

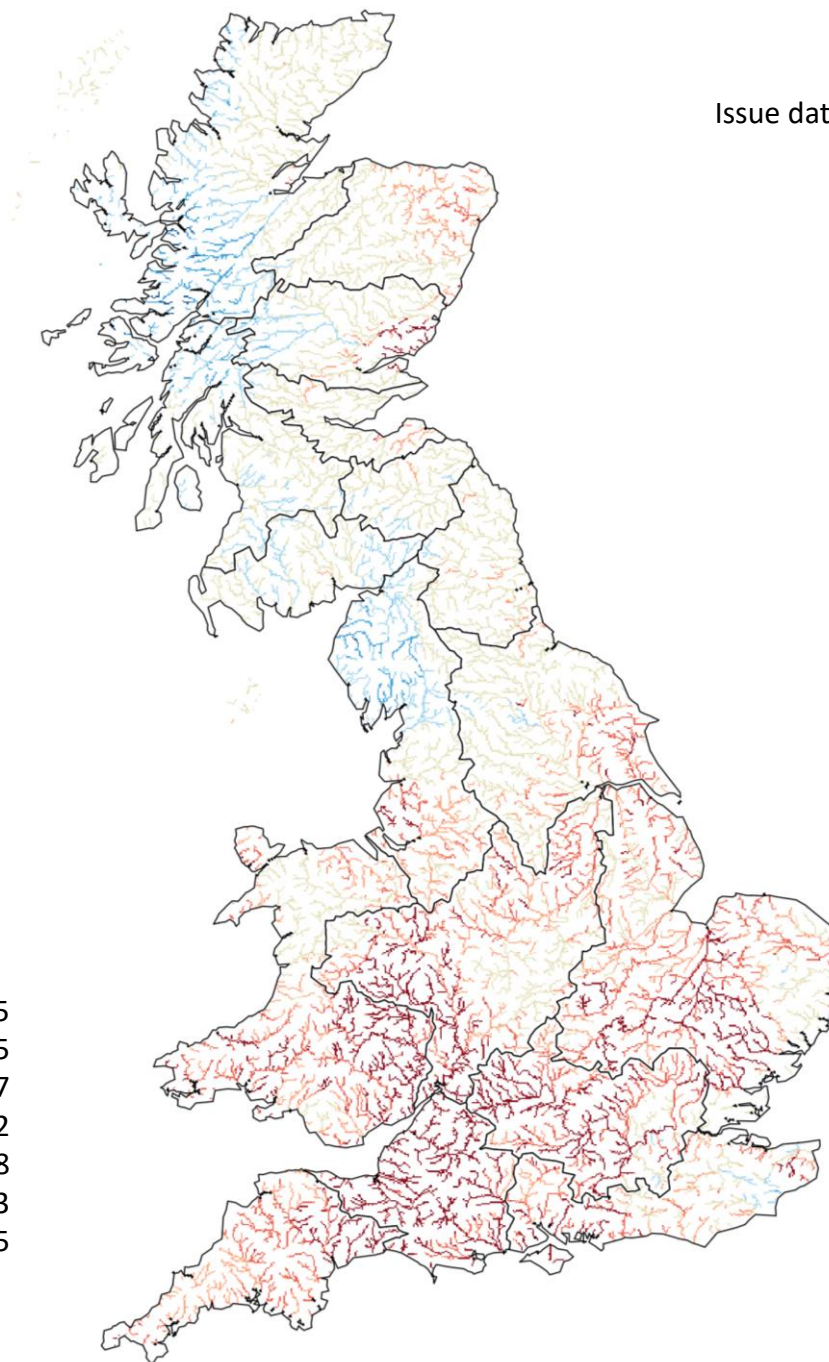
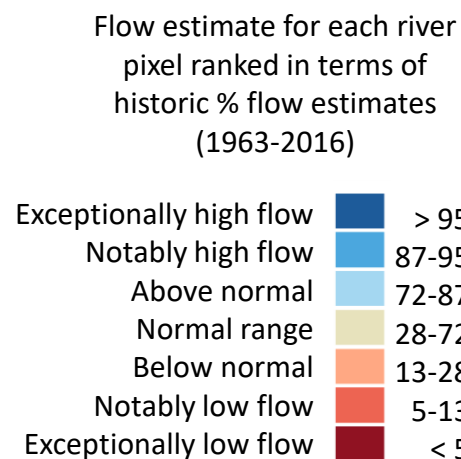
## July's mean river flows simulated by the Grid-to-Grid hydrological model

