

Climate Bulletin November 2016 Europe

The Climate Bulletin is a monthly service provided by Weather Impact. It provides a global overview of last months' weather and its relation to the historical average. The bulletin discusses weather irregularities on global and regional scale and provides background knowledge.

If you wish to receive any additional information about e.g. other weather variables, such as wind patterns or snow, or information specified for your region, please feel free to contact us at: info@weatherimpact.com

World

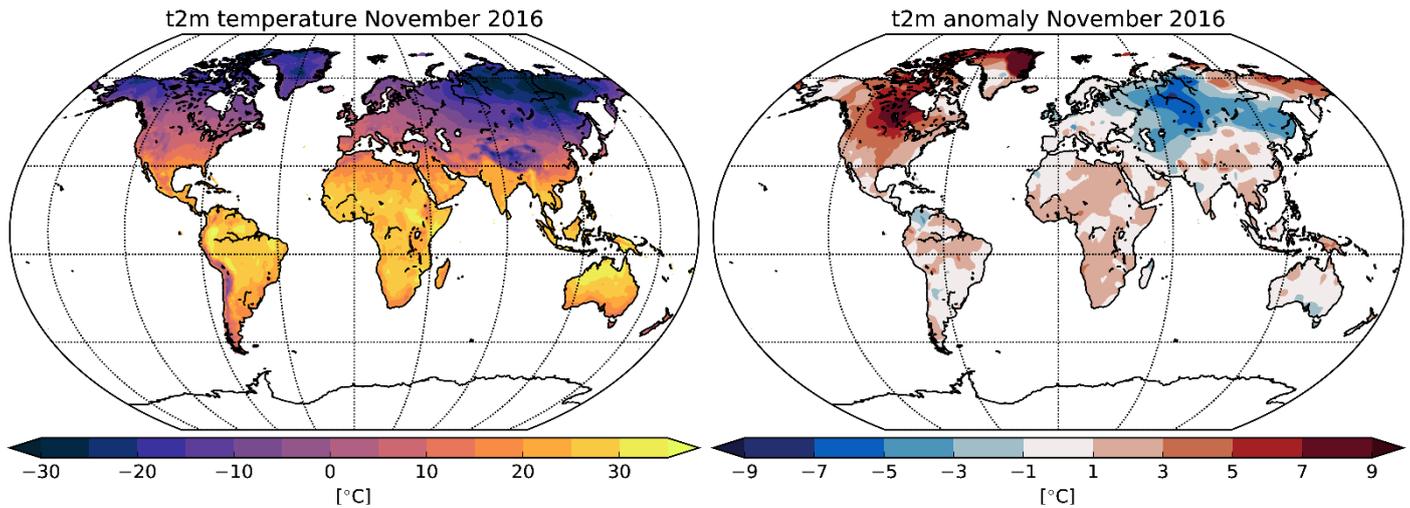


Fig. 1. Mean temperature at 2m height in November 2016 (left) and anomaly with respect to 1981-2010 (right).

Temperature in November 2016 was dominated by exceptionally warm temperatures in the Arctic and North America, and abnormal low temperatures in Siberia. This pattern was caused by a persistent atmospheric pattern of high pressure cells in the vicinity of the North Pole. The highest positive anomaly was observed in Greenland and parts of Canada, which showed temperatures up to 8 °C higher than the climatic mean between 1981 and 2010. Equatorial regions and the Southern Hemisphere had temperatures close to the climatic mean, with slightly higher temperatures than normal in most parts of Africa. As for precipitation, India and a large part of Australia experienced a dry November. Europe, South America and parts of Asia received average precipitation. This is also the case for large parts of North America, although some areas received less than normal precipitation. The Southeast of the United States continued to experience severe drought. South Eastern China (Hongkong) and Northern Mexico received relatively high amounts of precipitation.

