

PRIMER ON CLIMATE CHANGE

by Tom Kuennen

Warm Winter Weather: Where Is the Cold Air?

December 1999 -- Where was the cold air during fall and winter of 1999?

That's what many U.S. citizens have been asking as they enjoyed one of the balmiest autumns on record, with continuing days of sunny, mild weather and little or no snow, even in the northern tier of states.

A mild autumn and winter like 1999's can give credence to publicists who maintain that the world's climate is warming uncontrollably, and it's the result of too much carbon dioxide emitted through the combustion of fossil fuels, especially in the United States.

But nothing could be further from the truth. Instead, the cold air was trapped up north by vigorous air movements off the Pacific Ocean which blocked the seasonal flow of cold air south across North America.

This strong flow from the west -- combined with tropical systems that kept rain- and snow-producing air from the Gulf of Mexico from moving north -- led to uncommonly pleasant weather throughout most of the continental United States.

For example, strong westerly winds throughout November brought normally blustery Chicago its sixth warmest November on record, and its first on record without any snow.

But up in Alaska and northern Canada, exceptionally low temperatures were recorded in fall 1999, and Europe suffered through unseasonably cold and snowy weather, reported the National Climatic Data Center (NCDC) of the National Oceanic and Atmospheric Administration (NOAA).

Bethel, Alaska, established a new snow depth record for November 1999 when 17 inches were measured Nov. 25, Thanksgiving Day. Even before then, temperatures reached minus 50 deg F in Siberia, and minus 21 deg F in Canada's Northwest Territories. Fairbanks, Alaska, was buried under 13 inches of snow.

And in Europe, in the first week of December 1999, NCDC reported, a strong winter storm with strong winds, rains and snows battered parts of the British Isles, Scandinavia, Denmark, Germany, Poland and the Baltic Sea region, with at least 17 deaths.

This followed heavy snow in parts of Europe Thanksgiving week in which roads were blocked and electricity interrupted in Poland and the Ukraine. That week it snowed in Spain and in France people were temporarily trapped on the A7 highway in the Rhone Valley.

And for mid-November, the NCDC noted more snow than average across the colder high latitude regions of Mongolia, east central Siberia into the northeastern corner of Manchuria, China.

In fact, in November 1999 Europe's Alpine regions of Switzerland, Austria and Italy were getting so much snow that mountain communities were worried about repeats of the previous winter's deadly avalanches which killed 86 people and cost \$200 million, reported *USA Today*.

In Switzerland in mid-November 1999, temperatures in some mountain areas fell to 16 below zero, *USA Today* reported. One person died from exposure just a few feet from his house. In Italy, five people were killed in car accidents blamed on snow and high winds. About 240 Spanish villages were cut off after November snowfalls.

French soldiers dug out motorists and a convoy of 700 trucks trapped by snow and ice along highways. Another 1,500 trucks were trapped along the Rhone River. And 11 people froze to death in Moscow, bringing winter weather deaths there to 56.

So the next time you wonder where the cold weather is, thank your lucky stars that it's somewhere else ... at least until later.

In the meantime -- as predicted by researchers for [The Greening Earth Society](#) in February 1999 -- global temperatures in 1999 as measured by NASA satellites were below normal for most of year, a consequence of the dissipation of the strong 1997-1998 El Nino (warming of the central Pacific Ocean surface waters) and the onset of a weak La Nina (cooling of those waters).

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