The Nautical Institute

present

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
LAWYERS

The “green” credentials of shipping

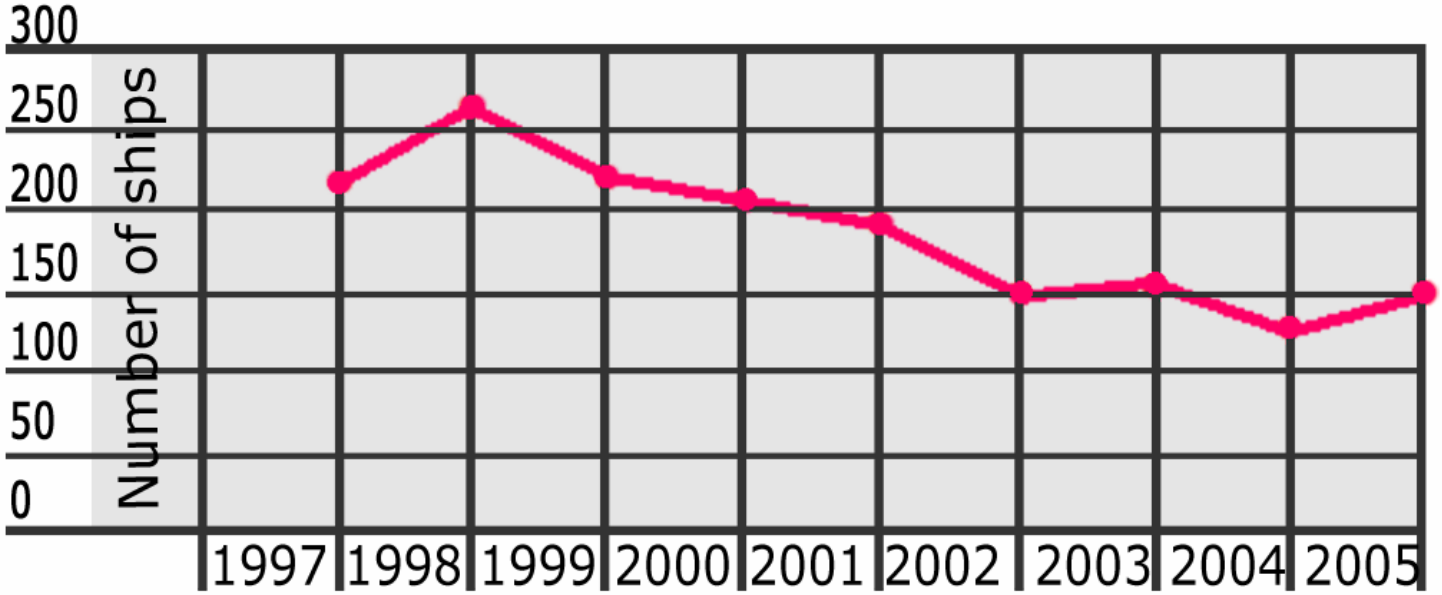
Queensland Branch of the Nautical Institute

