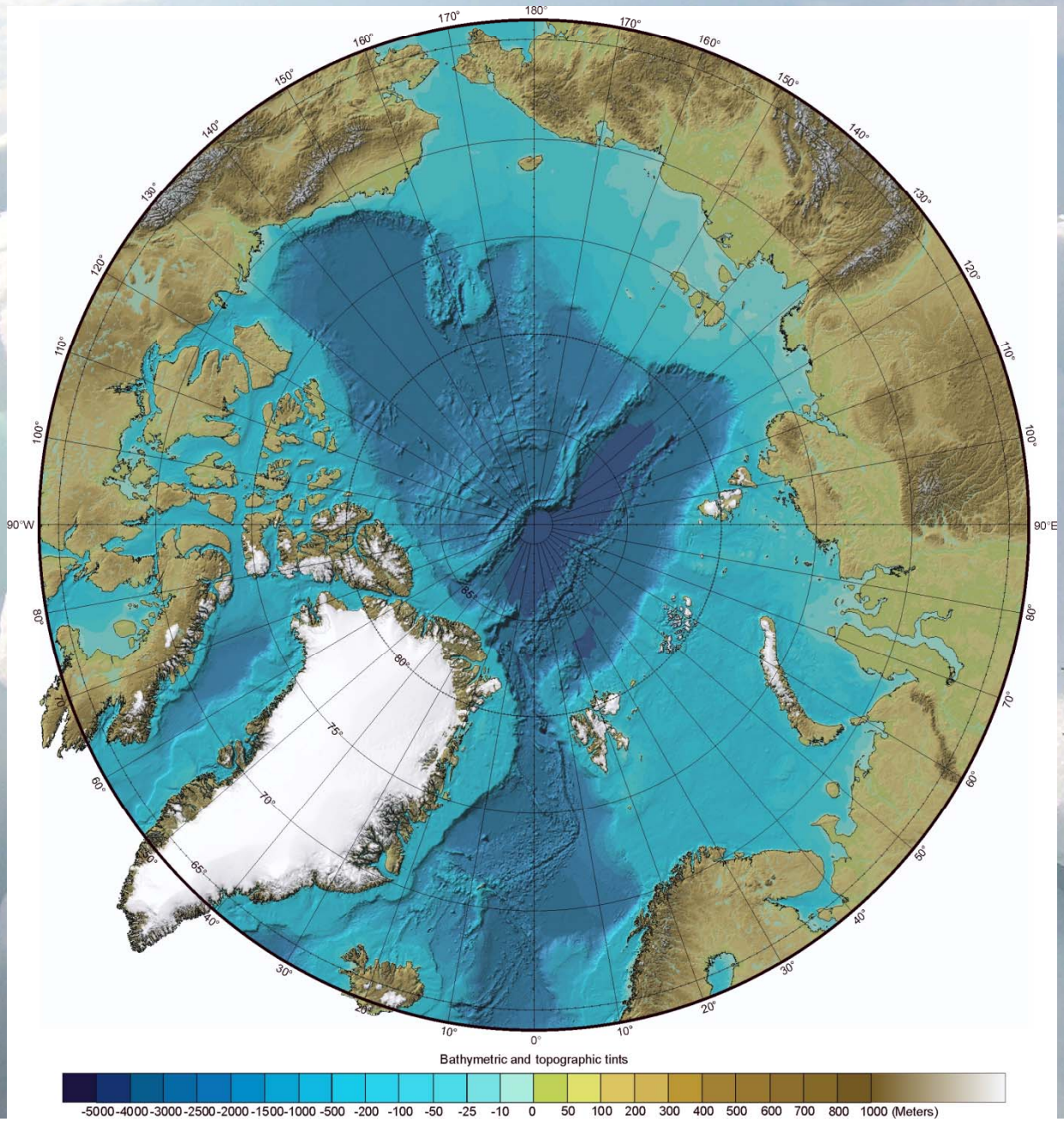
Why do we need to learn more about the Arctic and Southern Oceans?

