Met Office 3-month Outlook

Period: December 2011 – February 2012 Issue date: 29.11.11

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

SUMMARY - PRECIPITATION:

For the 3-month period December-January-February, for UK precipitation, the broad-scale signal, although weak, is for somewhat wetter conditions than normal. At the same time however we cannot discount the possibility that this period will be very dry – the risk is very small, but it is not negligible.

Even if a wetter-than-average scenario were to be realised across the UK as a whole it is still quite likely that some regions would see below-average rainfall.

The probability that UK precipitation for December-January-February will fall into the driest of our five categories is about 15%, whilst the probability that it will fall into the wettest of our five categories is 20-25% (the climatological probability for each of these categories is 20%).

CONTEXT:

Forecasts from a number of different centres around the world are consistent in predicting anomalously high surface pressure over and to the southwest of the UK. This particular pattern would be consistent with an increased frequency of westerly winds, which can often bring enhanced rainfall to the UK, especially western parts. Hence the outlook slightly favours wetter-than-average conditions. Note however that consistency between computer model forecasts does not boost confidence much; on seasonal timescales correctly predicting the pressure pattern remains very difficult, and it is quite possible that the broad-scale signals from such forecasts will not reflect what actually happens. Hence the outlook only differs slightly from climatology.

If the pressure pattern scenarios described above were to be realised, higher-than-average rainfall would probably be seen in most western parts of the UK, whilst some eastern parts would probably see below-average amounts.

There is a very small, but non-negligible risk of exceptionally dry conditions prevailing through the winter - compare the lowermost blue crosses on the right panel of Figure P2 with the grey and black points, which cover the last 40 years. The driest UK winter in the last century, 1963/64, had a December-January-February rainfall of 120mm.

As some eastern parts of England have seen unusually dry conditions through much of 2011, water resources here will be sensitive to winter rainfall. The Environment Agency advise that above-average rainfall in eastern and southern England would be needed to ensure a full recovery of the water resources situation. Below-average rainfall in these parts, which could be realised even if mean UK rainfall is above average, would result in well-below-average water resources availability by spring 2012.

As snow and ice frequency in winter is more closely related to temperature than to rainfall the signal for wetter-than-average should not be misinterpreted as meaning more snow than average; in fact based on the temperature forecast we anticipate less snow and ice than seen in recent winters.

