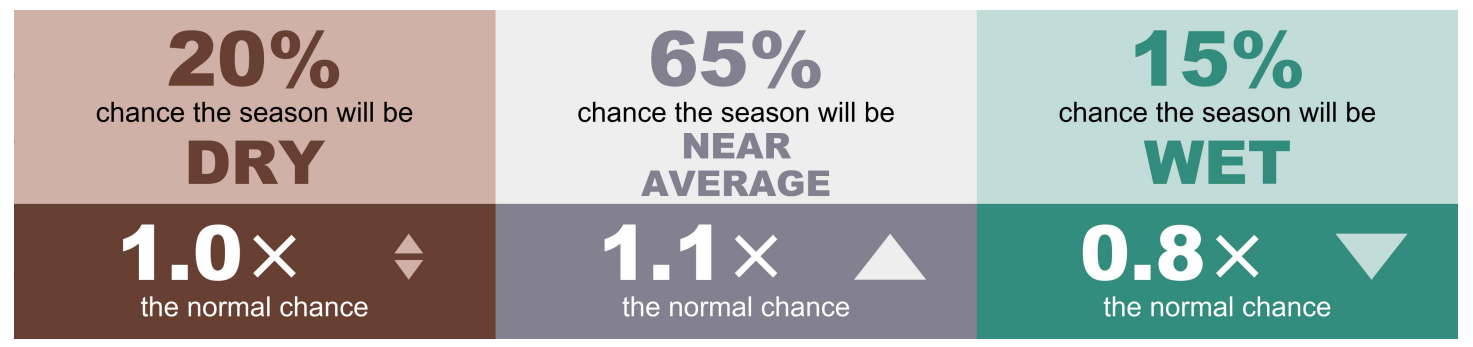| **3-month** | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

3-month summary

- The chance of autumn being warm is higher than normal
- The chance of a wet autumn is similar to normal
- Reduction in the chance of a windy autumn
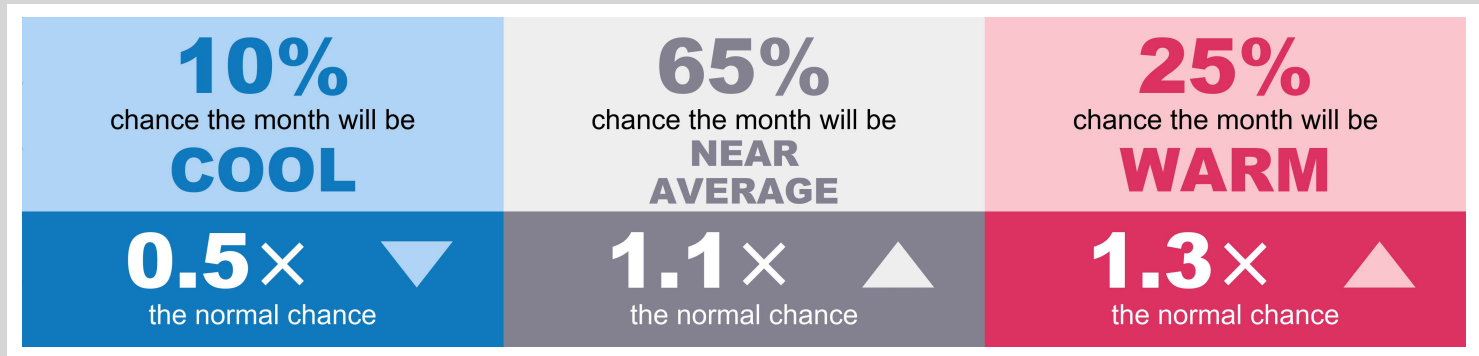
3-month likelihood of impact

Temperature

10% chance the season will be **COOL**	60% chance the season will be **NEAR AVERAGE**	30% chance the season will be **WARM**
0.5× ▼ the normal chance	1.0× ↕ the normal chance	1.5× ▲ the normal chance

Precipitation

20% chance the season will be **DRY**	65% chance the season will be **NEAR AVERAGE**	15% chance the season will be **WET**
1.0× ↕ the normal chance	1.1× ▲ the normal chance	0.8× ▼ the normal chance

Wind speed

20% chance the season will be **CALM**	70% chance the season will be **NEAR AVERAGE**	10% chance the season will be **WINDY**
1.0× ↕ the normal chance	1.2× ▲ the normal chance	0.5× ▼ the normal chance

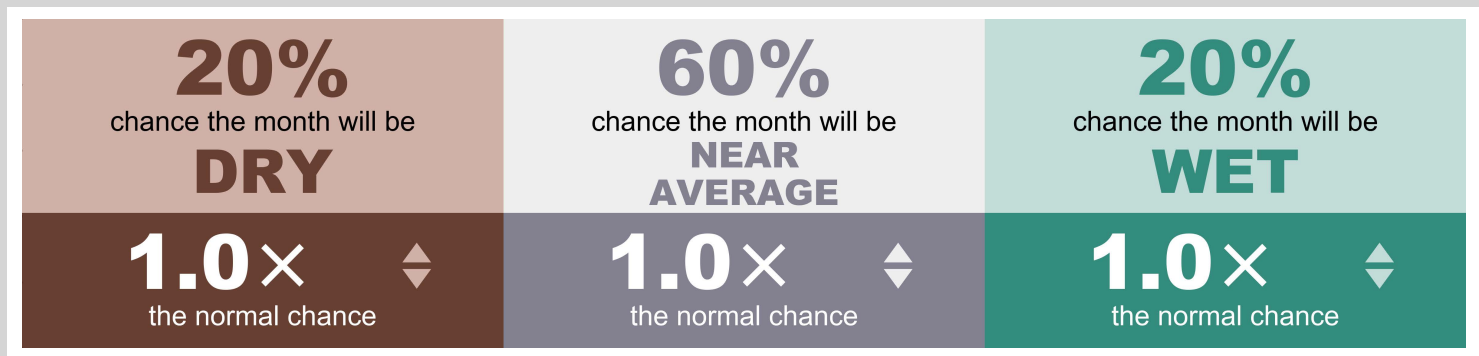| 3-month | **1-month** | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

