



Autumn 2020

(September, October, November)

Sunny. Wet in the West and Northwest, drier in the South and East

The first two thirds of September were warm with high pressure to the south of Ireland dominating and pushing the Jetstream further north. It was wet in the Northwest but relatively dry elsewhere. The final third of the month was cool as the Jetstream moved south again and Atlantic low-pressure systems brought widespread rain. October was a cool, wet and windy month with Ireland situated under, or on the cooler northern side of the Jetstream for much of the time. Low pressure dominated the first week, followed by a relatively dry period with high-pressure close by. A very strong Jetstream brought stormy conditions for the final third of the month with Storm Aiden (the first named storm of the 2020/2021 storm season) affecting Ireland on the 31st. November was a mild month overall as the Jetstream moved north again. Low pressure to the north and high pressure to the south for most of the month resulted in a predominately west or southwesterly airflow. The western half of the country saw a lot of rain off the Atlantic while the East stayed drier. The month finished drier everywhere under slack high-pressure conditions with fog and frost in places.

Rainfall: Highest in the West and Northwest

The majority of seasonal rainfall totals across the country were below their Long-Term Average (LTA). Percentage of seasonal rainfall values ranged from 84% (seasonal rainfall total of 242.6 mm) at Roche's Point, Co Cork to 127% (seasonal rainfall total of 450.8 mm) at Claremorris, Co Mayo. Seasonal rainfall totals ranged from 188.4 mm (87% of its LTA) at Casement Aerodrome, Co Dublin to 588.0 mm (123% of its LTA) at Newport, Co Mayo. The highest daily rainfall total was 49.1 mm at Valentia Observatory, Co Kerry on Monday 19th Oct. The number of rain days ranged from 55 days at Casement Aerodrome, Co Dublin to 77 days at Newport, Co Mayo. The number of wet days² ranged from 36 days at Dublin Airport, Co Dublin to 66 days at Newport, Co Mayo. The number of very wet days³ ranged from 4 days at a few stations to 21 days at Newport, Co Mayo. It was the wettest Autumn since 2011 in Newport, Co Mayo, Claremorris, Co Mayo, Belmullet, Co Mayo, Malin Head, Co Donegal, Finner, Co Donegal, Mount Dillon, Co Roscommon and Mace Head, Co Galway.

Temperature: Above average in most places

The majority of mean air temperatures were above their Long-Term Average (LTA) for the season. Deviations from mean air temperature ranged from -0.1 °C (9.9 °C, 11.1 °C, 11.4 °C, 10.3 °C mean temperature) at Markree, Co Sligo, Shannon Airport, Co Clare, Mace Head, Co Galway and Athenry, Co Galway respectively to 0.7 °C (10.9 °C mean temperature) at Phoenix Park, Co Dublin. Mean temperatures for the season ranged from 9.3 °C (0.2 °C above its LTA) at Knock Airport, Co Mayo to 11.9 °C (at its LTA) at Sherkin Island, Co Cork. The season's highest temperature was reported at Phoenix Park, Co Dublin on Monday 14th Sep with a temperature of 24.7 °C. Both the season's lowest air and grass minimum temperature were recorded on Saturday 28th Nov at Mount Dillon, Co Roscommon. The lowest air minimum was -2.8 °C while the lowest grass minimum was -6.9 °C. All stations reported ground frost during the season. The number of days with ground frost ranged from 2 days at a few stations to 37 days at Markree, Co Sligo. More than half of stations reported air frost. The number of days with air frost ranged from zero days at a few stations to 8 days at Mount Dillon, Co Roscommon. Up to 16 stations had their warmest Autumn in the last five years.

Sunshine: Above average everywhere

All available sunshine totals were above their Long-Term Average (LTA) for the season. Percentage of seasonal sunshine values ranged from 110% (seasonal sunshine total of 321.2 hours) at Casement Aerodrome, Co Dublin to 118% (seasonal sunshine total of 347.8 hours) at Cork Airport, Co Cork. Seasonal sunshine totals were highest at Johnstown Castle, Co Wexford with 373.7 hours (No LTA comparison*). Seasonal sunshine totals were lowest at Malin Head, Co Donegal with 249.7 hours (No LTA comparison*). The highest number of daily sunshine hours recorded this season was 11.2 hours at both Gurteen, Co Tipperary on Sunday 20th September and Belmullet, Co Mayo on Saturday 19th September. The number of dull days² ranged from 16 days at Casement Aerodrome, Co Dublin to 35 days at Belmullet, Co Mayo. Dublin Airport with 334.3 hours of sunshine (*its sunniest Autumn since 2012*) had more sunshine hours in both Spring and Autumn 2020 than in Summer 2020.

