

Storm Ciarán developed in the Atlantic Ocean and quickly intensified as it approached the south coast, with an complex area of low pressure towards the North West.

- The highest sustained (10-minute mean) wind speed was a near gale 59 km/h (32 knots or 37 mph) on Thursday 2 November 2023 at 1 UTC (1 am local time) at Roches Point (coastal), Co Cork and Mace Head** (coastal), Co Galway at 8 UTC (8 am local time).
- The highest gust (3-second mean) wind speed was a westerly 80 km/h (43 knots or 49 mph) on Thursday 2 November 2023 around 06:03 UTC (06:03 am local time) observed at Mace Head, Co Galway.
- The lowest hourly mean sea level pressure (MSLP) was 967.2 hPa on Thursday 2 November 2023 around 1 UTC (1 am local time) observed at Johnstown Castle, Co Wexford.
- The highest daily (00-00 UTC) rainfall total was 6.2 mm on Thursday, 2 November 2023 at Knock Airport, Co Mayo (4 % of its 1991-2020 November Long Term Average (LTA)).
- The highest 24-hour (09-09 UTC) rainfall total was 21.5 mm on Thursday, 2 November 2023 at both Derriana, Co Kerry (8% of its November LTA) and Waterville Oive No. 9, Co Kerry (8% of its November LTA).
- The highest individual wave height was 13.8 m and this was recorded at M6 (in the deep Atlantic) at around 23 UTC (11 pm local) on Thursday.