1-month summary

- September is more likely to be warm than cool
- Chances of a wet September are similar to normal
- The likelihood of September being windy is similar to normal
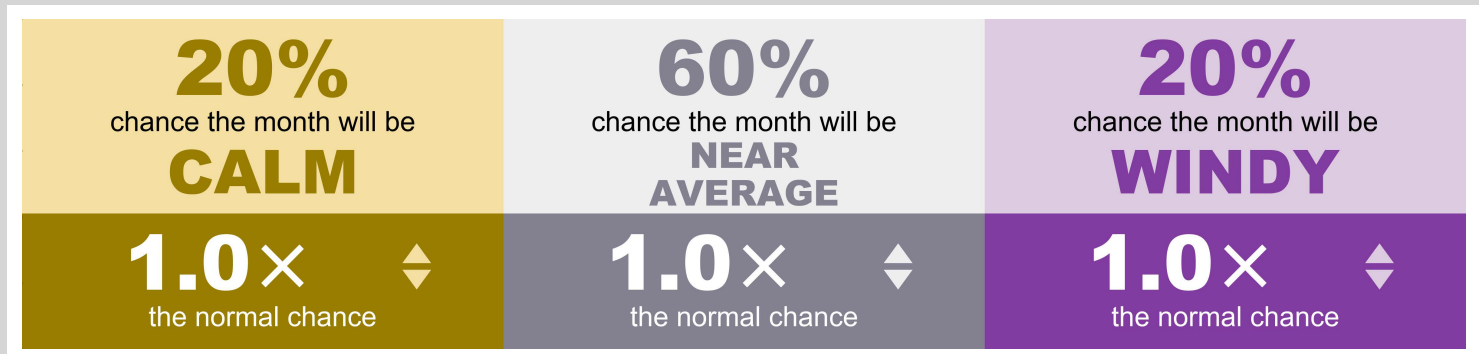
1-month likelihood of impact

Temperature

10% chance the month will be **COOL**	**65%** chance the month will be **NEAR AVERAGE**	**25%** chance the month will be **WARM**
0.5× ▼ the normal chance	**1.1×** ▲ the normal chance	**1.3×** ▲ the normal chance

Precipitation

20% chance the month will be **DRY**	**60%** chance the month will be **NEAR AVERAGE**	**20%** chance the month will be **WET**
1.0× ↕ the normal chance	**1.0×** ↕ the normal chance	**1.0×** ↕ the normal chance

Wind speed

20% chance the month will be **CALM**	**60%** chance the month will be **NEAR AVERAGE**	**20%** chance the month will be **WINDY**
1.0× ↕ the normal chance	**1.0×** ↕ the normal chance	**1.0×** ↕ the normal chance

| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Understanding the Outlook

The Outlook uses 3 categories for possible UK temperature, precipitation and wind speed in the next 1 and 3 months:

COOL, NEAR AVERAGE and WARM for temperature
WET, NEAR AVERAGE and DRY for precipitation
CALM, NEAR AVERAGE and WINDY for wind speed

These are linked to observed UK conditions in past years. The NEAR AVERAGE category represents typical conditions for the period and has a normal likelihood of 60%. The higher and lower categories represent more unusual conditions that are more likely to produce impacts. Each has a normal likelihood of 20%.

The Outlook shows how the chances of occurrence of the categories differ from normal, based on knowledge of expected global meteorological patterns. It does not identify which category will actually occur.

Same 3-month period over the last 10 years

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	NEAR AVERAGE	WARM	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	COOL	NEAR AVERAGE	WARM	WARM
	NEAR AVERAGE	NEAR AVERAGE	DRY	DRY	NEAR AVERAGE	NEAR AVERAGE	WET	NEAR AVERAGE	NEAR AVERAGE	WET
	NEAR AVERAGE	CALM	NEAR AVERAGE	CALM	NEAR AVERAGE	WINDY	CALM	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE

Same 1-month period over the last 10 years

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
	NEAR AVERAGE	WARM	COOL	WARM	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	WARM	NEAR AVERAGE
	NEAR AVERAGE	DRY	DRY	NEAR AVERAGE	WET	NEAR AVERAGE	WET	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE
	NEAR AVERAGE	CALM	CALM	NEAR AVERAGE	NEAR AVERAGE	WINDY	NEAR AVERAGE	NEAR AVERAGE	CALM	NEAR AVERAGE

Outlook in context

Drivers of UK weather for September to November
The impact of global weather patterns on the UK is small through this period. Drivers relevant to the current Outlook are:
• The warming of UK climate consistent with wider global warming trends
• El Niño continues to develop in the Pacific Ocean. Impacts on the UK, through most of the period, are small. However, in late-autumn El Niño increases the chance of westerly winds affecting the UK.
• Sea-surface temperatures around the UK are slightly above average, favouring above average land temperatures.
• Atlantic Tropical Cyclones – the season usually peaks in September and is forecast to have above average activity, this acting to reduce confidence in the forecast.

