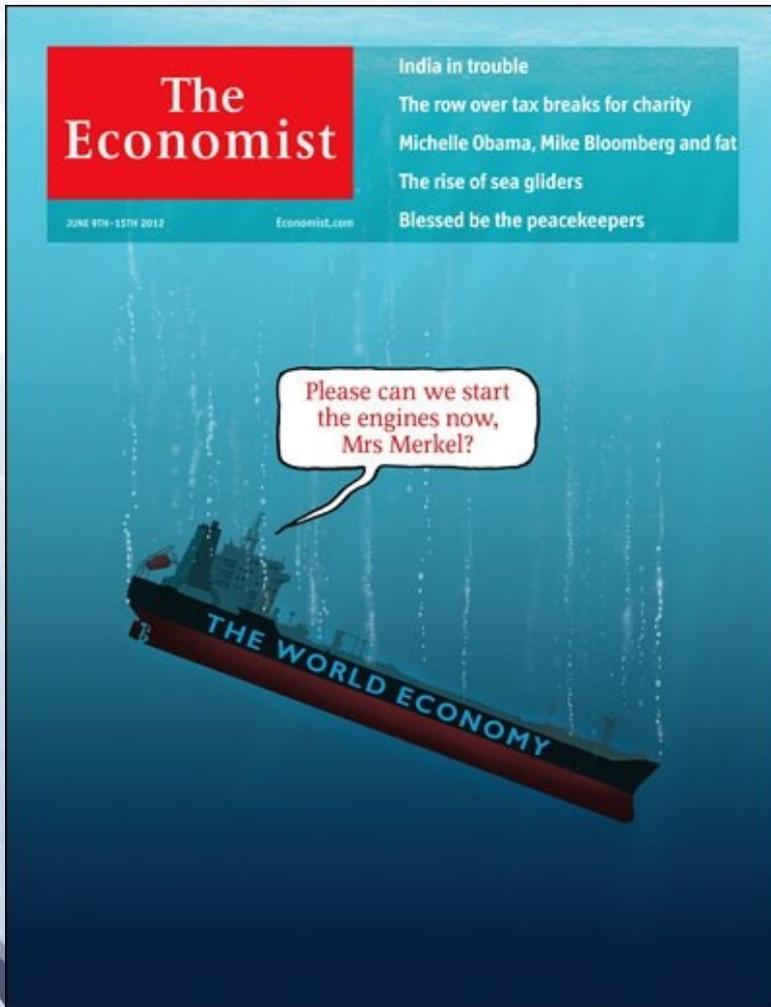
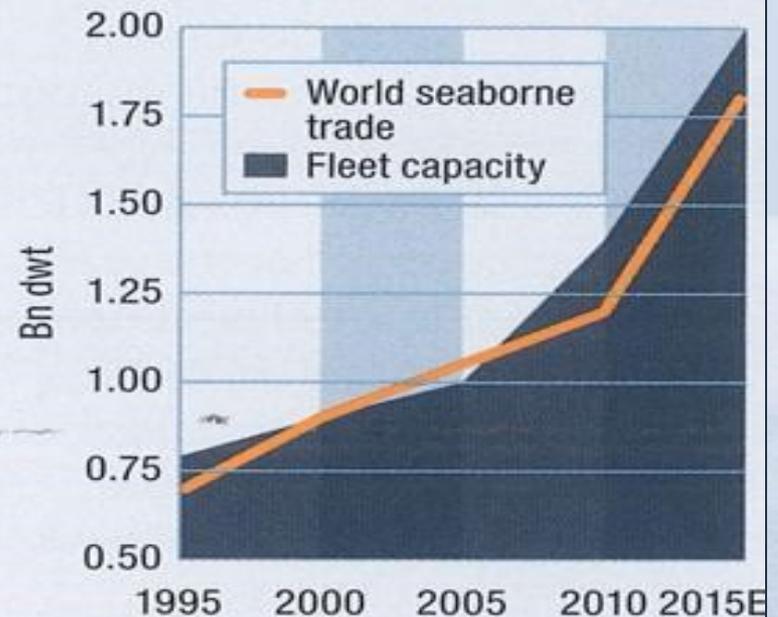


# Challenges Facing Shipping



## > World seaborne trade, 1995–2015



The Economist

AUGUST 30TH-SEPTEMBER 5TH 2014

Economist.com

Putin's new front in Ukraine  
The criminalisation of American business  
House prices bubble up  
India discovers diplomacy  
The last roar of Iran's lioness

# That sinking feeling (again)



INSIDE: A 14-PAGE SPECIAL REPORT ON NIGERIA'S FUTURE

The Economist

JUNE 20TH-26TH 2015

Economist.com

2.3m reasons to fix America's prisons  
Pacific grim: a trade deal in trouble  
China's capitalist torch-bearer  
How green is the pope?  
Computers make a quantum leap

FROM THE MAKERS OF "He's Just Not That Into EU"

# MY BIG FAT GREEK DIVORCE

Starring Alexis Tsipras and Angela Merkel



★★★★★  
"A bloc-buster"  
MARIO DRAGHI

★★★★★  
"Can't wait for the sequel"  
PODEMOS

★  
"Utterly predictable"  
THE ORACLE, DELPHI

★★★★★★  
"Bound to get our money back on this one..."  
IME

★★★★★  
"Mrs Merkel is a Goddess"  
VANITY FAIR

★★★★★  
"Just put some Windex on it"  
GEORGE PAPANDREOU

★★★  
"Shamefully over budget"  
WOLFGANG SCHAÜBLE

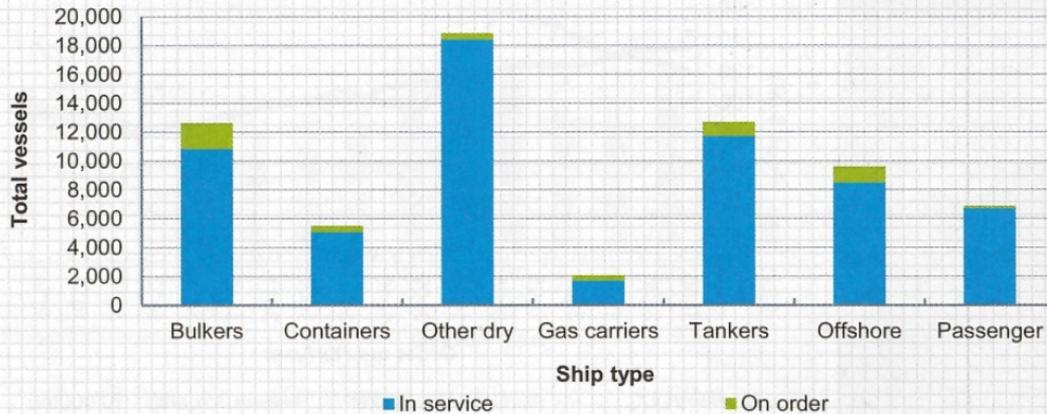


# Global Fleet

# 69,250

Merchant cargo, passenger, offshore, and research vessels currently in service or on order

Global fleet in service and on order



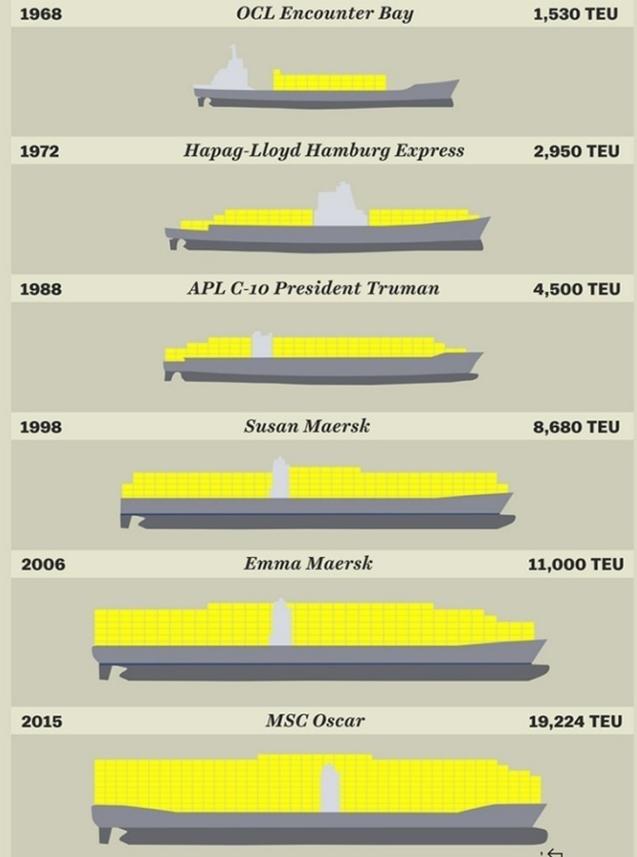
Source: IHS

© 2015 IHS



## THE LARGEST CARGO SHIPS per decade

= 50 TEU (20ft long containers)



source: container-transportation.com

Person for scale



## WORLD SEABORNE DRY BULK TRADE IN 3 MAJOR COMMODITIES (MILLION TONNES)

	2010	2011	2012	2013	2014	2015 <sup>a</sup>
Iron ore	1,005	1,069	1,124	1,210	1,336	1,398
Coal	954	1,014	1,111	1,191	1,193	1,215
Grain (including soyabeans)	297	313	328	352	374	376
<b>Total major bulks</b>	<b>2,256</b>	<b>2,396</b>	<b>2,563</b>	<b>2,753</b>	<b>2,903</b>	<b>2,989</b>
% growth from previous year		6.2	7.0	7.4	5.4	3.0

