

# Views on the Arctic

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Office of Science & Technology Policy  
Executive Office of the President

# This Presentation

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- My perspective
- Office of Science & Technology Policy
- Science-based policy for the Arctic
- Interagency efforts & coordination




# My Perspective

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# My Perspective

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- Anecdotal: 1980s & 90s to 2004 to Today
  - Drilling results:
    - perennial sea ice began ~14 years ago
    - Arctic had an amplified response to past extreme warming events
    - Arctic was once the largest lake on Earth
  - Requires experienced people, detailed planning, robust technology, and learning from our mistakes

# Office of Science & Technology Policy

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- Congress established OSTP in 1976
- Broad mandate to advise the President & others within the Executive Office of the President on the effects of science and technology on domestic and international affairs
- Also authorizes OSTP to:
  - lead interagency efforts to develop and implement sound science and technology policies and budgets
  - work with the private sector, state and local governments, the science and higher education communities, and other nations toward this end



# Science-Based Policy

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# Science-Based Policy: for the Arctic

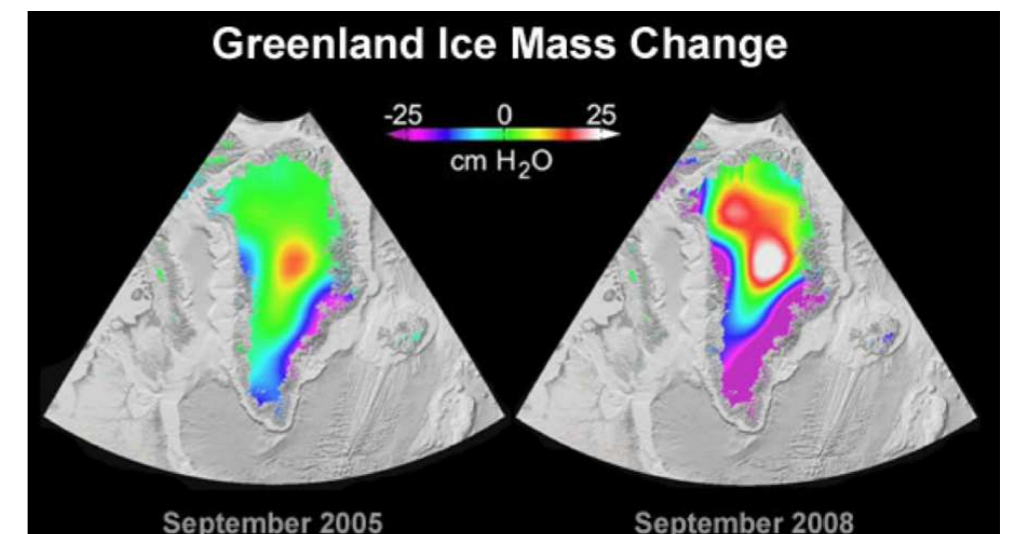
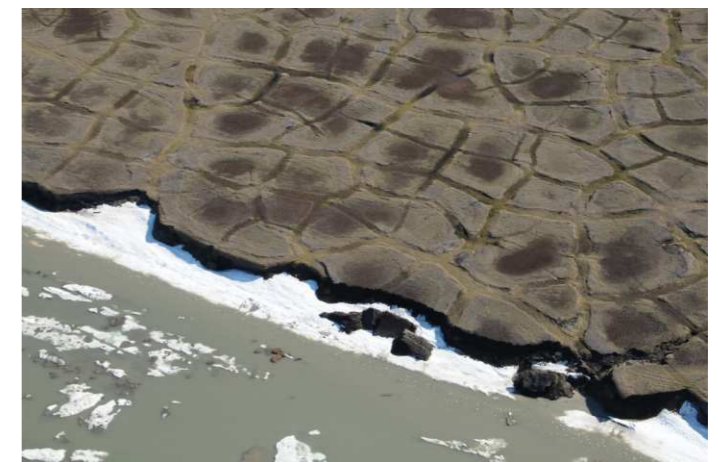
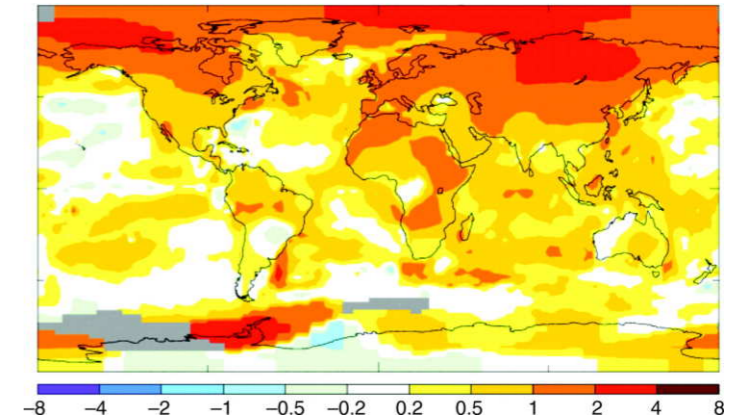
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- ecosystem science challenged by changing ecosystems
- integration of the ocean-ice-atmosphere processes
- deploying innovative technology integrated across agencies
- understanding local community/regional needs



