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SAL:22-004 SAL submission to PC AMLS

14 February 2022

Commissioners J Abramson & Dr S King
Inquiry into Australia's Maritime Logistics System
Productivity Commission
Level 8, Two Melbourne Quarter
697 Collins Street
Docklands VIC 3008

By online contact submission form:
https://www.pc.gov.au/inquiries/current/maritime-logistics/make-submission#lodge

Dear Commissioners Abramson & Dr King

Shipping Australia's submission to the inquiry into Australia's Maritime Logistics System

We write to provide our submission into the Productivity Commission's inquiry into Australian Maritime Logistics Systems.

Shipping Australia is the principal Australian peak body that represents the locally owned and the locally active ocean freight-focused shipping industry. We provide policy advice, insight, and information to just over 70 members, who, between them, employ more than 3,000 Australians. We provide policy input to Australian State, Territory and Commonwealth Government bodies. We are recognised across Australia by politicians, public service officials, national media and trade media as being the national association for Australian shipping.

Our membership includes Australian ports, the local arms of global shipping agents and domestic shipping agents, towage companies, the locally active arms of ocean shipping lines, and a wide variety of Australian-owned and locally operated maritime service providers. Services provided by our members include ocean freight shipping, local seaport cargo handling, domestic harbour towage, Australian marine surveying, and domestic pilotage, among other services. Our members handle nearly all Australian containerised seaborne cargo. They also handle a considerable volume of our car, and our bulk commodity trades.

Iconic and well-known Australian-based and Australian-owned businesses and industry associations among our membership include such names as 1-Stop Connections, Ausport Marine, the Australasian Institute of Marine Surveyors, Australian Amalgamated Terminals, the Australian Maritime College, the Australian Pilotage Group, Flinders Ports (South Australia), Fremantle Ports, Geelong Ports, NSW Ports, Patrick Terminals, Port Kembla Gateway, Port of Brisbane, Port of Newcastle, Port of Townsville, Port Phillip Sea Pilots, and the Australasian Marine Pilots Institute among others.

We hereby provide our submission to the inquiry into Australia's Maritime Logistics System.

Yours sincerely

Shipping Australia

Overview of Australia's international trade

1. The estimated total size of the Australian economy[1], including intangible services, in 2018-2019 is thought to be about AUD$1,980.9 billion (i.e., AUD$1.98 trillion). According to World Bank Data, international trade accounts for about 45.7% of Australia's gross domestic product. In the 2019 calendar year, exports of goods and services accounted for 24.1% of our gross domestic product[2] while imports of goods and services accounted for 21.6% of gross domestic product[3].
2. Unfortunately, these figures include all exports and all services, which therefore includes service sectors as "education". While education is an important export for Australia, it is not a physical, tangible, good or commodity that can be air- or sea-freighted.
3. A better indicator, for ocean shipping purposes, might be the figures for "merchandise trade", which can be simply explained as the trade in physical goods that cross the border of a country, and which are sold and / or used in that country[4]. Australia's merchandise trade as a percentage of gross domestic product is 35.27%[5].
4. A quick cross-check with Australian data[6] suggests that the 2018-2019 financial year saw approximately AUD$373.51 billion of tangible goods / commodities exported and AUD$320.00 billion of imports, totalling AUD$693.52 billion. Exports therefore accounted for about 18.86% of our GDP in that year and imports for about 16.15%. Together, that was about 35.1% of GDP.
5. It is therefore clear that Australia's international trade in physical goods and commodities is essential to the interests of all Australians simply because international trade accounts for a such a major part of Australia's economy. However, the benefits of Australia's international trade far exceed the dollar value of the cargo itself.
6. A 2015 study[7] estimated that the Australian maritime industry in 2012-2013 provided a direct contribution worth AUD$9.04 billion to the Australian economy and an indirect contribution of gross value added to other industries worth about AUD$11.8 billion.

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[1] "Australian National Accounts: National Income, Expenditure and Product" September 2021 Reference Period; Australian Bureau of Statistics, 01/12/2021. https://www.abs.gov.au/statistics/economy/national-accounts/australian-national-accounts-national-income-expenditure-and-product/latest-release#economic-overview

[2] "Exports of goods and services % of GDP – Australia" 2019, World Bank National Accounts Data and OECD National Accounts Data; access via data.worldbank.org

[3] Imports of goods and services % of GDP – Australia" 2019, World Bank National Accounts Data and OECD National Accounts Data; access via data.worldbank.org

[4] The Australian Bureau of Statistics defines Merchandise Trade as goods that cross the customs frontier, and which add to, or subtract from, the stock of a country's material resources. Goods are the "physical objects for which a demand exists, over which ownership rights can be established, and where ownership can be transferred from one institutional unit to another by engaging in transactions on markets," see 5489.0 - International Merchandise Trade, Australia, Concepts, Sources and Methods, 2001. So goods imported as stock for sale by a major supermarket chain would be merchandise goods that form part of merchandise trade. By contrast, an international musician's guitars, amplifiers, sound stage, rigging, lighting etc that he or she imports for the purposes of putting on a show and which are then exported after a show would not be merchandise goods.

[5] 2019 data, "Merchandise trade (% of GDP) Australia, World Bank - https://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS?end=2019&locations=AU&start=2013&view=chart

[6] "International Trade in Goods and Services, Australia," Reference Period November 2021, Australian Bureau of Statistics - see data catalogues 5368.0 International Trade in Goods and Services, Australia, "TABLE 3. GOODS CREDITS, Original, Current prices" and 5368.0 International Trade in Goods and Services, Australia, "TABLE 4. GOODS DEBITS, Original, Current prices"; Credits = exports and Debits = imports.

[7] "The economic contribution of the Australian maritime industry," PricewaterhouseCoopers

7. A 2017 study[8] demonstrated that Australia's liberal international trade system led to the economy being 5.4% higher in 2016 than it would otherwise have been without trade liberalisation; that the average Australian family had a real income AUD$8,448 higher than otherwise; and that trade supported approximately one-in-five jobs, which was about 2.2 million employees at the time. Exports supported about 14% of all employment in 2016 and imports supported about 6% of all employment. Today, a one-in-five international trade supported jobs figure would equate to about 2.6 million Australians given that current Australian workforce numbers just over 13 million people[9].

8. Importantly, the report also noted[10] that international trade liberalisation increases overall demand in the economy and most increases job numbers in the service sectors, which tend to be more labour intensive than other areas of the economy.

9. Meanwhile, a 2014 report[11] by consultants ACIL Allen on behalf of the Australian Logistics Council, and which was focused on landside logistics (trucking, warehousing, rail, distribution etc) found that about 1.2 million people directly worked in landside logistics in Australia in 2013. The report also found that an increase of 1% of logistics factor productivity in Australia would increase our GDP by AUD$2 billion. It should be noted that the Australian landside logistics sector is driven by Australia's international trade.

10. As the Australian Logistics Council wrote[12] in 2013, "every industry in Australia depends on transport and logistics to some degree. Low cost transport and logistics allows Australian exporters to profitably reach key markets, helps Australian manufacturers to keep cost-competitive in the face of cheap imports and enables firms within Australia to compete over a larger area, bringing lower prices and greater choices to consumers… indeed it could be argued that a substantial part of Australia's economic activity exists only because of the ability to trade via the use of logistics services; that is, they are key part of enabling trade and economic activity[13]".

11. Our tangible international trade must be physically carried to / from our seaports and carried between seaports here and overseas. If Australia's logistics services, personnel, assets, and infrastructure of all kinds (be that sea, air, road, or rail) are severely disrupted for an extended period, then there will likely be severe consequences for public health, the economy and, eventually, law and order.

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[8] "Australian trade liberalisation – analysis of the economic impacts," The Centre for International Economics (2017) prepared for the Australian Department of Foreign Affairs and Trade. Higher trade volumes – page 2. Higher family income – page 2. One-in-five jobs claim – page 1. Over the 12 months ending November 2021, Australia's workforce on average totalled about 13 million people (13,013,466). A one-in-five ratio applied to 13 million people suggests that, today, about 2.6 million Australians have international-trade related jobs across a wide variety of sectors.

[9] Over the 12 months ending November 2021, Australia's workforce on average totalled about 13 million people (13,013,466). A one-in-five ratio applied to 13 million people suggests that, today, about 2.6 million Australians have international-trade related jobs across a wide variety of sectors.

[10] "Australian trade liberalisation," op cit at page 10.

[11] "The Economic Significance of the Australian Logistics Industry," page i, ACIL Allen Consulting for the Australian Logistics Council.

[12] "The Economic Significance of the Australian Logistics Industry," op cit at page ii.

[13] "The Economic Significance of the Australian Logistics Industry," op cit, page 14.

How freight is carried into / out of Australia: air and sea compared

12. The air freight and sea freight markets are mostly, but not wholly, separate. Most of Australia's commodity exports are shipped in bulk. Cargoes that are economically viable to move by either air or sea tend to be small volume, high value containerised cargoes. Bulky, heavy and high-volume freight is typically moved by sea.

13. Some freight forwarders may choose to offer a combined sea-air freight product. Door-to-door logisticians may offer a truck-sea-air-truck product, or some variation thereof. During times of supply chain stress, freight forwarders have also been known to ship typically air-freighted cargo by sea and typically sea-freighted cargo by air. This may happen, for instance, if government regulations affect one mode of transport but not the other, or if there are problems (such as congestion induced delay) at a particular location in the supply chain, or if there is a shortage of equipment. Shipping typically air-freighted cargo by sea can result in lengthy delays compared to normal air freight times and shipping typically sea-freighted cargo by air can result in higher costs compared to normal sea freight costs.

14. There are also some cargoes that can be easily transported by either mode: pharmaceuticals, seafood, meat, vegetables and fruit are the obvious examples. They can be carried by sea despite the longer journey times because they can be transported frozen, chilled, or otherwise cooled in a controlled environment in a "reefer" (refrigerated) container.

15. Another example of cargo that can be freighted either by air or sea would be expensive retail electronics (mobile phones, computer game consoles and the like). Typically, large volumes of such goods would often be sea-freighted however they may be air-freighted at certain times of high demand (e.g., just-in-time for a new product launch) to meet that demand. Precious metals and jewellery may also be freighted by air as they are low volume and high value.

What does Australia physically trade?

16. Australia's physical trade comprises a vast range of goods and commodities. By way of illustration, consider the Customs Tariff Classification List, available from the Australian Border Force. The main list is split into 21 sections and 97 chapters detailing the distinct types of goods that may be imported.

17. A small selection of goods and commodities that comprise Australia's international trade include, but are not limited to iron ore, coal (thermal and metallurgical), natural gas, nickel, bauxite, alumina, livestock, chilled meats, aluminium, pharmaceutical products, medical devices, crude oil, refined petroleum products, wool, skins, seafood products, fruit, vegetables, scrap metal, paper and wood products, explosives, passenger motor vehicles, goods motor vehicles, machinery of every type, electronic consumer goods of every type, electronic business goods of every type, electronic industrial goods of every type, general goods sold in retail stores and supermarkets (clothes, shoes, personal accessories, jewellery, household chemicals, household products, furniture, food and so on) among a vast range of other goods of all kinds.

18. For simplicity's sake, and for the purposes of this study, we can assume that, of the national inventory of all of the goods and commodities available for sale in Australia, at least some stock will have been imported. Likewise, we can also assume that, of all the primary, secondary and tertiary goods and

commodities produced in Australia, at least some stock (in in some cases a very large proportion of that stock) is produced for export. Further comprehensive details can, no doubt, be obtained from the Australian Bureau of Statistics or other appropriate government bodies.

How big is Australia's physical trade?

19. This segment aims to provide a high-level overview[14] of the volume and value of the tangible part of Australia's international trade, what it is composed of, and how it is physically[15] carried into, and out of, this country.

20. Australia's physical two-way trade in 2018-2019[16] was about 1,694.9 million tonnes (1.69 billion tonnes) of cargo by volume[17] and $692,858 million ($693 billion) of cargo by value[18]. Air freight physically handled about 1.2 ***million*** tonnes[19] of cargo with a value of about $113.7 billion[20].

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[14] This document gives a top-level set of numbers on Australia's physical freight and how it is handled. Analysts and detailed researchers are directed to the original source material as starting points for more considered research. Figures change from year-to-year. Some questions do not have a simple answer. For instance, the answer to the question: "how long does it take for a ship to sail from Singapore to Sydney" will depend on a wide range of factors. Variations in those factors will considerably change the end-answer. Shipping Australia is able to estimate ship operating costs, however, these are only approximate, and readers should not apply any daily ship operating costs given here to any specific vessel. Figures in this document contain estimates, approximations and conclusions may be based on sub-optimal data. Numbers may sum inexactly owing to rounding. Calculated figures may not match figures issued by official bodies.

[15] Unless otherwise stated, this document only discusses physical, tangible, imports and exports and specifically excludes non-tangible (but valuable) imports and exports such as education and tourism.

[16] 2018-2019 figures as, at the time of writing, it is (a) the year for which the most recent full set of data is available and (b) just before the COVID-19 pandemic. Inclusion of 2020 data will create distortions. For example, much aviation freight is carried in passenger aircraft but, for most of 2020, a great portion of the global air fleet was grounded.

[17] See "Australian Sea Freight 2018-2019" July 2021 by the Bureau of Infrastructure and Transport Research Economics (BITRE), part of the Australian' Government's Department of Infrastructure, Transport, Regional Development and Communications, page iii, first paragraph, second line.

[18] The Department of Foreign Affairs and Trade's "Composition of Trade 2018-2019" (page 12, Table 1 "Australia's Trade in goods and Services Balance of Payments Basis A$ million (current prices)" (see under "Total two-way trade" and on the line marked "Goods") which states that the value of Australia's two-way trade is $692,858 million (i.e., $693 billion).

[19] The 1.2 million tonnes of air freight – see "International Airfreight Indicator 2019", by Infrastructure Partnerships Australia and Oxford Economics, Table 1 & 2 (p10). Note: BITRE's "Statistical Report Aviation International Airline Activity 2019" p.8, gives a 2019 aviation figure of 1,102,785 tonnes. Whichever aviation volume figures are used, they are so tiny relative to maritime volume figures that the total volume of Australia's physical trade remains at 1.69 billion tonnes. Although there are compelling reasons to use BITRE sea freight and BITRE air freight data, nonetheless we have chosen to use the IPA / Oxford Economics statistics as (a) they cover the financial year 2018-2019 (as opposed to BITRE's calendar year figures) (b) the IPA / Oxford Economics data also contains information both on the volume and value of freight and (c) the difference in volume between the IPA / Oxford Economics and the BITRE data is insignificant relative to total volumes.

[20] Sources vary on the value of air freight. The Australian Airports Association's 2018 Factsheet, "Airports & Australia's Freight Network" estimates that in the 12 months to October 2017, A$100 billion of goods were transported by air. Infrastructure Partnerships Australia and Oxford Economics in their "International Airfreight Indicator 2019" (p10) quotes $113,652 million ($113.7 billion 2018-2018). We have adopted Infrastructure Partnerships Australia and Oxford Economics figures - Table 1 & 2, p10 – as it contains both volume and value figures for the same year.
It should be noted on page 9 of the 2021 "International Airfreight Indicator", by Infrastructure Partnerships Australia, that the calendar year value of airfreight jumped from AUD$113.3 billion in 2018 to AUD$128.8 billion in 2019, although no explanation is given for this. It appears to have been driven by a near AUD$4 billion uplift in the value of imports and an AUD$7.7 billion uplift in the value of exports. Air freight value data for calendar year 2020 is largely flat when compared to 2019, which is surprising given that air freight is largely

Therefore, about 0.07% by volume and 16.4% by value of all Australian cargo (i.e., all inbound and outbound cargo) is carried by aeroplanes.

21. In 2018-2019, ocean-going ships carried 1.69 ***billion*** tonnes[21] of cargo with a value of about $579.2 billion[22]. Therefore, about 99.93% by volume and 83.6% by value of all Australian freight is transported in ocean-going cargo ships. Australia imports and exports tangible goods to and from the world. The trade is unbalanced as some regions predominate imports and exports. Australia is very heavily dependent upon Asian countries both as suppliers and as customers.

TABLE 1: Weight (million tonnes) of Australia's sea freight (2016-2017) by trading region

	Exports	% of total	Imports	% of total	% of Import & Export Total
Africa	4.8	0.3	3.3	3.3	0.5
Central Asia	0.0	0.0	0.0	0.0	0.0
China	867.5	59.8	15.6	15.7	57.0
Europe	27.3	1.9	5.2	5.2	2.1
Middle East	13.1	0.9	6.5	6.6	1.3
New Zealand	3.6	0.2	2.8	2.8	0.4
Nth & Central Am	4.9	0.3	6.1	6.2	0.7
Other East Asia	403.3	27.8	20.9	21.1	27.4
Pacific & PNG	2.4	0.2	1.1	1.1	0.2
South America	10.4	0.7	1.9	1.9	0.8
South Asia	53.8	3.7	2.5	2.5	3.6
SE Asia	58.5	4.0	28.4	28.7	5.6
RoW	0.4	0.0	4.8	4.8	0.3
TOTALS	1,450.0	100.0	99.1	100.0	100.0

Source: "Table 1.8" Australian Sea Freight 2016-2017, BITRE

carried in the bellies of passenger planes – and these were grounded en-masse around the world in 2020 as a consequence of anti-COVID controls. However, the IPA notes that this apparently seeming stability was caused by an increase in the transport of precious goods such as pearls, precious stones, precious metals, jewellery and the like. If such precious items are excluded, there was a fall in the value of airfreight by about 2% for imports and 15% for exports to / from Australia.

[21] We can estimate the approximate volume of sea freight simply by deducting aviation freight volumes from the total physical trade volumes as follows: 1,694.9 million tonnes minus 1.2 million tonnes equals 1,693.7 million tonnes. Air freight volumes are effectively 'hidden' in the rounding-up process.

[22] Deducting the air cargo value of $113.65 billion from the total value of $692.9 billion gives a sea cargo value of about $579.20 billion.

TABLE 2: Value $ billion of Australia's sea freight (2016-2017) by trading region

*Value of Australia's sea freight (**2016-2017** data) $ billion*
by trading region discharging / loading

	Exports	% of total	Imports	% of total	% of Import & Export Total
Africa	2.4	1.0	2.6	1.3	1.1
Central Asia	0.0	0.0	0.0	0.0	0.0
China	89.8	35.6	48.4	25.1	31.0
Europe	11.7	4.6	33.0	17.1	10.0
Middle East	5.5	2.2	3.8	2.0	2.1
New Zealand	6.9	2.7	6.5	3.4	3.0
Nth & Central Am	8.0	3.2	19.5	10.1	6.2
Other East Asia	68.2	27.1	30.9	16.0	22.3
Pacific & PNG	2.6	1.0	0.9	0.5	0.8
South America	2.3	0.9	2.4	1.2	1.1
South Asia	14.8	5.9	4.6	2.4	4.4
SE Asia	39.5	15.7	40.5	21.0	18.0
RoW	0.4	0.2	0.1	0.1	0.1
TOTALS	252.1	100.0	193.2	100.0	100.0

Source: Table 1.7 Australian Sea Freight 2016-2017, BITRE

[Submission continues on the next page]

26. Seaborne import values per tonne are much higher than seaborne exports per tonne because of the nature of cargoes carried. Outbound cargoes by volume are typically iron ore, coal, and liquefied natural gas. These are cargoes that might have a price of a few tens of dollars to hundreds of dollars per tonne. Imports, however, may include such things as consumer electronics like mobile phones. These may have a price of many hundreds of dollars – perhaps thousands of dollars – for a few grams.

Transporting and handling Australia's physical, seaborne, trade

27. BITRE reports on the number of vessel calls in Australian ports. In 2016-2017 these were as follows: 5,845 uniquely identified cargo ships made a total of 32,801 port calls at Australian ports in 2016–17. These included 5,743 cargo ships which made 17,068 voyages to Australian waters from overseas ports.

28. Ships are built to match a trade and a cargo type. There are a wide variety of ship types to match these trades and cargoes. The three main categories of ship are carriers of "dry bulk cargo" called "bulkers"; carriers of "wet bulk cargo" called "tankers"; and carriers of "general cargo", which will be either container ships or "container ships" and "multi-purpose" ships (these latter are sometimes called "break bulk" ships").

29. The different ship type categories can be broken down further by size (e.g., capesize vs panamax), cargo type (there are many kinds of tankers), and by the type of equipment aboard (e.g., whether the ship has cranes).

30. There are many other kinds of ships that can be assigned to an "other category" e.g., cruise ships, ro-pax, PCTCs and so on. These categories have some fluidity. For instance, dry bulk cargo ships can carry general cargo in limited circumstances. Container ships can carry wet bulk (liquid) cargoes if the liquids are put inside a bladder inside a container (wine is carried this way). A vehicle carrier can store containers while box ships can carry vehicles stored inside containers.

31. Ports are usually built to handle specific ship types and trade. The big export ports on the Australian west coast typically handle huge volumes of iron ore and lesser volumes of dry bulk commodities. They typically receive dry bulkers. Varanus Island, also on the west coast, handles gas and condensates. It receives tankers.

32. Other ports may handle a mixture of cargo but the facilities within them will be specialised to handle the specific type of cargo. Port Botany, Sydney, is typically thought of as a container port. The terminals on the north side of Botany Bay are classic examples of the kind. Port Botany is also a major bulk liquids port that handles all of NSW's bitumen, nearly all of its LPG and bulk chemicals and large volumes of refined petroleum and aviation fuels. Brisbane handles containers and large volumes of coal. Fremantle handles containers, vehicles, liquid bulk and, in good seasons, large volumes of grain.

33. Port facilities are typically specialised to handle specific cargoes. Dry bulk ship loaders cannot handle containers; liquid berths cannot handle grain and so on. But there are exceptions. Various kinds of mobile harbour cranes can handle a variety of different cargoes (e.g., break bulk unitised cargoes and containers). Some cargoes can be transported in a variety of ways e.g., various liquids can be placed inside a large bladder, containerised, and transported by a box ship. Gases can be liquefied, placed in pressurised cylinders that have container-shaped framework and transported by containers. Liquids can

also be placed inside drums and handled on multipurpose ships as break bulk cargo. Containers have been known to be carried on the decks and hatches of dry bulkers (on the deck usually). Large pieces of break bulk cargo, normally carried on multi-purpose ships, can sometimes be carried on the decks and hatches of dry bulkers.

34. Some ship types can carry cargo on both the front-haul and back-haul voyages. Self-working multi-purpose ships with cranes can cargo on all legs of their journeys. Container ships can also, in theory, carry cargo on all legs of the journey but typically sail full of high value cargo to a destination and then sail back light with low volumes of cargo or empty back to the centres of production.

TABLE 3: the world merchant fleet

Equasis 2020	Numbers of ships				
	Small	Medium	Large	V Large	Totals
General Cargo Ships	4,137	11,730	258		**16,125**
Special Cargo Ships	8	263	63	6	**340**
Container Ships	20	2,258	1,605	1,507	**5,390**
Ro-Ro	38	607	539	260	**1,444**
Bulkers	293	3,762	6,622	1,845	**12,522**
Oil / Chemical tankers	1,948	7,364	2,770	2,117	**14,199**
Gas Tankers	36	1,143	406	555	**2,140**
Other tankers	413	726	14		**1,153**
Totals	**6,893**	**27,853**	**12,277**	**6,290**	**53,313**
Tugs	18,407	944			

Small: 100 to 499 gross tons
Med: 500 to 24,999 GT
Large: 25k GT to 59,999 GT
V Lrg: 60,000+

"Gross tonnage" is a measure of volume and not weight. It refers to all the space inside the enclosed volume of a ship.

Source: Equasis Stats 2020

Table: *Shipping Australia.* ***Source data:*** *Equasis.*

Dry bulk cargo and dry bulk ships

36. These are non-liquid, single commodity cargoes that are carried as one large parcel per ship. They are normally loaded via conveyor belt into large holds and are discharged via suction, grabbers and bulldozers. These are typically large-volume agricultural products or mineral ores. Examples include wheat, barley, iron ore, alumina and bauxite among others. Ships that carry such cargoes typically have large void spaces within the hull and are characterised by large flat hatches.

37. Australia is a large shipper of the major dry bulk cargoes of iron ore, grain and coal, which form the vast majority of commodity exports from Australia to destinations mostly in Asia.

38. Australia exported about 836 million tonnes of iron ore in 2019, according to the Office of the Chief Economist, and this was mostly to customers in China. There are large competitor suppliers around the world, particularly Brazil. Iron ore is used in the manufacture of the various types of steel.

39. About 177 million tonnes of metallurgical coal was exported in 2019-20. Customers are primarily found in China, India, South Korea, Japan and the European Union and it is used in steel making. The use of metallurgical coal in steel making releases considerable volumes of carbon dioxide. There is a push to reduce carbon emissions from steel making using technological means and it may be that the future of met coal as a large volume export for Australia is not assured. About 212 million tonnes of thermal coal was exported in 2019-20. Thermal coal is currently bought by customers in China, India, Japan, South Korea, Taiwan and southeast Asian nations. There are also competitor suppliers around the world. Thermal coal is burned as a source of energy. Many of our major customer-nations, e.g., Japan and China, have announced a phase-out of coal fired power plants. It may be that the future of thermal coal as a large volume export for Australia is not assured.

40. About 16.5 million tonnes of dry bulk agri-products (e.g., wheat, coarse grains, oil seeds and sugar) were exported from Australia in 2019-2020, according to the Department of Agriculture, Water and the Environment. Volumes have been lower than in previous years (about 22.05 million tonnes of wheat alone were exported 2016-2017) owing to the droughts of recent years. Customers are particularly found in Indonesia, the Philippines, China, Vietnam, Yemen, Korea, Japan and Malaysia.

41. There were 15,998 port calls by bulk carriers at Australian ports in 2016-17. BITRE does not appear to produce data on what types of ships call at what ports however, using industry knowledge and BITRE data, we note that following ports are the major bulk ports in Australia and are therefore most likely to have attracted bulk carriers.

42. 2016-17

Primarily (iron ore millions of tonnes): Port Hedland: 489 m; Dampier 162.5 m Port Walcott: 188.9 m
Primarily coal: Hay Point: 106.7 m; Gladstone: 95.1 m Abbot Point: 25.1 mt Port Kembla: 10.8 m

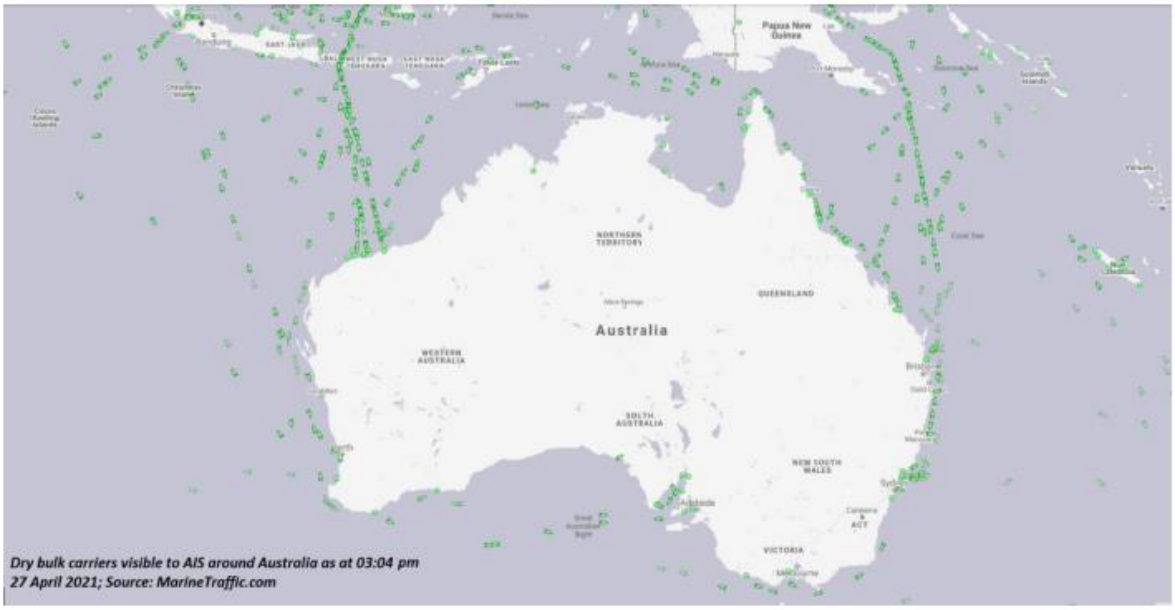
Others

Brisbane 13.8 mt (primarily a container port but also coal volumes)
Fremantle 18.5 mt (primarily a container port but large volumes of wheat)
Source: Shipping Australia

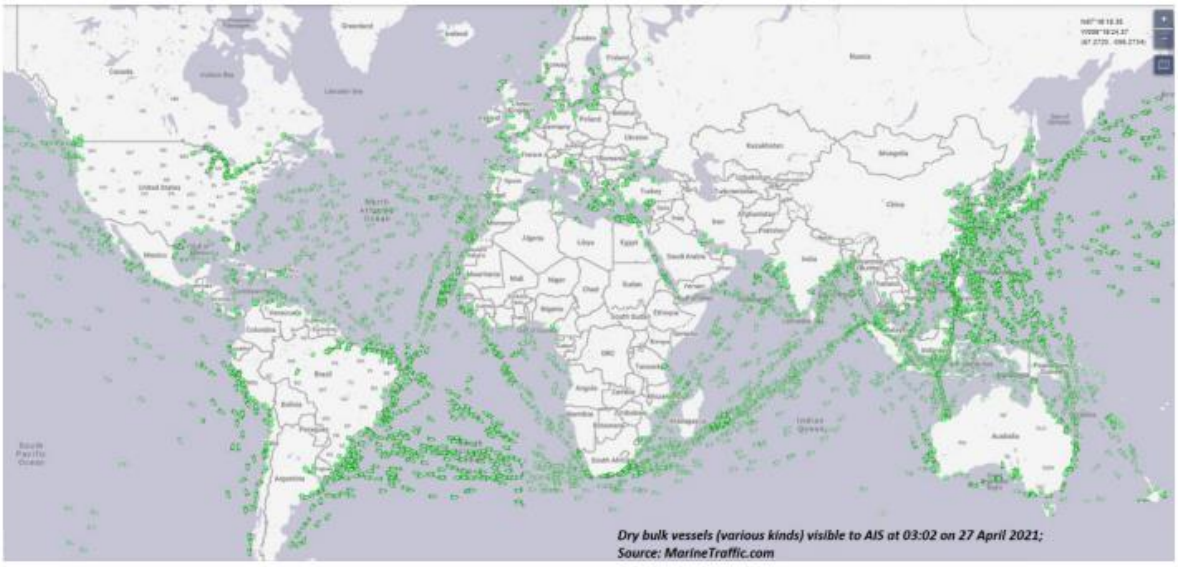
Wet bulk cargo

43. Wet bulk cargoes are commodities that are liquid, are often homogeneous, and are carried in large tanks within ships. Load and discharge take place via cargo being pumped on and off ship via pipelines. Examples of cargoes include edible oils, liquefied petroleum gases, liquefied natural gas, refined products of oil and crude oil.

44. Oil and its products can be divided into two types. Dirty products include crude oil and bunker fuel, which are carried in crude carriers. Clean products are typically refined products, such as jet fuel.



Dry bulk carriers visible to AIS around Australia as at 03:04 pm 27 April 2021; Source: MarineTraffic.com


Dry bulk vessels (various kinds) visible to AIS at 03:02 on 27 April 2021; Source: MarineTraffic.com

45. In 2018-19 Australia imported 21,760.8 mega litres of crude oil and other refinery feed stocks. The volume of imported refined petroleum products in the same year stood at 36,609.8 mega litres of refined petroleum product imports23.

46. Another major type of liquid bulk cargo is liquefied natural gas (super-cooled, pressurised methane gas) which is a source of energy. With 79 million tonnes exported in 2019-20, Australia is the second-largest exporter by volume (after Qatar with an estimated 110 million tonnes per annum, according to news agency Reuters). There are a wide range of other liquid cargoes, typically liquid chemicals of all kinds.

Tankers

47. LNG carriers are an unusual ship as they carry super-cold, pressurised commodities and must travel to / from particular terminals. They are very specialised, highly technical, ships. Tankers are largely, but not wholly, interchangeable. An LNG carrier can't carry crude oil; a crude oil carrier can't carry small parcels of dangerous goods and so on. However, some tankers can carry crude on one voyage and clean products on the next, provided they are carefully cleaned.

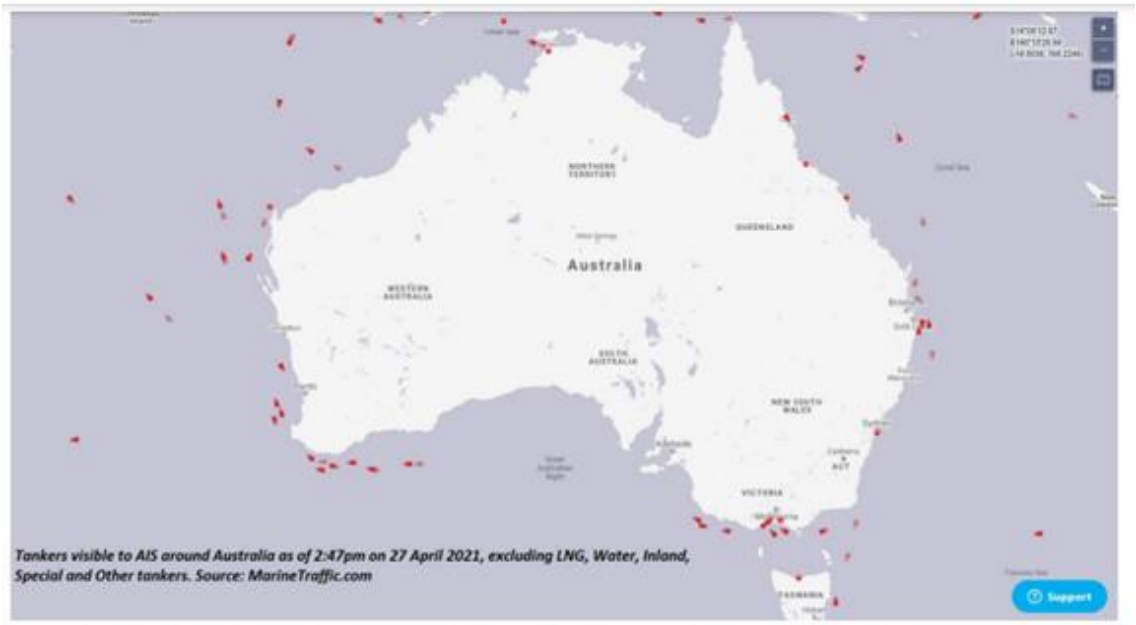
48. Not all tankers carry homogeneous commodities. Some tankers, such as product and parcel tankers particularly, may carry many different types of chemical cargoes in the same ship in different tanks. The tanks will have been constructed so as to carry different kinds of cargoes. Tanks may be heated, or refrigerated, coated in various coatings (for example to resist corrosion from acids), or agitated so as to prevent settling of the cargoes. These are very complex and expensive vessels.

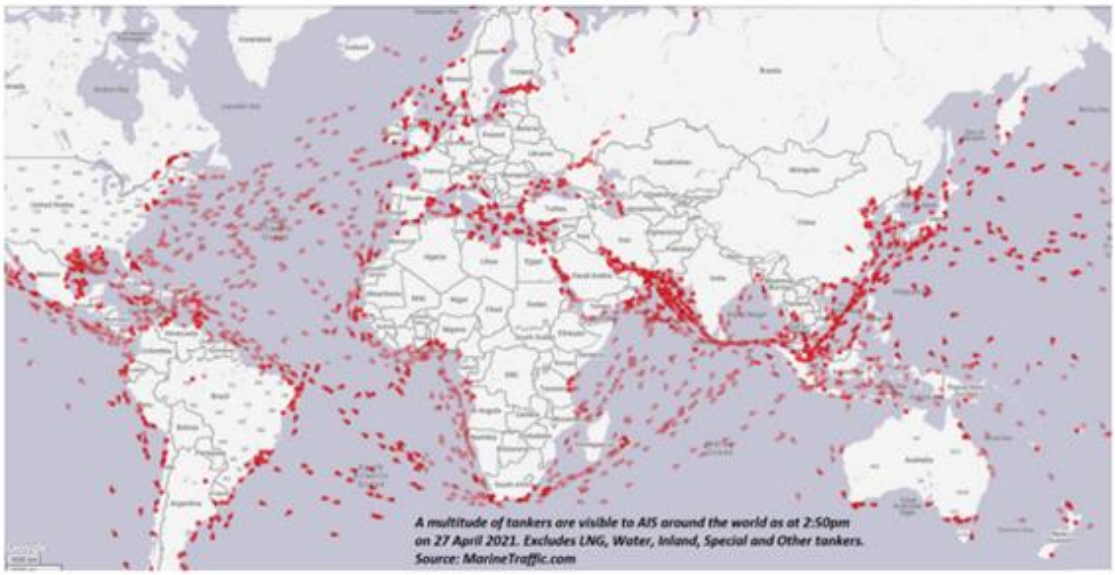
49. Tankers are also segmented by size. The smaller crude oil carrying panamax vessels start in size at about 50,000 deadweight (deadweight (dwt) – the cargo carrying capacity of a ship) and they rise in size to Very Large Crude Carriers (200,000 dwt plus). VLCCs typically ply the trades between the major production and refining centres e.g., Middle East to Singapore. Clean product tankers may start in size at about 25,000 dwt (so-called medium range) and rise in size to "long range" (100,000 deadweight).

