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Impact of decreases in the Arctic sea ice on climate in high latitudinal land areas of the Northern Hemisphere

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Arctic sea ice has been declining rapidly in recent years. An impact of changes in sea ice on climate is evaluated by means of numerical simulations with a climate model of intermediate complexity (MIT IGSM). In these simulations atmospheric and terrestrial models are forced by prescribed distributions of sea surface temperature and sea ice. Results of the simulation along with the actual sea ice distribution for the beginning of the 21st Century will be compared with the results obtained using data averaged over years 1951-1980.