Dr. Wendy Watson-Wright

Executive Secretary & Assistant Director General

Intergovernmental Oceanographic Commission of UNESCO

IOC - IHO - GEBCO



WMO-ROSHYDROMET WORKSHOP ON INTERNATIONAL POLAR DECADE INITIATIVE (St. Petersburg, Russian Federation, 14 and 15 April 2011)

Establish, maintain, or enhance critical polar observing networks

- Strengthen networking mechanisms, especially internationally
- Refine observing system strategies and fill observing gaps
- Develop new observing technologies
- Improve data integration and data product development

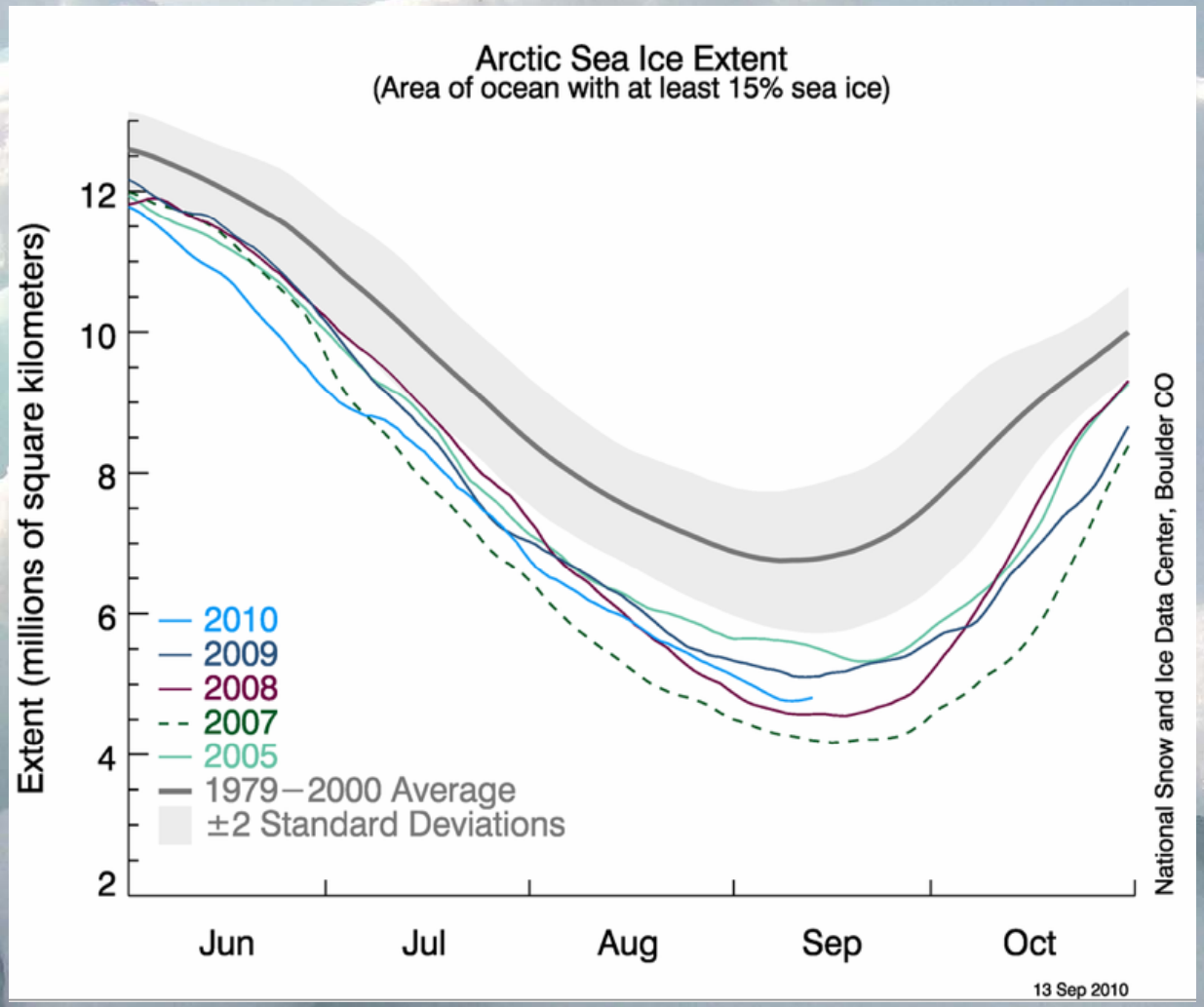
IOC Assembly XXV (2009)

The Assembly decided to:

