

SUMMARY The outlook for September indicates normal to below normal flows across southern and eastern areas of the UK. Northwestern parts are likely to see normal to above normal flows. The September-November outlook for river flows indicates a continuation of normal to below normal flows across southern and eastern areas, and above normal flows in northwestern areas of the UK. Groundwater levels across the UK are likely to be normal to below normal for September, with some boreholes likely to see notably low levels. For September-November, groundwater levels are expected to trend closer to normal.

Rainfall:

August rainfall for the UK was below normal. The majority of England recorded less than half of the August average, with large areas recording below 30%. Rainfall across Wales and Northern Ireland was below normal, with less than 90% of the August average recorded widely, and less than 50% recorded locally. Rainfall for parts of western Scotland was slightly above average. The forecast (issued by the Met Office on 01.09.2025) shows there is an increased chance of wetter conditions compared to normal for September, particularly for northwestern areas. The September-November forecast suggests a continuation of the increased chance of wetter conditions.

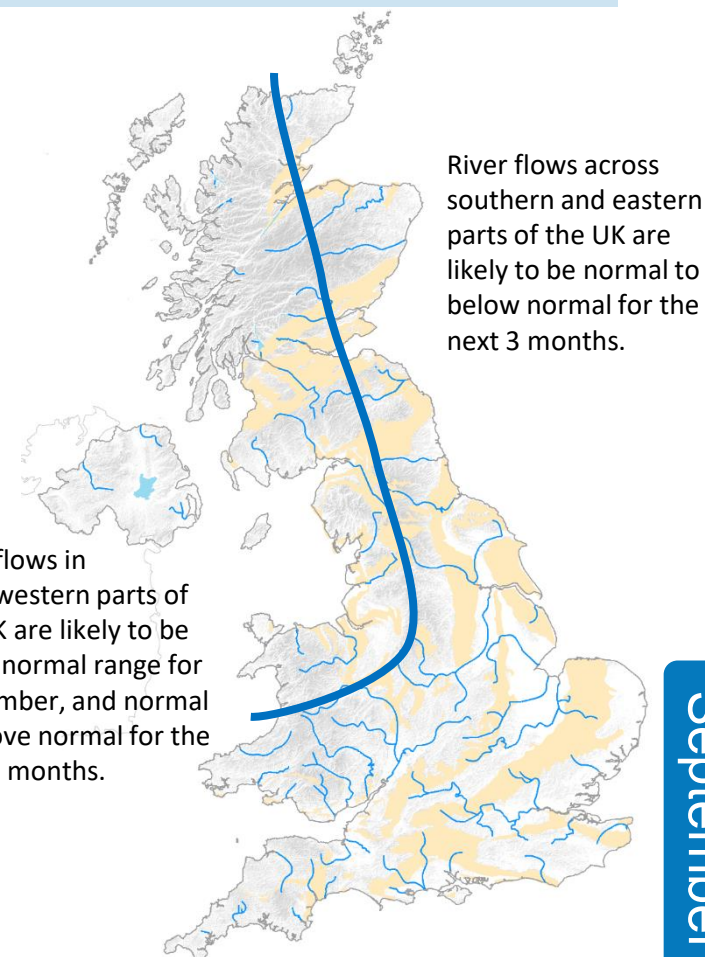
River flows:

River flows in August were in the normal range for western Scotland and some catchments in the far southeast of England. Elsewhere, flows were below normal and some catchments in Wales and northern England saw exceptionally low flows. For September, flows are expected to be in the normal range for Northern Ireland, northern Wales, northwestern England, and western Scotland. Elsewhere in the UK, flows are likely to be normal to below normal. For September–November, the outlook is similar, with river flows in northwestern areas shifting towards normal to above normal. Normal to below normal flows are likely to persist across southern and eastern areas of the UK, and some catchments are likely to see a continuation of low flows for the time of year.

Groundwater:

Groundwater levels in August were above normal in the Permo-Triassic sandstone of northern Wales and central England, and parts of the southern Chalk. Normal to exceptionally low levels were recorded at sites elsewhere in the UK. The outlook for September is for above normal levels to persist in the Permo-Triassic sandstone in northern Wales and parts of the southern Chalk. Groundwater levels at the majority of sites elsewhere in the UK are likely to be normal to below normal, with sites in central England, South Wales, the South Downs, and central Scotland likely to see notably to exceptionally low levels. For the September-November outlook, this pattern is likely to persist for most of the UK, with levels gradually trending towards the normal range.

The UK Hydrological Outlook provides an outlook for the water situation for the United Kingdom over the next three months and beyond. For guidance on how to interpret the outlook, a wider range of information, and a full description of underpinning methods, please visit the website: www.hydoutuk.net



Groundwater levels are likely to be normal to below normal across much of the UK for September to November.

Shaded areas show principal aquifers

About the UK Hydrological Outlook:

This document presents an outlook for the UK water situation for the next 1-3 months and beyond, using observational datasets, meteorological forecasts and a suite of hydrological modelling tools. The outlook is produced in a collaboration between the UK Centre for Ecology & Hydrology (UKCEH), British Geological Survey (BGS), the Met Office, the Environment Agency (EA), Natural Resources Wales (NRW), the Scottish Environment Protection Agency (SEPA), and for Northern Ireland, the Department for Infrastructure – Rivers (DfIR).

Data and Models:

The UK Hydrological Outlook depends on the active cooperation of many data suppliers. This cooperation is gratefully acknowledged. Historic river flow and groundwater data are sourced from the [UK National River Flow Archive](#) and the [National Groundwater Level Archive](#). Contemporary data are provided by the EA, SEPA, NRW and DfIR. These data are used to initialise hydrological models, and to provide outlook information based on statistical analysis of historical analogues.

Climate forecasts are produced by the Met Office. Hydrological modelling is undertaken by UKCEH using the Grid-to-Grid and GR6J hydrological models. Hydrogeological modelling uses the AquMod model run by BGS. Supporting documentation is available from the Outlooks website: <https://hydoutuk.net/about/methods>

Presentation:

The language used in the summary presented overleaf generally places flows and groundwater levels into just three classes, i.e. below normal, normal, and above normal. However, the underpinning methods use as many as seven classes as defined in the graphic to the right, i.e. the summary uses a simpler classification than some of the methods. On those occasions when it is appropriate to provide greater discrimination at the extremes the terminology and definitions of the seven class scheme will be adopted.

Percentile range of
historic values for
relevant month

Exceptionally high flow	> 95
Notably high flow	87-95
Above normal	72-87
Normal range	28-72
Below normal	13-28
Notably low flow	5-13
Exceptionally low flow	< 5

Disclaimer and liability:

The UK Hydrological Outlook partnership aims to ensure that all Content provided is accurate and consistent with its current scientific understanding. However, the science which underlies hydrological and hydrogeological forecasts and climate projections is constantly evolving. Therefore any element of the Content which involves a forecast or a prediction should not be relied upon as though it were a statement of fact. To the fullest extent permitted by applicable law, the UK Hydrological Outlook Partnership excludes all warranties or representations (express or implied) in respect of the Content.

Your use of the Content is entirely at your own risk. We make no warranty, representation or guarantee that the Content is error free or fit for your intended use.

The UK Hydrological Outlook is supported by the Natural Environment Research Council funded NC-UK (NE/Y006208/1) and [Hydro-JULES](#) (NE/S017380/1) Programmes.

Copyright:

Some of the features displayed on the maps contained in this report are based on the following data with permission of the controller of HMSO.

- Ordnance Survey data. © Crown copyright and/or database right 2005. Licence no. 100017897.
- Land and Property Services data. © Crown copyright and database right, S&LA 145.
- Met Office rainfall data. © Crown copyright.
- The three month outlook contained in the hydrological outlook is licensed under the terms of the [Open Government Licence](#)

All rights reserved. Unauthorised reproduction infringes crown copyright and may lead to prosecution or civil proceedings.

Further information:

For more detailed information about the UK Hydrological Outlook, and the derivation of the maps, plots and interpretation provided in this outlook, please visit the UK Hydrological Outlook website. The website features a host of other background information, including a wider range of sources of information which are used in the preparation of this Outlook. Dynamic access to many of the outputs of the UK Hydrological Portal are available on the [UK Hydrological Outlooks Portal](#).

Contact:

UK Hydrological Outlooks, UK Centre for Ecology & Hydrology, Wallingford, Oxfordshire, OX10 8BB
t: 01491 838800 e: <https://hydoutuk.net/contact>

Reference for the UK Hydrological Outlook:

UK Hydrological Outlook, 09 September 2025, UK Centre for Ecology & Hydrology, Oxfordshire UK, Online, <https://www.hydoutuk.net/latest-outlook/>

Other Sources of Information:

The UK Hydrological Outlook should be used alongside other sources of up-to-date information on the current water resources status and flood risk.

Environment Agency Water Situation Reports: provides summary of water resources status on a monthly and weekly basis for England: <https://www.gov.uk/government/collections/water-situation-reports-for-england>

Flood warnings are continually updated, and should be consulted for an up-to-date and localised assessment of flood risk:

- Environment Agency: <https://flood-warning-information.service.gov.uk/map>
- Natural Resources Wales: <https://flood-warning.naturalresources.wales/>
- Scottish Environment Protection Agency: <https://www.sepa.org.uk/flooding.aspx>

Hydrological Summary for the UK: provides summary of current water resources status for the UK: <https://nrfa.ceh.ac.uk/monthly-hydrological-summary-uk>

UK Met Office forecasts for the UK: <https://www.metoffice.gov.uk/>

UK Water Resources Portal: monitor the UK hydrological situation in near real-time including rainfall, river flow, groundwater and soil moisture from COSMOS-UK: <https://eip.ceh.ac.uk/hydrology/water-resources/>

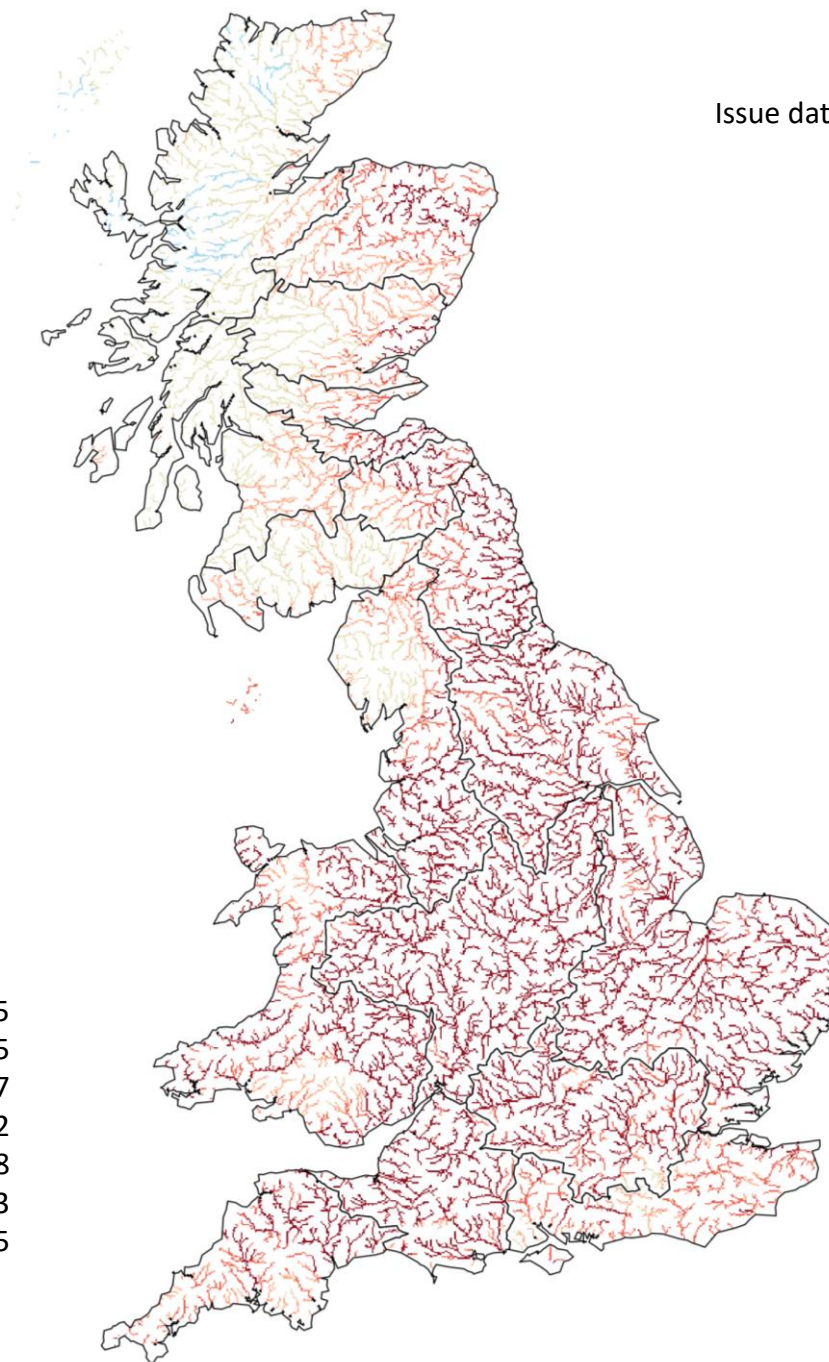
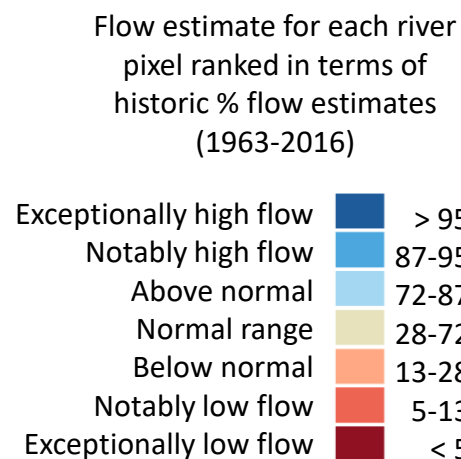
August's mean river flows simulated by the Grid-to-Grid hydrological model

Issue date: 04.09.2025

This map shows the simulated monthly mean flow across Great Britain for last month, ranked in terms of 54 years of historical flow estimates (1963 – 2016).