Long-range weather predictions
The Met Office and other prediction centres around the world routinely produce long-range predictions of conditions in the months ahead. Predictability is typically lower at this time of year, reflected by only weak signals in current model output. The main signals for September and the autumn as a whole, is an increased chance of higher than normal pressure across northern Europe and lower than normal pressure across western and southern Europe, leading to a reduction in the likelihood of westerly winds affecting the UK.

Impact
An increased chance of warm conditions through September to November is consistent with higher than average sea surface temperatures and our warming climate. There is no strong indication for UK-wide rainfall to vary significantly from normal over the next three months. Wetter spells of weather are possible at times, especially later in the season. Given the reduced chance of westerly winds prevailing, the likelihood of impacts from strong winds is decreased compared to a typical autumn. However, this doesn't preclude the chance of stormy spells at times.

| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

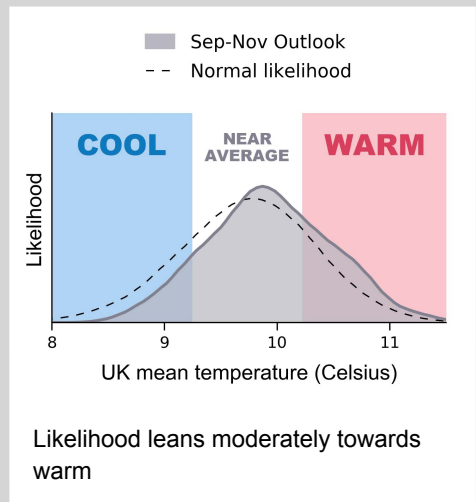# Outlook compared to normal likelihood

The curves below show the likelihood of the 1- and 3-month average temperature, precipitation and wind speed taking specific values. In each case:

• The dashed curve shows the normal likelihood based on how often each value has been recorded in past years
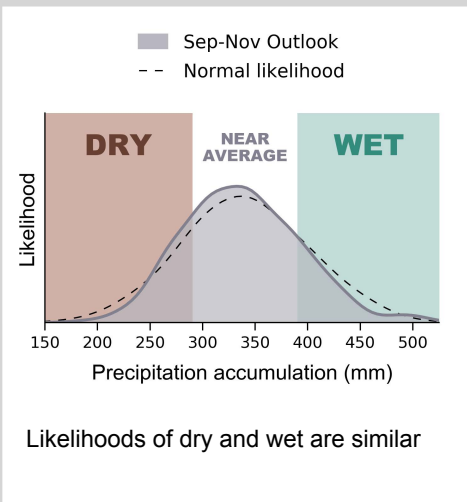• The solid curve shows the current likelihood based on the Outlook for this year

The differences in these curves show how the probabilities for the coming periods differ compared to past years. Where the solid curve (corresponding to this year's Outlook) lies above the dashed curve (normal likelihood), the temperature, precipitation or wind speed at that point has a greater-than-normal likelihood of occurring. Likewise, wherever it is below the dashed curve, the likelihood of those values is less than normal.

A shift of the solid curve to the left of the dashed curve indicates an increase in the chances of below-average temperature, rainfall or winds. A shift to the right, meanwhile, indicates increased chances of above-average values.

