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Developments in International Seaborne Trade: An overview

By
Hassiba Benamara
Economic Affairs Officer, Policy & Legislation
Trade Logistics Branch
Division on Technology and Logistics
UNCTAD

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Key trends in international transport and implications for development:

Developments in international seaborne trade: an overview

Hassiba Benamara
Policy and Legislation Section
Trade Logistics Branch/Division on Technology and Logistics

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Outline

I. Derived demand

II. Seaborne trade: some figures and trends

III. Some issues to monitor

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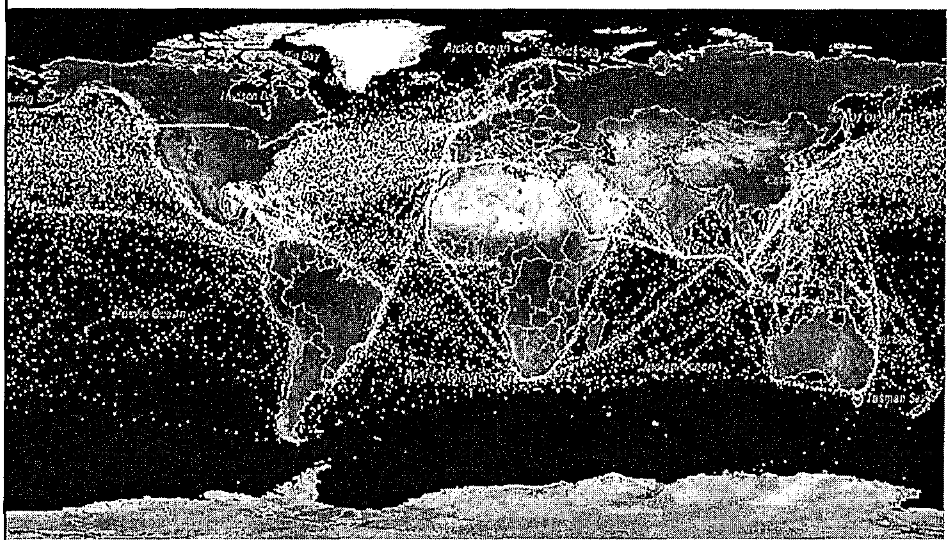
Shipping is the lifeblood of world trade and much more...



Source: Simon Bennett, ICS, presentation at UNCTAD Ad Hoc Expert Meeting 2011

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Key drivers

Economic growth and merchandise trade

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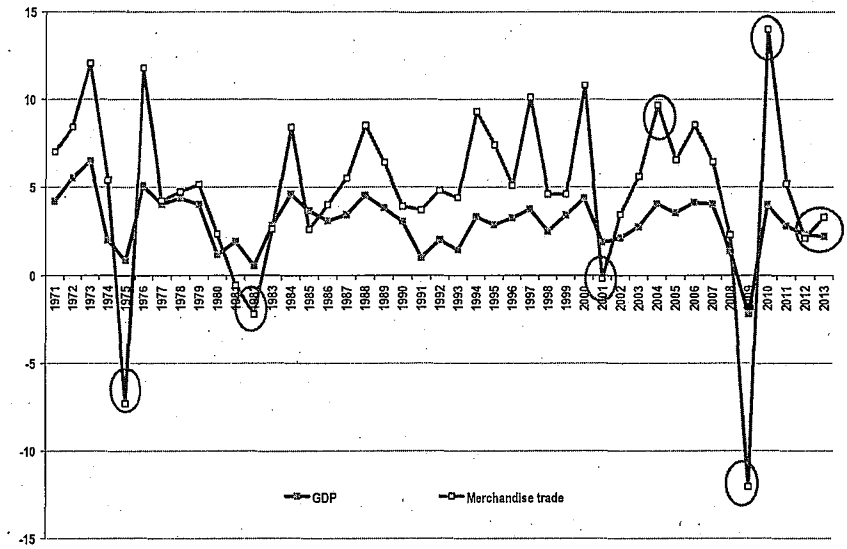
World GDP and merchandise trade



UNCTADStat, June 2013, UNCTAD preliminary data and WTO Trade Statistics, April 2013

