

North American Marine Environment Protection Association®



2014 Lloyd's List Awards ENVIRONMENT AWARD WINNER

Environmental Innovation and Port Development

Shipping's Size

- There are over 50,000 merchant ships trading internationally, transporting every kind of cargo. The world fleet is registered in over 170 nations, and manned by over a million seafarers of virtually every nationality.



Shipping's Role in Global Trade

- Our marine transportation system delivers nearly **90%** of all global trade
- In 2008, for example, it is estimated that the industry transported a total volume of world trade by sea of over 32 thousand billion tonne-miles and nearly 50 thousand billion tonne-miles in 2014- an increase of 50% (Source: UNCTAD)



Ports are the gateway for commerce



Shipping is regulated by IMO



The shipping industry is principally regulated by the [International Maritime Organization \(IMO\)](#), which is the London based United Nations agency responsible for the safety of life at sea and the protection of the marine environment.

Enforcement

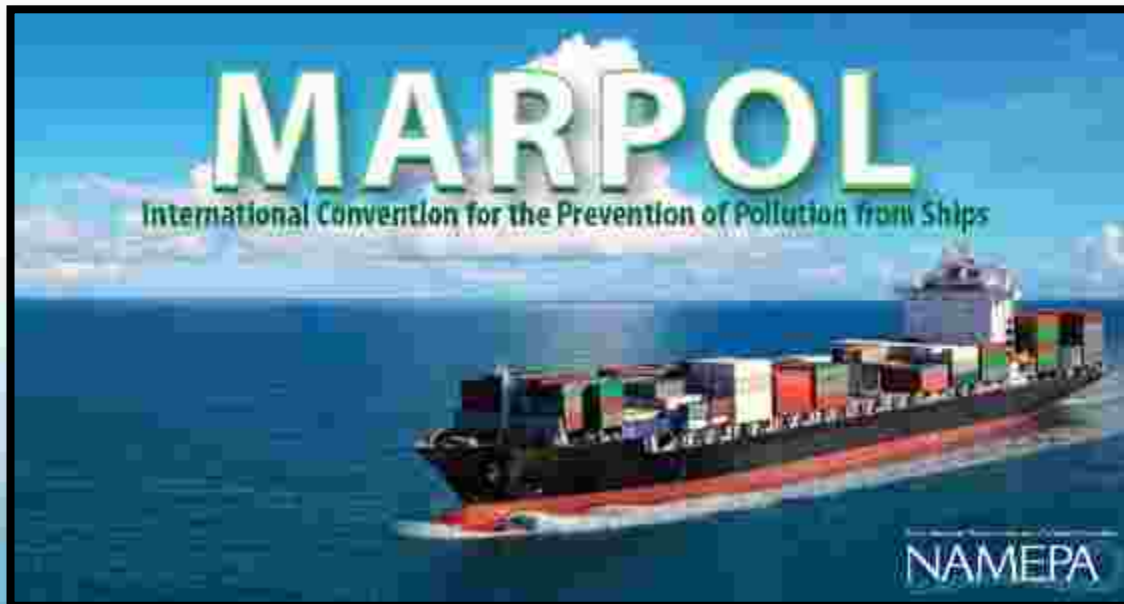
- The principal responsibility for enforcing IMO regulations concerning ship safety and environmental protection rests with the flag states (i.e. the countries in which merchant ships are registered - which may be different to the country in which they are owned).
- Flag states enforce IMO requirements through inspections of ships conducted by a network of international surveyors. Much of this work is delegated to bodies called classification societies.

Port State Control (PSC)

- Flag state enforcement is supplemented by what is known as Port State Control, whereby officials in any country which a ship may visit can inspect foreign flag ships to ensure that they comply with international requirements. Port State Control officers have the power to detain foreign ships in port if they do not conform to international standards. As a consequence, most IMO regulations are enforced on a more or less global basis.

MARPOL Regulations

- The International Convention for the Prevention of Pollution from Ships (MARPOL): main international convention covering prevention of pollution of the marine environment by ships (operational or accidental)
- Currently includes six technical Annexes. Special Areas with strict controls on operational discharges are included in most Annexes.



