Arctic Climate Predictions: Pathways to Resilient, Sustainable Societies (ARCPATH)

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Partners

1. Nansen Environmental and Remote Sensing Centre (NERSC) (Project Leader)
2. Stefansson Arctic Institute (SAI) under the Ministry of the Environment in Iceland (Project Co-leader)
3. University of Bergen (UiB)
4. Arctic University of Tromsø (UiT)
5. Danish Meteorological Institute (DMI)
6. Swedish Meteorological and Hydrological Institute (SMHI)
7. University of Iceland (UoI) - the Institute of Sustainable Studies and the Research Centre in Húsavík
8. Nansen-Zhu International Research Centre, Institute of Atmospheric Physics, Chinese Academy of Science
9. Institute of Arctic and Alpine Research (INSTAAR) University of Colorado, USA
10. P.P. Shirshov Institute of Oceanology of the Russian Academy of Sciences (IO RAS)
11. Royal Roads University (Canada)

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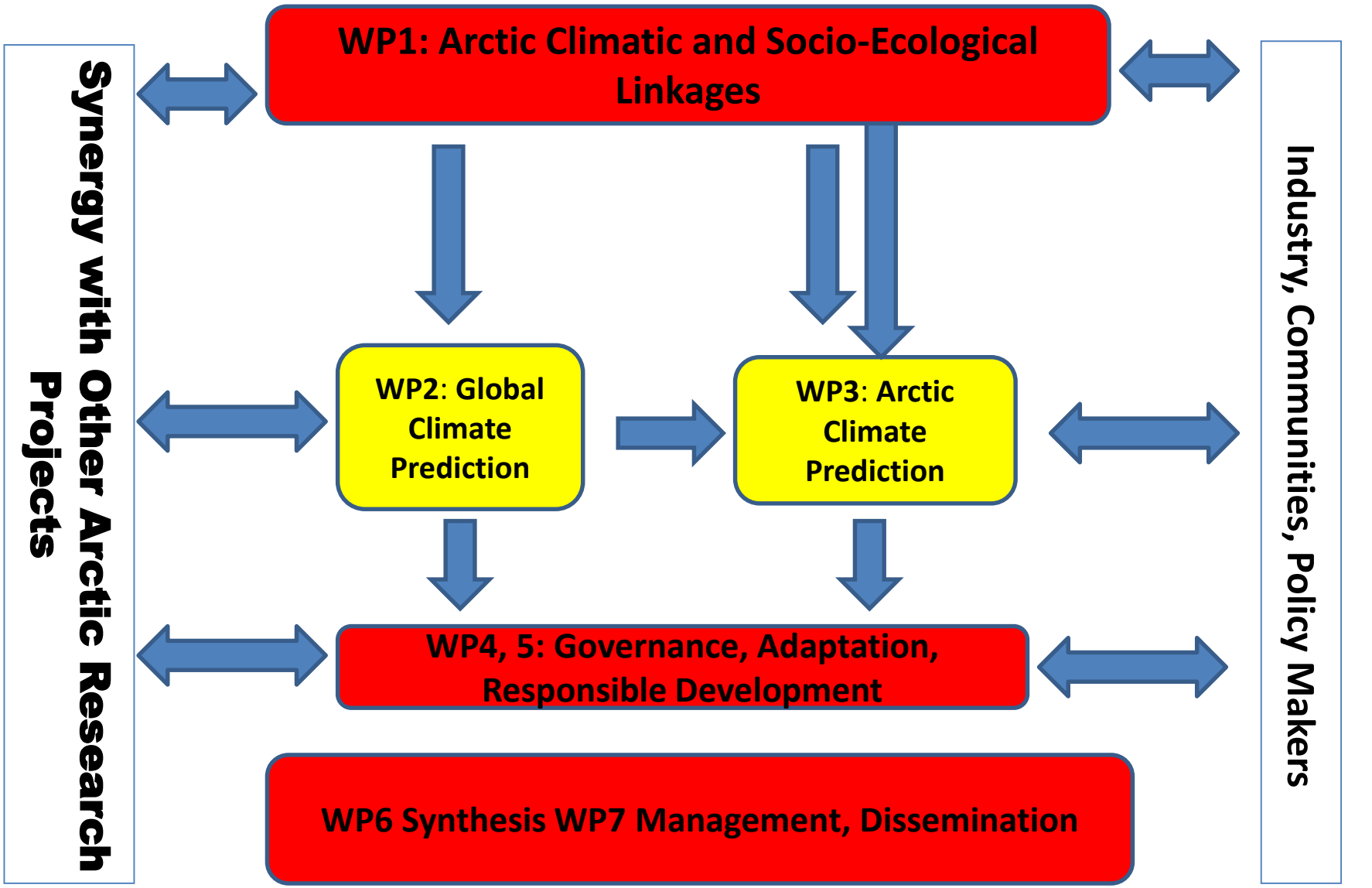
OBJECTIVE OF ARCPATH