Wind: Gales, strong gales and storm force winds reported and one named storm

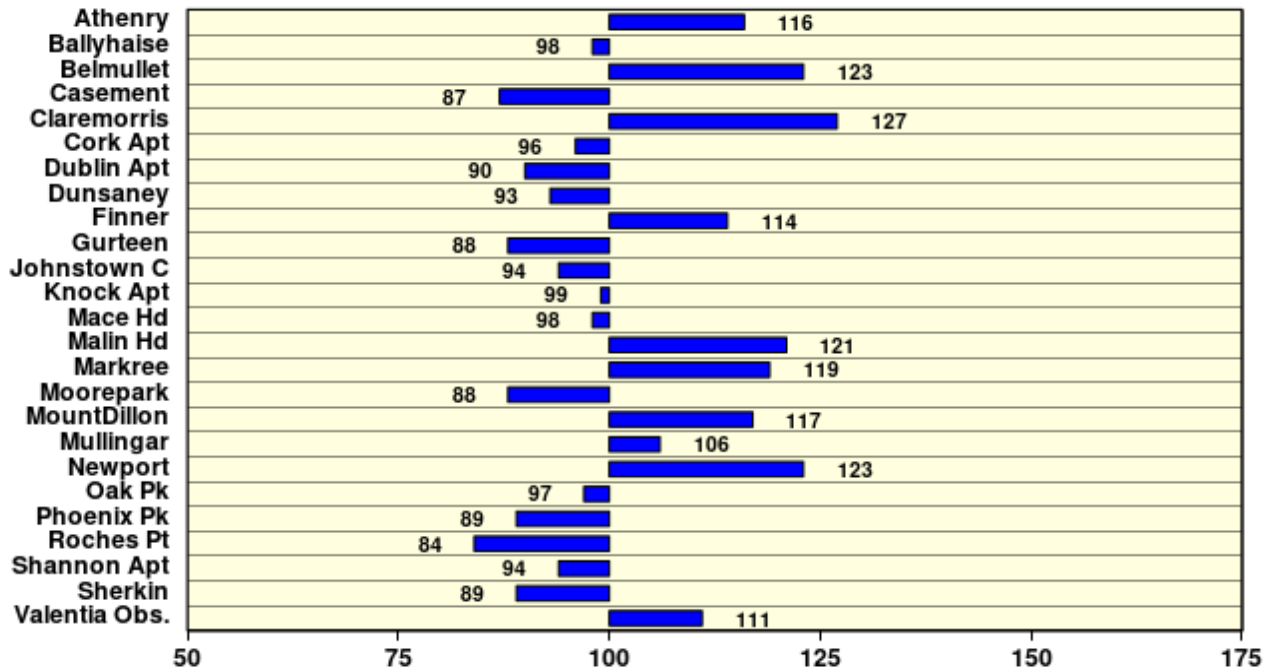
Seasonal mean wind speeds ranged from 6.1 knots (11.3 km/h) at Moore Park, Co Cork to 16.1 knots (29.8 km/h) at Mace Head, Co Galway. Gales were reported on numerous days with up to strong gales reported on 8 days during the season. Storm force winds were reported on the 31st Oct during Storm Aiden. The number of days with gales ranged from zero days at Dublin Airport, Co Dublin to 14 days at both Mace Head, Co Galway and Sherkin Island, Co Cork. The number of days with up to strong gales ranged from zero days at most stations to 1 day at Roches Point, Co Cork, 2 days at Sherkin Island, Co Cork, Malin Head, Co Donegal and Belmullet, Co Mayo and 5 days at Mace Head, Co Galway. Both the season's highest gust and 10-minute mean wind speed was reported at Malin Head, Co Donegal on the 31st Oct during Storm Aiden. The highest gust was 70 knots (130 km/h) while the season's highest 10-minute mean wind speed was 53 knots (98 km/h).

