



Barents-Kara sea ice and European winters as simulated in EC-Earth

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The potential link between decreasing Barents-Kara sea ice and cold winters in Europe is investigated using the global, coupled climate model EC-Earth at high resolution. Nudging sea ice in the Barents-Kara Seas(only), five configurations of sea ice covers are used to assess the importance of the amount of sea ice in this region. Nudging in the coupled model is achieved by modifying the surface heat flux into the ice/ocean interface. Our results suggest that moderate sea ice reductions in the Barents-Kara Seas are linked to lower winter temperatures over Europe. Minor sea ice reductions show a similar, but less strong, signal while larger reductions are linked to higher European winter temperatures.