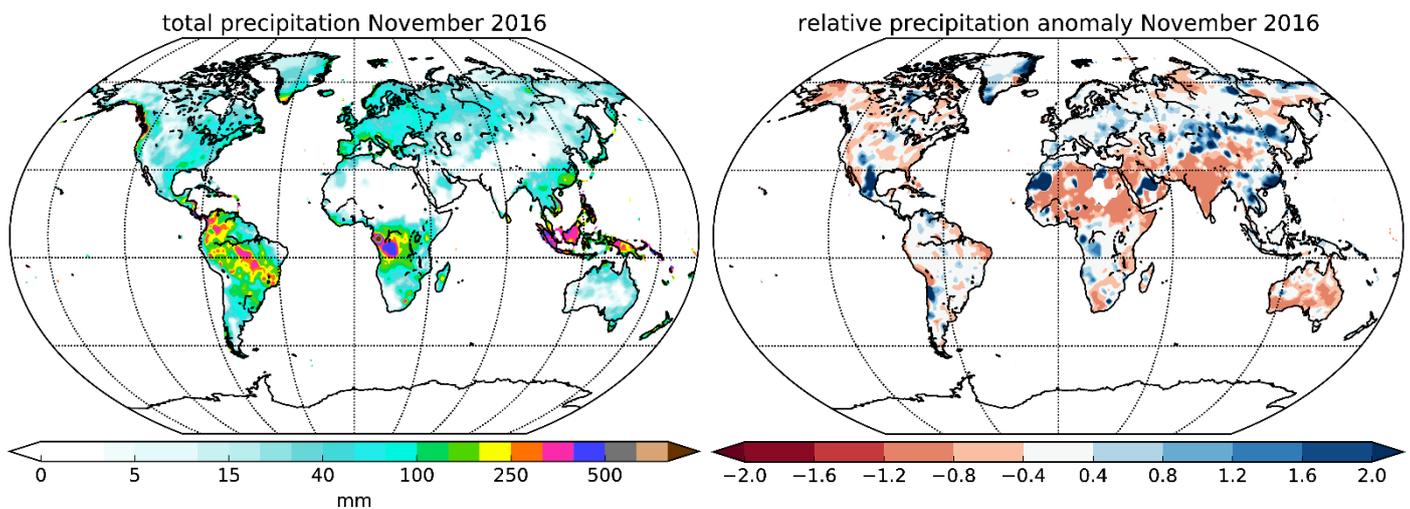


Fig. 2. Total precipitation sum in November 2016 (left) and relative anomaly with respect to 1981-2010 (right).