source: Bulk Shipping Analysis estimates and forecasts \*forecast

## WORLD BULK CARRIER FLEET (MILLION DEADWEIGHT TONNES)

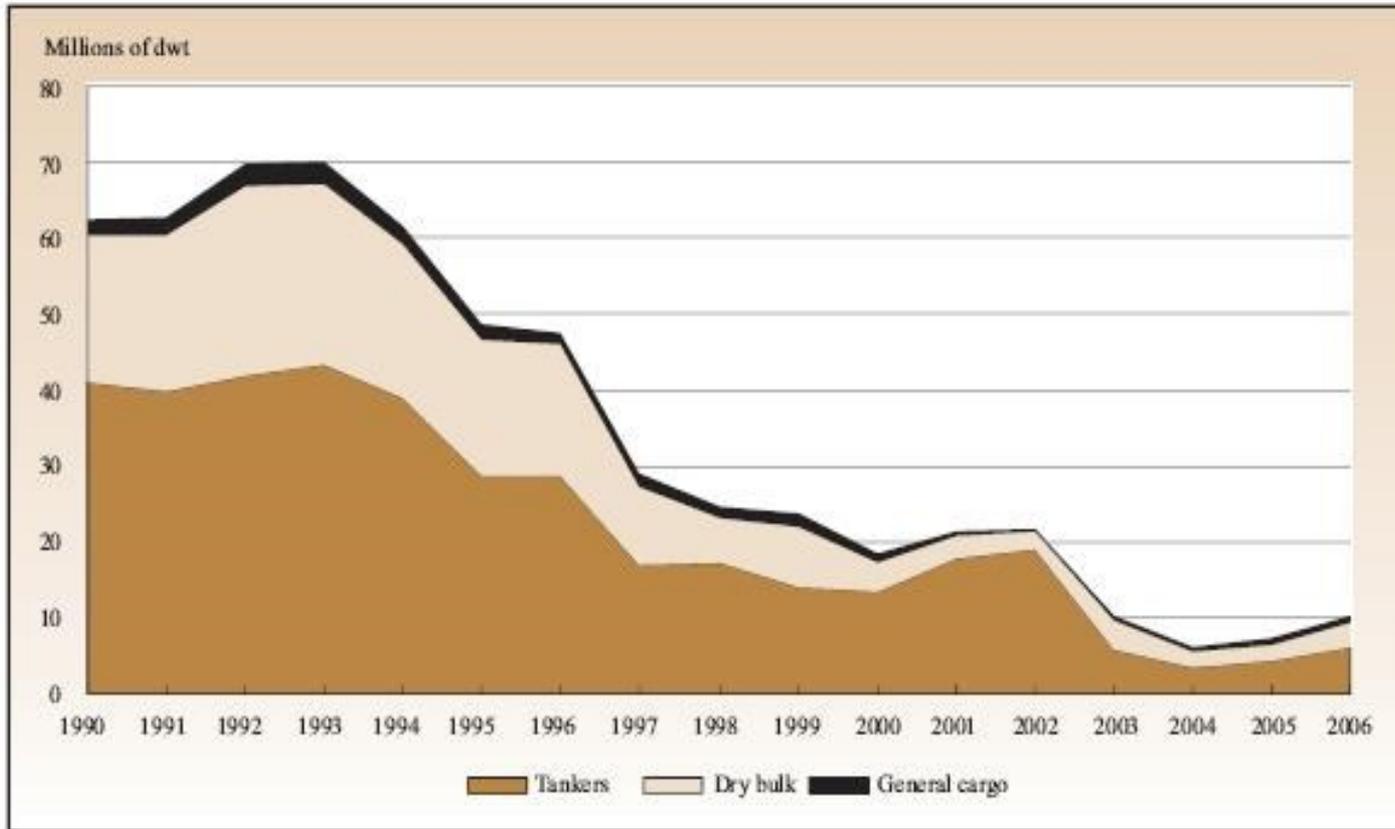
	2010	2011	2012	2013	2014	2015 <sup>a</sup>
Newbuilding deliveries	80.8	100.0	100.2	62.8	49.0	58.0
Scrapping	6.5	23.2	33.4	23.3	15.9	17.0
Losses	0.4	0.5	0.1	0.4	0.1	0.2
Other adjustments/conversions	4.7	4.0	-1.1	0.0	-0.9	0.0
Net change in fleet	78.6	80.3	65.6	39.1	32.1	40.8
<b>Fleet at end of year</b>	<b>539.1</b>	<b>619.4</b>	<b>685.0</b>	<b>724.1</b>	<b>756.2</b>	<b>797.0</b>
% growth from previous year		14.9	10.6	5.7	4.4	5.4

source: Clarkson Research (historical data) & BSA 2015 forecast \*forecast

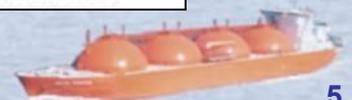


# The 2006-08 bubble

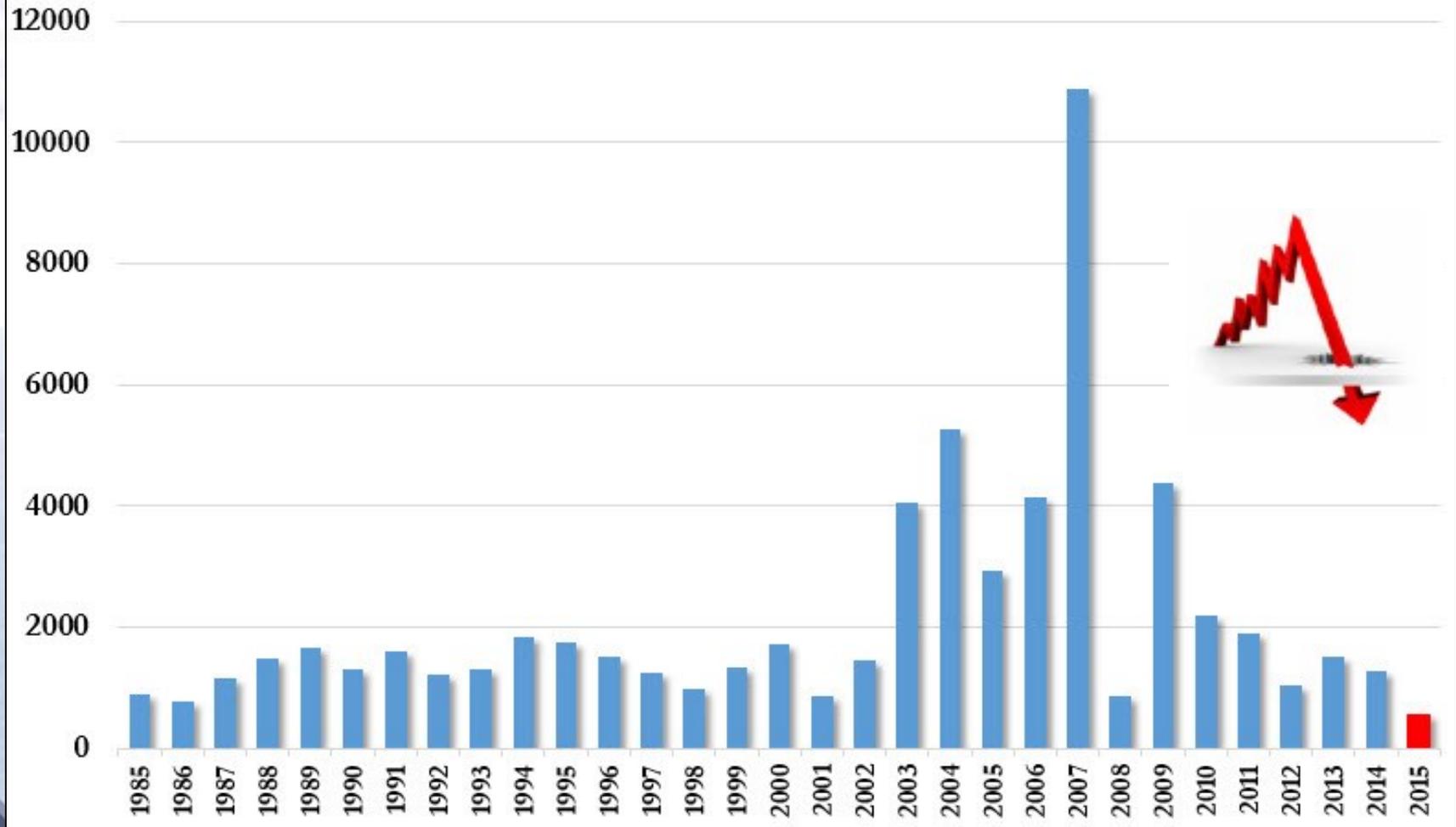
Trends in surplus capacity by main vessel types, selected years



Source: Compiled by the UNCTAD secretariat on the basis of data from *Lloyd's Shipping Economist*, various issues.

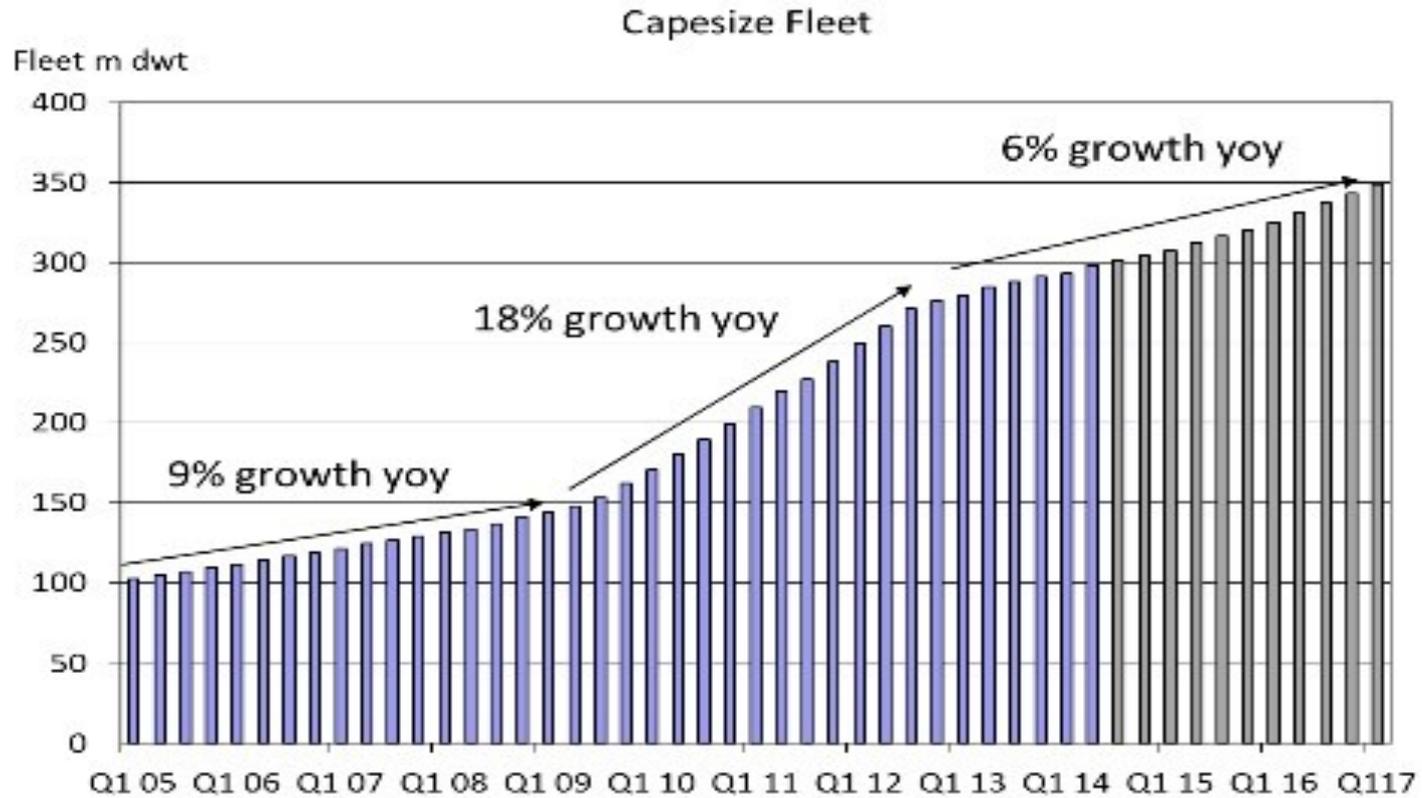


# Baltic Dry Index (mid-November)



# Capesize Fleet Growth

Fleet growth slowed considerably last year and this should continue....