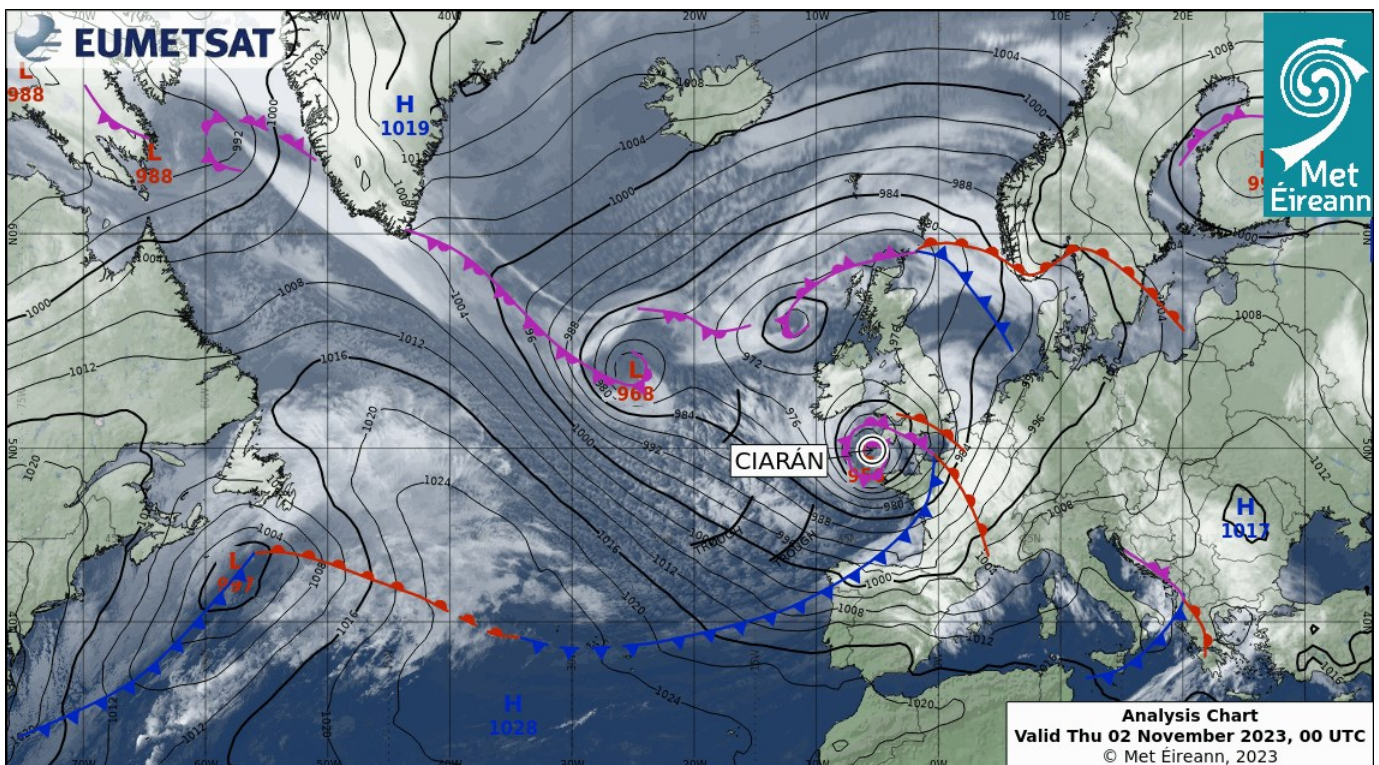


Figure 1. EUMETSAT Satellite and Analysis Chart at 00 UTC on Thu 2 Nov 2023

Wednesday 1 November 2023

A low-pressure system west of Ireland brought rain and strong westerly winds in the morning, shifting north by afternoon. Sunshine and scattered showers followed. Winds eased by evening, but Storm Ciarán brought wet and windy conditions overnight, with northerly winds to the south. Elsewhere, it was dry with some frost and mist.

Thursday 2 November 2023

Between Storm Ciarán (954 hPa) over southwest England and a depression of 960 hPa just northwest of the country the country experienced variable winds. Rain associated with Storm Ciarán affected the south and southeast overnight. The rain cleared by mid-morning. After the rain cleared, it was a mostly dry and blustery day apart from scattered showers which mainly affected the southwest and Northwest.

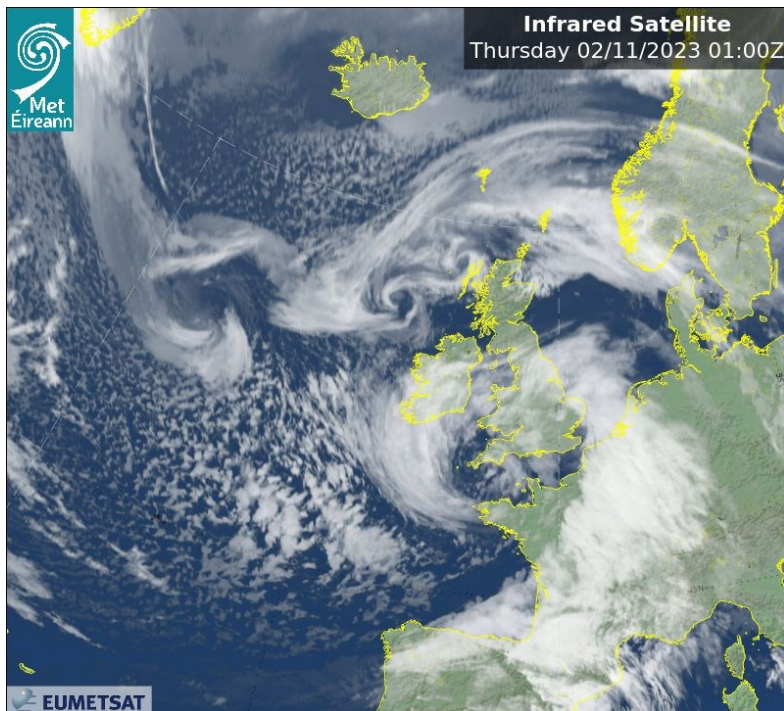


Figure 2 EUMETSAT Infrared satellite on Thu 2 Nov at 01 UTC near when the lowest mean sea level pressure (**967.2 hPa**) was recorded at Johnstown Castle (coastal), Co Wexford

