NROC MEETING
DECEMBER 16, 2019

Key Takeaways
GOM 2050 International Symposium
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Who?
Leaders from New England and Maritime Provinces

What?
Explore environmental, economic, social and institutional perspectives on climate resilience in the Gulf of Maine

Why?
• Learn how key drivers will impact Gulf of Maine over next 30 years
• Identify priorities for regional resilience
Special Thanks to our Sponsors and Partners

Gulf of Maine 2050 Hosts

Ocean Futurist

Leadership in Action
Special Thanks to our Sponsors and Partners

Many Voices Scholarships

Poster Session

Organizational Partners

Special thanks to the following organizations for providing in-kind support to help plan and coordinate Gulf of Maine 2050.

- Bay of Fundy Ecosystem Partnership
- Fisheries and Oceans Canada
- Gulf of Maine Council on the Marine Environment
- Gulf of Maine Research Institute
- Huntsman Marine Science Centre
- Maine Department of Marine Resources / Maine Coastal Program
- Massachusetts Office of Coastal Zone Management
- MIT Sea Grant
- National Oceanic and Atmospheric Administration
- New Brunswick Department of Environment and Local Government
- New Hampshire Coastal Program / New Hampshire Department of Environmental Services
- Northeastern Regional Association of Coastal and Ocean Observation Systems
- Nova Scotia Department of Intergovernmental Affairs
- Regional Association for Research on the Gulf of Maine
- US Environmental Protection Agency
Why 2050?

Global average surface temperature change

Source: IPCC
Over 320 leaders from across US / Canada
Keynote speakers
Scientific scenario papers
Poster sessions
Scientific presentations
Panels, lightning talks, and working sessions
Collaborative action grants
Research, Management, Policy and Communications Priorities

- Cross-cutting
- Driver specific
  1. Sea level rise, storm surge, precipitation
  2. Coastal and Ocean Acidification
  3. Warming Waters
Expand Collaboration

- Knowledge, tools, resources and strategies
- Bi-nationally (US / CA), across jurisdictions, between state and federal government, among local communities
- Across multiple sectors
  - Science, industry, academia, government, NGOs, the public
- Look beyond our continent
Improve Communications, Awareness and Education

- Bridge the gap between science, management and public information
- Convey ‘stories’ about regional communities and priorities
- Share case studies and models of success
  - Adaptation and mitigation examples
  - Innovative research techniques
  - Local and regional policy actions
Improve Communications, Awareness and Education

• Use creative strategies to increase awareness
  • Increase role of scientists in communicating their work
  • Engage meteorologists in climate change communications
• Improve K-12 Education
  • Climate change
  • General earth science
Research Priorities

- Research impacts out to 2100 to reflect more drastic changes after 2050
- Combined impact of all three major drivers on multiple sectors
  - Communities
  - Ecosystems
  - Economy (needed to inform cost / benefit analysis)
Policy and Management Priorities

- Promote social / environmental justice
  - Vulnerable communities face significant negative impacts
- Integrate climate policies into all levels of government policy
- Create ‘adaptive’ policies and management strategies
  - Changing ecosystems
Policy and Management Priorities

- Improve link between science and management / policy decisions
  - Use most recent IPCC research, forecasting and knowledge
  - Improve ‘real time’ data and reporting tools to inform adaptive management strategies
- Come to terms with the importance of making good policy and management decisions despite UNCERTAINTY associated with climate change
Policy and Management Priorities

• Increase knowledge and expertise in conflict management
• Promote cross-generational planning and management
  • Engage young people in policy and management
  • Extend the planning horizon out to 2100
  • Plan for ‘grandchildren not grandfathers’
Key piece of advice

- Make sure we’re all talking about the same thing

*Total Water Impact = combined impacts of sea level rise, storm surge, rainstorms, and groundwater*
Troubling reality check:

- Despite everything we know about coastal damage from SLR and storm surge…

*We are still building too close to the shoreline!*

- Major planning and policy changes are needed to shift this trajectory
Research Priorities

- Expand use of existing tools
  - IPCC data and reports
  - LIDAR data
  - SLR viewers
- Improve existing tools
  - Example: Integrate waves & sediment into SLR models
- Develop new tools
  - Example: Tools to measure success of coastal resilience strategies
Expanding local action is critical

• Communities can move forward despite state / federal political shifts
• Highlight and share successful case studies, model ordinances, building codes
• Significant funding is needed to promote resilient communities and infrastructure
  • Maritime
  • Ecosystem services
  • Transportation
  • Disaster management
  • Protecting vulnerable communities
Research Priorities

- Increase understanding of ocean and coastal acidification
  - Environmental conditions in the region
  - Ecological, social and economic impacts
  - Interaction of variables and stressors on life stages of key species
- Funds to support current and additional monitoring and reporting
Communications, Policy and Management Priorities

• Expand activism and communications to increase awareness about OCA
• Implement strategies to reduce atmospheric carbon
• Create ‘nimble’ management policies that adapt to shifting environmental conditions
Research Priorities

• Real-time data, especially for bottom temperatures
• How warming waters impact ecosystems
  • Species distribution
  • Interconnections among shifting species
• Relationship between warming waters and wider oceanographic processes
• Increase sharing of data, tools, research gear and equipment
Communications, Policy and Management Priorities

- Link policies to most recent climate information
- Develop systems for transboundary (US / Canada) efforts to protect key species that cross boundaries
  - Birds, whales, fish, etc…
Anticipated Products / Reports

- Publication of scientific papers
- GOM 2050 proceedings
- More detailed set of priority recommendations from Working Sessions
- Additional resources (presentations) posted online
- Public outreach materials

Abstracts, program details, scientific scenario papers, collaborative action grant details and more: www.gulfofmaine2050.org
For discussion:

⇒ How can NROC support key priorities?

www.gulfofmaine2050.org