3-month temperature Outlook compared to normal

Likelihood leans moderately towards warm

3-month precipitation Outlook compared to normal

Likelihoods of dry and wet are similar

3-month wind speed Outlook compared to normal

Likelihood leans towards near average

1-month temperature Outlook compared to normal

Likelihood leans moderately towards warm

1-month precipitation Outlook compared to normal

Likelihoods of dry and wet are similar

1-month wind speed Outlook compared to normal

Likelihoods of calm and windy are similar
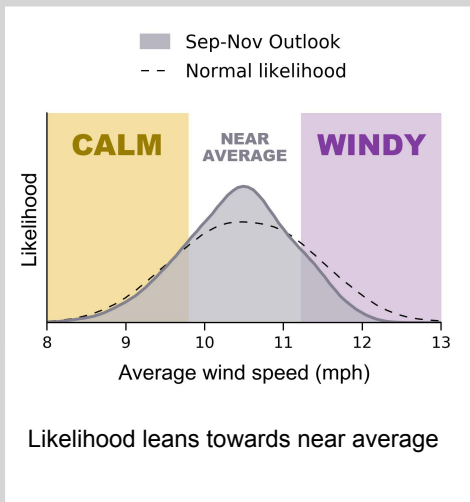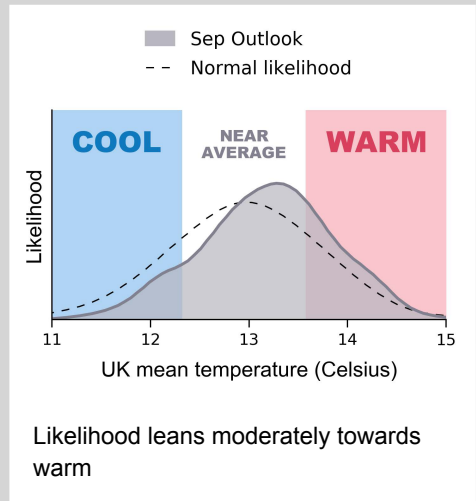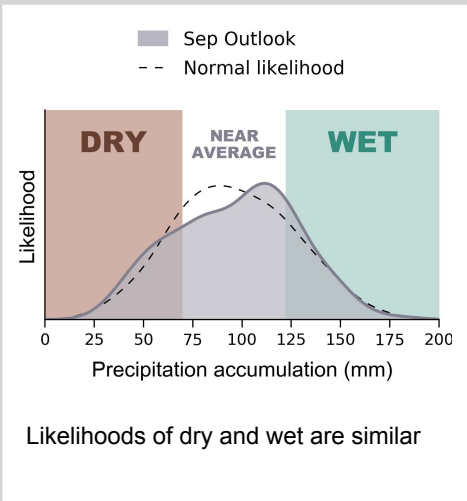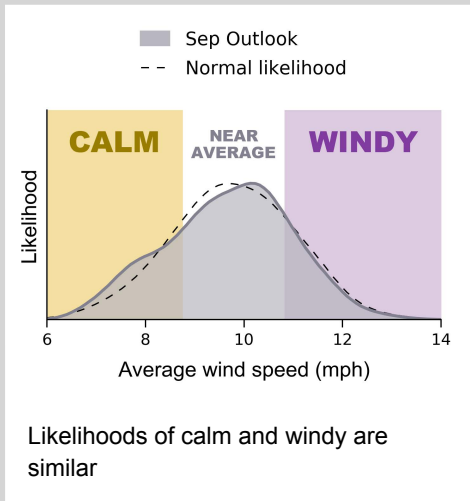
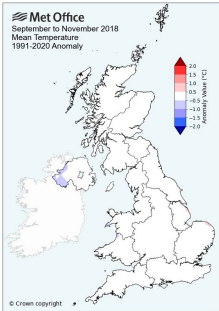| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average temperatures (3-month)

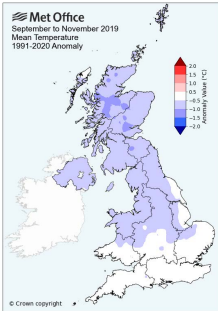This page shows the long-term average temperatures across the UK applicable to the 3-month Outlook period.

Average temperatures for September - November based on observations of past years.
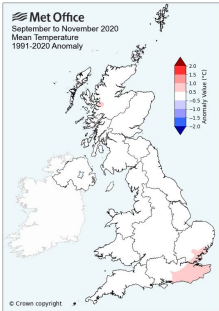
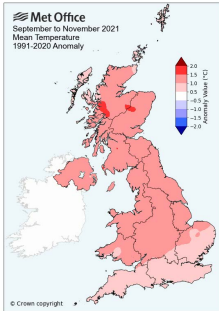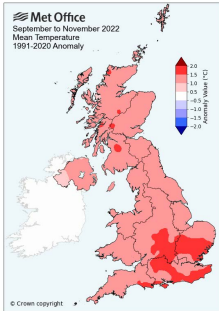## Last 5 years temperatures, difference from average (3-month)
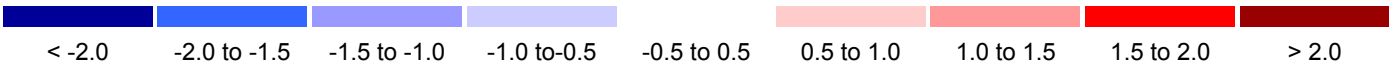

Sep - Nov 2018   Sep - Nov 2019   Sep - Nov 2020   Sep - Nov 2021   Sep - Nov 2022

Anomaly (°C)

| < -2.0 | -2.0 to -1.5 | -1.5 to -1.0 | -1.0 to-0.5 | -0.5 to 0.5 | 0.5 to 1.0 | 1.0 to 1.5 | 1.5 to 2.0 | > 2.0 |
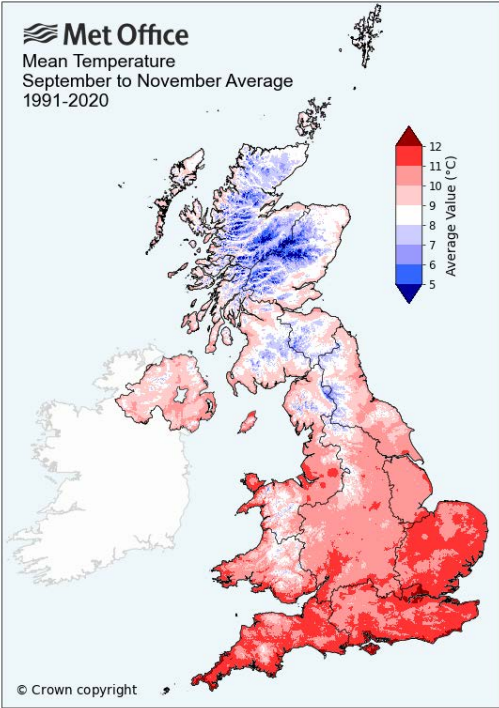
These maps show how September - November temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate warmer-than-average conditions while blue shades indicate cooler-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

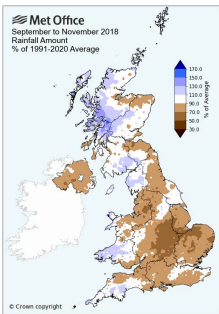| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average precipitation (3-month)

