AAPA Climate Change Workshop Jan. 27, 2011

Cooperation Across the Atlantic for Marine Governance and Integration (CALAMAR)

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CALAMAR
Cooperation Across the Atlantic for Marine Governance Integration

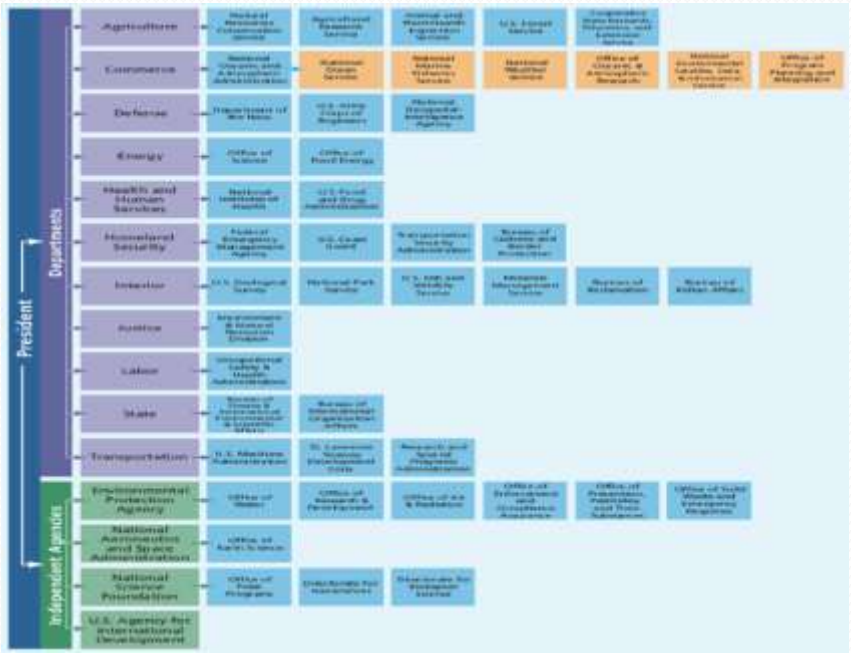
What is It?	Structured EU-US dialogue on marine policy and management…..
Charge:	Provide *actionable recommendations* for EU-US cooperation to improve marine policy effectiveness and encourage the transfer of best practices.
Themes:	Integrated Policies and Tools; EU/US Transatlantic Cooperation; ***Oceans and Climate Change***; and, High Sea Governance
Final Report:	June/July 2011

Governance of Maritime Affair

EU

Services with key activities specific to Maritime Affairs				
Joint Research Council	Environment monitoring			
DG Development	Sustainable management of natural resources			
DG Employment	Social dialogue, social rights, working conditions, adaptation to change			
DG Justice, Freedom and Security	Border management and maritime surveillance			
DG Research	Agriculture, forestry, fisheries and aquaculture	Maritime transport, research, waterborne tech, research strategy	Management of natural resources	
DG Enterprise and Industry	(Maritime) cluster policy and lead markets	Maritime industries, shipbuilding and Leadership 2015, MIP	Tourism	
DG External Relations	Maritime surveillance	Norway	Coordination and analysis	Arctic
DG Mobility and Transport	State aid to maritime transport	Maritime Transport Policy, Regulatory Questions, Maritime safety	Maritime Transport & Ports Policy, Maritime Security	
DG Energy	Promotion of renewable energies	Energy policy/Maritime policy, ensuring a better fit		
DG Climate Action	Emissions from ships			
DG Environment	Natura 2000	Framework Directive Protection of Water and Marine Environment, urban wastewater, integrated coastal zone management	LIFE Programme	Ship dismantling
DG Regional Policy	Thematic innovation, coordination			
DG Eurostat	Statistical information technologies			
DG Education and Culture	Cultural policy and interculture dialogue			
DG Trade	Transport services	Trade and sustainable development		
DG Competition	State aid to shipbuilding	Competition in maritime transport		
Secretariat General	Strategic objective, solidarity			
DG Maritime Affairs and Fisheries	Implement maritime and fisheries policy			