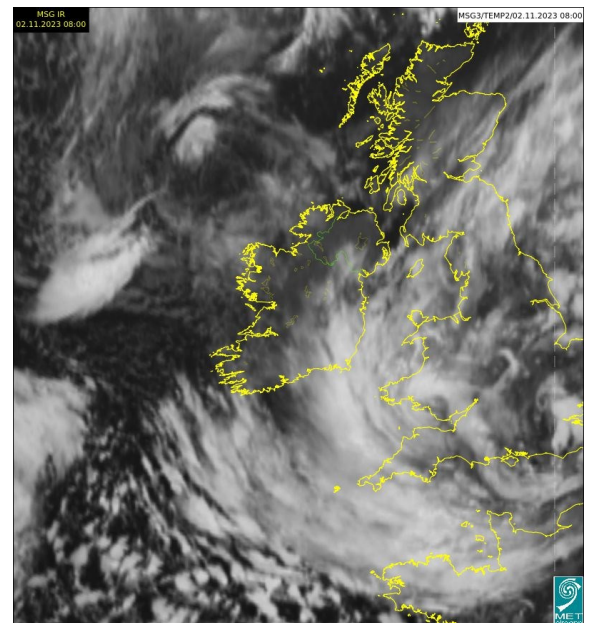


Figure 3 Infrared satellite on Thu 2 Nov at 08 UTC when the highest sustained (59 km/h) wind speed was recorded at Mace Head, Co Galway

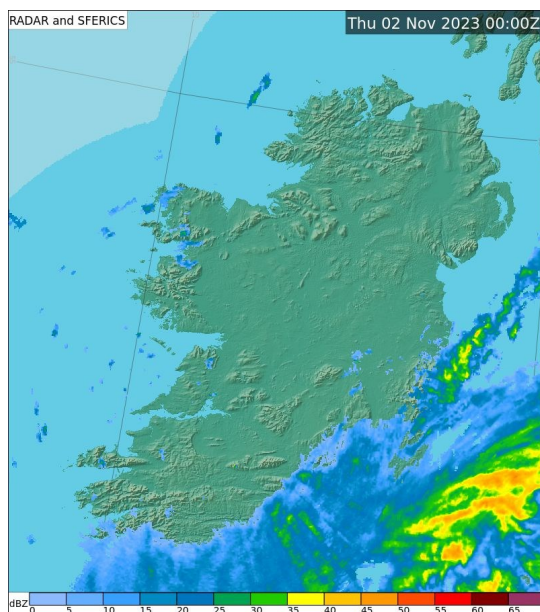


Figure 4. On Thu 2 Nov 2023 in the hour ending 00 UTC 2.0 mm of rain fell at Cork Airport (coastal), Co Cork