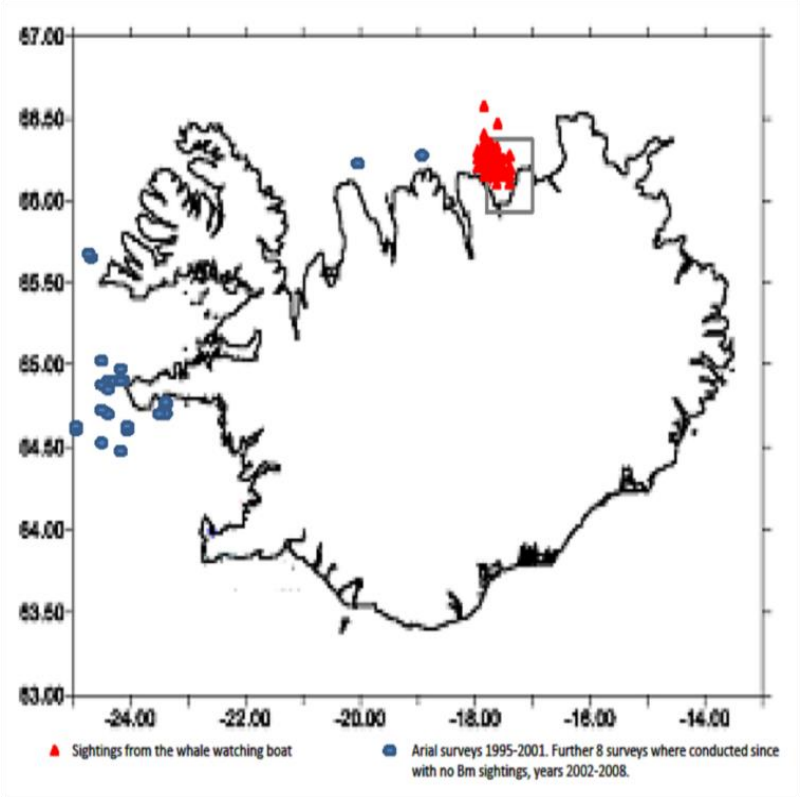
To supply new knowledge on Arctic "pathways to action" by combining improved regional climate predictions with enhanced understanding of environmental, societal, and economic interactions.


WP1: Arctic Climatic and Socio-Ecological Linkages
WP2: Global Climate Prediction
WP3: Arctic Climate Prediction
WP4, 5: Governance, Adaptation, Responsible Development
WP6 Synthesis WP7 Management, Dissemination
Synergy with Other Arctic Research Projects
Industry, Communities, Policy Makers

