

ARCTIC

NOAA'S ARCTIC VISION and STRATEGY

NOAA Imperatives, Drivers, & Service Needs

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NOAA's Arctic Vision

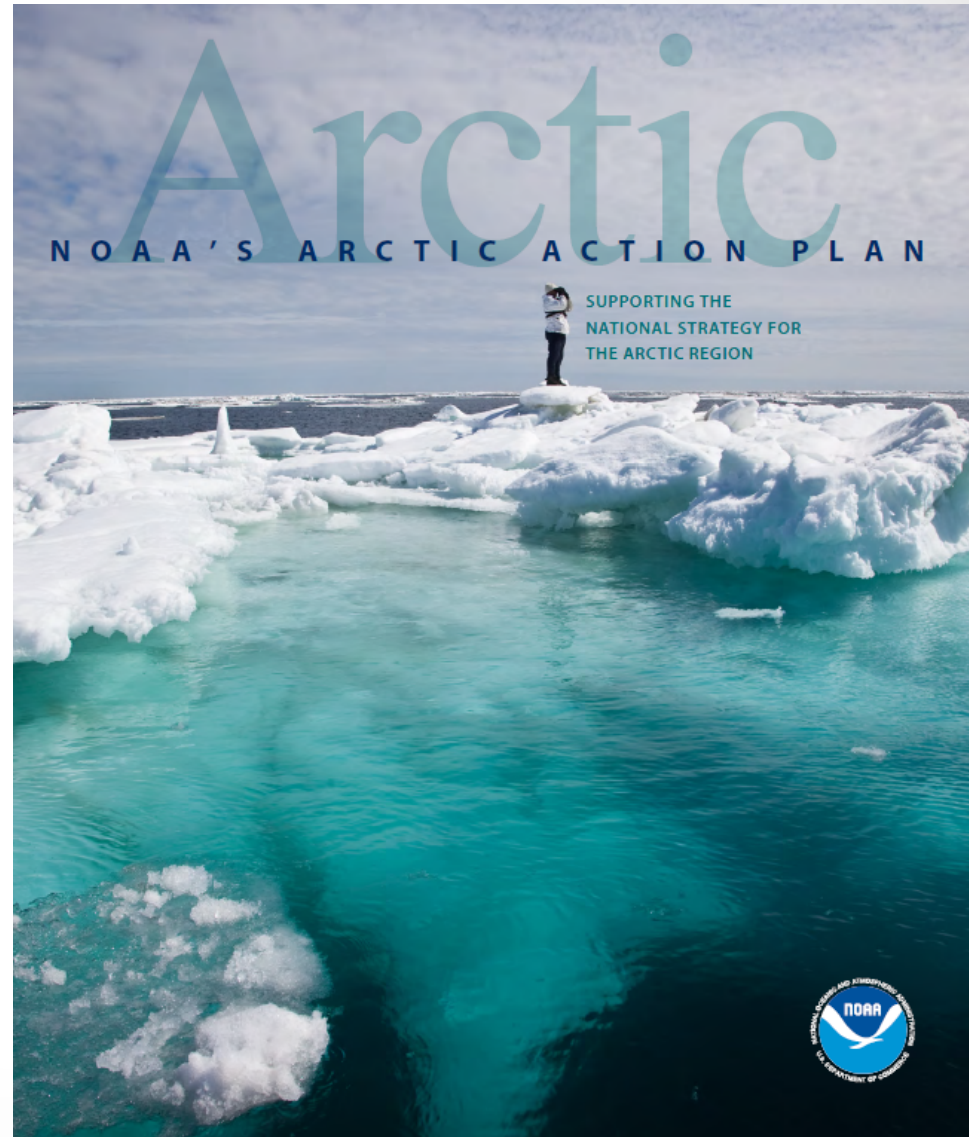
- NOAA envisions an Arctic where:
 - Conservation, management, and use are based on sound science, and support healthy, productive, and resilient communities and ecosystems,
 - The global implications of Arctic change are better understood and predicted.



