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The Secretary  
Standing Committee on Climate Change, Water, Environment and the Arts  
House of Representatives  
Parliament House  
PO Box 6021  
CANBERRA ACT 26010

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Dear Ms Holmes,

### **Inquiry into Climate Change and Environmental Impacts on Coastal Communities**

We are pleased to respond to the invitation to make a submission to the Inquiry into Climate Change and Environmental Impacts on Coastal Communities

### **Ports Australia**

Ports Australia [formerly the Association of Australian Ports and Marine Authorities (AAPMA)] is the peak body representing the interests of the majority of government owned and privately owned ports as well as marine regulatory authorities in Australia. The Association provides leadership and support in areas of common interest related to ports, their interfaces and the achievement of their trade facilitation objectives. A list of our members is included at the Appendix.

### **Ports, Shipping and Trade**

Ports and shipping are crucial to Australia's international trade carrying 99% of Australia's total merchandise trade (by mass and tonne-kilometres) and 75% by value. Ocean-going vessels transport 90% of all world trade by volume and the increasing demand for seaborne transport is driven by world economic growth and trade.

Development of infrastructure particularly at our major container and commodity exporting ports is proceeding at a steady pace to support future growth particularly in the rapidly developing resource sector. Ships calling at Australian ports are getting larger (again, at both commodity and container ports) and hence there is a need to strengthen and expand wharves and deepen navigation channels.

This increase in ship size/numbers visiting Australia and the associated development of port infrastructure to support Australia's economic growth will result in an increase in GHG emissions. However, the port/shipping industry has some of the lowest GHG emissions per unit of goods transported on a per kilometre travelled basis. We recognise that there is an ongoing need to reduce GHG emissions at our ports without impeding the growth in trade.

The markedly better emission performance of shipping compared to road/rail transport of freight is particularly important when considering the revitalisation of dedicated coastal shipping services around the Australian coastline. Whilst increased coastal shipping would place additional pressure on port

infrastructure, it has the potential to make a substantial contribution to reducing GHG within the overall freight and transport task.

### **Ports and Environmental Management**

Environmental management is an integral part of the way that ports do business. The focus of their approach is to ensure that the identification and management of environmental risks and issues are integrated across all of the business functions of the port authority.

At various times, however, port expansion projects have met with opposition from a number of stakeholders, including local environmental and community groups. Their concerns focus on environmental impacts, noise and traffic issues, however, all relevant environmental matters, including air quality and habitat protection, are assessed as part of the various state and Commonwealth approvals processes.

### **The Potential Impact of Climate Change On Ports**

Port engineers advise that sea level rise would have no direct impact on navigation per se, however, it would affect harbour infrastructure and the standard of service of port structures. Sea level rise may result in greater penetration of wave energy into harbours potentially causing increased coastal erosion, navigation difficulties and damage to port infrastructure. Wharf/drainage assets could be affected by higher sea levels, especially with maintenance of those assets.

Climate change-related events may affect ports through changing frequencies/magnitudes of storms, tidal and storm surges, flooding, wind direction and erosion, with associated impacts upon our seaborne trade. Ports are in the process of developing specific strategic plans in response to the impacts of climate change such as design considerations to cope with sea level increases within port expansion plans. Such strategic plans are being based upon risk assessments utilising the most recent data. However, constantly changing predictions make such assessments difficult.

### **Air Quality**

Port operators recognise that their activities can impact upon air quality at our ports. The majority of emissions emanate from vessels, handling of bulk products, and transport operations undertaken by port customers.

Some of our ports are working on collaborative approaches with their tenants to develop strategies to manage the GHG footprint of port operations. Several ports have developed GHG reduction guidelines for new tenant developments. New port leases often include measures to improve the environmental outcome in key areas such as air quality, water consumption, energy usage and waste management.

However, it is important to note that port authorities do not have regulatory powers over their tenants and cannot enforce changes in tenants' operational activities outside the terms of their leases, some of which date back more than 20 years. Nonetheless, port authorities encourage their tenants to be more environmentally responsible through the promotion of environmental initiatives relevant to the port and its operations.

Ports are investigating the merits of encouraging operational changes to shipping/port operations in order to reduce GHG emissions (and emissions impacting upon air quality). These changes could include operational practices to reduce fuel consumption, cleaner fuels, hybrid cargo handling vehicles and alternative energy sources (eg natural gas).

Anecdotal evidence suggests that most of our ports will not reach the GHG levels required for reporting under NGERs, however, several will track the direct and indirect energy consumption from their activities and may choose to voluntarily report under the Scheme.

## Overseas Developments

Australian ports are monitoring progress and developments with various overseas air quality programs noting the pressure being placed on ports and shipping to institute programs that sometimes exceed existing regulatory requirements. Australian ports are interested in improving their respective environmental management practices to accommodate changing strategies for emission reduction. Our ports are keenly observing the adoption of a variety of programs at overseas ports to gain an appreciation of their efficiency and effectiveness.

