54

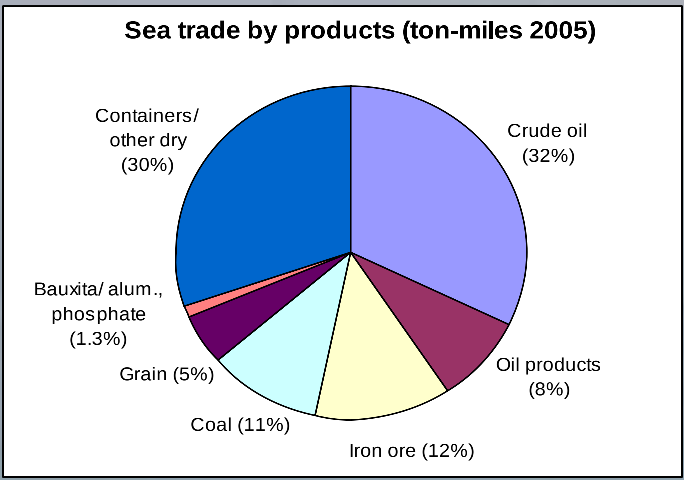
MARITIME SECTOR
Vademecum No. 43

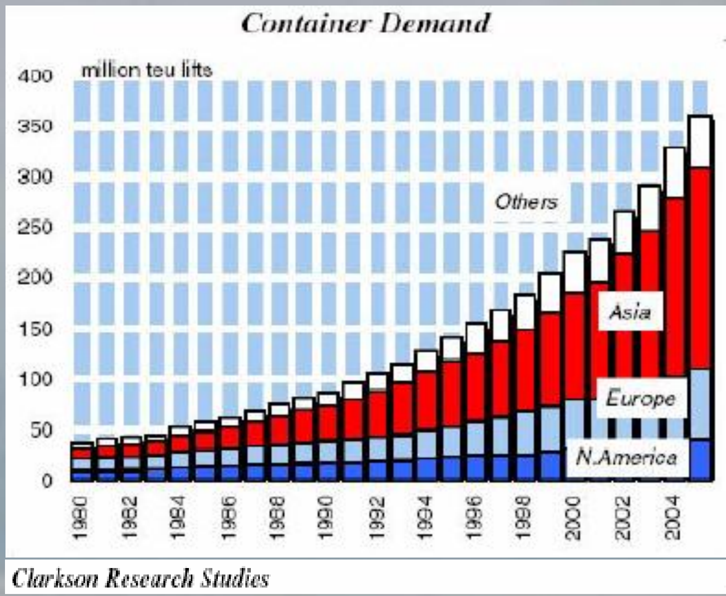
TABLE OF CONTENTS

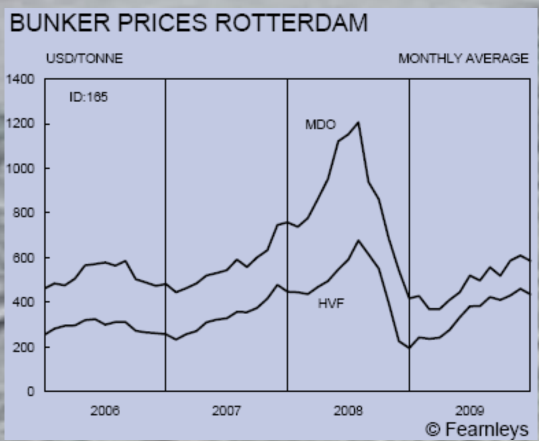
***NEW IN THIS ISSUE:* Community Guidelines: the impact that state aid has had on Shipping (p.73); Arctic transits through NSR, NWP: ship numbers, types, Issues (p. 73); Maritime Security: the new EU Strategy 2014 (p. 84); DNV-GL's plan to cut sea casualties and accidents by 90% (p.84)**

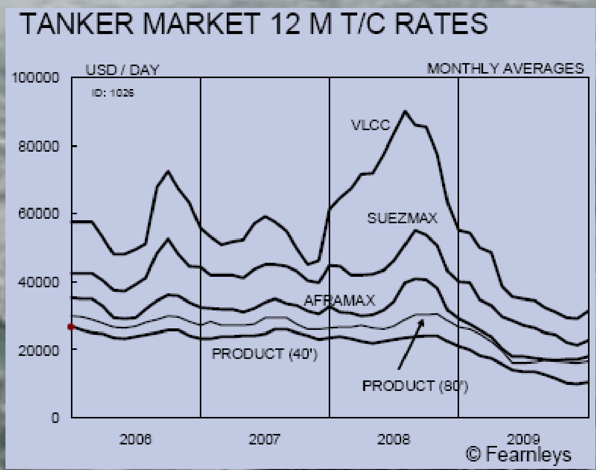
DG MOVE D.1 – 2014-S1 (12th year)

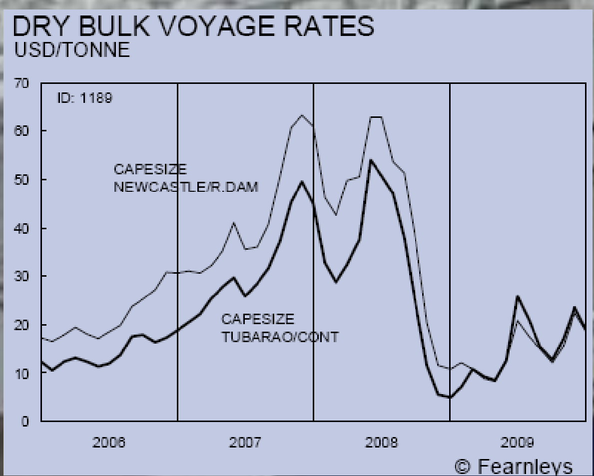
“VISUAL” SUMMARY of

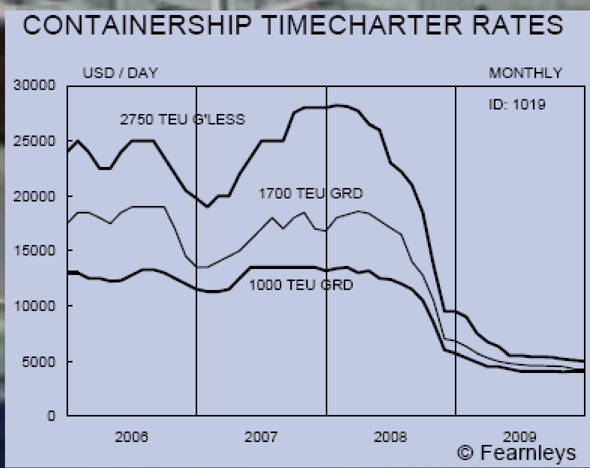


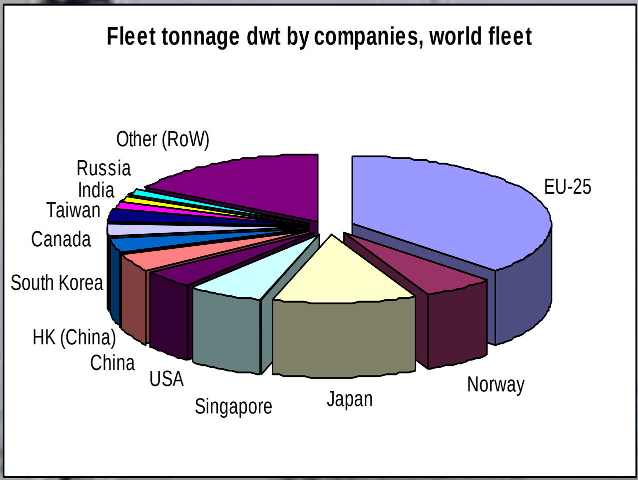


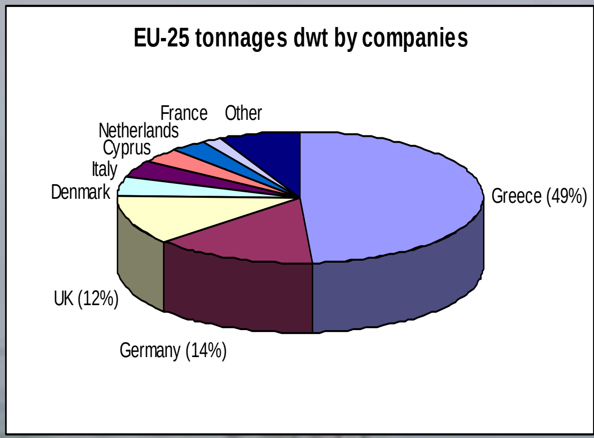


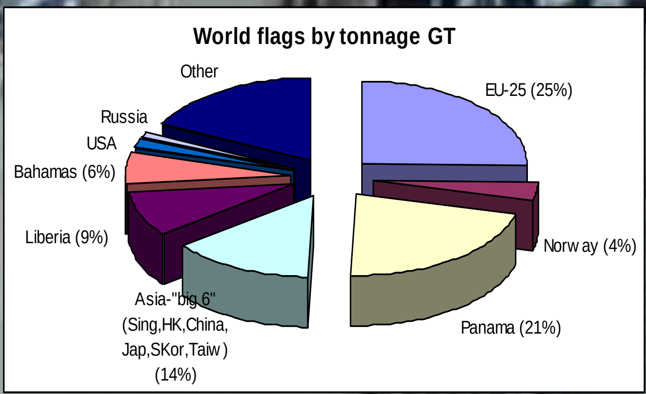


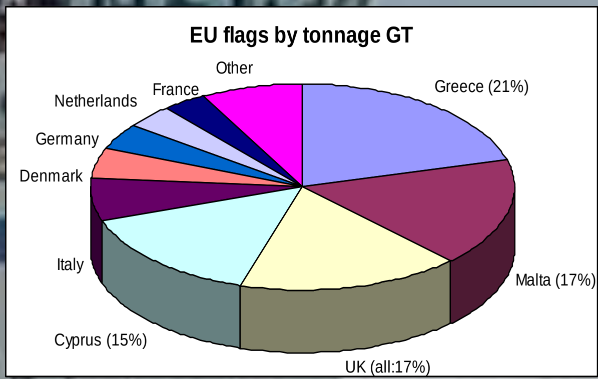


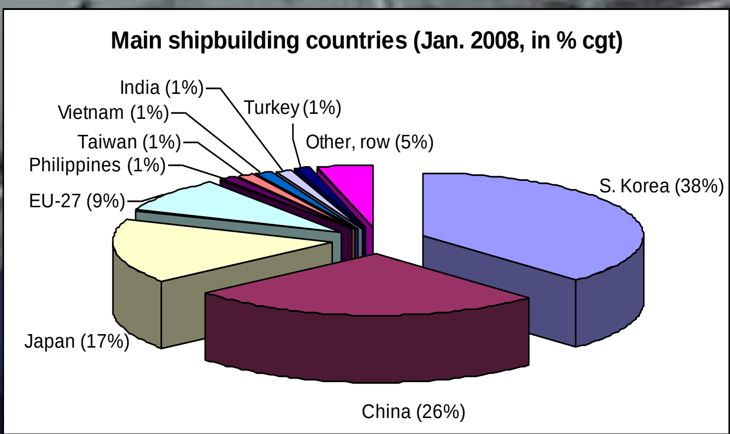


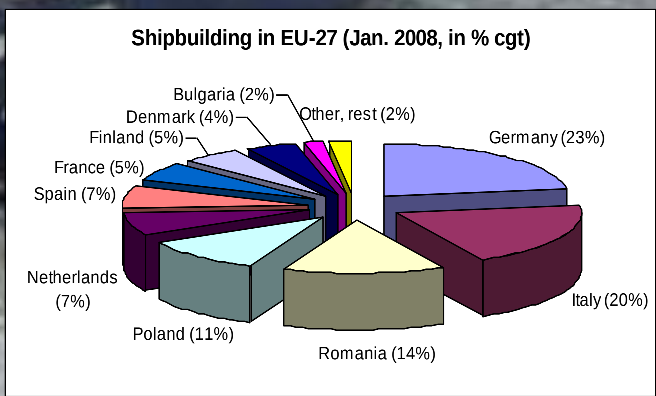

Fleet tonnage dwt by companies, world fleet
Other (RoW)
Russia
India
Taiwan
Canada
South Korea
HK (China)
China
USA
Singapore
Japan
Norway
EU-25


EU-25 tonnages dwt by companies
France
Other
Netherlands
Cyprus
Italy
Denmark
Greece (49%)
UK (12%)
Germany (14%)


World flags by tonnage GT
Other
EU-25 (25%)
Russia
USA
Bahamas (6%)
Liberia (9%)
Norw ay (4%)
Asia-"big 6"
(Sing,HK,China,
Jap,SKor,Taiw)
(14%)
Panama (21%)


EU flags by tonnage GT
Other
France
Netherlands
Greece (21%)
Germany
Denmark
Italy
Malta (17%)
Cyprus (15%)
UK (all:17%)


Main shipbuilding countries (Jan. 2008, in % cgt)
India (1%)
Vietnam (1%)
Turkey (1%)
Taiwan (1%)
Other, row (5%)
Philippines (1%)
S. Korea (38%)
EU-27 (9%)
Japan (17%)
China (26%)

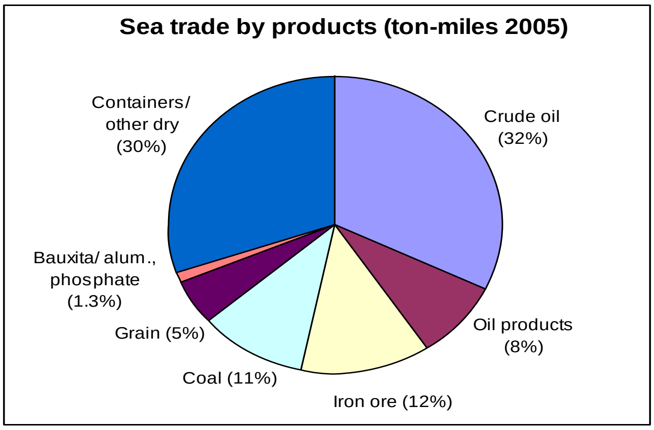

Shipbuilding in EU-27 (Jan. 2008, in % cgt)
Bulgaria (2%)
Denmark (4%)
Other, rest (2%)
Finland (5%)
Germany (23%)
France (5%)
Spain (7%)
Netherlands
(7%)
Italy (20%)
Poland (11%)
Romania (14%)

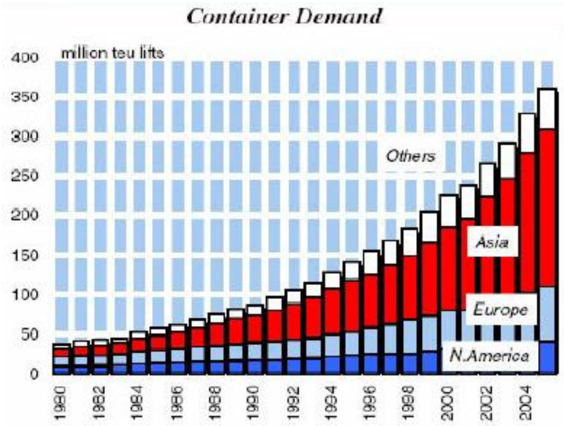
1. THE TRADE

World trade is essentially made by sea. Maritime concerns most of EU's external trade and more than 40% of all intra-EU trade (in ton-miles). Oil is imported in EU mainly via oil tankers. Oil, its products and other raw materials account for 2/3 of world's maritime trade in tonnage, share of manufactured goods in containers: about 1/4.

Main Commodities traded in the world by sea: *(in billions of ton-miles, 2005 figures, source: UNCTAD)*

- Crude oil	8,910	(32%)	- Grain	1,325	(5%)
- Oil products	2,325	(8%)	- Bauxite/alumina, phosphate:	360	(1.3%)
- Iron ore	3,415	(12%)	- Containers/other dry: . .	8,335	(30%)
- Coal	2,965	(11%)	**Total:**	**27,635**	





Container traffic *(source: ECSA Annual reports 2005-11, **2011 update**-Unctad/Ecsa data for global trade/economy)*
Grows rapidly, 114 M TEU* cont.trades in 2005, +10.7% ann.growth (**2011: 165Mteu, +8.1%**), to triple in 20 years.
Data for 3 main selected trades, world-wide (covers 1/3 of the whole trade, intra-Asia nearly another third, RoW rest)

1. Trans-Pacific (East-Westbound)	**2. Europe/Mediterranean-Far East**	**3. Trans-Atlantic**
12.4 Mteu (E) + 5.1 Mteu (W) =**17.5**	4.8 Mteu(E)+9.2 Mteu(W)=**14.0** **(19.2)**	1.8 Mteu (E) + 2.4 Mteu (W) =**4.2**

**TEU: Twenty-feet Equivalent Unit or 20-feet container (=35m3, 10-12 tonnes), 40-feet container also widely used*

Global Trade/Economy 2011 data:	2007	2008	2009	2010(e)	2011(f)
World sea trade: 8,714Mt (teu:165M)	+4.1% (+11%)	+2.4% (+5.4%)	-4.9% (-11%)	+9.1% (+15%)	+4.9% (+8%)
Global GDP growth (and EU-27's):	+4.0% (+3.0%)	+1.7% (+0.5%)	-2.1% (-4.2%)	+3.9% (+1.8%)	+3.1%(+1.9%)

2. THE MARITIME BUSINESS

2.1 Estimated Annual Turnover by Sectors of Maritime Cluster in EU:

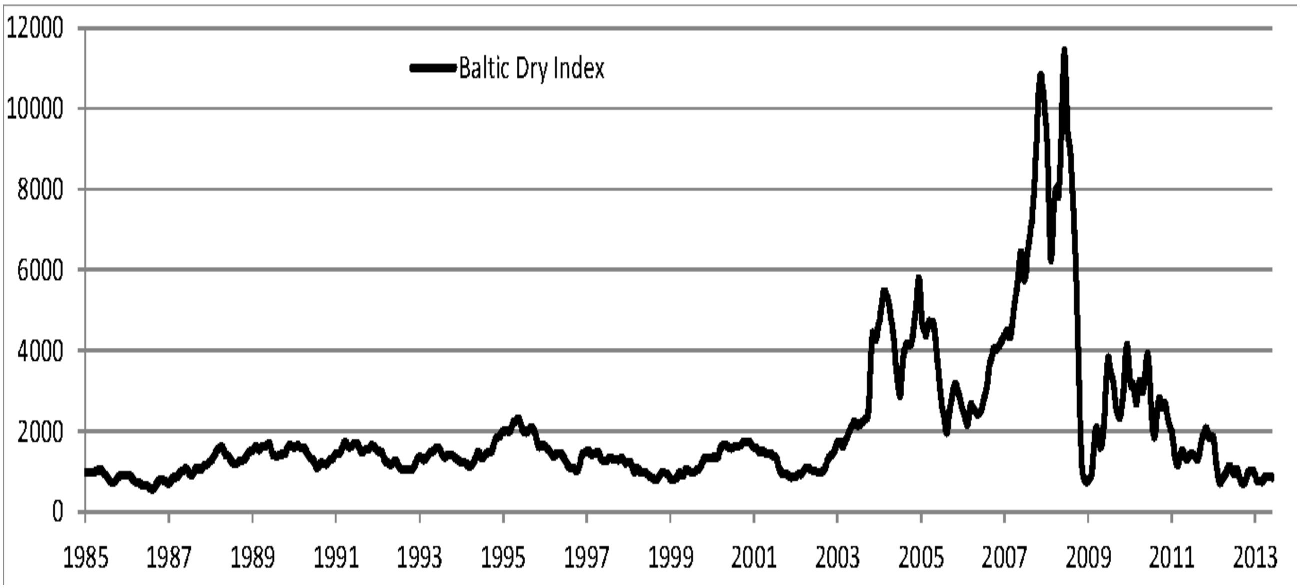
Cluster sectors	€bn (prc'00, main eu)		Europe in world, assessment '06 (Prof.Wijnolst*)	€bn (IMI-Mare'06)
Shipping, companies:	39.60	dk-de-uk..	40% w.fleet, 4 in top-5 cont'lines, sss 50%world, 40% w.orders	151.14
Ports and related services:	22.11	be-nl-it..	European ports handle 25% of world seaborne trade	13.21
Equipment and Manuf.:	18.73	de-uk-it..	Marine equipment manufacturers produce 35% of world market	18.06
Offshore Supply	11.94	uk-fr-nl..	Offshore companies are world leaders in many segments	19.11
Fishing and Aquaculture:	9.86	it-es-fr..	World leading in fisheries	8.24
Shipbuilding:	9.12	de-it-fi..	European shipbuilders have the highest turnover	13.14
Support Services:	6.95	uk-dk-it	World leading in maritime services	-
Repairs and Conversion:	3.96	uk-es-it..	-	-
Naval shipbuilding:	3.41	fr-de-uk	World leading in navies	-
Recreational vessels:	3.01	fr-uk-it..	Yachtbuilders produce 60% of the mega-yachts (>24m loa)	-
Inland shipping:	2.95	nl-de-it..	Inland shipping has a modern fleet of 9,400 ships, world leading	-
Dredging and mar. works:	2.86	nl-be-de..	European dredging companies have 80% of the open market	-
R&D, Education:	1.70	uk-ie-de..	World leading in maritime research	(R&D) 3.27
Cable-submarine telecom:	0.81	uk-fr	-	0.19
Classification societies:	0.55	uk-de-fr..	-	-
Scrapping:	0.03	it-es-de..	-	-
TOTAL EU:	**137.59**	**uk-de-fr..**	*(~2.4% of EU's gdp)*	TOTAL EU: **310.78**** *(~2.7% EU's gdp)*

**Prof.Dr.Niko Wijnolst, chairman of Dutch Maritime Network, chairman of European Network of Maritime Clusters*
*** Sectors missing in list include:* Marine Tourism (incl. marinas/ports): €71.81bn, Fish/Seafood processing: €8.24bn, Cruise industry: €2.37bn, Renewable energy: €0.12bn, Ocean survey: €0.54bn, Minerals and aggregates: €1.34bn.
Source of data: Irish Marine Institute for 2006, published in DG MARE's Green Paper, PRC for 2000 in 1st column.

MAIN SHIPPING MARKET INDICATORS

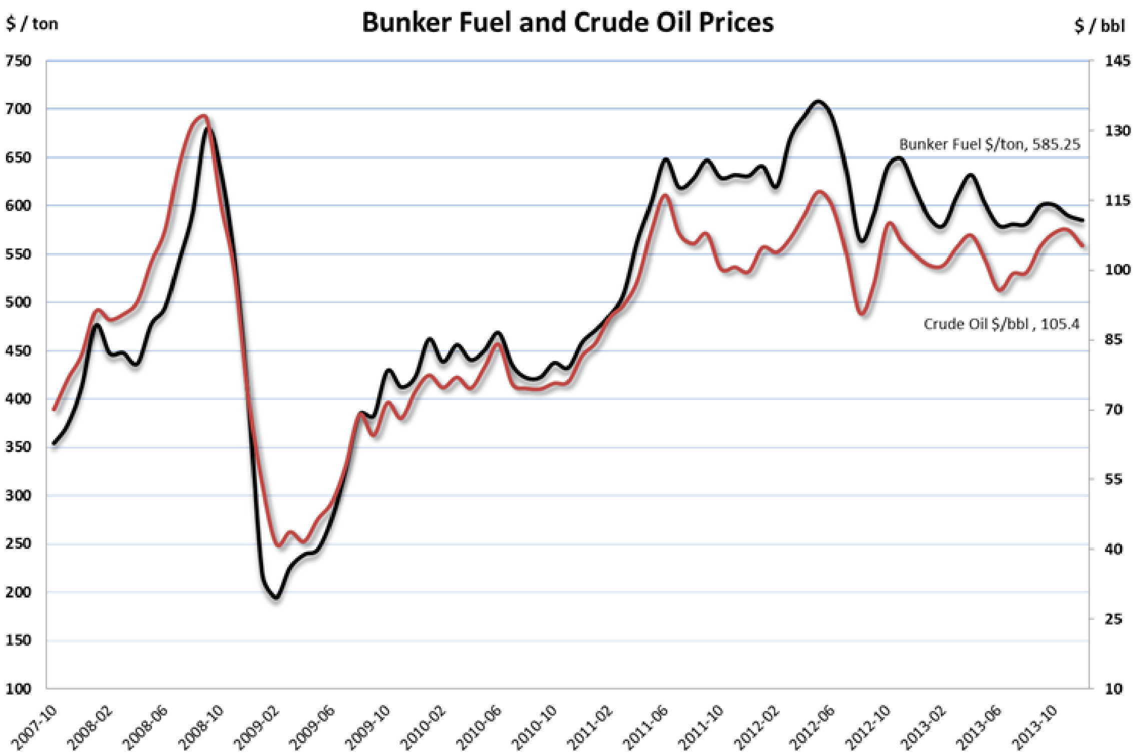
Freight rates, Market evolution and trends *(by market segments, source: Drewry/CESA-SEA Europe, other)*

The Baltic Dry Index *(see also Annex 3)*



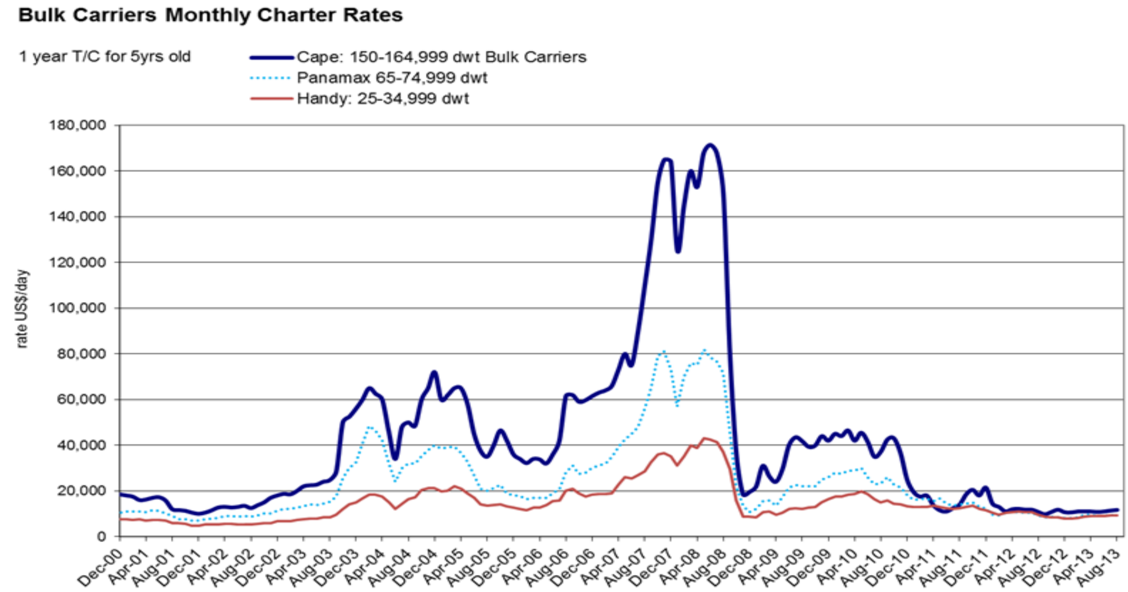
Source: Nboccard/Capitallink

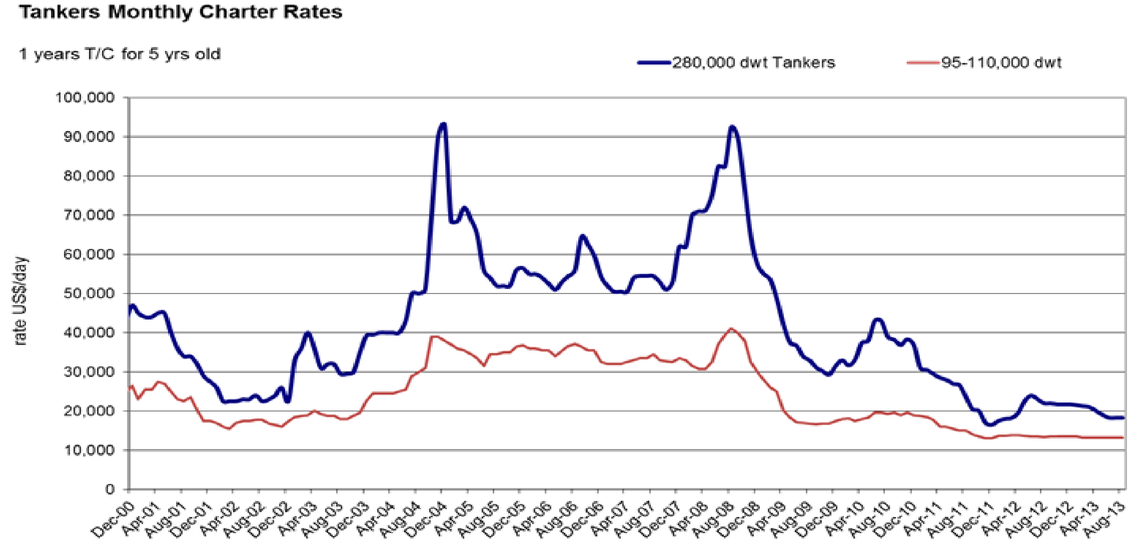
Baltic Dry Index (BDI)= 1,019 on 5.12.14 **[1,814** on 25.11.11; **2,099** on 1.12.10; **3,005** 12-2009; **774** 12-2008]

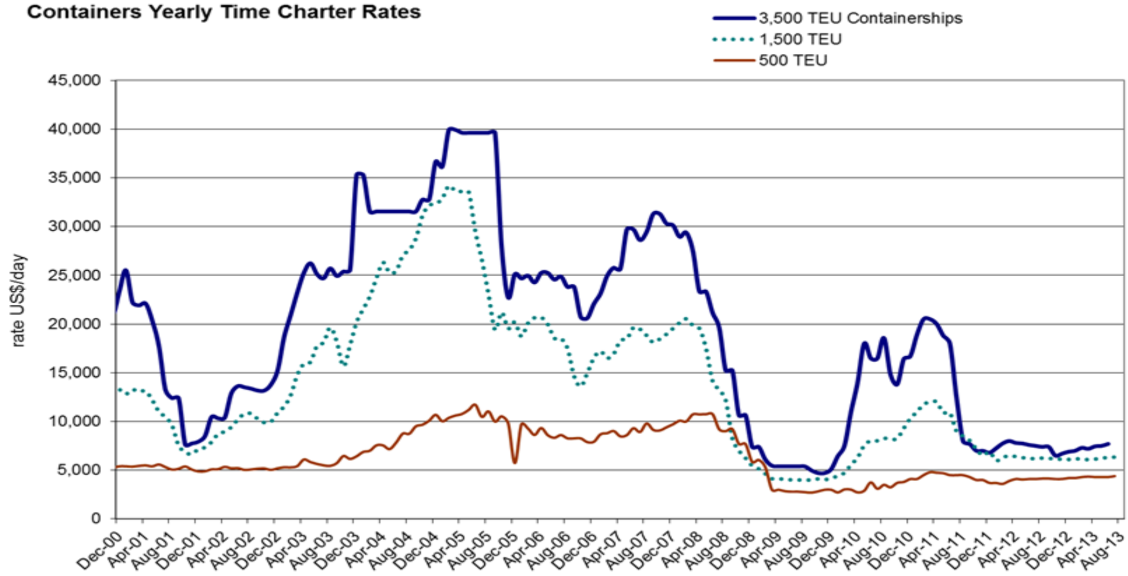


Source: BunkerWorld.com/CESA-SEA Europe Market monitoring report

Low-sulphur bunker fuel (1% level instead of 3.5% HFO): estimated to be up to 10% (av. $15-30/t) more expensive than Heavy Fuel Oil-HFO; Marine Diesel Oil-MDO (0.1%) 30-60% more expensive.







Source graphs: Drewry/CESA-SEA Europe Market monitoring report

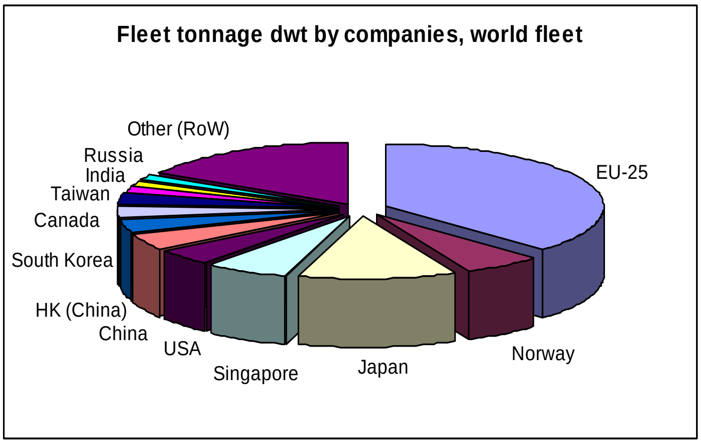
See Annex 3: the importance of the Baltic Dry Index; main Shipping companies listed in stock exchanges

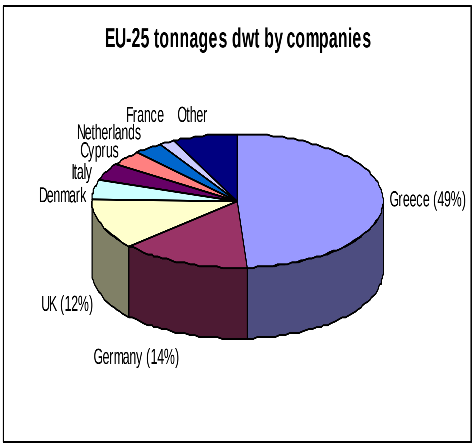
See Annex 4: Shipping Operational Costs, Ship Prices

2.2 European and World Merchant fleet *(Jan.2008, data from LR-Fairplay, Bimco/ISF):*

	EU	with Norway/EEA	World
Number of ships under **flags**:	9,158 (20% world)	10,310 (22% world)	46,964
Tonnage under flags (1-year trend):	250.4 Mdwt **(+4%)**	274.5 Mdwt **(+4%)**	1,114.1Mdwt **(+7%)**
Share of world tonnage under flags:	**22%**	**25%**	-
No. of ships under control **fleet managers**:	12,963 (28% world)	14,827 (32% world)	46,964
Tonnage fleet managers, by nat. (trend):	378.0 Mdwt **(+3%)**	421.3 Mdwt **(+3%)**	1,114.1Mdwt **(+7%)**
Tonnage fleet managers, residents:	410.5 Mdwt	451.0 Mdwt	1,114.1Mdwt
Share of world tonnage by residents:	**37%**	**40%**	-
Yards, ships on order/under constr. (trend):	976 **(+6%)**	1,038 **(+4%)**	9,456 **(+46%)**
Number of **seafarers**, citizens:	205,000	221,000	1.2 million
Seafarers working on board control fleet:	259,000	297,000	940,000
People employed in ***maritime cluster***:	3.1 million	3.2 million	n.a.

See Annexes 1-A and 1-B: European and World Merchant Fleets (with all details)

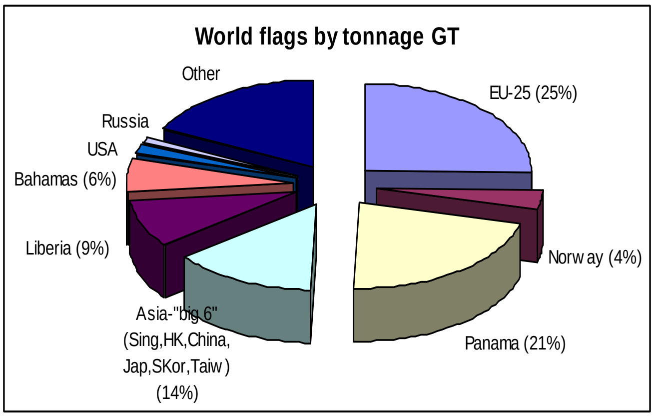


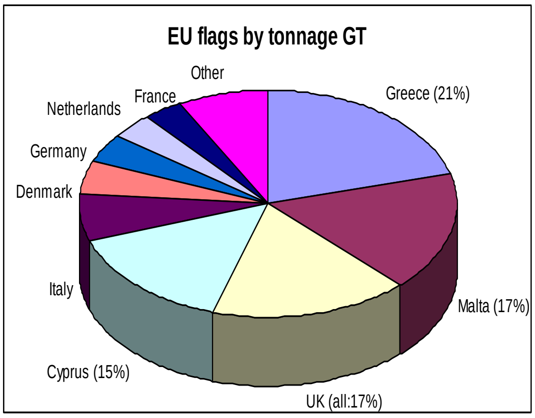


World's main merchant fleets, by control, in Mdwt, foreign flag % in (), 2-year growth *(Jan. 2011 update, Unctad)*

1. Greece:	**202.4 (68% ff) +19%**	**11. Italy:**	**23.3 (29% ff) +18%**	21. Indonesia:	10.0 (18% ff)+43%
2. Japan:	197.2 (90% ff) +14%	12. Turkey:	19.8 (60% ff) +28%	**22. Cyprus:**	**9.5 (58% ff)+13%**
3. China (all):	178.1 (60% ff) +14%	13. Russia:	19.5 (72% ff) +7%	**23. Netherlands:**	**9.4 (54%ff)+12%**
4. Germany:	**114.8 (85% ff) +9%**	14. Canada:	19.1 (87% ff) +11%	24. UAE:	9.4 (92%ff)+4%
5. UK*:	**58.3 (81% ff) (-)**	15. India:	18.1 (19% ff) +5%	**25. France:**	**9.1 (65% ff)+38%**
6. South Korea:	47.5 (62% ff) +2%	16. Malaysia:	14.1 (34% ff) +22%	26. Vietnam:	7.0 (32% ff)+25%
7. USA:	46.4 (47% ff) +16%	**17. Belgium:**	**13.0 (53% ff) -3%**	**27. Sweden:**	**5.6 (79% ff)-24%**
8. Norway:	43.0 (65% ff) -14%	18. Iran:	12.7 (95% ff) -13%	28. Kuwait:	5.6 (47% ff)-13%
9. Denmark:	**35.1 (60% ff) +11%**	19. Saudi Arabia:	12.4 (86% ff) -17%	**29. Spain:**	**5.0 (70% ff)+14%**
10. Singapore:	31.6 (41% ff) +12%	20. Brazil:	10.6 (79% ff) +126%	30. Thailand:	4.5 (23% ff)+10%

** incl.Bermuda, Isle of Man* ***Rest of the world (Other)*: 13%** = 182 Mdwt / 1,378 Mdwt (world= +25%).





WORLD'S TOP-10 FLAG STATES *(Open registers underlined, EU-MS in bold, ECSA Report, **July 2010**)*

Flags (rank'08)	MtGT, ships	2.5years	%world	Paris MoU	Main countries behind Open reg. (No.of ships)
1. Panama (1)	198.6 (8,231)	+19%	22%	grey	Japan-2,785, China-531, SKorea-489**Greece-345**
2. Liberia (2)	97.4 (2,581)	+28%	11%	white	**Germany-1304**,**Greece-433**,Japan-141,Russia-110
3. Marshall Isl.(6)	55.7 (1,540)	+56%	6%	white	US-250, **Germany-269**, **Greece-211**, Berm**UK-73**
4. Bahamas (3)	50.2 (1,478)	+10%	5%	white	Norway-223, US-180, **Greece-140**, Japan-100
5. Hong Kong*(5)	49.2 (1,649)	+37%	5%	white	---
6. UK (all) (7)	**43.4 (1,613)**	**+23%**	**5%**	white	(Bermuda, Isl.Man, Gibraltar, Cayman isl:OpenR.)
7. Singapore (4)	42.7 (3,040)	+18%	5%	white	---
8. Greece (8)	**41.0 (1,552)**	**+16%**	**4%**	white	---
9. Malta (9)	**35.8 (1,674)**	**+42%**	**4%**	white	**Greece-371**, Turkey-265, **Germany-128,** Iran-93
10.China* (10)	33.4 (3,802)	+34%	4%	white	---

**China-Hong Kong together rank world's No.3; top-10 flags together represent 71% of world fleet(2%+ fom 2008)*

ALL FLAGS/REGISTERS MERCHANT SHIPS (min. 500GT, with ship numbers, Jan'2008, States in bold)

Albania-35	**Colombia**-36	**Germany**-485	**Korea N.**-203	**Nigeria**-105	**Spain**-102+136
Algeria-44	**Comoros**-196	**Ghana**-9	**Korea South**-984	**Norway**-548+597	**Sri Lanka**-42
Angola-16	**Congo, DR**-5	Gibraltar/uk-229	**Kuwait**-55	**Oman**-2	**Sudan**-5
Antigua&B.-1103	Cook Isl./nz-34	**Greece**-1,015	**Laos**-1	**Pakistan**-26	**Suriname**-4
Argentina-86	**Costa Rica**-2	Greenland/dk-2	**Latvia**-35	**Panama**-6,492	**Sweden**-230
Australia-110	**Croatia**-95	Guadeloupe/fr-4	**Lebanon**-42	**Papua NG**-40	**Switzerland**-34
Austria-5	**Cuba**-11	**Guinea**-1	**Liberia**-2,107	**Paraguay**-30	**Syria**-101
Azerbajan-189	**Cyprus**-893	**Guyana**-18	**Libya**-25	**Peru**-8	**Taiwan**-135
Bahamas-1,390	**Denmark**-47+356	**Haiti**-1	**Lithuania**-58	**Philippines**-568	**Tanzania**-16
Bahrain-80	**Djibouti**-2	**Honduras**-355	**Luxembourg**-71	**Poland**-62	**Thailand**-571
Bangladesh-137	**Dominica**-79	Hong Kong-1,096	Macao/cn-1	**Portugal**-46+114	**Togo**-2
Barbados-105	**Dominican Rep.**-6	(**Hungary**-0)	**Madagascar**-14	Puerto Rico/us-5	**Tonga**-28
Belgium-136	**Ecuador**-47	**Iceland**-7	**Malaysia**-510	**Qatar**-50	**Trinidad-T.**-15
Belize-321	**Egypt**-138	**India**-742	**Maldives**-40	(Réunion/fr-0)	**Tunisia**-12
Bermuda/uk-136	**Equat.Guinea**-4	**Indonesia**-1,698	**Malta**-1,323	**Romania**-99	**Turkey**-765
Bolivia-40	**Eritrea**-6	**Iran**-213	**Marshall Isl.**-1,034	**Russia**-1,464	**Turkmenistan**-21
Brazil-258	**Estonia**-39	**Iraq**-45	**Mauritius**-9	**St.Vincent-G.**-760	**Tuvalu**-96
(Br.Virgin Isl./uk-0)	**Ethiopia**-11	**Ireland**-35	**Mexico**-192	**Samoa**-3	**UAE (7)**-176
Brunei-13	Faeroes/dk-24+7	Isle of Man/uk-345	**Micronesia**-9	**Sao Tome&P.**-12	**Ukraine**-323
Bulgaria-84	Falkland Isl./uk-3	**Israel**-22	**Mongolia**-95	**Saudi Arabia**-134	**UK**-770
Cambodia-683	**Fiji**-12	**Italy**-750	**Morocco**-44	**Seychelles**-9	**USA**-1,205
Cameroon-7	**Finland**-131	**Jamaica**-14	**Mozambique**-11	**Sierra Leone**-177	**Uruguay**-25
Canada-295	**France**-95+134	**Japan**-1,377	**Myanmar**-47	**Singapore**-1,431	**Vanuatu**-246
Cape Verde-12	(Fr.AntarcticT/fr-0)	**Jordan**-29	**Netherlands**-775	**Slovakia**-59	**Venezuela**-109
Cayman I./uk-130	Fr.Polynesia/fr-24	**Kazakhstan**-18	Neth.Antilles/nl-157	**Solomon Isl.**-2	**Vietnam**-525
Chile-72	**Gabon**-4	**Kenya**-6	New Caledonia/fr-4	**Somalia**-3	Wallis&Futuna/fr-8
China-2,616	**Georgia**-244	**Kiribati**-35	**New Zealand**-23	**South Africa**-8	**Yemen**-7

"New" maritime country flags from 2005: American Samoa/us-2; **Gambia**-5; Guam/us-1; **Mauritania**-1; **Moldova**-15; **Namibia**-2; **Nicaragua**-1; **St.Kitts&N**-154; **Senegal**-3; (**Serbia**)-**Montenegro**-5; **Timor-Leste**-1; US Virgin Isl./us-1.

Ranking EU flags merchant fleet: in Mdwt, 4-y trend in (), 2-y fleet gr.in [], **bold:** tonnage tax in place (ECSA, 2011 data)

1. EL: 73.3 (+35%>) [+19%]	**10. BE:** 6.7 (-1%<) [-3%]	19. RO: 0.2 (-33%>) [-]
2. MT: 64.6 (+60%>) [-]	**11. ES:** 2.7 (+13%<) [+14%]	20. EE: 0.1 (+0%>) [-]
3. CY: 34.0 (+11%>) [+13%]	12. SE: 2.3 (-4%<) [-24%]	**21. PL:** 0.1 (+2%>) [-]
4. UK*: 22.4 (-) [-]	13. LU: 1.4 (+40%>) [-]	22. SK: 0.1 (-67%<) [-]
5. IT: 20.2 (+55%>) [+18%]	**14. FI:** 1.2 (+33%>) [-]	**23. LV: 0.1 (-67%<) [-]**
6. DE: 17.9 (+36%<) [+9%]	15. PT: 1.2 (-33%<) [-]	24. AT: 0.01 (-75%<) [-]
7. DK: 13.8 (+29%>) [+11%]	16. BG: 0.7 (-46%<) [-]	25. SI: 0.001 (-) [-]
8. FR: 8.5 (+15%>) [+38%]	17. LT: 0.3 (-25%<) [-]	26. CZ: -
9. NL: 8.0 (-1%<) [+12%]	18. **IE:** 0.2 (+0%<) [-]	27. HU: -

**Red Ensign plus Gibraltar flag*

Main findings 2011 *(similar to those four years earlier, for 2007):*

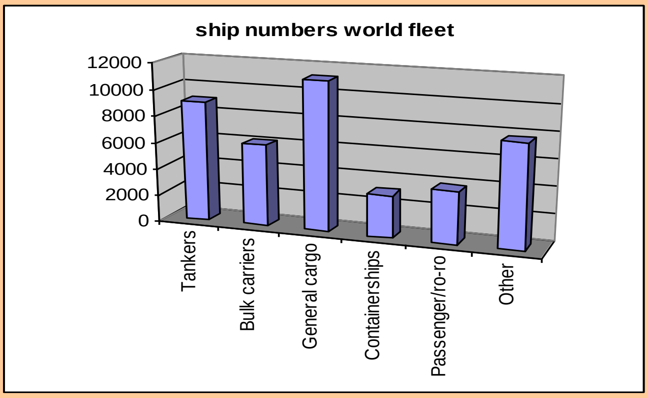
1. EU flags still growing in tonnage but a bit less than growth of world fleet, and less than EU fleet growth by control.

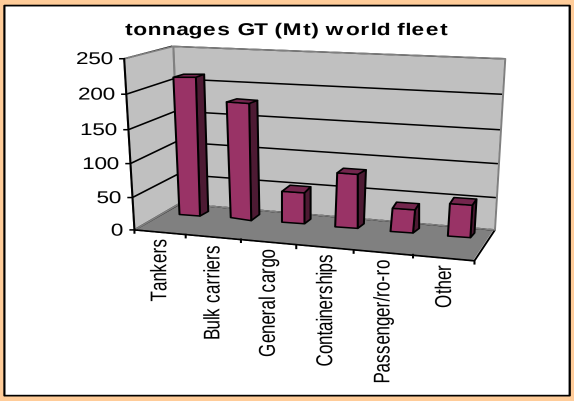
2. Tonnage tax seems to remain influential for most cases; some flagging-out observed in MSs where tonnage tax is not applied.

3. STRUCTURE OF THE SHIPPING INDUSTRY

Main deep sea routes from European ports, liner shipping *(ranked by order of importance)*: 1. Far East-Europe; 2. Transatlantic route, with US; 3. “Europe sub-continent” route (India, Pakistan, Sri Lanka), Middle East/Gulf route; 4. East&West of S.America; 5. Developing countries: Caribbean, W, S, and E Africa; 6. Australia and New Zealand.

Structure and evolution of the World merchant fleet (from LR-Fairplay 2005 data, **2011 update** from UNCTAD)





	WORLD			EU – 25 (total fleet)				
	No. Ships	Mdwt	MtGT	No. Ships		Mdwt	MtGT	
All merchant ships:	**41,212**	**894.9**	**609.2**	**12,354**	(30%)	**334.5**	**227.5**	(37%)
Tankers:	9,047	358.8	212.2	2,541	(28%)	133.6	78.1	(37%)
Bulk carriers:	6,133	318.1	178.5	1,998	(33%)	113.0	62.8	(35%)
General cargo:	11,221	68.3	49.5	2,865	(26%)	19.3	14.0	(28%)
Containerships:	3,159	95.9	83.1	1,562	(49%)	51.4	43.8	(53%)
Passenger/Ro-Ro:	3,887	11.6	36.4	1,372	(35%)	5.4	16.0	(44%)
Other ships:	7,765	42.2	49.5	2,016	(26%)	11.8	12.8	(26%)
Newbuildings/on order:	**+3,780**	**+195.8**	**+135.6**	**+1,628**	(43%)	**+79.8**	**+57.2**	(42%)
Ships scrapped/lost (5 y.):	**-4,369**	**-154.5**	**-90.4**	**-1,605**	(37%)	**-73.3**	**-42.0**	(46%)
Average age of fleet:	19 years (19.3)			17 years (16.5)				

Update 2011, 6-year trends: Global merchant fleet = 1,396 Mdwt (~1.4bn)= **+56% since 2005** (or +9% in just 2011)
Trend **by ship types**, tonnage: Tankers= +46%; Bulk carriers= +67%; General cargo= +60%; Containerships= +92%
Global fleet growth has accelerated: 1980-1995= +8%; 1995-2000= +8%; 2000-2005= +12%; 2005-2010= +42%.

3.1 Liner Service (Containers):

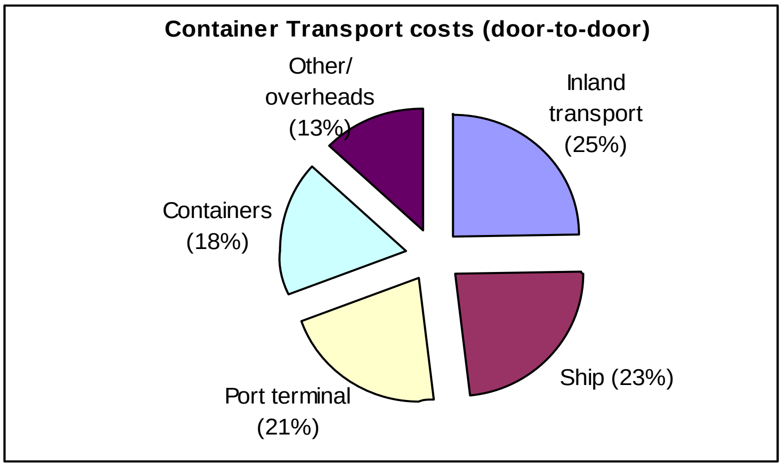
Based on fix schedules and itineraries (published), for containers. Fix rates could apply when Liners regrouped in Conference, Liner Conferences (no longer EU-allowed) covered ~70% of fleet capacity, remaining 30% subject to free competition. Other association forms include Consortia, Alliances, Mergers.

Ranking top-20 Container Lines, update 1.6.11, fleet capacity in million TEU, 4-year growth (source: Alphaliner)

1. **Maersk-P&O (DK, UK/NL): . 2.32 +32% (616 ships)**
2. **MSC** (Switzerland, **IT**): **1.97 +82% (467 ships)**
3. **CMA-CGM/D (FR): . . . . . . 1.27 +69% (385 ships)**
4. Evergreen (Taiwan): . . . . 0.61 +7% (166 ships)
5. **HapagLl.-CP (DE, UK/Can.): 0.60 +28% (139 ships)**
6. COSCO Cont. (China): . . . . . . 0.59 +51% (142 ships)
7. APL/NOL (Singapore/US): . . 0.58 +70% (147 ships)
8. CSAV/Norasia (Chile): . . . . . . 0.55 +120% (139 ships)
9. Hanjin/Sen. (Korea): . . . . . . 0.52 +49% (110 ships)
10. China Shipping CSCL(China): 0.42 +19% (141 ships)
11. OOCL (Hong Kong): . . 0.41 +37% (75 ships)
12. NYK (Japan): . . . . 0.41 +17% (104 ships)
13. Mitsui/MOL (Japan): . . . . 0.41 +46% (95 ships)
14. **Hamburg-Süd (DE): . . . . 0.38 +73%(115 ships)**
15. Yang Ming (Taiwan): . . . 0.34 +36% (84 ships)
16. K Line (Japan): . . . . . . 0.34 +21% (79 ships)
17. Zim (Israel): . . . . 0.25 +32% (96 ships)
18. Hyundai HMM (Korea): . . 0.31 +82% (63 ships)
19. Pacific/PIL (Singapore): . 0.26 +73% (137 ships)
20. UASC (United Arab Shipping Co.): 0.24 .. (58 ships)

Total top-20 companies: 13.0 Mteu=84% world (top-20 represented 81% in 2007, 64% in 2002**)**, world=15.46Mteu
*Market structure: very concentrated (**top-5** companies control **44%** of whole market), big companies with large fleets.*
New in 2013: P3 Alliance formed between world's top-3: *announced in June, Maersk, MSC and CMA-CGM to start East-West trades operational mega-alliance in 2nd quarter 2014 –if cleared by antitrust authorities (EU, US, China)-, from London-based Joint Vessel Operating Centre: **255 vessels** put together (42/35/24%), **2.6Mteu** capacity, **29 loops** world-wide (Asia-Europe, with **over 40% market share**, trans-Atlantic and trans-Pacific trades), to reduce unit costs.*

Apart from the two container lines from China (Cosco and China Shipping) and APL (which is owned by the Singapore Government), all the other companies are, to a large extent, **privately owned** *and run.*
Geographical decentralisation *is common for some big companies: Maersk, for instance, apart from Denmark, is registered and operates ships in Singapore (28 ships), Isle of Man/UK (11 ships),USA (11 ships), Taiwan, France, Egypt, Brazil and Japan.*



World's top-10 **global logistics providers**, multimodal transport companies *(source: PRC, 2006 data)*

Group	*Country*	*Founded*	v*Revenue*	*Income*	*log.%group*
1. DHL Logistics Division	**DE (since 2002)**	**1969, *SF-Ca-US***	**30.0 $Bn**	**1.0 $Bn**	**34%**
2. Schenker DB Logistics	**DE (since 2003)**	**1872, *Vienna-AT***	**17.5 $Bn**	**0.5 $Bn**	**44%**
3. Kühne & Nagel	**DE/CH**	**1890, *Bremen-DE***	**12.2 $Bn**	**0.5 $Bn**	**100%**
4. UPS Supply Chain Solutions	USA	1907, *Seattle-Wa-USA*	8.0 $Bn	-	26%
5. Panalpina	CH	1935, *Basel-CH*	6.3 $Bn	0.2 $Bn	100%
6. Geodis Group	**FR**	**1995, *FR***	**5.0 $Bn**	**0.1 $Bn**	**100%**
7. Bolloré Group	**FR**	**1822, *Ptx.-Paris-FR***	**4.3 $Bn**	**-**	**61%**
8. NYK Logistics (NipponYK)	Japan	1885, *Japan*	4.1 $Bn	0.1 $Bn	22%
9. Expeditors	USA	1979, *Seattle-Wa-USA*	3.8 $Bn	0.4 $Bn	100%
10. Eagle Global Logistics	USA	1984, *Houston-Tx-USA*	3.2 $Bn	0.1 $Bn	100%

3.2 The Tanker market:
Based on charter; schedules, routes and even cargo can change in the last minute to adapt to best business opportunities and maximise profit.

Top 20 Tanker companies with Mdwt and fleet of tankers (***source: PRC, 2006-data*** *top-10 and demanders, Lloyd's*):

1. Mitsui OSK Lines Ltd.	(Japan):	12.6	(92)	
2. Frontline Ltd.	(Norway):	11.4	(52)	
3. Teekay Shipping Corporation	(Canada):	8.7	(76)	
4. OSG Ship Management Inc.	(USA):	8.4	(87)	
5. NYK Line (Nippon Yusen Kaisha)	(Japan):	7.9	(31)	
6. Kristen Navigation	**(Greece**/Liberia**)**	**7.9**	**(33)**	
7. AET (American Eagle Tankers, MISC)	(Malaysia)	6.5	(52)	
8. Euronav NV	**(Belgium):**	**6.2**	**(24)**	
9. Dr. Peters Gmbh	**(Germany)**	**6.1**	**(31)**	**Main demanders (charterers)** large
10. Tsakos Shipping and Trading SA	**(Greece)**	**5.0**	**(42)**	VLCC tankers, from demand side:
11. Vela International Marine Ltd.	(UAE):	5.0	(22)	**1) Stasco-Shell International (NL-UK)**
12. Tanker Pacific Management Private Ltd.	(Singapore):	5.0	(45)	2) Exxon Mobil (USA)
13. Bergesen d.y. ASA	(Norway):	4.9	(16)	3) Chevron-Texaco (USA)
14. National Iranian Tanker Co.	(Iran):	4.8	(27)	**4) BP-British Petroleum (UK)**
15. AP Moller-Maersk Group	**(Denmark):**	**4.7**	**(24)**	**5) Total-Fina-Elf (France)**
16. International Energy Transport Co. Ltd.	(Japan):	4.3	(16)	6) Reliance, oil company (India)
17. Petrobras (Petroleo Bras.)/Transpetro	(Brazil):	4.2	(52)	7) Unipec, oil company (China)
18. Thenamaris Ships Management	**(Greece):**	**3.6**	**(34)**	*There are less than 40 customers*
19. Chevron Texaco Shipping	(USA)	3.4	(21)	*altogether for VLCC tankers.*
20. Aramco/Nat.Shipping Co.Saudi Arabia	(Saudi Arabia)	3.1	(23)	

Top-10 companies= 81 Mdwt (22% world), top-20= 124 Mdwt (33% world), total world= 374 M dwt
Market structure: much less concentrated than for containers/liner shipping, many more companies.

Main countries for oil tankers' fleet over 10,000 dwt by companies (2003, PRC) / +Main LNG tanker fleets

Large oil tankers		LNG tankers*	
1. Greece: 713 ships	6. Singapore: 132	1. Japan: 30 ships (+22)	6. Norway: 12 (+8)
2. Norway: 376	**7. Italy: 129**	**2. UK:** 29 (+17)	7. Nigeria: 10 (+3)
3. Japan: 292	8. China: 116	3. Malaysia: 18 (+11)	8. UAE: 8 (+0)
4. USA: 238	9. Canada: 104	4. S.Korea: 17 (+1)	9. Australia: 6 (+0)
5. Russia: 134	10. India: 82	5. USA: 13 (+0)	10. Algeria: 6 (+0)

Fleet of LPG tankers remains larger than that for LNG in ship numbers (975 vs 173 ships) but no longer in tonnage: LNG ships are newer and much lager than LPG tankers. Newcomers to be soon at the top-10 are Qatar (0+11), **Greece (0+7), China (0+6).*

Oil tankers, kinds of ships (units in world fleet and average age in brackets, Dec.'02)

Total fleet of medium-large oil tankers: 2,525 ships (+ 575 on order), of which:

- **Handysize** (Medium):	25,000- 50,000 dwt	(1,034 units + 237 ordered, 14 years)	
- **Panamax:**	50,000- 80,000 dwt	(234 + 72, 16 years)	
- **Aframax:**	80,000- 120,000 dwt	(550 + 141, 11.7 years)	(650,000 barrels of oil)
- **Suezmax:**	120,000-200,000 dwt	(283 + 58, 9.8 years)	(1.0 million barrels of oil)
- **VLCC/ULCC*:**	> 200,000 dwt	(424 + 67, 9.4 years)	(2.1 million barrels of oil)

*Very Large Crude oil Carrier and Ultra-Large Crude oil Carriers

Double hull: compulsory from MARPOL for all oil tankers of 5,000 dwt and above, built from 1996 onwards.
Single-hull phasing out for oil tankers, in EU waters and ports: ongoing, should be completed by 2010.

3.3 The Bulk market: Top 20 shipping companies for bulk carriers, with Mdwt and fleet of ships (Lloyd's)

1. Cosco (HK) Shipping Co. Limited	(Hong Kong)	4.6	(82)
2. Mitsui OSK Lines Ltd.	(Japan)	3.9	(47)
3. Nippon Yusen Kaisha	(Japan)	3.7	(38)
4. Qingdao Ocean Shipping Co. (Cosco Q.)	(China)	3.3	(62)
5. Pan Ocean Shipping Co. Ltd.	(Korea)	2.9	(51)
6. Asociated Bulk Carriers Ltd.	(Monaco)	2.7	(17)
7. Marmaras Navigation Ltd.	**(Greece)**	**2.6**	**(36)**
8. SA Monégasque d'Admin. Maritime et Aér.	(Monaco)	2.5	(29)
9. Cosco Bulk Carriers Co. Ltd.	(China)	2.4	(34)
10. Hyundai Merchant Marine Co. Ltd.	(Korea)	2.3	(18)
11. Korea Line Corporation	(Korea)	2.3	(16)
12. Anangel Shipping Enterprises SA	**(Greece)**	**2.3**	**(26)**
13. Toyo Sangyo Co. Ltd.	(Japan)	2.2	(18)
14. Coeclerici Ceres Bulk Carriers NV	**(Italy)**	**2.1**	**(18)**
15. Kumiai Senpaku Co. Ltd.	(Japan)	2.0	(17)
16. Hanjin Shipping Co. Ltd.	(Korea)	2.0	(20)
17. Islamic Republic of Iran Shipping Lines	(Iran)	1.8	(41)
18. Shoei Kisen K.K.	(Japan)	1.8	(26)
19. China Steel Corporation	(Taiwan)	1.7	(11)
20. Bergesen d.y. ASA	(Norway)	1.7	(7)

Total top-20 companies: 50.8 M dwt (17% world), or some 614 ships (10% world)
Market structure: high competition, many small companies control most of market, including "one-ship" companies.

Bulk Carriers, kinds of ships:

- Handysize: 10,000-40,000 dwt
- Handymax: 40,000-60,000 dwt
- Panamax: 60,000-80,000 dwt
- Cape Size: >80,000 dwt (tipically between 140-170,000 dwt)

See Annexes 2-A and 2-B: EU and International Maritime Legislation; Convention ratification, Research projects

See Annexes 5-A and 5-B: The Actors involved and Responsibilitites; "Safety Watch": Maritime Companies with risk concerns

See Annex 6: "Maritime Europe"

Flagging of EU merchant fleet-control-: whole merchant fleet and largest ocean-going ships *(>40,000gt, Jan'08)*

MS	own-flag/ships	Mdwt	largest ships	MS	own-flag/ships	Mdwt	largest ships	MS	own-flag/ships	Mdwt	largests ships
EL:	53% (1015)	154.0	229/462=50%	**SE:**	45% (230)	5.5	1/18=6%	LV:	13% (35)	1.5	0/0
UK+:	51% (1613)	86.8	152/343=44%	ES:	51% (238)	4.9	5/15=33%	**RO:**	20% (99)	1.0	0/2=0%
DK:	23% (436)	48.6	69/294=23%	CY:	>100% (893)	4.8	60/19	SI:	0% (0)	0.7	0/0
DE:	44% (485)	34.3	76/118=64%	**PT:**	38% (160)	3.4	3/19=16%	LT:	90% (58)	0.4	0/0
IT:	76% (750)	18.0	45/58=78%	**FI:**	38% (131)	2.9	4/14=29%	MT:	>100% (1323)	0.4	74/1
FR:	43% (269)	18.0	32/64=50%	**PL:**	2% (62)	2.8	0/6=0%	LU:	>100% (71)	0.4	0/0
BE:	51% (136)	12.8	22/61=36%	**IE:**	8% (35)	2.6	0/2=0%	EE:	33% (39)	0.3	0/0
NL:	75% (932)	11.1	17/1	BG:	72% (84)	1.8	0/0	SK:	>100% (59)	0.01	0/0

EU-27: own flag 66% (Mdwt, incl.open registries mt, cy, lu, sk), 71% by ships (9158 / 12963) and **53%** largest ships (789 / 1497)

4. SHORT SEA SHIPPING (SSS), FERRIES / PASSENGERS

Short Sea Shipping (SSS) or short-distance Maritime Transport: All routes within the different EU seas and areas (Baltic, North Sea, Atlantic façade, Mediterranean, Black Sea). New concept of Sea Motorways developed, with fast and safe connections involving a number of European international ports, along some well pre-defined itineraries.

