

TEMPERATURE CONDITIONS IN ICELAND AND THE EASTERN NORTH-ATLANTIC REGION, BASED ON OBSERVATIONS 1901-1990

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ABSTRACT

Monthly and annual temperatures for the period 1901-1990 were collected for 23 weather stations, i.e. 7 Icelandic stations, 6 stations surrounding the coasts of Greenland, 5 stations along the coast of W-Norway, besides 5 island stations from the Faeroe Islands along the Norwegian Sea to Svalbard. Temperature conditions in Iceland relate closely to a region that extends about half way towards both the coast of W-Norway and Jan Mayen, covers the Faeroe Islands and extends towards west or southwest from Iceland over the Greenland Sea and to SW-Greenland. The cold period in the first two decades of the century appeared in all parts of the North-Atlantic region.

INTRODUCTION

A number of factors affect temperature conditions in the eastern North-Atlantic region, meteorological as well as geographical. Cyclones pass frequently through this region, usually moving from southwest towards northeast. This can cause sudden temperature changes, or relatively persistent temperature conditions for a long time, depending on the tracks of cyclones and high pressure systems. Further, a cold high pressure system often persists over the huge glacier of Greenland and a high pressure system over Scandinavia may also influence weather conditions.

† The author passed away on October 20, 1994 and was not able to read the proofs of this paper.

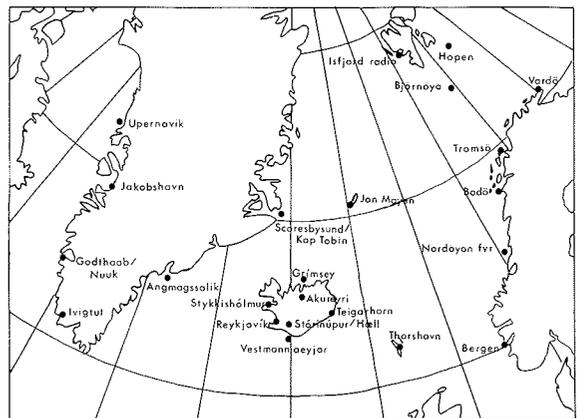


Figure 1. The region and weather stations used in the investigation and comparison between temperature conditions in Iceland and neighbouring countries. — *Svæði það, ásamt veðurstöðvum, sem notað er til samanburðar milli hitafars á Íslandi og í nágrennalöndum.*

Considerable temperature variations have occurred in Iceland during this century (Einarsson, 1991). Most significant are the very cold first two decades, and a sudden warming after 1920, followed by an unusually warm period 1926-1946.