These flows are produced by the 1km resolution Grid-to-Grid (G2G) hydrological model, which is run up to the end of each calendar month using observed rainfall and MORECS potential evaporation as input.

Note that the G2G model provides estimates of natural flows.



Current Daily Simulated Subsurface Water Storage Conditions

Based on subsurface water storage estimated for 31 August 2025

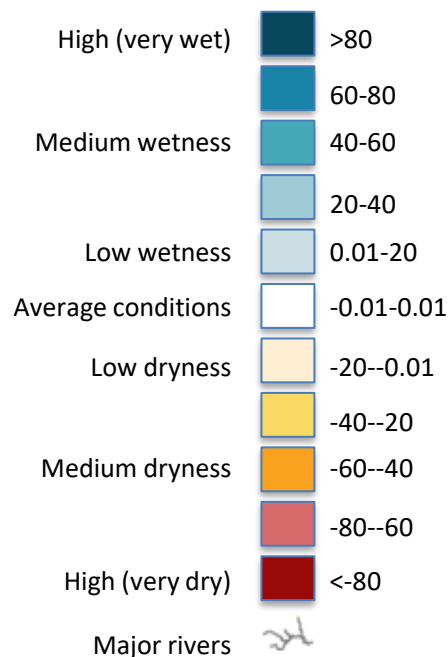
Issue date: 04.09.2025

These maps are based on Grid-to-Grid (G2G) hydrological model simulated subsurface water storage (water in the soil and groundwater), expressed as an anomaly from the historical monthly mean. To highlight areas that are particularly wet or dry, the storage anomaly is presented relative to historical extremes. Rainfall in WET areas with high positive relative wetness could result in flooding in the coming days/weeks. Areas of negative relative wetness indicate locations which are particularly DRY, and little or no rain in these areas could potentially lead to (or prolong) a drought. Maps of soil moisture only are available on the next page.

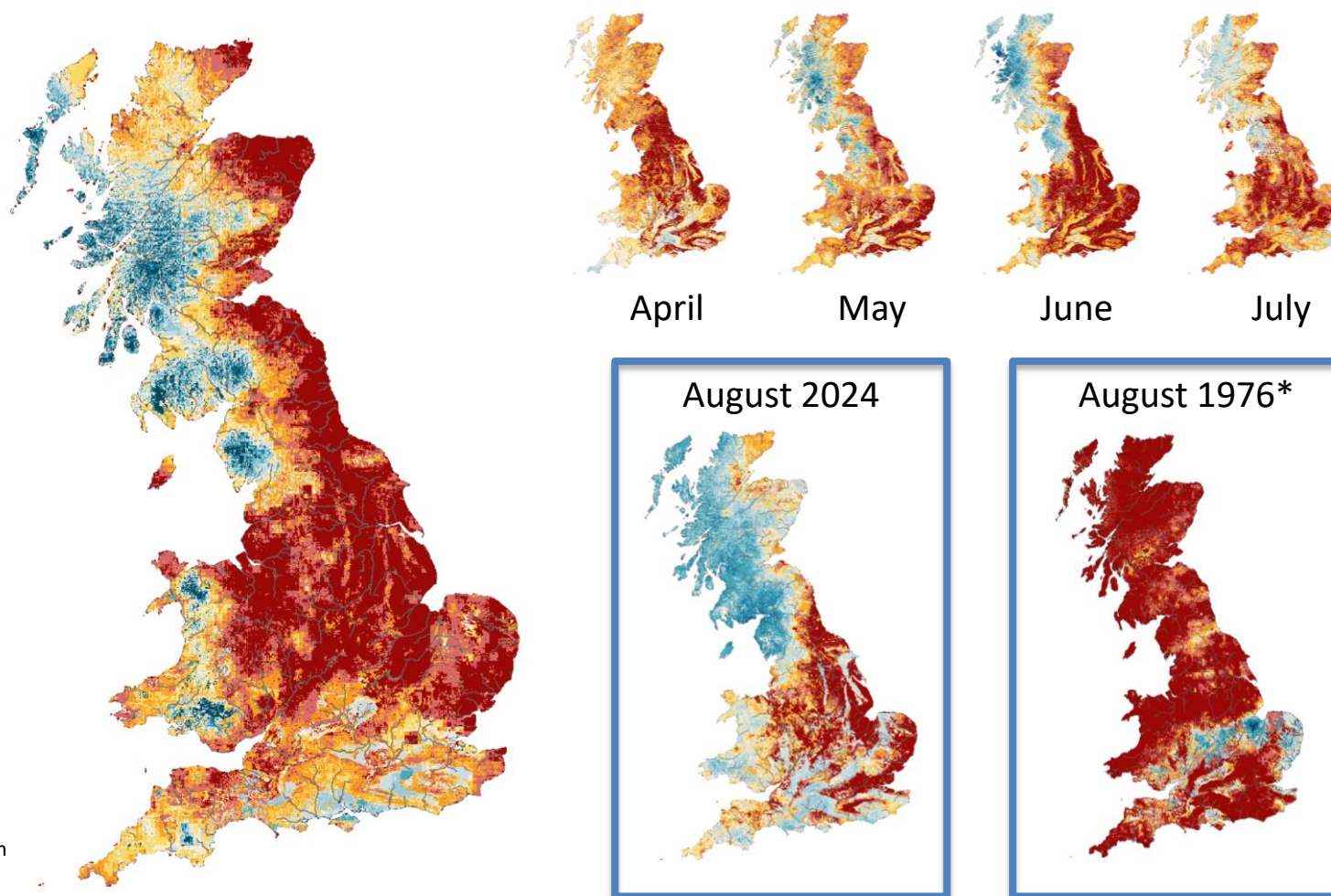
SUMMARY: Low rainfall across much of Great Britain means that subsurface water stores remain very low (dry) over much of central England and along the eastern side of the country. Small areas of high (wet) stores are seen in western Scotland and parts of Wales resulting from August's rainfall.

Relative wetness

Water storage anomaly as a % of maximum (positive wetness) or minimum (negative wetness) storage anomaly (zero indicates average value)



Labels refer to estimated storage on final day of named month



*Example month displaying extreme negative wetness

September 2025

CURRENT CONDITIONS

Current Daily Simulated Soil Moisture Conditions

Based on soil moisture estimated for 31 August 2025

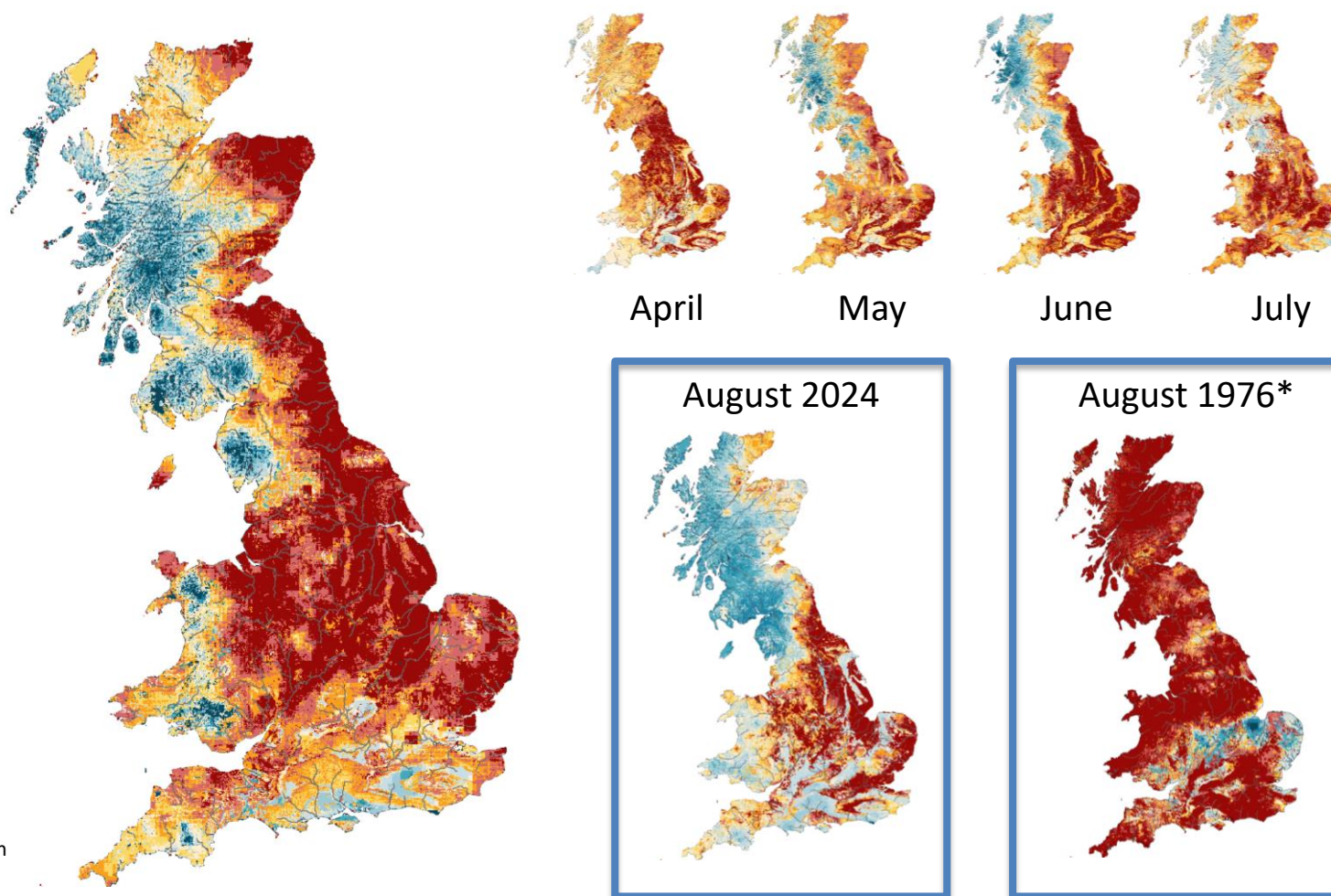
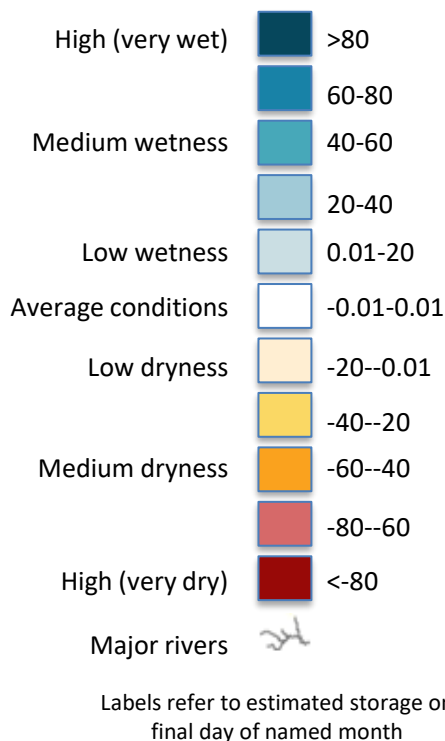
Issue date: 04.09.2025

These maps are based on Grid-to-Grid (G2G) hydrological model simulated soil moisture, expressed as an anomaly from the historical monthly mean. To highlight areas that are particularly wet or dry, the soil moisture anomaly is presented relative to historical extremes. These maps are not a forecast; rather an indication of current conditions. Soil moisture will often look similar to total storage (shown on the previous slide), since total storage comprises both soil moisture and storage in the saturated zone.

SUMMARY: Low rainfall across much of Great Britain means that soil water stores remain very low (dry) over much of central England and along the eastern side of the country. Small areas of high (wet) stores are seen in western Scotland and parts of Wales resulting from August's rainfall.

Relative wetness

Soil moisture anomaly as a % of maximum (positive wetness) or minimum (negative wetness) storage anomaly (zero indicates average value)



Estimate of Additional Rainfall Required to Overcome Dry Conditions

Based on subsurface water storage estimated for 31 August 2025

Issue date: 04.09.2025

These maps show the Grid-to-Grid (G2G) hydrological model simulated subsurface water storage, expressed as an anomaly from the historical monthly mean (1981-2010), presented on a 1km grid and as regional means. Subsurface storage deficits, i.e. where the subsurface water storage anomaly is less than zero, are highlighted in red/pink.

The subsurface storage deficit (mm) can be interpreted as an estimate of additional rainfall that would be required in future months to overcome dry conditions (i.e. rainfall in addition to what is expected on average). Regional mean values of additional rainfall required are provided in the table below.