EXTREME VALUES FOR AUTUMN AT SYNOPTIC STATIONS

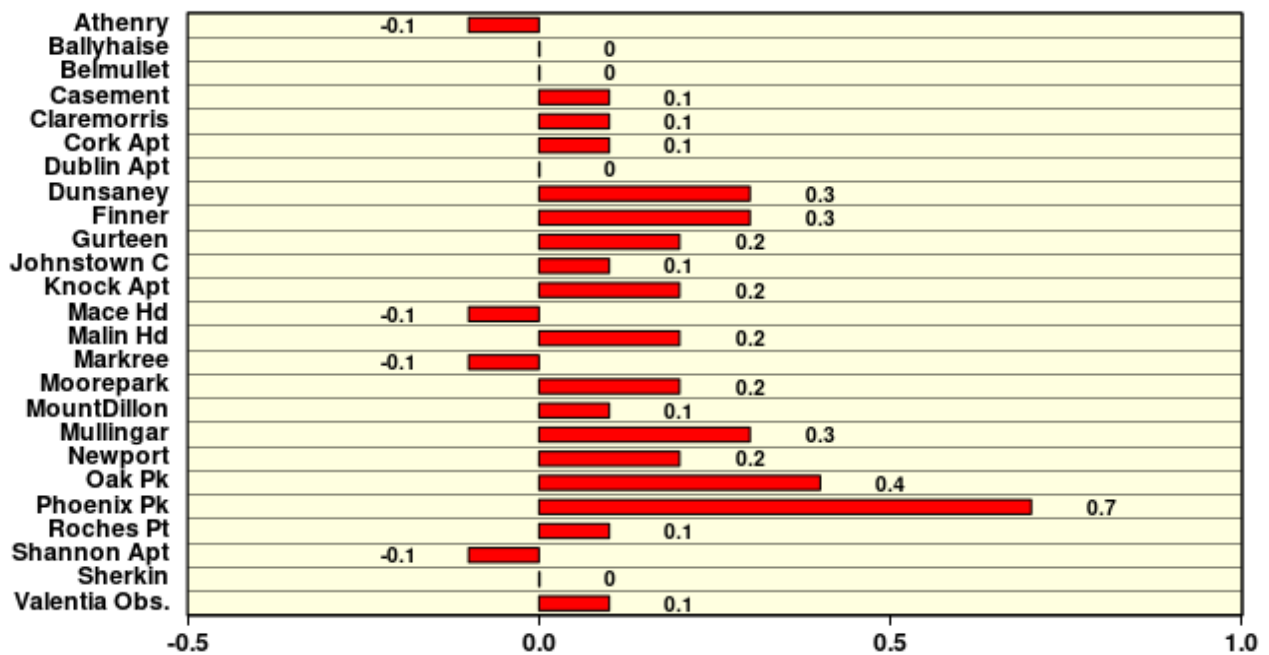
Rainfall	Highest seasonal total: 588.0 mm at Newport, Co Mayo (123% of its LTA) Lowest seasonal total: 188.4 mm at Casement Aerodrome, Co Dublin (87% of its LTA) Highest daily rainfall: 49.1 mm at Valentia Observatory, Co Kerry (28% of its monthly LTA) on Mon 19th Oct
Temperature	Highest mean seasonal temperature: 11.9°C at Sherkin Island, Co Cork (at its LTA) Lowest mean seasonal temperature: 9.3°C at Knock Airport, Co Mayo (0.2 above its LTA) Highest air temperature for the season: 24.7°C at Phoenix Park, Co Dublin on Mon 14th Sep Lowest air temperature for the season: -2.8°C at Mount Dillon, Co Roscommon on Sat 28th Nov Lowest grass minimum for the season: -6.9°C at Mount Dillon, Co Roscommon on Sat 28th Nov
Sunshine	Highest seasonal total: 373.7 hrs (daily mean 4.11 hrs/day) at Johnstown Castle*, Co Wexford Lowest seasonal total: 249.7 hrs (daily mean 2.74 hrs/day) at Malin Head*, Co Donegal Highest daily sunshine for the season: 11.2 hours at both Gurteen, Co Tipperary on Sun 20th Sep and Belmullet, Co Mayo on Sat 19th Sep

