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

3-month summary

- Slight increase in the likelihood of a wet period
- The chance of a cold period is similar to the long term average
- Nevertheless, the chance of cold is higher than for equivalent periods in many recent years
- Cold weather impacts such as snow and ice therefore remain possible

3-month likelihood of impact

Temperature

15% chance the season will be COLD	65% chance the season will be NEAR AVERAGE	20% chance the season will be MILD
0.8× ▼ the normal chance	1.1× ▲ the normal chance	1.0× ↕ the normal chance

Precipitation

15% chance the season will be DRY	60% chance the season will be NEAR AVERAGE	25% chance the season will be WET
0.8× ▼ the normal chance	1.0× ↕ the normal chance	1.3× ▲ the normal chance

Wind speed

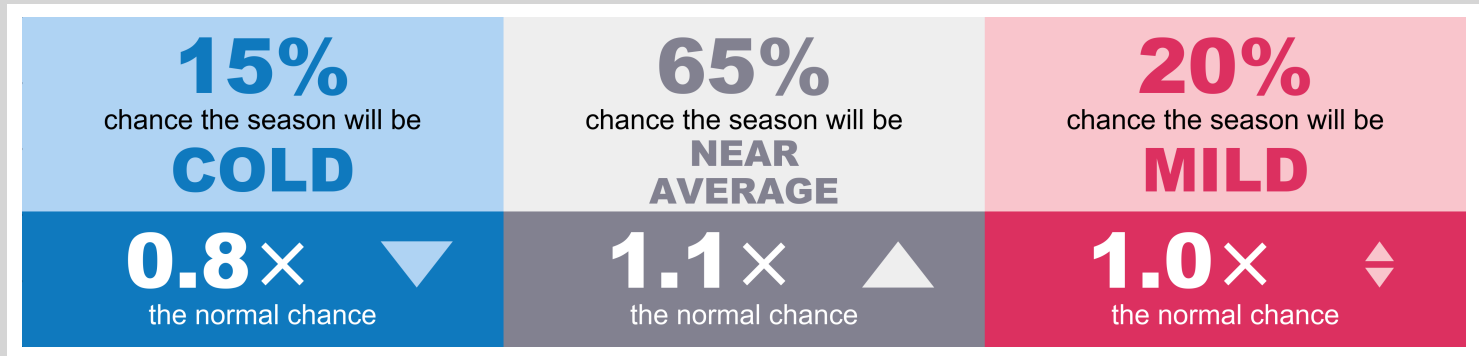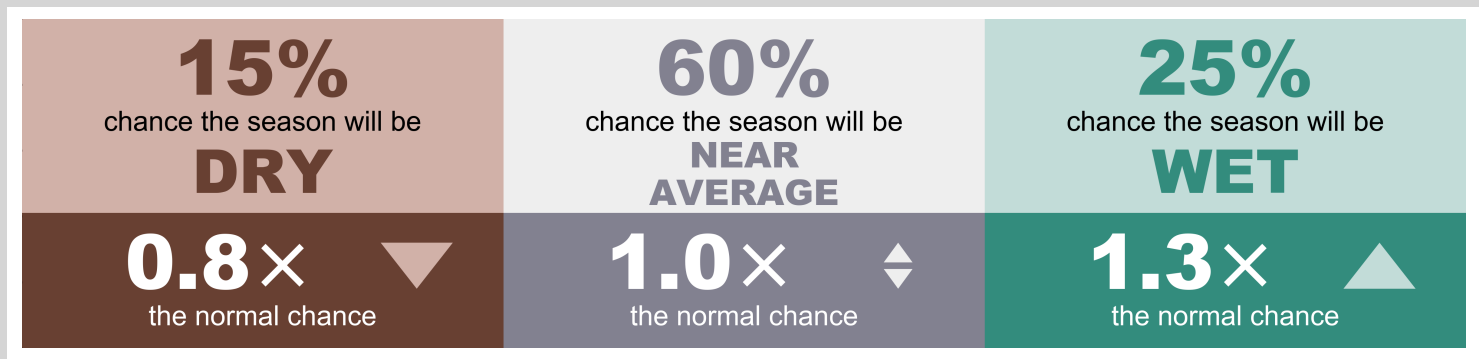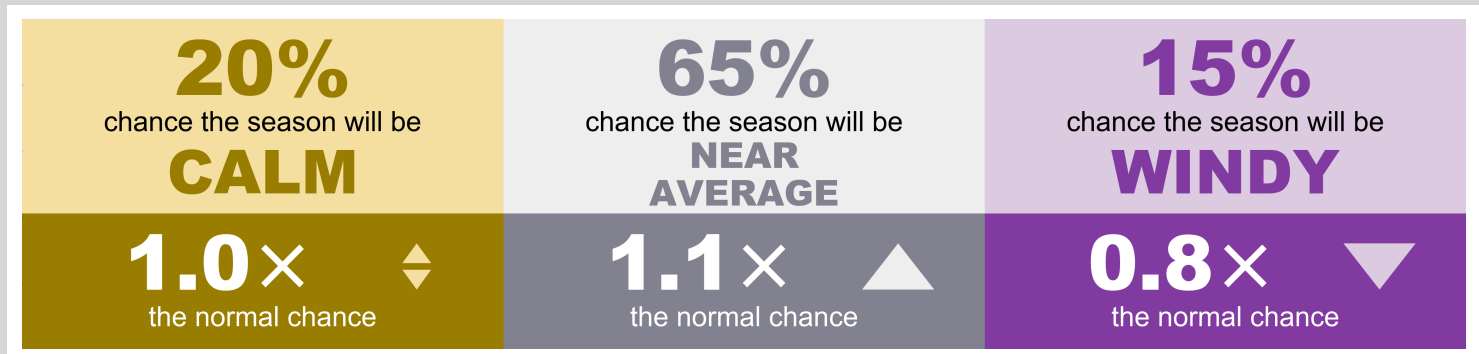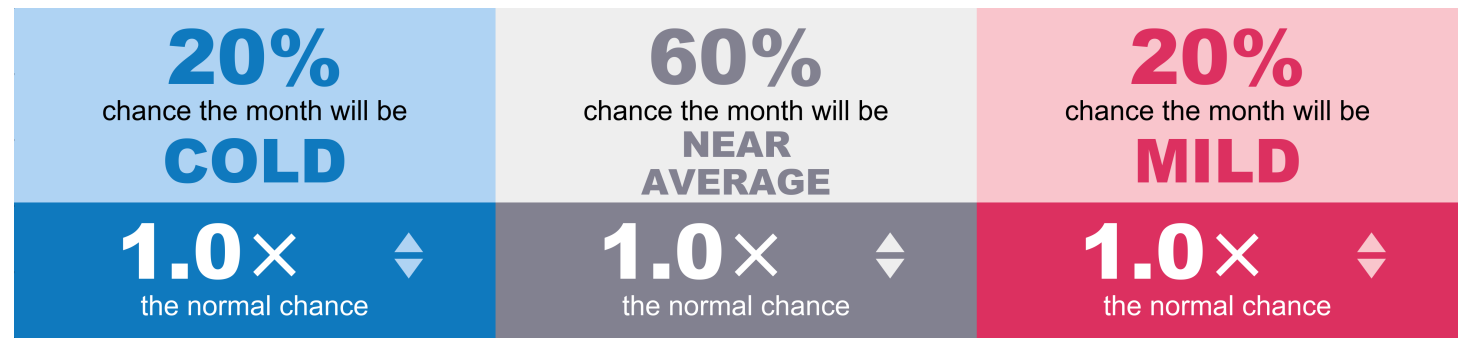| 20% chance the season will be CALM	65% chance the season will be NEAR AVERAGE	15% chance the season will be WINDY
1.0× ↕ the normal chance	1.1× ▲ the normal chance	0.8× ▼ the normal chance