SSS traffic numbers (vs total traffic in million tons/year) by EU Member States *(source: Eurostat, **2005 figures**)*

EU MS	SSS Mt.	(1-y.growth)	SSS/total	Total Mt.	(1-y.growth)
1. UK:	354	(+2%)	60%	586	(+2%)
2. IT:	323	(+4%)	63%	509	(+5%)
3. NL:	254	(+0%)	55%	461	(+5%)
4. FR:	213	(+2%)	62%	341	(+2%)
5. ES:	196	(+4%)	49%	400	(+7%)
6. DE:	179	(+3%)	63%	285	(+5%)
7. SE:	137	(+10%)	77%	178	(+6%)
8. BE:	109	(+12%)	53%	206	(+10%)
9. EL:	89	(-5%)	59%	151	(-4%)
10. FI:	83	(-6%)	83%	100	(-7%)
11. DK:	72	(+4%)	72%	100	(-1%)
12. LV:	46	(+8%)	77%	60	(+9%)
13. PL:	42	(-)	76%	55	(+5%)
14. PT:	37	(+8%)	57%	65	(+11%)
15. IE:	37	(+7%)	71%	52	(+9%)
16. EE:	35	(-5%)	76%	46	(+4%)
17. RO:	22	(+18%)	46%	48	(+18%)
18. LT:	21	(-5%)	81%	26	(+1%)
19. BG:	18	(+7%)	72%	25	(+7%)
20. SI:	7	(+7%)	54%	13	(+5%)
21. CY:	4	(+60%)	57%	7	(+7%)
22. MT:	3	(+16%)	75%	4	(+1%)
Total EU-27:	**2,281**	**(+4%)**	**61%**	**3,718**	**(+4%)**

In terms of tonnages loaded (or unloaded) in EU ports, seaborne trade accounts for approximately: **1.2 Bn t. for EU's SSS, 1.4 Bn t. for EU's deep sea traffic**, out of a total of about **7 Bn t. world-wide** *(figure from UNCTAD).*

See Annex 7: Main EU Short-Sea Shipping Routes from/to main SSS EU Ports

PASSENGERS AND RO-RO, FERRIES/SSS:

The number of **EU ferry passengers** in Europe has been estimated by ESPO at about **350 million** passengers/year (2005), out of an estimated **1.3 billion ferry passengers world-wide**, according to Sweden's Ship Pax Information. 189 million cars, 860,000 buses and 29 million trailers have to be added that figure, from the same source. Short-sea shipping lines and routes typically concentrate on freight and ro-ro but very often take passengers as well.

Use of flags EU in SSS/ferries by main EU shipping companies, ferry-passenger and ro-ro lines
(companies with more than 3 ships, number of ships in brackets –flags EU vs total-, source LR-Fairplay Jan.2004)

Belgium: (8/20=40%)	Cobelfret (8/10), Ferryways (-/4), Zadeko Shipping (-/6).
Denmark: (33/33=100%)	DFDS/DFDS Seaways (10/10), Mols-Linien (6/6), Scandlines-DK (17/17).
Estonia:(16/16=100%)	Saaremaa Shipping (6/6), Tallink Group (10/10).
Finland: (48/51=94%)	Alands Landskapsstyrelse (5/5), Birka Cargo (7/7), Engship (7/7), Finnlines (7/8), Godby Shipping (5/5), Rettig Bore (6/6), Silja/Silja Line (5/7), Viking Line (6/6).

France: (29/33=88%)	Brittany Ferries (7/7), Delmas/Delmas Armement (-/4), France Govt. (5/5), SNCM (12/12), SeaFrance (5/5).
Germany: (39/62=63%)	ADG Shipmanagement (-/7), Amrum (6/6), EMS (4/4), Finnlines Deutschland (6/6), Harren & Partner (-/4), Norden-Frisia (7/7), Paulsen S. (4/4), Russ E. (1/5), Scandlines Deutschland (5/5), Scanscot Shipping (-/7), TT-Line (6/7).
Greece: (97/103=94%)	Anek Lines (11/11), Aneth (6/6), Blue Star Ferries (10/11), Electra Maritime (-/5), GA Ferries (6/6), Hellas Flying Dolphins (34/34), Minoan Lines (10/10), Nel Lines (6/6), Superfast Ferries (9/9), Valiant Shipping (5/5).
Ireland: (5/5=100%)	Irish Continental Group (5/5).
Italy: (175/179=98%)	Alilauro (7/7), Aliscafi (4/4), Amadeus (4/4), B Navi (2/5), Caronte Shipping (6/6), Enermar (5/5), Grandi Navi Veloci (8/8), Italy Govt. (13/13), Levantina Trasporti (9/9), Messina I. (13/13), Navarma (15/16), Sarda di Navigazioni (6/6), Tirrenia (69/69), Tourist Ferry-Boat (5/5), Tourship Italia (9/9).
Lithuania: (6/6=100%)	Lisco Baltic Service (6/6).
Malta: (4/4=100%)	Gozo Channel (4/4).
Netherlands: (19/19=100%)	Norfolk Line (4/4), P&O North Sea Ferries (4/4), Terschellinger Stoomboot (4/4), Wagenborg Shiping (7/7).
Poland: (8/8=100%)	Gdanska Zegluga (4/4), Polish Steamship (4/4).
Portugal: (7/7=100%)	Soflusa (7/7).
Slovenia: (4/6=67%)	TransEuropa Lines (4/6).
Spain: (53/54=98%)	Armas Naviera (6/7), Balearia (8/8), Iscomar (4/4), Olsen Líneas (6/6), Suardiaz Flota/Vapores (8/8), Trasmediterránea (21/21).
Sweden: (47/48=98%)	B&N Nordsjofrakt (4/4), Gorthon Lines (7/7), Nordo-Link/Management (4/4), OSM Sea Partner (7/7), Scandlines (5/5), Stena Line/Ro ro (15/16), Sweden Govt. (5/5).
UK: (72/96=75%)	Caledonian Macbrayne (21/21), Cenargo International (5/10), Condor Marine Sces. (-/5), Demline Management (2/4), Norbulk Shipping UK (7/7), Northern Marine Mngmt. (4/5), P&O Ferries/Irish/N.Sea (11/21), Stena Line (8/8), Weir Shipping (6/7), Wightlink (8/8).
Total EU-25:	**670 / 750 = 89%**

Main links/departure places in EU for ferry passengers (in M pass./year):

Dover (GB)-Calais (F):	16.2 M	Sta.Cruz Tenerife-Las Palmas (E):	4.9 M
Helsingborg (S)-Helsingor (DK):	13.5 M	Copenhagen (DK):	3.8 M
Messina-Reggio Calabria (Sicily,I):	11.9 M	Frederikshavn (DK)-Goteborg (S):	3.7 M
Piraeus (EL):	10.2 M	Turku (FIN):	3.5 M
Helsinki (FIN):	9.2 M	Portsmouth (GB):	3.3 M
Stockholm (S):	7.7 M	Piombino-Portoferraio (Elba, I):	3.1 M
Napoli-Capri/Porto d'Ischia (I):	6.7 M	Malmo (S)- Copenhagen (DK):	2.9 M
Puttgarden (D)-Rodvyhavn (DK):	5.4 M		

See Annex 8: SSS/IWW/Intermodality: Main EU Infrastructure/network by Mode and Member State

CRUISE LINERS:

100% of inter-continental passenger travelling made by sea until the 1950's (Airlines start then regular trans-Atlantic flights). Air transport took two billion passengers world-wide in 2005, cruise ships over **16 million passengers** (market mainly US and UK passengers-dominated). **4.8 million Europeans** took a cruise in 2005, 4.5 million in European waters, market to keep increasing. Cruise ships are important employment generators (~1 crew for each 2 passengers). World's largest cruise ship (April 2006): Freedom of the Seas (339 m LOA, 158,000gt, Aker Finnyards).

Major cruise line companies (source LR-Fairplay, database)

Company name	Founded	HQ, Ownership	No. of ships	Ships on order
1. Carnival Cruise Lines (Group)	1972	Panama, USA	70	+ 13
2. Royal Caribbean Cruises Ltd. (RCCL)	1990	USA, **Norway**	26	+ 2
3. Star Cruises	1993	Malaysia, Malaysia	23	+ 2
4. Holland America Line (Carnival group)	1976	**Netherlands**, USA	15	+ 2
5. Princess Cruises (P&O, Carnival group)	1994	USA, USA	11	+ 4
6. Norwegian Cruise Line	1987	**Bermuda-UK**, Malaysia	11	+ 2
7. Louis Cruise Lines	1987	**Greece, Cyprus**	9	-
8. Costa Crociere (Carnival group)	1926	**Italy**, USA	9	+ 2
9. Cunard Line (Carnival group)	1968	UK, USA	4	+ 2
10. Radisson Seven Seas Cruises	1995	USA, USA	4	-
11. Crystal Cruises	1990	USA, Japan	3	-
12. Aida Cruises (P&O)	1999	Bahamas, USA	1	-

2010 update on sea passengers figures (2009 data ferries and cruise ships; source: Shippax SE, Optimar)

	Numbers	4-y growth	Main markets
Ferry passengers world:	1.98bn	(+52%)	SE Asia (893mn), **EU (400-500mn)**, US (298mn)
Cars by ferry, world:	252mn	(+33%)	Baltic (85mn), US (74mn), Mediterranean (36mn)
Trailers by ferry, world:	32.2mn	(+11%)	North Sea (10mn), Medit. (9mn), Baltic (8mn)
Buses/coaches ferry, world:	677,000	(-21%)	Baltic (261,000), N.Sea (220,000), Medit. (101k)
Trips by ferries, world:	8 mn	-	Baltic (3.9mn), SE Asia (1.5mn), US (1.4mn)
Cruise ship passengers, world:	*19.6mn*	*(+17%)*	*Destin.: America (53%) Europe (34%) Asia(11%)*
			Nationality users: US(57%) EU(30%),other(13%)

Cruise, passenger ship accidents (main, peacetime): a relative safe record for EU* despite some tragic episodes

Costa Concordia (2012, IT, 32 deaths/4,252 on board);
Sea Diamond (2007, EL, 2 deaths/1,195 on board);
Express Samina (2000, EL, ferry, 82 deaths/534 people)
Estonia (1994, EE, ferry, 852 deaths/989 on board);
Scandinavian Star (1990, NO, fire, 158 deaths/~470);
Herald of Free Enterprise (1987, BE/uk, ferry, 193 deaths/539)
Heraklion (1966, EL, ferry, 217 deaths/364 on board)
Andrea Doria (1956, US/it, 52 deaths/1,706 on board)
Empress of Ireland (1914, Can./uk, 1,012 deaths/1,477)
Titanic (US/uk, 1912, 1,514 deaths/2,223 on board)

**As compared to millions of passengers and to negative safety record in other parts of the world; Increasing risks and concerns, however, from growing cruise/passenger ship tourism to Arctic/Polar waters (climate, SAR, hazards, practices): remains an Issue.*

See Annex 6 (Maritime Europe)**:** Main cruise passengers' ports in Europe; Cruise Tourism in Europe 2010

YACHTING, RECREATIONAL VESSELS:

Yachts and recreational vessels, and marinas, represent one of the highest growing sectors in the whole martime cluster, especially in Europe (Facts and figures for EU: **9 million vessels, 70% in the Mediterranean, about 5,000 marinas,** with 1.3 million mooring berths, sector generates over 30,000 jobs and €3.2bn just in Spain, €40bn in EU).

Super-yachts of over 24m of length represent a small segment of the market but the one generating largest added value and turnover, on shipbuilding, equipment, ports and services. International regulation, standards not always directly applicable, codes of safety issued by UK Maritime and Coastguard Agency (MCA), IT Administration/class society. A yacht is considered as such as long as it does not carry more than 12 passengers (considered otherwise as a passenger vessel). Super-yachts are often on charter from firms (commercial use). Sector enjoys a rather high growth.

Data on the recorded fleet of 372 super-yachts by main countries involved (source LR-Fairplay, data for July 2005)

Owner (residence): **UK**:89, **USA**:72, **Greece**:48, Monaco:24, Italy:18, France:14, Spain:12, CH:11, UAE:6, other:78.
Ship's flag/register: **Cayman Isl.**:130, **UK**:75, **Bermuda**: 29, Isle of Man:13, Bahamas: 10, Panama:8, other:107.
Shipbuilder: **NL**:124, **Italy**:109, **Germany**:31, UK:25, USA:10, South Africa:10, Australia:8, N.Zealand:8, other:47.
Ships on **order/under construction**: 104 (30 in Italy, 20 in NL, 9 in Germany, 7 in USA, 55 with Cayman Isl. Flag).
Largest yacht: 160m length, 11,600gt, being built in Hamburg by Blohm+Voss, unknown owner, with UAE flag.
Prices of super-yachts can easily equal those of standard merchant ships, or be even higher for largest vessels: €40M for 40-m yacht, or about €60M for 60-m (€1M/metre for largest ships). Mega-yacht fleet expected to double by 2015.

5. THE PORTS

5.1: World - **Distances from important ports in the world** ***(nautical miles from Le Havre, source France)***

Alexandria: 2,985	**Djibouti: 4,493**	**Los Angeles: 7,557**	**Port Said: 3,093**
Antofagasta, Chile: 6,778	**Dubrovnik: 2,635**	**Manila: 9,545**	**Pusan,Korea (via Suez): 10,663**
Auckland: 11,200	**Fremantle, Austr.: 9,395**	**Marseille: 1,876**	**Reunion: 6,800**
Baltimore: 3,380	**Galveston, US: 4,880**	**Mombasa: 6,135**	**Rio de Janeiro: 5,080**
Bangkok: 8,970	**Guayaquil: 5,492**	**Montevideo: 6,090**	**S.Juan Puerto Rico: 3,655**
Beyrouth: 3,200	**Haifa: 3,200**	**Montreal: 3,015**	**Shanghai: 10,400**
Bombay: 6,165	**Halifax, Can.: 2,515**	**New Orleans: 4,690**	**Suva, Fiji: 10,961**
Boston: 2,880	**La Havana: 4,190**	**New York: 3,080**	**Singapore: 8,160**
Buenos Aires: 6,210	**Ho Chi Minh City: 8,785**	**Noumea (v.Pan.): 11,625**	**Suez: 3,180**
Cape Town: 6,030	**Hong Kong: 9,595**	**Odessa, Ukr.: 3,314**	**Sydney (v.Suez): 11,370**
Cape Horn: 7,230	**Jakarta: 8,395**	**Oslo: 752**	**Valparaíso, Chile: 7,258**
Cartagena, Col.: 4,390	**Jedda: 3,805**	**Papeete (via Pan.): 9,180**	**Vancouver (v.Pan.): 8,727**
Colombo: 6,595	**Kaoshiung,Taiwan: 9,785**	**Philadelphia: 3,230**	**Veracruz, Mex.: 4,980**
Cristóbal, Pan.: 4,600	**Kobe: 10,890**	**Piraeus: 2,693**	**Yokohama (v.Suez): 11,115**
Dakar: 2,410	**Lagos: 4,120**	**Port Moresby,PNG: 10,663**	

Approximate duration of trip ***(for 1,000 nautical miles*):***
4.2 days at 10 knots; 2.8 days at 15 knots; 2.1 days at 20 knots
**1,000 nm is about half of the Mediterranean's length, or the distance from Algeciras to Messina.*

WORLD'S TOP PORTS by total throughput: Mt/Mteu/4-year trend in ( ) ***(Source: Port of Rotterdam 2011, data for 2010)***

1. Shanghai: 650/29 (+21%/+32%)	9. Hong Kong: 268/24 (+13%/+0%)	17. Nagoya: 186/- (-11%/-)
2. Ningbo-Zhoushan: 627/13 (+103%/-)	10. Busan: 262/14 (-/+17%)	18. Port Hedland-au: 179/- (-)
3. Singapore: 503/28 (+12%/+12%)	11. Qinhuangdao 257/- (-)	**19. Antwerp:** 178/8.5(+7%/+21%)
4. Rotterdam: 430/11 (+14%/+10%)	12. South Louisiana 246/- (-)	20. Chiba-TokyoB. 165/- (-)
5. Tianjin: 408/10 (+58%/-)	13. Houston 225/- (-)	Other main ports (containers):
6. Guangzhou: 400/13 (+32%/-)	14. Shenzhen 221/23 (-/+28%)	Dubai ports: - /12 (-/+30%)
7. Qingdao: 350/12 (+56%/-)	15. Rizhao 221/- (-)	Kaoshiung: - /9.2 (-/-8%)
8. Dalian: 301/- (+51%/-)	16. Los Angeles: 188/7.8 (-/-3%)	Port Klang-my: -/8.9 (-/-)

Main International Terminal Operators (containers) in 2006 (Capacity M TEU, market share, Le Lloyd/Drewry/3B)

1. PSA Ports/Temasek (Singapore): 41.2 (9.3%)	11. Hanjin Shipping (S.Korea): 4.5 (1.0%)
2. APM Terminals-Maersk (DK): 32.4 (7.4%)	12. SSA Marine (USA): 4.4 (1.0%)
3. HPH-Hutchinson (Hong Kong): 30.8 (7.0%)	13. NYK/Ceres Stevedoring (Japan): 3.9 (0.9%)
4. DP World (Dubai): 26.2 (5.9%)	**14.** MOL-Mitsui OSK Lines (Japan): 3.3 (0.8%)
5. Evergreen (Taiwan): 8.1 (1.8%)	**15. Dragados-ACS Group (Spain): 3.0 (0.7%)**
6. Cosco Group (China): 7.9 (1.8%)	16. "K" Line-Kawasaki (Japan): 3.0 (0.7%)
7. Eurogate (Germany): 6.6 (1.5%)	17. **Grup TCB-Barcelona (Spain): 2.9 (0.7%)**
8. HHLA-Hamburg (Germany): 6.0 (1.4%)	18. MSC (Switzerland): 2.7 (0.6%)
9. OOCL (Hong Kong): 4.8 (1.1%)	**19. CMA-CGM (France): 2.3 (0.5%)**
10. APL (Singapore): 4.6 (1.0%)	20. ICTSI (Philippines): 1.8 (0.4%)

Top 10: 169Mteu (38%); other intern.operators: 33Mteu (8%); local operators: 240Mteu (54%); total world: 442Mteu

Ranking Review, World's TOP-10 *(from Drewry's **2012 Annual Review**)*, in Mteu, 5-year growth, market share:

1. PSA: 47.6 (+16%, 8.1%)	**5. COSCO:** 15.4 (+95%, 2.6%)	**8. Evergreen:** 6.9 (-15%, 1.2%)
2. HPH: 43.4 (+41%, 7.4%)	**6. TIL** (Term.Inv.Ltd.~MSC): 12.1 (- , 2.1%)	**9. Eurogate:** 6.6 (+0%, 1.1%)
3. DPWorld: 33.1 (+5%, 5.6%)	**7. China Shipping** (Term.Devpt.): 7.8 (-, 1.3%)	**10. HHLA:** 6.4 (+7%, 1.1%)
4. APM: 32.0 (-0%, 5.4%)	*Top 10 Terminal Operators: 211Mteu (+25% 5-y. growth, 36% market share)*	

5.2: Europe

TOP EU PORTS by total throughput: in Mt/Mteu/4-year trend in () *(Source: Port of Rotterdam 2011, data for 2010)*

1. Rotterdam: 430/11 (+14%/+10%)	8. Bremen: 69/4.9 (+6%/+9%)	15.Constantza: 48/0.6 (-16%/-)
2. Antwerp: 178/8.5 (+7%/+21%)	9. Valencia: 64/4.2 (+64/+62%)	16. Dunkirk: 43/- (-25%)
3. Hamburg: 121/7.9 (-10%/-12%)	10. Grimsby/Imm. 56/- (-)	17.Southampton: 39/1.6 (-/+7%)
4. Amsterdam: 91/- (+8%)	11. Genoa: 51/- (-7%)	Other main ports (containers):
5. Marseille: 86/- (-14%)	12. Zeebrugge: 50/2.5 (+28%/+47%)	Felixstowe: -/3.4 (-/+13%)
6. Algeciras: 71/2.8 (-1%/-15%)	13. London: 48/- (-8%)	Gioia Tauro: -/2.9 (-/+0%)
7. Le Havre: 70/2.4 (-5%/+14%)	14. Barcelona: 48/1.4 (+4%/-39%)	Marsaxlokk: -/2.4 (-/-)

Main EU Ports by MS: (with >1Mt or >*1Mpass.*/year, top in bold, total in (), 82 TEN-T-selected ports* underlined)

Belgium (5/8): **Antwerp**, Brugge-**Zeebrugge**, Ghent, Liège, Ostend. (4)

Denmark (16/90): Aabenraa, Aalborg, Aarhus, Asnaesvaerkets Havn, ***Copenhagen***, Ensted, Esbjerg, Fredericia, ***Frederikshavn***, Grenaa, ***Helsingor***, Hirtshals, Kalundborg, Odense, ***Rodbyhavn***, Ronne. (2)

Finland (20/79): Hamina, Hanko, ***Helsinki***, Inkoo, Jakobstad, Kaskinen, Kemi, Kokkola, Kotka, Loviisa, Mariehamn, Naantali, Oulu, Pori, Raahe, Rauma, ***Turku***, Uusikaupunki, Vaasa, Veitsiluoto. (4)

France (18/103): Bastia, Bayonne, Bordeaux, Boulogne-sur-Mer, Brest, ***Calais***, Cherbourg, Dieppe, **Dunkerque**, La Rochelle-Pallice, **Le Havre**, Lorient, **Marseille**, **Nantes-St.Nazaire**, Rochefort & Tonnay-Charente, **Rouen**, Sète, St. Malo. (7)

Germany (17/62): Brake, Bremen, **Bremerhaven**, Brunsbüttel, Bützfleth, Cuxhaven, Duisburg/Ruhrort, Emden, (5) **Hamburg**, Kiel, **Lübeck**, Nordenham, ***Puttgarden***, Rendsburg, **Rostock**, **Wilhemshaven**, Wismar.

Greece (9/105): Agioi Theodoroi, Alexandrapoulis, Aspropyrgos, Chalkis, *Igoumenitsa*, Pachi, Patras, **Piraeus**, Thessaloniki, Volos. (4)

Ireland (6/49): Cork, Drogheda, Dublin, Limerick (Shanon Foynes Port), Rosslare Europort, Waterford. (3)

Italy (28/106): Ancona, **Augusta**, Bari, Brindisi, **Cagliary**, ***Capri-Porto d'Ischia***, Chioggia, Civitavecchia, Catania, **Genoa**, **Gioia Tauro**, **La Spezia**, Livorno, Marina di Carrara, ***Messina***, Melilli Oil Terminal (in port of Augusta), Monfalcone, ***Napoli***, Palermo, ***Piombino, Porto Ferraio/Elba***, Ravenna, ***Reggio Calabria***, Salerno, Savona-Vado, **Taranto**, **Trieste**, Venezia. (11)

Netherlands(12/42): Alkmaar, **Amsterdam**, Delfzijl, Dordrecht, Groningen, Ijmuiden, **Rotterdam**, Scheveningen, Schiedam, Terneuzen, Vlissingen, Zaanstad. (4)

Portugal (6/16): Aveiro, Leixoes-Oporto, Lisbon, Setubal, Sines, Viana do Castelo. (3)

Spain (31/99): Alcúdia, **Algeciras/bahía**, Alicante, Almería-Motril, Avilés, **Barcelona**, Bilbao, Cádiz/bahía, Carboneras, Cartagena, Castellón, Ceuta, Ferrol-San Ciprián, **Gijón**, Huelva, La Coruña, ***Las Palmas/Can.I.***, Málaga, Marín-Pontevedra, Melilla, Motril, Palma/Mallorca, Pasajes, Sagunto, Santander, Sevilla, ***Sta.Cruz de Tenerife/Can.I.***, Tarragona, Torrevieja, **Valencia**, Vigo. (11)

Sweden (26/134): Brofjorden, Bulkhamnen/Helsingborg, Gävle, **Göteborg**, Halmstad, ***Helsingborg***, Kapellskär, Karlshamn, Karlstad, Köping, Landskrona, Luleå, ***Malmö***, Oxelösund, Skellefteå, Stenungsund, (5) ***Stockholm***, Sundsvall, Uddevalla, Umeå, Trelleborg, Varberg, Västerås, Visby, Wallhamn, Ystad.

UK (51/287): Aberdeen, Belfast, Blyth, Boston, Braefoot Bay, Bristol, Cardiff, Cromarty Firth, ***Dover***, Dundee, Falmouth, **Felixstowe**, **Forth Ports** (Edinburgh), Fowey, Glasgow/Clyde, Goole, Great Yarmouth, **Grimsby**, Harwich, Heysham, Holyhead, Hound Point, Hull, Hunterston, **Immingham**, Ipswich, King's Lynn, Larne, Lerwick, Liverpool, **London**, Londonderry, Manchester Ship Canal, Medway Ports, **Milford Haven**, [Newport], Peterhead Bay Harbour, Plymouth, Port Talbot, ***Portsmouth***, Ramsgate, Scapa Flow, Sheerness, Shoreham, **Southampton**, Sunderland, **Tees & Hartlepool**, Tetney Terminal, Thamesport, Tilbury, Tyne, Warrenpoint. (14)

NEW EU-MEMBER STATES: (from 1.5.04 and from **1.1.07**)

Cyprus (1/16): Limassol. (1)
Estonia (4/16): Tallinn, Kuivastu, Muuga-Port of Tallinn, Virtsu, Kunda. (1)
Latvia (2/10): Riga, Ventspils. (2)
Lithuania (1/2): Klaipeda. (1)
Malta (2/2): Marsaxlokk, Valletta. (2)
Poland (4/10): Gdansk, Gdynia, Swinoujscia, Szczecin. (4)
Slovenia (1/3): Koper. (1)
Bulgaria (2/7): Bourgas, Varna. (1)
Romania (8/26): Braila, **Constantza**, Calarasi, Galatz, Giurgiu, Medgidia, Orsova, Tulcea. (1)

(Total EU-27: 270 / 1,272)

*ports or port systems (EU-27: 91)

EU CANDIDATE COUNTRIES, ICELAND, WEST BALKANS AND NORWAY (cont'd, main Merchant Ports):

Norway (26/206):	Aaheim, Aalesund, **Bergen**, Borg Havn IKS, Drammen, Egersund, Floro, Glomfjord, Grenland Harbour, Haavik, **Haugesund**, Kristiansand, Kristiansund, Larvik, Maaloy, Mo I Rana, Molde, **Mongstad**, Moss, Narvik, **Oslo**, Risavika, Stavanger, Sture Oil Terminal, Tromso, Trondheim.
Turkey (25/119):	Aliaga, Ambarli, Bandirma, Borusan, Botas (Ceyhan) Oil Terminal, Derince, Diler-Hereke, Diliskelesi, Eregli, Gemlik, Giresun, Haydarpasa, Isdemir, Iskenderun, Istanbul, Izmir, Martas, Mersin, Nemrut Bay, Port Adeniz, Samsun, Tekirdag, Toros, Yarimca.
Croatia (3/37):	Omisalj, Rijeka, Split.
Iceland (2/43):	Grundartangi, Reykjavik.
Montenegro (1/6):	Bar.
Albania (1/6):	Durres.
Bosnia-Herzegovina (-/-):	(no merchant port along country's 20km of coastline).

Eurostat figures 2005 on EU Short Sea Shipping (report December 2006):
Main seas: 1. **North Sea** (29% of traffic), 2. Mediterranean (26%), 3. Baltic (21%), 4. Atlantic (14%), 5. other (10%).
Main countries, ro-ro (Mt): **UK**-67, **SE**-40, **DE**-34, IT-28, BE-25, FR-23, DK-21, EL-16, NL-15, ES-14, FI-13, IE-9.
Traffic containers (M teu): **DE**-4.7, **IT**-4.2, **ES**-3.6, NL-3.5, UK-3.4, BE-2.3, FI-1.3, FR-1.3, EL-1.2, IE-1.0, SE-1.0.

EU's main maritime transport partners (by tonnage of goods handled in EU ports in 2008, Eurostat 2010 report):
1. RUSSIA (238.6 Mt); **2. USA** (182.6 Mt); **3. BRAZIL** (150.4 Mt); 4.NORWAY(115.2 Mt); 5.EGYPT(100.8 Mt); 6. CHINA (89.4 Mt); 7.TURKEY (81.7 Mt); 8.LIBYA (69.9 Mt); 9. S.AFRICA (63.9 Mt); 10.ALGERIA (51.3 Mt).

See Annex 9: Ports' Fees, Port Performance; Emissions; trans-oceanic Liner Shipping routes; Arctic

THE **EU EXTERNAL BORDERS**, MAINLY MARITIME
(Figures: Sea Borders km + Land Borders km, Border Control Points in ( ) +No. main Airports, intern./ext. EU in ( ))

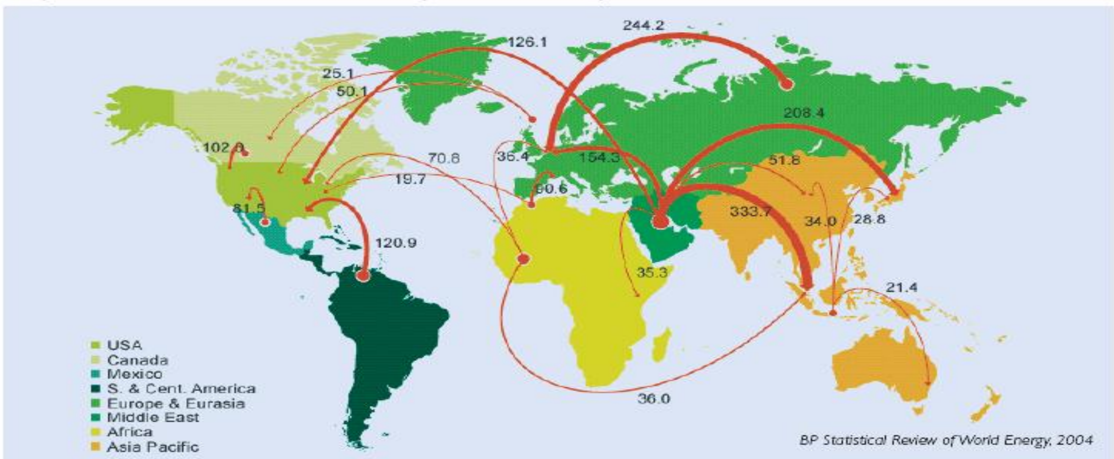
Eastern borders	**Southern borders**	**North-West/Atlantic borders**
FI: 1,250 (64) +2,042 (23) +17(1)	**EL:** 16,000 (52)+1,248(13)+34(2)	**FR:** 5,500 (77) + 0 (0) + 45 (6)
EE: 339 (35) + 500e (5) + 2 (1)	**CY:** 648 (7) + - (-) + 2 (1)	**UK:** 12,429 (70e)+ 0 (0) + 37 (8)
LV: 496 (9) + 437 (26) + 4 (0)	**SI:** 48 (3) + 670 (44) + 3 (0)	**IE:** 1,448 (20e)+ 0 (0) + 9 (1)
LT: 138 (8) + 906 (31) + 2 (0)	**IT:** 7,996 (108)+ 0 (0) +31(2)	**BE:** 66 (5) + 0 (0) + 5 (2)
PL: 395 (18) +1,185 (29) + 8 (1)	**MT:** 253 (3) + 0 (0) + 1 (0)	**NL:** 451 (12) + 0 (0) + 4 (1)
SK: 0 (1) + 97 (86) + 3 (0)	**FR:** (see Atlantic borders)	**DE:** 3,338 (115)+ 0 (0) + 23 (7)
HU: 0 (1) +1,104 (54)+ 3(1)	**ES:** 7,785 (31) + 88 (4) + 42 (8)	**DK:** 7,300 (104) + 0 (0) + 8 (1)
Subtotal: 2,618(136)+6,271(254)+39(4)	**PT:** 2,148 (24) + 0 (0) + 15 (2)	**SE:** 2,700 (51) + 0 (0) + 41 (1)
	Subtotal: 34,878(228)+2,006(61)+128(15)	***Subtotal:33,232(454)+0(0)+172(27)***

"Central" Europe (no ext.borders)
AT: 0 (0) + 0 (0) + 6 (1)
CZ: 0 (0) + 0 (0) + 3 (1)
LU: 0 (0) + 0 (0) + 1 (1)
Subtotal: 0(0)+0(0)+10(3)

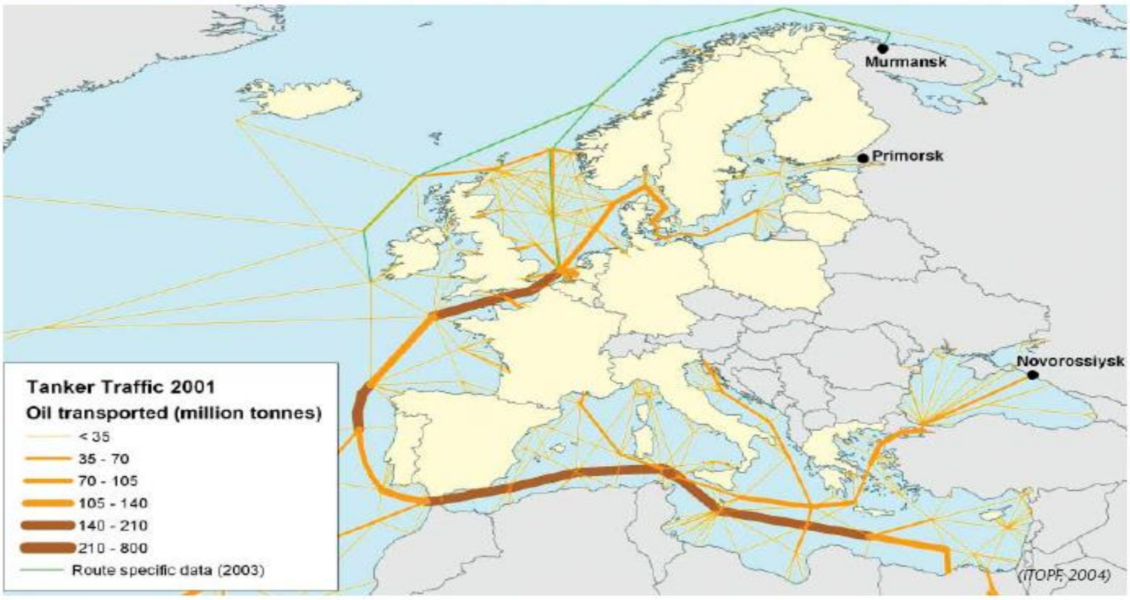
Total EU external borders: 70,728km-sea (818 BCPs)
+ 8,277km-land (315 BCPs) + 349 main airports (49 international/ext.EU)
*Over successive enlargements, the EU is gradually taking the shape of a large peninsula, surrounded by seas (**maritime borders 90%**) and navigable canals.*

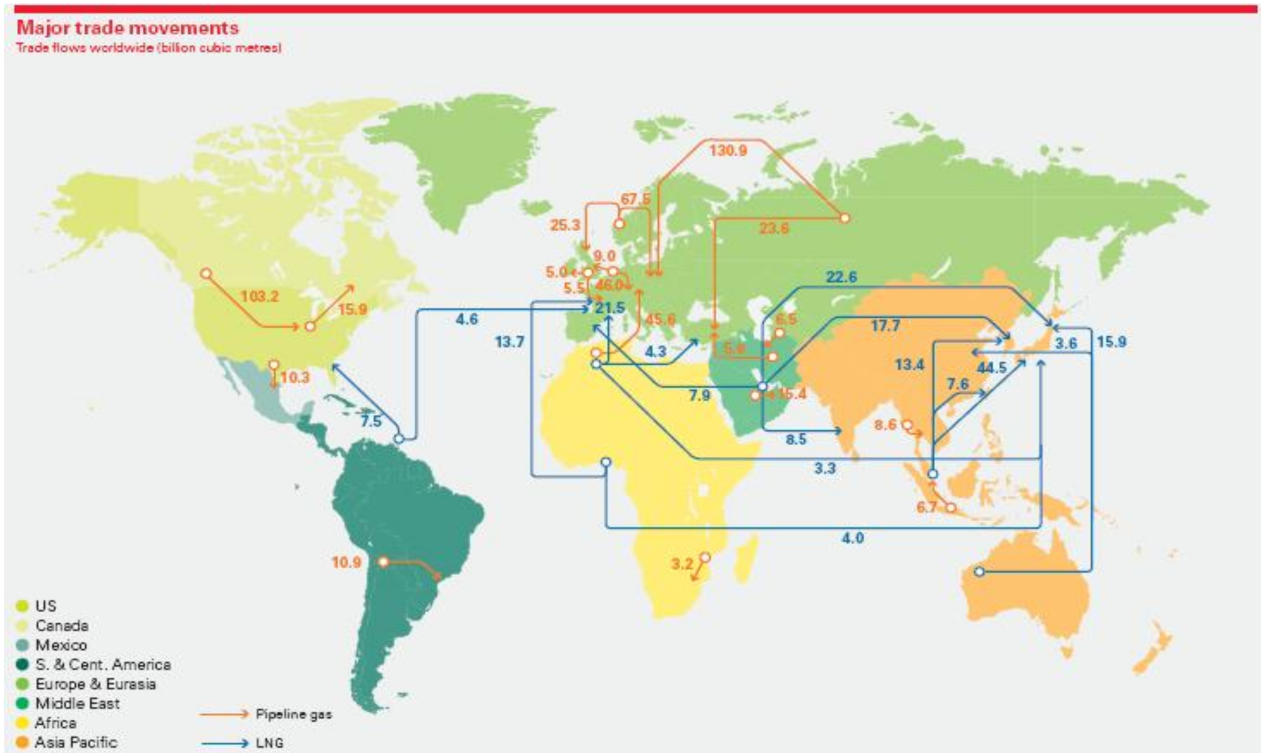
6. THE TANKERS' ROUTES: OIL AND GAS (LNG); BULK CARRIERS

Major Oil Trade Movements: 2003 (million tonnes)



Indicative Tanker Traffic and Volume of Oil Transported in 2001





LNG OUTLOOK (2011 data, from BP report 2012)	**2011**	**2005**	**2002**	**1995**
Share gas in hydrocarbons cons. (Mtoe), world:	42% (38% EU)	39% (38% EU)	39% (36% EU)	37% (-)
Share LNG in total gas imported or exp., world:	32% (20% EU)	26% (15% EU)	26% (14% EU)	- (-)

World's main LNG importers (in bcm):		**World's main LNG exporters** (in bcm):			
1. Japan	107.0 (+40% last 6 years)	1. Qatar	102.6 (+755%)	8. Russia	14.4 (-)
2. EU-27*	**82.5 (+93%)**	2. Malaysia	33.3 (+17%)	9. Oman	10.9 (+18%)
3. South Korea	49.3 (+62%)	3. Indonesia	29.2 (-7%)	10. Brunei	9.4 (+3%)
4. China/Taiwan	32.9 (+140%)	4. Australia	25.9 (+74%)	11. Yemen	8.9 (-)
5. India	17.1 (+183%)	5. Nigeria	25.9 (+115%)	12. Egypt	8.6 (+24%)
6. USA	10.0 (-44%)	6. Trinidad-Tob.	18.9 (+35%)	13. UAE	8.0 (+12%)
7. Turkey	6.2 (+27%)	7. Algeria	17.1 (-33%)	14. Eq.Guinea	5.3 (-)

EU-27: *7 out of 22 coastal EU Member States have infrastructure in place to import LNG (some other to join soon): UK: 25.3, ES: 24.2bcm, FR: 14.6, IT: 8.7, BE: 6.6, PT: 2.0(e), EL: 1.0(e) (NL and DE have LNG investment plans).*

See Annex 10: Oil and Gas: Main Producers/Exporters and Consumers/Importers

MAIN PORTS of Export and Import of Oil and Gas (LNG), world-wide

OIL EXPORTS: Russian oil: Novorossiysk (46.9Mt), Primorsk (12.2Mt), Ventspils,LV (10.5Mt), Odessa,UA (10.5Mt), Tuapse (5.1Mt), Butinge,LT (3.2Mt), Murmansk (new pipeline).
Gulf/Caspian oil: Ras Tanura,SA (-), Yanbu,SA (95Mt), Kharg Island,IR (-), Mina Al Ahmadi,KW (40Mt), Botas/Ceyhan,TR (-), Fujairah,AE (10Mt), Mina Al Bakr,IQ (-)
Mediterranean: Arzew,DZ (-), Ras Lanuf,LY (-)
North Sea: Mongstad,NO (65Mt), Teesport,UK (45Mt), Forth Ports,UK (40Mt), Offshore platforms,NO-UK
Americas: Valdez,Alaska,US (domestic), José Terminal,VE (-), Cayo Arcas Terminal,MX (-)
Africa: Escravos Oil Terminal,NG (100Mt)

OIL IMPORTS: EU-15: Rotterdam,NL (145Mt), Marseille (65Mt), Le Havre (45Mt), Wilhemshaven (40Mt), Trieste (37Mt), Antwerp (34Mt), Milford Haven,UK (32Mt), Augusta (31Mt), Cagliary-Sarroch (26Mt), Immingham,UK (26Mt), Southampton (25Mt), St.Nazaire (20Mt), Goteborg (19Mt)
USA: US Gulf Lightering Zones, Los Angeles (-), Corpus Christi (75Mt), Philadelphia (65Mt), Tampa (46Mt)
Asia-Pacific: Chiba,JP (60Mt), Yokohama,JP (-), Nagoya,JP (-), Kolkata/calcuta,IN (-), Dalian,CN (-), Qingdao,CN (-), Ulsan,KR (45Mt), Geelong,AU (40Mt), Fremantle,AU (30Mt)

GAS-LNG EXPORTS *(152.1 bcm in 2002):*
Gulf/Caspian: Ras Laffan,QA (19.3), Qalhat,OM (9.0), Das Island,AE (7.4)
Mediterranean: Arzew,DZ (23.7), Skikda,DZ (7.9), Marsa El Brega,LY (3.6)
Asia-Pacific: Bontang B.,ID (30.2), Blang Lanc.,ID(16.6), Bintulu,MY (21.0), Withnell Bay,AU (10.3), Lumut,BN (9.2)
Africa: Bonny Island,NG (12.2)
Americas: Point Fortin,TT (8.7), Kenai-Alaska,US (1.8)
Potential and new flows: LNG terminals from Egypt, Yemen, Iran, Norway, Venezuela, Sakhalin-Ru, PNG.

GAS-LNG IMPORTS *(152.1 bcm*):
EU-15: Barcelona (10.9), Nantes-St.Nazaire (10.6), Marseille (4.7), Zeebrugge (5.3), Panigaglia/Spezia (3.7), Cartagena (3.7), Huelva (3.7), Revithoussa Islet (2.2).
Japan: Sodegaura (39.9), Chita-Nagoya (33.4), Futtsu (28.1), Higashi-O.-Kawasaki (21.3), Senboku (20.2), Negishi (16.5), Nigata (12.2),Yokkaichi (12.2), Himeji-LNG (11.6)..
Other Asia: In-Chon,KR (34.8), Pyeong-Taek,KR (23.1), Tong-Yeong,KR (11.2), Yung-An,TW (6.3).
Americas: Lake Charles,US (6.9), Elba Island,US (4.9), Everett,US (4.7), Penuelas-PR (4.0).
Other: Marmara Ereglisi,TR (6.5).

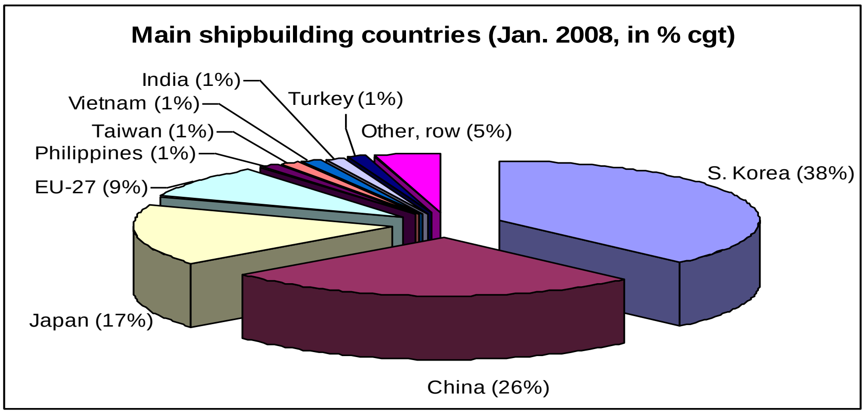
See Annex 11: The Negative Record: Oil Spills Disasters

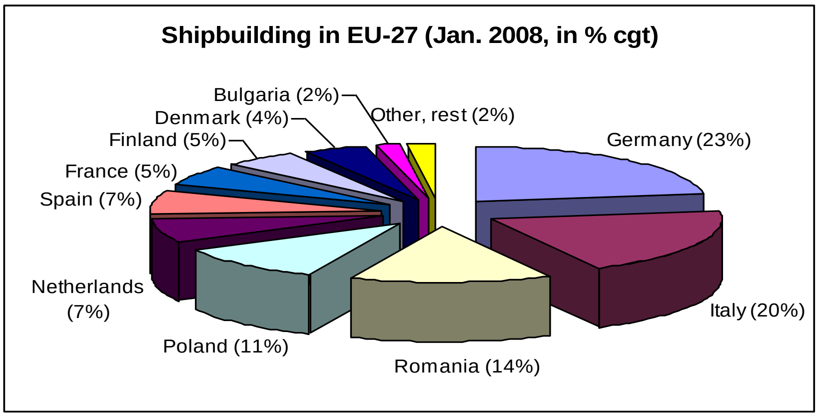
See Annex 12: Maritime Safety and Ship Maintenance

The main (world) routes for Bulk Carriers for the three main bulks (*source: Unctad report 2009*)

IRON:	from: 1.**Australia** (37% total exports); 2.**Brazil** (33%); 3.**India** (12%); 4.S.Africa (4%); other (14%)
	to: 1.**China** (53% total imports); 2.**Japan** (17%); 3.**EU** (15%); S.Korea (6%); other (9%)
COAL:	from: 1.**Australia** (33% total); 2.**Indonesia** (25%); 3.**Colombia** (9%); S.Africa (8%), other (25%)
	to: 1.**Japan** (26%); 2.**EU** (25%); 3.**S.Korea** (12%); 4.India (8%); other (29%)
GRAIN:	from: 1.**USA** (44%); 2.**Argentina** (11%); 3.**Canada** (9%); 4.EU (7%); 5.Australia (5%); other (24%)
	to (importing regions): 1.Asia (28%); 2.Latin America (23%); 3.Africa (20%); other (29%).

7. THE SHIPBUILDING SECTOR





EU/world shipbuilders: Ships on order/under construction, tonnage in Mcgt *(LR-F,Jan.08 ,2004 in ( ),bold:growing)*

A. European Union (EU-27):	***B. Other Europe:***	***C. Rest of the World:***	
1. Germany: 3.99Mt-191 (112)	**Turkey: 2.26Mt-267 (83)**	**S.Korea:74.67Mt-2281(933)**	**Argentina: 0.13Mt-10 (4)**
2. Italy: 3.47Mt-97 (54)	Croatia: 1.23Mt-61 (71)	**China: 52.31Mt-3069 (616)**	**Canada: 0.12Mt-8 (1)**
3. Romania: 2.53Mt-152 (80)	**Ukraine: 0.67Mt-59 (40)**	**Japan: 32.96Mt-1482 (922)**	**Australia: 0.09Mt-16 (14)**
4. Poland: 1.91Mt-119 (94)	**Norway: 0.62Mt-62 (6)**	**Philippines:2.70Mt-106(21)**	**UAE: 0.09Mt-6 (4)**
5. Netherlands: 1.25Mt-166 (84)	**Serbia: 0.02Mt-4 (3)**	**Taiwan: 2.41Mt-67 (43)**	**Chile: 0.04Mt-8 (2)**
6. Spain: 1.21Mt-111 (35)	`	**Vietnam:2.36Mt-210(23)**	**Tunisia: 0.03Mt-8(-)**
7. France: 0.96Mt-11 (10)		**India: 2.34Mt-244 (30)**	**Sri Lanka: 0.03Mt-6 (2)**
8. Finland: 0.95Mt-9 (6)	**EU-27: 17.70Mt-975 (555)**	**Brazil: 1.10Mt-64 (43)**	**Bangladesh: 0.02Mt-5 (2)**
9. Denmark: 0.79Mt-20 (19)	*(8.9 % world)*	**USA: 0.90Mt-95 (61)**	Saudi Arabia: 0.01Mt-2 (1)
10. Bulgaria: 0.28Mt-30 (19)	**"Europe": 22.50Mt-1428 (758)**	**Russia: 0.83Mt-80 (46)**	Egypt: 0.01Mt-1 (6)
11. Slovakia: 0.11Mt-24 (26)	*(11.4 % world)*	**Indonesia:0.80Mt-99(19)**	Hong Kong: 0.01Mt-1 (1)
12. Portugal: 0.08Mt-10 (3)		**Iran: 0.66Mt-37 (14)**	**Israel: 0.01Mt-1(-)**
13. Czech Republic: 0.04Mt-17 (5)		**Singapore: 0.58Mt-64 (29)**	**N.Korea: 0.01Mt-1(-)**
14. Lithuania: 0.04Mt-8 (2)		**Malaysia: 0.21Mt-39 (7)**	
15. Greece: 0.03Mt-3 (3)			**Total world:**
16. Sweden: 0.03Mt-2 (-)			**198.01Mt-9456 (3615)**
17. Belgium: 0.02Mt-3 (-)	**Value of tonnage completed, 2007** (source CESA):		
18. Latvia: 0.01Mt-2 (3)	1.S.Korea: €16.1bn, **2.EU/CESA: €15.2bn**, 3.China: €12.2bn, 4.Japan:€10.6bn		

Orders by countries (owners/operators)**:** EU:**42%** (DE-1228, EL-848, DK-351, UK-340, NL-308, IT:270,FR-141..); China-HK:**8%** (525+262), Japan:**6%** (597), Norway:**4%** (416), Turkey:**4%** (362), SKorea:**4%** (331), US:**3%** (269)..
By ship types: Tankers (2925),Bulk carriers (2449),Cont'ships (1494),Gral.cargo (978),Pass./ro-ro (265),Other (1345).
Shipowners/operators buying from **own yards**: Japan **79%**, China/HK **74%**, S.Korea **71%**, US **35%**, EU-27 **17%**
Destination of EU-built ships: 76% to EU-27; rest sold to Norway (99), US (41), Turkey (15), Russia (15), UAE (10), other.

CRISIS AND THE FLEET OVERCAPACITY PROBLEM:

The **orderbook** of the European and the world's **shipbuilding yards** have to face, apart from the problem of receiving **no new orders** since the beginning of financial **crisis** in September 2008, the **global fleet overcapacity problem**. Supply of ships largely exceeds demand for merchant ships, not only the present ones but also the future ones, as the orderbook now is five times bigger now than in 2002, 2001 and 2000 (according to DNV, who does not foresee any balance recovery until 2014).

Main ship types in the current global orderbook are the following: **1) Bulk carriers** (with 292 Mcgt of global orders out of the total 540 Mcgt –means 64% increase of the present fleet-, 34% of which from EU/EEA owners, mainly EL but also DE, IT, DK); **2) Tankers** (164 Mcgt of global orders –means 32% increase of the present fleet-, 32% of which from EU/EEA owners, mainly EL but also IT, NO).
3) Containerships (65 Mcgt of global orders -means 40% increase of the present fleet, 12% of which currently laid up-, 48% of which from EU/EEA owners, mainly from DE but also FR and DK).

Current shipbuilding crisis is expected to bring a strong decline in volume of new ship deliveries as follows (for Europe and its main competitors, for years 2010, 2011 and 2012 as compared to the last 3 years' average output: **China:** 550%, 439%, 158%; **South Korea:** 275%, 248%, 88%; **Japan:** 162%, 137%, 79%; **Europe/CESA:** 102%, 56%, 23%! *(data source: CESA/LR-Fairplay, ECSA, Sept.'09)*

See Annex 13: Main EU Shipyards

See Annex 14: Maritime Equipment / Engine Building

Orderbook of main EU shipbuilding countries, by ship types and MSs, '000s CGT (*source: Ecorys' 2009 Study on Competitiveness of European Shipbuilding Industry, IKEI/CESA, with 2006 data)*

Vessel type	**DE**	**IT**	**NL**	**PL**	**DK**	**FR**	**FI**	**ES**	**RO**	**Total**
Full container	2,203	-	409	769	1,053	-	19	77	259	4,789
Passenger	1,184	1,757	29	-	-	946	675	-	-	4,591
Other non-cargo	101	132	669	83	12	14	-	313	184	1,508
General cargo	97	-	646	31	-	-	-	177	164	1,115
Ferries	199	501	10	11	-	4	280	68	22	1,095
Product-ch.tankers	106	87	231	24	-	-	-	138	203	789
Ro-ro vessels	199	-	-	148	-	-	-	63	-	410
Car carriers	-	-	-	403	-	-	-	-	-	403
LPG carriers	127	15	-	70	-	-	-	-	14	226
LNG carriers	-	-	15	16	-	73	-	68	-	172
Combined carriers	-	-	33	71	-	-	-	-	-	104
Bulk carriers	13	-	83	-	-	-	-	-	-	96
Fishing vessels -	-	15	-	17	-	-	19	-	51	
Crude oil tankers	-	-	-	-	-	-	-	-	51	51
Reefers -	-	-	-	-	-	-	-	-	-	
Total orderbook	4,229	2,492	2,140	1,626	1,082	1,037	974	923	897	15,400

Top European shipbuilding yards *(by orderbook, at 1.1.09, in '000s CGT, source: Carkson-Ecorys)*

	Shipyard	*MS*	*rank world*	*orderbook*	*yard capacity*
1.	Meyer Werft	DE	38	1,155	(269)
2.	Fincantieri (Marghera/Monfalcone)	IT	74/88	1,033	(457)
3.	Daewoo-Mangalia	RO/kr	41	1,025	(128)
4.	STX Europe (St. Nazaire/Helsinki)	FR/FI/kr	70/104	987	(607)
5.	Odense Lindo* (Maersk)	DK	84	505	(302)
6.	Szczecin Nowa	PL	89	473	(191)
7.	Santierul Naval	RO	92	468	(90)
8.	Brod. Uljanik	HR	114	324	(154)

**to be closed down gradually until final orders delivered in Feb. 2012, group has announced.*

Other shipbuilding yards in Europe's top-20, *by orderbook (with less than 300,000 cgt):*
Flensburger (de), J.J.Sietas (de), Volkswerft (de), Wadan Yards (de), Barreras (es), Brod.3 Maj (hr), Sestri-Cantiere (it), Damen (nl), IHC Merwede (nl), Stocznia Gdynia (pl), Celiktekne (tr), Sedef Gemi End. (tr).

World's top-20 shipbuilding countries in 2010, by deliveries, in tonnage Mdwt (*source:Unctad 2011 report*)

1. China	62.2 Mdwt	(1,434 ships)	8. Croatia	0.53 Mdwt	(16)	**15. Netherlands**	**0.17 Mdwt**	**(29)**
2. South Korea	46.9	(526)	**9. Germany**	**0.52**	**(36)**	16. India	0.14	(37)
3. Japan	32.6	(580)	10. Turkey	0.50	(94)	**17. Poland**	**0.12**	**(52)**
4. Philippines	1.9	(34)	11. USA	0.33	(76)	**18. Italy**	**0.12**	**(34)**
5. Romania	**0.9**	**(43)**	12. Russia	0.25	(30)	**19. Bulgaria**	**0.10**	**(6)**
6. Viet Nam	0.8	(132)	**13. Spain**	**0.23**	**(56)**	*(Taiwan No. 8 included in China)*		
7. Denmark	0.8	(8)	14. Indonesia	0.18	(135)	**EU-27(est.)= 3.1 Mdwt**	**(~300 ships)**	

World's top-3 in Mdwt represents up to 95% of world's total. EU comes No.4 (but gt/cgt, turnover high).

World shipbuilding: Market leaders by ship type (source: Germany's Shipbuilding and Ocean Industries Association):

Oil and chemical tankers:	**South Korea, world leaders**
Products tankers:	**China, world's No. 1**
LNG tankers:	**South Korea, No. 1 (has taken over from Japan)**
Bulk carriers:	**Japan No.1 (but China is advancing strongly behind)**
Containerships:	**South Korea No. 1 (then China, Japan and Germany/EU for smaller types)**
Ro-ro ships:	**Japan No. 1, world leaders**
Ferries and passenger ships:	**EU No. 1 (100% market share for large cruise vessels, Italy takes the lead)**

Main shipbuilding names and giant yards, by area:

South Korea: Hyundai Heavy Industries, Daewoo Shipbuilding, Samsung HI, STX Shipbuilding.
Japan: Mitsubishi HI, Kawasaki Shipbuilding, Mitsui, Oshima Shipbuilding, Universal Shipbuilding.
China: China State Shipbuilding Corp(CSSC)+China Shipbuilding Industry Corp(CSIC)=2/3 of total
Europe/EU: Fincantieri (IT), Aker yards (Nor/FI/FR), Meyer Werft (DE) = world's big-three, cruise ships.

Apart from large cruise ships and ferries, Europe's shipbuilding is specialised in complex and high added value ships with sophisticated technology. As an illustration, Germany, as EU's main shipbuilding country (in cgt) is specialised, by this order, in cruise ships, containerships, ro-ro/cargo ships (of up to 130m long), products-chemical tankers and mega-yachts (without counting the key sector of naval ships and submarines). Europe excels on marine equipment, which accounts for 70% of the value of a merchant ships (mainly engines, see hereunder, and electronic equipment)

World's top marine engine builders (ranking by ships on order/under construction, source LR-Fairplay, July 2006):

1. Caterpillar (USA/Germany): 851
2. Hyundai HI (South Korea): 544
3. Wärtsila (Finland): 489
4. Mitsui (Japan): 325
5. Rolls-Royce (UK): 273
6. HSD (South Korea): 269
7. MAN (Germany): 236
8. Hudong Shanghai (China): 217
9. Fincantieri Grandi Motori (Italy): 128
10. Hitachi Zosen (Japan): 122

Other names: Mitsubishi, Kobe, Kawasaki, Diesel United, Cummins (US) MTU, Zaklady, etc.

Europe's global leadership in the sector of Mega-yachts (luxury yachts >24m, 79ft, of length)

(Source: Ecorys study on Competitiveness of European shipbuilding industry, Showboats International)

The mega-yacht industry has grown significantly over the last decade, with the number of units built worl-wide having tripled. The still limited number of mega-yachts yearly constructed (over 900 in 2008) contrasts with the high turnover or money spent in that industry, estimated at around $10bn, which gives an average of about $11 million the average cost of a luxury yacht. EU holds the biggest market share of the mega-yacht industry with over 2/3 of world orders (see below) with largest yacht builders being concentrated in Italy (global leader), but also in NL, DE and UK.

Top-10 mega-yacht building countries *(Global Orderbook 2008, Showboats Int.), by total length*

	Country	Total length (m)	No.of projects	Av.length (m)	Market share (units)
1.	Italy	15,080	427	35	47%
2.	USA	4,054	104	39	11%
3.	Netherlands	3,196	65	49	7%
4.	Germany	2,780	31	90	3%
5.	Taiwan	2,093	71	29	8%
6.	UK	1,762	57	31	6%
7.	Turkey	1,589	38	42	4%
8.	Australia	811	21	39	2%
9.	China	674	23	29	3%
10.	New Zealand	527	13	41	1%
Rest of the World			*66*		*8% (incl. 3% Europe)*
World Total			***916***		***100%***

Top-10 global luxury yacht builders *(2008 orderbook by total length on order)*

	Name	Country	Total length (m)	Units	Av.length (m)
1.	Azimut-Benetti	Italy	3,603	98	37
2.	Ferretti Group	Italy	2,845	89	32
3.	Rodriguez Group*	France	1,506	47	32
4.	Lürssen	Germany	1,400	14	100
5.	Sunseeker Intern.	UK	1,386	48	29
6.	FIPA Group	Italy	1,304	40	27
7.	Sanlorenzo	Italy	1,059	35	30
8.	Trinity Yachts	USA	990	19	52
9.	Camuzzi Nautica	Italy	965	23	42
10.	ThyssenKrupp	Germany	884	10	88
Subtotal top-10				***423***	*(46% of world construction)*

Others: Heesen (NL), Tecnomare (IT), Baglietto (IT), Palmer&Johnson (USA), Blohm&Voss (DE), Peters-Schiffbau (DE), Bremer Vulkan (DE), Corsair Yachts (China), Feadship (NL), Devonport Yacths (UK), OceAnco (NL), Abeking&Rasmussen (DE), Royal Denship (DK), Hanseatic Marine (Australia), Delta Marine (USA), Alstom Marine (FR), Amels (NL), Kanellos (EL)

** Conglomerate regrouping today several mega-yacht shipyards in Europe, including some in IT and ES.*

EU/EEA MS's Disparity on Yacht Licence requirements for Sea navigation in Europe
(Source: EBI, European Boating Industry; Table: red=regulated, orange=partly regulated, green=unregulated)

Present situation of differing sea navigation licence requirements in EU Member States prevents a *de facto* EU-wide enforcement of maritime safety, safety of life, anti-collision/pollution rules.

BE: no mandatory license for sea-going boats, and for up to 15m length for inland water navigation.
BG: no compulsory boating license for sea navigation.
CY: no mandatory license for sea going yachts up to 15m length, apart from "speed" boats.
DE: mandatory license for motorboats with engines >3.68kW (5hp).
DK: no mandatory license for sea-going vessels until 15m of length (or 20gt).
EE: mandatory licence for boats >7m, engine >7kW (9.5hp) or >5nm from coast.
EL: mandatory for all recreational boats with engines of over 6hp, three different licenses.
ES: mandatory, five recreational licences, linked to length, engine power and distance from coast.
FI: no compulsory boating license for sea navigation.
FR: mandatory for engines >4.5kW (6hp), 3 licences, for day, coastal and high seas navigation.
IE: no mandatory boating license for sea navigation.
IT: mandatory, for all boats, yachts (>10m) with engines >40hp or sailing >6nm from the coast.
LT: mandatory license for sea motor boats and yachts.
LV: mandatory license for sea-going motor and sailing boats and yachts.
MT: no mandatory license for sea-going motorboats and yachts with engines of up to 100hp.
NL: no mandatory license for sea-going boats, and for up to 15m length for inland water navigation.
NO: mandatory license for sea boats >8m, engine, engine>25hp or for drivers < 20years old.
PL: mandatory license for sea-going boats, 6 types of licenses according to boat type and navigation.
PT: mandatory license for sea boats, 5 types of licenses according to boat type and navigation.
RO: mandatory boat license for sea navigation.
SE: no mandatory license for sea-going vessels until 12m of length (4m beam).
SI: mandatory license for sea boats with engines >3.7 kW (5hp).
UK: no compulsory licence until 24m length (200t), commercial licence for super-yachts >24m.
(Same as in US and Canada, where non-compulsory boat licenses just for gaining experience, knowledge)

Besides the lack of harmonisation in terms of **yacht license** requirements, disparities around EU Member States also exist for yacht **registration number** requirements (like car number plate), where mandatory requirements exist for all countries except for: DE, DK, FI, IE, NL, SE, NO and UK. Compulsory **safety equipment onboard** (determined by the sea navigation zone or maximum distance from the coast) is also an area where there is no EU harmonisation, and where rules are differently applied in EU and enforced.

*EBI requests **EU harmonisation of rules** and promotion of nautical tourism in following areas too (**2013**):*
- Marine Protected Areas: disparity of requirements/prohibitions among 677 MPAs in Mediterranean only.
- Lack of berths and dry storage for boats: lack of births prevents visiting vessels, inter-marinas cruising.
- Taxation rules, "matriculation tax" widely differ in EU: big differences undermine activity in some MSs.
- Competence, training in repair & maintenance: differing levels of service/training in yacht chartering too.
- Impossibility for certain professions to be practiced everywhere in Europe: captains/skippers up to 200gt.

EU harmonisation exists, however, for **yacht categories** (constructed after 15 June 1998 and sold in EU) according to safety compliance and navigation fitness (Recreational Craft Directive 94/25EC), as follows:
Category A - Ocean: Extended voyages with wind >Beaufort force 8 and wave hights >4m.
Category B - Offshore: Offshore voyages with wind up to Beaufort force 8 and waive heights up to 4m.
Category C - Inshore: Voyages on coastal (and other) waters with wind up to foce 6 and waves up to 2m.
Category D - Sheltered waters (not sea navigation): sheltered inland waters, wind force 4, waves 0.5m.

