

US CLIVAR





The Arctic is undergoing rapid change. Questions about how the Arctic Ocean mesoscale eddies will change in the future and how they will influence progress of Arctic Atlantification remains to be investigated. Before applying eddy-resolving resolution, the first step is to analyze simulations with intermediate model resolution and evaluate model performance. Here I show the intermediate resolution model assessment results. With local resolution refined in the Arctic region to 4.5km, the model reasonably represent observed sea ice decline and variability in the ocean circulations and hydrography in the past, and improves our understanding of the future change of the Arctic ocean. These results encourage to proceed to 1-km resolution eddy-resolving simulations in the next step.

Mean Salinity of Eurasian basin: PSU

FESOM2 SETUP/CONFIGURATION

Finite-Element/volumE Sea ice-Ocean Model (FESOM 2) Ocean Resolutions (4.5km in the Arctic): • Atmospheric forcing field : AWI-CM Historical (1958-2014); Future-SSP585 (2015-2100)



Mean Temp of Eurasian basin: ° C

Toward understanding future development of Arctic using FESOM2

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ABSTRACT







the Arctic Ocean (CASA)" from AWI.