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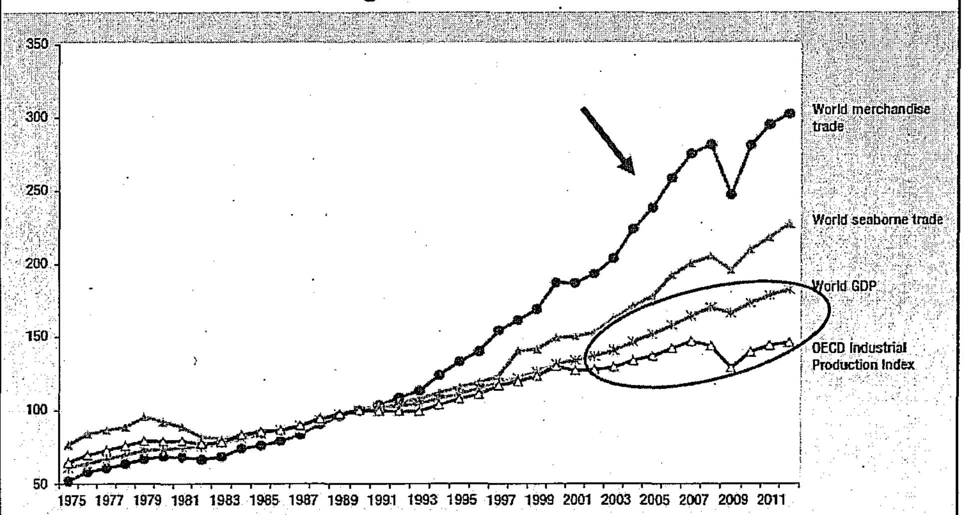
Seaborne trade, GDP, merchandise trade, and industrial production Trade grows faster than GDP



Source: Review of Maritime Transport 2012

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International seaborne trade

Some figures

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Seaborne trade by commodity sector

Tanker (liquid bulks): Crude oil, refined petroleum, gas

Dry Bulk: Iron ore, coal, grain, phosphate/rock, bauxite/alumina, metals and minerals

Containerized: Manufactures, intermediate goods

Other: Break-bulk, Ro-Ro

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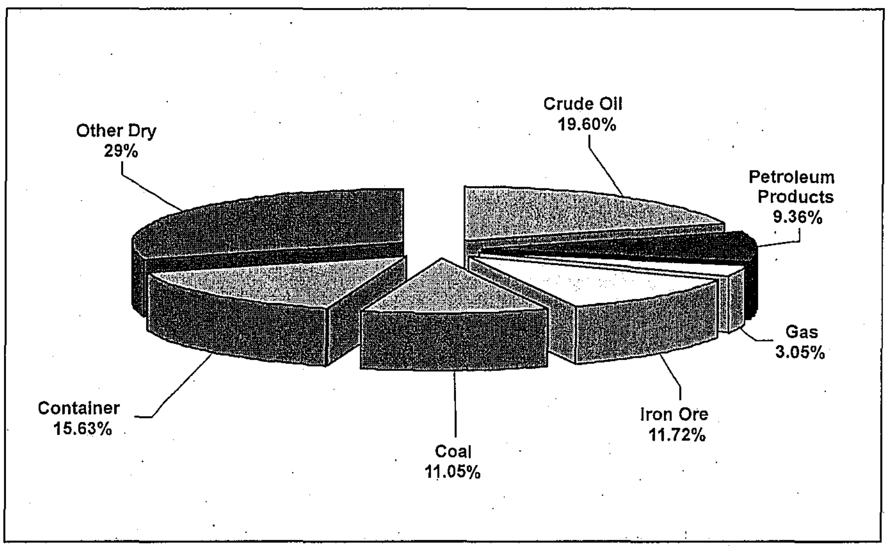
The composition of international seaborne trade, 2012



UNCTAD Review of Maritime Transport 2013 (forthcoming).

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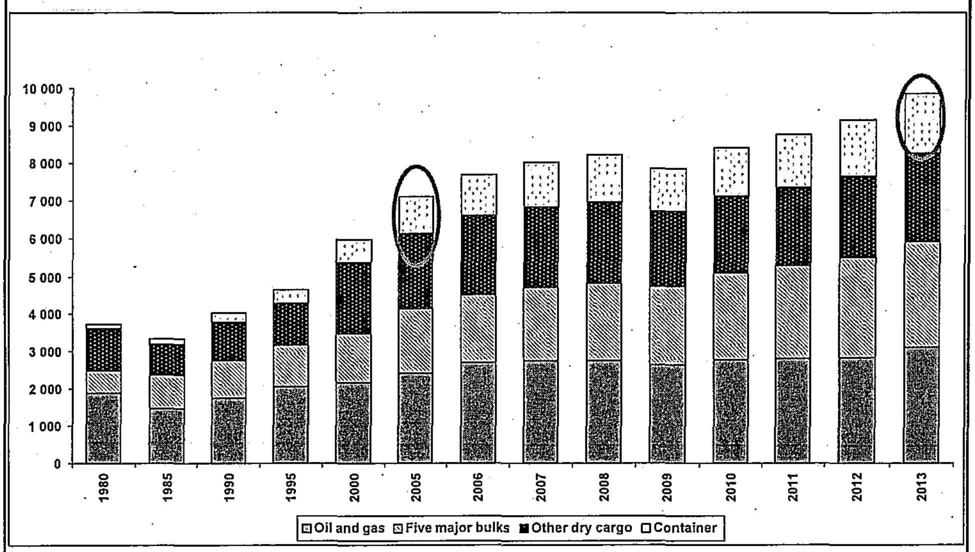
International seaborne trade (metric tons), 1980-2013



