

# Australian Coastal Shipping

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ICHCA Adelaide May 2015





**Shipping is international, competitive, unpredictable, risky, multi-faceted and fast.**

**The industry leaves its members little time for contemplation, and little margin for error, and has no sympathy for failure, no tolerance for the undecided, the stupid, or the weak**

Stuart Ballantyne 1990

# AUSTRALIAN COASTAL SHIPPING

(Still in a coma. )

**UNIONS**

**UGLY SHIPS**

**TAX POLICIES**

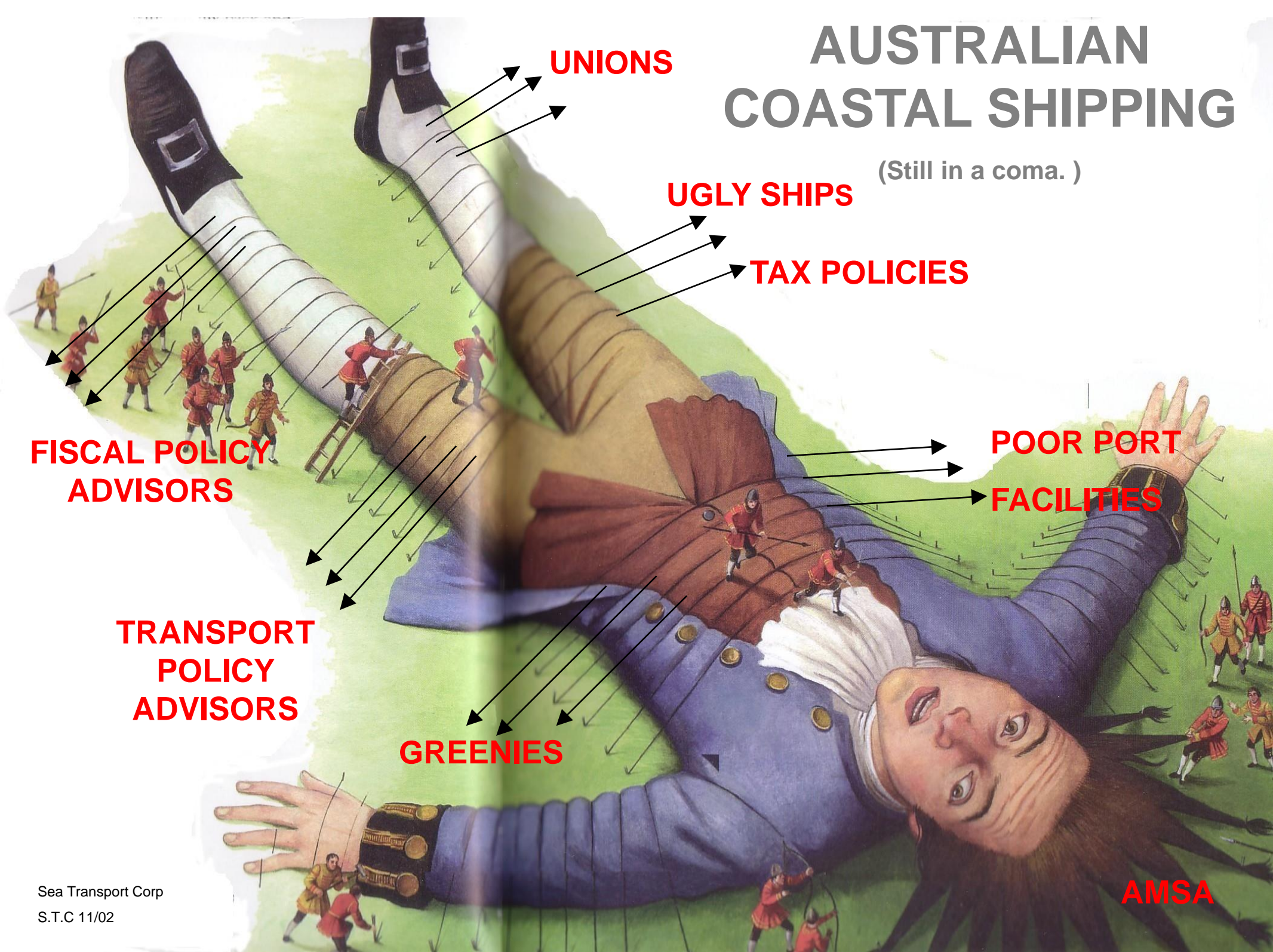
**FISCAL POLICY  
ADVISORS**

**POOR PORT  
FACILITIES**

**TRANSPORT  
POLICY  
ADVISORS**

**GREENIES**

**AMSA**





# Present status— Coastal Shipping



- Carrying only 4.8% of the nation's cargo (globally it is 95%)
- Too many Regulators for too few ships
- Anti –shipping legislation, particularly fiscal policy
- Fear of unions with poor attitudes by all stakeholders
- Investors regard the Australian industry as “**high risk**”
- There is little or no port infrastructure suitable for modern roro tonnage, small bulkers or pallet carriers
- Lack of Government interest (av budget 60% roads, 30% rail and 10% ports)
- Lack of skilled people for ships, ashore or regulators

