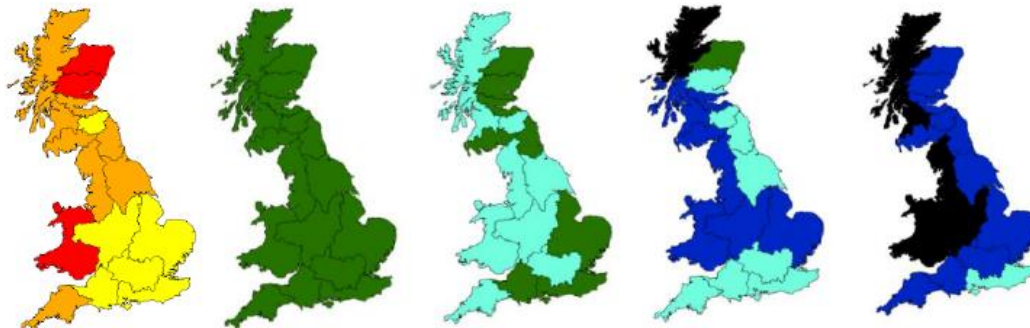


## Outlook based on modelled flow from rainfall forecasts

### SUMMARY

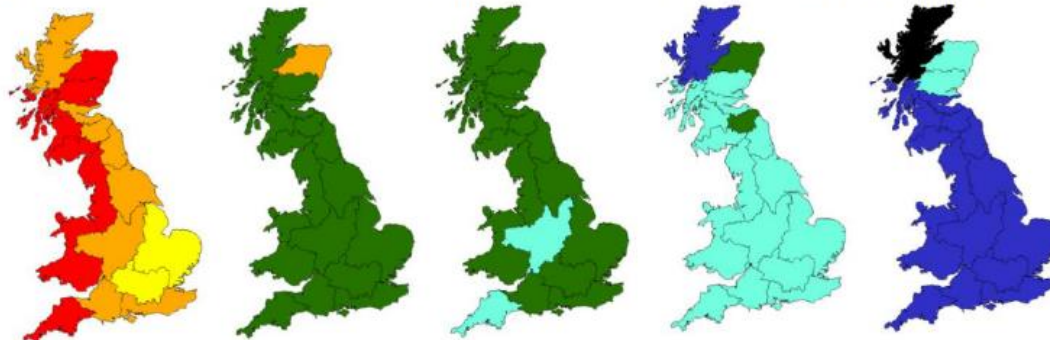
River flow forecasts based on rainfall forecasts above the lowest quartile are in the normal range or above for most regions over the next 1- to 3-months. Above average flows are most likely to occur in western regions and central England where higher than average rainfall totals *recently* led to wetter catchments. However, in NE Scotland, lower than normal *recent* rainfall left catchments drier, and flow forecasts for this regions are more likely to be in the normal or below normal range for this time of year.

Lowest rainfall forecast 1<sup>st</sup> quartile Median 3<sup>rd</sup> quartile Highest rainfall forecast



### 1-month flow outlook

Lowest rainfall forecast 1<sup>st</sup> quartile Median 3<sup>rd</sup> quartile Highest rainfall forecast



### 3-month flow outlook

These forecasts are produced by using five members of the Met Office rainfall forecast ensemble as input to a water balance hydrological model to provide the five estimates of river flows shown on the left for one month and three months ahead.

Regional forecast monthly-mean river flows are derived from the average of 1km river flow estimates within each region and ranked in terms of 49 years of historical flow estimates

The five maps illustrate the wide range of possible flows and while there is a 50% chance of flows between the 1<sup>st</sup> and 3<sup>rd</sup> quartiles, actual flows may be more extreme than the flows derived using the highest or lowest rainfall forecasts.

Exceptionally high flow  
Notably high flow  
Above normal  
Normal range  
Below normal  
Notably low flow  
Exceptionally low flow



The maps illustrating the regional river flows for five members of the Met Office ensemble of rainfall forecasts give some indication of the range of possible river flows in the coming months. As noted previously, the actual flows could be more extreme than the flows generated by either the lowest or highest members of the rainfall ensemble.

The tables below give further insight into the range of river flow forecasts by considering all members of the forecast rainfall ensemble. The numbers in the tables are the percentage of ensemble forecasts falling in each of the flow categories as generated by the monthly-resolution water-balance model. As before results are averaged by region then ranked in terms of 49 years of historical regional flow estimates.

#### SUMMARY

In many regions the highest percentage of river flow forecasts are in the “normal” range, however, a large number of flow forecasts lie in the “above normal” or “notably high” range, particularly in western regions and central England at a lead time of 1-month. The apparent lower flow forecasts in North East Scotland compared to surrounding regions follow a drier *season* than normal in this region.

1-month ahead	A	NW	N	ST	SW	S	T	Welsh	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally low flow	0	0	0	0	0	0	0	2	0	0	0	0	0	5	0	2	0
Notably Low flow	0	5	7	0	2	0	0	2	0	2	7	2	5	5	7	5	0
Below normal	2	2	0	7	5	2	2	2	7	5	0	5	2	5	0	2	7
Normal range	52	40	48	29	31	52	45	31	50	40	43	48	38	64	50	45	40
Above normal	17	17	31	29	38	45	50	36	36	26	17	17	10	19	17	38	40
Notably high flow	29	21	14	33	24	0	2	14	7	26	31	29	19	2	26	7	12
Exceptionally high flow	0	14	0	2	0	0	0	12	0	0	2	0	26	0	0	0	0
3-months ahead	A	NW	N	ST	SW	S	T	Welsh	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally low flow	0	3	0	0	3	0	0	3	0	0	3	0	0	3	3	3	0
Notably Low flow	0	0	10	3	0	3	0	0	3	3	0	3	3	25	0	8	3
Below normal	13	10	10	8	10	8	10	10	10	18	10	10	10	8	10	5	10
Normal range	58	52	52	35	35	48	63	43	58	45	45	58	55	48	52	60	68
Above normal	13	15	10	35	38	35	20	28	23	28	30	18	5	18	28	25	13
Notably high flow	18	20	18	20	15	8	8	18	8	8	13	13	25	0	8	0	8
Exceptionally high flow	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0