Photo © Bill Hess

NOAA's Arctic Action Plan

- Building out from NOAA's Arctic Vision and Strategy (released 2011)
- Provides detail on activities in 2014-2015



National Strategy for the Arctic Region

National Strategy for the Arctic Region — lines of effort —	NOAA's Arctic Vision and Strategy — strategic goals —
<ul style="list-style-type: none"> • Advance U.S. security interests 	<ul style="list-style-type: none"> • Forecast sea ice
<ul style="list-style-type: none"> • Pursue responsible Arctic region stewardship 	<ul style="list-style-type: none"> • Improve weather and water forecasts and warnings • Strengthen foundational science to understand and detect Arctic climate and ecosystem changes • Improve stewardship and management of ocean and coastal resources in the Arctic • Advance resilient and healthy Arctic communities and economies
<ul style="list-style-type: none"> • Strengthen international cooperation 	<ul style="list-style-type: none"> • Enhance international and national partnerships

NOAA's Arctic Goals



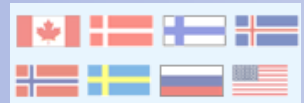
Forecast Sea Ice



Strengthen Foundational Science to Understand and Detect Arctic Climate and Ecosystem Changes



Improve Weather and Water Forecasts and Warnings



Enhance International and National Partnerships



Improve Stewardship and Management of Ocean and Coastal Resources in the Arctic



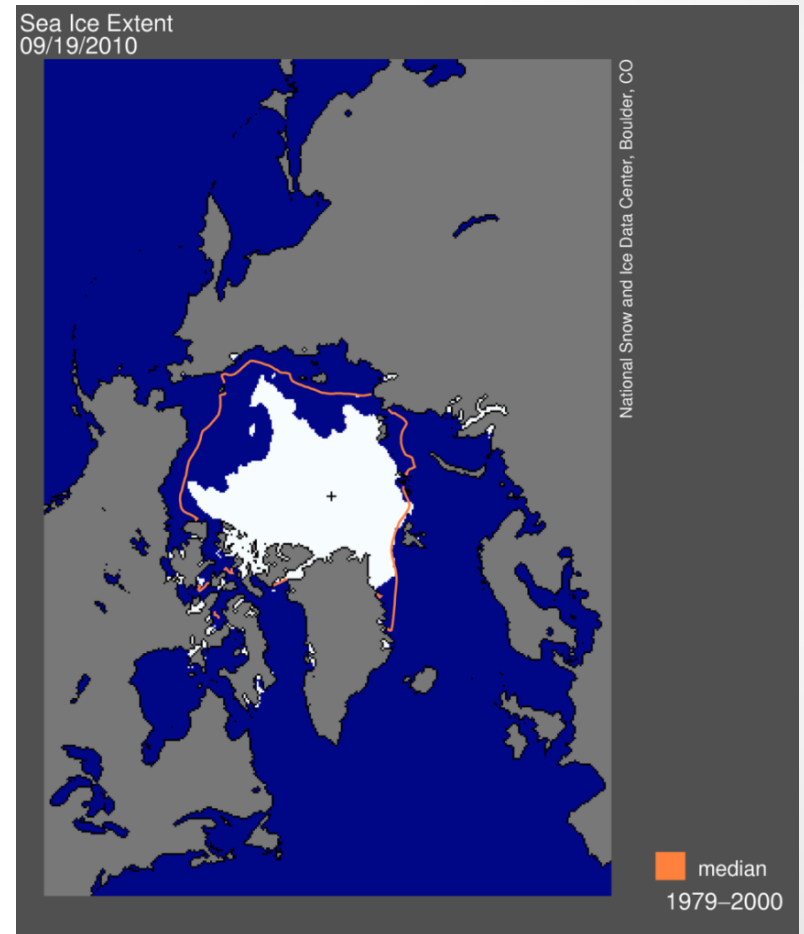
Advance Resilient and Healthy Arctic Communities and Economies

Goal 1: Forecast Sea Ice

Goal Statement – Accurate, quantitative, daily forecasts to decadal predictions of sea ice are provided to support safe operations and ecosystem stewardship.