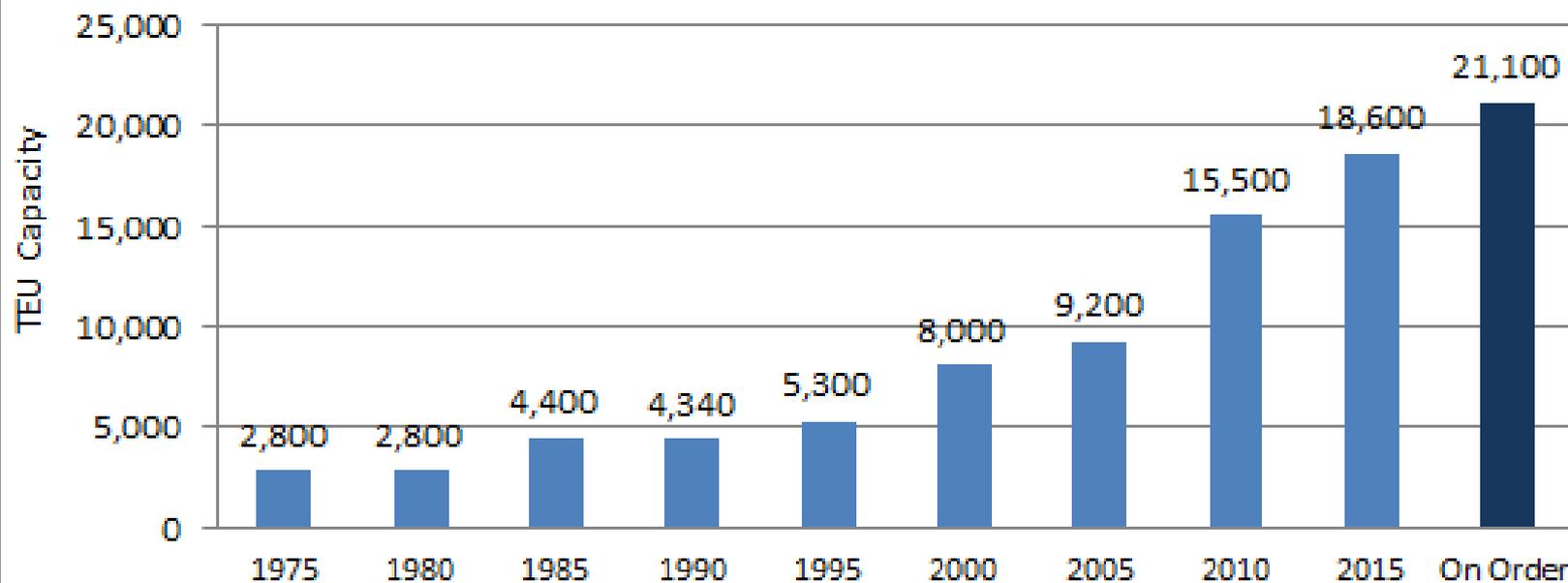
SwissMarine Services SA



# Containers

## 40 years of container ship growth

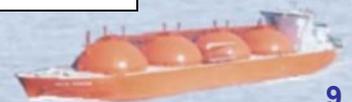
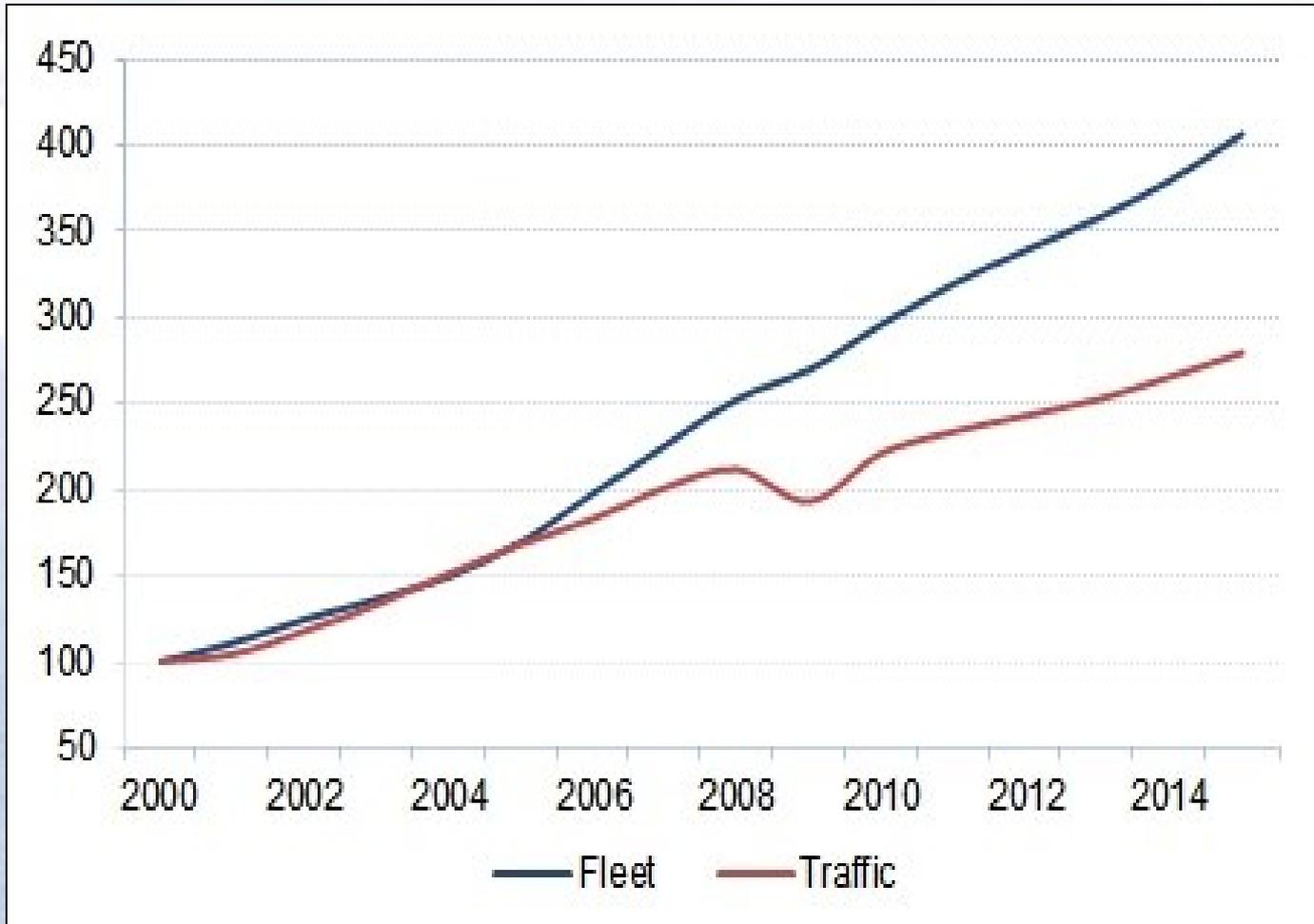
IHS Maritime & Trade historical vessel and orderbook data



Source: IHS Maritime & Trade



# Development of world container ship fleet versus container traffic



IHS MARITIME & TRADE



# IHS Maritime Fairplay

7 January 2016 • Vol 386 • Issue: 6869

Fairplay.IHS.com

ANNUAL REVIEW

## Recipe for a fragile 2016 recovery



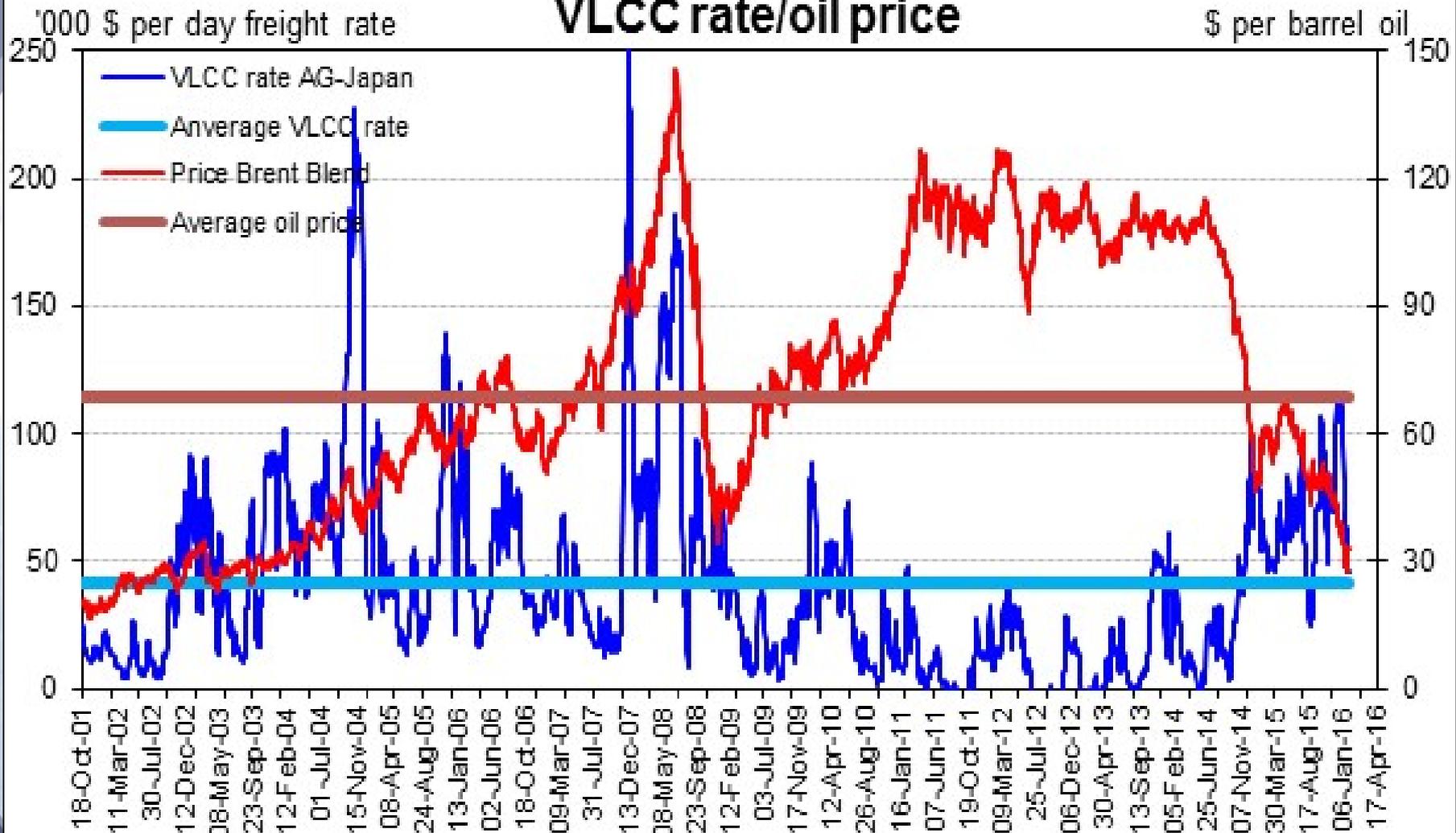
SIX OF THE BEST

Decision-makers who value listening,  
trusting, leading and focusing on the future