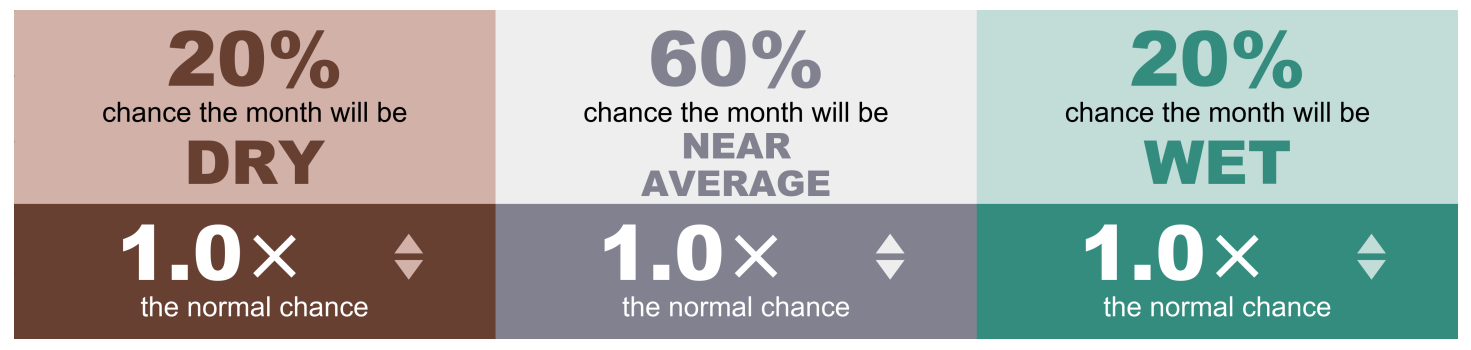| 3-month	1-month	About the Outlook	Shifts in likelihood	What is average?	Q&A	Find out more

