



# September 2020

## Warm first two thirds, cool final third. Wet in the Northwest, dry in the South

September 2020 started with low-pressure to the northwest, bringing active weather fronts across the country on Wednesday 2nd, with widespread heavy rain and some flooding in the Northwest. High pressure, which began to develop to the south of Ireland during the rest of the first week, gradually pushed the jet stream and low pressure systems further north, while keeping Ireland in a mild southwesterly airflow. This setup, which continued into the second week, brought a lot of dry weather, especially in the southern half of the country, but active weather fronts brought some heavy falls of rain to the North and Northwest during this period. During the third week high pressure developed over mainland Europe and to the north of Ireland, which brought a warm and sunnier continental airflow over the country from the southeast and the dry conditions spread countrywide. The settled weather broke down at the beginning of the 4th week as a cold front brought a change of air mass with cooler conditions that continued for the rest of the month. The cold front was followed by an area of low-pressure crossing the south of the country on the 23rd and 24th, which brought widespread rain or showers. An area of high pressure gave a mostly dry final weekend of the month with plenty of sunshine, although cool at night with frost and fog in places. The month finished with active weather fronts moving in from the west on the 29th followed by heavy showers.

### Rainfall: Below average for most

Nearly all rainfall totals were below their Long-Term Average (LTA) for the month. Three stations in Co Cork had dry spells<sup>6</sup> between Thursday 3rd and Monday 21st, including Moore Park, Cork Airport and Roches Point. Percentage of monthly rainfall values ranged from 54% at both Moore Park, Co Cork (monthly rainfall total of 43.0 mm) and Johnstown Castle, Co Wexford (monthly rainfall total of 47.5 mm) to 120% at both Malin Head, Co Donegal (monthly rainfall total of 115.7 mm) and Belmullet, Co Mayo (monthly rainfall total of 121.9 mm). Monthly rainfall totals ranged from 41.6 mm (55% of its LTA) at Shannon Airport, Co Clare to 153.4 mm (117% of its LTA) at Newport, Co Mayo. The month's wettest day was also recorded at Newport, Co Mayo with 43.7 mm on Wednesday 2nd. The number of rain days ranged from 11 days at Roche's Point, Co Cork to 23 days at Newport, Co Mayo. The number of wet days<sup>1</sup> ranged from 8 days at a few stations to 19 days at Newport, Co Mayo. The number of very wet days<sup>3</sup> ranged from zero days at Shannon Airport, Co Clare to 6 days at Belmullet, Co Mayo.

### Temperature: Near or slightly above average overall

The majority of mean air temperatures were slightly above or slightly below their Long-Term Averages (LTA) for the month. Deviations from mean air temperature ranged from -0.3 °C (12.6 °C, 12.8 °C mean temperature) at Markree, Co Sligo and Dublin Airport, Co Dublin respectively to 0.6 °C (13.7 °C mean temperature) at Phoenix Park, Co Dublin. Mean temperatures ranged from 12.0 °C (0.1°C above its LTA) at Knock Airport, Co Mayo to 14.2 °C (0.1°C below and 0.3 °C above their LTA respectively) at Sherkin Island, Co Cork and Roche's Point, Co Cork. The month's highest temperature was reported at Phoenix Park, Co Dublin on Monday 14th with a temperature of 24.7 °C. The month's lowest air minimum was recorded on Saturday 26th at Markree, Co Sligo with -2.1 °C (*its lowest September minimum for 49 years*), while the lowest grass minimum was -6.6 °C reported at Oak Park, Co Carlow on Sunday 27th (*its lowest September grass minimum for 51 years*). More than half of stations reported ground frost. The number of days with ground frost ranged from zero days at a few stations to 10 days at Markree, Co Sligo. Less than half of stations reported air frost. The number of days with air frost ranged from zero days at a few stations to 3 days at Mount Dillon, Co Roscommon.