Whale-Watching in Iceland

Photo: Marianne Helene Rasmussen

Whale-Watching in Iceland



Courtesy of Marianne Helene Rasmussen

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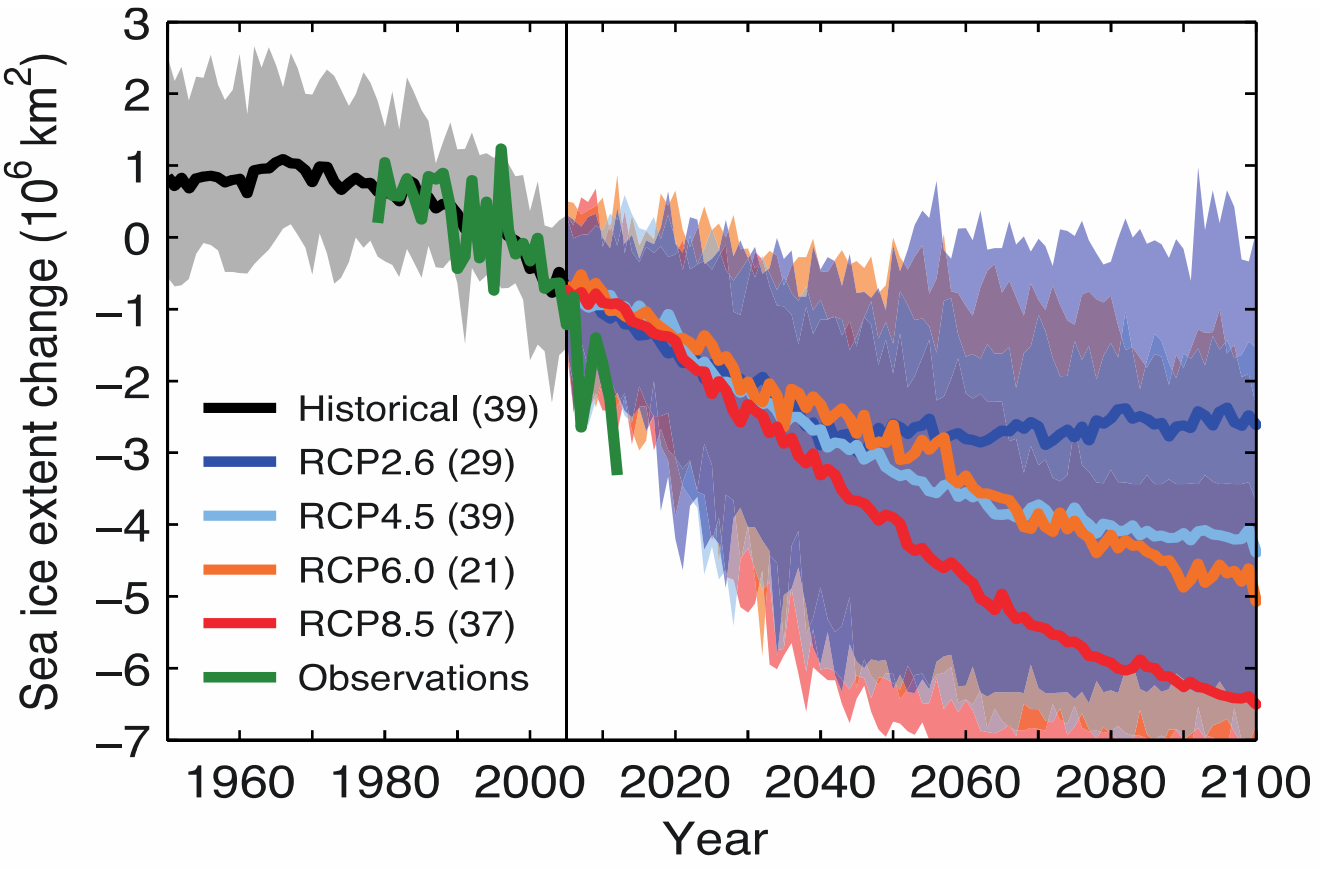
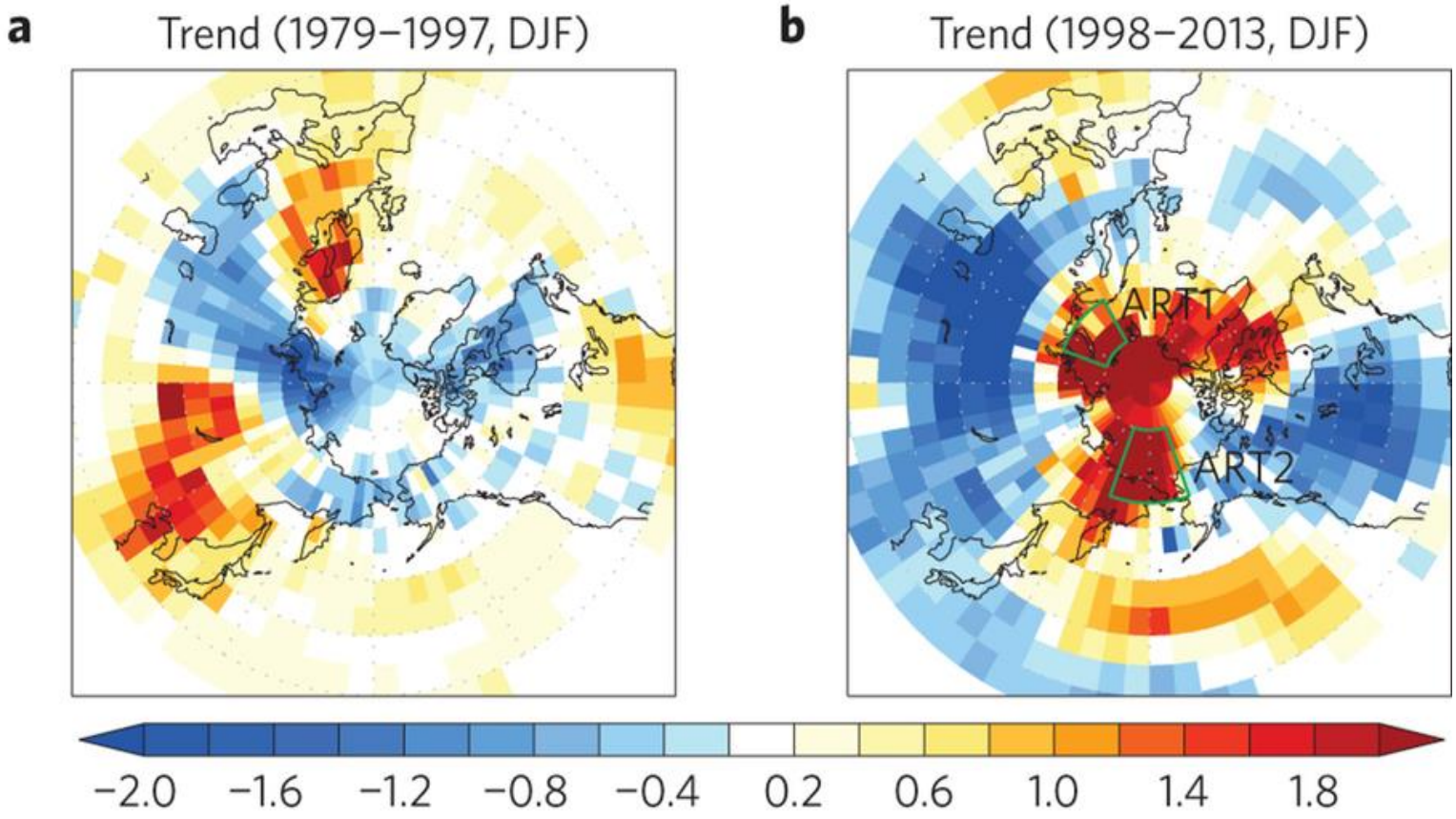
Arctic Sea Ice

