



WORLD SHIPPING COUNCIL
PARTNERS IN TRADE

LINER SHIPPING AND CARBON EMISSIONS POLICY

September 2009





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Liner Shipping

About the Industry

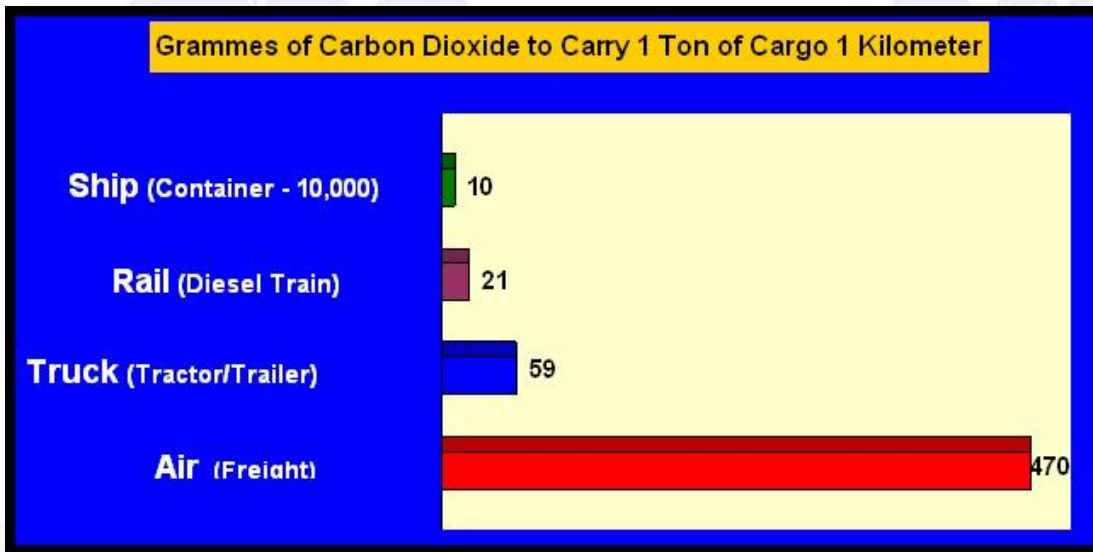
- **Liner ships operate regularly scheduled services on fixed routes.**
- **Liner shipping is the most efficient mode of transport for goods.**
 - If containers from a single voyage of an 11,000 TEU ship were transported by train, it would need to be 77 kilometers (44 miles) long.
- **Container ships and roll-on/roll-off ships carry 60% of the goods by value moved internationally by sea.**
 - The global economy is now highly dependent on the efficiency gains and reduced product costs enabled by liner shipping.





Carbon Dioxide Emissions from Ships

Shipping is the most carbon-efficient mode of transportation.



Source: Data provided by Network for Transport and the Environment

- Moving goods by the next most efficient mode – rail – would more than double carbon dioxide emissions.
- If the 1.3 billion tons of cargo carried by containership in 2008 were to be shipped via airfreight instead, carbon dioxide emissions would increase 4,700%.

International maritime shipping accounts for 2.7 percent of annual global greenhouse gas emissions. Container ships account for approximately 25% of that amount.*



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Industry Efforts to Reduce Carbon Footprint

- **Improved fuel efficiency**

- 35% improvement from 1985 to 2008 (4500 TEU ship)*
- 75% improvement from 1500 TEU ship of 1976 to 12,000 TEU ship of 2007

- **Advancing Technology**

- Better hull and propeller design
- Waste heat recovery systems
- Reduce onboard power usage
- Testing LNG and bio-fuels

- **Adjusting Operations**

- Alternate routes
- Slower speeds
- Load factors
- Monitoring and reducing emissions





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Regulating Emissions from Shipping

- Ships are registered in many different countries and operate regularly between ports in over 200 countries.
- Ships need a predictable and uniform set of regulations.
- IMO is the appropriate forum to develop a global carbon emissions regime applicable to shipping.
 - IMO successfully created a rigorous, environmentally effective regime for other ship emissions – NO_x, SO_x and particulate matter.
- IMO has already developed
 - Energy Efficiency Design Index for new ships
 - Ship Energy Management Plan for all ships
 - Energy Efficiency Operational Indicator
 - Key principles for carbon emission regulation

IMO*

UNFCCC*

International rules through treaties or conventions.

Individual countries agree to implement the new rules.

Individual countries issue local regulations consistent with international rules.

*IMO is the United Nations' International Maritime Organization and UNFCCC is the United Nations Framework Convention on Climate Change.

Regulating Emissions from Shipping

Industry endorses *IMO key principles* for carbon emissions from ships.

1. Effectively reduce CO₂ emissions.
2. Be binding and include all flag states.
3. Be cost effective.
4. Not distort competition.
5. Be based on sustainable development without restricting trade and growth.
6. Be goal-based and not prescribe particular methods.
7. Stimulate technical research and development in the entire maritime sector.
8. Take into account new technology.
9. Be practical, transparent, free of fraud and easy to administer.



