Scottish Environment Protection Agency
Buidheann Dìon Àrainneachd na h-Alba

For the future of our environment

Water Scarcity Report

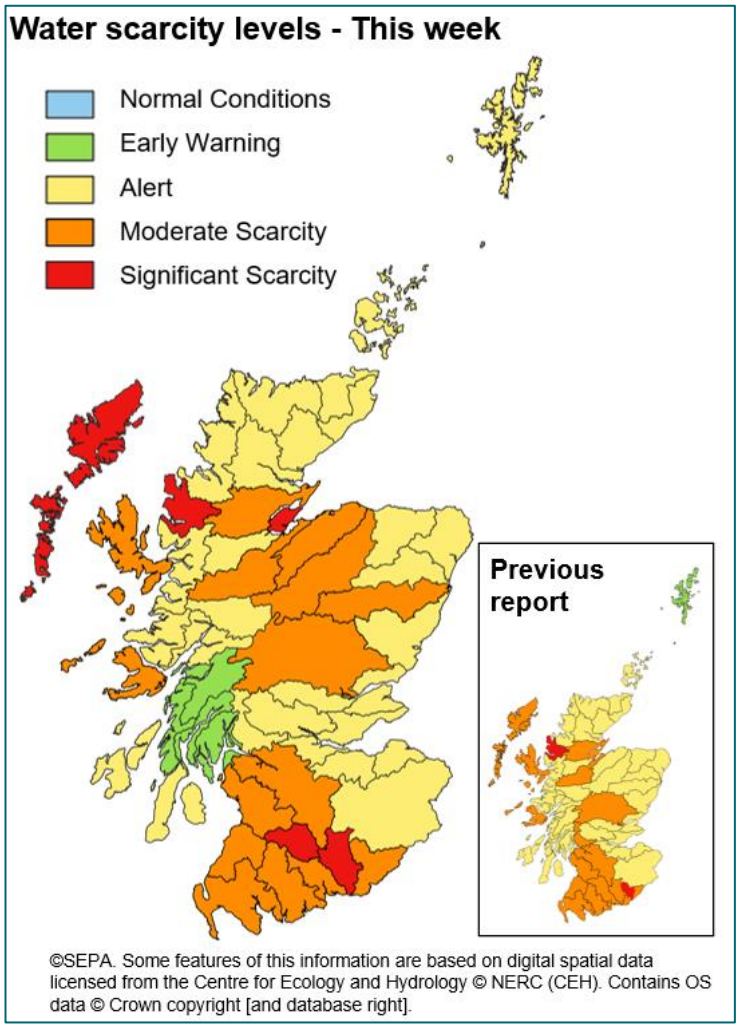
30th June 2023

The Rivers Annan, Nith, the Black Isle and the Outer Hebrides are now in a Significant Water Scarcity situation along with the Loch Maree area.

The Esk area of Dumfriesshire has improved from Significant to Moderate Water Scarcity.

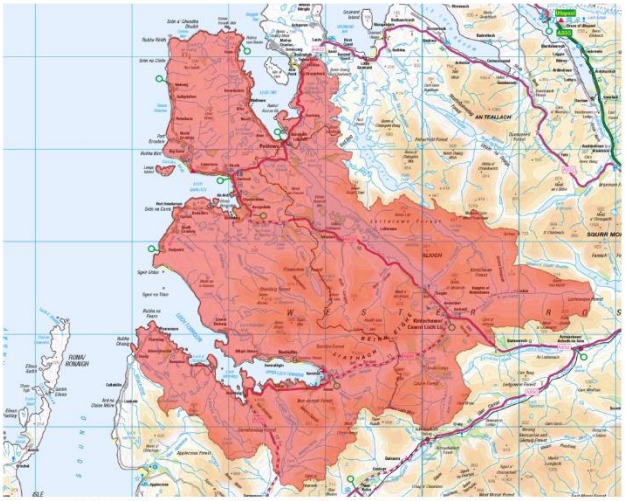
The Nairn, Findhorn, Spey and Dee catchments are now at Moderate Scarcity.