Arctic sea ice observations and projections (IPCC 2013)

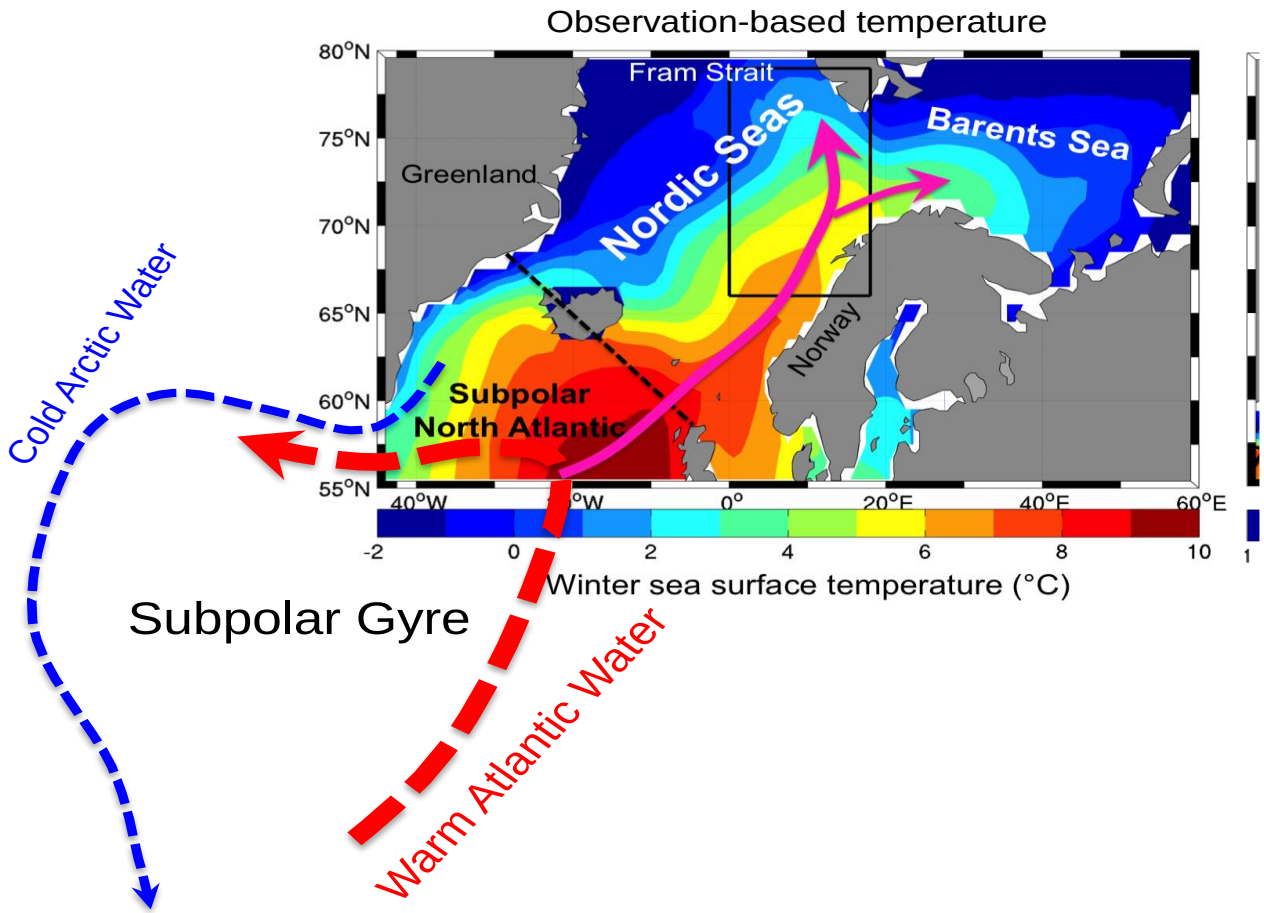


Arctic Warming



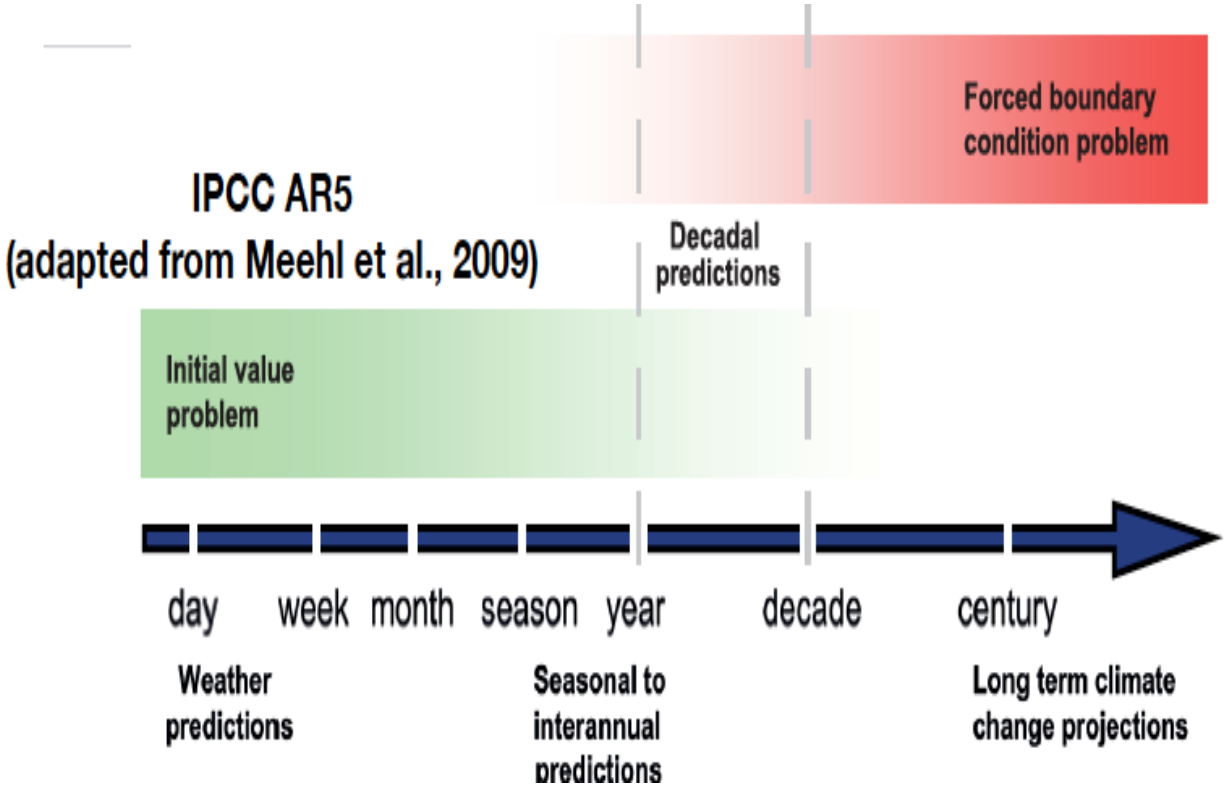
Kug et al. 2015.

