

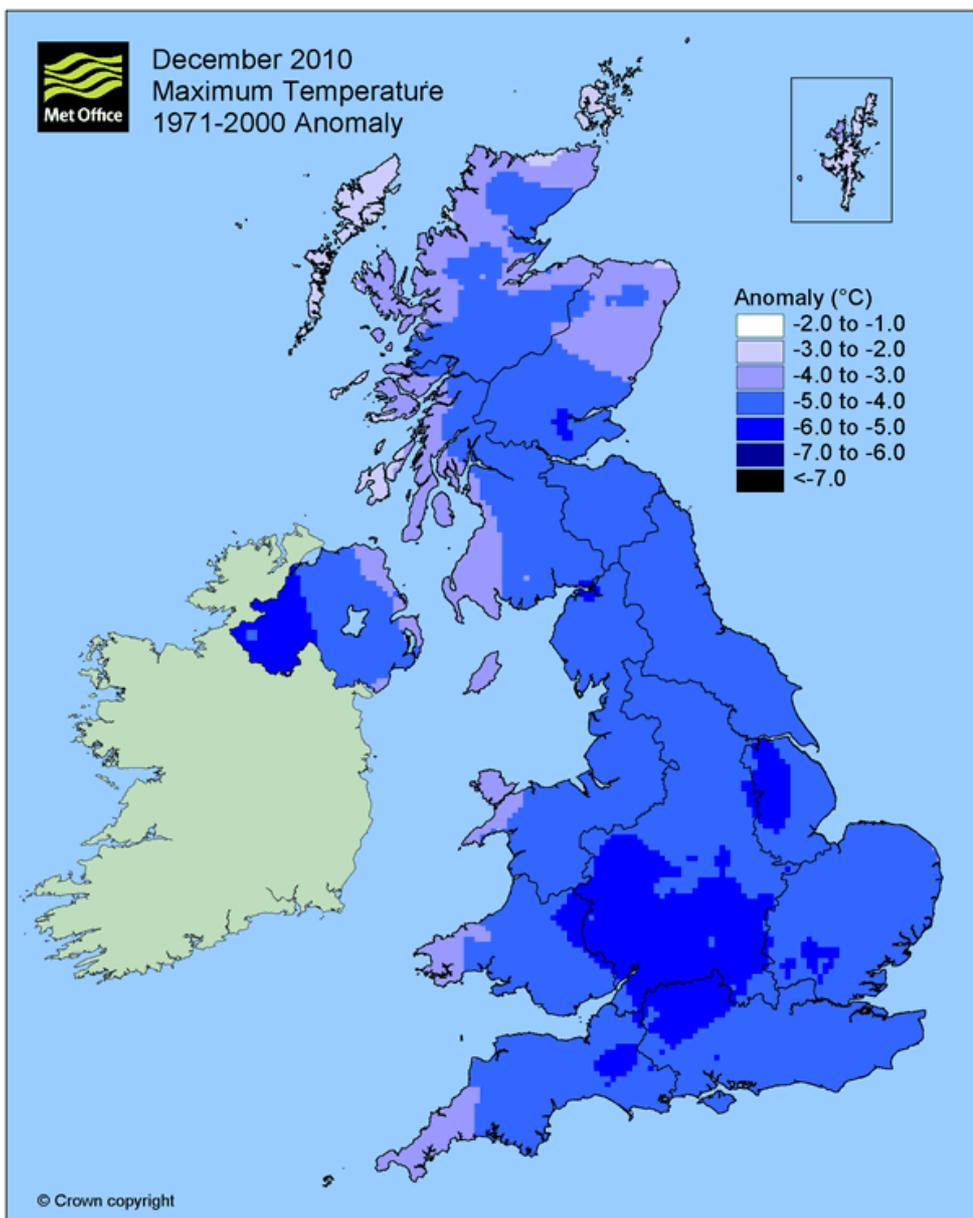
December 2010

The averaging period used for the following assessment was 1971-2000.