The majority of Argyll and Bute has recovered to Early Warning level.

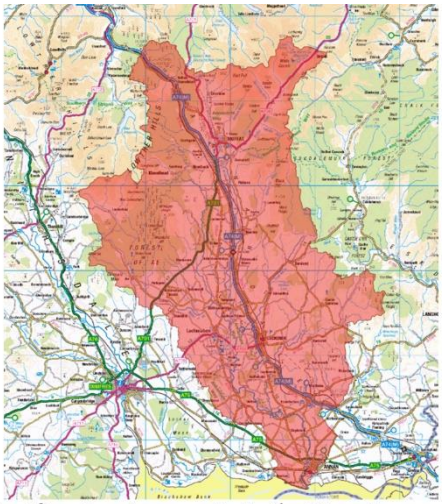


Accessible version of national water scarcity map

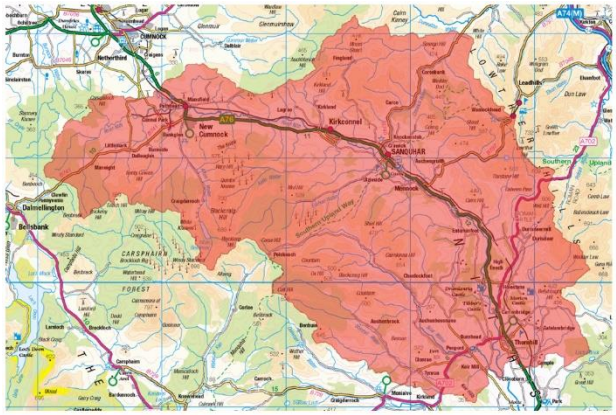
The overall risk of water scarcity takes account of the individual water scarcity indices, relevant water use, sectors in each region, and forecast weather conditions. The areas shown in this map represent major river catchments. Details on how levels are set and actions required can be found in SEPA's National Water Scarcity Plan.



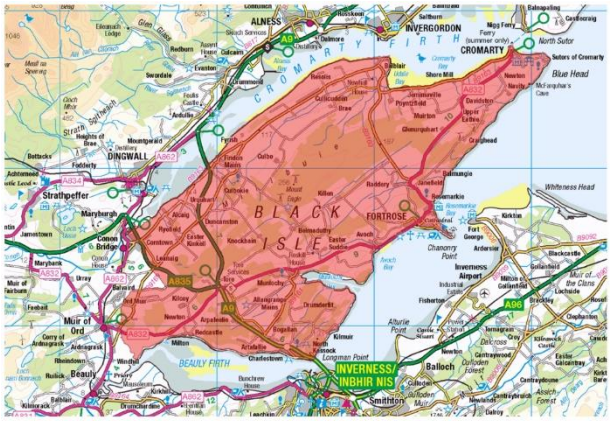
Area of significant water scarcity in the Loch Maree area



Area of significant water scarcity in the River Annan catchment



Area of significant water scarcity in the River Nith catchment



Area of significant water scarcity in the Black Isle

Situation Summary

The Rivers Annan, Nith, the Black Isle and the Outer Hebrides are now in a Significant Water Scarcity situation due to prolonged extremely low river flows in the areas. The Loch Maree area in Wester Ross remains at Significant Water Scarcity.

When an area reaches Significant Water Scarcity we consider additional action to protect the water environment. As such, some abstraction licences in areas of Significant Scarcity may be subject to a reduction in the allowable volume of water abstracted or may be suspended. These licence variations will be for the minimum time necessary and will be lifted as soon as possible.

The Nairn, Findhorn, Spey and Dee catchments have increased to Moderate water scarcity as river flows in these areas remain extremely low. Shetland has increased to Alert level. There have been widespread showers across the country this week, with particularly heavy rainfall across Central and Western Scotland. This has caused some localised improvement in conditions, with further recovery of the Awe and Etive area of Argyll and Bute from Alert to Early warning. However, the rain has not been sufficient for large-scale recovery, and many areas remain at risk of water scarcity.

