

Met Office 3-month Outlook

Period: February - April 2015 Issue date: 29.01.15

The forecast presented here is for February and the average of the February-March-April period for the United Kingdom as a whole. The forecast for February will be superseded by the long-range information on the public weather forecast web page (www.metoffice.gov.uk/public/weather/forecast/#?tab=regionalForecast), starting from 6 February 2015.

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

SUMMARY - TEMPERATURE:

For February near- to above-average temperatures are more probable than below-average. For February-March-April as a whole above-average temperatures are more likely than below-average.

Overall, the probability that the UK-mean temperature for February-March-April will fall into the coldest of our five categories is around 15% and the probability that it will fall into the warmest category is around 30% (the 1981-2010 probability for each of these categories is 20%).

CONTEXT:

The tropical Pacific Ocean overall remains warmer than average. However, sea surface temperatures in the eastern Pacific have cooled in the past month, with the strongest positive anomalies remaining across central and western parts of the tropical Pacific Ocean. This change in the pattern of sea surface temperature anomalies suggests that we are now moving away from a possible weak El Niño event, with near-neutral conditions the most probable outcome in the coming months; this will offer little predictive value for conditions across Europe during the period of this forecast.

In the Arctic, sea ice growth has slowed and overall extent is now below average, particularly across the Bering Sea and Sea of Okhotsk. This factor is not expected to offer any useful predictability for Europe in the next three months.

The Quasi-Biennial Oscillation (QBO), an oscillation of the equatorial zonal wind in the stratosphere, is now firmly in an easterly phase. Typically, an easterly phase is associated with a weaker polar vortex. A weaker polar vortex can lead to a greater incidence of blocking patterns over the northern hemisphere in winter, which would increase the probability of cold weather across northern Europe. However, this is a transitional time of year with the QBO probably exerting some influence at the beginning of the season, but providing little known contribution by the end.

For February, there is a reasonably strong signal, from several models, for a continuation of a positive phase of the North Atlantic Oscillation, with winds blowing frequently from the west or northwest. Overall this pattern typically brings near- to above-average temperatures but, as seen in January, this does not preclude occasional spells of colder weather with snow. The left-hand graph in figure T2 shows a shift towards milder conditions and the chance of a prolonged, severe spell of cold weather is reduced compared to climatology.

For February-March-April as a whole, computer models begin to diverge; consequently no clear signals emerge and predictability is considered low. The right-hand graph of figure T2 reflects this, with the forecast curve more closely resembling climatology than the curve for February. Nevertheless, there is still an increased probability of above-average temperatures.