8. CREWS, SEAFARERS & EMPLOYMENT

The rising **world-wide shortage of seafarers** since the 80's, concerning mostly merchant marine officers, involves **many countries of the EU**; it occurs when demand for shipping is booming and affects the overall shipping industry. Besides the EU shortage of seafarers, that also risks undermining the functioning of the EU maritime clusters, there is some lack of comprehensive reliable data regarding seafarers (active and non-active), due to the complexity of the subject and the coherence and co-operation from national authorities in collecting and providing the necessary input.

Estimated numbers of Seafarers from EU-27 2010, 5-year trend (source: Bimco/ISF 2010 report, EC report)

MS	Seafarers	Officers (chg)	Ratings (chg)	demand flag (total)	Legal requirements flag/nationality
1. BG (14):	**33,300** =	10,900**(+419%)** +	22,400 **(+623%)**	1,700 (2,400)	n.a.
2. RO (7):	**24,400** =	18,600 **(+313%)** +	5,800 (+0%)	2,000 (3,000)	n.a.
3. UK (3):	**23,400** =	14,800 (+5%) +	8,600 **(+87%)**	32,300 (36,800)	No prescription, just Capt.strategic ships
4. PL (6):	**22,600** =	17,900**(+111%)** +	4,700 (+0%)	1,200 (3,800)	n.a.
5. IT (2):	**21,000** =	9,600 (+0%) +	11,400 (+0%)	15,000 (18,400)	Capt.+2nd IT, all crew EU (not for IR).
6. FR (10):	**13,700** =	4,600 **(+53%)** +	9,100 **(+36%)**	5,400 (12,500)	Capt.+2nd FR, all crew (35%IR) EU.
7. EL (1):	**13,000** =	10,000 **(-41%)** +	3,000 **(-80%)**	20,300 (51,400)	Capt.+2nd EL, all crew EU (exceptions).
8. SE (5):	**11,000** =	6,000 **(+22%)** +	5,000 **(-44%)**	4,600 (7,200)	Captain from SE.
9. DE (12):	**10,300** =	4,000 **(-17%)** +	6,300 **(+230%)**	9,700 (32,600)	Capt.+2nd DE, all crew EU (not for IR).
10. EE (9):	**9,000** =	2,700 **(-27%)** +	6,300 (+2%)	800 (2,100)	n.a.
11. LV (4):	**7,900** =	5,500 **(-27%)** +	2,400 **(-76%)**	700 (2,700)	n.a.
12. ES (8):	**7,100** =	3,200 **(-20%)** +	3,900 **(-13%)**	4,800 (7,000)	Capt.+ 2nd ES, all crew (50%IR) EU.
13. LT (20):	**5,400** =	2,900 **(+625%)** +	2,500 **(+317%)**	1,200 (1,600)	n.a.
14. LU (21):	**4,500** =	2,300 **(+360%)** +	2,200 **(+450%)**	1,400 (200)	Captain from EU.
15. FI (13):	**4,200** =	3,000 **(+50%)** +	1,200 **(-73%)**	2,600 (4,300)	Captain from FI, min. half crew EU.
16. DK (11):	**4,000** =	2,800 **(-49%)** +	1,200 **(-71%)**	8,700 (31,300)	Captain from DK.
17. NL (15):	**3,600** =	3,000 **(-23%)** +	600 **(-40%)**	18,600 (23,800)	Captain from NL.
18. CY (16):	**3,400** =	2,900 **(+81%)** +	500 **(-77%)**	17,900 (4,100)	n.a.
19. IE (17):	**3,100** =	1,500 (+0%) +	1,600 **(-24%)**	700 (2,300)	Capt.-officers EU/Cmwth, ratings EU.
20. PT (18):	**2,200** =	400 (+0%) +	1,800 (+0%	3,200 (2,400)	Capt.+2nd PT, all crew (50%IR) EU.
21. HU (19):	**2,000** =	800 (+0%) +	1,200 (+0%)	0 (40)	-
22. SI (22):	**600** =	500 (+0%) +	100 (+0%)	0 (400)	n.a.
23. BE (23):	**600** =	500 (+0%) +	100 (+0%)	2,700 (7,400)	Captain from BE.
24. SK (24):	**600** =	300 (+0%) +	300 (+0%)	1,200 (20)	n.a.
25. AT (25):	-	-	-	100 (0)	No gral. rule, negotiated case-by-case.
26. CZ (26):	**n.a.**	n.a.	n.a.	0 (20)	-
27. MT (27):	-	-	-	23,500 (1,200)	n.a.

Total: 230,900 (+13%) = 128,700 (+27%) + 102,200 (-1%) **; 180,300 (259,000)**

Seafarers, top-20 supply countries: 2010, 5-year trend *(source: BIMCO/ISF, 2010 report, ranking by officers)*

Main countries	Officers (chg)	Ratings (chg)	Total seafarers (chg)	Demand by fleet (total)
1. Philippines*	115,400 **+18%**	47,000 **-70%**	162,400 **-37%**	11,400 >
2. China*	103,000 **+141%**	180,000 **+127%**	283,000 **+132%**	95,000 >
3. India*	46,500 +0%	32,400 **-50%**	78,900 **-29%**	16,300 >
4. Turkey*	36,700 **+66%**	102,000 **-15%**	138,700 -2%	25,800 >
5. Indonesia*	31,800 **+105%**	123,600 **+81%**	155,400 **+86%**	34,100 >
6. Ukraine	27,200 -6%	11,000 **-70%**	38,200 **-41%**	10,400 >
7. Russia	25,000 **+15%**	40,000 **+18%**	65,000 **+17%**	36,200 >
8. USA	21,800 **+241%**	16,600 **+18%**	38,400 **+87%**	48,200 <
10. Japan	21,300 **+64%**	7,300 +6%	28,600 **+44%**	76,100 <
11. Romania	**18,600 +313%**	**5,800** +0%	**18,600 +81%**	**3,000 >**
12. Poland	**17,900 +111%**	**4,700** +0%	**22,600 +71%**	**3,800 >**
13. Norway	16,100 **+99%**	7,300 +0%	23,400 **+52%**	36,000 <
14. **UK**	**14,800** +5%	**8,600 +87%**	**23,400 +26%**	**31,500 <**
15. Canada	14,000 **+207%**	3,100 **-69%**	17,100 **+17%**	9,300 >
16. Croatia	11,700 **+14%**	7,000 **-24%**	18,700 -4%	2,300 >
17. Myanmar*	11,000 **+83%**	40,300 **+75%**	51,300 **+77%**	900 >
18. Bulgaria	**10,900 +419%**	**22,400 +623%**	**33,300 +540%**	**2,400 >**
19. Vietnam	10,700 +2%	11,400 **+64%**	22,100 **+27%**	11,000 >
20. Greece	**10,000 -41%**	**3,000 -80%**	**13,000 -59%**	**51,400 <**

***not all active -Total active seafarers world-wide: 1.3 million** +8% (other key countries: S.Korea, Cambodia, Sing.)

Main employers (countries by fleet control) of Philippines' seafarers (source: Cardiff University-SIRC, 2002**):**
a) Senior Officers: Japan (44.3%); Norway (22.9%); Singapore (22.6%); Greece (21.3%); Philippines (20.9%).
b) Junior Officers: Japan (67.7%); Norway (48.5%); Greece (45.3%); Philippines (39.7%); Singapore (38.3%)
c) Ratings: Japan (78.3%); Norway (57.2%); Greece (56.6%); Philippines (46.9%); Germany (46.6%).

Employment of EU/non-EU seafarers in Intra-EU Shipping (in EU-flagged, EU-operated vessels):
(source: ECORYS's study 2009 on labour market and employment conditions in EU maritime transport)

Seafarers in Ships with EU/EEA-flag (=80% total) *(top flags in EU/EEA SSS: IT, Norway, EL, UK, SE)*
There are three main groups of countries in EU/EEA MSs according to their employment patterns:
1. Six MSs where only nationals are employed onboard ships with own flag: **BG, IS, FR, LT, PL, RO.**
2. Six MSs where crews onboard own flag ships are mostly (~90%) nationals: **ES, FI, LV, NO, PT, SE.**
3. Rest: **BE**: 40% non-nat., mostly non-EU; **CY**: 70% non-nat., mainly non-EU;
DK: 70% non-nat., non-EU ratings,EU officers; **EE**: 50% non-nat. mainly non-EU;
DE: 40% non-nat., non-EU ratings, some EUof.; **EL**: 50% non-nat; non-EU ratings, national of.;
IE: 30% non-nat., mostly EU; **IT**: 30% non-nat, non-EU;
LU: 80% non-nat., non-EU; **MT**: 95% non-nat. mainly non-EU;
NL: 50% non-nat., non-EU ratings, some EUof.; **UK**: 60% non-nat., non-EU.

Main nationalities of non-nationals on board of ships with EU/EEA flag:
i- Non-EU as officers: Ukraine (8 MSs), Philippines (6), Russia (5), Croatia (3), Morocco (2), 5 other (1).
ii- Other EU as officers: Poland (7 MSs), Bulgaria (2), Greece (2), Romania (2), Sweden (2), 9 other (1).
iii- Non-EU as ratings: Philippines (10 MSs), Russia(6), Ukraine(5), Indonesia(2), Morocco(2),6 other(1).
iv- Other EU as ratings: FR (2 Member States), EE, ES, FI, IT, LV, PL, RO, SE (1 MS).

Main nationality of non-EU/EEA companies operating in EU/EEA SSS (4% of total EU/EEA SSS):
Turkey (9comp.24ships), Russia (4-7), Switzerland (3-17), Morocco (3-4), S.Korea (1-10), Singapore (1-4)

Level of remuneration of seafarers in intra-EU Shipping: range by EU MSs /EEA, registered shiping companies *(Source: Ecorys study 2009, gross wages in €/month,first group for ratings second for officers)*

BE:	1,400-2,000 / 3,100-4,000	FI:	1,400-2,600 / 3,100-3,900	MT:	330- / 1,100-1,300
BG:	900-1,000 / 1,600-2,200	FR:	1,400-2,500 / 3,100-4,500	NL:	1,400-2,000 / 3,100-4,000
CY	900-1,200 / 2,100-2,700	IC:	1,500-3,000 / 3,100-4,900	NO:	1,200-2,100 / 3,100-4,200
DK:	1,400-2,000 / 3,100-4,000	IE:	1,100-1,700 / -3,710	PL:	[n.a.]
DE:	1,400-1,900 / 3,100-4,600	IT:	900-2,800 / 1,900-4,400	PT:	1,300-1,700 / 2,700-3,300
EE:	800- / 2,700-	LT:	[n.a.]	RO:	440- / -
EL:	1,600-2,700 / 3,200-6,900	LU:	1,500-2,000 / 3,100-4,000	SE:	2,200-2,600 / 2,400-3,800
ES:	900-1,500 / 2,100-2,700	LV:	1,500-1,500 / 2,700-4,200	UK:	1,100-1,700 / 3,700-

EU average: €1,200-2,000 for ratings, **€2,700-3,900** for officers

Manning costs: Crews from developing countries (ratings and officers) estimated to cost in average **one third** of EU/ high standard crews. **Salaries** much higher for Officers, in EU ships (ranging 17,000-50,000 euros/year), training required being equivalent to a university degree, with 3-5 years of studying (2-3-month courses required for ratings). Ratings' minimum salary: fixed world-wide by ILO as US$500/month (in 2005), as Recommendation (no legal force)

Standard composition of a crew of a merchant ship (20-people crew altogether as an average):
Captain, officers: 1st deck officer (2nd on board), 1 Chief engineer, 3 more officers (1 bridge, 2 engineers), 1-2 Cadets.
Ratings, seafarer tasks (most of them): 1 Crew chief (boatswain), 3-4 ratings for watches (4-h. turns), 2-3 Mechanics, 1 Cook, 1 Electrician (1 Pump worker for tankers); with just specific tasks (no STCW needs): 2 painters, 2 welders.

EU-27 Nautical schools and colleges for merchant shipping (OFFICERS, *Source: Europa/MS, Lloyd's***):**

AT: **BE:** Antwerp; **BG:** Varna; **CY:** Limassol; CZ: **DE:** Bremen, Bremerhaven, Duisburg, Elsfleth, Flensburg, Hamburg, Leer, Rostock; **DK:** Aarhus, Copenhagen, Fredericia, Frederikshavn, Marstal, Svendborg; **EE:** Tallinn; **EL:** Aspropyrgos-Athens, Chania-Crete, Chios, Hydra, Kefallinias, Kimi, Nea Michaniona-Thessaloniki, Oinousses, Prevezas-Ipiros, Syros; **ES:** Barcelona, Bilbao, Cádiz, La Coruña, Gijón, Santander, Tenerife; **FI:** Aland, Helsinki, Kotka, Pori, Rauma, Turku; **FR:** Le Havre, Marseille, Nantes, St. Malo; HU: **IE:** Cork; **IT:** Genoa, Savona, Trieste, Venice; **LT:** Klaipeda; LU: **LV:** Liepaja, Riga; **MT:** Kalkara; **NL:** Amsterdam, Delfzijl, Flushing, Ijmuiden, Rotterdam, Terschelling, Vlissingen; **PL:** Gdynia, Szczecin; **PT:** Paço d'Arcos-Lisboa; **RO:** Constantza; **SE:** Göteborg, Kalmar, Malmo, Nynashamn, Stockholm; **SI:** Portoroz; SK: **UK:** Falmouth, Fleetwood, Fraserburgh, Glasgow, Kent, Liverpool, London, Lowestoft, Orkney, Plymouth, Southampton, Tyne.

Prepared by
Josep A. CASANOVAS
MOVE D.1, DM28 3/100 (96088)

Note: *Main source of maritime data (fleet numbers and figures): "Register of Ships" database, from Lloyd's Register-Fairplay. Maritime news (in Annex 15 of Vademecum) mainly extracted from Lloyd's List (LL), LR-Fairplay (LR-F), Financial Times (FT).*

Annex 1-A: EUROPEAN MERCHANT FLEET (by flag+fleet manager/nationality)*
EU Member States, Candidate Countries, EFTA and other (Ships of 500 GT and over, LR-F Jan.2008)

Country	(1) Total Mdwt trend (resid.)	(2) Flag Mdwt trend (MGT)	%flag /total	Age 1, 2	PMoU List'09	Ships 1, 2	+newb/ -scrap	Ships by type 2008 (Tk-Bc-gC-Co-PR-Ot)	newblts ctry
Austria	-	0.03 -25% (0.02)	-	- , 10	-	0 (5)	+0 -1	-	-
Belgium	12.8 +20% (12.8)	6.5 -4% (4.1)	51%	14,16	white	371 (136)	+114 -8	(58-48-73-41-35-116)	3
Bulgaria	1.8 +6% (1.8)	1.3 +0% (0.9)	72%	25,25	grey	121 (84)	+4 -23	(11-56-39-4-5-6)	30
Cyprus	4.8 -17% (4.5)	30.4 -1%(19.3)	633%	20,14	white	206 (893)	+168 -42	(59-40-64-7-9-27)	-
Czech Rep.	0.004 +0% (0.004)	- -	-	23, -	-	1 (0)	+0 -0	(0-0-1-0-0-0)	17
Denmark	48.6 +11% (48.6)	11.3 +6% (9.5)	23%	12,16	white	1564 (436)	+351-18	(414-161-226-511-85-167)	20
Estonia	0.3 +0% (0.3)	0.1 +0% (0.4)	33%	23,23	white	103 (39)	+9 -4	(9-0-56-0-28-10)	0
Finland	2.9 +0% (2.9)	1.1 +22% (1.5)	38%	17,20	white	214 (131)	+21 -2	(45-3-39-10-92-25)	9
France	18.0 +15% (18.0)	7.8 +5% (6.1)	43%	12,13	white	626 (269)	+144 -11	(85-16-43-274-103-105)	11
Germany	34.3 +15% [78.9]	15.0+14% (12.8)	44%	12,13	white	1630 (485)	+1229-40	(216-192-704-328-93-97)	191
Greece	115.0 -4% (154.0)	60.6 +11%(35.2)	53%	20,18	white	2572(1015)	+848-539	(874-1020-272-12-253-141)	3
Hungary	0.007 +0% [0.3]	- - -	-	20, -	-	2 (0)	+0 -0	(2-0-0-0-0-0)	-
Ireland	2.6 -10% (2.6)	0.2 +0% (0.1)	8%	11,9	white	115 (35)	+9 -1	(20-19-41-11-12-12)	-
Italy	18.0 +6% (18.0)	13.6 +5% (12.9)	76%	18,17	white	922 (750)	+270 -90	(226-81-128-84-236-167)	97
Latvia	1.5 +7% (1.5)	0.2 -33% (0.2)	13%	24,27	grey	136 (35)	+11 -21	(44-1-67-0-4-20)	2
Lithuania	0.4 +0% (0.4)	0.4 +0% (0.4)	90%	22,20	white	80 (58)	+0 -2	(4-2-43-3-6-22)	8
Luxembourg	0.4 -20% [3.0]	1.2 +20% (0.9)	300%	16, 9	white	8 (71)	+1 -2	(4-0-0-0-0-4)	-
Malta	0.4 -20% (0.2)	41.2 +2%(25.3)	>1000%	27,17	white	63 (1323)	+3 -14	(13-3-31-0-11-5)	-
Netherlands	11.1 -3%[14.3]	8.3 +2% (7.5)	75%	15,13	white	1192 (932)	+308 -45	(204-11-458-53-49-417)	166
Poland	2.8 +17%(2.8)	0.06 -25% (0.09)	2%	23,28	white	189 (62)	+25 -7	(20-68-38-6-32-25)	119
Portugal	3.4 +17% (3.4)	1.3 -28% (1.1)	38%	20,20	white	118 (160)	+19 -3	(23-10-34-10-22-19)	10
Romania	1.0 +0% (1.0)	0.2 -20% (0.2)	20%	29,30	-	151 (99)	+4 -35	(21-6-55-4-4-61)	152
Slovakia	0.006 - [0.04]	0.3 +0% (0.2)	>1000%	32,26	black	1 (59)	+0 -0	(0-0-1-0-0-0)	24
Slovenia	0.7 +17% (0.7)	-	0%	22, -	-	22 (0)	+1 -1	(0-16-5-0-1-0)	-
Spain	4.9 -6% (4.9)	2.5 +4% (2.6)	51%	19,16	white	352 (238)	+32-37	(77-28-43-26-91-87)	111
Sweden	5.5 -8% (5.2)	2.5 +4% (4.0)	45%	17,17	white	361 (230)	+57 -3	(114-8-72-2-67-98)	2
UK	86.8 +1% (81.1)	44.3 +1% (35.2)	51%	16,13	white	1843 (1613)	+343-100	(581-212-294-81-192-483)	0
Total EU-27:	**378.0 +3%(410.5)**	**250.4+4%(180.5)**	**66%**	**16,16**		**12963 (9158)**	**+3971 -1049**		**976**
Iceland	0.2 +0% (0.2)	0.005 +0% (0.01)	3%	18,34	-	35 (7)	+3 -0	(1-0-12-7-2-13)	-
Liechtenstein	3.0 - (0.003)	-	0%	14, -	-	28 (0)	+0 -1	(12-14-0-0-1-1)	-
Norway	40.1 -2% (40.3)	24.1 -0% (18.0)	60%	18,18	white	1801 (1145)	+416-93	(411-121-384-5-236-644)	62
Total EEA-30:	**421.3 +3%(451.0)**	**274.5+4%(198.5)**	**65%**	**16,16**		**14827 (10310)**	**+4390 -1143**		**1038**
Switzerland	26.1+51%(25.9)	0.9 +13%(0.6)	3%	16,6	grey	550 (34)	+59-41	(52-72-31-343-3-49)	-
Monaco	7.0 +11% (7.0)	-	0%	15, -	-	115 (0)	+9- 20	(40-35-12-2-14-12)	-
Croatia	2.8 +22% (2.8)	2.2 +29% (1.3)	79%	22,21	white	142 (95)	+19 -10	(14-48-29-0-41-10)	61
Turkey	13.0+16% (13.2)	7.5 +3% (5.0)	58%	23,23	white	1289 (765)	+362-106	(231-157-711-44-118-28)	267
Serbia	-	-	-	-	-	-	-	-	4
Montenegro	0.06+500%(0.06)	0.01+0%(0.009)	17%	28, 24	-	10 (5)	+0 -0	(0-1-7-0-2-0)	-
Albania	0.1 +0% (0.1)	0.1 +0% (0.07)	100%	37,38	black	46 (35)	+0 -10	(1-1-42-0-1-1)	-
Ukraine	3.1 +7% (3.2)	1.1 +10% (1.0)	35%	27,27	black	521 (323)	+12 -31	(26-42-302-0-28-123)	59
Georgia	0.06 +20% (0.06)	1.4 -13%(1.0)	>1000%	25,31	black	11 (244)	+0 -2	(2-0-2-0-1-6)	-
Azerbaijan	0.6 +0% (0.6)	0.6 +0% (0.7)	100%	24,24	grey	191 (189)	+0 -3	(47-0-30-0-12-102)	-
Moldova	0.001 +0% (-)	0.05+150%(0.03)	>1000%	46,38	black	1 (15)	+0 -0	(0-0-1-0-0-0)	-
Total Europe:	**474.1 +5% (503.9)**	**288.4 +4% (208.2)**	**61%**	**17,17**		**17703 (12015)**	**+4851 -1366**		**1429**

***Values in columns:** **Total Mdwt:** tonnage of fleet under control in million dwt, by fleet manager/nationality (fl.mng./ residence in (), ownership in [ ]); **trend:** 1-year change; **Flag Mdwt:** tonnage of fleet under own flag in million dwt; **MGT:** tonnage under own flag in million GT; **% of total:** part of total fleet under own flag; **Age 1,2:** average age of the fleet, under control and under own flag; **PMoU List'06:** Paris Memorandum of Understanding, list based on ports' ship inspections/detentions; **Ships 1,2:** number of ships (500gt and over) under control and under own flag; **+newb/-scrap:** number of ships on order/under construction and number of ships scrapped in last 4 years; **Ship by type: Tk**-tankers, **Bc**-Bulk carriers, **gC**-General cargo, **Co**-Containerships, **PR**-Pasenger/ro-ro, **Ot**-Other; **Newblts ctry:** number of ships built in the country's yards, on order/under construction.

Annex 1-B: WORLD MERCHANT FLEET (Main shipping countries and regions)

(Countries with at least 0.5 Mdwt by control or1 Mdwt by flag, Ships of 500 GT and over, LR-F Jan.2008)

Country	(1) Total Mdwt trend (resid.)	(2) Flag Mdwt trend (MGT)	%flag /total	Age 1, 2	PMoU List'09	Ships 1, 2	+newb/ -scrap	Ships by type 2008 (Tk-Bc-gC-Co-PR-Ot)	newblts ctry
Europe (see B)	474.1+5%(503.9)	288.4+4%(208.2)	61%	17,17		17703 (12015)	+4851-1336	-	1429
Subt./world	**43% (45%)**	**26% (27%)**				**38% (26%)**	**51% 40%**		**15%**
Russia	14.5+9%(14.9)	6.5 -9% (5.7)	45%	25, 25	white	1811 (1464)	+104-80	(334-105-904-29-55-384)	80
Medit.Partners*	9.7 +3% (9.9)	4.8 -4%(3.9)	49%	28, 27	-	859 (457)	+65-121	(74-67-400-87-75-150)	10
Neighb.areas subt./world	**24.2 (2.2%)**	**11.3 (1.0%)**	**9.6 (1.3%)**			**2670 (6%)**	**1921 (4%)**		**90 (1.0%)**
Japan	138.8+6%(138.5)	12.8 +0%(11.3)	9%	11, 14	white	3807 (1377)	+578-34	(1072-1039-402-320-346-628)	1482
China	69.7+9% (69.5)	37.0 -3% (24.9)	53%	21, 23	white	3753(2616)	+525-102	(586-757-1337-396-135-542)	3069
+Hong Kong	37.5 +6%[48.4]	59.6+11%(35.9)	159%	16, 11	white	995 (1096)	+262 -49	(165-337-207-150-63-73)	1
Singapore	53.9 +19% (53.9)	56.6+12%(36.1)	105%	16, 12	white	1584(1431)	+372-158	(711-221-140-170-11-331)	64
Korea, South	49.9+8% (49.8)	18.5+25%(11.4)	37%	17, 20	grey	1659 (984)	+331 -53	(468-336-356-238-69-192)	2281
Taiwan	31.0 +3%(31.6)	4.2 -7% (2.6)	14%	14, 20	-	743 (135)	+136-40	(60-217-111-292-12-51)	67
India	16.9+13%(16.9)	15.3+13%(9.1)	91%	17, 16	white	813 (742)	+112 -88	(141-135-284-17-26-210)	244
Malaysia	7.0 -9%(7.0)	9.9+19%(7.1)	141%	19, 19	grey	459 (510)	+68 -8	(138-12-115-32-23-139)	39
Indonesia	8.6 +3% (8.6)	6.6+12% (5.1)	77%	26, 26	-	1703(1698)	+21-113	(395-70-783-57-207-191)	99
Philippines	3.4 +3% (3.5)	6.4 +0% (4.7)	188%	27, 25	white	479 (568)	+3 -33	(82-46-157-4-129-61)	106
Vietnam	4.5 +32% (4.4)	3.8+19%(2.4)	84%	17, 16	black	550 (525)	+63 -14	(62-51-366-15-6-50)	210
Thailand	4.4 -6% (4.4)	4.2 -7%(2.8)	95%	27, 27	grey	584 (571)	+30-34	(252-50-153-41-20-68)	7
Cambodia	0.06 +0%(0.06)	2.8+8%(2.0)	>1000%	30, 29	black	8 (683)	+0 -22	(0-1-6-0-1-0)	-
North Korea	1.0 +0%(1.0)	1.3 -7% (0.9)	130%	27, 29	black	154 (203)	+1 -30	(16-9-115-3-3-8)	1
Pakistan	1.0+11% (1.0)	0.6 -14% (0.3)	60%	27, 26	-	42 (26)	+2 -17	(8-3-17-3-0-11)	-
Bangladesh	0.9 -10% (0.9)	0.6 +0% (0.4)	67%	32, 33	-	144 (137)	+0 -9	(62-7-58-8-5-4)	5
Asia subt./world	**428.6 (38%)**	**240.2 (22%)**	**157.0 (21%)**			**17477 (37%)**	**13302 (28%)**		**7675 (81%)**
Panama	15.4+9%(1.6)	251.5 +8%(167.3)	>1000%	27,17	grey	615(6492)	+169-104	(110-146-168-8-58-125)	-
Bahamas	1.0 +0% (0.5)	62.7+8%(45.7)	>1000%	22,15	white	45 (1390)	+21 -5	(3-10-10-0-10-12)	-
United States	54.6 +9%(58.7)	11.8 -2%(10.0)	22%	20, 23	grey	2408(1205)	+269-140	(374-186-212-205-269-1162)	95
Canada	12.6-10% (12.6)	3.1 -3% (2.6)	25%	26, 33	-	463 (295)	+77 -25	(68-149-34-3-105-104)	8
Brazil	10.3 +0%(10.3)	3.6 -8% (2.4)	35%	21, 21	-	298 (258)	+50 -22	(82-25-28-15-26-122)	64
Antigua & Barb.	0.01-50%(0.008)	11.3+12%(8.6)	>1000%	31,11	white	4 (1103)	+0 -0	(1-0-2-0-0-1)	-
St.Vincent &G.	0.2 -33% (0.1)	8.1-5% (5.6)	>1000%	33, 27	black	32 (760)	+2 -19	(5-0-21-2-4-0)	-
Chile	5.1 -6% (5.1)	0.9 -10%(0.7)	18%	13, 23	-	190 (72)	+13 -12	(24-13-18-101-16-18)	8
Venezuela	1.8 -28% (1.7)	1.5 +0% (1.0)	83%	29, 30	-	81 (109)	+14 -3	(28-7-13-0-12-21)	-
Argentina	1.8 -5% (1.8)	1.0 +0% (0.6)	56%	27, 31	-	122 (86)	+5 -12	(29-7-19-17-8-42)	10
Belize	0.06 -25%(0.06)	1.5 -6%(1.1)	>1000%	30, 21	black	25 (321)	+0 -4	(5-2-12-0-1-5)	-
Mexico	1.4 +0% (1.4)	1.4 +0% (1.0)	100%	28, 28	-	176 (192)	+0 -7	(42-4-8-0-23-99)	-
America subt./world	**104.3 (9%)**	**358.4 (32%)**	**246.6 (32%)**			**4459 (9%)**	**12283 (26%)**		**185 (2%)**
UAE	19.9+120%(18.7)	1.0 +0% (0.8)	5%	23, 22	-	842 (176)	+115-182	(230-51-128-78-43-312)	6
Iran	10.1+0% (10.1)	8.2 -8% (4.7)	81%	19, 21	grey	243 (213)	+83-30	(39-52-70-14-13-55)	37
Kuwait	3.9 +15% (5.3)	3.9+15%(2.3)	100%	17, 18	-	53 (55)	+9 -6	(30-3-0-0-1-19)	-
Saudi Arabia	2.2 -8% (2.2)	1.1 +0% (0.9)	50%	20, 24	grey	191 (134)	+41 -24	(49-1-7-0-21-113)	2
Qatar	1.5 +88%(1.5)	0.9 -10%(0.6)	60%	10, 13	white	50 (50)	+41 -0	(21-1-0-4-1-23)	-
Gulf subt./world	**37.6 (3.4%)**	**15.1 (1.4%)**	**9.3 (1.2%)**			**1379 (2.9%)**	**628 (1.3%)**		**45 (0.5%)**
Liberia	15.3+37%(0.05)	117.4+11%(76.2)	767%	17, 13	white	225 (2107)	+99 -38	(56-136-16-0-7-10)	-
Nigeria	3.6 +16% (3.6)	1.7 +31% (0.9)	47%	30, 35	-	189 (105)	+4 -12	(109-3-5-0-5-67)	-
South Africa	1.1 +22% (1.1)	0.05-17%(0.05)	5%	15, 31	-	49 (8)	+19 -1	(4-18-5-7-0-15)	-
Comoros	0.02 +0%(0.01)	1.0+0%(0.7)	>1000%	38, 33	black	7 (196)	+0 -2	(1-0-4-0-2-0)	-
Africa/ss subt./world	**20.0 (1.8%)**	**120.2 (11%)**	**77.9 (10%)**			**470 (1.0%)**	**2416 (5.1%)**		**0 (0%)**
Marshall Isl.	8.3 +20%(0.2)	59.4 +9% (35.8)	716%	15,11	white	143(1034)	+90-27	(8-98-23-1-7-6)	-
Australia	4.7 +9% (4.4)	2.4 +0% (1.8)	51%	17, 19	-	189 (110)	+1 -3	(29-29-22-14-35-60)	16
Vanuatu	0.001 -50% (0)	2.4 +0% (1.8)	>1000%	34, 20	grey	1 (246)	+2 -0	(0-0-0-0-0-1)	-
Oceania subt./world	**13.0 (1.2%)**	**64.2 (5.8%)**	**39.4 (5.2%)**			**333 (0.7%)**	**1390 (3.0%)**		**16 (0.2%)**
Total countries/world:	**1101.8 (99%)**	**1097.8 (99%)**	**748.0 (98%)**			**44491 (95%)**	**43955 (94%)**		**9440 (99%)**
World total:	**1,114.1 +7%**	**(760.4)**		**19**		**46964 (46964)**	**+9456 -3375**		**9456 (+46%)**

* MEDA/ Mediterranean Partners: **Algeria:** 0.8/0.7-grey, **Egypt:** 1.5/1.6-black, **Israel:** 3.6/0.9, **Jordan:** 0.5/0.5, **Lebanon:** 0.5/0.1-black, **Libya:** 0.7/0.09-black, **Morocco:** 0.2/0.3-grey, **Syria:** 1.8/0.5-black, **Tunisia:** 0.2/0.07-grey.

Annex 2-A: EU Maritime Transport Policy Legislation

(New, latest legislation, from last 3-4 years, highlighted in yellow)

1. Market access, free competition, internal market:

- Communication on Single Market Act II COM(2012)573, of 3.10.12 (Blue Belt included).
- Transport **White Paper**, Communication COM(2011)144, of 28.3.11, "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system".
- **Regulation (EC) 906/2009** of 28.9.09, on agreements, decisions and concerted practices between liner shipping companies (new Cosortia Regulation).
- **Regulation (EC) 1419/2006** of 25.9.06, repealing Reg. 4056/86 on liner conferences.
- **Regulation (EC) 611/2005** of 20.4.05, on consortia (modifying 823/2000); *expired*.
- Communication COM(2004) 675 final, White Paper on review of Regulation 4056/86.
- **Regulation (EC) 823/2000** of 19.4.00, on certain categories of agreements, decisions and concerted practices between liner shipping companies (consortia); *expired*.
- **Regulation (EEC) 3577/92** of 7.12.92, on the liberalisation of maritime transport services within the EU (maritime cabotage).
- **Regulation (EEC) 479/92** of 25.2.92, on certain categories of agreements, decisions and concerted practices between liner shipping companies (consortia), *habilitation*.
- **Regulation (EEC) 4056/86** of 22.12.86, on liner conferences and exemption of anti-trust principle (application of articles 85 and 86 of Treaty to maritime transport); *repealed*.
- **Regulation (EEC) 4055/86** of 22.12.86, on the free provision of maritime transport services between Member States and between Member States and third countries.

2. Competitiveness EU Shipping and fleet, State Aids, policy strategy, passenger rights:

- **Regulation 1177/2010**, of 17.12.10, on passenger rights in maritime and IWW transport.
- Communication (2009/C132/06) of 10.6.09, on State Aid Guidelines for Ship Managers.
- Maritime Transport Policy Strategy until 2018, Comunication COM(2009)8, of 21.1.09.
- Communication COM(2004) 43 on Guidelines on State Aid to maritime transport, in force since 30.6.05, amending 1997 Guidelines and 1st report SEC(1989) 921 final.
- Council Resolution of 24.3.97 on a new strategy to increase the competitiveness of Community shipping (OJ C109 of 8.4.97).
- Communication COM(96) 81 final, of 13.3.96, “Towards a new maritime strategy”.
- Communication (White Paper) COM(2001) 370, of 12.9.01, on “European Transport policy for 2010: time to decide”.
- Report SEC(94) 933 final, on maritime transport.
- Communication COM(89) 266 final, of 3.8.89, “A future for the maritime transport in the Community: measures to improve the operating conditions in the sector”.
- Communication from the Commission, in 1985, proposing a common maritime policy, “Towards a common transport policy: maritime transport”, ref. OJ supplement 5/85.

3. Maritime Safety, environmental issues:

- Proposal for a new Directive on Marine equipment, COM(2012)772, of 17.12.12, repealing Directive 96/98/EC (Text with EEA relevance).
- Revised EMSA **Regulation**, to be adopted, after political agreement in October 2012.
- **Directive 2012/33/EU**, of 21.11.12, on Sulphur content of marine fuels (amending Directive 1999/32/EC).
- **Regulation 530/2012**, of 13.6.12, on accelerated phasing-in of double-hull tankers.
- **Directive 2011/75/EU**, of 2.9.11, on Marine equipment, amending Directive 96/98/EC.

- **Directive 2011/15/EU**, of 8.2.11, Vessel Traffic Monitoring, amending Dir. 2002/59.
- **Regulation 1286/2011**, of 9.12.11, on common methodology for accident investigation.
- Proposal for a new Directive, COM(2011)456, of 26.7.11, on safer and cleaner recreational crafts (*repealing Directive 94/25/EC, DG ENTR chef de file*).
- **Directive 2009/45/EC**, of 6.5.09, on safety rules and standards for passenger ships.
- ***3rd Maritime Safety Package (23.4.09)*: Directives 2009/21** on flag State requirements, **2009/15** on class societies, **2009/16** on Port State Control, **2009/17** on traffic monitoring, **2009/18** on accident investigation, **2009/20** on insurance shipowners claims; **Regulations 391/2009** on class societies and **392/2009** on liability of carriers passengers/Athens Conv.
- Communication COM(2007)313, of 11.6.07, on further improving the environmental performance of recreational craft engines.
- **Directive 2005/35**, foreseen on 7.9.05, on fight against ship-source pollution (plus Framework Decision 2005/../JHA for the reinforcing the penal sanctions part).
- **Directive 2005/33**, on Sulfur content in marine fuels (DG ENV *chef de file*).
- Communication COM(2005)595 on an EU strategy to reduce atmospheric emissions from seagoing ships (DG ENV *chef de file*).
- **Regulation (EC) 789/2004** of the EP and the Council on the transfer of cargo and passenger ships between registers, adopted on 21.4.04 (repealing Regulation 613/91).
- **Directive 2003/44/EC** of 16.6.03 on recreational vessels (DG ENTR *chef de file*).
- **Directives 2003/24/EC** and **2003/25/EC** of the EP and the Council, adopted on 14.4.03 on safety rules, standards and stability requirements for ro-ro passengers ships.
- **Regulation 1726/2003** on double-hull oil tankers, adopted in October 2003 (amending previous Regulation **417/2002**).
- **Regulation 782/2003** of the EP and the Council, of 14.4.03, on the prohibition of organotin compounds on ships (anti-fouling systems).
- EU proposal in 2003 to amend IMO Marpol Convention on double-hull phase-in, banning of transport of heavy oils in single-hulls and compulsory structural surveys.
- **Directive 2002/84/EC** of 5.11.02 (amending Directives …) on maritime safety and the prevention of pollution from ships, introducing a reference to the COSS Committee.
- **Directive 2002/59/EC** establishing a Community Vessel Traffic Monitoring System (repealing Directive 93/75/EEC).
- **Regulation 2099/2002** of the EP and the Council, of 5.11.02, establishing a Committee on Safe Seas and the Prevention of Pollution from Ships (COSS).
- **Regulation 1406/2002** of the EP and the Council, adopted on 27.6.02, establishing the Maritime Safety Agency EMSA (modified by Regulation **724/2004**, of 31.3.04).
- **Regulation 417/2002** on accelerated phasing-in of double-hull tankers (repeals 2978/94).
- Communication COM(2002) 681 final, of 20.12.02, improving safety at sea in response to the Prestige accident.
- **Directive 2001/106/EC** of 19.12.01 on Port State Control (amends Dir. 95/21/EC).
- **Directive 2001/96/EC** of the EP and the Council, of 4.12.01, establishing harmonised requirements and procedures for the safe loading and unloading of bulk carriers.
- **Directive 2000/59/EC** of the EP and the Council, of 27.11.00, on port reception facilities for ship-generated waste and cargo residues.
- **Regulation 2037/2000** on gas emissions (Halon), of 29.6.00 (DG ENV *chef de file*).
- **Directive 1999/35/EC** of 29.4.99 on a system of mandatory surveys for the safe operation of regular ro-ro ferry and high-speed passenger craft services.
- **Directive 1999/32/EC, of 26.4.99,** on reduction of sulphur content of Marine fuels.
- **Directive 1999/19/EC** of 18.3.99, amending Directive 97/70/EC on fishing vessels.

- **Directive 98/41/EC** of 18.6.98 on the registration of persons sailing on board passenger ships operating to or from ports of the Member States of the Community.
- **Directive 98/34/EC** on technical standards (DG ENTR chef de file).
- **Directive 98/18/EC** of 17.3.98 on safety rules and standards for passenger ships.
- **Directive 97/70/EC** of 11.12.97, setting up a harmonised safety regime for fishing vessels of 24 metres in length and over.
- **Directive 96/98/EC** of 20.12.96, on Marine equipment (maritime safety).
- **Directive 96/40/EC** of 25.6.96, establishing a common model for an identity card for inspectors carrying out port State control.
- **Directive 95/21/EC** from the EP and the Council, June 1995, on common procedures for inspection and immobilisation of ships calling at EU ports, Paris MoU (amended by Directive **2001/106/EC** of 19.12.01 on Port State Control).
- **Regulation 3051/95** of 8.12.095 on the safety management of roll-on/roll-off passenger ferries (ro-ro ferries).
- **Directive 94/57/EC** on Classification Societies; common rules and standards for ship inspection and survey organisations and for the relevant activities of maritime administrations (amended by Directive **2001/105/EC**).
- **Directive 94/25/EC** on recreational vessels (ENTR chef de file), built with "CE" mark.
- Communication COM(1993) 66 final, of 24.2.93 on a common policy on safe seas.

4. Maritime Security:

- Commission Recommendation of 11 March 2010, on measures for self-protection and the prevention of piracy and armed robbery against ships (2010/159/EU).
- Report from the Commission to the Council and the EP, COM(2009)2, assessing the implementation of the Directive on enhancing port security.
- **Regulation 324/2008** of 9.4.08, on maritime security inspections, replaces Regulation 884/2005 and covers EC monitoring of Directive 2005/65/EC on Port security.
- **Directive 2005/65/EC**, of 26.10.05 (OJ 25.11.06), on enhancing Port Security.
- **Regulation (EC) 884/2005** of 10.6.05 laying down procedures for conducting Commission inspections in the field of maritime security (repealed by Reg.324/2008).
- **Regulation 725/2004** of the EP and the Council, of 31.3.04, on enhancing ship and port facility security (ISPS Code).

5. Ports, Short Sea Shipping (SSS), Marco Polo, TEN-T infrastructures:

- **Regulation 670/2012**, of 11.7.12, on Competitiveness+Innovation Framework Programme 2007-2013 (Project Bonds) and on general rules for granting EU financial aid to TENs.
- Staff Working Paper, SWD(2012)145, of 24.5.12, on evaluation of Blue Belt Pilot project.
- Communication COM(2011)676, of 19.10.11, on a **Growth Package** for Integrated European Infrastructures (TEN-T) (Text with EEA relevance); linked to two proposals:
- Proposal for a Regulation COM(2011)665, of 19.10.11, on establishing the **Connecting Europe Facility** (TEN-Ts) (with SEC(2011)1262 and 1263) (Text with EEA relevance).
- Proposal for a Regulation COM(2011)650/2, of 19.10.11, on EU **Guidelines** for the development of TEN-Ts (with SEC(2011)1212 and 1213) (Text with EEA relevance).
- **Directive 2010/65/EU** of 20.10.10, on Ports Reporting Formalities (*repeals Dir.2002/6/EC*).
- **Regulation 177/2010/EU**, of 2.3.10, on Community Customs Code, legal implementation.
- **Regulation 923/2009**, of 16.9.09, on Marco Polo programme, amendments, procedures.
- Communication COM(2009)11, of 21.1.09, with Action Plan, on establishing a European Maritime Transport Space without Barriers.

- Mini-Communication 2008/C 317/08, of 12.12.08, on Motorways of the Seas and TEN-Ts.
- Ports Policy Communication, COM(2007)616, of 18.10.07 (with SEC(2007)1339/1340)
- **Regulation 1692/2006**, of 24.10.06, on Marco Polo programme, Phase II (2007-13).
- Directive proposal COM(2004) 654 final, on market access to port services adopted on 13.10.04 (after EP rejected in Nov. 2003 conciliation text of a first 2001 EC proposal).
- Decision in 2004 on TEN Guidelines, priority projects, and motorways of the sea.
- Communication COM(2004)453 final, of 2.7.04 and Staff Working Doc. (Annex), on SSS.
- Staff Working Doc. SEC(2004)333 of 17.3.04, on simplified customs procedures.
- **Regulation 1382/2003**, of 22.7.03, on Marco Polo programme, launch of first phase.
- Communication COM(2003)155 final, of 7.4.03, on SSS promotion.
- **Directive 2002/6/EC**, adopted on 18.2.05, on reporting formalities for ships at ports' arrival/departure (SSS), in force/transposed since 9.9.03 (*repealed*).
- Staff Working Document SEC(2002)632, of 29.5.02 on Customs procedures for SSS.
- *Short Sea Shipping: Perspectives and Challenges, Communication COM(95)317.*

6. Intermodality and Inland Waterways (IWW), Logistics:

- **Regulation 689/2012/EU**, of 27.7.12, on technical specifications vessel tracking and tracing systems In IWT, RIS (*amending Regulation 415/2007/EU*).
- Communication COM(2007)607, of 18.10.07, onFreight Transport logistics Action Plan.
- **Regulation 416/2007/EC**, of 22.3.07, on technical specifications Notices to Skippers, RIS.
- **Regulation 415/2007/EC**, of 13.3.07, on technical specifications vessel traking IWT, RIS.
- **Directive 2006/87/EC** on technical requirements for IWW vessels, adopted 23.10.06.
- **Regulation 1365/2006** of 6.9.06 on statistics of goods transported by IWW (rep. 80/1119).
- Communication COM(2006)336 final, on Comodality.
- Communication COM(2006)6, of 17.1.06, on an Integrated European Action Programme for Inland Waterway Transport (NAIADES).
- **Directive 2005/44/EC** of the EP and the Council of 7.9.05, on harmonised river information services (RIS) on inland waterways in the Community.
- Recommendation to the Council SEC(2003)597 restr., of 1.8.03, for a mandate to negotiate Community membership to the Rhine and Danube Commission.
- **Regulation (EC) 718/99** of 29.3.99, on a Community fleet capacity to promote IWW.
- **Directive (EC) 96/75** on the systems of chartering and pricing in national and international inland waterway transport in the Community.
- **Directive (EC) 96/50** on harmonisation of conditions for obtaining boat masters' certificates for the carriage of goods and passengers in IWW in the Community.
- **Directive 96/35/EC** of 3.6.96 on transport of dangerous goods by IWW, road and rail.
- **Regulation (EC) 1356/96** on common rules applicable to the transport of goods or passengers by inland waterways between Member States and on freedom of services.
- **Directive (EEC) 91/672** on the reciprocal recognition of IWW's boat masters' certificates.
- **Regulation (EEC) 3921/91** laying down the conditions under which non-resident carriers may transport goods or passengers by IWW within a Member State.
- **Directive (EEC) 87/540** on professional market access for inland waterways in national and international transport and on mutual recognition of diplomas.
- **Regulation 2919/85** laying down the conditions for access to the arrangements under the revised Convention for the navigation of the Rhine.
- **Directive (EEC) 82/714** on technical requirements for IWW vessels (repealed).
- **Directive 78/1016/EC** on reciprocal recognition of navigability licenses for inland waterway vessels (amending **Directive 76/135/EEC**).

7. Seafarers, certification, training, working conditions:

- **Directive 2012/35/EU**, of 21.11.12, on minimum level of training of seafarers (STCW Convention), amending Directive 2008/106/EC (Text with EEA relevance).
- **Proposal for a Directive** for the Implemention of the Maritime Labour Convention (MLC), Communication, COM(2012)134, of 23.3.12 (Text with EEA relevance).
- **Proposal of a Directive** amending the Directive 2009/16/EC on port State Control, COM(2012)/129, of 23.312 , after ILO's Maritime labour Convention (MLC) of 2006.
- **Proposal for a Directive**, COM(2011)555, of 14.9.11, amending Directive 2008/106/EC on minimum level of training of seafarers (STCW).
- **Directive 2008/106/EC** of the EP and of the Council, of 19.11.08, on the minimum level of training of seafarers (STCW) (Text with EEA relevance).
- **Directive 2005/45/EC** of the EP and the Council of 30.9.05, on the recognition of seafarers' certificates issued by the EU Member States (amending 2001/25/EC).
- **Directive 2005/23/EC**, on minimum level of training of seafarers (amending 2001/25/EC).
- **Directive 2003/103/EC** of the EP and the Council of 17.11.03, on the minimum level of training of seafarers (amending 2001/25/EC).
- **Directive 2001/25/EC** of 4.4.01, on the minimum level of training of seafarers.
- Communication COM(2001)188, of 6.4.01, on the training and recruitment of seafarers.
- **Directive 1999/95/EC** of the EP and the Council of 13.12.99, on the enforcement of provisions on seafarers' hours of work on board ships calling at Community ports.
- **Directive 1999/63/EC** of 21.6.99 concerning the Agreement on the organisation of working time of seafarers concluded between ECSA and FST.
- **Directive 92/29/EEC** of 31.3.92 on the minimum safety and health for improved medical treatment on board vessels.

8. External relations, EU bilateral and multilateral-IMO:

- MoU between US and EU (DG MOVE) of 27.9.12, on Maritime Security inspections.
- Joint (EC/HR) EU Arctic Policy Communication 2012, JOIN(2012)19, of 6.6.12 (with two Staff Working Documents SWD(2012)182/183) on progress since 2008 and next steps.
- MoU signed between the EU (EC/DG MOVE) and the US (Martime Administration, Dept. of Transport), on 1.7.11, on Co-operation on Short Sea Shipping, Marine Highways.
- EU Arctic Policy Communication of 2008, COM(2008) 763, of 20.11.08, "The European Union and the Arctic Region".
- Council Transport Group agreement in 2005 (non-paper) for starting negotiations for an EU-India Maritime Agreement.
- GATS: submission in May 2005 of revised conditional EC offer to WTO, including maritime transport services (MMS).
- **EU-China Maritime Agreement**, signed on 6.12.02 on market access/cooperation issues.
- Recommendation SEC(2002) 381 final, adopted on 9.4.02 for Community Accession to IMO (Commission and EU Member States).
- **Regulations 4057/86** and **4058/86** for fighting anti-competitive practices of third countries and third country operators, of unfair prices or restrictions to market access.

9. Maritime cluster, including shipbuilding, Integrated Maritime Policy:

- Blue Growth Communication, COM(2012)494 of 13.9.12, on "opportunities for marine and maritime sustainable growth" (Text with EEA relevance).
- Communication COM(2012)491, of 11.9.12, on Progress EU Integrated maritime Policy.
- Proposal for a Regulation COM(2011)804, of 2.12.11, on the European Maritime Fisheries Fund (EMFF), for the MFF period 2014-2020 (with SEC(2011)1416, 1417).

- **Regulation 1255/2011/EU**, of 30.11.11, establishing a programme to support the further development of an Integrated maritime Policy, 2011-2013 (Text with EEA relevance).
- Communication COM(2010)771, of 17.12.10, on Maritime Spatial Planning in the EU.
- Communication COM(2009)538, of 15.10.09, on Maritime Surveillance, a Common Information Sharing Environment for the EU Maritime domain (with SEC(2009)1341).
- Communication COM(2009)540, of 15.10.09, on Progress EU Integrated Maritime Policy.
- White/Blue Paper on an Integrated Maritime Policy for the EU, Communication COM(2007)575, of 10.10.07 (with Staff Working papers SEC(2007)1278/1279/1280/ 1283).
- Communication/Green Paper, COM(2006)275 of 7.6.06, on a European Maritime Policy, as the result of Task Force works of Inter-service groups (DG FISH/MARE *chef de file*).
- Communication COM(2003) 717 final, adopted on 21.11.03, on "LeaderSHIP 2015: defining the future of the European shipbuilding and shiprepair industries".
- **Directive 2002/75/EC**, on marine equipment, amending Directive 96/98/EC.
- **Directive 2001/53/EC** of 10.7.01, on marine equipment, amending 96/98/EC.
- **Directive 98/85/EC** of 11.11.098, on marine equipment, amending 96/98/EC.
- **Directive 96/98/EC** of 20.12.96 on marine equipment (amended in 1998, 2001, 2002).

10. Research activities and projects:

- Horizon 2020: Package of measures to boost research, innovation and competitiveness in Europe launched by Commission, on 30.11.11, with proposal of 80bn euro investment.
- 7th Framework Programme adopted on 18.12.06 by the Council for 2007-2013 (2007-2011 for nuclear research, Euratom), new EU Research Programme adopted by EC on 6.4.07.
- Decision of the EP and the Council 1513/2002/EC, of 27.6.02, on the 6th Framework Programme for RTD (2002 to 2006). Maritime in Priority 6.2: Sustainable Surface Transport, Waterborne platform (see list of research maritime projects FP6 hereafter).
- Decision of the EP and the Council of 22.12.98 on the 5th Framework Programme for RTD (1998-2002). A number of small projects on maritime, being finalised.

EU-funded Research Maritime projects, FP6 *(TREN-managed projects in bold, rest are RTD projects)*

Title/Acronym, sector of activity		EU fundsM€%	Time frame	Project leader	Website/mail
1. Maritime transport, ports, inter-modality					
ACMARE (CA)	Maritime transport research EU	1.0 (100%)	1.05 - 12.07	CESA (BE)	www.waterborne-tp.org
BaWaPla	Ballast water management	1.7 (66%)	2006-200?	VFTHB (DE)	faslan@ttz-bremerhaven.de
CAPOEIRA	Ports' research and innovation	0.5 (100%)	5.06 - 4.08	Intecsa-Inar.(ES)	www.capoeiraproject.eu.com
CREATE3S	Efficiency new generation SSS	2.5 (59%)	2006-2009	ING (NL)	pswaak@geest.nl
CREATING	Transport performance by IWW	2.6 (60%)	6.04 - 5.07	S.P.Binnenv.(NL)	www.creating.nl
EFFORTS	Effective operation in ports	8.0 (53%)	2006-2009	D'Appolonia (IT)	www.efforts-project.org
EMBARC	**Traffic monitoring, VTMIS**	**2.0 (68%)**	**12.01 - 6.05**	**AVV (NL)**	www.euro-embarc.com
FLAGSHIP	Safe, efficient ship operations	10.2 (54%)	2006-2010	ECSA (BE)	deMeester@ecsa.be
IMPROVE	Effic. ship production/operation	2.5 (58%)	2006-200?	Univ. Liège (BE)	www.anast-eu.ulg.ac.be/inde
INMARE	Safe, efficient ship operations	0.8 (84%)	4.04 - 3.06	C.A.Ricerca (IT)	www.inmare-fp6.com
LOGBASED	Logistics-based ship design	1.8 (59%)	3.04 - 2.07	Grieg Logist.(NO)	www.logbased.no
MARNIS	**Traffic monit., e-navigation**	**12.0 (60%)**	**11.04 - 11.08**	**AVV (NL)**	www.marnis.org
MOSES	**Motorways of the Sea**	**8.0 (57%)**	**6.07 - 6.10**	**Marintek (NO)**	haakon@marintek.sintef.no
MTCP	**Studies, sectorial analyses**	**2.7 (100%)**	**4.04 - 4.07**	**BMT (UK)**	www.maritime-transport.net
SPIN-HSV	**Shipping quality, fast vessels**	**1.9 (52%)**	**1.02 - 12.04**	**Mettle (FR)**	www.spin.mettle.org
	Sub-total:	**58.2 M€**			
2. Maritime safety, environment, ship dismantling					
ALERT	Ship repair practices tankers	0.6 (100%)	11.06 - 11.08	U.Newcastle (UK)	www.ncl.ac.uk/marine
ARCOP	**Maritime safety in Arctic**	**3.0 (58%)**	**12.02 - 2.06**	**KMY (FI)**	www.arcop.fi/index.htm
CAS	Structural maintenance ships	1.7 (52%)	2.05 - 1.08	B.Veritas (FR)	www.shipshullmonitoring.eu
DIFIS	Intervention on shipwrecks	1.8 (57%)	9.05 - 8.08	Mar.Res.I.N. (NL)	www.difis.eu
DSS-DC	Ships in degraded condition	2.4 (56%)	1.04 - 12.06	NMTRI (NO)	www.marintek.no
ECODOCK	Envir. friendly coatings ships	1.9 (63%)	2.04 - 1.07	Meyer Werft (DE)	www.ecodock.net
EU-MOP	Elimination marine oil pollution	1.9 (66%)	2.05 - 1.08	NTUA (EL)	www.eumop.org
HANDL.WAVES	Ship operation rough weather	1.7 (56%)	2006-2009	RINA (IT)	www.mar.ist.utl.pt/handlingw
HISMAR	Robotics for ship dismantling	1.2 (72%)	11.05 - 10.08	U.Newcastle (UK)	www.hismar.ncl.ac.uk
OSH	Oil Sea Harvester ship recycl.	2.0 (56%)	12.04 - 11.07	Akeryards (FR)	www.osh-project.org
POP&C	Pollution prevention oil tankers	1.5 (70%)	1.04 - 12.06	Intertanko (UK)	www.pop-c.org
SAFECRAFTS	Safe abandoning of ships	2.8 (56%)	2.04 - 10.07	TNO-NOASR (NL)	leo.devries@tno.nl
SAFEICE	Safety of icebound shipping	1.1 (48%)	9.04 - 8.07	Helsinki U.T.(FI)	www.tkk.fi/Units/Ship/Resea
SAFETOW	Strategic aid for escort tugs	1.3 (56%)	3.04 - 2.07	British M.T.(UK)	www.bmtproject.net/safetow
ShipDismantl	Dismantling obsolete vessels	1.6 (60%)	2.05 - 1.09	Naftosol (EL)	www.shipdismantl-project.or
SHIPMATES	Ship repair and maintenance	2.2 (63%)	6.04 - 5.07	Shiprep.Ass.(UK)	www.ssa-shipmates.co.uk
	Sub-total:	**28.7 M€**			
3. Shipbuilding, marine equipment					
ADOPT	Support system ship design	1.9 (64%)	4.05 3.08	F.Schiffbau(DE)	www.adopt.rtdproject.net
CAREMAR	RTD, educ. marine industries	0.7 (100%)	9.05 - 8.08	WEGEMT (UK)	www.caremar.org
HERCULES	Marine engines low emissions	15.0 (45%)	3.04 - 9.07	ULEME (DE)	www.ip-hercules.com
InterSHIP	Design of passenger ships	19.0 (49%)	11.03 - 10.07	Aker Yards (FI)	www.intership-ip.com
MC-WAP	Fuel-cell marine engines	9.9 (58%)	9.05 - 8.10	CETENA (IT)	marco.schembri@cetena.it
METHAPU	Engines fuel-cells methanol	1.0 (50%)	11.06 - 5.09	Wärtsila (FI)	tho.phan@wartsila.com
OFIENGINE	Components marine engines	1.0 (44%)	2006-200?	INASMET (ES)	www.ofiengine.net
SMOOTH	Ships with air-lubricated hulls	1.4 (57%)	2006-2009	Mar.Res.I.N. (NL)	c.thill@marin.nl
SUPERPROP	Better lifetime ship propellers	1.0 (52%)	5.05 - 4.08	U.P.Madrid (ES)	www.canal.etsin.upm.es/sup
VISIONS	Future vessels, float.structures	5.0 (100%)	4.05 - 9.08	CESA (BE)	www.maritime-visions.eu
	Sub-total:	**55.9 M€**			
4. Energy, marine infrastructures, other:					
GIFT	Gas import floating terminal	2.3 (72%)	2.05 - 1.07	Doris Engin. (FR)	messager.jc@doriseng.com
HTA	Maritime testing infrastructure	6.5 (87%)	2006-2011	Mar.Res.Inst. (NL)	a.b.aalbers@marin.nl
MARSTRUCT	Excelence of marine structures	6.0 (90%)	2.04 - 1-09	Inst.Sup.Tec. (PT)	www.mar.ist.utl.pt/marstruct
NG2SHIPI/F	Natural gas ship interfaces	1.8 (34%)	11.03 - 10.06	Snecma M. (FR)	emmanuel.viallon@snecma.
SAFEOFFLOAD	Offloading LNG float.platforms	2.0 (58%)	1.06 - 12.08	Shell (NL)	www.mar.ist.utl.pt/safeoffloa
SECURCRANE	Safe operation port cranes	2.2 (52%)	5.06 - 4.09	Sciroidea (IT)	www.securcrane.info
	Sub-total:	**20.8 M€**			
	Total research maritime projects:	**163.6 M€**	**(incl. TREN: 29.6 M€)**		

Annex 2-B: International Maritime Law

1. IMO Conventions (IMO in place since 1958, has today 166 member countries):

- WRC, 2005 (under discussion), on Wreck Removal.
- Ballast Water, 2004, on Control-Mngt. of Ships' Ballast Water/Sediments (ratif*.=2;-)
- ISPS Code, 2002, on Intern. Ship and Port Facility Security (amending SOLAS, XI-2)
- AFS, 2001, on Control of Harmful Anti-Fouling Systems on Ships (ratif.=12;00001).
- Bunkers, 2001, on Civil Liability for Bunker Oil Pollution Damage (ratif.=7;-).
- HNS, 1996, on Sea Carriage of Hazardous and Noxious Subst. (r=8;-), (Protocol 2000)
- ISM Code, 1993, on International Safety Management (amending SOLAS, chapter IX)
- OPRC, 1990, on Oil Pollution Preparedness Response & Co-operation (ratif.=85;01111)
- SALVAGE, 1989, on Salvage of Ships (in force 1996, ratif.=50;00111).
- **SUA**, 1988, on the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (ratif.=126;11111), (Protocol 1988, ratif.=115;11111).
- **Paris MoU** on Port State Control, 1982 (7 others after: Viña del Mar MoU-1992, Tokyo MoU-1993, Caribbean MoU-1996, Mediterranean MoU-1997, Indian Ocean MoU-1998, West and Central African/Abuja MoU-1999 and Black Sea MoU-2000).
- SAR, 1979, on Maritime Search and Rescue (in force 1985, ratif.=84;00111).
- **STCW**, 1978, on Training, Certification, Watchkeeping for Seafarers (in force 1984, ratif.=149;11111; amendments 1995), (STCW-F, for fishing vessels, 1995, ratif.=5;-).
- SFV-Torremolinos, 1977, for Safety of Fishing Vessels (replaced by Protocol 1993).
- **LLMC**, 1976, on Limitation of Liability for Maritime Claims (in force 1986, ratif.=47;01011), (Protocol 1996, ratif.=17;00001).
- INMARSAT, 1976, on Intern. Mar. Satellite Org. (ratif.=90;11111, amended 1994, 98).
- **SOLAS**, 1974, on Safety of Life at Sea (in force 1980, ratif.=155;11111), (amended by Protocols 1978/ratif.=109;11111, 1988/ratif.=78;01111).
- **PAL-Athens**, 1974, on the Carriage of Passengers and their Luggage by Sea (in force 1987, ratif.=32;01110), (Protocols 1976/ratif.=25;01110, 1990, 2002).
- **MARPOL**, 1973/78, on Prevention of Pollution from Ships (with Protocols 1978, 1997: Annexes I/II-ratif.=134;11111, Annex III-ratif.=118;11111, Annex IV-ratif.=104; 10011, Annex V-ratif.=123;11111, Annex VI-ratif.=27;11011).
- Protocol on Space Requirements for Special Trade Passenger Ships, 1973 (ratif.=16).
- CSC, 1972, for Safe Containers (in force 1977, ratif.=77;01111), (amended in 1993).
- LDC, 1972, on Prevention of Marine Pollution by Dumping Wastes, other (ratif.=81).
- COLREG, 1972, on Intern. Regul. for Preventing Collisions at Sea (ratif.=147;11111).
- **FUND**, 1971 (FIPOL), on Establishment of an International Fund for Compensation Oil Pollution Damage (Protocol 1976, 1992-replaces 1971 Conv./ratif.=95;11011, 2003)
- STP, 1971, Agreement on Special Trade Passenger Ships (ratif.=17;00011), (Prot.1973).
- NUCLEAR, 1971, on Civil Liability Mar. Carriage Nuclear Material (ratif.=17;01001).
- **CLC**, 1969, on Civil Liability for Oil Pollution Damage (in force 1975, ratif.=44, later denounced), (amended by Protocols 1976/ratif.=54;01011, 1992/ratif.=110;11111).
- TONNAGE, 1969, on Tonnage Measurement of Ships (in force 1982, ratif.=144;11111)
- INTERVENTION, 1969, on Intervention on High Seas in Cases of Oil Pollution (in force 1975, ratif.=82;11101), (Protocol 1973, in force 1983, ratif.=48;01101).
- LL, 1966, on Load Lines (ratif.=155;11111), (amended by Prot. 1988, ratif.=74;01111).
- **FAL**, 1965, on Facilitation of International Maritime Traffic (ratif.=102;01111).
- IMO Conv., 1948, IMCO till 1982 (in force 1958, ratif.=165), (amended 1991, 1993).