Due to the widespread showers, there has been some improvement in soil moisture particularly in western areas but areas in the east are continuing to dry out. Soil moisture across the country remains mostly Dry or Quite Dry.

Some showers are forecast for this weekend, with the heaviest and most persistent across the north which may lead to some limited recovery in conditions. However, there is uncertainty around the locations and amounts of this rain. If there is no recovery in river levels then further areas may be escalated to Significant Water Scarcity in the coming week. If rivers remain at very low flows for more than 30 consecutive days there is a heightened risk of severe, long-lasting ecological impact. Details of this are outlined in Annex 4 of Scotland's National Water Scarcity Plan and the current count can be seen on SEPA's Drought Risk Assessment Tool.

SEPA is monitoring the situation and coordinating steps to manage water resources in line with Scotland's National Water Scarcity Plan which is available on SEPA's website: https://www.sepa.org.uk/environment/water/water-scarcity/.

You can help us by reporting any evidence you see of water scarcity. For details of information that would be useful to us and where to send it see: Water scarcity in your area | Scottish Environment Protection Agency (SEPA).

Advice for water users

Water sources used for irrigating farmland are at risk of becoming limited in the Alert areas. We are urging farmers in these areas, especially if taking water from burns and small rivers, to:

- Routinely check equipment isn't leaking;
- Only use the water required for the use;
- Consider water saving measures for next irrigation season.
- If the catchment reaches Moderate Water Scarcity, consider your upcoming water needs and begin to plan with others in the catchment to share the resource or schedule abstractions.

Managers of golf courses are asked to do the same.

For the most up to date advice please see: Advice for abstractors.

Public water supplies are operating normally.

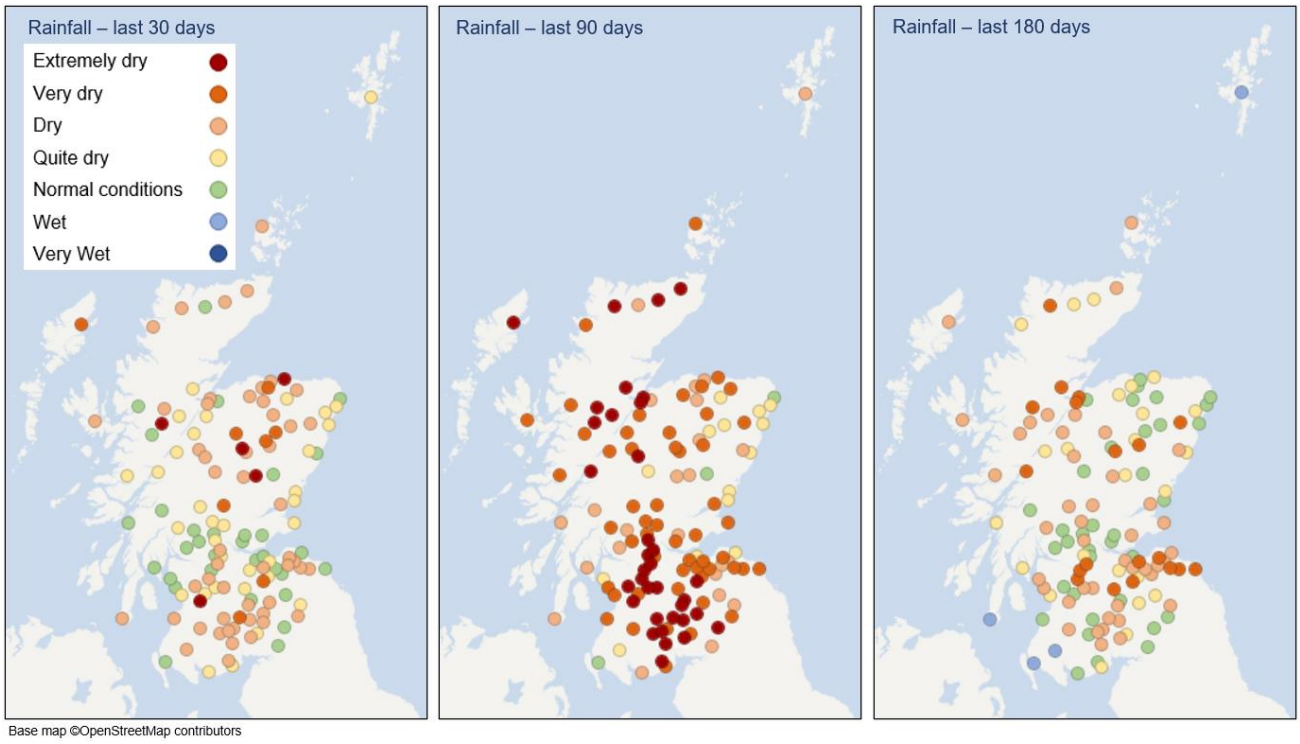
Weather forecast (29/06/2023)