Five-year Strategy

- Improve daily to weekly sea ice models and forecasts and new seasonal prediction services
- Multi-decadal sea ice projections
- Retrospective and prospective studies of the linkages between changes in Arctic sea ice and hemispheric weather and climate

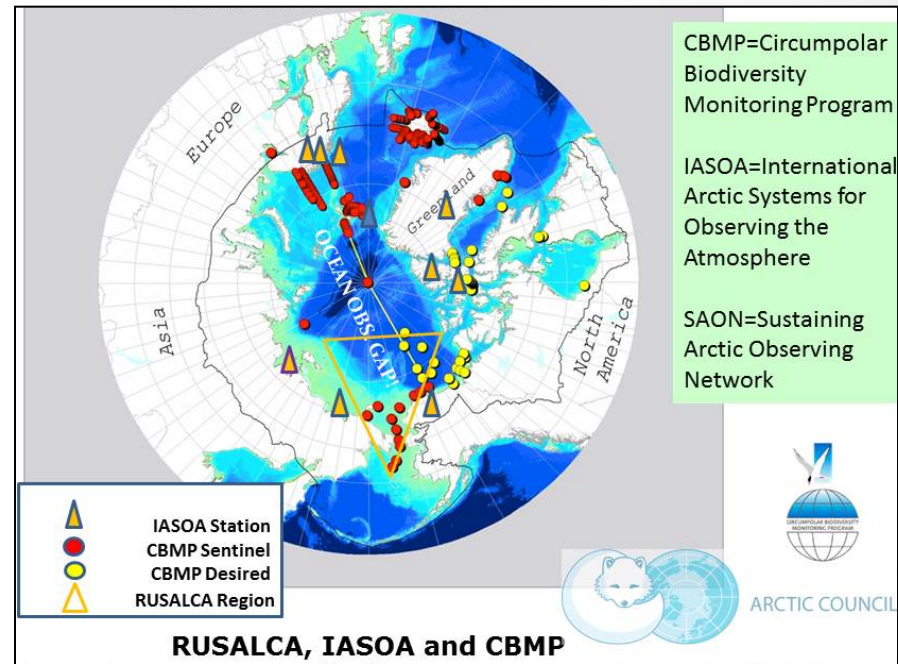


Goal 2: Strengthen Foundational Science to Understand and Detect Arctic Climate and Ecosystem Changes

Goal Statement – Improved baseline observations and understanding of Arctic climate and ecosystems reduces the uncertainty in assessing and predicting impacts caused by a changing Arctic.

Five-year Strategy

- NOAA's Arctic Science program is focused on developing **Arctic Observing Networks**
 - Distributed Biological Observatory
 - International Arctic Systems for Observing the Atmosphere (IASOA)



Goal 3: Improve Weather and Water Forecasts and Warnings

Goal Statement - Advanced, accurate forecasts and warnings are provided to ensure society can prepare for and respond appropriately to weather-related routine and extreme events.

Five-year Strategy

- Improve Arctic marine weather, sea ice and storm forecast services.
- Protect northern and western Alaska coastal communities from storm surge, inundation, and erosion hazards.

