

The forecast presented here is for December and the average of the December-January-February period for the United Kingdom as a whole. The forecast for December will be superseded by the long-range information on the public weather forecast web page ([www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast](http://www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast)), starting from 30 November 2014.

This forecast is based on information from observations, several numerical models and expert judgement.

## SUMMARY - TEMPERATURE:

For both December and December-January-February as a whole above-average UK-mean temperatures are more likely than below-average.

Overall, the probability that the UK-mean temperature for December-January-February will fall into the warmest of our five categories is around 25% and the probability of falling into the coldest of our five categories is near to 10% (the 1981-2010 probability for each of these categories is 20%).

## CONTEXT:

The whole tropical Pacific Ocean has remained warmer than average for over six months; however, the pattern of sea surface temperature anomalies and the tropical rainfall response typically associated with an El Niño – Southern Oscillation event has yet to materialise. During the past month further warming of the central and eastern Pacific has occurred and a weak event remains likely by the end of the year, although there is also a chance that El Niño conditions will remain neutral. This factor is not expected to exert a strong influence on weather patterns in Europe during the next three months.

In the Arctic, sea ice is now slightly below average across the basin as a whole. There is no clear indication whether these anomalies will have a significant influence on weather patterns in the UK.

The Quasi-Biennial Oscillation (QBO), an oscillation of the equatorial zonal wind in the stratosphere, has now changed to an easterly phase. In the winter months an easterly phase is typically associated with a weaker polar vortex. A weaker polar vortex can lead to a greater

incidence of blocking patterns over the northern hemisphere, which would increase the probability of cold weather across Europe. However the predicted frequency of blocking remains low for this period, implying other factors have a stronger influence on weather patterns in Europe during this winter period.

Computer models are in good agreement in suggesting a positive phase of the North Atlantic Oscillation (NAO) is more likely than a negative one during much of this period. A positive NAO is characterised by an enhancement of the westerly winds across the Atlantic which, during winter, brings above-average temperatures to western Europe. Later in the period, the confidence in the forecast of the NAO reduces, with computer models having a much weaker signal and the risk of occasional colder outbreaks increases. However, the overall probability of below-average temperatures is lower than climatology, as can be seen in figure T2.

Fig T1

3-month UK outlook for temperature in the context of the observed annual cycle

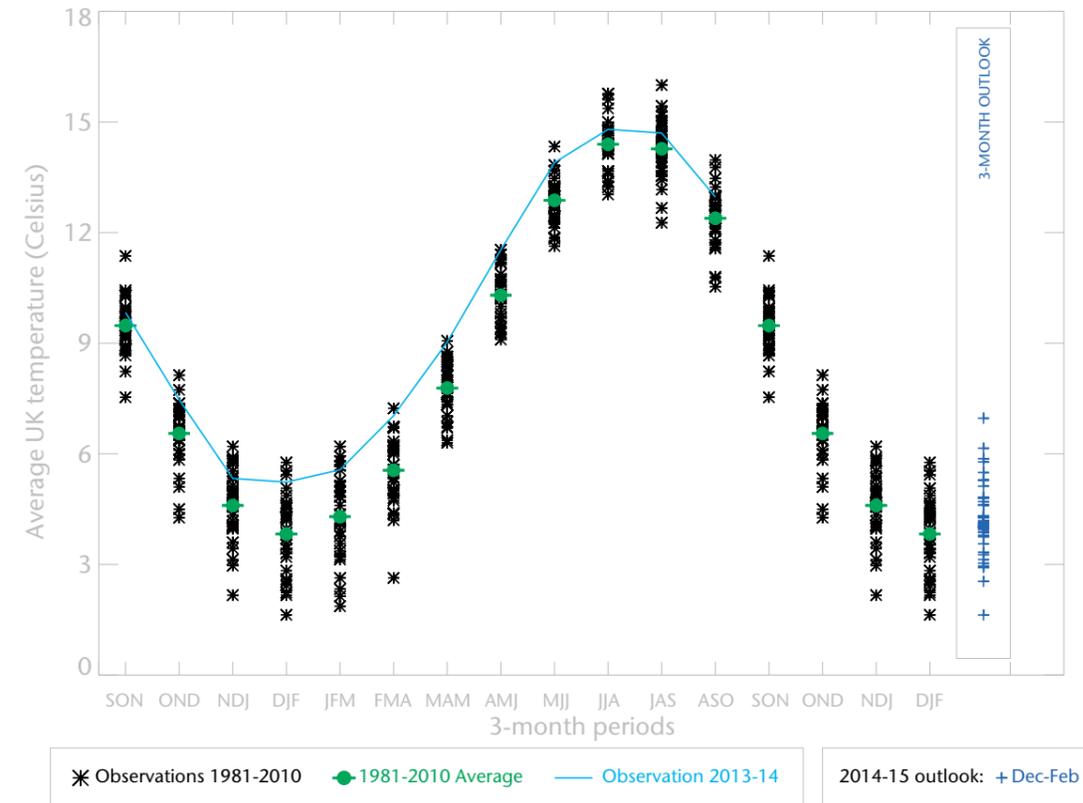


Fig T2

1-month and 3-month UK outlook for temperature in the context of observed climatology