Autumn 2020

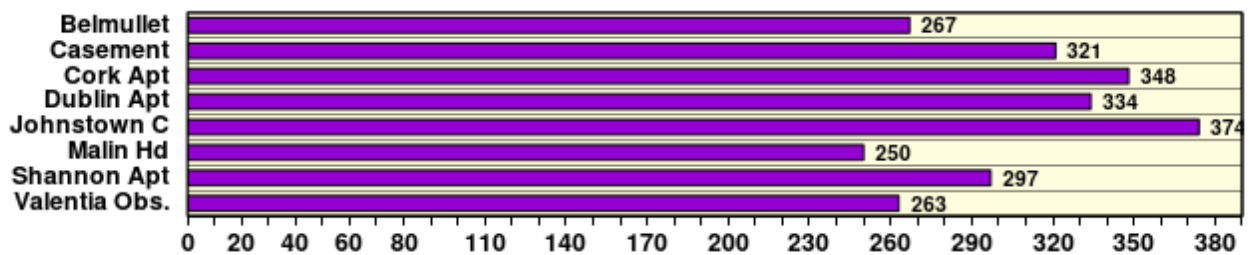
Rainfall (% of average for period 1981-2010) on whole season basis



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



Sunshine (Number of seasonal sunshine hours)



Issued by the Climatology and Observations Division of Met Éireann on Thursday 3rd December 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 wet day is a day with 1.0 mm or more of rainfall. ²A dull day is a day with less than 0.5 hours of sunshine. ³A very wet day is a day with 10.0 mm or more of rainfall. ⁴An absolute drought is a period of 15 or more consecutive days to none of which is credited 0.2 mm or more of precipitation. ⁵A partial drought is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm. ⁶A 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). *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

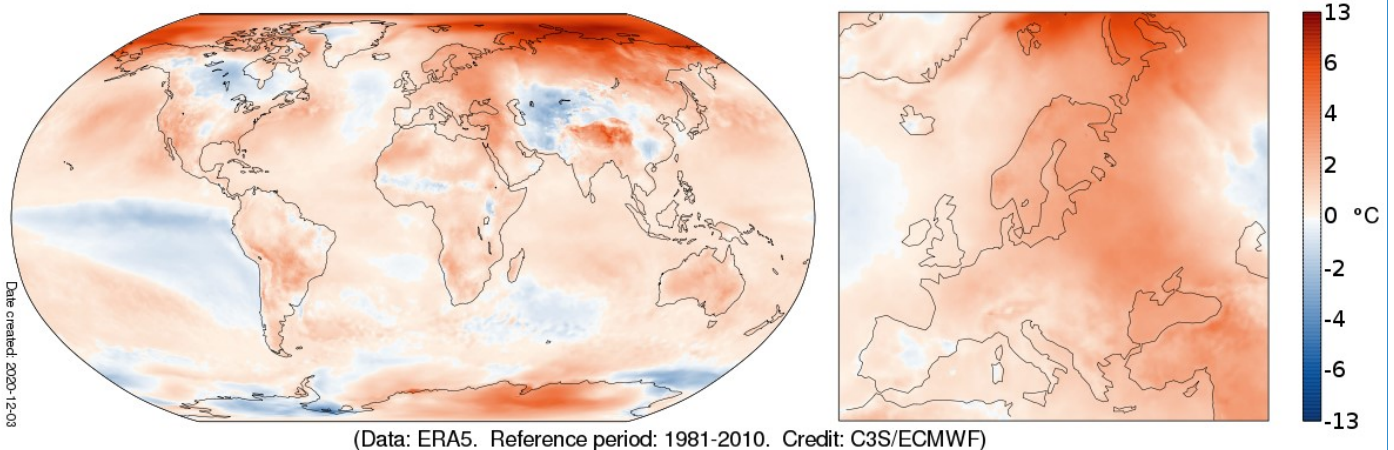
Autumn Global

(September, October, November 2020)

Surface air temperature: Boreal Autumn 2020 (September, October, November)

Boreal autumn temperatures were most above average over northern Siberia, the Arctic Ocean and neighbouring coastal seas. They were much above average over most of the rest of Siberia, over the Tibetan Plateau, and in a band stretching from the Middle East to northern Europe. The remainder of Europe was also generally warmer than average. The September–November average temperature for Europe was the highest on record. It was 1.9°C above the 1981–2010 norm, 0.4°C higher than the average temperature for 2006, the previous warmest autumn.

