Met Office 3-month Outlook

Period: October – December 2019 Issue date: 26.09.19

The forecast presented here is for October and the average of the October-November-December period for the United Kingdom as a whole. The forecast for October will be superseded by the long-range information on the public weather forecast web page (www.metoffice.gov.uk/ /public/weather/forecast/#?tab=regionalForecast), starting from 2nd October 2019.

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

SUMMARY – TEMPERATURE:

For October and October-November-December as a whole, above-average temperatures are more likely than below-average temperatures.

Overall, the probability that the UK-average temperature for October-November-December will fall into the coldest of our five categories is around 10% and the probability that it will fall into the warmest of our five categories is around 45% (the 1981-2010 probability for each of these categories is 20%).

CONTEXT:

The El Niño-Southern Oscillation (ENSO) is currently in a neutral phase, with very little likelihood of a significant El Niño or La Niña event developing during the outlook period. It is therefore not expected to have any influence on UK weather patterns.

Sub-surface temperatures in the North Atlantic Ocean show a pattern of cooler-than-usual waters in sub-polar and sub-tropical latitudes, with warmer-than-usual waters in mid-latitudes. The outlook period is a time of year when surface temperatures reconnect with those beneath the surface, and therefore this pattern is expected to become more prominent at the surface. Its effect on the atmosphere is to moderately increase the chances of a positive phase of the North Atlantic Oscillation. At this time of year, this is associated with more frequent westerly winds from the Atlantic and milder-than-average conditions.

For October, long-range forecast systems show moderate agreement for increased chances of below-average sea level pressure in the UK region. This implies greater likelihood of the influence of air from the North Atlantic and, together with the warming of climate seen over recent decades, an increased likelihood of mild conditions (see left-hand graph of figure T2).

For October-November-December, the Met Office long-range forecast system, along with systems from other centres around the world, suggests an increased likelihood of below-average sea level pressure to the north and west of the UK. This pattern would lead to a greater-than-usual incidence of mild westerly or south-westerly winds across the UK which, along with the warming of climate, contributes to an increase in the chances of above-average temperatures (see right-hand graph of figure T2). Note that below-average temperatures remain possible, although less likely.

The relatively high probability of our warmest category does not imply extreme or unseasonal temperatures throughout the 3-month period. Indeed, the outlook does not identify weather for a particular day or week. The increased likelihood of this category could mean greater chances of days with temperatures that are above average to a more modest degree. Above-average temperatures at this time of year do not imply sunny and dry conditions.