Ports, particularly those on the west coast of the USA and in some parts of Europe, are under increasing pressure from community groups and local governments to implement air quality programs with the inevitable association made with port expansion plans.

Comparisons with US or European ports are not appropriate for Australian ports considering the marked differences in the scale of port operations (hence volume of emissions) and presently good air quality in most Australian ports (air quality is very poor in many US ports). Nonetheless, pressure is being placed on some of our capital city ports to follow the lead of their overseas counterparts without recognition of the inherent differences involved.

Whilst some of the overseas programs reduce ship emissions whilst the vessel is in port (such as Alternative Marine Power or "cold ironing"), the relative benefits of the electricity supplied from the shore depend on how the electricity is produced. *According to the California Government website, 78.1% of the state's energy is produced within California and of this, 41.5% comes from natural gas, 12.9% from nuclear, 19% from hydro and 10.9% is renewable. Coal comprises 15.7%. In Australia, 85% of electricity comes from brown and black coal. Consequently, use of Alternative Marine Power in Australian ports would do little to reduce GHG emissions.*

Because something is an imperative elsewhere in the world, this does not mean that the same environmental or political considerations can or should apply in our ports. The net environmental and cost benefit needs to be assessed on a port-by-port basis.

Internationally, ship emissions are receiving increasing attention. MARPOL Annex VI, which covers air pollution from ships, is undergoing a comprehensive review by the International Maritime Organisation's Marine Environment Protection Committee. The review is expected to be completed by the end of 2008. Annex VI sets limits on emissions of nitrogen oxides from diesel engines and sulphur content in ships' bunker fuel. The Annex also prohibits deliberate emissions of ozone-depleting substances such as halons and CFCs.

## Operational versus Market-Based Options to Reduce GHG Emissions in Coastal Communities

Operational measures to reduce GHG emissions may have significant commercial implications. For example, slowing down ships upon their approaches to ports to reduce fuel use may create a need for more ships (which, in itself, would result in a perverse environmental effect). Increased shipping times for customers may lead to partial substitution to other potentially more GHG intensive transport modes where the transport task is contestable. Such commercial implications may be magnified if operational measures were to be imposed by direct regulation rather than being the result of commercial decisions by ship operators.

Emissions from fuel used by international shipping are currently excluded from national GHG totals under the Kyoto Protocol and emissions from international shipping will not be included within the proposed Australian emissions trading scheme. However, work is presently underway at the IMO to determine an agreed basis upon which market-based measures could be established for international shipping. Suggested approaches have included cap and trade emissions trading schemes as well as levies or taxes aimed at promoting more environmentally friendly international shipping.

Market-based measures have both short and long-term possibilities to reduce emissions.

### **Conclusion**

Australian ports recognise that climate change, GHG and air quality are three of the most important environmental and economic issues currently facing the maritime trade and transport sector. The challenge is to address these issues in a manner that is both appropriate and acceptable to the industry and the coastal communities in which they reside and support.

Ports recognise that they face pressure to limit and reduce their emissions but these must be placed in the context of increasing demand for trade and the considerable GHG emission advantages over other forms of transport that shipping/ports offer.

Ports are undertaking risk assessments and adopting strategies to address GHG emissions. Different operational or market-based options are being reviewed and some have already been implemented.

Ports Australia will continue to seek opportunities to work with other stakeholders in addressing this important issue and is keen to be involved in future discussions.

Yours sincerely,



**Susan Blackwell**  
**Executive Officer**

## **Appendix - Ports Australia's Members**

- Albany Port Authority
- Broome Port Authority
- Bunbury Port Authority
- Cairns Port Authority
- Darwin Port Corporation
- Dampier Port Authority
- Esperance Port Authority
- Flinders Ports South Australia
- Fremantle Ports
- Geraldton Port Authority
- Gladstone Ports Corporation
- Mackay Port Authority
- Port of Melbourne Corporation
- Newcastle Port Corporation
- Port Hedland Port Authority
- Port Kembla Port Corporation
- Port of Brisbane Corporation
- Port of Portland Pty Ltd
- Ports Corporation of Queensland
- Sydney Ports Corporation
- Tasmanian Ports Corporation Pty Ltd
- Toll Ports and Resources - A Division of Toll Logistics
- Townsville Port Authority

### Marine Authorities

- NSW Maritime Authority
- Maritime Safety Queensland
- Victorian Regional Channels Authority
- Victorian Department of Infrastructure
- Department for Transport, Energy & Infrastructure, SA
- WA Department for Planning & Infrastructure

### Associate Members

- Port of Hastings Corporation
- Royal Australian Navy
- Australian Hydrographic Service (RAN)