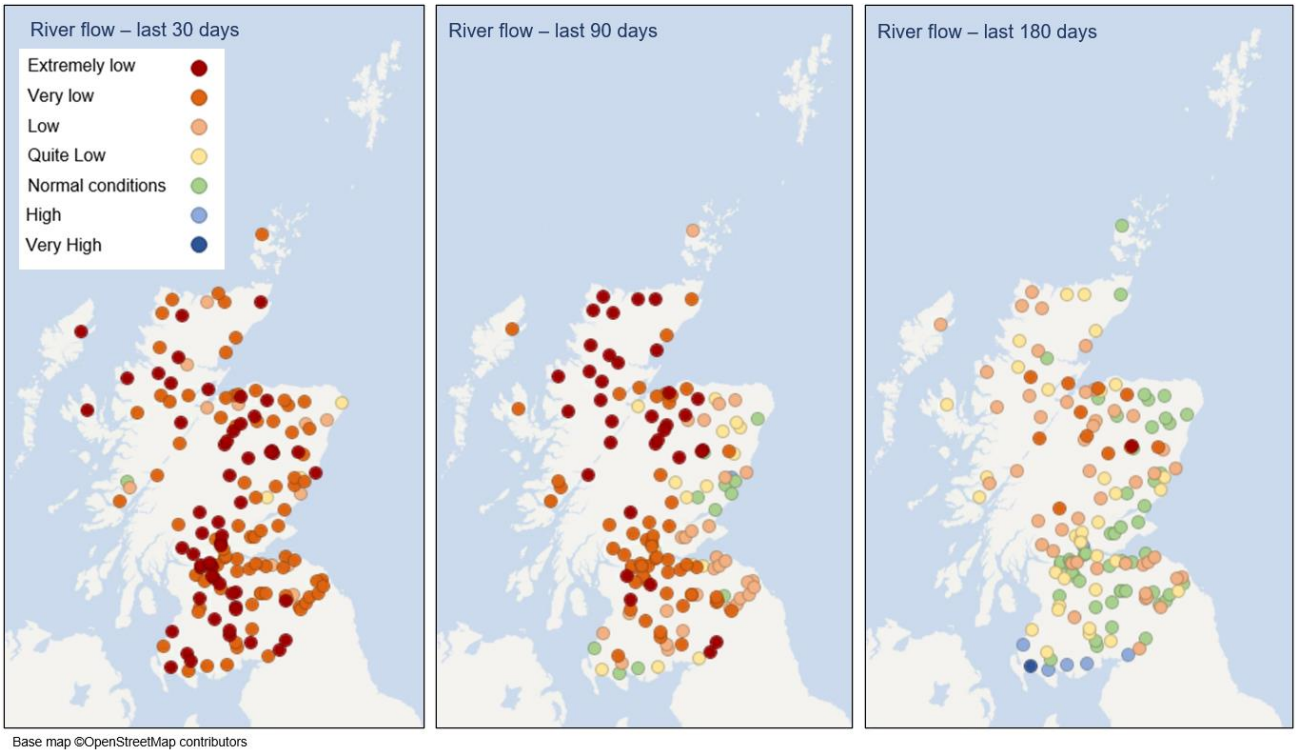
Scattered showers developing, mainly in the north and west, locally heavy in the north later Thursday. Showers north and west at first Friday, outbreaks of rain spread southeast from the morning. Showers in the west at first Saturday, merging into longer outbreaks of rain at times in the north and west later. Rain and showers clear east early Sunday with a few showers following across western parts. Becoming drier across all except the Northern Isles Monday.
Unsettled weather is expected to continue into early July. The outlook for the June-August period also suggests that across the UK there is double the usual chance of a hot summer.