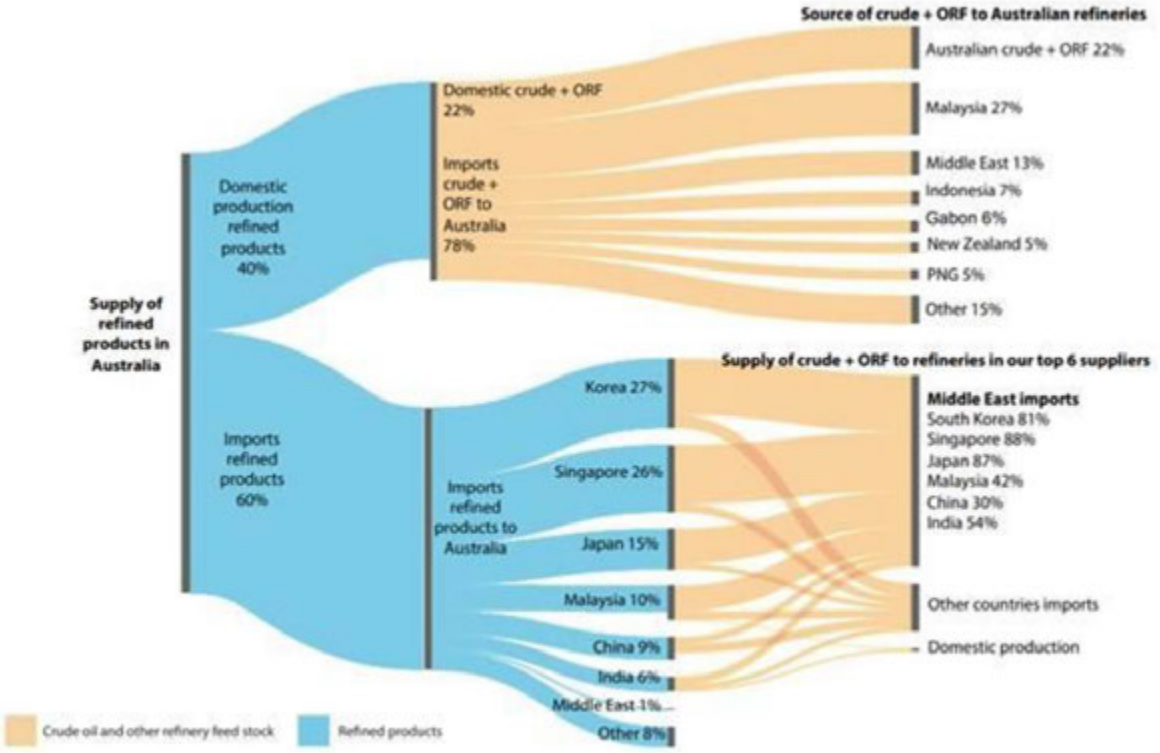
[23] "Australian Energy Update 2020" by Australia's Department of Industry, Science, Energy and Resources

Tanker voyages

50. A multitude of tankers can be seen on the sea and around Australia at any given time.







Source: Department of the Environment and Energy, Liquid fuel security review: interim report, 2019, p. 23.

Supply of crude oil and refined petroleum products

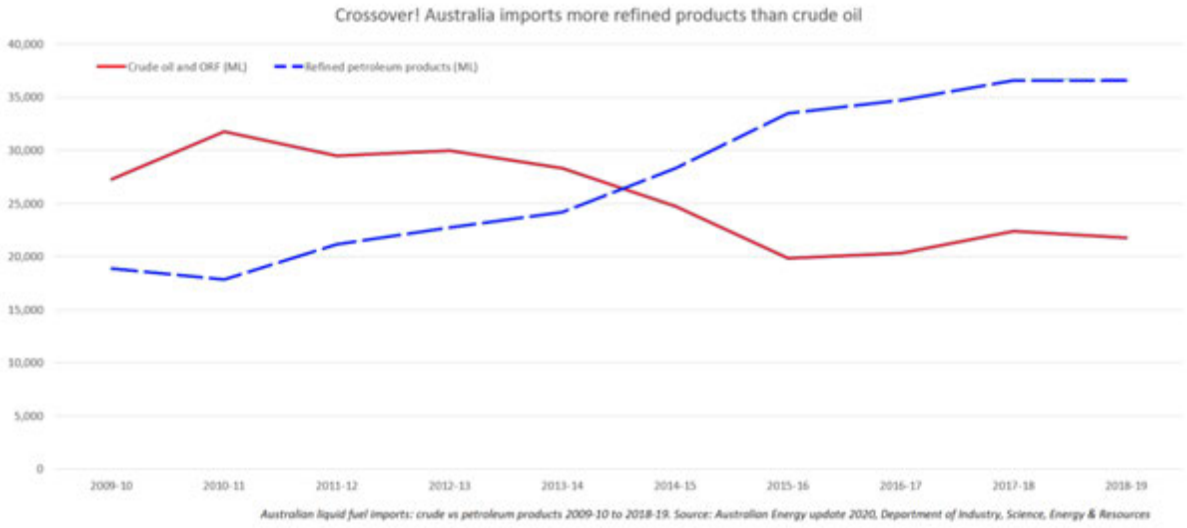
55. Crude oil sent to Australia for refining originates from a variety of sources around the world. Crude sent to overseas refineries for import into Australia as refined products often originates from the Middle East. [Note: in the next diagram, "ORF" means "other refinery feed stock"].

56. Global economic activity, supply and demand drives the demand for freight, local factors play the major part for the transport of freight. However, sea-borne carriage of crude oil and petroleum products is, unsurprisingly, driven by the presence of crude oil refineries and import/export terminals.

57. In or about the year 2000, Australia had eight refineries. However, and for reasons beyond the scope of Shipping Australia's submissions, by the time of writing (April 2021) that had declined to one refinery at Lytton (Brisbane) and the other at Geelong (Victoria). Continuation of operations at Lytton was under review, however, the Commonwealth Government committed on 17 May 2021 to maintain a self-sufficient refining capability in Australia at Lytton and Geelong.

58. The other refineries – Kwinana (Perth), Altona (Melbourne), Gore Bay (Sydney); Kurnell (Sydney); Bulwer Island (Brisbane), have been converted to fuel import terminals. Meanwhile, other fuel import terminals have been built elsewhere, for instance, oil major Shell built an import terminal at Newcastle in 2011.

59. This conversion from refineries to import terminals can be seen in the liquid fuel import statistics. In 2009-10, Australia imported 27,284.3 mega litres of crude oil and other refinery feed stocks, according

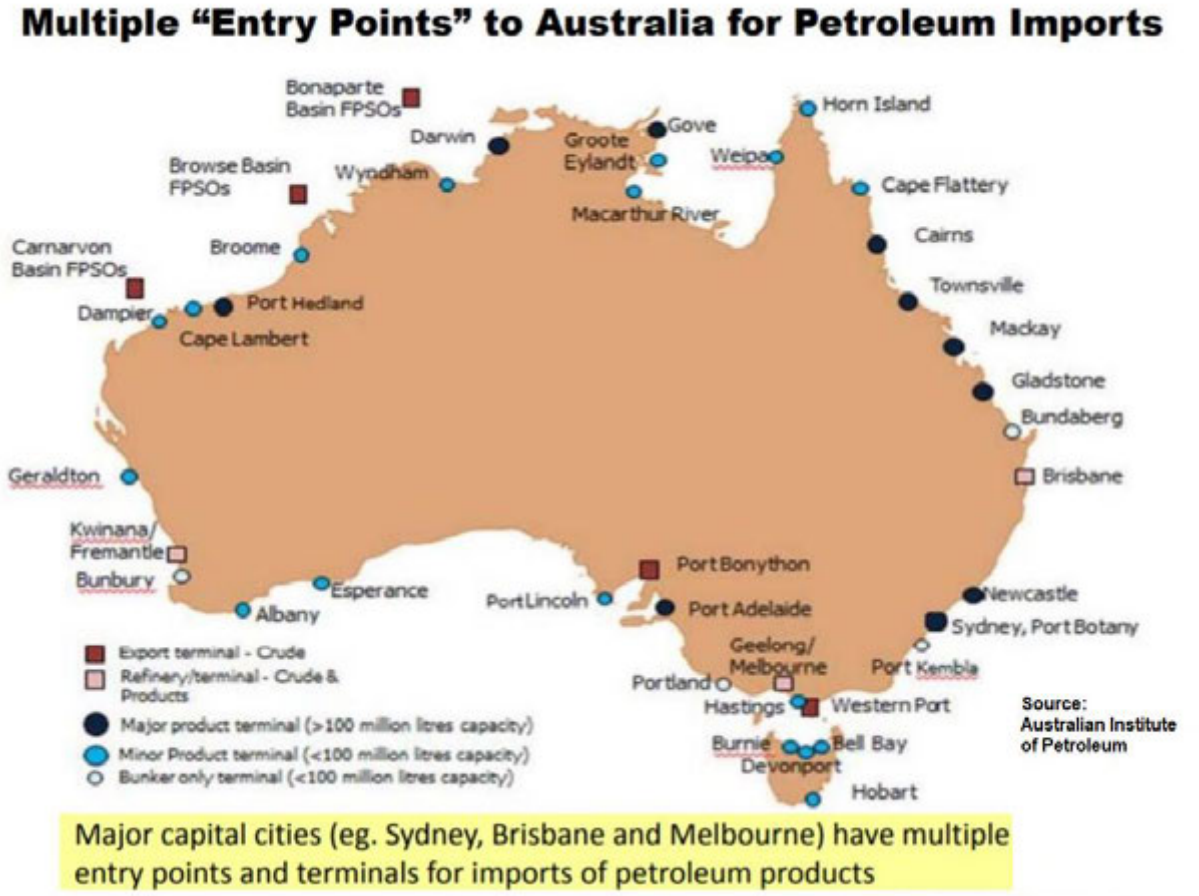


Australian liquid fuel imports: crude vs petroleum products 2009-10 to 2018-19. Source: Australian Energy update 2020, Department of Industry, Science, Energy & Resources

to Australian Energy Update 2020. Although there has been some year-by-year variation in volumes, that amount in 2018-19 stood at 21,760.8 mega litres. That's a 20.2% fall in volume.

60. Meanwhile, the volume of imported refined petroleum products has markedly increased. According to the same source, in 2008-09 there were 18,899.7 mega litres of refined petroleum product imports. By 2018-19 there were 36,609.8 mega litres of refined petroleum product imports. That's a 93.7% increase.

61. These figures are worth putting side by side for emphasis: over the ten-year period 2009-2019, volumes of crude imports fell 20.2% and volumes of petroleum product imports rose 93.7%.



Refined petroleum product import terminals

62. There are many entry points to Australia for the import of petroleum-related products, as can be seen in the following 2015 diagram from the Australian Institute of Petroleum. Note, this diagram is now a little out of date as the some of the refineries shown in Figure 7 have been converted into clean product import terminals.

63. Tanker-related ports of call in Australia (2016-17) were as follows:

- 466 chemical tankers
- 854 LNG tankers
- 507 LPG tankers
- 2,775 other tankers

Source: Australian Sea Freight 2016-17, BITRE

Containerised general cargo

66. The baseline ocean shipping container has dimensions of 5.89 metres long (twenty foot), 2.35 metres width and 2.36 metres tall. They can carry 21.7 tonnes of cargo and have 33 cubic metres of capacity. For both historical and ease-of-reference reasons, these are referred to as twenty footers and "TEU" (twenty-foot equivalent unit). The main variant is the FEU or forty-footer, which is just over twice the length but the same width and height. FEUs carry 26.5 tonnes and have up to 66 cubic metres of capacity.

67. Container ship capacity, world trade and port throughput are all measured in TEUs. So one FEU is two TEU. There are a variety of container variants – high cubes (about 33 centimetres taller but otherwise identical), flat racks, open topped (for the transport of ores), and refrigerated containers (for the transport of meat, seafood, pharmaceuticals, agri-products and other perishables; commonly known as "reefers"). There are other variants on the standard container[24].

68. A "container" could therefore be a TEU, an FEU, a refrigerated container (although these are normally referred to as "reefers") or an open-top. The exact nature of the container is normally obvious from the context in which it is referred.

69. Containerised cargo is any kind of cargo that can fit inside a container. The cargo could be any combination of liquids (using container-sized bladders), foodstuffs such as grains (using containers that have been cleaned to food-grade quality), other commodities, or manufactured goods of every conceivable type (anything from bathroom tiles to machinery) provided it can fit inside a container. Such cargo can be manufactured anywhere in the world where it is safe and economic to do so. Accordingly, ships bound for Australia carrying general cargo can in theory originate from literally anywhere in the world where there is a seaport.

70. Containerised general cargo imports into Australia include consumable goods and manufactured items such as metals, furniture, pharmaceuticals, electrical equipment, beverages, paper and newsprint, and other manufactured products; pharmaceutical goods, engines and machines; rubberised articles; motors; appliances; radio and tv; polymers and plastics; furniture; bedding, and clothes. Containerised exports principally include primary goods and some manufactured goods such as cereal grains, meat, medical products, aluminium, dairy products, beverages, paper spirits, vinegar; dyes, paint and varnishes; iron and steel pig iron powders and ingots wool skin and hair, fruit nuts and vegetables.

Container stevedores, volumes and values

71. There are currently five main container stevedores that handle the Australian trade. These are Patrick Terminals, DP World Australia (DPWA), Flinders Adelaide Container Terminal, Victorian International Container Terminal and Hutchison Port Holdings. There are other ports and terminals that handle small volumes of container cargo as an ancillary to their main, dry bulk, business.

72. In recent years, Australian marine terminal operators have had a TEU throughput ranging from 7.75m to 8.5 million TEU25. These figures include both full and empty containers and both imports and exports. The consensus figure that is generally discussed is 8 million TEU.

[24] Footnote: see "Ocean Freight Containers," Mainfreight, https://www.mainfreight.com/romania/en-nz/info-point/ocean-freight-containers accessed on 30 January 2022.

[25] "Container stevedoring monitoring report – 2020–21", ACCC Figure 6.2, p58.

TABLE 4: TEU throughput at selected ports in recent years

Port	TEU millions	Empties	Trans-shipped	Data year
Brisbane	1.3	370,635	54,628	2020
Sydney	2.4	764,000	Not known	Jun-2019 to Jul-2020
Melbourne	2.88	680,000	239k TEU are trans-Bass Strait; 152k other trans-shipped; note – once the Bass Strait and other trans-shipped cargoes are account for, Melbourne is much closer in throughput to Sydney.	2019-2020
Adelaide	0.4 (410,500)	77,063		2020
Fremantle	0.8 (783,802)	173,023		2019-2020

SOURCE: *Shipping Australia. Data collected from the ports listed in the table. Note: there are also small volumes at other ports e.g., Townsville, Cairns etc. Shipping Australia estimates about 82,402 of TEU throughput at other ports" around Australia.*

76. Most ocean shipping containers are carried on specialised "fully-cellular container ships" although they can be carried on other vessels such as multi-purpose break bulk ships. They can even be carried on the decks of dry bulker in certain circumstance.

77. Ocean container shipping is the single most efficient way to move large volumes of manufactured goods bar none. Back in 1956, loading of a medium sized break-bulk ship cost US$5.83 per US ton. Loading of the first true container ship, the Ideal-X, in 1956 was US$0.16 per US ton. It was literally 36 times cheaper than the alternative26.

78. Container shipping has since increased its efficiency and value-for-money. According to the World Shipping Council, if all the containers from an 11,000 TEU ship were loaded onto a train, it would need to be 77 kilometres long. A container can be moved from a factory in Malaysia to Los Angeles – a journey of 14,484 kilometres – in 16 days. The cost of transporting a small electronic appliance from Asia to the US is about US1.50, a kilo of coffee is US$0.15, and a can of beer is a penny, according to the World Shipping Council.

79. Fully cellular container ships have metal guide rails inside that create "cells" (or slots) for each container. As ocean shipping containers are all the same length and width, they fit in the guides which are also built to standard dimensions. Loading and discharge equipment in ports is built to the same dimensions. A fully cellular container ship can therefore carry any standard ocean shipping container

[26] "The Box", Marc Levinson, Princeton University Press, 2008; https://www.amazon.com/Box-Shipping-ContainerSmaller-Economy/dp/0691136408

from anywhere in the world to anywhere in the world where equipment that is capable of handling standard containers is used. Which is pretty much everywhere. Even ports that do not have dedicated container cranes usually have cranes of some description that can handle standard ocean shipping containers.

80. Although the cell guides in container ships are built to exact and standard dimensions, the ships themselves are built to a variety of lengths and widths. The very largest container ships can be about 400 metres long, over 61 metres wide and with a draught (the part of the hull that is underwater) in excess of 16 metres. However, the most important dimension is the number of containers they can carry. The very largest ships can carry in excess of 23,000 TEU (twenty-three thousand TEU).

Container shipping network organisation

81. Ocean container shipping companies are often called "lines" or "liners". Shipping lines typically transport containers between ports on a pre-determined set of port calls. These routes of port calls are often called "strings", "lines" or "loops". For the avoidance of doubt and confusion, both the ocean shipping company and the route it sails are both referred to as “lines”; the context makes it clear which type of line is being discussed.

82. The major volume routes in the world are the Asia-Europe, the trans-Atlantic and the trans-Pacific. These are sailed by the major international ocean shipping companies. There are also the intra-regional routes, such as the intra-Asia and the intra-Europe. These are also sailed by the international shipping companies and may also be sailed by intra-regional lines known as "feeder lines”. Feeder lines span a range of sizes from the very small to globe-spanning operations with numerous, high-value assets). There are also the lesser volume routes, such as those within a particular part of a region, or between some of the lesser trafficked parts of the world. For instance, there is a small cabotage (coastal shipping) route between continental USA and the islands of Hawaii. Australia, New Zealand and the Pacific Islands are smaller volume routes.

83. Container shipping lines tie all the routes together by using a "hub" and "spoke" model of transport, in much the same way that international aviation designates certain airports as hubs for the movement of people. The opposite of a "hub" is an "origin" or "destination" port whereby large volumes of containers either originate from, or are destined for, a seaport. Container ports in Australia are typically destination ports although they do export small volumes of containers too. Examples of origin ports include such places as Shanghai (43.3 million TEU; the world number one port by volume) and Ningbo-Zhoushan (27.5 million TEU), which are both in China.

84. Shipping companies may pick up comparatively small volumes of containers from regional ports using multiple ships and will transport the containers to a hub. At such container shipping hubs, the temporary receival, storage, and onward transport of containers (trans-shipment) is the predominant activity of the hub. Hubs in our region include Singapore (37.2 million TEU; the world number two port by volume) and Port Klang (13.6 million TEU; in Malaysia).

85. Some ports can be both destination and trans-shipment ports at the same time. Rotterdam (Netherlands, Europe) is at the centre of a grouping of a variety of nearby cities (Rotterdam itself, Dordrecht, the Hague, Leiden, Breda, Utrecht and many more) so it has a sustainable trade for its own hinterland. It

also the port with the fourth-highest number of direct port connections in the world. It also has the world's highest "betweenness" with about 42,656 port-to-port connections that include Rotterdam. Brisbane is a destination port with trans-shipment volumes to the Pacific Islands. Melbourne is a destination port that has trans-shipment volumes to Tasmania.

86. At the hub, bigger ships will usually arrive to pick up large volumes of containers. As noted above, the biggest ships can carry up to 23,000 TEU and will transport them to another hub on the far side of the world. From that other hub, smaller vessels will arrive and will transport containers to their destination.

87. A slightly different method of transportation is for intra-regional vessels to pick-up boxes and drop them off at a central hub. Other small intra-regional vessels from a neighbouring region may the visit the hub to pick up boxes for onward transportation.

88. Containers imported to / exported from Australia may be transported by either method. Europe origin / destination containers to / from Australia will likely be carried by large main line vessels between hubs such as Singapore and Rotterdam. Similarly, containers to / from Australia to / from Vietnam will likely travel by smaller vessels to and from, say, Port Klang.

90. Ocean container shipping companies also offer services arranged as a sequence of port calls running in a loop in which a ship starts at a given port, calls at the ports on its loop, and returns to its port of origin.

91. This pattern is particularly prevalent in Australia (and also in New Zealand and the Pacific Islands). After calling at a hub such as Singapore, Laem Chabang (Thailand) or Port Klang, ocean-going liners usually follow a clockwise loop of port visits around Australia calling at Brisbane, Sydney, Melbourne, Adelaide and Fremantle (or some variation thereof). There are also a few services that run counterclockwise starting at Fremantle, but these are fewer in number as the preponderance of container volumes runs from east to west in Australia.

92. Future hubs in the Oceania region could include the Port of Brisbane and, in New Zealand, Tauranga, as both ports are deep water and have room for expansion. Both ports already somewhat act like hubs as they handle trans-shipment trade for the Pacific Island nations. Brisbane does not appear to have any obvious impediments to hosting very large container ships. It is deep water; it can expand and there are no overhead bridges or other infrastructure to impede the passage of ships. Brisbane is trialling the operation of very large cranes which will allow it to handle ships of about 14,000 TEU.

93. Finally, there is also the point-to-point system. In Australia, ocean shipping line ANL set up a direct Singapore-Port Hedland route in October 2020 for break bulk, containerised and out-of-gauge cargo. The service is aimed at reducing the length of the WA supply chain, reducing road haulage and helping shippers and consignees to import and export more easily from remote northwest Australia. Northern Australia specialist Sea Swift launched a new liner service in November 2020 connecting Singapore and Dampier with a nine-day transit time and a frequency of 20 days for the carriage of containers, break bulk and less-than container-loads.

94. The number of shipping lines serving Australia can fluctuate. There are currently (January 2022) about 23 ocean shipping container lines serving Australia27. Australia is currently an attractive market for liner shipping companies. Australia's liner shipping connectivity is at the highest level ever since UNCTAD began recording data in Q1 200628.

95. Australia has attracted new services over the last 18 months. In addition to the point-to-point services mentioned above, Australia attracted container shipping line, Zim, which had previously exited the Australian trade some years ago. In June last year, Chipolbrok / HongFa Shipping began running a break bulk service to Australia (typically carrying unitised cargo but it also would have container capacity if necessary). Meanwhile, both this year and last year, Gold Star Line expanded its services to Australia and New Zealand. In January 2022, it was announced that Sea Lead Shipping of Singapore / Dubai would start servicing the Australia trade with the deployment of a vessel into one of the local Australia-Asia loops. There were 4,323 container ship calls at ports in Australia in 2016-2017, according to BITRE.

General cargo – break bulk, project cargo and heavy lift

96. Break bulk is best thought of by what it is not. It is not dry bulk or wet bulk liquids. It is not cargo that goes into a container. It is individual units of dry cargo that are not categorised elsewhere.

97. This cargo type includes everything from bags, bales, barrels, drums and reels (e.g., steel coils) through to rubber tiles, large pieces of machinery, wind turbines and even giant industrial equipment up to and including oil rigs. The smaller end of the cargo can be thought of as break bulk, mid-size as being project cargo, and heavy lift, as the name implies, comprises the very biggest, heaviest cargoes. The mid- to upper-end of project cargo and heavy lift are probably best thought of as case-by-case, specialist, engineering-centred, sectors and, having been noted, do not need to be discussed further here.

99. There are multiple and considerably different definitions of the size of the world break bulk fleet and debate over what constitutes break bulk. The shipping of break bulk is often called "multi-purpose" shipping29.

100. There is an ongoing market in Australia, New Zealand and the Pacific Islands for the carriage of unit cargoes ranging from small break bulk up through to mid-sized cargoes. Such ships are typically "geared" (i.e., they have cranes installed on the vessel able to load and discharge heavy cargoes especially in remote and lesser developed areas).

101. In some ways, break bulk shares characteristics of other shipping sectors. They may call at ports on a loop, or by point-to-point. They need large flat and often reinforced spaces for the loading and unloading of cargo.

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[27] "Fact check: Australia benefits from plentiful container shipping", Shipping Australia, https://www.shippingaustralia.com.au/fact-check-australia-benefits-from-plentiful-container-shipping

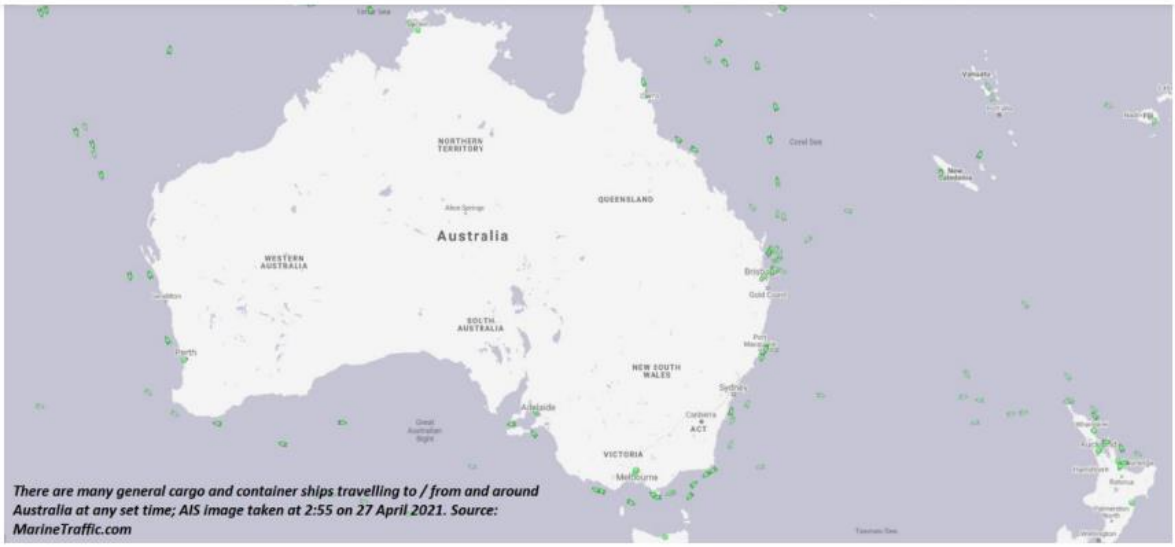
[28] Ibid.

[29] "Port Report: break bulk's existential angst", by Jim Wilson of Freightwaves.com, 07 October 2019.

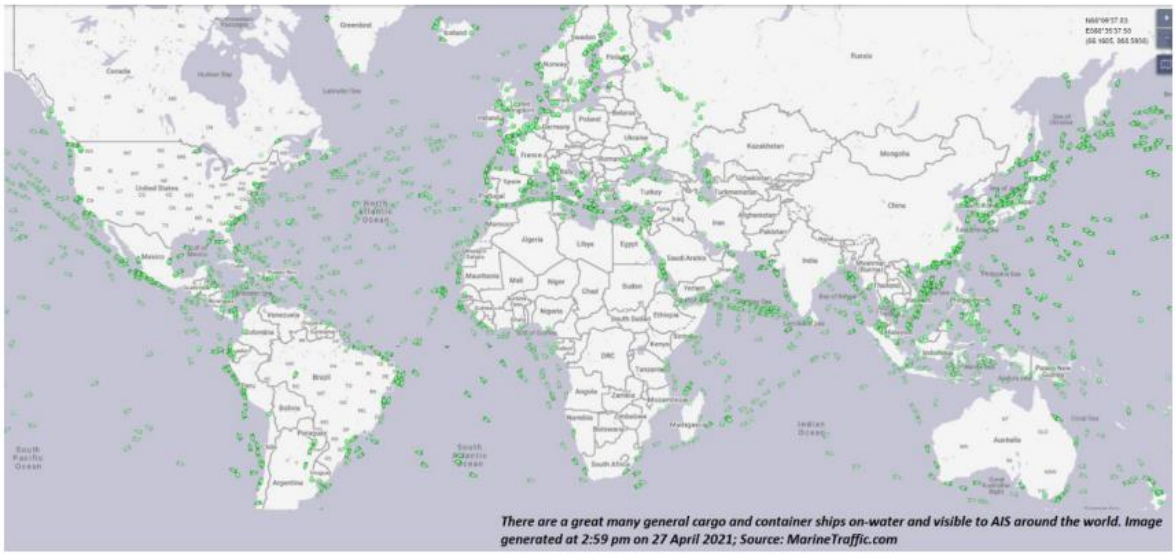
102. Break bulk has lost (and in some cases continues to lose) market share to container shipping. Some containers are flat racks (consisting of a floor and a wall at each end but no roof or sides) which can be used to transport machinery. Container ships can also carry out-of-gauge cargo on the top of their container stacks – they simply surround the unitised cargo with containers which protects it from the weather. Break bulk also loses some market share to dry bulk vessels (which can carry certain types of unit cargo, such as steel coils, on deck). Break bulk is also losing share in developing regions to ports that are adopting more advanced technology such as mobile harbour cranes, or new floating infrastructure (floating cranes, barges, floating supply docks and bases). Other new(ish) competitors are the ro-ro and pure car and truck carrier sectors.

103. Break bulk operators are deploying bigger and more standardised vessels, with greater capacity, and are typically operating using line-routes. They are trying to focus on going to where other types of ships cannot or do not go. They have an advantage anywhere that is less developed and to which floating infrastructure cannot be easily mobilised, or wherever there are large volumes of cargo that come in a variety of shapes and sizes.

104. The break bulk sector is a specialised sector, but it is not separate from other shipping sectors. For instance, dry bulkers can carry unit cargo. Multi-purpose ships can carry vehicles, machinery and large tanks of liquid fuels. The COVID crisis induced a spike in demand for the carriage of containerised general cargo that has led to a shortage in the availability of container ships. It has since been widely reported in the trade media that ship operators are now hiring break bulk ships to carry containers as a way of mitigating that shortage. (See next page for graphic).



There are many general cargo and container ships travelling to / from and around Australia at any set time; AIS image taken at 2:55 on 27 April 2021. Source: MarineTraffic.com



There are a great many general cargo and container ships on-water and visible to AIS around the world. Image generated at 2:59 pm on 27 April 2021; Source: MarineTraffic.com

Motor vehicle and wheeled cargo carrying trade

105. One final cargo and ship-type of note is the Pure Car and Truck Carrier (PCTC) which is used for the carriage of vehicles. They are very large ships with a large internal volume and a giant ramp at the stern that allows entrance and exit for wheeled cargo. Inside the cargo carrying area they look much like giant multi-story car parks with ramps, signs and laneways. Because they are wholly enclosed they are very suitable for ensuring that vehicular cargo is not subject to any damage from the sea or from adverse weather.

106. PCTCs are somewhat related to roll-on / roll-off (ro-ro) ships and ro-pax (roro ships with passenger capacity). Ro-ros and ro-paxes typically also carry wheeled loads such as trucks and cars and may carry them over considerable distances.

107. The fundamental difference between PCTCs and ro-ros / ro-paxes is that the wheeled vehicles in the former are freight cargo being transported between nations on behalf of large shippers (manufacturers usually) and the cargo is typically destined for sale in the destination country and will form part of that country's merchandise trade. Although ro-ros and ro-paxes also carry wheeled vehicles, the purpose of

the journey is to help the owners of the vehicles (usually members of the public) and the operators of commercial vehicles transit a sea space as part of a longer journey. Ro-ros and ro-paxes are essentially ferries for the transport of vehicles and the owners / operators of vehicles. An example would be the Spirit of Tasmania vessels.

108. Confusingly, it should be noted that PCTC operators sometimes use ro-ro label to refer to their operations, when, really, they are PCTC operators.

109. PCTCs typically carry passenger cars and other vehicles such as buses and trucks. They can also carry train rolling stock. They will usually be the ships of choice for the transport of a vast range of mining and farming equipment, provided that the machines have wheels. Tractors and combine harvesters will certainly be carried by PCTCs. Bulldozers, the smaller excavators, forklifts and the like will be carried by PCTCs. Heavy equipment that is too big, or oddly shaped, or too heavy to be transported in a container, such as a large generator set, may be placed on a wheeled chassis or bogie and shipped via a PCTC (or it could break bulk on a multi-purpose vessel). Extremely large and heavy mining equipment may be carried on heavy lift ships and, if the cargo is truly gargantuan, possibly on semi-submersible ships.

110. PCTCs, multi-purpose ships and container ships can be in competition for certain cargoes. Anything that can fit inside a container and is not too heavy can obviously be carried in a container and on a container ship. But it could be carried on PCTCs or multi-purpose ships too. Even cargo that is too heavy and oddly shaped to go inside a container can still be carried on a container ship. – the cargo can be loaded on top of the container stacks on the ship and other containers can be placed around the cargo to protect it. Or it could go in PCTC or in a multi-purpose ship. Meanwhile, break bulk cargo can also be carried inside a PCTC too. Confusingly, as "break bulk" is any unit cargo that is not bulk, liquid or containerised, then vehicles can be considered as a form of break bulk cargo and are referred to as such by industry actors from time to time.

111. PCTCs typically operate on loops (much like container shipping) from the main centres of vehicle manufacturing around the world (such as China, the USA, Thailand, Japan and Korea) delivering wheeled vehicles and wheeled machinery to ports near the end user. Major car import centres in Australia include Brisbane, Port Kembla, Melbourne, Adelaide and Fremantle.

112. All car (but not truck) manufacturing in Australia ceased in late 2017. We therefore assume that new car sales from 2018 onward were of imported cars. In 2017, there were 1.19 million cars were sold (although some of that was domestic production) The following year, 2018, there were 1.15 million cars sold. In 2019, there were 1.06 million and in 2020 there were 0.91 million sold. Car sales have been declining in Australia since 2017[30].

113. There are, however, some trucking and van manufacturers in Australia. About 14% of the total volume of trucks/vans that are sold in Australia are domestically produced and the rest are imported, according to the Truck Industry Council, which collects sales figures for all light duty vans, light trucks, heavy trucks that exceed 3.5 tonnes gross vehicle mass. In 2018, there were 41,268 units sold, which means

[30] BudgetDirect - https://www.budgetdirect.com.au/car-insurance/research/australian-car-sales-statistics.html accessed 30-January 2022

that, in 2018, there were 35,490 imported and 5,778 domestically produced vans and trucks. This was described by the Truck Industry Council as a record year.

114. In 2016-17 there were 219 vehicle carriers that called at Australian ports, according to BITRE's Australian Sea Freight data publication.

Other ships and cargoes

115. The world of modern commercial shipping is vast and there are far more types of cargoes and ships than can be sensibly covered here. Other types of shipping operations include tug-and-barge (seen around the northern coast and islands of Australia); ro-pax (roll on, roll-off ferries such as the Spirit of Tasmania vessels); reefer (refrigerated) ships (mostly being displaced by container ships); a multitude of different kinds of tankers; semi-submersible; heavy lift (like break bulk but with heavier handling capacity; ferries; cruise ships; livestock carriers; offshore vessels and so on.

116. Many of these ship types can be further sub-divided and / or cross over into other categories. For instance, offshore includes supply ships; anchor handling tug supply vessel; pipe layers; crane barges; possibly dredgers; drill ships; accommodation barges; production platforms; floating storage and production vessels (sometimes these are converted from LNG carriers); and oil-rig decommissioning vessels such as the Pioneering Spirit (thought to be the world's biggest ship).

International shipping markets in recent years

117. Ocean shipping is, normally, a low return business. According to internationally respected shipping analysts, Alphaliner, container shipping rates were so low that the average ocean-going carrier had an operating margin of minus 2.9% in the six years following the 2008 financial crisis. Eight of the major ocean shipping companies recorded an aggregate net loss of more than US$2.5 billion in the five years prior to 2020 despite generating over USD$350 billion in revenues.

118. At the end of 2019, a coronavirus novel to humans was identified as being in circulation in Wuhan, China. The SARS-CoV-2 pathogen, which leads to COVID-19 disease, quickly became pandemic leading to the well-known border shut-downs and lock downs around the world on the basis of health concerns. There was a slump in world trade in the early part of 2020, which led to such a decline in the container trades that box ships sailed around the Cape of Good Hope to save on Suez Canal Fees. But then a remarkable and unforeseen rebound led to a huge surge in trade[31].

119. By the end of 2019, world container throughput volumes had risen to 770.77 million TEU, which was both a 1.69% increase on 757.94 million TEU of throughput recorded in 2018, and 70.07 million TEU

[31] "WTO goods barometer flashes red as COVID-19 disrupts world trade", World Trade Organization, https://www.wto.org/english/news_e/news20_e/wtoi_19may20_e.htm - accessed 09 February 2022; "Containerships opt for Cape Route", Global Maritime Hub - https://globalmaritimehub.com/containerships-opt-for-cape-route.html accessed 09 February 2022; "Goods Barometer signals trade resilience amid ongoing COVID concerns", World Trade Organization, 20 November 2020 via https://www.wto.org/english/news_e/news20_e/wtoi_20nov20_e.htm - accessed 09 February 2020".

greater than the 2014 to 2018 five-year average of 692.70 million TEU. Even in 2020, world TEU throughput figures of 758.85 million are still considerably in excess the five-year average.

120. This was, and is, a huge surge in TEU volumes. Demand for shipping services had massively escalated during the pandemic and supply of shipping services would, inevitably, take some time to catch-up. The short-term supply nonetheless did massively expand. Prior to the start of the pandemic, the idled world container shipping fleet stood at about 3 million TEU-strong and this idled fleet was quickly put back to work. Ocean shipping companies reduced scrapping rates, thereby keeping ships in service for longer, non-specialist ships such as break-bulk ships were hired as container carriers (and some shippers switched from containers to putting their cargo into large bags that were shipped as break bulk) and even dry bulk ships were pressed into service to transport containers on deck.

121. Longer term, huge orders of new ships have been put on the order book with Alphaliner estimating that 135 new box ships of more than 855,000 TEU combined capacity were delivered in 2020. It also forecast that, by the end of December 2023, there would be 287 box ships delivered with a combined capacity of greater than 2.3 million TEU.

122. The world cellular fleet is forecast to rise from 5,372 ships with 23.90 million TEU capacity as at the end of December 2020 to 5,978 ships and 28.39 million TEU capacity as at the end of December 2023. These figures account for deletions from the world fleet. This sustained increase in the supply of shipping capacity may put downward pressure on freight rates in the near future. Meanwhile, as of 09 February 2022, Alphaliner reported that there were 6,328 active ships with a total TEU capacity of 25.93 million (the fully cellular fleet stood at 5,532 ships with a capacity of 25.03 million TEU).

