

The University of Queensland
Marine & Shipping Law Unit

IMO WORLD MARITIME DAY 2007 SEMINAR



ENVIRONMENTAL CHALLENGES FOR SHIPPING: AUSTRALIAN RESPONSIBILITIES & INTERESTS

Thursday 4 October 2007

supported by

BLAKE DAWSON WALDRON

L A W Y E R S

The “green” credentials of shipping

Queensland Branch of the Nautical Institute

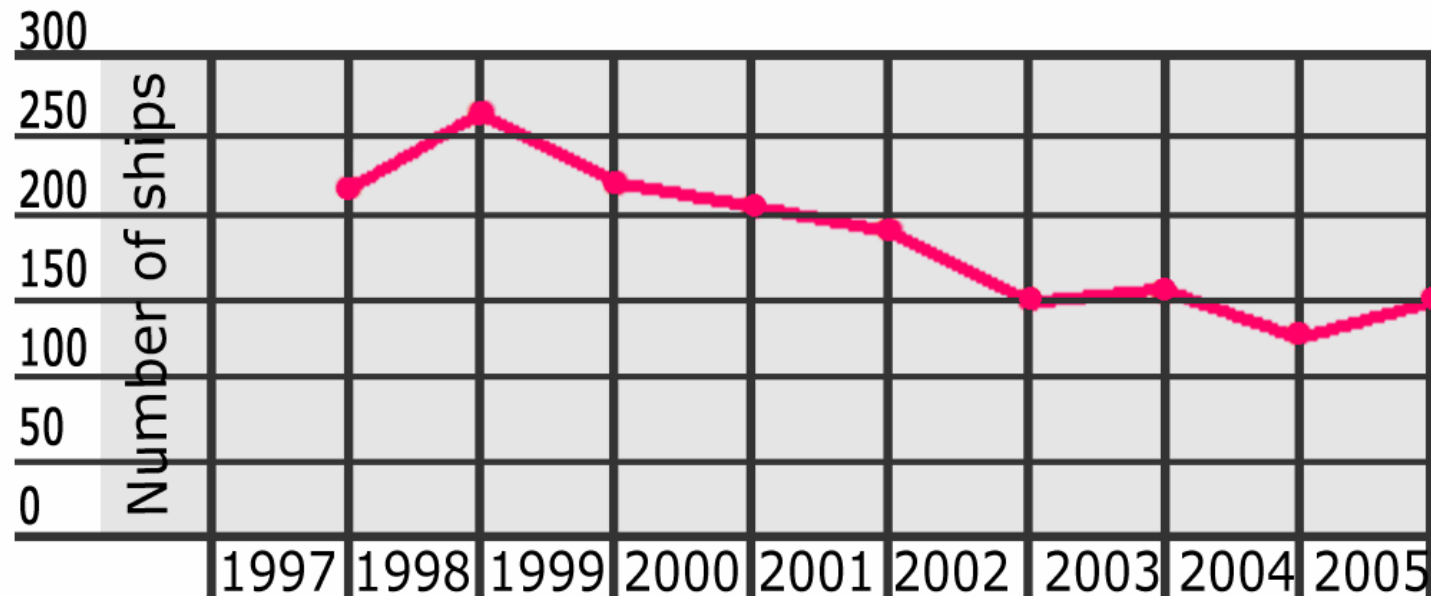
4 October 2007

Presentation by Llew Russell,
Chief Executive Officer,
Shipping Australia Limited



Shippings performance

Total losses by number (ships over 100gt)