SHIPPING  
OF BRITISH COLUMBIA



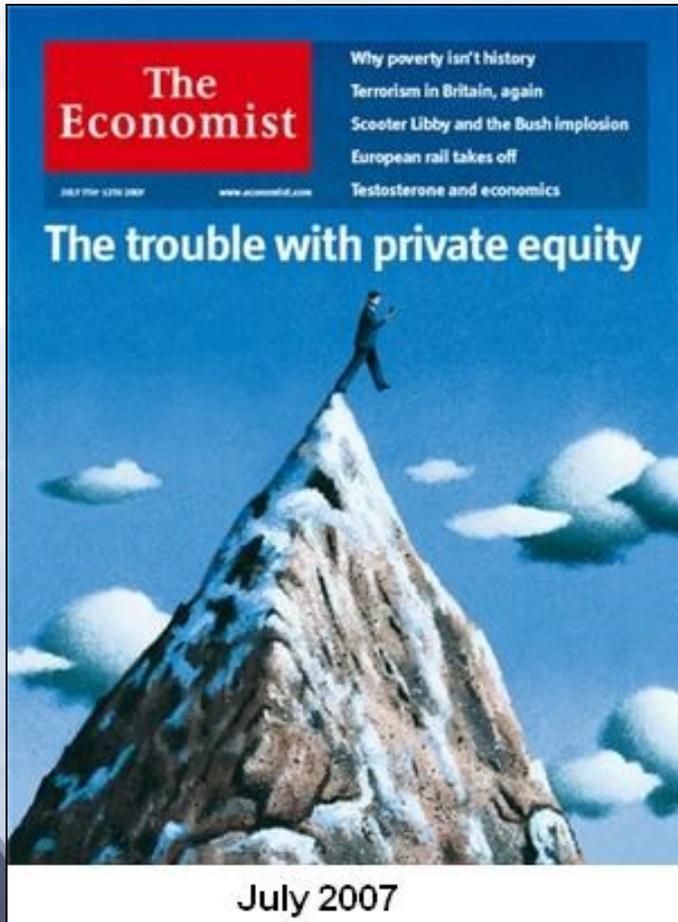
# VLCC rate/oil price



# Private equity in shipping

MARCH 5, 2015

Private equity firms sometimes go for the risky bets and invest in an industry that won't end up providing the profits the firms were looking for. The global shipping industry looks to be one of the riskier bets, as reports suggest big private equity firms are looking for an exit from the sector.



The global shipping industry is currently going through the biggest downturn in 30 years and this has caused many private equity firms, which invested in the sector after the financial crash in 2008, to rethink their strategy. The weak demand from China combined with oversupply of vessels has cut freight rates and even caused some firms to file bankruptcy.

Private equity invested approximately \$32 billion in the sector during its heyday from January 2012 to January 2014 but most are now exiting.





### Shipping market

Private equity investment in shipping (\$bn)



Sources: Marine Money; Clarksons

Order book as a proportion of the fleet (%)

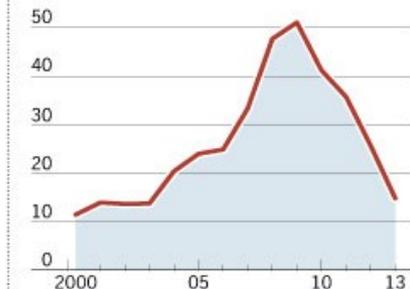
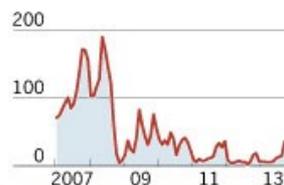


Photo: Dreamstime

### Bulk carriers



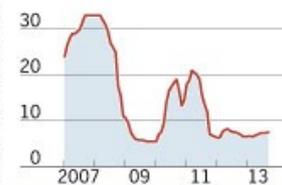
Average daily rate per day (\$'000)



New build investment, 2013 (year to date)

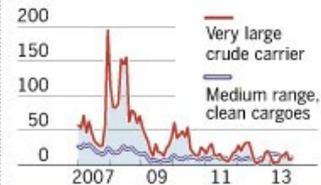
\$13.1bn

### Container ships



\$12.9bn

### Tankers



\$6.6bn



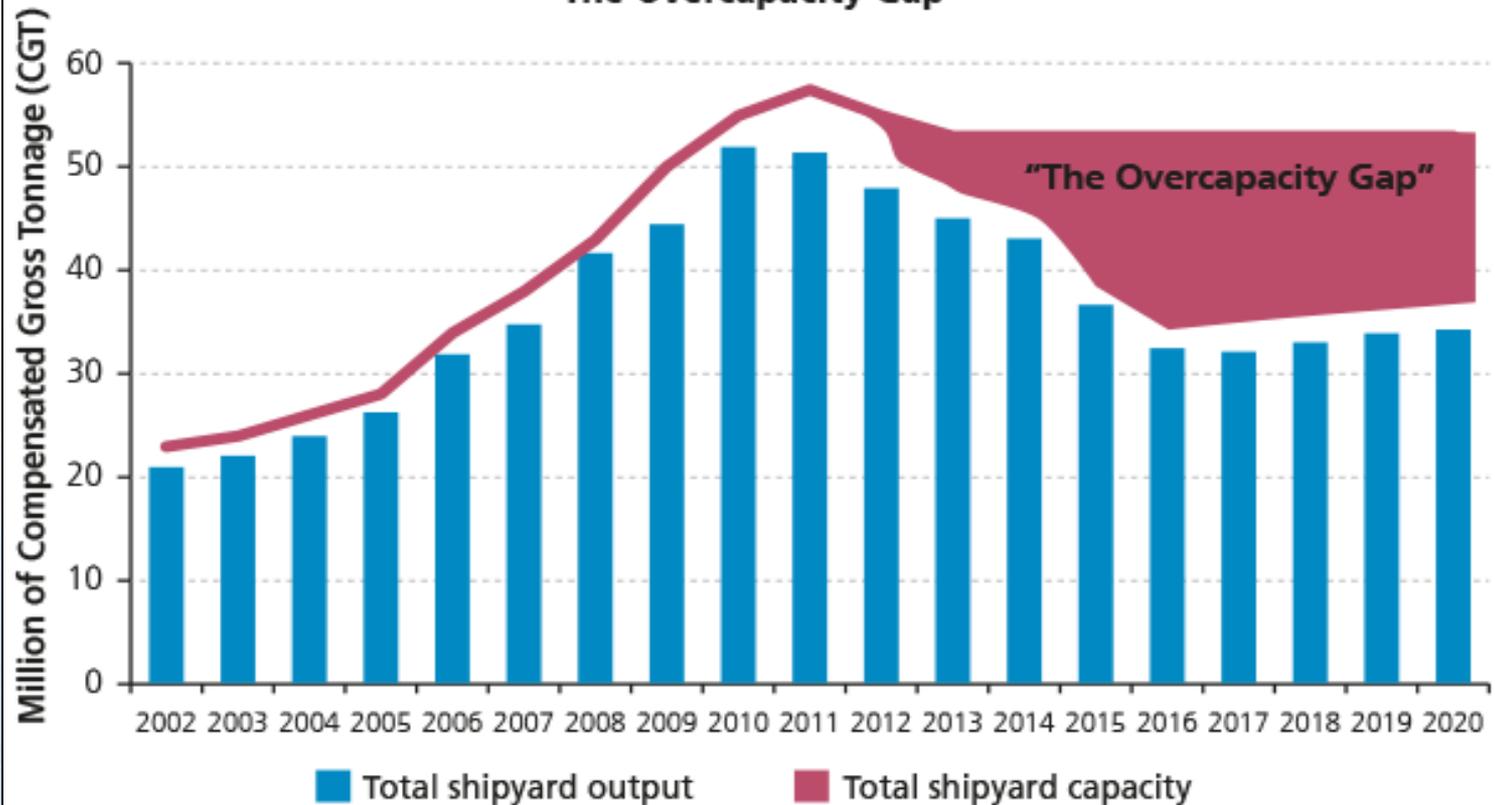
# Keeping shipyards alive – to the detriment of markets

\$1.0 billion Memorandum of Understanding between the Eximbank of China and ING Bank for shipping finance

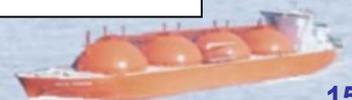


## The Shipyard Industry - BIMCO Estimates

### "The Overcapacity Gap"



Source: BIMCO, IHS Fairplay



# International Maritime Organization



- Shipping is regulated by the 170 states of the International Maritime Organization (IMO)
- Responsible for the safety of life at sea and the protection of marine environments



# IMO Conventions



## International Maritime Law

I

### SOLAS

International Convention for the Safety of Life at Sea

II

### STCW

International Convention on Standards of Training, Certification and Watchkeeping for Seafarers

III

### MARPOL

International Convention for the Prevention of Pollution from Ships

IV

### MLC

Maritime Labour Convention

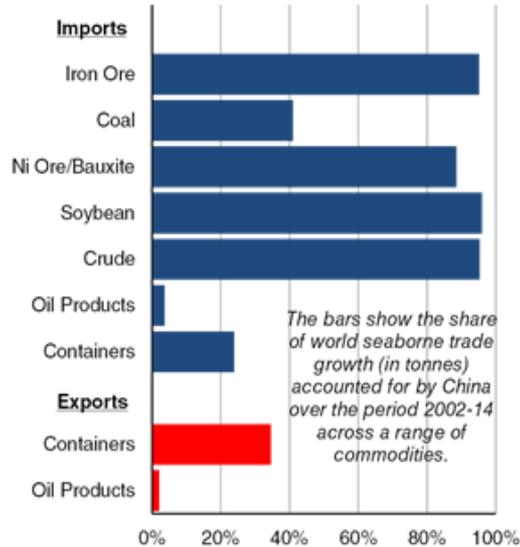


# Geopolitical

## Graph of the Week

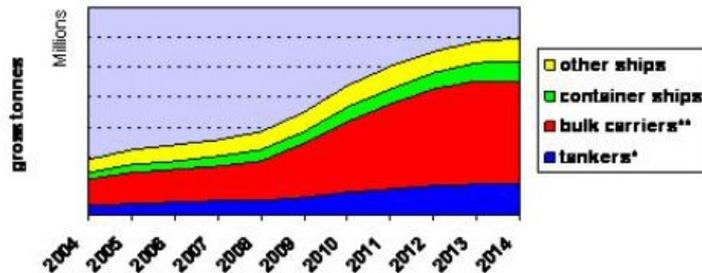
### China's Influence...

The growth of the steel industry in China towards 50% of global output has meant that China is responsible for 95% of net growth in seaborne iron ore trade 2002-14. China's economic growth has also helped to fuel crude oil imports (equivalent to 95% of world growth), along with container exports (35%) tied to the country's role as workshop for the world. At the same time, rising consumer demand (some of it credit-fuelled) is also boosting oil import demand and container imports, as wages rise and manufacturing develops further elsewhere in Asia.



