



Met Office 3-month Outlook

Period: November 2018 – January 2019 Issue date: 25.10.18

The forecast presented here is for the average of the November-December-January period for the United Kingdom as a whole. This forecast is based on information from observations, several numerical prediction systems and expert judgement.

SUMMARY – TEMPERATURE:

For November-December-January as a whole, above-average temperatures are slightly more probable than below-average temperatures.

Overall, the probability that the UK-average temperature for November-December-January will fall into the coldest of our five categories is between 15% and 20%, and the probability that it will fall into the warmest of our five categories is around 25% (the 1981-2010 probability for each of these categories is 20%).

CONTEXT:

Tropical Pacific sea surface temperatures have recently warmed and are now on the threshold of El Niño. Further development is expected, leading to a moderate El Niño event within the outlook period. In late autumn and early winter, El Niño increases the chances of the North Atlantic Oscillation (NAO) being in its positive phase. This would imply an increase in the likelihood of milder-than-average conditions for the UK.

The Quasi-Biennial Oscillation (QBO), an oscillation of the equatorial winds in the stratosphere, is entering a westerly phase. It will remain in this state throughout the coming winter. A westerly phase of the QBO also increases the likelihood of a positive phase of the NAO in the outlook period.

North Atlantic sea surface temperatures continue to show a pattern of colder-than-average conditions south of 30°N and north of 50°N, with warmer-than-average conditions in a band in between. Like the other global influences, its effect in the outlook period is to moderately increase the chances of a positive phase of the NAO.

This would be expected to increase the likelihood of milder-than-average conditions, though this would be partially offset by westerly winds blowing across the below-average sea surface temperatures to the west of the UK.

For November-December-January, the Met Office long-range prediction system shows an increase in the likelihood of a positive phase of the NAO and thereby a greater-than-usual chance of mild conditions. Agreement with long-range predictions from other global centres is mixed, however, with a significant minority suggesting greater chances of weather patterns that would bring colder-than-normal conditions to the UK. As a result, while there is an increased likelihood of milder-than-average conditions (see figure T2), this increase is modest. The chances of colder-than-average conditions, and impacts from cold weather, remain reasonably close to normal. Given this overall outlook, the highest chance of any cold weather impacts is towards the end of the outlook period.

