



# Climate Change, Marine Environmental Regulatory Development, and Sustainable Development in Ports and Shipping

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# Overview

- Transport Canada's Strategic Objectives
- International Context
- International Maritime Organization work to address Climate Change
- Environmental Conventions and Regulations
- Government and Industry Sustainable Development Initiatives



# Transport Canada's Strategic Objectives

- Clean Transportation System
- Clean Air / Water
  - Emissions Regulations
  - ecoTRANSPORT
  - Protection from Invasive Species
  - Liability Regulations
  - Incident Response
- Environmental Stewardship
  - Sustainable Development



## International Context

- United Nations Framework Convention on Climate Change (UNFCCC)
- Canada's commitment to the Copenhagen Accord
- Developing a regulatory climate change framework



# International Maritime Organization (IMO)

- Environmental Protection at the IMO
- Marine Environmental Protection Committee (MEPC) and climate change
- Addressing climate change at the IMO
  - Energy Efficiency Design Index (EEDI)
  - Ship Energy Efficiency Management Plan (SEEMP)
  - Market-based mechanisms



# Ratified International Maritime Conventions

- Annexes IV, V and VI of the International Convention for the Prevention of Pollution from Ships (MARPOL);
- International Convention for the Control and Management of Ship's Ballast Water and Sediments, 2004;
- International Convention on the Control of Harmful Anti-fouling Systems on Ships, 2001;
- 1988 Protocol Safety of Life at Sea Convention (SOLAS);
- Convention on Standards of Training, Certification and Watch-keeping for Fishing Vessel Personnel (STCW-F);
- 1988 Protocol to the Convention on Load Lines;
- 2001 Bunkers Convention;
- The Supplementary Fund Protocol; and,
- Maritime Labour Convention, 2006.



# North American Coastal Emission Control Areas (ECA)

- Proposed by the U.S. and Canada, joined by France on behalf of the Saint Pierre and Miquelon archipelago
- ECA will apply to large ships operating in a 200 nautical mile corridor in North American coastal waters
- All ships must use increasingly low sulphur-content fuels (1% in 2012, 0.1% in 2015) or emission control systems
- Post 2016-built ships must use advanced emission control technologies to control nitrogen oxide emissions



## Domestic Emission Control Areas

- Canada is proceeding with the creation of regulations to apply ECA-style nitrogen oxide (NO<sub>x</sub>) and sulphur oxide (SO<sub>x</sub>) controls to the Great Lakes / St. Lawrence System
- TC will work with EPA to develop a bi-national regulatory scheme. Canadian regulations are expected towards the latter part of 2012 and will be implemented under the *Canada Shipping Act, 2001*
- Transport Canada is seeking a reciprocity arrangement with the Environmental Protection Agency
- The marine industry will be fully engaged on these coming rules at the Canadian Marine Advisory Council (CMAC)





# Ballast Water

- Canada has recently ratified the IMO's International Convention for the Control and Management of Ship's Ballast Water and Sediments
- *Ballast Water Control and Management Regulations*
  - Ballast water management requirements in the Great Lakes and the St. Lawrence System are among the most stringent in the world
  - Over 97% initial compliance and corrective actions taken before ships enter the Seaway, we collectively achieve 100% compliance
- The department continues to follow developments in the U.S. regarding ballast water rules at both state and national levels
- Nationally consistent and internationally harmonized ballast water standards will provide the necessary predictability for the marine industry and enable ship owners to make environmentally responsible long-term plans for fleet renewal



# Canada's Federal Sustainable Development Strategy

- Minister of Environment responsible
- Focusing on environmental sustainability under 4 main themes
  - Addressing climate change and clean air
  - Maintaining water quality and availability
  - Protecting nature
  - Shrinking the environmental footprint – beginning with government
- Departments are required to develop 3-year Strategies that contribute to the FSDS starting in 2011



# The *Canada Marine Act* and Environmental Framework Affecting Canadian Port Authorities

- *Canadian Environmental Assessment Act*
- *Navigable Waters Protection Act*
- *The Fisheries Act*
- *Canada Marine Act*
- Port Eligible Federal Program Funding
  - Gateways and Border Crossings Fund
  - Asia-Pacific Gateway and Corridor Fund
  - Infrastructure Stimulus Fund



# Government Support for Port Initiatives

- ecoFREIGHT Marine Shore Power Program at Port Metro Vancouver
  - Cold ironing reduces greenhouse gas and air emissions
  - Reduces port related impacts on climate change and air quality
  - Government of Canada, the BC Ministry of Transportation, Holland America Lines, Princess Cruises, BC Hydro, and Port Metro Vancouver
- Port of Montreal Footprint Project
  - Inventory greenhouse gas and air emissions / forecast to 2020
  - Identify priority reduction measures
  - Share methodologies and best practices
  - Transport Canada, Environment Canada, Green Marine, Port of Montreal



# Conclusion

- Clean Air activities contribute to domestic and international objectives of a more sustainable transportation system.
- Government continues to engage with the International Maritime Organization in developing standards and best practices for reducing greenhouse gas emissions and pollutants emitted by ships.
- Amendments to the *Canada Marine Act* have been passed which allow Canadian Port Authorities to receive federal funding for capital infrastructure, environmental sustainability, and security enhancements.
- Environmental Stewardship activities further environmental objectives and promote sustainable transportation. With port level partnerships, we are realizing gains from these activities already.