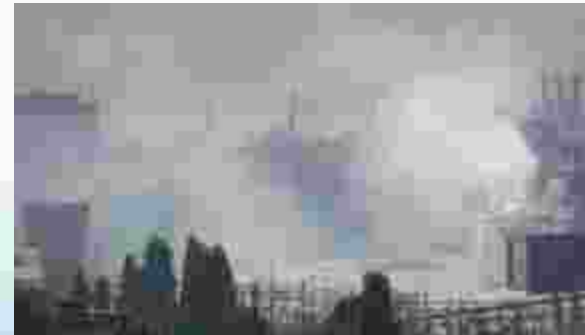
Refresher

- Annex I - Regulations for the Prevention of Pollution by Oil
- Annex II - Regulations for the Control of Pollution by Noxious Liquid Substances in Bulk
- Annex III - Prevention of Pollution by Harmful Substances Carried by Sea in Packaged Form



Refresher (continued)

- Annex IV - Prevention of Pollution by Sewage from Ships
- Annex V - Prevention of Pollution by Garbage from Ships
- Annex VI - Prevention of Air Pollution from Ships



Ratification and Implementation

- While many countries ratify IMO conventions to protect the environment (or their national equivalent) so they enter into force, implementation is not as widespread
- Countries having difficulty developing legislation to implement IMO regulations can turn to the IMO for assistance
- Ratification, implementation and enforcement are critical to protecting shipping, ports and our social license for global trade

The public has a voice...