Fig T1

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

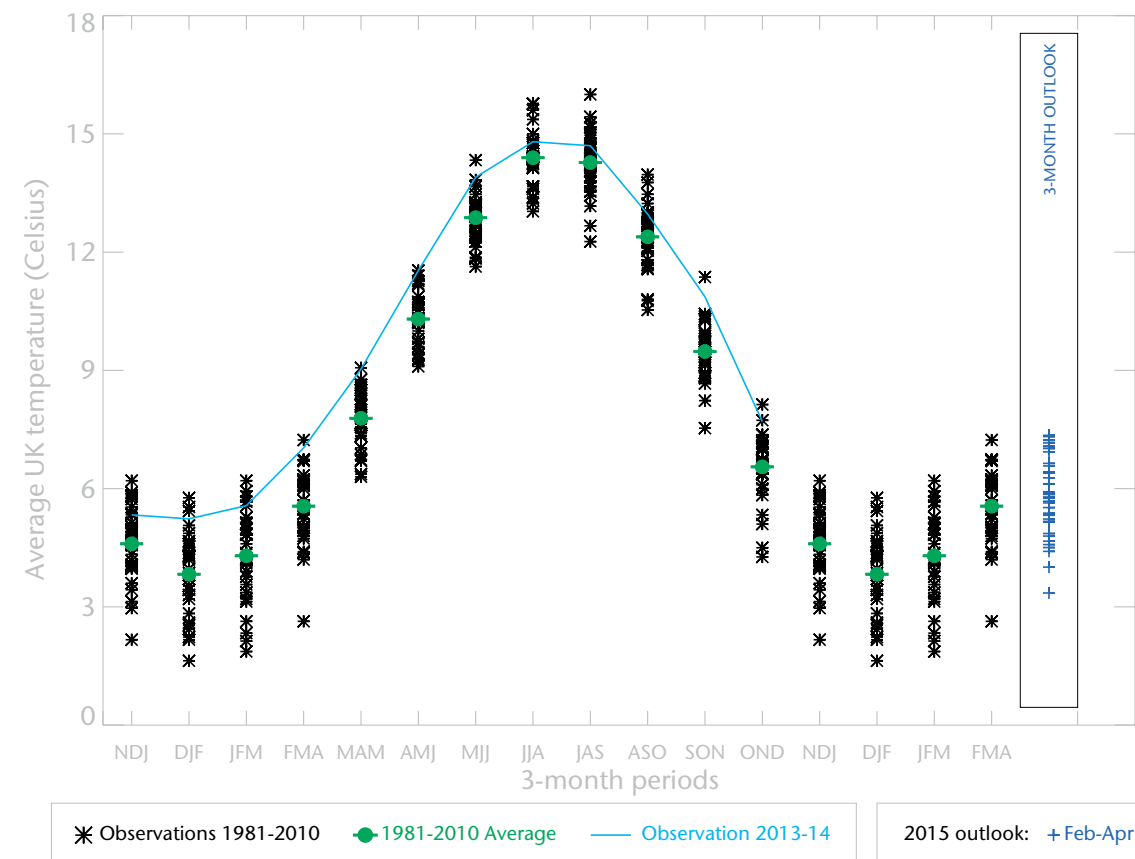


Fig T2

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