This page shows the long-term average precipitation across the UK applicable to the 3-month Outlook period.
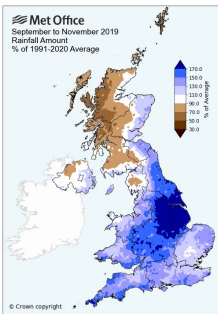

Average precipitation for September - November based on observations of past years.
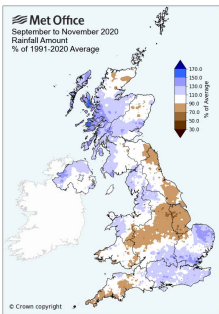
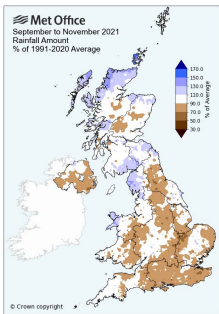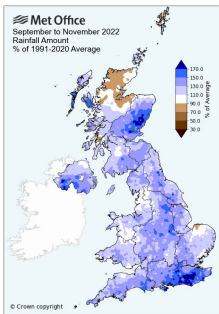# Last 5 years precipitation, difference from average (3-month)
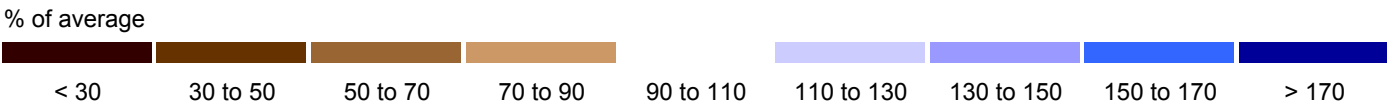

Sep - Nov 2018   Sep - Nov 2019   Sep - Nov 2020   Sep - Nov 2021   Sep - Nov 2022

% of average

| < 30 | 30 to 50 | 50 to 70 | 70 to 90 | 90 to 110 | 110 to 130 | 130 to 150 | 150 to 170 | > 170 |
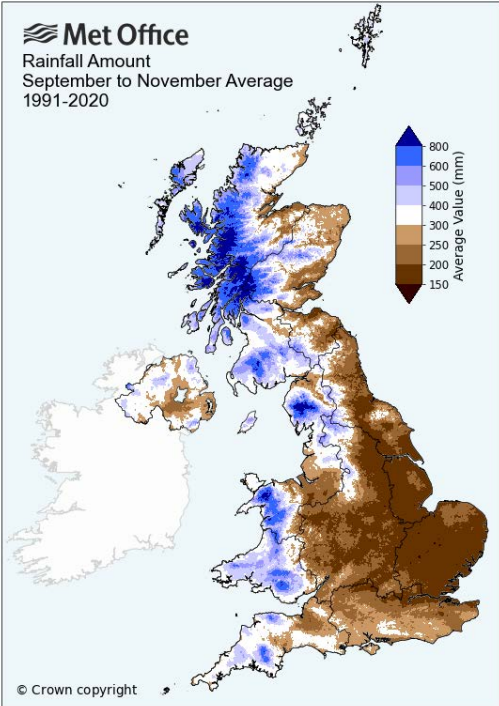
These maps show how September - November precipitation in the last five years differed from the long-term average precipitation shown above in the upper panel. Brown colours indicate drier-than-average conditions while blue shades indicate wetter-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

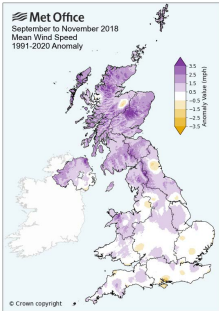| 3-month	1-month	About the Outlook	Shifts in likelihood	What is average?	Q&A	Find out more

Long-term average wind speed (3-month)

This page shows the long-term average wind speed across the UK applicable to the 3-month Outlook period.
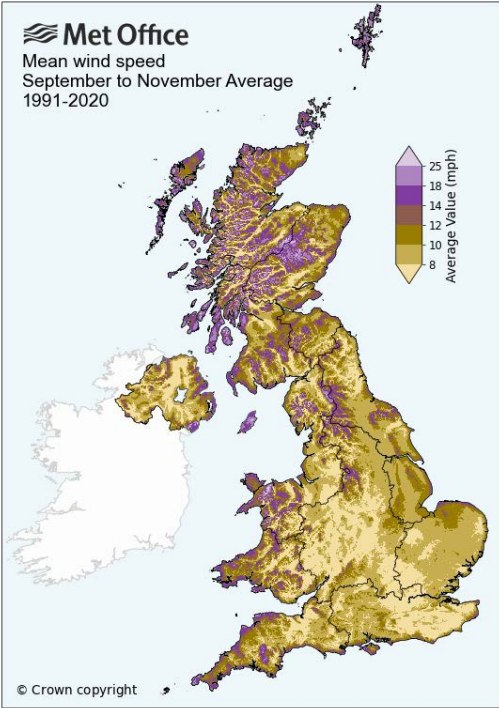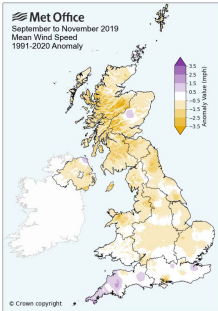

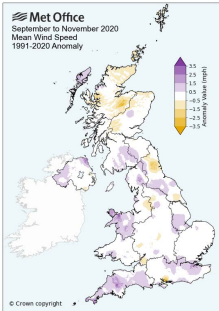Average wind speed for September - November based on observations of past years.