- ...and they know how to use it

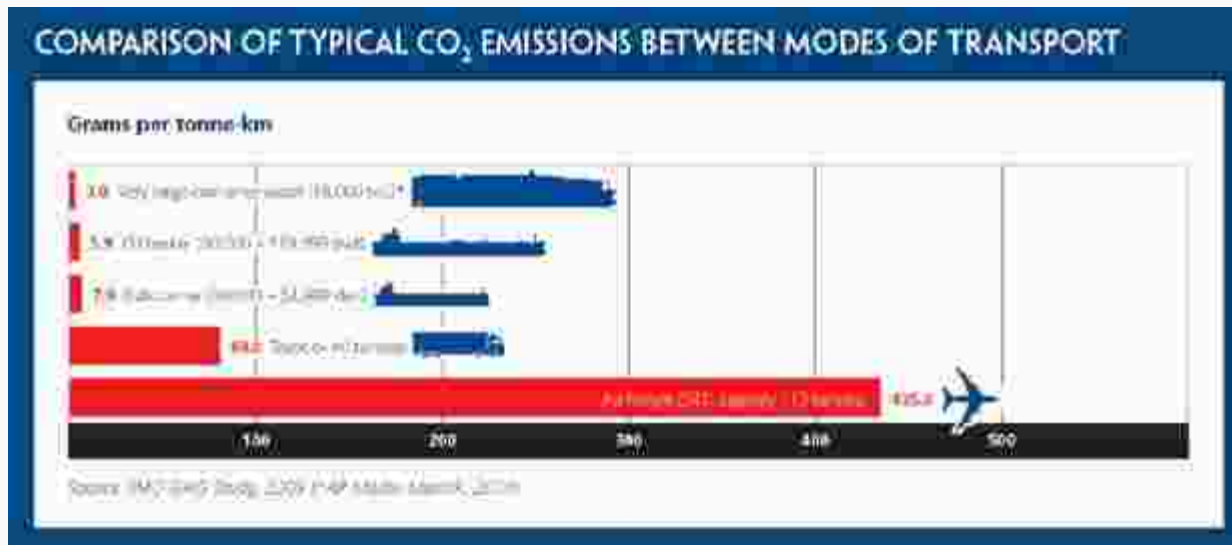


Shipping is Environmentally Efficient

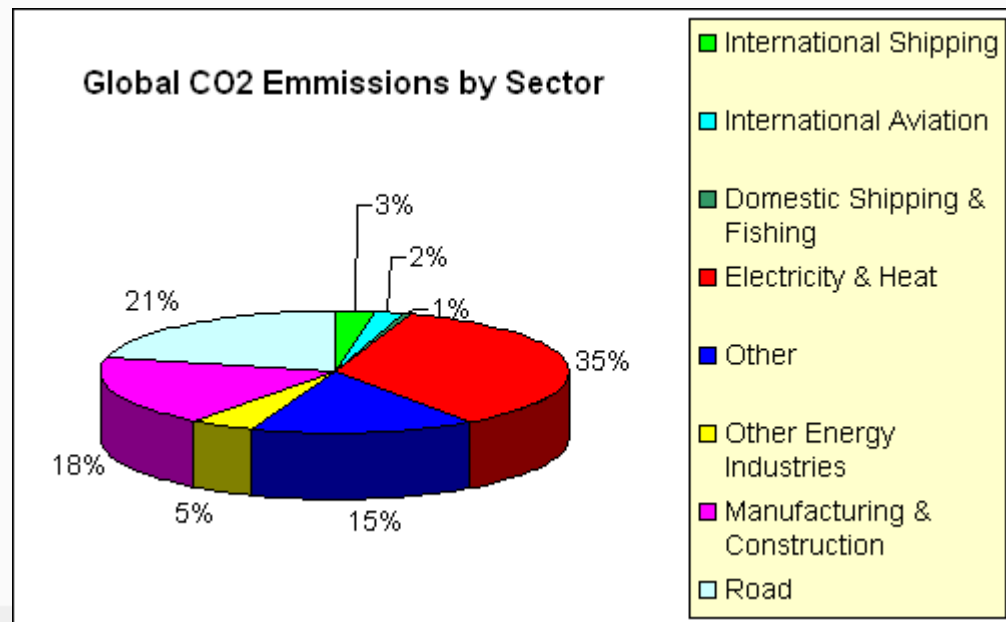
- Sea transport is one of the least environmentally damaging modes of transport and, when compared with land based industry, is a comparatively minor contributor to marine pollution from human activities.



Comparable modes



Comparable industries



Industry Action

- 10% reduction in total CO2 (2007 – 2012)
- Commitment to carbon neutral growth
- Mandatory CO2 rules already in force globally
- 20% less CO2 per tonne/km than 2005
- 50% CO2 reduction by 2050

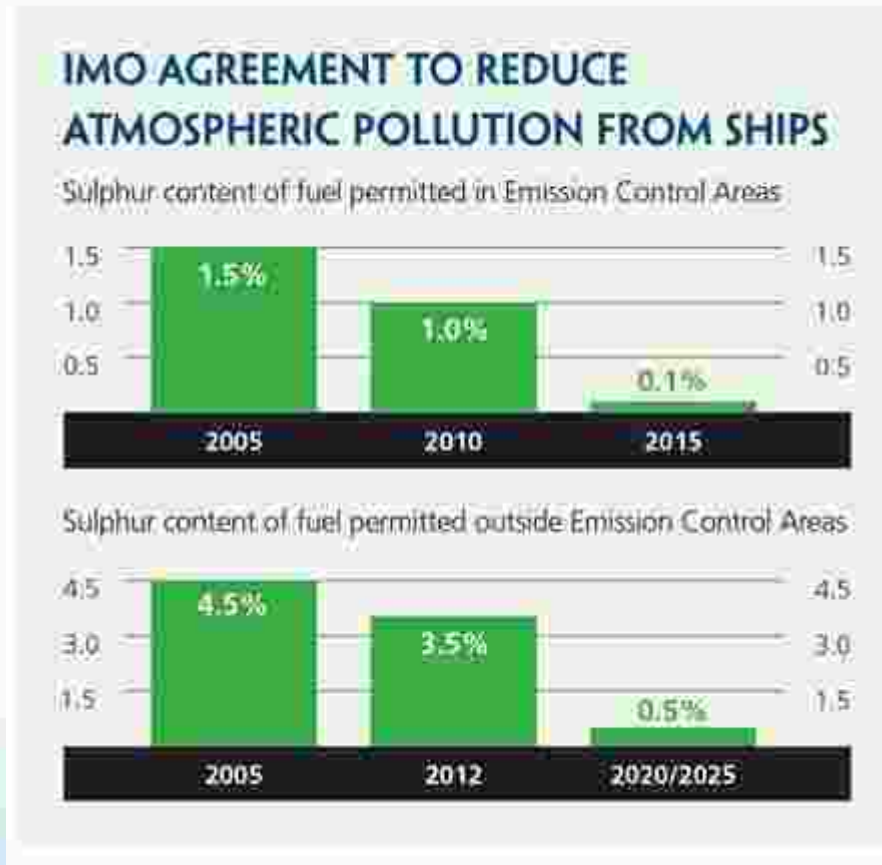
IMO Action on Carbon

IMO agreement on technical regulations will reduce ships' CO₂

MARPOL Annex VI, Chapter 4 adopted July 2011, which entered into force in January 2013



IMO Action on Sox- Today!