Regional estimate of additional rainfall required (mm)

SCOTLAND

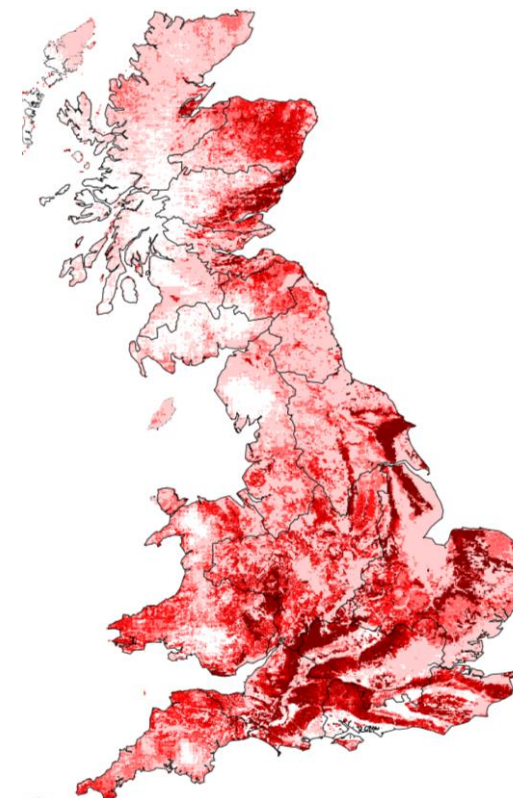
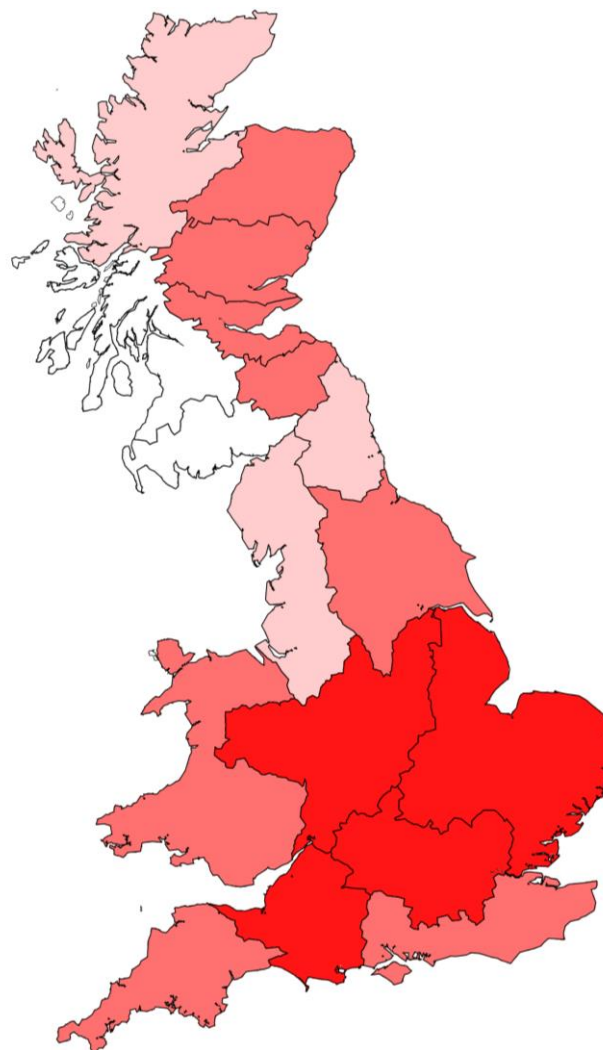
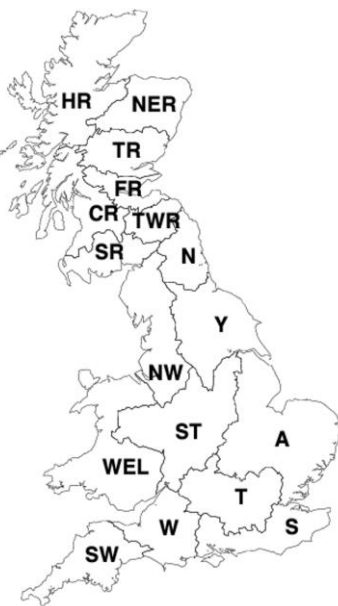
10	HR	Highlands Region
48	NER	North East Region
30	TR	Tay Region
30	FR	Forth Region
0	CR	Clyde Region
35	TWR	Tweed Region
0	SR	Solway Region

ENGLAND

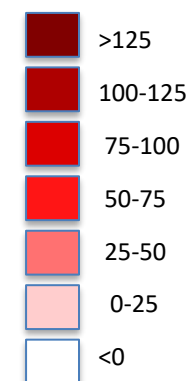
25	N	Northumbria
18	NW	North West
40	Y	Yorkshire
52	ST	Severn Trent
53	A	Anglian
63	T	Thames
67	W	Wessex
46	S	Southern
36	SW	South West

WALES

35	WEL	Welsh
----	-----	-------



Water storage deficit
(anomaly; mm)



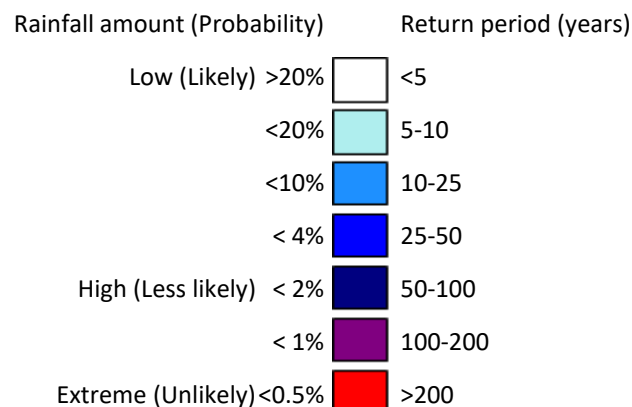
Return Period of Rainfall Required to Overcome Dry Conditions

Period: September 2025 - February 2026

Issue date: 04.09.2025

These maps show the return period of the rainfall required to overcome dry conditions simulated using the Grid-to-Grid (G2G) hydrological model. The maps are coloured according to the return period of accumulated rainfall required to overcome the estimated current subsurface water storage deficit over the next one to six months (areas with no storage deficit will always be white). These maps do not provide a drought forecast; instead they indicate whether particularly heavy rainfall would be required to return to normal conditions for the time of year.

SUMMARY: Subsurface storage deficits exist in almost all areas. It is unlikely that these stores will return to normal over Autumn since this would require unusually high rainfall (>5-year return periods). Some deficits in eastern areas will likely persist into next year.



SCOTLAND

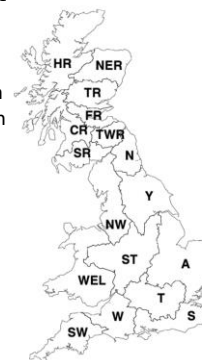
HR Highlands Region
NER North East Region
TR Tay Region
FR Forth Region
CR Clyde Region
TWR Tweed Region
SR Solway Region

ENGLAND

N Northumbria
NW North West
Y Yorkshire
ST Severn Trent
A Anglian
T Thames
S Southern
W Wessex
SW South West

WALES

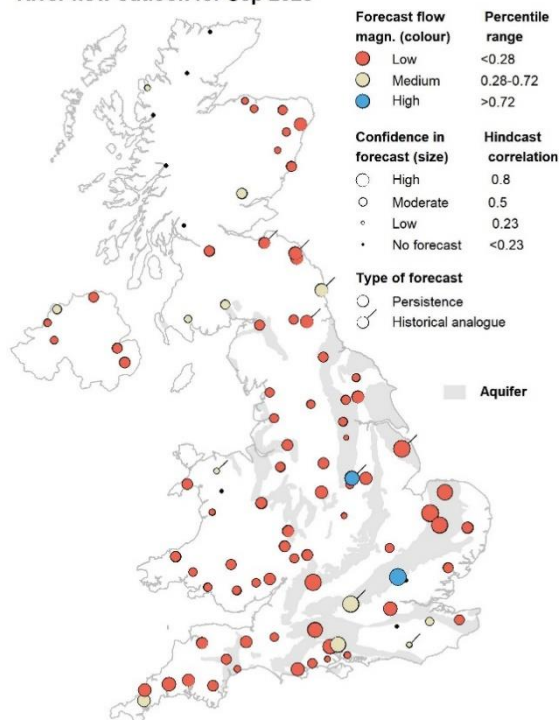
WEL Welsh



SUMMARY:

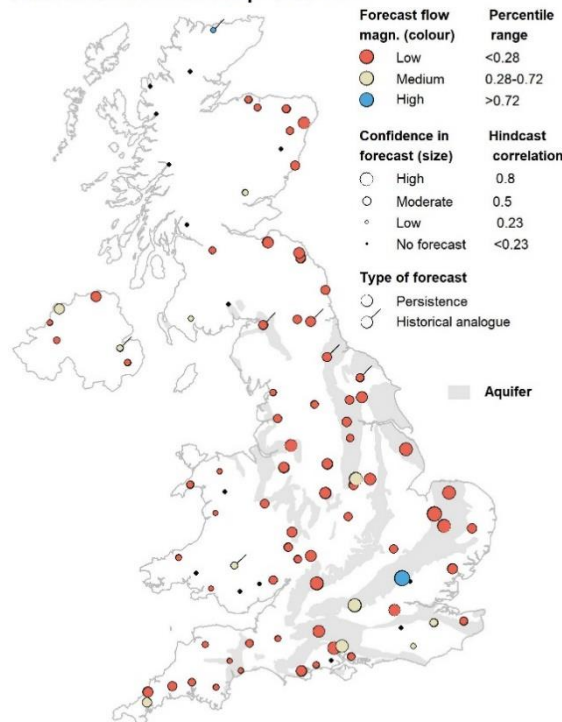
The outlook for September and September–November indicates that river flows across England, Wales and eastern Scotland are expected to be in the low to below normal range. In contrast, flows in northwestern regions and groundwater-fed catchments in south-east England are likely to be within the normal to below normal range.

River flow outlook for Sep 2025



1-month flow outlook

River flow outlook for Sep - Nov 2025



3-month flow outlook

Outlooks from hydrological analogues are based on a comparison of river flow during recent months with flows during the same months in previous years at a set of approximately 90 sites from across the UK. These sites are depicted on the two maps. Years with observed flows that most closely resemble current conditions are identified as the best analogues and the outlook is based on extrapolating from current conditions based on these analogues.

It is, however, often the case that a simpler forecast based on the persistence of river flow provides a better forecast than provided by analogy. This is particularly true for slowly responding catchments associated with aquifer outcrops.

Both methods are considered at each site and the forecast from the method with the higher confidence is presented. A simple classification of flows is used (high, medium and low) as indicated by the colours of the dots, with the confidence

of the forecast being represented by the size of the dot. A tag on the dot indicates which method has been used in each instance.

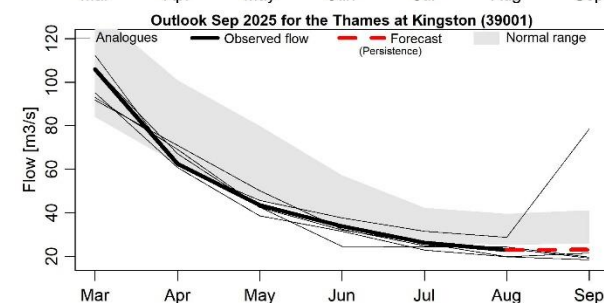
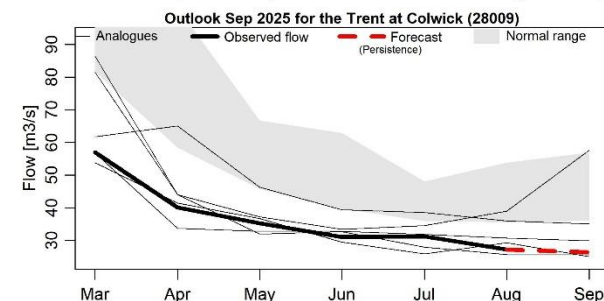
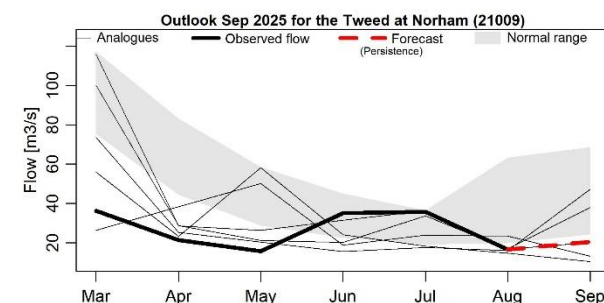
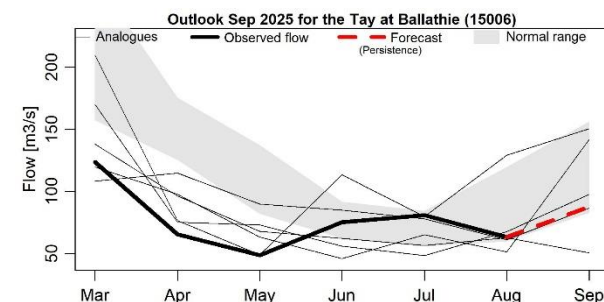
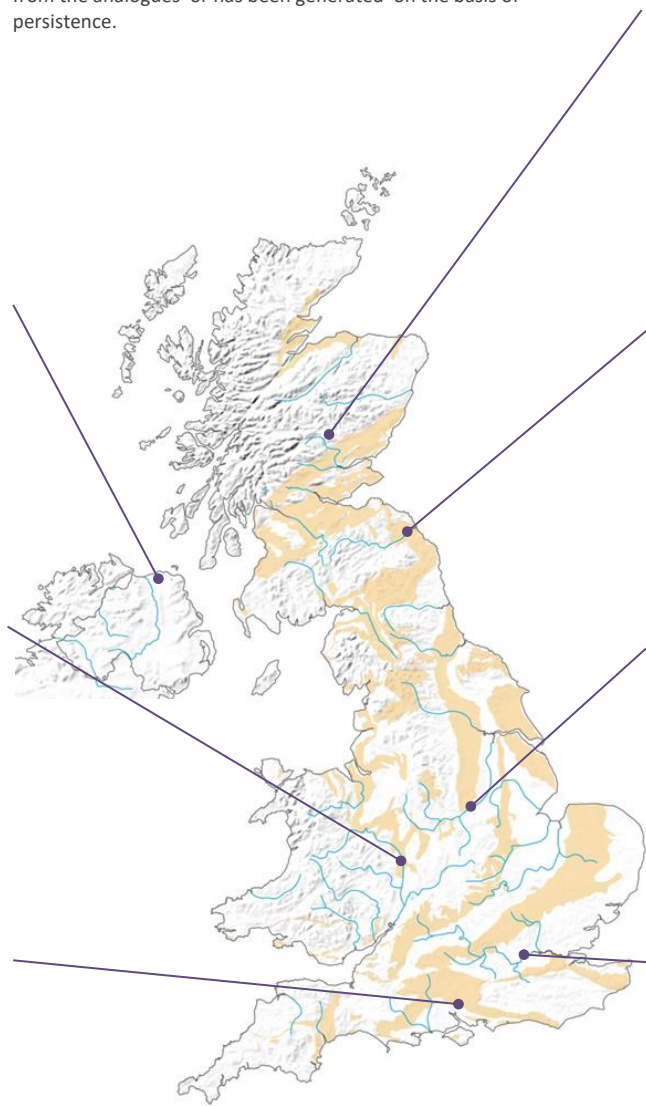
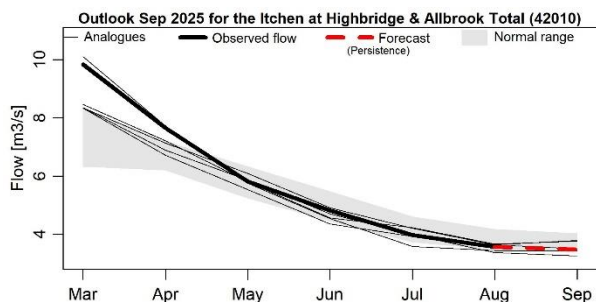
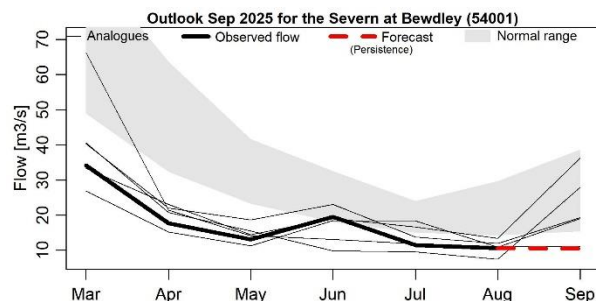
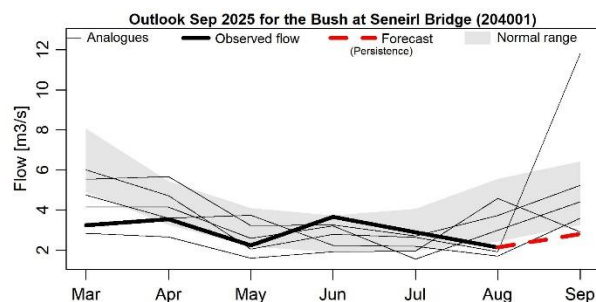
Period: September 2025

Issued on 08.09.2025 using data to the end of August 2025

These figures provide insight into the hydrological analogue methodology for a set of sites from across the UK.