# SAFETY-



## Sea Transport is Safer

- 1,193 deaths on the road p.a. (2013) against 34 at sea (mainly recreational craft and fisherman)
- Most road deaths involve trucks
- 18,000 Serious road injuries p.a. (higher cost to the community than deaths) Road Toll cost for Qld alone is \$3.5bn
- Sea Safety costs \$0.4bn p.a.
- An efficient coastal roro system, even with a subsidy, will surely reduce this appalling road toll
- The Media continues to beat the Marine industry up as our accidents are “more interesting”

# ROAD MAINTENANCE

## - Sea Transport is Cheaper



Road maintenance, predominantly for the perimeter highway in Australia amounts to \$8 billion per annum

It is agreed that most road damage is done by trucks, all states are behind in their road maintenance program.

An efficient coastal roro system, even with a subsidy, will surely reduce this road maintenance bill

*The sea doesn't require any maintenance !!*

# Are Shipping Costs Competitive ?



- 20 ft container one way Brisbane - Cairns
  - \$6000 by road – Express 23 hours (source RTA)
  - \$1000 by rail - 96 hours (source Qld Rail)
  - \$1900 by 40 kt ship - 21 hours
  - \$1200 by 28 kt ship - 30 hours
  - \$600 by 18 kt ship - 48 hours (this is similar to sea freight rates Fremantle-Sydney) includes \$300 lift charge costs)\*\*

\*\* assuming an efficient operator with a fleet and good frequency

# Can Shipping compete with the Road ?



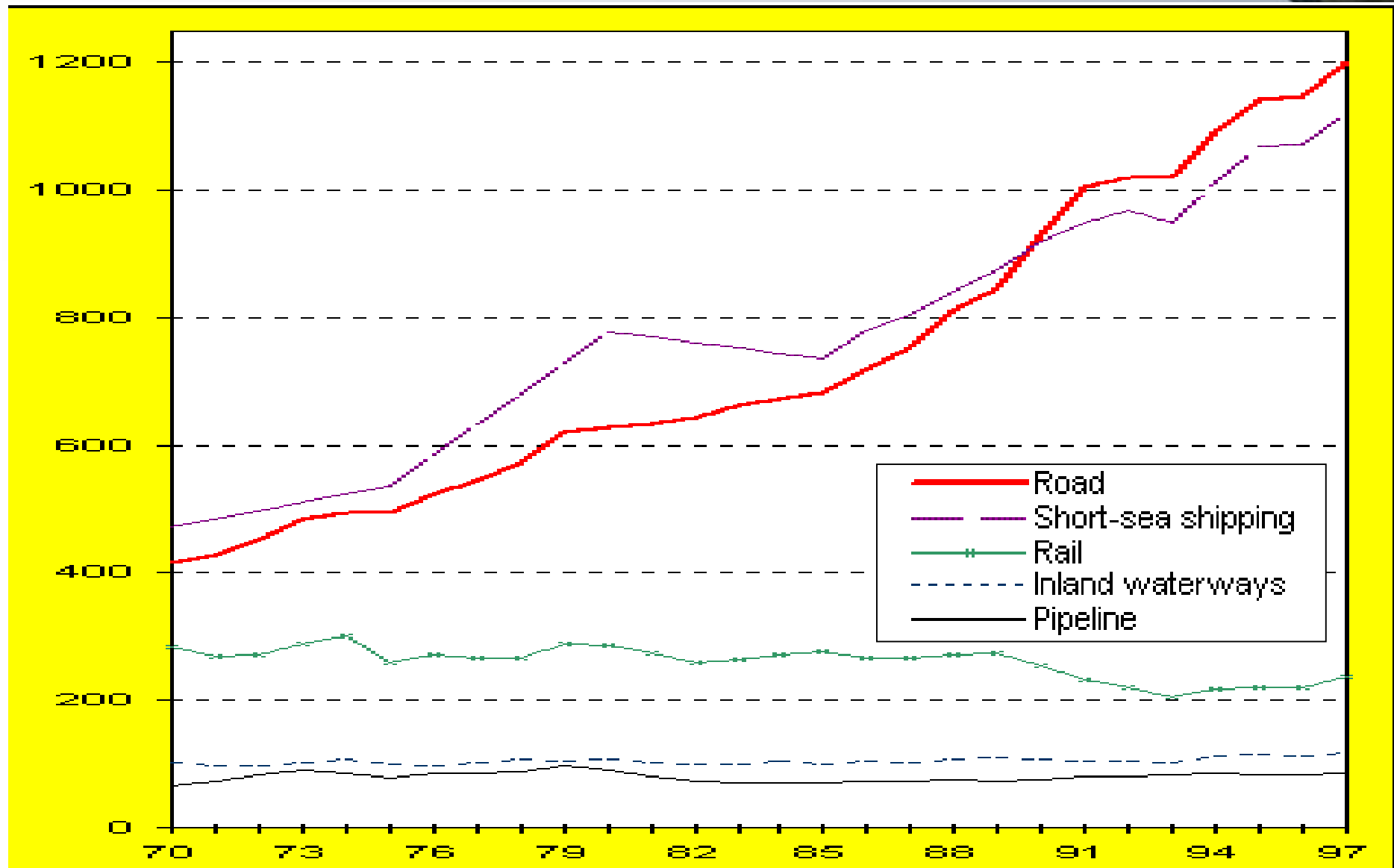
- *“We can transport a container from Italy to Spain at the same cost of a truck’s fuel and toll charges”.....*
- *....”Each terminal handling fee is 15 euros (A\$26) for a trailer, or 50 euros (A\$85) for a prime mover and 12m trailer”*