Supporting information

Rainfall and river flows:

These maps show rainfall (top row) and river flow (bottom row) relative to the long-term average, for this time of year, over 30 days, 90 days and 180 days.



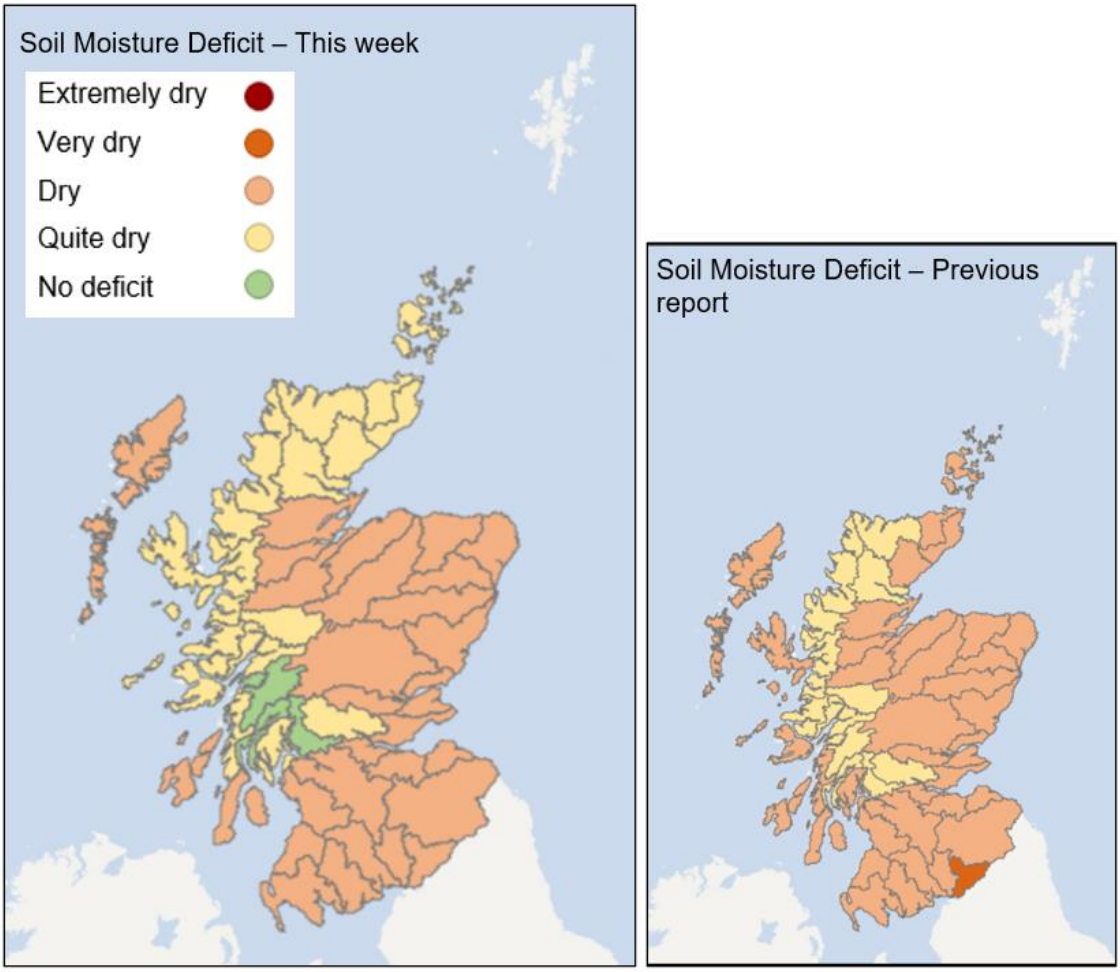


Rainfall totals in the short term have been mainly quite dry and dry in many parts of Scotland, however some areas have experienced normal rainfall totals. Conditions in the medium term have been extremely dry compared to normal across much of northern and southern Scotland. Conditions in central Scotland have been largely very dry, while conditions in most parts of Aberdeenshire have been quite dry. In the longer term, following heavy rainfall events in March and April, rainfall totals have been more normal in the northeast and southwest of the country, with dry conditions more prevalent in the north and central area of Scotland.