Draft UNCTAD Review of Maritime Transport 2013 (forthcoming). Based on RMT various issues, and Clarkson Research Services data.

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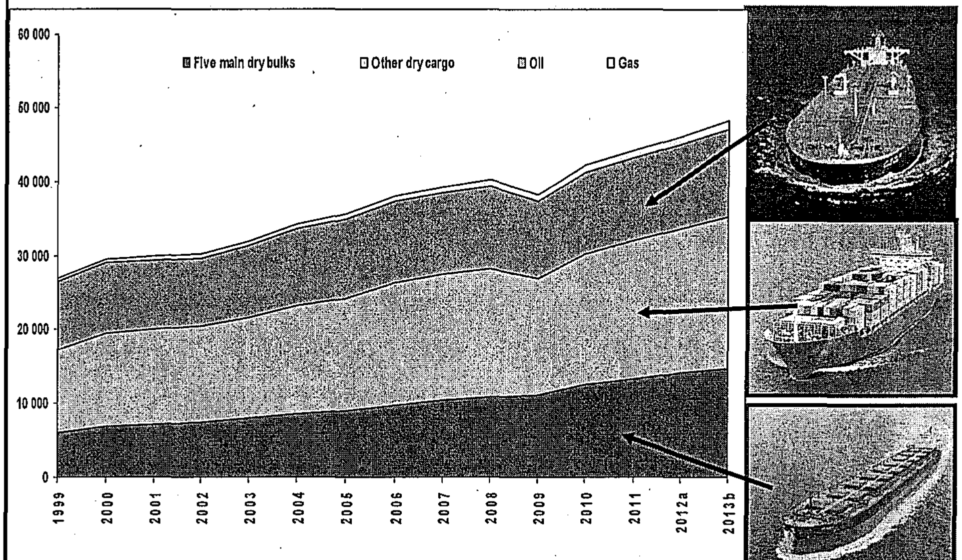
World seaborne trade, billion ton-miles (1999-2013)



Draft Review of Maritime Transport 2013 (forthcoming). Based on data from clarkson Research Services

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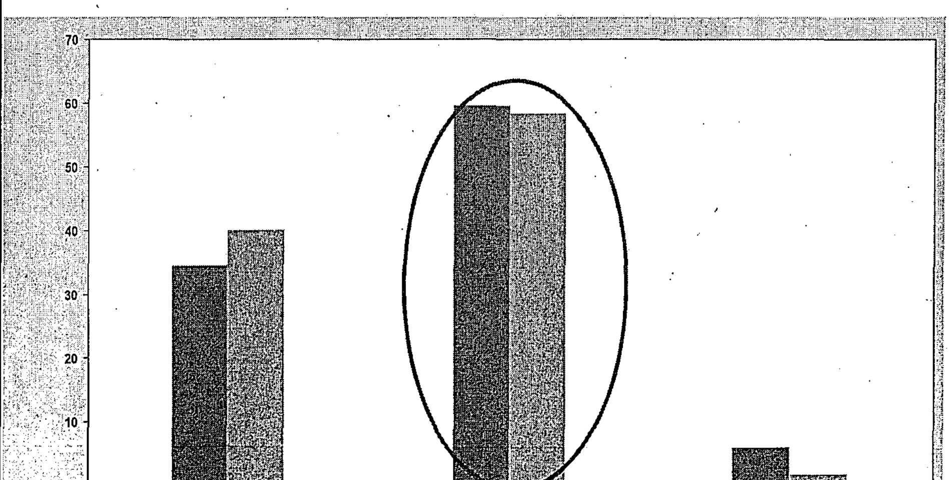
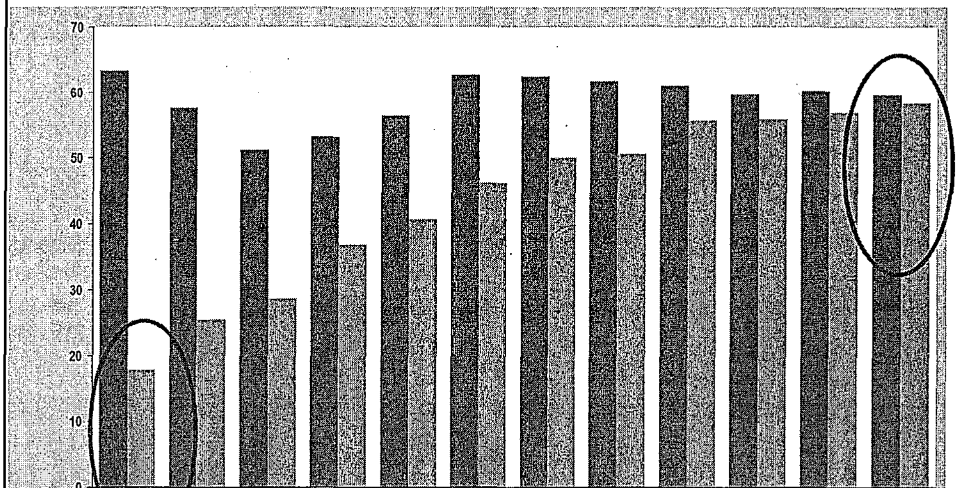
World seaborne trade by country group, 2012 (% Share of world tonnage)