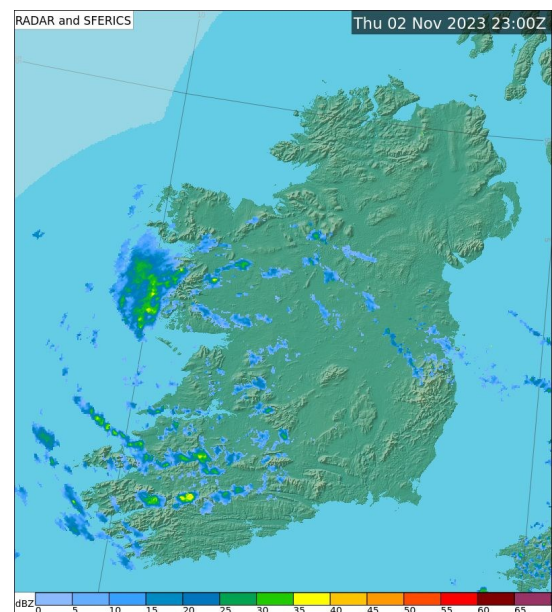


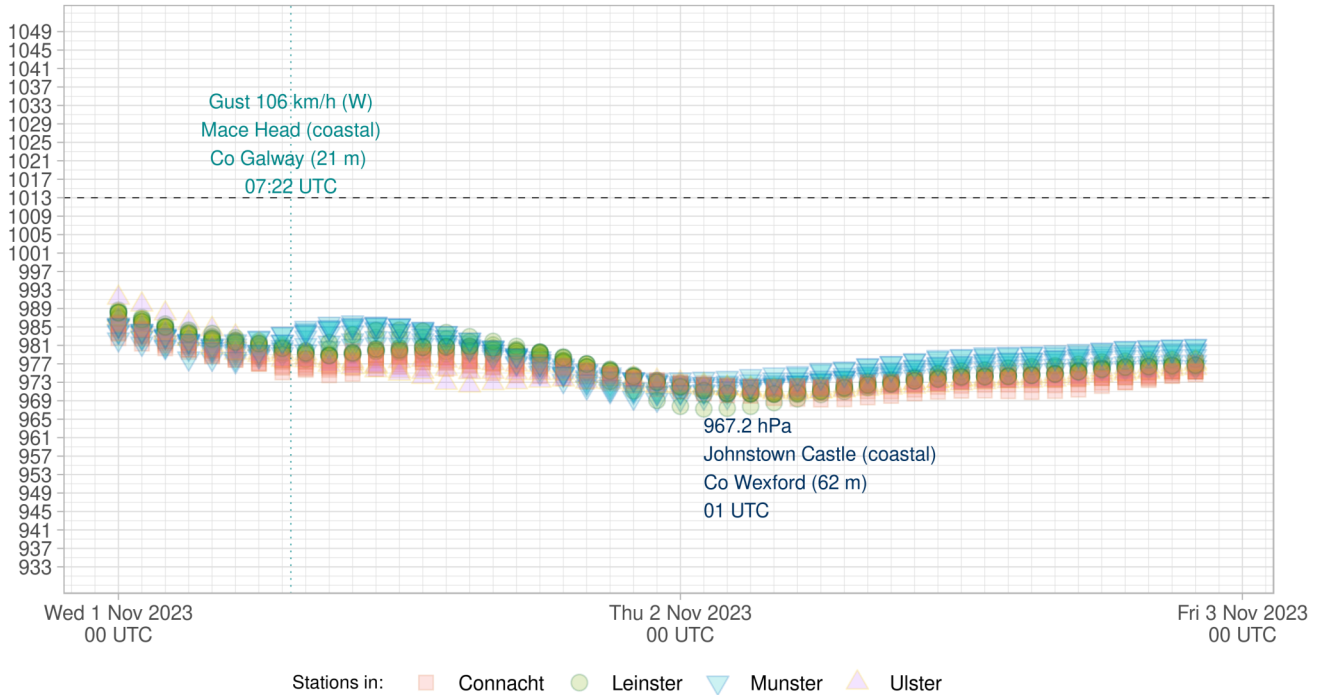
Figure 5. On Thu 2 Nov 2023 in the hour ending 23 UTC 1.9 mm of rain fell at Knock Airport, Co Mayo

Mean Sea Level Pressure

The minimum hourly mean sea level pressure (MSLP) observed in Ireland during storm Ciaran was 967.2 hPa at Johnstown Castle, Co Wexford around 01 UTC (1 am local) on Tuesday 2nd. On Thursday, the air pressure dropped by 10.9 hPa at Johnstown Castle, Co Wexford, as the mean sea level pressure decreased from 978.2 to 967.2 hPa.

Storm Ciaran

Hourly Mean Sea Level Pressure (hPa) and Highest Gust Wind Speed



© Met Éireann (2024)

Figure 6: Hourly Mean Sea Level pressure (MSLP) (station points coloured by province) between Wed 1 and Thu 2 Nov 2023 (inclusive)

Impacts

- **Power Outages:** No major outages report in Ireland ([ESB PowerCheck, 2023](#)).
- **Flooding:** No major outages report in Ireland.
- **Travel:** No major reports of train stoppages in Ireland ([Irish Rail, 2023](#)).

Synoptic stations - extremes of wind speeds and rainfall totals

Table 1 contains wind speeds and rainfall observations for the SYNOPTIC on Thursday 2 November 2023 during Storm Ciaran. The sustained wind speeds are shaded by land [Beaufort scale](#).