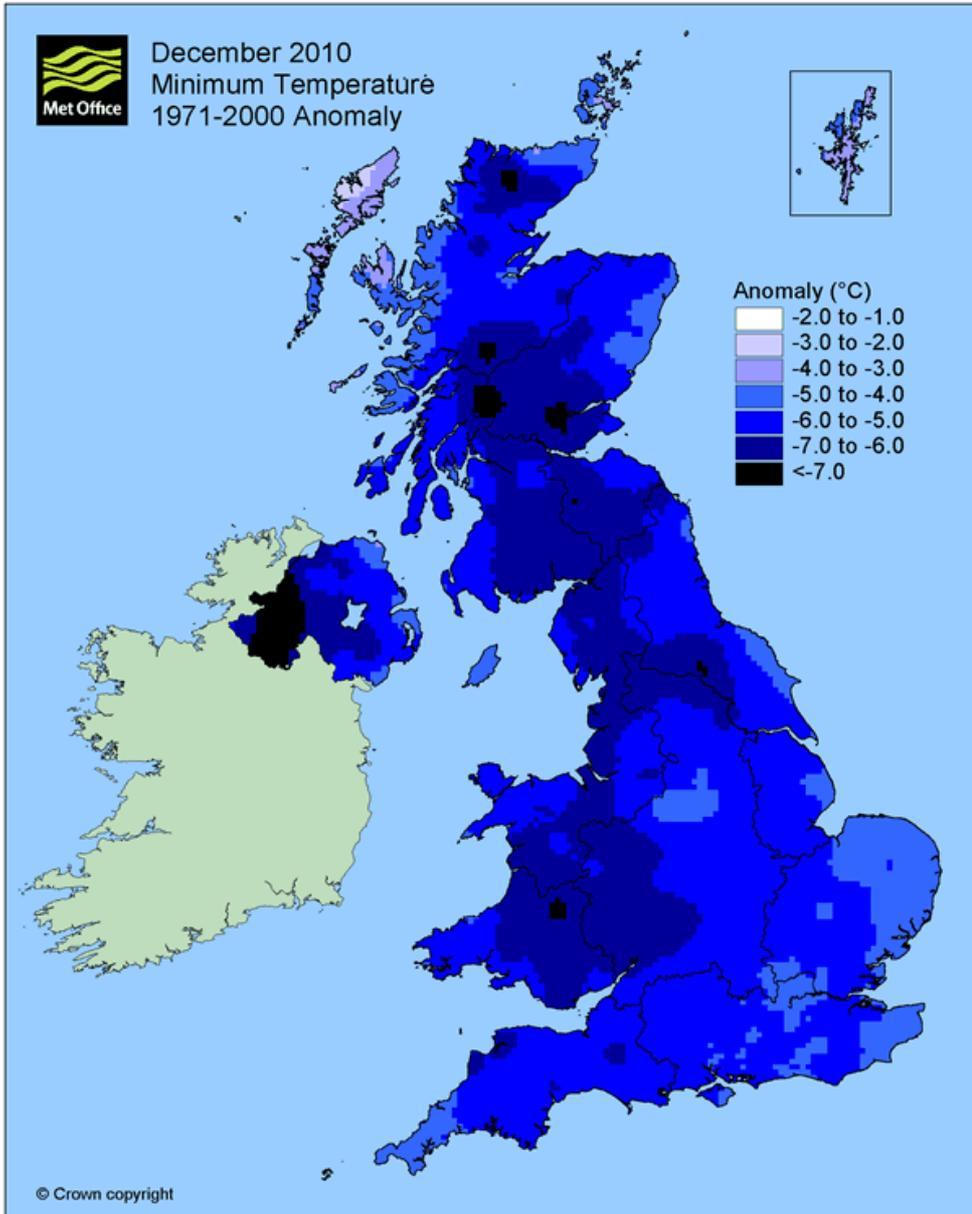
UK overview

Temperature anomaly maps for December 2010:

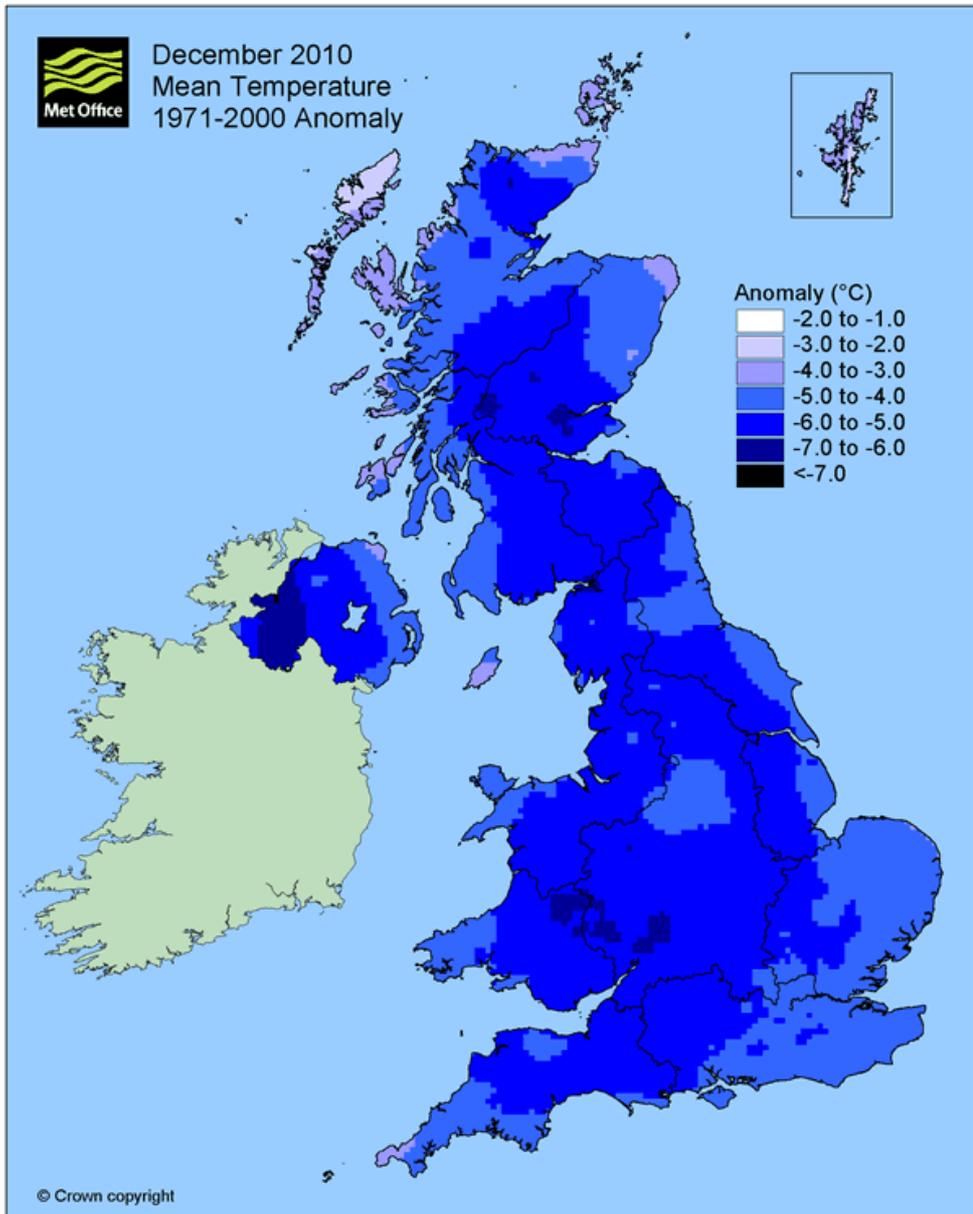
Mean maximum temperature anomaly



Mean minimum temperature anomaly



Mean temperature anomaly



It was exceptionally cold across the UK, with mean temperatures some 5 °C below the 1971-2000 average, and the coldest December in over 100 years. It was also one of the coldest calendar months in the last 100 years and the coldest since February 1986. Temperatures quite widely fell to very low values on several nights and remained below freezing during the day. The number of days with air frost was the highest for December for over 50 years. It was briefly less cold around mid-month and temperatures rose to around normal in the last few days. Snowfalls occurred in almost all areas, especially in the first week and from mid-month until Christmas.