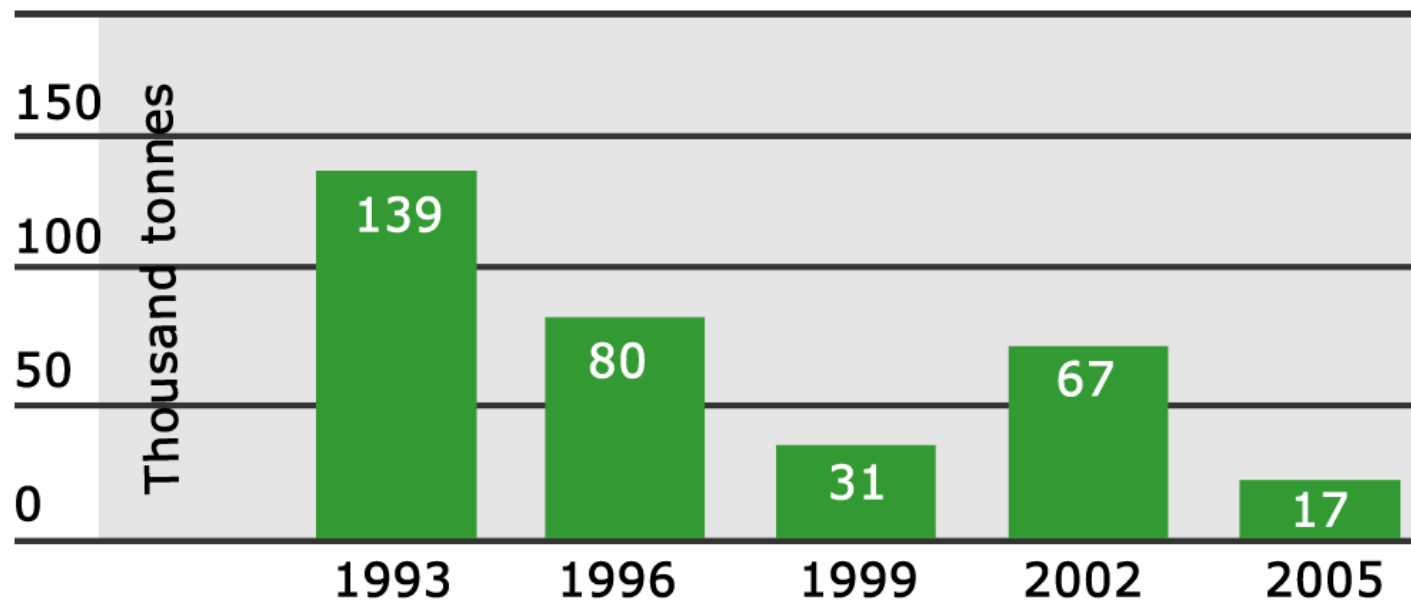


A 'loss' refers to ships damaged beyond economic repair

Source: Lloyd's Register Fairplay

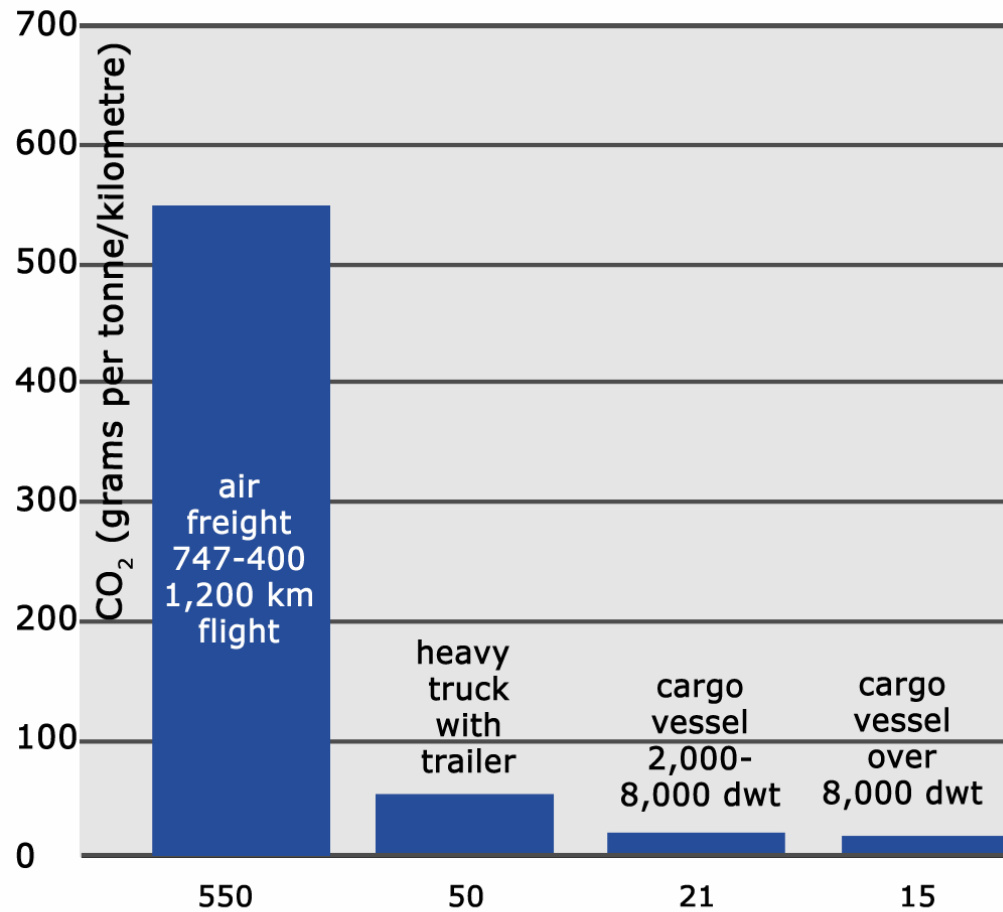
Shippings performance

Quantity of oil spilled (tonnes)