123. Before the pandemic, in or about December 2019, the global average freight rate for a forty-foot box according to publicly available information from Freightos, was about USD$1,446. As of 28 January2022, that figure was US$9,806. That is a global average. Other trade lanes will have a variety of rates. The China / North America West Coast was, in late January, about US$15,485 per forty-foot box whereas the North America West Coast / China route was US$1,089 per forty-foot box.

124. Freight rates increased because of the interactions of supply and demand. As explained above, demand for containerised shipping services (as indicated by container port throughput) while the expansion of the supply of shipping services inevitably had to lag behind.

125. Exacerbating the situation was the enormous port congestion all around the world. In New Zealand there were, at some points over the 2020-2021 period, periods of two weeks delay. In the United States it was reported that there were weeks of delay and many tens of container ships – sometimes over 100 container ships – stuck in queues waiting to unload at the adjacent ports of Los Angeles and Long Beach. Congestion spread around the U.S. to ports on both main coasts such as Oakland (near San Francisco) and Savannah (US east coast in the state of Georgia).

126. Unprecedented congestion and the resulting delays to vessels have the effect of removing vast amounts of capacity from the world container shipping fleet, according to maritime analyst company Sea-Intelligence.

127. Using Sea-Intelligence's proprietary data, the company found capacity was soaked up by delays imposed on vessels. Approximately 25% of capacity on the trans-Pacific route was lost to these delays, "far outpacing the 17% soaked up by the 2015 US West Coast labour dispute". Meanwhile, the Asia-

Europe route lost 11% of capacity deployed in the first four months of 2021 because of delays. And this at a time when "more capacity is deployed than ever before".

128. At the height of the congestion, about 12% of global container ship capacity was lost to delays to vessels. That's equivalent to about 2.8 million TEU of shipping container capacity. To put that in perspective, the entire global fleet of ultra-large container ships of 18,000 TEU and above had a combined capacity of about 2.7 million TEU at the time of the analysis in June 2021.

129. "Hence, in very real terms, the congestion problems in 2021 is of such a magnitude, that the effect is the same as if the entire industry had decided to remove all Ultra-Large Container Vessels from the fleet, without adding any new vessels," Sea Intelligence said in a statement.

130. In summary, the key factors driving up freight rates were a surge in demand (induced by world populations being locked-down on health grounds), a limited and time-constrained ability to increase supply, and an inability of ports to cope with the surge in trade leading to massive losses in capacity to ship queues.

131. A variety of commentators have made unsubstantiated allegations that shipping companies have engaged in some kind of collusion and price-gouging. To the best of Shipping Australia's knowledge and belief these allegations are without foundation. The global rise in freight rates can be adequately explained by the interactions of supply and demand as explained above. It seems likely that as demand normalises, as supply increases, and if ports can improve their performance, then the global situation ought to normalise.

Shipping costs have massively increased

132. The Hamburg and Bremen Shipbrokers' Association has reported in its weekly Contex reports that shippers that normally do not engage in ship operating have entered the market and that they have pushed up ship charter rates to extreme highs. It also reported that the market for 1,000 to 6,500 TEU container ships was effectively sold out. There were no more ships to charter. The Harper Petersen Charter Rates Index (Harpex), collated by ship broker Harper Petersen, has reached 10-year highs. Charter rates have massively escalated.

133. Meanwhile, the cost of marine fuel has massively escalated too. In April 2020, the cost per tonne of marine fuel (IF0 180; Singapore) was USD$155 per tonne. That price rose to USD$530 in December 2020 and, as of 28 January 2022, the price was USD$526 per tonne. As ships can consume hundreds of tonnes of fuel per day, depending upon ship size and speed, the fuel price is of central importance to ship operators.

134. Overall, there has been a massive escalation in ship operating costs over the last two years. The one-day ship operating cost (no fuel) for a 4-5k TEU vessel in early January 2021 was about USD$32,652 a day (about AUD$42,121 in January 2021 exchange rates). The one-day operating cost inclusive of fuel for a 4-5k TEU vessel stood at approximately USD$78,673 (AUD$101,489).

135. As of 28 January 2022, the one-day costs for the same sized ship (no fuel) have risen to USD$105,652 (AUD$149,653) and the costs inclusive of fuel have risen to USD$175,557 (AUD$248,671). Delay and disruption have always been costly for ship operators. In the current market it is extremely costly.

Delay and disruption in Australia during the pandemic

136. Two areas in the Australian maritime sector in particular caused disruptions over the last two years. These were Australian port performance and industrial relations leading to stoppages and work delays. Shipping Australia discusses these in detail later in this submission.

137. Container ports in Australia demonstrated that they could not cope with a surge in trade. This is of great importance as the container trade forecasts predict that Australia's box trade will rise from 7.2 million TEU in 2012-2013 to 19.4 million TEU by 2033.

138. By 2032–33, the total volume of containerised trade is projected to reach to 3.6 million TEUs in Brisbane, 5.2 million TEUs in Sydney, 6.4 million TEUs in Melbourne, around 1.0 million TEUs in Adelaide, 2.1 million TEUs in Fremantle and 1.2 million TEUs across all other ports[32].

139. Container ports in Australia are not getting ships to berth quickly enough, they are not utilising their berths enough to handle the volume of ships, there is too much idle time at the berth and waterfront cranes are not working fast enough. Total turnaround time is too slow.

140. Separate studies one by the Australian Competition & Consumer Commission, and the other by the World Bank and I.H.S. Markit have demonstrated that Australian ports are not internationally competitive. Slow ports create congestion and cause large unnecessary and wasted costs to society, to ocean carriers, and to importers and exporters. If Australian ports do not increase their efficiency, then they will not be able to cope with the forecast rise in trade should it eventuate.

141. The other major theme is industrial disputation. The various waterfront unions engaged in a wide range of rolling industrial actions throughout most of 2020 and 2021. This caused extreme disruption, led to port congestion, caused stock to spoil, disrupted business generally, caused massive problems with empty container management and led to huge costs being incurred on shipping companies and Australian importers / exporters.

142. It was particularly damaging that strikes were held right across the waterfront – all the main container terminal operators were hit with a series of frequent and rolling strikes as was one of the towage operators. Just as one set of industrial action ended, another set seemed to begin.

143. By way of example of the extensive nature of the strikes on the waterfront, the Productivity Commission is directed to the Shipping Australia article "Union-led industrial action to disrupt the waterfront – the details," 24 September 2021- https://www.shippingaustralia.com.au/union-led-industrial-action-to-disrupt-the-waterfront-the-details/.

144. Strikes across several of the main waterfront companies crippled the ability of the docks to handle trade which therefore hurt Australia at a time when the country was reeling from the twin crises of COVID and a severe economic downturn.

Container shipping responses to congestion and disruption

146. Shipper representatives have particularly expressed concerns over the management tools used by shipping companies in recent years to cope with the effects of port congestion and industrial disruption. These management tools include:

[32] "Research Report 138: containerised and non-containerised trade through Australian ports to 2032-2033", 2014, Bureau of Infrastructure, Transport and Regional Economics, pV

- Shipping companies changing port rotations
- Skipping ports in a loop (opting to instruct a vessel not to call at a given port)
- Omitting ports from a loop (cutting the ports out of the loop completely)
- Changing routes, changing arrival times and dates (slowing down or speeding up)
- Blanking previously announced sailings (a shipping company will announce a planned journey around a loop will not take place)
- Issuing surcharges for such matters as port congestion.

147. However, the use of these management tools is vital to ensure that Australia's international trade can continue during periods of congestion and disruption.

148. If ships were bound to some kind of service level during periods of extreme disruption, if ships could not skip a congested port, change rotation, blank sailings or could not use any of the tools above, and if ports and ships worked on a one-in / one-out basis, then there would quickly be massive ship queues at Australian ports. As more and more ships arrived at the congested port, the queue would get longer and longer (just like a motorway traffic jam gets longer and longer) because the ships at the back of the queue would arrive faster than ships at the front of the queue could be processed by a port.

149. This happened off the US west coast as ship queues built up, sometimes to over 100 ships, off the dual ports of Los Angeles and Long Beach over the last year. That, in turn caused a cascade of ill-effects on the landside. The costs of such queues in Australia would be extreme.

150. The current (28 January 2022) one day cost without fuel consumption of a 5,000 to 6,000 TEU vessel is about A$149,653 a day. The current cost of a 5,000 to 6,000 TEU vessel, burning fuel, would be about A$248,671 a day. On a 14-day delay that's over AUD$2 million per ship for the non-fuel costs and AUD$3.48 million if the cost of fuel is included. That's per ship, so if there are multiple ships in the loop, then they would incur multiples of those costs.

151. No ocean shipping company can afford to bear such costs on an ongoing, or even a temporary basis. Shipping Australia can only imagine that, if we enter a period where there is ongoing port congestion and disruption, then ocean shipping lines would not be able to economically service Australia if they could not manage their business using tools such as blanked sailings, port omissions, changing of port rotations and the like.

152. An exit of ships from the Australian trades would decrease capacity, increase instability, while decreasing frequency and resilience of service. Under the current system, ships can keep moving which means that trade – and consignees' goods – can keep moving without the build-up of excessive costs and ship queues.

153. Shippers and consignees have a variety of tools they can use to manage their businesses when supply chains come under stress. They can amend their own contract terms to customers, they can communicate the details of the situation to their own customers, they can take insurance for a variety of situations, they can issue surcharges of their own, they can place orders in advance, and they can also build up inventory stocks to cope.

Container bookings are largely available

154. Australia has an imbalanced trade. We buy lots of goods from overseas and we don't have the manufacturing to fill the containers on their journey back overseas. Australia has a substantial agricultural sector but the vast majority of agricultural produce, such as wheat, is exported in dry bulk ships. The transport task reflects the fundamental nature of Australia's economy and won't change until, or if, Australia becomes a manufacturer of goods.

155. Port Botany, Sydney, is a port that is representative of Australia's container trade. Port Botany reports on a financial year basis. In the financial year ending June 2021, Port Botany handled 2.69 million TEU (twenty-foot containers). Of that figure 1.34 million TEU were exports and just under 1.35 million were imports.

156. About 1.34 million TEU of Botany's imports were fully loaded TEU. About 5,865 TEU of imports (0.45% of Botany's imports) were empty. There were 455,000 TEU fully loaded exports and just over 883,192 empty TEU exports. About 34% of Botany's TEU exports were fully loaded and 66% were empty. It is normal that nearly all of Port Botany's imports to be fully loaded TEU and approximately two thirds of Port Botany's TEU exports to be empty.

157. At the time of writing, the full 2021 calendar year data from the main capital city ports around Australia was not available. However, there is a selection of data (below) from the ports that tells a story of plentiful container exports even if the numbers do not cover the exact same time frame. They are illustrative as they show the typical volumes of TEU exports of the capital city ports:

158. Full TEU exports around Australia

- 455,000 Port Botany 2020-2021 – Financial year
- 701,908 Brisbane 2020-2021 – Financial year
- 759,363 Melbourne 2019 – Calendar Year
- 223,404 Fremantle Ports 2020-21 – Financial Year
- 179,757 Adelaide 2020 – Calendar Year

159. Data from the Australian Competition and Consumer Commission is supportive. There were just under 8 million TEU handled in Australia in 2019-2020, which was down a little from the previous year (as would be expected given the general slowdown in the early part of the pandemic) and there was about 8.5 million TEU handled in 2020-2133.

160. A booking is required before an export can be made. It therefore follows that if millions of full TEU are being exported throughout the pandemic then it is proven that a very great number of container bookings have in fact been obtained.

161. Shipping Australia understands that there has been advocacy that container bookings are not available. However, if millions of full TEU each year are exported from Australian ports then, by definition,

[33] "Container stevedoring monitoring report 2020–21", ACCC, p58, figure 6.1 https://www.accc.gov.au/system/files/Container%20stevedoring%20monitoring%20report%202020-21.pdf.

exporters who say they cannot get container bookings are not representative of the whole. Shipping Australia suggests that the people who are complaining of a lack of availability are a "self-selected sample"34.

162. There could be numerous reasons why any given individual cannot obtain a given set of container bookings. Sometimes, especially during periods of high demand and industrial disputation, containers might be temporarily unavailable. Shippers sometimes leave their container bookings to a point that is too late, which can result in disappointment and frustration for the shipper.

163. In the past during times of high demand, shippers have engaged in double-booking of containers which dries up supply. Shippers might be ordering "clean" containers when they need "food grade" containers which are not the same type of container. A clean container is a container that is in good repair and free of any obvious rust or contaminants whereas food grade containers are clean to a much higher standard so that edible foodstuffs can be placed inside.

164. It takes time and resources to upgrade a container to "food" grade. Typically, only very small numbers of food grade containers are in circulation or stock at any point in time, even during the most normal everyday mundane set of circumstances, and they're always in high demand somewhere in the world. Ocean shipping companies will export food grade containers during times of low demand to where they are needed and, during times of high demand, they can fall into short supply. Shippers of edible agri-produce need to specifically order "food grade" containers in sufficient numbers and in advance.

165. Shipping Australia refers the Productivity Commission to our factsheet "Food Quality Containers" https://www.shippingaustralia.com.au/food-quality-containers/ and to our "Explainer: why is there a shortage of food quality containers around the world?" https://www.shippingaustralia.com.au/explainer-why-is-there-a-shortage-of-food-quality-containers-around-the-world/ which explains the phenomenon in some detail.

166. Shipping Australia also refers the Productivity Commission to the extensive and expert-produced document "Standards on Empty Shipping Container Inspection (v2 May 2021)", which is supported by Shipping Australia, Grain Trade Australia and The Australian Government's Department of Agriculture, Water and the Environment - https://www.shippingaustralia.com.au/standards-on-empty-shipping-container-inspection-v2-document-may-2021/

Ocean shipping is not concentrated in Australia and there are plentiful services

167. It is sometimes incorrectly alleged by that ocean shipping is a concentrated market and it is sometimes alleged that shipping companies work together as part of the international shipping conferences (with the implication (sometimes unspoken, sometimes outright alleged) that there is some kind of unlawful collusion). These unsubstantiated allegations appear to be made with the intent to sway public officials to make rules that favour their sector.

168. Firstly, to the best of our knowledge and belief, ocean container shipping companies do not engage in unlawful collusion. Ocean shipping companies do engage in conference-related operational behaviour such as vessel sharing and slot-chartering where this is allowed by competition law and where this

[34] "Self-Selection Bias," Statistics How To via www.statisticshowto.com accessed 10 February 2022.

provides a range of benefits to the public such as service stability, flexibility, expanded shipper choice, service provision in lower volume markets and expanded capacity. We discuss this elsewhere in our submission (see our comments about Part X and the proposed Liner Shipping Block Exemption) for further details. Even though shipping companies may co-operate when / where allowed by competition law on operational matters, they nonetheless engage in fierce competition for business and market share. Different companies promote themselves on a variety of different aspects of business (such as customer service, marketing, advertising promotions, and reputation among other things) and these may be collectively thought of as the "brand" of each shipping company.

169. Although the various ocean shipping brands may co-operate on some operation aspects of service delivery, ocean container shipping is not a concentrated market. According to the World Shipping Council, a global representative body for international liner shipping, there are over 1,950 liner services worldwide, of which are 80 liner services that are Australasia & Oceania-related[35].

170. A "service" is typically a regularly scheduled sailing by container ships between a given set of ports. One container shipping company could offer one service, or it could offer many services.

171. Shippers to / from Australia have a choice of many different shipping brands offering container shipping services to / from Australia. Shipping Australia is aware of at least 23 container shipping brands that service Australia and these are: ANL; CMA CGM; COSCO; Evergreen; Gold Star Line; Hamburg Sud; Hapag Lloyd; HMM; Maersk; Mariana Express; Marfret; Matson; Mediterranean Shipping Company; Neptune Pacific; ONE; OOCL; Pacific Asia Express; Pacific Forum Line; SinoTrans; T S Lines; Yang Ming; Zim; and Sea Lead (due to start March 2022).

172. A commonly accepted measure of market concentration is the Herfindahl–Hirschman Index. It is calculated by discovering the market share of each company in the market, squaring each market share number, and then adding the results. The closer the resulting number is to zero the less concentrated the market; conversely, the higher the number, the less concentrated the market. Opinions as to what constitutes the threshold of concentrated market vary, however the United States Department of Justice considers scores of up to 1,499 to not be concentrated, scores of 1,500 to 2,500 points to be highly concentrated and scores over 2,500 to be highly concentrated. Australia has a Herfindahl-Hirschman Index score of about 1,016 and would be considered to be an unconcentrated industry using the US Department of Justice criteria[36].

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[35] "Liner Services," World Shipping Council https://www.worldshipping.org/liner-services accessed on 09 February 2022.The WSC statement quotes data from internationally respected maritime analyst firm, Alphaliner.

[36] "Herfindahl-Hirschman Index", U.S. Department of Justice, 31 July 2018 https://www.justice.gov/atr/herfindahl-hirschman-index accessed on 09 February 2022; "Herfindahl-Hirschman Index (HHI)", Investopedia, A Hayes et al; 30 August 2021, https://www.investopedia.com/terms/h/hhi.asp#:~:text=(HHI)%20Mean%3F-,The%20Herfindahl%2DHirschman%20Index%20(HHI)%20is%20a%20common%20measure,and%20the%20lower%20its%20competition accessed 09 February 2022.

173. Noting that Australia has recently attracted a variety of new services and new entrants (such as Zim, Hong Fa and Sea Lead) and with the forecast growth in trade, we can only presume that the Australian ocean shipping trade will become even more diverse in the future.

TABLE 5: international market share of ocean shipping companies active in Australia with HHI score

	Market share	**Market share squared (HHI index points)**
ANL & CMA CGM	12.70	161.29
Cosco & OOCL	11.60	134.56
Evergreen	5.80	33.64
Gold Star Line	0.03	0.00
Hapag Lloyd	6.90	47.61
HMM	3.20	10.24
Maersk including Hamburg Sud	17.00	289.00
Marfret	0.03	0.00
Matson	0.30	0.09
Mediterranean Shipping	17.10	292.41
Neptune Pacific including PFL	0.03	0.00
ONE Lion	6.00	36.00
PIL / Pacific Forum	1.10	1.21
SinoTrans	0.18	0.03
T S Lines	0.40	0.16
Yang Ming	2.60	6.76
Zim	1.70	2.89
	Market share: 86.66%	**HHI points: 1,016**

Source: *Shipping Australia; market share data Alphaliner.* ***Note:*** *the HHI score is likely to be an underestimate as numbers are rounded and the market share of some brands servicing Australia, such as Mariana, could not be discovered. There are more ocean shipping brands service Australia than are listed here. There are also several non-container brands that may carry containerised cargo and call at Australia. These include but are not limited to Armacup; Austral Asia Line; BBC Chartering; Hong Fa; Spliethoff; Swire; and Wallenius.*

174. Australia's liner shipping connectivity is now at the highest level since UNCTAD began recording data in Q1 2006. See the graph below, "Liner Shipping Connectivity Index (Australia) Q1 2006 – Q1 2021"), based on UNCTAD data.

Graph: Liner Shipping Connectivity Index (Australia)

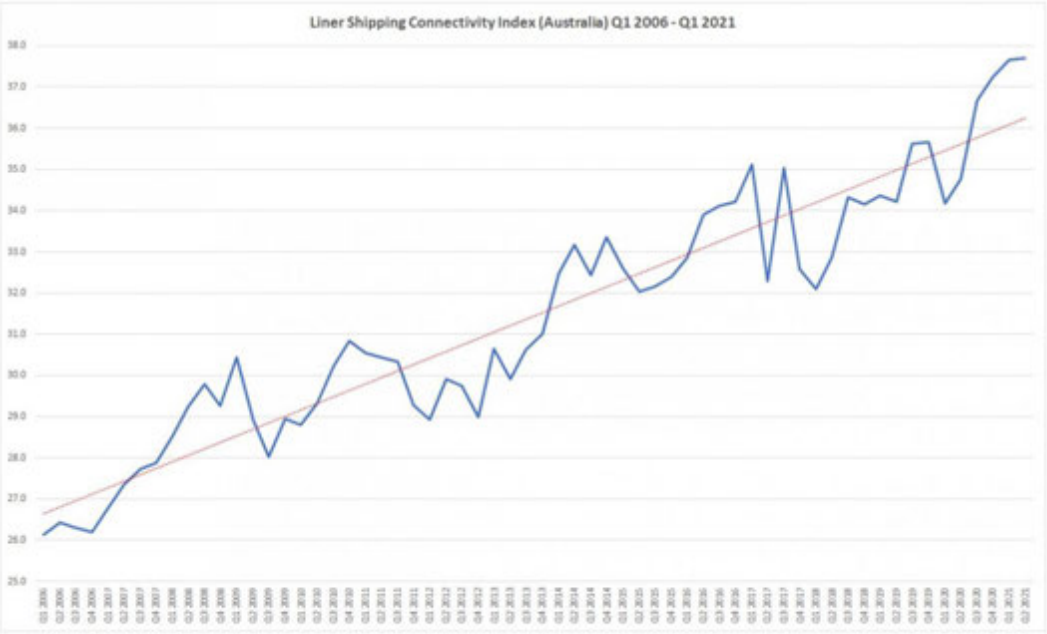

FIGURE 2: the Y-axis (left) also shows the index points on the UNCTAD Liner Shipping Connectivity Index. The Y-axishas been truncated and does not start at zero. it has also been truncated so as to more clearly show the change and trends over time. See Quartz.com "It's OK not to start your Y-axis at zero".
Data: UNCTAD Liner Shipping Connectivity Index. Graph: Shipping Australia.

Source: *Shipping Australia.* ***Data:*** *UNCTAD.*

175. While there have been ups and downs in Australian liner shipping connectivity, the overall trend over time has been for increasing connectivity (see red dotted line-of-best-fit). Connectivity is important because it facilitates trade. It enables overseas suppliers to get their goods to here from practically any part of the world and for Australian exporters to get their goods from here to any part of the world too.

176. Even if there isn't a direct service from Melbourne to, say, Beira, which is the capital city of Mozambique, international container shipping can get a container from here to there. A shipping container could be exported on an Australia / southeast Asia service, trans-shipped at Singapore or Port Klang (Malaysia), sent across the Indian Ocean to Salalah (Oman), where it would be transhipped south to Mozambique.

177. So, it is important to realise that even a few shipping lines to / from Australia open the Australian economy to the whole world.

Maritime supply chains are resilient

178. It is often said by commentators from a broad range of sectors and interest groupings that supply chains are "fragile". This is manifestly not true in relation to ocean shipping.

179. During the COVID pandemic, despite the world-wide shutdown of borders, the aviation industry and massive restrictions on the movement of persons, ocean going ships delivered the goods. In fact, around the world, there have been numerous epidemics including measles (worldwide 2019-2020); dengue fever (2017-2020, Pakistan, Sri-Lanka, Asia, Pacific, Latin America); Zika (2015-2016, worldwide); dengue fever (2013, Singapore – although present in one small country Singapore is of central importance to the world shipping industry); Ebola (2013-2016); Middle East Respiratory

Syndrome (2012-present, worldwide) and swine flu (2009-2010, worldwide). Going back further in time and there were repeated outbreaks of dengue, cholera and plague among many other epidemics. Ocean shipping sailed through it all and delivered the goods.

180. Throughout history, there have been repeated bouts of labour unrest and strikes. These include the Greek general strike (2021), the US essential workers general strike (2020); the US Strike for Black Lives (2020); the Indian general strike (2020); the Brazilian general strike (2017); the Indian general strike (2016) and the Egyptian general strike (2008).

181. Here in Australia, we have repeated bouts of industrial action owing to the ongoing campaigns and militancy of the local waterfront trade union against stevedores and towage companies. Although, as will be demonstrated elsewhere, these strikes are very disruptive to the landside supply chains, are very costly for ocean shipping companies and are very costly to the Australian economy, they do not stop sea-going vessels which can work around industrial disruptions (albeit at great expense). Ocean shipping has sailed past all the strikes and has delivered the goods.

182. Last year the Suez Canal became blocked after a ship grounded, vessel operating companies were able to work around the blockage. Despite what may have been published in the media, ocean going ships delivered the goods. Shipping Australia detailed the non-effects of the 2021 Suez Canal Obstruction in our submission to the Productivity's Commission's Vulnerable Supply Chain inquiry (the major finding of which was that our supply chains are not vulnerable).

183. There have been repeated financial crises: the European sovereign debt crisis (2009-2019), the Russian financial crisis (2014), the Brazilian economic crisis (2015), the Chinese stock market crises; the Global Financial Crisis and the U.S. sub-prime housing market crisis which caused the world's financial industries to go into spasm; the oil price crisis (2003-2009) and the price per barrel hit US$147.30 (it was generally under US$23 per barrel until late 2003), ocean going ships weathered the financial crisis and delivered the goods.

184. In World War 2, the armed forces of Nazi Germany targeted merchant shipping in the Atlantic through a policy of unrestricted submarine warfare. In the 1980s war in the Persian Gulf, both the Iranian and the Iraqi armed forces targeted ocean-going ships for destruction. Towards the end of that conflict, armed soldiers from the belligerent were flying helicopters just above crude oil carriers and were literally throwing grenades at the ships in an attempt to damage or destroy the ships. However, crews were still willing to sail ships and ship operators were still willing to put their assets at risk as both were lured by the prospect of hazard pay. In the early 1990s the Said Barre regime collapsed in Somalia and that led to an ongoing multi-sided civil war – a situation in which maritime piracy flourished. The Gulf of Aden and a sea-space stretching for hundreds of kilometres around the coast of Somalia became pirate hunting grounds. Pirates attacked ships with AK-47 machine guns and rocket-propelled grenades. They stormed ships to kidnap the crew and hijack the vessel, later ransoming them back to their owners. However, ocean shipping continued and delivered the goods.

Automation in the maritime industries

185. The maritime industries appear to be in the early stages of an industrial revolution centred on robotics, artificial intelligence, advanced software and automation. The marine container terminal operation industry is already deep into that revolution with highly sophisticated terminal operations software and robotic cranes already in operations around the Australian coast.

186. Seafaring marine businesses are also intensely examining the application of these technologies to their businesses. For instance, international towage operator Svitzer along with Kongsberg Maritime and technical consultant ABS are investigating the development of the world's first fully remotely controlled tugboat[37].

187. Perhaps remote-control technology is already obsolete technology. The Yara Birkeland, a 120 TEU coastal container ship is due to start a two-year trial in Norway shortly. If it is successful, it will be the world's first fully electric-powered and fully autonomous cargo ship that enters into service[38].

188. Japanese shipping major Mitsui OSK Lines carried out a port-to-port sea trial with a coastal container ship. on 24 January 2022 and carried out mooring tests with a drone[39].

189. Perhaps the most interesting example is the voyage of the autonomous tug "Nellie Bly" which carried out a 1,027 nautical mile journey around the coast of Denmark in 129 hours. The vessel was under autonomous control for 96.9% of that time. The Nellie Bly used artificial intelligence, computer vision, and nautical chart data (among other things) to carry out the journey in which it executed 31 collision avoidance and traffic separation manoeuvres. Starting at Cuxhaven (Germany), the ship transited the Kiel Canal, circumnavigated Denmark, and returned to Cuxhaven. The voyage was supervised by US Coast Guard mariners... remotely stationed 3,000 miles (4,828 km) away in Boston, in the United States[40].

190. By way of comparison, 1,027 nautical miles is about 1,900 kilometres. The voyage of the Nellie Bly would be somewhat similar to a vessel sailing from the Port of Melbourne in Victoria and cross the Bight to Fremantle Ports in Western Australia while being monitored by mariners in Brunei, southeast Asia.

191. These autonomous technologies appear to be successful. Purely from a financial viewpoint, there are compelling reasons for ship operators and marine craft operators to adopt autonomous craft. In or about

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[37] "Svitzer, Kongsberg Maritime and ABS join forces to develop the world's first commercial tug to be fully remotely controlled," 22 February 2021, Svitzer https://svitzer.com/svitzer-kongsberg-maritime-and-abs-join-forces-to-develop-the-worlds-first-commercial-tug-to-be-fully-remotely-controlled/ accessed 08 February 2022.

[38] "Yara Birkeland," Yara, via https://www.yara.com/news-and-media/press-kits/yara-birkeland-press-kit/ accessed on 08 February 2022.

[39] "Autonomous ship project in first sea trial," Ship & Bunker News, 25 January 2022, https://shipandbunker.com/news/apac/209061-autonomous-ship-project-in-first-sea-trial.

[40] "Tug completes first 1,000 NM autonomous voyage in Europe", the Maritime Executive - https://www.maritime-executive.com/article/tug-completes-first-1-000-nm-autonomous-voyage-in-europe accessed on 08 February 2022.

2018, Blanke et al[41] estimated the annual gross costs per ship employee to be about one million Danish Kroner (about AUD$206k at 2018 rates) in direct costs. Those savings multiply rapidly if there is a crew of, say, 16 to 20 people and they especially multiply if the ship operator has hundreds of ships.

192. But it is likely that the true financial benefits would be far greater that the direct cost savings. Not only would insurances, provisions, wages and the like be avoided, but a commercial ocean-going ship-drone would likely not even have an accommodation block. There would be up-front capital savings on the construction of the vessel and the absence of an accommodation block would result in huge fuel savings over the lifespan of the ship. The space currently taken up by an accommodation block could be given over to the carriage of cargo thereby offering additional revenue-generating possibilities.

Maritime skills vulnerability is over-stated

193. Policy proponents who seek to have the state invest in maritime will often deploy an argument that maritime sector needs highly skilled and experienced people to work in the sector and that a lack of sufficiently skilled and experienced people will be detrimental to the sector and the national economy.

194. They will often then advance the argument that the public authorities need to invest in creating a maritime skilled workforce and that, accordingly, the public authorities should subsidise support / own some part of the maritime industry.

195. Proponents often justify their position with export reports that purport to show that by given year A then there will be a shortage of seafarers of B, C, D types for deployment in X, Y, Z trades. Such reports are often written by highly regarded economists and industry experts.

196. However, shipping companies and other actors in the trade and industry (such as shipping companies and maritime training schools) also read those and then adjust their recruitment plans accordingly, with appropriate investments in training and education.

197. Or, in other words, the invisible hand of the market moves in such a way as to head off, or alleviate, that threat of potential seafarer shortfalls as highlighted in expert reports. Alternatively, if it is decided that there are policy reasons for developing Australian seafarers, then the Australian government could fund the training of Australian seafarers. Such trainees could be rotated around berths on a variety of ships in the international fleet, provided that the Australian government provides an appropriate financial recompense. They could also be rotated into / out of a variety of maritime institutions (e.g., intra-governmental organisations, secondments to transport departments in allied nations) and commercial organisations (e.g., ports, pilotage companies etc) around the world to maximise the diversification of their experiences and competencies.

198. In the event of a perceived or actual shortage of roles, Australian maritime-focused institutions (such as governments, or ports etc) can consider importing skilled and experienced staff from overseas. Two of the Shipping Australia secretariat policy positions are filled by Australian naturalised and overseas-

[41] "A pre-analysis on autonomous ships", M Blanke, M Henriques, J Bang, Technical University of Denmark, undated, circa 2018, https://www.maritimecyprus.com/wp-content/uploads/2017/03/autonomous-ships-pre-analysis-s-1.pdf

born citizens both of whom came to Australia to fill maritime-related roles. Shipping Australia can point to many other people working in the Australian maritime industry who are overseas born. This includes a range of personnel including senior managers of substantial maritime companies, lawyers, and harbour masters.

199. Nationalist-focused policy proponents often counter that relying on the international market carries the risk that personnel needed in Australia might not be available. As a theoretical risk that is certainly true but there seems to be a low likelihood of that risk eventuating. There are approximately 1,647,500 seafarers of which 774,000 are officers and 873,500 are ratings, according to the International Chamber of Shipping.

200. It also won't be the case that Australia will have to source every single maritime-related job from overseas. There are a wide range of maritime businesses that are, and will likely remain, in Australia such as port operations and marine terminal operations. In Australia, today, there are already 66,000 domestic certified seafarers and a further 28,000 uncertified crew and volunteers 42 without the need for any policy prescriptions such as a national fleet.

201. Looking forward, because of automation in the maritime industries, future levels of demand for a maritime workforce may be far lower than predicted and the skills needed may be radically different from that envisaged today. As we have mentioned earlier, there have been long, successful, voyages of autonomous craft.

202. In the event that, for whatever reasons, it is decided that Australia absolutely needs to boost its qualified and experienced numbers of marine-capable personnel who are natural born (or naturalised) citizens, there are 61 registered training organisations in Australia offering 179 different units of competency. Then there are a multitude of academic, training and vocational institutes around the world.

203. Rather than spending vast sums of money on a national fleet, at least AUD$1 billion for a modest 12-ship national fleet, a fraction of that money could be used to pay for a thorough and intensive academic and vocational educational and training programme to be undertaken by Australian citizens.

Inappropriate development at Fremantle Ports

204. Shipping Australia has called upon Premier McGowan to protect Fremantle Ports, a vitally important institution for the continued economic well-being of Western Australians, from inappropriate development proposals.

205. We have become concerned about proposals by the McGowan administration to develop a film studio at the waterfront on, or near, land used by Fremantle Ports that is essential for international trade related operations. The proposed location is Victoria Quay.

[42] "Industry Outlook Maritime 2021," Maritime Industry Reference Committee, Australian Industry Standards

206. Fremantle Ports, and its assets, are not private property[43] and it is fair for policy settings to be formulated to the benefit of the community.

207. As explained earlier, ocean shipping is of vital importance to Australia and Australians. In Western Australia, Fremantle Ports is a vital centre for international trade and ocean shipping. Fremantle Ports handles 30.4 million tonnes of cargo a year, worth AUD$31.34 billion per annum. This cargo includes the handling of over 100,000 cars and the equivalent of about 807,000 twenty-foot shipping containers a year. We also understand there will be a new port near Fremantle, but that will take a long time to develop, and our members are concerned about costs and delays in the near future if this inappropriate studio development proceeds.

208. Firstly, we want to make it clear that Shipping Australia is not opposed to a proposal to develop a film studio somewhere in Fremantle, or, indeed, elsewhere in Western Australia. We are in favour of investment that would boost cultural and economic opportunities. But the film studio development must not proceed at, or near, Fremantle Ports land.

209. Shipping Australia is very concerned that this development would adversely affect trade through Fremantle Ports. Our members fear that the proposed film studio development will remove between 1,000 to 1,500 car slots from the existing 3,000 car slots that are currently available.

210. We understand from members that the proposal to create a film studio could cut existing (limited) capacity by 30%. Victoria Quay handles large volumes of break bulk trade including cars, motorbikes, caravans, campervans, industrial vehicles, boats and machinery along with second-hand motor vehicles from the eastern Australian states, machinery and iron / steel products. The trade has been so strong, that in March 2021, Fremantle Ports reported that the wheeled trade was up by 156% (about 12,000 vehicles) and that, to handle all that trade, they had to shut Peter Hughes Drive on Victoria Quay[44].

211. We are advised by shipping line members that there is already an "extreme shortage" of ground wharf stowage space for cargo. Scarce capacity inevitably hinders shipping. Vessels that are due to enter port must already wait offshore before being allowed to berth and discharge.

212. Any delay is already extraordinarily expensive. The current one-day cost of delay (without including fuel) can be estimated at about AUD$129,000 a day for a 4,000 TEU vessel. Companies operating large fleets, or calling regularly at Fremantle, would be very severely disadvantaged if there is a reduction in port capacity. It should also be noted that car carriers often sail on a loop and are subject to strict timelines. If they get delayed in one part of the loop, it throws the carriers off schedule in the rest of the loop resulting in cascading lateness and escalating costs as they burn higher volumes of fuel by going faster in an attempt to reduce the lateness. PCTCs, like container ships, just can't wait.

213. We can only speculate that the increased costs, and the costs of delays, would likely be passed on to local businesses. In the past, in other situations, it can be observed that other shipping lines in other contexts have issued surcharges on freight to cope with increased costs.

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[43] "Fremantle Ports is a government trading enterprise with the Western Australian Government as its sole shareholder," Fremantle Ports 2021 Annual Report, p3

[44] "Big increase in breakbulk imports to Victoria Quay," Fremantle Ports, 25 March 2021, https://www.fremantleports.com.au/news/big-increase-in-breakbulk-imports-to-victoria-quay.

214. It therefore seems likely that increased charges would inevitably affect Western Australian businesses and, ultimately, Western Australian families who would likely ultimately pay higher prices for goods that they buy in local shops and from local businesses.

215. However, we have recently been able to directly observe what happens when car carriers are not able to access a port. Without going into details, there was industrial action in or about September / October at Fremantle that prevented three PCTC vessels from being unloaded. The ships sailed on to Adelaide and Melbourne, dropping off cargo in those two cities that was originally destined for Fremantle.

216. In a series of articles, local trade publication The DCN reported that consignees of the cargo were forced to wait for their goods to be transported back across the country. The DCN quoted local industry association executives as saying that the PCTCs were carrying 42 combine harvesters, 38 of which should have been unloaded in WA and should have been operating on farms by early October 2021. The harvesters were over-sized for the roads and so specialist land transport vehicles had to be sent to collect them. And, because of the dimensions of the harvesters, they could only travel at night and may have even required a pilot vehicle. All of this, of course, would have been very expensive, time-consuming, and costly.

217. There were apparently also on-farm flow on effects. According to the source quoted by The DCN, the arrival of new machines would have initiated a series of trades of old and new equipment. It was reported that contracts were already signed, and dealerships were ready to handle the exchanges. Accordingly, the delay adversely affected far more people and businesses than those who were expecting new machines.

218. While the above incident relates to delays caused by industrial action, delays will likely occur in the future if Fremantle Ports land is not preserved for the operation of the port. Similarly, there should be no development – residential, cultural, industrial or otherwise, that could adversely affect the operation of the port and the unhindered unloading of wheeled cargoes.

219. Shipping Australia has urged Premier McGowan to oppose the location of a film studio in any site that would hinder port operations or that would result in a reduction of already scarce port land. We have also urged the McGowan administration to carry out industry consultation in respect of any development of a film studio in any location that would potentially reduce capacity at the port or would in any way hinder its functioning.

