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Sea surface temperature history in Isefjord (Denmark) over the last 2000 yrs

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The temperature history of the surface waters of Tempelkrog (innermost part of Isefjord, 55_40,220' N, 11_ 48,637' E) has been reconstructed at high resolution using alkenones over the last two millennia. SSTs show a long-term cooling until ∼1700 AD followed by a warming, steepening from 1940 AD until the present day. This time-series also contains multidecadal-scale oscillations around 10-12 °C in the first part of the record and around 11 to 15 °C over the last century. A warm interval is also detected between 1000 and 1300 AD, i.e. approximately at the time of the Medieval Climatic Anomaly (MCA). Prevailing anticyclonic atmospheric circulation over the last century in this region is likely responsible for the decadal-scale variability of SSTs. We hypothezise that the anomalous warming trend of the last century reflects enhanced heat transport form the North Atlantic Inflow into the Nordic Seas and the positive feedback from melting ice (reduced albedo) resulting from warmer northern Hemisphere temperatures.