Issue date: 05.08.2025

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 July 2025

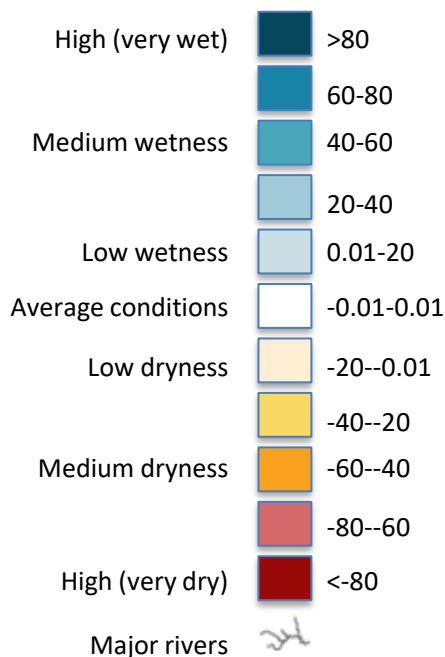
Issue date: 05.08.2025

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.

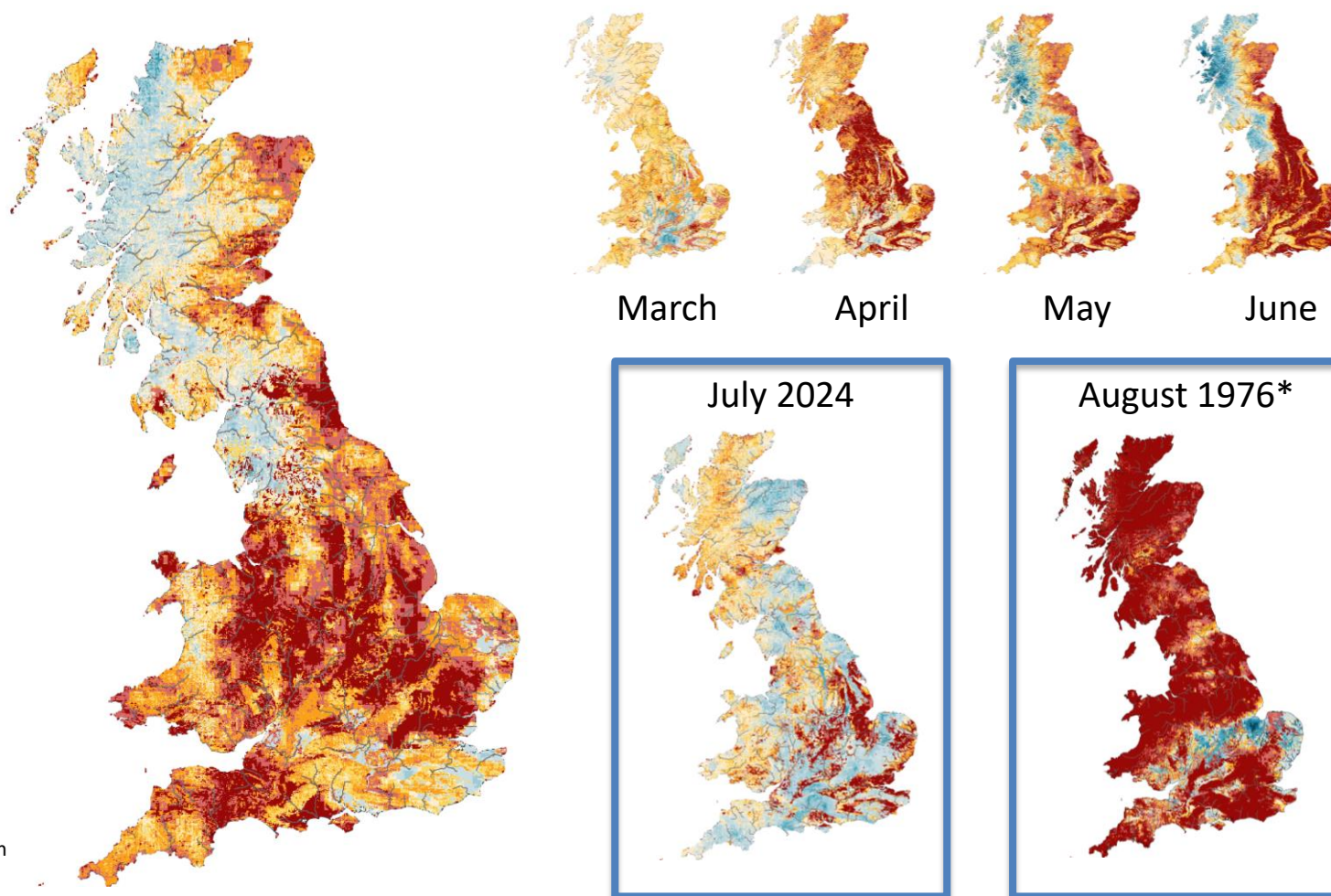
**SUMMARY:** Subsurface stores along the West Coast of Scotland and the Lake District remain slighter wetter than normal. In the rest of Great Britain, subsurface stores are mostly slightly wetter than in June but remain very dry in many areas.