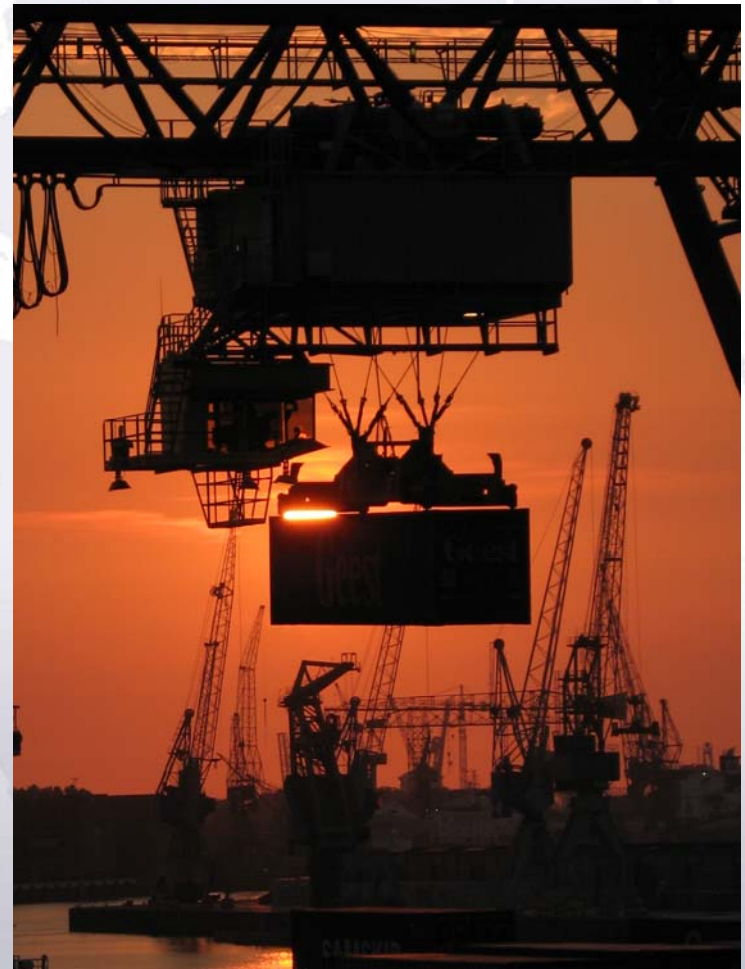


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Regulating Emissions from Shipping

Reaching international agreement is challenging, but feasible.

- **Divergent views among governments on scope of application.**
- **Mobile sources, like ships, operate in many jurisdictions.**
 - Registered in different countries
 - Call at ports in multiple nations
 - Generate emissions on the high seas outside any nation's jurisdiction
- **Ships need uniform regulations in all jurisdictions where they operate.**
 - Means that *all* countries must participate.





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Regulating Emissions from Shipping

Future global regime likely to include market-based instruments (MBI).

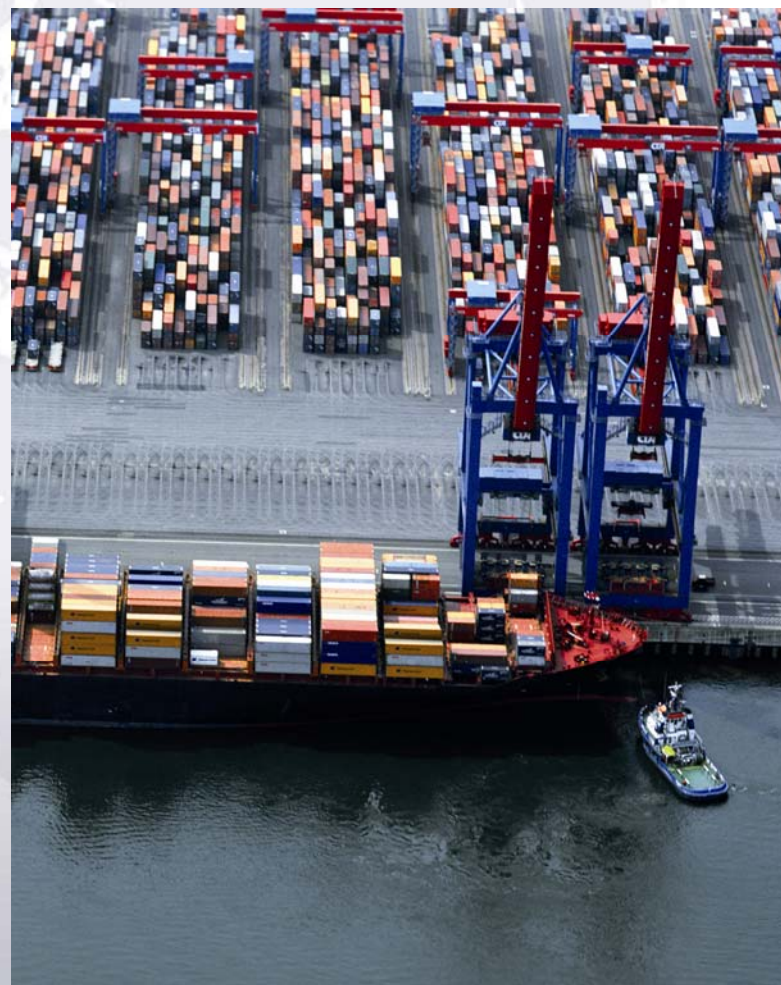
- MBIs may include a variety of economic mechanisms, like fuel surcharges or tradable permits.
- Energy efficiency standards for new ships is unlikely, alone, to sufficiently address carbon emissions reductions in the near term.
- MBIs are designed to provide additional financial incentive for reducing carbon emissions.
- Implementing an MBI on a global scale is complex.



