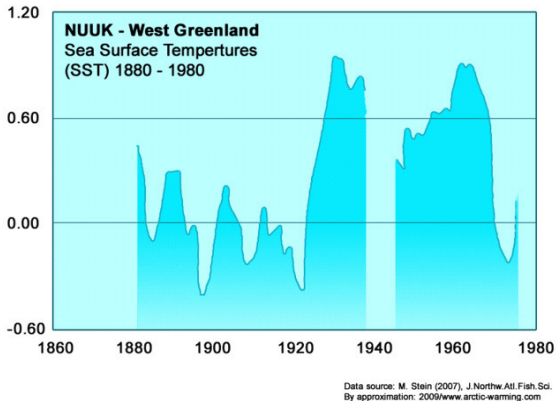
2007

M. Stein (2007), Warming Period off Greenland during 1800-2005:

Their potential Influence on the Abundance of Cod and Haddock in Greenland Waters;

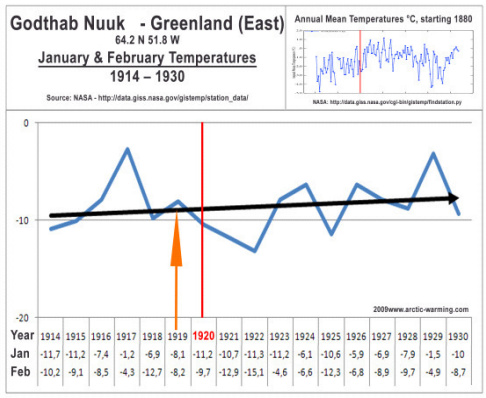
J.Northw.Atl.Fish.Sci.; Vol.39; p. 1-20

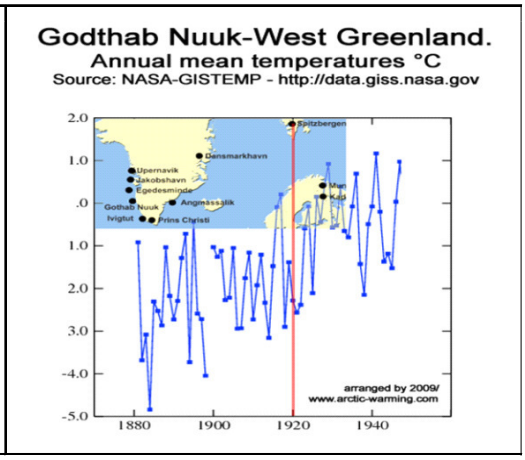
Extract from Abstract: (Nuuk-air temperature graphic added) Greenland and its adjacent waters are located at the northern boundary of the Sub-polar Gyre and thus subject to climatic variations within this gyre. It is suggested that periods characterized by regional shrinkage of warm water masses within the Gyre adversely affect the propagation of gadids from upstream Icelandic waters to Greenlandic waters, and periods of regional dilatation of warm water masses within the Gyre are favourable for developing gadid stocks in Greenlandic waters. Ocean temperatures off West Greenland show a significant upward trend, which is considerably higher than that for the North Atlantic Basin.



_____The paper states concerning: **Nuuk air temperature anomalies**; Very cold conditions were seen during the 1880s to 1910s., Warming began around 1920; and presently Nuuk enjoys warm conditions as during the 1926-30 period.

_____The paper states concerning: **Nuuk sea surface temperatures** (see modified M.Stein graphic); the 1890s appeared as a decade with warm SSTs; the first decade of the new century showed shrinking of the Gyre, and only East Greenland waters were warmer than normal during those times; from 1915 onwards, warming increased; and a warm Gyre was seen in the second part of the 1920s.





Comment:

____The series do not show an immediate correlation between the big warming at Spitsbergen during winter 1918/19, but a time lag of about two to three years. The SST increase at about 1922 is remarkable.

____ The first warming impulse seem to have been coming from the North, while only during the second part of the 1920s a warm Gyre had been observed.