Table 1. Extremes of wind and rainfall at synoptic stations

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Direction Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Direction Highest Gust	Highest Daily Rain (mm)	1-day Total Rain (mm)
Mace Head** (coastal) Co Galway	59 km/h Near Gale (32 knots or 37 mph)	Thu 2 Nov 2023 08 UTC	260° (W)	80 km/h (43 knots or 49 mph)	Thu 2 Nov 2023 0603 UTC	270° (W)	1.2 mm Thu 2 Nov 2023	1.2 mm
Roches Point (coastal) Co Cork	59 km/h Near Gale (32 knots or 37 mph)	Thu 2 Nov 2023 01 UTC	310° (NW)	72 km/h (39 knots or 45 mph)	Thu 2 Nov 2023 0154 UTC	310° (NW)	0.0 mm Thu 2 Nov 2023	0.0 mm
Sherkin Island (coastal) Co Cork	50 km/h Strong Breeze (27 knots or 31 mph)	Thu 2 Nov 2023 12 UTC	260° (W)	69 km/h (37 knots or 43 mph)	Thu 2 Nov 2023 1151 UTC	270° (W)	1.2 mm Thu 2 Nov 2023	1.2 mm
Valentia Observatory (coastal) Co Kerry	46 km/h Strong Breeze (25 knots or 29 mph)	Thu 2 Nov 2023 20 UTC	290° (WNW)	72 km/h (39 knots or 45 mph)	Thu 2 Nov 2023 0548 UTC	290° (WNW)	5.0 mm Thu 2 Nov 2023	5.0 mm
Cork Airport (coastal) Co Cork	41 km/h Strong Breeze (22 knots or 25 mph)	Thu 2 Nov 2023 14 UTC	270° (W)	63 km/h (34 knots or 39 mph)	Thu 2 Nov 2023 1212 UTC	280° (W)	0.1 mm Thu 2 Nov 2023	0.1 mm
Shannon Airport (coastal) Co Clare	41 km/h Strong Breeze (22 knots or 25 mph)	Thu 2 Nov 2023 14 UTC	250° (WSW)	54 km/h (29 knots or 33 mph)	Thu 2 Nov 2023 1125 UTC	250° (WSW)	3.0 mm Thu 2 Nov 2023	3.0 mm
Belmullet (coastal) Co Mayo	37 km/h Fresh Breeze (20 knots or 23 mph)	Thu 2 Nov 2023 21 UTC	30° (NNE)	52 km/h (28 knots or 32 mph)	Thu 2 Nov 2023 0623 UTC	240° (WSW)	2.0 mm Thu 2 Nov 2023	2.0 mm
Casement Aerodrome Co Dublin	35 km/h Fresh Breeze (19 knots or 22 mph)	Thu 2 Nov 2023 16 UTC	260° (W)	50 km/h (27 knots or 31 mph)	Thu 2 Nov 2023 1555 UTC	260° (W)	0.5 mm Thu 2 Nov 2023	0.5 mm
Johnstown Castle (coastal) Co Wexford	31 km/h Fresh Breeze (17 knots or 20 mph)	Thu 2 Nov 2023 09 UTC	290° (WNW)	54 km/h (29 knots or 33 mph)	Thu 2 Nov 2023 0249 UTC	330° (NNW)	4.2 mm Thu 2 Nov 2023	4.2 mm
Oak Park Co Carlow	31 km/h Fresh Breeze (17 knots or 20 mph)	Thu 2 Nov 2023 13 UTC	270° (W)	50 km/h (27 knots or 31 mph)	Thu 2 Nov 2023 1342 UTC	280° (W)	0.2 mm Thu 2 Nov 2023	0.2 mm
Gurteen Co Tipperary	31 km/h Fresh Breeze (17 knots or 20 mph)	Thu 2 Nov 2023 14 UTC	250° (WSW)	46 km/h (25 knots or 29 mph)	Thu 2 Nov 2023 1328 UTC	240° (WSW)	0.5 mm Thu 2 Nov 2023	0.5 mm
Moore Park Co Cork	30 km/h moderate breeze (16 knots or 18 mph)	Thu 2 Nov 2023 13 UTC	250° (WSW)	48 km/h (26 knots or 30 mph)	Thu 2 Nov 2023 1229 UTC	270° (W)	0.1 mm Thu 2 Nov 2023	0.1 mm