In each of the time series graphs the bold black line represents the observed flow during the past six months. The grey band indicates the normal flow range (the normal band includes 44%

of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows took in the following month are also shown. The forecast is shown as the dashed red line, and in each plot it states whether this has come from the analogues or has been generated on the basis of persistence.



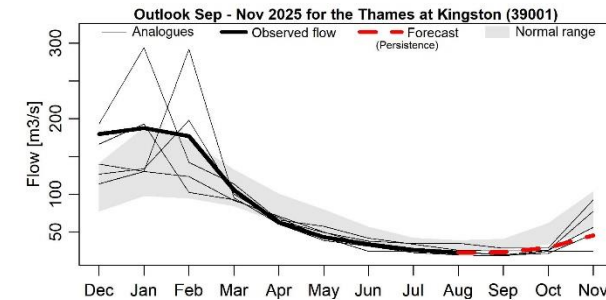
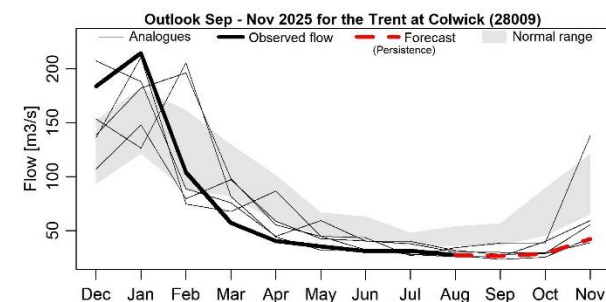
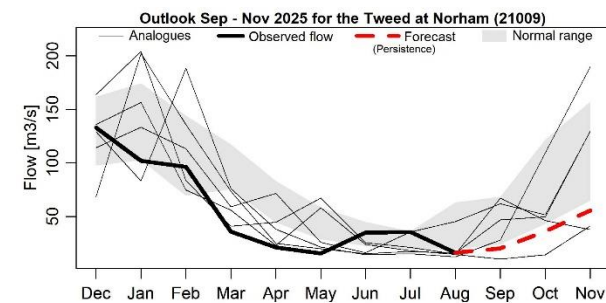
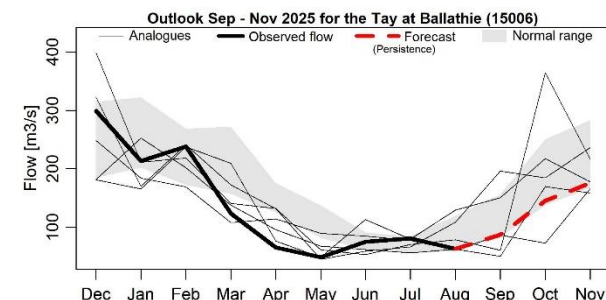
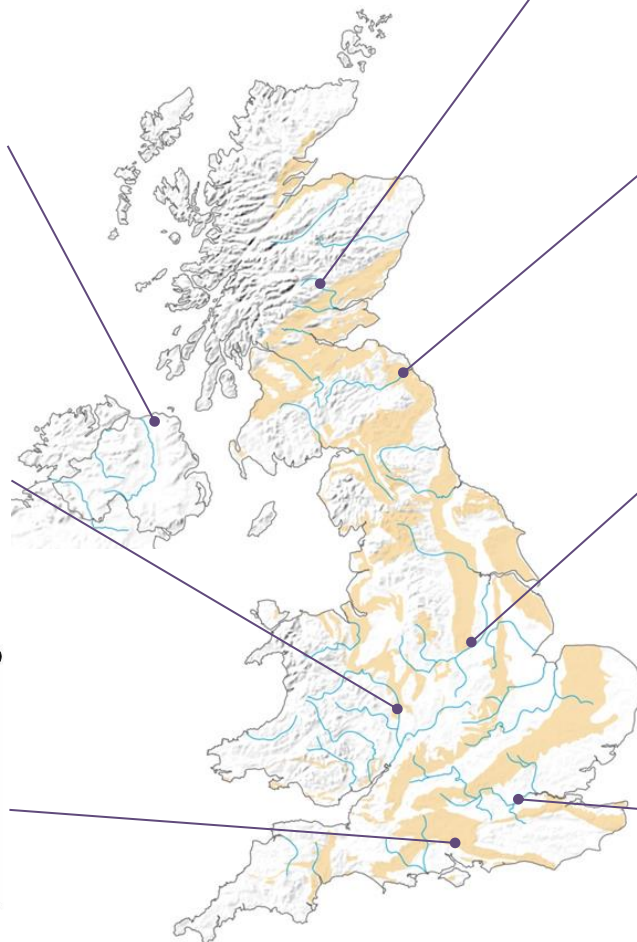
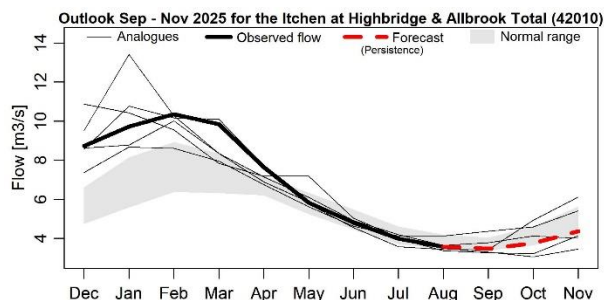
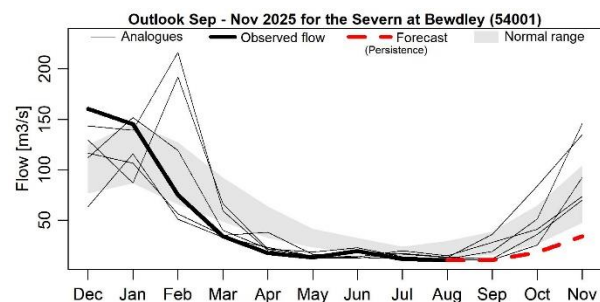
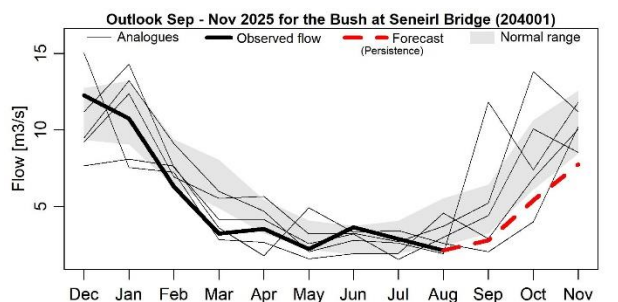
Period: September 2025 – November 2025

Issued on 08.09.2025 using data to the end of August 2025

These figures provide insight into the hydrological analogue methodology for a set of sites from across the UK.

In each of the time series graphs the bold black line represents the observed flow during the past nine months. The grey band indicates the normal flow range (the normal band includes 44%

of observed flows in each month). The selected analogues are shown as thin lines and the trajectories that flows took in the following three months are also shown. The forecast is shown as the dashed red line, and in each plot it states whether this has come from the analogues or has been generated on the basis of persistence.

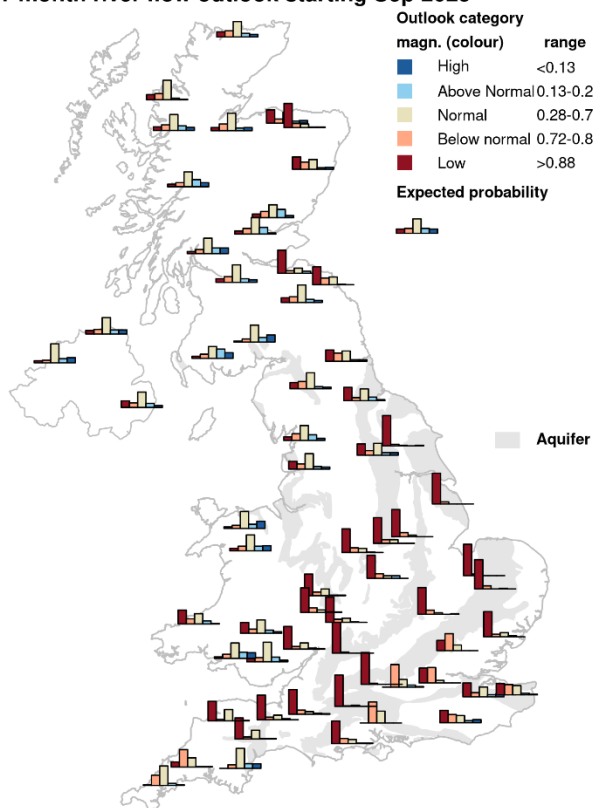


Period: September 2025 – February 2026

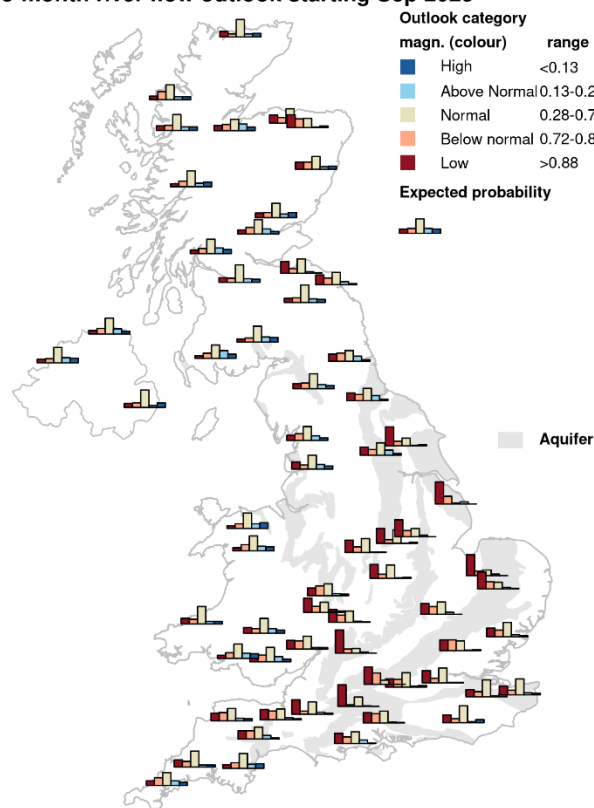
Issued on 02.09.2025 using data to the end of August 2025

The outlook for September indicates that flows are likely to be low across southern and central England, and normal to below normal for eastern Scotland and northern England. Flows elsewhere are likely to be in the normal range. The August to October outlook indicates that flows are likely to be normal to below normal across southern and central England and eastern Scotland, and in the normal range elsewhere in the UK.