# Driver: Human-Induced Arctic Climate Change

- Dramatic increases in Arctic average air temperatures
- Melt seasons extended
- Increasing ice loss from Greenland & smaller ice caps
- Record minimum of springtime snow cover
- Increase in permafrost temperatures
- Continued diminishment of sea ice extent & volume





# Impacts of Arctic Climate Change

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- Local & regional: transportation; fishing; coastal losses; infrastructure
- Growth in human activity
- Global weather patterns
- Global ocean circulation
- Global sea level rise



# Federal Interagency Efforts: Ocean Policy

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President Obama established the Interagency Ocean Policy Task Force June 2009, led by the Council for Environmental Quality:

***“We have a stewardship responsibility to maintain healthy, resilient, and sustainable oceans, coasts, and Great Lakes resources for the benefit of this and future generations.”***

- Charged the Task Force to deliver a national Ocean Policy in 90 days & a Coastal & Marine Spatial Planning Framework in 120 days
- Over 20 Federal agencies; 10’s of working groups; >100 stakeholder listening sessions; 6 national stakeholder workshops
- The Ocean Policy was formalized as Executive Order 13547 in July 2010



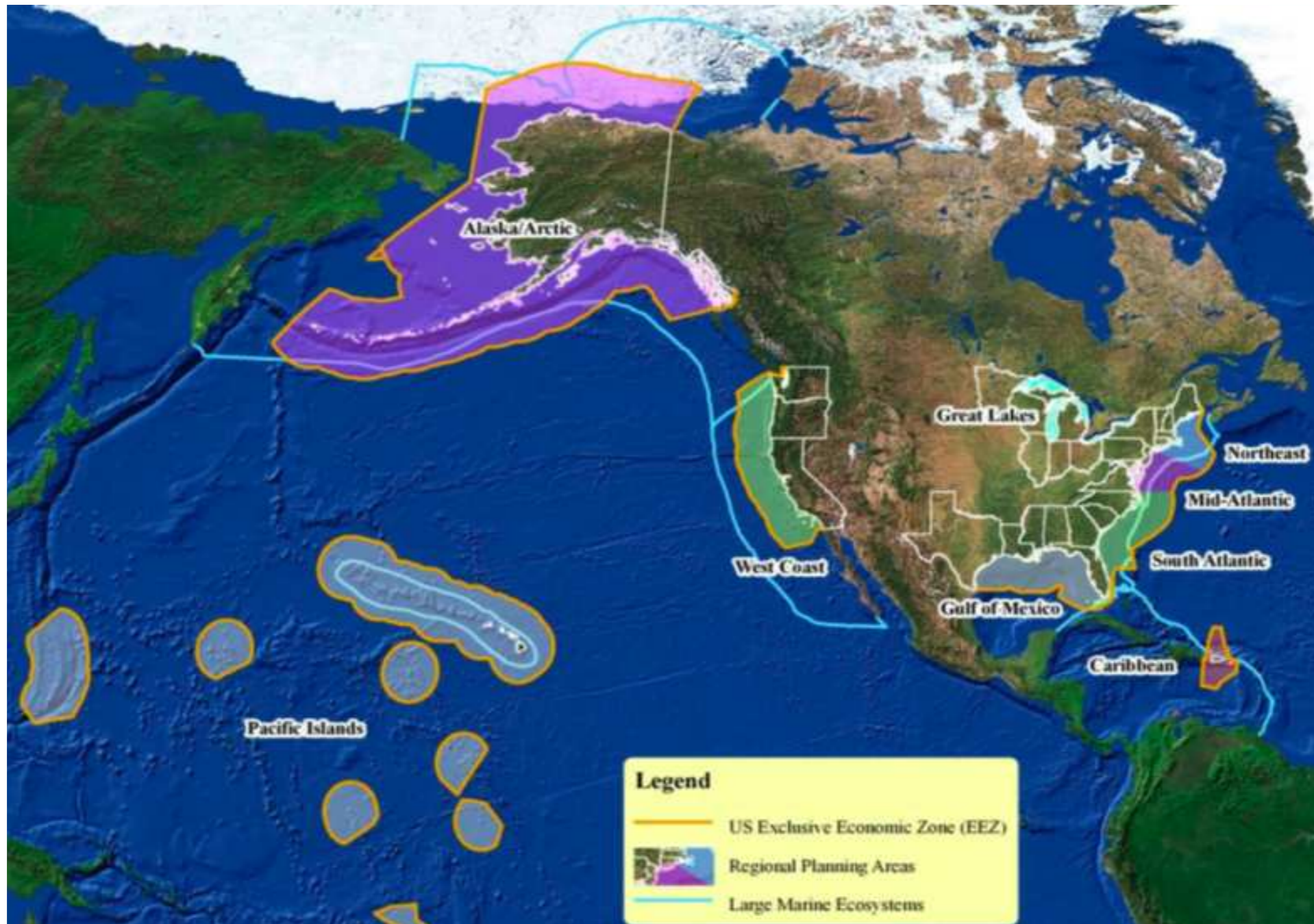
# National Ocean Policy

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- Four priority objectives:
  - ✓ Ecosystem-based management
  - ✓ **Coastal and marine spatial planning**
  - ✓ Inform decisions & improve understanding using sound science