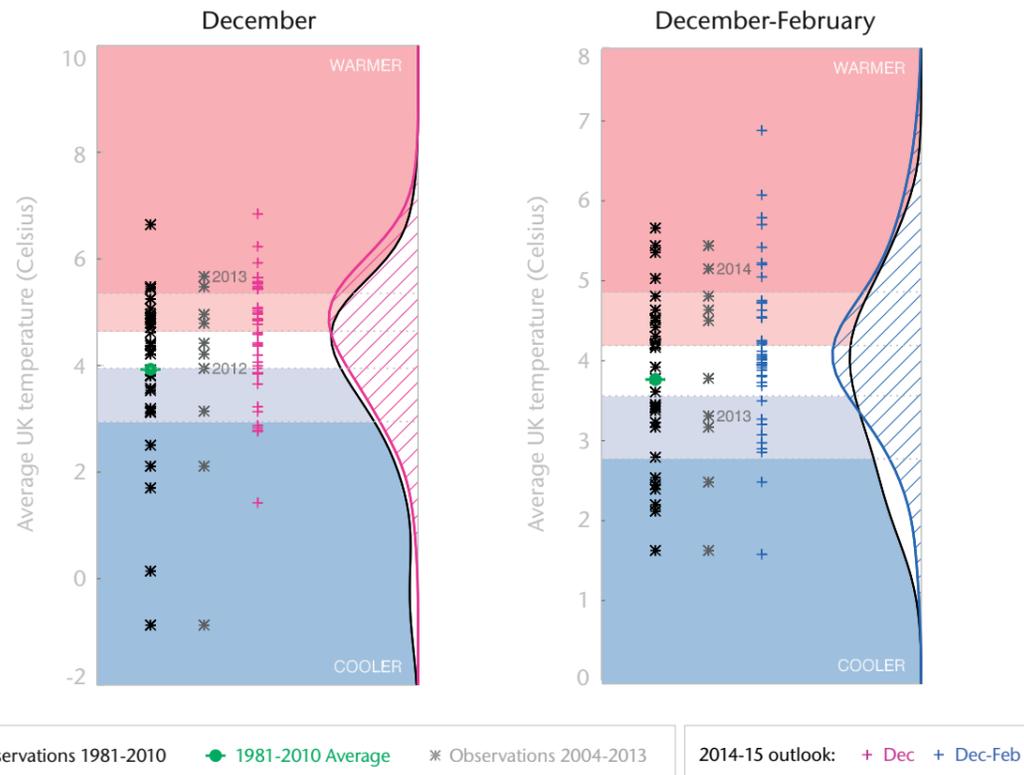
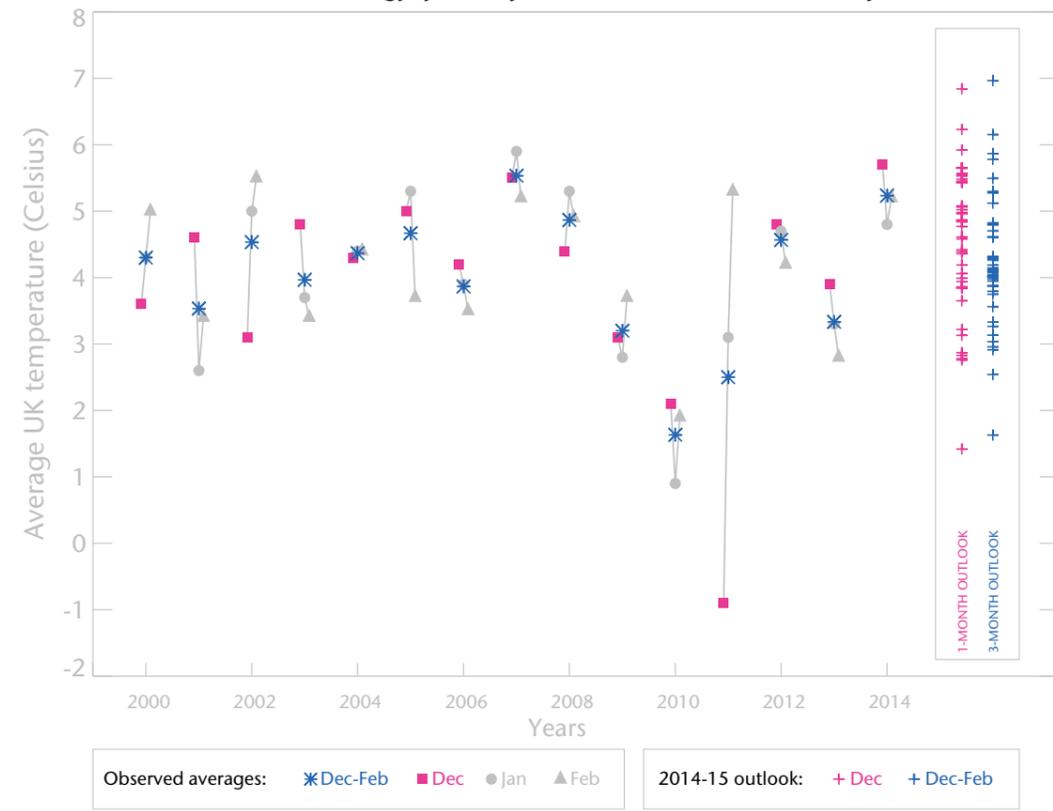


Fig T3

1-month and 3-month UK outlook for temperature in the context of recent climatology: year-to-year and within-season variability



This Outlook provides an indication of possible temperature and rainfall conditions over the next 3 months. It is part of a suite of forecasts designed for contingency planners. The Outlook should not be used in isolation but should be used with shorter-range and more detailed (30-day, 15-day and 1-to-5-day) forecasts and warnings available to the contingency planning community from the Met Office.