Portuguese map of the world from 1573.

THE LITTLE ICE AGE (LIA) AND THE COLONIAL WORLD

The Little Ice Age (LIA) is one of the most well-known and well-researched climatic events of the Late Holocene. Typically dated around 1300–1850 CE, the LIA was a period of cooler global temperatures on average. It is important to note that the LIA did not impact the entire globe evenly—an individual location may not have been as cold as somewhere else. The cooling of the LIA was also not consistent over the centuries it spanned. Yet, during those years, temperatures were cooler often enough and cooler in enough places that they brought down global temperatures on average.

The years of the LIA spanned some very important developments in human history. The 1300s, at the beginning of the LIA, witnessed the so-called Black Death in Europe, a devastating plague that decimated the European population. Climatic conditions may have played a role in the timing of the outbreak of the plague, and subsequent outbreaks, which spread via trade networks spanning Eurasia.[54] The European population rebounded, however, and was still growing when European states, starting with the expedition of Christopher Columbus in 1492, made contact with the Western Hemisphere and immediately began a program of conquering land and people under the system of **colonialism**. The LIA, therefore, provided the climatic backdrop to foundational events in the shaping of the modern world. How the LIA impacted the formation of the modern world is a matter of historical interpretation.

Phases of the LIA

The LIA eschews neat periodization. The reason it is hard to divide the LIA into clear sections is that the LIA is more of a conglomeration of events than one single event. The leading causes of the LIA were volcanic forcings and periods of lower solar activity identified by a lack of sunspots. Those occurrences are known as **solar minima**, and they happened in 1280–1350 (Wolf minimum), 1645–1715 (Maunder minimum), and 1790–1820 (Dalton minimum). The minima roughly corresponded to three periods of glacial advances in the European Alps that took place from the late 1200s to around 1380, from the 1580s to around 1660, and from around 1810 to 1860.[55] In other words, cooling during the LIA occurred in three distinct periods. The effects of this cooling were particularly noticeable in the Northern Hemisphere.

The LIA around the Globe

The LIA occurred at a time when humans around the globe became connected to an unprecedented degree. European contact with the Americas made the Atlantic Ocean a route heavily traveled by humans. Europeans were also trying to discover new routes to reach parts