4 October 2007

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

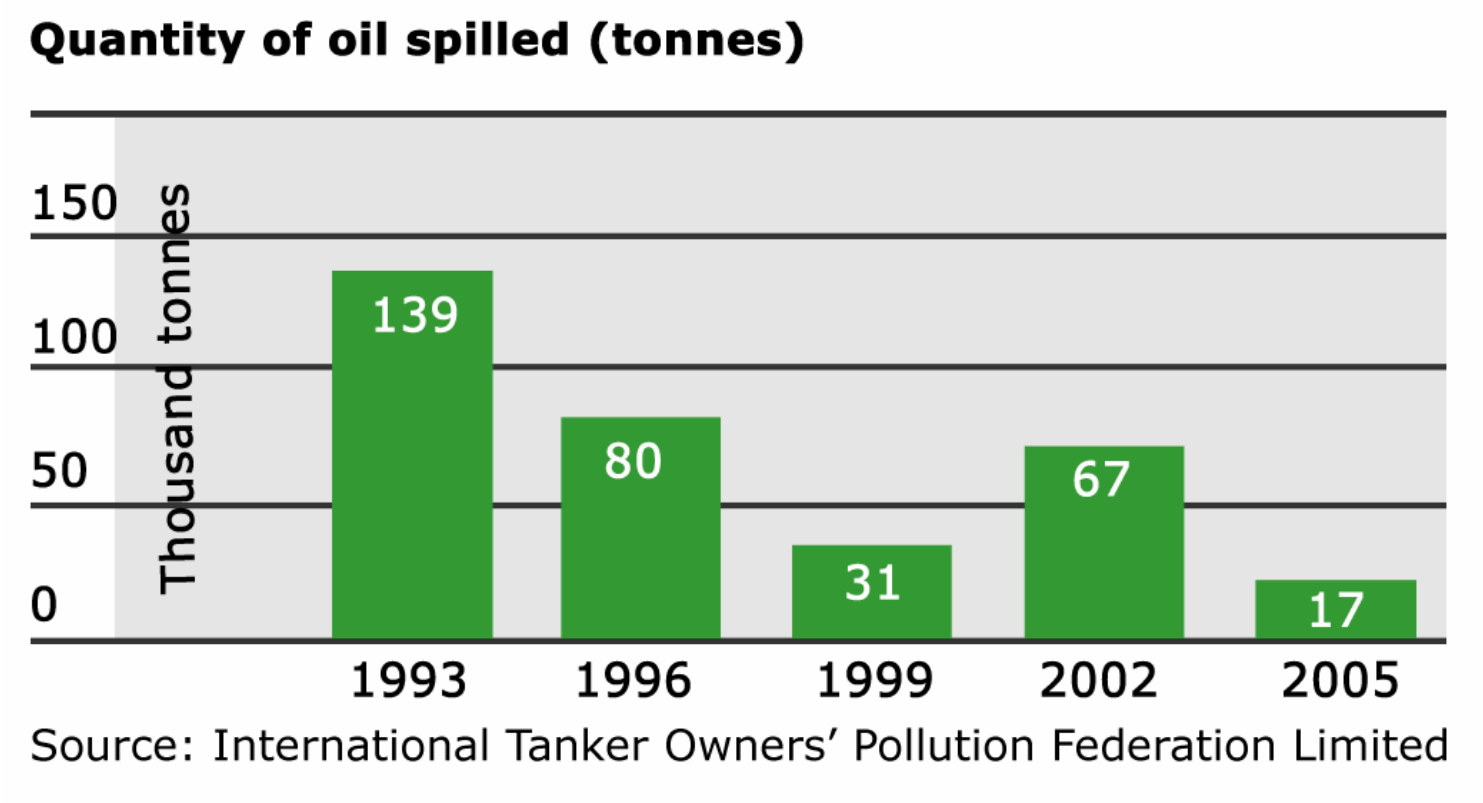
Shippings performance

Total losses by number (ships over 100gt)