1-month summary

- The chance of a wet November is similar to normal
- The likelihood of a cold month is also similar to normal
- Slight reduction in the likelihood of a windy month
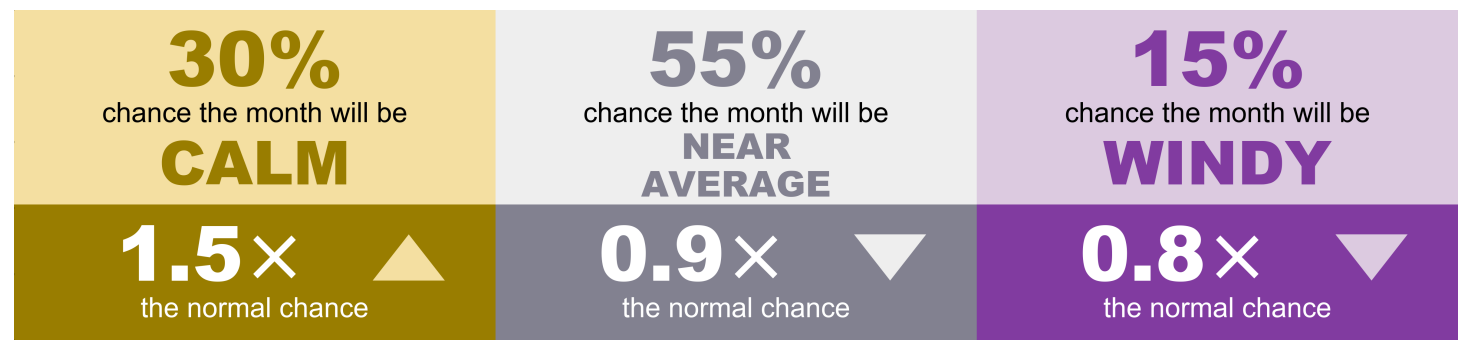
1-month likelihood of impact

Temperature

20% chance the month will be **COLD**	**60%** chance the month will be **NEAR AVERAGE**	**20%** chance the month will be **MILD**
1.0× the normal chance	**1.0×** the normal chance	**1.0×** 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

30% chance the month will be **CALM**	**55%** chance the month will be **NEAR AVERAGE**	**15%** chance the month will be **WINDY**
1.5× ▲ the normal chance	**0.9×** ▼ the normal chance	**0.8×** ▼ 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:

COLD, NEAR AVERAGE and MILD 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

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23
Temperature	NEAR AVERAGE	NEAR AVERAGE	MILD	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	MILD	NEAR AVERAGE
Precipitation	WET	NEAR AVERAGE	WET	DRY	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	DRY	NEAR AVERAGE
Wind	NEAR AVERAGE	NEAR AVERAGE	WINDY	CALM	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	CALM	NEAR AVERAGE	NEAR AVERAGE

Same 1-month period over the last 10 years

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Temperature	NEAR AVERAGE	MILD	MILD	COLD	NEAR AVERAGE	NEAR AVERAGE	COLD	MILD	NEAR AVERAGE	MILD
Precipitation	DRY	NEAR AVERAGE	WET	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	NEAR AVERAGE	DRY	WET
Wind	CALM	CALM	WINDY	CALM	NEAR AVERAGE	NEAR AVERAGE	WINDY	CALM	NEAR AVERAGE	NEAR AVERAGE

Outlook in context

Drivers of UK weather for November to January

Global weather patterns can affect UK weather during the coming season and their influence acts to shift the chances of the categories in the Outlook. Drivers relevant to the current Outlook are:

• The warming of UK climate consistent with wider global warming trends
• A strong El Niño event which increases the likelihood of mild, wet and windy weather in late autumn and early winter and dry and cold conditions in late winter
• The easterly phase of the Quasi-Biennial Oscillation (QBO), which favours a reduction in the strength of the westerly winds over the UK
• A strong positive phase of the Indian Ocean Dipole which increases the chances of southwesterly winds during winter

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. There is good agreement for increased chances of lower-than-average pressure to the south and southwest of the UK and above average pressure to the northeast in the Outlook period. The UK's position in this pattern means that there are potential risks from both wetter weather from the Atlantic and colder conditions from the European continent.

Impact

The chance of cold conditions is similar to normal. However, the likelihood is higher than has been typical for this period over many recent years. Therefore, impacts from cold weather remain possible throughout the period but are more likely later in the period. The likelihood of wet conditions is slightly higher than normal. Spells of wet and windy weather could occur at times throughout the period. Given October has been wet in many parts of the UK, this suggests a slightly higher than normal chance of impacts from heavy rain early in this period.

