



February 2020

Very wet and windy

February 2020 was an exceptionally wet and windy month. A very strong Polar Jetstream, further south than normal, made conditions very conducive for cyclogenesis and brought a series of vigorous Atlantic depressions, towards the northwest of Ireland. These depressions, including three named storms, Ciara, Dennis and Jorge, brought prolonged periods of heavy rainfall and stormy weather leading to extensive flooding in places, especially along the Shannon catchment. The first week of February started changeable with a transient area of high pressure giving a few dry days on the 5th and 6th. Storm Ciara affected Ireland on the 9th and 10th, followed by several cold windy days, with wintry showers and lying snow in places, as a polar maritime air mass moved in over the country. This pattern repeated the following weekend, as Storm Dennis, one of the deepest mid latitude cyclones ever observed in the North Atlantic, affected Ireland on the 15th and 16th and again, was followed by a cold polar maritime air mass with several days of wintry showers. This seesaw pattern, with vigorous depressions in the North Atlantic sending active weather fronts across Ireland, followed by cold showery conditions continued up to the end of the month when Storm Jorge brought more heavy rain, with snow in places and the strongest winds of the month on the 29th.

Rainfall: Well above average everywhere

All rainfall totals were above their Long-Term Average (LTA) for the month. Sixteen stations have had their wettest February on record, including Phoenix Park, Co Dublin (records going back to 1850), Shannon Airport, Co Clare (record length 74 years), Dublin Airport (record length 78 years), Mullingar, Co Westmeath (record length 70 years), Malin Head, Co Donegal (records going back to 1850), Newport, Co Mayo (record length 60 years), Claremorris, Co Mayo (record length 19 years), Belmullet, Co Mayo (record length 63 years), Casement, Co Dublin (record length 56 years) and Knock Airport (record length 23 years). Percentage of monthly rainfall values ranged from 155% (monthly rainfall total of 156.8 mm) at Sherkin Island, Co Cork to 332% (monthly rainfall total of 220.1 mm) at Gurteen, Co Tipperary. Monthly rainfall totals ranged from 130.4 mm (267% of its LTA) at Dublin Airport to 342.7 mm (271% of its LTA) at Newport, Co Mayo. The highest daily rainfall total was 51.5 mm at Knock Airport, Co Mayo on the 8th Feb (*its highest daily value for February since 1997*). The number of rain days ranged from 23 days at Phoenix Park, Co Dublin to 27 days at a few stations. The number of wet days¹ ranged from 19 days at Phoenix Park, Co Dublin to 26 days at a few stations in counties Mayo, Sligo, Donegal and Galway. The number of very wet days³ ranged from 3 days at both Phoenix Park, Co Dublin and Roche's Point, Co Cork to 15 days at Newport, Co Mayo.

Temperature: Slightly below average in the Northwest, above average elsewhere

Nearly all mean air temperatures were above their Long-Term Average (LTA) for the month. Deviations from mean air temperature for the month ranged from -0.2 °C (5.4 °C, 5.6 °C, 6.0 °C mean temperature) at Markree, Co Sligo, Malin Head, Co Donegal and Newport, Co Mayo respectively to 0.9 °C (6.2 °C mean temperature) at Phoenix Park, Co Dublin. Mean temperatures for the month ranged from 4.2 °C (equal to its LTA) at Knock Airport, Co Mayo to 8.0 °C (0.5 °C above its LTA) at Sherkin Island, Co Cork. The month's highest temperature was reported at Oak Park, Co Carlow on the 28th with a temperature of 14.0 °C. The month's lowest air and grass minimum temperatures were recorded at Mount Dillon, Co Roscommon with the lowest air temperature reported on the 6th with -2.5 °C, while the lowest grass minimum was -7.9 °C reported on the 27th. Most stations reported ground frost. The number of days with ground frost ranged from zero days at Finner, Co Donegal to 19 days at Claremorris, Co Mayo. More than half of the 25 synoptic stations reported air frost. The number of days with air frost ranged from zero days at several stations to 5 days at both Mount Dillon, Co Roscommon and Knock Airport, Co Mayo.

Sunshine: Sunniest in the South and East

Sunshine totals varied across the country. Percentage of monthly sunshine values ranged from 91% (monthly sunshine total of 54.5 hours) at Knock Airport, Co Mayo to 141% (monthly sunshine total of 97.2 hours) at Johnstown Castle*, Co Wexford. Monthly sunshine totals ranged from 50.6 hours (No LTA comparison*) at Valentia Observatory, Co Kerry to 103.2 hours (No LTA comparison*) at Dublin Airport. The highest number of daily sunshine hours recorded this month was 9.4 hours at Johnstown Castle*, Co Wexford on the 27th. The number of dull days² ranged from 3 days at both Dublin Airport and Casement Aerodrome, Co Dublin to 11 days at Valentia Observatory, Co Kerry.