Regulating Emissions from Shipping

Current market-based instrument proposals fall into four categories.

- **International Compensation Fund**
 - International surcharge on fuel
 - Revenues dedicated to international climate fund
 - Portion of revenues used for carbon mitigation projects and research and development
- **Emissions Trading or Cap and Trade**
 - Concept only; specific proposals not yet tabled.
- **Mandatory Efficiency Standards**
 - Increasingly stringent efficiency standards applied to all ships
- **Hybrid Proposals**
 - Variations on fuel levy or mandatory efficiency standards
 - Trade credits based on ships' energy efficiency





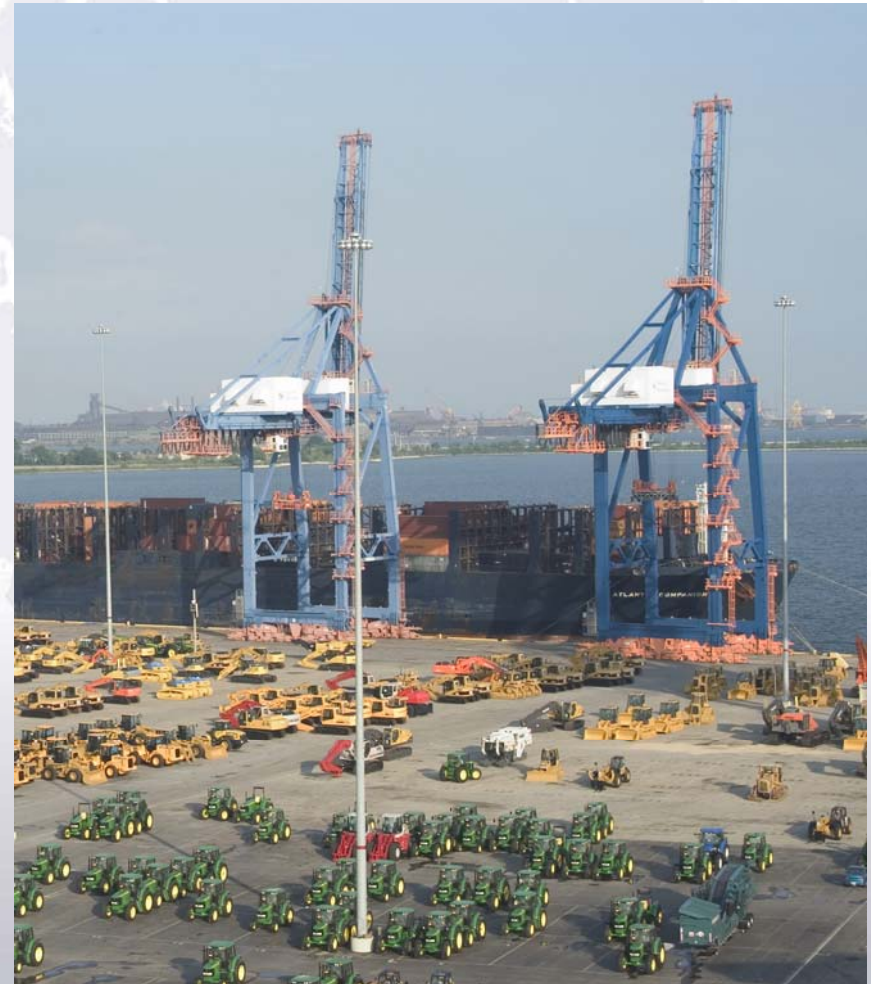
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Regulating Emissions from Shipping

Answering numerous implementation questions guides IMO debate.

A sampling:

- Who pays?
- How much do they pay?
- To whom do they pay?
- How is the program enforced?
- Who is covered?
- Does it apply to all ships and voyages?
- How are proceeds allocated or spent?
- How is the program enforced?
- Will other industries also be regulated?
- Will all governments agree to participate?



Regulating Emissions from Shipping

What are the next steps?

- **Governments participating in the United Nations Framework Convention on Climate Change (UNFCCC) will meet in December 2009 to discuss a successor to the Kyoto Protocol*, which expires in 2012.**
- **Governments at IMO are now negotiating a global carbon emissions regime for shipping. Most stakeholders expect the current negotiations to lead to final agreement sometime in 2011.**



*The Kyoto Protocol is a set of rules to guide nations as they address greenhouse gas emissions. International shipping is not covered by the Kyoto Protocol.



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**Learn more about the liner shipping industry
at**

www.worldshipping.org