Europe

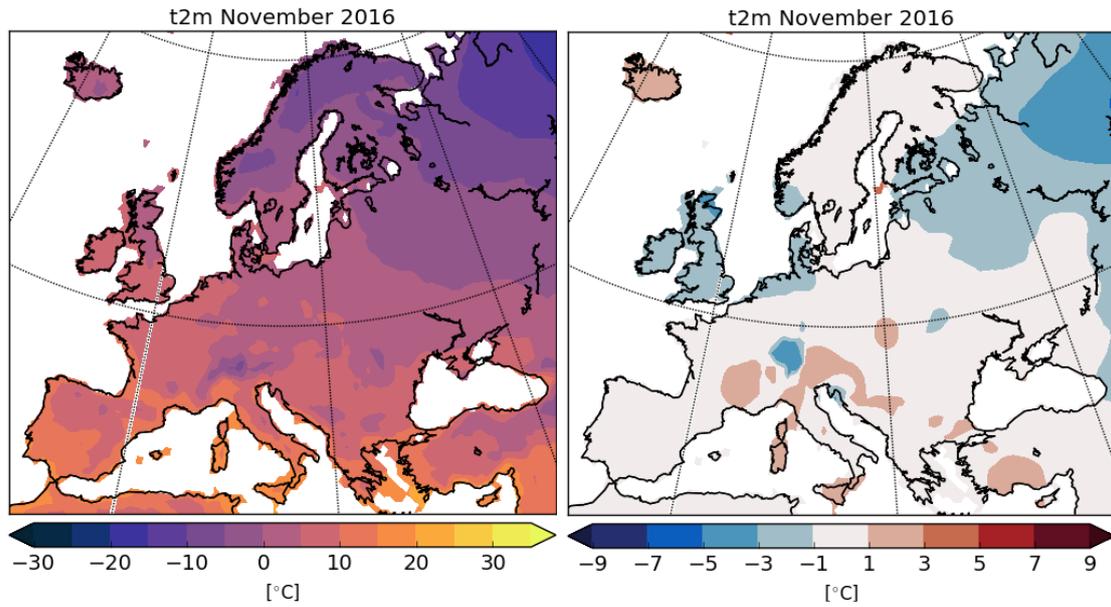


Fig. 3. Mean temperature at 2m height of November 2016 (left) and anomaly with respect to 1981-2010 (right) for Europe

November temperatures were relatively close to the climatic mean (1981-2010) in Europe. Central Russia experienced temperatures far below the normal. This cold anomaly extended westward up to the Baltic and Southern Finland. The British Isles also experienced temperatures around 2°C lower than normal. Precipitation in Europe was also close to the climatic mean. Central Ukraine, Romania and some parts of Southern Europe received more precipitation than normal, while Ireland was slightly dryer.

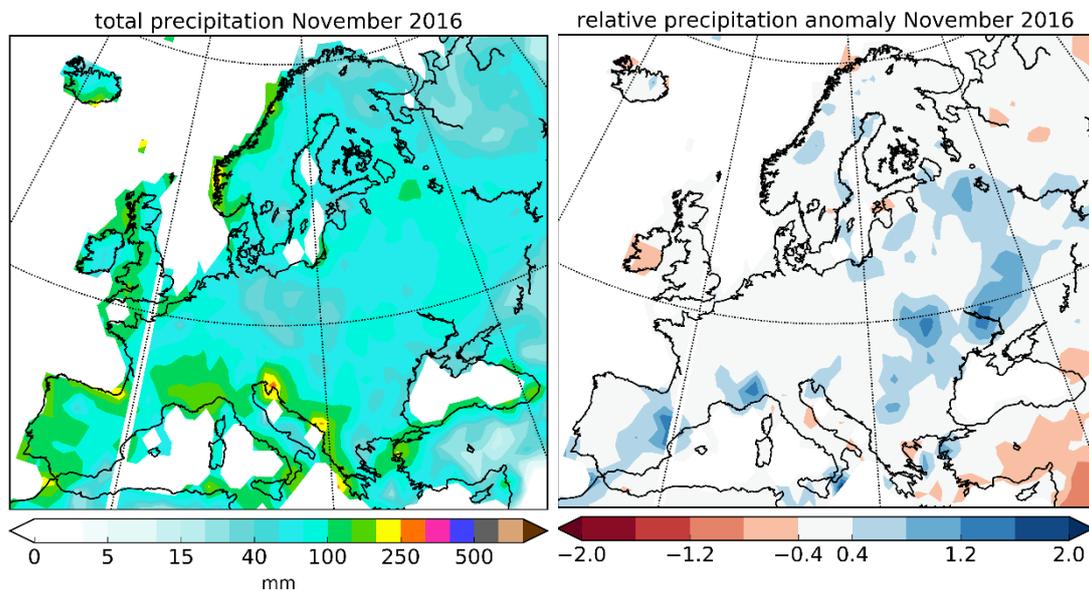


Fig. 4. Total precipitation sum in of November 2016 (left) and relative anomaly with respect to 1981-2010 (right) for Europe.