2. ILO Conventions (ILO created in 1919, under UN from 1946, has today 178 member countries):

- **MLC**, 2006 (Feb.), new consolidated Maritime Labour Convention (ratif.*=1;01000).
- C185, 2003, on Seafarers' Identity Documents (ratif.=4;00000).
- **C180**, 1996, on Seafarers' Hours of Work and Manning (in force 2002, ratif.=18;00011)
- **C179**, 1996, on Recruitment and Placement of Seafarers (in force 2000, ratif.=9;00001).
- **C178**, 1996, on Inspections of Seafarers' Working/Living Conditions (ratif.=11;00001).
- **C166**, 1987, on Seafarers' Repatriation (in force 1991, ratif.=12;00000).
- **C165**, 1987, on Seafarers' Social Security (in force 1992, ratif.=3;00000).
- **C164**, 1987, on Health Protection and Medical Care for Seafarers (ratif.=14;00001).
- C163, 1987, on Seafarers' Welfare at Sea and in Ports (ratif.=15;00001).
- C152, 1979, on Occupational Safety and Health in Dock Work (ratif.=24;00001).
- **C147**, 1976, on Minimum Standard in Merchant Ships (in force 1981, ratif.=52;01011) and Protocol P147, 1976 in force 2003, ratif.=17;00010).
- C146, 1976, on Seafarers' Annual Leave with Pay (in force 1979, ratif.=15;00000).
- C145, 1976, on Continuity of Employment for Seafarers (ratif.=17;00001).
- **C138**, 1973, on Minimum Age for Seafarers (amends C58, ratif.=141;10111).
- C137, 1973, on New Methods of Cargo Handling in docks (ratif.=25;00001).
- C134, 1970, on Prevention of Accidents (Seafarers), (ratif.=29;00011).
- C133, 1970, on Accomodation of Crews (Supplementary Provisions) (ratif.=29;01011).
- C126, 1966, on Accommodation of Crews for Fishermen (ratif.=22;10001).
- C125, 1966, on Fishermen's Certificates of Competency (ratif.=10;10000).
- C114, 1959, on Fishermen's Articles of Agreement (ratif.=22;11000).
- C113, 1959, on Medical Examination of Fishermen (ratif.=29;11001).
- C112, 1959, on Minimum Age for Fishermen (ratif.=29;11001).
- C109, 1958 (not in force), on Wages, Working Hours and Manning (ratif.=16;00001).
- **C108**, 1958, on Seafarers' Identification Document (revised by C185, ratif.=64;11011).
- C93, 1949 (not in force), on Wages and Work Hours (revised by C109, ratif.=6;00000).
- C92, 1949, on Crews' Accommodation onboard Ships (in force 1953, ratif.=95;11011).
- C76, 1946 (not in force), on Wages and Work Hours (rev. by C93, C109, ratif.=1;-).
- C74, 1946, on Certification of Able Seamen (in force 1951, ratif.=28;10000).
- C73, 1946, on Medical Examination of Seafarers (in force in 1955, ratif.=45;10011).
- C72, 1946 (not in force), on Paid Holidays for Seafarers (revised by C146, ratif.=5;-).
- C71, 1946, on Seafarers' Pensions (in force 1962, ratif.=13;10011).
- C70, 1946 (not in force), on Social Security for Seafarers (ratif.=7;00000).
- C69, 1946, on Certification of Ships' Cooks (in force 1953, ratif.=37;10011).
- C68, 1946, on Food/Catering for Crews onboard Ships (in force 1957, ratif.=25;10011).
- C58, 1936, on Minimum Age for Seafarers (rev. by C138, ratif.=51;11011).
- C57, 1936 (not in force), on Seafarers' Work Hours & Manning (rev. C109, ratif.=4;-)
- C56, 1936, on Sickness Insurance for Seafarers (in force 1949, ratif.=19;10001).
- **C55**, 1936, on Shipowners' Liability for Sick and Injured Seafarers (ratif.=18;11010).
- C54, 1936 (not in force), on Annual Holidays with Pay to Seafarers (ratif.=6;00000).
- C53, 1936, on Officers' Competency Certificates (ratif.=36;11001).
- C47, 1935, on Fourty-Hour Week of Work (ratif.=14;00001).
- C32, 1932, on Protection against Accidents Dockers (revised by C152, ratif.=45;10101).
- C23, 1926, on Repatriation of Seafarers (revised by C166, ratif.=46;11110).
- C22, 1926, on Seamen's Articles of Agreement (ratif.=59;11101).
- C16, 1921, on Medical Examination of Young Seafarers (ratif.=81;10111).

- C9, 1920, on Placement and Employment of Seafarers, Ratings (ratif.=40;10011).
- C8, 1920, on Unemployment Indemnity for Shipwreck (ratif.=59;10011).
- C7, 1920, on Minimum Age (Sea), (revised by C58 and 138, ratif.=53;00111).

3. Other UN-related Conventions (UN has today 191 member countries):

- Intern. Conv., 1999, UNCTAD*, on the Arrest of Ships (not in force, ratif.=5;-).
- Intern. Conv., 1993, UNCITRAL*, on Liens and Mortgages (not in force, ratif.=9;-).
- Basel Convention, 1992, UN Environment Programme (UNEP), on the Control of Transboundary Movements of Hazardous Wastes and their Disposal.
- Intern. Convention, 1991, UNCITRAL, on Liability of Terminal Operators.
- Rules on documents for Multimodal transport, 1991, set up by UNCTAD/ICC.
- Intern. Conv., 1986, UNCTAD, on Cond. Registration Ships (not in force, ratif.=11;-).
- **UNCLOS**, 1982, **United Nations Convention on the Law of the Seas** (in force 1994, ratif.=149, Agreement Part XI 1994 ratif.=122, Agreemt. Fish Stocks 1995 ratif.=56).
- Intern. Convention, 1980, UNCTAD, on Intern. Multimodal Transport of Goods.
- Hamburg Rules, 1978, UNCITRAL, Intern. Convention on Carriage of Goods by Sea.
- Intern. Convention, 1974, UNCTAD, on Code of Conduct for Liner conferences.

** Unctad: UN Conference on Trade and Development, established in 1964; Uncitral: UN Commission on International Trade Law, created in 1966; ratification of conventions: number of countries and five major flags (half of world's fleet): **Panama, Liberia, China-HK, Greece, Norway** (1: ratified, 0: non-ratified).*

4. Pre-UN/IMO International Maritime Conventions and Legislation:

- Brussels Intern. Convention, 1957, on the Limitation of Liability of Shipowners.
- Intern. Convention, 1954, for the Prevention of Pollution of the Sea by Oil.
- Brussels Intern. Convention, 1952, on the Arrest of Sea-going Ships.
- Intern. Convention, 1948 for the Safety of Life at Sea, 1948.
- INCOTERMS, Rules on International Commercial Terms (fob, cif..), 1936, prepared by the International Chamber of Commerce ICC (last adaptation from 2000, 13 terms).
- Hagues-Visby Rules (Brussels International Convention), 1924, (Protocol 1968), on Unification of Rules for Bills of Lading.
- Intern. Convention, 1923, on the Statute of International Regime of Maritime ports.
- Brussels Intern. Convention, 1910, on Unification of Rules on Collision.
- Harter Act, 1893, US martime law on obligations and rights of shipowner, master (rules adopted internationally in 1924 through Brussels Convention).
- York-Antwerp Rules, 1877, after resolutions adopted in York (in 1864) and Antwerp (1877), on common Incidences onboard (12 rules listed originally, 31 rules from 1994)
- French Commercial Code (Napoleon's *Code de commerce*), 1807, containing shipping provisions, applied internationally (through other codes), and still today by Panama.
- Catalan Medieval Maritime Code (*Llibre del Consolat de Mar*), 1370, compilation in use in all major Mediterranean ports and other Europe (until 1829 in Spain), derived from Barcelona's maritime customs (1258), enforced by maritime courts in big cities.
- Other influential codes in international maritime law: England's Admiralty Law book (derived from the Roles of Oleron, 1266), the Baltic's Hanse League laws, the Rules of Wisby (from Gotland), Pisa's *Constitutum Usus* code (12th century) partly covering shipping, the Byzantine Rhodian Sea Code (8th century, indirect written record), or the primary Roman Empire's *Praetor's Edict* (with section on shipping and seafarers).

EU/EEA Ratification Process of main International Maritime Conventions (IMO, ILO)

(21.6.07)

1. IMO Conventions	*at*	be	bg	cy	*cz*	dk	ee	fi	fr	de	el	*hu*	ie	it	lv	lt	*lu*	mt	nl	pl	pt	ro	*sk*	si	es	se	uk	no	ic	TT*
SOLAS Convention 74	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	161
SOLAS Protocol 78	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	114
SOLAS Protocol 88	-	X	X	X	-	X	X	X	X	X	X	-	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	87
STCW Convention 78	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	154
STCW-F Convention 95	-	-	-	-	-	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	9
SFV Protocol 93 (Fish.v.)	-	-	X	-	-	X	-	-	-	X	-	-	X	X	-	-	-	-	X	-	-	-	-	-	X	X	-	X	X	13
SAR Convention 79	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	94
MARPOL 73/78 Annex I/II	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	146
MARPOL 73/78 Annex III	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	130
MARPOL 73/78 Annex IV	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	-	121
MARPOL 73/78 Annex V	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	135
MARPOL Protocol 97 Ann.VI	-	X	X	X	-	X	X	X	X	X	X	-	-	X	X	X	X	-	X	X	-	X	-	X	X	X	X	X	-	42
CLC (FIPOL) Protocol 92	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	120
FUND (FIPOL) Protocol 92	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	-	X	X	X	X	X	X	101
FUND (FIPOL) Protocol 03	-	X	-	-	-	X	-	X	X	X	X	X	X	X	X	X	-	-	X	-	X	-	-	X	X	X	X	X	-	22
PAL Protocol 02	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4
LLMC Protocol 96	-	-	X	X	-	X	-	X	X	X	-	-	-	-	X	-	X	X	-	-	-	X	-	-	X	X	X	X	-	28
SUA Convention 88	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	144
SUA Protocol 88	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	133
FAL Convention 65	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	113
OPRC Convention 90	-	-	X	-	-	X	-	X	X	X	X	-	X	X	X	X	-	X	X	X	X	X	-	X	X	X	X	X	X	91
HNS Convention 96	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	8
BUNKERS Convention 01	-	-	-	X	-	-	X	-	-	X	X	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	X	-	-	13
ANTI FOULING 01	-	-	X	X	-	X	-	-	X	-	X	-	-	-	X	X	X	-	-	X	-	X	-	X	X	X	-	X	-	24
Totals, pending ratif.:	14	8	5	5	14	3	8	6	5	4	5	10	7	6	2	6	8	9	6	8	8	8	13	4	3	4	5	3	8	

2. ILO Conventions	*at*	be	bg	cy	*cz*	dk	ee	fi	fr	de	el	*hu*	ie	it	lv	lt	*lu*	mt	nl	pl	pt	ro	*sk*	si	es	se	uk	no	ic	TT*
C55-Shipowners liability-36	-	X	X	-	-	-	-	-	X	-	X	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	-	18
C92-Accomodation crews-49	-	X	-	X	-	X	-	X	X	X	X	-	X	X	-	-	X	-	X	X	X	X	-	X	X	X	X	X	-	46
C133-Accomodation II-70	-	-	-	-	-	X	-	X	X	X	X	-	-	X	X	-	X	-	X	X	-	X	-	-	-	X	X	X	-	32
C138-Min.age seafarers-73	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	149
C147-Min.standards-76	-	X	X	X	-	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	-	X	X	X	X	X	X	55
C164-Health protection-87	-	-	X	-	X	-	-	X	X	X	-	X	-	X	-	-	-	-	-	-	-	-	X	-	X	X	-	X	-	14
C165-Social security-87	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	3
C166-Repatriation-87	-	-	X	-	-	-	-	-	X	X	-	X	-	-	-	-	X	-	-	-	-	X	-	-	X	-	-	-	-	13
C178-Work inspections-96	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	-	X	-	-	X	-	-	-	-	-	X	X	X	-	13
C179-Recruitement-96	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	10
C180-Hours of work-96	-	X	X	-	-	X	-	X	X	X	X	-	X	-	X	-	X	X	X	-	-	X	-	X	X	X	X	X	-	21
C185-ID cards seafarers-03	-	-	-	-	-	-	-	-	X	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	11
Consolidated MLC-06	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
Totals, pending ratif.:	12	8	5	10	11	8	11	5	2	6	7	7	7	7	9	10	5	10	8	8	10	7	11	9	5	6	6	5	11	
Totals pending, IMO+ILO**:	26	16	10	**15**	25	11	19	11	7	**10**	**12**	17	14	13	11	16	13	**19**	14	16	18	15	24	13	8	10	**11**	8	19	

**TT=total number of ratifications, all countries; **main European flags in bold*

Pending ratifications from
World's 5 main registers:
Panama: 22 (12 IMO+10 ILO)
Liberia: 17 (9 IMO+8 ILO)
HK+China: 21 (9 IMO+12 ILO)
Bahamas: 20 (10 IMO+10 ILO)
Marshall Isl: 21 (8 IMO+13 ILO)

Best/worst record on Convention ratification process among EU/EEA:

Best record among EU/EEA, IMO+ILO: **(with pending ratifications)**

1. France (7)	**4. Bulgaria (10)**	**7. Finland (11)**
2. Spain (8)	**4. Germany (10)**	**7. Latvia (11)**
3. Norway (EEA, 8)	**4. Sweden (10)**	**7. UK (11)**

Worst record among EU/EEA, IMO+ILO: **(cz, hu excluded, nc=non-coastal)**

1. Austria (nc 26)	**3. Malta (19)**	**7. Belgium (16)**
2. Slovakia (nc 24)	3. Iceland (EEA, 19)	**7. Lithuania (16)**
3. Estonia (19)	**6. Portugal (18)**	**7. Poland (16)**

International Law-UNCLOS (UN Convention on the Law of the Sea)

The United Nations Convention on the Law of the Sea (UNCLOS) has been qualified by some as *"the most significant success, achievement in international law and diplomacy of 20th century"*. Adopted in 1982 (after years of negotitations) and entered into force in 1994 (one year after Guyana became the 60th state to sign the treaty); UNCLOS replaced four previous 1958 treaties. UNCLOS defines the rights and obligations of coastal and non-coastal states in the world's oceans and seas, covering key subjects like the environment or the management of natural resources.

Signatories of UNCLOS that have signed and ratified the Convention:

160 States (including all EU-27 Member States) plus the European Union, Niue and Cook Islands (New Zealand's OCTs); Vatican City is a non-voting member. Other associated members include Taiwan, Sahrawi Republic (Western Sahara) and Palestine Liberation Organisation (as Observer).

Signatories of UNCLOS that have not (yet) ratifed the Convention (Coastal States only)

	IMO member	*Major IMO Conventions not ratifed (on security, life protection)*	
1. Cambodia	1961	SAR, Salvage.	[IMO Conv.ratif.: 19/61]
2. Colombia	1974	Load Lines-P88, SOLAS-P88, SUA, Salvage.	[24/61]
3. El Salvador	1981	(*no merchant ships under country flag*)	[14/61]
4. Iran	1958	-	[31/61]
5. Libya	1970	Salvage.	[24/61]
6. North Korea	1986	SAR, SUA, Salvage.	[18/61]
7. Thailand	1973	SOLAS-P77-P88, Load Lines-P88, SAR, SUA, Salvage.	[13/61]
8. United Arab Emirates	1980	SOLAS-P88, Load Lines-P88.	[28/61]
9. USA (pending ratif.)	1950	-	[29/61]

States that have not signed UNCLOS (Coastal States only)

	IMO member	*Major IMO Conventions not ratifed (on security, life protection)*	
1. Azerbaijan (Caspian)	1995	SAR.	[24/61]
2. Ecuador	1956	-	[26/61]
3. Eritrea	1993	SAR, SUA, Salvage	[10/61]
4. Israel	1952	SOLAS-P88, Load Lines-P88, SAR, Salvage.	[21/61]
5. Kazakhstan (Caspian)	1994	SAR, Salvage.	[19/61]
6. Peru	1968	Salvage.	[29/61]
7. Syria	1963	Load Lines-P88.	[37/61]
8. Timor-Leste	2005	(*no merchant ships under country flag*)	[1/61]
9. Turkey	1958	SOLAS-P77-P88, salvage.	[21/61]
10. Turkmenistan (Caspian)	1993	SOLAS-P77-P88, Load Lines-P88, SAR, Salvage.	[14/61]
11. Venezuela	1975	SUA, Salvage.	[24/61]

Some of the key topics covered by UNCLOS: **Territorial sea** and contiguous zone (part II, arts. 2-33); straight **baselines** (art.7); **internal waters** (art. 8); right of **innocent passage** (arts. 17-32); **straits** used for international navigation (III, arts. 34-45); right of **transit passage** (arts. 36-38); **archipielagic states** (IV, arts. 46-54); **exclusive economic zone** (V, arts. 55-75); **continental shelf** (VI, arts. 76-85); **high seas** (VII, art. 86-120); **freedom of navigation** (art. 87); **nationality of ships** (art. 91); **duty to render assistance** (art. 98); definition of **piracy** (arts. 101-107); **living resources** in the high seas (arts. 116-120); regime of **islands** (VIII, art. 121); **enclosed or semi-enclosed seas** (IX, arts. 122-123); access to sea and freedom of transit **landlocked states** (X, arts. 124-132); **the area** (XI, arts. 133-191); protection **marine environment** (XII, arts. 192-237); **ice-covered waters** (art. 234); marine scientific **research** (XIII, art.s 238-265); marine **technology** (XIV, arts. 266-278); **disputes** (XV, arts. 279-299); **amendments** (arts. 312-316) Commission on the Limits of the Continental Shelf **UNCLCS** (Annex II); prospecting, **exploration and exploitation** (Annex III); **International Tribunal for the Law of the Sea** (Annex VI).

Annex 3: The Baltic Dry Index, Shipping companies in stock markets, Finance

The importance of the Baltic Dry Index as a Shipping but also as an Economic indicator:

The Baltic Dry Index (BDI) is an index covering the **dry bulk shipping rates** and managed by the Baltic Exchange, that is located in London (see www.balticexchange.com). BDI is a **base 100 index** (started at 4th January 1985), it reached a level of over 10 times higher the original level (100/1000 points) just before the 2008 crisis. It shows how prices (sea freight) have rather been historically driven by demand-supply interaction than by mainly concentrating on costs and margins. The BDI is daily published by shipping and financial newspapers (Lloyd's List, Financial Times).

The BDI is like a basket that takes into account 40 different routes (prices both on time charter and voyage basis), different sizes of bulk carriers (reflected in sub-indexes) and a range of commodities including coal, iron and grain. The bulk freight market relies on the co-operation of shipbrokers, shipowners and charterers, in order to ensure the free flow of trade. **Every working day**, the Baltic gathers **brokers around the world** and asks how much it would cost to book various cargoes of raw materials on various routes (e.g., 150,000t of iron ore from Australia to China or 120,000t of coal from South Africa to Japan), taking also into account variables such as the type and speed of the ship or the voyage length.

The BDI is considered to be **an excellent indicator** not only for shipping in general, even though it just focuses on the sea transport of solid raw materials, but also **for economic purpose** to see the present health or dynamism of the global economy. Unlike liner shipping, that transports consumer or finished goods, bulk carriers move raw materials (coal, iron ore, bauxite…) which are at the origin of the production chain process, so it can give a good idea of how **investment and future economic/industrial growth** will evolve. An additional advantage of the BDI over other economic indexes such as for stock or bond markets or measuring investor or consumer confidence, is that it excludes financial or speculative influences and it concentrates on physical/real goods, objectively measurable and for the intended use. In other words, and as an economist said, people don't book cargo ships unless they have cargo to move.

Main shipping companies listed in stock exchanges ranked by market capitalisation, profitability
(Around half of world's top liner shipping companies are listed in stock exchanges; Source: LL-Bloomberg, 1.10.08)

	Country	**Market value** ($mn)	**Yield share***	**P/E ratio****
1. AP Moller-Maersk A/S	Denmark	37,488	11.6%	8.6
2. Carnival Corp.	USA	27,398	8.5%	11.8
3. China COSCO Holdings	China	18,934	53.3%	1.9
4. MISC Bhd	Malaysia	8,807	7.9%	12.7
5. Mitsui OSK Lines	Japan	8,320	18.0%	5.6
6. Nippon Yusen KK	Japan	6,412	13.9%	7.2
7. China Shipping Development	China	5,541	13.1%	7.6
8. China Shipping Container Lines	China	4,755	18.4%	5.4
9. Hyundia Merchant Marine	S.Korea	4,248	3.3%	30.6
10. Royal Caribbean Cruises	USA	4,243	14.7%	6.8
11. Frontline Ltd.	Norway	3,476	22.0%	4.5
12. Kawasaki Kisen Kaisha	Japan	3,150	20.8%	4.8
13. D/S Norden	Denmark	2,091	51.5%	1.9
14. Hanjin Shipping	S.Korea	1,967	7.8%	12.8
15. Kirby Corp.	USA	1,926	7.6%	13.3
16. Neptune Orient Lines	Singapore	1,837	39.3%	2.5
17. Teekay Corp.	USA	1,822	9.9%	10.1
18. D/S Torm A/S	Denmark	1,724	-	-
19. Overseas Shipholding Group	USA	1,689	15.1%	6.6
20. Qatar Shipping	Qatar	1,592	10.3%	9.7
21. Orient Overseas International	HK/China	1,568	30.6%	3.3
22. Dry Ships Inc.	USA	1,558	40.8%	2.5
23. Ship Finance Internattional	Bermuda(UK)	1,513	13.1%	7.6
24. Diana Shipping Inc.	USA	1,466	12.2%	8.2
25. Pacific Basin Shipping	HK/China	1,413	50.1%	2.0
26. Euronav NV	Belgium	1,409	12.2%	8.2
27. Compagnie Maritime Belge	Belgium	1,389	23.6%	4.2
28. CSC Nanjing Tanker Corp.	China/CH	1,382	5.1%	19.7
29. Evergreen Maritime Corp.	Taiwan	1,350	24.7%	4.1
30. Seaspan Corp.	USA	1,200	6.1%	16.5

**Annual profitability rate=x **Price/Earnings ratio=1/x=number of years needed to recover (or double) investment.*

Top 20 banks, bookrunners of global syndicated shipping loans in 2007 (*Source: Dealogic*)

	Bank/bookrunner	Country	Total ($bn)	No.of loans	% Share
1.	Nordea Bank AB	SE	16.14	75	17.2%
2.	DnB NOR Bank ASA	Norway	15.60	77	16.6%
3.	Citi	USA	6.92	26	7.4%
4.	HSH Nordbank	DE	4.82	22	5.1%
5.	Fortis	NL-BE	4.39	17	4.7%
6.	ING	NL-BE	4.12	16	4.4%
7.	BNP Paribas	FR	4.02	20	4.3%
8.	RBS	UK	3.61	7	3.8%
9.	Sumitomo Mitsui B.	Japan	2.18	21	2.3%
10.	JP Morgan	USA	2.14	3	2.3%
11.	Calyon	FR	1.60	6	1.7%
12.	HSBC	UK	1.20	4	1.3%
13.	Goldman Sachs	USA	1.18	1	1.3%
14.	ANZ	Australia	1.11	2	1.2%
15.	Intesa Sanpaolo	IT	1.10	3	1.2%
16.	Mizuho	Japan	1.09	20	1.2%
17.	Mediobanca	IT	1.06	2	1.1%
18.	Wells Fargo & Co.	USA	1.03	3	1.1%
19.	Credit Suisse	Switzerland	0.80	2	0.9%
20.	ABN AMRO	NL	0.77	3	0.8%
Subtotal:			**74.89**	**330**	**79.9%**
Grand Total:			*93.85*	*353*	*100%*

Top 15 "shipping" loans/borrowers in 2007 *(Source: Dealogic)*

	Borrower	Country	Loan ($bn)	Banks involved
1.	TransOcean Inc.	USA	3.50	Citi, JP Morgan, Mitsubishi, Calyon, Credit Suisse
2.	Scandlines AG	DE	2.12	ING, Mizuho, RBS, SG CIB
3.	Dubai Drydocks	UAE	1.73	BNP Paribas, DBS, Emirates NBD, Lloyds TSB, China DB, Sumitomo Mitsui
4.	Ferretti SpA (megayachts)	IT	1.66	Mediobanca, RBS
5.	Eagle Bulk Shipping Inc.	USA	1.60	RBS
6.	Seadrill Rig AS	Norway	1.50	DnB NOR Bank ASA, Nordea Bank AB, Citi, Deutsche Bank, Danske Bank, Fortis, ING
7.	Genco Shipping&Trading	USA	1.38	DnB NOR Bank ASA, Bank of Scotland
8.	Prosafe SE	Norway	1.30	Nordea Bank AB, DnB NOR Bank ASA, Fortis, ING
9.	Seaspan Corp.	Canada	1.30	Citi, Fortis, Credit Suisse, DnB NOR Bank, Helaba
10.	IHC Holland Merwede	NL	1.29	ABN AMRO, Rabobank
11.	Royal Caribbean Cruises	USA	1.23	Citi, DnB NOR B., Scotia Capital, JP Morgan, RBS
12.	Marisco Ltd.	USA	1.18	Goldman Sachs
13.	CMA CGM	FR	1.11	Citi, DnB NOR Bank, SG CIB, Sumitomo Mitsui
14.	Awilco Offshore ASA	Norway	1.09	Nordea Bank AB
15.	Newcastle Coal-NCIG	Australia	0.96	ANZ, DZ Bank, Dexia, KBC, Oversea-Chinese, Sumitomo Mitsui, Suncorp-Metway
Total:			**22.95**	

Credit ratings for world's largest shipping groups after crisis (*source: LL-Lloyd's List Intelligence, 7.2011*)

Container top-5	**Bulker top-5**	**Tanker top-5**
Maersk Line **(dk)**: . . . . AAA	COSCO (HK, China): . . AAA	MOL (Japan): . . . . A
MSC (ch, **it**): . . . . AAA	NYK (Japan): . . . . AAA	Teekay (Canada): . . . . AA
CMA CGM **(fr)**: . . . . . AA	China Shipping (China): AAA	Frontline (Norway): . . . AA
COSCO Cont. (China): A	K Line (Japan): . . . . AAA	Sovcomflot (Russia): . . A
APL (Singapore/US): . . AA	Mitsui OSK (Japan): . . . A	MISC (Malaysia): . . . . AAA

Credit Rating categories: from AAA (*max.level on capacity to meet financial commitments*), to AA, A, BBB, BB (*end of investment grade, start of speculative grade, "junk" bonds*), B, CCC, CC, C and D (*min.level=payment default on financial commitments*); EU-27 MSs' credit ratings on their public/sovereign debt (from S&P, 8.2011): AAA (9 EU MSs, among which 6 in **€-zone**), AA (**be**/cz/**ee**/**si**/**es**), A (**mt**/**it**/pl/**sk**), BBB (bg/**cy**/hu/**ie**/lt/**pt**), BB (lv/ro), CC (**el**). **World:** US=AA; China=AA; Japan=AA; Canada=AAA; Russia=BBB; Brazil=BBB; India=BBB; South Korea=A.

Average age of world merchant fleet by ship subtypes *(LR-Fairplay'07, Shipping Fin.2008-09)*
Classification of world merchant fleet by average age, fom youngest to oldest (world average 19):

Avergage age	Ship type/subtype	Tonage fleet	No. of ships
10 years	Containerships	124.9 Mgt	4,278
11 years	LNG tankers	23.2 Mgt	253
" "	Crude Oil tankers	160.3 Mgt	2,080
13 years	Chemical tankers	36.8 Mgt	3,793
15 years	Bulk carriers (dry bulk)	203.1 Mgt	6,064
17 years	LPG tankers	10.7 Mgt	1,099
18 years	Ro-ro cargo ships	38.1 Mgt	2,416
19 years	Offshore supply ships	4.6 Mgt	4,200
22 years	Passenger Cruise ships	13.4 Mgt	485
23 years	Passenger ships (ferries)	1.5 Mgt	3,031
" "	Oil products tankers	30.2 Mgt	4,966
" "	Refrigerated cargo ships	6.2 Mgt	1,236
" "	Tugs (towing/pushing)	3.4 Mgt	11,958
24 years	Passenger/ro-ro cargo (ferries)	16.3 Mgt	2,837
" "	General cargo ships	55.1 Mgt	16,872
27 years	Dredging ships	2.6 Mgt	1,140
" "	Research ships	1.4 Mgt	891

World average age merchant ships: 19 years (16 years for EU/EEA for both flag and control)

Leading 20 shipowning groups groups by fleet capacity in gt (including newbuilts)
(Source: LR-Fairplay 2007, extracted from Shipping Finance Review 2008/09)

	Shipping Company	Country	Sector*	Tonnage fleet (total ships)	Newbuilts (incl.)
1.	Mitsui OSK Lines Ltd.	Japan	Tankers, Bc	31.9 Mgt (677)	9.7 Mgt (149)
2.	Nippon Yusen Kaisha	Japan	Tankers, Co	28.7 Mgt (486)	9.9 Mgt (144)
3.	COSCO	China-HK	Bc, Co	21.9 Mgt (722)	5.0 Mgt (69)
4.	**Moller AP**	**DK**	Co, Tk	21.7 Mgt (485)	7.8 Mgt (147)
5.	Kawasaki KK (K Line)	Japan	Containerships	15.0 Mgt (264)	4.4 Mgt (60)
6.	China Shipping Group	China	Containerships	12.8 Mgt (560)	3.3 Mgt (49)
7.	China Government	China	(all trades)	12.7 Mgt (3161)	1.2 Mgt (103)
8.	**Medit. Shipping (MSC)**	**CH, IT**	Containerships	11.4 Mgt (289)	3.1 Mgt (36)
9.	Bergesen Worldwide-BW	Norway	Tankers	9.3 Mgt (117)	1.3 Mgt (16)
10.	**Anangel Shipping Ent.**	**EL**	Bulk carriers	9.1 Mgt (104)	2.6 Mgt (30)
11.	Frontline Ltd.	Norway	Tankers	8.7 Mgt (110)	2.0 Mgt (46)
12.	Cido Shipping (HK)Ltd.	S.Korea	Tankers	7.9 Mgt 193)	4.3 Mgt (109)
13.	Carnival Corp.	USA	Cruise ships	7.6 Mgt (104)	2.0 Mgt (21)
14.	**Zodiac Maritime**	**UK**	Bulk carriers	7.1 Mgt (154)	1.3 Mgt (23)
15.	Teekay Shipping Corp.	Canada	Tankers	6.8 Mgt (102)	1.9 Mgt (21)
16.	Iran Government	Iran	Tk, Bc	6.3 Mgt (194)	2.9 Mgt (35)
17.	Tanker Pacific Sing.	Singapore	Tankers	6.3 Mgt (86)	0.4 Mgt (5)
18.	**Dynacom Tankers**	**EL**	Tankers	6.1 Mgt (76)	2.5 Mgt (31)
19.	PETRONAS	Malaysia	Tankers	5.8 Mgt (121)	1.4 Mgt (18)
20.	Ship Finance Intern.	Norway	Tankers	5.7 Mgt (48)	0.2 Mgt (2)

** Sector abbreviation: Tk=tankers, Bc=bulk carriers, Co=containerships*

Annex 4: Shipping Operational Costs, Ship Prices, Insurance

Capital Investment: the ship

Price newbuildings by major ship types (end of 2002, from ENTR/Clarkson Research Studies), in million USD:

Tankers:		Bulk carriers:	Container ships:	Ro-Ro ships:
Handysize : 27.00	LNG carrier: 150.00	Handysize: 19.00	1,000 TEU: 15.50	Small: 27.50
Panamax: 31.25	LPG carrier: 58.00	Handymax: 19.00	1,700 TEU: 21.00	Large: 39.50
Aframax: 34.75		Panamax: 21.50	2,750 TEU: 29.50	
Suezmax: 43.75		Capesize: 36.25	4,600 TEU: 45.00	Large cruise ships (ECSA):
VLCC: 63.50			6,200 TEU: 60.00	up to 500-600

Amortisation: 15 years foreseen in standard amortisation plans (ship's economic life), can go up in some cases to 20 years, which is considered to be the physical life of a merchant ship (to stay in minimum good structural condition).

Ship financing and business profit:

Capital costs for ship financing (12 or 15-year loan): interest rate around 6% (depending on currency as well).
Minimum profit rate normally demanded in the maritime/shipping (keeps/attracts investors): around 10% (IRR).

Operational costs of Shipping industry

FUEL OIL: cost and consumption: up to 300 t/day for containership of up to 7,600 TEU at speed of 14.5 knots
CREWS: salaries, social security, officers and master: rates depend on countries (nationality cost advantage)
TAXES: charged on profits or tonnage-based, rates depending on country where the company is registered
PORT HANDLING: from Port operator: handling, loading/unloading in port, dockers: prices from $80-90/container
PORT FEES: for dwelling, and days in port (stop over) during route, average of 4 days/stop over for general cargo
INSURANCE: for the ship, the cargo and other parties/service providers: rates depending on coverage share
MAINTENANCE & REPAIR: regular and occasional works on the ship, proportional with the age of the ship
CANAL FEES: if used during the route, normally very high ($300,000 one way for 7,500 TEU containership in Suez)

Estimated annual costs and standard features for different kinds of oil tankers (source from AWES):

(full-time operational)	**VLCC**	**Suezmax**	**Aframax**	**Product tanker**
Deadweight tonnage:	300,000dwt	150,000 dwt	95,000dwt	20,000dwt
Oil barrels/trip:	2.1 mio b.	1.0 mio b.	650,000 b.	20,000 b.
Repairs, days off-hire	15	15	15	15
Ship price, basic:	70 Meuro	43 Meuro	35 Meuro	20 Meuro
(Best, highest standard)	*(126 Meuro)*	*(90 Meuro)*	*(75 Meuro)*	*(45 Meuro)*
Standard route:	Gulf to EU	W.Africa to EU	N.Africa to EU	EU cabotage
Round trip duration:	52 days	30 days	20 days	15 days
Fuel oil consumed/trip:	4,368 tonnes	2,268 tonnes	1,176 tonnes	882 tonnes
Fuel oil cost/trip (140€/t):	611,520 €	317,520 €	164,640 €	123,480 €
Port & Canal fees/trip:	680,000 €	200,000 €	100,000 €	100,000 €
Number of trips/year:	6	11	16	22
ANNUAL OPERATIONAL COSTS, in million € (high standard ships and EU crews in brackets):				
Capital cost*	6.10 (10.98)	3.75 (7.85)	3.05 (6.54)	1.74 (3.92)
Fuel oil cost	3.67	3.49	2.63	2.72
Port & Canal fees:	4.08	2.20	1.60	2.20
Crew cost/year	1.00 (3.00)	0.90 (2.70)	0.80 (2.40)	0.60 (1.80)
Maintenance cost:	1.40 (4.20)	0.86 (2.58)	0.70 (2.10)	0.40 (1.20)
Insurance cost:	0.70 (1.26)	0.43 (0.90)	0.35 (0.75)	0.20 (0.45)
TOTAL:	**16.95 (27.19)**	**11.63 (19.72)**	**9.13 (16.02)**	**7.86 (12.29)**
Daily cost (in €):	**48,400 (77,700)**	**33,200 (56,300)**	**26,100 (26,100)**	**22,500 (35,100)**
Cost oil transport/trip:	2.82 (4.53)	1.06 (1.79)	0.57 (1.00)	0.36 (0.56)
Cost oil transport/barrel:	**1.34 € (2.16 €)**	**1.06 € (1.79 €)**	**0.88 € (1.54 €)**	-
Cost/litre (158l/b.) €cents:	**0.85 c (1.37 c)**	**0.67 c (1.13 c)**	**0.56 c (0.97 c)**	-

** capital cost (annual): ship's loan amortisation, calculated on the basis of a 6% interest rate and a 20-year loan*

Freight rates for containers (shippers) depend on route, three main trades (figures for 2007 from ECSA):
1. EU-US: $1,800/box; US-EU: $1,100/box / 2. EU-Asia: $900/box; Asia-EU: $2,100/box (ships arrive fully loaded from Asia, not the case in the return route) / 3. US-Asia: $800/box; Asia-US: $1,700/box (same case as for Europe).

MARITIME INSURANCE, RE-INSURANCE, CLAIMS, LLOYD'S, P&I CLUBS *(several sources)*

Categories of maritime insurance include: Hull and Machinery **(H&M)**, **Cargo** insurance, third parties' Protection and Indemnity **(P&I)** gathered around clubs, Kidnapping and Ransom **(K&R)**, re-insurance..

Leading and historic role of Lloyd's: Lloyd's of London is today the world's main centre, exchange, for maritime international insurance (and reinsurance), its headquarters located in a singular modern building in the heart of the London City. Lloyd's is the name of the market insurance associated corporation too. Lloyd's is also the name of the first classification society which was created, UK's Lloyd's Register of Shipping. In its origin, Lloyd's started, in the 17th century, as a coffee shop in London (run by Edward Lloyd, from **1688**) which started publishing and circulating information on merchant ships in town and on shipping, and then became recognised -and pioneer- as the place for obtaining marine insurance for ships.

Other Lloyd's maritime-related companies which took the original name from the historic Lloyd's coffee shop: Lloyd's Register of Shipping, first classification society founded in **1760** (second main branch apart from the insurance business and market London-based); shipping companies (Lloyd Triestino, from original Österreichischer Lloyd founded in **1836** in Trieste; Hapag-Lloyd, from original Norddeutscher Lloyd founded in **1857** in Bremen); German class society Germanischer Lloyd, founded in Hamburg in **1867**; Loyd's List (daily press for shipping from insurance market branch founded in **1734**), Loyd's Bank..

Protection and Indemnity (P&I) Clubs: during the **mid-19th century** shipowners found themselves with liabilities that their traditional hull underwriters (Lloyd's) were unable or unwilling to cover. To solve the problem, groups of shipowners formed mutual insurance associations and agreed to share each other's claims. These have evolved to the so-called called P&I Clubs, 13 of which form today the International Group (IG) of P&I Clubs, ensuring between them about **93% of the world's** ocean going fleet **tonnage**.

Third party liability is the cover offered by P&I clubs, typically related to, e.g., death and personal injury of seafarers, passengers or third parties, liabilities arising from pollution or from ship collisions; the system operates at three levels: 1. on its own to cover claims up to a certain limit, 2. then Pool of all Clubs may intervene for claims beyond that limit, up to a certain amount, 3. then through single collective reinsurance contract (said to be the world's largest) for any claim beyond that limit amount. **Directive 2009/20** from 3rd Maritime Safety package makes insurance compulsory to all ships with EU-flag and/or entering EU ports.

Accident (collision) claims: special system in maritime, that shares always responsibility among both parts (never 100% fault on one side but 60-40, 70-30, 80-20, 90%-10% used in 3rd party damage compensation), with party having "less" fault in a collision possibly ending up paying more than the other party. Another particularity of ship insurance can emerge when the amount received from insurer in case of accident, total loss of an old ship, might exceed its residual, scrap value, after costs. **P&I coverage for seafarers** includes cases of death and injury but not when a crew is "abandoned" in a port by the company, with the ship, with unpaid salaries (with low residual value of ship and/or high accumulated debt); about 100 ships/year being reportedly abandoned world-wide. ILO, IMO are developing future amendment to ILO's MLC Convention to tackle problem. Seafarers (or relatives) are compensated in case of death or injury, but not in all cases, e.g., if/when one-ship company (owning/operating oldest ships) is closed, liquidated after ship's total loss.

Protection and Indemnity: IG of 13 P&I Clubs (HQ, **tonnage** Mgt, Calls&Prem.$m, *source:P&I Brokers)*

1. **American** Steamship Owners Mut.prot.&Indemnity Assoc.	*(**USA**, NewYork-1917*	***22 Mgt**, $103m)*
2. Assuranceforeningen **Skuld** P&I	*(**Norway**, Oslo*	***100 Mgt**, $255m)*
3. Assuranceforeningen **Gard** P&I (Bermuda), Ltd.	*(**Norway**, Oslo*	***191 Mgt**, $448m)*
4. The **Britannia** Steam Ship Insurance Association Ltd.	*(**UK**, London*	***137 Mgt**, $290m)*
5. The **Japan Ship Owners'** Mutual Prot. & Indemnity Assoc.	*(**Japan**, Tokyo-1950*	***92 Mgt**, $231m)*
6. The **London** Steam Ship Owners' Mutual Insur. Assoc.Ltd.	*(**UK**, London-1866*	***44 Mgt**, $121m)*
7. The **North of England** Protecting & Indemnity Assoc.Ltd.	*(**UK**, Newcastle-1860*	***110 Mgt**, $269m)*
8. The **Shipowners'** Mutual Protection & Indemnity Assoc.	*(**UK**, London-1855*	***17 Mgt**, $182m)*
9. The **Standard** Steamship Owners' Prot.& Indemnity Assoc.	*(**UK**,London*	***110 Mgt**, $240m)*
10. The **Steamship Mutual** Underwriting Association Ltd.	*(**UK**, London-1909*	***83 Mgt**, $305m)*
11. The **Swedish Club**	*(**Sweden**,Göteborg-1872*	***39 Mgt**, $150m)*
12. The **United Kingdom** Mutual Steam Ship Assurance Assoc.	*(**UK**,London-1869*	***165 Mgt**, $384m)*
13. The **West of England** Ship Owners Mutual Insurance Assoc.	*(**UK**, London-1860*	***69 Mgt**, $240m)*

Annex 5-A: The Actors involved and Responsibilities, Global Shipping

Parties and countries involved in shipping, ships *(makes the sector complex and global)*

- Country of registration (flag State)
- Port of registry (*port d'attache*)
- Registered Owner, shipowner, nationality (*armateur*)
- Ship Operator (nationality/country of residence) or fleet manager, shipping company
- Group or holding, incorporating other companies (country registered, country of control)
- Charterer, when a ship or part of the fleet is on charter
- Shipmanager, shipbroker
- Ship agent, or forwarding agent (canvassing or finding cargo for the ship)
- Insurer (P&I Club, country)
- Document of Compliance (DOC)
- Classification Society, technical inspections (country)
- Ship captain (master) and officers, nationality
- Crew of ship, nationality
- Shipbuilder, name, country and place
- Group beneficial Owner (nationality and country of residence)
- Financial company or group, ship financing (financial pools)
- "Country of Economic Benefit"

MARITIME AMONG THE MOST LIBERAL AND MULTINATIONAL OF ALL ECONOMIC SECTORS?
Some facts and practices are at least unique, unmatched to the other transport modes…

- About **2/3 of the world's tonnage uses a "foreign" flag**, different from the operator's country, means that ships are mostly linked to third-country legislations and rules and operated under lower costs (unlike for civil aviation).
- This makes unrealistic the application of **tariffs on merchant ships "imported"** where free trade is therefore the inevitable outcome for the shipbuilding industry, in the EU and the rest of the world (special cases though in the US, where Short Sea Shipping ships are locally built and in Japan where ship owners buy Japanese vessels).
- Any merchant ship, in addition, is in principle prepared to **sail around the world** with no particular constraint, which reinforces the multinational character of Shipping as the maritime service industry (see example hereafter).
- Some "loose" practices and rules have included, up to 1.7.04, no compulsory **identification number** on the hull of the merchant ship, unlike for civil aviation planes, just the ship name (this changes with revised SOLAS/ISPS).
- For most of the ships, lack of visible identification of who is the ship operator/owner with the **company name** (unlike for civil aviation, road transport), probably justified by the common existence of "one-ship" companies.
- Difficult recognition or knowledge in some cases of the **country flag** of the ship, some ships being even formally classified under a so-called "unknown" flag group. Occasional difficulties in tracking ship **insurance** and insurer.

Distinct Areas for control and responsibility over ships (e.g., on infractions, pollution):
1. Territorial waters: 12 nautical miles (or 22km) from coast (limit for the Mediterranean)
2. Exclusive Economic Zone (EEZ): up to 200 n. miles from coast (370km), fixed by each country (ref. UNCLOS)
3. International waters: beyond EEZ (control belongs to country of the ship's flag)

Flags widely used, international open registers and flags of convenience (with No. of ships and Mdwt)

Africa:	Comoros, Equatorial Guinea, **Liberia** (1,484, 77 Mdwt), Mauritius, Sao Tome & Principe
The Americas:	**Antigua & Barbuda** (884, 6.9 Mdwt), **Bahamas** (1,150, 48 Mdwt), Barbados, **Belize** (428, 1.8 Mdwt), **Bermuda** (111, 6.9 Mdwt), Bolivia, Cayman Islands, Honduras, Jamaica, Netherlands Antilles, **Panama** (5,331, 187 Mdwt), **St. Vincent & Grenadines** (958, 9.2 Mdwt)
Asia:	**Cambodia** (597, 3.2 Mdwt), Lebanon, Myanmar, Sri Lanka
Oceania:	Marshall Islands, Tonga, **Vanuatu** (132, 1.5 Mdwt)

Advantages of ship registration in some third countries:
- Lower controls and obligations, ensured by country of flag
- Lower salaries and social security costs for lower crew and officers
- Lower taxes, on profits (tonnage) and in general
- Port of registration associated to the flag country (costs)
- Legislation applicable on safety and security, liabilities

Global Suppliers of Maritime Transport: leading countries by sector/cluster* (*source: Unctad/J.H.*)

1. Building (ships): **China, South Korea** = 74% of world (*by GT, built, 2012*), China=41%, S.Korea=33%
2. Owning: **EL, Japan, China(all), DE** = 50% of world (*dwt*), EL/Japan=29%,EL-15%,China-13%, EU-41%
3. Registration: **Panama, Liberia, Marshall Islands** = 42% of world (*2013, GT*), compared to 39% in 2010.
4. *Operation* (liner, cont'ships): **DK, Switzerland(/IT),FR**=38% of world (*3 groups*) = 53% with **China**.
5. Scrapping (end of cycle): **India, Bangladesh, China, Pakistan** = 94% of world.
6. *Other sectors*: Seafarers: **Philippines, Indonesia, China..**; Finance: **UK, SE, NO**; Insurance (P&I): **UK** (62% world); Classification: **Japan, UK, US, NO/DE** (81% of world); port terminal operators (for containers, international): **China, Singapore, DK, Dubai, DE** (38% of world).

**Gradual global market concentration seen for most sectors over the years, with countries reinforcing their positions.*

20-point "Radiography" of the world's No. 1 maritime flag and registry: PANAMA

- Panama flag gathers alone **23% of world's** merchant fleet by tonnage dwt (13% by ship numbers)
- Over 90% of the Panama-flagged ships (tonnage dwt) belong to **foreign companies** (mainly Asia, Japan)
- Remaining 10% of ships are linked to local companies that mainly belong to **non-residents** (Europe/Greece)
- **Low-cost** and very easy ship registration: $6,500 for new tanker plus minor additional taxes and formalities
- Panama is a **small country** with a small economy: 3 M inhabitants, 76,000sq.km, 6,200 $/capita PPP
- Services-oriented economy (75% of GDP), highly **specialized**: Canal, Banking, Offshore finance, Registry
- The **Canal**: achieved by US Army between 1904 and 1914, following independence from Colombia in 1903
- 1999: **sovereignty** over the Canal is "returned" to the country in accordance with Agreement signed in 1977
- **Flag registry**: created in 1925 by US lawyers in order to by-pass US law prohibiting alcohol imports
- Foreign **income** from flag registry (over 5,300 ships registered) has now overtaken that generated by Canal
- Panama diplomatic missions abroad or **"Consulates"** are not less than 65, comparable to big countries
- Consulates help to attract and consolidate maritime for the country, issue **seafarers passports** world-wide
- **HQ** Maritime authority in Panama austere (former US military school) but monitors world **24 hours/day**
- A dozen **cabinets of lawyers** specialized on maritime act as intermediaries, well linked to UK, US lawyers
- Panama has improved record on the Paris MoU, but now again in **black list** (594 detentions/7,368 inspect.)
- Black listed as well by the ITF Trade Union, for **poor record on social** and life conditions for seafarers
- **Offshore finance** in Panama offers possibility to open tax-free and low-controlled limited companies
- Apart from world's No. 1 flag, Panama is also the first funds contributor to **IMO** (half of its total budget)
- Panama has elected **new President**, Torrijos Jr., son of General who closed deal with US over Canal's return
- Claims of insufficient efforts and co-operation on **safety-security** (IACS, JSA) denied by registry authorities

(source: Le Monde, LR-Fairplay, other)

OECD's List of Tax Havens (and Other Financial Centres), at 22.9.09

(with number of agreements signed with 3rd countries to cooperate on tax evasion)

Andorra	**(3)**	**Grenada**	**(1)**	**PHILIPPINES**	**(0)**
Anguilla-uk	(4)	**Guatemala**	**(0)**	**St. Kitts-Nevis**	**(4)**
ANTIGUA&BARBUDA	**(9)**	**LIBERIA**	**(0)**	**St. Lucia**	**(0)**
BAHAMAS	**(1)**	**Liechtenstein**	**(5)**	**ST. VINCENT-GR.**	**(4)**
BELIZE	**(0)**	**Malaysia (Labuan)**	**(1)**	**Samoa**	**(0)**
Brunei	**(6)**	**MARSHALL ISLANDS**	**(1)**	**San Marino**	**(9)**
Chile	**(0)**	**Monaco**	**(6)**	**SINGAPORE**	**(9)**
Cook Islands-nz	(1)	Montserrat-uk	(0)	**Switzerland**	**(10)**
Costa Rica	**(0)**	**Nauru**	**(0)**	Turks-Caicos Isl.-uk	(4)
Dominica	**(1)**	Niue-nz	(0)	**Uruguay**	**(1)**
GIBRALTAR-UK	(8)	**PANAMA**	**(0)**	**VANUATU**	**(0)**

States marked in bold, major flag registries for merchant ships in capital letters (world's top-4 underlined).

A **continuous very dynamic growth** has been registered in the **world's top-4 flags** (of convenience) from 1.1.08 until 1.7.09: **Panama (+11%), Liberia (+13%), Bahamas (+32%) and Marshall Islands (+28%).** These four flags already constitute, today, the chosen register for most (**51%) of world's merchant fleet**. Three out of these four States, **in addition** of being the world top flag registries, are **big maritime centres** where a number of foreign shipping companies (EU residents incl.) are established, with merchant fleets (regardless of flag) of the order of 15Mdwt (**Liberia**), 14 Mdwt (**Panama**) and 8Mdwt (**Marshall Isl.**)

Annex 5-B: "SAFETY WATCH" - Vademecum No. 43, MOVE C (updated 31.8.14)

LIST OF SHIPPING COMPANIES WITH SAFETY-RELATED RISK CONCERNS

Fleet manager, with ships banned, large ships lost or fleet old >22y (Latest names added highlighted in yellow)

Company name	*Country*	*Fleet*	*Risk*	*Ship(s), ship types, flag(s)*
Aegean Shipping Mgt.	Greece	23	loss	Panagia Soumela (oil tanker, flag unknown).
Akar Deniz	Turkey	6	ban	Hatice Hakar (bulk carrier, tr).
Alendal Rederi	Norway	1	ban	Caribbean Trader (chem.tanker, pa).
Alfamarine Shipping Co.	Syria	7	ban	Andelina (general cargo ship, vc).
Almar	Ukraine	3	ban	Ina (ro-ro cargo ship, tg).
Alternatif Shipping &Tr.	Turkey	0	ban	Baba T (general cargo ship, tg), broken up.
Anglo-Eastern UK	UK	40	loss	Destiny (oil tanker, sg).
Aquarius Maritime	Panama	1	ban	Sadalsuud (oil tanker, pa).
Arados Bureau Sea Sces.	Egypt	2	ban	Taknis (general cargo ship, tz).
Arctic Shipping LLC	Russia	6	ban	Frio Petropavlosk (refrigerated cargo ship, kn).
ARG Shipping SIA	Latvia	10	ban	Meropa (general cargo ship, dm).
Arne Shipholding SA	Marshall islands	1	ban	Mermaid (general cargo ship, md).
Associated Maritime	HK/China	21	loss	New Renown (oil tanker, lr).
Astoria Maritime	Greece	1	ban	Long Guan (bulk carrier, kh), in force
Athenian Sea Carriers	Greece	3	loss	Astor (oil tanker, cy).
Atlantic Oil Maritime	Greece	3	loss	Nothsea (oil tanker, kh).
Azerbaijan State Casp.	Azerbaijan	80	loss	Mercury-2 (pass./ro-ro, az).
Baltlanta JSC	Lithuania	10	ban	Pelikan (oil tanker, km), in force.
Barhoum Maritime Co.	Lebanon	6	ban	Athina A. (general cargo ship, tz).
B Navi	Italy	11	age	Bulk carriers (24y., cym, mt..).
B&H Equimar	USA	8	age	Oil tankers (23y., bs, lr).
Bright Sunset Co SA	Panama	0	ban	Castor (general cargo ship, pa), broken up,Co.dissolved.
Cata Shipping Mangmt.	Syria	9	ban	Gulf Forest (general cargo ship, tz).
Champion Tankers	Norway	9	loss	Fjord Champion (oil tanker, no).
Chekka Shipping	Greece	4	ban	Alexander K (bulk carrier, lb).
Chemtrans Intern.	Romania	1	ban	Santos C (chem..tanker, pa).
China Chance	HK/China	3	ban	Oil Ambassador (oil tanker, pa), in force
Coasters Maritime SA	Greece	3	ban	Eos (general cargo ship, ke).
Cosco Shanghai SM	China	25	ban	Navision Laker (bulk carrier, pa), in force
Cosena	Romania	5	ban	Andra (bulk carrier, vc).
Cosmoship Mangmt.	Greece	10	ban	Paloma C (bulk carrier, pa).
Cowen Management	Russia	2	ban	Hermes (oil tanker, vc), in force
Daglia Maritime	Greece	0	loss	Best (oil tanker, flag unknown).
Dalnave Navigation	Greece	7	age	Bulk carriers (23y., cy).
DD Shipping	Panama/Ru	10	ban	DD Seaman (bulk carrier, vc), in force
Delfi	Greece	10	age	Oil tankers (24y., pa, lr).
Deniz Nakliyati	Turkey	7	ban	Burdur (bulk carrier, tr).
Densa Tanker Isletm.	Turkey	3	ban	**2 ships:** Yasmin C, Buket (chem.tankers, sl,pa)
Deval Shipping	Turkey	13	ban	Hakki Deval (bulk carrier, tr).
DND Management	Greece	7	age	Bulk carriers (26y., pa..).
Donbass	Ukraine	6	age	Bulk carriers (26y., ua).
Efxinos Shipping	Cyprus	0	loss	Efxinos (oil tanker, mt).
El Salam Maritime Tr.	Panama/Egypt	9	loss	**3 passenger/ro-ro ships lost** (Panama flag).
Endeavor Shipping	Panama/Greece	5	ban	Agios Nikolaos II (bulk carrier, km).
Engy Shipping Lines	Panama/Egypt	1	ban	Milano (bulk carrier, pa), in force.
ENTMV	Algeria	4	ban	Hoggar (passenger/ro-ro, dz), in force
ER Denizcilik	Turkey	1	ban	Balaban I (bulk carrier, tr).
Ergene Shipping &Tr.Co.	Marshall islands	1	ban	Atahan (general cargo ship, md).
Essar Shiping	India	9	age	Bulk carriers, oil tankers (23y., in).
Estoril Navigation	Greece	3	loss	Kingfisher (oil tanker, mt).
Excessive Navigation	Albania	3	ban	Haj Yamak (bulk carrier, ge, pa), **2 bans**
Eurocarrier Maritime	Cambodia	1	ban	Eurocarrier (bulk carrier, kh).
Eurocarriers	Greece	11	age	Bulk carriers (23y., cym, pa..).
Eurotankers	Greece	8	loss	Michael (oil tanker, mt).
Falcon Shipmanagement	Marshall Isl./EL	1	ban	Adam S (general cargo ship, vc).

Company name	*Country*	*Fleet*	*Risk*	*Ship(s), ship types, flag(s)*
Fedcomshipping	Ukraine	11	age	Bulk carriers (27y., ge..).
Frim Joint Stock Co.	Russia	3	ban	Dana-1 (general cargo ship, md).
Fuden Denizcilik Ticaret	Turkey	3	ban	Zelek Star (general cargo ship, vu)
Fujian Shipping	China	20	age	Bulk carriers (26y., cn, pa..).
Gemarfin	Switzerland	8	loss	Kristal (oil tanker, mt).
Glencore International	Switz./Greece	9	loss	Elli (crude oil tanker, pa)
Global Mangmt&Trading	Lebanon	7	ban	Safi (general cargo ship, tg).
Glory Shipmanagmt.	Singapore	19	age	Oil tankers, bulk carriers (24y., sg..).
GMA Maritime	Greece	3	ban	Cora (bulk carrier, vc).
GMZ Ship Management	Lebanon	31	ban	**2 ships: Joudi**, Jasy (general cargo ship, kh, tg).
Gold Star Shipping	Marshall Islands	1	ban	Gold Star (general cargo ship, tz).
Good Faith Shipping	Greece	14	age	Bulk carriers (26y., pa, mt).
Grup Denizcilik	Turkey	12	loss	Sancaki (pass./ro-ro, tr).
Guangzhou Maritime	China	18	age	Oil tankers (25y., cn).
Harbor Shipping	Greece	7	age	Bulk carriers (25y., pa, gr).
Hayfield Intl. Ltd.	UK/Virgin Isl.	1	ban	Derya (bulk carrier, km), in force
Hellenic Star Shipping	Greece	9	ban	Capetan Giorgis I (bulk carrier, cy).
Hellenic Star Shipping	Greece	9	age	Bulk carriers (26y., mt, cy).
Hesen Moon Shipping	Marshall Isl./Greece	1	ban	Hesen Moon (general cargo ship, tz).
Hong Ying Shipping Mgt.	Marshall Islands	2	ban	Hai Feng 66, new name (reefer, kh).
HQ Marine Services Ltd.	Cyprus	4	ban	Vilga (general cargo ship, vc).
Hyproc Shipping	Algeria	6	age	LNG tankers (28y., dz).
Ilias Shipping	Greece	3	ban	**2 ships:** Star, Trinity (bulk carriers, kh).
Ilias Shipping	Greece	3	loss	**2:** EurobulkerIV,EurobulkerX(bulk c.,vc, kh).
Interbunker Comm.	Panama/Spain	1	ban	Blue Ice (oil tanker, kn).
Interglobal Marine A.	Greece	6	age	Bulk carriers (29y, pa).
Intern.Shipping Group	Turkey	6	ban	**2 ships:** Belize City, Sambor (bulk carr., bz).
ISCOMAR	Spain	8	loss	Don Pedro (ro-ro, es).
Island Navigation CI	HK/China	10	loss	New Renown (oil tanker, lr).
ISM Group Ltd.	Syria	25	ban	Mahmoud-Z (general cargo ship, tz).
Istanbul Deniz Ticaret	Turkey	37	ban	Zgorzelec (bulk carrier, kh), **3 bans**
Jaguey Maritima	Panama	0	loss	Shauadar (oil tanker, pa).
Jaohar UK Ltd.	UK	5	ban	Lady Lina (general cargo ship, tg), broken up.
Jiangsu Fareast	China	6	age	Bulk carriers (23y., vc, hk).
Jobmarine Shipping & Tr.	Syria/Jordan	0	ban	Captain Johnny (gral.cargo ship, sl), broken up, Co.diss.
Ka-Trans Navigation	Ukraine	3	ban	Malbork (bulk carrier, ge), in force.
Kermantrans Intern.	Turkey	3	ban	Constantza (general cargo ship, km).
Kiran Group	Turkey	13	ban	Gokhan Kiran (bulk carrier, tr).
Kutup Shipping &Tr.	Turkey	1	ban	Nurettin Amca (general cargo, sk).
Leo Shipping	India	8	age	Bulk carriers (27y., pa, cy..).
Louis Cruise Lines	Greece	11	loss	Sea Diamond (cruise ship, gr).
Lula Shipping	Syria	1	ban	Mansour M. (general cargo ship, md).
Lulu Shipping Co SA	Lebanon	2	ban	Mansour M. (general cargo ship, md).
Mangue Shipholding Inc	Marshall Islands	1	ban	Merkur 1 (general cargo ship, md).
Mantion Shipping Ltd.	Lebanon	1	ban	Laguna (general cargo ship, tz).
Marworld Ship Mangmt.	Italy	1	ban	MRW Lorerei (general cargo ship, vc).
Marine Transport Co.	USA	12	loss	Patriot (oil tanker, us).
Master Shipmangnt.	Greece	0	loss	**2:** Madona, Saturn II (bulk carriers, lr, pa).
Med Moryak Denizcilik	Turkey	4	ban	Tuzla (general cargo ship, bz).
Mediterr. Freedom	Italy	1	ban	Media V (passenger/ro-ro, cy).
Medship Navigation	Greece	1	ban	Agios Isidoros (chem.tanker, vc).
Medusa, SA	Greece	1	ban	Chloe (general cargo ship, pa).
Mehmet Kaptanoglou	Turkey	2	ban	Sohret (bulk carrier, tr).
Mersa Denizcilik Nakliyat	Turkey	1	ban	Mersa 2 (general cargo ship, pa).
Milenyum Denizcilik	Turkey	2	ban	Mariana (LPG tanker, ge).
Muhieddine Shipping	Syria	10	ban	Khaled Muhieddine (bulk carr., ge), in force.
Murmansk Shipping	Russia	31	age	Bulk carriers, oil tankers (24y., ru, mt, cy).
Naftomar Shipping	Greece	25	loss	Gaz Poem (LPG tanker, pa).
Nationwide Shipping	Greece	1	ban	Amaze (tanker, vc), in force.

Company name	*Country*	*Fleet*	*Risk*	*Ship(s), ship types, flag(s)*
Nautical Sea Trade	Greece	3	ban	Arielle (passenger/ro-ro, vc).
Naviera Armas	Spain	10	loss	Volcan de Tacande (pass/ro-ro, es).
Nika Maritime Inc.	Albania/St.KittsN.	0	ban	Nika Z. (general cargo ship, kh).
Norbulk Hellas	Greece	8	age	Bulk carriers (23y., lr, mh).
Nordic Shipping Group	Estonia	1	ban	Fiona (ro-ro cargo ship, tg), broken up.
North Africa Mar.Trans	Libya	0	ban	Farwa (general cargo ship, ly).
Northern Shipping	Russia	6	age	Bulk carriers (30y., ru).
NV Vega Shipping	Cyprus	1	ban	Lady Fox (bulk carrier, km), in force.
Ocean Link Intern.	Panama	0	ban	Global Star (chemical tanker, mn).
Ocean tankers	Singapore	61	loss	Heng San (oil tanker, sg).
Odfjell	Norway	63	loss	Bow Mariner (oil tanker, sg).
Orchid Shipping	S.KittsN./Lebanon	1	ban	Hala B (general cargo ship, tz).
Oscar Shipmangnt.	Greece	2	ban	Andreas K. (bulk carrier, pa).
Pacific King Intern.	China	6	age	Bulk carriers (23y., pa..).
Pacific Naval Regist.L.	UK-Malta	2	ban	Navaga (general cargo ship, kn).
Pan Nautic S.A.	Switzerland	8	ban	Red Moon (bulk carrier, pa)
Pemex	Mexico	28	age	Oil tankers (24y., mx).
Phoenicia Maritime Co	Syria/US	7	ban	Nasem (general cargo ship, bo).
Pioneer Tankers Shp.	Greece	5	loss	Ritas (oil tanker, cy).
Polaris Maritime	UK	1	ban	Bruin (refr.cargo ship, kn), broken up.
Polembros Shipping	Greece	22	ban	Good News (bulk carrier, vc).
Polembros Shipping	Greece	22	loss	Tasman Spirit (oil tanker, mt).
Poseidon Ltd-Kherson	Ukraine	7	ban	Orion-1 (general cargo ship, md).
Priamos Maritime	Greece	10	age	Bulk carriers (26y., mt, pa..).
Primorsk Shipping	Russia	8	age	Oil tankers (24y., ru..).
Project Shipping	Greece	8	age	Oil tankers (24y., lr..).
Qawareb Ship Mgt.	UAE-Dubai	2	ban	Heidi II (bulk carrier, ge), in force
Rabunion Maritime	Lebanon	6	ban	**2 ships:**Hajji Amnah,SebaM(bulk c.,sy,lb),i.f.
Raouf MaritimeCo.	Syria	3	ban	Ziad Junior (general cargo ship, md).
Rem Service	Poland	4	ban	Mamry (chem.tanker, pl).
Rozete	Panama	2	ban	Andra (chem.tanker,kh), in force.
Sadent Shipping Ltd.	Ukraine/Russia	3	ban	Sea Way (bulk carrier, bz).
Sahyouni	Syria	3	ban	Khaldoun (bulk carrier, sy), in force.
Samin Shipping	Syria	10	ban	Mai-S (bulk carrier, sy), in force.
Samta Shipmangnt.	Singapore	11	loss	Seraya Baru (oil tanker, sg).
Sayed Nasr Navigation	Egypt	1	loss	El Safa (pass./ro-ro, pa).
Sealink Marine	Greece	3	loss	**2:** Kiperousa, Kastor Too (bulk carr., mt, cy).
Sea Trade Shipping	Greece	1	loss	Radwan (oil tanker, cy).
Seabulk Shipping	Greece	6	age	Bulk carriers (38y., pa..).
Seven Seas Maritime	UK	17	loss	**2:** Aurelia, Arethusa (bulk carriers, mt, cy).
Shanghai Adani Shpg.	China	11	age	Bulk carriers (26y., hk..).
Sine Line Shipping	Greece	1	ban	Rita S. (bulk carrier, pa).
Skenderbeg Lines	Italy	1	ban	Europa I (Passenger/ro-ro, bo).
Skymar Shipping	Syria	1	ban	Yazan Z (tanker, pa), in force.
SNTM/CNAN	Algeria	29	ban	Ain Oussera (bulk carrier, dz).
SNTM/CNAN	Algeria	9	age	Bulk carriers (25y., dz).
South River Shipping	Ukraine	4	ban	Vectis Isle (general cargo ship, km).
Soysay Shipping	Turkey	4	ban	Mediterranean star (chem.tanker, pa).
Split Ship Management	Croatia	3	ban	Therese (general cargo ship, pa), broken up.
Stamford Navigation	Greece	19	ban	Epos Breeze (bulk carrier, hk-cn).
Svemir Shipping	Germany	1	ban	Elena B (bulk carrier, vc).
Team Chartering&Shipp.	Turkey	3	ban	Nore (general cargo ship, md).
Teekay Norway	USA	72	ban	Ocean Princess (bulk carrier, mt).
Teekay Shipping Can.	Canada	57	loss	Alliance Spirit (oil tanker, bs).
Tekso Denizcilik vTur.	Turkey	1	ban	AresII>Vera (general cargo ship, kn>kh).
Tonghae Sonbak	N.Korea	9	ban	Hyon Sin 2 (bulk carrier, kp).
Trade Fortune	Greece	6	age	Bulk carriers (24y., mt..).
Transmed Shipping	Greece	7	loss	**2:** John R., Christopher (bulk carriers, cy).
Transmet Denizcilik T.	Turkey	0	ban	ELA (general cargo ship, tz).