	Developed economies	Developing economies	Transition economies
Loaded	35	60	6
Unloaded	40	58	2

Draft Review of Maritime Transport 2013 (forthcoming).

Participation of developing countries, 1970-2012 (% share in world tonnage)



	1970	1980	1990	2000	2005	2006	2007	2008	2009	2010	2011	2012
Loaded	63	58	51	53	56	63	62	62	61	60	60	60
Unloaded	18	26	29	37	41	46	50	51	56	56	57	58

Draft Review of Maritime Transport 2013 (forthcoming).

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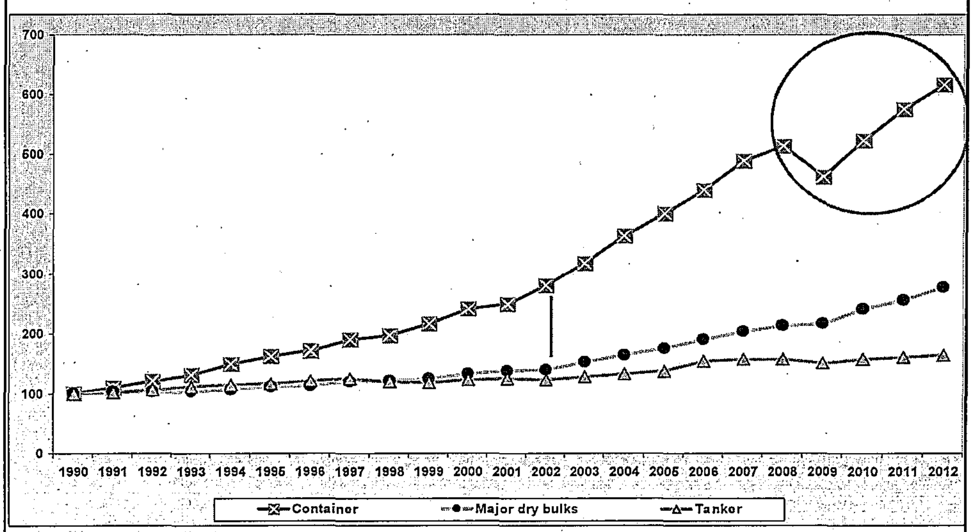
Growth by major market segment, 1990-2012



Review of Maritime Transport, 2012.