### Sunshine: Above average everywhere

All available sunshine totals were above their Long-Term Average (LTA). Percentage of monthly sunshine values ranged from 105% (monthly sunshine total of 124.2 hours) at Shannon Airport, Co Clare to 116% (monthly sunshine total of 144.9 hours) at Casement Aerodrome, Co Dublin. Monthly sunshine totals ranged from 109.8 hours (No LTA comparison\*) at Belmullet, Co Mayo to 157.1 hours (No LTA comparison\*) at Johnstown Castle, Co Wexford. The highest number of daily sunshine hours recorded this month was 11.2 hours at both Gurteen\*, Co Tipperary and Belmullet\*, Co Mayo on Sunday 20th and Saturday 19th. The number of dull days<sup>2</sup> ranged from 3 days at a few stations to 13 days at Belmullet, Co Mayo.

### Wind: Strong gales reported

Monthly mean wind speeds ranged from 5.0 knots (9.3 km/h) at Moore Park, Co Cork to 14.5 knots (26.9 km/h) at Mace Head, Co Galway. Gales were reported on the 12th, 23rd, 29th and 30th with up to strong gales reported on the 24th. Three stations reported gales during September, Belmullet, Co Mayo, Sherkin Island, Co Cork and Valentia Observatory, Co Kerry. The number of days with gales ranged from zero days at most stations to 4 days at Sherkin Island, Co Cork. The number of days with up to strong gales ranged from zero days at most stations to 1 day at Sherkin Island, Co Cork. Both the month's highest gust and 10-minute mean wind speed were reported on the 24th. The highest gust was 60 knots (111 km/h) reported at Valentia Observatory, Co Kerry while the month's highest 10-minute mean wind speed was 44 knots (82 km/h) at Sherkin Island, Co Cork.

## EXTREME VALUES AT SYNOPTIC STATIONS

### Rainfall

Highest total: 153.4 mm at Newport, Co Mayo (117% of its LTA)  
Lowest total: 41.6 mm at Shannon Airport, Co Clare (55% of its LTA)  
Highest daily rainfall: 43.7 mm at Newport, Co Mayo (33% of its monthly LTA) on Wed 2nd

### Temperature

Highest mean monthly temperature: 14.2°C at Shannon Airport, Co Clare (at its LTA), Sherkin Island, Co Cork (0.1°C below its LTA), Roches Point, Co Cork (0.3°C above its LTA) and Valentia Observatory, Co Kerry (0.2°C above its LTA)  
Lowest mean monthly temperature: 12.0°C at Knock Airport, Co Mayo (0.1°C above its LTA)  
Highest Air temperature: 24.7°C at Phoenix Park, Co Dublin (7.0 °C above its LTA) on Mon 14th  
Lowest air temperature: -2.1°C at Markree, Co Sligo (10.5 °C below its LTA) on Sat 26st (*its lowest September minimum for 49 years*)  
Lowest grass minimum: -6.6°C at Oak Park, Co Carlow on Sun 27th (*its lowest September grass minimum for 51 years*)