Company name	*Country*	*Fleet*	*Risk*	*Ship(s), ship types, flag(s)*
Transpetro	Brazil	50	loss	Velma (chem. tanker, mn).
Transtas Global Logistics	Egypt	0	ban	Ersel, broken up (gerenal cargo ship, tg).
Trustoil tankers	Greece	6	age	Oil tankers (24y., pa..).
Ukrainian Danube Shipp.	Ukraine	26	ban	**2nd ban:** Reni (general cargo ship, ua).
Ultragas Naviera	Chile	1	loss	Vicuna (oil tanker, cl).
Uni-marine Management	Lebanon	6	ban	**2 ships:** Sky Hope, Uranus (gral. cargo ship, md, tz).
Universe Maritime	Greece	0	loss	Prestige (oil tanker, bs).
Varna Shipping & Tr.	Bulgaria	3	ban	European (bulk carrier, vc), in force.
Varun Shipping	India	10	age	LPG tankers (23y., in).
Ventura Services	Greece	0	loss	Ventura (oil tanker, vc).
Waywiser Marine S.	Taiwan	15	age	Bulk carriers (27y., pa).
WG &AJebsens Shipm.	Philippines	7	loss	Superferry 14 (pass./ro-ro, ph).
Worldwide Ocean C.	Greece	1	ban	Vorios I.H. (bulk carrier, pa).
X, Y, Zotaj Shipping &T.	Albania	3	ban	Koravi (general cargo ship, al).

Annex 6: "Maritime" Europe

A COMPREHENSIVE VIEW OF MARITIME: **World's main "maritime" countries, 20 criteria (incl. EU place):**

Criteria	**World's main countries (ranked 1 to 7)**							**EU-25 rank.**
1) Merchant fleet (control):	**Greece**	Japan	China*	**UK***	USA	S.Korea	Singapore	No.1
2) Merchant ports (biggest):	Singapore	China	**Netherlands**	Japan	**Belgium**	USA	S.Korea	No.3
3) Shipbuilding (cgt):	S.Korea	Japan	China	**Germany**	**Poland**	**Italy**	Croatia	No.4
4) Seafarers, oceanic:	Philippines	India	China	Ukraine	Turkey	Russia	**Greece**	No.2
5) Flag merchant fleet:	Panama	Liberia	China*	Bahamas	**Greece**	**UK***	Singapore	No.1
6) Classification societies:	Japan	**UK**	USA	Norway	**France**	**Germany**	China	No.1
7) Port intl. companies:	China*	Singapore	Dubai	**Denmark**	**Germany**	S.Korea	USA	No.2
8) Liner companies (main):	**Denmark**	Switzerland	**France**	Taiwan	**Germany**	Singapore	S.Korea	No.1
9) Coast length (all-year nav.):	Indonesia	Philippines	Japan	Australia	Norway	USA	N.Zealand	No.1
10) Fishing fleet (tonnage):	Russia	Japan	USA	**Spain**	Norway	Ukraine	**UK**	No.2
11) Naval fleet (main ships):	USA	**France**	**UK**	Russia	Japan	India	China	No.2
12) Leisure fleet (s-yachts):	**UK**	USA	**Greece**	Monaco	**Italy**	**France**	**Spain**	No.1
13) Historical depend. (OCTs):	**UK**	**France**	**Spain**	**Portugal**	**Netherlands**	**Italy**	**Germany**	No.1
14) Acquaculture (M tonnes):	China	India	Philippines	Japan	Indonesia	Bangladesh	Thailand	No.4
15) Oceanographic/R&D fleet:	USA	Russia	Norway	China	**UK**	**Germany**	Japan	No.1
16) Total No. merchant ports:	USA	China	**UK**	Canada	Japan	Indonesia	Australia	No.1
17) Ferry passengers (ships):	Japan	**Greece**	Norway	China*	**Italy**	Indonesia	Philippines	No.1
18) Oil-gas offshore (s.ships):	USA	UAE	Norway	Singapore	**UK**	China	India	No.2
19) Cruise ships (fleet control):	USA	**UK**	Norway	Malaysia	**Italy**	**Greece**	**Netherlands**	No.2
20) Straits/Canals (traffic):	Singapore+	**UK**+	**Spain**+	Turkey	**Germany**	Egypt	Panama	No.1

Main countries by number of criteria (i.e., number of times country appears in table above, EU MSs put in bold): **UK: 12/20**; China, USA: **11/20**; Japan: **10/20**; Singapore, **Germany**, Norway: **7/20**; **Greece: 6/20**; **France, Italy,** S.Korea**: 5/20**; Philippines, India, Russia, Indonesia, **Spain: 4/20**; **Netherlands: 3/20**; Turkey, Panama, **Denmark**, Australia: **2/20**; 17 countries with **1/20**; EU taken as a block: **EU-25: 20/20** (EU appears in all criteria in above table).

**UK is counted with its OCTs, and China with Hong Kong*

Europe's Overseas Countries and Territories (OCT/PTOM not being part of EU) and Overseas Provinces or Outermost Regions (DOM-RUP, as part of EU, with EU citizens):

The insularity of these territories, their presence in all continents, as well as their extension by (sea) surface, including the seabed, makes Europe an even larger maritime power. This results from the fact that total sea surface takes into account the Exclusive Economic Zone (EEZ) of up to 200 nm, from the coast's drawn baselines. If the continental shelf extends beyond 200nm -and that can be proved to a special UN Committee (who can then grant recognition, upon request)-, then the State can extend most of EEZ's rights -including seabed resource exploration/exploitation- to up to 350nm (or more). This extension process, under international law (ref. UNCLOS arts. 55-58, 76, 77, 86, 87) brings reduction of the world's high seas.
200 nautical miles of EEZ around isolated point in the ocean = $\Pi R^2 = 3.14 \times (370.4)^2 = \sim 431{,}000$ sq km.
If the EEZ is extended till the maximum of 350nm, then sea surface = $3.14 \times (648.2)^2 = \sim 1{,}319{,}000$ sq km.

A. List of OCT/PTOM (not part of the EU but part of a Member State):

Anguilla	UK	91 km²
Aruba	NL	180 km²
Bermuda	UK	54 km²
British Antarctic Territory	UK	1,709,400 km²
(incl. Chile's claim of 1,250,300 km² and Argentina's claim of 965,000 km²)		
British Indian Ocean Territory	UK	60 km²
British Virgin islands	UK	151 km²
Cayman islands	UK	264 km²
Falkland islands (Malvinas)	UK	12,173 km²
French Southern &Antarctic Lands	FR	7,747 km² *(excl. Antarctica, 500,000 km², US contested)*

French Polynesia (4 archipielagos)	FR	4,167 km²
Greenland	DK	2,166,000 km²
Montserrat	UK	102 km²
Netherlands Antilles (3*+2 islands)	NL	800 km²
New Caledonia (and depend.)	FR	18,575 km²
Pitcairn	UK	47 km²
Saint Helena (and depend.)	UK	308 km²
Saint Pierre et Miquelon**	FR	242 km²
Sandwich and S.Georgia islands	UK	3,903 km²
Turks and Caicos islands	UK	948 km²
Wallis and Futuna	FR	142 km²

Other countries (apart from UK, FR, NL, DK) having OCT/PTOM: USA, Australia, New Zealand, Norway. USA has the world's largest maritime domain, followed by France (with some 11 million sq km).

B. List of DOM-RUP (all being part of the EU, with EU citizens):

Açores islands	PT	2,346 km²
Canary islands	ES	7,447 km²
Guadeloupe	FR	1,628 km²
(with St. Martin/St. Barthélémy)	FR	(66 km²)
Guyane	FR	83,534 km²
Madeira	PT	828 km²
Martinique	FR	1,128 km²
Mayotte*	FR	374 km²
Réunion	FR	2,512 km²

Other MS's territories part of the EU: Gibraltar (6 km²), Ceuta-Melilla (48 km²), Akrotiri-Dhekelia (254 km²). EU's overseas provinces (DOM) contrast with Europe's Territories and Regions Outside the Union (TROU): Faroe islands (1,393 km²), Isle of Man (572 km²), Channel islands (194 km²), five of Europe's so-called six micro-States (691 km²).

**(to)become DOM-RUP, from previous OCP/PTOM status; **former DOM/RUP become OCP/PTOM.*

Overseas Countries and Territories, outermost regions (OCT/RUP) from Rest of the world

State	List of OCTs/RUPs (alphabetical, land surface in brackets)
USA:	American Samoa (199 km²), Guam (544 km²), Hawaaian islands (US State, 16,637 km²) Navassa island (5 km²), Northern Mariana islands (464 km²), Puerto Rico (8,870 km²), US Pacific island wildlife refuge (22 km², islands/ atolls: Baker, Howland, Jarvis, Johnston, Kingman, Midway, Palmira); Virgin islands (346 km²), Wake island (7 km²) (plus reserves the right to make claim on Antarctica).
Norway:	Bouvet island (49 km²), Jan Mayen (377 km²), Svalbard (62,045 km²) (plus Antarctic claim, frozen by 1959 Antarctic Treaty, like rest of claims)
Russia:	Franz Josef Land (16,134 km²), Kuril islands (15,600 km²) (plus reserves the right to make claim in Antarctica).
New Zealand:	Cook islands (236 km²), Niue (260 km²) (plus Antarctic claim)
Australia:	Heard and McDonald islands (412 km²) (plus Antarctic claim)
Chile:	Easter, Sala y Gómez islands (167 km²) (plus Antarctic claim, overlapping with UK's and Argentina's)
Argentina:	(Antarctic claim, overlapping with UK's and Chile's)

World's main maritime domains (in Msq.km: EEZ+claims extended continental shelf*, *source: P.Royer*)

1. USA:	13.54 (11.35+2.19)	8. U.K.:	6.18 (5.45+0.72)	15. Micronesia:	3.01 (3.00+0.01)
2. France:	11.42 (11.03+0.39)	9. Japan:	4.93 (4.48+0.46)	16. Norway:	2.59 (2.38+0.43)
3. Russia:	11.38 (7.57+3.82)	10. Brazil:	4.43 (3.66+0.77)	17. India:	2.71 (2.30+0.40)
4. Australia:	10.70 (8.51+2.19)	11. Chile:	3.93 (3.67+0.25)	18. PNG:	2.59 (2.40+0.19)
5. Canada:	8.24 (5.60+2.64)	12. Mexico:	3.60 (3.18+0.42)	19. Argentina:	2.02 (1.16+0.86)
6. Indonesia:	8.20 (6.16+2.04)	13. Kiribati:	3.45 (3.44+0.01)	20. Marshall I.:	2.01 (1.99+0.02)
7. N.Zealand:	6.96 (6.68+0.28)	14. Denmark:	3.05 (2.55+0.50)		[EU: 6.87 (6.87+0.00)]

**Claims at UNCLCS (UN Commission on the Limits of the Continental Shelf), with current big workload/ backlog: 17 recommendations/decisions issued so far (2000-12) out of a total of 65 submissions up to now.*

Main Cruise Passengers' Ports in Europe (totals 2010 in/out and transit*) (*Source: ITTMA, ECC study*)

Cruise Ports (Ranking top-60 in million passengers/year)

1. Barcelona	2.35	21. Stockholm	0.42	41. Gdynia	0.13
2. Civitavecchia (Rome)	1.92	22. Tallinn	0.39	42. Harwich (UK)	0.13
3. Venice	1.62	23. Cyprus (Limassol)	0.38	43. Hamburg	0.13
4. Palma (Balearic isl.)	1.35	24. Helsinki	0.34	44. Toulon	0.12
5. Piraeus (Athens)	1.21	25. Kiel	0.34	45. Split	0.12
6. Southampton	1.20	26. Gibraltar	0.31	46. Alicante	0.10
7. Naples	1.12	27. Dover	0.31	47. Nordkapp	0.10
8. Dubrovnik	0.97	28. Messina	0.30	48. Le Havre	0.09
9. Livorno (Pisa)	0.83	29. Bergen	0.29	49. Zeebrugge	0.08
10. Santorini	0.76	30. Oslo	0.27	50. Tromso	0.08
11. Cannes/Nice (Riviera)	0.76	31. Cádiz	0.24	51. Cork	0.07
12. Copenhagen	0.66	32. Monaco	0.23	52. Riga	0.07
13. Las Palmas (Can.isl.)	0.61	33. Amsterdam	0.23	53. Reykjavik	0.07
14. Tenerife (Sta.Cruz)	0.58	34. Bari (Adriatic)	0.22	54. Alesund	0.07
15. Genoa	0.55	35. Vigo	0.22	55. Dublin	0.07
16. Palermo (Sicily)	0.54	36. Geiranger (Norway)	0.22	56. Cagliari (Sardinia)	0.06
17. Málaga	0.49	37. Valencia	0.20	57. Almería	0.06
18. Lisbon	0.45	38. Rostock	0.17	58. Olden-Nordfjord	0.06
19. Madeira	0.44	39. Stavanger	0.15	59. A Coruña	0.06
20. St. Petersburg	0.43	40. Flåm (Norway)	0.14	60. Edimburgh	0.06

**in/out=embarking/disembarking, transit=port calls other than home port, 2009/2008 figures only for some ports (not in top-10); Blue colour: Mediterranean; Green: Atlantic/North Sea; Brown: Baltic Sea.*

Cruise Tourism in Europe 2010: Facts & Figures *(from European Cruise Council study by GPW/BREA)*

45 cruise lines domiciled in Europe (defined as EU-27+Norway, Iceland, Switzerland), operating **132 cruise ships** with a capacity of 137,000 berths (66 vessels also deployed in Europe by non-European lines, with capacity of 81,000 berths, totalling **198 cruise ships, with 218,000 berths**).

Over **5.5 million European residents** booked cruises in 2010 (mostly to sail in European waters but also elsewhere in the world), a 10% increase over 2009, represents nearly 30% of all cruise passengers world-wide. Ranking passengers **by source country:** 1.UK (1.56m); 2.DE (1.22m); 3.IT (0.89m); 4.ES (0.65m); 5. FR (0.39m); Scandinavia (0.17); Benelux (0.13m); AT (0.09m); Switzerland. (0.09); other (0.21m).

Over **5.2 million passengers** embarked on their cruises **from a European port** (7.6% increase from 2009), of whom over 4 million were European nationals and **1.2 million came from outside Europe**.

Vast majority of these cruises visited ports in the Mediterranean, Baltic and other European regions/seas, generating **25.2 million passenger visits** at about **250 European port cities** (6.0% icrease over 2009). About **13.2 million crew** also arrived at European ports.

Estimated **economic impact** of cruise industry: **€14.5 billion direct spending** (by lines, passengers, crew); **€35.2bn in total output** (with all inputs); **308,000 jobs** (full-time equivalent); each €1m in direct cruise industry expenditure generating €2.42m in business output, and 21 jobs (average wage of over €30,000).

The other Ports in Nautical Tourism: Top-20 Marinas for megayachts (>24m length) *(Nautical press)*

1. Antibes	(Port Vauban, fr, 165m max.length)	11. Southampton	(Ocean Village Marina, uk, 85m)
2. London	(West India Dock, uk, 160m)	12. Bangor, Belfast	(Bangor Marina, uk, 80m)
3. Genova	(Marina Molo Vecchio, it, 150m)	13. Cannes	(Port Pierre Canto, fr, 80m)
4. Barcelona	(Marina Port Vell, es, 130m)	14. Viareggio	(Porto di Viareggio,it, 80m)
5. Monaco	(Port of Monaco, mc, 130m)	15. Istanbul	(Ataköy Marina, tr, 75m)
6. Porto Cervo	(C.Esmeralda, NE Sardinia, it, 114m)	16. Calvià, Mallorca	(M.Portals Nous, es, 70m)
7. Palma de Mallorca	(Club de Mar Palma, es, 110m)	17. Athens	(Marina Zeas, Piraeus, el, 67m)
8. Marbella	(Puerto Banús, es, 92m)	18. Horta, Açores	(Marina da Horta, pt, 62m)
9. San Remo	(Portosole, it, 90m)	19. Saint-Tropez	(Port St.Tropez, fr, 65m)
10. Ijmuiden	(Marina Seaport, nl, 90m)	20. La Rochelle	(Port de La Rochelle, fr, 60m)

Annex 7: Main EU short-sea shipping routes from/to main SSS EU ports, weekly regular connections* (short transit times=max.4 days, bold: served by 3 companies or more, underlined: daily direct links)

Port	BE CY DE DK EE EL ES FI FR IE IT LT LV MT NL PL PT SE SI UK
BE1 Antwerp	CY **DE1,3** DK1 **EE** **EL1,2** ES13**4** **FI1**,2 FR12**4** **IE** IT134**7** LT LV.**NL** **PT** **SE1,2** UK23**4**
BE2 Zeebrugge	.. .. DE1 DK2 .. EL1 ES1,**4** FI1 FR2,4 IE IT4 . . . **NL** PL . **SE1**,3 .. UK2,3,4
CY Limassol	BE1 .. .. EL1,2 ES3 .. FR1,**2** .. IT1,7 .. ..
DE1 Hamburg	**BE1**,2 CY . DK1 EE EL1 ES1,4 **FI1**,2 **FR2**,4 . IT7 LT **LV** . **NL** **PL** PT **SE1**,2 .. UK3,**4**
DE2 Lübeck	.. .. FI1 .. .. LV .. ..
DE3 Bremerhaven	**BE1**,2 .. **DK1** EE EL2 .. **FI1**,2 FR2 .. .. **LT** **LV** .. **NL** **PL** .. **SE1**,2 ..UK2,**4**
DE4 Rostock	.. .. **FI1** .. .. SE3 .. ..
DE5 Kiel	.. .. FI2 .. .. .. LT LV .. .. .. SE1 .. ..
DK1 Aarhus	**BE1** .. DE1,**3** .. .. ES1 FI1 .. .. .. LT .. .. **NL** .. PT **SE1**,2 .. **UK4**
DK2 Esbjerg	BE1,2 .. .. UK2
EE Tallin	**BE1** .. DE1,**2** .. .. **FI1** FR2 .. IT1 LT LV .. .. .. SE1,2 .. UK3
EL1 Piraeus	**BE1** **CY** .. .. ES1,3,4 .. FR1,**2** IE IT123467 ... .. PL .. SE123 . UK3
EL2 Thessaloniki	BE1 CY DE1,2 .. .. **FR2** .. IT1,2 .. .. SE1,2 .. ..
ES1 Barcelona	**BE1**,2 .. DE1 DK1 .. **EL1**,2 .. .. **FR1**24 .. **IT1**34**6**7 ..MT NL .. PT UK3,4
ES2 Algeciras	BE1 .. **DE2** DK1 .. .. FR123 .. .. NL .. .. SE1 .. UK1234
ES3 Valencia	**BE1** .. .. DK1 .. EL1 .. .. FR124 .. **IT1**34**6**7 . .. NL .. PT SE1 .. UK134
ES4 Bilbao	BE1,**2** .. DE1 .. .. EL1 .. .. **FR2** **IE** IT4,7 .. .. **NL** PL PT SE1,3 **UK1**23**4**5
FI1 Helsinki	**BE1**,2 .. **DE1**23**4** **DK1** **EE** .. ES4 .. .. LV .. NL PL SE1,2 .. UK1
FI2 Turku	.. .. DE1,3 .. .. SE2 .. ..
FR1 Marseille	BE1 .. .. **EL1**,2 **ES1**,2,**3** .. .. .. **IT1**36 .. .. **MT** .. ..
FR2 Le Havre	**BE1**,2 .. **DE1** DK1 .. .. ES2,**4** .. .. IE .. .. **NL** . PT SE1 .. UK134**5**
FR3 Nantes-St.N.	.. ..
FR4 Dunkerque	BE1,2 .. DE1 .. .. .. ES2 .. .. NL .. ..
IE Dublin	BE1,2 .. .. **ES4** .. FR2,4 .. IT4 .. .. .. **NL** PL . SE3 .. UK13**4**
IT1 Genova	BE1 CY DE1 .. EE EL1,2 **ES1**,3 ..FR1,2 .. .. LT LV .. NL UK4
IT2 Trieste	.. .. EL1,2 .. .. FR1 .. ..
IT3 Napoli	BE1 .. .. EL1,2 ES1 .. FR1 .. ..
IT4 Livorno	BE1 .. .. EL1 ES13**4** .. .. PL PT SE3 .. UK1,3
IT5 Venezia	.. .. FR1 .. ..
IT6 La Spezia	.. .. EL1 **ES1**3 . FR1,2 .. ..
IT7 Salerno	BE1 CY .. .. .. EL1 ES134 . FR1,2 .. .. NL .. PT SE1,2 .UK134
LT Klaipeda	**BE1** .. **DE1**3**5** DK1 EE .. .. FI1 .. .. IT1 .. **LV** NL .. .. SE2 .. UK2
LV Riga	.. .. **DE1**23**5** .. **EE** .. .. FI1 FR1 .. IT1 **LT** .. .. NL .. .. SE2 .. UK4
MT Marsaxlokk	.. .. **FR1,2** .. ..
NL Rotterdam	**BE1,2** .. **DE1** **DK1** .. EL1 ES1,**4** FI1 **FR2**,4 **IE** IT7 LT LV .. .. **PT** **SE1** . UK1234
PL Gdynia	BE1 .. **DE1,3** .. EE .. .. FI1 .. .. .. LT LV .. .. PT SE3 .. UK3,4
PT Lisboa	**BE1**,2 .. DE1 .. .. EL1,2 ES124 .. **FR2**,4 .. IT147 .. .. .. NL .. .. SE1,3 .UK134
SE1 Goteborg	**BE1,2** .. **DE135** **DK1** EE .. ES1,4 FI1 FR1 .. ..**NL** .. PT UK1234
SE2 Stockholm	.. .. DE1 .. EE .. .. **FI1,2** .. .. LV .. .. PL UK3
SE3 Trelleborg	.. .. DE4 .. .. UK3
SI Koper	.. .. FR1 .. ..
UK1 London ports	**BE1**,2 .. DE1 .. .. EL1,2 ES234 FI1 FR2 **IE** IT4,7 .. .. .. **NL** .. **PT** SE1 .. ..
UK2 Grimsby&Im.	BE1,**2** .. DE1,2 DK2 .. ES2,4 .. .. IE .. .. LV .. NL .. .. SE1 .. ..
UK3 Southampton	BE1,2 .. .. DK1 .. EL1 ES3,**4** .. .. IE IT4,7 .. .. .. NL .. **PT** SE1 .. ..
UK4 Felixstowe	**BE1**,2 CY **DE1,2** **DK1** .. ES12**4** FI1,2 FR2 **IE** IT .. .. .. **NL** PL PT **SE1** .. ..
UK5 Portsmouth	.. .. ES4 .. ..

**source:BMT-Hamburg for main SSS EU ports (pre-definition MoS), European Shortsea Network database for links*

EU ports with highest number of regular SSS EU-port connections: Antwerp: **29**; Hamburg: **22**; Rotterdam: **20**; Barcelona, Lisboa, Piraeus: **19**; Bilbao, Flixstowe: **18**; Goteborg, Valencia, Zeebrugge: **17**; Bremerhaven, London ports: **16**; Helsinki, Salerno: **15**; Genova, Le Havre: **14**.

Main EU ports on container throughputs (2008 data) and crisis'* negative effects registered in 2009
(for EU's top-40 ports, covers SSS, feedering and oceanic container traffics; source: ITMA-Univ.Antwerp)

		Mteu	Δ'08-09			Mteu	Δ'08-09
1.Rotterdam	**NL**	10.78	(-10%)	21.Marseille	FR	0.85	(+3%)
Hamburg	**DE**	9.74	(-28%)	Taranto	IT	0.79	(-6%)
Antwerp	**BE**	8.66	(-16%)	Leghorn	IT	0.78	(-5%)
Bremerhaven/Bremen	DE	5.45	(-16%)	Thamesport	UK	0.77	(-18%)
Valencia	**ES**	3.60	(+1%)	**Dublin**	**IE**	0.68	(-19%)
Gioia Tauro	**IT**	3.47	(-18%)	Liverpool	UK	0.67	(-11%)
Algeciras	ES	3.33	(-9%)	**Kotka**	**FI**	0.63	(-6%)
Felixstowe	**UK**	3.20	(-9%)	**Gdynia**	**PL**	0.61	(-38%)
Barcelona	ES	2.57	(-30%)	**Lisbon**	**PT**	0.56	(-10%)
Le Havre	**FR**	2.45	(-9%)	Bilbao	ES	0.56	(-20%)
11.Marsaxlokk	**MT**	2.34	(-0%)	31.Naples	IT	0.48	(+3%)
Zeebrugge	BE	2.21	(+5%)	**Aarhus**	**DK**	0.46	(-16%)
(St-Petersburg)	*Russia*	1.98	(-32%)	Leixos	PT	0.45	(+1%)
Genoa	IT	1.77	(-13%)	**Piraeus**	**EL**	0.43	+52%)
Southampton	UK	1.71	(-6%)	Málaga	ES	0.43	(-32%)
Constantza	**RO**	1.38	(-57%)	Amsterdam	NL	0.42	(-52%)
Las Palmas G.Canaria	ES	1.31	(-23%)	Helsinki	FI	0.42	(-14%)
La Spezia	IT	1.25	(-16%)	Santa Cruz Tenerife	ES	0.40	(-13%)
Tilbury	UK	1.17	(-28%)	Venice	IT	0.38	(-3%)
Göteborg	**SE**	0.86	(-4%)	**Klaipeda**	**LT**	0.37	(-35%)

**crisis refers to the financial/economic crises started in Sept. 2008 with the collapse of Lehman Brothers.*
Average/estimated 2009 negative growth for containers on total EU ports = **-14%** (1st sem. 2010: **+8%**)

EU Port charges, container TERMINAL costs/berth productivity: Samples&examples around Europe

Berth Productivity for 25 of Europe's container terminals: in teu/$1,000, teu/m berth in( ) (name if >1 terminal, *Source: Cargo Systems, Sept.2008)* **Green:** low Cost and/or high Productivity; **Red:** opposite

Bremerhaven (ntb)	**83 (2,182)**	Hamburg (hhla-a)	53 (**1,500**)	Ambarli-tr (Marport)	39 (741)
Constantza (dp s)	**74** (1,036)	Hamburg (hhla-b)	52 (1,018)	Bremerhaven (ctb)	36 (690)
Algeciras (apmt)	**74 (1,732)**	Valencia (marvvalsa)	52 (1,099)	Marseille (Fos)	34 (**550**)
Rotterdam (apmt d)	**70 (1,394)**	Rotterdam (ect d)	50 (1,194)	Piraeus	32 (**506**)
St Petersburg-ru (fct)	59 (1,140)	Gioia Tauro	48 (865)	Barcelona (tcb)	30 (667)
Hamburg (Eurogate)	57 (1,220)	Liverpool	46 (1,310)	Göteborg	**29** (683)
Southampton	55 (1,111)	Felixstowe (Trinity)	45 (1,032)	Antwerp (gateway)	**29 (364)**
		Thamesport-Ldn	45 (1,032)	Taranto	**20** (595)
		La Spezia	40 (693)	Le Havre (gmp)	**20 (316)**

Structure of total **Annual Costs** in those container terminals (%, ranges): **Construction:** 19-48% (average of 25: 30%); **Equipment:** 21-33% (av.28%) **Maintenance:** 21-35% (av.28%) **Labour:** 4-28% (av.14%)

Port charges (port dues, tech. nautical services) in EU ports (*Source: Port of Amsterdam, website for ES ports*)
Payable amounts (in €) for a **ro-ro ship** (200m loa, 56,000gt, 21,000dwt) with **2 days in port**, June 2009

	Amsterdam	**Rotterdam**	**Zeebrugge**	**Bremerhaven**	**Barcelona**	**Valencia**
Port/quay dues:	7,660	7,470	1,760	6,220	11,700	11,400
Pilotage (sea/river/port):	7,720	8,780	6,020	13,440	1,790	1,620
Towage assistance:	11,400	8,440	5,020	15,760	15,600	17,960
Mooring/unmooring:	1,720	1,030	610	1,080	710	1,250
Other: VTS, reporting..:	1,170	1,100	420	130	480	480
TOTAL:	**29,670**	**26,820**	**13,830**	**36,630**	**30,280**	**32,710**

(excluded: bunker fuel, supplies-services, waste disposal, dockers/cargo handling, cargo taxes, discounts)

EU/EEA Short Sea Promotion Centres and their funding *(Source: Cyprus SSP Centre, 2012)*

MS/Country*	Total budget,€(e)	Ranking funds	Public funding	Staff No.
BE (Flanders):	310,000	3	100%	2
BG:	30,000	11	0%	2
Croatia:	*120,000*	*6*	*20%*	*4*
CY:	12,000	14	100%	2
DE:	425,000	1	70%	4
DK:	*(no SPC as such, but an activity of the Danish European Maritime Development Centre)*			
EE:	2,000	18	100%	0
EL:	110,000	7	0%	3
ES:	87,000	8	36%	1
FI:	87,000	9	70%	1
FR:	300,000	4	20%	3
IE:	*(no funding for the SPC, part of IMDO, the Irish Maritime Development Office)*			
IT:	n.a.	-	-	-
LT:	8,000	17	62%	1
LV:	*(no existing SPC, Shortsea Promotion Centre being reported)*			
MT:	40,000	10	60%	1
NL:	316,000	2	45%	2
Norway:	*200,000*	*5*	*50%*	*2*
PL:	25,000	12	0%	1
PT:	11,000	16	0%	1
RO:	11,700	15	60%	3
SE:	(no funding for the SPC, but support via the Maritime Forum's activities)			
SI:	*(no existing SPC, Shortsea Promotion Centre being reported).*			
UK:	25,000	13	0%	1
Total:	**€ 2.12M**	**-**	**-**	**34**
Average:	**€ 118,000**	**-**	**44%**	**2**

**None of EU's 5 non-coastal MSs (AT, CZ, HU, LU, SK) have a SSS Promotion Centre.*

LNG for Shipping: present situation, ongoing development and trends *(source: EMSA, other)*

LNG-fuel terminals: exist in BE, NL, NO (pioneers, and with over 40 small-scale LNG by now), SE, UK.
Plans to establish **16 new terminals**: in DE, FI, FR, LT, PL (plus additional ones in SE, UK).
The **current fleet** of LNG-fuelled ships: **37 ships world-wide**, many of which operating in **Norway**.
LNG-fuelled ships on order/under construction: another 34 (mainly to operate in N Europe, US/Canada).
Newbuilts basically from two main **ship types: ro-ro/passenger ships (ferries), offshore/supply vessels**.
Fleet of LNG-fuelled ships set to increase rapidly, to **1,000 ships by 2020** (mostly as dual-fuelled engines)
It is also estimated (by DNV) that in Norway **LNG share** of all marine fuels to reach up to 25% by 2016.
FI's Wärtsilä has already provided 210 dual fuel engines, engine conversion also possible (in 12 months).
Success story: new Viking ferry **Turku-Stockholm** running on LNG, with 60-min. re-fuelling time at port.
40% of world fleet will enter North American or European **Emission Control Areas (ECAs)** in one year.
LNG as fuel to be used **also in Inland Waterways Transport** (3 LNG-fuelled barges operate now in EU).
New **"Clean Power for Transport Package"** (adopted on 24.1.13) proposes that all 91 TEN-T core ports must provide LNG refuelling facilities by 2020 (new 0.1% SOx rules applicable in SECAs from 1.1.15).

Aiming at even cleaner shipping: the "Zero-Emission Ferry" concept *(from Scandlines, GL)*

A highly innovative solution proposed by DK's Scandlines together with DE's Germanisher Lloyd (through its "Future Ship" company) consists of developing and constructing (to end by 2018) an Hydrogen-powered ferryon the basis of fuel-cells and wind energy. Flettner rotors for utilisation of wind energy on board transform by electrolysis water into hydrogen, then served by fuel cells to generate electricity into the ship batteries (for main propulsion electric engine) and to transform the hydrogen back to water. The project is part of Scandlines's "Green Vision" for the Fehmarn Belt (as alternative to new projected bridge linking DK to DE). Scandlines' Emissions comparison for ferry link Rodby-Puttgarden: current consumption/emissions per trip= 0.95t low sulphur HFO, 2.96t of CO2, 20kg SOx, 50kg NOx (future, with new ferry = 0t HFO, 0t CO2, 0t SOx, 0t NOx).

Annex 8: SSS/IWW/Intermodality: EU Infrastructure network, world

SSS/Inland Waterways/intermodality: main EU infrastructure network by mode and Member State:

	Merchant ports	IWW-km	(names)	Highways-km	Railways-km	Airports-main	km2
AT	-	351	(Danube)	1,670	5,661	6	84,000
BE	8	1,527	(Meuse, Schelde)	1,729	3,521	5	31,000
CY	16	-		268	-	2	9,000
CZ	-	664	(Elbe)	518	9,612	3	79,000
DE	62	**6,642**	(Rhine, Elbe, Main..)	**12,044**	**36,054**	23	357,000
DK	90	-		1,027	2,273	8	43,000
EE	16	320	(Narva)	98	959	2	45,000
EL	105	6	(Corinthos Canal)	742	2,414	34	132,000
ES	99	70	(Guadalquivir)	**10,296**	14,387	**42**	**505,000**
FI	79	**7,872**	(lakes)	653	5,851	17	338,000
FR	103	**5,637**	(Rhône, Seine, Rhine..)	**10,379**	**29,269**	**45**	**552,000**
HU	-	1,440	(Danube, Tisza)	542	7,950	3	93,000
IE	49	-		176	1,919	9	70,000
IT	**106**	1,477	(Po)	6,487	16,288	31	301,000
LT	2	477	(Nemunas)	417	1,774	2	65,000
LU	-	37	(Moselle)	147	275	1	3,000
LV	10	347	(Daugava)	-	2,269	4	64,000
MT	2	-		-	-	1	300
NL	42	**5,046**	(Rhine-Waal, Maas..)	2,541	2,812	4	37,000
PL	10	3,640	(Wisla, Odra..)	405	**19,900**	8	313,000
PT	16	124	(Tejo, Douro)	2,002	2,818	15	92,000
SE	**134**	390	(Gota, Stockh..)	1,591	9,882	**41**	**450,000**
SI	3	-		477	1,229	3	20,000
SK	-	172	(Danube)	313	3,657	3	49,000
UK	**287**	1,065	(Thames, Trent..)	3,609	17,052	37	245,000
EU-25:	**1,239**	**37,304**		**58,131**	**197,826**	**349**	**3,977,000**

The IWW and rail infrastructure networks in EU and the rest of the world (main countries)

(Source: UNCTAD report "Review of Maritime Transport 2009")

A- Inland Waterways: total length of navigable waters (and tons of goods transported by IWT)

1.China:	110,000 km	(1,300,000,000 tons)
2. Russia:	102,000 km	(152,000,000 tons)
3. EU:	52,332 km	(515,000,000 tons, mainly in Rhine-area, Danube~10%)
4. Brazil:	50,000 km	[n.a.]
5. USA:	41,000 km	(800,000,000 tons)
6. Indonesia:	21,579 km	[n.a.]
7. Colombia:	18,000 km	(3,800,000 tons)

B- Total rail networks (of 20,000km and above), world's main countries and regions

1. EU:	236,400 km	(17% world)	8. Argentina:	31,900 km	(2%)
2. USA:	226,600 km	(17%)	9: Brazil:	29,300 km	(2%)
3. Russia:	87,200 km	(6%)	10. Japan:	23,500 km	(2%)
4. China:	75,400 km	(6%)	11. Ukraine:	21,900 km	(2%)
5. India:	63,200 km	(5%)	12. South Africa:	20,900 km	(2%)
6. Canada:	48,100 km	(4%)	*Subtotal:*	*903,000 km*	*(66% world)*
7. Australia:	38,600 km	(3%)	*World total:*	*1,370,800 km*	

MARCO POLO I projects for new services involving maritime/ports/hinterland (2003-2006)

Title/Acronym	Sector of activity	EU fundsM€%	Time frame	Project leader
Call for proposals 2006:				
HRE	Direct rail link NL-HU	1.1 (30%)	10.06 - 9.09	Railog (DE)
TRIANGLE	Port terminal link ES-NL-PL	2.0 (30%)	9.07 - 2.10	Kombiverkehr (DE)
SEuropeGREEN LINK	Rail-road link Marseille-Milan	0.8 (30%)	10.07 - 9.10	Sologaz-GCA (FR)
MARNY	Rail link Marseille-Ludwigshafen	1.9 (30%)	10.06 - 10.09	CMA-CGM (FR)
ARAGO PROJECT	Rail link Antwerp-Tarragona	2.5 (30%)	12.06 - 12.09	Novatrans (FR)
IRIS	Logistics rail link IT-RO	0.6 (30%)	1.07 - 12.09	Pol-Rail (IT)
T-REX PROJECT	Direct freight rail link BE-RO	1.3 (30%)	10.06 - 9.09	TRW (BE)
LORRY RAIL	Rail link Luxembourg-Perpignan	2.0 (30%)	5.07 - 4.10	ASF (FR)
IBERSHUTTLE	Direct rail link ES-BE ports	1.5 (30%)	12.06 - 12.09	Combiberia (ES)
LUNA	Shuttle train service IT-CH-DE	0.7 (30%)	1.07 - 12.08	Cemat (IT)
ETS-ELBE	Container system in Elbe river	1.6 (35%)	4.07 - 3.11	S.Binnenhäfen O. (DE)
EXCITE	Trailers by rail link London-DE..	1.5 (35%)	7.07 - 6.09	EWS/UK Railways (UK)
SHUTTLE ROMANIA	Containers on rail link AT-RO	0.6 (30%)	11.06 - 10.09	Gartner (AT)
ITS-IT	Information system transport	0.3 (50%)	6.07 - 5.09	AFT (FR)
DZRS	Rail shuttle Zeebrugge-Duisburg	0.5 (30%)	10.06 - 10.09	Duisport Agency (DE)
	TOTAL:	**18.9 M€**		
Call for proposals 2005:				
SCAPEMED	SSS service IT-ES-PT	2.1 (30%)	3.06 - 2.09	Naveiro (PT)
ATTAC	Alps crossing by sea IT-FR	2.1 (30%)	2.06 - 1.09	Atlantica di Naveg. (IT)
Shortsea XML	Training for Short Sea Shipping	0.9 (50%)	9.06 - 9.08	NorStella (NO)
DRS-Danube Ro-ro	Inland waterway link BG-DE	1.0 (30%)	10.06 - 9.09	Lehnkering R. (DE)
Morocco Seaways	SSS link Genoa-Barcelona-Tanger	1.8 (30%)	12.06 - 6.09	Grandi Navi Veloci (IT)
NePolExpress	Rail link Rotterdam-PL regions	0.9 (30%)	1.06 - 1.09	Polzug Intermodal (DE)
RAIL	Rail link NE France-NE Spain	1.8 (30%)	1.06 - 1.09	Eurorail Int. (BE)
BaSS-Baltic Sea	SSS linke Rostock-Ventspils	1.3 (30%)	1.06 - 1.09	Scandlines-D. (DE)
2E3S.com Project	European School of SSS	1.0 (50%)	9.06 - 8.08	Port of Barcelona (ES)
ZEST	SSS ro-ro link BE-DK	0.9 (30%)	1.06 - 1.09	Cobelfret Ferries (BE)
LOGISTIC	LPG rail link IT-Central/E.Europe	0.5 (30%)	1.06 - 1.09	Cargo Chemical (IT)
TCS	Direct train shutttle Duisburg-TR	1.1 (30%)	7.06 - 6.09	Railog (DE)
ROLYS	Shuttle rail link Rotterdam-Lyon	0.7 (30%)	1.06 - 1.09	Trimodal Europe (NL)
Fastlink	Fast train link BE-IT	2.8 (35%)	9.06 - 8.08	Cemat (IT)
Scandinavian Shuttle	Daily shuttle rail link SE-DE	2.5 (35%)	6.06 - 5.10	UBQ (SE)
	TOTAL:	**21.4 M€**		
Call for proposals 2004:				
RORO-Esperance	SSS link Santander-Dunkirk	4.0 (30%)	10.05 - 7.06	Norfolk Shipping (NL)
EUREWA	Daily shuttle rail link DE-HU	3.1 (30%)	1.05 - 3.08	Kombiverkehr (DE)
INSECTT	Security intermodal terminals	0.4 (50%)	9.05 - 9.07	UIRR (BE)
BRIDGE over Europe	SSS link Bilbao-London-Rotterdam	1.0 (30%)	12.04 - 12.07	Geest North Sea (NL)
ItaloExpress	Market barriers intern. rail cargo	3.5 (35%)	1.05 - 12.08	TX Logistik (DE)
IBERLIM	SSS link between ports PT-ES	1.6 (30%)	3.05 - 3.08	Naveiro (PT)
ACCESS	SSS information, one stop shop	0.3 (50%)	1.05 - 1.07	Rete Autostrade M. (IT)
MARIS	SSS link Livorno-Valencia	1.6 (30%)	12.05 - 12.08	Grimaldi (IT)
SINGER	Slovenian Intermodal Gateway	0.7 (30%)	8.05 - 8.07	Adria Kombi (SI)
RAFTS	Train-ferry service Ijmuiden-Hull	2.5 (30%)	12.05 - 12.08	Rail Ferry Tr.S.(UK)
HAPPY METAL	Intermodal link Duisburg-Verona	1.1 (30%)	1.05 - 1.07	Winner Spedition (DE)
IT-POL-IT NET	Rail link automotive sector IT-PL	0.7 (30%)	1.05 - 12.07	Villanova Tematrans (IT)
	TOTAL:	**20.5 M€**		
Call for proposals 2003:				
EURO STARS	SSS link IT-ES-MT-Tunisia	1.5 (30%)	1.04 - 6.06	Atlantica di Navig. (IT)
AIN	Barge-train links port of Antwerp	1.7 (30%)	1.04 - 12.06	Port of Antwerp (BE)
Unitnet SS&I	SSS link South Spain-NL	1.5 (30%)	10.04 - 10.07	Von Bon Fruit (BE)
PORTNED	SSS link between PT and NL	1.0 (30%)	12.03 - 2.06	Holland Maas S. (NL)
Project EUCON	SSS link IE with FR-NL-BE	1.0 (30%)	1.04 - 12.06	Irish Continental (IE)
Graz-Duisburg-E.	Shuttle trains Graz-Duisburg	1.5 (30%)	1.04 - 12.06	Wenzel Logistics (AT)
DUE	Intermodal rail-road link DE-IT	0.6 (30%)	10.04 - 5.07	Lokomotion G.f.S (DE)
eWIT	Intermodal and IWW training	0.4 (50%)	12.03 - 12.05	Via Donau (AT)
DARIS	Rail link Rotterdam-Istanbul	1.0 (30%)	10.04 - 9.07	Europ.Rail Shuttle (NL)
CGTK-project	SSS link between FI and SE	0.6 (30%)	1.04 - 12.06	RG-Line (FI)
SHUTTLE-Isabella	Train link AT/DE with EL	1.0 (30%)	12.03 - 12.06	Gartner (AT)
BSH-Traffic-Venture	Rail links DE/PL with UK	0.3 (30%)	10.04 - 9.07	Bosch/Siemens H.(DE)
TRITS	Direct train link DE-TR	1.0 (30%)	1.04 - 12.06	TRANSFESA (ES)
	TOTAL:	**13.1 M€**	**Grand Total:**	**73.9 M€**

MARCO POLO II projects for new services involving maritime/ports/hinterland (2007-2009)

Title/Acronym	Sector of activity	EU fundsM€%	Time frame	Project leader
Call for proposals 2009:				
ARCON	Norway's Arctic fresh food to EU	4.3 (11%)	11.09 - 11.12	TX Logistik AG (DE)..
BFI	Rail link food products SE/DK-IT	4.1 (13%)	5.09 - 5.12	TX Logistik AG (DE)..
DANNED	Sea link DK/Esbjerg-Amsterdam	1.3 (20%)	7.10 - 06.13	Sea-Cargo AS (NO)
ECO DANUBE	IWT Danube link DE/AT-BG-RO	2.6 (22%)	5.09 - 5.12	Hödlmayer Intern.(AT)
EuroCar SHUTTLE	Rail link new vehicles NL-AT-HU	1.5 (5%)	1.10 - 12.12	Koopman InterRail (NL)
FRESH-EXPRESS	Intermodal link ES/Almeria-N.EU	7.5 (9%)	6.10 - 6.13	Almeria Port Auth.(ES)
G2G 2XL	Rail-SSS link AT/CH/IT-BE/UK	2.2 (3%)	6.10 - 6.13	2XL NV (BE)
ITAFRA SHUTTLE	Rail link door-to-door IT-FR	2.1 (7%)	4.10 - 3.13	TO Delta (IT)
NG-WP	Rail link between PL and DE	1.2 (7%)	7.09 - 6.12	PCC Intermodal (PL)
RAIL2	New rail link FR cities-LU/DE/IT	3.3 (9%)	9.09 - 8.12	SA Eurorail NV (BE)
RKE	Shuttle train link PL-Rotterdam	1.0 (9%)	7.09 - 6.12	PCC Intermodal (PL)
S.I.S.T.E.R.	Rail/road link IT to North of ES	2.0 (12%)	6.09 - 5.12	SIDEUROPA (IT)
JUICE VESSEL	SSS-IWT link NL-BE-DE-ES-UK..	1.7 (7%)	7.10 - 6.13	Logical Company (NL)
VEGETIS	SSS link Agadir (Morocco)-FR	3.5 (6%)	11.09 - 10.11	CMA CGM (FR)
ESTRAB	Road-rail cargo beamer technol.	5.4 (28%)	5.09 - 5.14	CargoBeamer (DE)
GLASSTAINER	SSS-IWT new type of container	2.4 (14%)	1.10 - 5.15	ASG Flat Glass (BE)
HINTERPORT	Hinterland-networks promotion	1.1 (49%)	1.10 - 1.12	Interporto Bologna (IT)
INTERMOD. E-80	Intermodal transport solutions	0.4 (47%)	1.10 - 12.11	ZAL Salamanca (ES)
FRES MOS	MoS FR-ES St.Nazaire-Gijòn	4.1 (4%)	7.09 - 6.13	GLD, Grimaldi (FR/ES)
SIRIUS2 CRATING	Logistic platforms in DE, FR	5.0 (11%)	4.10 - 3.15	S.des EauxVolvic (FR)
DoubleLOADING-N	Freight pallets transport in EU	5.1 (4%)	7.10 - 6.15	Emons Group (NL)
	TOTAL:	**61.8 M€**		
Call for proposals 2008:				
AUTOROM	Rail link new vehicles RO-FR	0.9 (4%)	4.08 - 4.11	STVA (FR)
AVELINE	SSS link DE/Lübeck-LV/Liepaja	1.8 (3%)	12.08 - 12.10	AVE Logitic (LV)
CARES	Rail link RO-IT, RO-TR for vehicles	1.3 (3%)	4.08 - 4.11	Vega International (AT)
COPVIT	Rail-IWT link DE-BG-EL-TR	1.4 (6%)	1.09 - 6.12	Fanty-Good (BG)
CORAT	Upgrade rail link LT-LV-RU	0.8 (6%)	1.09 - 12.11	LDZ Cargo (LV)
Dutch-Rus.LOLO	SSS link Harlingen-Ventspils	1.2 (1%)	2.09 - 2.12	Harlingen NCL (NL)
ENERCON TRI-M	Intermodal link with SSS DE-PT	1.3 (2%)	7.09 - 6.12	Enercon (DE)
EURO Reefer Rail	Rail link BE-IT, PL-IT, PL-BE..	2.1 (5%)	1.09 - 12.11	HZ Holding (NL)
FERRO CHEM IT	Rail link dangerous goods FR-IT	1.0 (4%)	5.08 - 4.11	Ermechem (FR)
GATEWAY Moscow	Rail link BE/Zeebrugge-Moscow	1.0 (3%)	1.09 - 12.11	P&O Ferrymasters (UK)
HODI	Rail link DE-AT for new vehicles	1.2 (8%)	4.08 - 4.11	Autotransport (BE)
IGOR	SSS-rail link BE-FI, FI-Russia	1.5 (4%)	9.08 - 9.08	Spedition Serv. (UK)
KATARSYS/Intrasys	Intermodal link IT-BG-RO	2.0 (7%)	1.09 - 12.08	Borraccino Transp.(IT)
KOBALINK	SSS link cars Koper-Barcelona	2.0 (9%)	7.09 - 12.12	Luka Koper (SI)
KOTCAR	SSS link BE/DE ports-FI/Kotka	1.0 (2%)	4.08 - 4.11	ICL-Intermodal CL (AT)
KTS	Rail link DE-CZ-SK-HU-RO-IT	1.1 (4%)	7.09 - 6.12	Kronosplan Italia (IT)
OBSTE	SSS link Lübeck-St.Petersburg	1.3 (2%)	6.09 - 6.12	Finnlines DE (DE)
OFE	Rail link BE ports-FR/Ottmarsheim	0.8 (6%)	4.08 - 4.11	IFB Inter Ferry (BE)
PROXAL-2	Rail link FR/Vosges-DE/Worms	0.5 (1%)	7.08 - 6.11	Nestlè Waters (FR/DE)
ROLBAL	Rail container link Barcelona-Lyon	0.6 (3%)	2.09 - 1.12	Port of Barcelona (ES)
S.C.A.D.AE	SSS-rail link IT-SI-EL-TR	1.3 (11%)	2.09 - 1.12	Semar Line (IT)
TOVAL	Rail link IT/Turin-ES/Valladolid	0.8 (5%)	6.09 - 6.12	Arcese Transporti (IT)
TRAIN TO SPAIN	Rail link IT/Verona-FR/Mouguerre	0.9 (5%)	6.08 - 4.10	Codognotto (IT)
ULYSSES	SSS link ro-ro for trailers IT-EL	1.1 (3%)	6.09 - 6.12	Minoan Lines (EL)
ZAKARPATTYA Exp.	Rail link DE/Nuremberg-HU-Kiev	0.5 (5%)	1.09 - 12.12	Eisenbahnverkehr (DE)
FGI SYSTEM	Rail link BE-IT, BE-FR, trailers	3.0 (8%)	4.08 - 4.13	Lanutti (IT)
AGORA	Intermodal Terminals efficiency	0.7 (50%)	1.09 - 1.11	Rail Cargo Austria (AT)
GLAD	Promotion of modal shift, SSS	1.4 (50%)	3.09 - 3.11	Escola Europ.SSS (ES)
	TOTAL:	**34.5 M€**		
Call for proposals 2007:				
NETHPOLA	SSS container link NL-PL-DE	1.0 (4%)	7.07 - 7.10	Inter Marine CL (CY)
RUBY	Rail link Le Havre-BE-DE	1.5 (5%)	7.07 - 7.10	CMA CGM (FR)
GULF STREAM	SSS ro-ro link ES/Santander-UK	0.9 (3%)	3.08 - 2.11	Brittany Ferries (FR)
WESTMED BRIDGE	SSS ro-ro link IT/Civitav.-ES/Bcn	4.5 (10%)	4.08 - 4.11	Grimaldi Logistica (ES)
RIGAMODAL	SSS container link BE-NL-DE-LV	1.2 (5%)	7.08 - 7.11	Inter Marine CL (CY)
CERAMICA 2	SSS link ceramic industry IT-ES	4.0 (5%)	7.08 - 7.11	LOGITEC (IT)
ITALBEL EXPRESS	New block train link IT-UK	1.9 (3%)	7.07 - 7.10	ITALCONTAINER (IT)
SLO-UK-COMBI	Intermodal service link SI-BE-UK	1.1 (35%)	3.08 - 2.11	NIKO Transport (SI)
ROMONET	Rolling motorway rail link RO-DE	2.3 (5%)	2.08 - 1.11	Hungarokombi (HU)
REEFER EXPRESS	SSS link containers ES-UK-NL	1.7 (3%)	7.07 - 7.10	Mac Andrews&Co(UK)
SIRIUS 1	Delicated rail link FR-DE	0.6 (2%)	1.08 - 12.10	SA Eaux Min. Evian (FR)
ALBATROSS	Maritime link rolling cargo IT-ES	4.8 (7%)	7.07 - 7.10	Atlantica di Navigaz. (IT)
VIKING RAIL	Rail link autom. industry DE-SE	1.1 (3%)	7.08 - 6.11	Schenker ARailN (DE)
SEEIS	Road-rail link SI-BG-EL-RO-TR..	1.0 (4%)	2.08 - 11.10	Adria Kombi (SI)
VIA DANUBE	IWW link Passau(DE)-Vidin(BG)	1.0 (3%)	6.08 - 05.11	Intershipping Ltd (BU)
DANUBE-BYPASS	Public infrastructure in Danube	2.8 (21%)	6.08 - 6.13	DTU Donau-Tr.-U.(DE)
OCRA	Rail link Trieste (IT)-Prague(CZ)	5.1 (24%)	2.08 - 1.11	Soc.Alpe Adria (IT)
EWITA	Training/e-learning IWT intermod.	0.8 (50%)	6.08 - 7.10	Via Donau-O.W. (AT)
COMBINET	Co-operation logistics chains	1.3 (50%)	5.08 - 5.10	Debrecen LogCIP (HU)
Roro Past FRANCE	Ro-ro link BE/Zeebrugge-ES/Bilbao	6.8 (2%)	9.07 - 12.11	Spliethoff's Bevr. (NL)
	TOTAL:	**45.4 M€**	**Grand Total:**	**141.7 M€**

Trans-European Networks-Transport (TEN-T) projects in "Maritime"/Waterborne sectors

Actions supported since start in 1983*:

Year	Sector	Title of project/action	Benef.	Code/No.	EU fundsM€	Sub-totals (M€)	
1985	IWW	Infrastructure works river Lys	BE	85-BE-237	5.5		
	IWW	Infrastructure works river Lys	FR	85-FR-55	2.6		
	Ports	Ferry access port of Harwich	UK	85-UK-22	2.5	1985:	10.6
1986	Ports	Ro-ro facility port of Ostende	BE	86-BE-238	1.0		
1990	IWW	Study for link Seine-Nord	FR	90-FR-105	0.1		
1992	IWW	New platform port of Duisburg	DE	92-DE-218	3.0		
	Ports	Intermodal centre Lisbon terminals	PT	92-PT-268	0.8		
1993	IWW	Study Twente-Mitteland Canal	DE+NL	93-DE-6	0.1		
	IWW	IWW link study Rhin-Saone	FR	93-FR-18	0.3		
1994	IWW	Study for forth lock in Anaye	BE	94-BE-3	1.1		
	IWW	Upgrading of Houdeng canal	BE	94-BE-4	0.6	1986-94:	7.0
1995	VTM	Vessel Traffic Mangmt.-Germany	DE	95-DE-503	0.2		
	VTM	Vessel Traffic Mangmt.-France	FR	95-FR-567	0.6		
	VTM	Vessel Traffic Mangmt.-Greece	EL	95-GR-218	0.4		
	VTM	Vessel Traffic Mangmt.-Italy	IT	95-IT-73	1.0		
	VTM	Vessel Traffic Mngt.-Netherlands	NL	95-NL-480/570	0.6	1995:	2.8
1996	IWW	Seine-Escaut rivers' studies	BE	96-BE-4	1.5		
	Ports	Study ports of Gent, Terneuzen	BE	96-BE-106	0.5		
	Ports	Study port of Lübeck	DE	96-DE-19	0.1		
	Ports	Ports of Aalborg East, Aarhus	DK	96-DK-9/10	0.4		
	VTM	Vessel Traffic Mangmt.-Finland	FI	96-FI-70	0.7		
	Ports	Port infrastructure Nordic Triangle	FI	96-FI-71	0.2		
	VTM	Vessel Traffic Mangmt.-France	FR	96-FR-42/43	0.2		
	Ports	Ports 2000 Le Havre, Saint Malo	FR	96-FR-44/45	0.5		
	Ports	Port multimodal transport	EL	96-GR-25	0.3		
	Ports	Hinterland links port of Venezia	IT	96-IT-54	0.1		
	VTM	Vessel Traffic Mngt.-Netherlands	NL	96-NL-57/58	1.2		
	Ports	Port of Terneuzen	NL	96-NL-61	0.2		
	Ports	Trelleborg, Stockholm, Göteborg	SE	96-SE-80/1/2	0.3		
	VTM	Vessel Traffic Mangmt.-UK	UK	96-UK-96	0.1	1996:	6.3
1997	IWW	Charleroi-Brussels inland waterway	BE	97-BE-17	1.2		
	IWW	Havel-Oder, Elbe/Dresden IWW	DE	97-DE-52/53	2.8		
	Ports	Port of Vuosaari, Nordic Triangle	FI	97-FI-247	0.7		
	Ports	Studies Port 2000 Le Havre	FR	97-FR-140	0.5		
	VTM	Vessel Traffic Mangmt.-France	FR	97-FR-148/9	0.4		
	VTM	Vessel Traffic Mngt.-Netherlands	NL	97-NL-201	0.6		
	Ports	Masterplan port of Setúbal	PT	97-PT-235	1.0		
	Ports	Studies UK ports	UK	97-UK-288	0.7	1997:	7.9
1998	IWW	Ports IWW in the Danube	AT	98-AT-7	1.3		
	IWW	Magdeburg canal bridge in the Elbe	DE	98-DE-90	6.5		
	Ports	Ports of Lübeck, Brunsbüttel	DE	98-DE-108	0.5		
	Ports	Container terminal Port of Aarhus	DK	98-DK-196	0.5		
	Ports	Studies logistics Spanish ports	ES	98-ES-40	0.9		
	VTM	Vessel Traffic Mangmt.-Spain	ES	98-ES-43	0.5		
	Mar.Sces.	Electronic navigational charts	EU-wide	98-EU-154	2.5		
	Ports	Port of Marseille container traffic	FR	98-FR-223	0.4		
	Ports	Container terminal port of Piraeus	EL	98-GR-52	0.2		
	VTM	Vessel Traffic Mangmt.-Ireland	IE	98-IE-18/19	1.8		
	Ports	Ports of Genova and Trieste	IT	98-IT-273/282	1.0		
	IWW	Study Juliana canal, Maas river	NL	98-NL-68	2.0		
	Ports	Ports of Leixoes, Sines	PT	98-PT-125	0.7		

Year	Sector	Title of project/action	Benef.	Code/No.	EU fundsM€	Sub-totals (M€)
	Ports	Masterplan port of Göteborg	SE	98-SE-235	0.7	
	Ports	Rail infrastructure in five UK ports	UK	98-UK-167	0.6	
	VTM	Vessel Traffic Mangmt.-UK	UK	98-UK-177	0.5	1998: 20.6
1999	IWW	Port of Krems in Danube	AT	99-AT-6	0.5	
	Ports	Masterplan port of Hamburg	DE	99-DE-9	0.5	
	IWW	Charlottenburg, Hohenwarte, Dortmund	DE	99-DE-14/15/16	17.1	
	Ports	Container terminal port of Aarhus	DK	99-DK-28	0.5	
	IWW	Canal network and IWW ports	FI	99-FI-143	0.6	
	Ports	SSS terminals in ports	PT	99-PT-122/3	1.5	
	Ports	Trelleborg, Travemunde, Rostock	SE+DE	99-SE-208	0.3	
	Ports	Great Yarmouth port hinterland	UK	99-UK-173	0.2	
	Mar.Sces.	Search and Rescue from sea-air	UK	99-UK-174	0.5	1999: 21.7
2000	IWW	Works in Houdeng-Aimeries..	BE	00-BE-212	1.0	
	IWW	Berlin, Calvörde, Haldensleben, Dortmund	DE	00-DE-301/2/3	14.8	
	Ports	Study port of Hamburg	DE	00-DE-322	0.5	
	Ports	Works in Port 2000, Le Havre	FR	00-FR-702	2.5	
	VTM	Vessel Traffic Mangmt.-Greece	GR	00-GR-517	0.9	
	Ports	Port of Venise, Marghera island	IT	00-IT-931	0.5	
	IWW	Ketelmeer-Kampen, data system	NL	00-NL-1109/10	3.0	2000: 23.2
2001	IWW	Management system in Danube	AT	01-AT-162	1.5	
	IWW	Albert canal, Schelde locks	BE	01-BE-3003	1.0	
	IWW	Dortmund-Ems canal	DE	01-DE-359	2.0	
	Ports	Hinterland links port of Lübeck	DE	01-DE-370	1.2	
	IWW	Bridge, link Magdeburg-Berlin	DE	01-DE-373/5	4.3	
	Ports	Infrastructure works port of Valencia	ES	01-ES-666	2.5	
	Ports	Works ports of Piraeus, Thessaloniki	GR	01-GR-551	1.2	
	Ports	Works ports of Ancona, Marghera	IT	01-IT-970/972	2.0	
	IWW	Juliana canal, Maas route	NL	01-NL-1151	1.0	2001: 16.7
2002	IWW	Danube link Wien-Slovak border	AT	02-AT-3001	0.4	2002: 0.4
2003	IWW	Information system Danube IWW	AT	03-AT-107	4.2	
	IWW	Danube link Wien-Slovak border	AT	03-AT-3001	0.7	
	Ports	Tidal zone port of Zeebrugge	BE	03-BE-202	2.0	
	Ports	Hinterland port of Wilhemshaven	DE	03-DE-307	2.0	
	IWW	Works Dortmund-Ems canal	DE	03-DE-312/3	3.3	
	Ports	Hinterland links port of Vuosaari	FI	03-FI-1305	2.0	
	IWW	Works in Seine Nord	FR	03-FR-3011	1.8	
	Ports	Rail infrastructure port of Genova	IT	03-IT-908	1.1	
	IWW	Upgrading Maas route waterway	NL	03-NL-1103	2.6	
	Ports	Automated manifest system	NL	03-NL-1103	1.4	
	Ports	Study efficiency Portuguese ports	PT	03-PT-1202	1.5	2003: 22.6
2004	IWW	Lock Lanaye canal	BE	04-BE-3101	2.3	
	Ports	Passenger terminal port of Limassol	CY	04-CY-92001	1.6	
	Ports	Works ports of Lübeck, Rostock	DE	04-DE-90307/11	3.5	
	RIS	River Information Services-EU	EU-wide	04-EU-93003	0.7	
	IWW	Works in Canal Seine Nord	FR	04-FR-3011/90708	4.5	
	IWW	Improvement navigability Danube	HU	04-HU-92201	1.1	
	Ports	Efficiency port of Ventspils	LV	04-LV-92302	1.7	
	Ports	Studies Port structures in Malta	MT	04-MT-92501	0.8	
	IWW	River Information Services	NL	04-NL-91101	0.3	
	MoS	Motorways of the Seas-Portugal	PT	04-PT-91204	1.3	2004: 17.8
2005	IWW	Study Austrian IWW	AT	05-AT-3001-S	2.1	
	IWW	Study on lock building Meuse	BE	05-BE-90203-S	1.2	
	Ports	Breakwaters port of Tallinn	EE	05-EE-92901-P	1.5	
	MoS	Motorways of the Seas-West	EU-wide	05-EU-90609-S	1.5	

Year	Sector	Title of project/action	Benef.	Code/No.	EU fundsM€	Sub-totals (M€)	
	Ports	Berth and rail port of Trelleborg	SE	05-SE-91405-P	1.5		
	Ports	Vuosaari harbour links (Helsinki)	FI	05-FI-91303-P	5.2		
	IWW	Canal Seine Nord, French IWW	FR	05-FR3011/90610	5.9		
	MoS	Motorways of the Seas-GreeceMP	EL	05-GR-90701-S	2.0		
	RIS	River Information Services-Hungary	HU	05-HU-93003	2.0		
	MoS	Motorways of the Seas-SwedenMP	SE	05-SE-91406-S	1.9	2005:	24.8
2006	IWW	Link Wien-Slovak border, IWW	AT	06-AT-3001-S	3.4		
	IWW	Albert Canal and locks Scheldt	BE	06-BE-3003-P	5.5		
	RIS	River Information Services-Seine	FR	06-FR-93007-S	0.9		
	Ports	Rail upgrade port of Gotteborg	SE	91405	2.8		
	Ports	Rail access in Vuosaari	FI	91301	3.3		
	Ports	Reconstruction breakwaters ports	LV	92301	1.2		
	Ports	Passenger/ro-ro terminal Klaipeda	LT	92402	1.6		
	IWW	2nd container terminal Rhône	FR	90601	1.3		
	Ports	Upgrading port of Marsaxlokk	MT	92502	1.2	2006:	21.2
2007**	IWW	Danube port infrastructure	RO	-	0.2		
	IWW	2nd Mosel-lock-basin in Fankel	DE	-	4.9		
	Ports	Malta Freeport Terminals	MT	-	3.1		
	Ports	Marselis tunnel project, Aarhus	DK	-	4.2		
	Ports	Grand Canal of Le Havre	FR	-	1.4		
	Ports	Riga northern transport corridor	LV	-	5.5		
	Ports	Rail facilities in Marghera, Venise	IT	-	0.9		
	Ports	Ventspils port infrastructure	LV	-	0.5		
	Ports	Port of Genoa hinterland terminal	IT	-	4.6		
	Ports	Masterplan ports of Cyprus	CY	-	0.5		
	Ports	Intermodal port facilities in Malmö	SE	-	0.6	2007:	26.4
2007-13'	IWW	Rhine-Meuse-Main-Danube works	EU-6	PP-18	190.2		
	IWW	Seine-Scheldt IWW works	FR+BE	PP-30	420.2	2007-13:	610.4
				TOTAL since 1983:		**840.4 M€**	

** projects from annual calls take about 4 years in aveage for implementation, multi-annual projects concern larger-scale projects.*
% of EU funding always <10% of total budget/investment -typically between 5-10%- except for studies (up to 50% of project cost).
*** Selected projects, pending adoption of Commission decision (2007 annual call and multi-annual 2007-2013).*

Subtotals by sectors (M€):

IWW = inland waterways infrastructure and studies:	731.5	*(121.1 annual, 610.4 m-annual)*
Ports = projects on port infrastructure and studies:	85.9	
VTM = Vessel Traffic Management:	9.7	
MoS = Motorways of the Seas infrastructure and studies:	6.7	
RIS = River Information Services (VTM for IWW):	3.6	
Mar.Sces. = Maritime Services, other non-covered areas:	3.0	
TOTAL:	**840.4 M€**	

Structural and Cohesion funds allocations for Transport infrastructures in Seaports, 2000-2006
(Source: European Court of Auditors report 2012, with some selected projects by EU MS, EU-funds in million euros)

ES (€1,469m =52% of total EU funds: €2.82bn): *A Coruña/punta Langosteira (257.5); Gijón (247.5); Ferrol (39.6);Algeciras bay/San Roque (16.6); Las Palmas/Arinaga (11.8); A Coruña/fishing (9.3); Las Palmas/dike (6.9); Avilés/docks (6.6); Las Palmas/pier (5.1); Cádiz/Chipiona Marina (2.2); Avilés/works (1.2); Cádiz (0.7) [Total selected projects= €605.0m].*

EL (€359m =13% of total EU funds): *Myrinas (9.6); Karlovasi (6.2); Mytilini/Marina (5.9); Tinos (4.0); Athinios/Santorini (2.4); Syros (1.5) [total selected projects=€29.6m]*

IT (€339m =12% of total EU funds): *Ragusa/Marina (15.4); Messina (10.5); Bari (8.0); Brindisi (4.5); Augusta (3.8); Vieste/Marina (2.5) [total seleced projects=€44.7m]*

FR (€246m =9% of total): *Le Havre/works (38.1); Le Havre/rail (8.4); Rouen (1.0) [total selected projects=€47.5m]*

Other: *PT=180-6.4%; UK=59-2.1%; DE=46-1.6%; PL=28-1.0% (<1%: EE=10; NL=5; LV=4; LT=3, MT=1.3)*

A long-term view on possible Re-balance North-South of EU ports' traffic on Far-East trade

EU's former High Representative for CFSP and SG of the Council, **Javier Solana**, published an article in May 2011 (entitled **"The Mediterranean Reborn"**), in which he foresaw a re-balance of ports role in Europe, in the sea trade with the Far East. Even if nearly all the Far East-Europe trade route transits today via the Suez Canal, and along the Mediterranean, **72% of the container traffic** reaches its final destination at North European ports, **with only 28% of those containers** being unloaded or trans-shipped in **South European ports**.

