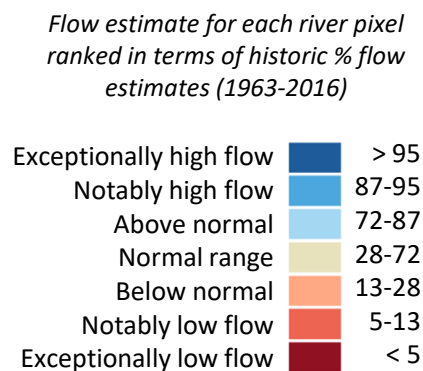


This map shows the simulated monthly mean flow across Great Britain for last month, ranked in terms of 54 years of historical flow estimates (1963 – 2016).

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 30th June 2022

Issue date: 05.07.2022

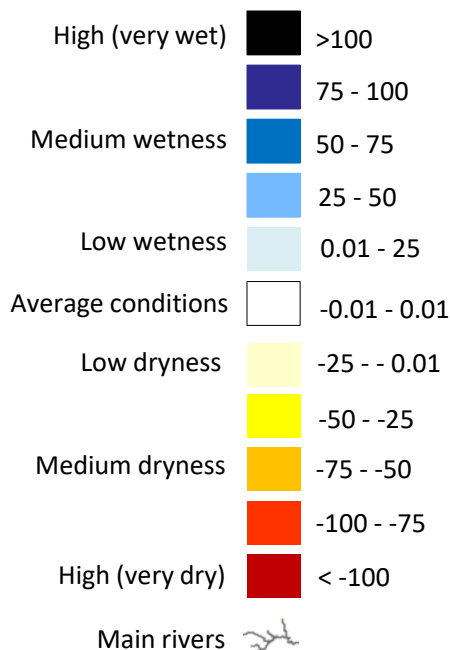
These maps are based on Grid-to-Grid (G2G) hydrological model simulated subsurface water storage, expressed as an anomaly from the historical monthly mean. To highlight areas that are particularly wet or dry, the storage anomaly is presented here using a colour scale highlighting water storage relative to historical extremes. The maps below show the “relative wetness” which combines maps previously shown separately as the “relative wetness” and “relative dryness”.

These maps do not provide a forecast and are not maps of soil moisture. Instead they indicate areas which are particularly wet or dry. Rainfall in areas with high positive relative wetness could result in flooding in the coming days/weeks. Areas of negative relative wetness provide an indication of locations which are particularly dry, and little or no rain in these areas could potentially lead to (or prolong) a drought.

