



Met Office

Met Office 3-month Outlook

Period: April – June 2012 Issue date: 23.03.12

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

SUMMARY - PRECIPITATION:

The forecast for average UK rainfall slightly favours drier-than-average conditions for April-May-June as a whole, and also slightly favours April being the driest of the 3 months.

With this forecast, the water resources situation in southern, eastern and central England is likely to deteriorate further during the April-May-June period.

The probability that UK precipitation for April-May-June will fall into the driest of our five categories is 20-25% whilst the probability that it will fall into the wettest of our five categories is 10-15% (the 1971-2000 climatological probability for each of these categories is 20%).

CONTEXT:

As a legacy of dry weather over many months water resources in much of southern, eastern and central England remain at very low levels. Winter rainfall in these areas has typically been about 70% of average, whilst observations and current forecasts suggest that the final totals for March will be below average here too. The Environment Agency advises that, given the current state of soils and groundwater levels in these areas, drought impacts in the coming months are virtually inevitable. The degree of impact will be greater if warm, dry conditions prevail. On the upper (wet) portion of the graphs on Figure P2 note how the forecast curves for both April (pink) and April-May-June (blue) lie to the right of the climatology curves (black), implying reduced probability of wet conditions compared to climatology.

It is during the winter half of the year that significant runoff into rivers and groundwater recharge typically occur. This is because much of the rain that falls during the summer half is delivered back to the atmosphere through evaporation. So only with extremely high rainfall totals over the next three months would the water resources situation be prevented from deteriorating further.

The signals from different sources are not strong enough this month for us to anticipate any specific regional variations in forecast rainfall relative to long-term averages.

Predicting month to month variations in rainfall at long-lead times remains very difficult. However there are hints from some computer model forecasts that as we move through May and on into June the jet stream over the North Atlantic may tend to edge southwards, which, if it happened, would probably lead to an increase in rainfall across the UK. Such a sequence would bear some resemblance to the evolution seen last year - note on the right of Figure P3 how May and June in 2011 (grey symbols) were markedly wetter than April (pink symbol). It is mainly for this reason that April could well be the driest of the 3 months this year.

One source of UK rainfall as we move into summer is thunderstorm activity moving north from southern France and Iberia. As a legacy of a very dry winter in those regions soil moisture levels there are now below local climatological averages for March. This is believed to reduce the likelihood of large rainfall totals arising over the UK from the aforementioned mechanism.

