

## Greenland irrigation systems on a West Nordic background

An overview of the evidence of irrigation systems in Norse Greenland c. 980–1450 AD

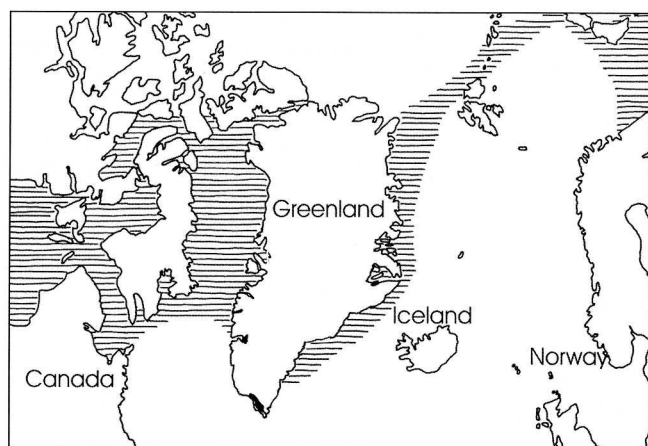
Überblick über die Bewässerungssysteme im norwegischen Grönland (ca. 980–1450 n. Ch.)

Vue d'ensemble des systèmes d'irrigation dans le Groenland, c. 980–1450

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### Introduction

About 1000 years ago according to written sources settlers from Iceland established a pasture farming community in the sub arctic parts of Southwest Greenland. The settlers were descendants of Scandinavian Vikings, and during the favourable climatic conditions of the Medieval Warm period the settlers founded the Eastern Settlement in Southwest Greenland, and the Western Settlement some 500 kilometres further to the north. The Norse settlement in Greenland lasted for about 500 years. Before 1500 AD the two settlement areas lay deserted for reasons not yet fully understood (*fig. 1*).



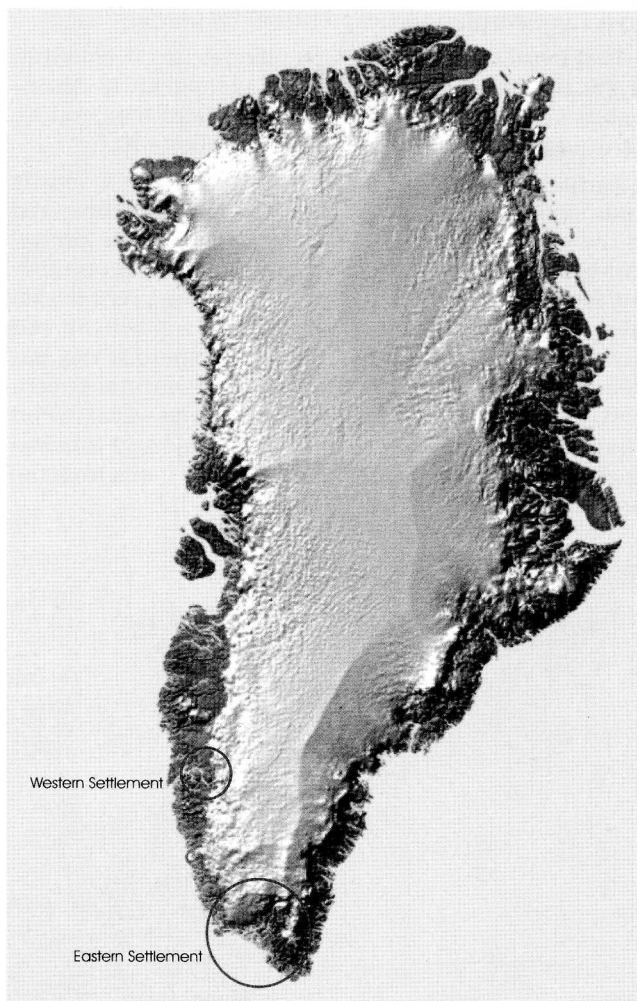
**Fig. 1.** Greenland and the North Atlantic.

Though the Norse Greenlanders subsisted partly on sheep, goat and cattle breeding and partly on fishing and hunting sea mammals both socially and economically they were heavily dependent on their land, and finds of irrigation canals in the infield or home field and dams in the mountains show that artificial irrigation was one of the strategies to secure the necessary yields. The question is whether irrigation was an integrated part of the pasture farming economy that the Icelandic settlers brought with them or whether it was introduced later to meet the environmental and/or man-made changes that took place during the settlement period.

### Southwest Greenland – the natural setting

The Norse Eastern Settlement area is located at 60–61 ° N latitude, and the Western Settlement is located at 64 ° N latitude (*fig. 2*).

Long and deep fjords with intervening mountains characterize both settlement regions. Close to the outer coast the mountains rise steeply from the sea but when you enter the inner part of the fjords the landscape



**Fig. 2.** The Norse Eastern Settlement was situated in the southern part of the Greenland west coast. The Norse Western Settlement was situated in the area of nowadays Nuuk, the capital of Greenland.