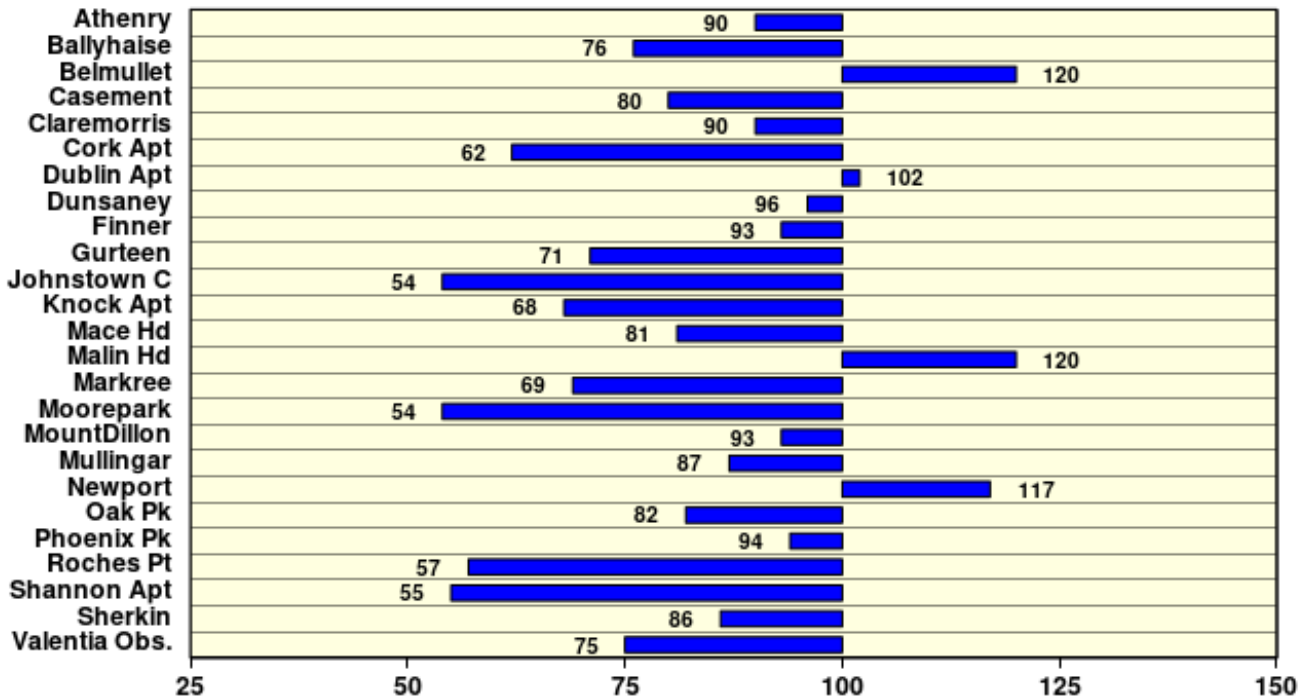
### Sunshine

Highest monthly total: 157.1 hrs (daily mean 5.24 hrs/day) at Johnstown Castle\*, Co Wexford  
Lowest monthly total: 109.8 hrs (daily mean 3.66 hrs/day) at Belmullet\*, Co Mayo  
Highest daily sunshine: 11.2 hours at both Gurteen\*, Co Tipperary on Sun 20th and Belmullet\*, Co Mayo on Sat 19th

