



## **How unusual was autumn 2007 in Europe?**

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The temperature in a large parts of Europe have been record high during the meteorological autumn of 2006. Compared to the 1971-2000 normals it was more than three degrees Celsius warmer from the North side of the Alps to southern Norway. This made it the warmest autumn on record in the United Kingdom, Belgium, the Netherlands, Denmark, Germany and Switzerland, with the records in Central England going back to 1659, in the Netherlands to 1706 and in Denmark to 1768. Also in most of Austria, southern Sweden, southern Norway and parts of Ireland the autumn was the warmest on record.

Under the obviously false assumption that the climate does not change, the observed temperatures for 2006 would occur with a probability of less than once every 10000 years in a large part of Europe, given the distribution defined by the temperatures in the autumn until 2005. However, even taking global warming into account the event was still very unusual, with return times of 100 years or more in many places using the most conservative extrapolation.

Global warming, a southerly circulation, more sunshine, and SST anomalies in the North Sea were found to give the largest contributions to the anomalous temperature. The contribution of each of these is compared to climate predictions from an ensemble of climate models in order to assess the likelihood of this kind of events happening in the future.