Wind: Storm force winds reported during Storm Ciara, Dennis and Jorge

Of the 23 stations that record wind, 11 stations recorded their windiest February on record, including Shannon Airport (record length 74 years). Monthly mean wind speeds ranged from 9.4 knots (17.4 km/h) at Mullingar, Co Westmeath to 24.3 knots (45.0 km/h) at Mace Head, Co Galway. Gales were reported on numerous days with up to strong gales reported on 5 days or more during the month. Storm force winds were reported on the 8th at Belmullet, Co Mayo and on the 10th, 11th, 16th and 29th at Mace Head, Co Galway. The number of days with gales ranged from zero days at a few stations to 22 days at Malin Head, Co Donegal. The number of days with up to strong gales ranged from zero days at a few stations to 10 days at both Mace Head, Co Galway and Malin Head, Co Donegal. 9 stations recorded strong gales and 2 stations recorded storm force winds. Both the month's highest gust and 10-minute mean wind speed was reported at Mace Head, Co Galway on Sat the 29th during Storm Jorge. The highest gust was 72 knots (133 km/h) while the month's highest 10-minute mean wind speed was 54 knots (100 km/h).

EXTREME VALUES AT SYNOPTIC STATIONS

Rainfall

Highest total: 342.7 mm at Newport, Co Mayo (271% of its LTA) (*its wettest February on record (record length 60 years)*)
Lowest total: 130.4 mm at Dublin Airport, Co Dublin (267% of its LTA) (*its wettest February on record (record length 78 years)*)
Highest daily rainfall: 51.5 mm at Knock Airport, Co Mayo (50% of its monthly LTA) on Sat 8th (*its highest daily value for February since 1997*)

Temperature

Highest mean monthly temperature: 8.0°C at Sherkin Island, Co Cork (0.5°C above its LTA)
Lowest mean monthly temperature: 4.2°C at Knock Airport, Co Mayo (equal to its LTA)
Highest Air temperature: 14.0°C at Oak Park, Co Carlow (5.1°C above its LTA) on Fri 28th
Lowest air temperature: -2.5°C at Mount Dillon, Co Roscommon (4.2°C below its LTA) on Thur 6th
Lowest grass minimum: -7.9°C at Mount Dillon, Co Roscommon on Thur 27th