Dr Paul Kyprianou  
Grimaldi Lines, Italy  
Roro Conference Belgium May 2009



# Should Australia invest in Rail ??

## Let's look at Europe



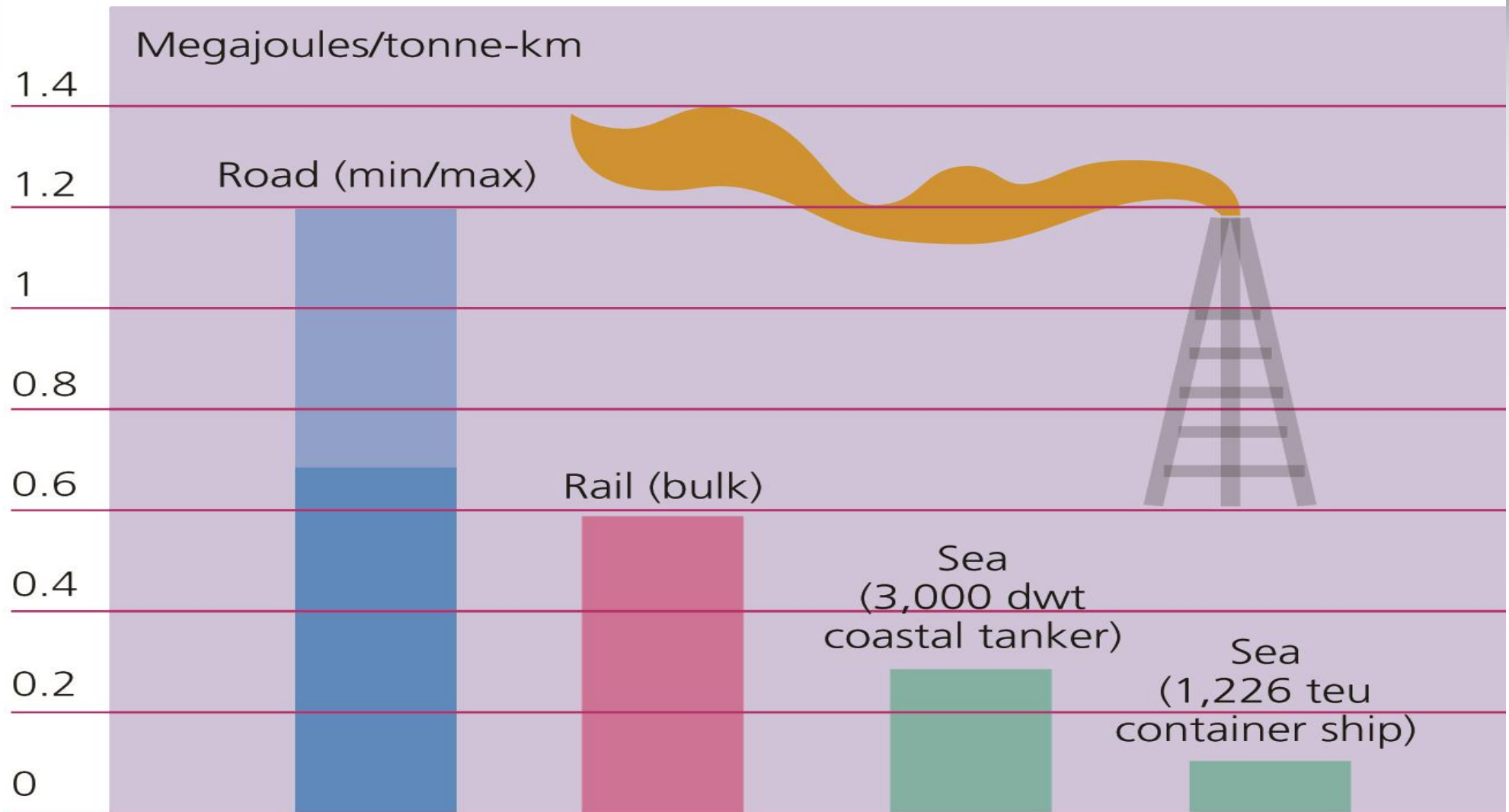
Note - Rail cannot increase freight volume, so why pour more money into it??