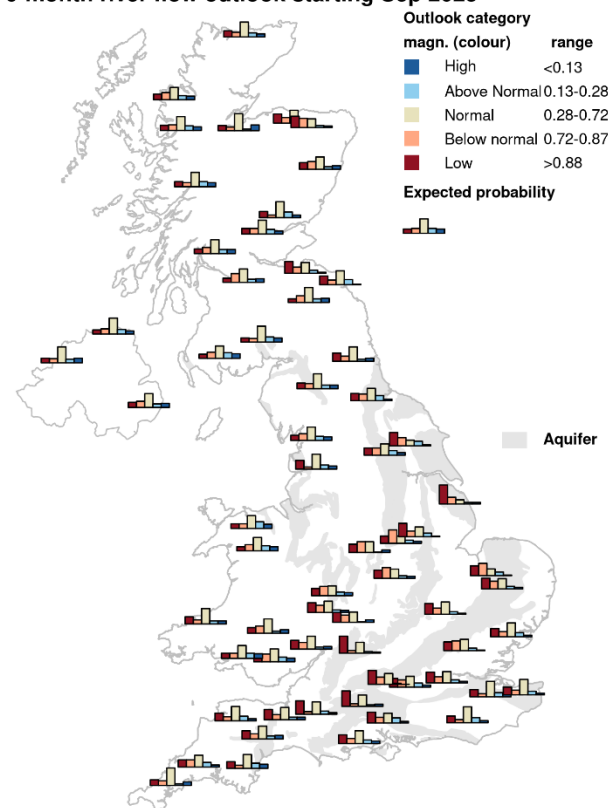
1-month river flow outlook starting Sep 2025



3-month river flow outlook starting Sep 2025



6-month river flow outlook starting Sep 2025

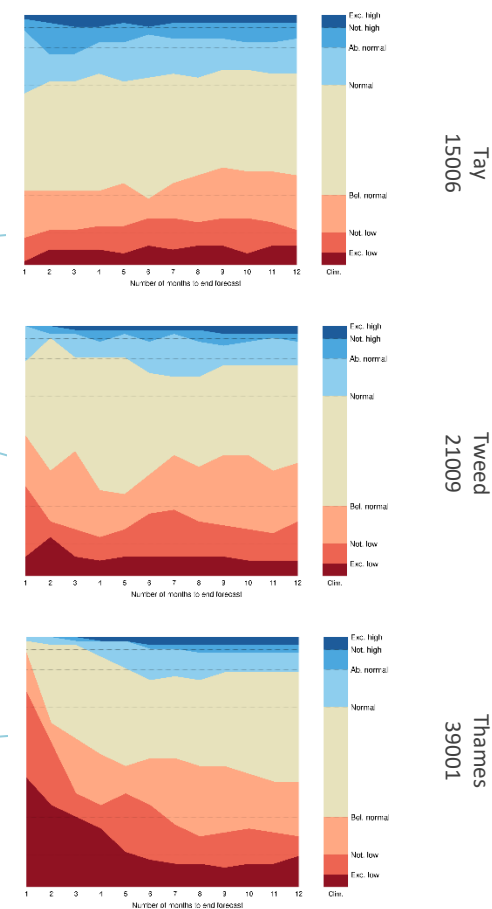
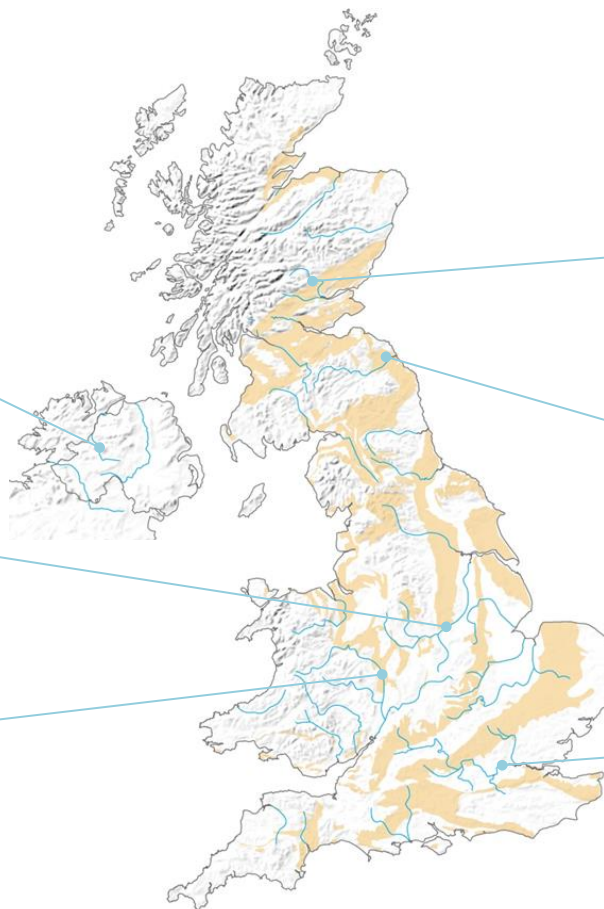
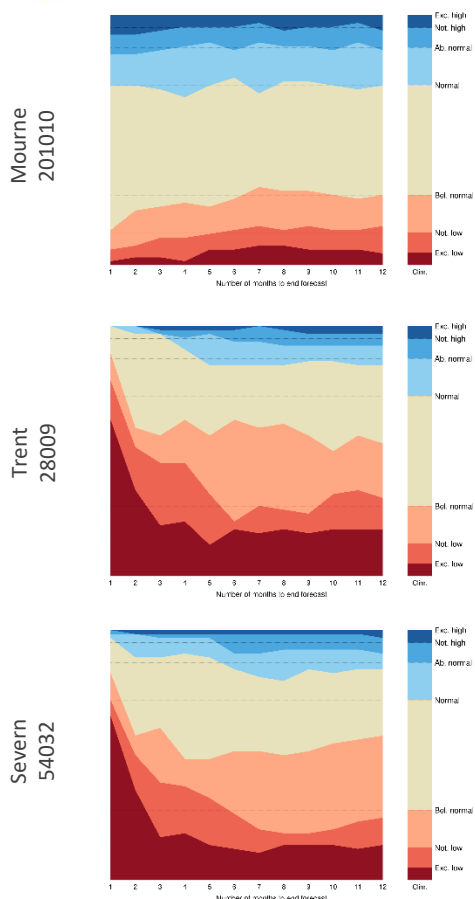


This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to a hydrological model. The outputs are probabilistic simulations of the average river flow over the forecast period (1 to 12 months ahead), at each location. The simulations are generated by the GR6J conceptual rainfall-runoff model from INRAE (France) calibrated on observed or naturalised flows.

The bar plot maps show the outlook distribution for 1, 3 and 6-month period for 64 catchments across England and Wales. Each bar plot represents the probabilistic distribution of the simulated river flow compared to the historical river flow, for the same n-month period. The probabilities fall within five categories, classified as: low, below normal, normal, above normal and high.

This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.

Please note that *Outlooks based on modelled flow from historical climate* from October 2023 onwards were generated using GR6J model, whereas until September 2023, they were produced using GR4J model. For more details, please see the section on River flow from historical climate at this link: <https://hydoutuk.net/about/methods/river-flows>



This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to a hydrological model. The outputs are probabilistic simulations of the average river flow over the forecast period (1 to 12 months ahead), at each location. The simulations are generated by the GR6J conceptual rainfall-runoff model from INRAE (France) calibrated on observed or naturalised flows.

The stack diagrams show the variation over time of the outlook distribution for a number of individual catchments. Each graph represents variation over time of the number of simulated river flows, in each month ensemble, that fall within each of seven categories: exceptionally low, notably low, below normal, normal, above normal, notably high and exceptionally high. The categories represent cumulative flow conditions, e.g. For 3-month, the simulated total 3-month flow compared to the historical 3-month flow distribution. The monthly variations can be compared to the long-term average distribution of river flows (shown as columns on

the right of each timeline graph).

This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.

Outlook based on modelled flow using historical weather analogues

Period: September 2025 – November 2025

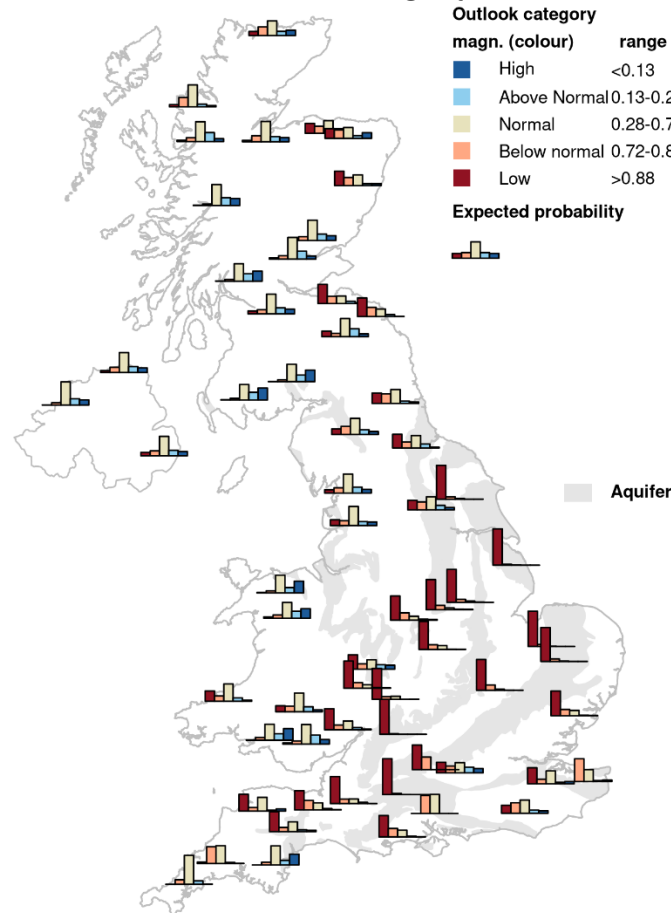
Issued on 02.09.2025 using data to the end of August 2025

The outlook for September indicates that flows are likely to be low across southern and central England, and normal to below normal for eastern Scotland and north-eastern England. Flows in western Scotland and northern Wales are likely to be normal to above normal. Elsewhere, flows are likely to be in the normal range. In the September to November outlook, flows are likely to be normal to below normal across southern and central England. Flows in western Scotland, north-western England, and northern Wales are likely to be normal to above normal. Flows in the normal range are expected elsewhere.

The historical weather analogues method uses Met Office predictions of average weather 1 and 3 months ahead to provide inputs to a hydrological model. Like the ESP method, observed rainfall and temperature data from past years are used to drive the predictions, however, the analogue method constrains the selection of past rainfall using the weather conditions in the meteorological forecasts (which are summarised for this forecast in the Met Office likelihood of impacts blocks underneath the maps). For each member of the Met Office forecast ensemble, the 10 analogues that best match the predicted average weather pattern (surface pressure map) over the forecast period are selected. Precipitation and temperature sequences constructed from the selected analogue scenarios are corrected to account for historic trends and used as inputs to hydrological models. Here, the GR6J model is run using these inputs, creating an ensemble of hydrological forecasts.

The outputs shown in the maps are the likelihoods of different outcomes for the average river flow over the one-month and three-month forecast periods at each location. The outlooks maps show the distribution for 64 catchments across the United Kingdom. Each bar plot represents the likelihood of the simulated river flow compared to the historical river flow, for the same n-month period. The probabilities fall within five categories, classified as: low, below normal, normal, above normal and high. The expected climatological probability of ensemble members in each of these categories is shown under the legend.

1-month river flow outlook starting Sep 2025

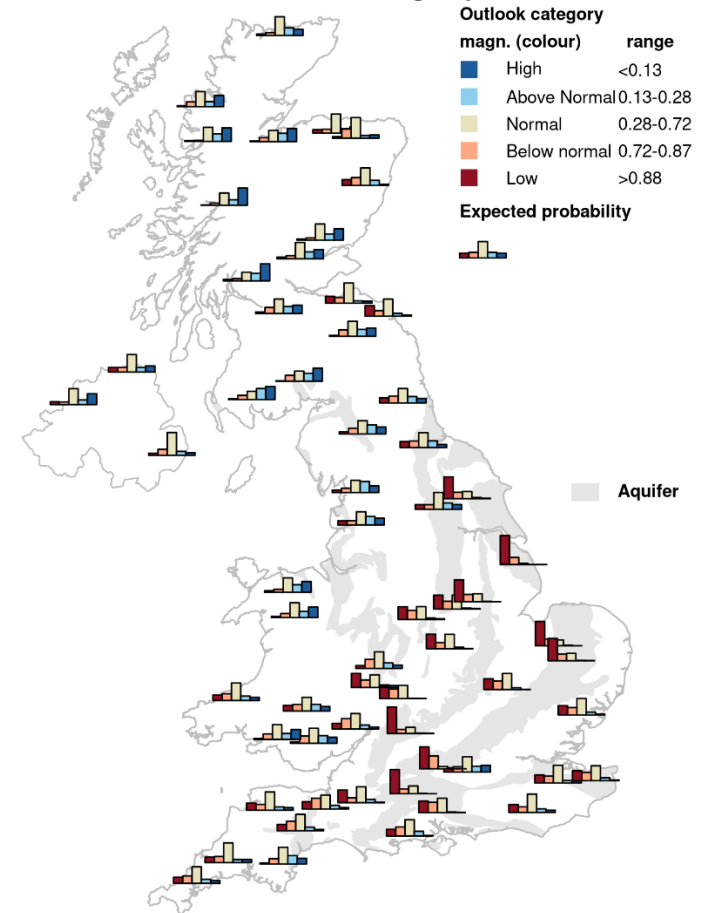


Met Office 1-month likelihood of precipitation impact



© Crown copyright, Met Office

3-month river flow outlook starting Sep 2025



Met Office 3-month likelihood of precipitation impact

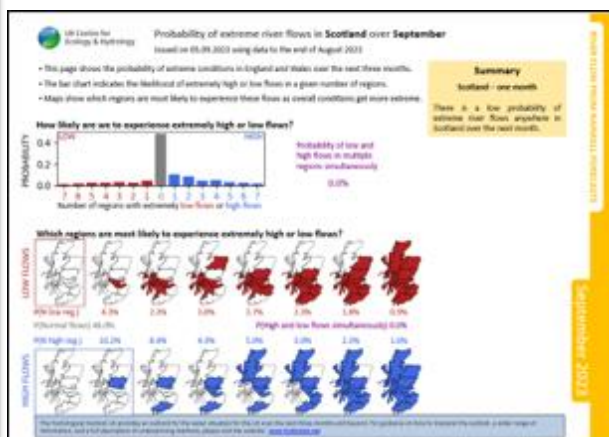


© Crown copyright, Met Office

Forecasts of river flows using Met Office rainfall forecasts

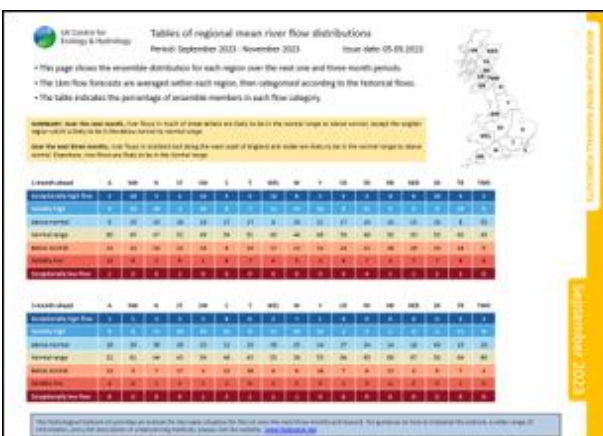
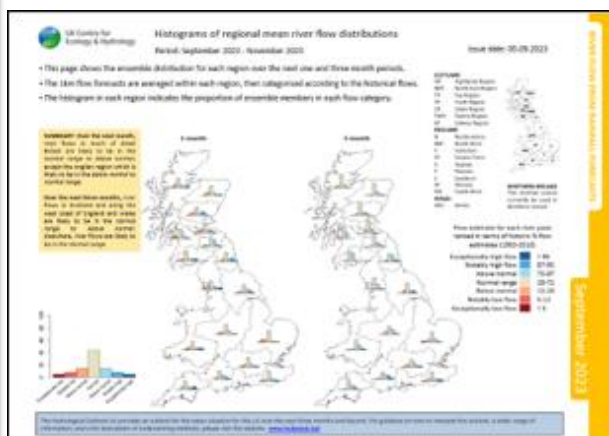
- These (yellow edged) pages summarise river flow forecasts produced by the UKCEH Water Balance Model.
- This model uses an ensemble of rainfall forecasts provided by the Met Office and a hydrological model to forecast river flows for the next one- and three-months ahead.
- A detailed description of these forecast products can be found on the final page, and a full technical description is given in the documentation available via the Hydrological Outlook website.
- Additional forecast products are available on the Hydrological Outlook Portal, via the website.