220. While Fremantle is particularly in the spotlight because mentions of a film studio attract political and media excitement, these issue limitations are not constrained to just WA. Both Brisbane and Port Kembla have been problematic in recent times, in part because of the ramping up of infrastructure projects, such as wind turbine handling, has caused laydown space issues.

221. **Recommendation:** that the Productivity Commission recommend that development of any Film City should stop and not proceed at, or near any, land owned or used by Fremantle Ports.

222. **Recommendation:** that the Productivity Commission recommend that developments of any kind that are not trade-enabling, and which adversely affect shipping and / or port operations, should stop and not proceed.

223. **Recommendation**: that the Productivity Commission recommend that the Federal government should explore how to protect industrial land, and land at or near ports, from usage incompatible with ongoing ocean shipping and port operations.

Ongoing container hire fees

224. Shipping Australia is aware of various pieces of advocacy calling for restrictions and controls on the terms and conditions of hire of ocean shipping containers.

225. A quick note on naming conventions. Shippers and their representatives often refer to "container detention charges" to refer to the monies charged by container owners to those parties who have leased the container. Shipping Australia much prefers the term "ongoing container hire fees" because that term accurately reflects what has happened to the container.

226. At some point the container owner (usually, but not always, an ocean container carrier) will allow another party, a shipper, to borrow the carrier's container in return for the payment of money. The term of the loan of a container is decided in a market transaction that is freely entered into by both carrier and shipper (presuming that the container is carrier owned).

227. The container owner typically charges a daily fee for the use of the container. To obtain the use of an object in return for the payment of money is literally the dictionary definition of the word "hire". If this continues on an ongoing basis then it is an "ongoing container hire". It is not by any means a "detention charge" which would imply some kind of penalty for the retention of the container.

228. In addition, there may be "demurrage" charges. These are daily charges imposed by a container terminal for the use of container equipment inside the port terminal.

229. Shippers benefit from the provision of containers in several ways. Firstly, and somewhat obviously, shippers have access to standard-sized containers in which they can put their goods. The goods are therefore protected from the damage by the container. Secondly, the provision of containers enables goods to be shipped via the global containerised shipping network. That, in turn, enables shippers to access markets that would otherwise be out of reach.

230. Shippers have a further benefit from the provision of carrier owned containers because, as Container X-Change describes it, "using and owning containers is an operational nightmare". Provision of container owned carriers relieves shippers of this burden.

231. Among those burdens are container tracking (knowing where the container is and where it should be next), storage when not in use, inspection, repair and disposal. These burdens require considerable investment in computerised logistics systems, land, warehousing, security systems, depots, and staff time, among other resources, to ensure that containers are in the right place at the right time and can be safely used by customers.

232. All of these benefits are provided to shippers in return for freight rates and container hire fees. As we are sure readers of this submission can agree, it is a good deal.

233. However, shipper advocates complain that container owners require the payment of ongoing hire fees for the continuing usage of boxes that belong to container owners. Shipper advocates have therefore been calling for the public authorities to interfere in the transaction between container owners and shippers.

234. Shipper advocates want the public authorities to force container owners to give shippers completely free hire of containers for a given period ("free time"). Container owners already grant several days of free time. However, shippers want container owners to have longer free time and for that period to be fixed by law. Shippers also want public authorities to decide when the container owners are allowed to start and stop charging for the use of their container; and to rule in what circumstances the container owner can and cannot charge for the hire of their containers.

235. Firstly, ocean shipping containers are privately owned property and the concerns and sensitives of interfering with privately owned property are an issue. Therefore, as a starting point, there is a rebuttable presumption that interference by public authorities with the private property rights of container owners in favour of shippers is unjust. There is no justification to overturn this presumption. Shipper advocates are proposing that the rights of container owners should be interfered with so that importers and exporters will gain commercial advantages. These commercial advantages include shippers experiencing less inconvenience, improving their cashflow, increase their profits and reducing the risks of being in business.

236. Seeking to preference a class of actors so that they can have a commercial advantage for their own benefit is not a justification of sufficiently overwhelming importance to override the rights of property owners to deal with their own property.

237. The costs to the container owners, and society, would be harsh. Ongoing hire fees incentivise hirers to return the container to the owner. Prompt return of containers to ocean shipping carriers enables the container to be re-used by being re-stuffed with goods and transported for a fee. Containers are an essential part of the supply chain. Without prompt return containers there can be no seaborne carriage of goods. Containers need to be returned to owners in good time so that the containers can be used for the business of cargo carriage.

238. Putting restrictions on the ability of container owners to manage their containers, mandating that container owners have to allow commercial shippers to have free use of containers, restricting when container owners can charge a hire fire and reducing the incentive for containers to be returned will likely cause a shortfall in the supply of containers.

239. Containers not only have to be present in sufficient volume to meet demand, but containers must also be present in specific places at specific times and in specific volumes to meet demand. If containers are not present, then shippers may find they may that they do not have sufficient access to containers to transport their goods to market. That will lead to a loss of sales, loss of opportunity, damage to shipper reputations, possible spoilage of perishable goods, and the reduction in the economic value of time-sensitive goods. There could also be a variety of other costs such as ongoing storage costs for goods that cannot be shipped on time because of a lack of containers in the right place at the right time, or the costs of dealing with spoiled or ruined goods.

240. There would also be significant opportunity costs for ocean shipping companies. For instance, as of 28 January 2022, shipping market platform Freightos reported that a forty-foot box on one of the China / US trades was attracting hire of approximately US$15,485. That is potentially quite a lot of lost opportunity in itself. However, there could be many tens of thousands of containers that are in the wrong place and the aggregate opportunity cost would be massive.

241. If restrictions on hire fees are instituted, then container owners will find that a bigger part of their capital will become tied up in container stock than would have been the case if controls were not implemented. That will reduce the cashflow of container owners, which could produce a host of issues and, in extreme cases, could be a cause of enterprise failure. Container owners would also likely have to invest more capital in containers than they otherwise would have done to avoid the supply issues and reputation issues mentioned above.

242. Restrictions on how container owners can commercially deal with their containers also imposes unwarranted burdens on their business. If "X days" is set as the free time, then a given container owner and a given shipper are stuck with that period of free time. Perhaps the parties would otherwise be willing to use a different period of free time because it is mutually advantageous. But, if free time is controlled, that's tough. The parties are stuck with it.

243. On the import side, if controls on the terms and conditions of containers are introduced, then Australian importers will likely pay higher freight rates and ancillary charges which they will pass on to Australian end users (both consumers and business end users) of goods. Eventually, everyday Australians will pay in the form of higher goods prices. On the export side, Australian exporters will likely be faced with higher freight rates and ancillary charges than they would have otherwise had to pay.

244. Restrictions on how container owners can lease containers will make business more difficult for many parties in the supply chain and will increase costs for shippers, for container owners, for ocean shipping companies, for Australian importers, for Australian exporters and, ultimately, it will increase the costs of products that are bought by Australian families.

245. It is grossly unjust to deprive the container owner of the right to decide how the container will be used simply so as to benefit commercially focused third parties have made no investment, and bear no risk, in the creation of the property nor in keeping it accessible and safe to use. That's especially so when those third parties are borrowing a container as part of a wealth-generating enterprise for their own benefit. And it is even more so when those third parties have voluntarily entered

246. In any event, such controls are unnecessary. Complaints from shippers about container hire fees come and go. They are driven by the state of the market at that point in time. When times are very busy (as now) or during times of disruption (such as during industrial action) that shippers complain most vociferously about ongoing hire fees. In many cases, it's a self-solving problem. The situation that leads to the charging of ongoing hire fees changes and the issue largely goes away. It is not sensible or appropriate to institute a permanent change to tackle a temporary matter.

247. Secondly, shippers have a wide range of tools and tactics available to manage container hire fees. The first, most obvious, and simplest tactic is for shippers and forwarders to return the container on time. There are examples where shippers have not tracked containers and have racked up ongoing hire bills. Returning containers will end any ongoing hire fees. It is clear that some instances of large container

hire bills have their root cause in poor management of the logistics process. There are plenty of articles online explaining the root causes of ongoing hire fees and demurrage fees[45].

248. Shippers and forwarders can plan in advance and arrange freight in advance as much as possible, allowing for buffer time. They can have contingency plans (e.g., alternate truckers; alternate cargo routes). They can make sure that all documentation is correct (no discrepancies in addresses, voyage details, cargo particulars, freight particulars etc); make sure documents are not delayed or lost – better yet, digitise the documentation if possible.

249. Shippers can more carefully monitor shipments – sometimes boxes can be sitting in yards / ports for days before anyone is aware that the boxes are there. Estimated times of arrivals for boxes can be inaccurate but, these days, however, there are digital tracking software programmes such as Transvoyant, Arviem, Project44 / OceanInsights and others. Systems should be able to also track the return of containers. Today, the estimated time of arrival of ships can also be cross-referenced against highly accurate online ship tracking software such as Marine Traffic, Fleetmon, Shipfinder, VesselFinder, VesselTracker, VT Explorer and many more.

250. Shippers, importers and exporters need to know their business. Staff need to be trained on such matters as contracts, the basics of principal-agent law, misrepresentation, indemnity clauses and the like. Logistics managers need to know, and should know, about possible border holds by border agencies for such things as drugs, biosecurity risks (stink bugs and the like), written documentation of customers being notified of such matters as free time, hire charges, container availability, container collection times, container cleanliness, who was notified to pick up the container and when and a variety of other practical measures[46].

251. All of the above ought to be simple stuff for commercial actors involved in moving international trade – it is literally their business to know and apply these measures. Incidentally, trucking operators

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[45] "What are the main causes of Demurrage and Detention," H Manaadiar, 8 July 2021 - https://www.shippingandfreightresource.com/causes-demurrage-detention/; "How to avoid high demurrage & detention costs," https://www.mathezfreight.com/en/blog/avoid-demurrage-detention-costs/; "6 tips to avoid demurrage and per diem detention charges," https://www.shapiro.com/demurrage-detention-per-diem-oh-my-6-tips-to-avoid-additional-charges/; "The Unfortunate, but Avoidable, World of Detention and Demurrage Penalties," Transvoyant https://transvoyant.com/unfortunate-avoidable-world-detention-demurrage-penalties/; "Ocean Freight Basics Part 3: how to avoid demurrage and detention fees" Tendereasy - https://www.tendereasy.com/en/resources/blog/ocean-freight-basics-part-3-how-to-avoid-demurrage-detention-fees/ - there are many more such articles, reports and pieces of guidance online.

[46] "Managing container detention," February 2019 by Hunt & Hunt https://www.ftalliance.com.au/data/news_attachments/managing%20detention%20charges.pdf accessed 01 February 2022; "How to effectively manage demurrage and detention costs through free time optimization," page 5, Ocean Insights https://www.ocean-insights.com/pdf/Ocean-Insights-White-Paper_Demurage-Detention.pdf

sometimes find themselves potentially on the hook for ongoing hire fees. They too can insist on indemnity clauses in their contracts[47].

252. Furthermore, shippers can contact carriers in search of the best rates, free time and best ongoing hire policies. It's a free market. Shippers can also ask around and find out how sympathetic ocean shippers are to requests to be absolved of ongoing hire fires.

253. Shippers can also negotiate with carriers in advance of entering into a contract for extended free time and to be absolved of ongoing container hire in given circumstances.

254. If ongoing container hire is incurred because of exceptional circumstances, then shippers can always pick up the phone and talk to their carrier. Ocean shipping companies are in the business of having satisfied customers. Ocean shipping lines have an incentive to listen, to make determinations on a case-by-case basis and to come to reasonable arrangements.

255. Incidentally, no reasonable justification has been given by shippers as to why container owners should automatically foot the bill during unusual situations. These include situations such as when the border authorities hold up a container, or if there are delays caused by industrial disputation. All businesses face risk of loss. It's just part of being in business. If a shipper hires a container on the basis of paying a daily hire fee, then it is reasonable for the container owner to expect the shipper to give the container back when it has contracted to do so or to continue paying hire.

256. If there are issues around the return of the container then that is a matter for the shipper to deal with – it is part of the risk assumed when hiring a container. By way of analogy, a member of the public who hires a hire-car would be expected to return the car on time or to pay continuing hire. If there are random events that prevent the car being returned on time, such as big traffic jams, then the hire car company would reasonably expect the hirer to pay continuing hire.

257. In some circumstances it is possible to obtain liability insurance that covers ongoing hire fees provided the event is generally unexpected, unintentional and is not voluntarily incurred. Insurance can generally be obtained when container hire fires are incurred due to negligence when goods are wrongfully detained or are delivered to the wrong address. Coverage may also be obtained for container theft, consignee fraud and disappearance of the consignee.

258. Another way of avoiding ongoing container hire fees is to not hire a container. Most ocean shipping containers are "carrier owned" meaning that they are owned and operated by the ocean container-shipping companies. However, some ocean shipping containers are owned by shippers and are known as "shipper owned containers"[48].

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[47] Ibid

[48] *Footnote: See "SOC Container | Definition and How to Source Them [+ Mystery Shopping]", by Container X-Change https://www.container-xchange.com/blog/soc-container/ accessed on 30 January 2022. Container X-Change provides a platform for container trading services. See also: "Shipper-Owned Containers: The Most Common SOC Containers in Freight Shipping," by Callarman, S; https://www.shipbob.com.au/blog/shipper-owned-container/ of 11 December 2020, accessed 30 January 2022; See also: "What is the difference between a shipper owned container and a carrier owned container??", by Manaadiar, H of 6 September 2021 accessed at*

259. Shippers can, accordingly, invest their own resources into acquiring ocean shipping containers. Smaller, regular, shippers could band together to operate a pool of containers. Or, indeed, they could take advantage of the pre-existing pools of shipper owned containers that have been set up for this exact purpose[49].

260. In summary, there is a long-standing practice in which container owners (usually ocean shipping companies) lease containers to shippers for the purposes of containerised goods transport. Shippers benefit greatly from hiring containers. However, some shippers and their representatives are urging public authorities to interfere in this system and to set rules that in are their favour for their commercial benefit. Implementation of such rules would be a gross breach of private property rights and would impose massive costs on other parties and society generally causing freight rates and other charges to escalate and could put containers in short supply.

261. Although shippers may find ongoing demurrage and container hire fees unpalatable, there are a multitude of management options that shippers can use to manage their potential exposure including operational management (staff training, knowing where containers are, remembering to return containers); financial (e.g. by taking out insurance); free market (shopping around for carriers and forwarders; shopping around for shipper owned containers). Policies aimed at restricting and controlling what container owners can do with their containers is nothing more than blatant rent-seeking that, ultimately, would be highly detrimental to pretty much everyone.

262. Recommendation: that the Productivity Commission should condemn proposals to restrict and control the terms of usage of container hire as blatant rent-seeking that would be highly detrimental to Australia's interests.

263. Recommendation: that the Productivity Commission should urge policy makers to take no action that would interfere with the current free market in container hire.

Calls for an Australian maritime regulator

264. Many of the issues listed above, ongoing container hire, the management tools used by shipping companies to manage port congestion (omitting ports, changing port of call rotation, altering service frequency and the like) have led to calls for a maritime regulator to govern the ocean shipping industry in Australia and, specifically for it to be set-up like the United States Federal Maritime Commission.

Arguments against a maritime regulator generally

265. The key argument against the establishment of a regulator is that it is unnecessary. Importers, exporters and shippers have many tools of their own that they can use to manage their businesses. We have

https://www.shippingandfreightresource.com/difference-between-a-shipper-owned-container-and-carrier-owned-container/ on 30 January 2022.

[49] "Optimizing drayage to reduce demurrage and detention charges at the port,", by V Rajamanickam, Freightwaves, 31 January 2019 – https://www.freightwaves.com/news/insurance-and-risk-management/optimizing-drayage-to-reduce-demurrage-and-detention-charges-at-the-port.

mentioned such tools elsewhere in this submission, but they include such matters as further developing their own commercial relationships, revising their terms and conditions of business, issuing their own surcharges and buying insurance among others.

266. Many of the drivers for the current problems are temporary in nature. The effects of the COVID pandemic appear to be easing because of access to vaccines. Once world governments stop disrupting their supply chains with lockdowns and border restrictions and once world populations can socialise freely and travel internationally, it is likely that the demand for goods will normalise. In the near future a massive wave of new ships is scheduled to be built which should put downward pricing pressure in the freight markets and should also relieve any supply capacity issues. By the time any maritime regulator is set up, the problems it is set up to tackle may well be on their way to being resolved without the input of the regulator.

267. There will be a variety of direct costs in the set-up of any new regulator in terms of premises, staff, equipment and the like. Any new regulator will likely create new regulation which, inevitably, will be resource-consuming in terms of staff time, money and effort. Direct and indirect compliance costs will have to be paid for somehow and this is likely to either be through higher freight rates, or surcharges, or both. In the worst-case scenario, the creation of a maritime regulator could lead to some of the newer and smaller industry actors deciding to revisit their decisions to offer services in Australia.

268. Another concerning problem is the possibility that flawed regulation will cause severely harmful adverse effects. The most obvious maritime example in Australia is the 2012 coastal trading regime which has caused severe problems and has failed to meet its policy objectives. It has been detailed elsewhere in this submission.

Calls for an Australian version of the US Federal Maritime Commission

269. Meanwhile, calls for an Australian version of the Federal Maritime Commission would not lead to an optimal policy outcome. The United States' FMC Commissioners basically come from backgrounds that are either official, political or legal, or a mix of all three. So, if we follow the US FMC model, the Australian FMC would probably also be politicised, bureaucratic and legalistic too.

270. The US FMC's mission is to ensure a competitive and reliable ocean supply chain that supports the US economy and protects the public from unfair and deceptive practices. This is very similar objective to what the Australian Competition and Consumer Commission already does. Australia doesn't need a US-style FMC because we've sort of already got one: it's the ACCC.

271. The FMC's predecessors were born out of World War One. The demands on global shipping were enormous, there was a loss of shipping supply, and the US was a fast-growing nation. There were fears at the time that liner conferences might gain too much market power and a new watchdog was created to "protect American exporters and importers", according to the FMC. The predecessors of the FMC were explicitly protectionist bodies. The FMC is still a protectionist body today and it appears to be institutionally prejudiced against ocean carriers. It starts from a position of bias against ocean carriers. Consider this line from its website: "[The FMC provides] a forum for exporters, importers, and other members of the shipping public to obtain relief from ocean shipping practices". And this: "reviewing

and monitoring agreements among ocean carriers and marine terminal operators … to ensure that they do not cause substantial increases in transportation costs".

272. The Productivity Commission will find other, similar, statements from the FMC. Not only does the FMC start with a biased view of ocean carriers, it is institutionally set-up to be one-sided. The main FMC advisory membership committee that advises on policies relating to the fairness of the international ocean freight delivery system is the "National ***Shipper*** Advisory Committee". The FMC explains that its advisory committee has membership that is comprised of "12 representatives of entities who export cargo and 12 representatives of entities who import cargo". While the FMC is balanced between importers and exporters it doesn't have any ocean carrier representation on its main advisory committee.

273. It's hard to see how an FMC-style body set-up to promote the interests of shippers, with an industry advisory committee wholly comprising of shippers, could plausibly be, or claim to be, fair. No matter what it said or decided, every act would be tainted by a perception of bias.

274. A fair and accurate description of the call to set up a US-style FMC in Australia is that shipper representatives want to replace Australia's existing, open, competitive, unbiased and free market system with a protectionist government body. This proposed body would give shipper representatives, but no-one else, extra opportunities to influence government policy and to regulate behaviour of market participants. While it would generally be described with the neutral term of "regulator", in reality, it would be a government body set up for the specific purpose of setting rules that would prioritise the interests of importers and exporters.

275. The fundamental point is this: government control of markets doesn't work. This was something the Labour Prime Ministers, Bob Hawke and Paul Keating, knew. It's why they dismantled the old protectionist system. Australia has enjoyed a sound economy since then. An FMC-style regulator in Australia would be unnecessary, biased and economy-damaging.

276. **Recommendation:** that the Productivity Commission recommend against (a) a national maritime regulator and (b) specifically against the creation of an Australian version of the US Federal Maritime Commission for the reasons given above.

Port-related charges: Terminal Handling, Terminal Access, Wharfage, Navigation Services

277. Charges relating to the handling of freight have become a vexed issue, generating much anger and controversy. Note: sometimes port authorities and port operators may be the same organisation if the port is directly owned and operated by a public authority. For instance, the former Sydney Ports Corporation earned navigation service revenues and wharfage revenues. Today, the Port Authority of NSW earns navigation service revenues, and the private operator NSW Ports earns wharfage revenues. Meanwhile, the Port Authority of NSW is still the port operator of Port Jackson (Sydney Harbour) and so it also issues a range of other charges.

278. Navigation service charges are typically charged by port authorities on ships that use a port. The Navigation service charge is typically levied to pay the costs of the port authority, the provision of navigation aids, emergency response and the like. The monies are usually ultimately paid by the shipping company (although a shipping agent may actually pay the money and may then be reimbursed

by a shipping company). Shipping companies can become angered when various other fees are rolled into / absorbed into a navigation service charge or if the navigation service charge is raised (perhaps without consultation) to pay for some reason that is not directly ship or freight related.

279. Wharfage charges are charges that are typically levied by a port operator on ships. The charge is levied for the provision and upkeep of wharf and berth infrastructure such as dredging and serviced land etc. Port operators typically generate revenue from wharfage, site occupation fees (a time-based charge) for occupying a berth, container wharfage (fees charged per container that passes over the wharf).

280. Other port fees may also be charged by port authorities / port operators / regulators / third parties. Who charges the fees, and in what way, will depend upon the ownership status of the port. Such fees include pilotage fees and towage fees, among others.

281. Port operators generate revenue by charging rent on land to tenants (such as container terminal operators) within the port. Following a series of port privatisations, port operators massively hiked rents on tenants.

Terminal Handling Charges

282. Terminal Handling Charges are often fundamentally misunderstood. Also sometimes known as Container Service Charges, these are charges charged by container terminal operators on ships. The shipping company will then pass on this cost to shippers. As such these are ancillary charges (ancillary to the cost of freight) and are not surcharges. Because Terminal Handling Charges are charged by terminals and are then re-charged to shippers by carriers, importers and exporters the world over are convinced that these are ocean carrier-imposed fees. But they are levied by container terminal operators for the loading or unloading of containers and will cover equipment handling, equipment maintenance, container movements, container monitoring, and storage of containers, costs of loading boxes on trucks, among other things[50].

283. There are charges for containers handled at the origin terminal (origin terminal handling charges) and terminal handling charges at the terminal of destination (destination terminal handling charges).

284. Terminal charges are set at a high level in global negotiations between global marine terminal operators and global ocean shipping companies. They may vary on a country-to-country and location-to-location so as to take into account local issues. Large high volume and value shippers may be able to negotiate the level of terminal handling charges that are passed on by carriers, especially in relation to "all in" contracted freight rates51.

[50] "All about Terminal Handling Charges: Full overview, examples, and costs," Container X-Change https://www.container-xchange.com/blog/terminal-handling-charges/ accessed 01 February 2022; see also "A Full Guide to Terminal Handling Charges (THC)," K Barrios, 17 October 2017 at https://www.xeneta.com/blog/terminal-handling-charges accessed 02 February 2022.

[51] "Terminal handling charges during and after the liner conference era", European Commission Competition Reports, October 2009, p2, paragraph 16.

285. A little understanding of history is useful52. Containerisation in its modern form was effectively invented in 1956. Prior to that, general cargo was shipped as break bulk. Shippers would basically deliver cargo to the dock and many men would load the ships manually from the dockside, on the deck of the ship and even work in the hold. Loading and discharge took weeks. All dockside charges were for the shippers' account. The cost of loading / unloading cargo was for the ship's account, and this was a negotiated rate between the shipping company and, probably, the port authority / stevedore company / port operators (which, depending upon time / place / ownership status all of these roles may have been fulfilled by the same entity).

286. Terminal handling charges began to appear some 20 years or so after the introduction of containerisation. Terminal operators came to understand that the break bulk method of charging for stevedoring services was not appropriate for container stevedoring, which was requiring increasingly specialised capital-intensive equipment.

287. Instead of charging to sling cargo over the ship's rail, stevedores began charging for all the services provided from entry of the container into the port gate and to putting the container on the ship (and, in reverse, for import cargo). This is basically still the system today.

288. In addition to generating revenues and profits, stevedores would use these fees to pay for the provision and upkeep of all the new container terminal infrastructure (fences, cranes, roads, roundabouts, truck-bays and the like). This now leads us to the single most controversial terminal fee of recent years.

Terminal Access Charges

289. Terminal Access Charges had their origin in recent years53 and they are controversial fees. We will use the term "trucking companies" as shorthand to refer to all parties that have to pay terminal access charges.

290. It is generally accepted that stevedores found that the market had shifted against them. Ocean shipping lines consolidated and entered into global alliances. Fewer container shipping companies carrying larger volumes caused a swing in market power toward the shipping companies and away from the stevedores.

291. Meanwhile, on the Australian east coast, the local authorities generally decided on a policy of increasing the number of terminal operators to cope with growing volumes of container trade and to introduce some competitive tension into what was then a container duopoly.

292. So, in Australia at least, the numbers of customers declined at the same time as the numbers of competitors increased. Shortly thereafter, following port privatisation, the new private port operators increased the rent that they charged to port tenants. Looking forward, stevedores also realised that they would shortly be hit with a need to invest in their facilities and equipment because ocean shipping companies would be deploying bigger ships. Bigger ships will require more trucks to service the

[52] "Terminal handling charges during and after the liner conference era", European Commission Competition Reports, October 2009.

[53] "Expert report on charging issues for container stevedoring; Report prepared for Gilbert + Tobin", 10 August 2018 by economists Farrierswier.

greater flows of trade. That would require an upgrade in facilities of all kinds – more truck bays, more roads, more roundabouts and the like.

293. Container terminal operators were therefore caught in a perfect storm: a loss of market power, loss of pricing power, fewer customers, increased competition from new entrants, a need to commit large amounts of investment capital and surging rents.

294. Stevedores decided to look at how and who they charged. Since the dawn of containerisation, shipping companies paid for all container terminal infrastructure through the various fees and charges levied by stevedores. However, stevedores had for decades provided and maintained extensive trucking (and rail) landside infrastructure such as roads, truck bays and like – and the stevedores had never charged the trucking companies for access to this infrastructure.

295. It may be noted that, in some cases, stevedores had charged trucking companies a nominal fee of a few dollars. However, this was so small that it was effectively nothing. In the following paragraphs, we will disregard these small, nominal fees.

296. Stevedores therefore decided to re-balance their charges away from shipping lines and toward trucking companies. They introduced "infrastructure charges" on trucks calling at their terminals and, over the last few years, the accepting naming convention has become "Terminal Access Charges".

297. Truckers were displeased that they were formerly getting access to high quality infrastructure services for free and now they were being forced to pay.

298. Shipping Australia takes note of the complaints in relation to the introduction of terminal access charges, the amount charged, the frequency of price hikes, the rate of increase of prices and the notice (or alleged lack thereof) given to trucking companies. Shipping Australia's policy position is that these disputed elements are for trucking companies and container terminals to deal with; they are, literally, none of our member shipping companies' business.

299. Shipping Australia does, however, note advocacy by shipper representatives. We note, and agree, with comments that all businesses must figure out how to deal with costs such as rent, infrastructure, labour and power. We also agree that businesses then have to figure out whether to absorb those costs or to pass them on to their commercial clients.

300. However, we disagree with shipper representatives' contention that stevedores should be forced to pass on such costs on to commercial clients who are shipping lines and to allow land transport operators to use the terminal infrastructure for free.

301. The starting point for this analysis is that container terminals are private property. Specifically in this case, the stevedores are long-term lease holders who have made a range of capital investments (upgrades to land, infrastructure, container handling equipment, security equipment and fittings, along with a multitude of other capital investments) to create a secure terminal used to facilitate the international trade in, and transport of, containerised goods.

302. As expressed earlier, the owner of private property is entitled to decide how to deal with that property. The owner has the right to decide who, if anyone can access it and on what terms. The owner of land-related property is entitled to charge other people for access to its premises. The operator of a private highway may decide to charge tolls on road users to access its road. If you, as a road user, want to use that road, then you will have to pay the toll, which is a form of access charge. Similarly, a container

terminal operator is entitled to charge trucking companies a Terminal Access Charge for access to its terminal.

303. It is fair and just for container terminal operators to charge trucking companies at terminal access charge to access the container terminal. In commerce, if you benefit from using someone else's property, then, if the owner decides to issue a charge, then you have to pay to use it.

304. Container terminal operators provide and maintain land transport-related infrastructure such as roads, roundabouts, weighbridges, ramps, parking, holding points, turnaround facilities, rail links and information systems that enable transport operators to manage their assets more efficiently. Trucking companies simply could not provide services to their customers if this infrastructure had not been provided by container terminal operators.

305. Stevedores have not previously charged trucking companies for access to their terminal. However, that has now changed with the introduction of Terminal Access Charges. It is reasonable for container terminal operators to ask trucking companies, which benefit from infrastructure that has been provided for them to use, to pay a financial contribution to the cost and upkeep of that infrastructure.

306. Trucking companies were formerly given that access for free. But now they have to pay a fee to access the terminal. The Merriam-Webster dictionary definition of a "customer" is "one that buys a commodity or service". To "buy" means to acquire possession of, or the rights to use, goods or services in return for the payment of money.

307. If a private highway operator allows your car to access its highway on condition that you will provide financial compensation for that access, then you have used a service in return for the payment of money. In that situation you are, by definition, a customer of the private highway operator.

308. If a container terminal operator allows a truck to access its terminal on condition that the trucking company will provide financial compensation for that access, then the trucking company has used a service in return for the payment of money. In that situation, the trucking company is, by definition, a customer of the container terminal operator.

309. It is clear that container terminal operators have two different, but similar, products for sale to two different sets of commercial customers. One product is access to the terminal for ocean going ships and the other product is access to the terminal for trucks.

310. The whole argument of the shipper representatives that shipping lines should be forced to pay all stevedore charges rests wholly on the contention that shipping lines are the clients of stevedores. Incidentally, the Merriam-Webster dictionary definition of a "client" includes the word "customer".

311. But, as we have shown above, any trucking companies that pay money in return for being granted access to a container terminal are customers of the stevedore. It is reasonable to accept that customers should pay the fees and charges of their suppliers. However, it does not logically follow that one set of customers (ocean shipping companies) should be forced to pay the fees charged to another set of customers (trucking companies) if both groups are both customers of same supplier (the container stevedores). It is clearly a flawed premise and should therefore be rejected.

312. By way of example, think of the operations of two different kind of wheeled delivery vehicles: heavy freight trucks and light commercial vans[54]. There are other kinds, but to keep the analysis simple, we will focus on just two types.

313. Heavy freight trucks, say, prime movers with two trailers in a Double-B configuration, are typically used to move large volumes of goods across land between two points. Light commercial delivery vans are typically used to pick up smaller volumes of cargo from retail and distribution centres and to deliver that cargo to, say, home occupiers on quiet suburban streets.

314. Heavy trucks may be employed to bring and take large and heavy volumes of cargo to and from a city-located distribution centre. The heavy freight trucks would be loaded / unloaded, and the cargo sorted. Then, perhaps, light commercial vans may be used to pick up numerous small parcels and packages for delivery to residents all over the city. We will assume in this example that the heavy freight truck, the distribution centre and the light commercial vans are all owned by different companies. In this example, we have two sets of wheeled freight vehicles, filling similar but different roles, working on different scales and using the same independent supplier – the distribution centre – and everything takes place on a commercial basis.

315. The central depot owners decide to charge access fees levied each time the big heavy freight trucks enter the central depot to use their heavy-truck specific facilities and to carry out operations. Similarly, the central depot decides to charge the operators of light suburban commercial delivery vans for access to the depot and for using the light commercial van-specific facilities to unload and reload cargo to / from their vans.

316. The central depot sends invoices to the light delivery van operators, who then promptly demand that the heavy truck operators pay them. What's the rationale? The light commercial van operators claim that heavy truck operators should pay all of the depot's invoices because the heavy truck operators are commercial clients of the central depot.

317. But the heavy truck operators would immediately, and quite correctly, point out that the light commercial vans are also the commercial clients of the depot and there is no reason for the truck operators to pay the bills of the van operators.

318. While the decision as to who to charge for access to a terminal is, and should be, up to the terminal owner, it is also completely fair and equitable for stevedores to charge trucking companies because a container terminal is the interface between the sea and the land. It exists for the benefit of ships and trucks.

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[54] Heavy trucks are defined by the Truck Industry Council, the representative body for truck and van manufacturers in Australia, as cab-chassis type vehicles (both rigid and prime mover application) with either three or more axles; or two axles with a gross vehicle mass greater than 8,000 kilograms (kg) and a gross combined mass over 39,000 kg. Light-duty vans were defined as cab-chassis vehicles with a gross vehicle mass of 3,501 kg to 8,000 kg inclusive but with an enclosed van. For more details about several different types and kinds of trucks and vans, see "2018 sees record sales of trucks and vans in Australia", by J Wilson, Freightwaves, accessed 03 February 2022 - https://www.freightwaves.com/news/2018-record-truck-sales-australia

319. Ships enter a terminal via the sea, and they pick up and drop off containers. Stevedores and port authorities have provided dedicated ship-specific infrastructure such as ship-to-shore cranes, wharves, and loading/discharge areas. This infrastructure has been provided for the benefit of ships. Shipping companies pay to use that infrastructure through wharfage charges.

320. Trucks enter a terminal via the land, and they pick up and drop off containers. Stevedores have provided dedicated truck-specific infrastructure such as roads, roundabouts, ramps, parking, weighbridges, turnaround facilities and transport booking systems. This infrastructure and technology has been provided for the benefit of trucks. Trucking companies pay to use that infrastructure and technology through Terminal Access Charges.

321. If it is fair for stevedores to charge ships to use ship-related terminal infrastructure, then it is equally fair for stevedores to charge trucks to use truck-related terminal infrastructure.

322. Additionally, trucking companies and ocean shipping companies are both suppliers to the cargo owner. Both sets of companies incur costs for the services they supply to the cargo owner, and they may or may not decide to absorb those costs or to issue a charge. For example, a wharfage charge is incurred by the ocean shipping company, and it may decide to absorb the cost or to recover that cost by issuing an ancillary charge to its own customers. Correspondingly, a Terminal Access Charge is incurred by the trucking company, and it may decide whether it wants to absorb that cost or recover that cost by issuing an ancillary charge to its own customers.

323. It is unfair to expect shipping companies to subsidise the ordinary business costs of trucking companies merely because they both provide services to cargo owners and, in the course of providing those services, merely because they both use the same supplier.

324. Trucking companies previously had terminal access for free but now they must pay. No one likes to pay for a service previously provided for free. Container terminal operators have decided to recover the costs of the significant investments made for the benefit of landside transport operators by charging landside transport operators. They have the right to do that because the container terminal is their private property.

325. The Terminal Access Charge is just another cost of doing business for trucking operators. All businesses must pay their own costs. That's just a commercial reality. There is no valid reason for shipping lines to be forced to subsidise the businesses of trucking companies so that those trucking companies can have more commercial benefit.

326. Shipper representative and land transport operators may argue that the terminal access charges situation is unsustainable because shipping line-charged terminal handling charges – charged for the transfer of containers to / from the ship – have not declined even as terminal access charges have increased. This argument is flawed because the terminal handling charges that a shipper / land transport operator sees on the invoice are not shipping line-origin charges. They originate from the terminal and are passed on by shipping lines.

327. Shipper representatives and land transport operators argue that they are being cheated because they are being double charged. There are several ways in which this argument is flawed.

- The first is because the buyer and seller induce a transport journey to occur for their benefit so the burden of the whole cost of transport from start to finish should directly or indirectly fall upon

them. It is not clear why any party in the transport journey, such as shipping lines (or, indeed, anyone else), should subsidise the cost of that journey by paying charges of other parties.

- The second way that the argument flawed is that terminal handling charges pay for the loading and unloading of a ship and the various pieces of equipment (such as cranes) that enable that to happen. Terminal access charges can be regarded as paying for the landside infrastructure – roads, roundabouts, weighing equipment and the like.
- The third way is that it is a charge levied by the stevedore on trucks in return for permission to access a terminal.
- Fourthly, the container terminal belongs to the stevedores. In a free market they can charge who they want.

328. Further shipper / trucker arguments that trucking companies are not customers because they do not have any choice in whether or not to use a given terminal (they are contractually required to pick up / drop off boxes from a given terminal) are, again, not valid. A related argument that customers also have the ability to discuss and accept pricing with suppliers also isn't valid.

329. If a person is a customer of a monopoly business, then he or she is still a customer despite the fact that there are no competitors to turn to. On the assumption that Sydney Water is a monopoly retailer of potable water in Sydney, if I consume some of Sydney Water's product, and if the company bills me, and if I then pay that bill, then I am a customer of Sydney Water. That fact that I cannot go to a competitor because none exist is irrelevant to the fact that I have paid money for a product, for which I have paid money in return. That, by definition, means that I am a customer of the company. I also do not get the opportunity to negotiate prices with Sydney Water.

330. **Recommendation:** that the Productivity Commission assert that there is no justification for a policy that shipping lines should subsidise trucking operations by paying their Terminal Access Charges.

Competition law matters – Part X and the Liner Shipping Block Exemption

331. Shipping Australia supports the retention of Part X in its current form but could potentially support a repeal if a suitable block exemption to competition law is provided.

332. Part X is well-known, well-understood and doesn't have any unfortunate inadvertent consequences. The disadvantages of Part X are that it is rather cumbersome, bureaucratic and time consuming to administer.

333. Part X gives certain exemptions from competition law that allows ocean shipping companies to collaborate. In Part X are a variety of exemptions that potentially allow ocean shipping companies to fix and co-ordinate prices, fix and co-ordinate surcharges, pool revenues and costs, and the like along with exemptions on allocating markets, ports, routes or regions, or sharing commercially sensitive information.