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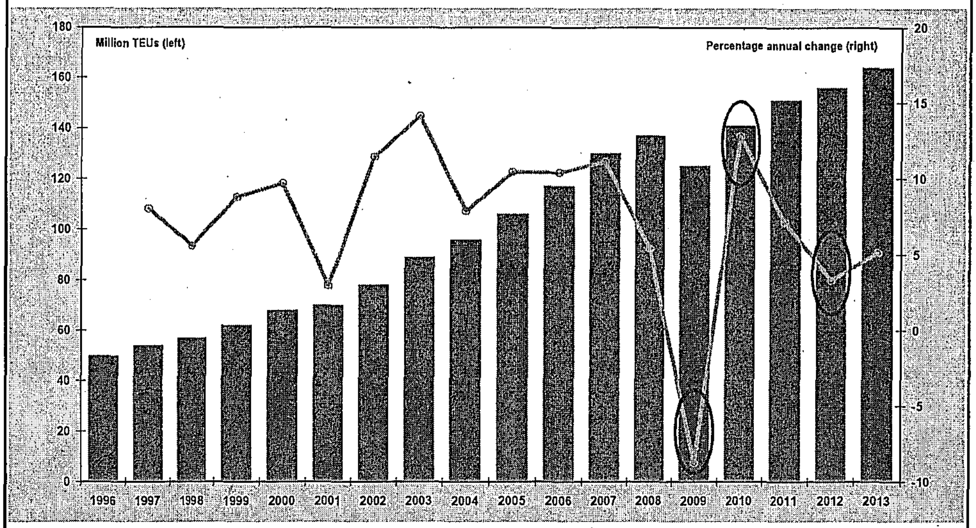
Global containerised trade, 1996-2013 (*TEUs & annual % change*)



Draft Review of Maritime Transport 2013 (forthcoming). Based on Drewry and Clarkson Shipping Services data.

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Some issues to consider/monitor

Some key issues currently affecting shipping and seaborne trade, include:

- Uncertainty and downside risks
- Supply-demand imbalance
- Piracy
- New routes/infrastructural developments: Panama Canal 2015
- Northern sea routes (NWP)
- Geopolitical developments/political unrest
- Natural disasters/disruptions

But, the **interconnected issues** of energy and climate change call for particular attention → have the potential to deeply transform shipping and trade

"***Globalization, climate change, and escalating energy costs are a strategic nightmare for shipping companies and they all have one thing in common – fossil fuels.***" **Martin Stopford, Clarksons**

Maritime transport and the climate change debate

Two sides of the "climate change coin": **causes (mitigation) – effects (adaptation)**

Mitigation

- International shipping estimated to contribute about 3% of the global CO2 emissions. (IMO GHG Study, 2009) – Set to grow by a factor of 3 by 2050
- Oil dependency! High carbon intensity!
- Yet, emissions from international shipping not covered by Kyoto Protocol: negotiations on future emissions regime underway at IMO and UNFCCC
- IMO: package of technical/operational measures adopted in July 2011 (not by consensus) - amendments to MARPOL, Annex VI; In force January 2013
- Market-based instruments: way forward not uncontroversial

Impacts and adaptation

- Much of international debate/policy action focuses on climate change mitigation
- Relatively **little focus on study of impacts** and development of adaptation policies/actions
- Climate change/extreme events likely to have **direct (infrastructure, equipment, operations, networks, etc.) and indirect impacts** (change in demand) on maritime transport and related infrastructure (ports!!)
- Open **new arctic sea-lanes** due to polar ice melting
- Require a better understanding of impacts (which vary by type of extreme event, region, environment, sector) and assessment of vulnerabilities (ports particularly exposed and vulnerable – location, asset value, strategic value)
- Design and adoption of adequate and effective adaptive measures are key

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The special case of ports

OECD study (Nicholls et. al, 2007)

- ✓ Exposure of 136 port megacities to coastal flooding (population/assets) in 2005
- ✓ Estimated asset exposure: **USD 3 trillion**

Allianz/WWF study (Lenton et.al, 2009) http://knowledge.allianz.com

- ✓ Assuming SLR of 0.5 m by 2050 (tipping scenario)...
- ✓ Estimated asset exposure in same 136 port megacities: **USD 28 trillion**

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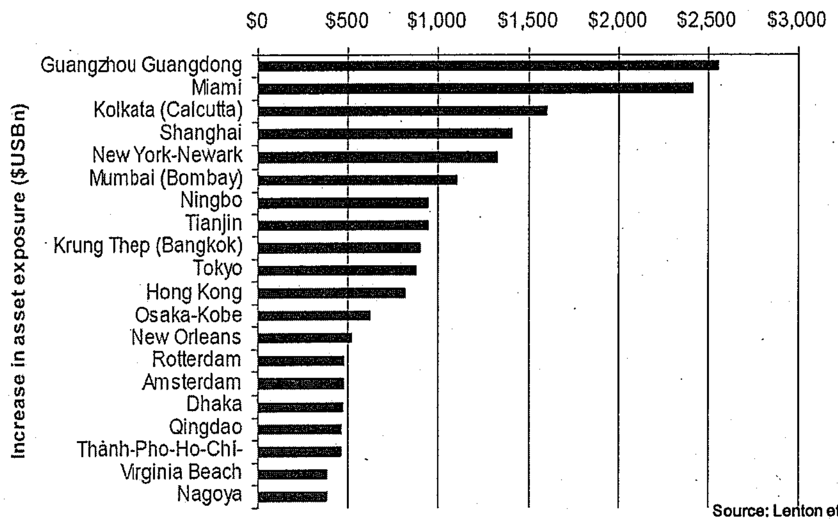
Top 20 port cities with highest increase in exposed assets under tipping scenario (US$ billion) by 2050



