The atmospheric contribution to Arctic sea-ice variability - DIVA Fram Strait is the primary region of sea ice export from the Arctic and therefore plays an important role in. Climate Dynamics Our results highlight the importance of high frequency atmospheric variability in forcing Fram Strait sea ice motion. Fram Strait sea ice export variability and September Arctic sea ice. in eastern Fram Strait, using the sea-ice proxy IP25, sheds new light on poten- tial feedback mechanisms between sea-ice variability and ocean circulation changes during. Arctic sea ice is a crucial element within the global climate system. area to identify past changes in sea-ice export associated with climate shifts. 16.2.4.1. Sea Ice in the Arctic Ocean - IPCC - Intergovernmental Interannual variability of Arctic sea ice export into the East Greenland. Observations since the 1950s suggest that the Arctic climate system is changing in response to resulted from a short-term peak in Arctic sea ice export via Fram Strait. The impact of early Holocene Arctic shelf flooding on climate in an. transport of sea ice out of the Arctic Ocean takes place via. Fram Strait (Vinje 2001 Kwok, Cunningham et al. 2004), and a substantial part of ice export through. History of sea ice in the Arctic Amazon????????Arctic Climate Variability: Sea ice export through Fram Strait??????????????????Amazon??????????????????Torben Koenigk?? . Interannual variability of Arctic sea ice export into the. - boscorf.org 15 Aug 2003 . Multiyear sea ice originating in the Arctic Ocean is being exported through the Fram Strait into the Green- land Sea (a map with relevant names. needed in models used for climate change scenarios. Sea ice conditions have Arctic sea ice decline and ice export - Bjerknessenteret The Arctic sea-ice cover plays an important role for the global climate sys- tem. .. through the Fram Strait can be attributed to sea-ice export (Köningk, 2005). The. Fram Strait sea ice export variability and September Arctic sea ice. 13 Sep 2016. It has also been linked to Atlantic multidecadal ocean variability, but its potential Sea ice is an important component of the Arctic climate system, affecting heat. Variations in Fram Strait Sea Ice Export (FSSIE) have been EASTGREEN - East Greenland Ice: constraining the extent and. Arctic climate system variability. Sea-ice drift is simulated using a It is found that the already dominant sea-ice export through Fram Strait has increased at the Climate Change 2007 - The Physical Science Basis: Working Group I. - Google Books Result Changes in air temperature expected with projected climate change are likely. The mean annual export of sea ice through Fram Strait was ~2,850 km3 for the. Recent advances in understanding the Arctic climate system state. and the sea ice export through Fram Strait changed from zero correlation (1958–77) to about. at least under present-day climate conditions. It is argued that the spatial pattern of interannual NAO variability as observed during the last two. The role of the Beaufort Gyre in Arctic climate variability: Seasonal to,. 10 Mar 2018. Keywords: Arctic sea ice, summer AO, winter AO. Arctic climate changes, surface air temperature. Abstract. We examine variability in pressure patterns over the Northern have favoured enhanced sea ice export from the Arctic toward Fram through Fram Strait, and southward along the East coast of. Present-Day Arctic Sea Ice Variability in the. - Semantic Scholar 29 Jun 2002. Climate and interannual variability (3309) 4207 Oceanography: General: [2] Arctic sea ice export through Fram Strait is an important climate. The Fram Strait Arctic Outflow Observatory - Norwegian Polar Institute Fram Strait sea ice export variability and September Arctic sea ice extent over the. Bjerknes Centre for Climate Research, Bergen, Norway University Centre in Fram Strait spring ice export and September Arctic sea ice 19 Dec 2014. attributable Arctic climate change apparent in the sea ice cover, we find it rally increased sea ice export through Fram Strait into the Greenland Sea is especially large. Estimating sea-ice volume flux out of the Laptev Sea using multiple. The steady decrease in the area of the summer minimum arctic sea ice cover. 4.4.4.3 Ice Export and Advection The sea-ice outflow through Fram Strait is a Causes and impacts of changes in the Arctic freshwater budget. 7 Aug 2015. 2Bjerknes Center for Climate Research, Bergen, Norway Changes in ice export is also considered an important contributor to variability in the 10% of the Arctic sea ice area is exported through Fram Strait annually, and Atmospheric forcing of Fram Strait sea ice export: a closer look. A new updated time series from 1935 to 2014 of Fram Strait sea ice area export. Spring Fram Strait sea ice area export (red) and mid-September Arctic Sea-I (green). of the sea ice loss, but both observations and simulations from global climate. Sea Ice Export through Fram Strait: Variability and. - MPG.PuRe Fram Strait and the Canadian Archipelago, the atmospheric moisture flux and the. in this storage (e.g., in ice thickness and in ocean salinity) are substantial. Arctic climate change: observed and modelled temperature and sea. 13 Jan 2017. 2Bjerknes Centre for Climate Research, Bergen, Norway. 3University not sensitive to long-term change in Fram Strait sea ice con- centration. Arctic sea ice decline and ice export between Greenland and. 27 Nov 2013. ceasing sea-ice volume and export through the Fram Strait and causing the sea-ice extent level stands to other shallow seas in the Arctic suggests that large areas were.. annual variability in these variables. This seasonal Fram Strait Ice Export during the Nineteenth and Twentieth. 10 Jan 2013. The area of the ice floating through the Fram Strait is now about 200 thousand. The ice export is rather controlled by internal climate variability. Anomalies of sea-ice transports in the Arctic in the, were linked to sea-ice variability. SAT observations and model. .. to circulation-driven ice export through the Fram Strait between. Greenland and New Evidence for Abrupt Sea-Ice Fluctuations in the Subpolar North. 14 Jan 2013. The Arctic sea ice is shrinking, both in extent and thickness. is superimposed to indicate the southward export of sea ice through the Fram Strait. The ice export is rather controlled by internal climate variability within each Arctic-Subarctic Ocean
Fluxes: Defining the Role of the Northern Seas in Climate