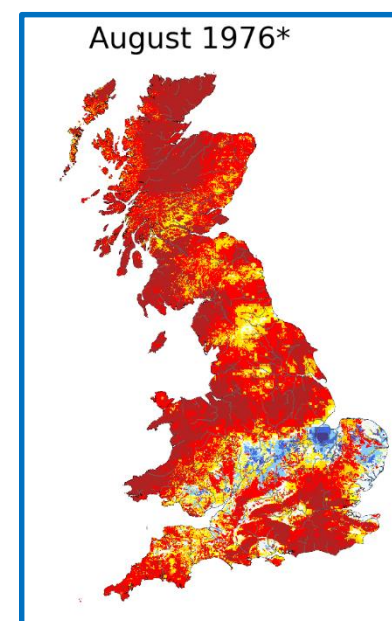
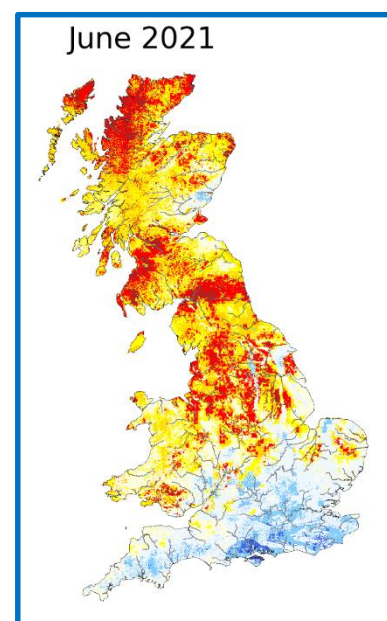
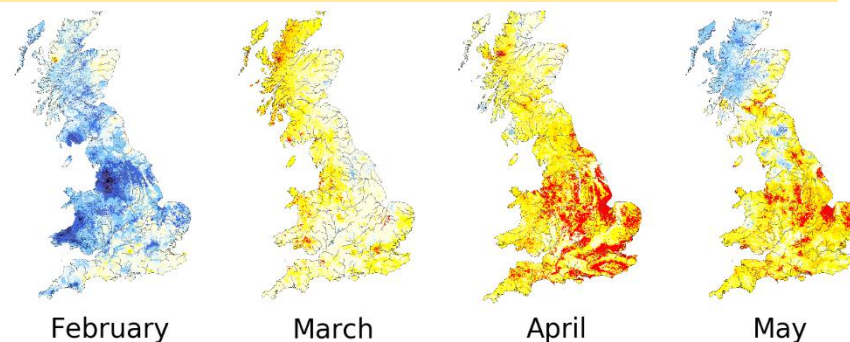
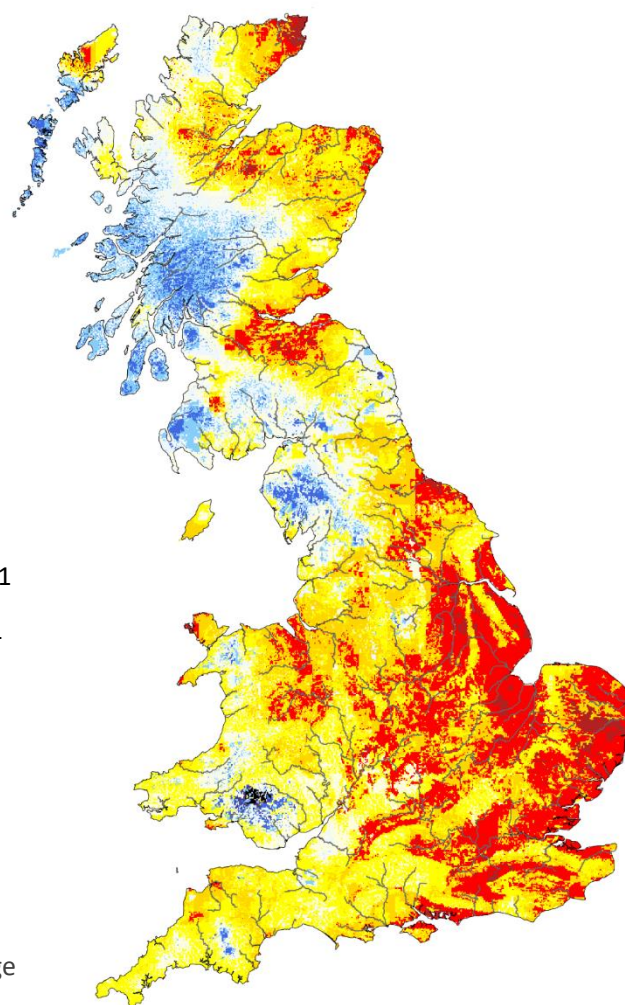
SUMMARY: At the end of June subsurface water levels were generally lower (drier) than normal across England, Wales and eastern Scotland. Elsewhere, and in some areas of north west England, south Wales and western Scotland, higher (wetter) than normal wetness prevails.

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

Return Period of Rainfall Required to Overcome Dry Conditions

Period: July 2022 – December 2022

Issue date: 05.07.2022

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 few months.

These maps do not provide a drought forecast. Instead they indicate the return period of rainfall required to overcome the dry conditions for the following 6 months based on current conditions.

SUMMARY: During July to August, regions in southern and eastern England would require rainfall with a return period of between 5 and 25 years to overcome the dry conditions. Elsewhere, not particularly unusual rainfall (<5 year return periods) would be required to return to average conditions for this time of year.

During October to December, Great Britain will not require particularly unusual rainfall (<5 year return periods) to return to average conditions for the time of year.



SCOTLAND

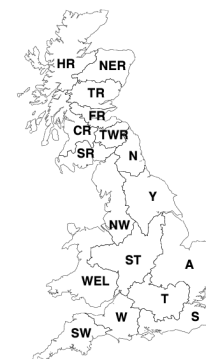
HR Highlands Region
NER North East Region
TR Tay Region
FR Forth Region
CR Clyde Region
TWR Tweed Region
SR Solway Region

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



NORTHERN IRELAND

This method cannot currently be used in Northern Ireland

Rainfall amount / Probability		Return period (years)	
Low (this rain is likely to occur)	> 20%		< 5
	< 20%		5 - 10
	< 10%		10 - 25
	< 4%		25 - 50
High (less likely)	< 2%		50 - 100
	< 1%		100 - 200
Extreme (unlikely but still possible)	< 0.5%		> 200

Estimate of Additional Rainfall Required to Overcome Dry Conditions

Based on subsurface water storage estimated for 30th June 2022

Issue date: 05.07.2022

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 by the red/pink colours.