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

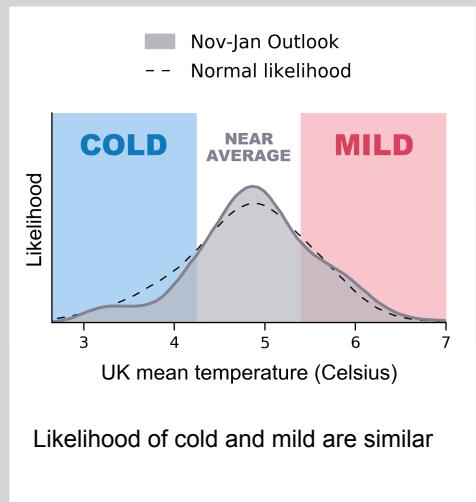# Outlook compared to normal likelihood

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
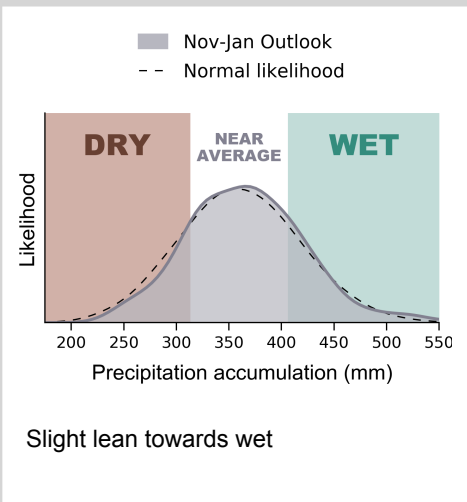• The solid curve shows the current likelihood based on the Outlook for this year

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 of cold and mild are similar

3-month precipitation Outlook compared to normal

Slight lean towards wet

3-month wind speed Outlook compared to normal

Similar likelihood of calm and windy

1-month temperature Outlook compared to normal

Likelihood of cold and mild are similar

1-month precipitation Outlook compared to normal

Likelihood of dry and wet are similar

1-month wind speed Outlook compared to normal

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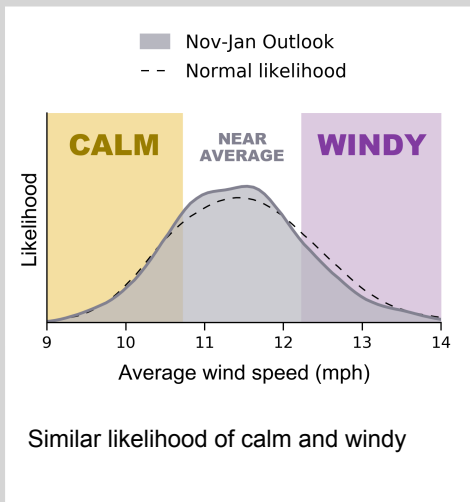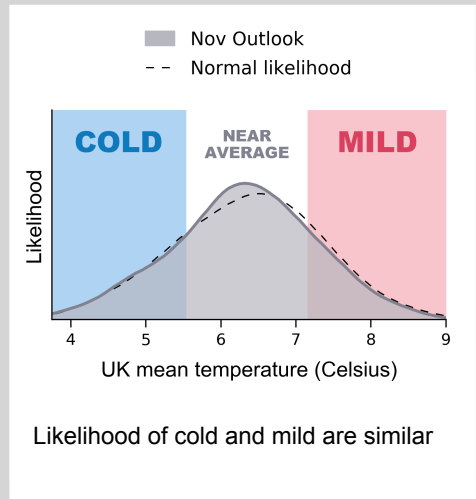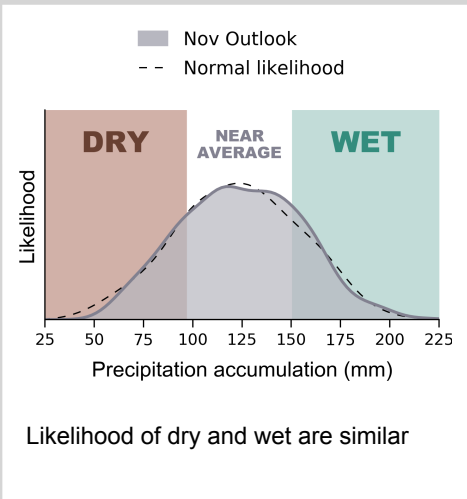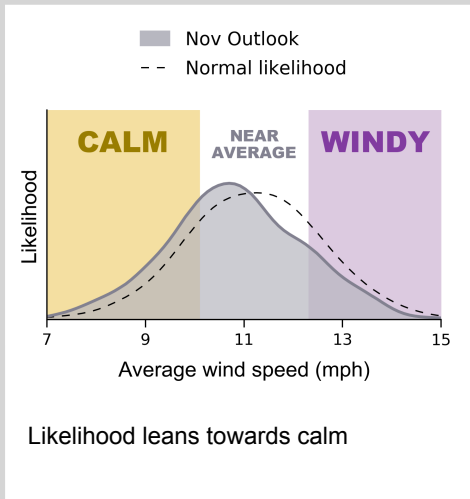
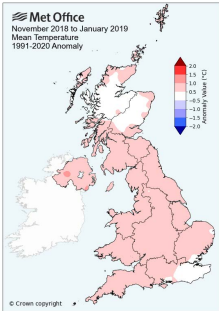| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average temperatures (3-month)

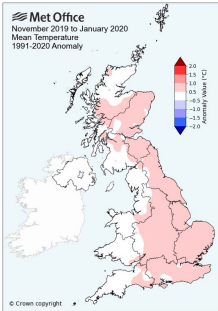This page shows the long-term average temperatures across the UK applicable to the 3-month Outlook period.