US



Key Opportunities Cooperation

High Level Ocean Policy Initiatives

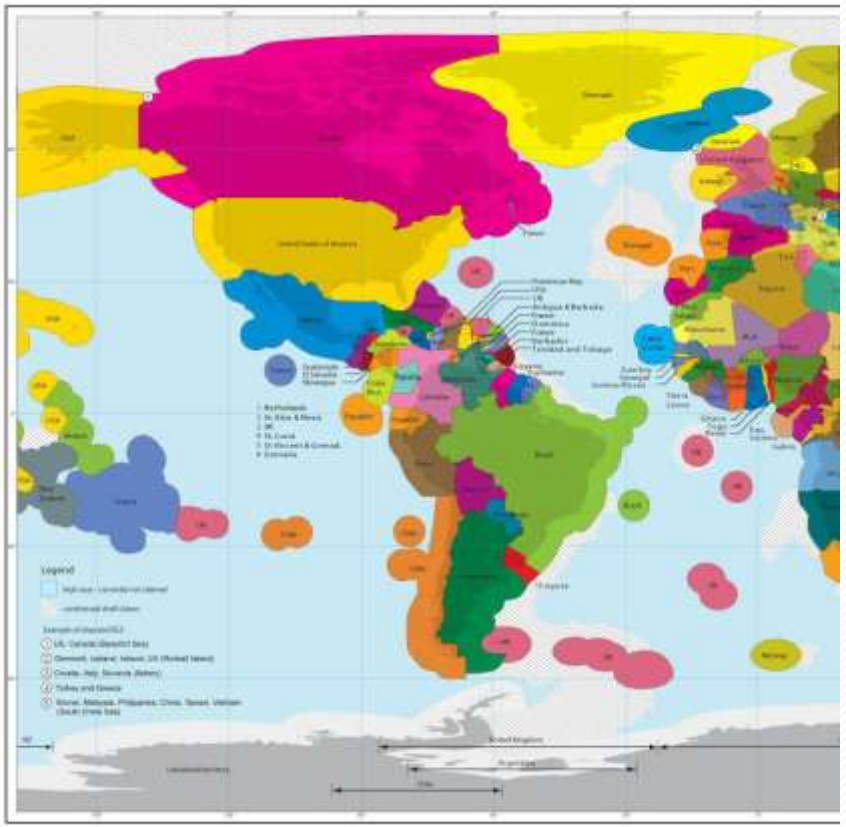
- US Ocean Commission , National Ocean Policy and National Ocean Research Priorities Plan
- EU Integrated Maritime Policy, Marine Strategy Framework Directive and European Strategy for Marine and Maritime Research.

Opportunities:

- Integrated Policies and Governance Frameworks
- Coastal and Marine Spatial Planning and Decision Support Tools
- Improved Ocean Observation and Scientific Platforms
- Shared Ocean Resource and Interests in International Fora
- Increased bi-lateral governmental, non-governmental and industry collaboration and best practices.

Oceans and Climate Change Working Group

- Priority Areas
  - Ocean-related mitigation strategies
    - specifically focused on shipping and alternative energy.
  - Coastal adaptation strategies
    - Shoreline protection and planned retreat
    - Science and research knowledge gaps.



Oceans and Climate Change Working Group

- Gary Griggs, UCSC(Chair)
- Niko Wijnolst, EU Network of Maritime Clusters
- Tundi Agardi, Sound Seas
- Loic Blanchard, EU Commission, DG Mare
- Charles Buchanan, Luso-Amer. Dev. Foundation
- Margaret Davidson, NOAA, CSC
- Mark Dickey-Collas, IMARES
- Robert Gagosian, Consor. For Ocean Leadership
- Tony MacDonald, Urban Coast Institute
- Sean O'Neill, Ocean Renewable Energy Coalition
- Harilaos Psaraftis, National Tech. Unv. Athens
- Ana Ruiz, EC, DG Mare
- Victor Schoenmakers, ESPO and Port of Rotterdam

Preliminary Outline

A. Introduction

B. Enhance EU/US climate dialogue

1. Encourage and support EU and US dialogue on coastal adaptation to climate change

2. Identify existing fora and avenues for international cooperation and environmental information and data sharing related to climate change

C. Improve platforms for informational exchange on climate and alternative/renewable energy

1. Transatlantic oceans and climate change portal for improving exchange of information and best practices

2. Placement of information and data on alternative energy funded by public monies into the public domain

D. Engage economic sectors in mitigation and adaptation strategies

1. Interactions between EU and US ports on mitigation and adaptation strategies

2. Engage insurance and reinsurance sectors on adaptation strategies

3. Promotion of new and emerging ocean renewable energy sources and collaborations on emerging best practices

E. Improve use of Global Ocean Observing Systems (GOOS) for climate-related applications and decisions

1. Encourage funding and collaboration around GOOS

2. Improved communication between scientists and managers on the need for and use of GOOS information.

F. Conclusions

Key Drivers – IPCC

Sea-Level Rise

- There is now strong evidence that sea level rise will be ***at least 1 meter by 2100***, with the possibility of even higher levels of sea level rise likely.
- Key questions now related to increased risks from coastal storms, inundation, and impact of coastal infrastructure and development

Polar Ice Melt and Glacial Retreat

- Polar ice is continuing to melt at a rapid rate and glaciers are retreating globally, contributing to global sea level rise and ***the potential alteration of ocean currents and ecological systems***.