He foresees a gradual **re-balance** of that container traffic (in order to reach optimum economic and environment impacts and benefits) to take place in future, to eventually reach an ultimate level of the order of **37% for North European ports versus 63% for South**, thus **reducing up to 50% EU's sea-transport related CO2 emissions**.

However, to make possible this to happen, of clear benefit for EU and for south EU MSs also, including Spain, Italy or Greece, Mr Solana concludes that it is essential to **invest on port infrastructure** and particularly on enhancing, improving the South European **ports' hinterland connections (mainly by rail)**; therefore the importance of TEN-T projects like the Mediterranean corridor, linking by rail ES's three main ports between them and with FR and the EU market.

Current, continuing financial/debt crisis in some MSs of the Euro-zone: a Handicap

After the global financial crush of Sept. 2008, the 10-year bond interest rates for some of the MSs of the euro-zone gradually started to rise and later to spiral (in a vicious circle), making the cost of servicing the debt increasingly high; thus re-assiging scarce public resources, investing less, generating in turn less growth, less income and revenues to Treasuries, with parallel austerity measures to curve deficits, debts. An illustration of the evolving euro-zone debt crisis since first appeared in late 2009 in EL, can be seen in the table below, with the raise of 10-year bond interest rates for some MSs of the euro-zone, beyond or far beyond the more common or standard levels of interest rates of around 3%:

EU MS (10-y.Govt.bonds)	**20.1.11**	**21.3.11**	**14.4.12**	**18.6.12**	1.5-y.trend
Greece:	11.5%	12.3%	21.0%	**26.2%**	(+128%)
Portugal:	6.9%	7.5%	12.7%	**10.6%**	(+54%)
Ireland:	9.0%	9.7%	7.0%	**7.4%**	(-18%)
Spain:	5.4%	5.2%	6.0%	**7.2%**	(+33%)
Italy	4.7%	4.7%	5.5%	**6.1%**	(+30%)
DE:	3.1%	3.3%	1.7%	1.4%	(-54%)
FR:	3.5%	3.6%	3.0%	2.6%	(-26%)
UK (non-euro):	3.6%	3.6%	2.0%	1.6%	(-56%)
USA:	3.3%	3.4%	2.0%	1.6%	(-52%)

To illustrate the magnitude of the additional/marginal cost of servicing the (public) debt beyond standard 3% rates:

Cost of just 1% interest rate above standard 3%		(for servicing the public debt)
EL:	€ 3.5bn	(from €215bn gdp, 165% public debt ratio), times 23
PT:	€ 1.9bn	(€ 171bn gdp, 109% debt ratio), x 8
IE:	€ 1.7bn	(€ 156bn gdp, 108% debt ratio), x 4
ES:	€ 7.6bn	(€ 1.1tn gdp, 69% debt ratio), x 4
IT:	€ 19.4bn	(€ 1.6tn gdp, 121% debt ratio), x 3

The present crisis has a **direct impact on Europe's maritime sector**, as it prevents investment re-activation (thus growth and job creation), particularly from the **public sector** -of the most affected EU MSs- which accounts for about half of a country's GDP. As public revenues stagnate or even decrease, the **growing extra funds needed for servicing the debt** are taken from other parts of the MS' budgets, foreseen for sectorial expenditures and **public investment in infrastructures**, including on **ports, hinterland connections** and maritime; projects which are therefore put aside, postponed or even discarded. EU's maritime infrastructures and their development are therefore affected or in other cases affected EU MSs **risk losing ultimate control over maritime and its infrastructures**, which are of strategic importance for the EU, its growth and its competitiveness.

Annex 9: Ports' fees, Performance; Emissions; Liner shipping routes; Arctic

PORTS' FEES all SERVICES: Cost analysis Port of Rotterdam (Tariffs 2005)

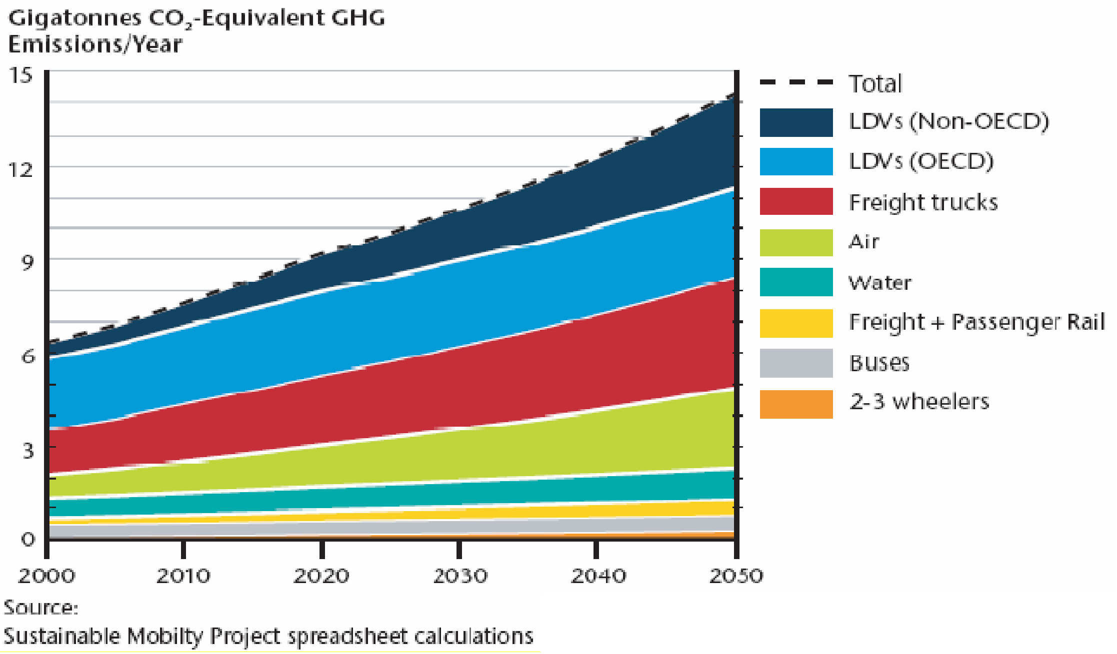
Services/concept	Dues/fees payable	Example: General cargo ship photo, 24h.*	
1. Quay dues:	€2.68/meter length l.o.a./day	2.68 x 171.2m x 1day =	**€ 460**
2. Harbour dues (taxes):	ranges €0.5-1.5/GT (ship type)	Tramp/light: (€0.276x22,817gt) +(€0.45x 2,000t teu)=6,297+900=	**€7,197**
3. Pilotage dues:	Draught 11.6m: € 3,549/time	3,549 in + 3,549 out =	**€ 7,098**
4. Harbour towage (tug):	Length OA 161-190m: €1,210/trip (closer quays)	1,210 x 2 times =	**€2,420**
5. Mooring-unmooring:	Length OA 165-175m: €445 mooring + €412 unmoor.	445 + 412 =	**€ 857**
6. Bunkering services:	Tariff B, sea: € 0.082/GT	0.082 x 22,817gt =	**€ 1,871**
7. Container handling:	commercial, ~ €150/box	80 boxes left + 120 taken = 200 boxes x 150 =	**€ 30,000**
8. Drinking water:	€ 4.80 per ton(m3), min.5m3 +€37.50/delivery (region east)	(50t x 4.80) + 37.50 =	**€ 278**
9. Waste disposal facilities:	Main engine 10.000-15,000kw	€320 for oil waste (<10m3) +€230 domestic waste (<6m3)=	**€ 550**
10. Electricity generation:	(commercial, standard rates)	-	-
11. Discounts on final price	from 5% to 35% (frequency)	-	

TOTAL PAYABLE TO PORT (for 24h., excluding fuel oil, electricity and discounts):
= <u>€ 50,731</u> (for 1 day, or = € 51,191 for 2days, € 51,651 for 3 days…

*** Ship's technical specifications:** Type: general cargo ship, GT: 22,817, dwt: 35,466, Displacement: 45,376t, Draught: 11.65m, Length (OA): 171,2m, Breadth: 30.6m, TEU: 1,644, Crew: 22, 1st Engine power: 12,000KW, Main engines: 1 (oil engine), Shipbuilder: SP-Szczecin-pl; Date of build: Oct.1999; Engine builder: ZPM-Poznan-pl.

Table with main UNITS, MEASURES and CONVERSIONS used in Maritime *(with background)*

Present situation and projections of CO2 emissions/year per transport mode: Waterborne transport's emissions appear to diminish significantly in relative terms over the referred period, despite strong expected growth (see graph below, from CRA International, 2005: www.its.ucdavis.edu, where LDVs stands for "light-duty vehicles")



Top European (EU/EEA) Ports' Performance* (commercial, capacity), compared to world's main ports
(Version 11.11.08, source: LR-Fairplay, Port of Rotterdam, Eurostat, ISL)

Main EU/EEA	1 Mt/y**	2 4y-gr.	3 Mteu	4 Mpas.	5 Calls	6 Surf.ha.	7 draught	8 [+tide]	9 Drydks	10 Cong.	11 Main"	12 Exp.
1. Rotterdam	406.8	(+18%)	10.79	-	34.900	10.500	22.5m	[1.6m]	405m	yes	Tk-Bc	yes
2. Antwerp	182.9	(+27%)	8.18	-	15.800	14.000	15.5m	[4.8m]	312m	yes	Co-Tk	yes
3. Hamburg	140.4	(+38%)	9.89	0.03	13.000	-	15.1m	[3.4m]	351m	yes	Co-Bc	yes
4. Marseilles	96.3	(+8%)	0.97	2.0	-	-	14.5m	[0.0m]	465m	some	Tk-Bc	yes
5. Bergen	94.0	(+0%)	0.02	-	24.000	-	12.2m	[1.2m]	207m	no	Tk-Bc	no
6. Amsterdam	87.8	(+20%)	0.39	-	5.700	2.900	16.4m	[0.0m]	250m	some	Bc-Tk	no
7. Le Havre	78.9	(+9%)	2.64	0.3	-	-	24.7m	[5.3m]	313m	yes	Tk-Co	no
8. Algeciras	74.5	(+30%)	3.41	5.0	21.500	-	23.0m	[0.7m]	225m	some	Co-Tk	yes
9. Bremen-Brmrh.	69.2	(+40%)	4.91	0.07	-	-	13.0m	[3.9m]	335m	yes	Co-Bc	yes
10. Teesport	60.7	(+18%)	-	-	-	-	17.2m	[3.6m]	150m	-	Tk-Bc	no
11. Constantza	60.0	(+85%)	1.04	-	14.300	3.900	12.3m	[0.5m]	350m	no	Bc-Tk	yes
12. Immingham	57.6	(+15%)	-	-	6.300	-	14.2m	[4.8m]	no	no	Tk-Bc	yes
13. Genoa	57.2	(+6%)	1.61	3.4	15.800	-	15.2m	[0.2m]	277m	-	Tk-Co	yes
14. Dunkirk	57.1	(+19%)	0.21	-	7.100	950	14.2m	[6.0m]	180m	-	Bc-Tk	no
15. London	52.7	(+1%)	1.70	-	12.300	(150km)	14.6m	[6.6m]	no	-	Tk-Bc	yes
16. Barcelona	50.0	(+42%)	2.61	1.4	9.000	1.800	15.1m	[0.8m]	215m	some	Bc-Co	yes
17. Trieste	48.3	(+8%)	0.21	0.1	3.500	230	18.0m	[0.8m]	295m	-	Tk-PR	yes
18. Valencia	45.6	[+43%]	3.04	0.3	7.000	(13kmq)	13.4m	[0.0m]	155m	some	Bc-Co	yes
19. Wilhelmshaven	42.7	(+11%)	0.08	-	1.300	-	19.0m	[3.3m]	150m	-	Tk-Bc	yes
20. Zeebrugge	42.1	(+19%)	1.20	-	-	-	15.7m	[4.4m]	no	-	Tk-PR	yes
21. Calais	41.5	(+177%)	-	11.5	-	(7kmq)	11.5m	[5.0m]	141m	-	PR-	yes
22. Tallinn	41.1	(+40%)	0.15	6.8	-	(4kmq)	10.7m	[0.8m]	130m	-	Tk-Bc	no
23. Bilbao	40.0	(+41%)	0.55	0.2	-	242	21.0m	[4.7m]	154m	no	Tk-Bc	yes
24. Göteborg	39.9	(+21%)	0.81	2.2	-	-	18.9m	[0.3m]	332m	-	Tk-PR	yes
25. Gioia Tauro	17.3	[-2%]	**3.45**	-	-	124	15.0m	[0.6m]	no	-	Co.	yes
26. Felixstowe	24.4	[+10%]	**3.30**	-	4.300	-	15.0m	[4.0m]	no	some	Co-Bc	yes
27. Southampton	37.0	[+18%]	**1.90**	0.8	-	-	15.0m	[4.5m]	no	yes	Bc-Tk	yes
28. Piraeus	21.1	[-1%]	**1.37**	20.5	29.200	-	12.5m	[0.4m]	200m	-	PR-Co	yes
29. Las Palmas	19.0	(+41%)	**1.22**	0.3	10.000	-	20.0m	[2.8m]	217m	-	Co-PR	yes
30. Dover	23.8	(+83%)	-	**14.3**	-		10.0m	[4.6m]	no	-	PR-Tk	yes
Average:	**70.3**	**(+30%)**	**2.19**		**7.800**		**15.8m**		**253m** (77% ports)			

**Definition of "Performance" (Oxford English Dictionary): The accomplisment or carrying out of something commanded or undertaken; the doing of an action or operation./ The quality of execution of such an action, operation or process; the competence or effectiveness of a person or thing in performing an action; the capabilities, productivity or success of a machine, product or person when measured against a standard.*

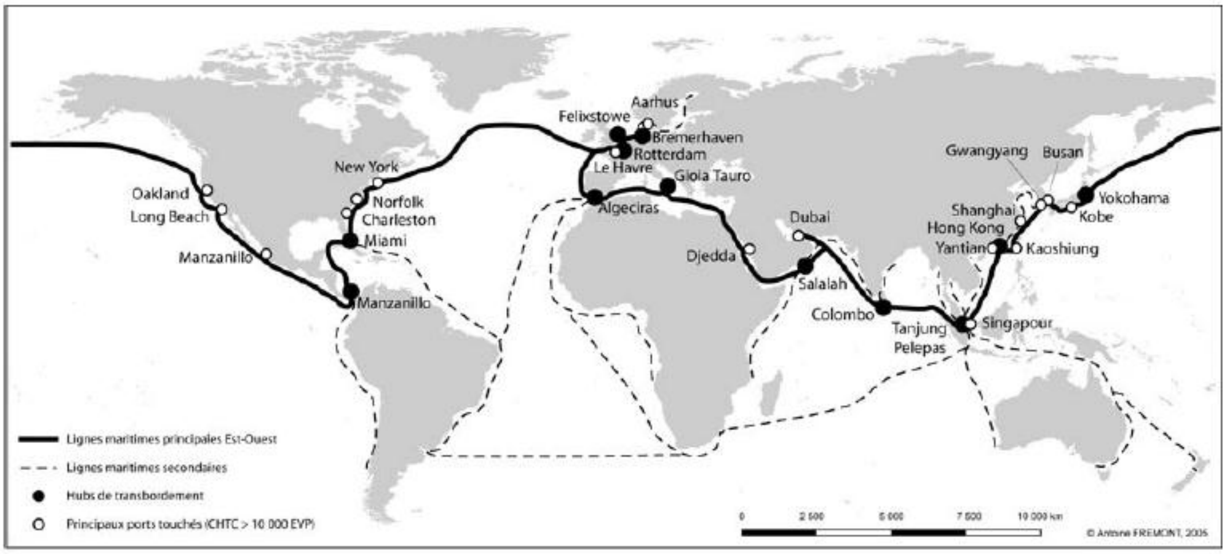
*** Total port throughput in million tonnes/year includes container traffic.*
" Main traffics in port, main terminals: Tk=tankers, Bc=bulk carriers, Co=Containers, PR=Passenger/ro-ro, Gc=Gral.cargo

Other types of Port Performance besides Commercial perf., Capacity perf. (measurements by categories):
Connectivity perf.: hinterland modes (13), no. of coridors (14), max. distance link (15),
Technical perf.: loading/unloading capacity dry bulk (16), load./unl. cap. containers (17), load./unl.cap. tankers (18),
Socio-economic perf.: port staff (19), port dockers (20), cranes (21), employment (22), gdp contr. (23), city-leisure (24),
Efficiency perf.: waiting times (25), delays quay (26), labour productivity (27), capital productivity (28), surface prod. (29),
Business perf.: turnover PA/terminal (30), profit (31), profit ratio (32), state contributions/grants (33),
Financial perf.: investment value (34), financing origin (35), debt (36), State investment (37),
Price/Quality perf.: cost stay (38), cost services (39), cost load./unl./dockers (40), quality services (41),
Governance perf. (ESPO): duration concessions (42), public procurement (43), ownership type (44), competition (45).

	1	2	3	4	5	6	7	8	9	10	11	12
Main World	**Mt/y**	**4y-gr.**	**Mteu**	**Mpas.**	**Calls**	**Surf.ha.**	**draught**	**[+tide]**	**Drydks**	**Cong.**	**Main**	**Exp.**
Shanghai-cn	561.0	(+103%)	26.15	10.6	55.000	-	15.0m	[2.1m]	222m	-	Bc-Co	yes
Singapore-sg	483.6	(+45%)	27.93	-	174.600	-	22.0m	[3.5m]	355m	-	Co-Bc	yes
Ningbo-cn	344.0	(+102%)	7.00	-	-	-	18.2m	[3.0m]	no	-	Tk-Bc	no
Guangzhou-cn	340.0	(+97%)	6.60	-	-	-	13.5m	[2.2m]	140m	-	Bc-Tk	yes
Tianjin-cn	309.0	(+100%)	6.00	-	8.000	-	15.5m	[2.4m]	212m	-	Bc-Co	yes
Qingdao-cn	265.0	(+83%)	7.70	-	-	-	12.5m	[4.0m]	no	-	Tk-Bc	yes
Hong Kong-cn	245.0	(+24%)	23.88	22.5	-	-	16.8m	[1.4m]	270m	-	Co-Bc	yes
South Louisiana-us	239.0	(+0%)	-	-	4.000	-	13.7m	-	no	-	Bc-Tk	no
Dalian-cn	220.0	(+84%)	3.20	-	-	-	24.0m	[2.7m]	365m	-	Bc-Tk	yes
Nagoya-jp	215.0	(+29%)	2.75	-	39.900	12.300	16.0m	[2.4m]	450m	-	Tk-Bc	yes
Busan-kr	200.0	[+28%]	13.26	(25k)	83.500	-	14.5m	[0.8m]	100m	-	Co-Bc	yes
Kwangyang-kr	170.0	[+68%]	1.46	-	-	-	23.5m	-	no	-	Tk-Bc	yes
Chiba-jp	165.7	(-2%)	0.04	-	65.200	24.800	19.2m	[1.2m]	-	-	Tk-Bc	yes
Qinhuangdao-cn	160.0	(+64%)	0.10	-	-	-	15.5m	[1.3m]	-	-	Bc-Tk	yes
Houston-us	160.0	(+13%)	1.47	-	-	-	12.8m	[0.3m]	no	-	Tk-Bc	yes
Shenzhen-cn	153.0	[+143%]	21.10	-	-	-	-	[1.4m]	-	-	Co-Bc	yes
Ulsan-kr	149.6	(+0%)	0.30	-	24.500	-	16.5m	[0.6m]	380m	-	Tk-Bc	yes
Incheon-kr	132.0	(+10%)	1.37	-	47.600	-	13.0m	[9.0m]	no	-	Tk-Bc	yes
Kaohshiung-tw	129.4	[+15%]	10.26	-	36.500	(26kmq)	15.0m	[0.7m]	390m	-	Co-Bc	no
Yokohama-jp	127.0	(+9%)	2.61	-	42.200	-	17.0m	[1.5m]	-	-	Tk-Bc	yes
Dampier-au	126.1	(+54%)	-	-	3.400	-	19.5m	[4.2m]	no	-	Bc-Tk	no
Los Angeles-us	123.4	[+39%]	8.36	1.2	-	3.000	14.5m	[2.7m]	170m	-	Co-Bc	yes
Port Hedland-au	110.6	(+84%)	-	-	-	-	19.2m	[5.7m]	no	-	Bc-Tk	yes
Keelung-tw	99.5	(+28%)	2.13	-	9.200	-	14.0m	[0.8m]	265m	-	Tk-Bc	no
Osaka-jp	93.1	(+0%)	1.73	1.7	34.000	-	15.0m	[1.0m]	188m	-	Bc-Tk	no
Kobe-jp	92.0	(+9%)	2.00	-	-	-	15.0m	[1.8m]	no	-	Bc-Co	no
Tokyo-jp	91.4	(+8%)	3.50	-	32.600	-	15.0m	[1.1m]	180m	-	Bc-Co	no
Richards Bay-za	86.3	(+16%)	-	-	1.500	21berths	17.5m	[1.7m]	no	-	Bc-Tk	yes
New York-us	86.2	(+17%)	5.09	-	5.600	-	14.5m	[1.4m]	332m	-	Bc-Co	yes
Long Beach-us	85.0	(+32%)	7.29	-	5.700	-	16.7m	[1.2m]	333m	-	Co-Bc	yes
Port Klang-my	85.0	(+42%)	6.32	-	12.000	41berths	13.4m	[4.5m]	80m	-	Co-Bc	yes
Newcastle-au	83.5	(+14%)	-	-	1.600	-	16.5m	[1.4m]	180m	-	Bc-Gc	yes
Vancouver-ca	79.5	(+9%)	2.20	1.0	2.700	-	18.3m	[3.7m]	220m	-	Bc-Co	yes
Corpus Christi-us	79.0	(-2%)	-	-	2.100	-	13.7m	[0.5m]	no	-	Tk-Bc	yes
Taichung-tw	78.0	(+73%)	1.25	-	6.000	46berths	18.0m	[3.7m]	152m	-	Bc-Co	no
Hay Point-au	77.5	(+41%)	-	-	-	-	17.5m	[3.5m]	no	-	Bc-	yes
Dubai/Rashid-ae	77.4	[+113%]	8.92	-	14.000	35berths	13.0m	[1.5m]	525m	-	Bc-Co	yes
Tubarao-br	76.0	(+9%)	-	-	-	-	16.5m	[1.8m]	no	-	Bc-Tk	no
Philadelphia-us	75.5	(+0%)	0.08	-	-	-	12.2m	[1.7m]	300m	-	Tk-Co	no
Novorossiysk-ru	75.0	(+50%)	-	-	6.000	-	19.0m	[0.6m]	400m	-	Tk-Bc	yes
Santos-br	73.0	(+71%)	1.60	0.5	5.600	-	12.8m	[1.0m]	120m	-	Bc-Tk	yes
Tanjung Pelepas-my	57.1	[+92%]	**4.80**	-	3.200	-	14.4m	[1.8m]	-	-	Co-Bc	yes
Laem Chabang-th	32.6	(+53%)	**3.80**	-	4.700	-	13.0m	[3.3m]	282m	-	Co-Bc	yes
Mumbai JNP-in	44.8	(+33%)	**3.30**	0.03	6.000	-	12.2m	[2.5m]	304m	-	Bc-Co	yes
Tanjung Priok-id	38.6	(+0%)	**3.20**	-	7.200	-	10.6m	[1.4m]	125m	-	Bc-Co	no
Colombo-lk	28.2	(+12%)	**3.08**	-	3.800	-	14.0m	[0.4m]	263m	-	Co-Tk	yes
Durban-za	42.7	(+33%)	**2.34**	-	4.600	-	12.0m	[1.1m]	352m	-	Bc-Co	yes
Manila-ph	41.9	(+0%)	**2.30**	3.4	-	-	14.5m	[0.6m]	no	-	Co-PR	yes
Melbourne-au	24.7	(+191%)	**2.10**	-	-	34berths	13.1m	[0.5m]	146m	-	Bc-Co	yes
Seattle-us	12.7	(-2%)	**2.09**	-	-	-	15.2m	[5.5m]	287m	-	Co-Bc	yes
Average:	**138.9**	**(+43%)**	**4.81**		**15.100**		**15.6m**		**261m**			
									(72% ports)			

Top-50 world (incl.Europe): China=9 (all in top20), EU=8 (only one in top20), US=7, Japan=6, Korea=4, Australia=4

Main global liner shipping (containerships) routes and stopovers (source: Frémont, 2007 *"Conteneurisation et mondialisation"*, OECD report 2008 *"Clarifying Trade Costs in Maritime Transport"*)
The graph below shows the main trans-Oceanic route (and secondary ones) as well as the major (hub/transhipment) ports serviced by Maersk, which is the largest global container shipping firm.



World's top-20 container terminals in 2010 throughput (in Mteu), annual growth (*source:Le Lloyd-Alphaliner*)

1. **Shanghai, China** (29.1) +16%	8. Guangzhou, China (12.6) +12%	**15. Antwerp,be/EU** (8.5)+16%
2. **Singapore, Sing.** (28.4) +10%	9. Qingdao, China (12.0) +17%	**16.Hamburg,de/EU**(7.9)+13%
3. **Hong Kong, China** (23.5) +12%	10. Dubai, UAE (11.6) +4%	17.Tanjung Pelepas, Mal.(6.5)+8%
4. **Shenzen, China** (22.5) +23%	**11. Rotterdam,nl/EU**(11.1) +14%	18. Xiamen, China (5.8) +24%
5. Busan, S.Korea (14.2) +19%	12. Tianjin, China (10.1) +16%	19. Dalian, China (5.2) +15%
6. Los Angeles, USA (14.1) +19%	13. Kaohsiung, Taiwan (9.2) +7%	20. Laem Chabang, (5.2) +12%
7. Ningbo, China (13.1) +25%	14. Port Klang,Malaysia(8.9)+21%	**Top-20=259.5=49%World(530.9)**

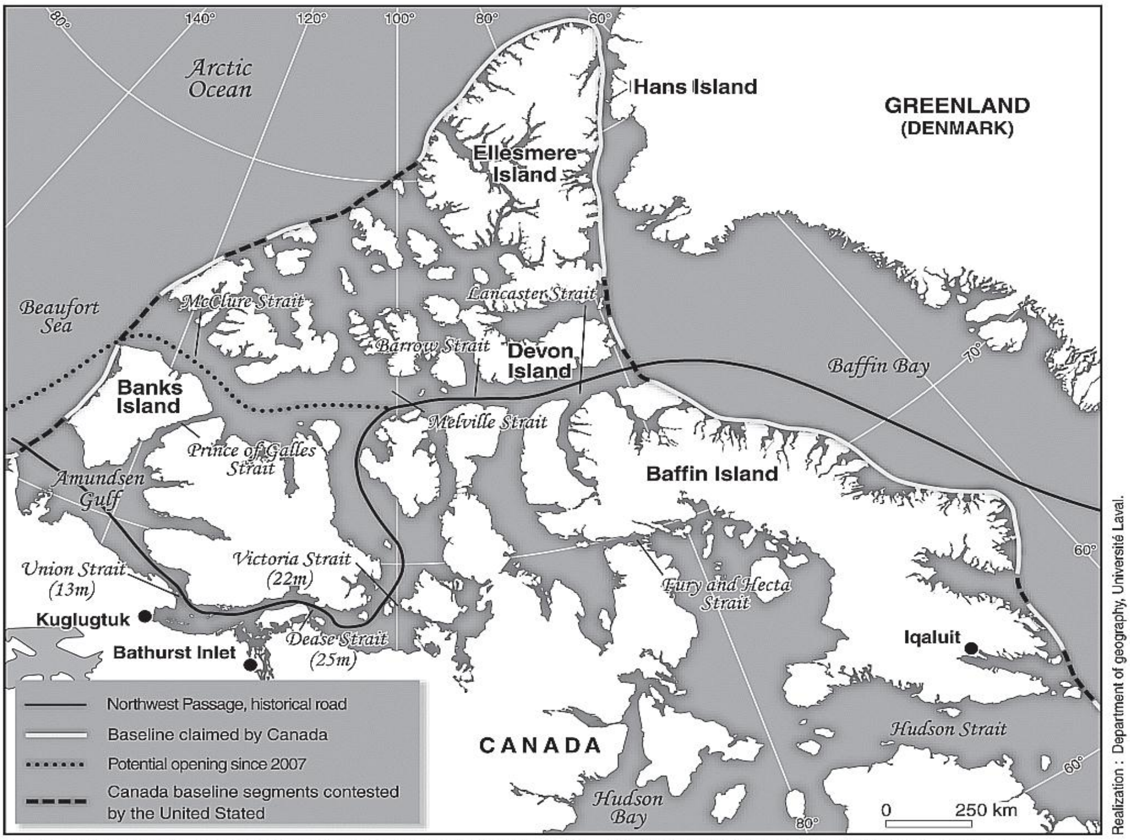
Future Shipping trans-Arctic routes (Source of maps, distances table: NATO Defense College report 2009)

Gradual ice melting in the Arctic Ocean seems to be an irreversible process, threatening fragile and sensitive eco-systems in the Arctic region but opening at the same time a new natural Canal for new shipping routes. Assuming there will be, *inter alia*, increased and reinforced safety and environmental, ice-class standards, enhanced preparedness and response capacity/infrastructure, charting, and respect of UNCLOS' freedom of navigation, right of innocent passage, with no discriminatory measure applied by any of the Arctic coastal States, the future trans-Arctic shipping routes (through the North-East Passage along Northern Russia and/or the North-West Passage along Northern Canada and Alaska, see maps below) would offer an opportunity to cut up to 40% the distance, duration, costs –and emissions through lower fuel consumption- of trans-Oceanic trips from Europe to Pacific (Asia/Far East or US/West coast).

Distances between major ports using different routes (in nautical miles, *=present shortest route)**:**

Itinerary	**Panama**	**NW Passage**	**NE Passage**	**Suez+Malacca**	
London-Yokohama	12,581	7,603	**7,474**	11,447*	(-34% **-35%**)
Rotterdam-Shanghai	13,816	8,693	**8,528**	10,556*	(-18% **-19%**)
Marseilles-Yokohama	12,975	**9,028**	9,694	9,611*	(**-6%** n.a.)
Hamburg-Seattle	9,239*	7,241	**6,895**	16,080	(-22% **-25%**)
Rotterdam-Vancouver	8,828*	7,738	**7,127**	15,335	(-12% **-19%**)
Los Angeles-Rotterdam	7,824*	8,164	8,397	16,064	(n.a., n.a.)
New York-Shanghai	11,274*	**9,195**	10,741	12,381	(**-18%** -5%)
New York-Hong Kong	11,479*	**9,795**	11,331	11,647	(**-15%** -1%)
New Orleans-Singapore	12,100	11,852	13,915	11,533*	(n.a., n.a.)

Fig. 3 The Northwest Passage



Source : Lasserre, Frédéric. « Le passage du Nord-Ouest : une route maritime en devenir ? », Revue Internationale et Stratégique (Paris), n°42, p.143-160, 2001

Fig. 4 The Northeast Passage

Source : DUNLAP William (1996) Transit Passage in the Russian Arctic Straits, Maritime Briefing vol.1 n°7, International Boundary Research Unit, University of Durham.

Arctic Maritime Disputes: unresolved and bilaterally settled, claims (source: Nato, EC, other)

Unresolved (alphabetical order):
- Beaufort Sea, border between Alaska and Yukon at sea, from 1825 Russia-UK Treaty (US vs Canada)
- Bering Strait, maritime border dispute (Russia vs US)
- Hans Island, in Kennedy passage, plus two small areas in Lincoln Sea (DK/GL vs Canada)
- North-West Passage, baselines, EEZ (US+ vs Canada), North-East Passage, baselines (US+ vs Russia)
- Svalbard waters, EEZ of 200nm disagreement on fishing rights (Norway vs Russia+several countries).

Bilaterally settled or by the International Court of Justice (chronological order):
- Barents Sea, Grey Zone dispute for four decades (Russia vs Norway) [settled in April 2010, signed 2011]
- Fram Strait, between Spitsbergen and Greenland (DK/GL vs NO) [settled in 2006]
- Strait of Denmark between Iceland and Greenland (DK/GL vs CA) [settled in 1997]
- Jan Mayen island, maritime dispute with Greenland (NO vs DK/GL) [settled in 1993-95, ICJ judgment]
- Jan Mayen island, maritime dispute with Iceland (NO vs Iceland) [settled in 1980-81]
- Davis Strait, between Canada and Greenland (CA vs DK/GL) [settled in 1973]

Territorial-maritime claims in the Arctic (from Extension of Continental Shelf* to 350nm or beyond):
- Russian claim on Lomonosov Ridge (contested by DK-Greenland and other states), UN unresolved-2007
- Russian claim on Mendeleev Ridge, attached to the Alpha Ridge (contested too), UN unresolved-2007
- Norwegian claim on three Arctic areas: Loop Hole in Barents Sea, Western Nansen and "Banana Hole".
- Denmark claim that Lomonosov ridge is extension of Greenland, as it has nearest coastline to North Pole.
- Canadian (first historical in 1925) claim of North Pole by extending its boundaries, followed by others.
- Canadian claim that waters in Canadian archipelago are internal waters, contested by US (submarines).
- US ongoing mapping, since 2007, off North Alaska's sea floor to determine extent of continental shelf.

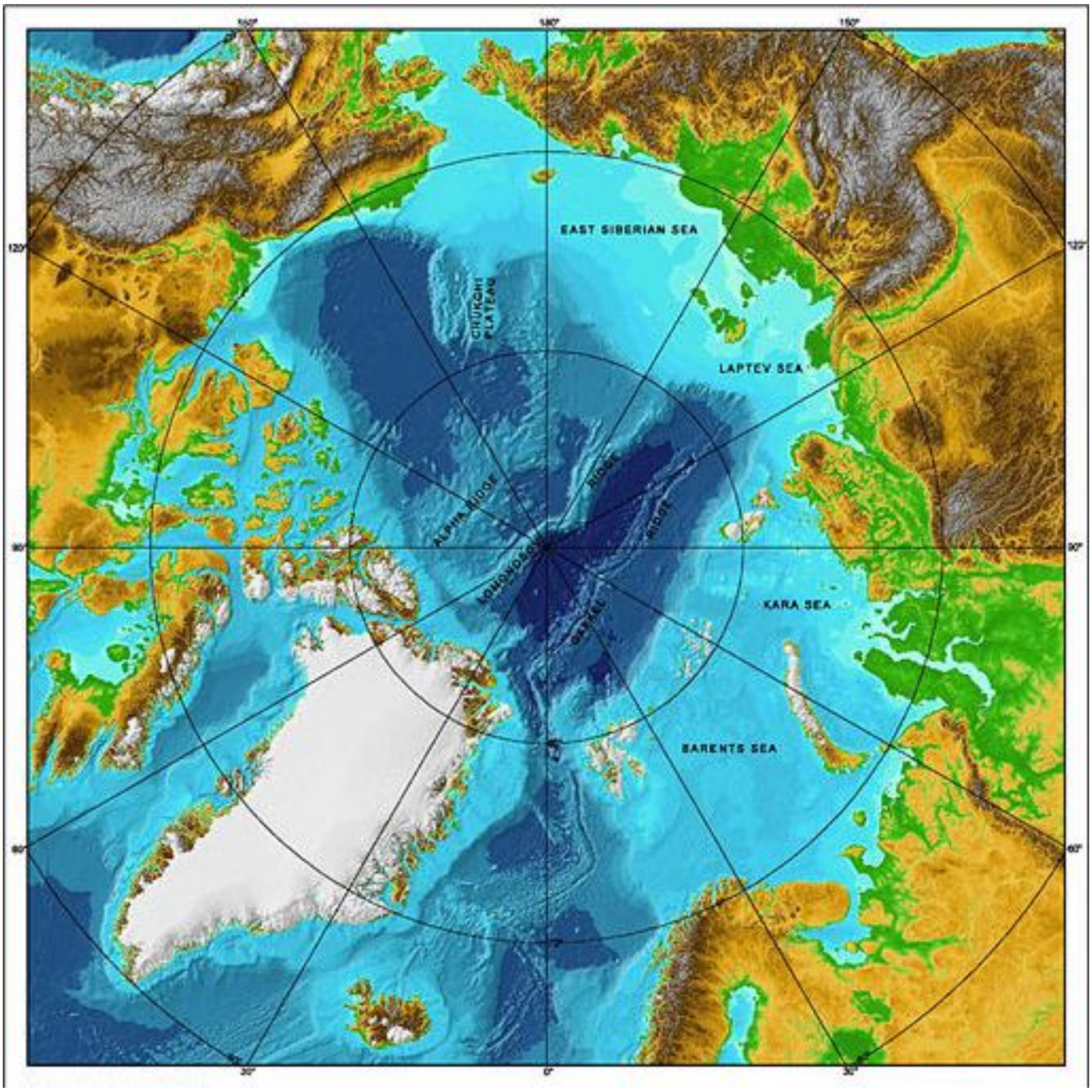
*Upon ratification of Unclos, a country has a ten year period to make claims to an extended continental shelf to the UNCLCS (UN Commission on the Limits of the Continental Shelf) and if approved gives rights on or below the seabed. Ratifications: Norway 1996, Russia 1997, Canada 2003, Denmark 2004, US only signed but not (yet) ratified.

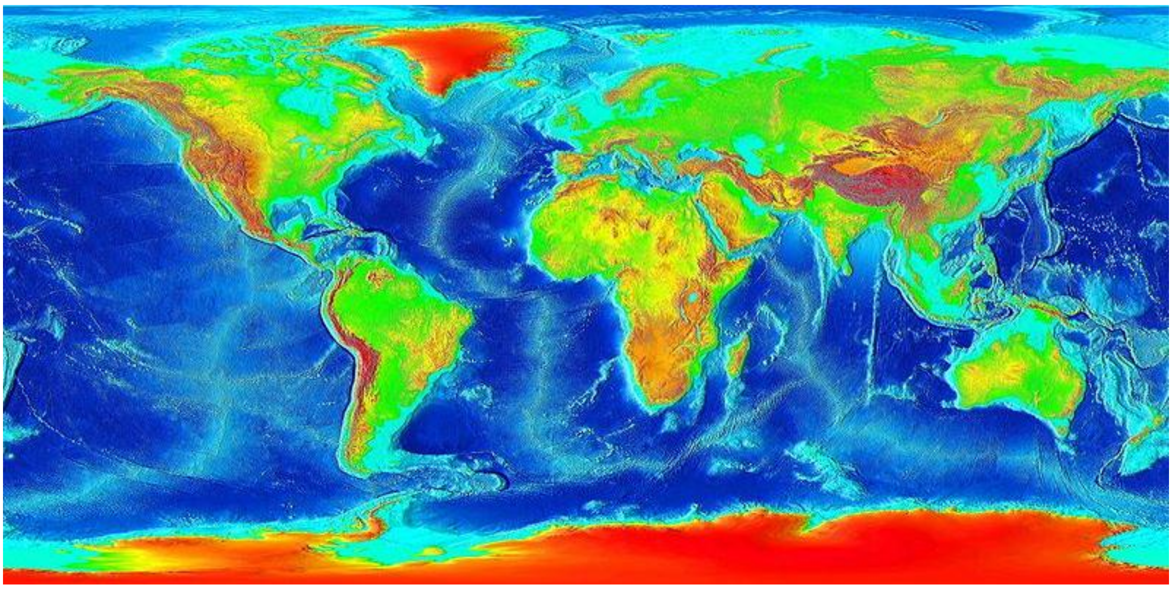
Other maritime (or insular) disputes in the rest of the world, unresolved and settled:

Unresolved (alphabetical order):
- Aegean Sea, on 12nm of territorial waters -6nm currently applied-, airspace, islets, EEZs (EL vs Turkey)
- Canada-France over maritime border, EEZ and rights from French PTOM Saint Pierre et Miquelon.
- Caspian Sea (Russia vs four other coastal States), on oil-gas, fishing, passages, as Sea treatment denied.
- Chile-Peru maritime border, Peru argues sea border runs SW direction, Chile on West direction.
- Falkland islands/Malvinas waters, EEZ, extension of continental shelf (UK vs Argentina, after 1982 war)
- Gibraltar waters (UK vs ES, UK applies 3nm, ES contests existence of any territorial waters)
- Iceland claims on continental shelf in N.Atlantic Hatton-Rockall (Iceland vs DK/Faeroes, UK-Ireland)
- Japan-China over maritime border (Diaoyu/Senkaku islands), Chinese oil-gas offshore exploration in area
- Japan-South Korea maritime border dispute over Dokdo/Takeshima islands (Japan vs S.Korea)
- Korean North-South maritime border, since 1953 UN-established maritime division rejected by N.Korea.
- Kuril islands, shouthernmost (Japan vs Russia, since end of WWII, with no peace treaty), Sakhalin-linked
- Paracel islands, in South China Sea (China vs Vietnam)
- Slovenia-Croatia maritime border (Gulf of Piran and division of the area)
- Spratleys archipelago, in South China Sea (China vs Taiwan, Vietnam, Philippines, Malaysia, Brunei)
- Western Sahara waters (Morocco vs countries and organisations that recognise Territory as a State)
- Zhongsha islands, in South China Sea (China vs Philippines)

Bilaterally settled or by the International Court of Justice (chronological order):
- Romania-Ukraine maritime delimitation [settled by ICJ who gave its verdict in 2009]
- Australia-Indonesia maritime border [settled in 1997 with signing of Maritime Delimitation Treaty]
- Libya-Malta continental shelf dispute [settled in 1984 by ICJ judgment, requested by Italy]
- Canada-US maritime delimitation dispute Gulf of Maine area [settled in 1984 by ICJ judgment]
- Chile-Argentina right of passage in Magallanes Strait [settled in 1982, special clause, article in Unclos]
- Tunisia-Libya continental shelf dispute [settled in 1982 with ICJ judgment]
- Germany-Denmark, Germany-Netherlands over Norrth Sea continental shelf [settled in 1969 by ICJ]
- UK-Albania over the use of the Corfu Channel [settled in 1949 by ICJ judgment]

Arctic and world maps showing the continental shelf (up to 2,000m deep) in cyan light-blue colour
(Source: US National Oceanic and Admospheric Administration, US Federal Government)





EU Arctic Policy – Selected key facts & developments, Maritime, Shipping related

Chronology of main steps and subsequent "layers" in the new EU Arctic policy

EC Communication: **"The European Union and the Arctic Region"** of 20.11.08 (COM(2008)763 final, with 3 main objectives: 1. Protecting and preserving the Arctic in unison with its population; 2. Promoting sustainable use of resources (hydrocarbons, fisheries, transport, tourism); 3. Contributing to enhanced Arctic multilateral governance.
Council Conclusions "on Arctic issues", on EC Communication; on 8.12.08 (general welcome given) and on 8.12.09 (Foreign Affairs Council meeting, sector by sector, with a number of recomendations).
European Parliament Resolution on "A Sustainable EU Policy for the High North", adopted on 20.1.11 (adding EP input and recommendations).
Other relevant EU policy documents (preliminary or to follow): Paper from the High Representative and EC to the European Council on "Climate Change and International Security", of 14.3.08, with chapter on Arctic; EP Resolution "on Arctic Governance", of 9.10.08; EC/EEAS Progress Report on 2008 Arctic Communication, due by end of 2011.

Definitions of Arctic; what exactly the "Arctic" is or means, different definitions include the following:

1. Arctic Polar Circle (area within): north of 66°33'N (=limit of midnight sun summer solstice) =90°-23°27' of tropics.
2. Isotherm Line (of 10°C in July, hottest month), nearly coincides with so-called line of the trees (tundra/permafrost).
3. Human Development Report Boundary (by Arctic Council), with peoples, land&sea (Arctic Region)
4. The Arctic, as the Ocean and its 10 surrounding seas*, covers maritime and not land, unlike previous definitions.
5. Arctic, maritime restricted (1): IMO concept of Arctic (polar) waters, ice-covered waters only (~art.234 of Unclos).
6. Arctic, maritime restr. (2): Central Arctic Ocean only (coastal circumpolar states G-5, continental shelf extension).
7. Arctic, as SAR (mainly maritime) areas: covering some areas from ~60°N, do not coincide with maritime zones.

**Barents, Kara, Laptev, E.Siberia, Chuckchi, Beaufort, NWPassage, Baffin B., Hudson B., Greenland (Bering not in).*
(Arctic smallest of five oceans but with surface of 14.1Mkm²=over 3 times EU's surface, total Region: ~30Mkm²).

Other Arctic background/policy notes *(used at Norwegian-sponsored Arctic Conference in the EP, on 22 June 2011)*

- **Agreement SAR**, very important for present (cruise ships, offshore vessels, intra-Arctic) and future (shorter trans-Arctic routes), increasing traffics. Discussed DFA meeting May 2010, EU controls 41% world fleet, SAR work should be open to users, cooperation (EP, Council); cooperation on VTMIS, means/tools, emergency needs.
- Safety: **Polar Code** main developments; Chronology: 2002: Guidelines for Ships operating in Arctic ice-covered waters (Arctic Guidelines); 2009: Guidelines for ships operating in Polar Waters, adopted (Polar Guidelines, after 2007 MS Explorer incident in Antarctic waters); from 2010 until adoption from 2012 at the earliest. Mandatory International Code for Ships operating in Polar warters (Polar Code); DE 53 (2'10), 54 (10'10) 55 (3'11) meetings in London IMO, with EU-coordination meetings EU/EEA.
- **Environment protection** from shipping in Arctic: contrast between present and future, trends; Transport White Paper from MOVE adopted on 28.3.11, Roadmap for the Future of Transport 2050; includes target of curbing shipping emissions of at least 40%; to happen with legislation but also technology developments; IMO leading role for global industry; class' forecast of "ultimate zero-emission zero-dischartge vessel for the Arctic".
- Arctic **Ministerial of Nuuk, 12 May 2011**: other important decisions: Permanent Secrariat AC in Tromso, good, means reinforcement of Arctic Council (from decision shaping towards decision making, SAR legally binding agreement); EU permanent observer application, postponed (like for Italy, China, Japan, S.Korea, Singapore), but six EU's non-Arctic MS are among permanent observers, existing EU Arctic presence, certain competences).
- **Support to AC's WGs**, meetings, participation, PAME, later EPPR too (oil pollution, prevention.). **Permanent Participants** also very important: 1) Inuit-160k; 2) Saami-120k; 3) RAIPON-300k=Russian Arctic Indigenous Peoples of the North, originally 26 groups: Nenets/Samoyed, Evenks, Khanty, Evens, Chukchi, Nanai, Mansi…; 4) Athabaskan-50k; 5) Aleut-20k; 6) Gwich'in-10k. Existing EU dialogue with **indigenous peoples,** ongoing, visits (Arctic indigenous Peoples estimated at ~1/3 of total 4 million inhabitants, thus > 0.7M from census).
- **Research Arctic** related: key contribution from EU (more than €200 million on top of EU Member States' contributions on Arctic-related projects); idea of International Polar Decade being proposed, European Arctic Information Centre (AIC) pending decision (one official candidacy so far), Aurora Borealis ice-breaker project.
- **Telecoms and EU systems** relevant for the Arctic: Galileo, AIS, AIS-space, LRIT, GMES, Canada's PCW satellite system, EMSA tools. VTMIS monitoring (LRIT cooperation, between systems: SafeSeaNet), IMO role.
- **Governance**: relevant recent dispute settlements (Grey Zone Norway-Russia in the Barents Sea, precedent, smooth resolution); ongoing and future claims, to UNCLCS: 10-year period for extension of continental shelf from ratification of Unclos: Norway-96, Russia-97, Canada-03, DK-04, US not yet ratified (Congress); Arctic disputes settled (mainly bilaterally, ICJ in 1 case) outnumber those unsettled, still unresolved (6 vs 5): good sign.

EU Arctic Policy and Arctic developments (cont'd): 2013 Update

- New **EU Arctic Policy Communication** (2nd, after 2008) adopted on 26.6.12, during DK's Presidency "*Developing a European Union Policy towards the Arctic Region: progress since 2008 and next steps*" [JOIN(2012)19 final], with way forward (Knowledge, Responsibility, Engagement), progress achieved and two accompanying documents (SWD): on "*Inventory of Activities*" and on "*Space and the Arctic*".
- **Arctic trans-ocean crossings (through NSR** along Russia's North coast), numbers in strong progress: **2** (in summer 2009, Beluga Shipping); **16** (2010); **34** (2011), **47** (2012); **71** (2013); **prospects:** to keep growing (geometrically or just gradually, depending on source): from 200-300 crossings/year **by 2020** (indicated by Norwegian shipowners) to 1/10 of China's ocean trade diverted to Arctic (Chinese govt.).
- **North-West Passage** (**NWP**, along Canadian northerm coast/archipielago); growth in traffic, transits much lower than for NSR (since 1st commercial transit from DK's "Peter Faber" in 2008), cruise ships. Transpolar Sea Route (**TSR**, Arctic central crossing through North Pole, still shorter route, High Seas): attempted by Chinese ship/icebreaker in summer 2012, failed by little, avoided NSR fees on return trip.
- **Cruise ships in Arctic** waters: on constant progress too (ship numbers, ship size, passenger numbers): **increasing concerns** over lack -or little presence- of Search and Rescue (SAR) means and presence. Global solution, through IMO (mandatory, Polar Code) preferred to regional (voluntary) initiatives from Arctic coastal states (EU relevance: EU-flag ships, operators, ports departure/arrival, insurance..).
- **UNCLOS: respect of international law** (freedom of navigation, right of innocent passage..) and IMO rules compatibility of Arctic Coastal States applying art. 234 of Unclos (ice covered areas, for most of the year) remains a high EU priority on maritime, besides maritime safety/pollution prevention "pilar".
- **Arctic Council (AC) Ministerial meeting of 15 May 2013** in Kiruna, Sweden: EU not yet formally confirmed as permanent observer in the AC (awaiting seal ban exemption with Canada and issue's satisfactory resolution); New permanent observers: China, India, IT, Japan, South Korea and Sigapore. **2nd legally-binding agreement, on oil spill preparedness and response**, signed by all 8 Arctic States.

Straits and Canals of world geo-strategic importance, chokepoints of global economy/shipping
(Source: Jean-Paul Rodrigue, US Hofstra University, Hempstead-NY, other sources)

Most important international Straits and Canals, worldwide, chokepoints (with key features):

Bab El-Mandeb Strait (Djibouti/Yemen): crucial passage, in route from Gulf of Aden to Suez Canal.
Bosphorus/Dardanelles (Turkey): strategic passage for oil tankers, trade, congested (~50,000 ships/year)
Hormuz strait (Iran/Oman): 40% of world's seaborne crude oil exports transit via strait (18,000 ships/year)
Malacca Strait (Indon., Mal.): crucial strait trade, links Indian Ocean-Far East/Pacific (71,000 ships/year)
Panama Canal (Pan.): Key link Atlantic/Pacific via Central America (13,000 ships/year, max.65,000dwt)
Suez Canal (Egypt): Crucial waterway shipping/trade Asia-Europe (14,000 ships/year, max.200,000dwt)

Other highly important international straits and canals (EU and world shipping):

Bass Strait (Indian Ocean-South Pacific); **Cabot** Strait (access to East Canada); **Cook** Strait (N-S New Zeanland); **Danish** Straits (North Sea-Baltic); **Detroit**/River (access to US lakes); **Dover** Strait/English Channel (Atlantic-North Sea); **Gibraltar** Strait (Atlantic-Medit..); **Indonesian** Straits (Sunda/Lumbok/ Makassar); **Kiel Canal** (North Sea-Baltic); **La Pérousse** (Sakhalin-Japan); **Luzon** Strait (Taiwan-Philippines); **Magellan/Drake** Straits (Atlantic-Pacific); **Mediterranean** Straits (Bonifacio, Corfu, Malta..); **Palk** Strait (India-Sri Lanka); **Singapore** Strait; **Taiwan** Strait; **Torres** Strait (Indian Ocean-Pacific)

Other straits of possible future strategic importance (trans-Arctic or inter-Arctic routes)

Arctic passage, NSR (Russia):	4 main straits: Kara, Vilkitski, Sannikov, Long
Arctic Passage, NWP (Canada):	Davis, Lancaster, Barrow, Victoria, Dease, Union, Melville, McClure, Hudson..
Bering Strait (Russia, USA):	Entrance/exit to both Arctic passages and Trans-polar Sea Route (TSR)
Fram Strait (GL/DK, NO):	Entrance/exit to **Trans-polar Sea Route (TSR)** through North Pole.
Denmark Strait (GL/DK, IS):	Possible route from Fram Strait (Central Arctic) to America's East Coast.

GALILEO: Europe's Global Navigation Satellite System (*to offer initial services as of end of 2014*)

Programme start: 2001, EU and European Space Agency (ESA) agreed in March 2002 to fund project.

Participation: all EU MSs (28), plus Partners: China (Sept.'03 until Nov.'06 with planned funding); Israel (July'04); Ukraine (June'05); Morocco (Nov.'05); South Korea (Jan.'06); Norway (April'09, with funding, ESA member); Switzerland (Dec.'13, funding). Combined use with US's GPS signed in 2004 agreement (Galileo to be GPS-compatible, receivers combining signals).

Budget: €3.4bn from 2006-2013 budget; €7.1bn for 2014-2020; Consortium for the construction of system: ground station and satellites. Galileo Implementation Regulation since April'08.

Satellite launch: Two first test satellites, launched in 2005 and 2008; 21.10.11: first two of 4 operational satellites to validate system launched, other 2 on 12.10.12 (from Guiana, Soyuz rocket); all further satellites to have Full Operational capability (22 on order), at 23,222 km orbit. 2014: six satellites foreseen to be launched in 3 turns (3x2: June/Sept./Dec.) = 10 in total. Full completion of 30-satellite Galileo system (27 operational, 3 active spares): by 2019.

Services (options): i) Open (free, mass market); ii) Commercial (high accuracy); iii) Safety of Life (open, integrity); iv) Public regulated (encrypted, continuous); v) Search and Rescue (global).

Fully operational: with 16-30 satellites (being gradually launched), high-precision 1-m positioning system, intended primarily for civilian use (unlike US, Russia and China's navigation systems).

Complemented with EGNOS: the "European Geostationary Navigation Overlay Service" that monitors and corrects GNSS signals (40 ground stations, 3 geostationary satellites above equator), but not for high latitudes (from 75 degrees): uncertified positions, augmentation tests.

Centres: HQ in Prague (CZ), 2 ground operation centres near Munich (DE) and Fucino (IT); ground station near Kourou (French Guiana).

OTHER global navigation satellite systems, GNSS (*from third countries, space-technology powers*):

USA: Global Positioning System (**GPS**) from NAVSTAR: operational since 1978 (globally since 1994).

Russia: GLONASS, global system since 1995, subsequently recovered and fully restored in 2011.

China: Beidou-1/2 COMPASS since 2011 (Regional), Global system/Compass to be operational by 2020.

In the process of developing Regional Navigational Satellite Systems:

India: Indian Regional Navigation Satellite System (**IRNSS**), by Indian Space Research Organisation (ISRO), controlled by the Indian Government, to be completed, operational by 2014.

Japan: Quasi-Zenith Satellite System (**QZSS**), 3-satellite regional system (positioning, navigation, timing) with GPS enhancement; covering East Asia and Oceania, ongoing (first satellite launched in 2010).

EU's COPERNICUS, the European Earth Observation Programme *(formerly GMES-Global Monitoring for Environment and Security)*: Satellite Monitoring, surveillance (also for Arctic)

EU's Copernicus programme, started in 2001 (Göteborg European Council Summit, after agreed in 1998 with declaration), is a joint initiative of EC and European Space Agency (ESA) to reach Earth observation capacity for EU; foreseen to provide **fully operational services from 2014**, after moving from initial R&D (FP7, FP6, pre-operational services 2008-2010, initial operations 2011-2013); budget: **€3.8bn for 2014-20**.

Copernicus services address **six main thematic areas** (free of charge, with different degrees of maturity): i-Land monitoring; ii-Marine monitoring (data on currents, winds, sea ice, for instance, to help on safety, ship routings); iii-Atmosphere monitoring; iv-Emergency management; v-Security; vi- Climate change.

Copernicus infrastructure: composed of several Earth observation satellites (under ESA's responsibility for space component), plus a multitude of sensors on the ground, sea and in the air. EMSA will be responsible for coordinating Copernicus' Maritime Surveillance Services (via a delegation agreement, when finalised).

Two types of Copernicus satellite missions: i) the **Contributing Missions** (about 30, operated by national, European or International organisations and already provide a wealth of data for Copernicus services; and ii) the **Sentinels**, currently being developed for certain specific needs, classed under 5 different families:

Sentinel-1: all-weather, day/night radar imagery for land and ocean, sea-ice (1st 1-A sat. launch: April'14).
Sentinel-2: high-resolution optical imagery for land services, vegetation, soil.. (1st satellite launch: 2014).
Sentinel-3: high-accuracy optical, radar, altimetry data for marine/land services (1st satellite launch: 2014).
Sentinel-4: data and atmospheric composition monitoring, Meteosat linked (1st satellite launch: by 2020).
Sentinel-5: atmospheric composition monitoring too, to be operated by Eumetsat (1st satellite launch 2020).

Major Icebreakers of the World by Countries, ship types (Arctic, Antarctic, N=nuclear, B=Baltic)
(Source: Wise Pens International, Naval Challenges in the Arctic Region, Sept. 13, USCG's 2013 review)

	Very large*	Large	Medium	being built	planned	Total
1. Russia:	6 (all Nuclear)	19	12	+ 4 (1-N/vl)	+8 (3-N/vl)	**37 (+12)**
2 . USA:	2	2	1	-	+1 (v.large)	**5 (+1)**
3. **Finland**:	-	6 (4-B)	1 (B)	-	-	7 (-)
4. **Sweden**:	-	4 (3-B)	3	-	-	7 (-)
5. Canada:	-	2	4	-	+1 (large)	6 (+1)
6. Japan:	-	1	-	-	-	1 (-)
7. **Denmark**:	-	-	4 (4-B)	-	-	4 (-)
8. **Estonia**:	-	-	2 (1-B)	-	-	2 (-)
9. China:	-	-	1	-	+1 (M)	1 (+1)
10. Norway:	-	-	1	-	+1 (M)	1 (+1)
11. **Germany:**	-	-	1	-	+1 (M)	1 (+1)
12. Australia:	-	-	1	-	-	1 (-)
13. South Korea:	-	-	1	-	-	1 (-)
14. South Africa:	-	-	1	-	-	1 (-)
15. **Latvia:**	-	-	1 (B)	-	-	1 (-)
16. Argentina:	-	-	1	-	-	1 (-)
17: Chile:	-	-	1	-	-	1 (-)
EU-28:	***-***	***10***	***12***	***-***	***+1 (M)***	***22 (+1)***
World total:	***8***	***34***	***36***	***+ 4***	***+13***	***78 (+17)***

Icebreakers that have been in the North Pole *(=11, so far, by countries):*
Russia: 50 Let Pobedy (built 2007); Sovetskiy Soyuz/(built 1990, refit 2014); Rossiya (built 1985, refit 2007); Yamal (built 1993), all four being Very Large, Nuclear; Kapitan Dranitsyn (built 1980, refit 1999, Large).
USA: Polar Sea (built 1978, refit 2006, Very Large), Healy (built 2000, Large).
Sweden: Oden (built 1989, Large); Vidar Viking (built 2001, Medium).
Canada: Louis St. Laurent (built 1969, refit 1993, Large).
Germany: Polarstern (built 1982, Medium).
** Very large=very high capability/performance (> 45,000BHP propulsion power, up to 4m ice capable); Large=high capability/ performance (>20,000BHP), Medium=medium/standard capability/performance (>10,000BHP, ~1m ice capable); ice-classes: 1-A/1-B. Construction of iceabreaker is highly expensive and takes long, ~60% are built by FI.*

Shipping traffic density in Arctic (Polar) Waters *(Source: DNV-GL, 2013/2014 reports, 2012 data)*

Ship types/categories:	***Ship number*** *(unique vessels)*	***Traffic growth (2 years)***
Merchant/cargo ships*:	473 (see ship types by trades)	= +45% (vs 326 in 2010)
Cruise Passenger ships**:	71 (see division by ship size)	= **+61%** (vs 44 in 2010)
Fishing vessels:	570 (nearly half being <1000gt)	= **+48%** (vs 384 in 2010).
Other (research, navy, yachts..):	233 (nearly half being <1000gt)	= +17% (vs 200 in 2010)
Total (ships in 2012):	***1,347 ships***	***= +41% (vs 954 ships in 2010)***

*Among those 1,347 ships, 371 sailed using Heavy Fuel Oil-HFO = 28% of total (**nearly 3/4 used distilled fuels**).*

****Merchant cargo ships****, by ship type/cargoes:124 tankers (+72%), 76 bulk carriers (+46%), 133 general cargo ships (+25%), 17 containerships (+42%), 123 other merchant ships =offshore supply/services, reefers, ro-ro (+46%).*
*****Cruise passenger ships****, by categories (+61% growth registered, despite indusry's claim that traffic declines!..): 26 very large (>25,000gt, thousands on board); 37 Large (>1,000gt, hundreds): 8 Medium/small (<1,000gt, dozens).*

Future Arctic traffic estimates: trans-Arctic ocean crossings (through Northern Sea Route-NSR, other):
Crossing numbers NSR summers 2009-2013= **2, 16, 34, 47, 71**. Forecasts done (ranging from low to high):
i) **200-300 ships/year by 2020** (mentioned by Norwegian Shipowners' Association);
ii) **480 ships/year by 2030** (Centre for High North Logistics, Kirkenes, set up by NO's Tschudi Shipping);
iii) **400-560 ships/year by 2030** (NSR), **plus 30 to 400 ships/year** through Trans-Polar Sea Route-**TSR** (from DNV-GL, so up to **~1,000 ships/year** in "high scenario");
iv) China's forecasts/plans: 1/10 of its oceanic traffic diverted through Arctic by 2020, 1/3 by 2030 (meaning **~2,000 ships/year?** Suez Canal having ~14,000 ships/year);
v) Russia said to expect **30-fold increase** in transits NSR by 2020 (from 71 ships in 2013 ~2,130/y).