# Shipping's spectacular environmental performance



## Comparative fuel consumption

Source: UK Department for Transport





# Infrastructures -The Good (European standard)



NORDIC JET in Tallinn, Estonia.



# Infrastructures -The Bad and Ugly (third world standard)



**Toondah Harbour – Brisbane, Queensland, 2013, no progress for over 20 years because of environmental constraints. A National disgrace for a harbour that carries 200,000 vehicles & 900,000 passenger (many tourists) p.a.**

**There are NO RORO facilities in any State except Vic and Tas suitable for modern roro and ropax vessels**





# INFRASTRUCTURE SOLUTIONS

## ECONOMICALLY UNBEATABLE EXPORT TRANSHIPMENT FROM MINI PORTS

A 5km Jetty with a 80,000T  
storage shed Total cost \$950m  
Plus bond for removal of jetty  
at the end of the mine life

A small harbour this size and small sheds  
can feed to an FHT 4 miles out with:-  
1 x 2500 dwt feeder barge – 4M TPA  
Total Capex appx 1/6<sup>th</sup> of a traditional jetty  
Including the transhipper



Lucky Bay May15th 2015

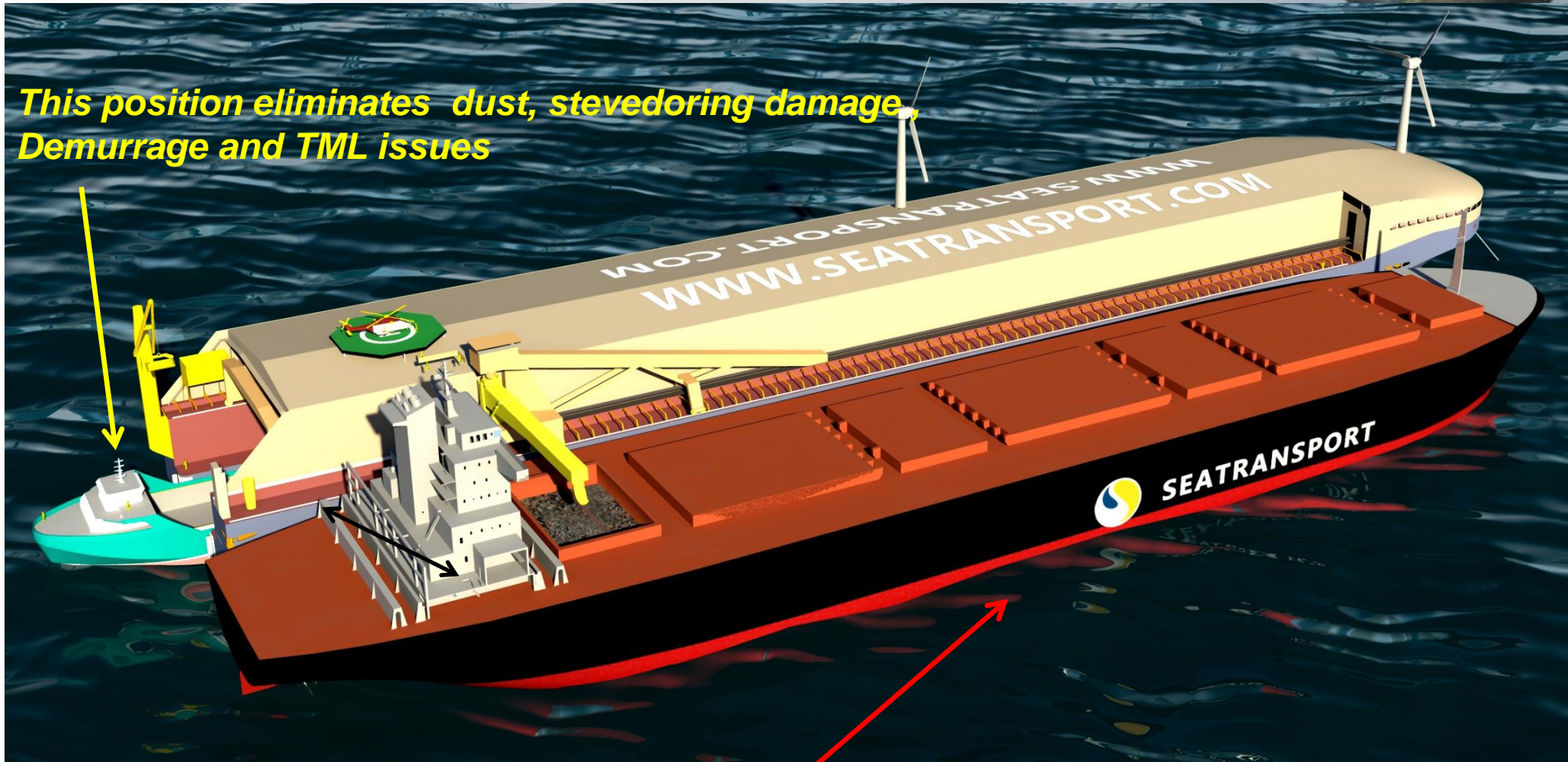




# INFRASTRUCTURE SOLUTIONS - STL FLOATING HARBOUR TRANSHIPPER (FHT)



*This position eliminates dust, stevedoring damage,  
Demurrage and TML issues*



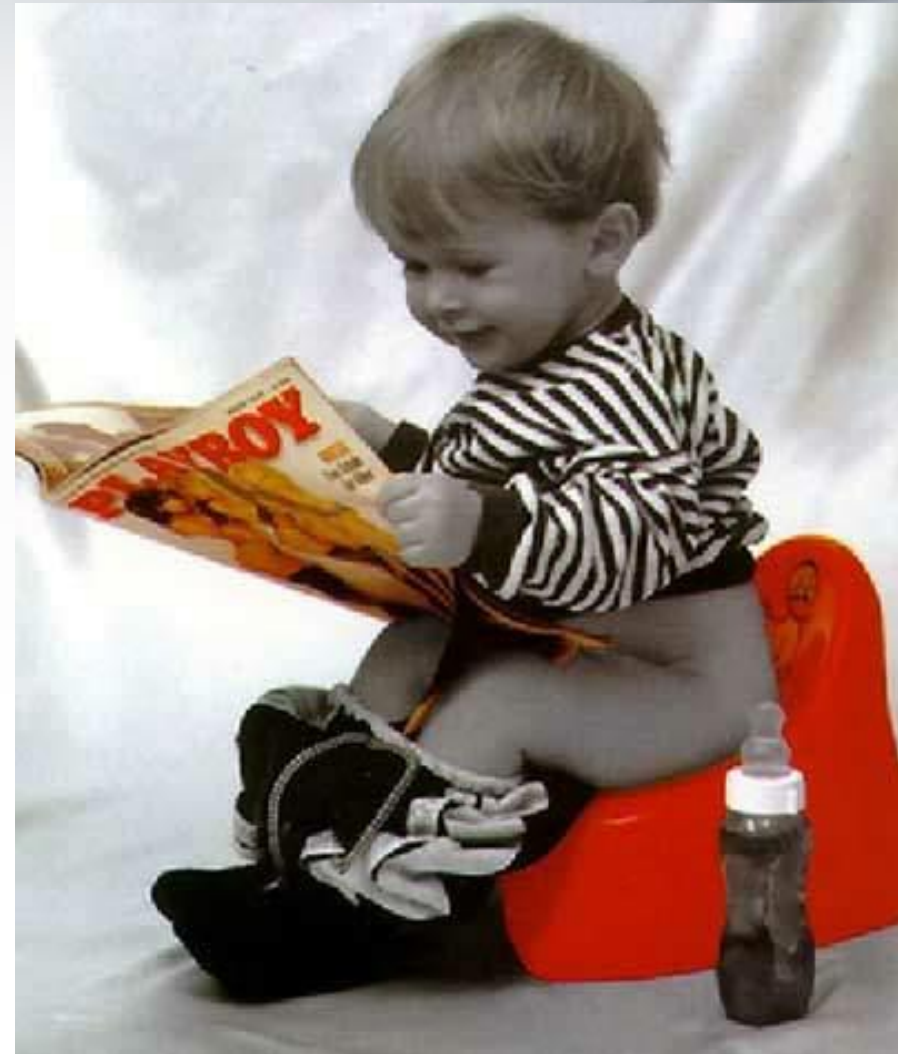
**Standard alongside feeder position can lose up to 90 days p.a.  
Plus stevedoring damage (up to \$400k p.a. each feeder)**