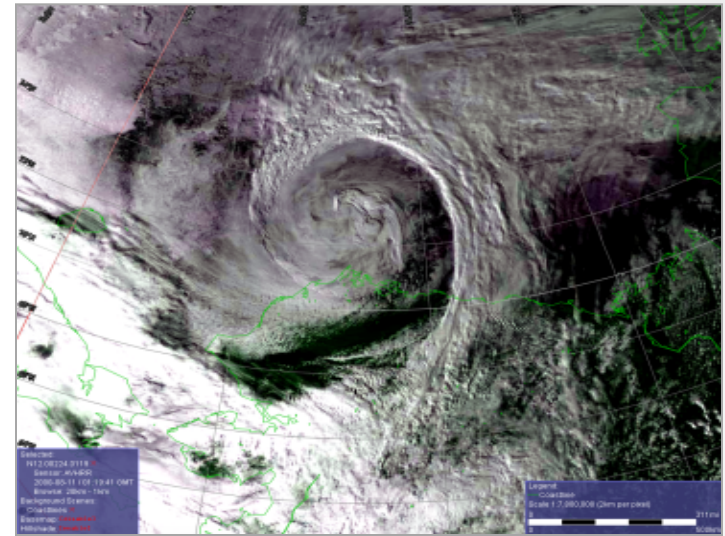


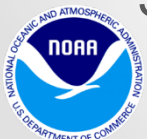
Photo 10: Shoreline erosion during coastal storm in Shismaref. (Credit: Tony Weyiouanna)

Goal 4: Enhance International and National Partnerships

Goal Statement - National and international partners are engaged to promote cooperation and sharing of data, observational platforms, and intellectual resources to enable more rapid and comprehensive attainment of NOAA's Arctic goals.

Five-year Strategy

- Encourage data sharing at multiple levels among providers and users
- Expand Arctic protection mechanisms
- Provide leadership and resources to support Arctic governance and science organizations
- Support development of effective SAON process

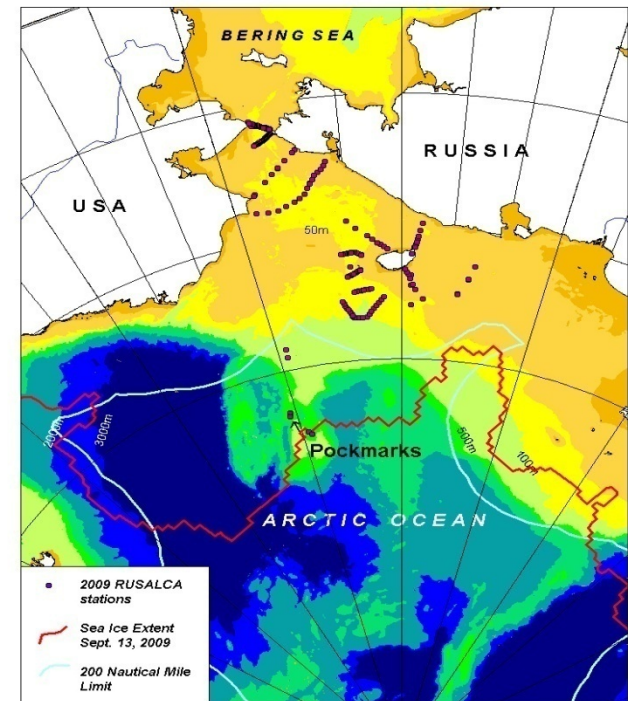


Goal 5: Improve Stewardship and Management of Ocean and Coastal Resources in the Arctic

Goal Statement - Conservation, stewardship, management, and use of ocean and coastal resources are based on sound science, and support healthy, productive, and resilient ecosystems and communities.

Five-year Strategy

- Continue ongoing assessment programs on marine mammals, fish, and shellfish
- Expand existing programs
 - RUSALCA; Arctic EIS
 - NOAA's ocean acidification program



RUSALCA 2009 stations, bathymetry in meters

K. Crane
NOAA

RUSALCA Ecosystem stations taken in 2009 from the Bering Strait north to 77°N on the Chukchi Plateau.

Goal 6: Advance Resilient and Healthy Arctic Communities and Economies

Goal Statement - Resilient and healthy Arctic communities and economies through improved geospatial infrastructure, safe navigation, oil spill response readiness, and climate change adaptation strategies.