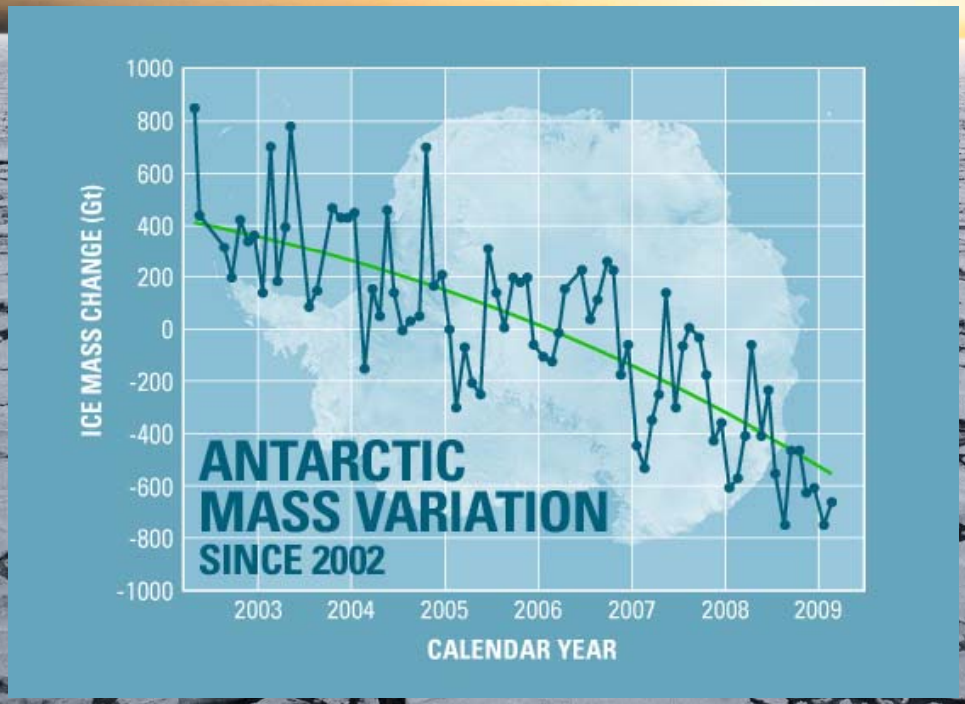
(i) support multilateral ocean-observing systems in the Arctic and Southern Oceans as regional contributions implemented under the guidance of JCOMM, and of IODE for data exchange and long-term stewardship of the data; and

(ii) support the Arctic Council's call for a follow-on International Polar Decade.

Polar Regions and the Climate Agenda



Antarctic Ice Mass Variation



Erik Conway
NASA/Jet Propulsion Laboratory

Pack Ice in the Ross Sea

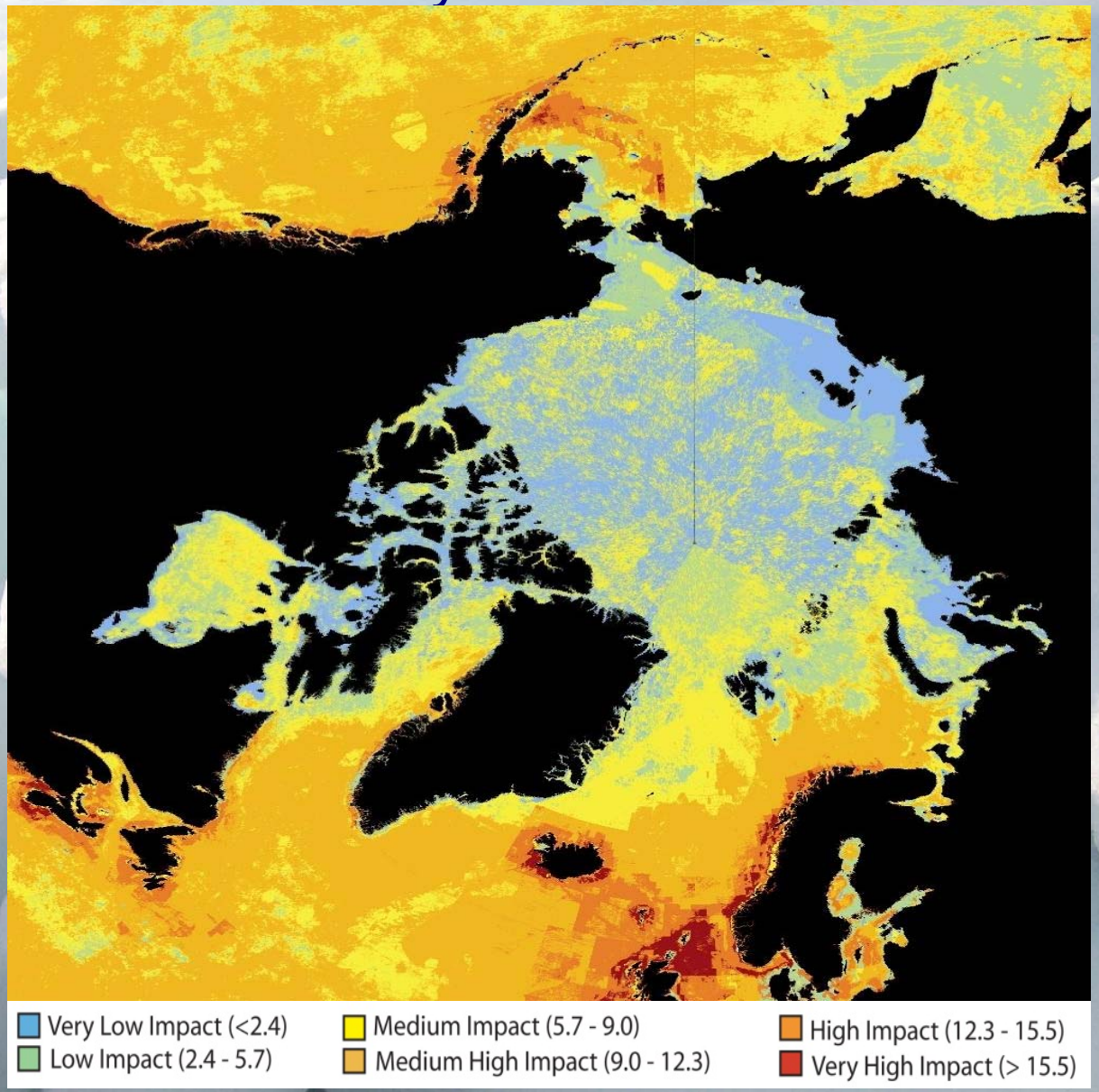
Anthropogenic interferences, climate change and variability