Source : Clarkson Research Services

### China-owned fleet, at end-year, gross tonnes



## The Economist

JANUARY 16TH - 22ND 2016

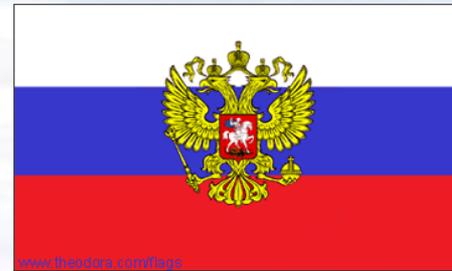
Migrant men and European women  
The myth of common-law marriage  
Free food and misery: the life of a techie  
The scramble for lithium  
Starman Jones: oddity and hero

# Everything's under control

China, the yuan and the markets



# Russia – scores to settle



The  
Economist

NOVEMBER 14TH - 20TH 2009

Economist.com

The decline of music piracy  
Nigeria gets better  
Farmers v greens in America  
How drugs are being decriminalised  
Bland bosses

# Brazil takes off



A 14-PAGE SPECIAL REPORT  
ON LATIN AMERICA'S BIG SUCCESS STORY

The  
Economist

SEPTEMBER 28TH - OCTOBER 4TH 2009

Economist.com

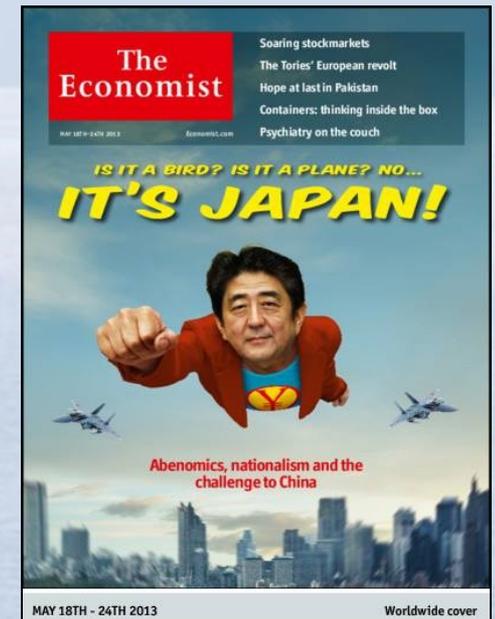
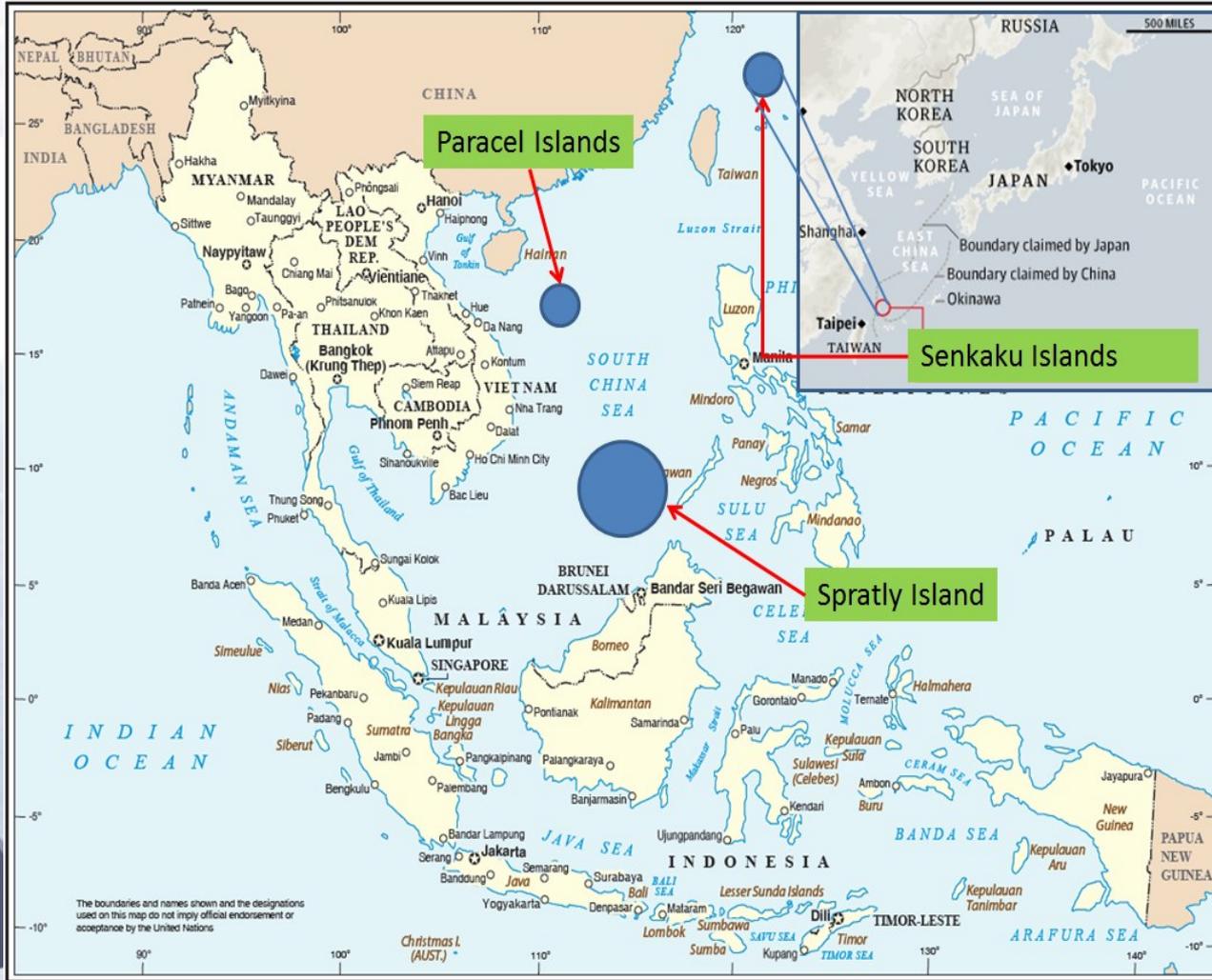
The new face of terror  
The Breaking Bad school of business  
Obama's Iran gambit  
On the edge of the helium cliff  
E-cigarettes: don't stub them out

# Has Brazil blown it?

A 14-page special report



# Territorial disputes in Asia





# Ever bigger ships – strain on terminal, truck and rail capacity



## Traffic Congestion Comparison

source: TomTom International BV

\*Congestion, as defined by TomTom, is the increase in overall travel times when compared to a free-flow (no traffic) situation. For example, a congestion level of 12% corresponds to 12% longer travel times compared to a free-flow situation.

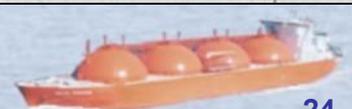
Los Angeles	Vancouver	Toronto
Overall *congestion 35%	Overall *congestion 36%	Overall *congestion 27%
Total Road Network Length (in miles) 6,511	Total Road Network Length (in miles) 785	Total Road Network Length (in miles) 3,198
Total distance covered by drivers surveyed (in miles) 3,699,534	Total distance covered by drivers surveyed (in miles) 656,700	Total distance covered by drivers surveyed (in miles) 5,536,000



Two-year performance in 2014 (CPAs handling more than 10 million tonnes annually),  
ranked by growth rates

CPA	2009	2010	2011	2012	2013	2014	2014 over 2012
Vancouver	101,887,824	118,450,134	122,499,631	123,876,885	135,009,878	140,005,230 *	13.0%
Montreal	24,524,139	25,919,667	28,534,264	28,422,003	28,156,971	30,445,984	7.1%
Hamilton	8,358,123	11,472,831	10,024,418	10,303,190	10,024,418	10,526,732	2.2%
Prince Rupert	12,121,360	16,417,303	19,339,236	22,289,980	23,060,096	20,691,536	-7.2%
Saint John	26,900,000	30,450,000	31,760,000	27,744,856	27,661,153	23,944,323	-13.7%
Quebec	22,100,000	24,500,000	28,900,000	32,500,000	27,065,994	28,000,000	-13.8%
Sept-Îles	19,828,220	25,070,234	26,000,000	28,000,000	27,712,654	23,944,323	-14.5%
<b>Total tonnage</b>	<b>215,719,666</b>	<b>252,280,169</b>	<b>267,057,549</b>	<b>273,136,914</b>	<b>278,691,164</b>	<b>277,558,128</b>	<b>1.6%</b>

\*Estimated



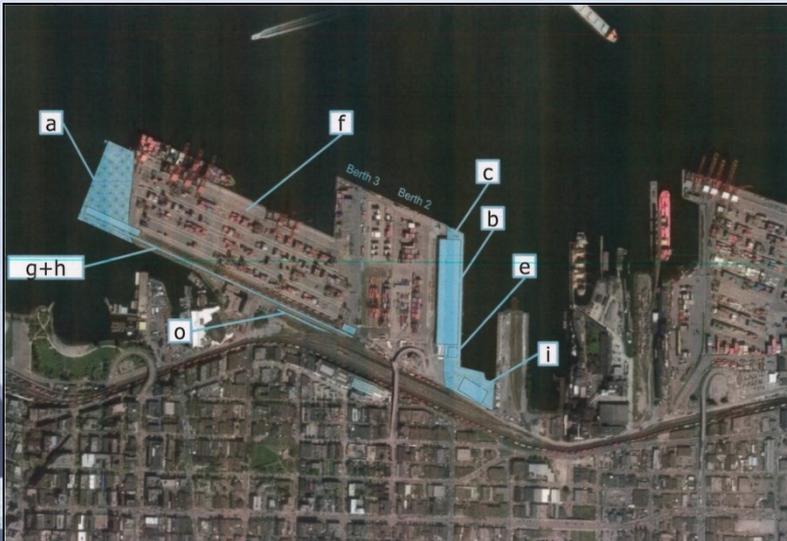
# Northern Projects



# Southern Projects



**KINDER MORGAN**



# BC's largest ever terminal investment - RBCT2



APE (Against Port Expansion in the Fraser Estuary BC) is a group of concerned citizens who recognize that plans for container terminal expansion on Roberts Bank (T2) will see the degradation of the quality of life for thousands of Lower Mainland residents; the industrialization of prime agricultural land; and the loss of globally-significant habitat for salmon, migrating birds and orca whales.



# Fraser Surrey Dock Coal Export Facility



IMAGE: FLUX PHOTO



## Your Child's Health May be at Risk...



Fraser Surrey Docks hopes to construct a Direct Transfer Coal Facility to ship up to 8 million metric tonnes of U.S. Thermal Coal annually, through B.C. Communities, making British Columbia the largest coal exporter in North America. This coal will be transported near our schools and homes multiple times a day. This may bring to your community serious implications to the health of the residents, and the environment. **Join us for a discussion to empower your community.**

## SURREY/DELTA COAL AWARENESS TOWN HALL MEETING

Wednesday September 11, 2013 @ 7:00 pm

Guest Presenter Dr. Frank James, MD

Trinity Lutheran Church  
11040 River Road, Delta, BC

[www.facebook.com/communitiesandcoal](http://www.facebook.com/communitiesandcoal)

**NO U.S.  
THERMAL  
COAL**



# Experts warn of tanker threat to whales

Expansion of Trans Mountain pipeline would increase shipping traffic and noise, which could cause auditory injury to the mammals

MARK HUME VANCOUVER

Marine experts in both Canada and the U.S. are raising concerns about the impact of underwater noise on endangered killer whales and other mammals on a shipping route that will become increasingly busy if the Trans Mountain pipeline expansion project proceeds.

A review of the Trans Mountain proposal by the Canadian Science Advisory Secretariat, of the Department of Fisheries and Oceans, has warned that an increase in tanker traffic associated with the pipeline project "has the potential to result in sensory

“

**As vocal effort increased, we found that there was a significant increase in metabolic rate.**

**U.S. National Oceanic and Atmospheric Administration**  
*Report on killer whales*

disturbance to marine mammals from underwater noise, ranging from auditory injury to behavioural disturbance.”

And a study by the National Oceanic and Atmospheric Administration, a U.S. agency examining threats to killer whales that use Puget Sound, has underscored the risk with a study that found dolphins and other marine mammals have to work harder to be heard when shipping traffic increases.

“As vocal effort increased, we found that there was a significant increase in metabolic rate,” the NOAA researchers wrote.