Source: International Tanker Owners' Pollution Federation Limited

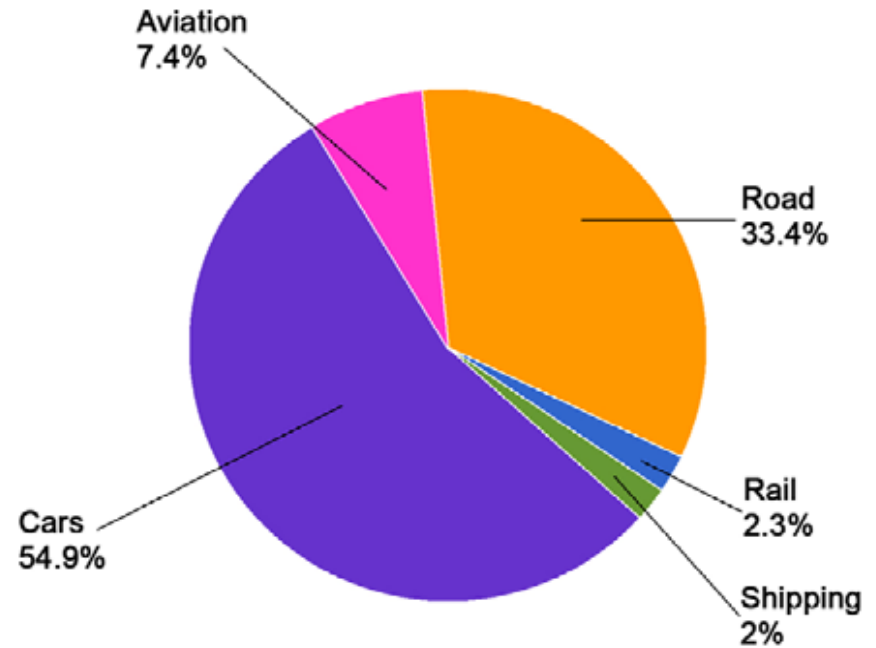
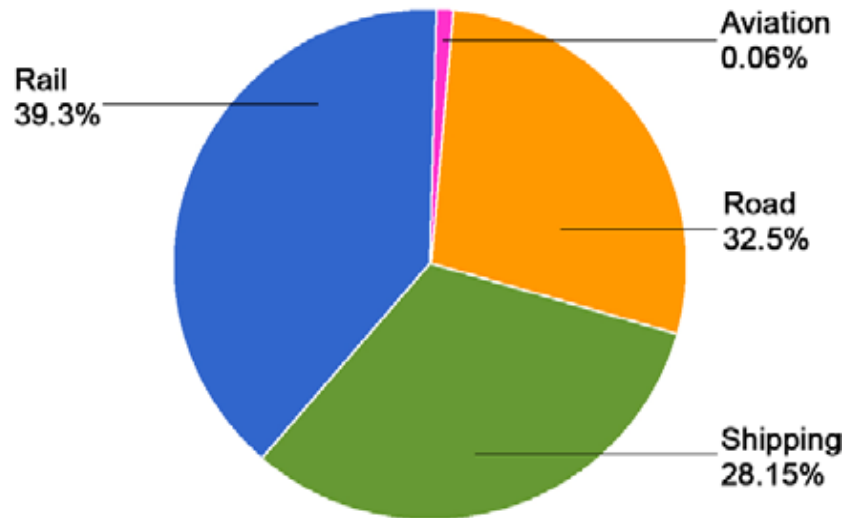
Comparison of CO₂ emissions between different transport modes