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The sea ice export through Fram Strait and its variability have been studied by

1. Variability of Fram Strait sea ice export: Causes, impacts and feedbacks in a 2013: Arctic Rapid Sea Ice Loss Events in Regional coupled Climate

2. Arctic Climate Variability: Sea ice export through Fram Strait (??) 3 Apr 2018. of Arctic freshwater content and the variability of freshwa- ter transport through the Arctic basins through the Fram Strait, the only deep Arctic gate-way, supplying part influence on lower latitude ocean and climate with potential societal impact.. Sea ice export through the Davis Strait is much less than that Fram Strait sea ice export variability and September Arctic sea ice. Project Department: Uni Research Climate (group: Climate Variability) period: 01.01.14 as well as export of ice through Fram Strait between Greenland and Svalbard. belt of sea ice that emanates from the Arctic Ocean through Fram Strait. Importance of combined winter and summer Arctic. - IOPscience 31 Oct 2007. on the Siberian shelf and the sea ice export through Fram Strait, potential biases related to the large Arctic climate decadal variability in the Linkages between atmospheric blocking, sea ice export through. Based on climate simulations, the Arctic Ocean may become seasonally. the annual ice export is discharged each year through Fram Strait, the majority of. vulnerable state, a kick associated with natural climate variability can result in. The Link between the North Atlantic Oscillation and Arctic Sea Ice. This long-term project monitors the ocean currents and sea ice leaving the Arctic Ocean through Fram Strait. Topics: Chemistry, Climate, Oceanography. Sea ice exported affect the density of seawater in the Nordic Seas and sub-polar North Spatial variability is monitored using ice thickness soundings from helicopter. A link between Fram Strait sea ice export and atmospheric planetary. Defining the Role of the Northern Seas in Climate