  - ✓ Coordinate & support regional management across agencies
- Five areas of special focus:
  - ✓ Resiliency & adaptation to climate change & ocean acidification
  - ✓ Regional ecosystem protection & restoration
  - ✓ Water quality & sustainable practices on land
  - ✓ **Changing conditions in the Arctic Ocean**
  - ✓ Ocean, coastal & Great Lakes observations & infrastructure



# Regional Plans



# Federal Interagency Efforts: Arctic Region Policy

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- Meet national security & homeland security needs relevant to the Arctic region
- Protect the Arctic environment and conserve its biological resources
- Ensure that natural resource management & economic development in the region are environmentally sustainable
- Strengthen institutions for cooperation among the eight Arctic nations
- Involve the Arctic's indigenous communities in decisions that affect them
- Enhance scientific monitoring and research into local, regional, & global environmental issues



# Federal Interagency Efforts: IARPC

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- Interagency Arctic Research Policy Committee
- President Obama moved within the National Science & Technology Council structure in July 2010
- Focusing on developing a 5-year plan to support the Arctic Region Policy, National Ocean Policy, international collaborations through the Arctic Council, U.S. Global Change Research Program, and new Federal sustainability directives
- Example: Ecosystem research for the Chukchi and Beauforts Seas
- Example: Regional-scale modeling for forecast & prediction
- Example: Expanding the Arctic observing network