Ecosystem Services

- Food
- Transportation
- Recreataion
- Minerals and oil
- Climate regulations
- Absorption of CO_2 and production of O_2
- Biomedical organisms…

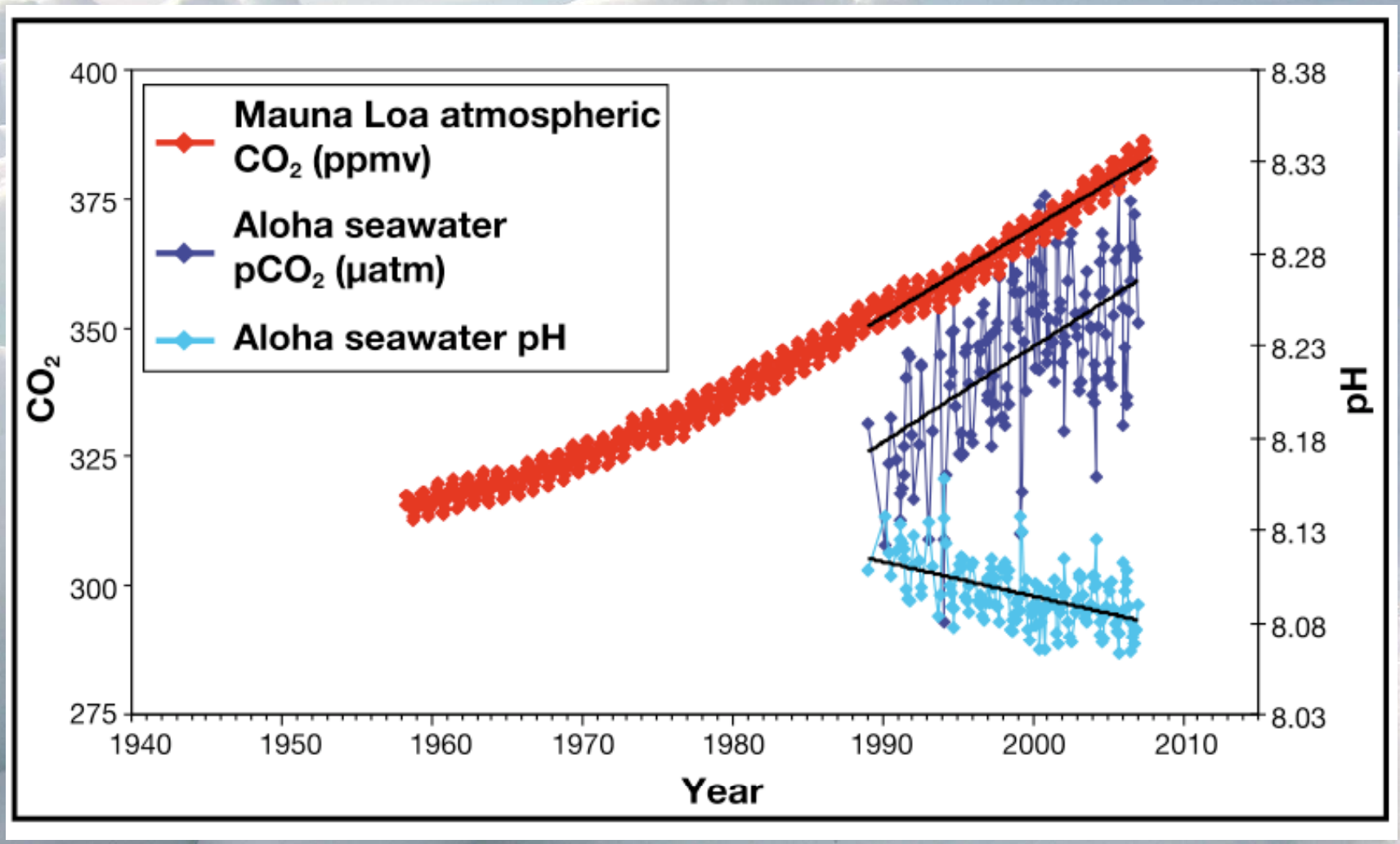
Polar bear wandering on the polar ice Chukchi Sea, Arctic Ocean.