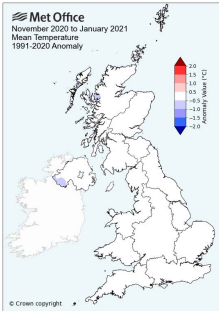Average temperatures for November - January based on observations of past years.

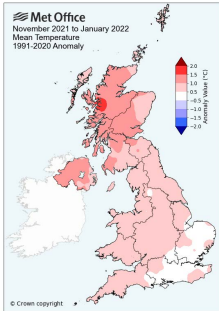## Last 5 years temperatures, difference from average (3-month)
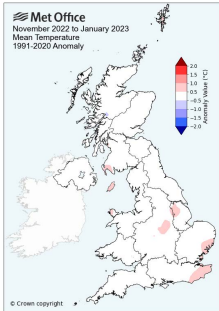

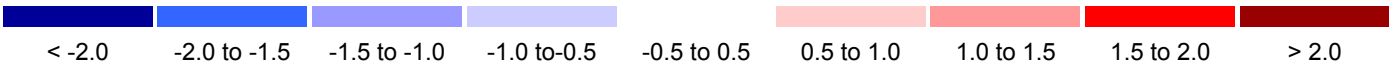Nov - Jan 2018/19   Nov - Jan 2019/20   Nov - Jan 2020/21   Nov - Jan 2021/22   Nov - Jan 2022/23

Anomaly (°C)

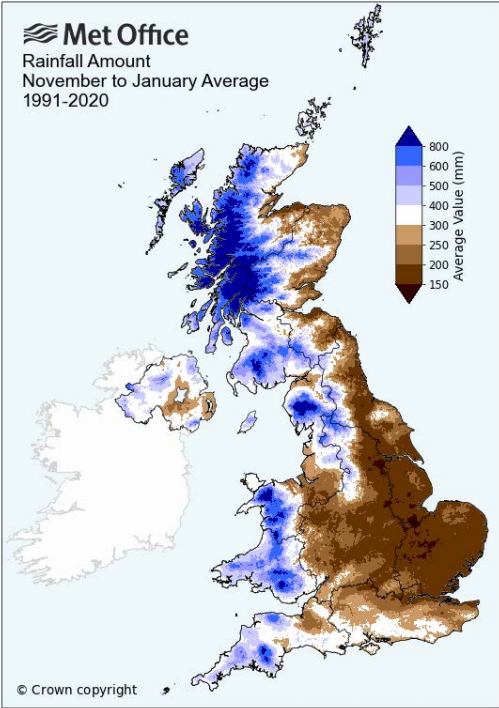| < -2.0 | -2.0 to -1.5 | -1.5 to -1.0 | -1.0 to-0.5 | -0.5 to 0.5 | 0.5 to 1.0 | 1.0 to 1.5 | 1.5 to 2.0 | > 2.0 |
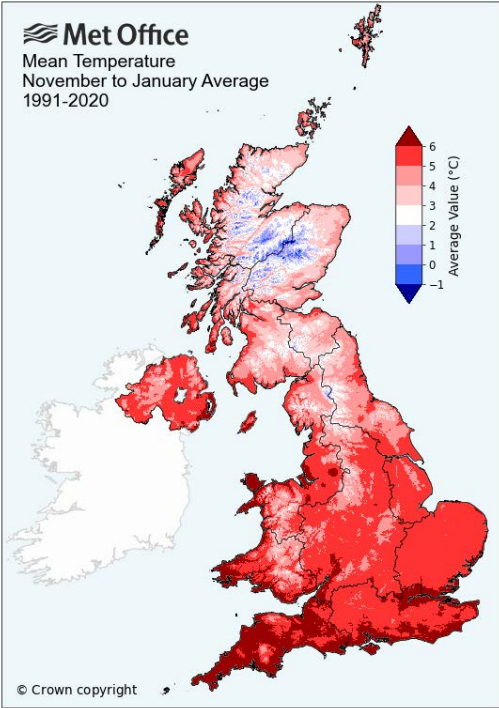
These maps show how November - January temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate milder-than-average conditions while blue shades indicate colder-than-average conditions. Detailed information on the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