Fig T1

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

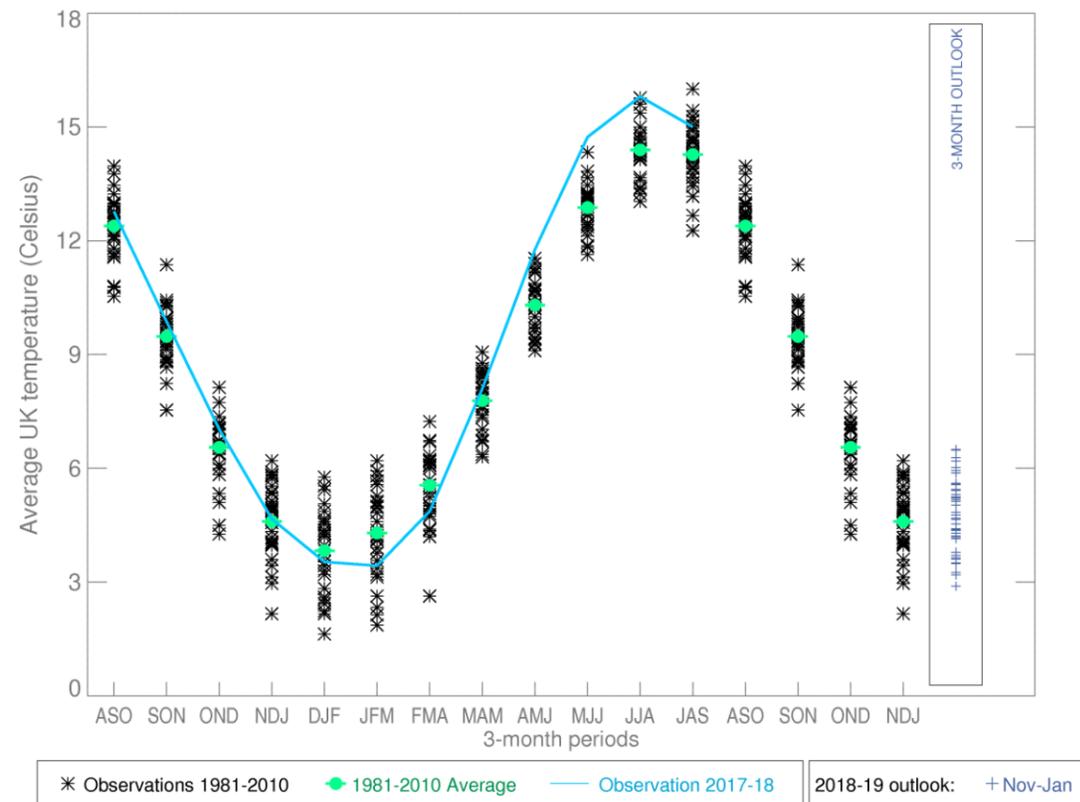


Fig T2

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

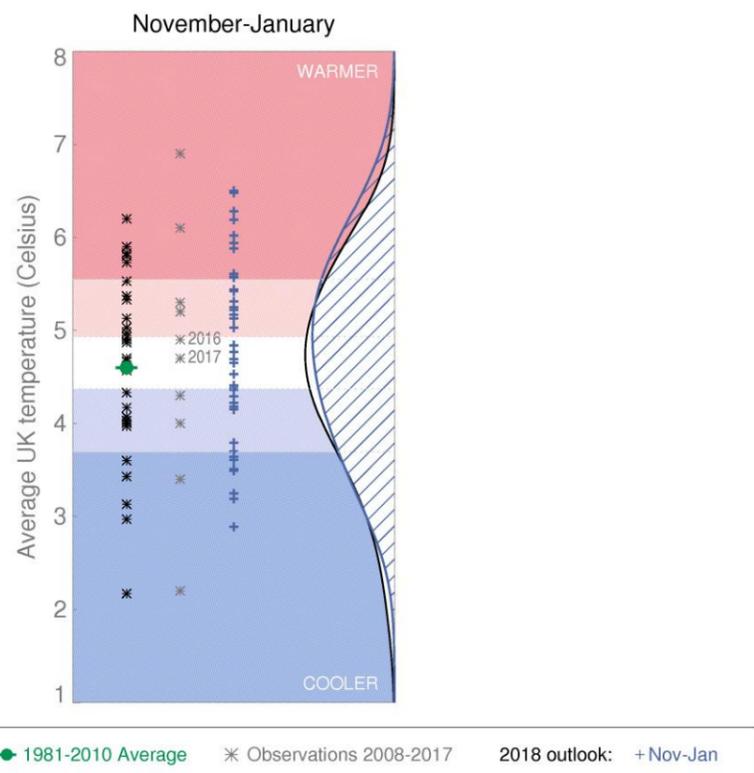
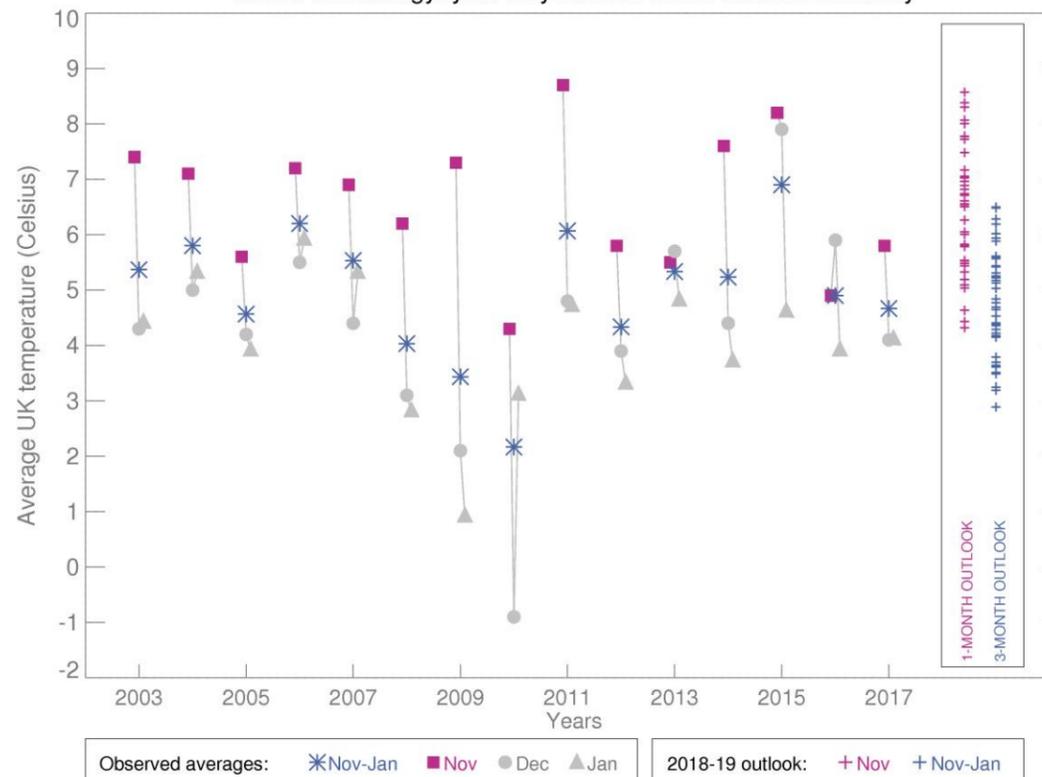


Fig T3

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.