334. Shipping Australia carried out research in 2020 for a submission to the ACCC. Shipping Australia understands that, barring the odd exception, shipping lines largely do not use these financial exemptions (price fixing, surcharge coordinating etc.) and do not desire to use them. We further understand that, back in 2020, there were some minor trades that had historically used these financial

exemptions but were in the process of phasing them out. Shipping Australia members did not object to losing these financial exemptions as they did not use them and did not want to use them.

335. However, Shipping Australia members do use the other exemptions from competition law that relate to a of variety matters such as jointly fixing sailing timetables and port calls; exchanging, hiring, selling, leasing and sub-leasing spaces on vessels; pooling vessels; adjust capacity in response to fluctuations in supply and demand; restrict capacity; collectively bargain with suppliers, and so on.

336. Use of these exemptions does not restrict or lessen competition, instead, they boost it. Shipping is an expensive and complicated business. One way to lessen risk and become more able to handle complexity is to co-ordinate and collaborate on services. Ultimately, this produces a more stable service that benefits importers, exporters and the general Australian public. It also boosts competition as the shipping lines compete with each other on price, branding and overall customer services.

337. Case in point: during the research and writing of this submission, it was announced that Sea Lead, a Singapore / Dubai-based shipping company had decided to commit a single vessel to "CA2", the China Australia Service, which calls at ports in the rotation Qingdao, Ningbo, Shanghai, Nansha, Brisbane, Sydney, Melbourne on a 41-day loop (24 days from Qingdao to Brisbane; 17 days from Brisbane back to Qingdao calling at the other ports en-route).

338. It is most unlikely that a shipping company would commit one vessel to such a loop by itself without being part of a consortia. It would be far too costly, and it would be of little value to Australian importers / exporters because they would only have one opportunity every 41-days to import / export around the loop.

339. However, having the ability to slot a vessel into the service benefits everybody. Sea Land has an opportunity to take part in the China-Australia Service; the other participants in the loop have and extra vessel to provide stability and services and (presumably) extra slots etc.; Australian importers and exporters experience a boost in reliability and frequency of calls.

340. Further information and details can be found in our 2020 submission to the ACCC, dated 28 February 2020 and marked "SAL 20013". We hereby incorporate that earlier submission into this submission to the Productivity Commission's inquiry into maritime logistics systems. The submission can be viewed by visiting https://www.accc.gov.au/system/files/public-registers/documents/Shipping%20Australia%20Limited.pdf.

341. Shipping Australia also directs the Productivity Commission's attention to the 28 February 2020 submission by the World Shipping Council, submitted with a supporting report from RBB Economics, on the ACCC's proposed block exemption for ocean liner shipping. Shipping Australia supports the World Shipping Council's submission. The World Shipping Council submission can be viewed at: https://www.accc.gov.au/system/files/public-registers/documents/World%20Shipping%20Council.pdf.

342. The report of RBB Economics can be viewed here: https://www.accc.gov.au/system/files/public-registers/documents/RBB%20Economics%20Report.pdf.

343. Shipping Australia also directs the Productivity Commission's attention to the 28 February 2020 submission by ocean shipping company ANL to the ACCC, which can be viewed here: https://www.accc.gov.au/system/files/public-registers/documents/ANL%20Container%20Line.pdf.

344. Shipping Australia could support the repeal of Part X provided that a liner shipping block exemption is in place, that it offers the same high level of reliability as Part X and that it retains the operational benefits of Part X as discussed in Shipping Australia's submission to the ACCC of 28 February 2020.

Empty container management

345. There was a build-up of empty shipping containers in Australia in 2020. Empty container parks and empty container holding spaces in New South Wales became chock-a-block with empty boxes. Even port precincts became extra-busy and port operator NSW Ports quite rightly imposed control measures to preserve safety. Empty container management became an issue elsewhere around Australia.

346. Shipping companies have an inherent incentive to evacuate empty containers from where they are not needed, such as in destination countries like Australia, back to the centres of world manufacturing where the boxes can be re-stuffed with goods and new freight-revenue earning journeys can begin. As containers cost money to put into, and keep, in service while tying up capital at the same time, shipping companies have a disincentive to keep empty boxes in this country.

347. COVID was at heart of the problem as public lockdowns drove up the demand for goods. Because the demand for goods went into orbit, the demand for shipping services and for containers, likewise, went into orbit. In April 2020 (which was the peak phase of disruption of the COVID pandemic), the world's inactive container ship. fleet was about three million TEU. That figure represented about 13% of the container capacity of the 2019 and 2020 world fleet. Analysts at Alphaliner described it as "the worst capacity crisis the container shipping industry has ever seen". However, as of December 2021, that figure had reduced to about 156,685 TEU, which was less than 0.6% of the TEU capacity of the 2021 world fleet. In absolute terms comparing the size of the early 2020 idled fleet to the end of 2021 idled fleet, it's about a 19-fold fall in the size of the idled fleet[55].

348. But by the beginning of 2021, that inactive fleet had pretty much returned to work; ocean shipping companies were chartering multi-purpose ships (i.e., non-specialist ships) to cope; shippers reported difficulty booking space and equipment; and the container ship. demolition market effectively evaporated[56].

349. Booming business causes its own problems. Consignors and consignees, importers, exporters, forwarders and shippers may all experience difficulties in booking space on ships, rising freight rates and generally encounter difficulties in getting product to where it needs to be simply because of supply

[55] To put it all into perspective, the size of the world container fleet in TEU capacity at the end of December each year was / is approximately 23 million TEU in 2019; 23.9 million TEU in 2020, and 24.9 million in 2021. Data for the size of the 2019 fleet was estimated by deducting the 2020 deliveries from the end of year 2020 total. Sources: "Inactive containership fleet set to breach 3M TEU mark", Alphaliner Weekly Newsletter, volume 2020 issue 14; "Alphaliner Monthly Monitor", December 2021.

[56] In the years 2015 to 2020, the numbers of individual ships scrapped ran from 56 to 192 and the TEU capacity from 102,308 TEU to 654,862 TEU. In 2021 there were 18 ships scrapped and they had a combined capacity of 13,778 TEU. In markets with very high freight rates, only the extremely uneconomic ships (the oldest ships usually) will be scrapped "Alphaliner Monthly Monitor", December 2021.

and demand. As it is not easy to massively and quickly expand the supply of ships and containers then, inevitably, the people who are demanding freight services may find it more difficult to get bookings.

350. Demand for goods (and therefore for containerised cargo) is dynamic i.e., demand rises and falls. But the infrastructure to handle the flow of goods, in the form of shipping containers, ports, terminals, ships, underwater access channels and turning basins, cranes, hard stand and so on, is comparatively static. Yes, more equipment and infrastructure can be built but it takes a lot of time and money to do so. Just think, for instance, about how much time, effort and cost would be needed to build another Port Botany or another Port of Melbourne.

351. A massive follow-on issue was the build-up of empty shipping containers. All around the world, in 2020 and 2021, empty shipping containers were in the wrong place. They were in the countries that received cargo, like Australia. But they needed to be in the places that send cargo, like China.

352. But why is empty container management a problem? Surely if someone brings in a ship with say, 2,000 containers full of goods, then the same ship can take out 2,000 empty containers, right? No, that's wrong.

353. Australia's box trade basically doesn't balance. Or, to put it another way, just because a box full of goods is brought into Australia does not mean that an empty box is exported from Australia. Empty shipping containers can stay for quite some time in Australia before they are "evacuated" (i.e., exported) back to the world centres of manufacturing to be re-filled with goods. Basically, there isn't a one-for-one exchange of full imported boxes with empty exported boxes. For instance, about 61% of containers exported at Port Botany in 2018 were empty and 39% were full. With some variations, that's pretty representative around the country[57].

354. We have an imbalanced trade because many of the consumer goods we buy, such as retail goods in supermarkets or in general department stores, are made in part or full overseas but are transported in containers to Australia to be sold locally. About 6% of the Australian economy is based in manufacturing, according to the Reserve Bank of Australia, and comparatively few containerised products are exported. Australia therefore tends to end up with more empty containers than it needs to help export goods.

355. Full boxes nearly always take priority over empty boxes. There are good reasons for this. Trade accounts for just under 46% of Australia's gross domestic product. Trade is utterly essential to our nation's economic vitality. Because of that central role of trade in the economy, full boxes come first. We do not want our supermarkets, retail and department stores to run short of stock.

356. We should also remember that the cargo that is in a box is somebody's product for export and is somebody else's stock for sale. Business survival, growth and jobs depend on these goods getting to their destination on time at the least possible cost.

357. Normally, empty box volumes do not build up in Australia to the extremes we saw over the last couple of years. Australia's logistics chains handle a massive flow of containers so efficiently and quietly that huge cargo volumes pass by largely unnoticed. But, in the last couple of years, COVID.

[57] "Quay Conclusions" p16, by KPMG, 2019.

358. The massive demand for goods (and therefore shipping containers) that has been induced by the pandemic threw everything into disruption. There are "current situation-specific issues" that are causing disruption and there are the "happens-all-the-time" factors.

359. Throughout 2020 and 2021, ocean shipping companies worked – at great cost to themselves – to help alleviate the build-up by evacuating record numbers of containers. Essentially, shipping companies were bringing empty ships (called "sweepers" or "extra loaders") to Australia and they loaded empty containers onto those empty ships to evacuate empty boxes.

360. Ports and terminals are key infrastructure and they're inherently limited by how fast their cranes can move boxes, by the number of ships that need berthing, by the available berth space, and by the hours available in a day. A container terminal inherently only has the capacity to do so much in a given time. That's not a criticism, we're just pointing out the fact that everyone and everything is subject to the constraints imposed by infrastructure capacity limits.

361. During January 2021, one of our members advised that it wanted to bring an extra loader (an empty ship sent to Australia specifically to pick up empty boxes). However, it was told that there was no space / time / slot to berth the extra vessel. The company was told that it had to wait until March.

362. Meanwhile, ships and stevedores agree to what's called a "pro-forma" for container exchange. The shipping company agrees it will send a ship with a given number of containers onboard. The stevedore agrees to unload a certain number of import boxes from the ship and then to load a certain number of export boxes back onto the ship. For instance, if a ship has two thousand imports and is only allowed 2500 exchanges, then only 500 boxes can be exported.

363. There may be time issues. Australian container terminals are very busy – even congested – from time to time (this varies by port and by terminal). Unloading and discharge must be done in, and on, time because there are always more ships waiting to enter port to carry out operations. If time runs out, then the ship will have to sail and that might mean boxes left behind.

364. Remember, Australia has an imbalanced container trade. On-time ships, full boxes / full ships get the highest priority. Empty boxes, and ships carrying empty boxes, don't.

365. When there is congestion, or disruption from industrial action, or generally slow performance, ships may be discharging numerous boxes but, if terminal performance is slow, they might simply run out of time to load empty boxes.

366. Stevedores reported that, where they could, they were trying to work above pro-forma and to not limit container exchange. While Shipping Australia advocates for an improvement container terminal and port efficiency, it should be borne in mind that terminals have their capacity limits like everyone and everything else.

367. During the empty container crisis, Shipping Australia cautioned against giving undue attention to arguments that all the problems can be solved by the ocean shipping industry simply by putting on more empty loaders. If there are no, or few, berth slots available then extra loaders and sweepers physically cannot be brought into Australian ports to evacuate empty boxes. Calling for extra sweepers and loaders is futile as and until there are berth slots available.

368. Ultimately, many of these problems will resolve when either demand declines, and that's likely to happen when the pandemic starts to decline and people can go on holiday and socialise without fear, and / or when the large volume of newly ordered ships hits the water.

369. There are a wide variety of reasons why Australia can have a built-up of boxes, even outside of a pandemic-induced surge in demand.

370. The limited working hours of trucking companies is probably the biggest, day-to-day, all-year-round, factor that hinders the smooth movement of empty boxes. After ships deliver full boxes to a terminal, trucks then take the boxes either to their intermediate or ultimate destination somewhere in Australia. Trucks then either return empty boxes back to port or deliver them to an empty container park.

371. However, there is a basic mismatch in working hours: ocean shipping works 24 hours a day, every day. Trucks work from six or seven a.m. to about three or four p.m. and they usually don't work on Sundays.

372. Trucking companies also don't like working on public holidays because they have problems with their drivers calling in sick on Mondays or the days after public holidays if they require their drivers to work. Trucking companies also complain both of overtime and of the higher wages they have to pay drivers on weekends, evenings, public holidays and the like. These extra costs adversely affect their profitability. So, they do not work extended hours and they encourage their representatives to lobby public officials to create rules that favour their sector.

373. There are some trucking companies that do work 24/7 days, evenings, nights and weekends. Trucking representatives can quote you examples when and where this happens. But these are very few and they are the largest volume handlers. They do it to free up port capacity landside operations during the day. Shipping Australia also understands that there are some companies that work night shifts and weekends so as to stage containers in their yards for next-day deliveries.

374. However, the vast majority work to "normal spread of hours," during the day, hardly anything in the evening and not much at all at the weekend.

375. It is known that trucking companies generally refuse to deliver empty boxes to empty container parks in the evening. Empty container parks have trialled evening open hours, but trucking operators did not avail themselves of the longer hours and so Empty Container Parks no longer offer these later hours.

376. There is robust evidence to this effect that has been comprehensively collected by Transport for New South Wales. That data shows that empty container park slots in demand from six or seven a.m. to about three or four p.m. in the afternoon. Slots go begging for containers in the evenings and the weekends. Shipping Australia strongly recommends that the Productivity Commission make enquiries of Transport for New South Wales for this comprehensive and conclusive data.

377. However, to be fair, the lack of enthusiasm for the update of evening and weekend work is not limited to land transport operators. We understand that beneficial cargo owners, importers and exporters work generally work to the "normal spread of hours" too and, accordingly, from the trucking company perspective there is little incentive to work these extra hours. So, if ships are importing large volumes of boxes all the time but trucking operators are not matching the same working times as ocean shipping operators then, inevitably, there is an imbalance in the movement of boxes.

378. In relation to empty container parks, if trucking companies are largely working to the same narrow spread of hours, this leads to two immediate types of congestion: gate congestion and yard capacity congestion.

379. Gate congestion is basically the problem of getting a sufficient number of trucks through the empty container park gates in sufficient time. This is caused, in large part, by trucking operators only working to a narrow spread of hours. If they worked into the evening, nights and weekends, much of this problem could be at least alleviated if not resolved.

380. A second problem relates to trucking companies not using booking systems properly. Empty container parks have booking systems. The idea is that a truck goes through the gate at a time booked in advance of the truck turning up. What may happen is that truck arrives at the gate and a booking is then made with the truck sitting outside the gate. This defeats the point of a vehicle booking system and does not alleviate gate-congestion. A further problem is that some land transport operators exhaust slot availability at empty container parks by booking a number of slots in advance with fake registrations so as to secure a slot. They then cancel the dummy registration58.

381. All of this leads to long queues of trucks at the gate to the empty container park during the normal spread of hours.

382. The second form of congestion is yard congestion – the yard is full or is close to full. Again, this could be alleviated if trucking companies spread the workload over longer hours.

383. Trucking companies complain about being redirected from one park to another because yards are nearing capacity. If trucking companies spread the load over longer hours, then, again, the problem would be alleviated.

384. Other issues that need to be considered in relation to empty container re-directions include force majeure conditions at the terminals (e.g., high winds); transport operators requesting redirection to the nearest empty container park and empty container parks accepting containers not marked for them when shipping lines use multiple empty container parks.

385. A further issue with empty container park congestion relates to port performance. As explained in detail elsewhere in this submission, there are several areas in which increased port performance would increase the velocity of empty container transits through the system as a whole. Ships are often left waiting for some considerable time upon arrival at a port before being brought to berth; there is wasted idle time at berth; there are not enough cranes per ship and crane rates simply aren't fast enough. These four factors mean that Australia could have faster turnaround of ships which would mean either or both of more ship calls, or ships could have longer working time at berth thereby alleviating the pro-forma issue mentioned elsewhere in this submission.

386. Sydney clearly does not have enough storage capacity. Although both Botany and Melbourne have similar TEU throughputs, Melbourne is generally considered not to currently have any storage issues. Melbourne is also thought to have about 40% to 50% more capacity than Sydney59.

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[58] "Strategic review of the Victorian Empty Container Supply Chain," September 2021, p32 by NineSquared".

[59] Strategic Review of the Victorian Empty Container Supply Chain September 2021, NineSquared, p12.

387. It didn't help matters when, because of a road-building project in Sydney, an empty container yard lost some capacity. While it is important that road-building projects are not unduly held up, it is also vitally important that international trade can continue. There ought to have been consideration of the importance of the loss of capacity and, at the very least, a like-for-like replacement of capacity somewhere else in Sydney should have been created.

388. Secondly, extra ports would solve at least part of the problem. There has been policy / political induced paralysis for at least the last decade in developing extra port capacity on the Australian east and south coasts. Development at Newcastle has been unfairly stymied even though Newcastle has excellent road and rail connections. Botany has been designated as the container port for NSW. Meanwhile, there are plans to develop Kembla as a container port at some point in the future. It should be noted that Botany and Kembla are operated by the same operator. For years, there has been talk of developing a container terminal in Tasmania but relatively little action, although there is now a concept plan for a Burnie International Container Terminal which, if it draws Tasmanian cargo away from Melbourne could alleviate pressure on that port.

389. For years, there was a big debate about whether a new port should be developed at Hastings to the east of Melbourne or whether there should be some kind of "Bay West" option – but that will not happen until 2055 under current state policy as / until Melbourne hits eight million TEU, according to Infrastructure Victoria.

390. Successive governments seem to prefer to not to immediately build ports and to concentrate cargoes at one port, which is a supply chain risk, and it doesn't give extra options to evacuate empties.

391. Empty box volumes sometimes build up in Australia because boxes are sometimes transported large distances overland. In Australia, some consignees (the people to whom a shipper sends cargo) live and work many hundreds of kilometres away from the nearest port. Just getting boxes to and from remote communities takes time. If there are large volumes of boxes being sent to remote communities then it can take a long time to get the boxes back.

392. The transport of boxes is not necessarily distributed in an even volume; at different times of the year there can be large volumes being moved to different place which can lead to bunching and backlogs of empty boxes.

393. Container free time can be an issue in helping an empty box backlog to form. Ocean shipping containers normally (but not always) belong to ocean shipping companies. Shipping lines grant shippers and consignees a certain amount of free time (time without charge) to take possession of the shipping containers for the purpose of unloading. Free time helps to reduce the incentive to return of empty boxes and can contribute to a build-up of empty container volumes in Australia. We're not calling for reform in this area – we're just explaining how container free time can help an empty box backlog to form.

394. Unfortunately, there are some aspects of life that are near-random and just cannot be controlled. Random events – bad weather, industrial action and the like can help an empty box build-up to form. Heavy rain, heatwaves, strong winds and high swell can all hinder maritime and cargo operations. Extensive industrial action in 2020 caused a huge backlog of empty containers in Australia.

395. Some empty box inventory is necessary. Shipping companies will generally keep a stock of empty boxes available, even in destination countries like Australia, to service a backhaul export trade. As mentioned above, about 39% of boxes exported from Port Botany in 2018 were full. Shipping companies even import small volumes of empty containers for the purpose of making sure there are enough on-specification boxes available to Australian exporters.

396. Boxes need to be taken out of circulation for essential works. Containers need to be cleaned, upgraded (e.g., converted into food-grade containers at the customer's request), maintained and repaired. Taking boxes out of circulation for essential works may also help increase the volume of containers in Australia.

397. Small disruptions in big numbers can equal big backlogs. It should also be realised that we're talking large volumes of containers. Australia currently handles at least eight million TEU a year. With this kind of box volume, and boxes being transported over large distances, then even small disruptions or surges in demand can have large consequences for the build-up of empty containers.

398. Land transport operators complain when there is an empty box build-up because it potentially costs them resources (staff time, money, effort) to handle empty boxes in their yards. Trucking companies and their representatives then demand that shipping lines bear the burden. But there is usually no contractual or commercial relationship between land transport operators and ocean carriers.

399. Shippers contract with ocean carriers for the seaborne carriage of freight from country A to country B. Shippers contract with trucking companies in the origin country and in the destination country to carry the freight to / from the seaport. Ocean carriers' contract with ports and container terminal operators to accept their ships for cargo loading and discharge. Ocean carriers and trucking companies therefore do not contract with each other.

400. Other than the fact that trucking companies themselves don't want to bear the burden, it's not obviously clear why shipping lines are deemed as being automatically worthy of picking up the bill. Given that containers are hired by shippers for the carriage of goods, and given that shippers accept the liability of paying ongoing hire, and given that shippers induce the whole supply chain journey to take place for their commercial benefit, it seems that shippers ought to bear the burden.

401. Meanwhile, trucking companies have a free-market ability to help themselves. They can always review and amend their terms of conditions (assuming that they haven't done so already) so that they have the absolute right to refuse the entry of an empty box into their yard and / or the right to return an empty container to the shipper's premises if it is refused by an empty container park. While this remedy won't be practical for every container, it ought to alleviate some problems.

402. Similarly, trucking companies can always insist that they are granted an absolute indemnity from their customers in respect of ongoing hire fees, or any other financial liabilities, they could also introduce terms and conditions allowing them to pass on and / or impose surcharges for empty container related circumstances beyond the trucking companies' control.

403. They don't want to do this, however, because they want to keep their commercial relationships with their customers free of such concerns. Being able to keep costs low and ensuring costs are passed on to others in the supply chain benefits their cashflow and goes a long way to keeping happy relationships with customers.

404. In the short term, the problem of empty containers largely goes away. In 2020 and in part of 2021, there was a severe empty container management problem, but it later dissipated. A self-dissipating problem is not a problem that needs government action to solve. Secondly, any policy options that tackle the short-term problem could well have adverse effects and could simply just shift the burden from one group of actors to another group of actors.

405. Longer term, there is a more serious problem that will need tackling. It is generally forecast that Australia will have increasing volumes of containerised trade which means, in the long run, that Australia will have increasing volumes of empty containers to deal with. Long-term, a solution needs to be found.

406. A quick root cause analysis reveals the sources of the problem. Empty container inventories build up in trucking yards because trucking companies don't want to have more robust terms and conditions with their customers because having more lenient terms gives the trucking companies commercial advantage. Trucking companies find problems with gate congestion and yard congestion at empty container parks because they won't work outside of normal hours. So part of the solution to empty container management lies with trucking companies.

407. Empty container parks in Sydney also become full because there are simply not enough container parks in Sydney. An obvious comment is that there needs to be more empty container storage in Sydney, or accessible from Sydney. Although, of course, we do realise that is a lot easier said than done. At the very least, it would be beneficial if governments could refrain from cutting capacity.

408. Trucking yards and empty container yards hit capacity because there are not enough ships and taking enough boxes out via Sydney. There are not enough ships and boxes taking empty containers out of Sydney because port performance is poor and because ports are disrupted by industrial action. This is the root cause of the problem. If there was a faster turnaround of ships, if there wasn't as much disruption, then there wouldn't be such an enormous empty container build up from time-to-time. Eventually, these problems will have to be tackled because Sydney won't be able to cope with the forecast growth in trade.

409. Recommendation: that the Productivity Commission recommend that an investigation ought to be carried out into creating and preserving empty container park infrastructure especially at or near port precincts.

Port Botany Empty Container Incentivisation Scheme

The operators of Port Botany have mandated that visiting ships meet a load / discharge ratio to encourage the evacuation of empties and to avoid a build-up. However, it is flawed. For instance, a lot of factors relating to empty container build-up are systemic in nature and are beyond the control of shipping lines as explained above. Additionally, there are other factors that are not shipping line controlled that add to empty container build-up. Some shipping lines carry large volumes of one-way full export containers, and tank-tainers, and these may be shipper-owned containers.

There have also been wide-ranging industrial disruptions which, again, prevent the export of empty containers. Additionally, in the current environment, evacuation plans are being cancelled owing to labour shortages, trucking issues and stevedoring issues.

All of these factors are beyond the shipping lines' ability to control and therefore the empty container incentive scheme is unfairly penalising shipping lines. As we discuss elsewhere, such port charges form part of a pattern of ports operating without constraint either by the free market or by effective regulation, which adversely affects the Australian Maritime Logistics System. Given that ports are so important to the Australian economy, and given that ports are effectively regional monopolists, there is justification in creating price-regulation for this sector. Shipping Australia discusses this concept elsewhere in this submission.

Australia's coastal shipping regime

410. In 2012, Australia introduced major shipping-related legislative reform. The main aims of the reforms were to "revitalise" shipping, generate a vibrant maritime cluster that would produce large economic benefits, tax revenues and maritime jobs.

411. The reforms were vigorously supported in some parts of the industry.

412. On 22 March 2021, the Australian Shipowners Association (now re-branded as the Maritime Industry Association Ltd), said in a media release: "The Australian Shipowners Association supports the Government's package of reforms which are aimed at providing a competitive environment for Australian shipowners and operators... The focus of the Government on shipping for the past four years to reach this point is greatly appreciated by the industry and today represents another milestone in moving toward a new paradigm for Australian shipping".

413. Then, when the package of bills passed the House of Representatives, the Australian Shipowners Association [now MIAL], stated in a media release on 31 May 2012 that: "the introduction of the Australian International Shipping Register is a major development for Australia... Combined with the Tax Laws Amendment, the opportunity to compete with foreign flagged ships in these trades is now possible. This is a very positive development for the future of this Australian industry… The Coastal Trading Bill essentially codifies current practice and importantly increases transparency. The Shipping Reform (Tax Incentives) Bill provides Australian companies a significant and exciting opportunity to invest in new tonnage and potentially expand existing operations".

414. Shortly after the passage of the regime into law, the Australian Shipowners Association [now MIAL] enthusiastically welcomed the new regime "shipowners are ready to invest and this is a great day in terms of a new era for Australian shipping. Shipowners are quite committed to their investment decisions and they're looking forward to expanding into new trades, into new international opportunities that have never been available to us before... The introduction of the Australian International Shipping Register is a major development for Australia. Currently, Australian ships carry less than 0.5% of our export cargoes. Combined with the Tax Laws Amendment, the opportunity to compete with foreign flagged ships in these trades is now possible. The landmark reforms are the culmination of several years' work by the Government and the Australian shipping industry and mark a new chapter for the industry as a whole. The first signs of take up are already apparent. Banks are talking to shipping companies, cargo interests are considering new routes and ship ownership

structures, chief financial officers and tax advisers are hard at work understanding and applying the new laws"[60].

415. However, that optimistic view has not come to pass. The 2012 reforms (of which the Coastal Trading (Revitalising Australian Shipping) Act of 2012 (Cwlth) was a major part) have not 'promoted a viable shipping industry that contributes to the broader Australian economy' nor has it 'ensured efficient movement of passengers and cargo between Australian ports' or anything in between, in fact, they have hastened its demise.

416. As judged against the regime's own objectives, it is clear that the Act is not fit-for-purpose.

417. The Act restricts the interstate (but not intra-state) carriage of cargo between Australian ports to licensed ships. Vessels can hold either a general, temporary, or an emergency licence. The relevant Minister may also issue broad exemptions under section 11.

418. General licence holders must register a ship on the Australian General Register and that vessel must be crewed by an Australian crew, or a permanent visa holding crew (sections 13 and 21). Breach of licence conditions render the general licence holder to a civil penalty. Only vessels that are Australian-owned or are on demise charter (also known as a bare-boat charter) to Australian-based operators, or are small craft, can be registered on the general register. The Fair Work Act applies to vessels registered on the Australian General Register61.

419. Ship operators can instead apply for temporary licences, which allow the interstate carriage of cargo transfer between Australian ports over a 12-month period provided that at least five voyages are nominated in advance (section 28). Details of the application will be published (section 30) and any holder of a general licence may object. If there is an objection, then the applicant for a temporary licence and the general licence holder must negotiate for the carriage of the cargo. Third parties, such as unions, can also make comments (section 33). Having regard to the situation, the appropriate Minister must then decide whether to grant the application. A temporary licence can only be issued if the vessel is either registered on the Australian International Shipping Register or under the law of a foreign country. A person can be fined under the civil penalty regime for breaching temporary licence conditions.

420. A quick note is warranted on the Australian International Shipping Register. Ships can be registered on the International Register if they are at least 24 metres in length, if they are trading ships and if they are either Australian-owned, Australian-operated or on demise charter to Australians (section 15B of the Shipping Registration Act 1981). The revised objects of the International Register are to facilitate Australian participation in international trade; to provide an internationally competitive register to facilitate the long-term growth of the Australian shipping industry; to promote the enhancement and viability of the Australian maritime skills base and the Australian shipping industry (section 15A).

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[60] "Historic shipping reform becomes law", Anchor [the official letter of the Australian Shipowners Association [now re-branded as MIAL], September 2012.

[61] "Maritime Industry – workplace rights and entitlements" Fair Work Ombudsman - https://www.fairwork.gov.au/tools-and-resources/fact-sheets/rights-and-obligations/maritime-industry-workplace-rights-and-entitlements#does-it-apply accessed on 05 February 2022.

There are various tax incentives to entice shipping operators to register on the Australian International Shipping Register.

421. The Fair Work Act does not apply to internationally trading ships that are registered on the Australian International Shipping Register62. The Fair Work Act may, however, apply to ships in a variety of other situations. For instance, it applies to all ships engaging in licensed coastal trading, including overseas-flagged ships. The Fair Work Act will apply to certain ships operating outside Australia, for example, to ships on the Australian General Register, and to vessels that operate from an Australian port to fixed platforms in the sea. There are a variety of other situations in which the Fair Work Act will apply63.

422. When the Fair Work Act applies, then so do the Fair Work Regulations, which means that higher wages will be paid to Australian crew under the Seagoing Industry Award compared with international crew paid in accordance with the Maritime Labour Convention.

423. Section 3 of the Coastal Trading (Revitalising Australian Shipping) Act 2012 contains the legislation's objects clause. The objects are to: promote a viable shipping industry that contributes to the broader Australian economy; facilitate the long-term growth of the Australian shipping industry; enhance the efficiency and reliability of Australian shipping as part of the national transport system; maximise the use of vessels registered in the Australian General Shipping Register in coastal trading; promote competition in coastal trading; ensure efficient movement of passengers and cargo between Australian ports.

424. The Coastal Trading Act has failed in each and every one of its objectives. The Act has not succeeded in its policy goals. It is not fit for purpose. For instance, pre-COVID, the Australian cruise sector was booming. It employed numerous people and was generating vast revenues. It had also received a section 11 exemption by the then Minister for Transport and Infrastructure from the Coastal Trading Act shortly after the Act's introduction. The exemption was given because of the benefits that the sector was delivering outside of the Coastal Trading Act. It seems reasonable to believe that the other shipping sectors could likewise have thrived if they too were not subject to this coastal trading regime.

425. The section 15A objects of the Shipping Registration Act have also failed. Firstly, no ships were listed as registered on the Australian International Shipping Register during the research and writing of this submission (January to early February 2022). To the best of our knowledge and belief, no ship has ever been registered on the Australian International Shipping Register. That's a failure of the policy objects in section 15A of the Shipping Act 1985 and also section 3 of the Coastal Trading Act.

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[62] "Australian International Shipping Register", https://www.infrastructure.gov.au/infrastructure-transport-vehicles/maritime/business/coastal_trading/aisr accessed on 4 February 2020; "Maritime Industry – workplace rights and entitlements" Fair Work Ombudsman - https://www.fairwork.gov.au/tools-and-resources/fact-sheets/rights-and-obligations/maritime-industry-workplace-rights-and-entitlements#does-it-apply accessed on 05 February 2022.

[63] Ibid.

426. The Coastal Trading Act has driven up crewing costs, which can be a very significant component of total ship operating costs, depending upon circumstances64.

427. While, of course, employee-affiliated organisations and representatives would welcome any rise in pay, that's not what's happened. In practice, costs skyrocketed, shippers refused to use coastal ships (unless they absolutely had too) and ships working under the Australian flag fled the new regime.

428. For instance, Teekay Tankers reported that "incremental Australian crewing expenses of approximately $14,000 per day above international crewing costs". As Teekay Tankers is listed on the New York Stock Exchange, that $14k figure is in US dollars. The figure in Australian dollars is AUD$15,366[65].

429. Maritime Industry Australia Ltd is reported as stating that the regulatory settings and market conditions means that costs for some ships were between $5 million and $7 million higher with Australian crew66.

430. A representative of Rio Tinto Aluminium told a Queensland Parliamentary inquiry in 2019 that "The cost differential between an Australian crewed vessel and an international vessel is about US$5 million per year per ship" in relation to dry bulk vessels. That same representative also pointed out coastal trading ships need two crews as the Australian seafarers will take annual leave and will be absent from the vessel67. However, International seafarers will typically sign-on to a vessel for eleven months at a time68.

431. The Department of Infrastructure, Regional Development and Cities has produced a table comparing Australian seafarer wages with international, Maritime Labour Convention wages.

TABLE 6: comparison of Australian wages with international wages.

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[64] Estimating the total operating cost of shipping is depends on a wide range of factors, some of which are within the control of the ship operator (e.g., ship speed) and others that are affected by global issues e.g., marine fuel price per tonne. Some price factors change on a daily basis e.g., the cost per tonne of marine fuel.

[65] "Second Quarter 2013 Earnings Presentation, 08 August 2013", Teekay Tankers, a presentation, 4th slide "Strong Fixed-Rate Cover", note 1: "Charter rate covers incremental Australian crewing expenses of approximately $14,000 per day above international crewing costs". The historical USD to AUD conversion rate on the date of the presentation according to the historical rates tables provided by currency conversion specialist XE.com was 1.0976019797 so the AUD$ figure was A$15,366.

[66] "A hand behind their back': million-dollar disadvantage for Australian-flagged ships" Australian Financial Review (Baird, L & McIlroy, T), 24 January 2019 https://www.afr.com

[67] Queensland Parliament Transport and Public Works Committee, Public Hearing for the Inquiry into a Sustainable Queensland Intrastate Shipping Industry – Transcript of Proceedings (2019), page 9, testimony of Duncan White, Technical Adviser, Rio Tinto Aluminium Ltd.

[68] Marine Notice 17/2016—Maximum period of shipboard service for seafarers, Australian Maritime Safety Authority, Thursday 21 January 2021.

Part A Wages and Maritime Labor Convention (MLC) Minimum Wage Comparison

	Part A*	MLC^
Standard rate	AU$2477.23 (140 hours)	AU$390.72 (96 hours)
Overtime	N/A - aggregate wage	AU$223.85 (44 hours)
Paid leave accrued	AU$2245.12	AU$54.70
TOTAL	**AU$4722.35**	**AU$669.27**

*The Part A wage displayed in the table above is for a seafarer with a classification of Integrated rating/Assistant steward/Catering attendant working on a cargo vessel of up to 19 000 tonnes manned by 18 or less crew.

^The MLC wage displayed is the minimum wage for an Able Seaman as determined by the International Labor Organization. The exchange rate used is AU$1 = US$0.72/US$1 = AU$1.38. Maritime Labor Convention wages are published in US dollars by the International Labor Organization but are displayed here in Australian dollars for ease of comparison.

The Department of Infrastructure, Regional Development and Cities (as it was formerly known) created this table for its submission to the Federal Senate Standing Committee on Rural and Regional Affairs and Transport References Committee on the inquiry into the Policy, Regulatory, Taxation, Administrative and Funding Priorities for Australian Shipping in March 2019.

432. Ocean shipping companies have advised Shipping Australia that they are not even keen on the Temporary Licence regime, mostly because of its bureaucracy. Container carrying members have advised that it is "almost impossible" to obtain a licence when there is extensive industrial action or congestion given the rules of the system and the requirement to detail a minimum of five voyages in advance.

433. It can take up to three weeks to obtain a temporary licence and, in disrupted and congested times, vessels may have to omit ports to maintain schedule integrity. Picking up small volumes of coastal cargo would further delay already delayed schedules. Then there is the extra administration around the salary adjustments for the crew for the relatively short duration that the crew are carrying Australian coastal cargo.

434. One of the consequences of the 2012 coastal trading regime of was an exodus from the Australian flag. The following formerly Australian-flagged, internationally trading, ships have left the Australian flag.

435. Shipping Australia is aware of the following vessels that have de-registered from the Australian General Register: the Mariloula (Hedland to Kembla; iron ore); Lowlands Brilliance (Hedland to Kembla; iron ore); 2018 CSL Iron Chieftain (coal); 2017 CSL Thevenard; 2017 CSL Whyalla (iron ore); 2017 CSL Brisbane; 2016 British Fidelity (clean petroleum); 2016 CSL Melbourne; 2016 Portland (alumina); 2015 Alexander Spirit (fuel); 2015 Hugli Spirit (petroleum); 2015 British Loyalty (clean petroleum); 2014 Tandara Spirit; 2014 CSL Pacific (scrapped); 2014 Pacific Triangle (iron ore);

2013 Lindesay Clarke (alumina). That's 16 ships in all that have left the Australian flag. Over 500 Australian seafarers lost their jobs[69].

436. It is possible that there may be more ships that have left the Australian flag since 2019. It is notable that these vessels all left the Australian coast following the entry into force of the Coastal Trading Act of 2012. Some of these ships have returned to the Australian coast using the Temporary Licence system. It is notable that, given the free choice of the Australian flag – with a host of taxation benefits – or, alternatively, opting for the international flag without any tax benefits, that none of the ship operators have chosen the Australian flag.

437. It has been quite a big decline. Anthony Albanese, the former Leader of the House of Representatives and the former Minister for Infrastructure and Transport in 2012 (and who is now the Opposition Leader), introduced the Coastal Trading (Revitalising Australian Shipping) Bill (as it then was) on 22 March 201270.

438. "In the past decade the Australian fleet has gone from 55 ships to 21, with only four operating on international routes," Mr Albanese said in 2012.