Source: NTM (Swedish Network for Transport and the Environment)

Percent share of domestic, non-urban freight task measured in tonne-kilometres

Percent of CO₂ emissions in 2002 from transport by mode



Source: Australian Shipowners Association



Energy efficient transport

Energy use	S-Type container vessel	Rail – electric*	Rail – diesel*	Heavy truck*	Boeing 747-400*
kWh/tkm	0.018	0.043	0.067	0.18	2.00
Emissions (g/tkm)	S-Type container vessel	Rail – electric*	Rail – diesel*	Heavy truck*	Boeing 747-400*
Carbon dioxide (CO ₂)	8.36	44.1	17	50	552
Sulphur oxides (SO _x)	0.162	0.22	0.00005	0.00006	0.17
Nitrogen oxides (NO _x)	0.21	0.13	0.35	0.31	5.69
Particulate matters (PM)	0.009	n/a	0.008	0.005	n/a

*Source: Network for Transport and the Environment
 kWh/tkm=kilowatt hours per tonne-kilometres
 g/tkm=grams per tonne-kilometres



Finding solutions

- + SAL support current trend in IMO's approach to regulation is to turn away from prescriptive requirements and to set goals
 - Market and technology can find best solutions
- + Industry recognises need to produce measurable reductions in air emissions
 - But need to set course for the future that can be adapted to new technological and economic drivers
- + New measures should be reviewed for effectiveness every five years
- + IMO work on CO₂ and air pollution from ships should be combined

Shipping not standing still

- + Many SAL members actively working to reduce environmental footprint
 - Waste heat used for propulsion
 - Upgraded computers improving cargo handling, route and speed efficiency
 - Separation of wastes
 - New cylinder lubrications systems
 - Lower sulphur content in fuel
 - Use of TBT-free anti-hull fouling paint
 - Inboard protected fuel tanks



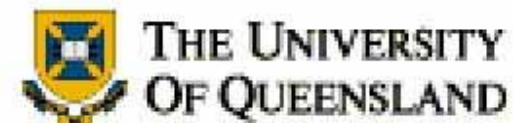
Onboard treatment of ballast water

- + WWL already using new (IMO approved) chemical free onboard system on new vessels
 - Based on advanced oxidation technology
- + WWL working out how to retrofit existing vessels
- + IMO expected to approve another system for trials in the first half of 2008
 - These developments strongly supported by the industry



Conclusion

- + Also need to increase efficiency of land transportation
 - Use of inter-modal terminals expected to increase coverage of freight by rail
- + Whilst shipping is not a pale shade of green, it will not rest on its laurels in seeking to improve its environmental performance



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