Atlantic Water inflow



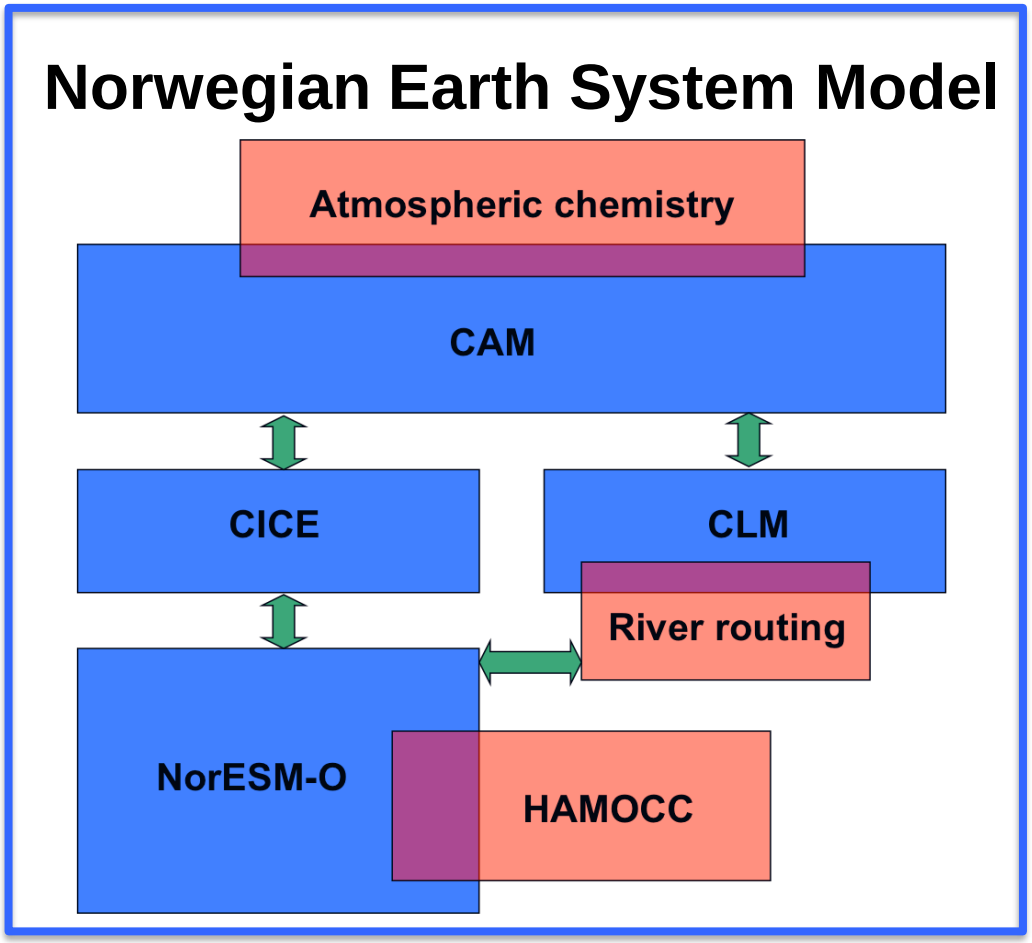
Langehaug et al. 2016

Climate Prediction



Seasonal-decadal variability depends on initial condition & forcing