Fig P1

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

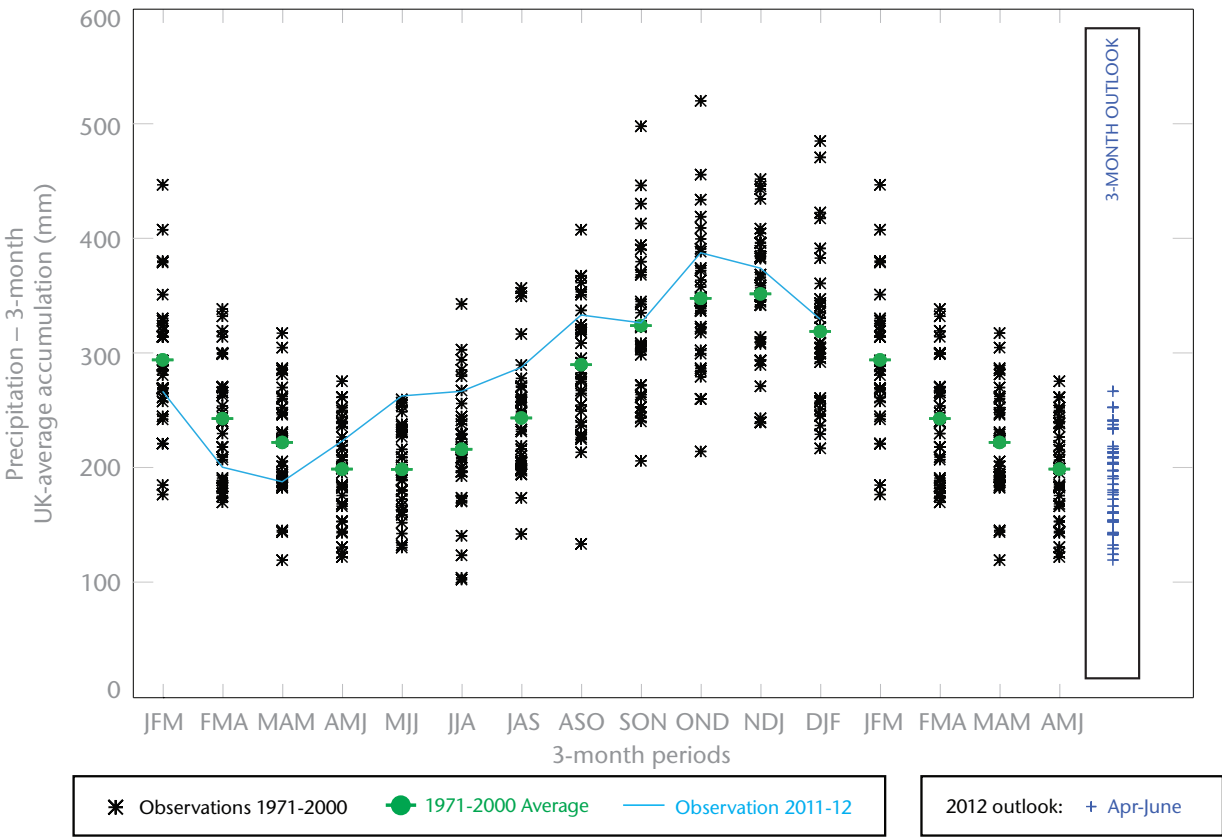


Fig P2

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

