

WHAT IS THE ROLE OF SEA SURFACE TEMPERATURE FOR THE PREDICTABILITY OF SEA ICE?

Decadal predictability of sea ice in the North Atlantic sector in three CMIP5 models

H. R. Langehaug, K. Lohmann, T. Eldevik, D. Matei, Y. Gao

PREDICTABILITY WORKSHOP JUNE 11, 2014 BERGEN







AVFORSKNINGSINSTITUTTE



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Questions to answer...

- Are hindcasts of SST significantly correlated with observations (HadISST)?
- Are hindcasts doing a better job than non-initialized runs (historical + rcp4.5)?
- Is the correlation skill high/low in the Nordic Seas compared to the Barents Sea?
- > Which season gives the highest correlation skill?
- > Is the spatial pattern predictable?



Std of March sic from NSIDC High variability in sea ice in North Atlantic sector...











- HadlSST (1°x1°) is interpolated to ocean model grid
- Correlation is done in each grid point for the ensemble mean
- Time series are detrended







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At some lead times for MPI-ESM-LR and IPSL-CM5

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Is the correlation skill high/low in the Nordic Seas compared to the Barents Sea?

Similar shape for MPI-ESM-LR

> Which season gives the highest correlation skill?

Winter season

> Is the spatial pattern predictable?

Yes, in some periods...

Hindcast is better than historical when initialized in 1960-1980.









Nordic Seas east

Only tested for MPI-ESM-LR





A taste of sea ice...



To be continued...