439. On 05 January 2022, Shipping Australia analysed the Australian General Register, which is maintained by the Australian Maritime Safety Authority. There were 11,715 vessels registered, however, these are overwhelmingly yachts, small watercraft, commercial barges and the like. There are 16 vessels with a length of 100 metres or more and which are engaged in some kind of cargo-carrying activity. It's an old fleet with 11 ships being 20 years or more old (and one of which is 40 years old). The other five are five years old or less.

440. The younger vessels appear to be servicing niche, specific, trades and have been deployed by long-established operators such as SeaRoad. So, although these younger vessels have been Australian flagged under the 2012 coastal regime, their owners would have probably bought them and put them on the Australian coast even if the 2012 reforms did not take place. No credit should be given to the coastal trading regime for the introduction of these vessels.

441. Six of these are vessels engaged in the ro-ro / ro-pax trade to / from Tasmania: the Liekut; the Tasmanian Achiever II; the Victorian Reliance II; the SeaMersey II; the Spirit of Tasmania I and the Spirit of Tasmania II.

442. One vessel is the Absolute I, which is some kind of oil products tanker that operates between Kwinana and Fremantle; it is probably a bunker (marine fuel) tanker. It is presumably not a trading vessel. The Donnacona is a self-discharging dry bulker used for transhipment (larger bulkers discharge into it at sea, the Donnacona will then go to port and discharge) so, again, it does not appear to be a trading vessel. The Wunma is another self-discharging bulker, last reported by AIS to be around Karumba,

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[69] "A plan to save the Australian shipping and maritime industries", Maritime Union of Australia, 5 March 2019, submission to the Senate inquiry into "The policy, regulatory, taxation, administrative and funding priorities for Australian shipping", authorised by P Crumlin.

[70] Hansard https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=chamber/hansardr/843adba4-b07b-4642-9c44-98beb898a1b5/&sid=0010

presumably another non-trading vessel. The Goliath is a cement carrier that appears to run the trans-Bass Strait trade to Tasmania. The Accolade II is a 101 metre long, shallow draught limestone carrier which appears to be registered to Adelaide Brighton Cement, according to Marine Man Ship Management, so, again, presumably not a trading vessel. Meanwhile, the Montara Venture is a floating production storage unit used in the oil and gas industry and is, again, not a trading vessel.

443. That basically leaves the four "Northwest" vessels of the NWS fleet, which are operated by Shell Tankers. These are the Liquefied Natural Gas carrying Northwest Sandpiper, Northwest Snipe, Northwest Sanderling and the Northwest Stormpetrel.

444. Established in 1985, North West Shelf Shipping Service Company Pty Ltd (NWSSSC) is the shipping adviser to International Gas Transportation Company Limited (IGTC), a Bermuda registered shipping company responsible for providing shipping LNG capacity to the North West Shelf Project participants. Both IGTC and NWSSSC are equally owned by the North West Shelf Project participants, which are BHP Billiton Petroleum (North West Shelf) Pty Ltd, BP Developments Australia Pty Ltd, Chevron Australia Pty Ltd, Japan Australia LNG (MIMI) Pty Ltd, Shell Australia Pty Ltd and Woodside Energy Ltd[71].

445. NWS / IGTC is basically an in-house captive shipping arm of the international oil and gas majors working on the North West Shelf. So, although the NWS fleet is carrying cargoes from Australia to Asia, it is not an independent, internationally trading fleet.

446. So, 12 years after the passage of the Coastal Trading (Revitalising of Australian Shipping) Act, we can estimate the size of the Australian-flagged, independently trading fleet to be close to zero.

447. There hasn't been a huge change in the volumes of coastal cargo either, according to data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE). Volumes have been flat pre- and post-2012. If anything, the cargo volumes have marginally declined. The Coastal shipping reforms came into effect in 2012. In the seven financial years from to 2005/2006 to 2011/2012 the average volume of coastal cargo was 54.2 million tonnes (standard deviation 2.9; volumes were particularly strong between 2006-2008. Exclude those two years and the pre-2012 seven-year average (going back to 2003-04) is 52.8 million tonnes). In the seven financial years from 2012/2013 to 2018/2019 the average volume of coastal cargo was 51.8 million tonnes (standard deviation 1.1).

[71] NWSSSC – http://www.nwsssc.com/about/ accessed 07 February 2021.

TABLE 7: weight (million tonnes) of coastal freight by state of loading (L) and discharge (D)

	NSW		*VIC*		*QLD*		*SA*		*WA*		*TAS*		*NT*		*Other*		*Totals*	
Yr	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*	*L*	*D*
04	3	15	6	10	17	15	6	5	14	4	6	6	1	0	0	0	**53**	**56**
05	4	15	6	8	18	17	7	5	11	3	6	6	1	0	0	0	**54**	**54**
06	3	14	8	8	20	19	7	6	12	3	6	5	1	0	0	0	**55**	**55**
07	4	15	8	9	21	20	7	5	14	5	5	4	0	0	0	0	**59**	**58**
08	4	14	8	9	21	20	7	5	12	5	6	5	1	0	0	0	**58**	**58**
09	3	12	6	8	20	19	6	4	11	4	5	5	1	0	0	0	**53**	**52**
10	3	15	6	7	21	19	6	5	11	2	5	4	0	0	0	0	**53**	**53**
11	3	13	6	7	21	19	6	5	10	3	5	5	1	0	0	0	**52**	**52**
12	4	10	6	8	21	19	7	6	8	2	5	4	1	0	0	0	**51**	**49**
13	3	10	5	7	23	21	6	5	8	3	5	4	1	0	0	0	**51**	**51**
14	3	11	5	7	24	21	7	5	8	4	5	4	1	0	0	0	**52**	**52**
15	2	9	5	7	24	23	7	5	7	3	5	4	1	0	0	0	**50**	**51**
16	2	9	5	8	23	23	7	4	8	3	5	5	2	0	0	0	**52**	**52**
17	2	10	5	8	22	23	7	4	8	3	5	4	4	0	0	0	**52**	**52**
18	2	10	5	8	21	22	7	5	7	3	6	5	5	0	0	0	**52**	**52**
19	2	10	5	9	19	23	8	5	10	3	6	5	5	0	0	0	**54**	**54**

Table: *Shipping Australia.* ***Data:*** *Australian Sea Freight 2012-2013 and Australian Sea Freight 2018-2019; Bureau of Infrastructure, Transport and Regional Economics. This table shows the cumulative totals of coastal freight loaded by jurisdiction and year. The "Yr" [Year] column at left indicates the end of a financial year so "04" is actually the year 2003-2004. Includes both intra-state and inter-state trade. So, for instance, the 2003-2004 data for NSW shows the sum of all freight loaded in NSW and coastally carried to elsewhere in NSW and to all other states and territories. Figures have been rounded to the nearest whole number so as to fit the table on the page. Figures have been rounded. Figures less than "0.5" have been rounded down to zero. The difference between the totals for loading and discharge are caused by rounding.*

448. Pre-Coastal Trading Act seven-year averages are 54.2 million tonnes (loading) and 53.7 million tonnes (discharge); Post-CTA seven-year averages are 51.8 million tonnes (loading) and 52.0 million tonnes (discharge). Clearly, the 2012 Coastal Trading Act has not induced a large upswing in the volume of freight and, if anything, it has caused a small decline in volumes.

449. Another particularly interesting aspect of the 2012 coastal trading regime is that it generally does not apply to intra-state trade, which is shipping between two ports in the same state (although companies running an intra-state route can apply to the Minister for a declaration that the Coastal Trading Act applies to their ship (section 12)).

450. The single biggest flow of coastal trade in Australia – by far – is a Queensland intra-state trade that is about 16.41 million tonnes a year, on average. Secondly, the average intra-state cargo flows – NSW / NSW, VIC / VIC etc – stand at 20.97 million a year while the average total coastal cargo flow is about 53.05 million. Average intra-state trade therefore accounts for about 39.52% of Australia's average coastal trade flow. The coastal trading regime therefore doesn't apply to the single biggest flow of coastal cargo nor to about 40% of Australia's coastal trade.

TABLE 8: from where to where – average coastal volumes from point of origin to destination

		16-year average volume of coastal freight by jurisdiction of discharge (millions of tonnes)							
		NSW	**VIC**	**QLD**	**SA**	**WA**	**TAS**	**NT**	**AUS**
Territory of load	**NSW**	0.13	0.72	0.64	0.89	0.32	0.15	0.01	**2.86**
	VIC	1.49	0.38	0.53	0.52	0.53	2.42	0.00	**5.87**
	QLD	2.47	0.86	16.41	0.40	0.23	0.57	0.02	**20.97**
	SA	1.63	1.52	0.86	1.94	0.52	0.16	0.00	**6.64**
	WA	4.97	1.34	0.65	0.81	1.86	0.19	0.05	**9.89**
	TAS	1.20	3.46	0.16	0.26	0.08	0.18	0.00	**5.35**
	NT	0.01	0.00	0.89	0.00	0.04	0.46	0.06	**1.47**
	AUS	**11.92**	**8.28**	**20.14**	**4.83**	**3.58**	**4.13**	**0.15**	**53.05**

Source*: Shipping Australia. Derived from Table 2.3 in each of Australian Sea Freight 2012-2013 and 2018-2019, BITRE.*

451. Australia's economy and Australian shippers have both paid a very heavy price for this policy. In a December 2013 analysis, the Institute of Public Affairs estimated72 that the net present value of the coastal shipping industry's net economic benefit to the Australian economy was between AUD$76 million and AUD$150 million less than it would have been in the absence of the Coastal Trading Act of 2012.

452. In the Productivity Commission review into Tasmanian Shipping and Freight there were numerous comments criticising the Coastal Trading Regime of 2012 and its costs. The submissions can be accessed via the "Tasmanian Shipping and Freight" submissions page of the relevant Productivity Commission inquiry:

"The Cabotage arrangements in place for Australian coastal shipping contribute significantly to fixed costs... Two and a half years ago, when a direct international shipping service was available Cuthbertsons was shipping 40 foot containers from Bell Bay to China for $1090. Today that price is road Launceston to Burnie $500, shipping Burnie to Melbourne $1000 and shipping Melbourne to

[72] "Coastal Shipping Reform: Industry Saviour or Regulatory Nightmare?" C Berg and A Lane, at page 2

China $500, a total of $2000.

Doug Dickinson, Managing Director, sheepskin and hide producer Cuthbertson Bros, 16 December 2013.

Alumina smelting business BBA wrote: Under any circumstances, the reliability of alumina supply to an aluminium smelter is a central concern. At BBA the reliability of alumina supply is of even greater concern as there is very limited alumina storage... The only General Licence holder with a suitable vessel to transport alumina from Gladstone... to BBA is Canadian Shipping Lines Australia (CSLA) which has only one vessel which is able to perform these charters. This one vessel is of course, not always available... BBA does not have the logistical infrastructure or operational flexibility to adapt to this unreliability... Until the introduction of the Coastal Trading (Revitalising Australian Shipping) Act 2012 on 1 July 2012... BBA ensured the timely and competitive freight for supply of alumina using a combination of Australian (General Licence) and foreign flagged vessels (Temporary Licence), by sourcing each voyage individually... Following introduction of the Coastal Trading Act 2012, BBA faced increased costs from $18.20 a tonne in 2011 to $29.70 in 2012, or 63 per cent. This compared with $17.50 a tonne charged by international operators in 2012. Demurrage rates also rose from $14,000/ in 2011 to $35,000 in 2012. The combined effects of this legislation increased annualised costs with at least A$4 million on freight alone"

Ray Mostogl, General Manager, Bell Bay Aluminium, 12 December 2013

The previous federal Government changed Coastal Legislation... Despite some strong arguments, the evidence points to fact that the more restrictive and expensive conditions has seen coastal volumes reduce and indeed some cargo previously supplied domestically now supplied externally. The Tasmanian impact currently is that the incumbent services plying the Bass Strait are all Australian Registered and crewed vessels with the costs to match.

Tasmanian Exporters Group, 12 December 2013

Essential to the viability of international connections for Tasmania is the modification of the current coastal shipping regulations that limit the ability of international vessels to carrying of domestic cargo. The current regulatory framework restricts the capacity of Tasmania to attract a viable import/export service as international carriers need to supplement volumes in and out of Tasmania with additional domestic cargoes.

Derek Le Marchant, Executive Officer, Northern Tasmania Development (NTD) is a regional development organisation, 13 December 2013

Existing domestic coastal shipping and cabotage restrictions could be adding to shipping costs and limiting competition in shipping services... the coastal shipping arrangements including cabotage, as a restriction on competition, should be reviewed to see whether the objective of preserving domestic shipping can only be achieved by restricting competition and if so, whether the costs outweigh the benefits.

Australian Competition and Consumer Commission, December 2013.

Since the 2012 legislation was introduced, there is evidence that the costs associated with using coastal shipping services across Australia (including routes to and from Tasmania) have risen. One company has experienced a 63 per cent increase in shipping costs to Tasmania. Another company estimates an additional 1,000 hours of labour annually are required to administer the new scheme. Deregulation of coastal shipping that reduces unnecessary red tape and removes undue restrictions on competition is needed to lift the competitiveness of the sector, reduce costs on business and grow opportunities for new investment and employment.

Business Council of Australia, December 2013

453. It is clear from the Productivity Commission review that Tasmania has been particularly disadvantaged by the withdrawal of the last direct international container shipping services (this happened before the Coastal Trading Act and is related to port draughts and the lack of an international container terminal). And it has also been badly affected by the Coastal Trading Act which has driven up trans-Bass Strait rates and which inhibits the threat of international competition. It wasn't just the Tasmanians that were adversely affected by the 2012 coastal shipping regime. It has adverse effects all over the Australian economy.

454. There has been an increasing substitution of Australian raw materials and manufactured products with imported international goods. The result is reduced competition, less efficiency, increased cost in coastal cargo movement and difficulties for onshore Australian businesses. Case in point: Penrice Soda was formerly an ASX-listed South Australian supplier of soda ash, and other commodities, that were used to make various construction products. The company failed for a variety of reasons, one of which was the introduction of the Coastal Trading Act.

455. At the time, Penrice's chairman, David Trebeck wrote in the company's 2012 annual report: *"I also can't accept the recent changes made to Australia's coastal shipping policy, which appear to owe more to favours to the maritime unions than policy in the national interest. The effect will inevitably be to reduce the distance from Adelaide that Penrice can competitively ship its product around the coast, again compared to imports. How this assists Australia's coastal shipping objectives escapes me"*[73].

456. Later, in summarising the position in 2015, lawyers at a leading law firm wrote: *"The stated objective of the 2012 reforms was to revitalise the Australian shipping industry and enhance efficiency and competition. However, almost 3 years after their enactment, the 2012 reforms have failed to revitalise the Australian shipping industry and have come under strong attack from just about every industry stakeholder for subjecting carriers and shippers to a system that is inefficient, anti-competitive and cumbersome... the negative impact of the 2012 reforms is highlighted by the following examples: it has*

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https://www.openbriefing.com/AsxDownload.aspx?pdfUrl=Report%2FComNews%2F20120928%2F01338556.pdf – see Chairman's report, third column, bottom paragraph (search for "shipping").

become cheaper for Australian manufacturers to import commodities such as bauxite, gypsum, cement clinker, fertiliser and soda ash which, until very recently, were almost exclusively purchased from Australian producers and shipped around the continent by coastal trade; Caltex stopped refining in New South Wales and withdrew their tankers from Australia's coastal trade - they now import their product from Asia; sugar is now imported from South East Asia and South Africa while the Australian sugar industry contemplates exporting 100% of its product due to the cost of coastal trading"[74].

457. The economic damage rolled on. In 2016, Brickworks CEO Lindsay Partridge said that the company imports a million bricks from Spain every month, adding that it costs twice as much to ship a brick from Perth (WA) to Sydney than it does to ship bricks from Spain. "It's about 10 cents a brick from Spain and 20 cents from Perth," he told the ABC, adding that he had hoped to ship some bricks from Perth but was put off by the shipping costs. He called for Australia's restricted coastal shipping regime to be opened up.

"All ships that are coming in from overseas go around Australia one way or the other and they're going past basically empty and we just want to put containers on," he told the ABC[75].

[74] "Cabotage Reform In Australia - The 2012 "Reforms" And The Need For Further Reform", M Thomson, C Keane and J Cockerell, Clyde & Co - https://www.mondaq.com/australia/antitrust-eu-competition-/375992/cabotage-reform-in-australia--the-2012-reforms-and-the-need-for-further-reform. Incidentally, politicians were warned of such consequences in advance. See the Economics Legislation Committee 15 May 2012 when executives from the sugar industries were questioned - https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/73248d50-c184-4d71-a92a-7ce806ed035a/&sid=0002 ; from the dry bulk industries - https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/73248d50-c184-4d71-a92a-7ce806ed035a/&sid=0006; and from the petroleum industries – https://www.aph.gov.au/Parliamentary_Business/Hansard/Hansard_Display?bid=committees/commsen/73248d50-c184-4d71-a92a-7ce806ed035a/&sid=0004.

[75] "Brickworks CEO says bricks cheaper to ship from Spain than Perth, maritime industry denies claims", B Trembath, 16 March 2016, ABC – https://www.abc.net.au/news/2016-03-16/bricks-cheaper-to-ship-from-spain-than-from-perth-to-sydney/7249646 accessed on 07 February 2022.

458. Expert reviewers – including the Productivity Commission – have repeatedly concluded that that our existing coastal shipping regime is detrimental to the wider community, to business, to consumers, and to workers:

• 'The Australian Government should amend coastal shipping laws to substantially reduce barriers to entry for foreign vessels'
(Productivity Commission's Agriculture Review, 2016)

• 'Cabotage restrictions on coastal shipping should be removed'
(Competition Policy Review/The Harper Review, 2015)

• 'Coastal shipping regulations are undermining the incomes and jobs of many onshore businesses and workers'
(Industry Innovation and Competitiveness Agenda, Commonwealth of Australia, 2014)

• 'More efficient coastal shipping services could help lift Australia's competitiveness and lower prices for consumers'
(Australian Competition and Consumer Commission, 2014)

• A more efficient coastal shipping industry will help to relieve pressure on Australia's road and rail networks, lowering transport costs and consequently prices, across the economy' **(Australian Competition and Consumer Commission, 2014)**

• 'Cabotage rules that preserve freight routes from one Australian port to another for Australian-flagged ships are effectively industry assistance, increasing costs and reducing competition'
(Towards Responsible Government, National Committee of Audit, Parliament of Australia, 2014).

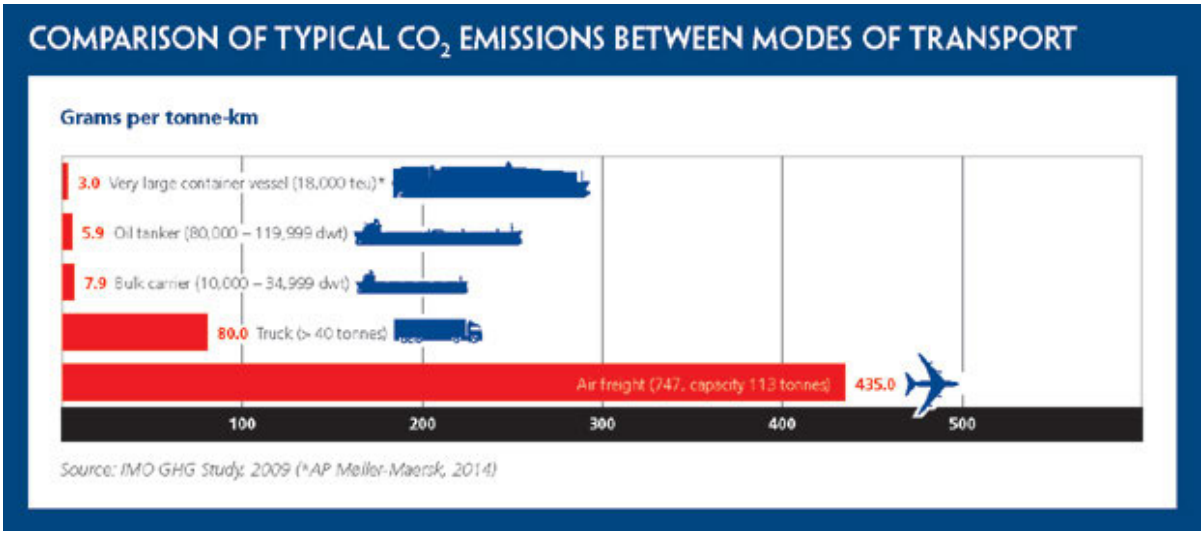
• 'Tasmania is particularly affected by inefficiencies embedded in coastal shipping regulation. This regulation should be reviewed and reformed as a matter of priority.'
(Productivity Commission Inquiry into Tasmanian Shipping and Freight, 2014).

• 'Australian cabotage can directly benefit local shipowners and maritime workers, [but] it does so at the expense of the wider community'
(Joint Australian and New Zealand Productivity Commissions, 2012).

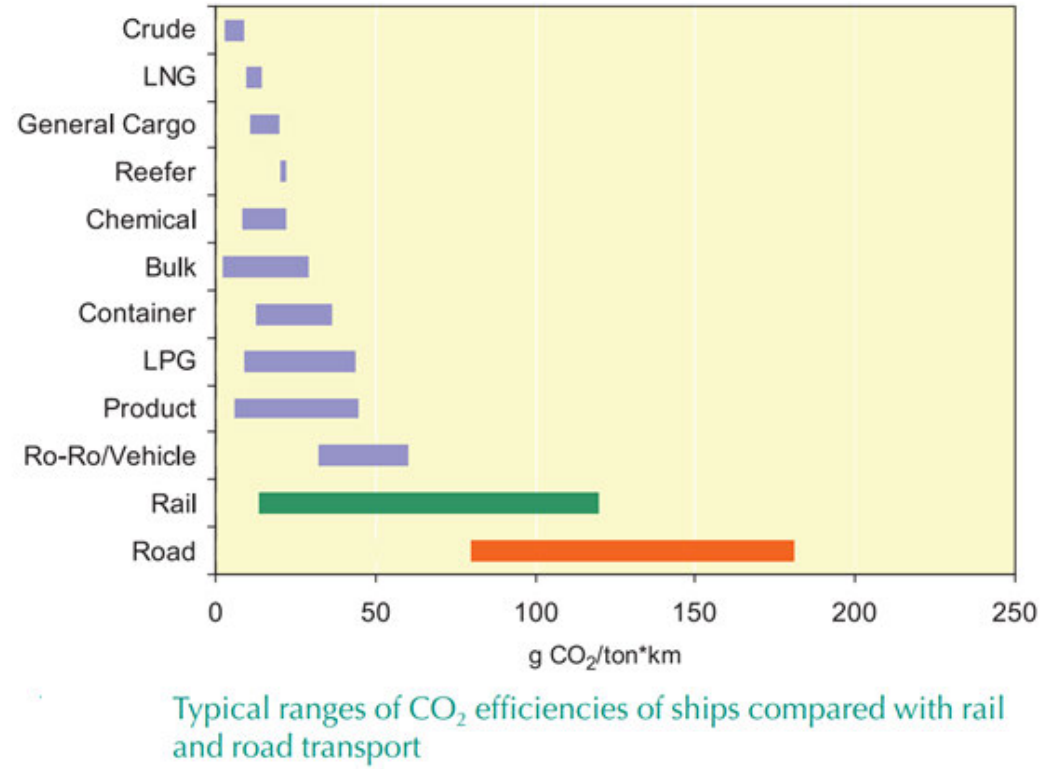
459. Australia's Coastal Trading Regime has discouraged the use of ocean shipping to transport freight and has encouraged the use of truck and rail. Yet ocean shipping is the most environmentally efficient method of long-haul freight movement. The longer the distance and the heavier the load, the greater the benefit when compared to other modes of transport. Shipping is more than 29 times more efficient than

trucks in terms of freight tonne-km for CO2 emissions.

GRAPHIC: Comparison of ship, road, air C02 emissions cited by the International Chamber of Shipping



GRAPHIC: C02 emissions different ship types vs rail and road; IMO 2009 2nd GHG study



Typical ranges of CO_2 efficiencies of ships compared with rail and road transport

460. Coastal shipping also has the potential to reduce demand for investment in infrastructure by literally taking the load off road. Effectively used, it could reduce the rate of increase in truck traffic.

461. About 3-4 people a week die in Australia in heavy truck-related accidents and ten people a week in Australia are hospitalised in heavy truck related incidents[76]. Ocean shipping a very safe mode of freight transport. A modal shift from trucks to sea would likely reduce the number of deaths compared with land transport. Yet the Coastal Trading Act has encouraged a shift in freight from ships to trucks.

462. The existing coastal trading regime, and flag regime, have been policy failures. Ironically, for a regime with the label "Coastal Trading (Revitalising Australian Shipping), the policy consequences have been to restrict competition; to drive up the costs of shipping; to drive up the time and burdens of bureaucracy; to destroy seafarer jobs; to destroy landside jobs; to lead to import substitution so that goods from overseas have replaced domestic goods and commodities; to cause a massive de-flagging from the Australian flag; to worsen air pollution and it has likely lead to more deaths in road accidents.

463. The policy of restricted cabotage has not led to an increase in maritime skilling, nor has it led to the creation of a maritime cluster, nor promoted a viable shipping industry that contributes to a broader Australian economy, nor enhanced the reliability of Australian shipping, has never attracted an international trading vessel to the international register, has decreased the uses of vessels in the Australian General Shipping Register and has destroyed competition in coastal trading.

464. In fact, it is hard to think of any other policy that has not only been such a complete failure but has also destroyed the objects that it was meant to protect.

465. Yet, despite the harm to competition, to shippers, to ocean carriers, to seafarer jobs, to the local manufacturing industry, to the environment and to the individual people who have been harmed by increased trucking (air pollution, road accidents and deaths), there are people and organisations that want to expand the scope of the coastal regime. Some policy actors have called for all ships calling at Australian ports to be required to fly the Australian flag. We can only imagine how that would affect Australia's international relations with other countries.

466. There are calls to abandon the Temporary Licensing regime. Maybe that would boost coastal shipping but there is certainly a very non-negligible chance it could destroy Australian coastal shipping altogether.

467. For the purposes of policy analysis, let's assume it does revitalise coastal shipping, generating maritime jobs (doubtful; automation), industry revenues and taxes. But what would the effect be on the rest of Australia? Well, if recent history is any guide, maybe less air pollution and road accidents from trucking, but also a massive hike in the cost of transport and the complete devastation of Australian manufacturing and landside businesses with massive job losses, a surge in the cost of living and industrial scale implementation of import substitution (which would pretty quickly remove demand for coastal shipping thereby defeating the point of expanding the current coastal shipping regime).

[76] https://www.bitre.gov.au/publications/ongoing/road-trauma-involving-heavy-vehicles 188 people were killed in Australian road crashes involving heavy trucks in 2019; there were 510 heavy truck occupants hospitalised because of road crashes in 2018; https://ihsmarkit.com/research-analysis/seafarer-fatalities-shows-shipping-must-do-more.html - there were 112 seafarer fatalities in 2019 – bear in mind that's a global figure whereas the truck deaths are Australia-only

468. The cost of an expanded coastal shipping policy is surely too high for Australia to bear. Australia could simply to do away with the current, protectionist, regime and allow international ships (which are already sailing around the Australian coast, and which are not allowed to carry coastal cargo) to take part in the cabotage trade. There would likely be a modal shift from road and rail thereby cutting air pollution from road and rail (the increase in air pollution from ships would be disproportionately less per tonne-km of cargo moved) and preventing personal injuries and deaths. The Australian economy and shippers would benefit from access to cheap coastal transport. Australian primary production and manufacturing businesses would particularly benefit from access to coastal shipping, thereby helping to preserve economic activity and jobs in country Australia.

469. Ships are subject to flag-state law and port state control. That means Australian Maritime Safety Authority inspectors will board ships in Australia to check they are safe. Ships are also subject to the Maritime Labour Convention and inspection by International Transport Federation officials who check that wages are paid and that the crew have decent conditions. Ships are subject to Classification Society rules and insurer rules, and so they are inspected. A ship calling in Australia without a certificate of Class and without various marine insurance certificates will be detained. There are commercially available databases that detail ship histories, including such matters as deficiencies and detentions, and so officials and members of the general public can check such matters if they so feel inclined. The Port State Controllers are members of international organisations such as the Tokyo Memorandum of Understanding on Port State Control, and they share information. Ships calling at port are subject to most (but not all) of the laws, such as the criminal law, of the country that they are visiting. Various other rules and regulations are imposed by other bodies (such as charterers) and there are various codes of practice regimes to be complied with.

470. Ships are very heavily regulated and inspected. If Australia were to simply eliminate its current restrictive coastal shipping regime and were to allow international ships to carry coastal cargo then there is no reason to believe it would be inherently unsafe, or environmentally disadvantageous, or would have much adverse effect at all. As far as Shipping Australia can see, there is no need for any kind of licensing system, or even the permit system that was used under the predecessor coastal shipping regime.

471. Shipping Australia believes that the greatest overall good to Australia and to Australians, in terms of environmental protection, safety of life, creation of jobs, reduction in demand for infrastructure spending and reducing unnecessary economic cost would be gained simply by revising the existing cabotage restrictions along with a re-write of the Coastal Trading Act.

472. Shipping Australia has made numerous submissions about Australia's coastal shipping regime and we hereby incorporate them into this submission by reference. The following submissions on coastal shipping should be considered to be part of this submission:

SAL 13162 - SAL Submission to Productivity Commission Inquiry into Tasmanian Shipping, 23 Dec 2013
https://www.pc.gov.au/inquiries/completed/tasmanian-shipping/submissions/submissions-test/submission-counter/sub053-tasmanian-shipping.pdf

SAL14046 Response to Government Options Paper: Approaches to regulating coastal shipping in Australia April 2014
http://shippingaustralia.com.au/wp-content/uploads/2012/10/SAL14046-Submission-in-Response-to-April-2014-Coastal-Shipping-Options-Paper-Final.pdf

SAL 14058 - SAL Submission to Queensland Coastal Sea Freight Inquiry notified by the Qld Legislative Assembly on the 22nd May 2014 http://shippingaustralia.com.au/wp-content/uploads/2012/10/SAL14058-Submision-to-Queensland-Coastal-Shipping-Review-July-2014.pdf

SAL 15109 - SAL Submission to Senate Inquiry into Shipping Legislation Amendment Bill 2015
https://shippingaustralia.com.au/wp-content/uploads/2012/10/SAL15109-SAL-Submission-Senate-Inquiry-Shipping-Legislation-Amendment-Bill-2015-FINAL.pdf

SAL 17021 - Shipping Australia Limited's Submission to the effect of red tape on cabotage
https://shippingaustralia.com.au/wp-content/uploads/2018/07/SAL17021-SAL-submission-to-Senate-Select-Committee-the-effect-of-red-tape-on-cabotage-5-April-2017.pdf

SAL 17022 - Shipping Australia Limited's Submission in Response to Coastal Shipping Reform Discussion Paper – March 2017 https://shippingaustralia.com.au/wp-content/uploads/2012/10/SAL17022-SAL-Response-to-Coastal-Shipping-Discussion-Paper-March-2017-Submitted-12-May.pdf

SAL 17242 - Shipping Australia Limited's Submission to Inquiry into the Provisions of the Coastal Trading (Revitalising Australian Shipping) Amendment Bill 2017
https://shippingaustralia.com.au/wp-content/uploads/2018/07/SAL17242-SAL-Submission-to-Senate-Inquiry-Provisions-of-the-Coastal-Trading-Amendment-Bill-2017-submitted.pdf

SAL 19007 - Inquiry into the policy, regulatory, taxation, administrative and funding priorities for Australian shipping
https://shippingaustralia.com.au/wp-content/uploads/2019/03/SAL19007-SAL-Submission-to-Shipping-Inquiry-2019-submitted-5-March-2019-.pdf

SAL19105 - Submission to Victorian Port and Coastal Shipping Industry Reform Enquiry
https://shippingaustralia.com.au/wp-content/uploads/2019/07/SAL19105_2-SAL-Submission-Victoria-Coastal-Shipping-Review.pdf

SAL 19216 - Shipping Australia's Submission to "Coastal Trading Reform – Where to from here?" 15 November 2019
https://shippingaustralia.com.au/wp-content/uploads/2019/12/SAL19216-SAL-Submission-Coastal-Shipping-Where-to-from-here-sent-15-Nov-2019.pdf

SAL20282 - Shipping Australia Limited's Submission on the "Coastal Trading Reform for Cargo Vessels - Discussion Paper - September 2020"
https://shippingaustralia.com.au/wp-content/uploads/2020/10/SAL20282-Submission-to-Coastal-Trading-Reform-DP-Sep-20-20201022.pdf

473. **Recommendation:** consistent with the Productivity Commission's previous recommendations, that the coastal trading regime be rewritten as a matter of priority.

A proposal for a national fleet

474. It has been proposed that there be an Australian-flagged and crewed fleet of privately-owned and commercially operated vessels available for requisition by the Australian Defence Forces in times of national need so as to bolster our "national security" and our "economic sovereignty". If the policy proceeds a taskforce will be appointed to advise on the development of a fleet that is likely to include "up to a dozen" vessels including tankers, container and ro-ro ships.

475. Policy proponents suggest there will be about 12 ships across three sectors, and they want to deploy them in four sectors: box ships, bulkers, tankers and ro-ro.

476. The potential ill-effects of a national fleet can be seen by looking at the U.S. Jones Act as a case study. Under the 1920 Jones Act, the United States has had a protectionist regime and national fleet for just over 100 years. It basically prohibits non-U.S. shipping from the cabotage trade. Coastal traders must be mostly U.S. owned, crewed, registered and built. Proponents of the regime claim it helps bolster military logistics by providing ships and manpower.

477. In the early 1990s, an international coalition formed to repel Iraqi invaders from Kuwait. Of the 281 Ready Reserve Force and commercial ships chartered by the Military Sealift Command, only eight were Jones Act ships. Of those eight, only five entered the Persian Gulf. Meanwhile, there was a shortage of mariners. The US authorities engaged students, professors, veterans of World War 2, the Korean War and the Vietnam War to fill the gap. This marine workforce included crew without the normal set of qualifications, teenagers, two octogenarians and a 92-year-old. The official account noted that the operations had "nearly exhausted the nation's supply of merchant mariners".

478. Jones Act ship numbers and deadweight tonnage has, apart from a couple of peaks, generally fallen. There were 434 Jones Act ships in the early 1950s with about 5.47 million deadweight tons. In the early 1980s there were 257 ships with 11.3 million deadweight tons (ships had gotten bigger). By 2018, that had fallen to 99 ships and 4.9 million tons. By November 2021, it was 96 ships with 4.87 million tons.

479. Then there's the quality of the Jones Act fleet. Of the November 2021 Jones Act fleet only 80% were "militarily useful". About 68% of all the Jones Act ships are over 10 years old; 34% are over 20 years old and 24% are 30 years of old or over. One is 59 years old. Some of these ships are even steam-powered.

480. Manpower availability has declined. The official U.S. account of the early 1990s Gulf War reports that mariner numbers fell by about 60% from 1970 to the early 1990s. Since then, there has been repeated testimony that U.S. mariner numbers are too low. In 2018, Rear Admiral Mark Buzby, the Administrator of the U.S. Maritime Administration, also warned of problems with manpower. “We’ll run out of people before we run out of ships,” Rear Admiral Buzby said.

481. The Jones Act is supposed to create an environment that provides a stable supply of quality ships and crew to help U.S. naval forces in a conflict. However, the Jones Act regime has resulted in a shrinking mariner workforce and a small number of ageing and poor-quality ships. The Jones Act regime does not support U.S. national security.

482. Given the economic might and power and of the United States, along with the 100-year history of Jones Act failure, it is unclear as to why anyone thinks that Australia can do better with its own national fleet policy.

483. If there are national security issues, national authorities can always buy or charter ships and hire crew from the open market to help with their naval and military logistics. It was actually the international charter markets that provided the solution to the US military logistics needs in the early 1990s Gulf War. The U.S. authorities were able to charter about 177 ships flying a variety of foreign flags. The US authorities also relied on the international shipping markets for their maritime logistics for the invasion of Iraq in early 2000s.

484. The worst-case scenario is a major war. These do not ignite overnight and so Canberra can always opt to charter ships if tensions rise. But that might not be a good idea. In the event of armed conflict, ships in a national Australian fleet flying the Australian flag have already pre-identified themselves as potentially high-value – and vulnerable – targets to any hypothetical enemy.

485. In contrast, there is no particular reason to attack ships in the international fleet that are flying the flag of neutral countries. And, if neutral ships are attacked, the attacker risks drawing a third party into the conflict. For instance, Imperial German submarines attacked and sank the British passenger liner *Lusitania* in 1915. That tragedy helped build U.S. support for entry into World War I. In the 1980s Iraq-Iran Tanker War, Kuwaiti crude carriers re-flagged to the U.S. flag to gain diplomatic cover from the United States.

486. In the event of a major war, our international alliances, such as our membership of the Australia, New Zealand, United States Security Treaty (ANZUS) and the 2020 announcement of near AUD$270 billion poured into the Defence Forces are all going to be far more important to Australian national defence than 12 civilian cargo ships.

487. Shipping itself is resilient to armed conflicts. As noted earlier, international shipping was resilient to attacks by armed forces in WW2, was resilient to attacks by armed forces in the Iraq-Iran War in the 1980s and it was resilient to attacks by Somali pirates in the 2000s.

488. There have been many wars, conflicts and other kinds of disasters over the last 120 years. Yet ships have sailed through it all and have continued to deliver the goods.

489. Some policy advocates claim that Australia's fuel security is vulnerable because of its reliance on international shipping. We assert the exact opposite: our fuel security is boosted because we rely on international shipping. Shipping Australia has already written a lot on this topic and interested readers can find detailed arguments in our submission to the Productivity Commission study on Vulnerable Supply Chains[77].

490. That same inquiry also found that our supply chains, and the goods within them, are not vulnerable. "The Australian shipping sector proved to be resilient", the study says in Box 2.4, fourth paragraph down. The report also concluded that: "services from maritime shipping and port operators largely continued to function during the COVID-19 pandemic in Australia."

