



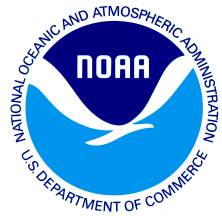
NOAA Science Challenge Workshop

***Predicting Arctic Weather and Climate and
Related Impacts:
Status and Requirements for Progress***

Workshop Overview and Objectives

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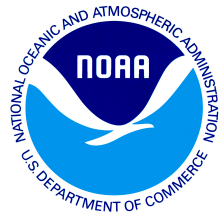
What is a NOAA Science Challenge Workshop?

- *The science challenge is critical to achieving NOAA's mission*
- *The challenge is complex and crosscutting.* It affects many parts of NOAA. Expertise across NOAA and outside the agency is required to address it.

Further requirements

- *NOAA's Research Council must approve the workshop*
- *The workshop outcomes are reported back to NOAA leadership*

Science challenge workshops affect NOAA's future directions



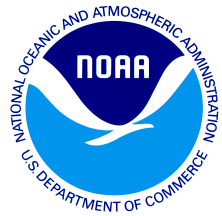
What is the main goal of this workshop?

To inform NOAA on actions required to address present and anticipated future mission requirements for predictions of Arctic weather and climate and related impacts.

This workshop focuses on forecast challenges in two areas:

- *Predictions of Arctic weather and climate, including sea ice*
- *Predictions of mid-latitude weather and climate, focusing on Arctic-lower latitude linkages.*

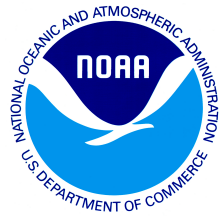
The intent is to move from problems toward solutions



How will we do this?

- ***Start from the drivers*** – why we need to take actions now
- ***Adopt a services perspective***
 - Consider three classes of prediction problems for services:
 - Arctic Short-term Weather and Hazards Predictions
 - Arctic Climate Predictions
 - Predictive Implications of Arctic-Lower Latitude Linkages
- ***Emphasize predictions on time scales from hours to a season***

Note that the fast processes affecting weather predictions are often also critical to longer-term climate predictions and climate change projections



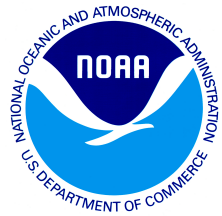
What is the relationship to NOAA and US Goals?

The Workshop will inform actions on three of six strategic goals identified in *NOAA's Arctic Vision and Strategy*:

- **Forecast sea ice**
- **Improve weather and water forecasts and warnings**
- **Enhance international and national partnerships**

These efforts will also support the 2013 *US National Strategy for the Arctic Region*.

David Kennedy and John Farrell will provide more detail on NOAA and US interests, respectively.



What is the time frame we're considering?

- ***The primary focus is on two to six years*** --This is the time horizon of an implementation plan.

The key questions we want to address are:

Between now and 2020 --What are actions that NOAA can take to help optimize progress on Arctic predictions and related services?

How can we work together with partners to achieve this progress?

Session 1 - The Drivers: US and NOAA Requirements for Advancing Arctic Predictions

- 8:50 am *National Needs for Improved Arctic Weather & Climate Predictions* – David Titley (PSU, Center for Solutions to Weather and Climate Risk)
- 9:05 am *A Navy perspective on Current and Future Needs for Arctic Operational Predictions*
RADM Jon White (US Navy)
- 9:20 am *NOAA Imperatives, Drivers and Service Needs* – David Kennedy (NOAA)
- 9:35 am *NOAA NWS Arctic Operational Forecasting Perspectives* – Ming Ji (NWS/NCEP)
- 9:50 am *Arctic Information and Regional Service Needs*– Aimee Devaris (NWS Regional Director– Alaska Region)