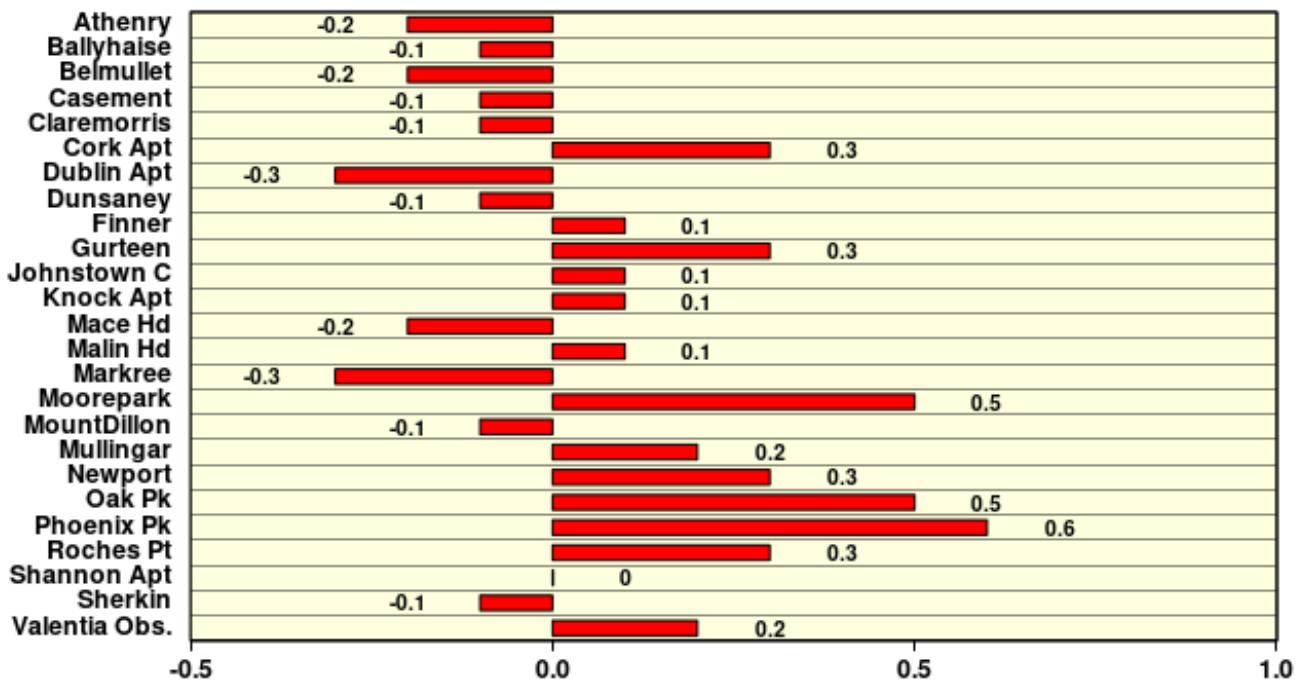
# September 2020

Based on Data from 1-30 September 2020 on whole month basis

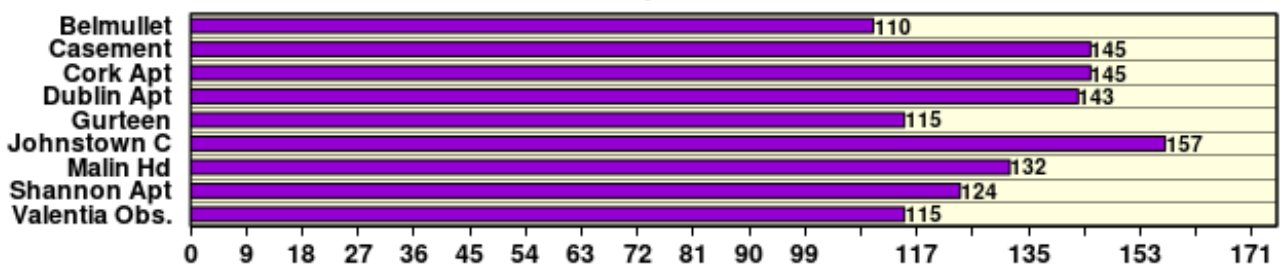
## Rainfall (% of average for period 1981-2010) on whole month basis



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



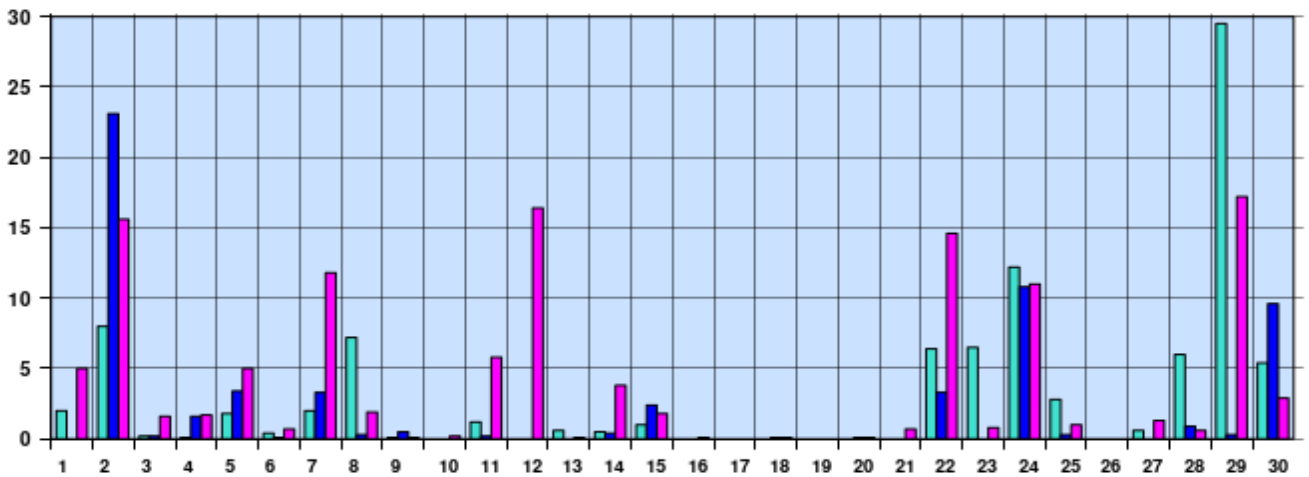
## Sunshine (Number of monthly sunshine hours)