The NOAA study is not part of

the Trans Mountain review process and was not examining the impact of increased oil-tanker traffic. But its findings are relevant because it concluded that while mammals use only slightly more energy to produce louder vocalizations to be heard over the sound of ships, the impact could be significant if there is a lot of vessel noise over an extended period. That was also a concern of the Canadian report, which was prepared directly in response to the application filed by Trans Mountain Pipeline ULC.

Both studies were released earlier this spring but are taking on increased importance in light

of a number of proposed developments around Metro Vancouver – including new or expanded coal, oil, LNG and container terminals – which will all generate large increases in shipping traffic.

Trans Mountain’s plan, which is currently under review by the National Energy Board, would twin an existing pipeline, nearly tripling the amount of oil delivered to the Westridge Marine Terminal in Burnaby.

The project, if approved, would lead to an additional 720 tanker transits through B.C. waters each year.

**Whales, Page 2**



“Oil patch dismayed by Liberal move to ban crude oil tankers in Northern B.C.” - Financial Post , Nov 16 2015



**CALGARY** - Executives in the Canadian oil patch are dismayed the federal government is poised to ban crude oil tanker traffic on the North Coast of B.C., which would hurt the Northern Gateway pipeline’s chances of being built.

Prime Minister Justin Trudeau followed through on one of his election promises when he asked Transportation Minister Marc Garneau to “formalize a moratorium on crude oil tanker traffic on British Columbia’s North Coast” in a mandate letter published Friday.



# Cowichan Bay Ship Watch Society (CBSWS)



OR



Our mission is to safeguard life in Cowichan Bay / Satellite Channel from the negative impacts of anchoring large commercial ships

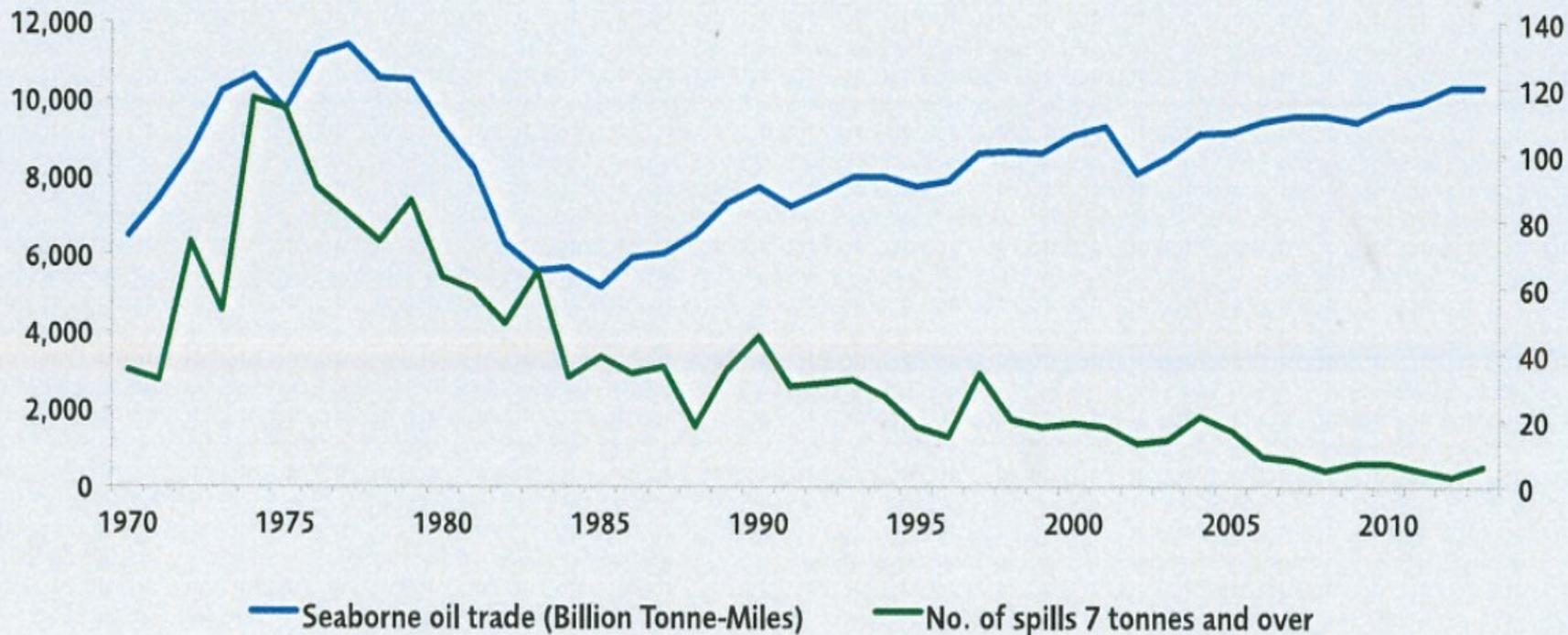


GABRIOLANS AGAINST FREIGHTER ANCHORAGES SOCIETY



Billion Tonne-Miles

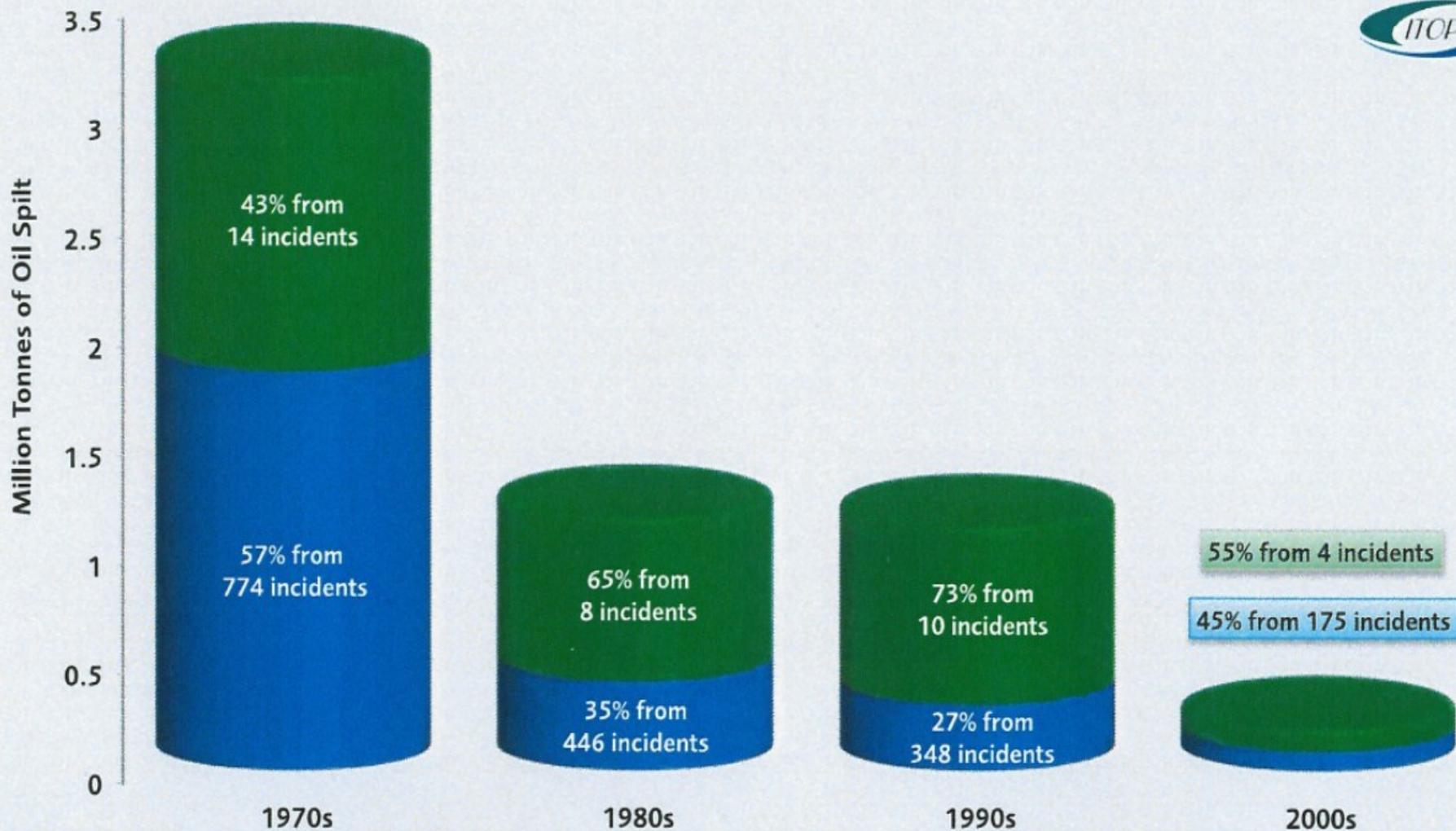
No. of spills 7 tonnes and over



[Source: Fearnresearch 1970-1989, Lloyds List Intelligence 1990-2013]

Seaborne oil trade and number of tanker spills 7 tonnes and over, 1970 to 2013 (Crude and Oil Product \*)

