



Even in the warmer decades of the present, some lakes – such as Lake Baikal in Russia – can freeze over in winter (Credit: Dmitry Vlasov, via imagedio.egu.eu)

The coldest decade of the millennium

The temperature at the surface of our planet is increasing and we are likely to experience warmer decades in the future. But if we go back in time, all the way to the 15th century, a different type of change in weather and climate resulted in the coldest decade of the millennium: the 1430s.

Chantal Camenisch, a historian at the University of Bern in Switzerland, first realised that something extraordinary was going on regarding the climate in the 1430s when looking through historical documents about the 15th century climate in central Europe. The documents described very cold winters with late frosts, and reported that many rivers and lakes froze over during that decade. Other documents mentioned that, in the winter of 1432–33, people in Scotland had to use fire to melt wine in bottles before drinking it!

She joined forces with Kathrin Keller, a climate scientist in Bern, and other researchers, to find out more about the climate in the 1430s and how it impacted upon societies across Europe. Using computer models, Kathrin found that the strange climate of the 1430s was due to a combination of natural factors that occurred by chance and gave Europe very cold winters and normal to warm summers.

Chantal then looked into how societies reacted to these climate conditions. In most places, the cold climate meant food crops were badly affected, so people were going hungry, getting weak and sick, with many dying. But in some cities, societies were able to adapt. They started storing grains when more were available, so that people would have food when crops failed.

The team says their study could help people today by showing how societies can be affected by extreme climate conditions, and how they should take precautions to make themselves less vulnerable to them.

Discuss with your teacher or parents

How long is a decade? What about a millennium?

What is the difference between weather and climate? This [video by Crash Course Kids](#) might help you.

What should you do to protect yourself from the cold? And how can societies adapt to cold conditions?

Could we be affected by climate extremes today? What do you think is more likely at present: extremely cold or extremely hot climate conditions?

This is a kids' version of the European Geosciences Union (EGU) press release '[The Coldest Decade of the Millennium? How the cold 1430s led to famine and disease](#)'. It was written by Bárbara Ferreira (EGU Media and Communications Manager), reviewed for scientific content by Chantal Camenisch (Historian, University of Bern, Switzerland) and Kathrin Keller (Climate Scientist, University of Bern, Switzerland), and for educational content by Phil Smith (Coordinator, Teacher Scientist Network, John Innes Centre, Norwich, UK). For more information check: <http://www.egu.eu/education/planet-press/>.