December was, however, generally drier and sunnier than normal. Less than a third of the average rainfall was recorded over most of Wales, western England and western Scotland. It was the driest December over the UK since 1963 and the third-driest in the 100-year series. It was the sunniest December in Northern Ireland, and the second-sunniest December in Scotland, in series from 1929. In contrast, it was a dull month in south-east England with less than 50% of average sunshine in some areas.

A maximum temperature of 12.0 °C was recorded at Treknaw and Bude (both Cornwall) on 28th. A minimum temperature of -21.3 °C was recorded at Altnaharra (Highland) on 2nd. The significant precipitation fell as

snow, with accumulations of over 40 cm in places; amongst the greatest depths were 54 cm at Nunraw Abbey (East Lothian) at 0900 on 7th, 55 cm at Westgate (County Durham) on 2nd and 58 cm at Balmoral (Aberdeenshire) on 1st. A wind gust of 74 mph was recorded at Needles Old Battery (Isle of Wight) on 4th.

England diary of highlights

An exceptionally cold month, with almost everywhere seeing snow at times. Mean temperatures were over 5 °C below the 1971–2000 average in most areas, and it was the coldest December for over 100 years. It was also one of the coldest calendar months in the 100-year series and the coldest since February 1986. In the Central England Temperature series it was the coldest December since 1890. There were some severe frosts and the number of days with air frost was the highest in December for over 50 years.

Much of the precipitation fell as snow, especially in the first and third weeks. December was drier than normal across almost all areas, with much of the north-west, south-west and the Midlands recording less than a third of the average amount. It was the equal fifth-driest December in the 100-year series.

Sunshine durations varied from over 150% of normal across much of northern England to about 50% in the south-east. Across northern England it was one of the sunniest Decembers in a series from 1929.

1st to 8th:

It was a very cold start with frequent snow showers in many eastern areas during 1st and 2nd, giving significant accumulations in places, including up to 25 cm in parts of Surrey and Sussex. Daytime temperatures widely remained below freezing and overnight temperatures fell below -10 °C in many northern and western areas, with -19.5 °C at Redesdale Camp (Northumberland) early on 3rd. A fragmented band of rain, sleet and snow moved eastwards during 3rd, leaving the rest of the first week mainly dry and often sunny, though some places saw further snow showers on 7th and 8th. It continued very cold with widespread frost, and freezing fog slow to clear. Overnight temperatures fell well below -7 °C across much of the Midlands and northern England on 6th, 7th and 8th with -18.0 °C at Topcliffe (North Yorkshire) early on 6th. Daytime maxima were also very low, with -6.8 °C at Church Fenton (North Yorkshire) on 6th, -5.6 °C at Scampton (Lincolnshire) on 7th and -7.9 °C at Carlisle (Cumbria) on 8th.

9th to 15th:

Brisk north-westerly winds developed, bringing increasingly cloudy, but less cold, conditions. Rain showers from Cheshire into the Midlands fell onto frozen surfaces on the morning of 9th, causing widespread ice. Outbreaks of rain and drizzle spread south-eastwards on 10th and 11th with a good deal of cloud and hill fog generally. The 12th to 15th was a relatively quiet period with high pressure. Many places were somewhat less cold than previously, though generally still well below average with overnight frosts. There was plenty of sunshine on 12th but then it became generally dull and cloudy, with locally persistent fog. Light rain affected eastern areas on most days and spread further west at times.

16th to 26th:

The 16th saw a change to much colder conditions as a band of rain, sleet and snow moved southwards, followed by strong northerly winds and snow showers in Norfolk and Suffolk. On 17th, snow showers fell in south-west England and parts of the Midlands, then an area of prolonged snow moved across southern counties on 18th, causing significant disruption to transport networks. A bitterly cold night followed, with a minimum temperature of -19.6 °C at Shawbury (Shropshire). Snow showers continued in the north-east and the far south on 19th, otherwise it was mainly dry and bright. Another very cold night followed, with temperatures well below -10 °C widely and -18.7 °C at Pershore (Worcestershire). Early on 20th, the south-west saw heavy snow, with 10 to 15 cm accumulating widely and around 25 cm locally, and snow spread eastwards to other parts of southern England later. Temperatures fell well below -10 °C overnight across the north, even on coasts, with -11.9 °C at Blackpool (Lancashire) and -10.5 °C at Scarborough (North Yorkshire).