# Hindrances to Coastal Shipping - Policy makers with little knowledge



*“It was evident from the beginning that one of the major problems is how little knowledge policy makers have about freight transport”*

Tony Slatyer, Director BTRE  
ATRE Forum Oct 2002



# Hindrances to Coastal Shipping– Environmental over-regulation



Quotes from Ports Conference Bris Nov 2005

- *“The Tragedy of (EPA) regulations is preventing port expansion, export and job opportunities”*

Warren Truss, Federal Transport Minister

- *“The torturous path of EPA regulation is a hindrance to our port and cost competitiveness”*

Vincent Tremaine CEO Flinders Ports

- *“There is no pleasing them”*

Paul Clauson, (ex Qld Attorney General)

- *Anti- shipping infrastructure obstruction by fringe groups funded by U.S. Rockefeller and Pew Foundation*

Des Houghton Editor Courier Mail March 2015 “Who is pulling the strings?”

This was reflected by every Port CEO from all States,  
evidenced today by ships at anchorages



# ADDRESSING THE ISSUES



## COASTAL SHIPPING - Fear of Unions

- There is still a fear of unions by the finance institutions, owners and operators.

### **Project Group should address:-**

- Recognise that all unions are not the same: each is a product of the mindset of the employees it represents
- Required;- people with a work-ethic: aspire, accountable, contribute

### **Possible Solution !**

- To compile the entire crew with a single union officers & officer-trainees
- This all-officer crew would need to move totally away from the low low-skill, low-productivity mindset. Potential to re-shape industrial landscape.
- No closed shop



# ADDRESSING THE ISSUES



## Fiscal policy - **MILITARY & EMERGENCY RESPONSE**

- Re-allocation of funding for many expensive non-redeployable military vessels . **Focus on :-**
- Investment allowances for owners of new tonnage who will incorporate military requirements on to commercial ships (helipads/rescue equipment / medical centres)
- Strengthens the Nations Defence and emergency response capability at a much lower capital cost



**This is common practice for many European countries**

# ADDRESSING THE ISSUES



## FISCAL POLICY - COASTAL SHIPPING

- **Focus on :-**
- **Investment allowances for shore infrastructures and new ships**
- **2nd Registry tax incentives**
- **Total Fuel tax exemption for coastal shipping**
- **Truck subsidies for using the sea instead of road –Oz Mos**

# The key issue of Environment.



- Sea transport has no noise pollution or congestion problems
- Sea transport has only 2-10% emissions per tonne/mile of cargo compared to road transport
- Greater environmental achievements can be made by Australia if we adopt a Sea Transport mentality
- Sea Transport unlike road & rail, does not require land resumption
- **Due to the huge contributions to the environment available from Coastal Shipping, it should be supported by all environmental groups, if they are indeed serious about the environment**

# ADDRESSING THE ISSUES

ENVIRONMENTAL ISSUES



- there has to be a status elevation for this industry.
- Focus on:-
  - Elimination of the torturous and expensive regulatory procedures for:-
    - Dredging
    - Berth expansion
    - Berth installation
  - **and if we are really serious about reducing or eliminating green house gases.....we must look to:-**