Ocean Acidification

- The oceans have ***increased in acidity by 30 per cent*** since the industrial revolution and are predicted to become even more acidic than they have been in the last 650,000 years.

Global Changes, Local Impacts

What's happening in your backyard?

What actions do you need to take now?

Coastal Adaptation

EU White Paper on Adaptation

Recommendations:

1) Build a knowledge base
2) Take climate change impacts into consideration in key EU policies
3) Financing, and
4) Supporting wider international efforts

Phase 1: A comprehensive adaptation strategy (2012)

Phase 2: Implementation (2012).

A Clearing House Mechanism (web based platform) (2011)

US Interagency Climate Change Adaptation Task Force

Recommendations

1. Insure accessibility of scientific information,
2. Adaptation as a standard part of agency planning process,
3. Coordinate federal efforts to respond to climate change impacts that cross-cut jurisdictions and missions
4. Develop a US strategy to support international adaptation; and
5. Build strong partnerships to support local, state, and tribal decision makers

Coastal Adaptation

Recommendation

Organize a **Transatlantic Policy Dialogue on Climate Adaptation in Coastal Areas** and in Oceans/Seas to bring together the experiences of the two regions, focusing on emerging best practices and fostering new collaboration among US and European local, regional, and national leaders/officials on both sides of the Atlantic.

Possible Outcomes

- A continuing mechanism for Transatlantic information exchange on adaptation practices
- Exchange of officials from national and regional/local levels (example: pairing of cities/local communities with similar physical settings and issues)
- Compiling and making available best emerging practices
- Cooperation on capacity building efforts, such as joint development of educational materials
- Development of a Transatlantic exchange of practice on oceans and climate

Improved Observations

Recommendations

- Develop a Transatlantic platform to ensure sharing of information on best portals, practices, scenario building, ecosystem services, and adaptation responses and resiliency by the first quarter of 2012.

- Establish national ocean or climate institutions in the US and EU and partner nations that are tasked with sustaining climate-quality ocean observing systems, including sufficient financial support.

Ports and Climate

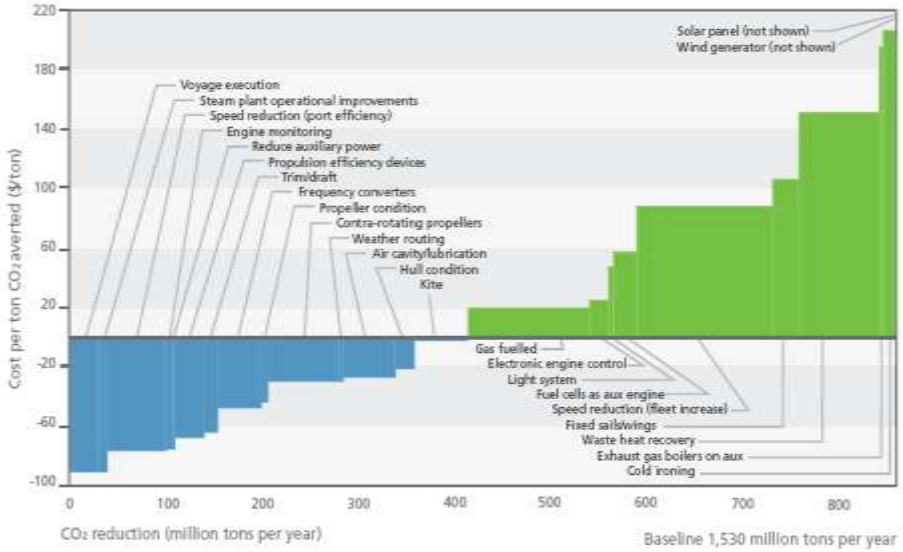
- Given the concentration of people, infrastructure and other assets in and around ports and their importance to global trade, failure to develop effective mitigation and adaptation strategies would have wide spread economic and potential security implications.

- The E.U. and US Atlantic ports share a history of intensive coastal development around maritime and port cities, and billions of dollars in investment in infrastructure to support commerce that is at risk from climate change impacts.

- A 2008 study for the Organization for Economic Development and Cooperation (OECD) analyzed how climate change could affect the world's largest 136 ports. New York, Amsterdam, Rotterdam and Virginia Beach are among the top10 cities with exposure of assets at risk from coastal flooding that will likely be exacerbated by climate change.