Source: Lenton et.al. 2009

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Example: The US Gulf Coast

A relative sea level rise of ~1.2 m (4 feet) could permanently inundate more than:

- ✓2400 miles of roads
- ✓Over 70% of the existing port facilities
- ✓9% of the railway lines
- ✓3 airports

In the case of a ~5.4-7 m storm surge:

- ✓More than 50% of interstate and arterial roads
- ✓98% of port facilities
- ✓33% of railways
- ✓22 airports in the US Gulf coast would be affected (CCSP, 2008).

Ports and other infrastructure assets at risk along the US Gulf coast (US Gulf Coast Study (Savonis 2009).

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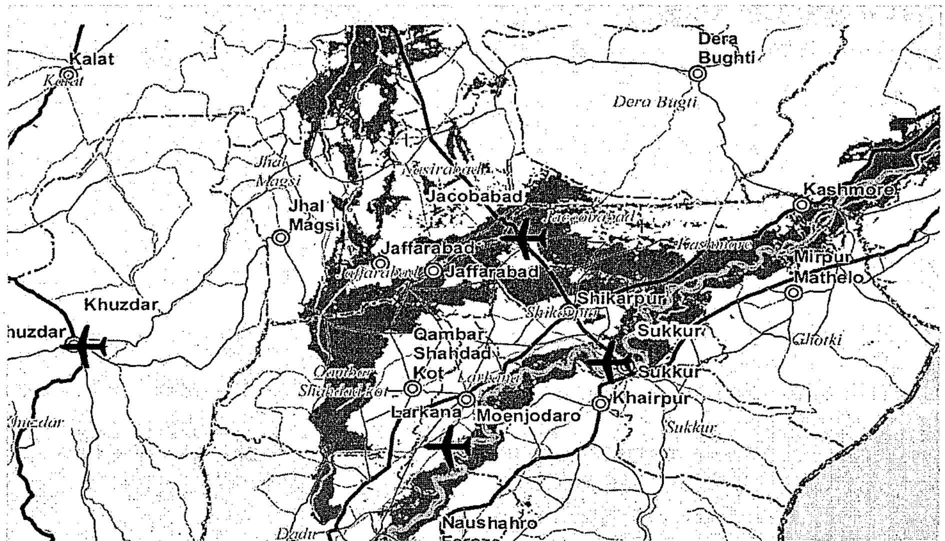
Ex: 2010 Pakistan flood: unusually intense monsoon rains



Source(s): MapAction; United Nations Office for the Coordination of Humanitarian Affairs (OCHA)
From: Pascal Peduzzi, UNEP GRID Europe (2010). UNECE-UNCTAD Workshop presentation.

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Summary of key points (1)

- ✓ Maritime transport is a strategic economic sector, a trade enabler and a driver of globalization
- ✓ Volumes expanded more than three-folds since 1970s
- ✓ Growth fueled by containerized trade and major dry bulks (China factor)
- ✓ Containerized trade accounts for the largest share in value terms (over 50%)
- ✓ Developing countries contribute larger shares and growth to world GDP and merchandise trade; growth in SS links → multipolar world economy
- ✓ Seaborne trade patterns are changing with: shifting economic influence, growth in intra-regional trade, deepening in South-South cooperation (investment, trade, finance, mining, energy)

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Summary of key points (2)

Challenges:

✓Economic uncertainty/other downturn?

✓Trade protectionism; shortage in trade finance

✓Supply-side pressures and excess ship supply capacity – profitability?