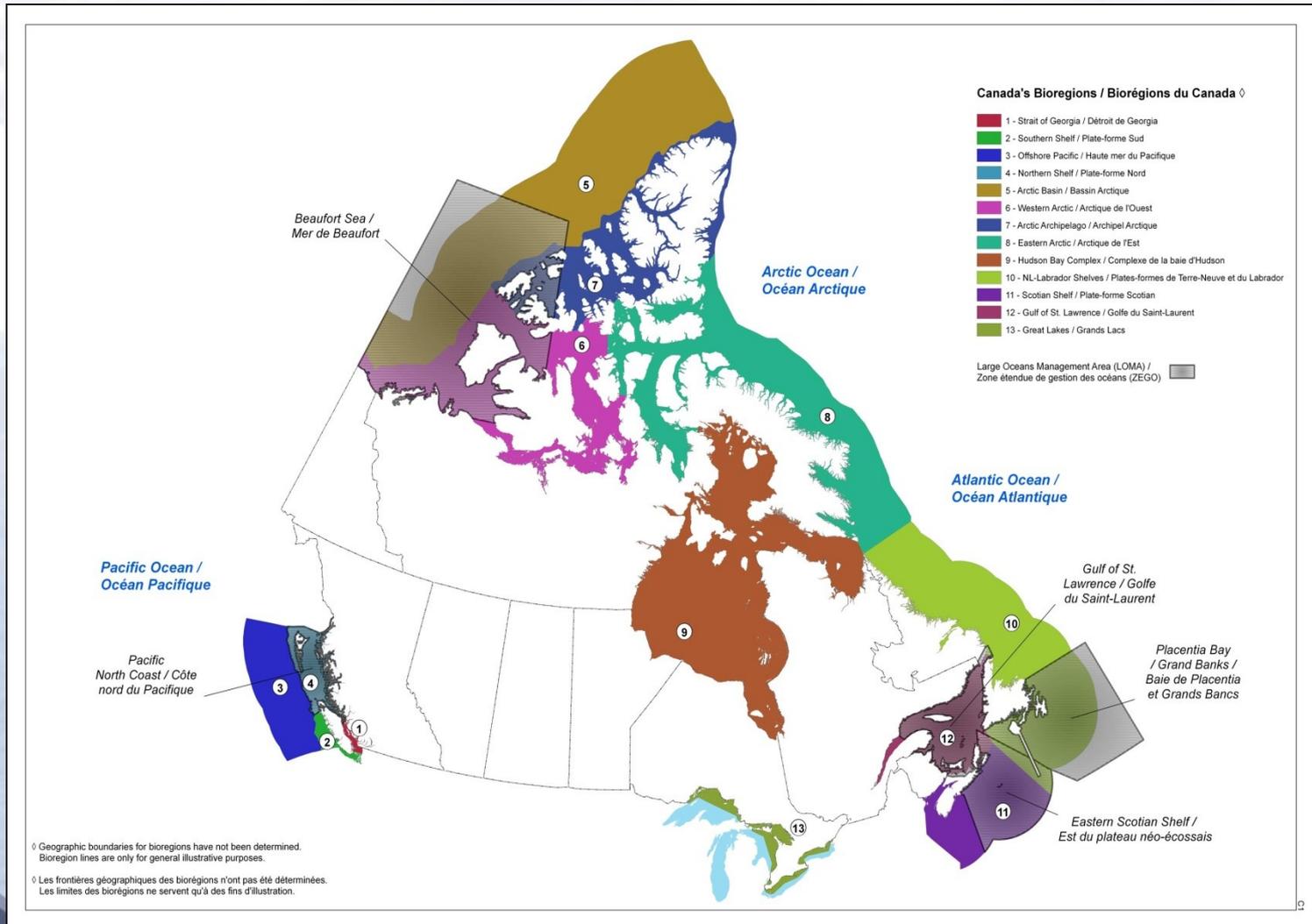




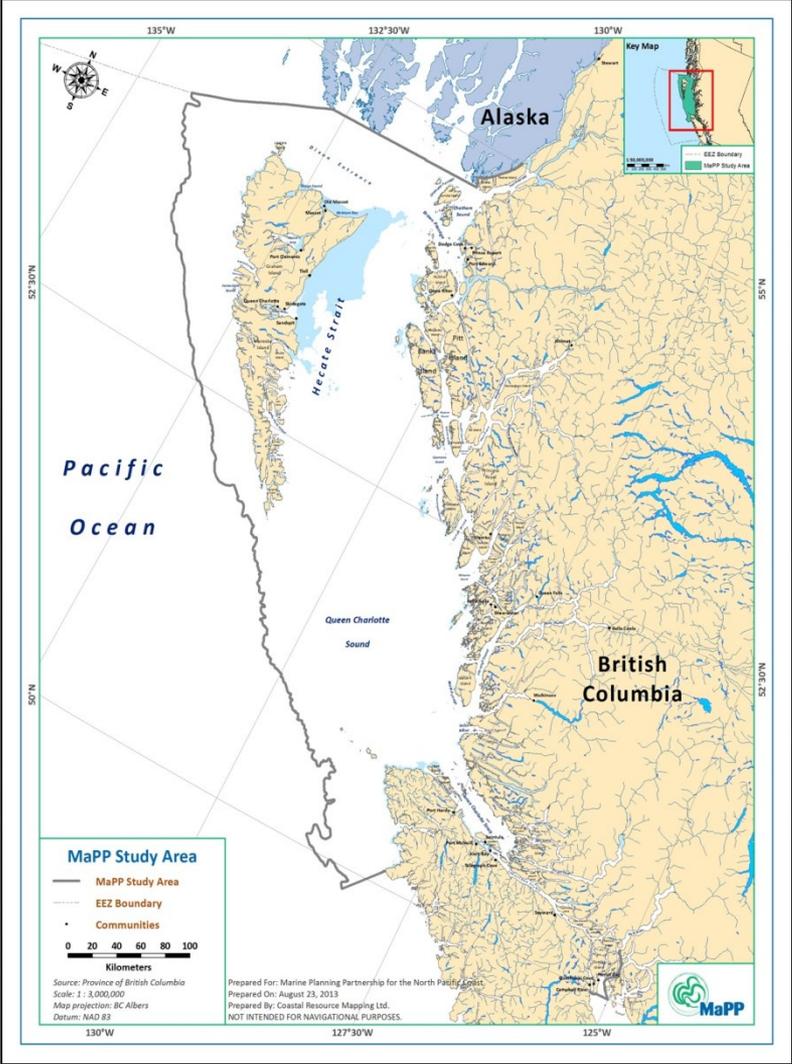
*Spills 7 tonnes and over per decade showing the influence of a relatively small number of comparatively large spills on the overall figure*



# National Framework for Canada's Network of Marine Protected Areas



# PNCIMA and MaPP



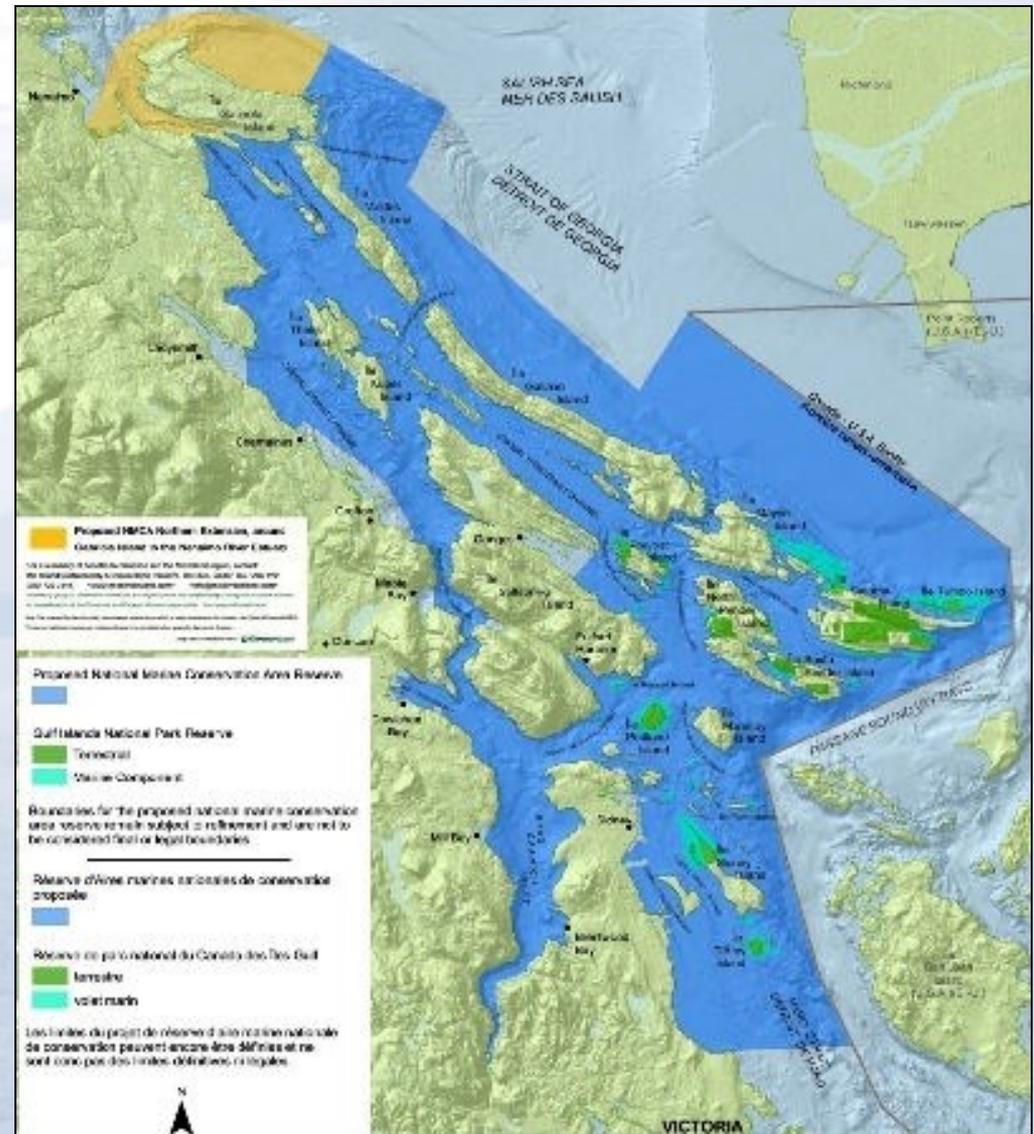
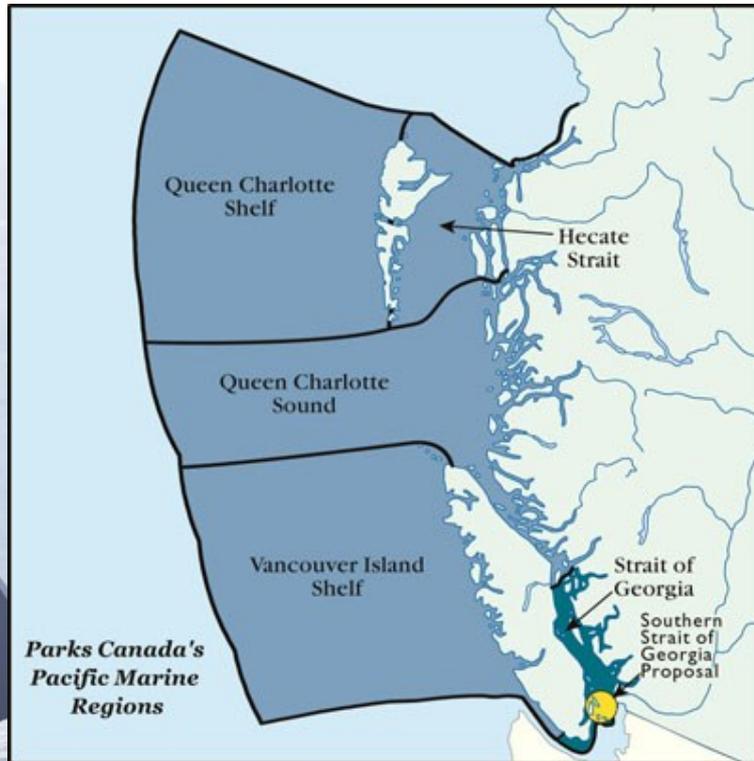
# Haida Gwaii Marine Plan

“The risks of increased marine traffic include a greater chance of oil spills, an increase in ocean noise, the introduction of exotic species, and increased marine pollution”.