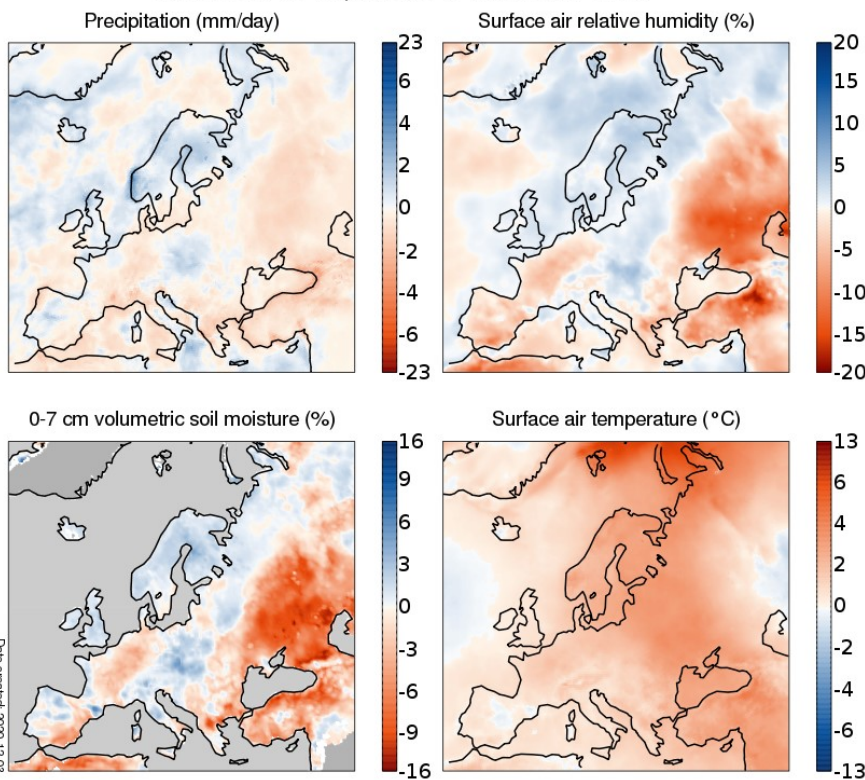
Surface air temperature anomaly for September to November 2020



Surface air temperature anomaly for the boreal autumn from September 2020 to November 2020 relative to the average for 1981–2010. Data source: ERA5. Credit: Copernicus Climate Change Service/ECMWF. <https://climate.copernicus.eu/surface-air-temperature-november-2020>

Anomalies for September to November 2020

European Autumn Anomalies



Autumn 2020 saw drier-than-average conditions over parts of Western Europe, including central and eastern France, the Benelux, northern Germany, eastern Spain, as well as in the southern Balkans and in central Europe and large regions of eastern Europe. Precipitation was above average over most of the United Kingdom and parts of Ireland, over Scandinavia, central Eastern Europe and parts of Italy. Soil moisture and relative humidity show consistently above average values in a large band including north western Spain and extending north-eastwards from northern Italy to western Russia. In the rest of Italy, the northern Iberian Peninsula and Greece departures from average of precipitation are not necessarily reflected in the soil moisture and relative humidity anomaly patterns.

Anomalies in precipitation, the relative humidity of surface air, the volumetric moisture content of the top 7 cm of soil and surface air temperature for summer (June 2020 to August 2020) with respect to 1981–2010. The darker grey shading denotes where soil moisture is not shown due to ice cover or climatologically low precipitation. Data source: ERA5 Credit: Copernicus Climate Change Service, ECMWF. <https://climate.copernicus.eu/precipitation-relative-humidity-and-soil-moisture-november-2020>