Probability of extreme river flows



- **Use these pages if you are interested in extreme conditions across multiple regions.**
- These pages summarise the risk of extremely high or low flows being observed across GB.
- The four pages show the risk for **Scotland** and for **England & Wales** over the next one and three months.
- The slides indicate the **probability of widespread extreme conditions** and which regions are most likely to experience extremely high or low flows.

Regional mean river flow distributions



- **Use these pages if you are interested in the ensemble distribution in a single region.**
- The first page shows the ensemble distribution as a histogram for each region.
- The second page shows the percentage of ensemble members in each band for each region.

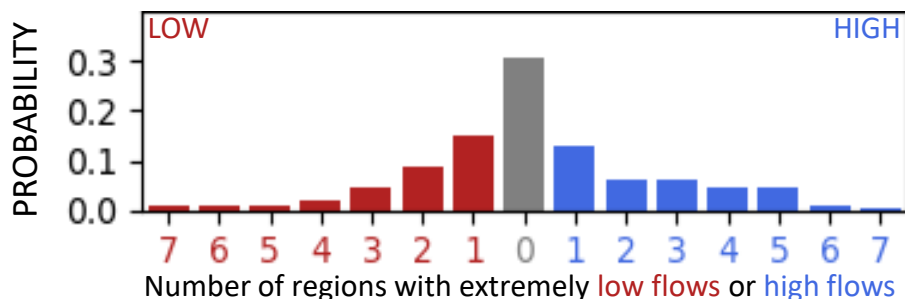
This page shows the **probability of extreme conditions in Scotland** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

Scotland – one month

Extreme river flows are not likely in Scotland over the next month.

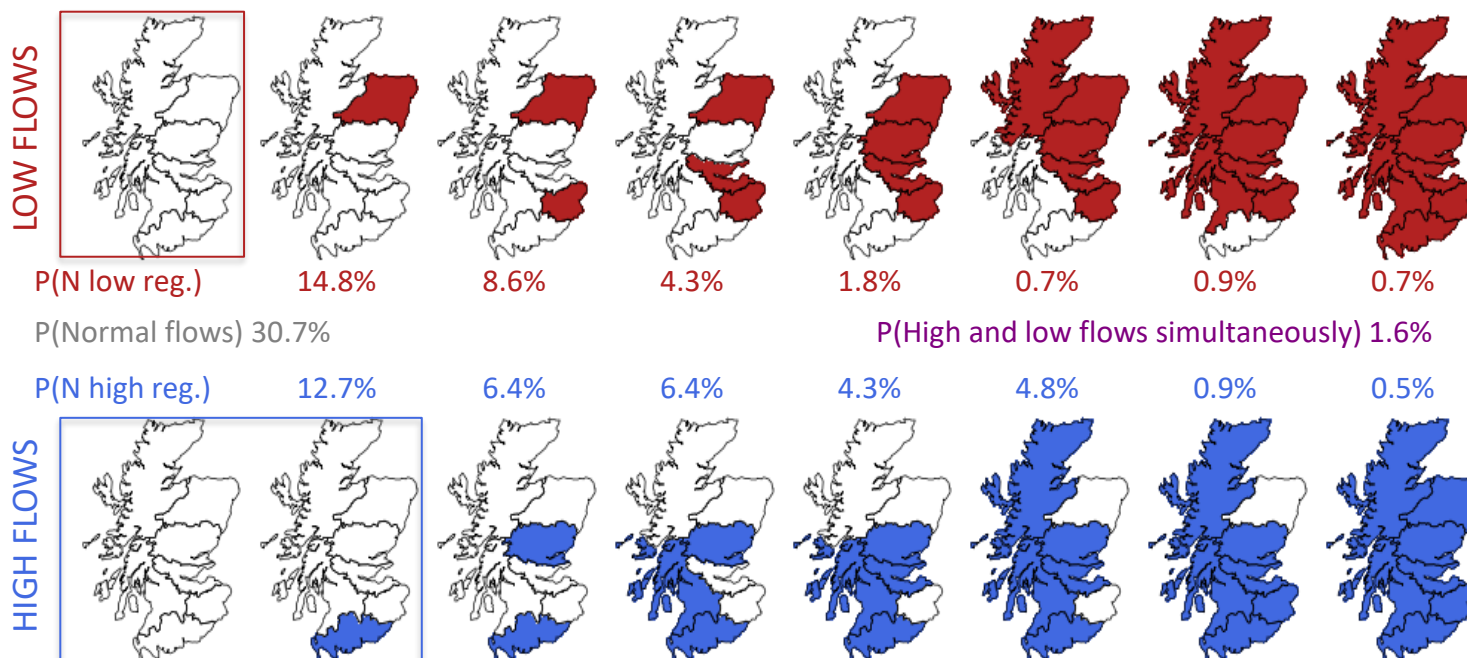
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

1.6%

Which regions are most likely to experience extremely low or high flows?



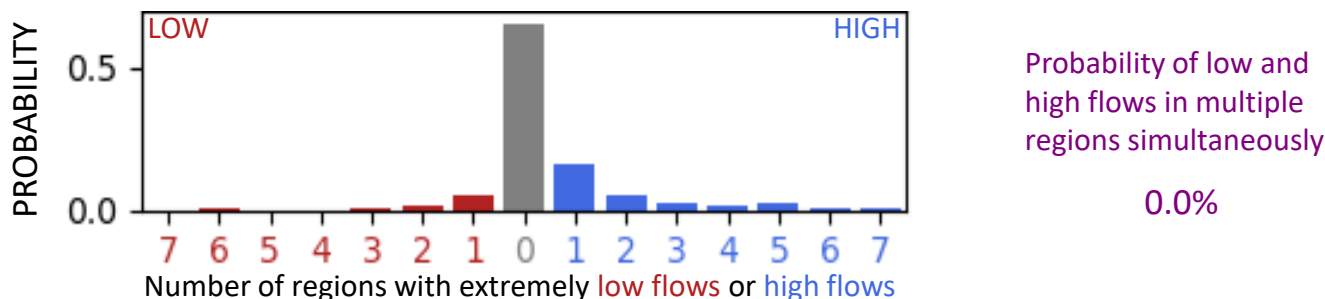
This page shows the **probability of extreme conditions in Scotland** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

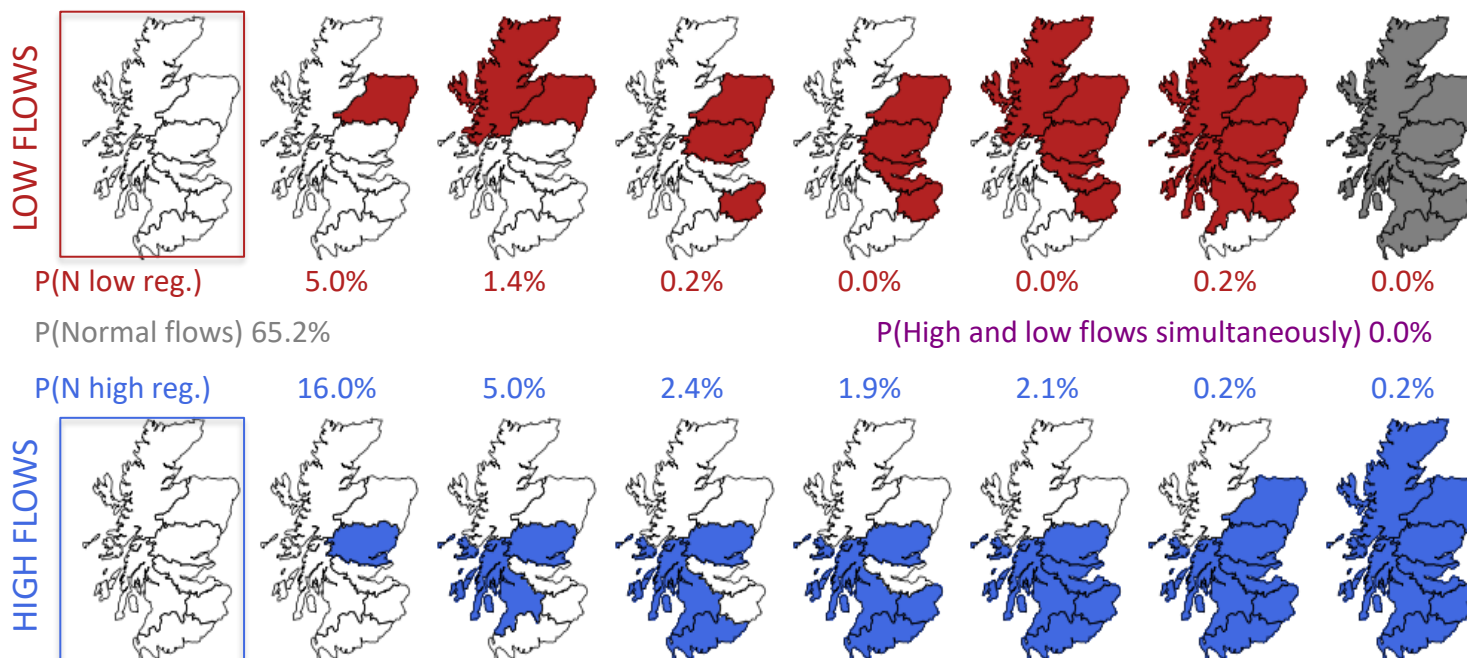
Scotland – three months

Extreme river flows are not likely in Scotland over the next month.

How likely are we to experience extremely low or high flows?



Which regions are most likely to experience extremely low or high flows?



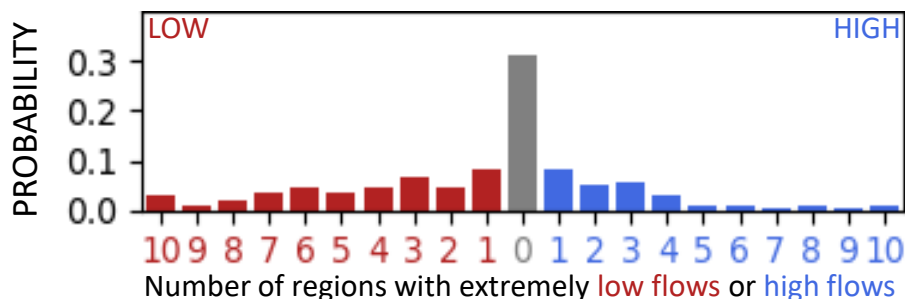
This page shows the **probability of extreme conditions in England and Wales** over the next month. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

England and Wales – one month

Extremely low river flows are likely to persist in eastern and central parts of England for the next month.

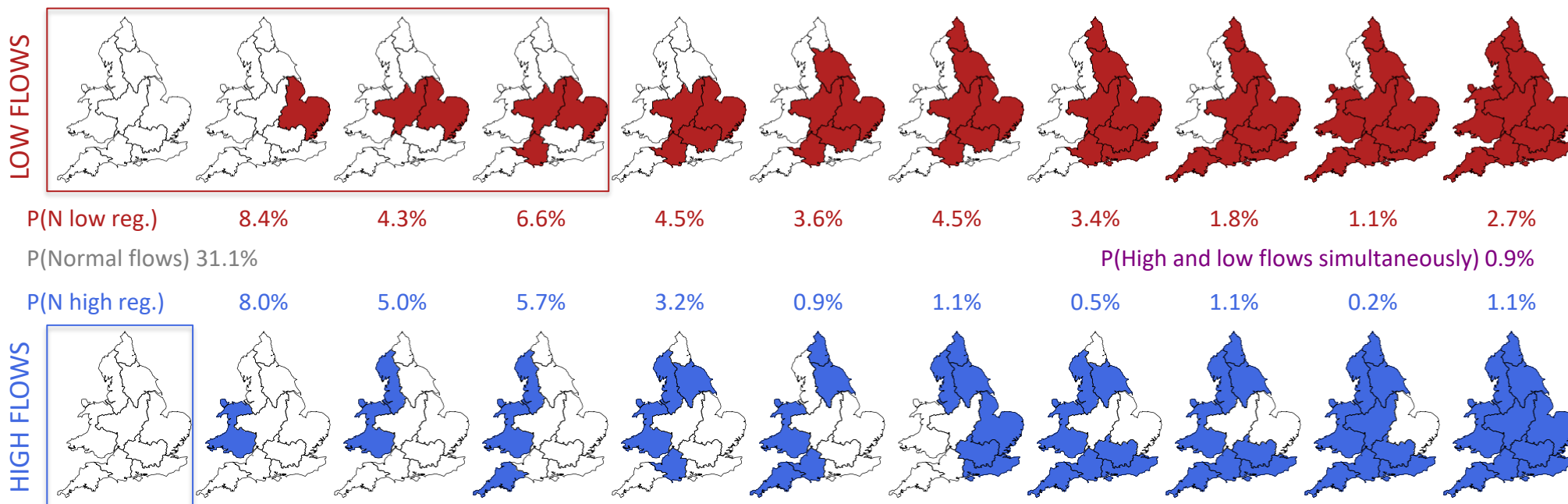
How likely are we to experience extremely **low** or **high** flows?



Probability of low and high flows in multiple regions simultaneously

0.9%

Which regions are most likely to experience extremely **low** or **high** flows?