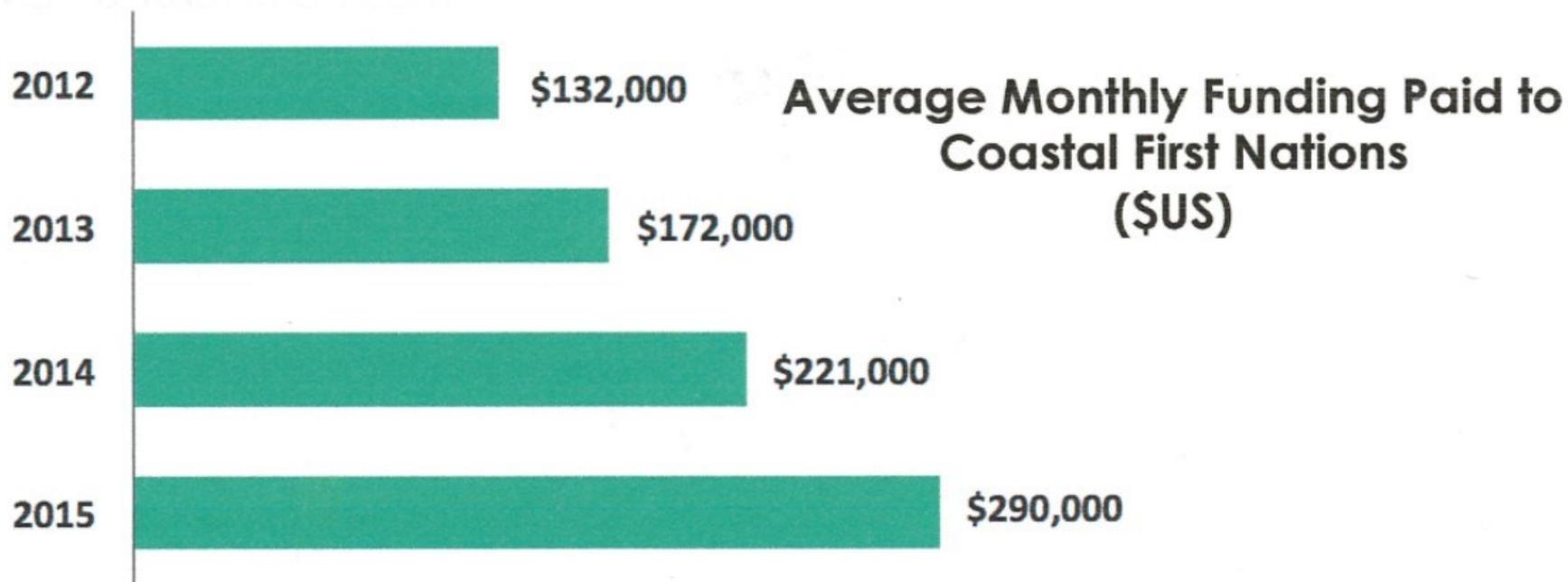
Coastal First Nations aims to achieve a shared governance over the marine industry and also view us as a future source of revenue.



# Parks Canada - Proposed Southern Strait of Georgia National Marine Conservation Area



# Monthly payments from the Moore Foundation to Coastal First Nations have doubled since 2012



Source: Compiled from the U.S. tax returns of the Gordon & Betty Moore Foundation



# Piracy



International Maritime Bureau



## Armed Robbery and Piracy Against Ships

ICC International Maritime Bureau

### Total Incidents per Region

January-December 2014

Americas	5
Africa	55
Indian subcontinent	34
SE Asia	141
East Asia	8
Other	2



Follow #IMBpiracy @IMB\_Piracy

## PIRACY AND ARMED ROBBERY AGAINST SHIPS

ICC INTERNATIONAL MARITIME BUREAU



### TOTAL INCIDENTS PER REGION FROM JANUARY TO JUNE 2015



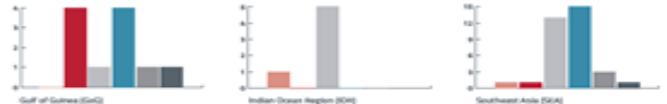
#IMBpiracy @IMB\_Piracy

# DRYAD MARITIME

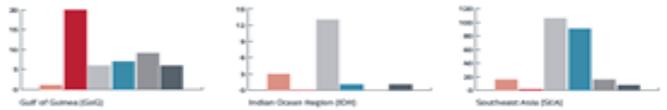
Dryad Maritime is a maritime operations company with a high-grade intelligence capability.



Figures by High Risk Area: October to December 2015



Figures by region in 2015



Legend: Hijack, Attack, Robbery, Seizure, Attempted Seizure, Suspicious Approach\*  
\* High levels of suspicious reporting under the best number of suspicious approaches correlates.

Total number of incidents in 2015



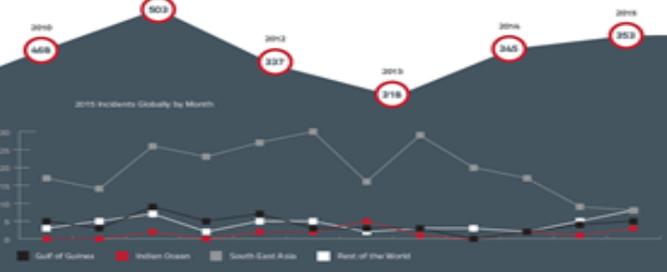
Dryad figures are comprised from open and privilege sources. Figures do not include reports discounted as piracy following analysis by Dryad.

Figures correct as time of print (21/10/2015)

### 96 crew kidnapped in 2015



47 Estimated total number of crew currently in captivity



T: +44 (0) 845 060 0072  
www.dryadmaritime.com

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# INCREASING CYBER RISKS:

Sample Cyber Incidents of Significance Involving Government, Industry and Maritime Domain



**KEY:**

- Government and Industry
- Maritime Domain

Volume of malicious code on American networks more than doubles from previous year, with more than 60K new pieces of malware identified per day.

Malware overwhelms underway off-shore drilling rig in Asia, forcing a prolonged shut-down.

**2010**

U.S. Secret Service estimates 867 terabytes of data stolen from U.S. systems, nearly four times amount of information in the Library of Congress.

77 million online entertainment accounts, including credit and debit card information, were stolen by an unknown group of cyber hackers.

Pirates suspected of exploiting cyber weaknesses for use in targeting vulnerable shipments.

**2011**

30,000 computers rendered inoperable at one of the world's largest oil companies as the result of a suspected state-sponsored attack.

Foreign counterfeit electronics parts suspected of providing potential "backdoors" in U.S. military systems.

Foreign military compromises "multiple systems" onboard commercial ship contracted by U.S. TRANSCOM.

Over 120 ships, including major Asian Coast Guard vessels, experience malicious jamming of GPS signals.

**2012**

McAfee estimates \$100 billion worth of data stolen from U.S. cyber systems every year.

Major cloud storage networks compromised by hackers targeting high-profile clients.

Multiple network intrusions of major U.S. Media outlets.

Major social networking site hacked, compromising over 250K accounts.

Foreign state-sponsored spear-phishing campaigns targeting commercial logistic companies supporting TRANSCOM.

European authorities announce drug smugglers hacked cargo tracking systems in major European port to avoid detection.

**2013**

GAO reports 24 major U.S. agencies do not consistently demonstrate effective response to cyber incidents.

Heartbleed Bug exposes approximately 66% of all internet traffic to data leaks.

70 million bank cards compromised from major U.S. retailer in data theft scheme.

GAO issues report – **MARITIME CRITICAL INFRASTRUCTURE PROTECTION: DHS Needs to Better Address Port Cybersecurity.**

A major U.S. port facility suffered a system disruption which shut down multiple ship-to-shore cranes for several hours.

Spear-phishing campaign against major Asian Shipping company.

**2014**





## BY THE NUMBERS

Tk **47.5** lakh  
Total minimum illegal payments a day  
at Chittagong Customs

Tk **36.5** lakh For imports a day      Tk **11** lakh For exports a day

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Total daily illegal payment at Chittagong Port to release  
imported goods: Tk **17.2** lakh



# Marlboro (Suez) Canal

*“On the ship I was on, the Suez Canal Authority suggested that the ship’s trim was not in line with canal standards. The problem was resolved when the master passed out the cartons of Marlboros (the Egyptians want only Marlboros, reds, in the box; anything else, especially Kools, would make them unhappy). On my ship, the master gave out a total of about thirty cartons, which is about average. Why all the cigarettes? Cigarettes, especially Marlboros, are like currency. And incomes of some of these people (especially laborers and vendors) are so low that selling cigarettes to Marlboro-hungry Egyptians is a lucrative source of income. (While in Cairo, it seemed everyone who was smoking was smoking Marlboros (reds, in the box).) Just before we got underway, a crewman on the pilot boat bringing the Suez pilot was yelling at our ship, “Captain, Captain, seegarets pleeze, seegarets for food!”*



## Traffic System



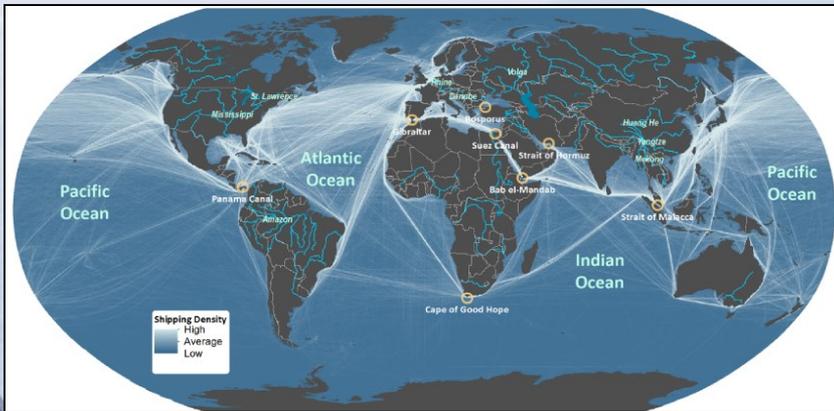
- The navigation is run in a convoy system .
- Ships transit the Canal in three convoys daily :
  - 1- From Port Said at 0000 hrs going south.
  - 2- From Port Tawfiq at 0600 hrs going north.
  - 3- From Port Said at 0630 hrs going south.
- Permissible speed for loaded tankers 13 Km/hr.
- Permissible speed for other ships 14 Km/hr.
- Average transit time from 12 to 16 hrs



# International Maritime Day Theme for 2016

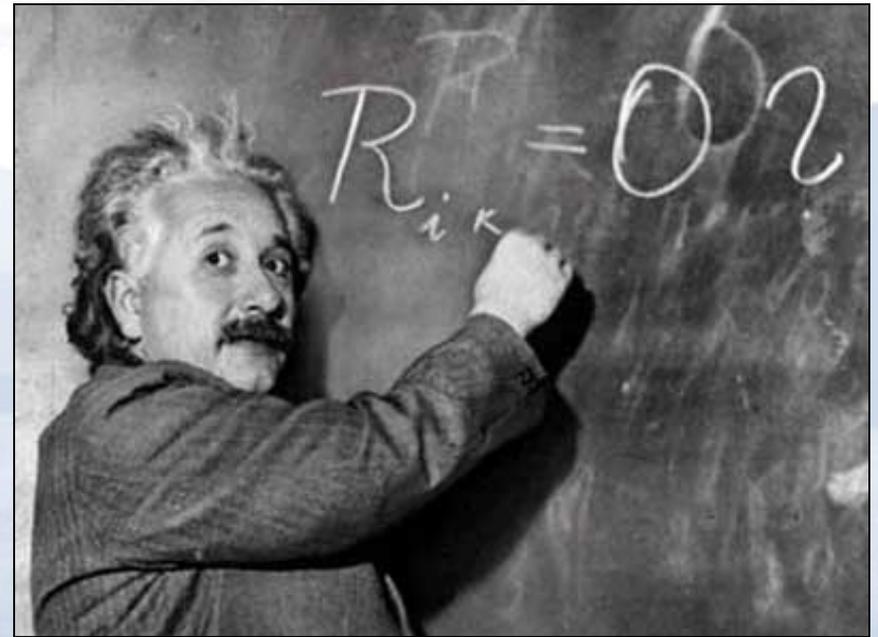
*"Shipping:  
Indispensable to the World"*

*"Half of the world would starve and other half would freeze had it not been shipping" - Efthimios Mitropoulos.*



We cannot solve our problems  
with the same thinking we used  
when we created them

Albert Einstein 1879-1955





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