In the short-term river flows across much of Scotland have continued to be very low or extremely low for this time of year. In the medium term, very low and extremely low flows have been seen in northern areas, with low flows in central Scotland and more normal flows evident in parts of the south and east.

Soil moisture deficit:

These maps show this week's soil moisture deficit, alongside those previously reported for comparison. This is obtained from the Met Office Rainfall and Evaporation Calculation System (MORECS), no data is available for Shetland.

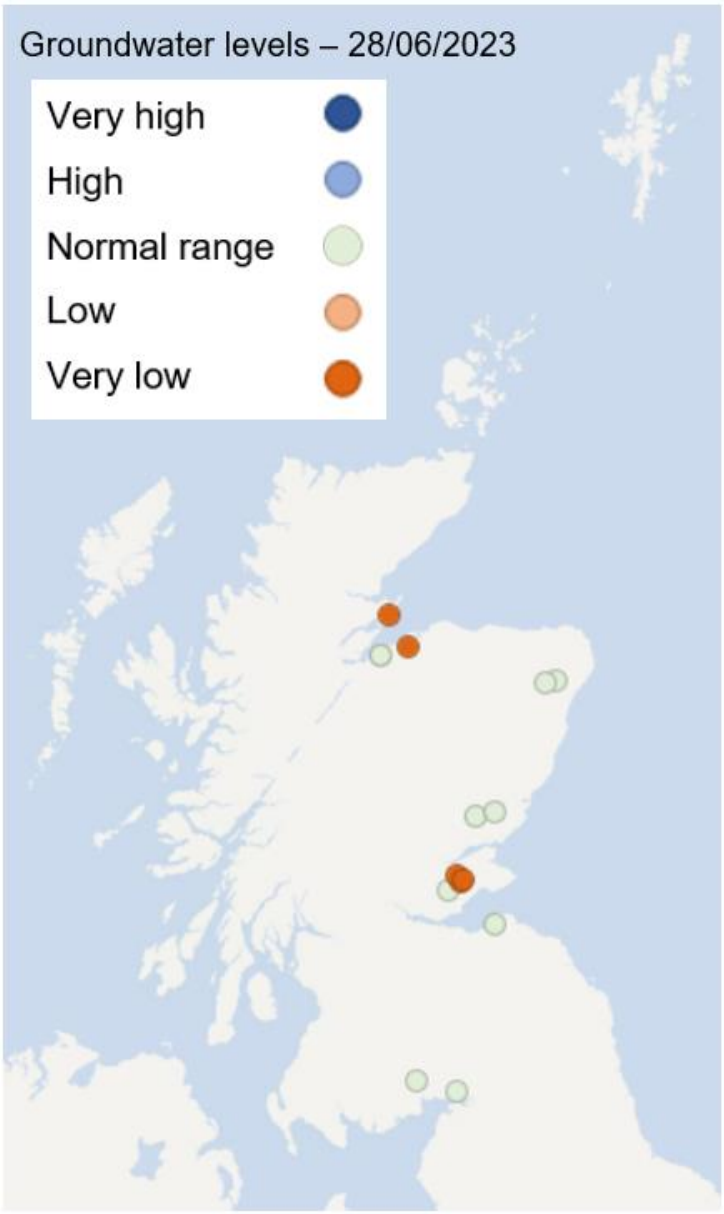


Data based on MORECS (Met Office © Crown Copyright). Some features of this information are based on digital spatial data licensed from the Centre for Ecology and Hydrology Copyright NERC (CEH). Contains OS data © Crown copyright [and database right]. Base map ©OpenStreetMap contributors

Widespread showers have continued to ease the drying of ground conditions particularly in the west, with some areas of Argyll and Bute now showing no soil moisture deficit. The Esk area of Dumfriesshire has also improved from Very Dry to Dry, but the majority of the country is still either Quite Dry or Dry.