ENSO

Background The El Niño Southern Oscillation (ENSO) is a phenomenon in the equatorial Pacific Ocean with strong impact on global weather. During an El Niño event sea surface temperatures in the Eastern Pacific are abnormally warm. This results in humid conditions along the Westcoast of South America and dry conditions in the West Pacific. In many places around the world, the weather is more extreme during an El Niño. La Niña is the name of the reversed pattern and follows after an El Niño event. El Niño's occur every 3 to 8 years, always around Christmas. It is difficult to predict the development of an El Niño longer than 6 months ahead. The last strong El Niño was in 2015.

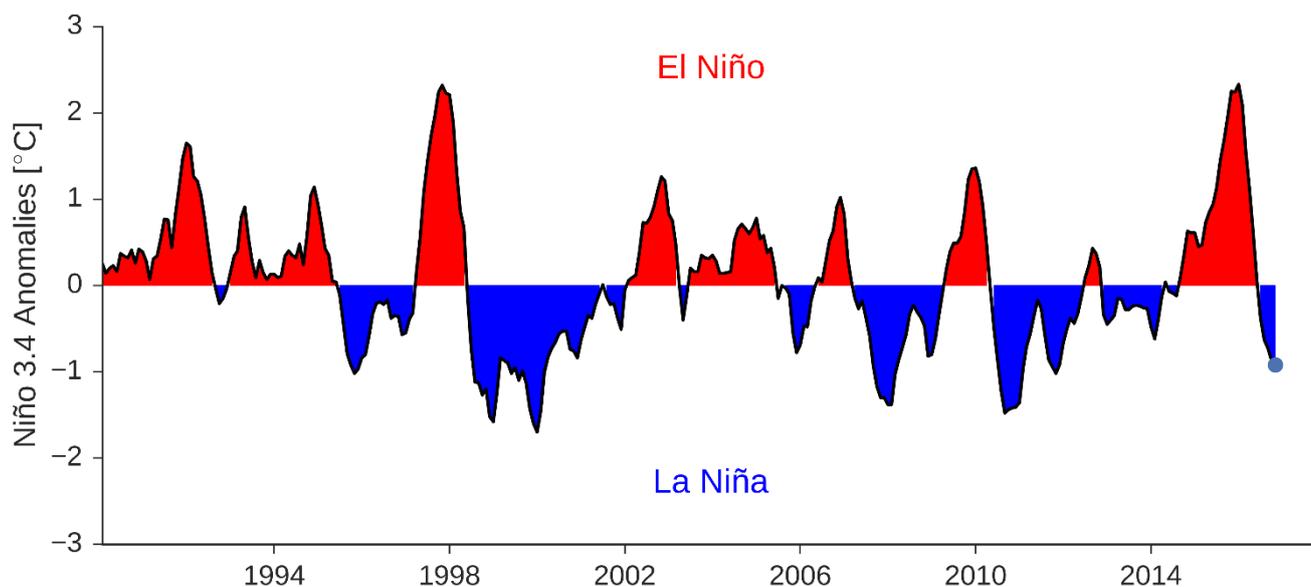


Fig. 5. El Niño index. The El Niño index is based on sea surface temperature data.

After the very strong El-Niño of December 2015 (positive index), we are now in a relatively strong La Niña phase (indicated by a negative index). Forecasts indicate that the La-Niño phase will probably weaken in the next few months, with the ENSO-system returning to a neutral state. The continental regions around the Pacific Ocean may experience some abnormal weather due to the current La Niña as visualised on this website ([link](#)). In 2017 the effects of the current La Niña will weaken out. It is impossible to predict when the next El Niño will develop, but it is very likely that it will only develop a couple of years ahead from now.

Data Sources

Temperature: GHCN CAMS from NOAA/ESRL/PSD <ftp://ftp.cdc.noaa.gov/Datasets/ghcncams/>

Precipitation: GPCC from DWD <ftp://ftp.cdc.noaa.gov/Datasets/gpcc/>

Nino 3.4 Index: NOAA/CPC http://www.cpc.noaa.gov/products/analysis_monitoring/ensostuff/detrend.nino34.ascii.txt