## 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

August 2025

CURRENT CONDITIONS



# Current Daily Simulated Soil Moisture Conditions

Based on soil moisture estimated for 31 July 2025

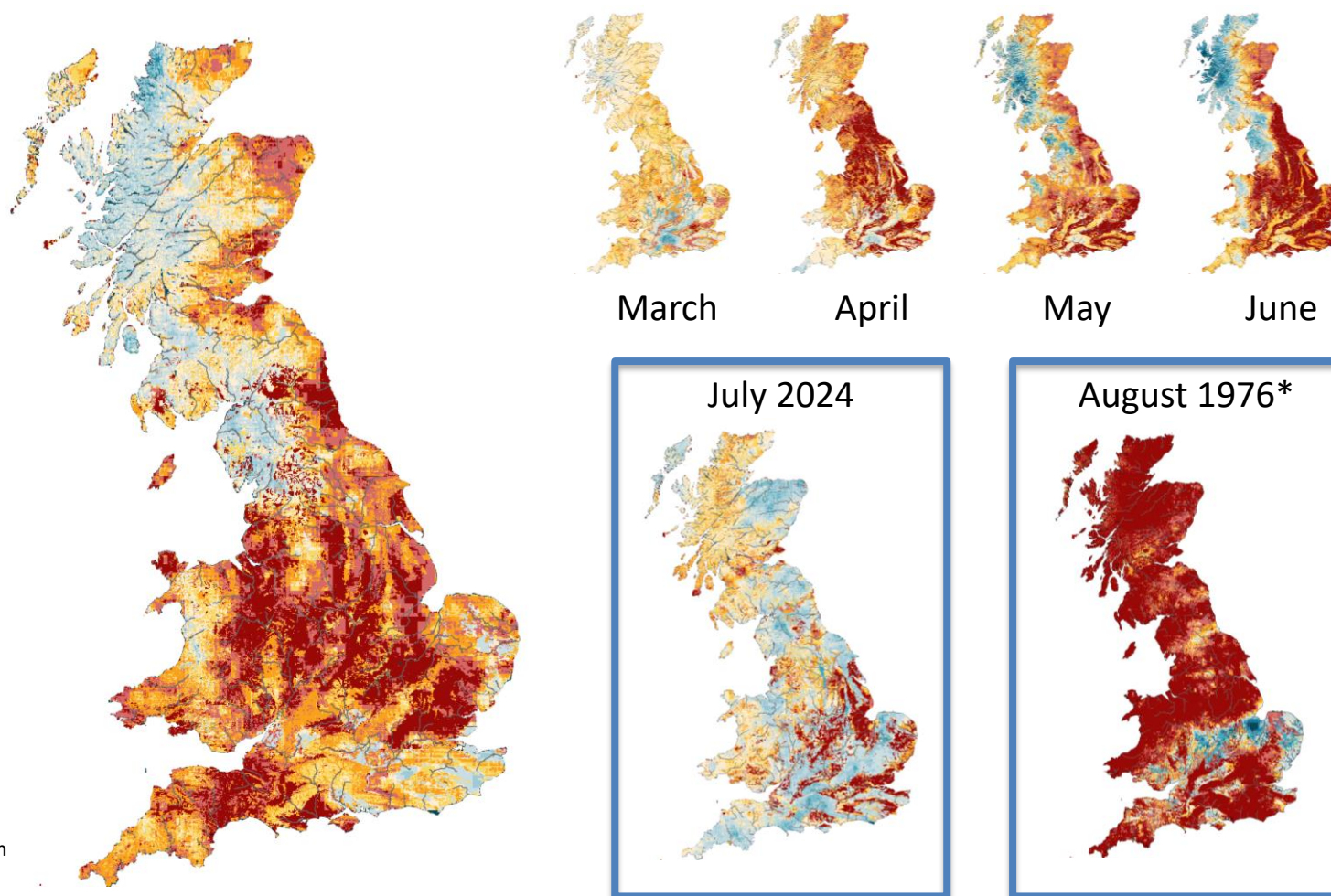
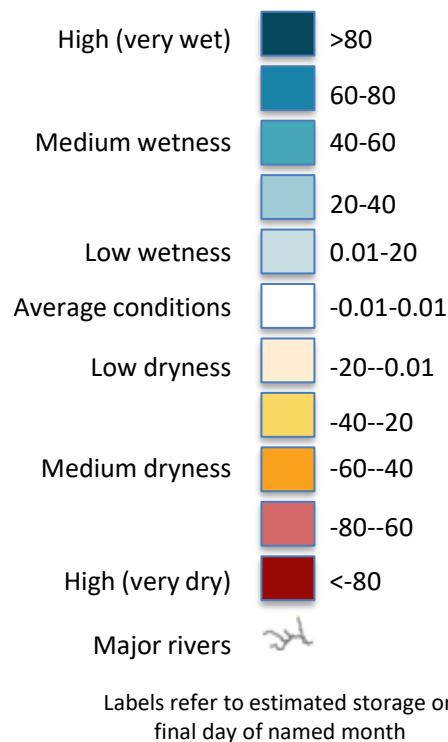
Issue date: 05.08.2025