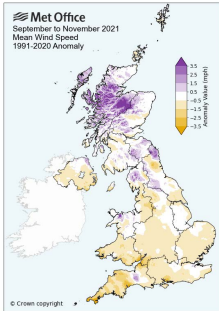## Last 5 years wind speed, difference from average (3-month)
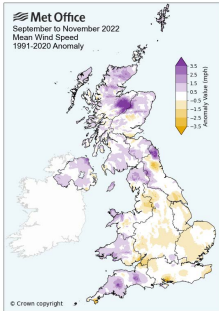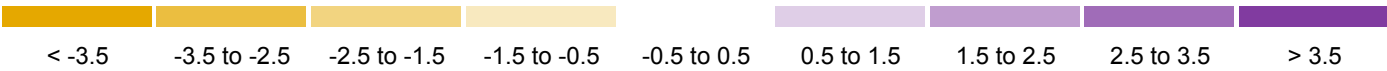

Sep - Nov 2018 Sep - Nov 2019 Sep - Nov 2020 Sep - Nov 2021 Sep - Nov 2022

Anomaly (mph)

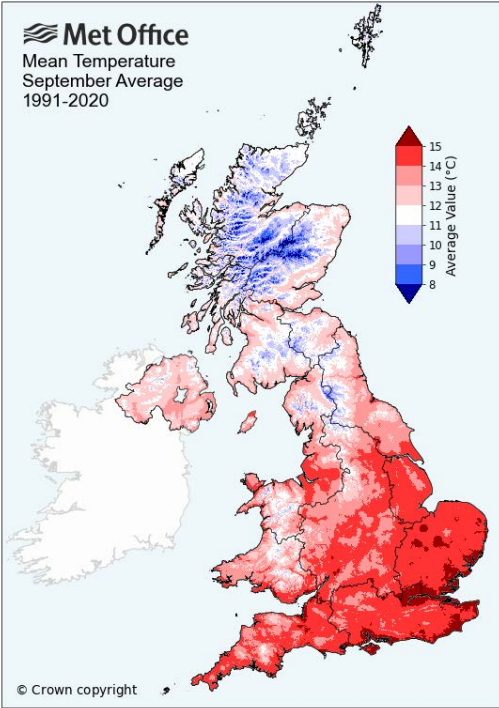| < -3.5	-3.5 to -2.5	-2.5 to -1.5	-1.5 to -0.5	-0.5 to 0.5	0.5 to 1.5	1.5 to 2.5	2.5 to 3.5	> 3.5

These maps show how September - November wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

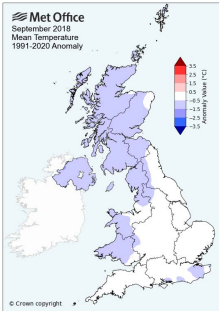| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average temperatures (1-month)

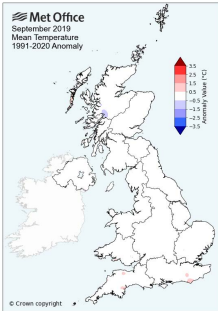This page shows the long-term average temperatures across the UK applicable to the 1-month Outlook period.

Average temperatures for September based on observations of past years.
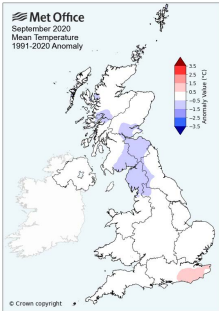
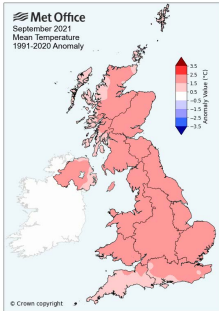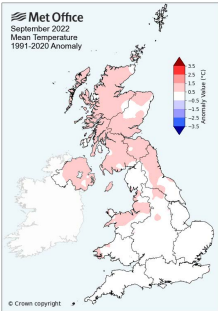## Last 5 years temperatures, difference from average (1-month)

Sep 2018   Sep 2019   Sep 2020   Sep 2021   Sep 2022

Anomaly (°C)

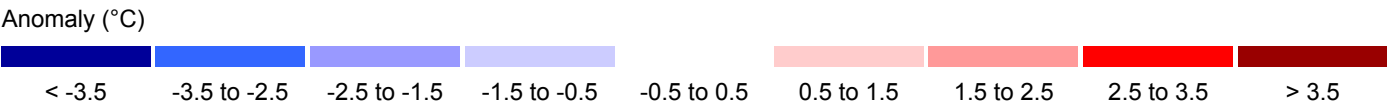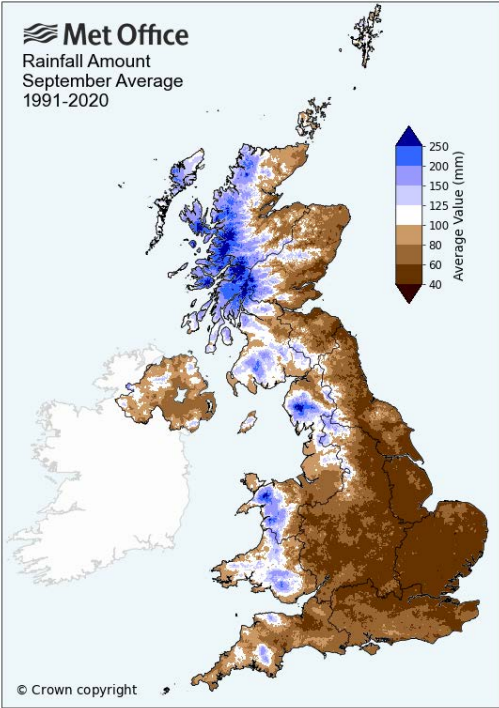| < -3.5 | -3.5 to -2.5 | -2.5 to -1.5 | -1.5 to -0.5 | -0.5 to 0.5 | 0.5 to 1.5 | 1.5 to 2.5 | 2.5 to 3.5 | > 3.5 |

