Simulated Atmospheric Response to Regional and Pan-Arctic Sea Ice Loss

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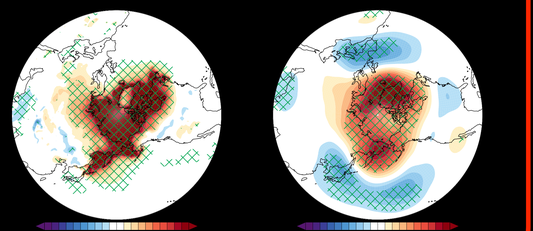
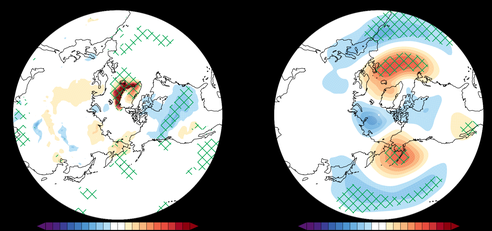
Introduction. This study analyses simulations with an atmospheric general circulation model prescribed with sea-ice loss separately in nine regions of the Arctic, to elucidate the distinct responses to regional sea-ice loss. A further experiment was conducted with pan-Arctic (all regions combined) sea-ice loss. Figures below show October-to-March responses of 1.5 m temperature and 500 hPa geopotential height in each case.

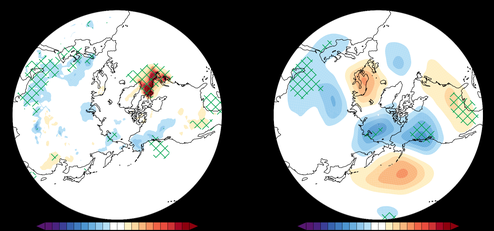
Pan-Arctic



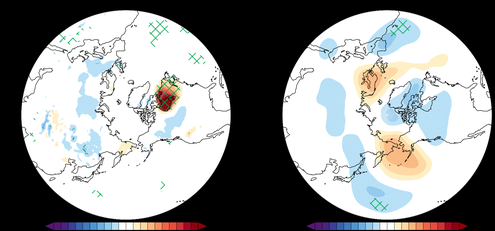
Greenland Sea



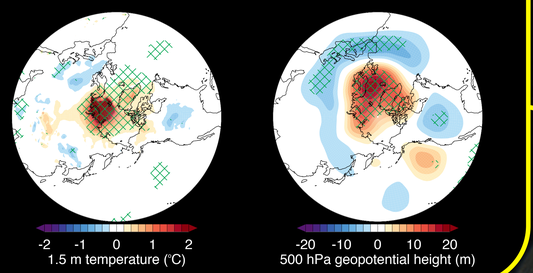
Labrador Sea



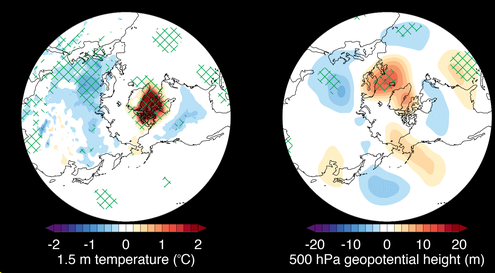
Hudson Bay



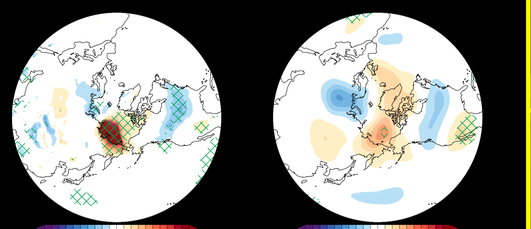
Barents-Kara Sea



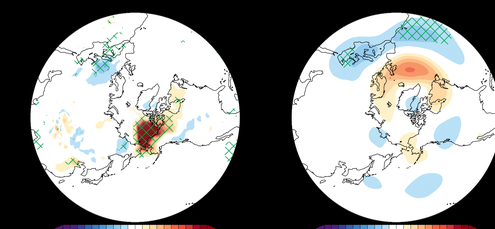
Archipelago-Baffin Bay



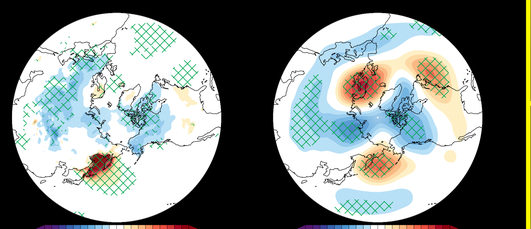
East Siberian-Laptev Sea



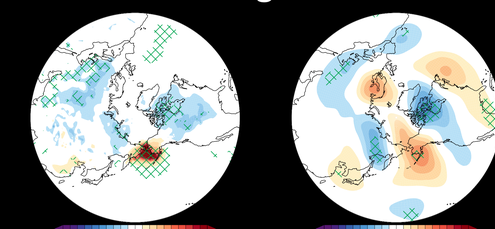
Beaufort-Chukchi Sea



Sea of Okhotsk



Bering Sea



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