Foreword

This monograph, *Ice Blocks From Norway*, is published under the joint auspices of 'The Last Ice Age' project and the North Atlantic Fisheries History Association (NAFHA). It concerns the Anglo-Norwegian trade in natural ice during the late nineteenth and early twentieth centuries, a business that formed an important part of the 'age of natural ice' being investigated by the project team, as well as one of the contributory factors in the development of the North Atlantic fisheries in the modern era. For 'The Last Ice Age', which is an international research investigation funded by the Research Council of Norway (RCN project number 275188) and managed by the Norwegian Maritime Museum in Oslo in partnership with the University of South-Eastern Norway, the University of Hull (UK) and Old Dominion University in Norfolk VA (USA), this book is one of a range of outputs that will include further peer-reviewed monographs on particular ice themes, an anthology of key project-generated studies, several PhD and MA theses, and numerous journal articles (see, for example, *International Journal of Maritime History* vol. 34:1, 2022, and the project website https://marmuseum.no/en/the-last-ice-age). For NAFHA, this is the fifteenth publication in its *Studia Atlantica* series, most of which are proceedings of conferences convened by the Association since 1995 in various fishing ports and locales – Akureyri, Bergen, Bremerhaven, Gothenburg, Halifax NS, Hull, Norfolk VA, Porto, Qatorqoq, Torshavn, Tromsø, Rotterdam, Westman Isles – across the North Atlantic region.

The joint sponsors are very grateful to Dr Michael Freeman of Mansfield College, Oxford, the author of *Ice Blocks from Norway*, for collaborating in the dissemination of the fruits of his research. In so doing, he enhances our knowledge and understanding of the scale, character, organisation and significance of the natural ice business of Northern and Western Europe during the period 1870–1925. By following the ice from

Norwegian lakes and ponds across the North Sea to British consumers in restaurants, shops, private households and an array of industries, not least the burgeoning inshore, offshore and distant-water fisheries, Dr Freeman sheds light on the wider contexts of transport history, technological and logistical developments, economic integration, changes in consumer patterns and environmental factors.

This is a multi-faceted story that ranges widely over time and space. In the Mediterranean world and beyond, natural ice had been used for cold storage to preserve the freshness of foods and provide cold drinks, sorbets, etc. since ancient times. In royal and aristocratic households in northern and western Europe, the use of ice for cooling can be traced back to the Middle Ages. By the late eighteenth century, a considerable local trade in ice had emerged in metropoles like London. This trade was partly triggered by a fashion for ice creams and confectionaries imported from Naples and other Mediterranean cities visited regularly by British upper-class travellers of this epoch. It was also stimulated by the development of the Scottish salmon fisheries from the 1780s, when merchants in Scotland introduced fresh salmon on ice to a growing London market as an alternative to smoked and salted salmon.

This market for natural ice emerged under climatic conditions different from the present. In most years until the second quarter of the nineteenth century, it seems that demand for ice in London, elsewhere in the British Isles and on the continent could be sated by local or regional supplies. High winter temperatures could, however, cause ice shortages, obliging ice traders to look for more distant sources of supply. The first few recorded imports of ice from Norway to Britain appeared in 1822, after a winter with extremely high temperatures and allegedly severe shortages of ice both in the London market and the Scottish salmon business.

In the following years, there were reports of imports of ice to Britain from Greenland, Iceland, the Faroe Islands and Norway, while the first imports of ice from Norway to continental ports were also recorded. In 1835 official statistics indicated that an export of 1,310 register tons of ice from Norway was customs cleared for different foreign ports. This corresponded to perhaps five or six shiploads. In some cases, during these years,

ice was shipped all the way to Portugal and even to the Mediterranean, a single cargo reaching Algeria in 1839.