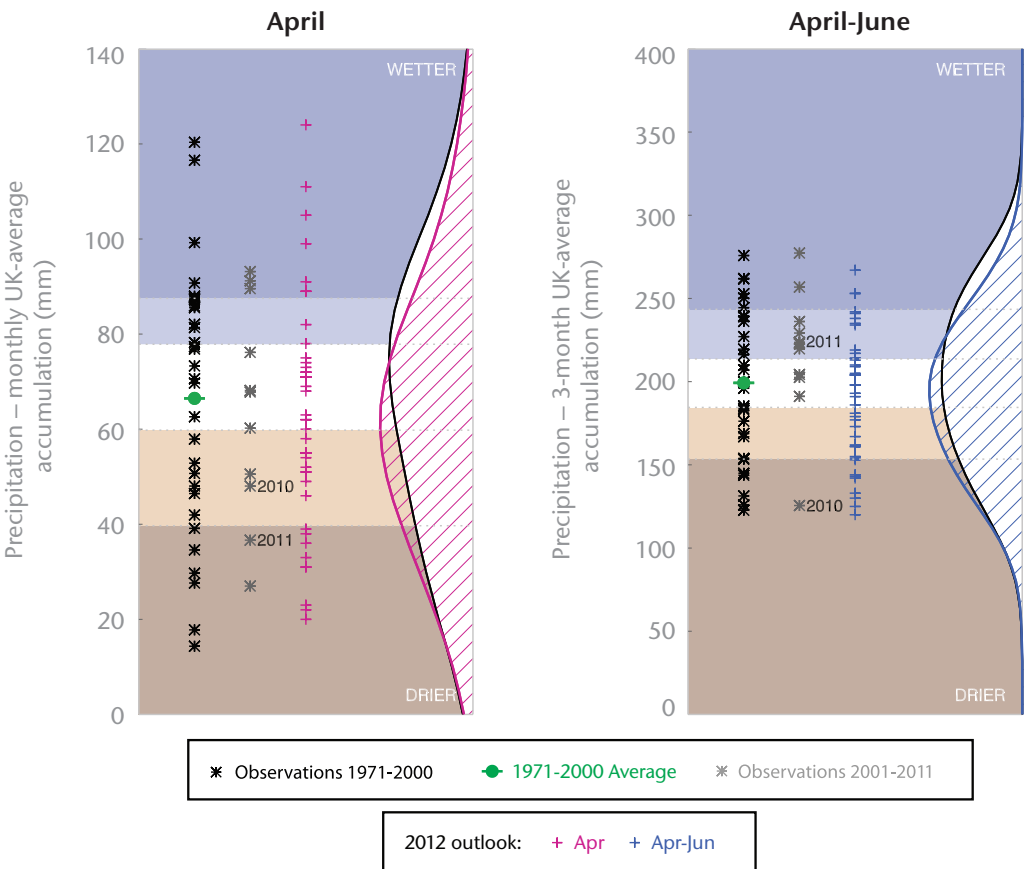
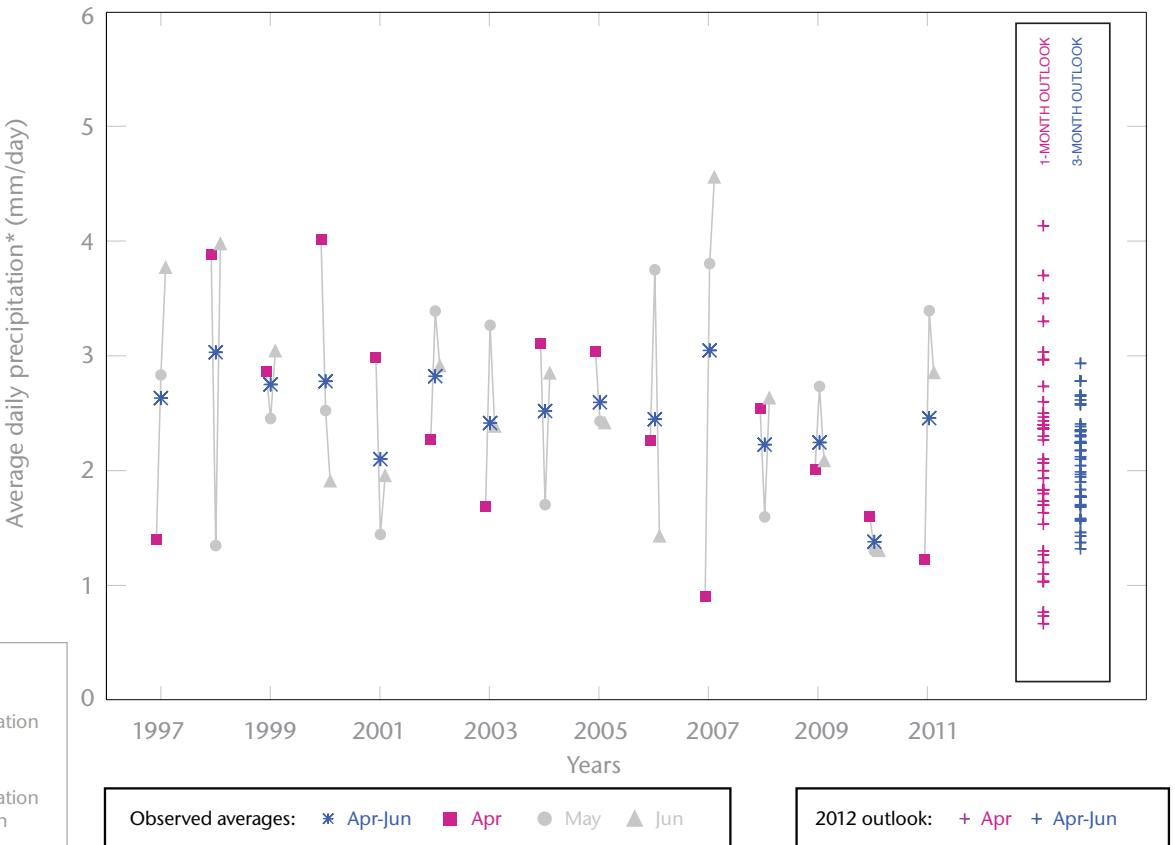


Fig P3

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.