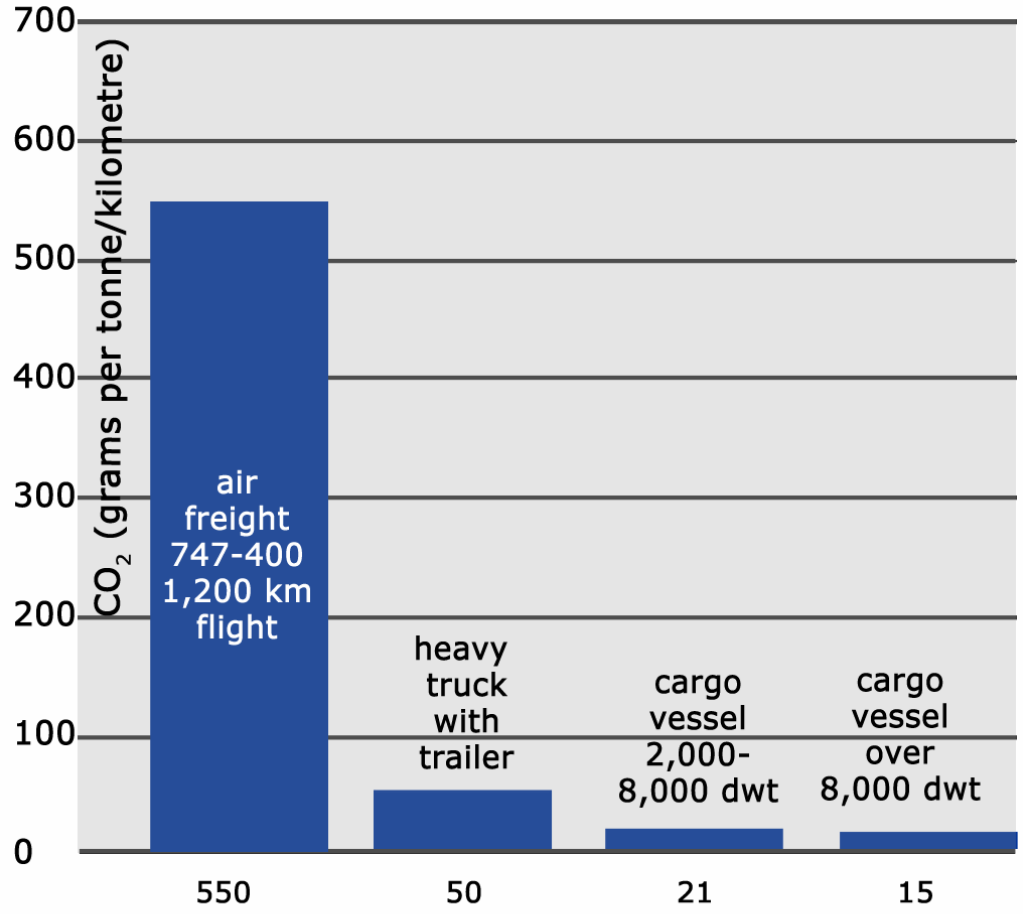


A 'loss' refers to ships damaged beyond economic repair
Source: Lloyd's Register Fairplay

Shippings performance

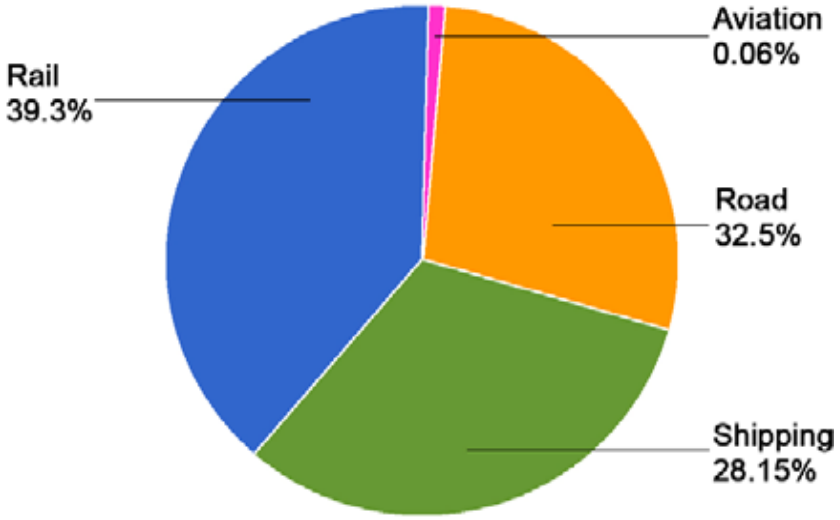


Comparison of CO_2 emissions between different transport modes

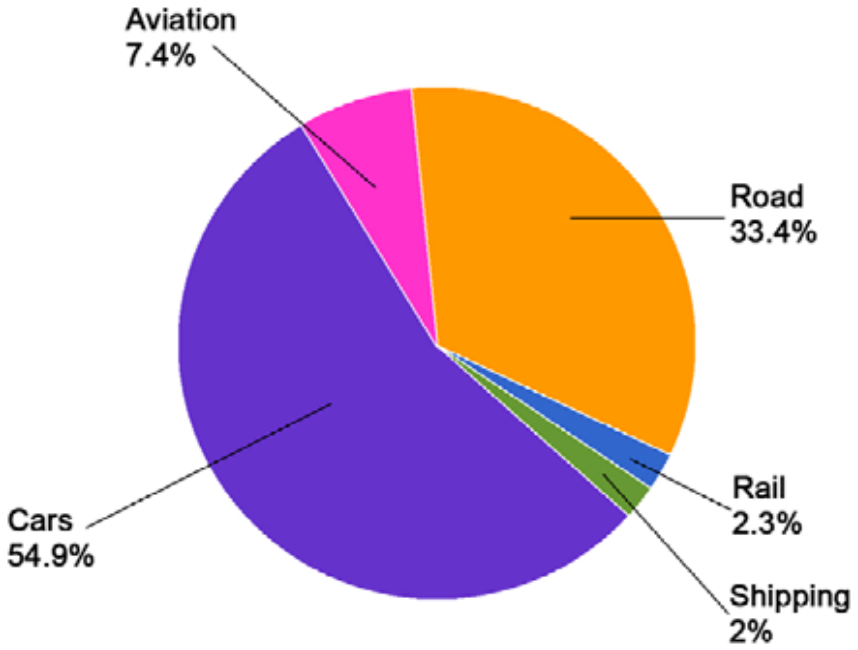


Source: NTM (Swedish Network for Transport and the Environment)

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



Percent of CO_2 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 CO_2 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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