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:** Soil water stores along the West Coast of Scotland and the Lake District remain slighter wetter than normal. In the rest of Great Britain, soil water stores are mostly slightly wetter than in June but remain very dry in many areas.

## Relative wetness

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



\*Example month displaying extreme negative wetness

August 2025

# Estimate of Additional Rainfall Required to Overcome Dry Conditions

Based on subsurface water storage estimated for 31 July 2025

Issue date: 05.08.2025

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

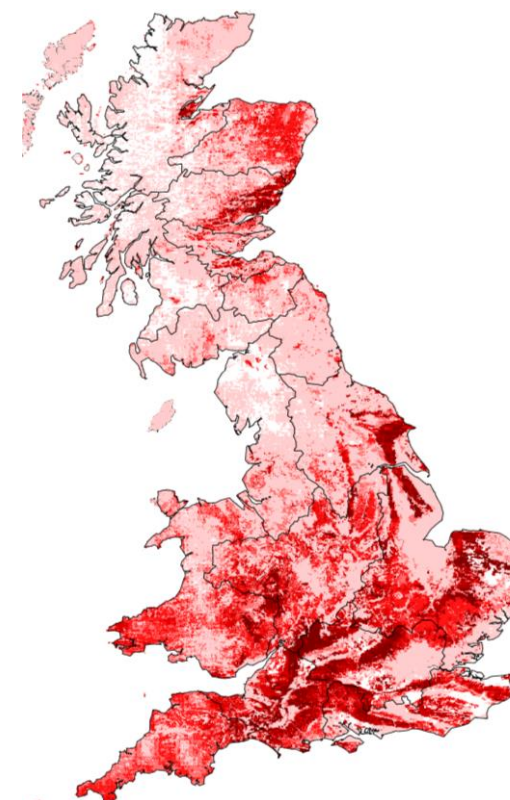
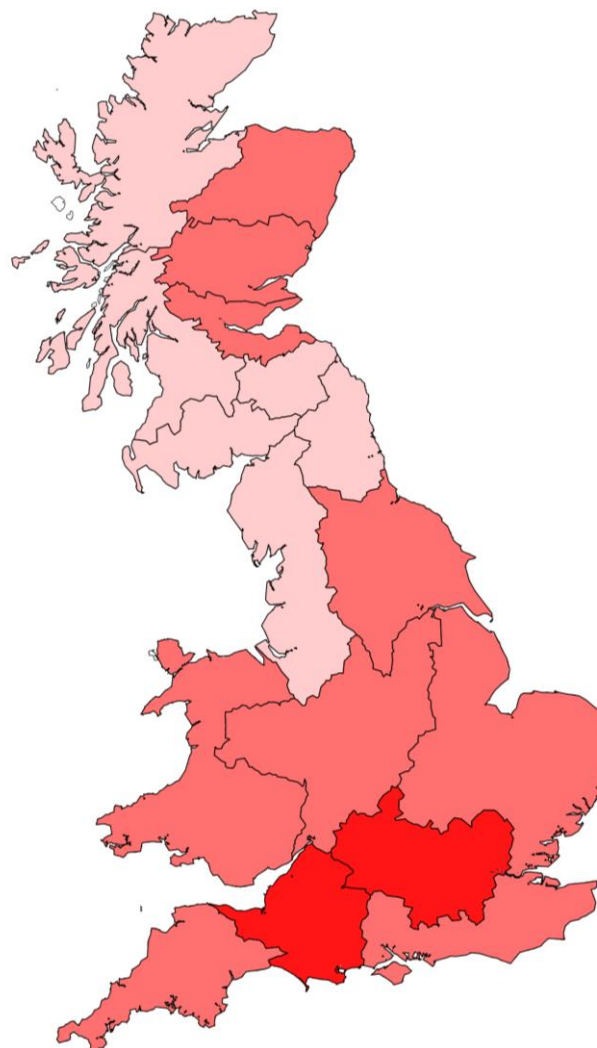
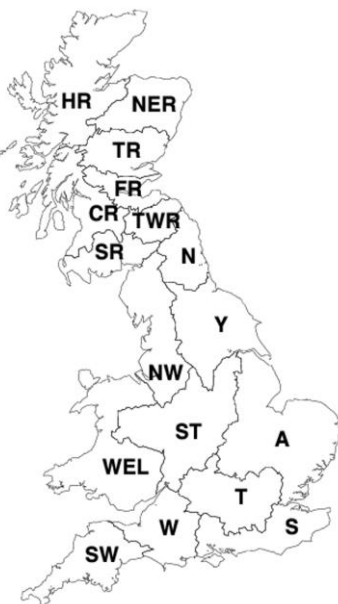
2	HR	Highlands Region
33	NER	North East Region
32	TR	Tay Region
29	FR	Forth Region
3	CR	Clyde Region
16	TWR	Tweed Region
9	SR	Solway Region

### ENGLAND

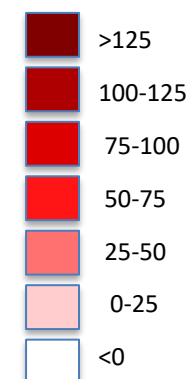
13	N	Northumbria
8	NW	North West
27	Y	Yorkshire
46	ST	Severn Trent
47	A	Anglian
60	T	Thames
74	W	Wessex
45	S	Southern
48	SW	South West