Groundwater levels:

This map shows groundwater levels compared to the long-term record at each station. Groundwater levels are updated fortnightly and reported as above (high) or below (low) the typical (normal) level for the calendar month. Groundwater level trend bands are specific to each station and based on the long-term (minimum 10 years) record of mean monthly level values recorded at individual stations.



Base map ©OpenStreetMap contributors

In Fife, and near Forres some monitoring locations show that the seasonal low level has been reached earlier than usual.

Groundwater levels at SEPA's other monitoring stations are within the normal range for this time of year.

Natural water storage

In each river catchment there is some degree of natural water storage, which can maintain river flows even when it is not raining. This natural water storage is mainly held in lochs and groundwater. When storage has been depleted it will take a lot of rainfall for levels to recover.

Flow, rainfall and groundwater data are accessed via SEPA's time series data service (API). SEPA's live data are subject to ongoing quality control and periodic review.

For information on accessing this document in an alternative format or language please either contact SEPA by telephone on 03000 99 66 99 or by email to equalities@sepa.org.uk

If you are a user of British Sign Language (BSL) the Contact Scotland BSL service gives you access to an online interpreter enabling you to communicate with us using sign language.

http://contactscotland-bsl.org/
www.sepa.org.uk
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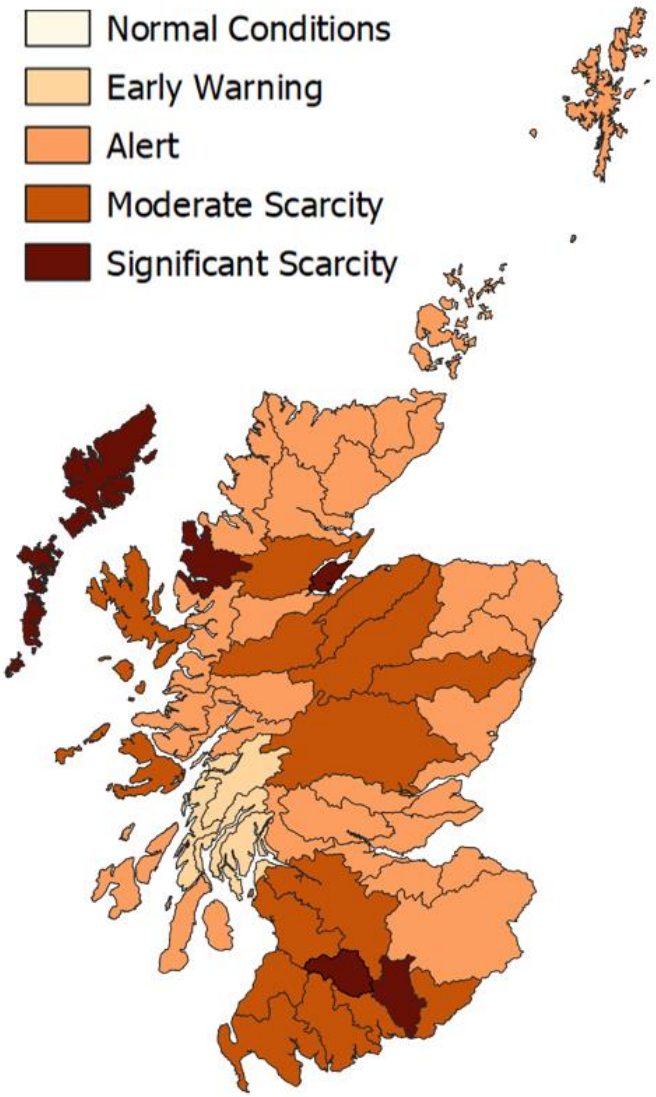
Appendix

Accessible national water scarcity map



Link to Situation Summary