# Federal Interagency Efforts: Arctic Policy Group

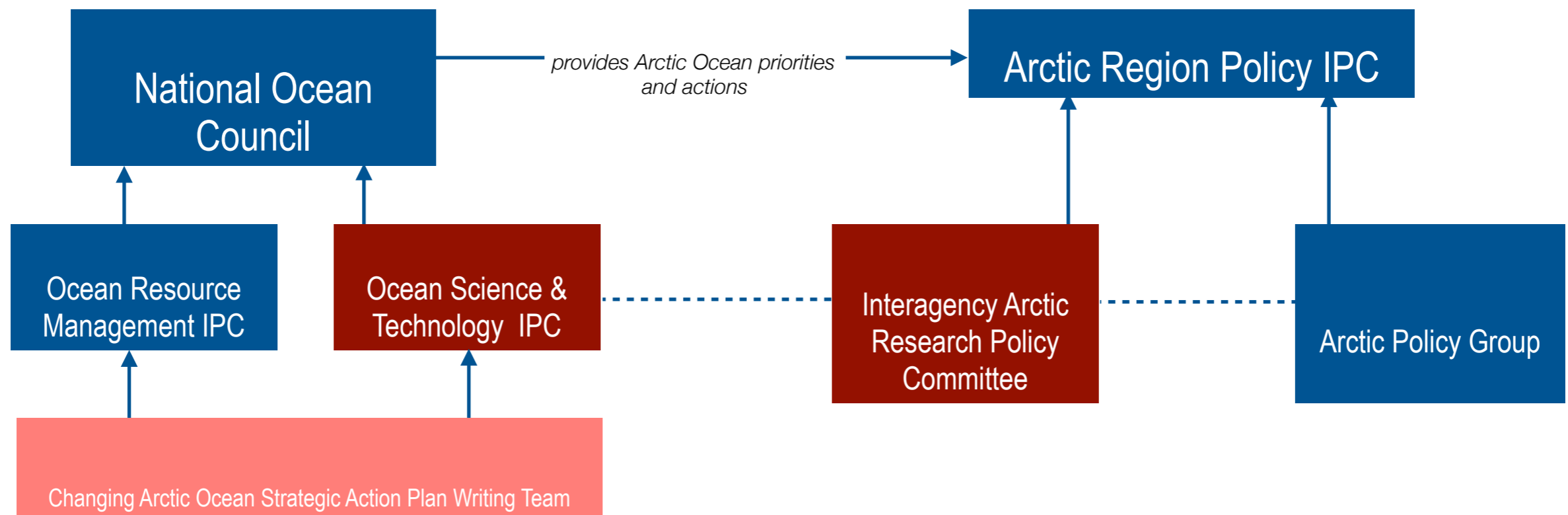
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- In 1996, the Ottawa Declaration established the Arctic Council
- U.S. participation in the Council is led by the State Department
- Member States: Canada, Denmark (including Greenland and the Faroe Islands), Finland, Iceland, Norway, Russian Federation, Sweden, and the United States of America
- Arctic Indigenous communities are active participants in the Council
- Six expert working groups: pollution in the Arctic, climate change, biodiversity conservation & sustainable use, emergency preparedness & prevention, living conditions of the Arctic residents



# Federal Interagency Coordination

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# Other Arctic Federal Interagency Efforts

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- Arctic Region Planning Body(ies) for Coastal & Marine Spatial Planning
- National Ocean Council Arctic Strategic Action Plan Writing Team
- Committee on Marine Transportation Systems Arctic Action Team
- Arctic Regulatory Team



# Some Arctic-Related Interagency Activities

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- Alaska Ocean Observatory Initiative
- Study of Environmental Arctic Change
- North Slope Science Initiative
- UNCLOS Arctic Ocean Mapping
- National Snow & Ice Data Center
- National Ice Center





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