### WALES

39	WEL	Welsh
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Water storage deficit  
(anomaly; mm)



# Return Period of Rainfall Required to Overcome Dry Conditions

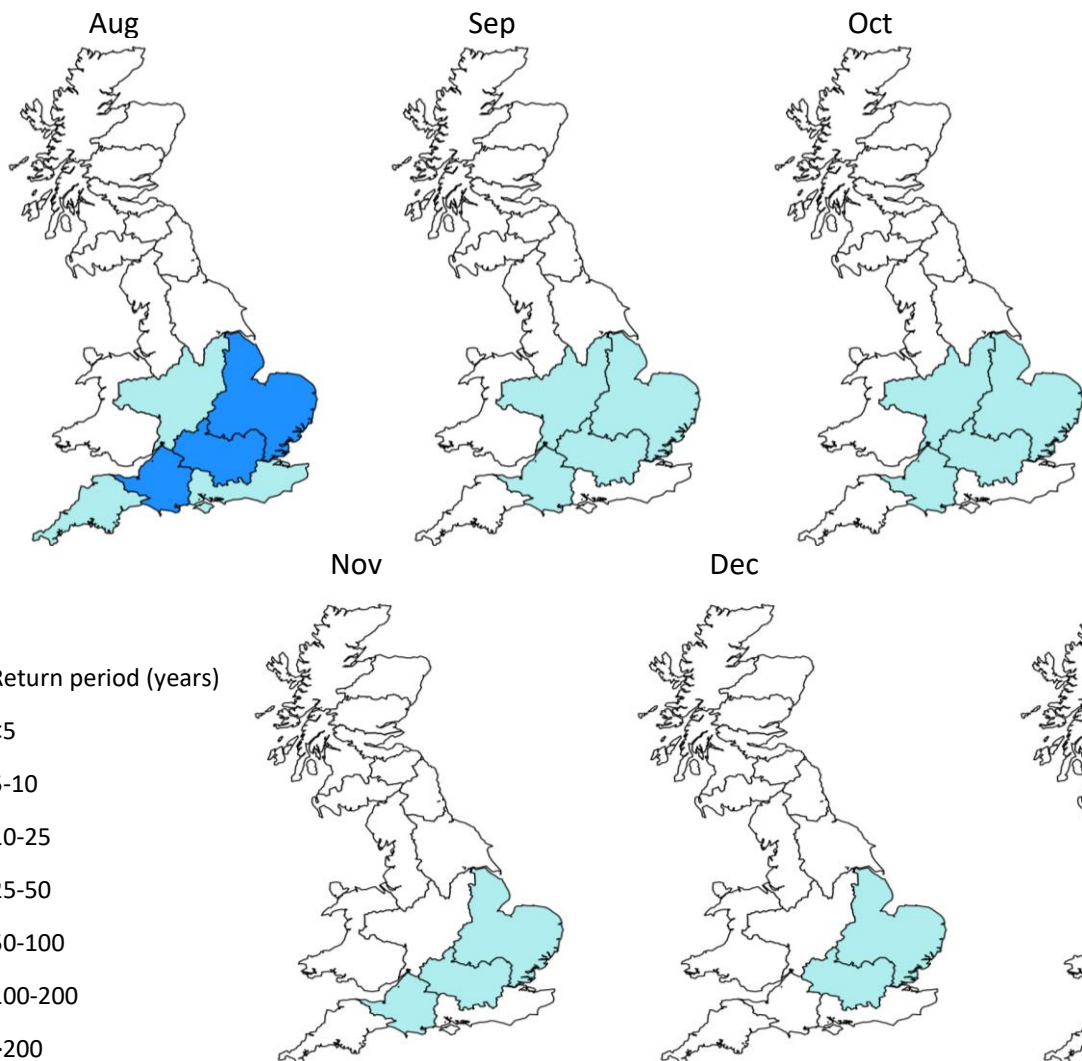
Period: August 2025 - January 2026

Issue date: 05.08.2025

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 water deficits are still present in central and southern England, requiring high to unusually high rainfall to recover to normal levels by the end of the month.

Over the next few months high levels of rainfall are required across central and southern England to recover to normal levels, particularly in the Anglian and Thames regions.



## SCOTLAND

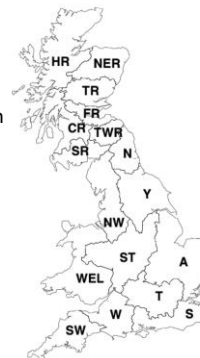
HR Highlands Region  
NER North East Region  
TR Tay Region  
FR Forth Region  
CR Clyde Region  
TWR Tweed Region  
SR Solway Region

## 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



Rainfall amount (Probability)

Low (Likely) >20%

<20%

<10%

< 4%

High (Less likely) < 2%

< 1%

Extreme (Unlikely) <0.5%

Return period (years)

<5

5-10

10-25

25-50

50-100

100-200

>200