**Use of LNG - from our vast gas reserves**

**Use of Methanol – from our vast coal reserves**

**Use of Nuclear power – from our vast uranium reserves**

# **President Eisenhower's Atoms for Peace Program 1965**

**Nuclear passenger –cargo ship “SAVANNAH”**

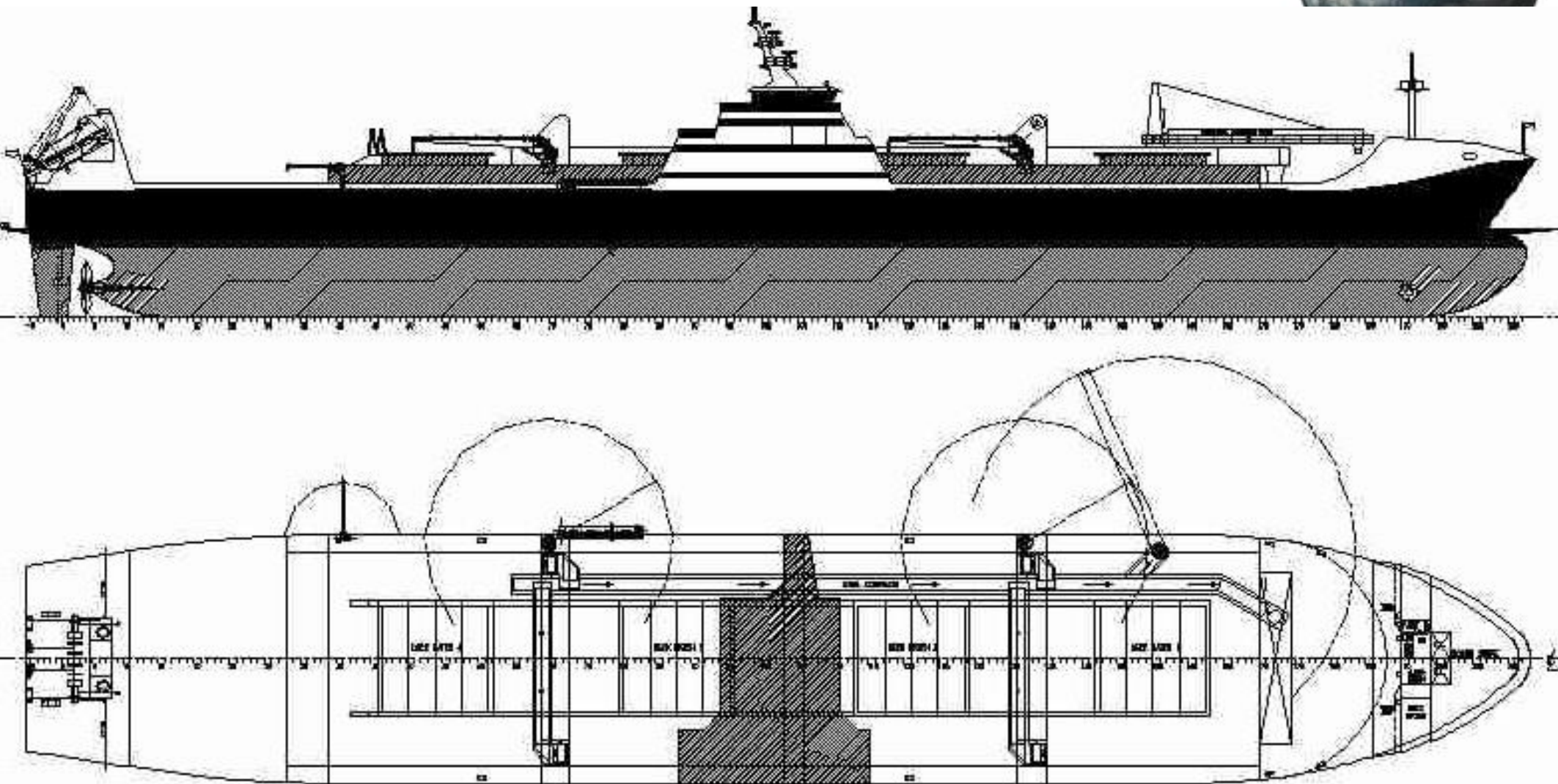


**Capable of circling the globe 14 times at 20 knots without refueling  
With 22 kgs of uranium and NO GREENHOUSE GASES**

**Nuclear fuel is about 80% less than bunker fuel**



# Alternative Energy- Fuel cell / **nuclear?**



Australian Crew cost \$7.5m p.a. Nuclear Fuel cost ~\$1m p.a. Total \$8.5m  
Foreign Crew cost \$4m p.a. Conventional Fuel \$5m p.a. Total \$9m  
*Reducing pollution and freight costs while employing locals  
are compelling reasons to at least discuss such a strategy*

# Energy - Nuclear



*“LIKE IT OR HATE IT, NUCLEAR IS CLEANER”*

R Bromby The Australian 9<sup>th</sup> June 2007

*“Australia has the highest reserves of uranium and Thorium and we should develop the technology instead of exporting materials”*

Bob Hawke PM 1993

Developing nuclear technology within Australia is better done with a ship as it is the only transport mode that is secure from public access, due to ISPS

**Cosco Shipping** – Worlds Largest Shipping Conglomerate  
Owner of 800 ships



**CEO Captain Wei Jiafu “We are investigating the use of Nuclear Powered Container ships, if submarines can have nuclear Power, Container ships should have the same”**