Snow continued in the Midlands at times through 21st and 22nd, the night 21st/22nd being very cold, with temperatures below -12 °C across the north-east. The 23rd was cloudy and very cold with light snow in many places. The Christmas period was dry and cold with some sunshine in many areas, although snow showers continued in northern and eastern parts and freezing fog also affected some areas.

27th to 31st:

The last few days were less cold, with temperatures returning to near normal across many parts and a thaw of lying snow. For example, at Exeter airport (Devon) a minimum temperature of -16.5 °C overnight 25th/26th was followed by one of 4.1 °C on 26th/27th. Rain affected western areas on 27th, spreading north-eastwards on 28th and turning to snow in the north. Otherwise, 27th to 31st were generally dry but dull, with widespread fog and low cloud persisting throughout the day across many areas.

Wales diary of highlights

An exceptionally cold month with mean temperatures over 5 °C below the 1971-2000 average, making it the coldest December for over 100 years. It was also one of the coldest calendar months in the 100-year series, and the coldest since February 1986. There were some very cold nights, and the number of days with frost was the highest in December for over 50 years.

There was less than a third of normal rainfall in almost all areas, making it the driest December since 1996 and equal fourth-driest December in the 100-year series. It was generally sunnier than normal, with over 150% of average across much of the western half of Wales.

1st to 8th:

A very cold period with some snow. Strong north-easterly winds on 1st and 2nd brought a few wintry flurries and it was very cold with sharp overnight frosts, the temperature at Sennybridge (Powys) falling to -12.9 °C early on 3rd. Winds turned south-westerly on 3rd with a band of rain, sleet and snow spreading from the west, the snow over high ground, then further wintry showers on 4th and 5th. Sharp overnight frosts returned overnight on 5th and 6th with mainly dry conditions, but some mist and fog and daytime temperatures struggling to get above freezing, although Aberdaron (Gwynedd) managed 5.9 °C on 5th and 6.3 °C on 6th. A band of light snow affected the north on 7th which was again very cold with a sharp overnight frost. Further wintry showers fell on 8th with the cold weather continuing in north-easterly, then northerly, winds.

9th to 16th:

A strong north-westerly flow developed on 9th with a few showers into north-east Wales. Frosty overnight, then conditions turned somewhat milder with weak bands of rain and drizzle on 10th and 11th. Rain cleared later on 11th to allow an overnight frost with mist and freezing fog patches. These were slow to clear along the Welsh border on 12th, otherwise it was a dry and bright day, but cold. Mainly dry, but rather cloudy from 13th to 15th, although with patchy overnight mist, fog and frost. Conditions turned much colder again later on 16th as a cold front and band of rain spread southwards introducing a strong northerly flow. It was very frosty overnight with -7.8 °C at Sennybridge, and snow showers developed over north-western hills.

17th to 26th:

Much colder air spread southwards on 17th with widespread and sometimes heavy snow showers, and temperatures struggled to rise above freezing in many areas. Further heavy snow showers on 18th, then very cold overnight with -12.2 °C recorded at Llysdinam (Powys). Many areas were dry on 19th, but temperatures remained below freezing and very cold overnight, with temperatures below -10 °C widely and -17.5 °C at Capel Curig (Conwy). Further snow spread to south then mid Wales on 20th, with a maximum temperature of -8.6 °C at Capel Curig. On 21st and 22nd, snow affected north and mid Wales. The 23rd was mainly dry with some brightness, but bitterly cold with a strong north-easterly wind developing and a sharp overnight frost.

Cold on 24th with lighter winds, but a few light wintry flurries in the far west. Mainly dry but still very cold on 25th, then a very sharp frost overnight with freezing fog and temperatures falling below $-10\text{ }^{\circ}\text{C}$ ($-16.5\text{ }^{\circ}\text{C}$ at Llysdyham). After a very cold morning on 26th, temperatures began to recover as milder southerly winds developed and rain, preceded by some sleet, spread eastwards.

27th to 31st:

It was generally cloudy on 27th and 28th with rain at times and fresh to strong southerly winds. It turned very misty as mild air came across cold ground. Mainly dry on 29th, but continuing mainly cloudy with widespread mist and some fog. The temperature reached $10.8\text{ }^{\circ}\text{C}$ at Trawsgoed (Ceredigion) on 29th. Generally cloudy on 30th and 31st with mist and fog patches and patchy drizzle, but temperatures stayed mainly above freezing.