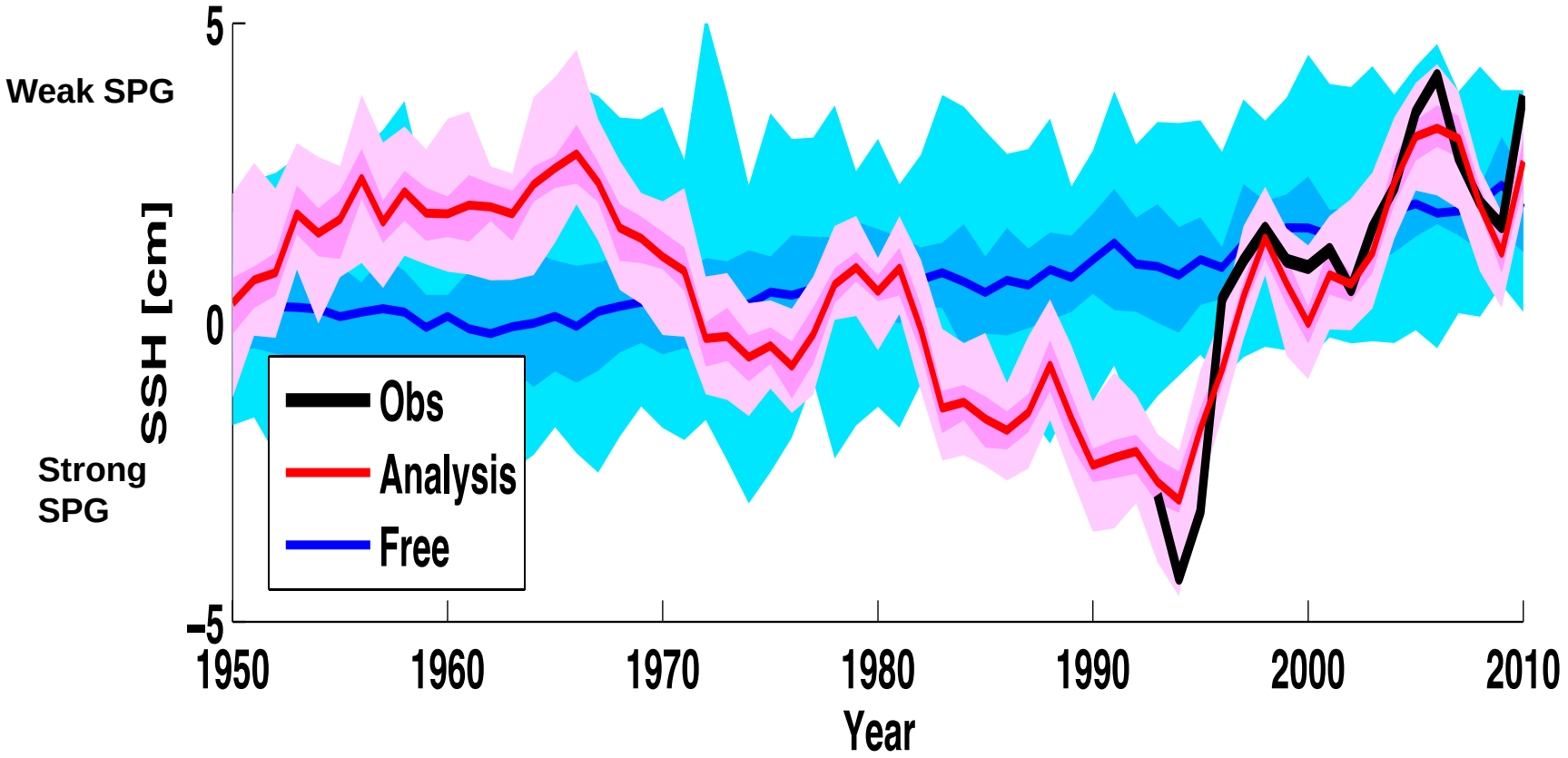
Norwegian Climate Prediction Model (NorCPM)



Objectives

- Reanalysis
- Prediction
- Services

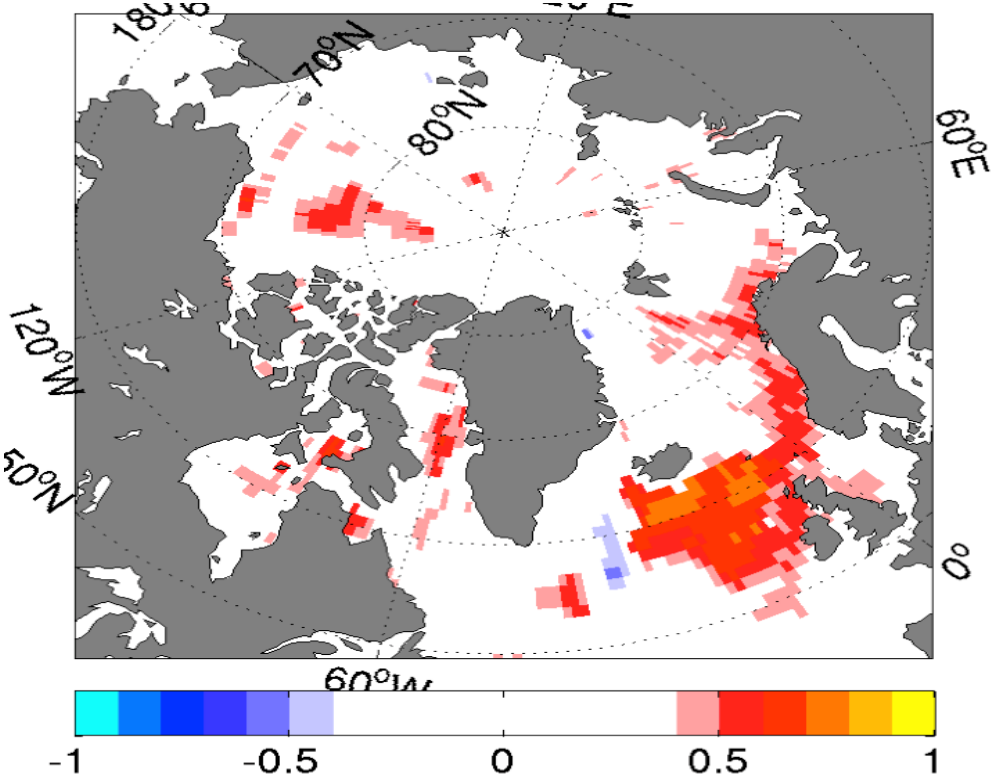
North Atlantic Variability (from SST)