Table 1. Cont'd

Station location	Sustained (10-min mean) Wind Speed	Date highest mean	Wind Direction Highest sustained	Gust (3-sec mean) Wind Speed	Date Highest Gust	Wind Direction Highest Gust	Highest Daily Rain (mm)	1-day Total Rain (mm)
Newport (coastal) Co Mayo	26 km/h moderate breeze (14 knots or 16 mph)	Thu 2 Nov 2023 11 UTC	250° (WSW)	46 km/h (25 knots or 29 mph)	Thu 2 Nov 2023 0920 UTC	250° (WSW)	5.9 mm Thu 2 Nov 2023	5.9 mm
Athenry Co Galway	26 km/h moderate breeze (14 knots or 16 mph)	Thu 2 Nov 2023 11 UTC	270° (W)	44 km/h (24 knots or 28 mph)	Thu 2 Nov 2023 1032 UTC	280° (W)	1.0 mm Thu 2 Nov 2023	1.0 mm
Claremorris Co Mayo	26 km/h moderate breeze (14 knots or 16 mph)	Thu 2 Nov 2023 23 UTC	10° (N)	37 km/h (20 knots or 23 mph)	Thu 2 Nov 2023 2343 UTC	10° (N)	3.4 mm Thu 2 Nov 2023	3.4 mm
Dublin Airport (coastal) Co Dublin	26 km/h moderate breeze (14 knots or 16 mph)	Thu 2 Nov 2023 16 UTC	270° (W)	37 km/h (20 knots or 23 mph)	Thu 2 Nov 2023 1548 UTC	270° (W)	2.2 mm Thu 2 Nov 2023	2.2 mm
Malin Head* (coastal) Co Donegal	26 km/h moderate breeze (14 knots or 16 mph)	Thu 2 Nov 2023 23 UTC	350° (N)	33 km/h (18 knots or 21 mph)	Thu 2 Nov 2023 2359 UTC	350° (N)	0.1 mm Thu 2 Nov 2023	0.1 mm
Knock Airport Co Mayo	22 km/h moderate breeze (12 knots or 14 mph)	Thu 2 Nov 2023 24 UTC	10° (N)	35 km/h (19 knots or 22 mph)	Thu 2 Nov 2023 2344 UTC	10° (N)	6.2 mm Thu 2 Nov 2023	6.2 mm
Dunsany Co Meath	22 km/h moderate breeze (12 knots or 14 mph)	Thu 2 Nov 2023 16 UTC	250° (WSW)	31 km/h (17 knots or 20 mph)	Thu 2 Nov 2023 1623 UTC	250° (WSW)	0.8 mm Thu 2 Nov 2023	0.8 mm
Finner (coastal) Co Donegal	19 km/h gentle breeze (10 knots or 12 mph)	Thu 2 Nov 2023 06 UTC	100° (E)	24 km/h (13 knots or 15 mph)	Thu 2 Nov 2023 0709 UTC	110° (ESE)	0.2 mm Thu 2 Nov 2023	0.2 mm
Mount Dillon Co Roscommon	17 km/h gentle breeze (9 knots or 10 mph)	Thu 2 Nov 2023 14 UTC	210° (SSW)	28 km/h (15 knots or 17 mph)	Thu 2 Nov 2023 1429 UTC	230° (SW)	0.8 mm Thu 2 Nov 2023	0.8 mm
Mullingar Co Westmeath	15 km/h gentle breeze (8 knots or 9 mph)	Thu 2 Nov 2023 12 UTC	240° (WSW)	30 km/h (16 knots or 18 mph)	Thu 2 Nov 2023 1343 UTC	260° (W)	0.1 mm Thu 2 Nov 2023	0.1 mm
Ballyhaise Co Cavan	7 km/h light breeze (4 knots or 5 mph)	Thu 2 Nov 2023 22 UTC	70° (ENE)	13 km/h (7 knots or 8 mph)	Thu 2 Nov 2023 2221 UTC	70° (ENE)	0.7 mm Thu 2 Nov 2023	0.7 mm
Markree Castle Co Sligo							1.6 mm Thu 2 Nov 2023	1.6 mm
Phoenix Park Co Dublin							1.7 mm Thu 2 Nov 2023	1.7 mm

Definitions

- Sustained (or mean) wind speeds are an average of 10-minute wind speeds.
- Gust wind speeds are an average of 3-second wind speeds.
- Unless otherwise stated daily means midnight to midnight UTC.
- Long-Term Averages (LTAs) and 'normal' refer to the observations being averaged over the period 1991-2020.
- Beaufort Scale available at www.met.ie/forecasts/marine-inland-lakes/beaufort-scale
- Marine area buoy maps and definitions available at www.met.ie/forecasts/marine-inland-lakes/sea-area-forecast-terminology

** Malin Head, Co Donegal's wind speeds are observed (using an anemometer) at a non-standard height of 23 m while all others are at 10 m. This will cause Malin Head's wind speeds to be higher in a strong air flow.*

*** Mace Head, Co Galway's anemometer is situated above exposed rock at the coast line.*

This report is based on the observations from Met Éireann's weather and climate stations and data available up to the publication date. For more information, please contact Met Éireann's Climate Services Division: enquiries@met.ie or <https://www.met.ie/about-us/contact-us>.