Establishment of ECA's

- Emission Control Areas



Strategies for Emissions

- Use of low Sulphur fuels
- Scrubber technology



LNG for Ships



Cold Ironing



Practical Resource Generation Appliance



Terragon is revolutionizing waste management by **enabling the generation of resources with a simple and economical appliance.**



MAGS: Micro Auto-Gasification System



Terragon is developing unique appliances that can be operated anywhere and by anyone to **safely and practically use waste to generate resources locally.**

Reducing drag with bubbles



Port Initiatives-trucks

Get a New Truck

Grants Available to Eligible Truck Owners to Purchase Newer Vehicles



The logo for the Regional Truck Replacement Program features a white semi-truck centered on a green background. The words "REGIONAL TRUCK REPLACEMENT PROGRAM" are written in a semi-circle above the truck.



ScRAPPS 2

Seaport Truck **Sc**rappage and **R**eplacements for **Air** in **Puget** Sound

The logo depicts a stylized blue and black truck with a green leaf emerging from its exhaust pipe. The text "ScRAPPS 2" is written in a large, bold, green font on a white rectangular background that is part of the truck's trailer.

Cargo handling



Ballast Water Management

- On September 8th, Finland ratified the IMO's Ballast Water Management Convention. The BWM Convention will [enter into force](#) on 8 September 2017.



Strategies for success in times of change

- Build community relations and engagement
- Educate on the value proposition of shipping (economic growth, access to less costly goods, lowering the number of trucks on the road)
- Recognition as successful, profitable and modern deep water ports which facilitate commerce while protecting the community
- Develop the balance between community interests and commerce

AND.....

Strategy for Success!!!

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NAMEPA's Mission

- Preserve and protect the marine environment
- Demonstrate maritime's commitment to environmental protection
- Support the marine industry
- Engage maritime businesses, government and public to "Save our Seas" by promoting sound environmental practices
- **Educate the public about the value proposition of the marine industry**



Membership Composition

- Corporate, academic and individuals engaged in the marine industry
- Intersection of industry, regulatory agencies, environmental groups and education
- Both international and domestic members, sponsors and partners

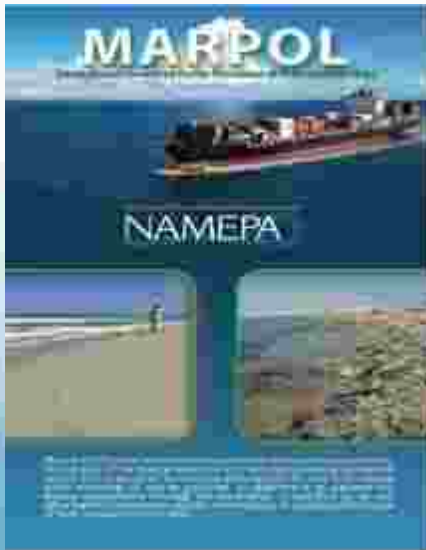
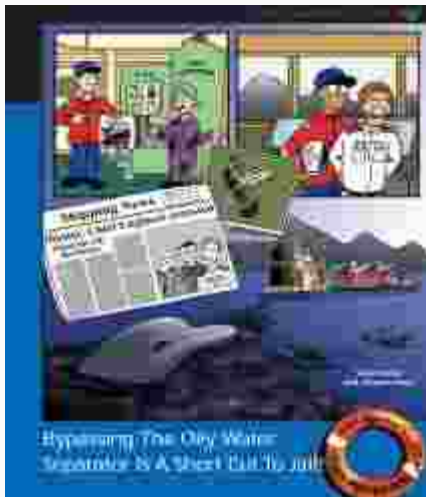


Events

- Host and participate in industry conferences and seminars including:
 - Environmental Intelligence in Maritime Seminars in Houston, Norfolk, Anchorage, New Orleans, Seattle, Long Beach
 - World Maritime Day Observance in NYC, Canada and Mexico
 - National Maritime Day Seminar in Washington DC
 - Connecticut Maritime Association Conference and Exhibition
 - Shipping & Offshore Corporate Social Responsibility Fora



Education Initiatives



Seafarers

- NAMEPA works with seafarers to augment their existing knowledge about marine environment protection
- Through our relationship with the North American Maritime Ministry Association (NAMMA), NAMEPA distributed over 12,000 copies of the American Club's environmental crimes poster
- Developed a MARPOL/Marine Science seafarer training program with over 10,000 programs disseminated throughout ports in North America including the Caribbean