Fig T1

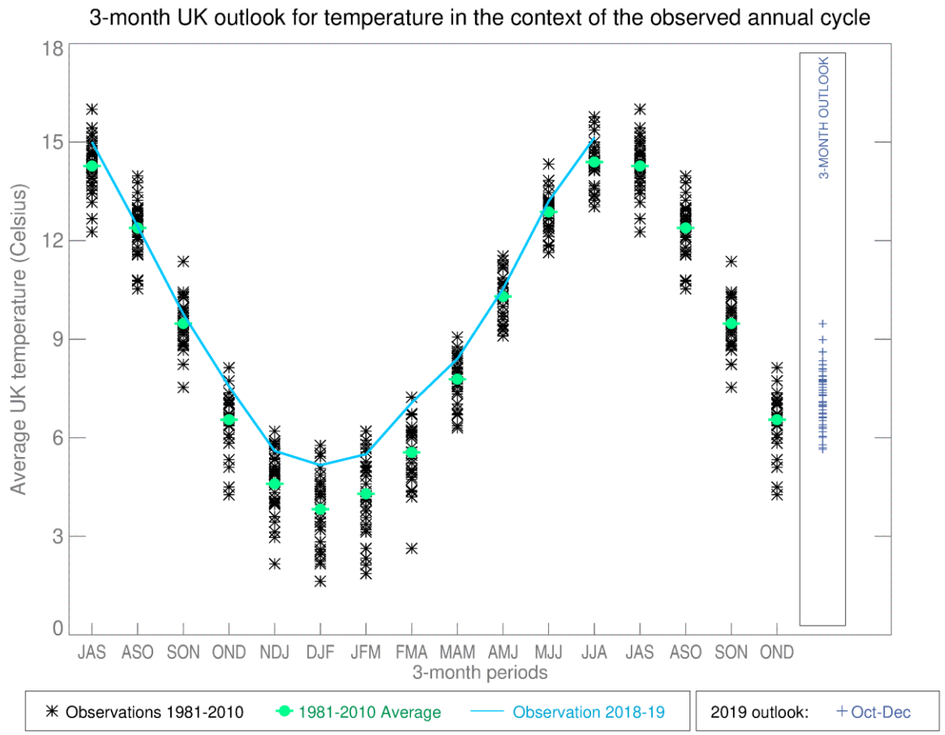


Fig T2

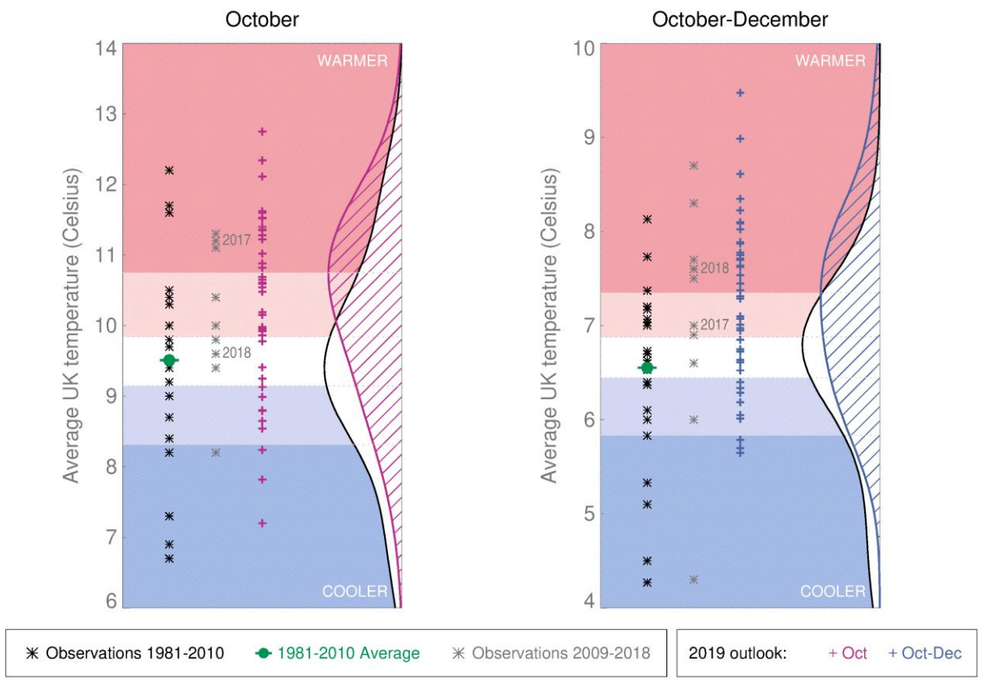
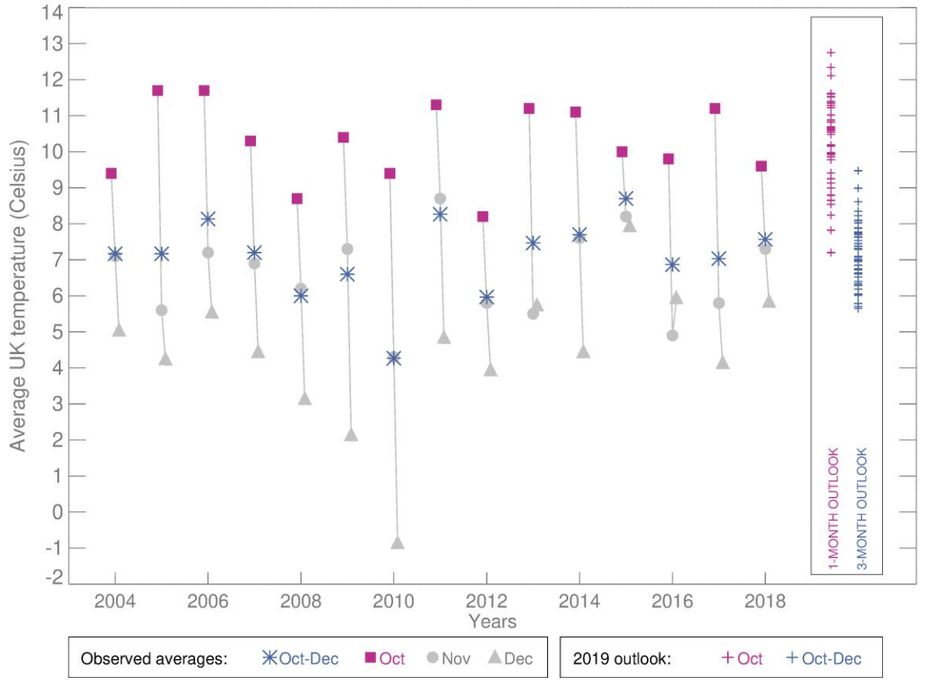


Fig T3



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-7-day) forecasts and warnings available to the contingency planning community from the Met Office.