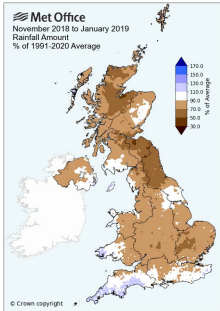| 3-month | 1-month | About the Outlook | Shifts in likelihood | What is average? | Q&A | Find out more |

Long-term average precipitation (3-month)

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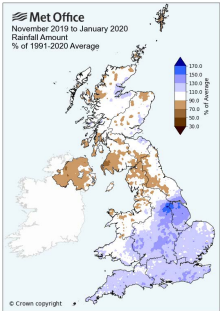

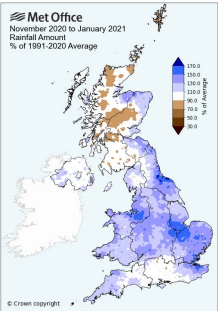Average precipitation for November - January based on observations of past years.

Last 5 years precipitation, difference from average (3-month)
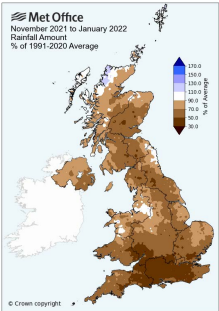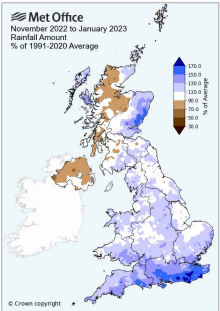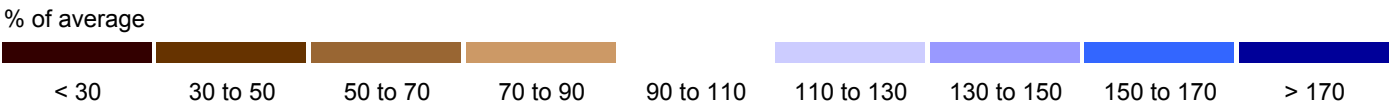

Nov - Jan 2018/19   Nov - Jan 2019/20   Nov - Jan 2020/21   Nov - Jan 2021/22   Nov - Jan 2022/23

% 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 November - January 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.

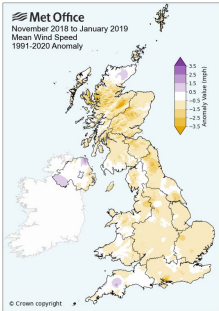| 3-month	1-month	About the Outlook	Shifts in likelihood	What is average?	Q&A	Find out more

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.
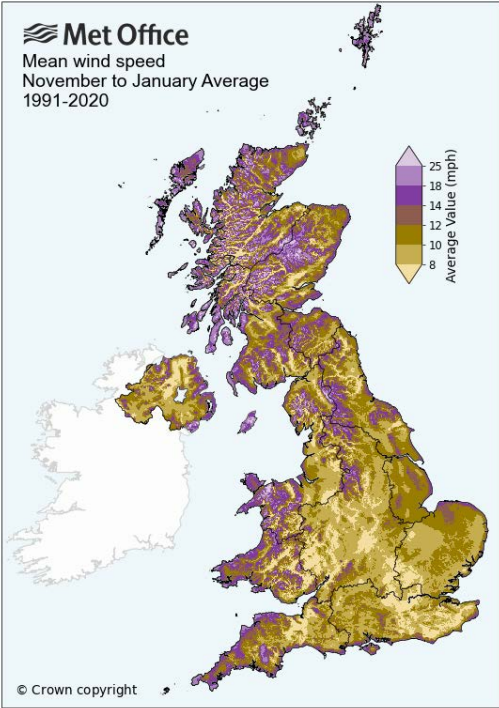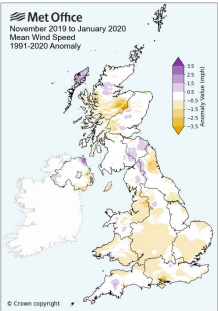

Average wind speed for November - January based on observations of past years.
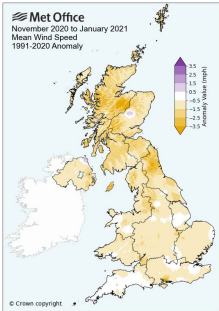
Last 5 years wind speed, difference from average (3-month)
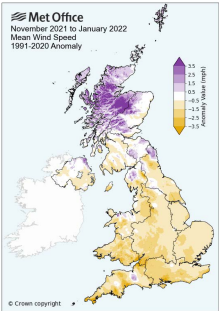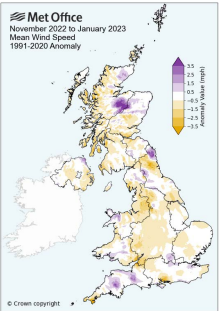

Nov - Jan 2018/19   Nov - Jan 2019/20   Nov - Jan 2020/21   Nov - Jan 2021/22   Nov - Jan 2022/23