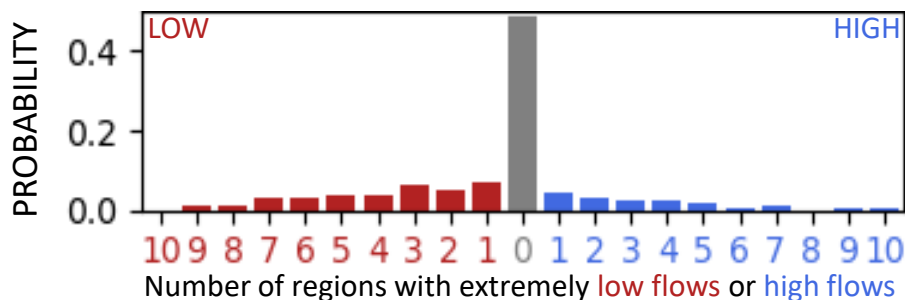
This page shows the **probability of extreme conditions in England and Wales** over the next three months. The bar chart indicates the likelihood of extremely high or low flows in a given number of regions. Maps show which regions are most likely to experience these flows as overall conditions get more extreme.

Summary

England and Wales – three months

River flows in England and Wales are unlikely to remain extremely low across the next three months.

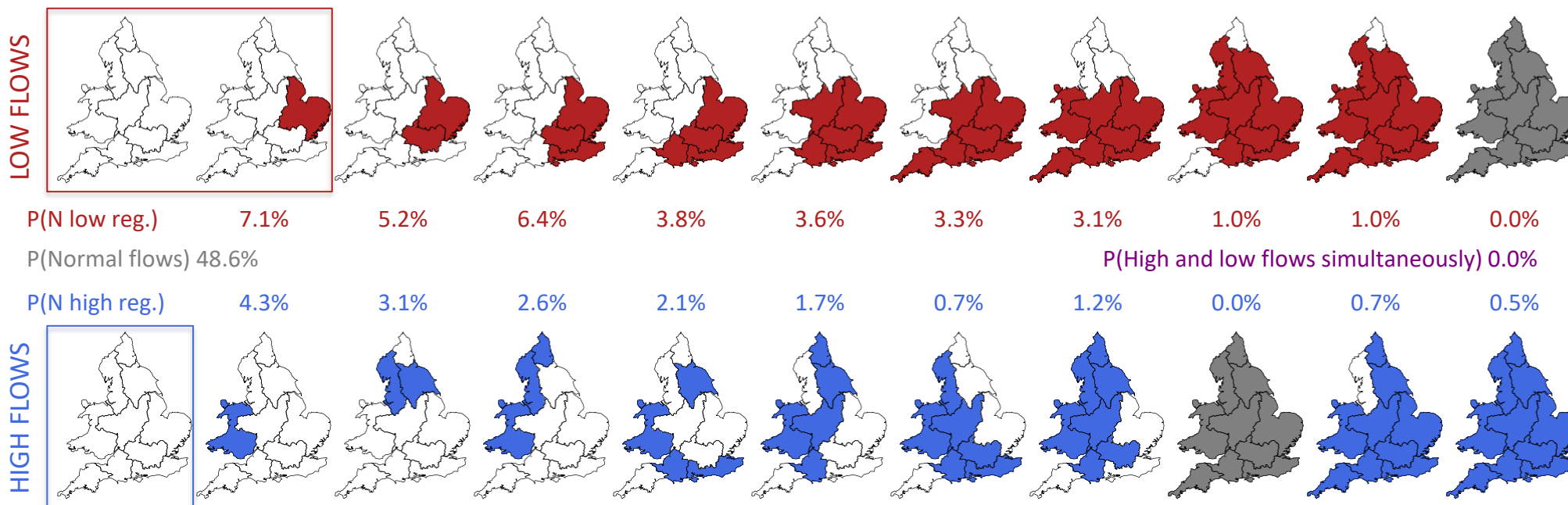
How likely are we to experience extremely low or high flows?



Probability of low and high flows in multiple regions simultaneously

0.0%

Which regions are most likely to experience extremely low or high flows?



Histograms of GB regional mean river flow distributions

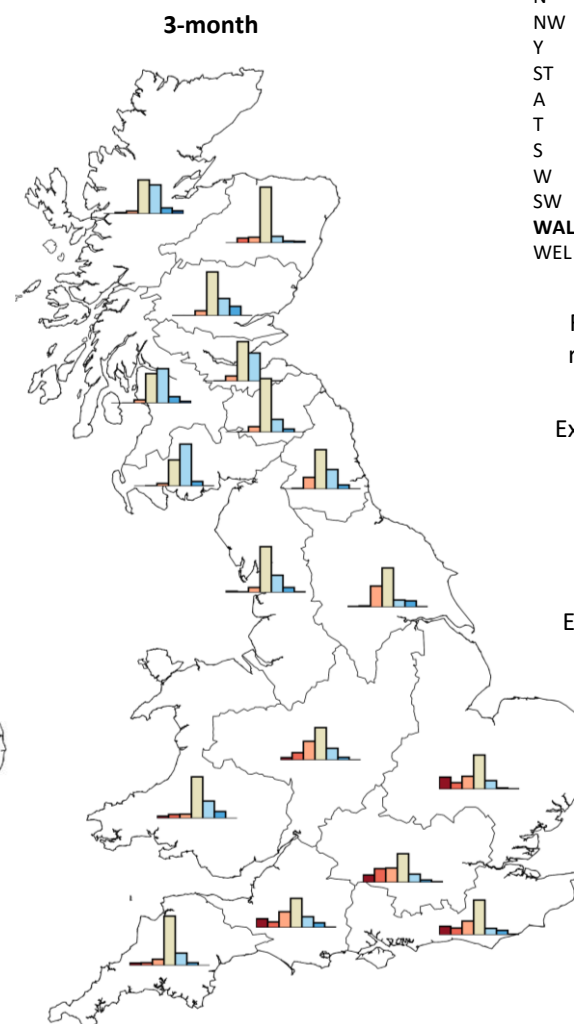
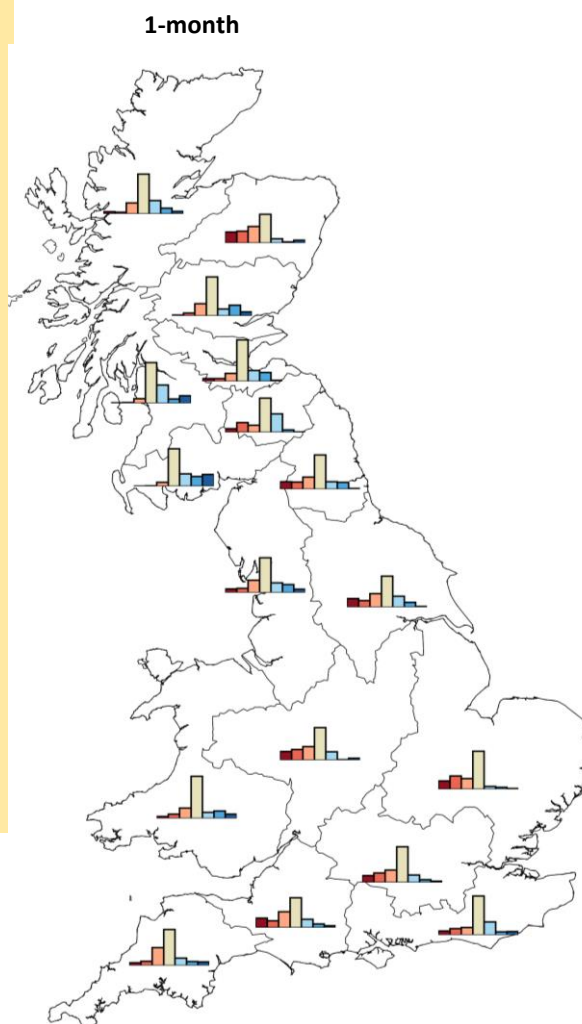
Period: September 2025 - November 2025

Issue date: 04.09.2025

- This page shows **the ensemble flow distribution for each region** over the next 1- and 3-month periods.
- The 1km flow forecasts are averaged within each region, then categorised according to the historical flows.
- The histogram in each region indicates the proportion of ensemble members in each flow category.

SUMMARY: Over the next month, river flows in southern and central England and north-eastern Scotland are likely to remain in the *normal range* to *exceptionally low*. In southern Scotland, river flows are likely to be in the *normal range* to *notably high*.

Over the next three months, river flows in Scotland and north-east England are likely to be in the *normal range* to *above normal*, while elsewhere flow are likely to remain in the *normal range* to *notably low*.



SCOTLAND

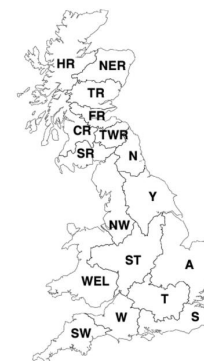
HR Highlands Region
NER North East Region
TR Tay Region
FR Forth Region
CR Clyde Region
TWR Tweed Region
SR Solway Region

ENGLAND

N Northumbria
NW North West
Y Yorkshire
ST Severn Trent
A Anglian
T Thames
S Southern
W Wessex
SW South West

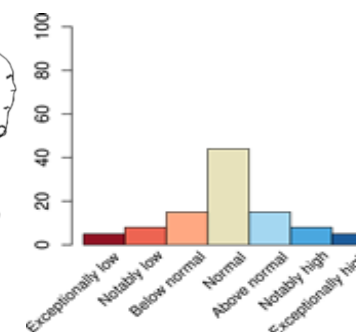
WALES

WEL Welsh



Flow estimate for each river pixel ranked in terms of historic % flow estimates (1963-2016)

Exceptionally high flow	> 95
Notably high flow	87-95
Above normal	72-87
Normal range	28-72
Below normal	13-28
Notably low flow	5-13
Exceptionally low flow	< 5



Tables of GB regional mean river flow distributions

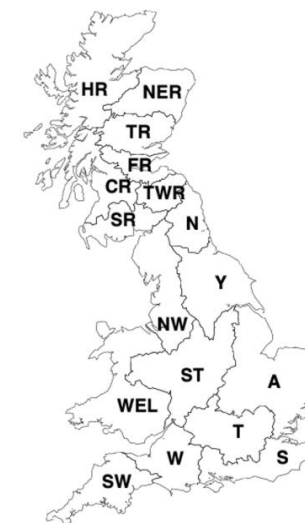
Period: September 2025 - November 2025

Issue date: 04.09.2025

- This page shows **the ensemble flow distribution for each region** over the next 1- and 3-month periods.
- The 1km flow forecasts are averaged within each region, then categorised according to the historical flows.
- The table indicates the percentage of ensemble members in each flow category.

SUMMARY: Over the next month, river flows in southern and central England and north-eastern Scotland are likely to remain in the *normal range to exceptionally low*. In southern Scotland, river flows are likely to be in the *normal range to notably high*.

Over the next three months, river flows in Scotland and north-east England are likely to be in the *normal range to above normal*, while elsewhere flow are likely to remain in the *normal range to notably low*.



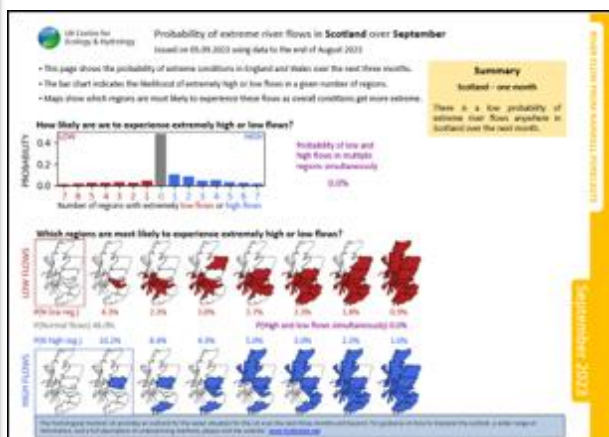
1-month ahead	A	NW	N	ST	SW	S	T	WEL	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	1	4	1	2	5	4	2	6	3	1	10	1	3	4	16	5	0
Notably high	2	11	9	1	5	4	4	10	5	6	6	12	8	2	13	14	3
Above normal	4	13	10	11	10	17	10	8	11	14	24	14	18	6	16	9	24
Normal range	50	46	45	42	47	51	47	55	39	40	53	54	52	38	49	51	45
Below normal	14	16	16	18	23	10	16	14	21	18	6	11	14	22	5	16	9
Notably low	18	6	9	14	6	8	12	6	9	9	1	4	2	16	1	4	13
Exceptionally low flow	11	5	10	11	4	5	9	3	12	11	0	4	3	14	0	1	5

3-month ahead	A	NW	N	ST	SW	S	T	WEL	W	Y	CR	FR	HR	NER	SR	TR	TWR
Exceptionally high flow	0	1	0	0	0	1	1	0	0	0	3	1	4	2	0	0	0
Notably high	2	7	6	4	4	6	3	9	6	8	9	2	8	2	6	12	4
Above normal	11	23	26	16	16	9	11	23	14	9	45	37	38	9	55	23	17
Normal range	45	60	52	43	65	46	38	54	38	51	39	52	44	73	34	58	70
Below normal	17	7	16	25	8	18	19	6	21	28	4	7	4	8	4	7	8
Notably low	9	1	1	10	4	9	18	5	8	2	0	0	2	6	0	0	0
Exceptionally low flow	16	2	0	3	3	11	10	3	12	1	0	0	0	0	0	0	0

Forecasts of river flows using Met Office rainfall forecasts

- The data on these (yellow-bordered) pages are based on approximately 400 rainfall scenarios provided by the Met Office, which are used as inputs to a water balance hydrological model.
- River flow forecasts for every 1km grid cell are ranked according to the historical flow estimates and aggregated within each region.
- A full description of this method and these summary products is given in the technical documentation available via the Hydrological Outlook website.