Arctic transits through the Northern Sea Route (NSR): 71 ships in crossings in 2013, Issues

71 ships (41 voyages East-bound, 30 West-bound); from 200 permits issued (from over 600 applications!)

Ship types and cargoes: Tankers-32, General cargo-13, Bulk carriers-4, in ballast/reposition-22.
Main flags ships: Russia-46, Panama-6, Liberia-5, Marshall Isl.-2, **EL-2, CY-2, FI-2, MT-2, NO-2.**
International (non-Russian) **shipping companies** involved: Cosco (China), Sanko (Japan), Tschudi Shipping (Norway), Vitol (Switzerland/UK), Stena Bulk/Hyundai (SE/Korea).

Administrative entities/requirements *(source: R.M., Ince&Co International Law Firm)* **: Permit needed**, to ship owner, master or representative; between 4 months and 15 days before the transit; pdf form with data to be sent (ship name, IMO no., details, contact details, class certificate, insurance, ship owner statement..).
Steps: 1) form to NSR Administration (NSRA), in Moscow (e-mail); 2) contact ice breaker administration once application submitted; 3) Decision made (10 working days); 4) Notification (2 working days), permit if/when issued valid for 365 days, with no possibility to sail in the NSR before/beyond the days indicated; 5) Reporting, daily (when in NSR), required, by master to NSRA required, by e-mail. **Refusal of permit:** occurs when/if information is false/misleading, incomplete or ship seen as "unsafe" under Russian law.
Fees: payable as a lump sum to the Russian Administration: ice-breaker fees, ice pilot fees, transit costs.
"Monopoly situation" is seen in the NSR due to compulsory use of Russian (Rosatomflot) ice-breakers.

Current Arctic Developments considered to potentially boost future number of Arctic transits, in NSR: Yamal LNG project (LNG terminal, to be operational by 2018 according to Russia and to multiply by 17 the NSR traffic, to Far-East too); Canada: Baffin Island's Mary River iron ore mine, extraction has begun.

News and Data about transits in the North-West passage (estimates, no official numbers)

Summers 2013, 2014: reported full NWP transits from **Le Ponant** shipowner (two FR cruise vessels in 2013, and new transit in 2014); **Sept. 2014:** *Nordic Orion* cargo ship loaded up with coal from Vancouver made NWP transit to Finland; **Fednav** (Canadian ship owner) sent merchant ship with nickel concentrate cargo to sail from from Hudson Strait/Canada to China through the NWP. In **summer 2008**, Denmark's cable layer *Peter Faber* made a successful transit of the NWP from Taiwan to Newfoundland/Canda.
Counting of NWP transits include those transiting through Davis and Bering Straits but not necessarily completing the full transit from Atlantic to Pacific or vice-versa: **from 9 ships in 2007 to 30 ships in 2012**.

Community Guidelines: How EU state aid to maritime transport has had an impact on EU's merchant fleet strength and competitiveness and EU's GDP/employment (*source: Oxford Economics shipping study*)

Tonnage tax, gradually adopted in EU Member States is main type of aid from Community Guidelines, meaning corporate tax for shipping being replaced by much lower lump sums to pay linked to tonnage; to prevent business delocalisation and flagging out of ships in highly mobile/competitive shipping industry. EU MSs having adopted tonnage tax have seen down-trend or decline of their merchant fleet under own flag register (flagging out) stopped or even curbed/reversed (clear examples for DE, DK, FR, UK).

Oxford Economics has estimated by **50% "the amount by which the *total economic contribution* of the EU shipping industry could have been reduced in the absence of EU-approved state aid measures".**

Total Economic impact of EU shipping industry: **estimated at €145bn** (€56bn direct + €59bn indirect + €30bn induced)**, generating 2.3 million jobs** (of which 590,000 direct jobs) **and €41bn tax revenue.**

Dynamic EU service industry: **70% of growth in tonnage of EU controlled fleet in last decade 2005-14** (660Mdwt, 450Mgt = 40% of world, 23,000 vessels), 38,000 students and cadets; large fleet of container ships (60% of global fleet in gt), multi-purpose vessels (52%) oil tankers (43%), offshore vessels (37%).

Adoption of tonnage tax by EU MSs *(in chronological order):*

1957: EL (revised in 1975)	2000: UK	2007: LT
1963: CY	2002: BE (rev.'04), DK (rev.'04/05/07), ES, LV.	2008: SI
1973: MT	2003: FR (rev. in 2004), IE.	2012: FI
1996: NL, Norway	2005: BG, IT.	
1999: DE	2006: PL	

EU (coastal) MSs with no tonnage tax: EE, HR, PT, RO, SE.

Annex 10: Oil-Gas, Energy: Main Producers/Exporters, Consumer/Importers

Traffic of hydrocarbons is highly important in the maritime sector: represents **40% of world's sea trade** in ton-miles (crude oil and oil products), **90% of EU oil imports come by sea**. World's natural gas consumption has doubled in last 25 years, with increasing share in overall hydrocarbons consumption (gas represents more than 1/3 EU and world, in terms of *tons of oil equivalent, toe/tep*). Natural gas in Europe is mainly imported by pipeline, but traffic figures of **Liquified Natural Gas (LNG) by tankers are surging** world-wide (**15% of total in EU, 26% world**).

1) OIL: Main Producers and Consumers* *(source **BP report 2012, 2011 data**, big importers and exporters in bold)*

Producers (6-year chg., % of output exported in brackets):

1.	**Saudi Arabia**, opec	-	525.8	*+0%*	(76%)
2.	**Russia**	-	511.4	*+9%*	(73%)
3.	USA	-	352.3	*+14%*	(0%)
4.	**Iran**, opec	-	205.8	*+3%*	(58%)
5.	China, opec	[No.6 in 2005]	203.6	*+13%*	(0%)
6.	Canada	[8]	172.6	*+19%*	(40%)
7.	**UAE**, opec	**[10]**	150.1	+16%	(80%)
8.	**Mexico**	[5]	145.1	*-22%*	(38%)
9.	**Kuwait**, opec	[12]	140.0	*+8%*	(86%)
10.	**Venezuela**, opec	[7]	139.6	*-10%*	(73%)
11.	**Iraq**, opec	[14]	136.9	*+53%*	(88%)
12.	**Nigeria**, opec	[11]	117.4	*-6%*	(81%)
13.	Brazil	[16]	114.6	*+35%*	(0%)
14.	**Norway**	[9]	93.4	*-32%*	(88%)
15.	**Angola**	[19]	85.2	+39%	(92%)
16.	**Kazakhstan**	**[18]**	82.4	*+31%*	(88%)
17.	EU-27** (uk,dk,it.)	[13]	80.9	*-32%*	(0%)
18.	**Algeria**, opec	[15]	74.3	*-14%*	(79%)
19.	**Qatar**, opec		71.1	+33%	(89%)
20.	**Colombia**		48.7	+41%	(76%)

Consumers (6-y chg, external dependence in brackets)

1.	**USA**	-	833.6	*-12%*	(58%)
2.	**EU-27**** (de,fr,it,uk..)		645.9	*-8%*	(87%)
3.	**China**	-	461.8	*+41%*	(66%)
4.	**Japan**	-	201.4	*-18%*	(99%)
5.	**India**	[No.6 in 2005]	162.3	*+40%*	(75%)
6.	Russia	[5]	136.0	*+5%*	(0%)
7.	Saudi Arabia	[10]	127.8	*+47%*	(0%)
8.	Brazil	[11]	120.7	*+44%*	(5%)
9.	**South Korea**	[7]	106.0	*+1%*	(99%)
10.	Canada	[8]	103.1	*+3%*	(0%)
11.	Mexico	[9]	89.7	*+2%*	(0%)
12.	Iran	-	87.0	*+11%*	(0%)
13.	Indonesia	-	64.4	*+16%*	(29%)
14.	**Singapore**	[15]	62.5	*+48%*	(-)
15.	**Thailand**	[14]	46.8	*+3%*	(70%)
16.	Australia	[17]	45.9	*+16%*	(54%)
17.	**Taiwan**	[16]	42.8	*+3%*	(-)
18.	Venezuela		38.3	+25%	(0%)
19.	Egypt		33.7	+12%	(0%)
20.	Turkey		32.0	+3%	(-)

Subtotal production top-10=2,546.3 (=64% total; =86% for top-20); Total world production=3,995.6 (+2% in last 6 years);
Subtotal consumers top-10= 2,898.6 (=71% total; =85% for top-20); Total world cosumption=4,059.1 (+4%).

Production OPEC countries=1,695.9 (+1%)=42% world; prod. opec countries not in top-20: Indonesia (45.6; -17%, left opec in 2009); Ecuador (27.1; -6%); Libya (22.4; -72%); Gabon (12.2; +4%, left 1994); China, Ecuador=new opec members, since 2007.

Proved oil reserves, main countries (2011):
1.Venezuela (46,300; +303%), 2.Saudi Arabia (36,500;+1%), 3.Canada (28,200; -3%), 4.Iran (20,800;+10%), 5.Iraq (15,500;+0%) 6.Kuwait (14,000; +0%), 7.UAE (13,000; +0%), 8.Russia (12,100; +19%), 9.Libya (6,100; +31%), 10.Nigeria (5,000; +18%).

****EU-27 producer countries:**

UK:	52.0	-39%
DK:	10.9	-41%
IT:	5.3	-13%
RO:	4.2	-29%
other:	8.5	-

****EU-27 main consumer countries:**

de:	111.5	-8%	nl:	50.1	+1%	at:	12.5	-12%	dk:	8.3	-9%
fr:	82.9	-11%	be:	33.7	-15%	pt:	11.6	-24%	ie:	6.8	-28%
uk:	71.6	-14%	pl:	26.3	+20%	fi:	10.5	-5%	hu:	6.5	-7%
it:	71.1	-18%	el:	17.2	-18%	cz:	9.1	-8%	sk:	3.7	+6%
es:	69.5	-12%	se:	14.5	-4%	ro:	9.0	-14%	other:	19.5	

Origin of oil imports main players:	Ext. dependance, trend
a) USA: Lat.Am.-21%, M.East-17%, Canada-16%, W.Africa-14%, oth-20%	**58%** (71%'05; 61%'02; 55%'99)
b) EU-27: Russia/cis-38%, M.East-22%, Norway-15%, N.Africa-14%, oth-11%	**87%** (83%'05; 78%'02; 73%'99)
c) China: M.East-40%, Asia-Pacif.-18%, wAfrica-17%, Russia/cis-12%, oth-13%	**66%** (45%'05; 31%'02, 28%'99)
d) Japan: MiddleEast-82%, othAsiaPacific-10%, other-8%	**99%** (99%'05; 98% '02)

2) GAS: Main Producers and Consumers* *(source **BP report 2012, 2011 data**, big importers and exporters in bold)*

Producers (6-year chg., % of output exported in brackets)

1.	USA	[No.2 in 2005]	592.3	*+25%*	(0%)
2.	**Russia**	[1]	546.3	*+2%*	(32%)
3.	**Canada**	[4]	144.4	*-13%*	(51%)
4.	EU-27** (uk, nl..)	[3]	139.5	*-22%*	(0%)
5.	Iran	[6]	136.6	*+74%*	(0%)

Consumers (6-y chg, external dependence in brackets)

1.	**USA**	-	626.0	*+10%*	(16%)
2.	**EU-27**** (uk,de,it,fr..)		403.1	*-6%*	(65%)
3.	Russia	-	382.1	*+5%*	(0%)
4.	Iran	[No. 5 in 2005]	138.0	*+73%*	(2%)
5.	China	[10]	117.6	*+178%*	(22%)

6. **Qatar**	[16]	132.2	*+237%*	(84%)	6. **Japan**	-	95.0	*+30%*	(96%)
7. China	[13]	92.3	*+105%*	(6%)	7. Canada	[4]	94.3	*+15%*	(0%)
8. **Norway**	[7]	91.3	*+19%*	(96%)	8. Saudi Arabia	-	89.3	*+43%*	(0%)
9. Saudi Arabia	-	89.3	*+43%*	(0%)	9. **Mexico**	-	62.0	*+39%*	(20%)
10. **Algeria**	**[5]**	70.2	*-11%*	(64%)	10. UAE	[13]	56.6	*+55%*	(18%)
11. **Indonesia**	[8]	68.0	*-1%*	(48%)	11. India		55.0	+71%	(25%)
12. **Malaysia**	[10]	55.6	*+3%*	(42%)	12. **Ukraine**	[7]	48.3	-26%	(67%)
13. Egypt		55.1	+44%	(16%)	13. Egypt		44.7	+57%	(0%)
14. **Turkmenistan**	[11]	53.6	*+1%*	(58%)	14. Uzbekistan	[11]	44.2	*+12%*	(0%)
15. **Uzbekistan**	[12]	51.3	*+2%*	(21%)	15. Argentina	[12]	41.9	*+15%*	(17%)
16. Mexico	[17]	47.2	*+33%*	(0%)	16. South Korea		41.9	+53%	(-)
17. UAE	[14]	46.6	*+11%*	(13%)	17. Thailand		41.9	+43%	(21%)
18. India		41.5	+55%	(0%)	18. Turkey		41.2	+70%	(-)
19. Trinidad-Tobago		36.6	+31%	(52%)	19. Pakistan		35.2	+10%	(0%)
20. Nigeria		35.9	+78%	(72%)	20. Indonesia	[14]	34.1	*-4%*	(0%)

Subtotal production top-10=2,034.4 (=69% total; =85% for top-20); Total world production=2,954.8 (+18% in last 6 years);
Subtotal consumers top-10=2,064.0 (=71% total; =86% for top-20); Total world cosumption=2,905.6 (+16%).

Proved gas reserves, main countries (2011):
1.Russia (40,140; +5%), 2.Iran (29,790; +27%), 3.Qatar (22,500; -3%), 4.Turkmenistan (21,870; +835%), 5.USA (7,650; +63%), 6.Saudi Arabia (7,380; +26%), 7.UAE (5,490;+0%), 8.Venezuela (4,950;+31%), 9.Nigeria (4,590;+11%), 10.Algeria (4,050;+0%).

EU-27 producer countries:			**EU-27 main consumer countries:**			
NL:	57.8	+2%	uk: 72.2 -15%	es: 28.9 -1%	at: 8.5 -6%	el: 4.1 +78%
UK:	40.7	-49%	de: 65.3 -16%	be: 14.4 -2%	cz: 7.6 -1%	dk: 3.8 -16%
RO:	9.9	-12%	it: 64.2 -10%	pl: 13.8 +13%	sk: 5.6 +6%	fi: 3.2 -11%
DE:	9.0	-37%	fr: 36.3 -10%	ro: 12.5 -21%	pt: 4.6 +70%	lt: 3.1 +7%
IT:	6.9	-36%	nl: 34.3 -3%	hu: 9.1 -25%	ie: 4.2 +20%	other: 7.4
DK:	6.4	-32%; other: 8.8				

Origin of natural gas imports, main players:	**Ext. dependance, trend**
a) EU-27: Russia-38%, Norway-25%, Algeria-9% (pipeline), **LNG-24%**, other-4%. (main sources of LNG in EU imports: Qatar, Algeria, Nigeria, Egypt, Trinidad-T.)	**65%** (58%'05; 46%'02)
b) USA: Canada-90%, **LNG-10%** (sources: Trinidad-Tobago, Qatar, Yemen, Egypt).	**16%** (17%'05; 18%'02)
c) Japan: Malaysia-19%, Aus.-18%, Qatar-15%, Indon.-12%, Russia-9%, oth-24% (**LNG-100%**).	**96%** (94%'05; 92%'02)

oil in M tons/year (1 million barrels=0.1368Mtons), gas in M tons of oil equivalent-toe/year (1bn m3= 900,000 toe~ =750,000 tons ~)* **Equivalences~: 1 barrel oil=159 litres; 7 barrels=1 tonne; 1 M barrels/day=50 M tonnes/year.

ENERGY MIX Energy Consumption of EU vs World's other main economies (*in Mtoe, source: BP report 2012*)

	Oil	Gas	Coal	*Fossil Fuels*	Nuclear*	Hydropower	Other Ren.	Total Cons.
EU-27**	645.9	403.1	285.9	*1,334.9*	205.3	69.6	80.9	1,690.7
	(38%)	(24%)	(17%)	*(79%)*	(12%)	(4%)	(5%)	(100%)
USA	833.6	626.0	501.9	*1,961.5*	188.2	74.3	45.3	2,269.3
	(37%)	(28%)	(22%)	*(86%)*	(8%)	(3%)	(2%)	(100%)
China	461.8	117.6	1,839.4	*2,418.8*	19.5	157.0	17.7	2,613.0
	(18%)	(5%)	(70%)	(93%)	(1%)	(6%)	(1%)	(100%)
Japan	201.4	95.0	117.7	*414.1*	36.9	19.2	7.4	477.6
	(42%)	(20%)	(25%)	(87%)	(8%)	(4%)	(2%)	(100%)
India	162.3	55.0	295.6	*512.9*	7.3	29.8	9.2	559.2
	(29%)	(10%)	(53%)	(92%)	(1%)	(5%)	(2%)	(100%)
Russia	136.0	382.1	90.9	*609.0*	39.2	37.3	0.1	685.6
	(20%)	(56%)	(13%)	(89%)	(6%)	(5%)	(0%)	(100%)
Brazil	120.7	24.0	13.9	*158.6*	3.5	97.2	7.5	266.8
	(45%)	(9%)	(5%)	(59%)	(1%)	(36%)	(3%)	(100%)
Canada	103.1	94.3	21.8	*219.2*	21.4	85.2	4.4	330.2
	(31%)	(29%)	(7%)	(67%)	(6%)	(26%)	(1%)	(100%)
WORLD:	4,059.1	2,905.6	3,724.3	*10,689.0*	599.3	791.5	194.8	12,274.6
	(33%)	(24%)	(30%)	(87%)	(5%)	(6%)	(2%)	(100%)

* Plans to abandon nuclear energy (fission) in the medium-to-long run have been announced by Japan; DE, SE; CH.
EU-main (top-5, in Mtoe), non-hydrocarbons: **Coal: 1.de (77.6), 2.pl, 3.uk, 4.cz, 5.it; **Nuclear:** 1.fr (100.0), 2.de, 3.uk, 4.se, 5.es; **Hydropower:** 1.se (15.0), 2.fr, 3.it, 4.es, at; **Other renewables:** 1.de (23.2), 2.es, 3.it, 4.uk, 5.fr.

URANIUM as raw material for Nuclear energy (fuel) for EU, Industrial world (*source: OECD, IAEA*)
(Maritime trade routes, from mining/refining sites, subsequent production plants to nuclear power plants)

World's main Uranium production countries *(in tonnes U/year, 2010 report):*

1. Kazakhstan:	17,803	6. Russia:	3,562	11. Malawi:	670
2. Canada:	9,783	7. Uzbekistan:	2,400	12. South Africa:	583
3. Australia:	5,900	8. USA:	1,660	13. India:	400
4. Namibia:	4,496	9. Ukraine:	850	14. Czech Republic:	254
5. Niger:	4,198	10. China:	827	15: Brazil:	148

Sub-total top-15 = 53,534t (=99.8% of world's total production of Uranium, =53,663t).

World's main Uranium producer countries, historically *(cumulative since beginning/start in1950s-60s, t):*

1. Canada:	426,670	6. South Africa:	156,312	11. Namibia:	95,288
2. USA:	363, 640	7. Kazakhstan:	126,900	12. France:	75,982
3. Russia/S.U.:	242,621	8. Ukraine:	124,397	13. Uzbekistan:	34,939
4. Germany:	219,517	9. Czech Rep.:	110,427	14. China:	31,399
5. Australia:	156,428	10. Niger:	110,312	15. D.R. Congo:	25,600

Sub-total top-15 = 2,300,432t (=95.5% of world's "historic" total production of Uranium, = 2,409,591t).

World's main reserves of Uranium *(tonnes, low-grade, non-profitable deposits -cost>$130/kgU- excluded)*

1. Australia:	1,673,000	6. Namibia:	284,200	11. Uzbekistan:	114,600
2. Kazakhstan:	651,800	7. Brazil:	278,700	12. Jordan:	111,800
3. Canada:	485,300	8. USA:	207,400	13. Ukraine:	105,000
4. Russia:	480,300	9. China:	171,400	14. Pakistan:	80,900
5. South Africa:	295,600	10. Vietnam:	140,800	15. India:	80,200

Sub-total top-15 = 5,161,000t (= 96% of world's total known reserves of Uranium, = 5,404,000t).

Undiscovered, unexplored *reserves: thought to lie in Arctic (Greenland,Canada, Siberia) and Antarctic. Reserves have become* ***more strategic****, since the price of Uranium multiplied by 14, from 2003 to 2007.*

EU's, USA's main suppliers of Uranium (ore, oxide concentrate) for Nuclear Energy, other countries

EU: 1. Australia (22%); 2. Russia (20%); 3. Canada (19%); 4. Niger (11%); 5. Kazakhstan (9%); 6. South Africa+Namibia (5%); 7. Uzbekistan (3%), 8. EU (own, 3%), other (8%).

USA: 1. Australia (22%); 2. Canada (18%); 3. Russia (16%); 4. USA (own, 14%); 5. Namibia (12%); 6. Kazakhstan (10%); 7. Niger (4%), 8. Uzbekistan (3%), other (1%).

Countries operating nuclear energy plants word-wide *(with No. of reactors, output; source: IAEA)***:**

1. **USA** (104 reactors in operation=101,465MW; +1 reactor under construction); 2. **FR** (58+1; 63,130); 3. **Japan** (50+3; 44,215); 4. **Russia** (33+11; 23,643); 5. **South Korea** (23+3; 20,754); 6. **China** (incl.Taiwan) (23+31; 17,834); 7. **India** (20+7; 4,391); 8. **Canada** (19+- ; 13,665); 9. **UK** (16+- ; 9,246); 10. **Ukraine** (15+2; 13,107); 11. **SE** (10+-; 9,325); 12. **DE** (9+- ; 12,068); 13. **ES** (8+- ; 7,560); 14. **BE** (7+- ; 5,927); 15. **CZ** (6+-; 3,766); 16. **Switzerland** (5+-; 3,263); 17. **FI** (4+1; 2,736); 18. **HU** (4+-; 1,889); 19. **SK** (4+2; 1,816); 20. **Pakistan** (3+2; 725); 21. **Argentina** (2+1; 935); 22. **Brazil** (2+1; 1,884); 23. **BG** (2+-; 1,906); 24. **Mexico** (2+-; 1,300); 25. **RO** (2+-; 1,300); 26. **South Africa** (2+-; 1,830); 27. **Armenia** (1+-; 375); 28. **Iran** (1+-; 915); 29.NL (1+-; 482); 30. **SI** (1+-; 688).

EU-28 (*14 MSs concerned*) = 132 reactors in operation = 121,839MW +4 reactors under construnction.

**One reactor/plant is under construction in UAE (to produce 1,345MW), to become 31st country in the ranking.*

Annex 11: The Negative Record: Oil Spills Disasters

Major maritime disasters involving oil tankers
(in brackets: place of accident, oil spilt/sunk, date of accident and ship total loss if the case;
other: cause, ship age, flag, company, classif., insurer, charterer, officers, ratings, shipyard, route, dwt/LOA, cargo)

1967: Torrey Canyon (Scilly Isles, England, UK, 119,000t, 18 Mar., 28Mar.-TL)
grounding, 8y, fl:LR, co:US, cl:-, in:-, ch:-, of:, ra:, sh:US, ro:KW-UK, 120,182dwt, crude oil.

1971: Wafra (Cape Agulas, South Africa, 65,000t, 10Mar., 12 Mar.TL)
grounding, -y, fl :LR
1974: Metula (Magellan Straits, Chile, 50,000t, 9 Aug.)
-, 6y, fl :-, co :-, 210,035dwt.
1975: Jakob Maersk (Leixoes/Oporto, Portugal, 88,000t, 29 Jan.TL, 7 dead)
grounding, 9y, fl:DK.
1976: Urquiola (Galicia, Spain, 101,000t, 12 May, June-TL)
grounding, 3y, fl:ES, ro:KW-ES, crude oil.
1977: Hawaiian Patriot (Hawaii, USA, 95,000t, 23 Feb., 24 Feb.-TL, 22°01'n-165°29'w)
str.collapse, 12y, fl:LR, co:GR, cl:US, in:-, ch:-, of:-, ra:-, sh:-JP, ro:BN-US, 99,447dwt, crude oil.
1978: Amoco Cadiz (Brittany, France, 223,000t, 16 Mar.-TL)
engine failure, 4y, fl:LR, co:US, cl:US, in:-, ch:-, of:-, ra:-, sh:-, ro:IR-NL, 233,690dwt, crude oil.
1979: Atlantic Empress (Tobago, West Indies, 287,000t, 19 Jul., 3 Aug.-TL, 26 dead)
collision, 5y, fl:GR, co:-, cl:UK, in:-, ch:-, of:-, ra:-, sh:-, ro:-, 297,361dwt, crude oil.
1979: Independenta (Bosphorus, Turkey, 95,000t, 15 Nov.-TL, 30 dead)
collision, 1y, fl:RO, co:RO, cl:-, in:-, ch:-, of:-, ra:-, sh:-, ro:LY-RO, 150,000dwt, crude oil.

1980: Irenes Serenade (Navarino Bay, Greece, 100,000t, 23 Feb.-TL)
fire/explosion, fl:-, co:-, crude oil.
1983: Assimi (Muscat, Oman, 53,000t, 7 Jan.)
-, 9y, fl:VC, co:-, cl:UK, in:-, ch:-, of:-, ro:-, 254,735dwt/338m.
1983: Castillo de Bellver (South Africa, 252,000t, 5 Aug., 13 Aug.-TL, 3 dead)
fire/explosion, 5y, fl:ES, co:ES, cl:UK, in:-, ch:-, of:-, sh:-, ro:AE-ES, 271,540dwt/334m, crude oil.
1988: Odyssey (Nova Scotia, Canada, 132,000t, 10 Nov.-TL, 27 missing)
str.collapse, 17y, fl:LR, co:GR, cl:FR, in:UK, ch:-, of:-, sh:JP, ro:UK-CA, 140,606dwt/274m, crude oil.
1989: Exxon Valdez (Alaska, USA, 37,000t, 24 Mar., repaired, renamed S/R Mediterranean)
grounding, 3y, fl:US, co:US, cl:US, in:UK, ch:US, of:-, sh:US, ro:US-US, 214,861dwt/300m, crude oil.
1989: Khark 5 (Morocco, N of Canary Islands, 80,000t, 18 Dec., repaired, renamed Koohrang)
fire/explosion, 14y, fl:IR, co:IR, cl:UK, in:-, ch:-, of:-, sh:JP, ro:IR-NL, 284,632dwt/340m, crude oil.

1991: Haven (Genoa, Italy, 144,000t, 11 Apr., 14 Apr.-TL, 5 dead)
fire-explosion, 18y, fl:CY, co:UK, cl:US, in:-, ch:-, of:-, sh:ES, ro:IR-IT, 232,163dwt/334m, crude oil.
1991: ABT Summer (Angola, 260,000t, 28 May, 30 May-TL, 1 dead, 4 missing)
fire-explosion, 17y, fl:LB, co:SA, cl:UK, in:-, ch:-, of:-, sh: KR, ro:IR-NL, 267,801dwt/344m, crude oil.
1992: Katina P. (Maputo, Mozambique, 72,000t, 16 Apr., 26 Apr.-TL)
str.collapse, 26y, fl:GR, co:GR, cl:JP, in:-, ch:-, of:-, sh:JP, ro:-VE-AE, 69,992dwt/238m, heavy fuel oil.
1992: Aegean Sea (Galicia, Spain, 74,000t, 3 Dec-TL/scrapped)
grounding, 20y, fl:GR, co:GR, cl:UK, in:-, ch:-, of:-, sh:JP, ro:UK-ES, 114,036dwt/261m, crude oil.
1993: Braer (Shetlands, UK, 85,000t, 5 Jan.-TL)
engine failure, 18y, fl:LR, co:UK, cl:NO, in:-, ch:-, of:-, sh:JP, ro:-, 89,730dwt/241m, crude oil.
1996: Sea Empress (Milford Haven, Wales, UK, 72,000t, 15 Feb., repaired, renamed Front Spirit)
grounding, 3y, fl:LR, co:LR, cl:NO, in:UK, ch:, of:-, sh:ES, ro:UK-UK, 147,273dwt/274m, crude oil.
1999: Erika (Brittany, France, 20,000t, 12 Dec., 13 Dec.-TL)
str.collapse, 25y, fl :MT, co :IT, cl:US, in:-, ch :-, of:IN, ra:IN, sh :JP, ro :FR-IT, 37,283dwt/184m, fuel oil.

2002: Prestige (Galicia, Spain, 76,000t, 13 Nov., 19 Nov.-TL)
str.collapse, 26y, fl:BS, co:GR, cl:US, in:UK, ch:RU, of:GR, ra:PH, sh:JP, ro:LV-SG, 81,564dwt/243m, fuel oil.
2003: Tasman Spirit (Karachi, Pakistan, 28,000t, 29 Jul., 13 Aug.-TL)
grounding, 24y, fl:MT, co:GR, cl:DE, in:US, ch:-, of:GR, sh:JP, ro:IR-PK, 87,584dwt/237m, crude oil.
2007: Hebei Spirit (Mallipo Beach, South Korea, 15,000t, 7 Dec)
collision+hole crane ship, 14y., fl:HK, co:CN, cl:UK, ch:-, of:-, ra:-, sh:JP, ro:-, 269,605dwt/338m, crude oil.

Most affected area in 35-year record: Galician coasts, Spain (7 tanker accidents with oil spills of more than 10,000t)

Intentional oil pollution: 3,000 detected illegal actions/year in European seas means spill of 0.7 to 2.5 M tons/year

Annex 12: Maritime Safety and Ship Maintenance, Maritime Security

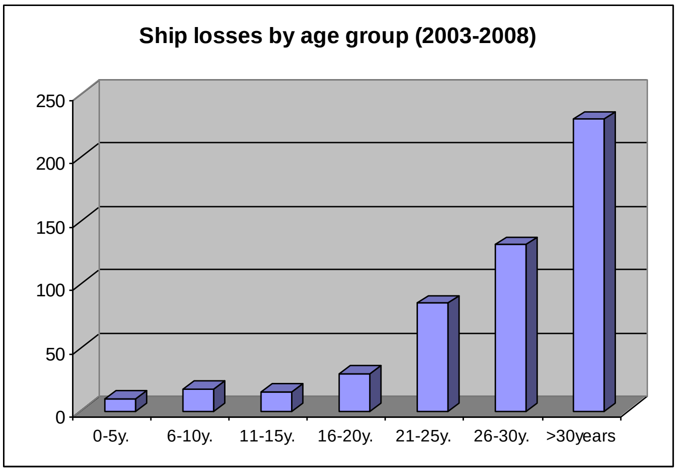
Classification Societies (*main/recognised, from Directive 94/57/EC and review in December 2003, data Jan.2005)*
Considered to be one of the main pillars of maritime safety, these organisations of technical nature produce norms and standards for the construction and maintenance of merchant ships, inspecting them and issuing them certificates.

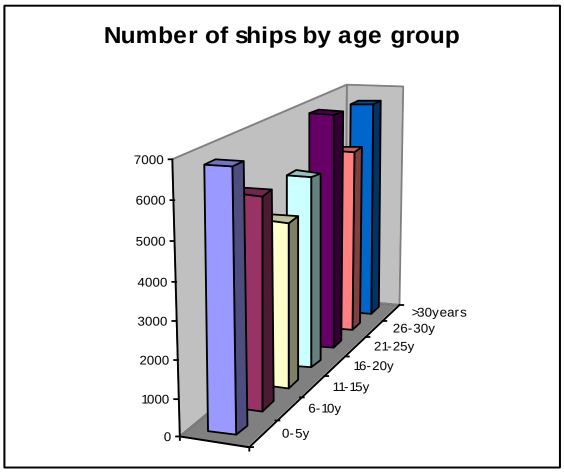
A. Internationally EU recognised:					
- Nippon Kaiji Kyokai-NK (Japan)	6,059 ships	(15% world)	**192.7Mdwt**	(21% world),	14 years av.age
- Lloyd's Register of Shipping-LR (UK)	6,056	15%	**176.1**	19%	21 y.
- American Bureau of Shipping-ABS (USA)	4,158	10%	**161.8**	18%	18 y.
- Det Norske Veritas-DNV (Norway)	3,908	9%	**144.5**	16%	16 y.
- Bureau Veritas-BV (France)	4,300	10%	**62.7**	7%	20 y.
- Germanischer Lloyd-GL (Germany)	4,143	10%	**60.0**	7%	16 y.
- China Classification Society-CCS (China)	2,006	5%	**33.0**	4%	20 y.
- Korean Register of Shipping-KR (Korea)	1,312	3%	**25.7**	3%	18 y.
- Russian Maritime Register-RS (Russia)	2,537	6%	**14.2**	1.6%	24 y.
- Registro Italiano Navale-RINA (Italy)	807	2%	**10.3**	1.1%	22 y.
B. Nationally recognised only (limited recogn.):					
- Hellenic Register of Shipping-HRS (Greece)	340	0.8%	**1.1**	0.1%	33 y.
- Registro Internacional Naval-Rinave (Portugal)	27	0.1%	**0.08**	0.01%	32 y.
C. Other class societies, non-recognised:					
- Indian Register	317	0.8%	**6.2**	0.7%	19 y.
- Biro Klass Indonesia	964	2.3%	**3.2**	0.4%	27 y.
- Polish Register	203	0.5%	**1.9**	0.2%	27 y.
- Bulgarian Register	101	0.2%	**1.4**	0.2%	27 y.
- Vietnamese Register	188	0.5%	**0.9**	0.1%	23 y.
- Turk Loydu	203	0.5%	**0.7**	0.1%	26 y.
- Croatian Register	82	0.2%	**0.7**	0.1%	28 y.
- Romanian Register	153	0.4%	**0.5**	0.1%	26 y.
- Registro Cubano	27	0.1%	**0.1**	0.01%	25 y.

The 10 "international" classification societies listed under A are grouped and form the International Association of Classification Societies, IACS, based in London. IACS controls 85% of the market (ships) and 97% of world tonnage.

Loss of human life at sea: Roughly estimated at about 3,000 lives (seafarers) per year, among which two thirds from the fishing sector. SOLAS Convention, on Security of Life at Seas, is in place since 1974 in the UN framework.
Annual fatalities among world's merchant seafarers 1990-1994 *(average numbers, Nielsen&Roberts/SIRC, 1998):* 2,207 seafarers (excluding passengers), of whom half (1,102) due to maritime disasters, main other reasons for death being illness (521) and work accidents (419). Taking world's seafarer population of 1.2m (see p.25), it means from this figure ratio of about 0.2% for one year, or 6% chances over a 30-year seafarer's job life (mortality rate still high).

Total loss of merchant ships (world-wide): numbers, trends and causes
577 total losses were recorded during 5-year period 1999-2004 (ships >= 500GT), 517 for 5-year period 2003-2008. Makes an average of more than 100 ships (0.3% of fleet) sunk every year, or about 2merchant ships every week. Numbers for civil aviation, worldwide (criteria: civil aircrafts of 16 passengers and more) similar to maritime (world merchant fleet): fleet of about 30,000 aircrafts, about 80 total losses per year, about 1,000 human lives lost every year.





SHIP LOSSES 5-year period, numbers per criteria (LR-Fairplay, **Jan.2008**, July 2004 in ( ), bold: growing cases)

a) by ship age:	0-5years=10; 6-10y.=17; 11-15y.=15; 16-20y.=29; 21-25y.=85; 26-30y.=131; >30y.=230 0-15 years: 42 losses, 8% of total; more than 15 years: 475 losses, 92% of total (see graph) Losses are minimal in first 15-20 years (=economic life of 1st-hand ship/amortisation plan)				
b) by ship type:	General cargo-292 (333)=56%	**Passenger/Ro-Ro-66 (42)=13%**		Tankers-49 (57)=9%	
	Bulk carriers-42 (67)=8%	**Containerships-8 (6)=2%**		Other ships-60 (72)=12%	
c) by shipyard, country:	Japan-174 (194)	Germany-47 (77)	**Netherlands-32(19)**	Spain-32 (36)	**Norway-28 (19)**
	UK-18 (28)	**China-17 (-)**	**Turkey-17 (16)**	Russia-15 (27)	**Romania-13 (-)**
	EU-27-214 (=41% total)				
d) by control/operator:	Greece-44 (86)	**Turkey-35 (26)**	**China-31 (23)**	S. Korea-26 (30)	**Indonesia-22 (-)**
	Panama-21 (23)	**UAE-20 (14)**	**Russia-19 (-)**	Singapore-18(20)	Norway-15 (16)
	EU-27-117 (=23% total)				
e) by flag/registry:	Panama-84 (86)	**Cambodia-34 (26)**	**Indonesia-21 (-)**	**N.Korea-21 (-)**	**S.Korea-21 (14)**
	St.VincentG-21(44)	Turkey-19 (26)	**China-14 (-)**	Malta-14 (25)	**Russia-12 (11)**
	EU-27-62 (=12%)				
f) classification societies:	LR-uk-89 (97)	BV-fr-83 (90)	NK-jp-48 (64)	**RS-ru-42 (41)**	GL-de-34 (45)
	NV-no-28 (37)	AB-us-27 (34)	**KR-kr-27 (25)**	**KI-id-19 (-)**	CC-cn-13 (18)

Ship Losses and Casualties update for 2013 *(Source: Allianz Insurance, Safety and Shipping Review 2014)*
94 total losses in 2013 (declining trend, -20% vs 2012, -45% vs 2003), around **2,600 ships involved in casualties**.
Most losses (~3/4) due to **foundering, sinking**, in bad weather; other major causes: wrecked/stranded, fire/explosion.
Asia/Far East, N.Europe/UK, East Medit. main areas casualties; worst month=January (N.Hemisphere), July (South).
80% of marine casualties are estimated to be due to **human error**, and lack of skilled workforce still being an issue.
Casualties in Arctic waters: up to 45/year in 2009-2013, from 7/year in 2002-2007 (1/3 due to machinery damage).

The OTHER TWO KEY PILLARS for MARITIME SAFETY:

A. Port State Control (PSC) inspections:
Under Paris MoU and EU's PSC legislation (see p. 26), ships entering EU ports are inspected for safety conformity. Paris MoU ranks, classifies main flags into white-grey-black lists, based on ratio numbers on detentions/inspections.

BLACK-LIST flag countries in Paris MoU (List 2007-2009, June 2010):

Very high risk:	High risk:	Medium to High Risk:	Medium Risk:
1. North Korea	1. Comoros	1. St.Kitts & Nevis	1. Mongolia
2. Libya	2. Cambodia	2. Syria	2. Dominica
3. Togo	3. Moldova	3. Vietnam	3. St.Vincent &Gren.
4. Bolivia	4. Georgia	4. Slovakia	4. Egypt 5. Ukraine
5. Albania		5. Lebanon	6. Jamaica 7. Belize
6. Sierra Leone			8. Honduras

CHANGES in Paris MoU WHITE-GREY-BLACK LISTS for Flag States (June 2010)

Black **to** grey **:**	**Panama**	white **to** grey **:**	**Switzerland, Vanuatu**
grey **to** white**:**	**Croatia, Poland**	grey **to** black**:**	**(no change)**
black **to** white**:**	**-**	white **to** black**:**	**-**

No longer appearing in lists: **Austria** (from grey), **Israel** (white), **Kuwait** (white), **Taiwan** (grey).
Appearing now in lists: **Vietnam** (black).

B. Maintenance work in the shiprepair yards
Shiprepair yards are probably the best placed to know (but not to enforce) what a ship really needs in terms of repair and maintenance. Classification societies emit conformity certificates to ships on safety after regular inspections, one of which to be made in dry dock to check the ship's structural condition at a shiprepair yard, in the EU or elsewhere.

MAIN EU's SHIPREPAIR YARDS (source: CESA-EU shipyards' Association)
AT: **BE:** Antwerp; CY: **DE:** Bremen, Hamburg; **DK:** Aalborg; EE: **EL:** Piraeus; **ES:** Barcelona, Palma/Mallorca, Cádiz, El Ferrol, Santander; **FI:** Turku; **FR:** Marseilles, Brest, Dunkerque; HU: IE: **IT:** Genoa, La Spezia, Napoli, Ravenna, Augusta; LT: LU: LV: MT: **NL:** Rotterdam, Amsterdam; **PL:** Gdansk, Gdynia; **PT:** Lisbon, Setubal, Leixoes-Porto; SE: SI: **UK:** Tilbury, Falmouth, Dover, Ramsgate, Southampton, Milford Haven, Tyne, Teesport.

A maritime safety's Success Story: The GREEN AWARD certificates for oil tankers

- Private/institutional initiative launched in 1994 by the port of Rotterdam, for world fleet of tankers (>20,000 dwt)
- Assessment & certificates of conformity covers today 12% of world fleet by ship numbers and 25% by tonnage
- Proof of success: 0 total losses of GA oil tankers in 12 years (22 oil tankers >20,000 dwt sunk in last 5 years)
- Opens the way for future approach to end with recurrent and disaster-linked oil spills from tanker accidents?

MAIN CAUSES FOR TOTAL LOSS OF A SHIP:

- Collision (with hull damage)
- Grounding (with hull damage)
- Water in (from rough seas)
- Cargo unfixed (in rough seas)
- Engine failure (in rough seas)
- Structural collapse (in rough seas)
- Ship capsize (in rough seas)
- fire/explosion on board (tankers)

Human factor *is nearly* ***always behind*** *a ship loss today -particularly for large and modern merchant ships- through* ***error*** *(navigation- operation),* ***negligence*** *(maintenance-costs) or* ***imprudence*** *(seas-weather).*

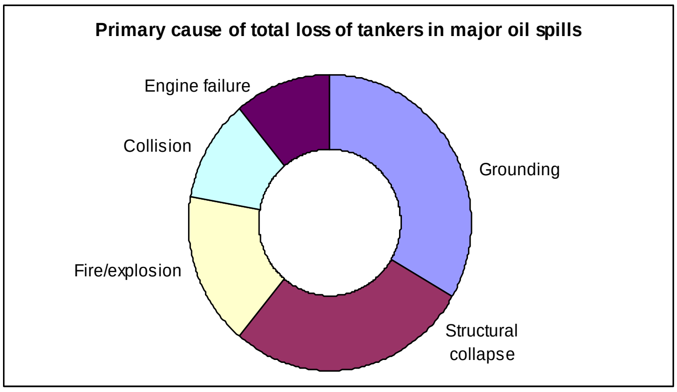


Illustration of a multi-country involvement in a single ship:
THE PRESTIGE CASE ***(A total of 17 countries concerned, in 4 continents)***

1. Bahamas:	**flag and place of registration of ship, and port of registry**
2. China:	**place where last repair works were made before the accident**
3. France:	**ISM (International Safety Management) Certificate issued**
4. Greece:	**country of shipowner, and of ship master and officers**
5. Latvia:	**last port of departure of ship before the accident**
6. Japan:	**country of shipbuilder of 26-year-old ship**
7. Liberia:	**country of domicile of shipowner's company**
8. Panama:	**original flag and ship registry before it was changed**
9. Philippines:	**nationality of ratings, ship's seafarers**
10. Romania:	**other nationality of ratings, seafarers on board**
11. Russia:	**charterer of ship and owner of the fuel oil transported**
12. Singapore:	**port of destination at the time of the accident, cargo buyers**
13. Spain:	**place of accident (territorial waters), rescue services called**
14. Switzerland:	**country of domicile of Russian charterer company**
15. UAE:	**class representative who inspected last repair works to ship**
16. UK:	**country of P&I Club for ship insurance**
17. USA:	**classification society responsible for ship's maintenance**

This wide multinational involvement complicates a little bit the situation when an accident like the one in November 2002 occurs, with an oil spill and subsequent damage caused, in order to identify the accident causes and actors, in all parts of the complex chain.

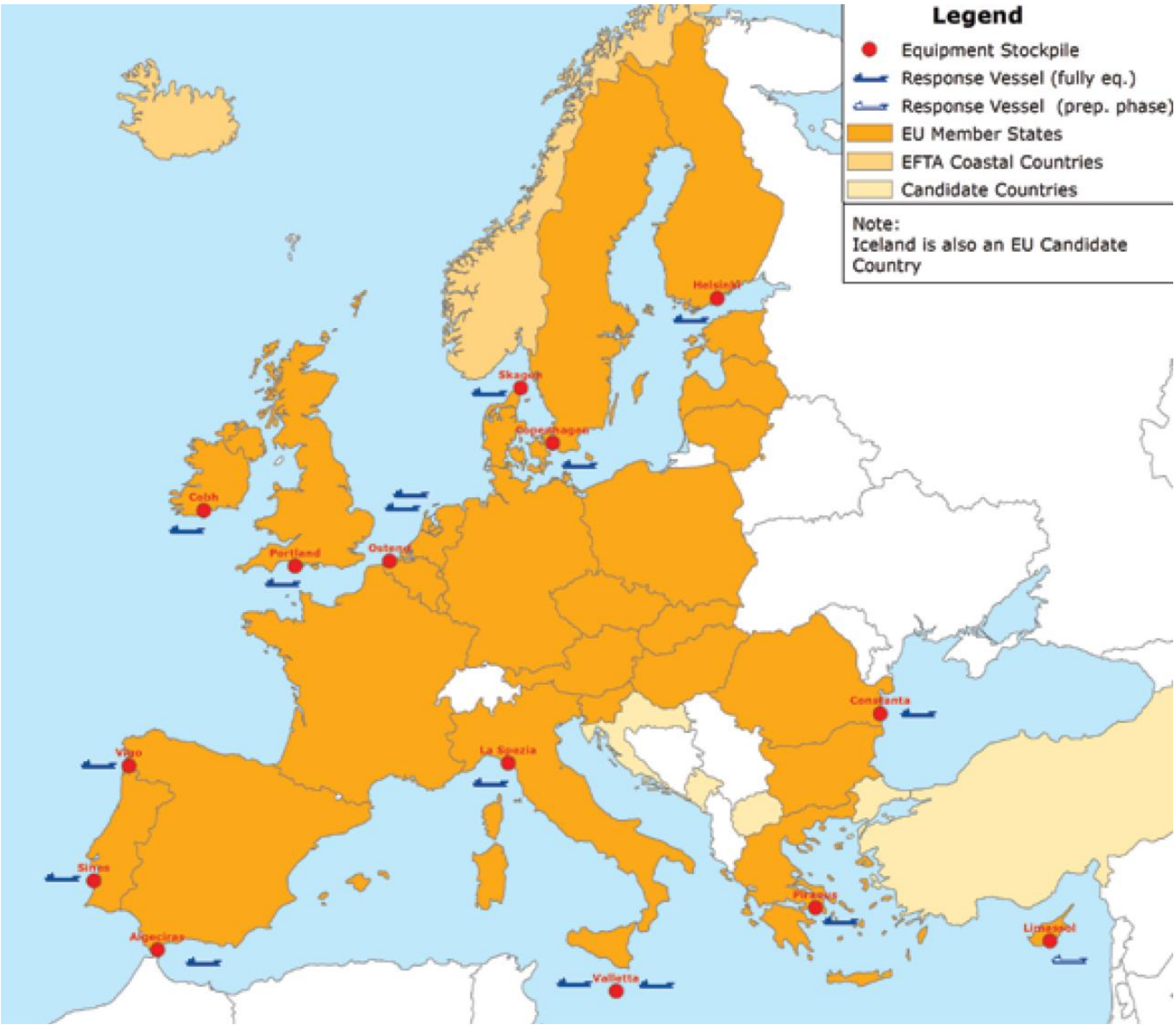
Evolution and Trends of total amount of oil spilt into global seas (accidental or intentional) over last 4 decades
(Source: European Maritime Safety Agency, EMSA)

	Oil spilt, total (tonnes)	Oil spilt, annual average (tonnes)
Period 1970-1979:	3,174,000 t	317,400 t
Period 1980-1989:	1,177,000 t	117,700 t
Period 1990-1999:	1,137,000 t	113,700 t
Period 2000-2009:	211,000 t	21,100 t
Year 2010:	-	12,000 t
Year 2011:	-	1,000 t

EMSA's Oil Pollution Preparedness and Response fleet, vessel network (contracted with ship operators)
(Source EMSA Annual Reports 2010, 2011)

At the end of 2011, EMSA had contracts for 16 fully equipped Stand-by Oil Response Vessels (average storage capacity for recovered oil of 3,2003), available upon request to assist coastal States in oil spill recovery operations; located and coverning in different geographical areas: Baltic, North Sea, Atlantic coast, Mediterranean and Black Sea.

	EMSA's Vessel Network for Oil Pollution Response *(all contracted vessels, see map hereunder)*
Baltic Sea:	O.W.Copenhagen (bunker vessel, DK); Kontio (ice-breaker, FI);
North Sea:	Interballast III (hopper dredger, NL); Vlaanderen 3000 (hopper dredger, BE);
Atlantic coast:	Sara (EN Channel, UK); 3 tankers (EN Channel, IE); Ria de Vigo (supply ship, ES); Bahia III (PT);
Mediterranean:	Monte Anaga (bunker ship, ES); Balluta Bay (tanker, MT); Alexandria (CY); Bahia I (ES); Salina Bay (IT), Santa Maria (MT); Aktea OSRV (EL);
Black Sea:	Enterprise (offshore supply vessel, BG); GSP Orion (RO).



Port State Control (PSC) Regimes around the world and performance (incl.Paris MoU, Source: IMO)

Paris MoU: Area covered: **Europe, North Atlantic East Coast of Canada, Russia.**
Parties (27): 22 EU coastal MS (=be, bg, cy, de, dk, ee, el, es, fi, fr, ie, it, lt, lv, mt, nl, pl, pt, ro, se, si, uk, Croatia, Iceland, Norway, Canada (E coast) and Russia.
Founded, set up: **1982**; Secretariat/HQ: **The Hague, NL**
Detention rates: **4%** (2009); 9% (2001); Non-compliance: **57%** (2009); 58% (2001)

Tokyo MoU: Area covered: **Pacific Ocean, Asia-Pacific Region.**
Parties (18): Australia, Canada, Chile, China, Fiji, HK-China, Indonesia, Japan, S.Korea, Malaysia, N.Zealand, PNG, Philippines, Russia, Singapore, Thailand, Vanuatu, Vietnam.
Founded, set up: **1993**; Secretariat/HQ: **Tokyo, Japan**
Detention rates: **6%** (2009); 8% (2001); Non-compliance: **67%** (2009); 69% (2001)

Viña del Mar: Area covered: **South and Central America** (*Acuerdo Latino* or *Acuerdo de Viña del Mar*)
Parties (13): Argentina, Bolivia, Brazil, Colombia, Chile, Cuba, Ecuador, Honduras, Mexico, Panama, Peru, Uruguay, Venezuela.
Founded, set up: **1992**; Secretariat/HQ: **Buenos aires, Argentina**
Detention rates: **2%** (2009); 4% (2001); Non-compliance: **53%** (2009); 41% (2001)

Caribbean MoU: Area covered: **Caribbean Sea, Region**
Parties (9): Antigua&Barbuda, Barbados, Dominica, Grenada, Guyana, Jamaica, Netherlands Antilles, Suriname, Trinidad-Tobago.
Founded, set up: **1996**; Secretariat/HQ: **Kingston, Jamaica**
Detention rates: **4%** (2009); n/a (2001); Non-compliance: **n/a** (2009); n/a (2001)

Mediterranean: Area covered: **South and Eastern Mediterranean (Mediterranean partners, 2MSs)**
Parties (10): Algeria, **Cyprus**, Egypt, Israel, Jordan, Lebanon, **Malta**, Morocco, Tunisia, Turkey (all Euromed partners except Libya, Palestinian Authority and Syria).
Founded, set up: **1995**; Secretariat/HQ: **Alexandria, Egypt**
Detention rates: **10%** (2009); 9% (2001); Non-compliance: **59%** (2009); n/a (2001)

Indian Ocean: Area covered: **Indian Ocean, Red Sea, Arab Sea (1MS)**
Parties (14): Australia, Eritrea, **France**, India, Iran, Kenya, Maldives, Mauritius, Oman, South Africa, Sri Lanka, Sudan, Tanzania, Yemen.
Founded, set up: **1997**; Secretariat/HQ: **Goa, India**
Detention rates: **10%** (2009); 5% (2001); Non-compliance: **58%** (2009); 52% (2001)

Abuja MoU: Area covered: **West and Central Africa**
Parties (19): Angola, Benin, Cameroon, Cape Verde, Congo, Côte d'Ivoire, Equatorial Guinea, Gabon, Gambia, Ghana, Guinea, Liberia, Mauritania, Namibia, Nigeria, Senegal, Sierra Leone, South Africa and Togo.
Founded, set up: **1999**; Secretariat/HQ: **Lagos, Nigeria**
Detention rates: **n/a** (2009); n/a (2001); Non-compliance: **n/a** (2009); n/a (2001)

Black Sea MoU: Area covered: **Black Sea, Region (2MSs)**
Parties (6): Bulgaria, Georgia, Romania, Russia, Turkey and Ukraine
Founded, set up: **1999**; Secretariat/HQ: **Istanbul, Turkey**
Detention rates: **6%** (2009); n/a (2001); Non-compliance: **67%** (2009); n/a (2001)

Riyadh MoU: Area covered: **Persian (/Arabic) Gulf**
Parties (6): Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and UAE.
Founded, set up: **2005**; Secretariat/HQ: **Riyadh, Saudi Arabia**
Detention rates: **n/a** (2009); n/a (2001); Non-compliance: **n/a** (2009); n/a (2001)

USCG: Area covered: **US waters and ports**, checks and verifications made by US Coast Guard
Parties: United States
Founded, set up: **[1790]**; Secretariat/HQ: **Washington DC, USA**
Detention rates: **2%** (2009); 2% (2001); Non-compliance: **27%** (2009); 27% (2001)

PIRACY and armed robbery at sea, data last years *(sources: IMO, IMB, OneEarthFutureFound., NYAI)*

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Ships hijacked:	16	14	8	18	10	18	47	49	53
Ransoms paid Som.pirates (est.):	-	-	-	-	-	-	$120m	-	$238m
Average ransom/ship (Som.pir.):	-	-	-	$0.15m	-	-	($1.1m)	$3.4m	$5.4m
Crew hostage/kidnapped:	125	113	147	367	224	223	773	867	1,001
Av. duration hijacks (days):	-	-	-	20d.	-	40d.	70d.	-	-
Piracy Acts/attacks:	383	452	330	267	254	310	330	406	(445 imb)
(hijacks % on attacks):	4%	3%	2%	7%	4%	6%	14%	14%	12%
Lives lost (crew killed):	6	12	29	0	17	22	6	8	8
Missing crew:	99	32	44	11	0	57	38	9	-
Wounded crew:	38	75	60	29	23	75	22	57	37

Global cost of piracy (est.): $12bn/year, of which: $3.2bn additional insurance[1]; $2.7bn ships re-routing[2]; $2bn naval operations/patrols[3]; $1.4bn shipowners' security spending; $1.3bn economic impact in affected countries: Egypt, East Africa..; other: institutional, trials..(Somali pirates behind 50% of piracy acts, 92% of hijacks, seen responsible for 95% of total cost of piracy, believed to have increased fivefold since 2005).

[1] War risk insurance premiums have increased 3-fold since 2005, kidnap/ransom (K&R) premiums 10-fold.

[2] Route Gulf-Rotterdam via the Cape means 11,169 instead of 6,434nm (+74%), +30% cost, trip duration.

*[3] Over 40 Countries involved in Naval anti-piracy operations in "Horn of Africa": **EU Navfor/Atalanta** (13 MS+Norway with ships, patrols, aircrafts, 9 other MS with staff+3), **US**, Japan, China, Russia, India, Australia, Canada, Iran, S.Korea, Malaysia, Pakistan, Saudi Arabia, Singapore, Thailand,Turkey.*

Piracy update 2013 (*from IMB 2012 Annual Report*): down trend for Somali piracy, raise in W.Africa, other: Highlights: Drop of total piracy attacks to 297 -in 2012- from 445 -in 2010- (to 49 from 139 off Somalia, 14 hijacks from 53), after Naval response, armed guards on board, preventive effort; just 2 attacks in Malacca Straits but raise in Indonesia (81 cases from 40 in 2010) and in Gulf of Guinea (42 cases in Nigeria, Togo).

Piracy attacks 2010 (total 445 attacks): by ship types: Tankers-147, bulk carriers-80; Containerships-74; general cargo-63; tugs-20; fishing vessels-19; other-42. by flag, main: Panama-82; Liberia-57; Singapore-40; Antigua&B-24; Malta-19; Hong Kong-18; by control: DE-69; Singapore-54; EL-46; Japan-23; UAE-17; UK-16. **Somali ship hijacks in 2010** (33 vessels off Somalia, 16 in Gulf of Aden area out of total 53): includes 10 fishing vessels hijacked used as mother ships; by ship types: Tankers-13; General cargo-9; Bulk carriers-6; Containerships-2; other-9; main flags (merchant): Panama-11; Marshall Isl.-4; Singapore-3; Malta-2; UK/Bermuda-2; by control: EL-7, UAE-4; Norway-3; DE-2; UK-2, other (with only one ship).

Chronology of selected news, events, developments in relation to (Somalia-related) Piracy 2008-2010:
Jan.'08: 10% annual rise of piracy acts reported, for first time in three years, waters off **Nigeria and Somalia** being world's most dangereous; **April'08:** Al-Qaeda urges in web attacks to European maritime targets along **Somali coast**; **Aug.'08:** IMB warns that **piracy epidemic** could spiral out of control after spate of ship hijackings and pirate attacks; **Nov.'08:** Shipping is **diverted from Suez** to avoid Somali pirates; **Indian Navy sinks** Thai fishing vessel hijacked by Somali pirates; **Dec.'08:** EU Navfor **Atalanta** operation starts, to fight piracy in Gulf of Aden; **Nato** extends its anti-piracy mission; **Jan.'09:** US creates new **US-led multinational** anti-piracy naval force CTF-151 to fight piracy in Gulf of Aden; shipping giants CMA CGM, China Shipping and Maersk divert ships to avoid Suez and opt for **new Cape route**; **April'09:** US sees **"war on terror"** moving to Somalia, East Africa; **Aug.'09: Suez Canal revenues plunge** (by 22% on year-to-year basis); **Sept.'09: US special forces** land in Somalia, kill suspected leader of group tied to al-Qaeda; **Nov.'09:** Somali pirates hit oil tanker in **attack 1,000 miles** off coast; **Dec.'09:** Dutch Navy warship releases **13 Somali pirates** after failing to find country to prosecute them; **Jan.'10:** Greek VLCC tanker released for massive, record **$9m ransom** off Somalia; **Mar.'10:** Hijacked 250gt Kenyan fishing vessel being used as **mother ship** off Somalia; Kenya sends strong signal with **20-year sentences** for pirates; **April'10:** Pirates extend reach as laden **tanker is taken 900 miles** off African coast; Obama links Somali ship hijackers to terrorism, says poses threat to **US national security**; **May'10:** Over **600 pirates held** in cooperating states following ship hijacks off Somalia; **June'10:** Donors to give **$9.3 million for Somali Piracy trials** in Kenya, Seychelles. **Aug.'10:** UAE experts confirm terrorist attack after explosion in Mutsui's laden VLCC in **Strait of Hormuz**; Industry frustration as **pirates released** after two attempted hijacks off Somalia; warship disrupts attack then sets pirates free, makes Intertanko react angrily.

Piracy, terrorism, war zones world-wide, from Joint War Committee (for hull insurance premiums)

Bahrain; Côte d'Ivoire; Djibouti; Georgia; Gulf of Aden; Gulf of Oman; Indonesia; Iran; Iraq (incl. oil offshore); Israel; Lebanon; Malaysia; Nigeria (Gulf of Guinea); Indian Ocean; Pakistan; Philippines; Qatar; Saudi Arabia; Somalia (and waters beyond 250 nm); Sri Lanka; Venezuela (incl. oil offhshre); Yemen.

Broad EU Maritime Security (global, multi-level approach): The new 2014 EU Strategy

Two EU (EC/EEAS-Council) Communications in 2014 for an "EU Maritime Security Strategy":

1) Joint (EC/HR) Communication (JOIN(2014) 9 final, of 6.3.14): "For an Open and Secure Global Maritime Domain: Elements for a European IUnion Maritime Security Strategy".
2) Council's "European Union Maritime Security Strategy" (11205/14 adopted by GAC on 24.6.14).

Main areas identified of relevance, concern, and affecting or to potentially affect EU interest:

The "classic" ones, understood as the already covered/regulated ones:

- Piracy and armed robbery at sea (Somali piracy, other parts of the world).
- Protection from other unlawful acts, terrorism (ships, infrastructure and citizens).
- Protection from organised crime, illegal activities, affecting the maritime domain (surveillance).

The wider, broader approach, to cover all areas in comprehensive way, from a global perspective:

- Unlawful practices (ref. Unclos) affecting, e.g. freedom of Navigation, right of innocent passage.
- International maritime disputes, threatening peace/stability in crutial areas (e.g., East Asia seas).
- Prospects from future use or opening of new trade/sea lanes (e.g., Arctic & environment).
- Conflict prevention, crisis response/management, areas involving maritime.
- Concept of maritime domain emerging world-wide, at MS and EU levels, to be protected.

Means to achieve it and objectives highlighted (from different perspectives):

- increased cross-sectorial, intra-EU and civil-military co-operation.
- full respect of international law, UNCLOS, promoting use of international arbitration, Courts.
- preserve peace and prevent conflict through arbitration, mediation, bilateral dialogues (with EU or not).
- better understanding and management of resources, training.

Follow-up of the Council's and Joint (EC/EEAS) Communications:

- Action Plan to follow, preparation for adoption during IT Presidency (end of 2014).

Further improving European shipping industry's image and safety record, performance:
DNV-GL's plan to cut casualties and accidents at sea by 90% *(source: Lloyd's List, DNV-GL)*

The CEO of the world's largest classification society today, **Norway's Det Norske Veritas**, recently merged with Germany's **Germanischer Lloyd (DNV-GL)**, Mr Tor Svensen, has announced plans to work on reducing shipping deaths and accidents by 90% in the long term.

Present situation (key facts and figures, background):
- around **800-900 people** still die in maritime incidents every year on average (shipping related)
- this number is considered to be **10 times higher** than for "comparable land-based industries".
- 50% of the casualties considered to be due to **navigation errors** (and 80% to human error).