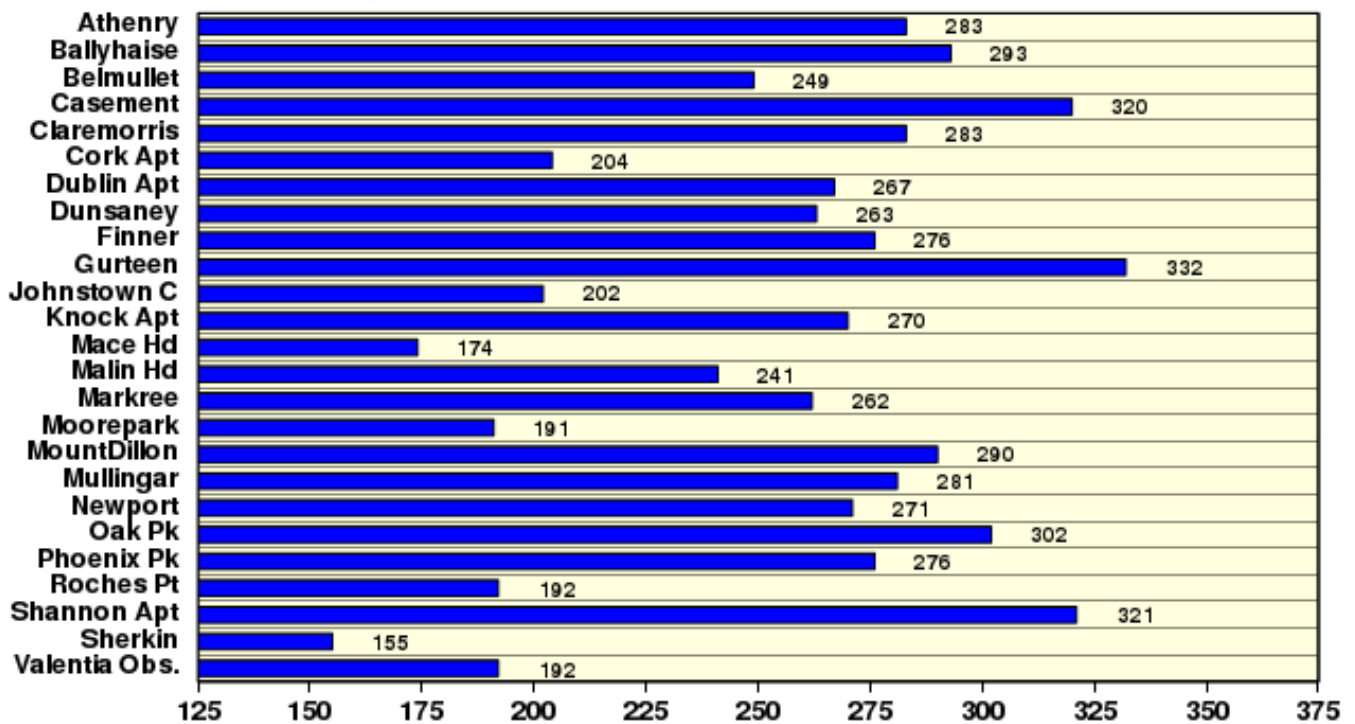
Sunshine

Highest monthly total: 103.2 hrs (daily mean 3.56 hrs/day) at Dublin Airport, Co Dublin
Lowest monthly total: 50.6 hrs (daily mean 1.74 hrs/day) at Valentia Observatory, Co Kerry
Highest daily sunshine: 9.4 hours at Johnstown Castle, Co Wexford on Thur 27th