✓Ability to effectively meet the demands arising from projected growth (infrastructure investment)

✓Vulnerability to external shocks/natural disasters

✓Climate change concerns (mitigation and adaptation), growing sustainability imperatives and energy (costs, access and sustainability)

✓Rising oil prices entail important implications for transport costs and trade

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Summary of key points (3)

Opportunities:

✓ Arising in connection with greater South-South cooperation

✓ Diversified sources of supply – enabled by transport and technology

✓ New trading partners/access to new markets (e.g. trade and cooperation deals)

✓ New routes: e.g. Panama Canal 2015, northern sea routes

✓ Move up the value Chain (China/other Asian economies)

✓ Projected growth: population, middle class; development process; boom in dry bulk trade (in 2025)

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Summary of key points (4)

Energy and climate change challenge: an opportunity to

✓ Move away from existing unsustainable patterns of production, consumption and transportation

✓ Reduce dependency on finite fossil fuels through inter alia, energy efficiency, technology, operational measures and economic instruments

✓ Keep down transport costs as rising oil prices can have significant impact on freight costs (***Oil Prices and Maritime Freight Rates: An Empirical Investigation (UNCTAD/DTL/TLB/2009/2***).

✓ Build the resilience to climate change-induced disruptions and preserve the integrity of transport infrastructure and systems through adaptation action – relevant to all countries developed and developing alike in view, in particular, of the global interconnectedness and interdependency

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Summary of key points (5)

✓ Developing countries have an advantage: as they embark on the development path, climate change considerations could be incorporated at early stages of the planning and design process of transport infrastructure

→ Meet sustainability targets while reducing retro-fitting and maintenance costs

✓ Action (energy efficiency/green energy, climate change mitigation and adaptation) requires, among other things: financial resources and investments, technology, innovation, information, data, cooperation,... while not undermining growth

Timely action is key!

Taking action now = good returns on investment in the long run

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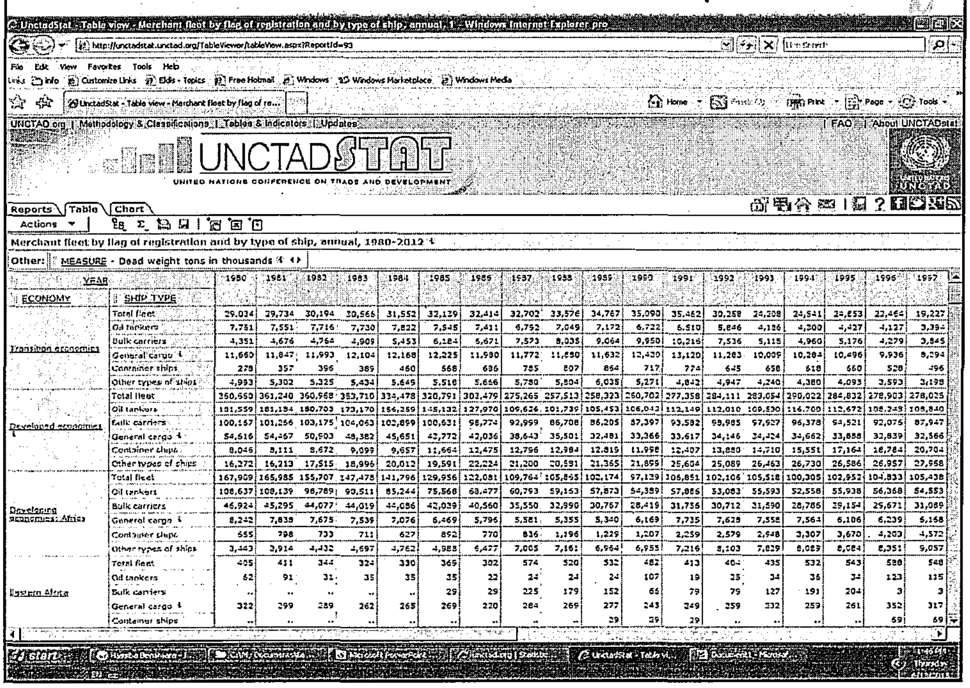
References and additional information

- For the Review of *Review of Maritime Transport see* http://unctad.org/en/pages/PublicationWebflyer.aspx?publicationid=380
- See www.unctad.org/ttl/legal for information/documentation/presentations re:
- UNCTAD Expert Meeting 2009 Summary of the proceedings (UNCTAD/DTL/TLB/2009/1)
- UNECE-UNCTAD Workshop 2010 Background note by UNECE and UNCTAD secretariats
- ECE/TRANS/WP.5/2010/3
- UNCTAD Ad Hoc Expert Meeting 2011 Main outcomes and Summary of Discussions
- (UNCTAD/DTL/TLB/2011/3)
- UNCTAD (ed.) *Maritime Transport and the Climate Change Challenge*, Earthscan
- (Routledge/Taylor&Francis), 2012, 327 pp.
- On UNECE Expert Group on CC Impacts and Adaptation for International Transport
- Networks, see http://www.unece.org/trans/main/wp5/wp5_ge3_02.html
- Transport Newsletter see: *http://unctad.org/en/Pages/DTL/TTL/Transport-Newsletter.aspx*.