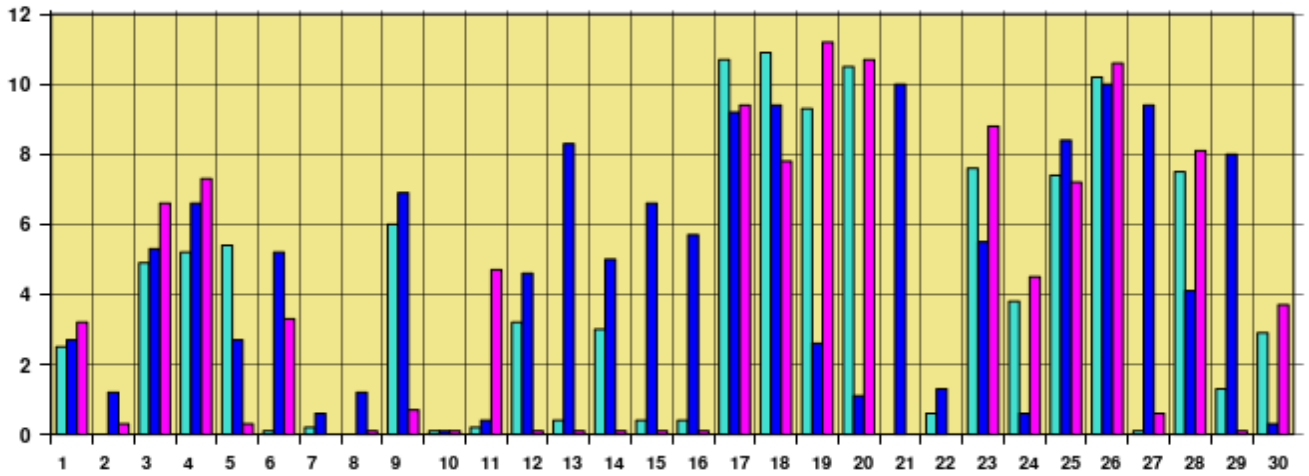
# September 2020 Daily Values at selected synoptic stations

Based on data from 1-30 September 2020 on a pro rata basis

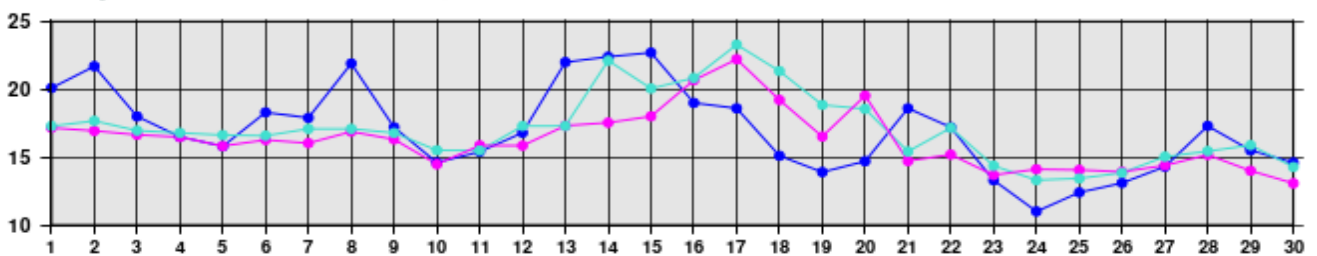
## Daily 00-24h rainfall values(mm)



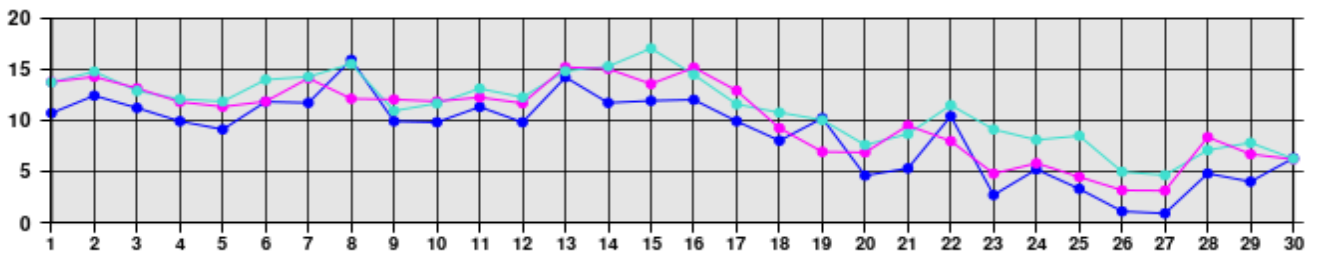
## Daily sunshine values(hours)