In the spring of 1846, after another mild winter in Britain, no less than twelve Norwegian ships were reported to have been chartered to carry ice to English ports alone. At this time, ice was also being shipped to Britain from the USA, but from the early 1850s ice exporting from Norway grew steadily, so much so that the trade in ice had become a regular industry by 1870, involving considerable investments in infrastructure, for the most part in south-eastern Norway. Ice was now an important factor in the sweeping transport and logistics revolution that changed the eating and drinking habits of broad sections of the population and led to increased economic integration in northern Europe. Fredrik Wallem, a Norwegian journalist, commented on this process while reporting from the international fishing exhibition in London in 1883: 'for fishmongers, butchers, dairies, breweries, confectioners, hotels, passenger steamships, etc. in most countries it has become necessary to have an even supply of ice […]. In the modern household, ice has become indispensable'.

In the second half of the nineteenth century, Norwegian ice also went to ports in the Mediterranean and the Black Sea. More exceptionally, Norwegian ice was shipped to Iceland, the Faroe Islands and far into the Baltic Sea to Finland and Russia, while in the 1880s a number of cargoes were sent to New York. And we know of individual cases where Norwegian ice was exported to more exotic areas like the Red Sea, Congo, Cuba, Burma and Batavia. However, ships laden with Norwegian ice primarily and most regularly sailed across the North Sea and other nearby waters. When natural ice exporting from Norway developed into a large and well-organised industry after 1850, London and the fishing ports on the east coast of England were the most important and stable markets, with substantial quantities also shipped to North-Western Europe and Scandinavia. The German market for natural ice was especially large, but in most years was mainly supplied by domestic production, with limited need for ice from Norway. Nevertheless, at least one company in the developing German distant water fisheries opted exclusively for the use of Norwegian ice.

From the 1850s, a domestic market for ice also emerged in Norway. Ice was used in the Norwegian fisheries, first to a limited extent in the urban fresh fish markets, then from the 1860s in the export of fresh fish, initially mostly mackerel and salmon, and later herring. By 1860, a nascent market for ice had emerged in other industries, and in private households in Christiania (Oslo) and other cities. But compared to Britain and continental Europe, the domestic market was limited, both for climatic reasons and due to the relatively small population and low levels of urbanisation and industrialisation. Moreover, in spite of a considerable export trade in fish, the Norwegian fisheries were slow to engage extensively in the export of fresh fish.

Overseas markets, especially in Britain, and particularly in London, therefore stimulated the expansion of the Norwegian ice business into a regular and well-organised trade. A central element in this evolution was the growing market for fresh fish in London and the rapidly growing urban industrial centres in the Midlands and north of England from the 1840s. This was facilitated and further spurred by technological changes on land and at sea, with railways opening up new markets, and sail-powered trawlers in the North Sea – and, from the 1880s, steam-powered trawlers in more distant Atlantic waters – greatly improving catches. Amidst these shifts in fishing and fish marketing, the innovative practice of taking ice to the fishing grounds allowed the catch to be put on ice immediately and kept chilled and fresh on the voyage back to the fishing ports, and thence by railway to London and other urban markets. This rendered fresh fish available to broader sections of urban society in Britain, a cheap source of protein sold as fried fish in the streets to working-class people and eventually accompanied by deep-fried potatoes and retailed as fish and chips. In essence, this was a virtuous circle, wherein the development of the British fisheries was a prime mover in the expansion of Norwegian ice imports, which, in turn, enabled trawling vessels to range more widely and return more fresh fish to more extensive markets.

In focusing on this dynamic relationship, Michael Freeman's thorough investigation of the Anglo-Norwegian ice trade, presented in this book, is not only an extremely valuable contribution to the history of the natural ice business in northern and western Europe and 'The Last Ice

Age' project, but also an important contribution to the understanding of the modernisation and expansion of the British fisheries. In thanking Dr Freeman, once more, for his commendable analysis, we would also like to express our gratitude to the publisher, Cappelen Damm Akademisk, for preparing for print and publishing the present book on a combined print-on-demand and open access online basis, thereby allowing it to reach out to a wide readership all over the world.

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