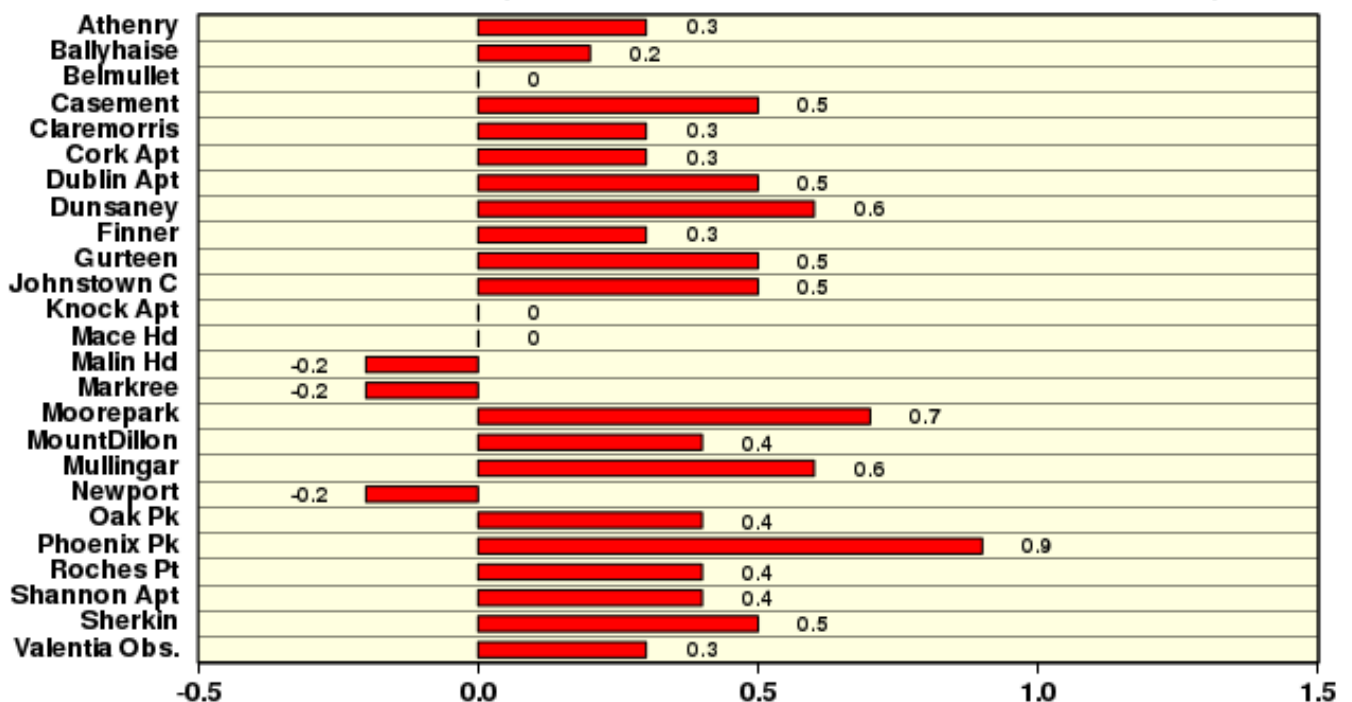
February 2020

Based on Data from 1- 29 February 2020 on whole month basis

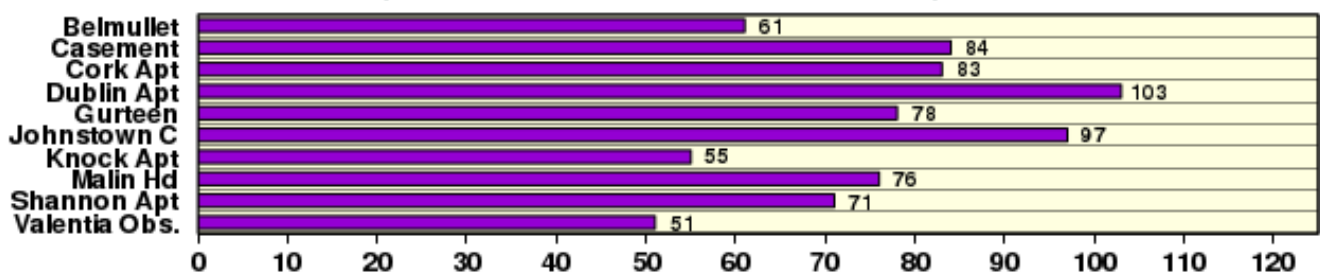
Rainfall (% of average for period 1981-2010) on whole month basis



Temperature (°C) difference from average for period 1981-2010



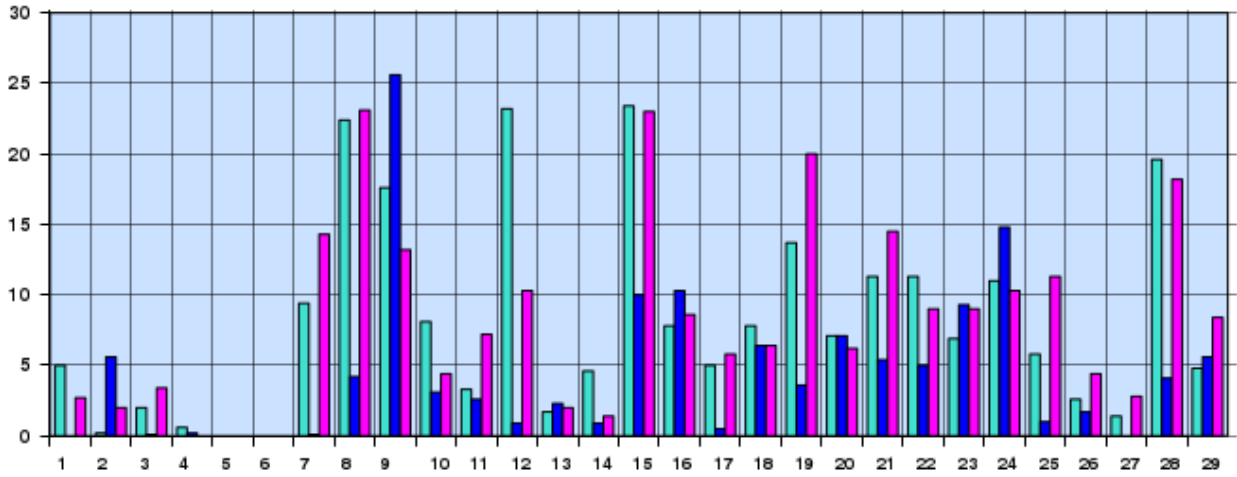
Sunshine (Number of monthly sunshine hours)