Fig P1

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

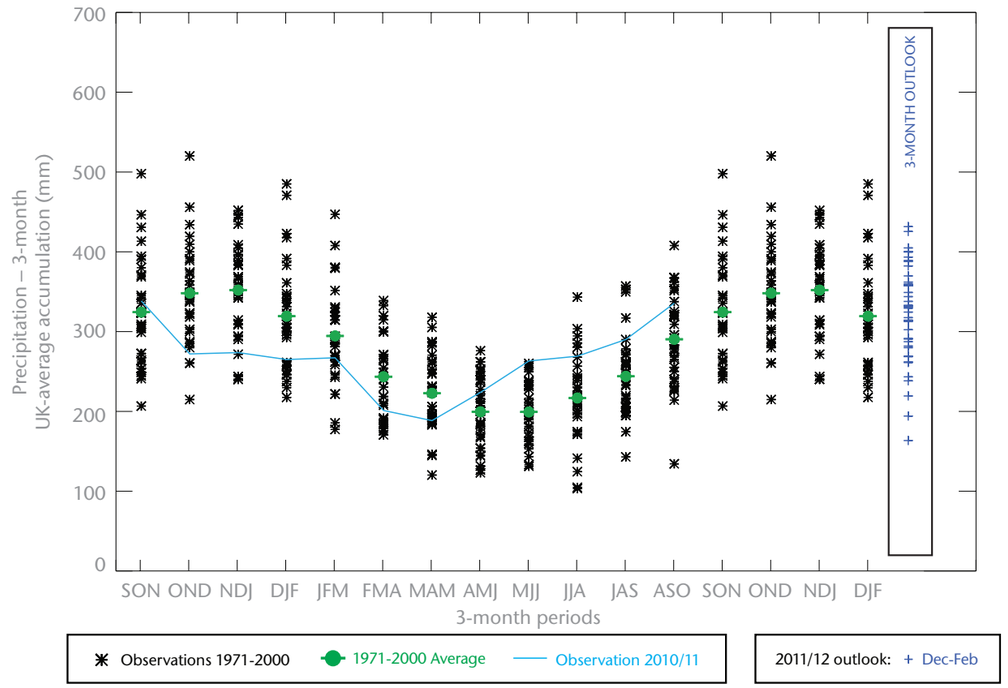


Fig P2

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

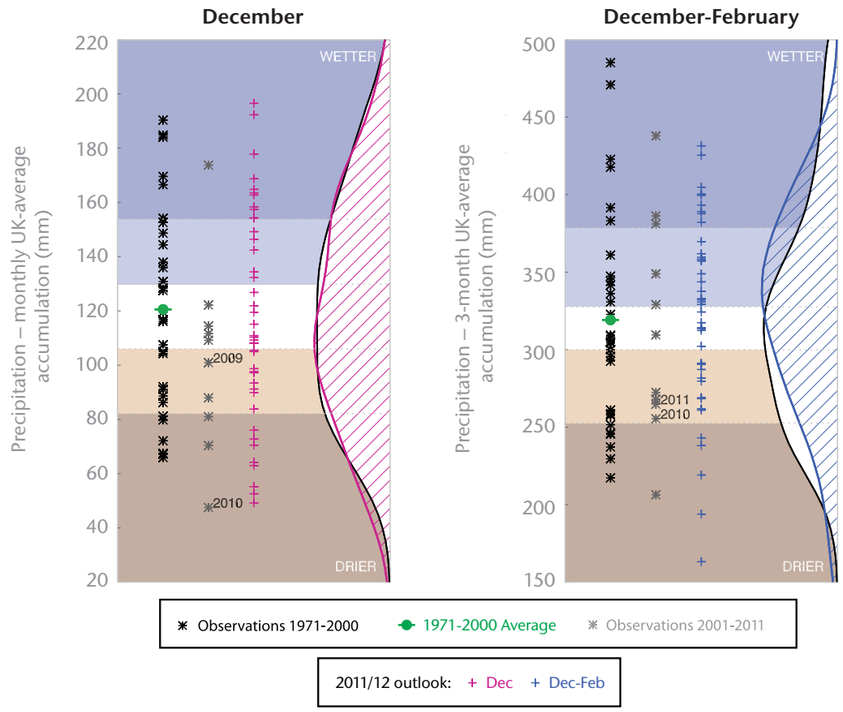
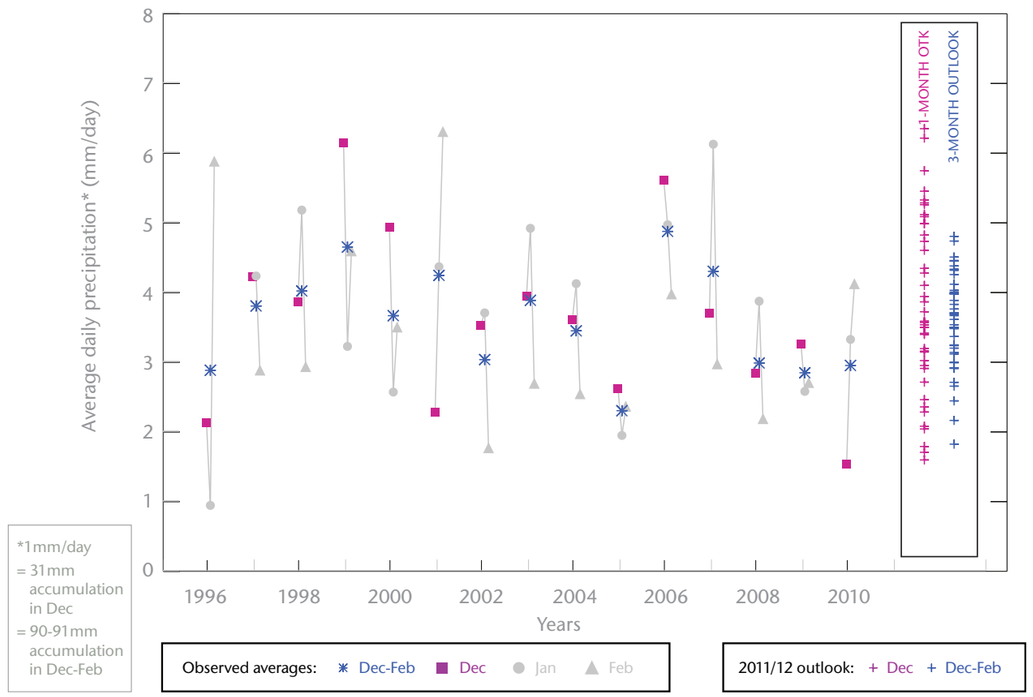


Fig P3

1-month and 3-month UK outlook for precipitation 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.