Ways and Means to achieve such an ambitious objective (through class society's influence):
- research and development for new projects and applications (5% of annual revenue in DNV-GL)
- more automation and monitoring in navigation (developing and adopting new ICT technologies)
- example: the "unmanned" ship (prototype launched by DNV-GL in Sept.'14), battery-powered*.
- special focus on passenger and ro-ro ships where the number of casualties in accidents highest.
- from an accident's cause perspective: special focus on avoiding collisions and groundings.

**The unmanned ship concept/idea launched by DNV-GL: towards the future "drones" of the seas?*
The "ReVolt" prototype ship has been launched by DNV-GL, to operate in Shortsea trades: merchant ship size: 60m length overall, 14.5m beam, 5m draught, 1,300dwt (100 containers/teu), 50kW energy requirement (like small car), zero-emission+unmanned. Autonomous operation: collision warning alert, avoidance; nautical chart reading; radar data processing. Maintenance free, range: 100 n.miles (before battery of 3,000kWh needs re-charge), average speed of 6 knots, no super-structure (no need for crew), to serve as "inspiration" for equipment makers, shipyards, ship owners.

Annex 13: Main EU Shipyards

Main Shipyards in EU-25: *(names, ship types, places and number of ships under construction/on order, Oct.'03-04)*

GERMANY:	Aker MTW Werft (containerships) : Wismar **(7)** Detlef Hegemann Roland werft (cont., ro-ro, other): Berne **(5)** Flensburger Schiffbau (ro-ro/cargo): Flensburg **(7)** JJ Sietas KG Schiffswerft (containerships): Hamburg **(10)** Jos.L. Meyer (passenger/cruise): Papenburg **(6)** Kvaerner Warnow Werft (containerships): Warnemuende **(6)** Lindenau Schiffswerft (tankers): Kiel **(4)** Peene-Werft (containerships): Wolgast **(9)** Volkswerft (containerships): Stralsund **(9)** Schiffswerft (passenger/cruise): Emden **(2)** Thyssen Nordseewerke (containerships): Emden **(2)**
POLAND:	Stocznia Gdynia SA (containerships, vehicle carriers): Gdynia **(35)** Stocznia Szczecinska Nowa S.p. (containerships, tankers, g.cargo): Szczecin **(31)** Gdanska Stocznia "Remontowa" (passenger, containerships, other): Gdansk **(8)** Maritim S.p. (general cargo): Gdansk **(7)** Stocznia Gdanska-Grupa Stoczni (general cargo, containerships): Gdansk **(4)** Marine Projects Ltd S.p. (general cargo): Gdansk **(3)** Stocznia Polnocna SA (Northern) (passenger/ro-ro/cargo): Gdansk **(3)**
ITALY:	Fincantieri (pass./ro-ro, cruise): Venezia**(5)**, Monfalcone**(5)**, Castellamare di Stabia**(3)**, Palermo **(2)** Soc. Esercizio Cant. Spa (ro-ro/cargo): Viareggio **(7)** CN Vicentini (passenger/ro-ro): Donada **(3)** CN di Pesaro (tankers): Pesaro **(3)** CN di Termoli (tankers): Termoli **(3)** CN Fratelli Orlando (tankers, other): Livorno **(2)** CN Mario Morini (tankers): Ancona **(3)** CN Rodriquez (passenger ships): Messina **(2)**, pietra Ligure **(1)** CN Rosetti (other): Ravenna **(2)** Sestri CN Spa (passenger/cruise): Genova **(2)**
DENMARK:	Odense Staalskibsvaerft (containerships): Lindo **(8)**
NETHERLANDS:	BV Scheepswerf Damen (general cargo, passenger..): Gorinchem **(10)**, Bergum **(15)**, Foxhol **(23)** Barkmeijer Stroobos BV (general cargo): Stroobos **(6)** Bodewes' Scheepswerf Volharding (containerships): Foxhol **(2)** Bodewes' Scheepswerven BV (containerships): Hoogezand **(3)** Sch. Bijlsma Lemmer BM (tankers, other): Lemmer **(2)** Sch. De Hoop Lobith (other): Lobith **(3)** Sch. Ferus Smit (tankers): Westerbroek **(3)** Sch. Peters (general cargo): Kampen **(8)** Schelde Scheepsnieuwbouw (other): Vlissingen **(2)**
FRANCE:	Chantiers de l'Atlantique (passenger/cruise, other): Nantes/Saint Nazaire **(6)** Chantier Piriou Frères (other): Concarneau **(3)**
SPAIN:	IZAR (tankers, pass./ro-ro...): Gijón **(5)**, Sestao **(4)**, Puerto Real **(3)**, Sevilla **(2)**, San Fernando **(1)** Hijos de J. Barreras, SA (passenger/ro-ro, other): Vigo **(6)** Astilleros de Huelva (passenger/ro-ro): Huelva **(2)** Factorías Vulcano, SA (tankers): Vigo **(2)**
FINLAND:	Kvaerner Masa-Yards Inc. (passenger/cruise, ro-ro): Helsinki **(2)**, Turku **(2)** Aker Finnyards Oy (passenger/cruise, ro-ro): Rauma **(2)**
SLOVAKIA:	Slovenske Lodenice, as (general cargo): Komarmo **(26)**
GREECE:	Hellenic Shipyards (passenger/ro-ro): Skaramanga **(2)**
CZECH REP.:	Ceskoslovenska Plavba, as (CSPL) (general cargo): Decin **(3)**, Chvaletice **(2)**
LATVIA:	AS Rigas Kugu Buvetava-Riga (passenger ships): Riga **(3)**
LITHUANIA:	UAB Vakaru Laivu Remontas (offshore supply ships, tugs): Klaipeda **(2)**
U.K.:	Appledore Shipbuilders Ltd. (passenger/ro-ro, cargo): Appledore **(2)** FBM Babcock Marine Ltd. (passenger): Rosyth **(1)**

NAVAL SHIPBUILDING, EU and World

(Industry is closely linked to traditional shipbuilding for cargo and passenger vessels -with marine equipment, shipyards-; also in the attempt to overcome the present on-going, lasting crisis in the sector, affecting Europe and the rest of the world)

Navies, Shipbuilding Countries, New Orders *(Source data: CESA/Fincantieri/Navantia/AMI Intl./JFS, 2012)*

A- The Naval Market: Main shipbuilding countries for naval ships, ships ordered/being constructed:

Country of built	*Underway ($bn)*	*Export share*	*World Market share*
1. USA	**194.3**	**1%**	**48%**
2. Russia (incl.Ukraine)	31.4	12%	8%
3. India	24.1	0%	6%
4. UK	**24.0**	**4%**	**6%**
5. China	22.2	5%	5%
6. FR	**20.9**	**18%**	**5%**
7. South Korea	12.2	0%	3%
8. Japan	10.5	0%	3%
9. IT	**10.3**	**10%**	**3%**
10. DE	**10.0**	**58%**	**3%**
11. ES	**6.6**	**47%**	**2%**
12. NL	**1.7**	**72%**	**0.%**
(EU, main six):	***73.5***	***21%***	***19%***
Sub-total:	368.2	6%	92%
Total world:	400.6	6%	100%

B- Main naval Ship Types, ordered/under construction world (in total value, $bn):

	Value ($bn)	No.of Units	Av.price/unit ($bn)	
Submarines* (Nu, De):	123.4	169	0.73	($2-7bn/unit for nuclear submarine)
Frigates (Fr):	76.3	189	0.40	
Destroyers (Ds):	74.2	63	1.18	
Aircraft carriers (Ac):	51.3	11	4.66	
Amphibious (Am):	26.5	96	0.28	
Corvettes (Co):	7.1	31	0.23	
Other, auxiliary (Ot):	41.8	879	0.05	
Total:	*400.6*	*1,438*		

**includes both diesel-electric and nuclear submarines, with cost/capabilities of nuclear submarine being much higher*

C- World's main Naval fleets (existing units, by ship types, plus units under construction/projected)

	Nu	Ac	Ds	Fr	De	Co	Am	Ot	Total
1. USA*	57 (+11)	11 (+3)	61 (+7)	28 (+22)	14 (+0)	0 (+0)	367 (+17)	-	2,317 (+257)
2. Russian Fed.	29 (+2)	1 (+0)	17 (+0)	10 (+30)	33 (+15)	69 (+0)	53 (+17)	-	1,243 (+126)
3. UK	**7 (+6)**	**1 (+2)**	**7 (+3)**	**13 (+0)**	**4 (+0)**	**0 (+0)**	**49 (+4)**	**-**	**241 (+15)**
4. FR	**6 (+6)**	**1 (+1)**	**13 (+0)**	**11 (+11)**	**4 (+0)**	**9 (+1)**	**32 (+10)**	**-**	**351 (+30)**
5. China	5 (+0)	1 (+0)	26 (+4)	53 (+8)	52 (+8)	0 (+0)	268 (+8)	-	1,081 (+93)
6. India	1 (+0)	1 (+2)	8 (+7)	13 (+26)	14 (+9)	24 (+0)	49 (+12)	-	284 (+113)
7. Japan	- -	2 (+1)	46 (+4)	0 (+0)	18 (+4)	0 (+0)	32 (+0)	-	691 (+27)
8. IT	**- -**	**2 (+0)**	**4 (+0)**	**12 (+10)**	**6 (+3)**	**8 (+0)**	**33 (+3)**	**-**	**415 (+52)**
9. ES	**- -**	**1 (+0)**	**0 (+0)**	**10 (+2)**	**3 (+8)**	**13 (+0)**	**58 (+0)**	**-**	**275 (+18)**
10. Brazil	- -	1 (+0)	0 (+0)	9 (+0)	5 (+4)	5 (+3)	13 (+8)	-	120 (+130)
11. Thailand	- -	1 (+0)	0 (+0)	8 (+0)	0 (+0)	7 (+0)	148 (+3)	-	415 (+10)
12. South Korea	- -	0 (+0)	11 (+1)	9 (+24)	12 (+6)	27 (+0)	22 (+2)	-	279 (+54)
13. Turkey	- -	0 (+0)	0 (+0)	17 (+0)	14 (+6)	6 (+12)	47 (+9)	-	432 (+63)
14. EL	**- -**	**0 (+0)**	**0 (+0)**	**14 (+0)**	**9 (+3)**	**0 (+0)**	**15 (+0)**	**-**	**353 (+8)**
15. DE	**- -**	**0 (+0)**	**0 (+0)**	**15 (+4)**	**4 (+2)**	**5 (+0)**	**2 (+0)**	**-**	**180 (+7)**
16. Argentina	- -	0 (+0)	4 (+0)	9 (+0)	3 (+0)	0 (+0)	17 (+0)	-	248 (+4)
17. Canada	- -	0 (+0)	3 (+0)	12 (+0)	4 (+0)	0 (+0)	0 (+0)	-	197 (+16)
18. Indonesia	- -	0 (+0)	0 (+0)	10 (+0)	2 (+0)	20 (+1)	69 (+0)	-	352 (+23)
19. Egypt	- -	0 (+0)	0 (+0)	10 (+0)	4 (+0)	0 (+0)	17 (+0)	-	220 (+15)
20. Pakistan	- -	0 (+0)	1 (+0)	10 (+9)	5 (+0)	0 (+0)	8 (+0)	-	68 (+9)
(No.2) EU-27:	57 (+12)	5 (+3)	24 (+3)	105 (+30)	46 (+18)	64 (+2)	573 (+74)	-	3,166 (+239)

**Part of the US Naval fleet is based abroad/overseas: in Middle East (5th Fleet, in Manama/Bahrain), in Europe (6th Fleet, in Gaeta/Italy), and in West Pacific (7th Fleet, in Yokosuka/Japan); China has plans to base part of its fleet abroad too.*

Annex 14: Marine Equipment / Engine Building

THE MOST PROFITABLE AND TECHNOLOGY-ORIENTED SECTOR
OF SHIPBUILDING IN GENERAL: ENGINE BUILDING

Engine building is one of the shipbuilding fields where competitive advantage seems not so much linked to low labour costs, price of steel or commercial and institutional practices. Asia is gradually reinforcing its world leadership in shipbuilding (Korea, China, Japan), but other countries may still retain their leader position in engine building, sector very technology-oriented and sometimes even high-tech, making competition less fierce and more localised.

A- Brief historical background of marine engine building: *(Source: "Vapors", Barcelona Maritime Museum)*

- Engine-powered ships appear for the first time in merchant shipping in early XIX century: Watt's steam engine.
- It will cause a revolution and will end with hundreds (and thousands) of years of sailing tradition and knowledge.
- Steam take-over is gradual and will eventually consolidate at 2nd half of XIX century (regularity, speed, loading).
- Mixed propulsion (engine-sail) will last for decades waiting for three major technological breakthroughs.
- First transoceanic steam ship: Savannah (1819), route US-Liverpool, using mainly sails and occasionally engine.
- Key technological step: introduction of propeller from 1838, to gradually replace paddle-propulsion system.
- 1845: iron ships built, advantages on size (end of 90-m length limit for wood), weight, cost (scarcity oak forests).
- 1910: Diesel engine is tested in a ship with full success (invented in 1892, 20 years after Otto's 4-stroke engine).
- Take-over: 90% of world tonnage is under sailing propulsion in 1846; 92% of tonnage under engine in 1914.
- Cruising speed gradually rises for all types and sizes of merchant ships, engines and ships evolve (also in size).
- 1975: gas turbine (jet engine) is tested in merchant ship (219 ships today), 1994: water jet propulsion introduced.

B- Main engine builders for merchant ships, newbuilts July 2004*: (Source: LR-Fairplay)*
(market mainly controlled by Europe, USA and Japan, like the car industry)

Rolls-Royce, UK: engine manufacturer in car, marine and aviation industries, global leader in marine propulsion, engineering and high-tech, builds for merchant ships and for over 50 navies world-wide, gas turbines (42 new ships).
MAN B&W Diesel, Germany: manufactures the most powerful 1,000 rpm diesel engines in the world (of 9,000 KW), powers newly ordered fast ferries (40 knot-speed for 600 dwt ship) built by Italy's Fincantieri (new ships: 94)
Wartsila Finland Oy, Finland: One of the major European engine builders, supplies engines to yards in Europe and all over the world, including China, Japan and Korea (188 ships on order/under construction).

Other major or world-wide known marine engine builders:
MTU Friedrichshafen, Germany: engines for European, US and Australian yards (56 new ships).
Zaklady PM, SA Poznan, Poland: Polish and Romanian shipyards (60 new ships).
Caterpillar, Inc., US (German factory): engines for yards in Europe, China, Australia (380 new ships).

Cummins Engine Co., US:	engines for US and Chinese yards (33 new ships).
Mitsui Eng. & SB, Japan:	shipyards in Japan, China and the Philippines (305 new ships).
Kawasaki HI, Japan:	Japanese and Korean yards (105 new ships).
Mitsubishi HI, Japan:	engines for shipyards in Japan, China and Europe (83 new ships).
Hitachi Zosen, Japan:	Japanese and German yards (73 new ships).
Yanmar Diesel Engine, Japan:	engines for yards in China, Singapore, Indonesia (24 new ships).
HSD Engine Co. Ltd, Korea:	mainly Korean yards, but also Chinese and European yards (240 new ships).
Hyundai HI Co. Ltd, Korea:	supplies engines to Korean yards (464 new ships).
Ssangyong HI, Korea:	Korean yards (81 new ships).

Hudong Shipyard-Shanghai, China: supplies engines to Chinese yards (108 new ships).
Dalian Marine Diesel Engine Factory, China: Chinese yards (50 new ships).

C- Latest marine engine technology for merchant ships, gas turbines/fast ships *(source: LR-Fairplay)*
(market controlled by US and some European firms, like civil aircraft industry)

General Electric/GE Marine Engines-Cincinnatti, Oh, USA: *one of the three world major engine constructors in the commercial aircraft, leader also in high-tech marine engines, gas turbines and water jets for fastest ships in the world (up to 60 knots). First to built gas turbine engine for a merchant ship in 1975. Existing fleet of 84 ships equipped with GE gas turbines, including the latest ultra-modern cruise ships (including Queen Mary 2).*
Solar Turbines-San Diego, Ca, US: *first to introduce water jet in merchant ship (1994) to replace propeller in turbine. Ships in British yards for Hong Kong owners, fast passenger/ro-ro/cargo ships (43 ships in service).*
European Gas Turbine Ltd-Lincoln, UK: *gas turbines manufactured for merchant ships from 1993, for Korean shipyards and Australian owners (10 ships in service).*
Textron Lycoming-Stratford, Ct, US: *turbines for US, Australian shipyards, Chinese and US owners (8 ships).*
Kvaerner Brug A/S, Norway: *gas turbines for Finnish shipyards and UK and Dutch owners (59 existing ships).*
ABB Stal AB Finspang, Sweden: *8 ships, built in Norwegian and Spanish yards, for Swedish, Uruguay owners.*

Annex 15: EU as a Global Trading, Economic, Financial Power

Comparative data World's main trading powers, with economic/financial data *(2006-07 WB-EU-US data)*

	EU	USA	Japan	China	Canada	Russia	India	Brazil	WORLD
Population (m):	490	301	127	1,322	33	141	1,130	190	6,602
Surface (m sq.km):	4.32	9.83	0.38	9.60	9.98	17.08	3.29	-	149
States (Federal, MS)	27	50	1	1 (23+5)	13	84 (7)	28	26	-
Coastline (km):	66,000	19,900	29,800	14,500	202,100	37,700	7,000	7,500	356,000
No. of merchant ports:	1,280	406	200	399	264	87	93	103	8,000
Merchant fleet w.,control:	40%	5%	13%	10%	1%	1%	1%	1%	100%
T R A D I N G*:									
Exports, $bn:	**1,330**	**1,140**	**665**	**1,221**	**440**	**365**	**141**	**159**	**13,700**
Imports, $bn:	**1,466**	**1,987**	**571**	**917**	**394**	**260**	**224**	**116**	**13,700**
E C O N O M I C:									
GDP, $bn (exch. rate):	**14,510**	**13,750**	**5,103**	**2,879**	**1,144**	**1,251**	**894**	**1,269**	**50,360**
GDP, $bn (in ppp)	(14,440)	(13,860)	(4,305)	(7,043)	(1,274)	(2,076)	(2,965)	(1,838)	(65,820)
GDP/capita (er,$):	29,600	45,000	38,400	2,000	36,200	8,900	800	6,700	7,400
GDP growth:	+3.0%	+2.2%	+2.0%	+11%	+2.5%	+7.6%	+8.5%	+4.9%	+5.2%
Life expectancy:	79	78	82	73	80	66	64	72	68
F I N A N C I A L:									
CAB, $bn (incl. services):	**+38**	**-752**	**+211**	**+363**	**+28**	**+74**	**-19**	**+10**	**0**
Foreign reserves, $bn:	689	66	881	1,493	35	470	239	178	-
FDI abroad, $bn:	2,042	708	460	75	458	210	21	100	12,200
FDI received, $bn:	1,471	629	89	700	398	272	68	214	12,200
Foreign debt, $bn:	309	12,250	1,492	363	759	385	165	230	54,260
Currency strength/value**:	**126**	**100**	**102**	**117**	**153**	**85**	**109**	**48**	**-**

	****Main Export partners:***	**Main Import partners:*
EU:	1us-23% 2ch-7% 3ru-6% 4cn-5% 5tr-5%	1cn-14% 2us-13% 3ru-10% 4no-6% 5jp-6%
USA:	1ca-23% **2eu**-21% 3mx-13% 4jp-6% 5cn-5%	**1eu**-18% 2ca-16% 3cn-16% 4mx-11% 5jp-8%
Japan:	1us-24% **2eu**-16% 3cn-15% 4kr-8% 5th-4%	1cn-21% 2us-12% **3eu**-11% 4sa-7% 5ae-6%
China:	1us-22% **2eu**-19% 3jp-10% 4kr-5% 5sg-3%	1jp-16% **2eu**-13% 3kr-13% 4us-8% 5my-3%
Canada:	1us-83% **2eu**-6% 3jp-2% 4cn-2% 5mx-1%	1us-56% **2eu**-12% 3cn-9% 4mx-4% 5jp-4%
Russia:	**1eu**-59% 2cn-5% 3ua-5% 4tr-5% 5ch-4%	**1eu**-46% 2cn-10% 3ua-7% 4jp-6% 5kr-5%
India:	**1eu**-22% 2us-18% 3ae-9% 4cn-8% 5sg-4%	**1eu**-18% 2cn-9% 3us-6% 4sg-5% 5au-4%
Brazil:	**1eu**-21% 2us-18% 3ar-9% 4cn-8% 5mx-4%	**1eu**-24% 2us-21% 3ar-8% 4cn-8% 5dz-4%

***currency value $-terms base-100 for 1999, € considered for EU.*

EU-bilateral Agreements and Dialogue with Third Countries on Maritime Transport Issues

A) International Relations with Main Maritime Countries and Trading Partners:

CHINA: EU-China Maritime Transport Agreement concluded in 2002, implementation meetings.
INDIA: EU-India Maritime Transport Agreement foreseen, ongoing negotiations and meetings.
JAPAN: EC-Japan Regular Maritime Transport Policy Dialogue, EU-Japan summits and meetings.
BRAZIL: EU-Brazil Regular Maritime Transport Policy Dialogue starter.
NORWAY: Bilateral EC-Norway Shipping Consultations, in the basis of common shipping policies.
USA: EC-US Dialogue, with US Coast Guards and Maritime Administration (MARAD).
RUSSIA: EC-Russia Maritime Safety and Maritime Transport Policy Dialogue.
SOUTH AFRICA: EU-South Africa Dialogue starting on maritime transport.

B) EU-bilateral agreements and contacts with other countries, on maritime issues:

CANADA, SINGAPORE: Informal dialogue, meetings in the *Consultative Shipping Group* (CSG).
S. KOREA: Informal contacts through the CSG, and indirectly through EU-Korea FTA negotiations.
AUSTRALIA: Informal multilateral meetings in the context of WTO/GATS's *Friends of Maritime* Group.
PANAMA: Contacts and Dialogue started with Panama, also through *Friends of Maritime* Group.
OTHER COUNTRIES (Agreements of rather general nature including maritime sector):
Algeria, Bahamas, Chile, Iceland, Indonesia, Kazakhstan, Malaysia, Marshall Isl., Mexico, Morocco, New Zealand, Saudi Arabia, South Africa, Switzerland, Thailand, Turkey, Ukraine, Vietnam.

International Organisations (with some relation to Maritime) with EU/EC*being represented

Acronym, Name		*founded, HQ/SG*	*Presence*	*since*
AC:	Arctic Council (permanent observer application)	1996, Tromso(p)	[EU application]	2009
ATS:	Anctartic Treaty Secretariat (Antarctic Treaty System)	1959, Buenos Aires	-	-
BEAC:	Barents Euro-Arctic Council (BEAR, Regions)	1993, Kirkenes	EC, full member	1993
BIPM:	International Bureau of Weights and Measures	1875, Sèvres	-	-
BSC:	Black Sea Commission (est.by Bucharest Conv.prot.BS)	1992, Istanbul	-	-
BSEC:	Organisation of the Black Sea Economic cooperation	1992, Istanbul	-	-
CCNR:	Rhine Commission (application frozen 2007)	1816, Strasbourg	[EU application]	2003
CERN:	European Organisation for Nuclear Research (Unesco-l.)	1952, Geneva	EC-observer	1985
CLCS:	UN Commission on Limits of Continental Shelf (Unclos)	1997, New York	-	-
CoE:	Council of Europe (47 member states)+ECHR, 1959	1949, Strasbourg	EU-participant	1996
CPAR:	Conference of Parliamentarians of Arctic Region	1993, Oslo	EP, full member	1993
DC:	Danube Commission (Inland waterways transport)	1948, Budapest	[EU application],	2003
EBRD:	European Bank for Reconstruction and Development	1991, London	EU-member	1991
ECOSOC:	Economic and Social Council (UN Agencies coord.)	1945, NY-Geneva	EU-observer	1974
ECSEE:	Energy Community (of South-East Europe) Secretariat	2005, Vienna	EU-full party	2005
ECT:	Energy Charter Treaty Secretariat	1991, Brussels	EU-full party	1991
ESA:	European Space Agency (intergovernmental org.)	1975, Paris	-	-
FAO:	Food and Agriculture Organisation (+WFP, 1962-Rome)	1945, Rome	EU-full member	1991
GEF:	Global Environment Facility (UNDP/UNEP/WB-link)	1991, Washington	-	-
GESAMP:	Joint Group Experts Marine Environm.Protection (UN)	1969, London	-	-
HELCOM:	Protection of the Marine Environment in Baltic	1992, Helsinki	EU-party	1994
IAEA:	International for Atomic Energy Agency	1957, Vienna	EU-participant	1975
IALA:	Intern. Assoc. Marine Aids and Lighthouse Authorities	1957, Paris	-	-
IATA:	International Air Transport Association	1945, Montreal	-	-
IAU:	International Astronomic Union	1919, Paris	-	-
ICAO:	International Civil Aviation Organisation	1944, Montreal	EU-observer	1989
ICBSS:	International Centre for Black Sea Studies (BSEC-link)	1998, Athens	-	-
ICC:	International Chamber of Commerce	1919, Paris	-	-
ICJ:	International Court of Justice	1945, The Hague	-	-
IEA:	International Energy Agency (OECD body) +NEA	1974, Paris	EC-member	1976
IGU:	International Geographic Union	1922, Brussels	-	-
IHO:	International Hydrographic Organisation	1921, Monaco	-	-
ILO:	International Labour Organisation (OIT) (UN Agency)	1919, Geneva	EU-observer	1961
IMB:	International Maritime Bureau (ICC-linked,+Piracy RC)	1981, London/KL	-	-
IMO:	International Maritime Organisation (UN body)	1948, London	EC-observer	1974
IMSO:	International Mobile Satellite Organisation (IMO-linked)	1979, London	-	-
IOC:	Intergovernmental Oceanographic Commission (Unesco)	1960, Paris	EU-observer	2005
IOM:	International Organisation for Migration	1951, Geneva	EC-observer	1974
ISA:	International Seabed Authority (Unclos-related)	1982, Kingston	EU-member	1994
ISO:	International Organisation for Standardisation	1947, Geneva	-	-
ISTC:	International Science and Technology Centre	1992, Moscow	EU-found.member	1992
ITC:	International Trade Centre (WTO/UNCTAD-sponsored)	1964, Geneva	EU-participant	-
ITER:	Intern.Thermonucl.Experimental Reactor, ITER Council	1986, Moscow	EU/Euratom-party	1996
ITLoS:	International Tribunal for the Law of the Sea	1982, Hamburg	-	-
ITSO:	International Telecommunications Satellite Organisation	1964, Washington	-	-
ITU:	International Telecommunication Union (+WSIS)	1866, Geneva	EU-participant	1989
IVF:	International Visgrád Fund (from Visegrád Group, V4)	1999, Bratislava	-	-
IWC:	International Whaling Commission	1946, Cambridge	-	-
NATO:	North Atlantic Treaty Organisation	1949, Brussels	-	-
NEAFC	North-East Atlantic Fisheries Commission (FAO)	1999, London	EU-member	1999
OCHA:	UN Office for Humanitarian Affairs (UNGA-linked)	1991, NY-Geneva	EC-member	-
OECD:	Organisation for European Cooperation and Development	1947, Paris	EC-participant	1960

OSCE:	Organisation for Security and Cooperation in Europe	1975, Vienna	EU-participant	2006
OSJD:	Organisation for Cooperation of Railways	1957, Warsaw	-	-
OSPAR:	Protection of the Marine Environment NE Atlantic	1972, London	EU-party	1998
OTIF:	Intergov.Organis.for Intern.Carriage by Rail (COTIF-1980)	1985, Berne	EU-member	2011
Paris MoU:	Paris Mem.of Understanding on Port State Control	1982, The Hague	EC-member	1982
REMPEC:	Marine Pollution Response Mediterranean (Bcn Conv.)	1976, Malta	EU-party	1976
TIR:	International Transport by Road (linked to Unece)	1975, Geneva	EU-observer	1974
UA:	University of the Arctic (Arctic States)	2005, Rovaniemi	-	-
UfM:	Union for the Mediterranean, UPM (Barcelona Process)	1995, Barcelona	EU-member	2008
UIC:	International Union of Railways	1920, Paris	-	-
UNCITRAL:	UN Commission on International Trade Law	1966, Vienna/NY	EU-observer	1974
UNCLOS:	UN Convention on the Law of the Sea	1982, New York	EU-full member	1982
UNCTAD:	UN Conference on Trade and Development	1964, Geneva	EU-participant	1965
UNDP:	UN Development Programme (UNGA-linked)	1965, New York	-	-
UNECE:	UN Economic Commission for Europe (TIR, IWT..)	1947, Geneva	EU-observer	1974
UNEFACT:	Centre for Trade Facilitation and Electronic Business	1996, Geneva	-	-
UNEP:	UN Environment Programme	1972, Nairobi	EU-observer	1972
UNFCCC:	UN Framework Conv.on Climate Change (+KP/1998)	1992, Bonn	EU-member	1992
UNESCO:	UN Educational, Science and Cultural Organisation	1945, Paris	EU-observer	2005
UNGA:	United Nations General Assembly (EU own voice 2011)	1945, New York	EU-observer	1974
UNHCR:	UN High Commission for Refugees	1950, Geneva	EU-observer	1974
UNIDO:	UN Industrial Development Organisation	1966, Vienna	EU-observer	1993
UNIDROIT:	International Institute for Unification of Private Law	1926, Rome	EU-observer	-
UNODC:	UN Office on Drugs and Crime	1997, Vienna	-	-
UNOOSA:	UN Office for Outer Space Affairs (+COPUOS)	1962, Vienna	EU-observer	-
UNOPS:	UN Office for Project Services (UNDP-linked)	1974, Copenhaguen	-	-
UNSC:	UN Security Council	1945, New york	EU-participant	-
UNU:	United Nations University	1973, Tokyo	-	-
UNWTO:	World Toursim Organisation (1925, then UN Agency)	1970, Madrid	EU-observer	-
UPU:	Universal Postal Union	1874, Berne	EU-inf.observer	-
WB:	World Bank (+IMF, main Bretton Woods Institutions)	1944, Washington	EU-observer	1984
WCO:	World Customs Organisation (OMD)	1952, Brussels	EU-full member	2007
WFP:	World Food Programme (linked to FAO, 1945-Rome)	1962, Rome	EU-observer	1996
WHO:	World Health Organisation (OMS)	1948, Geneva	EU-observer	2001
WIPO:	World Intellectual Property Organisation (UN Agency)	1970, Geneva	EU-observer	-
WMO:	World Meteorological Organisation (OMM)	1950, Geneva	EU-observer	2003
WMU:	World Maritime University (IMO-linked)	1983, Malmö	-	-
WTO:	World Trade Organisation	1995, Geneva	EU-found.member	1995

**EU standing for European Union and/or European Community(ies) before re-adapting the denomination after the Lisbon Treaty, in force since 1.12.09, and previous Treaties; EC standing for European Commission.*

Main Cities where Headquarters/Secretariats of the above international organisations are located, with #: **Geneva** (16), **Paris** (10), **New York** (8), **Vienna** (7), **London** (7), Brussels (4), Rome (3), Washington (3), Berne, Montreal, Moscow, Strasburg, The Hague (2); other cities: 25 (with HQ of 1 intern.organisation).

Annex 16, Vademecum No.43: MARITIME NEWS – Headlines
1st Semester 2014 (January – June)

1. EU Maritime Policy and Legislation

Maritime Safety

- Around 2,600 ships involved in casualties around the world in 2013; 94 were total losses, being the second time that figure drops below 100 since 2003 (EMSA News, 14.3.14)
- 17 parties file appeal against Court sentence on Prestige sinking; unprecedented result with no convicted draws protest from Spain, France, civil society, other (El Periódico, 22.5.14)

Environment, Sea pollution, Air emissions

- Stumbling blocks on path to MRV; industry questions regulators' understanding of vessel operations as emnissions rules debated, EC sets 2018 as first monitored year (LL, 24.1.14)
- EC welcomes EP's vote for renewed resources for combating pollution at sea; EP adopts 2014-2020 anti-pollution financial package of 160.5 Meuro for EMSA (RapidPR, 15.4.14)
- EU Shipowners applaud European Parliament's change of heart on monitoring of shipping CO2 emissions; EP adopts report on EC's EU Regulation proposal (ECSA News, 30.4.14)
- ECSA: Implementation of EU Sulphur Directive must be harmonised and realistic; MSs must have transposed by now EU law, to enter into force on 1.1.15 (ECSA News, 18.6.14)

Maritime Security, Piracy

- Nato Anti-Piracy operation is extended due to threat of ship hijacks off Somalia; operation with ships patrolling area since 2009, is extended until end of 2016 (Emsa News, 5.6.14)
- Brussels strengthens Europe's maritime security; European Council approves new EU maritime security strategy, developed under the Greek Presidency (LL, 24.6.14)
- EC's call for tender: Study on Cruise Ship Security; EC publishes call for tender for study to look into security issues and possible threats to cruise sector (ESPO News, 30.6.14)

Short Sea Shipping, Motorways of the Sea, modal shift, internal market, Blue Belt

- Athens Declaration sets EU future maritime transport policy priorities; Informal meeting of EU Maritime Ministers ends in Athens, lists policy priorities (COMM News, 8.5.14)
- Continuous efforts needed to establish harmonised reporting procedures for vessels; EC adopts report on the functioning of Reporting Formalities Directive (Rapid PR, 25.6.14)

Policy Strategy, Competition, Cabotage, State Aids, Integrated Maritime Policy

- Legal grey area for shipping lines as Brussels opens antitrust proceedings; EC investigates whether freight rate announcements from leading container lines is unlawful (LL, 5.2.14)
- Commission adopts European Strategy to Promote Coastal and Maritime Tourism; EC presented, on 20 February, its new strategy to support sector in EU (ESPO News, 3.3.14)
- EC gives green light for the P3 Network, G6 cooperation; EC opens path for operation of world's two biggest shipping alliances, says it will not open a file (COMM News, 5.6.14)
- Domestic factors key to Beijing's rejection of shipping merger; P3 alliance for a grand European shipping alliance was a threat in the eyes of Chinese operators (FT, 19.6.14)
- EC extends Liner Consortia Block Exemption Regulation until 2020; exemption of liner shipping consortia from EU antitrust rules extended, EC says (ECSA News, 24.6.14)

Common Maritime Space, surveillance, e-maritime, IMO membership, EU register, immigration

- Greece probes migrant deaths; boat sank with 28 people on board, Afghan and Syrian migrants, while it was being towed, Coastguard faces misconduct claims (FT, 25.1.14)
- 42,000 immigrants entered EU, mainly in boats, during 2013-Q3; third quarter of 2013 saw a massive upswing in irregular migrants arrivals, it is reported (Emsa News, 4.2.14)

- EU adopts new norms to reinforce sea border controls; new EU Regulation wih norms on border control to simplify Frotex task to fight illegal immigration (El Periódico, 13.5.14)

Shipyards/shipbuilding, marine equipment and technology, ship scrapping

- EP approves Directive on ship equipment; EP accepts EC's proposal for the replacement of the existing Directive on marine equipment with a new one (COMM News, 22.4.14)

Ports & port services

- Competition Commissioner to look into state support for sea ports; EC to see possible illegal state aid for ports, in reesponse to questions from MEP (Comm News, 20.3.14)
- Port services: EC plans to maintain its proposal; divided over project of opening activity to competition, MEPs postpone issue until the next legislature (COMM News, 25.4.14)
- ESPO to develop code of good practice for EU cruise and ferry ports; European Sea Ports Organisation responds to growing number of sea passengers in EU (ESPO News, 3.6.14)

Seafarers and social sector, passenger rights

- Europe's Shipping sector welcomes new facilitations for seafarers under the revision of the EU Visa Code; revision seen to benefit visa facilitation for seafarers (ECSA News, 3.4.14)
- Brussels will not ban Filipino seafarers, who faced the threat of derating; EMSA tells country's authorities to report to the European Commission every quarter (LL, 2.5.14)

International, bilateral & multilateral, EU actions, Arctic policy

- EU imposes Crimea sanctions; EU to impose sanctions against 21 Russian and Crimean officials, after Crimea votes to leave Ukraine and join Russian Federation (LL, 17.3.14)

Transport intermodality, inland waterways, Galileo, Copernicus, telecom satellites, logistics

- Europe starts launch of new fleet of satellites to monitor the Earth; First "Sentinel" satellite from Copernicus programme to be launched from French Guyana (El Periódico, 31.1.14)
- TRAN adopts legislative proposal Naiades II package; Transport and Tourism Committee of EP adopted on 20 February the 2 proposals of Naiades II package (ESPO News, 3.3.14)

Energy maritime issues, energy for transport

- EC creates Forum for Marine renewable energies; Commissioners for Maritime Affairs and Energy present an Action Plan for EU marine energies (French Shipowners, 23.1.14)

Projects financing, Marco Polo, TEN-T, EIB loans, institutional

- Horizon 2020: 6.3 billion euros for transport; some of the calls for proposals for EC's new R&D programme, published in December, cover maritime (French Shipowners, 15.1.14)
- TEN-T: Greener river vessel inaugurated thanks to EU support; Innovation and Networks Executive Agency (INEA) inaugurates retrofitted LNG-powered ship (RapidPR, 19.6.14)

Insurance, P&I Clubs, finance, class societies

---

2. News in the Sector, Market Trends, Companies

Markets

- Shipping is back with a bang: Euronav agrees to splash $980m on 15 Maersk very large crude carriers in biggest acquisition in VLCC sector in memory (LL, 9.1.14)
- US approves G6 alliance extension; US Federal Maritime Commission approves alliance between APL, Hapag Lloyd, Hyundai, Mitsui, NYK, OOCL (FR Shipowners, 16.4.14)

Shipping companies, associations

- Maersk cautions on year ahead; container demand is expected to rise 4%, whereas profits are forecasted flat for overall group, that faces year of hard work, says CEO (FT, 28.2.14)
- Hapag-Lloyd buys Chilean CSAV; German shipowner expands by purchasing Chilean group, becomes the world's fourth largest liner shipping group (FR Shipowners, 17.4.14)

- Maersk buoyed by upward trend in global trade; First-quarter results of Danish group, that transports 15% of world freight, beat expectations, lift profit forecast to $4bn (FT, 22.5.14)

Cruisers/Ferries

- Over 600 passengers on cruise ship ill with gastroenteritis; "Explorer of the Seas" vessel from Royal Caribbean is expected to arrive at New Jersey, USA (El Periódico, 28.1.14)
- Cruise operator Carnival returns to calmer waters; group reports better than expected earnings, helped by sustained marketing push and better economic climate (FT, 25.6.14)

Maritime Safety

- IMO gives go-ahead to mandatory container weight checks; Mandatory container weight checks to be introduced following IMO agreement, final adoption to follow (LL, 19.5.14)
- Reward for owner increased to $500,000 after ro-ro ferry sinks with loss of 302 off South Korea; ten-fold increase in reward to find billionaire owner of ferry (Emsa News, 26.5.14)

Environment, sea pollution, air emissions, climate change

- DFDS to axe North Sea route ahead of SOx deadline; Company warns customers of new surcharge as it switches to low-sulphur fuels, route Esbjerg to UK to close (LL, 29.4.14)

Maritime Security, Piracy

- Drop in Somali piracy suggests a rethink over prosecutions; infrastructure to prosecute Somali pirates should be dismantled if trend continues, says US academic (LL, 28.1.14)
- Two security officers found dead on famous Maersk box ship in Seychelles; cause of death of security officers in US containership *Maersk Alabama* unknown (Emsa News, 20.2.14)
- VLCC attacked by pirates off Oman; Thai flagged very large crude oil carrier is attacked when it was 60 n-miles off coast of Oman, near the Strait of Hormuz (Emsa News, 5.3.14)
- Maritime Security Strategy: Shipowners call for more action on piracy and port security; ECSA calls for EP and Council to endorse EC/EEAS document (ECSA News, 20.6.14)
- Nigerian Navy is forcibly preventing the use of armed security guards on board of ships within the country's EEZ; IMO has requested clarification from authorities (LL, 25.6.14)

Surveillance, Immigration

- Over 2,500 migrants saved by Navy in 24 hours; Italian Navy says it rescued a total of 17 migrant boats that had departed fom the coast of North Africa (Emsa News, 6.6.14)

Short Sea Shipping, Motorways of the Sea, competitiveness, competition

- Shippers urge regulators to rein in P3; Global Shippers' Forum calls for adjustments to ease competition concerns, just days before the US is to announce decision (LL, 18.3.14)

Shipyards/shipbuilding, marine equipment and technology, ship scrapping

- First French ferry vessel powered by LNG to be constructed by STX in France, St.Nazaire; *Pegasis* ferry ship will be the world's third largest of this kind (Le Marin, 15.1.14)
- Drones soon also at sea; Rolls-Royce preparing cargo ships that will sail without crew, to be more cost-effective, safer and more environtally friendly (French Shipowners, 4.3.14)
- Five die in Alang shipbreaking; five workers killed in latest incident in India raises the number of killet this year in South Asian ship recycling yards to 20 (LL, 30.6.14)

Ports & port services

- Italian port chosen for transfer of Syrian chemical arsenal; chemical weapons to be loaded in Gioia Tauro from Danish ship to US ship for destruction (French Shipowners, 17.1.14)
- EU-China railway a threat for EU ports; Dutch logistics director of Hewlett-Packard says increasingly popular railway connection threats main EU ports (COMM News, 21.3.14)

Seafarers and social sector

- The situation of seafarers worries the Vatican; Pope meets *Apostolatis Maris*, shares concerns about work and life conditions of world's seafarers (French Shipowners, 27.1.14)
- Sewol master and three crew members could face the death penalty; South Korean prosecutors bring indictments of homicide through gross negligence (LL, 15.5.14)

Transport intermodality, inland waterways, telecom satellites, logistics

- Inland ports discuss European issues on Danube; Inland ports meet in Bratislava for the Executive Committee meeting of the European Federation of Inland Ports (EFIP, 31.3.14)
- Almost 200 evacuated before cruise ship sinks in Netherlands; passengers and crew evacuated afte ship hits obstruction and sinks, in river Ijssel (Emsa News, 23.6.14)

Energy maritime issues, energy for transport, transport of oil and gas, LNG

- Ukraine conflict said could change global LNG shipping trends; disruptions to gas exports piped from Rusia to Europe could force Europe to rely more heavily on LNG (LL, 5.3.14)

Insurance, P&I Clubs, banking and ship finance, class societies

- Lloyds Bank continues to disengage from maritime transport; UK bank tries to get rid of $500m of shipping loans, in global policy of risk reduction (French Shipowners, 18.2.14)

---

3. News in the enlarged Europe and EU Bordering Zones

Austria

Belgium

- Zeebrugge: Fluxys signs deal with Yamal LNG on transhipment of Arctic gas; Russian joint venture with Novatek, Total signs deal with Belgian group (FR Shipowners, 23.4.14)
- NGO calls for end-of-life car carrier to be seized in Belgium; Platform on Shipbreaking calls on Belgium to seize 1987-built ship before sailing to Alang (Emsa News, 5.6.14)

Bulgaria

Croatia

Cyprus

- Oil tanker seized by US Navy South-east of Cyprus; rogue crude oil tanker is seized by the US Navy, preventing it from selling unauthorised cargo of Libyan crude oil (LL, 17.3.14)
- Greek-Cypriot tender could be first step for Cyprus to become an LNG trading hub; Delek Group and partners in East Med natural gas field submit tender (FR Shipowners, 17.4.14)

Czech Republic

Denmark

- Maersk to sell stake in Danish retailer; AP Moller-Maersk is selling most of its stake in Denmark's largest retailer, shipping-to-oil empire continues to prune potfolio (FT, 8.1.14)
- Danish carriers have billions at stake in Russia; Maersk, Unifeeder, DFDS are at particular risk of being hit by Russian sanctions, say Danish Shipowners (Comm News, 20.3.14)

Estonia

- Estonian MEPs react after anti-piracy vessel is arrested on arms charges in India; joint statement made on arrest of US ship with crew of 35, 14 Estonian (Emsa News, 17.1.14)

Finland

- Finland reveals further state aid for shipowners seeking to meet environmental challenges; move underscores new maritime strategy to 2022, supports greening of fleet (LL, 12.3.14)

France

- France debates legalising private maritime security firms; France is finally set to authorise use of private maritime security firms on ships, draft legislation presented (LL, 15.1.14)
- French Normand ports cooperate themselves to face competition; French ports of Rouen, Le Havre, Caen and Paris sign a three-year partnership agreement (Comm News, 27.1.14)
- French General says threat of ship hijacks ended off Somalia; General Hogard says piracy in seas around Somalia no longer poses threat to merchant shipping (Emsa News, 23.6.14)

Germany

- Ports of Bremen and Bremerhaven affected again by the crisis; German twin ports, that registered a good growth in 2011 and 2012, are hit again by crisis (Comm News, 18.3.14)
- German flag falls below 400 ships; number of vessels at lowest level for decades; number of German-owned vessels on other flags also drop, to below the 3,000 mark (LL, 19.6.14)

Greece

- Greek tax grab sours shipowners' mood; Ministry of economy pushes a surprise new tax law for ships, after industry had agreed to pay voluntary double tonnage tax (LL, 16.1.14)
- Russia-Ukraine tensions have yet to affect tanker movements, says broker; tanker business in the region, mainly operated by Greek shipowners, not seen affected so far (LL, 5.3.14)
- Greek-owned fleet soars to record level; In its biggest expansion since 2008, Greek-owned merchant fleet has grown year-to-year by 9.6%, survey says (FR Shipowners, 7.4.14)
- Posidonia 2014: Greek Shipping Minister calls for EU shipping reform; Varvitsiotis calls for EC intervention, EU policy reform, to support shipping competitiveness (LL, 2.6.14)

Hungary

Ireland

Italy

- Danish ro-ro cargo ship takes first Syrian chemical weapons to Italy; ship underway from Syria to Italy with first chemical weapons cargo to be destroyed (Emsa News, 8.1.14)
- 4,337 rescued from vessels off Italy in four days; UNHCR is urging EU to provide more support, and Italian PM asks Brussels for reinforcement of Frontex (Emsa News, 21.3.14)
- Fincantieri launches its initial public offering; Italy plans to sell a 38% stake in state-owned shipbuilder, specialised in cruise ships, naval and offshore vessels (LL, 16.6.14)

Latvia

Lithuania

Luxembourg

Malta

- Court appeal held up after Malteses cruise ship sinking off Greece in 2007; Greek court adjourns appeal case of 9 people convicted in link with accident (Emsa news, 29.1.14)

Netherlands

- Dutched flagged anti-whaling ship collides with Japanese whaling ship in Southern Ocean; Japan accuses Sea Shepherd of engaging in very dangerous sabotage (Emsa News, 5.2.14)
- Ship release sought by Greenpeace after seizure off Russia, jailing of crew; formal petition filed for release of NL-flagged *Arctic Sunrise*, 5 months after seizure (Emsa News, 5.3.14)

Poland

- Gdansk surpasses barrier of 30m tonnes; arrival of Maersk's giant containerships of 18,200 teu and other cargoes have contributed to the port's growth (French Shipowners, 9.1.14)

Portugal

- EU's Maritime and Fisheries Policy: Putting Portugal on Path of Growth; Commissioner Damanaki delivers speech on growth and jobs at Lisbon Conference (Mare News, 22.4.14)

Romania

Slovakia

Slovenia

Spain

- Spanish Public Works Minister flies to Panama to discuss Canal dispute; Spain attmpts to defuse a billion dollar row involing firm Sacyr and Panama Canal Authority (LL, 6.1.14)
- EU says that aid that the Spanish shipbuilding industry must return is greater; EC says the amount of 126 Meuros that Spain has calculated is not sufficient (Comm News, 28.1.14)

- Port of Barcelona urges the Spanish Government to preserve its financial autonomy; new land accessibility Fund is to finance Spanish ports' connections (El Periódico, 27.6.14)

Sweden

- TEN-T project: EU co-financing to help port of Stockholm redevelopment; EU to co-finance with over 14 Meuros project to revamp port infrastructure (MOVE News, 28.3.14)
- Permit granted for LNG terminal in Gothenburg; terminal to be capable of supplying shipping, industry and heavy transport with gas, as switch from oil is made (LL, 9.6.14)

United Kingdom

- Derelict 38-year-old cruise ship feared to be drifting towards UK; *Lyubov Orlova*, adrift in NW Atlantic since January 2013, is feared to be heading for Britain (Emsa News, 23.1.14)
- UK seeks closer collaboration in maritime security; the UK publishes its National Strategy for Maritime Security, to provide "joined-up", cross-gevernment approach (LL, 13.5.14)

EU Candidate countries, Western Balkans

- Iceland withdraws candidacy for EU Accession; After stoping negotiations in September, Icelandinc government withdraws application, with no referendum (Comm News, 24.2.14)

Norway

- Norwegian research vessel expelled from disputed waters off Cyprus; Cyprus to complain to UN after Turkish Navy patrol ship expels ship in gas exploration (Emsa News, 5.2.14)
- Europe's only LNG export plant is out of action for six weeks; Norway's liquefied natural gas export plant in Hammerfest closes for maintenance until June (LL, 1.5.14)

Switzerland

Ukraine

- Russian flag already flies in all military units and installations of Crimea; only two ships from Ukrainian Navy managed to escape from seizure by Russians (El Periódico, 27.3.14)

Other European countries

Russia

- Russia to use military infrastructure for Northern Sea Route; Russia to construct military stations and coastal infrastructure, to reconstruct abandoned aerodromes (EU Del, 24.1.14)
- Russia sinks vessel in Black Sea to block passage of Ukrainian Naval fleet; Russian forces sink old navy ship, block access to Ukraine naval base in Sevastopol (El Periódico, 6.3.14)

Arctic, Polar regions

- Chinese ice-breaker assisting ship stuck in Antarctic sea-ice gets stuck; 52 passengers from Akademik Xokalski were earlier transferred to Australian ship (El Periódico, 3.1.14)
- More North-West Passage travel planned by Danish shipper; Nordik Bulk Carriers plans to increase NWP shipments next year, after first commercial transit (Comm News, 7.1.14)
- Cruiseship pairing not viable in Arctic waters, warns CLIA; industry cites insufficient customer demand, operational risks, as insurance industry voices concerns (LL, 10.1.14)
- Shell suspends Arctic drilling; Anglo-Dutch oil major suspends its drilling in Arctic waters off Alaska, chief says decision is linked to US Court challenge on licenses (FT, 31.1.14)
- Arctic routes forecast to be only a limited boon for shipping; opening of Arctic shipping routes said -in summit- not to generate immediate boom in use of the route (LL, 6.3.14)
- Daewoo shipbuilding receives shipbuilding order, signs contract with Russia worth $367m for construction of LNG tanker with ice-breaking capability (French shipowners, 17.3.14)
- Greenpeace protests as Sovcomflot's tanker lands an Arctic first; Sovcomflot's ice-class tanker docks at Rotterdam with cargo of 67,000 tonnes of Arctic crude oil (LL, 1.5.14)
- Ice melt in Antarctica is already "unstoppable" and "irreversible"; NASA scientists warn and draw conclusion from data collected in the last four decades (El Periódico, 13.5.14)

Mediterranean Partners, countries

- First chemical weapons load from Assad leaves Syria; the vessel, with Danish flag, leaves the port of Latakia for international waters, escorted by war ships (El Peródico, 8.1.14)
- Growth of container traffic in the port of Algiers; Maritime traffic in Algerian port has grown by 15% year-on-year for ro-ro and 6% for containers (French Shipowners, 14.1.14)

Incidences in European seas, maritime accidents

- Danish box ship loses 520 containes off France; incident involving 7,200-teu containership occurred in hurricance force winds around 60 n-miles off Brest (Emsa News, 19.2.14)
- UK protests at alleged incursion by Spanish Navy ship off Gibraltar; Navy ship in waters around Gibraltar during British forces parachute training exercise (Emsa News, 20.2.14)

----

4. Other International, World News

Japan

- Japanese icebreaker aground on rocks of Antarctica; ship runs aground when it was 700m off the un-manned Russian *Molodyozhnaya* Station in Antarctica (Emsa News, 20.2.14)
- Japanese ship seized in wartime claims row; Chinese court seizes Japanese cargo ship over legal claims related to WWII as tensions rise, Japan denounces confiscation (FT, 22.4.14)
- Japan pledges support in China disputes; Japanese PM says his country is to play a bigger role in ensuring peace in Asia by providing support to SE Asian nations (FT, 31.5.14)

United States

- Siemens to supply first eolian park to the US; German group signs contract to deliver 130 wind turbines for offshore park along coast of Massachussets (French Shipowners, 9.1.14)
- ABS offers advice for sailing Russia's Northern Sea Route; US class society expects that interest in sailing the Arctic waterway to grow, says ready to help in transit (LL, 29.1.14)
- Hundreds of cargo ships affected by greatest ice cover in over 30 years in US; ice cover on Great Lakes hits one of America's most important economic regions (Emsa News, 2.5.14)

China

- Beijing starts antitrust review of P3; container ship liners mega-alliance is under review, decision by Chinese authorites not expected before second quarter of 2014 (LL, 29.1.14)
- Cosco Group, China shipping strategic cooperation agreement; Chinese shipping groups sign agreement, to establish comprehensive strategic partnership (safety4sea, 18.2.14)
- Cosco Pacific, China Shipping invest in Hutchinson Port; China's two biggest shipping companies invest in Singapore-listed Hutchinson Port Holdings (Comm News, 14.3.14)

Hong Kong

- Guangzhou ports threaten Hong Kong's status; traffic through Nansha alone has grown over fourfold in just a decade, with fast growth of its three other ports too (FT, 16.1.14)

Taiwan

Korea (South)

- 26,000 tonnes of chemicals could spill if tanker breaks up off South Korea; blaze in tanker after ships collision raises risks, after ship is denied place of refuge (Emsa News, 20.2.14)
- South Korean trawler gets back to Antarctic work after stranding; *Kwang Ja Ho* refloats itself with all 90 fishermen safe, returns to normal operation to Antarctic (LL, 26.2.14)
- Korean PM resigns over bad management of the sinking of the ferry ship "Sewol"; Chung Hong-won resigns after assuming responsibility over tragedy faults (El Periódico, 28.4.14)

Singapore
- Strait of Malacca still not safe from pirates; Waters in Singapore, Malacca straits are still not entirely safe from pirates, as evidenced by recent incidents (Comm News, 14.3.14)

Canada
- Major blaze disables Canadian ship with over 300 on board in North Pacific; Canadian Navy refuelling ship disabled, towed to Hawaii by US Navy ship (Emsa News, 5.3.14)

India
- Italy withdraws envoy in India dispute; Italy withdraws its ambassador in protest at what it calls "manifest inability" of justice system to handle case of Italian marines (FT, 19.2.14)

Saudi Arabia

Brazil
- Hamburg Süd wants to grow and invest in Brazil's ports sector; German group already controls one of Brazil's largest cabotage shipping company (French Shipowners, 25.3.14)

Malaysia
- 3 days after Malaysia Airlines flight MH370 from Kuala Lumpur to Beijing disappears over South China Sea, there is still no sign of wreckage but searches go on (FT, 11.3.14)

Iran
- Brussels lifts its ban on shipping Iranian oil; EU implements sanctions rlief for Iran for six months as Tehran curbs its nuclear programme (LL, 14.1.14)

Philippines
- 2 lost, 8 missing after ship hits and sinks fishing vessel off Philippines, cargo ship carrying containers is being sought by the Philippines authorities (Emsa Nes, 14.3.14)
- Manila warns over China's oil drilling tactics; President of Philippines warns that Beijing may repeat its tactics of exploring for oil in disputed waters close to country (FT, 27.5.14)

Indonesia
- 132 rescued, 7 missing after ro-ro ferry sinks off Indonesia; Indonesian ferry sinks 22 nm off the port of Tanjung Priok, Jakarta, after struck by huge waves (Emsa News, 23.1.14)
- Indonesia's gamble on ore export ban worries investors and mining communities; long-planned ban on the export of unprocessed ores, like bauxite, is implemented (FT, 8.5.14)

Australia
- Ten ships search Indian Ocean for Malaysian Airlines flight MH370; Australia reports no new progress finding aircraft missing with 239 passengers (LL, 31.3.14)

Thailand

Vietnam
- Damen inaugurates its shipbuilding yard of Song Cam in Vietnam; Dutch group opens its new centre of 43 hectares, to construct mainl tug ships (French shipowners, 25.3.14)
- Hanoi steps up war of words with Beijing after boat sinks; China, Vietnam fire accusations at each other after sinking of Vietnamese fishing vessel near Paracel islands (FT, 28.5.14)

UAE, Gulf region

Caribbean region

South Africa, Sub-Saharian Africa

Other countries and regions

Panama Canal, register
- Panama Canal widening project threatened by dispute over costs; consortium threatens to suspend a $3.2bn project if not compensated for $1.6bn of costs overruns (FT, 3.1.14)
- Frist tests on enlarged Panama Canal in one year; first tests foreseen in one year, says Administrator, after inauguration originally foreseen in 2014 (FR Shipowners, 11.6.14)

Suez Canal

- Death sentence for 26 for planning terrorist attacks on ships in Egypt; 26 sentenced for plotting attacks in Suez Canal, manufacturing missiles, explosives (Emsa News, 27.2.14)
- 15 tonnes of explosive material found near Suez Canal; Egyptian Army says it is one of biggest hauls since the start of campaign against Islamist militants (Emsa News, 15.5.14)

Incidences in world seas, maritime, ship accidents

- Passenger search after Korean ferry sinks; marine police search for almost 300 people after ferry carrying over 450 passengers sinks off SW coast of South Korea (FT, 17.4.15)
- Passenger ship accident in India kills 21 people; passenger ship transporting tourists in South East of India, in Gulf of Bengal, sinks, at least 21 missing (Comm News, 27.1.14)

Territorial/maritime disputes, UNCLOS-related issues

- China passes law to keep non-Chinese fishing vessels out of disputed parts of South China Sea; foreing ships to need to seek permission before entering waters (Emsa News, 10.1.14)
- Maritime border between Peru and Chile redefined; Peru says is pleased with International Court of Justice's ruling, increasing Peru's EEZ by 20,000 sq.km (El Periódico, 28.1.14)
- Tensions in South China Sea escalate afer Vietnam says Chinese ships rammed its vessels near Paracel islands and Philippines detains Chinese fishing boat and crew (FT, 8.5.14)

----

5. International Legislation, Institutions (IMO, WTO, ILO…)

International Law, Unclos, IMO

- Sekimizu renews call for faster adoption of IMO Conventions; IMO Secretary-general seeks "genuine progress" in implementing the organisation's goals (LL, 22.1.14)
- Nairobi Convention on shipwreck removal to enter into force on 14 April 2015; Denmark becomes 10th State to ratify IMO Convention, signed in 2007 (FR Shipowners, 17.4.14)

Social aspects, seafarer profession, ILO

- ILO adopts new measures to protect abandoned seafarers; changes to MLC 2006 to ensure financial security for abandoned seafarers and death, injury claims agreed (LL, 14.4.14)

International trade, WTO, competition, Unctad, WCO

- P3 decision shows why shipping needs a global competition body, single authority would benefit the industry, says lawyer; after China's decision to reject P3 Alliance (LL, 25.6.14)

International economy, OECD, IMF, WB, G-8, G-20

- China to overtake US as top economic power this year; change, monitored by world's leading statistical agencies, was initially not expected until 2019 (FT, 30.4.14)

Environment, UNEP, Climate change

UN, General

Main UNITS, MEASURES and CONVERSIONS used in Maritime *(with background, Back Cover)*

Nautical mile (nm): **1nm=1.852km=length of minute of meridian arc of Earth** (60nm make one –out of 360- degree); from Latin *mille* for 1,000 paces (land mile = 1.6093km), used in Middle Ages, and from early 17th century in Britain's Admiralty Law. Distance unit used in **maritime and aviation**. 1km=0.54nm; length of Equator/Earth meridian = 60nm x360 (degrees) = 21,600nm x 1,852 = 40,000km (approx.).

Knot (kt): measure of speed in maritime, **1knot=1nm/hour**. In old times real knots were made in a string.

Meter(m)/km: from Greek *metron*, defined at end of 18th century by French as length of a pendulum with a half-period of one second or **1/10,000,000 of the length of quadrant** of Paris meridian (today in terms of distance travelled by light in second fraction). Number of units derived from meter (dm, cm, mm, km, ha..) and **weight and volume** units (SI): **gram** (g), cg, mg, kg, t, **litre** (l), dl, cl, ml (**1dm3 water=1kg=1 litre**).
Foot (ft): reference unit widely used in maritime for measurements (and in aviation for measuring height). Non-metric unit from British Imperial system, **1ft=30.48cm=12 inches, 3ft=1yard**. Maritime uses feet mainly for measuring a merchant ship capacity/volume (tonnage) and in design of standard containers.

Teu: **"Twenty-foot equivalent unit"** or container of 20 feet long (standard common size of 40 feet adapts now better to standard size of big truck); standard size of **40ft x 2.6m x 2.9m**. Invented 50 years ago (1956) in the US, bringing revolution in sea transport, production location and inter-modality (sea-truck-rail box). Modern containerships can carry up to **14,000teu** in one single voyage! And ship capacity still expanding..

Former containerised means: wood **tonnes or tuns (tonneaux)**, of >500litres of capacity and **barrels** (over 100l., oil barrel today=159l) from Middle Ages, made for wine but for other liquids too (oil, beer, water..) and dry bulk (food: cereals, salted meat, species; coffee, gun powder, ballast..). **Amphorae** earlier.

GT: **"Gross Tonnage"**, measures the ship capacity but in terms of volume and not in terms of weight as unit misleadingly suggests. **1gt=100cu ft=2,83m3=1 tonneau (tun)**. Very old measure, now redefined (1969, IMO), used since the middle ages. GT is not derived from the concept of metric tonne (of 1,000kg).

Dwt: **"Deadweight tonnes"**, measures the ship loading capacity in terms of metric tonnes; indicates the maximum permitted load of a ship when loaded down to its maximum summer load line.
Displacement: measures, in metric tonnes, the real weight of the merchant ship (weight of water displaced gives the weight of the ship according to Archimedes principle), although less used than gt and dwt.
Cgt: **"compensated gross tonnage"**, measure used in the construction of new merchant ships, different from GT as it reflects or places the emphasis on the amount of work (man/days/months) that is needed.
Ldt: **"Light displacement tonnage"**, real weight of ship or of water displaced, used in ship dismantling to calculate value of merchant ship before scrapping. Takes into account ship itself excluding some parts.

Lm: **"lane meters"**, measures the capacity of a ro-ro ship; standard size of a ro-ro ship is **1,000-1,500 lm**, largest ro-ro ships going up to 3,000lm, which means as many as **100 (up to 200) trucks loaded on board**.

Kw, HP (Engine power): **1.36=conversion rate** for expressing the power of a ship engine (or any other combustion engine) in Horsepower (HP) or in Kilowatts (Kw). **1HP=1Kw x 1.36; 1Kw=1HP/1.36**.

Hz (radio communication): Hertz, Kilo-Hertz (=1,000Hz), Mega-Hertz (1,000KHz), tells wave frequency **(1Hz=1cycle/second)**, ranging from **300 to 3,000 KHz** (medium freq.MF), **3 to 30 MHz** (short wave HF), **30 to 300 MHz** (short wave VHF); VHF maritime frequencies classed in Channel numbers, channel 16 for emergencies (156.8MHz) "Mayday"/SOS. Inmarsat telecom (beyond radio reach: 50nm VHF, 270nm MF).

Beaufort scale: measures the **strength of the wind**; units range **from 0 to 12** (**in knots**: 0-1, 1-3, 4-6, 7-10, 11-16, 17-21, 22-27, 28-33, 34-40, 41-47, 48-56, 57-63 and 64+). **Douglas scale:** measures the **state/strength of the seas** (keeps relation with Beaufort scale), units range **from 0 to 9** (**in height of waves, metres**: 0,0-0.25, 0.25-0.5, 0.5-1.25, 1.25-2.5, 2.5-4, 4-6, 6-9, 9-14 and 14+).

Letters (Maritime international code); from A to Z, **each letter** of the alphabet has **its Flag**, **its Meaning** (*A=diver, B=dangerous goods, C=Yes, D=maneuvering…*), **its Morse code** (A .- B -… C -.-.) and **its Spelling** (*Alpha, Bravo, Charlie, Delta, Echo, Foxtrot, Golf, Hotel, India, Juliett, Kilo, Lima, Mike, November, Oscar, Papa, Quebec, Romeo, Sierra, Tango, Uniform, Victor, Whiskey, X-ray, Yankee, Zulu*), English compulsory in high seas.