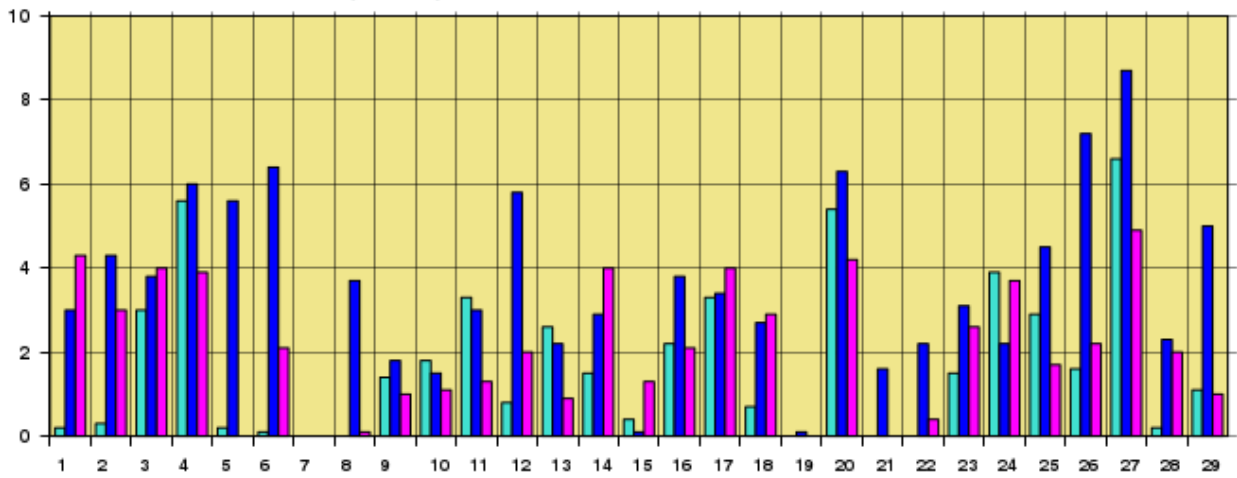
February 2020 Daily Values at selected synoptic stations

Based on data from 1- 29 February 2020 on a pro rata basis

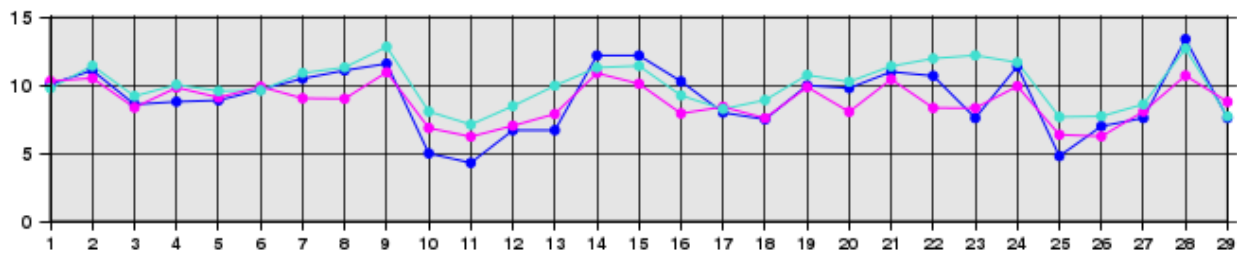
Daily 00-24h rainfall values(mm)



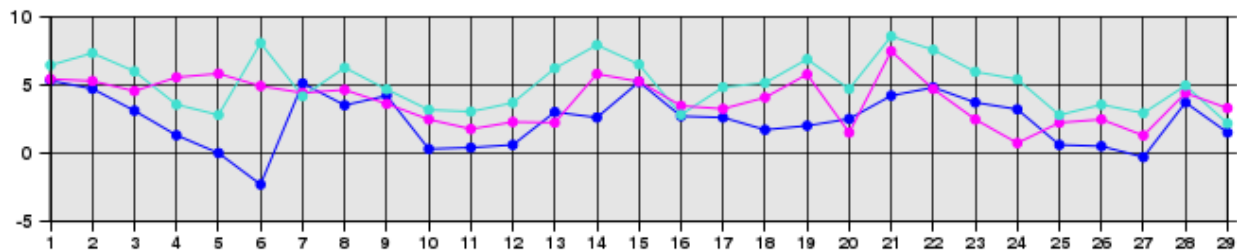
Daily sunshine values(hours)



Daily 00-24h maximum temperature (°C)



Daily 00-24h minimum temperature (°C)



- Valentia Observatory - Dublin Airport - Belmullet

Source: newR/WXBULL/CurentMonthlyTemp.R Plotted Mon Mar 2 17:31:29 2020

Issued by Met Éireann on Tuesday 3rd March 2020. This report is based on available preliminary data from 25 principal weather stations operated by Met Éireann.

Synoptic station data is midnight to midnight UTC. Long-Term Averages (LTAs) and “average” refer to the period 1981-2010. ¹A dry spell is a period of 15 or more consecutive days to none of which is credited 1.0 mm or more of precipitation (i.e. daily tot < 1.0 mm). ²A wet day is a day with 1.0 mm or more of rainfall. ³A dull day is a day with less than 0.5 hours of sunshine. ⁴A very wet day is a day with 10.0 mm or more of rainfall. *Sunshine data is from the Autosol Network.

LTAs for these sites are currently not used for comparison purposes. For more information, contact Met Éireann at 01-8064200 or e-mail: enq@met.ie