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

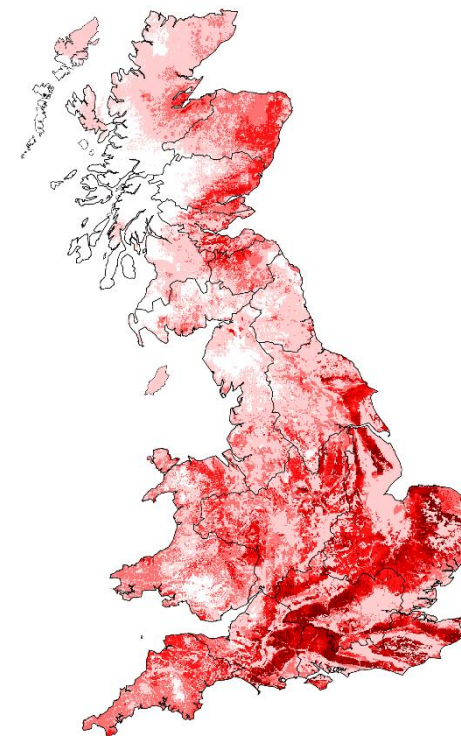
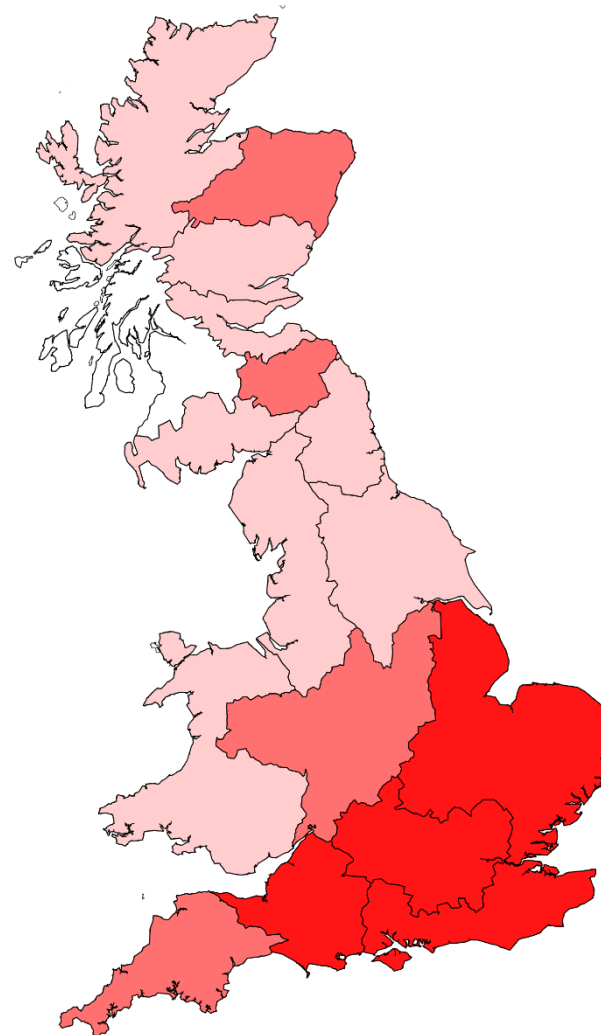
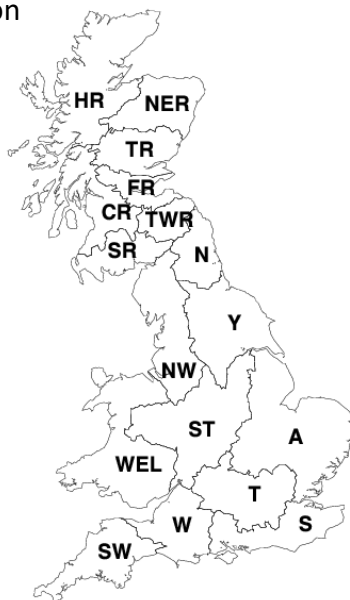
7	HR	Highlands Region
32	NER	North East Region
16	TR	Tay Region
24	FR	Forth Region
8	CR	Clyde Region
28	TWR	Tweed Region
3	SR	Solway Region

ENGLAND

8	N	Northumbria
9	NW	North West
25	Y	Yorkshire
37	ST	Severn Trent
53	A	Anglian
59	T	Thames
53	W	Wessex
59	S	Southern
35	SW	South West

WALES

23	WEL	Welsh
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*Water storage deficit
(anomaly, mm)*

