

## Debate over global warming heats up

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Is the rise in global temperatures due to human activity or a brighter sun?

**Scientists have announced that 2002 was the second warmest year on record.**

Their findings, which appear in *The State Of The Climate*, a report by the US National Oceanographic and Atmospheric Administration (NOAA), suggest that global temperatures have risen by 0.6°C since 1900.

However, although average global temperatures rose in 2002, some regions of the world such as Antarctica experienced significant cooling. Scientists believe that this is in line with climate change projections. 2002 was also a year of extreme weather patterns.

In India, a failure of the monsoon rains, caused by a disruption in tropical weather systems, caused the first all India droughts since 1987. Conversely, Central

Europe experienced widespread and extreme flooding. In Prague, where there is a confluence of the Elbe and Vltava rivers, river discharge peaked at 5,200 cubic metres a second in August 2002, in comparison to an average 180 cubic metres.

It is too early to speculate whether these extreme events are caused by global warming as climate records are not long enough to draw significant conclusions. However, if such extreme events were to occur within a decade, this would be well outside the natural variability of global climate - pointing towards climate change.

Meanwhile the debate continues between scientists as to what is responsible for rising global temperatures. Some believe that the Sun is catalysing the rises. The Sun periodically brightens and fades, altering global temperatures. Presently, the Sun is brightening, causing the Earth's temperature to rise.

A recent scientific study suggests that the Sun may have caused a temperature increase of 0.15°C since 1980, accounting for 25% of the recorded increase since 1900. However, scientists at the Naval Research Laboratory in Washington DC disagree, claiming that the Sun's role in climate change has been exaggerated, relying on a misinterpretation of data. This viewpoint belongs more to those who believe that rising global temperatures are caused by human activity, resulting in an enhanced greenhouse effect. Time will settle this debate, with long-term measurements crucial in pin pointing the causes of climate change.