Scotland diary of highlights

An exceptionally cold month, with mean temperatures on the mainland about $5\text{ }^{\circ}\text{C}$ below the 1971-2000 average and around $3\text{ }^{\circ}\text{C}$ below in the Northern and Western Isles. It was the coldest December for over 100 years and the second-coldest calendar month on record, with only February 1947 colder. There were some severe frosts, and the number of days with air frost was the highest in December for over 50 years.

December was drier than normal in most areas, with less than a third of the average amount across the west, in the Western Isles and Shetland. Only in parts of eastern Scotland were amounts closer to average. It was the fifth-driest December in the 100-year series and the driest since 1995. Much of the precipitation fell as snow, especially in the first and third weeks.

Sunshine amounts were generally above average, with well over 150% across much of southern and western Scotland. It was the second sunniest December in a series from 1929.

1st to 8th:

A cold day on 1st with frequent snow showers in the east and the Glasgow area. On 2nd showers were more confined to the east and died out later. After falling to $-21.3\text{ }^{\circ}\text{C}$, Altnaharra (Highland) recorded a day maximum of $-14.0\text{ }^{\circ}\text{C}$. Patchy rain, sleet and snow moved into the west on 3rd, whilst the east was mostly dry and cold. A bright day across the south on 4th but the north was cloudier with wintry showers. Clear or sunny spells and wintry showers on 5th, the showers becoming confined to the north during the morning, with a widespread, locally severe frost early and late. Snow showers in north on 6th, and snow over the central lowlands cleared only slowly southwards, followed by freezing fog and a severe frost. Generally 5 to 10 cm fell across the central belt but locally 15 cm or more, with travel chaos. At 0900 on 7th, a depth of 54 cm was recorded at Nunraw Abbey (East Lothian). Severe frost for much of 7th, the temperature having fallen to $-17.8\text{ }^{\circ}\text{C}$ at Strathallan (Perthshire) and only rising to around $-5\text{ }^{\circ}\text{C}$ in the Glasgow and Edinburgh areas. Snow showers affected the north. Little change on 8th with further snow showers in the north, but dry and sunny elsewhere with frost persisting all day.

9th to 15th:

Becoming cloudier and milder on 9th with some patchy light rain. The thaw gathered pace on 10th, helped by strong winds, and Drumnadrochit (Highland) reached $10.1\text{ }^{\circ}\text{C}$. The 11th was mainly dry and mild, with some sunshine, followed by a cold night with a frost with Eskdalemuir (Dumfries and Galloway) and Tyndrum (Stirling) dipping to $-4.8\text{ }^{\circ}\text{C}$. The 12th to 14th were mainly dry days with some sunshine but frost early and late, although cloudier with light showers in the north and north-east. A frosty start to 15th, then mainly dry and becoming cloudy with patchy rain in the north-west. Much colder air reached the Northern Isles during the evening, spreading to all parts later in the night.

16th to 26th:

A cold day on 16th with frequent snow showers and gales in the north, but dry and brighter in the south. Cold on 17th with snow showers continuing over the north and near the west coast, but dry and bright elsewhere followed by a cold night, Loch Glascarnoch (Highland) dipping to -17.2 °C. The 18th had a mixture of sunshine and snow showers. Another cold day with snow showers on 19th, heaviest over Edinburgh and the Lothians. Coastal snow showers on 20th, otherwise dry, but freezing fog persisted for much of the day at Glasgow airport. Another very cold day on 21st, Aberdeen airport having a maximum temperature of -6.9 °C and Altnaharra -13.8 °C. The nights of 21st/22nd and 22nd/23rd were very cold, with temperatures falling well below -10 °C, and -20.2 °C recorded at Altnaharra early on 22nd. Coastal snow showers in north and north-east on 22nd and some freezing fog patches. Remaining very cold on 23rd with Machrihanish (Argyll and Bute) falling to -12.9 °C overnight. Snow showers in the north and, at first, in the east. Snow showers in the north on 24th, turning to rain or sleet in the north-west later, but bright elsewhere. On 25th, eastern areas stayed mainly dry and cold, but rain and sleet showers in the west fell on frozen surfaces, especially around Glasgow. Dry and cold for much of 26th but milder on the west coast with rain during the afternoon and sleet edged eastwards during the evening, with snow on higher ground.