These maps show how September temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate warmer-than-average conditions while blue shades indicate cooler-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

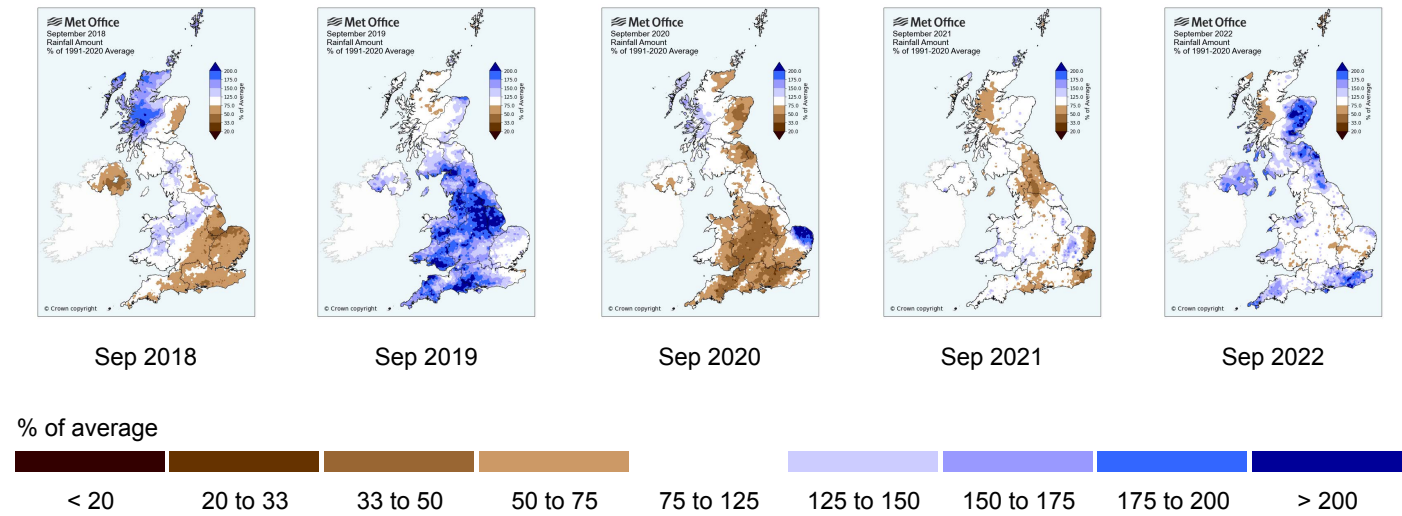| 3-month	1-month	About the Outlook	Shifts in likelihood	What is average?	Q&A	Find out more

Long-term average precipitation (1-month)

This page shows the long-term average precipitation across the UK applicable to the 1-month Outlook period.

Average precipitation for September based on observations of past years.

Last 5 years precipitation, difference from average (1-month)

Sep 2018   Sep 2019   Sep 2020   Sep 2021   Sep 2022

% of average

| < 20	20 to 33	33 to 50	50 to 75	75 to 125	125 to 150	150 to 175	175 to 200	> 200

These maps show how September precipitation in the last five years differed from the long-term average precipitation shown above in the upper panel. Brown colours indicate drier-than-average conditions while blue shades indicate wetter-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

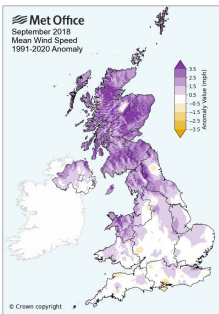| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average wind speed (1-month)

This page shows the long-term average wind speed across the UK applicable to the 1-month Outlook period.
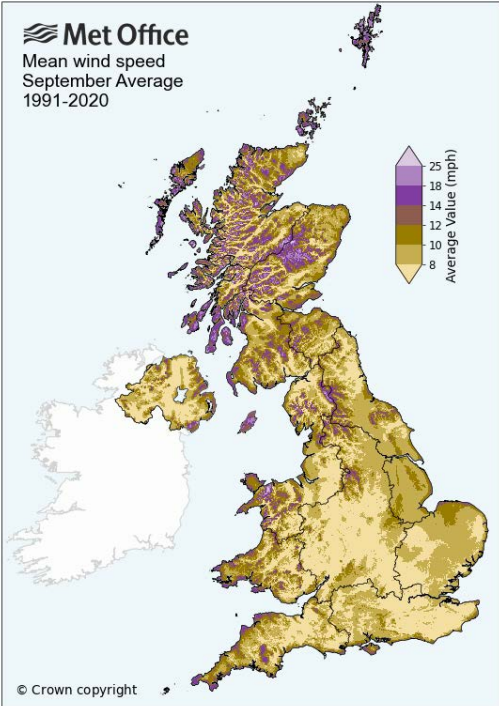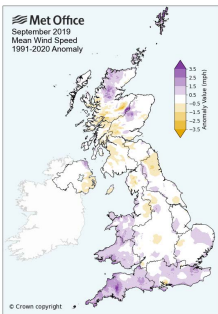

Average wind speed for September based on observations of past years.