Education Initiatives

Port Communities

- Distribute educational materials including marine debris and MARPOL brochures – over 200,000 copies of marine debris poster to date (now in Spanish too) within Western Hemisphere
- Host events with regional orientation suiting local communities' interests and concerns
- Reached over 23,500 people in 2016



Education Initiatives

Students

- Developed two learning guides: “Educator’s Guide to the Marine Environment” and Marine Debris
- Partners include NOAA, Sea Research Foundation (SRF), USCG, Ocean Conservancy, OAS-CIP and maritime academies
- Drawing Contest with the USCG & Sea Research Foundation, reaching over 2.5 million students
- Co-sponsor of Marine Science Fair with American Salvage Association



Education Initiatives



Students Cont'd.

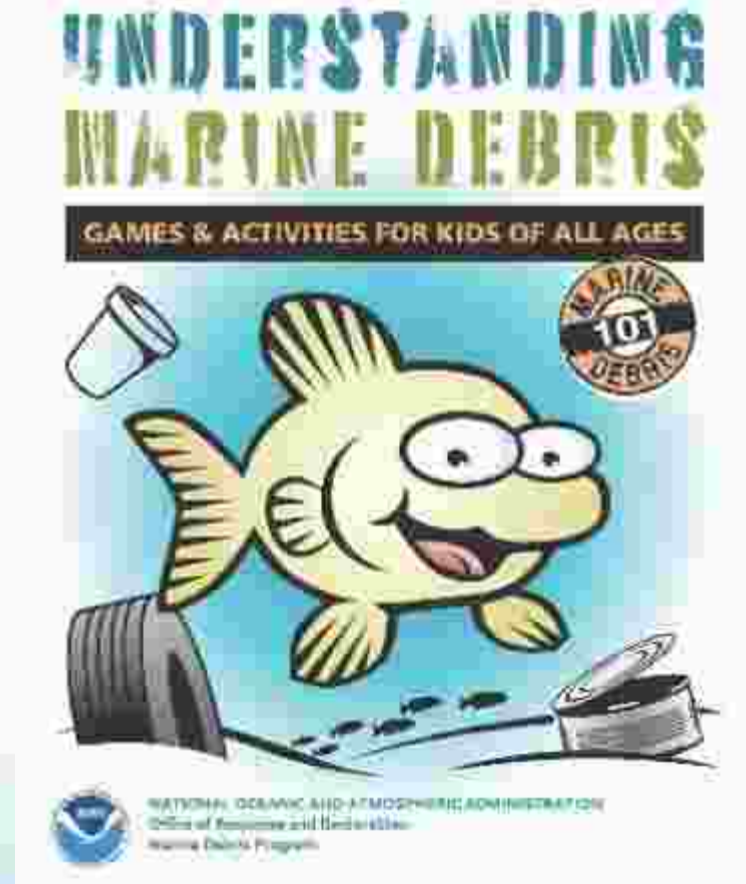


Beach cleanup with local Boys & Girls Club

- Learning institutions include Boys & Girls Clubs of America, New England Science and Sailing, schools, Mystic Aquarium, etc.
- Participate in the Ocean Conservancy's International Coastal Cleanup and National Marina Day
- Continuing to develop new materials and distribute throughout North America and the Caribbean in collaboration with OAS-CIP and others
- NAMEPA Junior website (www.namepajr.net)

Partnerships & Strategic Alliances

- USCG & Auxiliary, Sea Partners Program of USCG
- NOAA
- American Salvage Association
- International Maritime Organization
- OAS-CIP
- Sea Research Foundation
- National Geographic
- Shedd Aquarium, Chicago
- INTERTANKO/BIMCO
- ITOPF
- Ocean Conservancy: Clean Marina Day
- United States Power Squadron
- Wildlife Conservation Society
- Many more!



Moving Forward in 2017

- Continue to expand partnerships and member base including the Caribbean
- Deliver original STEM/NGSS-enhanced curricula to educational institutions and after school programs
- Publish Educator's Guide to the Marine Industry
- Distribute programs and materials nationally and internationally, and in multiple languages
- Develop college/academy chapter programs



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Shipping and ports deliver
sustainability!



Visit www.namepa.net!