Anomaly (mph)

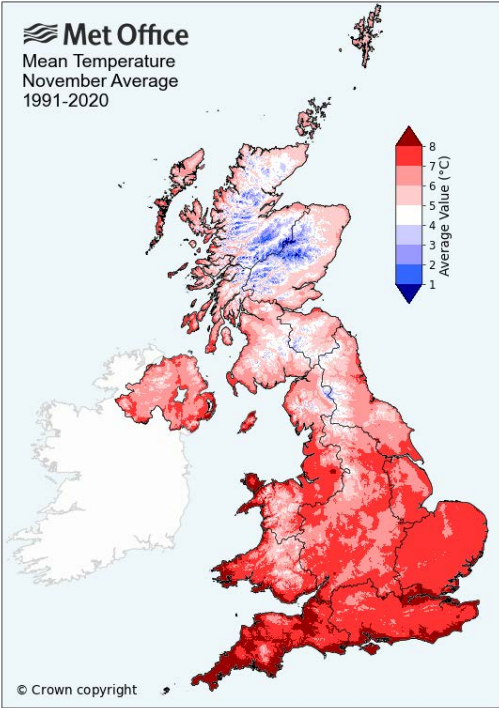| < -3.5 | -3.5 to -2.5 | -2.5 to -1.5 | -1.5 to -0.5 | -0.5 to 0.5 | 0.5 to 1.5 | 1.5 to 2.5 | 2.5 to 3.5 | > 3.5 |
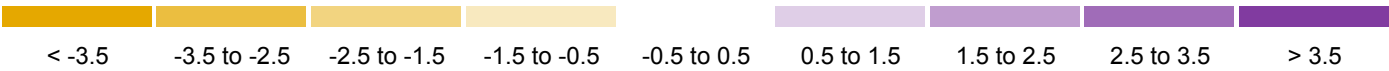
These maps show how November - January wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate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

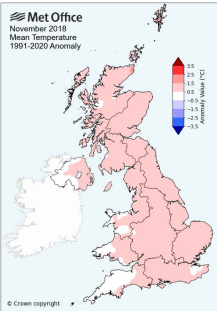| 3-month | 1-month | About the Outlook | Shifts in likelihood | **What is average?** | Q&A | Find out more |

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 November based on observations of past years.

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

Nov 2018   Nov 2019   Nov 2020   Nov 2021   Nov 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 |
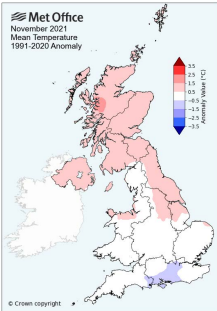
These maps show how November temperatures in the last five years differed from the long-term average temperatures shown above in the upper panel. Pink and red colours indicate milder-than-average conditions while blue shades indicate colder-than-average conditions. Detailed information on the climate 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.
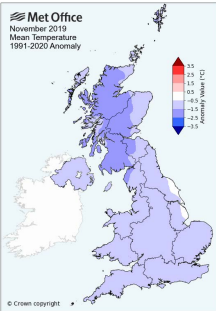

Met Office
Rainfall Amount
November Average
1991-2020

Average Value (mm): 250, 200, 150, 125, 100, 80, 60, 40

© Crown copyright

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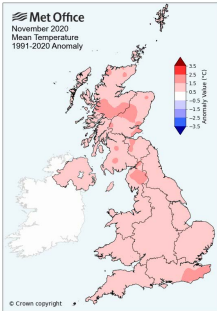
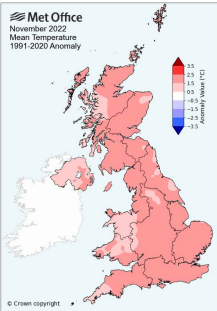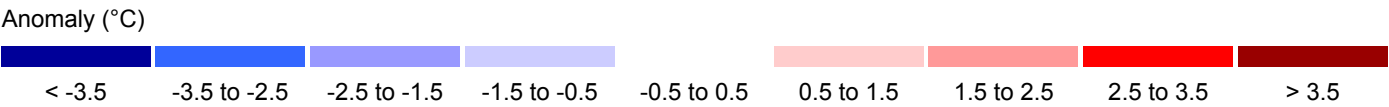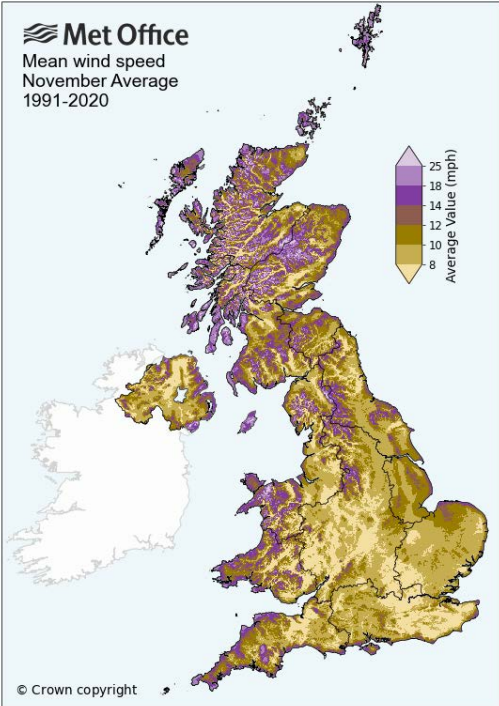## Last 5 years precipitation, difference from average (1-month)

Nov 2018   Nov 2019   Nov 2020   Nov 2021   Nov 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 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.