Last 5 years wind speed, difference from average (1-month)

Sep 2018   Sep 2019   Sep 2020   Sep 2021   Sep 2022

Anomaly (mph)

| < -3.5 | -3.5 to -2.5 | -2.5 to -1.5 | -1.5 to -0.5 | -0.5 to 0.5 | 0.5 to 1.5 | 1.5 to 2.5 | 2.5 to 3.5 | > 3.5 |
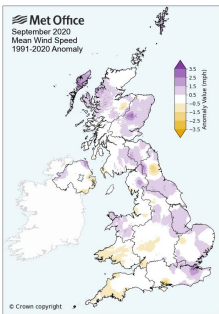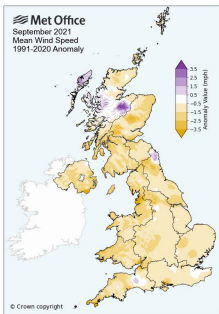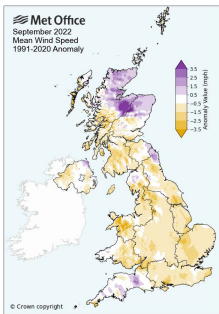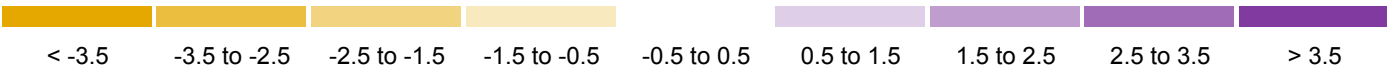
These maps show how September wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate of the UK is available at www.metoffice.gov.uk/climate.

| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Q&As

Q. What is the point of the Outlook, who is it meant for?
A. This Outlook is produced for planners in government and business who make risk-based decisions. These users are aware of the complexities of this type of outlook and will include those factors in their decision-making process.

Q. How did you decide on the Outlook? What are the main factors affecting it?
A. It is based on information from observations, several numerical prediction systems and expert judgement. See the 'Outlook in Context' section of the Outlook for more details.

Q. Is the Outlook for the whole country?
A. The Outlook is for the average of conditions over the UK as a whole. Regional deviations from the UK-average can occur. For example, average UK precipitation can result from below-average rainfall for the northwest and above-average for the southeast.

Q. How confident are you in this Outlook?
A. The percentages in the 'Likelihood of Impact' sections of the Outlook give the level of confidence.

Q. With the increased chance of warmer than normal conditions this Autumn does this mean we might finally see some hot weather?
A. The Outlook is not a guarantee of prolonged warm weather. Higher-than-average overall temperatures could just as easily be due to a mix of warm and cool days, warm nights, or less extreme levels of warmth. Even with above average temperatures it could still be cloudy, wet or windy. Furthermore, there still remains a chance of cooler-than-average conditions for the season overall and shorter spells of cooler or warmer weather are quite likely just through normal fluctuations within the season.

Q. With the Outlook suggesting a reduced chance of windy conditions, will autumn be less stormy than normal?
A. Although the Outlook suggests a reduction in the chance of windy conditions overall, this doesn't preclude the possibility of a windy autumn, nor the chance of stormy spells at times within the season. The Outlook does not predict the number of named storms, as the naming of storms is based on likely impacts, which can depend on factors such as the track of the storm and its time of arrival. This level of detail is beyond the scope of the 3-month outlook, and indications on prospects for storms should be sought from our shorter-range forecasts.

Q. What impact will El Niño have on the weather this autumn?
A. In general, the association between El Niño and UK weather is fairly weak. The UK is a long way from the tropical Pacific and it is only one of a number of factors that forecasters will take into account when assessing the forecast. Generally speaking, past El Niño events have tended to favour wetter and windier conditions for the UK in late autumn and early winter, although the effect is relatively easily disrupted by other factors in any given year.

| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

About the Outlook

The Outlook presented here is for United Kingdom as a whole and is based on information from observations, several numerical prediction systems and expert judgement. It is updated monthly to reflect the latest information on global weather patterns and their effect on the UK. The Outlook is designed to be used in conjunction with shorter-range forecasts – detailed weather forecast information is available on the Met Office website.

In this product, temperature refers to the average of daytime maxima and night-time minima. Wind speed refers to the average wind speed at a height of 10 metres. All numerical values relate to averages (temperature, wind speed) or totals (precipitation – rain, sleet, snow and hail) over 1 or 3 months, which are further averaged over the UK land area as a whole. Normal likelihood and long-term averages are established using the period 1991-2020.

Find out more

- UK 3-month Outlook user guidance page:
  https://www.metoffice.gov.uk/services/government/contingency-planners/user-guidance/user-guidance

- Explainers on climate drivers (such as the El Niño Southern Oscillation and North Atlantic Oscillation) that influence seasonal forecasts and the impacts they can have on UK weather:
  https://www.metoffice.gov.uk/services/government/contingency-planners/seasonal-forecasts-and-climate-drivers-resources

- Contingency planners page:
  https://www.metoffice.gov.uk/services/government/contingency-planners/index

Contact us

Website:
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enquiries@metoffice.gov.uk

Provide your feedback

We would like to hear your feedback on the UK 3-month Outlook to understand how it is being used. Please fill in the short form using this link or QR code to share your thoughts.