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## Increased ocean heat transport into the Nordic Seas and Arctic Ocean over the period 1993-2016

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Warm water of subtropical-origin flows northward in the Atlantic Ocean and transports heat to high latitudes. This poleward heat transport has been implicated as one possible cause of the declining sea ice extent and increasing ocean temperatures across the Nordic Seas and Arctic Ocean, but robust estimates are still lacking. Here we use a box inverse model and over 20 years of volume transport measurements to show that the mean ocean heat transport was  $305 \pm 26$  TW for 1993-2016. A significant increase of 21 TW occurred after 2001, which is sufficient to account for the recent accumulation of heat in the northern seas. Therefore, ocean heat transport may have been a major contributor to climate change since the late 1990s. This increased heat transport contrasts with the Atlantic Meridional Overturning Circulation (AMOC) slowdown at mid-latitudes and indicates a discontinuity of the overturning circulation measured at different latitudes in the Atlantic Ocean.