Ship Emissions in the Gulf of Mexico and Prospects for Control

Presentation to the Gulf Ecosystem Restoration Taskforce
27 June, 2011
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Shipping, with 1,046 MMT of CO$_2$ emissions, would be the sixth largest emitter if it were a country: Projected to triple by 2050
Ship Routes and SO\textsubscript{X} Emission Intensity:
Substantial Coastal Transit and Gulf Port Activity
Worldwide Ship PM-Related Mortality
- Emission Control Areas (ECA’s)
  - Air emissions from ships are the last to be regulated by IMO.
  - IMO’s Convention on Marine Pollution (MARPOL):
    - Revised in 2008 to include more stringent controls on NOx and SOx emissions from ships – to be phased in gradually through 2025.
    - Includes a special provision to allow member states to apply for special protections “ECA’s” if they can demonstrate the need.
    - Only US/Canada and Baltic States (Europe) have successfully applied for an ECA so far.
Barriers to Implementing ECA

- National / Political
  - Mexico has not ratified MARPOL Annex 6
  - Need strong internal focus, precedent activities
  - Ability to withstand industry objections

- IMO Application:
  Requires Substantial Air Quality Program and Planning
  - 8 Criteria boil down to need to:
    - Prove there is an air quality problem
    - Show that shipping is significant source of the problem
    - Show that ECA is most cost-effective solution

- Cost: Projected $3.2 Billion for North America ECA
  - Benefits are estimated at $47-110 Billion
  - 14,000 lives saved annually