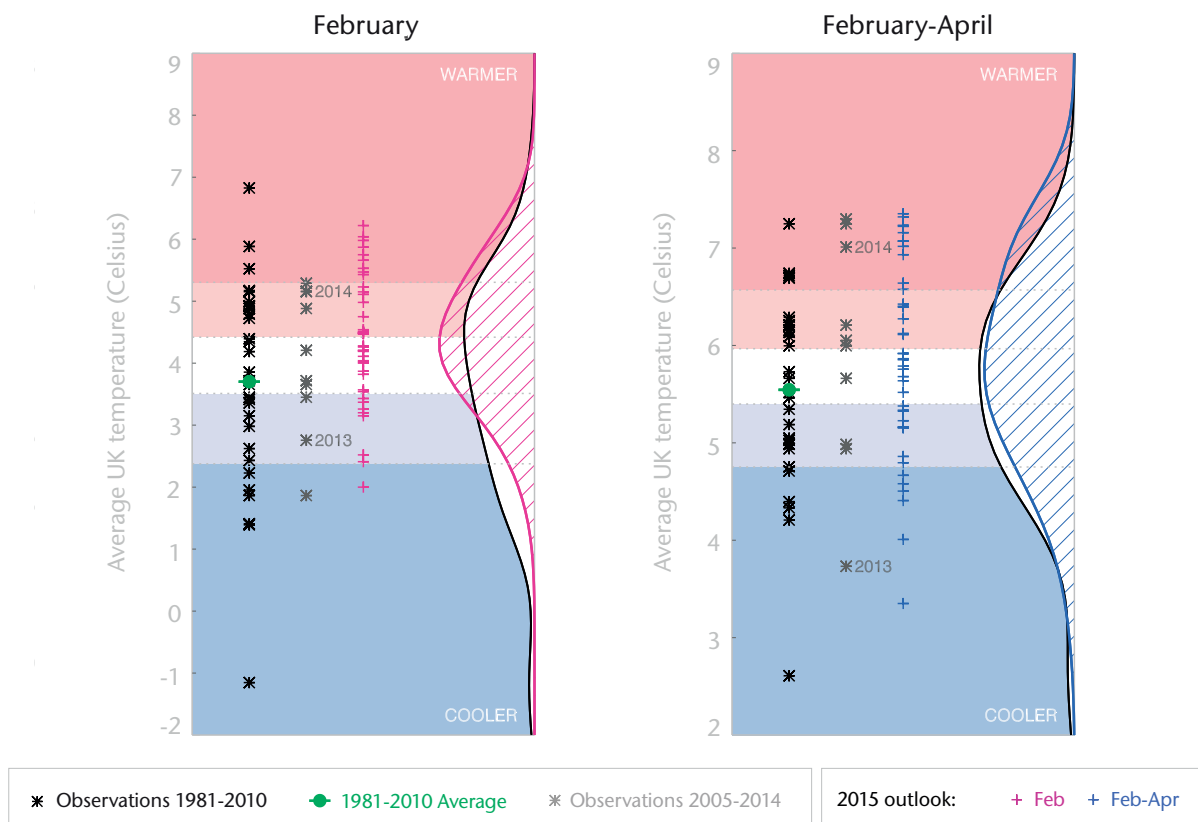
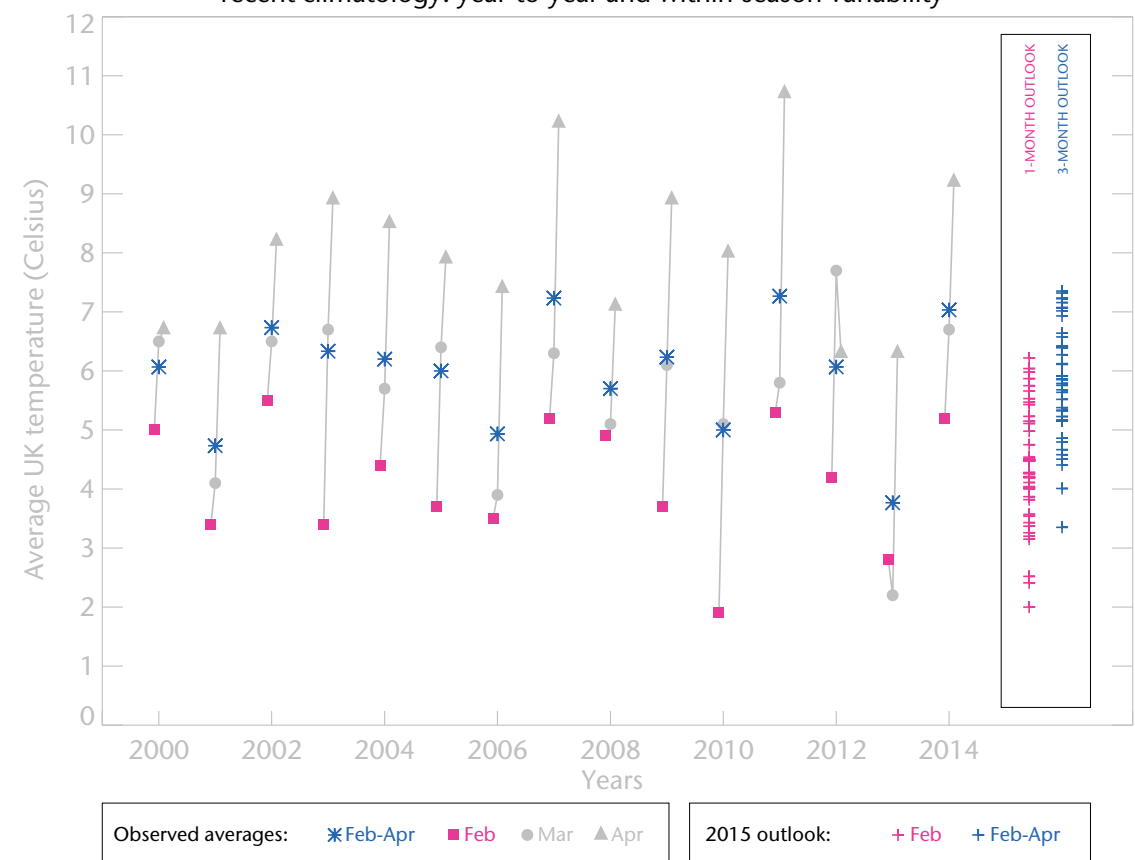


Fig T3

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.