UNCTADStat database: Maritime Transport



ECONOMY	SHIP TYPE	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997
Transition economies	Total fleet	29,034	29,734	30,194	30,566	31,552	32,139	32,414	32,702	33,576	34,767	35,090	35,462	30,258	24,208	24,541	24,853	22,464	19,227
	Oil tankers	7,751	7,551	7,716	7,730	7,822	7,545	7,411	6,752	7,049	7,172	6,722	6,510	5,846	4,156	4,300	4,427	4,127	3,394
	Bulk carriers	4,351	4,676	4,764	4,909	5,453	6,184	6,671	7,573	8,035	9,064	9,950	10,216	7,536	5,115	4,960	5,176	4,279	3,845
	General cargo	11,660	11,847	11,993	12,104	12,168	12,225	11,980	11,772	11,850	11,632	12,430	13,120	11,283	10,009	10,284	10,496	9,936	8,294
	Container ships	278	357	396	389	460	568	686	785	807	864	717	774	645	658	618	660	528	496
	Other types of ships	4,993	5,302	5,325	5,434	5,649	5,516	5,666	5,780	5,804	6,035	5,271	4,842	4,947	4,240	4,380	4,093	3,593	3,198
Developed economies	Total fleet	360,550	361,240	360,958	353,710	334,478	320,791	302,479	275,265	257,513	258,323	260,702	277,358	284,111	283,054	290,022	284,832	278,903	278,025
	Oil tankers	181,559	181,184	180,703	173,170	156,259	145,132	127,970	109,626	101,739	105,453	106,042	112,149	112,010	109,590	116,700	112,672	108,248	108,840
	Bulk carriers	100,157	101,266	103,175	104,063	102,899	100,631	98,774	92,999	86,708	86,205	87,397	93,582	98,985	97,927	96,378	94,521	92,076	87,947
	General cargo	54,616	54,467	50,903	48,382	45,651	42,772	42,036	38,643	35,501	32,481	33,366	33,617	34,146	34,424	34,662	33,858	32,839	32,566
	Container ships	8,046	8,111	8,672	9,099	9,657	11,664	12,475	12,796	12,984	12,819	11,998	12,407	13,880	14,710	15,551	17,164	18,784	20,704
	Other types of ships	16,272	16,213	17,515	18,996	20,012	19,591	22,224	21,200	20,591	21,365	21,899	25,604	25,089	26,463	26,730	26,586	26,957	27,958
Developing economies: Africa	Total fleet	167,909	165,985	155,707	147,475	141,796	129,956	122,081	109,764	105,865	102,174	97,139	106,851	102,106	105,518	100,305	102,952	104,833	105,438
	Oil tankers	108,637	108,139	98,789	90,511	85,244	75,568	68,477	60,793	59,153	57,873	54,389	57,886	53,083	55,593	52,558	55,938	56,368	54,553
	Bulk carriers	46,924	45,295	44,077	44,019	44,086	42,039	40,560	35,550	32,990	30,767	28,419	31,756	30,712	31,590	28,786	29,154	29,671	31,089
	General cargo	8,242	7,839	7,675	7,539	7,076	6,469	5,796	5,581	5,355	5,340	6,169	7,735	7,628	7,558	7,564	6,106	6,239	6,168
	Container ships	655	798	733	711	627	892	770	836	1,196	1,229	1,207	2,259	2,579	2,948	3,307	3,670	4,203	4,572
	Other types of ships	3,443	3,914	4,432	4,697	4,762	4,988	6,477	7,005	7,161	6,964	6,955	7,216	8,103	7,829	8,089	8,084	8,351	9,057
Eastern Africa	Total fleet	405	411	344	324	330	369	302	574	520	532	482	413	404	435	532	543	588	548
	Oil tankers	62	91	31	35	35	35	22	24	24	24	107	19	25	34	36	34	123	115
	Bulk carriers	..	..	..	..	..	29	29	225	179	152	65	79	79	127	191	204	3	3
	General cargo	322	299	289	262	265	269	220	284	269	277	243	249	259	232	259	261	352	317
	Container ships	..	..	..	..	..	..	..	..	..	29	29	29	..	..	..	..	69	69

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Thank you for your attention

Hassiba Benamara
Hassiba.Benmara@unctad.org

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