Probability of extreme river flows



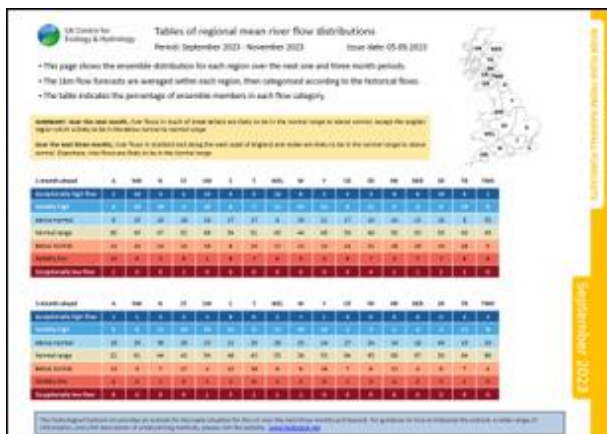
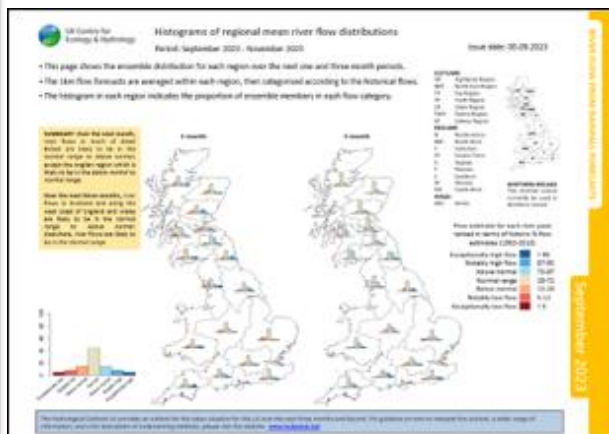
Extreme river flows are defined as those which rank in the lowest or highest 13% of historical flow estimates (1963 - 2016). This definition encompasses the 'Notably' and 'Exceptionally' high/low flow bands used elsewhere in the Outlook.

The bar chart shows the probability of a given number of regions experiencing extremely high/low flows, where scenarios showing both extremely high and extremely low flows in different regions simultaneously excluded. These probabilities are also shown beneath the maps.

Shaded regions on each map are those most likely to experience extreme flows from the set of scenarios with at least a given number of regions experiencing such flows. If shown, grey maps indicate scenarios not observed in the ensemble.

The box drawn around some maps spans the central 50% probability interval, excluding scenarios where extremely high/low flows are observed simultaneously. If these excluded cases constitute a significant probability, details are given in the yellow summary box.

Regional mean river flow distributions



The maps illustrate the ensemble distribution of regional mean river flows. The historical distribution is shown at bottom-left, and allows deviations from the normal distribution to be determined by comparing the forecast distribution to the historical distribution. A summary is given in the yellow box.

The table gives access to the data shown in the histograms. The numbers in the tables are the percentage of ensemble forecasts falling in each of the flow categories. As before results are averaged by region then ranked in terms of 54 years of historical regional flow estimates (1963 – 2016).

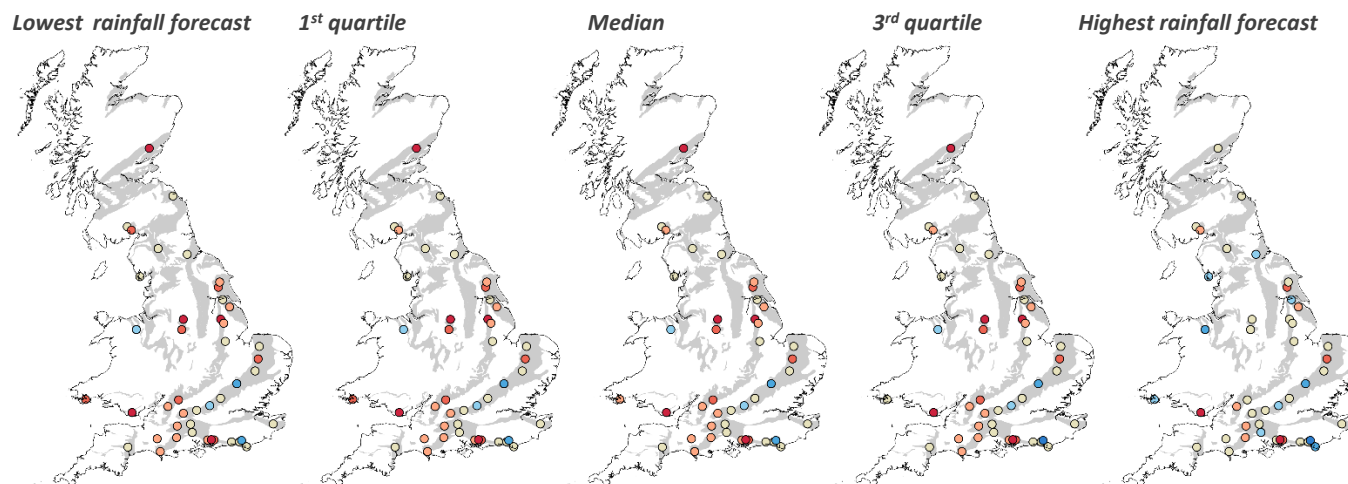
Period: September 2025 – November 2025

Issued on 05.09.2025 using data to the end of August

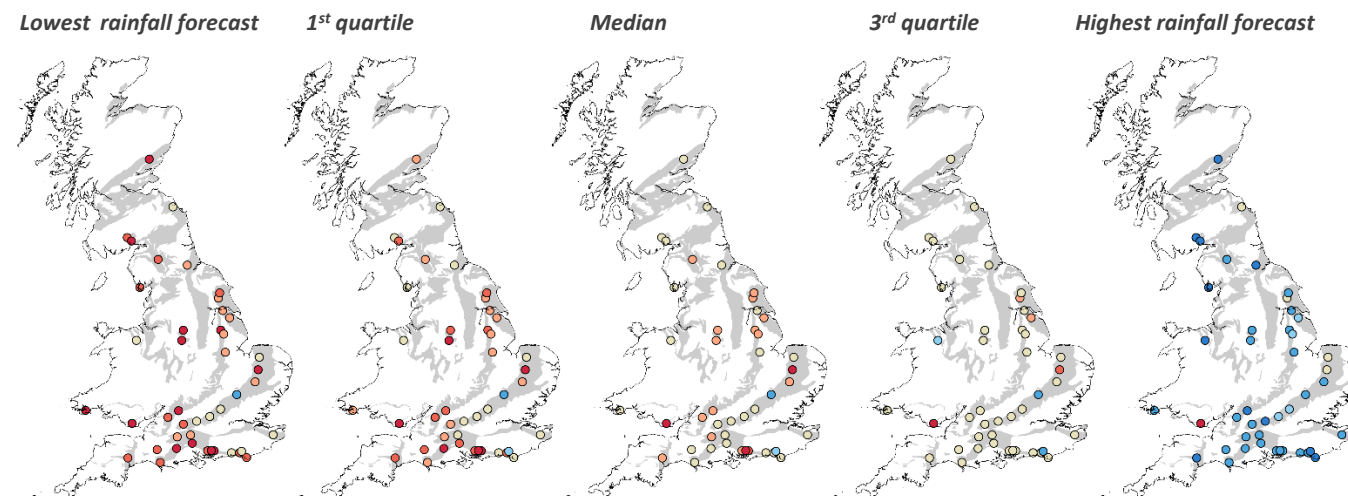
Under median rainfall conditions, groundwater levels across most UK sites are forecast to be normal or below normal over the next month. However, notably low to exceptionally low levels are anticipated in parts of central England, South Wales, the South Downs, and central Scotland. Above-normal levels are mainly limited to slower-responding boreholes in the southern Chalk aquifer and the Permo-Triassic Sandstone aquifer of northern Wales. The three-month outlook suggests broadly similar conditions, with groundwater levels gradually trending closer to normal, although some below-normal conditions are expected to persist.

These forecasts are produced by running five members of the Met Office ensemble climate forecast through groundwater models of observation borehole hydrographs at 42 sites across the country. The sites are distributed across the principal aquifers.

Based on the distribution of observed historical groundwater levels in a given month, seven categories have been derived for each site: very low, low, below normal, normal, above normal, high, and very high. The forecast groundwater level is assigned to one of these seven categories depending on where it falls within the distribution of the historically observed values.

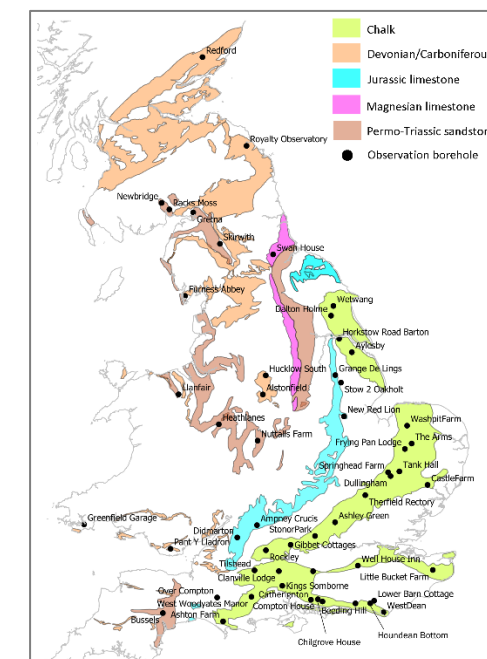


1-month outlook



3-month outlook

Key	Percentile range of historic observed values for relevant month
Exceptionally high levels	> 95
Notably high levels	87-95
Above normal	72-87
Normal	28-72
Below normal	12-28
Notably low levels	5-13
Exceptionally low levels	< 5

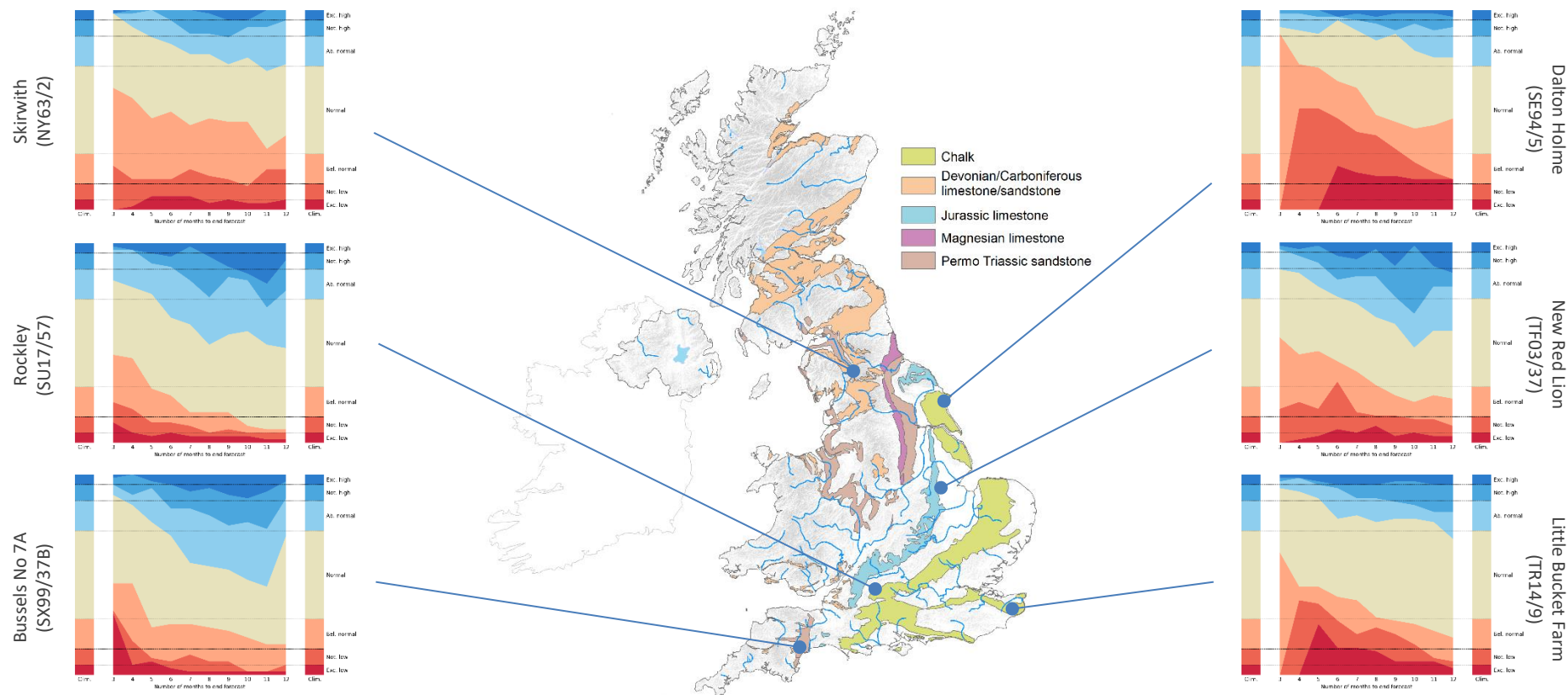


Outlook based on modelled groundwater from historical climate

Period: September 2025 – August 2026

Issued on 05.09.2025 using data to the end of August

Over the next four months, groundwater levels in the Permo-Triassic Sandstone at Bussels No 7A and Skirwith and in the Chalk at Little Bucket Farm and Rockley, are likely to remain normal to below normal for this time of year, with some potential for levels to recover towards normal in five to six months time. At Dalton Holme in the Chalk, below normal levels are expected to persist for the next six to eight months, before a trend towards normal levels is anticipated. In the Jurassic Limestone at New Red Lion, groundwater levels are expected to remain normal to below normal for the next eight months.



This outlook is based on monthly ensembles of historical sequences of observed climate (rainfall and potential evapotranspiration) that form input to hydrological models. The outputs are probabilistic simulations of the average groundwater level over the forecast horizon (3 to 12 months ahead), at each location.

The graphs show variation over time of the number of simulated groundwater levels in each monthly ensemble,

that fall within each the seven categories: exceptionally low, notably low, below normal, normal, above normal, notably high and exceptionally high. The monthly variations can be compared to the long-term average distribution of levels, which are shown as columns on the left and right of each graph.

This outlook is based entirely on historical sequences and therefore does not contain any knowledge of the state of

the atmosphere and ocean. It is hence possible that some of the historical sequences used might be inconsistent with current large-scale atmospheric conditions and would therefore be unlikely to occur in the next few months.