491. Our supply chains, ocean shipping, and the goods they carry within them, are highly resilient.

Economic sovereignty is not a valid justification

492. "Economic sovereignty" refers to the power of governments to run their economies and acquire or exchange resources free of foreign influence. But, in practice, no country actually has that supreme power. Even the economic choices of the United States are influenced by the willingness of China to fund American consumption. All internationally facing societies face constraints placed upon them by other societies.

493. We can see that the concept of economic sovereignty is a bit irrelevant in relation to international trade because, by definition, an internationally trading nation enthusiastically engages with citizens of other nations. A country with complete and total economic sovereignty would be a hermit kingdom trading with no-one.

494. Within the borders of Australia, we already have a high degree of economic sovereignty. At any point the Australian federal government (or, in some cases, state governments) can change monetary and fiscal policy, impose or remove prohibitions on dealing with goods, people or countries, impose or remove restrictions on the movement of people or capital, and either criminalise or legalise possession of various goods. It's not clear how having a 12-ship national fleet bolsters economic sovereignty in practice especially when our trade is currently carried by a near-6,000 strong fleet of international ships that call in Australia (although, note, the entire global shipping fleet is far larger than 6,000).

495. Disasters may result in huge casualties and population dispersals, so there may be a need for hospital ships, seaborne mass-people movers and accommodation vessels. Fires, earthquakes and tsunamis can be hard on infrastructure, creating a need for movable transport infrastructure and ships that have a variety of capabilities including shallow-draught, amphibious, self-working multipurpose ships.

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[77] Shipping Australia submission SAL21-018 to the Productivity Commission's "Vulnerable Supply Chains" inquiry. See: https://www.pc.gov.au/__data/assets/pdf_file/0006/275757/sub056-supply-chains.pdf. For details of wet bulk cargoes, tankers and terminals etc., see SAL21-018 paragraphs 41 to 56. Details of tanker routes are discussed from paragraph 47 onwards and can be seen in Figures 3 and 4. Details of the sources of domestic and imported crude, along with the details of imported refined products, are detailed in paragraph 48 and figure 5. See our detailed further comments on the topic of "Australian liquid fuel security" in SAL21-018, paragraphs 179 to 207.

Disaster relief needs shallow draught amphibious ro-ro type vessels, small landing craft and helicopter carriers, which, together, have excellent lift capability, appropriate draft, speed, range and flexibility. Large ro-ro vessels with ground-landing ramps can also be suitable as they can store, move and transfer large volumes of goods, food, fuel (in drums) and other supplies. Navies look for naval vessels to fill these requirements. In the event of any kind of long-term disaster relief, the Federal Government could always hire vessels from the international markets, just as the U.S. authorities did in the various Gulf Wars of the 1980s-to-early-2000s.

496. It is notable that none of the ship-types proposed for the national fleet (box ships, tankers, dry bulk) have these capabilities. Indeed, modern shipping is so specialised that it can be very difficult to move cargo if the right facilities are not available. For instance, when a box ship that grounded on a reef off the coast of northern New Zealand, it took many weeks for salvors to get all the containers off. In the event of a major disaster, such as an earthquake or a tsunami, the disaster-struck ports could be quite badly damaged and unable to unload cargo.

497. Meanwhile, this national fleet is supposed be commercially trading. If an Australian flagged crude tanker has just loaded at, say, the Das Island facility in the United Arab Emirates (in the Persian Gulf, near Qatar), then it is about 7,300 nautical miles and 30 days away from where it can unload at the Ampol refinery in Brisbane. It is also 6,662 nautical miles and 28 days away from unloading at the Viva refinery at Geelong. The tanker would have to sail back to Australia, and then be sent to the location of the disaster. When it gets to its location, there's no guarantee that it will be able to carry out operations in the disaster zone if the relevant infrastructure has been damaged.

498. Over a month is a long time to wait for logistics relief to be available, especially when tankers near to the disaster site or the relief force can be hired off the international market by making a few phone calls. It's a similar consideration with container ships too. A box ship might have just loaded at, say, Incheon, South Korea. It has to somehow get rid of its existing load and then get to a re-supply point, say, Melbourne in Victoria. That's probably a ten-day sailing time, then it has to re-load and then get to the scene of the disaster. It will also have the problem of unloading in a disaster zone if specialist infrastructure is damaged.

499. Australia imported / exported about 1.7 billion tonnes of cargo and 5,915 cargo ships made 17,602 voyages to Australian ports from overseas ports, according to BITRE's Australian sea freight. If there is a disaster or a conflict, what are those 12 ships going to do? How can 12 cargo ships possibly do more than the tiniest fraction of nearly 6,000 ships on 17,600 voyages carrying 1.7 billion tonnes of cargo?

500. It should now be obvious that the small, proposed, fleet is going to be irrelevant in a disaster relief situation at best.

501. It will also likely be very expensive. Policy proponents suggest there will be about 12 ships across three sectors, and they want to deploy them in four sectors: box ships, bulkers, tankers and ro-ro. We will assume three ships of each type. Data for new ships can be hard to come by, so we used data from the modern second-hand market as of December 2021. An un-named newly built 180,000 deadweight dry bulker was sold for US$60.2 million. A 111,000-deadweight crude tanker was sold for USD$52 million. NSW Ports data shows that most port calls are made by ships in the 4,000 TEU to 6,000 TEU

range. There was a 2015-built 5,000 TEU box ship sold in November for USD$105 million. An 11-year-old car carrier sold for USD$22 million.

502. Using that data, we can estimate the purchase price of the national fleet (assuming they are bought on a modern second-hand basis). Three dry bulkers at USD$180.6 million; three crude tankers at USD$156 million; three box ships for USD$315 million; and three car carriers for USD$66 million. That's at least USD$717.6 million, which is about AUD$1 billion at the current exchange rates (early January 2022). But that's the price for second-hand ships and the car carrier sale reported above involved middle-aged ships which have lower prices. If new ships are bought, then it will likely be more expensive.

503. Alternatively, ships can (usually) be hired off the international market. Container ships of 5,000 TEU size currently have an operational cost of about AUD$224,000 a day.

504. Then there's the operational side of matters. Will importers and exporters feel comfortable putting their cargo on ships that are crewed by Australian union-affiliated crew? The three main Australian maritime unions have all demonstrated willingness to engage in disruption to achieve their aims. Experience shows that it is extremely difficult for management to strike an Enterprise Bargaining Agreement with three different sets of unions.

505. Shippers will also have to bear in mind that these ships are supposed to provide a contingency capacity for conflicts and natural disasters. If these ships are called up, will the cargo be dumped in some foreign port somewhere so the ship can attend to its national disaster relief obligations? Will shippers accept that potential for cargo disruption and possible loss of cargo?

506. Then there is the issue of whether an Australian national fleet can compete against the international shipping companies. The container ships will be particularly difficult to run as there will only be three of them and they will need to enter into an alliance with other operators to provide a service.

507. Given the issues that these ships will be subject too, will the other container shipping companies be willing to enter into an arrangement with the Australian national fleet entity? The Australian entity will also be far more expensive than the competitors. The International Labour Organization basic monthly wage rate for an able seafarer is USD$641 (AUD$894.88 / month; AUD$10,739 / year) whereas the absolute minimum wage rate for an Australian sea-going worker is AUD$49,123 for an integrated rating. Australian crew will be at least 4.5 times more expensive than a comparable international crew.

508. Ocean shipping is, normally, a very low return business. When rates are high, as now, shipping companies make excellent profits. However, for the vast majority of the time shipping rates are low and profits are poor. According to internationally respected shipping analysts, Alphaliner, container shipping rates were so low that the average ocean-going carrier had an operating margin of minus 2.9% in the six years following the 2008 financial crisis. Eight of the major ocean shipping companies recorded an aggregate net loss of more than US$2.5 billion in the five years prior to 2020 despite generating over USD$350 billion in revenues.

509. When container freight rates revert to their historical lows, as they probably will given the volume of ships on the order book, then these wage differences may be the difference between a shipping company that can run sustainably and one that cannot.

Bad service: the Jones Act and the Coastal Trading Act

510. We already know that national fleets deliver considerably worse services and at a higher cost. Shipping a box from the mainland East Coast USA costs twice as much to Puerto Rico (an unincorporated territory of the US and so the Jones Act applies) as sending a box to nearby Jamaica. Shipping oil from Texas to the northeast coast of the U.S. is two to three times more expensive than sending it to nearby Canada.

511. Shippers are highly sensitive to freight prices. The Cato Institute provides several informative examples. The U.S. is one of the world's largest producers of rock salt (for use on the roads in winter). U.S. state authorities chose to import it from Chile instead, because it's cheaper. Hawaiian cattle producers fly their cows to market, or trans-ship via Canada to avoid the Jones Act costs. Even the Jones Act operators prefer not to use Jones Act ships – they use a tug and barge system instead because they can be sailed with half the crew of a Jones Act ship.

512. A tug and barge combo is potentially riskier too: they sail closer to the shore than regular ships, which potentially makes them more susceptible to grounding and they are less capable in heavy seas if they travel too far from the coast. Under the U.S. Jones Act regime, the overwhelming majority of Jones Act ships are only used to transport goods when no other transport option exists, according to the CATO Institute.

513. Closer to home, our own Coastal Trading (Revitalising Australian Shipping) Act 2012 led to an exodus of shipping from Australia, it led to examples of freight rates rising by over 60%, and it led to import substitution that led to the loss of manufacturing jobs.

514. History teaches us a lesson. Back in 1956 the Australian Shipping Board set up a shipping line, the Australian National Line. It was profitable to begin with, but its profitability plummeted, leading to multi-million-dollar losses every year because of cargo downturns and the increase in the level of industrial disputation. In the early 1980s, it was bankrupt and had to be rescued with $60m loans and $30m equity. It went bankrupt again a year later after an extraordinary restructure. The Commonwealth had to inject another $70.5 million. The national line was taken over by the Federal Government in 1988 but the company couldn't deliver on its business plan. It continued to deliver multi-million-dollar losses – rising to hundreds of millions of dollars. It was eventually sold to an overseas company. The national line was never able to compete in the international markets, it was subject to ongoing government interference, and it incurred high operating costs by flying the Australian flag. There is little reason to believe a future national fleet would fare any better.

515. It is likely the current shipping freights will revert to their mean in due course as more tonnage hits the water and as demand for freight normalises. In such circumstances, a national fleet will be burdened with high costs, will be unlikely to compete and will likely be burdened with extensive industrial disputation. It is easy to foresee that there could be large losses.

516. Recommendation: that the Productivity Commission state a national fleet proposal will likely not meet its policy goals and will be a sub-optimal use of public funds.

Policy incrementalism

517. It is well-known in policy making communities that one way to implement policy is through the practice of "incrementalism". Rather than focusing on wholesale or major changes, policy makers make small, little, changes that continuously build upon previous changes so that changes take place by increments rather than by leaps and bounds. See, for example, "Incrementalism" in the Encyclopaedia Britannica.

518. It appears possible that an incrementalist approach to maritime policymaking is being waged in Australia. Prior to the passage of the Coastal Trading Act (2012), Australia had a remarkably open cabotage system. However, the Coastal Trading Act ushered in a highly restrictive and protectionist policy. Now, in 2022, there is a proposal for a national fleet.

519. While the original statement from the policy proponent "Labor's plan for a Strategic Fleet" only says that a national fleet would be "likely to include up to a dozen vessels", the Taskforce could recommend any number of ships. Since the initial proposal, there have been statements that could be used by policy proponents to argue for a substantially bigger fleet.

520. "We have a deficiency in ships and … for a nation of this size, we need about 200 ships. 50 of those would be overseas ships, and the other 150 would be domestic," an executive of Sea Transport Corporation told Sky News host Cory Bernardi on 04 January 2022. (Incidentally, we are not asserting that the executive is advocating for such an outcome, merely that in that particular news segment, he was quoted as stating that Australia would need 150 domestic ships to cater to the freight task).

521. Such a fleet would be extremely expensive. Assuming the same fleet composition as discussed earlier, and assuming the purchase costs given earlier in this submission, we can estimate a very rough cost of a 150-strong national fleet.

TABLE 9: estimated initial cost of a national fleet

	Cost USD$ million / ship	**Ships in 150-national fleet**	**Total USD$ million**	**Total AUD$**
Bulkers:	USD$60.2m	38	2,288 m	3,186 m
Tankers:	USD$52m	38	1,976 m	2,753 m
Container ships:	USD$105m	38	3,990 m	5,559 m
Ro-Ro:	USD$22m	36	792 m	1,103 m
		150 ships	**USD$9,045 m (USD$9.04 billion)**	**AUD$12,601m (USD$12.6 billion)**

Source: *Shipping Australia.* ***Data:*** *derived from examples of single, and sometimes twin, ships being sold on the international modern second-hand market at the end of 2021.Figures may not sum exactly owing to rounding.*

522. Meanwhile, in another example of creeping incrementalism, certain other parties have been calling for all ships merely ***operating*** in Australian waters to be required by law to be registered in this country.

On current numbers, which would require just over 6,000 ships to be registered under the Australian flag[78].

PERFORMANCE MEASURES OF AUSTRALIA'S TRANSPORT INDUSTRIES

523. The Australian Bureau of Statistics has experimented with a set of satellite transport national accounts in the past[79]. The current set-up does not adequately capture commercial freight and transport. Freight transport activities may be carried out by non-transport industries. Construction companies may transport aggregates to a site, for instance. The ABS estimates that in-house road transport activity may contribute just under 61% of all road transport output[80].

524. Australia's freight task, international trade, economic activity and the jobs they support are far too important to be allowed to carry on being invisible.

525. As the ABS says, in its "Overview of the Australian Transport Economic Account", it 'will enable policy makers to assess the full contribution of transport activity to the economy, helping them better understand the direct and indirect effects of policy changes, track improvements in productivity, and better allocate investment in transport infrastructure".

526. Recommendation: the Productivity Commission recommend that an expert group comprising industry figures, data users, economists and statisticians should be set up to review what should be in the satellite account and how these should be individually profiled within the satellite accounts.

CONTAINER PORT PERFORMANCE

527. The Terms of Reference to this inquiry call for a discussion of port performance. Shipping Australia notes, and quotes with approval, the comments in the executive summary to the Container Port Performance Index 2020 by the World Bank and I.H.S. Markit.

"How a maritime port performs is a crucial element in the cost of international trade... Unfortunately, ports and terminals, particularly for containers, can often be sources of shipment delays, supply chain disruption, additional costs, and reduced competitiveness. Poorly performing ports are characterised by limitations in spatial and operating efficiency, limitations in maritime and landside access, inadequate oversight, and poor coordination between the public agencies involved, resulting in a lack of predictability and reliability. Poor performance can also have an impact far beyond the hinterland of a port: Container shipping services are operated on fixed schedules with vessel turnaround at each of the ports of call on the route planned within the allocated time for port stay. Poor performance at one port on the route could disrupt the entire schedule. The result far too often is that instead of

[78] See page IV of "Australian sea freight 2018-19,"July 2021, Department of Infrastructure, Transport, Regional Development and Communications, Bureau of Infrastructure and Transport Research Economics.

[79] "Overview of the Australian Transport Economic Account"

https://www.abs.gov.au/statistics/economy/national-accounts/australian-transport-economic-account-experimental-transport-satellite-account/latest-release accessed 06 February 2022.

[80] "Overview of the Australian Transport Economic Account"

https://www.abs.gov.au/statistics/economy/national-accounts/australian-transport-economic-account-experimental-transport-satellite-account/latest-release accessed 06 February 2022

facilitating trade, the port increases the cost of imports and exports, reduces the competitiveness of its host country and its hinterland, and inhibits economic growth and poverty reduction".

SPECIFIC MEASURES OF PORT PERFORMANCE

528. It's now a cliche that 'what gets measured gets managed'. Shipping, for instance, has been subject to many different kinds of metrics for decades. These have been published widely. One example is the annual flag state performance lists. Terms of Reference for the Productivity Commission's review of Australia's Maritime Logistics System talked of developing metrics within a port performance framework.

529. While Shipping Australia strongly advocates for private property rights in the maritime industries, we have also noted in certain circumstances that there can be a greater good that requires the over-riding of private property rights. Dealings with the ports around Australia can be one such situation.

530. Firstly, many Australian ports are government-owned. Secondly, the privatised ports are on a long-term lease. They are, in fact, privately-operated. The actual assets are still government-owned. Thirdly, Australian ports are effectively regional monopolies. Not only are they monopolies, they are also vital to the well-being of Australians and they are absolutely central to Australia's international trade.

531. Given that Australian ports are often government-owned, that they are monopolies, and that they have an outsize value to every Australian, then it is reasonable to subject them to a higher level of public scrutiny, public transparency and oversight compared to other businesses.

532. Publication of performance metrics will likely also prove to be an invaluable tool for policy actors to exercise port governance and oversight. Shipping Australia therefore looks forward to the open and free publication of Australian port performance metrics.

533. We have provided a list below of performance metrics that it would be useful for ports to publicly report. Our suggestions are based on the viewpoint of ship operating companies. However, we understand that different sectors of the container logistics industry may reasonably have different metrics that it would be valuable to publish. We also note that some of these metrics may be published by government officials, but we further note that those other statistics can be several years out of date.

534. Shipping Australia asserts that the following data sets should be published monthly, openly (anyone can access) and for free (there should be no financial cost to access the data). The port performance metrics should all be published in a uniform way, processed with a standard methodology, and with standard nomenclature, so that the data is comparable.

535. All data should be provided separately in Excel downloads and CSV downloads and also in formats in which the data can be downloaded for use in statistical programmes such as "R"; other download formats could additionally be provided at the port's discretion.

536. Data downloads in Excel, etc should be available in small file sizes so that anyone can access them and can interrogate the data (i.e., no giant Excel files as this dissuades all but the hardcore data user). This may mean making many multiple spreadsheets available for download. Data sheets tackling specific data sets should be discrete and separate. See, for instance, the data download cubes as provided by the Australian Bureau of Statistics as an example of good practice.

537. All data should be made available via port websites on a rolling ten-year basis; data should also be provided to and published by the appropriate Federal Department (e.g. the Department of Transport, and BITRE), and / or to the National Freight Hub and the Australian Bureau of Statistics, on a regular, timely and frequent basis (at an interval of at least every year and no more than a year in arrears).

538. Ports, terminals, port operators, authorities or governments should already have most, if not all, of the data listed here. This list of data should include, as a minimum:

- all port-, shipping-, maritime-, trade-, statutory-, regulatory- and any other relevant fees, monies, payments or charges, imposed by any private body, any government-related body, or any emanation of the state, of any shape, type, or form whatsoever
- Ship calls at port and terminal per month broken down by ship type and size, fully cellular container ship data to be broken down into 1,000 TEU blocks; bulkers, tankers (not gas) broken down by deadweight; gas carriers by cubic metres.
- Monthly cargo throughput – mass tonnes, cubic metres, TEU etc as appropriate
- Value of monthly cargo throughput – AUD$ per tonne, cubic metre, TEU etc.
- Total ship turnaround time from arrival to departure (from time of notification to deemed drop-off pilot point); data provided by port and terminal (inclusive of waiting time, idle time, time at berth, service time, sailing delays)
- Ship's time-to-berth for on-time ships
- Ship's time-to-berth for late ships
- Average time at berth per ship – by terminal and by port
- Average worked ship time at berth – by terminal and by port
- Average idle ship time at berth – by terminal and by port
- Average box moves per hour per crane – by terminal and by port
- Average box moves per hour per crane per eight-hour shift – by terminal and by port
- Average number of cranes deployed per ship – by terminal and by port
- Container moves per ship
- Berth utilization – by terminal and by port

539. Recommendation: that the Productivity Commission recommend that the Federal government determine what data to publish and how to publish it in consultation with industry.

Key elements of port performance of interest to a ship operator

540. Time is money in shipping. Faster port calls for a ship operator are generally better port calls. Ship operators want to have as fast a total turnaround time as possible, which we can define as the time it takes between notice of arrival to the point of drop-off-pilot for a ship.

541. Australian ports are not competitive in terms of total turnaround time. The ACCC noted in its recent Container Stevedoring Monitoring Report81 citing UNCTAD data82 that the median in-port time for box ships calling at Australia was three times longer than Japan, twice as long as China and 50% longer than Singapore or New Zealand.

[81] "Container Stevedoring Monitoring Report 2020-2021," ACCC pX

[82] "UNCTAD STAT Data Center - https://unctadstat.unctad.org/wds/TableViewer/tableView.aspx?ReportId=170027

542. Shipping Australia reviewed this data and noted that the 2020 median time in port for five highly comparable countries was as follows: UK 0.73 days; NZ 0.85 days; 1.03 USA; 1.41 Australia; and 1.80 for Canada. While these may sound like small differences, they quickly compound.

543. A reduction in Australian total turnaround time to UK times is a 48% cut in median turnaround times. Australia's turnaround time of 1.41 of a day is 33 hours and 33 minutes or 2,013 minutes. The UK's turnaround time of 0.73 of a day is 17 hours and 31 minutes or 1,051 minutes. To an ocean shipping company, that difference in time represents a lot of money. Shipping Australia estimates that a 4-5k TEU vessel not burning fuel costs about A$149,653 dollars a day, equivalent to about A$104 a minute83.

544. At the rates cited above, those 2,013 minutes in port would cost the ocean shipping company A$209,352 while the 1,051 minutes would cost A$109,304. That's a difference of A$100,048. But it compounds – that's A$100,046 wasted per ship, per port call. As noted below, there were 972 container ship calls (admittedly in a range of sizes) in the 2020-2021 financial year at Port Botany alone. While different ship sizes will incur different costs, it gives an idea of the scale of wasted costs imposed on shipping companies because of Australian port inefficiency. And that's before we consider the fact that there are still another four main container ports in Australia that box ships may well visit.

545. For the purposes of analysis, the duration of a container ship port call can be broken down into several phases: (1) the "time to berth" which is the waiting time from the issue of notice of arrival to getting to berth; (2) total time at berth comprising (a) "idle time" which is the time the ship is at berth but no cargo operations are underway; (b) cargo operations time; and (3) leaving berth and leaving the port. We're not aware of any major issues once a ship is leaving the berth and leaving the port so we will not discuss that aspect any further.

546. The International Maritime Organization estimates that ships spend up to 9% of their time waiting at anchorage (an area at or near a port in which ships can drop anchor and wait)84. Time to berth can be broken down into "waiting for marine service providers" and "waiting time for access to a berth". Waiting for marine service providers would involve tug availability, pilot availability, line-boat availability etc. However, we are not aware that waiting for marine service providers is an issue.

547. Waiting time for access to a berth can be adversely affected by bad weather (winds, waves and tidal surges will typically cause delays). In the northern regions, cyclones and the like disrupt schedules. There is little that can be done about this. Bad weather affects all kinds of ships. For instance, in March 2021, Lloyd's List reported that there was congestion at Australian ports following severe storms and that queues hit up to 40 vessels at Newcastle and 19 at Kembla[85].

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[83] figures are derived from publicly available sources. Figures may change daily. Figures current as of 31 January 2022

[84] Just in Time Arrival Guide issued to support smarter, more efficient shipping, IMO

[85] "Congestion at Australian ports following severe storm" by I Walia see https://lloydslist.maritimeintelligence.informa.com/LL1136217/Congestion-at-Australian-ports-following-severe-storm.

548. Excluding weather-related issues, waiting time for a berth in Australia is a vexing matter for ship operators. It is inherently tied to port performance and all the variables that ports are subject too.

549. Shipping Australia members have advised that waiting times for a container berth in Australia are particularly lengthy compared to their experiences in other countries. There are varying reasons. Industrial disruption (strikes and the like) inevitably lead to delays through the chain and so ships waiting to get to berth are delayed.

550. It is important to note the terminology. When ports and container terminal operators say that there is no "delay" in berthing, they mean that if a ship arrives on-window (industry-speak for "on time") then the ship is berthed promptly and, accordingly, there is no delay. When ships that arrive late, and have lost their slot, ports and container terminal operators refer to such ships as "waiting" and not as "delayed".

551. Shipping Australia has been advised that ports and container terminal operators will require an off-window (late) ship to wait and to give way to an on-window (on-time) ship. The on-window ship is serviced first, and the off-window ship may have to then wait for some considerable time before it is serviced. This practice induces delays into the system. If a ship is at port then it could be berthed and serviced immediately rather than made to wait. That means the cargo from the off-window ship will flow into the landside, enabling consignees to get their goods sooner. It would likely ease or prevent the problem of multiple ships calling in quick succession (vessel bunching) which causes huge stress on the landside logistics situation.

552. There is a dilemma here. Servicing ships upon arrival could delay ships that are frequently on-time. Trade lane managers will resist the notion that their ships – which may always be on time – are made to wait for frequently off-window ships. Stevedores and ports may also be very opposed to prioritising ships on a first-come-first served basis as it reduces the commercial value proposition that they can offer to shipping companies. Senior managers of shipping companies may be somewhat ambivalent – on the one hand, it might make some of their ships late that are otherwise on time, but they might gain faster service of ships that are frequently late. The system as a whole might speed up.

553. This whole area (and the related field of "Just-in-Time" arrival) abounds with advantages and disadvantages for a variety of parties. In summary, "Just-in-Time" (in the marine context) is that all the parties communicate with each other sometime in advance so as to optimise vessel arrival, which maximises berth utilisation and avoids undue stress on the landside operations.

554. There are a lot of unknowns. It may be worth carefully studying berthing priorities to discover an optimal solution.

555. A related issue is the decision of port and terminal operators to set a maximal berth utilisation percentage of about 65%[86].

556. Conversations with port operators have revealed that ports generally do not like to have a high berth utilisation. They state it leads to sub-optimal outcomes in relation to ship-queues.

[86] "Port Botany CCC – Meeting No 30 – February 2021" Port Botany Community Consultative Committee, Meeting No. 29, NSW Ports, https://www.nswports.com.au/file-download/download/public/1712, slide 6 "Port Utilisation" of the Wilkinson Murray slide presentation which shows port utilisation ranging from 2019 to 65%.

557. It is notable that some industry actors appear to be trying to blame ocean shipping companies for port-induced delays to shipping. Statements have been made that prior to 2019 about 70% of ships arrived on time and, of late, less than 10% of vessels have arrived on schedule.

558. Shipping Australia will assume for the sake of argument that the 70% figure and the new 10% figure are correct. It has been widely reported that there are issues with schedule reliability. It has been extensively reported in the global media that there have been severe disruptions around the world for the last couple of years[87].

559. As explained elsewhere in this submission, container shipping often works on "loops". One possible Australian loop is for a vessel to start a loop at, say, Port Klang (Malaysia) or the nearby Singapore, possibly call at Jakarta, then call at Brisbane, Sydney, Melbourne, Adelaide, Fremantle and thence back to Port Klang (or Singapore) thereby completing the loop. There are a variety of loops encompassing a variety of port calls.

560. It stands to reason that if ships are very badly delayed in overseas ports, then the ship will be late upon arrival in Australia. Over the last two years there has been extreme port congestion all around the world because of the demand surge induced by COVID and the inability of ports and terminals to keep up. Additionally, some Asian ports completely closed down from time-to-time over the last two years.

561. This is why Shipping Australia has been commenting that "The supply chain crisis... is really a port congestion crisis"88.The emphasis by some policy actors that only 10% of ships are on time, and that they are late because of overseas ports issues, also draws attention away from the performance of Australian ports.

562. In an update dated 11 January 2022, a shipping company gave insight into the delays at Australian ports89. Using that data, we can demonstrate how ports can induce delays to shipping in Australia. Assuming we start a loop at Brisbane (so the count starts at zero) the ship would experience the following timings as it sailed around the Australian coast:

Start Brisbane: 1.5 days of cargo operations / experience 2 days delay / 3.5 days in total

Arrive Sydney: 1 day of sailing time / 1.5 days of cargo operations / 2 days delay / 5.5 days in total

Arrive Melbourne: 2 days of sailing time / 1.5 days cargo / 14 days delay[90] / 17.5 days in total

Arrive Fremantle: 3 days of sailing time / 1.5 days cargo / 1 day delay / 5.5 days in total.

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[87] "Shipping disruption: Why are so many queuing to get to the US?", J Goodman, M Luxen, 16 October 2021 https://www.bbc.com/news/58926842 and, for example, "Container ships suffer record delays as demand spikes," G Miller, 17 December 2020, Freightwaves.com https://www.freightwaves.com/news/container-ships-suffer-record-delays-as-demand-spikes.

[88] "The supply chain crisis... is really a port congestion crisis" https://www.shippingaustralia.com.au/supply-chain-crisis-is-a-port-congestion-crisis/".

[89] "Maersk Weekly Update" 11 / 01 / 2022

[90] This delay was attributed to COVID issues and bad weather. Some of the previous updates have referred COVID and bad weather, others to industrial action.

563. A ship working this loop would have spent 31 days on the Australian coast. Without delays, that figure drops to 12 days. So, while, yes, maybe only 10% of ships are arriving on time, the reason for this lateness is caused by port performance and it is specifically caused, in part, by the performance by Australian ports.

564. The delays given in the worked example above amount to 19 days. That's a sizeable delay that would otherwise have not occurred and the price tag for that delay is currently about A$2.84 million[91]. That's a delay cost per ship per loop. Ships will repeatedly loop around Australia and will repeatedly rack up costs. The costs quoted above also do not take into account a wide range of other costs, such as the opportunity cost of lost freight or any ancillary charges or surcharges that ships may be hit with from time-to-time.

565. Nor does it take into account the likely cost of ships having to speed up once they leave the Australian coast in an attempt to claw back time on their schedule. Because water is viscous compared to air, ships need hefty amounts of power to overcome inertia and resistance from seawater. An increasing amount of power is needed to continue to speed up, which means increasingly larger volumes of fuel are needed to supply that power. It takes far more fuel for a ship to speed up from, say, 20 knots to 21 knots, than it does for a ship to speed up from, say 10 knots to 11 knots. This extra fuel consumption is a major cost for ocean shipping companies and it is caused by port inefficiency.

566. Industrial action delays ships at berth which means the next ship – and the ships after that – can be very delayed. Extreme port congestion caused by a sudden upsurge in trade (as has happened with COVID) can also cause extreme delays. In recent years, ships have been delayed for up to 14 days before being allowed into port.

567. Once shipping companies realise there are extensive delays that are not going to clear up any time soon, they may, if at all possible, instruct their ship masters to slow their ships down. Alternatively, ship operators may change the rotation of the port calls, they may simply skip a given port completely, they may even reduce the frequency of services e.g., from a weekly to a fortnightly. It can be misleading to look for queues of container ships off the coast during periods of port congestion – those ships are most unlikely to be there. However, even though the ships cannot be seen in a queue, the queue exists.

568. Finally, there is also academic research to suggest that larger ships wait may have to wait longer than the smaller ships because of difficulties allocating a berth[92].

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[91]: assuming A$149,653 per day of non-fuel costs, assuming no other costs incurred because of delay. One-day cost as of 31 January 2022. Ship operating costs are volatile and will change daily. Costs are for a 4-5k TEU box ship. Other size box ships will have different costs. Costs data derived from publicly available data.

[92] Tendency toward Mega Containerships and the Constraints of Container Terminals," N K Park and SC Suh, Journal of Marine Science and Engineering https://www.researchgate.net/publication/333050696_Tendency_Toward_Mega_Containerships_and_the_Constraints_of_Container_Terminals#:~:text=The%20analysis%20reveals%20that%20larger,and%20the%20maximum%20is%2073.3%25; although this paper is written in the context of very large container vessels (ships far too big to currently call in Australia), Shipping Australia notes that Australian container ports can be quite in berth

569. It is clear that "Time to berth", and the reasons for delay / wait time, have profound effects on shipping and therefore on landside logistics.

570. Recommendation: that the Productivity Commission recommend that a study should be carried attempt to discover why ships are not being berthed promptly. Berth utilisation practices ought to be investigated. The study authors should attempt to discover an optimal solution.

Time at berth – idle time

571. Time at berth consists of two main elements: idle time and time engaged in cargo operations. Shipping Australia notes that container ships spend, on average, about 13.3 hours of idle time at a berth 93. Idle hours vary port-by-port. It is notable that Brisbane, Melbourne, Fremantle and Adelaide currently have idle times of about 10-ish hours. Sydney currently has an idle time of about 21 hours94. While 21 hours might not seem a lot, that time escalates when multiplied by the number of ship calls per year and the number of container ports in Australia.

572. By way of example, in 2020-2021, there were 972 container ships that called at Port Botany, Sydney. Assuming 21 hours of idle time per ship (and that all ships are exactly equal and experience the same idle time), then that's 20,412 hours of idle time in the 2020-2021 financial year. That's a considerable amount of time that could be put to use in cargo operations. This exercise would then need to be repeated with all the main container ports in Australia. As the ACCC Container Stevedoring Monitoring Report notes, "shipping lines have stated that they generally regard idle time at ports as pure waste". Shipping Australia does not have visibility on the factors that drive idle time.

573. Recommendation: the Productivity Commission recommend that there be an investigation into the causes of idle time with recommendations for a solution.

Time at berth – cargo operations (time under the crane)

574. Box moves per hour per crane is a key metric. The faster a crane works, the more quickly a ship is unloaded and reloaded. Australia's average crane rate is about 28.1 boxes per hour per crane, according to the latest ACCC Container Stevedoring Monitoring report[95].

575. Is 28 box moves per hour per crane a good figure? The global average ranges from about 22 box moves per hour per crane for the smaller vessels and it hits about 25 box moves per hour per crane for vessels of about 13,500 TEU, according to the World Bank / IHS Markit report from earlier this year. So, when measured against the global average, Australia's crane rates are above the global average.

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lengths and geographical features (e.g. river bends). If two larger vessels arrive simultaneously, then it can be difficult to accommodate them both immediately, whereas two smaller vessels likely won't have to wait. Being able to handle bigger ships is one reason that Australian container ports are currently committing to capital investment.

[93] "Container Stevedoring Monitoring Report 2020-2021," ACCC, p xxiv.

[94] "Container Stevedoring Monitoring Report 2020-2021," ACCC, p60, Table 6.3

[95] "Container Stevedoring Monitoring Report 2020-2021," ACCC, page xxiv; figure 6.1, p58

576. But "average" figures are notorious for hiding extremes. Take, for instance, the Port of Haifa, Israel. International media reported96 that the port which set a productivity record. It is not stated in the article whether that was a world record, a national record or a record for the port itself. The report does state that the record consisted of 319 box moves per hour with six cranes on one ship. That's twice as many cranes as are typically find assigned to a ship in Australia. It's about 53 box moves per hour per crane – pretty close to twice the Australian average crane rate. The record crane rate on that record-breaking shift was just under 75 box moves per hour per crane. That's more than two-and-a-half times the average Australian crane rate.

577. Over in the United Arab Emirates, in the Middle East, executives from the Port of Sharjah have repeatedly declared on the local conference circuit that Sharjah can handle around 60 box moves per hour per crane.

578. The Port of Tauranga is described by the ACCC as consistently outperforming our best ports. Australia's average 28 box moves per hour per crane does not appear to be competitive internationally.

579. Shipping Australia understands that some of our container ports sometimes hit an average of about 15 box moves per hour per crane. The best ports in Australia are hitting about 30 box moves per hour per crane. That's a big difference in the number of hours it takes to unload the ship and, as time is money, it makes a large difference in the direct cost borne by the vessel. Ships are very expensive assets. Even if a vessel is just at anchorage and is not sailing (and so is not burning fuel for propulsion) it is burning money. Crew need to be paid, crew need to eat, insurance has a cost and so on and so on. Right now, these costs are very expensive. In the market at the time of writing of this segment, a non-sailing 6,000 TEU ship cost something in the region of about AUD$111 a minute.

580. As we will see from the table below, the lesser performance of Port A compared with Port B results in a huge difference in terms of time saved and costs saved. These time and cost savings are just for one ship. Many companies operate several ships in Australia, and they call many times in Australia each year. The lost time and the direct costs multiply.

TABLE 10: Port A vs Port B: cost in hours and USD$ to unload ships at 15 and 30 box moves per hour per crane; three cranes per ship

Ship size (TEUs)	Hours to unload with 15 box moves (Port A)	Ship costs USD$ at Port "A"	Hours to unload with 30 box moves (Port B)	Ship costs USD$ at Port "B"	Hours saved	USD$ saved
2,500	56	188,431	28	94,215	28	94,215
3,500	78	281,627	39	140,813	39	140,813
4,500	100	426,675	50	213,338	50	213,338
6,500	144	720,387	72	360,193	72	360,193

[96] "Haifa Port sets new productivity record". Port Technology - https://www.porttechnology.org/news/haifa_port_sets_new_productivity_record/ accessed Monday 7 February 2022.

8,500	189	1,066,002	94	533,001	94	533,001

***Source**: Shipping Australia. Figures are rounded and simplified for ease of comprehension. Does not take into account the fact that not all containers are offloaded and that other containers are loaded. Cost figures calculated using publicly available raw data; figures change weekly. Ship cost figures given here do not include the cost of fuel.*

581. The figures in the table above are simplified. We're not aware of any container ships in Australia that have taken 189 hours (8 days) to unload. It's a theoretical worst case.

582. In reality, we know that ships with a capacity bigger than 8,500 TEU are handled more quickly than indicated in the table above. For instance, there was a 10,600(ish) TEU ship handled in June 2020 and it was handled at port in about 44 hours.

583. Incidentally, we don't know how long the 10,600 TEU ship was 'under-the-cranes'. We don't know if the cranes were working the ship for all of those 44 hours. It could be that there was some idle-at-berth time. We assume that the ship was being solidly worked for the entire 44 hours. It's likely that this big vessel didn't have 10,600 TEU aboard and it's likely that there wasn't a 10,600 TEU container exchange (e.g., 5,300 offloaded and 5,300 onloaded).

584. In these kinds of scenarios in Australia the container exchange is normally a lot less than the nominal capacity of the ship. For instance, there was an 8,000(ish) TEU vessel that was handled in Australia in December 2020 but with a container exchange of 6,516 containers. It was handled within 90 hours. Australian ports put in extra effort to handle big ships like these.

