



Ski slopes with little snow in Davos, December 2015 (Credit: Archiv SLF)

Less snow and a shorter ski season in the Alps

Over the past few winters, the Alps have seen little December snowfall, which is affecting ski resorts in this famous central-European mountain range. The snow reduction is due to higher temperatures, as the amount of greenhouse gases in the atmosphere is increasing and trapping more heat from the sun. These gases come in part from factories, cars and planes, meaning human activities are partly to blame for the warming.

A new research study, published in the scientific journal *The Cryosphere* by Swiss scientists, shows that large parts of the Swiss Alps could lose up to 70% of snow cover by 2100. However, if humans manage to control greenhouse gas emissions and limit global warming, only about 30% of snow cover will be lost.

The team also revealed that the Alpine winter season – the time when there is enough snow for skiing and other winter sports – could become shorter. They say that, as temperatures rise, the ski season could start half a month to a month later than it does now. The scientists also found that, if we don't cut emissions, snow can only be guaranteed at high altitudes (above 2500 metres) by 2100. This would mean that many of the ski resorts at lower altitudes could have to shut down.

These changes will impact the economy in the region since a lot of mountain villages depend on the winter tourists coming to the mountains to ski. But we could limit the damage and avoid having too much of the snow disappear. Christoph Marty, the lead author of the study and a researcher at the Institute for Snow and Avalanche Research in Switzerland, says that the Alpine snow cover will recede anyway, but we can control how much by limiting our future emissions.

Find out more

Discuss with your teacher or parents

What is causing snow in the Alps to melt away?

What can we do to ensure there will still be enough snow for skiing by 2100?

How can humans limit the amount of greenhouse gases going into the atmosphere?

This is a kids' version of the European Geosciences Union (EGU) press release '[Less snow and a shorter ski season in the Alps](http://www.egu.eu/education/planet-press/)'. It was written by Bárbara Ferreira (EGU Media and Communications Manager), reviewed for scientific content by Daniel J. Hill (Researcher, University of Leeds, UK) and Lionel Favier (Postdoctoral researcher, Université libre de Bruxelles, Belgium), and for educational content by Abigail Morton (Earth Science Teacher at Woburn Memorial High School, Woburn, Massachusetts, US). For more information check: <http://www.egu.eu/education/planet-press/>.