The Arctic Ocean is one of the most pristine ecosystems on earth



Halpern et al (2008)

Ocean Acidification



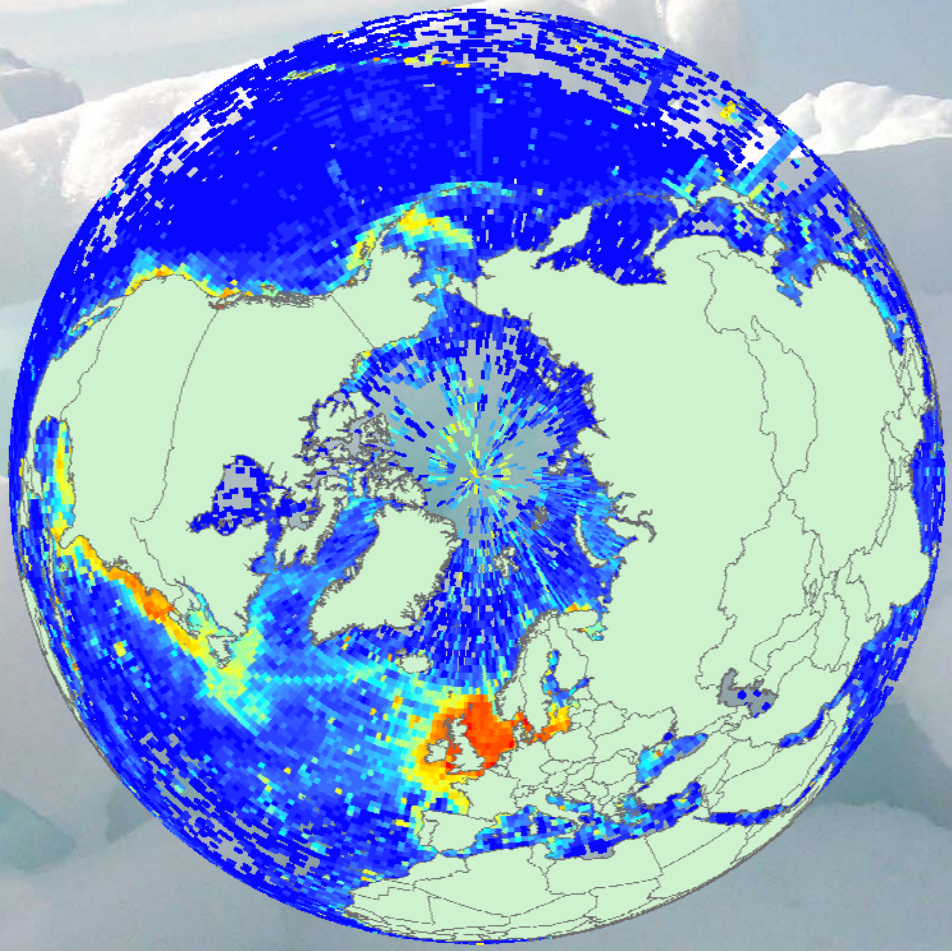
Gap in the Global Ocean Observing System

- The Arctic is a significant gap in the Global Ocean Observing System.
- An Arctic Ocean observing system must be created…

  …and sustained.

Latest location for platforms and tracks (all observations) for ships, as of June 2010.

Gap in OBIS Records



Red = High Data Density, Blue = Low Data Density, Grey = No Data

Gap in Governance

Arctic Council
Arctic Marine Shipping Assessment 2009 Report


UNESCO
50
1960-2010
why monitor the arctic oc
UNDERSTANDING
SEA-LEVEL RISE
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