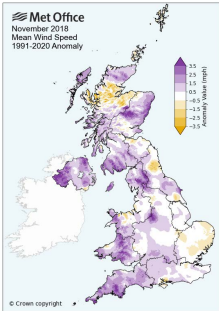| 3-month | 1-month | About the Outlook | Shifts in likelihood | **What is average?** | Q&A | Find out more |

Long-term average wind speed (1-month)

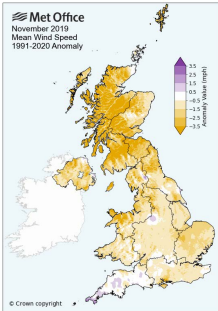This page shows the long-term average wind speed across the UK applicable to the 1-month Outlook period.

Met Office
Mean wind speed
November Average
1991-2020

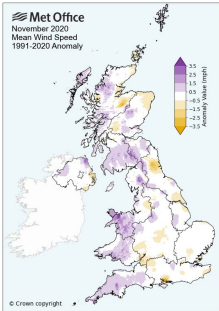Average wind speed for November based on observations of past years.

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

Nov 2018   Nov 2019   Nov 2020   Nov 2021   Nov 2022

Anomaly (mph)

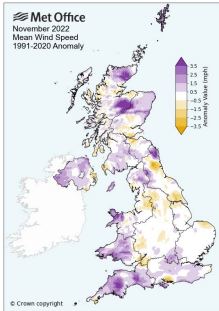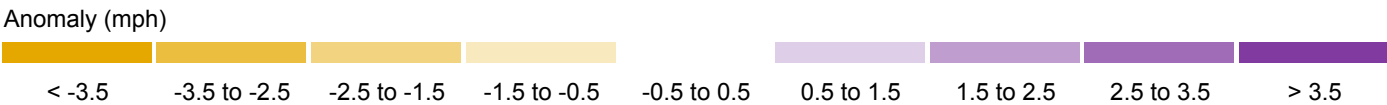| < -3.5 | -3.5 to -2.5 | -2.5 to -1.5 | -1.5 to -0.5 | -0.5 to 0.5 | 0.5 to 1.5 | 1.5 to 2.5 | 2.5 to 3.5 | > 3.5 |
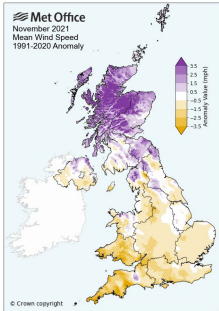
These maps show how November wind speed in the last five years differed from the long-term average wind speeds shown above in the upper panel. Yellow colours indicate calmer-than-average conditions while purple shades indicate windier-than-average conditions. Detailed information on the climate of the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

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. Does this Outlook mean we won't have any cold weather in late autumn / early winter?
A. While the chances of mild or cold temperatures are close to normal over the coming 3 months, in recent years the likelihood of our cold category has often been quite small, reflecting the fact that the UK climate has warmed compared to the long-term average. As a result, the chance of cold conditions is higher than we would typically expect considering this warming. Cold spells, with associated hazards such as snow and ice, are therefore more likely this year compared to the last decade. Despite this, a more usual winter remains the most likely outcome.

Q. What impact will El Niño have on the weather this autumn and winter?
A. El Niño has a moderate influence on the UK's weather and is only one of a number of factors that meteorologists will take into account when assessing the Outlook. Generally speaking, past El Niño events have tended to favour wetter and milder conditions for the UK in late autumn with colder and drier conditions later in winter, although the effect is relatively easily disrupted by other factors in any given year.

Q. Why is the chance of mild and cold as well as dry and wet so evenly balanced?
A. During this period, seasonal prediction systems show an increased likelihood of higher-than-normal pressure sitting to the northeast of the UK with lower-than-average pressure to the south. This pattern would potentially reduce the strength of our usual prevailing westerly winds from the Atlantic Ocean, leading to a drier and colder period. On the other hand, Atlantic weather systems that butt up against this pattern could bring more persistent mild and wet conditions. The exact positioning of these features would dictate whether we see colder periods with associated winter hazards such as snow and ice, or if milder, wetter weather would be more prevalent.

| 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

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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.