Counillon et al. 2016

SST Anomaly Predictions

12-month forecast lead time



Wang et al., in preparation

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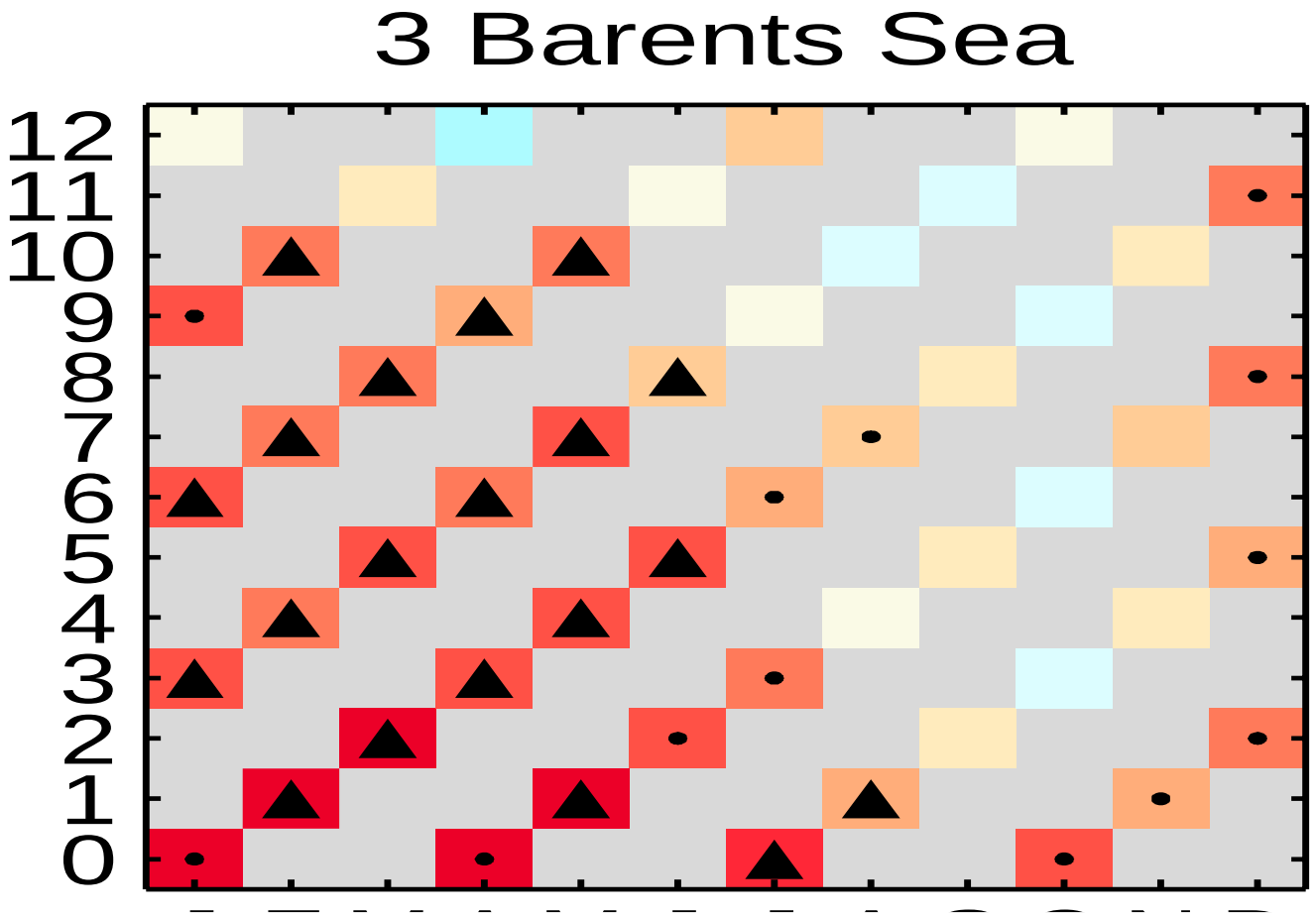
Arctic Sea Ice Prediction Skill



Dai et al., in preparation

Thank you !

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