27th to 31st:

Becoming milder on 27th, but mainly cloudy and misty with outbreaks of rain, sleet and snow. Staying cloudy with outbreaks of rain and hill snow on 28th. Dull and misty on 29th with outbreaks of rain but some bright intervals in the far north. Another mainly cloudy day on 30th with some patchy rain and still dull with some frost early and late. Mainly dry and cloudy on 31st with some rain by late evening in the north, and snow showers over Shetland.

Northern Ireland diary of highlights

An exceptionally cold month with mean temperatures over 5 °C below the 1971-2000 average. It was the coldest calendar month for over 100 years, slightly colder than February 1947. There were some severe frosts, and the number of days with air frost was the highest in December in over 50 years. During the second half of the month, many places had sub-zero temperatures continuously for over seven days. During this period, new Northern Ireland records were set for low night minimum and low day maximum temperatures. It was milder briefly during the second week and after Christmas.

Overall, December was drier than average, with about 50% of the normal amount. Much of the precipitation fell as snow, especially in the first and third weeks. Well over 150% of normal hours of sunshine were recorded, and it was the sunniest December in a series from 1929.

1st to 8th:

Mainly dry but cold on 1st with a few light snow flurries, the temperature at Castlederg (County Tyrone) falling to -11.7 °C overnight. Sunny on 2nd but isolated coastal snow showers. Cold and cloudy on 3rd with patchy light sleet and snow. Still cold on 4th with freezing fog persisting all day in places and wintry showers affecting northern parts, most frequent during the evening. A widespread, locally severe frost early on 5th, with wintry showers in the early hours then a mainly dry and sunny day, but frost and freezing fog in the evening. Still cold on 6th with occasionally heavy snow slowly moving southwards, followed by clearing skies and ice. Dry, clear start to 7th with patchy freezing fog and severe frost, the temperature at Castlederg having fallen to -14.5 °C. Snow showers in north later. Cold again on 8th with frost persisting all day inland and wintry showers in north.

9th to 15th:

Clouding over from the west on 9th with a thaw setting in. The 10th was cloudy, mild and windy, with Derrylin (County Fermanagh) reaching 9.3 °C. The 11th was again mild, with Stormont Castle (County Down) reaching 9.6 °C. Colder on 12th with sunshine, but frost and patchy fog early and late. Dry but cloudy on 13th. Patchy fog and frost dispersing in early morning sunshine on 14th but reforming after dusk, clouding over in north. Early fog slowly dispersed on 15th, otherwise it was generally cloudy with patchy light rain, mainly in west.

16th to 25th:

A mild start to 16th with early rain. Then much colder with snow showers and strong northerly winds. Very cold on 17th with occasional snow showers, giving accumulations of 10 to 15 cm quite widely and over 20 cm in the east. The 18th was exceptionally cold, with a daytime maximum of -11.0 °C at Castlederg being provisionally the lowest on record in Northern Ireland. Cold and bright with snow showers on 19th and then the temperature at Castlederg dipped to -18.0 °C overnight. Very cold on 20th and 21st, mainly dry although a few coastal snow showers and patchy freezing fog. Temperatures overnight 21st/22nd fell below -12 °C. Remaining very cold, dry and bright from 22nd to 25th with further local freezing fog. The temperature at Castlederg fell to a new record low for Northern Ireland of -18.7 °C on the morning of 23rd, while Edenfel (County Tyrone) recorded a daytime maximum of -11.3 °C. Both of these set new records for Northern Ireland.

26th to 31st:

The 26th started dry and frosty, with -14.6 °C recorded at Castlederg, then much milder air with outbreaks of rain spread eastwards. Cloudy on 27th with rain turning heavy in the evening. Mild on 28th, 29th and 30th, and mainly cloudy with outbreaks of rain, also mist or fog. Dry, but cloudy on 31st.

Last updated: 27 February 2013