585. For the purposes of illustration, let's assume that an Australian port nonetheless can handle ships of about 10,600 TEU in 44 hours. A ship of 10,600 TEU being handled in about 44 hours implies a box lift rate of about 241 boxes per hour.

586. At that rate, three cranes would have a lift rate of 80 box moves each per hour and that's higher than the world's best. Four cranes would have a rate of 60 box moves per hour (more than twice Australia's current average) and five cranes would have a rate of 48 box moves per hour (still higher than the Australian average).

587. A port would need to deploy nine cranes to lift about 241 boxes an hour to service a fully laden 10,600 TEU ship in 44 hours, assuming all the cranes worked at an Australian average crane rate of 28 box moves per hour. And for those times that the crane rate falls to about 15, well, a port would need 16 cranes to hit 241 box moves per hour. We doubt that there would be enough room to put 16 cranes on a 10,600 TEU ship.

588. As we indicated above, there was also an 8,000-ish TEU capacity vessel that was handled in December 2020. It had a container exchange of about 6,500 containers, although we don't know how many were discharged from, and loaded on, to the ship. So, for the sake of argument, we'll assume a discharge of 6,500 and no on-loading. The container exchange was apparently completed in 90 hours and we do not know how many cranes were assigned to work the ship.

589. So, if there was one crane working the ship we can simply divide 6,500 by 90 to give a crane rate of 72 box moves per hour per crane. It is not likely that only one crane would be deployed. We can add more cranes and see how that affects performance.

590. If, as is typical in Australia, three cranes were deployed, then it would be 24 box moves per hour per crane to move 6,500 boxes in 90 hours. That's a little less than the current 28 average box moves per hour per crane rate in Australia. The terminal in question has been known to deploy four cranes and actually owns five cranes, which would make the crane performance even slower at 18 and 14 box moves per hour per crane respectively.

Table 11: 6,500 TEU ship worked in 90 hours; implied crane rates

Cranes deployed	Implied box moves per hour per crane
1	72
2	36
3	24
4	18
5	14

SOURCE: *Shipping Australia. Assumes 8,500 TEU ship, 6,500 boxes discharged, 90 hours under the crane, figures are rounded.*

591. How much better could the discharge have been? Well, if performance was close to the performance recorded at the Port of Haifa at, say, 50 box moves per hour, then we could divide 6,500 TEU by 150 lifts per hour (three cranes each working at 50 box moves per hour; and which is, incidentally, still slower than the world's best) and then we'd end up with about 43 hours. That's less than half the time that it actually took to work a ship with a 6,500 TEU container exchange.

592. Back then, the one-day cost of a ship that wasn't actually sailing (therefore minimal fuel consumption) cost about AUD$55,200 a day. Let's have a look at how the money-cost and time-cost compares with three cranes working a 6,500 full ship at a rate of 24 box moves per hour and also at a rate of 50 boxes per hour.

Table 12: 6,500 TEU discharge with three cranes with a daily ship-operating cost of AUD$55,200

Variable	24 boxes per hour	50 boxes per hour
Time (hours)	90	43
Cost (A$)	207,846	99,766

SOURCE: *Shipping Australia. Figures are rounded.*

593. Boosting performance up to 50 box moves per hour per crane significantly cuts time under the crane and massively cuts the direct cost to the shipping company. The dollar-savings would be far greater as, at the time of writing this segment of this submission, the one-day non-sailing cost of a 6,000 TEU ship is about AUD$159,000. The benefits to wider supply chain would be much greater.

594. But what could the situation look like with much better performance? Examples from around the world have shown that the average of box moves per hour per crane can be far higher than what we see in Australia. What difference would that make? We called this table the "nearly the best of the best" because we haven't discussed such matters as advanced cranes that can lift two twenty-foot boxes at a

time, or even four twenty-foot boxes at a time. There are ports around the world that employ such technology.

TABLE 13: Nearly the best "Port C"; 50 box moves per hour per crane and 5 cranes per ship

Ship size (TEU)	Hours to unload	US$ cost of ship during unload time	Hours saved compared with "Port A"	US$ saved compared with "Port A"
2,500	10	33,918	46	154,513
3,500	14	50693	64	230,934
4,500	18	76,802	82	349,874
6,500	26	129,670	118	590,77
8,500	34	191,880	155	874,122

Source: *Shipping Australia. Simplified figures for ease of comprehension. Does not take into account the fact that not all containers are offloaded and that other containers are loaded. Cost figures calculated using publicly available raw data; figures change weekly. Ship cost figures do not include the cost of fuel.*

595. Putting technology matters aside, we can see that sub-optimal port performance is causing large, wasted, costs and wasted time. The time-costs and money-costs of poor port performance compound over time. Ships run on schedules. If a vessel is late to Port A, then it arrives even later than scheduled at Port B. Then it is made to be even more late by the time it gets to Port C. This continually compounding lateness forces ships to go faster, which causes them to burn a disproportionately large amount of fuel to catch-up, which increases cost. At some point, the lateness is so great that the only way to catch up is to reduce service levels by skipping ports and by reducing service frequencies (e.g., drop from a weekly service to a fortnightly service).

596. Taking ships out of a rotation causes a massive reduction of supply. If many shipping companies are taking ships out of service – even infrequently – it causes a big cut in supply. A shorter time at berth benefits shipping companies directly in lower costs. But the benefits of faster crane performance are so much greater than the direct savings to the ship.

597. A shorter time alongside means more ships are served quicker. It means ships can spend more time earning, so it massively cuts opportunity cost. It is less waiting time at anchorage and / or less time travelling slowly on the high seas. It is also less time speeding up after a slow port call. Going fast burns a disproportionately greater volume of fuel which is extremely costly. Faster crane performance means less congestion which, in turn, means more sailing time, which means less wasted supply of shipping capacity. More shipping capacity likely means lower freight rates. It also means more services, more ports of call, and a better quality of service as ships keep to their timetables better. Better quality of service, more capacity, and at a lower freight rate, benefits cargo owners which, ultimately, benefits the people who buy goods sold in shops or from other businesses.

598. From the port's perspective, faster crane rates mean a faster turnaround of ships and more cargo throughput which means more money for them. It means a better berth utilisation and a better return on

assets.

COMPARABLE PORT PERFORMANCE

599. In 2021, the World Bank and I.H.S. Markit published a world first: "The Container Port Performance Index 2020"97. The Container Port Index set out to compare the performance of container ports all over the world. It was explicitly designed to be comparable. The authors and compilers of the report ought to be congratulated on tackling such a massive body of work of vital importance and one that has certainly created much-needed transparency and debate in Australia.

600. In relation to the Terms of Reference for this inquiry, Shipping Australia therefore believes that one of the frameworks for annual container port performance reporting should be the Comparable Container Port Performance Index as published by the World Bank and I.H.S. Markit.

601. It is inevitable that a project of this nature would attract criticism. However, the provenance of the report is highly reputable. The World Bank is an international financial institution that is part of the World Bank Group, which is composed of five international organisations that are funded by world governments. Meanwhile, I.H.S. Markit is a London headquartered and New York Stock Exchange-listed data, information, and insight provider. I.H.S. has extensive commercial maritime expertise as it has acquired maritime analyst businesses such as Fairplay (magazines, news, a massive shipping database, maritime consultancy; holder of the IMO ship numbering contract), the JOC Group (as Fairplay but bigger; incorporates the unique PIERS database); GTIS (a major provider of global trade data); eMPX – a maritime technology company, and more. I.H.S. has also been a prolific acquirer of economics-focused consultancies. Shipping Australia analysed the background of the project compilers and found they were individuals of highly reputable shipping, ports and maritime backgrounds.

602. It seems most unlikely that two such prestigious institutions, and especially one with the data capabilities of I.H.S. Markit, would get an economic analysis report fundamentally wrong.

603. In the actual report, there are two different approaches to ranking the ports. One is the statistical approach, and the other is the administrative approach. It is notable that some ports have different rankings under each approach. It is equally notable that Australian container ports have remarkably poor rankings under both approaches. If two separate methodologies, devised and implemented by world-leading transport economists, both rank the performance of Australian container ports badly, then, Shipping Australia would suggest, it is not the methodologies that are at fault.

604. In any event, the Container Port Performance Index is supported by other evidence. The ACCC's most recent container stevedoring monitoring report noted that container ports were not performing well. "Improvements in crane rates have stagnated after the initial rise following the waterfront reform," the ACCC noted at page 58. The ACCC also compared Australian waterfront performance to UNCTAD data and compared Australian performance against New Zealand, China, Japan and Singapore. Ships visiting Australia spent considerably more in-port time here than elsewhere.

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[97] New Global Container Port Performance Index (CPPI) Launched by the World Bank and IHS Markit - https://ihsmarkit.com/research-analysis/new-global-container-port-performance-index-cppi.html accessed on 07 February 2022

605. It has been argued that CPPI has attempted to compare non-comparable ports. But the purpose of the report is to find a way to compare container ports. As the authors of the report write in their Foreword98.

> *"An inefficient [container] port will result in slower economic growth, lower employment, and higher costs for importers and exporters. Despite the centrality of the port to global value chains, one of the major challenges to stimulating improvement has been the lack of a reliable, consistent, and comparable basis on which to compare operational performance across different ports.*
>
> *"While modern ports collect data for performance purposes, the quality, consistency, and availability of data, the definitions employed, and the capacity and willingness of the organisations to collect and transmit data to a collating body, have all precluded the development of a comparable measure (or measures) to assess performance across ports, and time... However, the introduction of new technologies, increased digitisation, and the willingness on the part of industry interests to work collectively toward system wide improvements now provides the capacity and the opportunity to measure and compare container port performance in a robust and reliable manner for the first time...*
>
> *"The CPPI is intended to serve as a reference point for key stakeholders in the global economy... As that reference point, the CPPI is intended to identify gaps and opportunities for improvement".*

606. Even if it is accepted that the list of 351 ports in the original CPPI are not comparable, we can restrict the list to a handful of ports that are highly comparable to Australian ports.

607. Ocean shipping trade newspaper, Lloyd's List, provides a list of Top 100 container ports by volume[99]. Starting with the Lloyd's List top 100 provides a convenient way of winnowing the list. There were ports in 42 different countries in the Lloyd's List Top 100 (China, for instance, had many ports in the top 100). As Shipping Australia is somewhat familiar with New Zealand, and as there is a substantial trans-Tasman trade, we added New Zealand to the list even though it is not in the Lloyd's List Top 100.

608. Shipping Australia then cross-referenced those countries against Australia using the socio-cultural characteristics in the index created by cultural consultant Hofstede Insights[100]. Starting with the list of countries mentioned in the Lloyd's List Top 100 Container Ports, Shipping Australia found that the

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[98] "The Container Port Performance Index 2020: a comparable assessment of container port performance", World Bank Group and I.H.S. Markit, Foreword, pages 8 and 9.

[99] https://lloydslist.maritimeintelligence.informa.com/one-hundred-container-ports-2020

[100] https://www.hofstede-insights.com. Hofstede has five sets of values, and each set of values ranges from 0 to 100. We eliminated, as a comparator nation, any country that has over 20 points of difference in any three or more values when compared with Australia

nations that are most comparable with Australia, according to Hofstede, are Canada, New Zealand, South Africa, the United Kingdom and the United States[101].

609. The next step was to select ports that were in the 2020 Lloyd's List Top 100 Container Ports and which were also in the list of countries that are the most comparable to Australian container ports.

610. There was one more problem to solve. Unfortunately, none of the top 100 ports had volumes similar to Adelaide (approx. 304,000 TEU) or Fremantle (approximately 807,000). However, Shipping Australia noted that: the Port of Halifax (Canada) had a trade throughput of 595,751 in 2021; the Port of Lyttelton (New Zealand) has about 440,000 TEU a year; Auckland has a 2020 TEU throughput of 880,781 TEU; and that the Port of Tauranga had a TEU throughput of 1.25 m TEU in 2020.

611. We then compiled a list of ports that have similar volumes to Australian ports and which are located in socio-culturally similar countries. The basket of highly comparable ports comprises Adelaide, Auckland, Brisbane, Charleston, Durban, Felixstowe, Fremantle, Halifax, Houston, London, Lyttelton, Melbourne, Montreal, Oakland, Savannah, Southampton, Sydney, Tauranga, Vancouver and Virginia. That's 20 ports in all.

612. The next step was to compare those ports to check they have comparable functions (as origin, trans-shipment or destination ports). Shipping Australia notes that none of these ports are major trans-shipment hubs like Singapore, Port Klang, Khor Fakkan, or Malta. Nor are they origin ports like, say, Ningbo-Zhoushan (China). They all appear to be destination ports.

[101] the Hofstede analysis indicated that these countries were both very socio-culturally similar to Australia and to each other, with normally only a few points of difference between each country on each set of Hofstede's values.

613. We then reviewed satellite imagery (via Google Maps) to determine if the ports have physical similarities. Shipping Australia evaluated the physical characteristics of these ports as follows:

TABLE14: geographic comparison of highly alike ports

	Location	Road	Rail	Encroached	Expandable	Bridges
Adelaide, Aus	River mouth	Yes	No	No	Yes	No
Auckland, NZ	Bay	Yes	Yes	Highly	No	No
Brisbane, Aus	Bay	Yes	Yes	No	Yes	No
Charleston, US	River mouth	Yes	No	Partly	Yes	Yes
Durban, S Africa	Bay	Yes	Yes	Yes	Yes	No
Felixstowe, UK	River mouth	Yes	Yes	Partly	No	No
Fremantle, Aus	River mouth	Yes	Yes	Highly	Yes	No
Halifax, Can	Bay	Yes	Yes	Yes	No	No
Houston, US	Bay	Yes	Yes	Yes	Yes (marine)	No
London, UK	River mouth	Yes	Yes	No	Yes	No
Lyttelton, NZ	Bay	Yes	Yes	No	Yes (marine)	No
Melbourne, Aus	River mouth	Yes	Yes	Highly	No	Yes
Montreal, Can	Up-river	Yes	Yes	Highly	No	Yes
Oakland, US	Bay	Yes	Yes	Highly	No	Yes
Savannah, US	Up-river	Yes	Yes	Highly	No	No
Southampton, UK	River mouth	Yes	Yes	Highly	No	No
Sydney, Aus	Bay	Yes	Yes	Highly	Maybe	No
Tauranga, NZ	River mouth	Yes	Yes	Highly	No	No
Vancouver, Can	Bay	Yes	Yes	Highly	Yes (marine)	No
Virginia, US	River mouth	Yes	Yes	Highly	No	No

Source: *Shipping Australia.*

614. Out of 20 ports, nine are on a river mouth, two are up-river and the other nine are in a bay (this distinction can be a little pedantic at some ports. Melbourne is a river mouth port... but the river empties into a bay). All the container terminals have good road access and most have rail access. Only four ports had any potential concerns about air draught limitations imposed by bridges. Severe encroachment by towns and cities was evident in most ports. Charleston and Felixstowe, are part-encroached. About eight or nine ports are potentially expandable either on the land-side or marine-side[102].

[102] this comment about the potential for expansion is not taking into consideration community objections to such things as loss of amenity, issues around seizing private property, or any potential environmental issues. It just notes that there is nearby space.

615. These ports are physically comparable. Several of the ports are also largely comparable on a volume basis, as can be seen from the table below, although Savannah, and possibly Felixstowe, might be regarded as outliers.

TABLE 14: list of comparable ports ordered by TEU volume in ascending order

	Port	**TEU millions**
1	Adelaide	0.304
2	Lyttelton	0.440
3	Halifax	0.596
4	Fremantle	0.81
5	Auckland	0.88
6	Tauranga	1.25
7	Brisbane	1.30
8	Montreal	1.75
9	Southampton	1.92
10	Charleston	2.44
11	Oakland	2.50
12	Sydney	2.57
13	Durban	2.77
14	London	2.79
15	Virginia	2.94
16	Melbourne	2.97
17	Houston	2.98
18	Vancouver	3.40
19	Felixstowe	3.58
20	Savannah	4.60

Source: *Shipping Australia.*

616. The table below has reduced the World Bank's CPPI to a list of very highly comparable ports. All of the below ports in the table are highly comparable in terms of function, the ships they attract, the physical shapes of the containers they handle, the volumes of containers they handle, their geographical context, and the socio-cultural characteristics of the countries in which they are located. The "Original score" shows the actual statistical score given by the CPPI.

TABLE 15: highly comparable ports ranked by CPPI statistical score:

	Statistical analysis (CCPI; World Bank & IHS Markit)			
	Port	**TEU millions**	**Original Statistical rank**	**Original Score**
1	**London**	2.79	82	-1.117
2	**Virginia**	2.94	85	-1.044
3	**Charleston**	2.44	95	-0.820
4	**Tauranga**	1.25	219	0.333
5	**Vancouver**	3.40	237	0.499
6	**Brisbane**	1.30	246	0.569
7	**Houston**	2.98	266	0.878
8	**Savannah**	4.60	279	1.158
9	**Montreal**	1.75	285	1.231
10	**Southampton**	1.92	290	1.404
11	**Melbourne**	2.97	302	1.676
12	**Felixstowe**	3.58	313	2.006
13	**Oakland**	2.50	332	3.163
14	**Sydney**	2.57	337	3.907
15	**Durban**	2.77	349	8.082

Data source: *Container Port Performance Index 2020, World Bank, I.H.S. Markit.* ***Table:*** *Shipping Australia.*

617. London's 2.79 m TEU volume is close to Sydney's 2.57 m TEU throughput and Melbourne's 2.97 m TEU throughput. But London has a much better score than both of those Australian ports. Brisbane does well compared to the other Australian ports. But there is large disparity in scores between, say, London and Brisbane, and a large disparity between the top three ports and Brisbane. Melbourne and Sydney score lower than Brisbane.

618. The table below shows the result of a similar exercise but focused on the CPPI's administrative score.

TABLE 16: highly comparable ports ranked by CPPI administrative score

	Administrative analysis (CCPI; World Bank & IHS Markit)			
	Port	**TEU millions**	**Original admin rank**	**Original admin score**
1	**Charleston**	2.44	53	38
2	**Savannah**	4.60	96	18
3	**Tauranga**	1.25	100	17
4	**Virginia**	2.94	110	15
5	**London**	2.79	180	1
6	**Brisbane**	1.30	234	-8
7	**Houston**	2.98	242	-9
8	**Montreal**	1.75	283	-22
9	**Vancouver**	3.40	303	-31
10	**Melbourne**	2.97	313	-40
11	**Southampton**	1.92	317	-45
12	**Felixstowe**	3.58	322	-55
13	**Sydney**	2.57	327	-63
14	**Oakland**	2.50	334	-79
15	**Durban**	2.77	351	-255

Data source: *Container Port Performance Index 2020, World Bank, I.H.S. Markit.* ***Table:*** *Shipping Australia.*

619. The "Administrative" ranking was calculated on a different basis to the statistical ranking. Once again, Brisbane, the best ranked Australian port appears near mid-table based on its original administration score. It has a considerably lower score than Charleston. All of the top five have a considerably higher score than Brisbane. Tauranga has similar container volumes to Brisbane, both are at or are near a river mouth and are also in a bay. It is not clear why there should be such a large difference in score between Tauranga and Brisbane. Melbourne and Sydney are extremely far behind Virginia, London and Houston even though they all have somewhat similar volumes and are comparable ports.

620. The table below shows the result of a similar exercise but focused on the lower volume ports.

TABLE 17: sub one million TEU throughput container ports

Statistical and administrative analysis (CCPI; World Bank & IHS Markit)					
Port	**TEU millions**	**Statistical rank**	**Original Stat score**	**Admin rank**	**Original Admin score**
Halifax	0.596	39	-2.375	25	59
Auckland	0.881	123	-0.562	118	12
Lyttelton	0.440	188	0.034	186	0
Fremantle	0.807	326	2.716	319	-49
Adelaide	0.304	339	4.546	333	-78

Data source: *Container Port Performance Index 2020, World Bank, I.H.S. Markit.* ***Table:*** *Shipping Australia.*

621. With both the statistical or administrative methodologies, the ranking is Halifax, Auckland, Lyttelton, Fremantle and Adelaide. Australian lower-volume ports have markedly worse scores than their comparable peers. Auckland and Fremantle are particularly comparable. They both have very similar container throughput. They are both city ports. They are both highly encroached upon by their cities. They both are very constrained in expansion. They both have excellent road and rail access. And yet Auckland is considerably ahead of Fremantle in terms of the original statistical score and original admin score. Meanwhile, Lyttelton and Adelaide have the closest comparable volumes but Lyttelton is far ahead of Adelaide on both the statistical and administrative methods.

622. These 20 or so ports – selected for high comparability in purpose, operations, socio-cultural and a variety of factors – are effectively natural experiments. The ports have been tested twice – once statistically and one administratively. So there are, in fact, 40 sets of experiments and results.

623. A disinterested observer could likely have come to a reasonable hypothesis that such a group of highly comparable ports would have had close outcomes and scores. However, the scores varied markedly.

624. It might also have been hypothesised that, with two different types of tests, run on 20 different yet highly comparable ports, that some ports might score highly on one test and not on the other test. And, indeed, there was. Some ports did perform better on one methodology, when compared to their peers, but not so well on the other methodology. Savannah, for instance, ranked highly on one methodology but was middle-of-the-pack of comparable peers on the other methodology. Australian ports generally scored much lower than their comparable peers on both methodologies.

625. Although the ports are highly comparable, they're not identical. The ports are physically different sizes. All have good road access, and most have good rail access too. They have different but similar geographies. Some were in the northern hemisphere, some were in the southern. Most were very heavily encroached, but some were not. It could have been hypothesised that one local geographic factor would lead to main manifestly better or worse performance. But the alternate hypothesis would have been correct: local geographic differences did not seem to affect the results. There were up-river

ports that performed very highly, and up-river ports that performed less well. Bay side ports did not manifestly out-perform, or under-perform, river ports.

626. Regardless of the methodology used, volumes of throughput, and local geography, there was one geographic factor associated with performance, and that was nationality.

627. Although the US and Canadian container ports had a spread of results on both the statistical and administrative approaches, New Zealand container generally had higher results. The only South African port had lower results but there is only one South African port in the sample of highly comparable ports, and we are not concerned with South Africa, so it can be disregarded. However, there were five Australian ports in the sample of highly comparable ports and all five generally scored much lower than their top-ranked comparable peers on both the statistical and administrative methodologies. Four of the five container ports scored particularly badly on both methodologies relative to their peer group.

628. All of the Australian capital city container ports are of vital importance to the economies of their home states. Sydney and Melbourne are vital to the Australian national economy as, together, they account for about 65% of all containerised throughput in Australia.

Port oversight and governance

629. Shipping Australia believes that there could be better governance and more effective oversight of Australian ports. While Shipping Australia believes that the free market is generally the best way to organise the allocation of resources within a sector, and while Shipping Australia asserts that private property rights are of central importance, there are some instances when it may be justifiable for the public authorities to intervene. The activities of Australian ports may be one of those instances for reasons given in the next paragraph.

630. Many Australian ports are government-owned and government-operated, so the issue of private property rights largely do not apply in such ports. Most of the privatised ports are, in fact, privately operated on long-term leases and the various governments have reversionary interests once the leases expire. Nearly all major Australian commercial ports, if not all, are regional monopolies that are unconstrained by their suppliers, their competitors and their customers.

631. For instance, Australian ports appear to routinely put their prices up every year. The Port at Newcastle in December 2019 informed customers that it would apply a 33% increase in navigation service charges from 01 January unless the port user signed a 10-year deed that waived the right to object to matters detailed in the deed103. As has been discussed elsewhere in this submission, container terminal operators around the country have been frequently engaging in large hikes on Terminal Access Charges for their trucking customers and they have done so with little notice. In New South Wales, the port authorities [both the Port Authority of New South Wales and the private port operator NSW Ports are port authorities in this context] have decided to impose a requirement on tankers to pay large fees every

[103] "Commitment to negotiate on Port of Newcastle long term deed, and delay to 33 per cent fee increase for ship owners and agents", Shipping Australia, https://www.shippingaustralia.com.au/commitment-to-negotiate-on-port-of-newcastle-long-term-deed-and-delay-to-33-per-cent-fee-increase-for-ship-owners-and-agents

time a tanker crosses the port boundary. That's a reasonable way to fund a port if the fee is only levied once per trip, but it is not reasonable to make the tankers pay to re-enter the port if it has been temporarily ordered out of the port by the port authorities. Yet that is what is happening in New South Wales. It's double-charging and it is grossly unfair104. In Western Australia, the state government (via the state-owned Pilbara Ports Authority introduced expensive new charges on shipping without meaningful consultation with the shipping industry for the purpose of raising monies to pay people not to live near its port because of the adverse health consequences of iron ore dust exposure. Protection of public health is a sound policy. But, in this case, the state government owns the iron ore and it owns the port. It is the polluter. But it is requiring an innocent third party – the shipping industry – to pay for the government's pollution105. It is a clear breach of the "polluter must pay principle".

632. It is arguable that there is a pattern of elected officials, port authorities, port operators and terminal operators setting their pricing in a way that is not constrained by their stakeholders and their wider communities.

633. For the avoidance of confusion or doubt, Shipping Australia is not opposed to port authorities, port operators or container terminals charging fees or even increasing fees. However, we believe that because ports are so vital to the economic health of Australia, and because ports are regional monopolies largely unconstrained either by the free market or by meaningful regulation, then they have the potential to inflict harm on the Australian economy.

634. It therefore follows that it is appropriate to somewhat over-ride private property rights in these circumstances to achieve a fair and sustainable outcome. However, controls should be no more than reasonably necessary to achieve those goals.

635. Shipping Australia would therefore urge the Federal Government to consider requiring all port-controlling elected officials, all port-controlling public servants, port authorities and port operators across Australia to submit all potential fees, price increases, charges and the like, in advance to the scrutiny of an independent Commonwealth pricing regulator. That regulator would review the proposed charge, hold consultation with industry stakeholders, and give or withhold permission for the charge to enter into force and / or subject it to appropriate terms and conditions. Shipping Australia suggests that the independent regulator could be modelled upon the Victorian Essential Services Commission.

636. **Recommendation**: that the Productivity Commission recommend the creation of an independent Federal pricing regulator for the ports sector with the possibility of that regulator being based upon the Victorian Essential Services Commission framework; in the alternative, that a series of State / Territory-based regulators be set up to regulate port pricing and that these regulators should be based

[104] "Cash grab: Unfair New South Wales double-dipping port charges are unprecedented," Shipping Australia - https://www.shippingaustralia.com.au/cash-grab-unfair-new-south-wales-double-dipping-port-charges-are-unprecedented/

[105] "New Year, New Cash Grab in Western Australia", Shipping Australia - https://www.shippingaustralia.com.au/new-year-new-cash-grab-in-western-australia/

upon the Victorian Essential Services Commission framework.

Disruptions caused by Australia's industrial relations

637. As indicated elsewhere in this submission, the container trade is utterly vital to Australia's economic health. A well-functioning container trade enables ordinary Australian families to buy everyday goods; retailers to have stock to sell; manufacturers of all kinds to have input goods that are used to make other things; trades-people to have tools to use in their work; farmers to have a wide variety of input goods that they need for the farms; ordinary people to have jobs (about 1-in-5 jobs in Australia, that's 2.17 million jobs, are variously tied to international trade)106.

638. As indicated earlier in this submission, there has been extensive industrial disputation and industrial action around Australia over the last two years (for more details, please visit the Shipping Australia website where there are numerous articles on this topic). Disruption is caused by the enterprise bargaining process.

639. The collective workplace employment contracts known as "enterprise bargains" run for a maximum of four years. Unions and employers negotiate on the terms and conditions of the new bargain. If they cannot agree, unions can follow a process in which the Fair Work Commission will grant them the right to take "protected" industrial action. It is "protected" because no legal action can succeed against a union or an employee when the action is authorised under an order of the Fair Work Commission.

640. An enormous range of industrial actions can be authorised. These typically include, but are not limited to, stoppages of various durations ranging from hours to days, bans on the performance of overtime, bans on working standby shifts and bans on the performance of shift extensions. The action also includes bans on the performance of "upgrades", which refers to the practice of asking employees to work at a higher-level job. A ban on upgrades will restrict the scope of work that a category of employees can do. Unions have also obtained authorisations for a variety of performance-reducing actions such as working more slowly, only working with the non-dominant hand, and driving vehicles at the lowest possible safe speed.

641. Such actions devastate the performance of the strike-hit container terminal. They reduce crane and yard capacity and the ability to operate cranes. The impact of the bans on upgrades are particularly severe as they limit the supply of labour for crane driving and team leader roles, which means that whole teams cannot be allocated to cranes. That gang is left idle, or stood down, and the loss of a single crane prevents hundreds of box lifts per shift. Bans on upgrades, overtime, and employees on standby, also hinder the ability of terminal managers to work around disruptions.

642. Unions have also obtained bans on the working of sub-contracted vessels. So, if terminal "A" is experiencing a stoppage then it cannot sub-contract the vessels to be worked by nearby terminal "B" if the workers on that terminal are lawfully refusing to work sub-contracted vessels.

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[106] "How Trade Benefits Australia", Department of Foreign Affairs and Trade https://www.dfat.gov.au/sites/default/files/benefits-of-trade-and-investment.pdf accessed 09 February 2022.

643. It is noted and accepted that unions and employees in these circumstances are exercising their lawful employment rights and that the purpose of industrial action is to cause disruption and economic loss to the employer to force it to enter into negotiations.

644. However, the consequences are experienced across the economy. Container terminals work to narrow tolerances and whatever little operational buffer-space they have is quickly lost. Extreme port disruption causes large ship queues and delays which, as explained elsewhere in this submission, causes ships to incur extremely high costs and delays. These costs and delays are too high for the ocean shipping company to absorb. Shipping companies have in the past issued surcharges to recover costs or have used operational management tools to manage delays such as skipping port calls, re-routing loops, re-arranging port rotations, blanked sailings (owing to the size and speed of container ships, blanked sailings represent a massive cut in the supply of freight transport), slowing down ships and the like. If shipping companies are forced to reduce frequency of sailings, then that is a big loss of capacity. Re-scheduling from a weekly to a fortnightly service to avoid the worst effects of industrial disputation is a 50% cut in capacity. As explained above it is vital that ocean shipping companies have a continued ability to use these tools to manage the movements of their ships. An inability to freely deploy ships will lead to massive ship queues (as has been seen in the United States and elsewhere around the world) with a cascade of disastrous landside effects.

645. Even without restricting shipping companies' abilities to manage their vessels, the industrial disruption causes severe landside issues. Goods get "stuck", which can ruin the economic value of the goods (owing to ongoing costs of storage), perishables can spoil, commercial relationships can be severely harmed, medicines can be held up, time-sensitive events (shows, conferences, events and the like) cannot go ahead, industrial input goods (goods used to make other goods) fall into short supply which cause production problems, empty containers build up in trucking yards which imposes a wide range of financial costs along with dangerous health and safety issues for yard workers... in short there is a cascading effect across a wide variety of industries.

646. Shipping Australia understands that the economic impact can be quite severe. The direct actual losses of industrial action have been calculated by an economist using an input-output model and they total about AUD$21.6 million per day (but please also see the footnote to Table 18 for further elaboration).

TABLE 18: estimated economic losses per day of industrial action

Port (includes Patrick & DPWA)	Direct loss of output AUD$ / day (imports)	Direct loss of output AUD$ / day (exports)	Total loss of output AUD$ / day
Brisbane	2.5	1.6	4.1
Botany	5.8	1.7	7.5
Melbourne	4.9	2.2	7.1
Fremantle	2.1	0.8	2.9
Australia	**15.3**	**6.3**	**21.6**

Table: *Shipping Australia.* ***Data source:*** *confidential. Note: it is understood that these figures have been produced on a conservative basis and are thought to be an under-representation of the true direct loss. The figures in this table also do not include the multiplier effect. There is reason to believe that, with the multiplier effect, the daily losses to the economy would be about AUD$42.6m a day.*

647. Further, as indicated in the text above, there are a wide variety of indirect losses caused by the cascading effects across the economy. This is known as the multiplier effect. Economists have estimated that multiplier effect at anywhere between 1.9x to 2.5x in a variety of different circumstances.

648. Assuming there is no appetite for a complete reform of the entire industrial relations system, the challenge for policy makers is to amend the system that respects the rights of waterfront workers to carry out lawful industrial disputation within the context of enterprise bargaining and retains the effectiveness of industrial pressure on employers, yet which also minimises the adverse consequences for innocent third parties such as Australian landside logistics businesses, importers, exporters, and ocean-going shipping companies.

649. Many problems for importers and exporters stem from the fact once their containerised goods have entered the system and are out of their control it is very difficult (if not impossible) to take any remedial or corrective action should disruption occur. The "system" in this case comprises the staging yards, the container terminal, the ship on its voyage and the container terminal at the other end.

650. Exporters will generally truck their containers to the staging yard about six days before a vessel arrives. The duration of shipping voyages varies by port pair, route and company. Shipping from, say, Melbourne to a trans-shipment hub, such as Klang or Singapore, takes between 12 to 17 days depending on the voyage / route according to ocean shipping company schedules. North Asia (Yokohama) to Melbourne or Sydney will take nearly four weeks. Shipping on the Australia-Europe route takes up to 53 days via the Panama Canal.

651. In Australia, three days' notice must be given before strike action can take place[107]. Lengthening the notice period for industrial action on the waterfront to 64 days would cover the maximum duration of the longest voyage (Australia to North Europe), six days of staging time, and five days of buffer time. This would enable ocean carriers, shippers, importers and exporters to take preventative action (e.g., routing to another terminal, informing customers etc) to avoid being caught up in strikes at Australian container terminals. At the same time, the rights of employees to strike would be preserved.

652. A major issue is that industrial action can take place across multiple waterfront companies at the same time, which causes a lot of the problems for ocean carriers, shippers, importers and exporters. Requiring enterprise bargaining to take place at different waterfront companies on a staggered schedule and prohibiting any protected action from being taken simultaneously at more than one waterfront company would preserve the rights of employees to strike, would preserve the effectiveness of industrial action and would provide options for third parties to work around the disruption. This policy would likely require fixed periods for bargaining centred around the expiry date of the existing enterprise bargain and if the bargaining window closes without the parties reaching agreement, then the dispute would have to be sent for immediate arbitration and settlement.

[107] "Industrial action," Fair Work Ombudsman https://www.fairwork.gov.au/tools-and-resources/fact-sheets/rights-and-obligations/industrial-action#notice accessed on 10 February 2022

653. Finally, a prohibition on industrial action that prevents the working of sub-contracted vessels would give options for third parties to make arrangements to avoid being caught in strike action.

654. Recommendation: that the Productivity Commission recommend consultation be carried out into notice periods for waterfront industrial action; consultation on enterprise bargaining on the waterfront being subject to time frames and requiring the parties to settle their dispute in the Fair Work Commission if they cannot settle the dispute themselves by a given date; and prohibiting any industrial action that prevents the working of sub-contracted vessels.

Industrial relations and the ongoing low performance of container ports

655. The question of the ongoing low performance of Australian container ports despite large amounts of capital investment has been raised recently. Shipping Australia draws the attention of the Productivity Commission to court and tribunal cases in which it has been alleged that unions have engaged in "go-slows" and "productivity caps". It has been alleged in court that the unions have deliberately organised their members to carry out unlawful industrial action by working slowly. In several of these cases, a court has found as a fact that unlawful industrial action in the form of slow working has taken place. In other cases, the court did not so find. There have also been instances where unions have been authorised to lawfully work slowly as part of enterprise bargaining.

656. Case references include, but are not limited to:

- **(a)** Patrick Stevedores Holdings Pty Limited v Maritime Union of Australia, The (C2013/4565) [2013] FWC 4391; see also Fair Work Transcripts - C2013/4565, Transcript of Proceedings [2013] FWCTrans 531 (28 June 2013)
- **(b)** Maritime Union of Australia, The v Patrick Stevedores Holdings Pty Limited (C2013/5276) [2013] FWCFB 7736
- **(c)** Appeal by Maritime Union of Australia, The [2013] FWCFB 7736 (11 October 2013)
- **(d)** C2013/4565, Transcript of Proceedings [2013] FWCTrans 531 (28 June 2013)
- **(e)** DP World (Fremantle) Limited v The Maritime Union of Australia [2010] FWA 6100 (10 August 2010)
- **(f)** DP World Melbourne Limited v Construction, Forestry, Maritime, Mining and Energy Union [2019] FCA 1209 (1 August 2019)
- **(g)** Maritime Union of Australia, The v Patrick Stevedores Holdings Pty Limited & Patrick Stevedores Holdings Pty Limited [2014] FWC 2651 (22 April 2014)
- **(h)** Maritime Union of Australia, The v Patrick Stevedores Holdings Pty Limited [2014] FWCFB 657 (31 January 2014)
- **(i)** The Maritime Union of Australia Division, Construction, Forestry, Maritime, Mining and Energy Union v Sydney International Container Terminals Pty Ltd T/A Hutchison Ports Australia Pty Limited; Brisbane Container Terminals Pty Ltd T/A Hutchison Ports Australia Pty Limited [2020] FWC 3616 (10 July 2020)
- **(j)** P&O Ports Limited and The Maritime Union of Australia - re Application pursuant to s.127(2) of the Act - PR950434 [2004] AIRC 768; (5 August 2004)

(k) Toll Transport Pty Limited T/A Toll Shipping v Construction, Forestry, Maritime, Mining and Energy Union [2020] FWC 1381 (20 March 2020).

657. RECOMMENDATION: that the Productivity Commission recommend a review be carried out into the allegations raised in courts and tribunals that unions are slowing down the rate at which container terminals are able to work, that an economic impact analysis be carried out into that specific form of alleged disruption, and to provide recommendations as to how to remedy the situation if it is found to actually be occurring and if it has an adverse impact on the economy.

Submission authorised by
Melwyn Noronha
CEO of Shipping Australia

SUBMISSION ENDS