**Senior Maritime Forum 3<sup>rd</sup> December 2009**



# **ACTION PLAN !!**

**“OZ-MoS”**

## **Australian Motorways of the Sea**





# Objectives of Oz-MoS Project (Australian Motorways of the Sea)



- Based on the highly successful Europe “MoS”
- Secure massive modal shift of road freight to sea
- Reduce road transport externalities:
  - Deaths and serious accidents
  - Congestion
  - Pollution
  - Road damage
- Reintroduce large-scale coastal shipping system
- Significantly expand national stock of trained seafarers and training programs



# MoS services operating throughout Europe have shifted millions of truck movements off the roads



# Key MoS infrastructure



The ship – which is “infrastructure mobile”, essentially an extension of the national highway





# Key MoS infrastructure



The Terminal – sea/land interface – a parking lot



**Roro ramps should be installed in all ports throughout Australia as a priority catalyst for Coastal shipping, emergency response and defence activities**

# Motorways of the Sea (MoS)

## Basics



- Daily frequency to attract “Just in Time” warehousing
- Timed for industry (e.g. 1800 sailings / 0700 arrivals)
- Day A departure e.g. Melbourne/ Day C arrival e.g. Sydney (urgent cargo still moves by road)
- RoRo ship offers total carrying flexibility:
  - Semi Trailers and Containers
  - Autos
  - Outsize and heavy lift cargo
- Large capacity ships – 4,000 lane metres (250+ large semi trailers)
- Superior economies of scale relative to road and rail
- Medium speed ships = low fuel cost/low emissions

# Schedule Option Example: Melbourne-Sydney MoS



- Daily service each way = 4 ships
- Annual capacity – 182,500 trailers
- Seafarers required – 180-200



# Other Oz-MoS services



- Brisbane-Sydney (daily service / 4 ships)
- Melbourne-Adelaide (daily service / 4 ships)

Or, each ship does a complete multiport roundtrip:

- Brisbane-Sydney-Melbourne-Adelaide-Melbourne-Sydney-Brisbane (12 ships)
- 12/ship 3-corridor capacity = 547,500 trailers/year
- 12 ships requires 500-600 seafarers
- Plus port employment additional to this
- MoS extensions to West Australia and Northern regions

# Market research required



- Traffic volume assessment for Oz-MoS routes
- Customer logistics requirements
- Port/terminal locations and infrastructure analysis
- MoS service cash flow projections – estimate the subsidy level required – **THE KEY QUESTION - can the Oz MoS project be subsidised by savings in road accidents, road maintenance pollution, and savings to Navy fleet capability capex ? (the answer of course is YES, but Treasury needs the details)**
- Outline MoS tender process to procure MoS

# Implementation of MoS



- Joint state and federal management including the investment in RORO terminal infrastructure approvals and funding
- Instigate international tender to market Oz-MoS opportunity
- Offer 6-8 year MoS contract plus options
- Select MoS supplier
- MoS supplier procures ships and employs seafarers
- Investment in Seafarer training
- Allocate MoS operating subsidy
- ***OZ MoS service commences !***



# Local Shipping Solutions – Self Dischargers



Innovative Australian Designs which can load and discharge at 2000 tonnes per hour

Minimal port facilities

Shallow draft and no dredging required !!

“Wunma” carrying 5300 tonnes of lead zinc on 3.9m draft,  
Exporting 1 million tonnes p.a. and unsinkable in cyclones

# Local Shipping Solutions

(Remote area of Scotland)



One man and his Liebherr 934 loaded this 1200 tonnes of logs  
**(80 truck loads !)** in 8 hours



He also was:-  
The linesman  
The agent  
The wharf cleaner  
(the 5 crew members are  
in the contract team)

This strategy should be  
replicated throughout Australia



# LOCAL SHIPPING SOLUTIONS

## Stern Landing Vessels – SLV's

Remote area berthing using a single pile







**Vessel comes alongside the pile amidships and loops the 1.5m diam pile with a mooring rope**





With the outer starboard engine slow astern, the stern will swing round slowly, irrespective of the tidal flow, to place the SLV ramp on to the shore concrete ramp.  
The vessel will not need engine power to stay on the ramp during Cargo operations





# Cargo operations in strong current areas



**The container, roro or bulk cargo can be handled easily in this mooring arrangement during normal tidal flows**

**The SLV's low hinge point ensures a minimum access angle and full width between ramp horns facilitates rapid cargo operations.**





# Coastal Shipping

***“There is no industrial issue with more profound implications for Australia’s role as a trading nation”***

**Christopher Pearson The Australian  
May 26<sup>th</sup> 2007**

# Australian Coastal Shipping

## A Compelling National Strategy

Sea Transport Solutions  
Sea Transport Logistics  
Experience and Innovation at work

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