Mitigation - Vessel Emissions

- According to a 2010 EC report maritime transport accounts for about 4% and perhaps as much as 5% of "global man-made carbon dioxide emissions".
- Approximately 40 percent of the ships in the world fleet account for 80 percent of these emissions.
- Will increase in the future due to projected growth in world trade and the demand for seaborne transport.
- Report on the potential and cost effectiveness of *technical* measures to reduce greenhouse gas emission in shipping and its impact on the level of emissions in the year 2030



Market-based Mitigation Measures

- *Market-based measures (MBMs)*
  - reductions from shipping and/or the collection of funds to be used for mitigation activities.
  - Currently no consensus among IMO member states regarding these measures, however, and the European Commission has threatened to take unilateral action.
- The U.S. is calling for a *Ship Efficiency Credit Trading* system based on an Energy Efficiency Design Index (EEDI.)
  - The index is on the verge of adoption by the IMO as an amendment of Annex VI of MARPOL.
  - In Europe, there are also proposals for a levy on bunker fuel and a cap-and-trade (or ETS) proposal.

Comprehensive Port Adaptation Strategies – Key Challenges

- Because the results from even the most aggressive GHG mitigation strategies will take years , ports need to consider now whether there is a climate changed conditions such as storm surge.
- The navigability of channels, bridge clearance and dredging needs of ports could also be affected.
- Ports are often separated from larger urban or regional areas, while impacts of climate change are currently focused primarily on regional and global scales.
- Little examination of the indirect impacts of climate change on ports including
  - shifts in location of economic activity,
  - regional and international shipping patterns,
  - warming impacts on energy needs and facility operations, pollution impacts, and
  - port insurance and financing based on climate risks.
- Current planning tools are not designed to consider the long-term uncertainties associated with climate change impacts.
  - planning and financing for port infrastructure on 20-40 year time frames do not align with long-term climate forecasts of 50-100 years.

TRB Decision Framework to Address Impacts of Climate Change on U.S. Transportation Infrastructure

1. Assess how climate changes are likely to affect various regions of the country and modes of transportation (assess hazards).
2. Inventory transportation infrastructure essential for maintaining network performance in light of climate change projections to determine whether, when, and where the impacts of projected changes could be consequential (assess the vulnerability of assets and the system's resilience to loss of assets).
3. Analyze adaptation options to assess the trade-offs between making the infrastructure more robust and the costs involved. Consider monitoring as an option.
4. Determine investment priorities, taking into consideration the criticality of the infrastructure component as well as opportunities for multiple benefits (e.g., congestion relief, removal of evacuation route bottlenecks).
5. Develop and implement a program of adaptation strategies for the near and long terms.
6. Periodically assess the effectiveness of adaptation strategies.

Port and Climate – Mitigation Recommendations

- Selection and promotion of technical measures to reduce ship emissions to be implemented by the ship owners in the US and EU on their fleets, which do not require IMO consensus and conventions or regulations.
- Expand dialogue for building consensus in IMO and with non-governmental organizations regarding mitigation actions.
- Encourage dialogue on the selection of market-based measures to mitigate GHG emissions and establish the potential impact on the US and EU controlled fleets and ports.
- Expansion of the network of port cities in the US and EU that identify best practices, and strengthen the incentive system for shipping and other port users.
- Continue efforts to increase maritime supply chain efficiencies and improve in-port handling, including availability of alternative energy sources and other efficiency strategies.

Port and Climate – Adaptation Recommendations

- Expand collaboration and dialogue between the US and European maritime trade associations and other maritime clusters on experiences, best practices and strategies for adapting to climate change.
- Collaboration with national and international bodies to develop regional and locally relevant climate change and climate change impact projections relevant to assessing risk and informing planning at port facilities.
- Develop collaborations between ports and municipal and regional authorities to identify specific information and research gaps, and undertake studies and assist in better-coordinated planning practices and responses.
- Incorporate climate change into national coastal flood and extreme event risk management approaches, urban development strategies and port planning.
- Undertake studies of indirect impacts of climate change on ports, including shifts in location of economic activity and regional and international shipping patterns in the North Atlantic.

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- Next Steps -
  - WG to review and revise preliminary analysis recommendations Expand analysis as needed(Jan/Feb)
  - Consult informally with stakeholder groups and revise as needed. (Feb/Mar)
  - Integrate WG efforts, refine recommendations, including identification of specific actions and responsible parties. (Mar/Apr)
  - Review revised draft April 11-12, Lisbon
  - Finalize report and recommendations (May/June).