Five-year Strategy

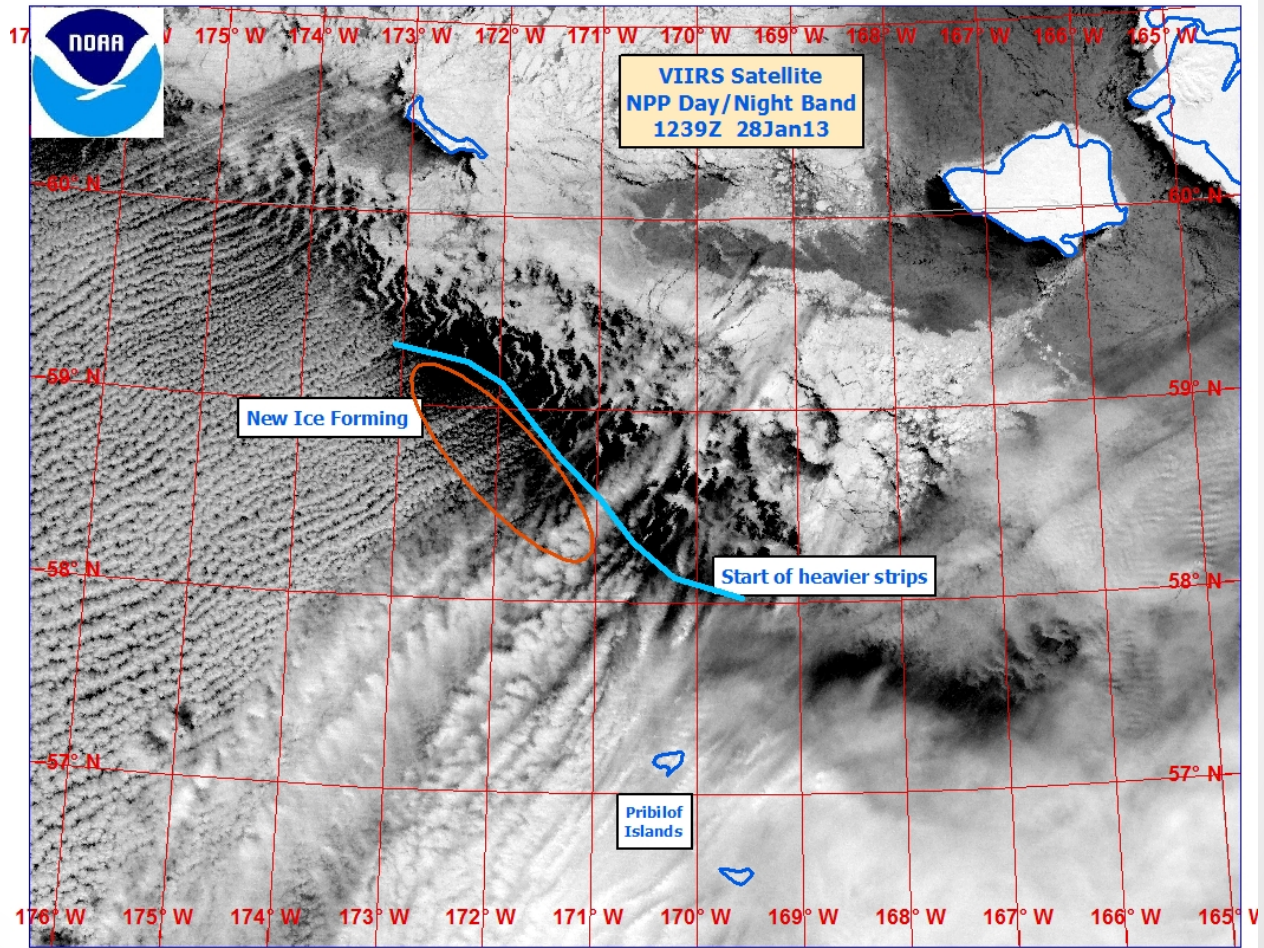
- Overhaul the Arctic Geospatial Framework
- Deliver scientific support for Arctic pollution response
- Survey and map Arctic waters and shoreline
- Support coastal communities with adaptive strategies and planning tools



Photo 9: Home falling over eroded bank in Shishmaref. (Credit: Tony Weyiouanna)

We need observations!

- NOAA forecasts are critical to ALL stakeholders
- But the information needed for accurate forecasts is severely lacking
- To improve predictions, we need better observations



Next Steps

- Improve Arctic marine weather, storm surge, and sea ice forecast services by enhancing and integrating observations



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