## Daily 00-24h maximum temperature (°C)



## Daily 00-24h minimum temperature (°C)



- Valentia Observatory - Dublin Airport - Belmullet

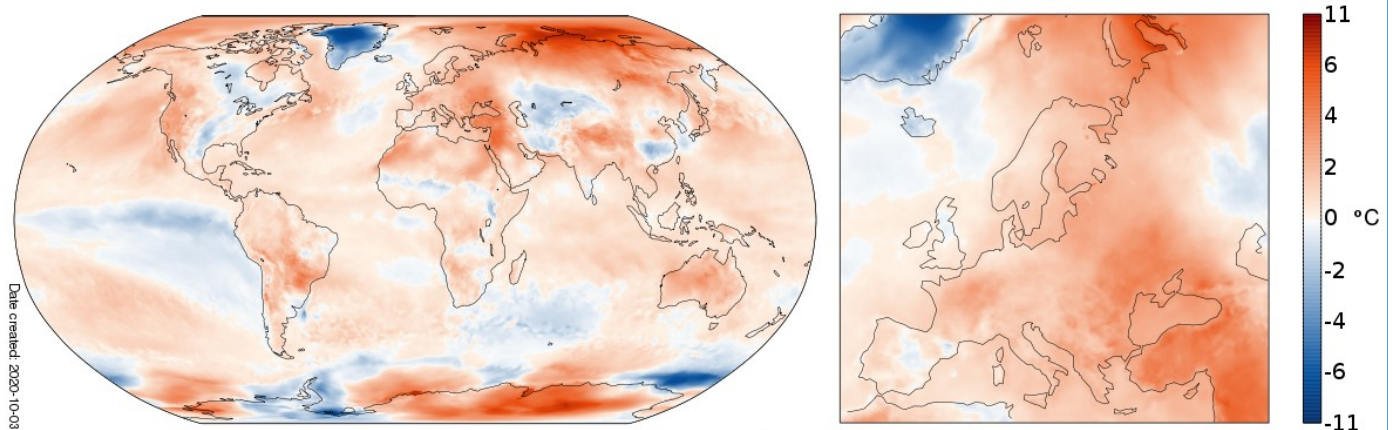
Issued by Met Éireann on Friday the 2nd October 2020. This report is based on available preliminary data from 25 principal weather stations operated by Met Éireann. Synoptic station data is midnight to midnight UTC. Long-Term Averages (LTAs) and "average" refer to the period 1981-2010. <sup>1</sup>A wet day is a day with 1.0 mm or more of rainfall. <sup>2</sup>A dull day is a day with less than 0.5 hours of sunshine. <sup>3</sup>A very wet day is a day with 10.0 mm or more of rainfall. <sup>4</sup>An absolute drought is a period of 15 or more consecutive days to none of which is credited 0.2 mm or more of precipitation. <sup>5</sup>A partial drought is a period of at least 29 consecutive days, the mean daily rainfall of which does not exceed 0.2 mm. <sup>6</sup>A 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

# September 2020 Global

## Surface air temperature for September 2020

Globally and in Europe, September 2020 was the warmest September on record, with the global average 0.05°C warmer than the previous warmest September in 2019 and 0.63°C warmer than the 1981-2010 average. Temperatures were well above average in many regions across the globe, including off the coast of northern Siberia, in the middle East, in parts of South America and Australia. There was cooler than average conditions in several locations including Greenland, Iceland and in the eastern equatorial Pacific Ocean, consistent with the ongoing La Niña event.

## Surface air temperature anomaly for September 2020



(Data: ERA5. Reference period: 1981-2010. Credit: C3S/ECMWF)

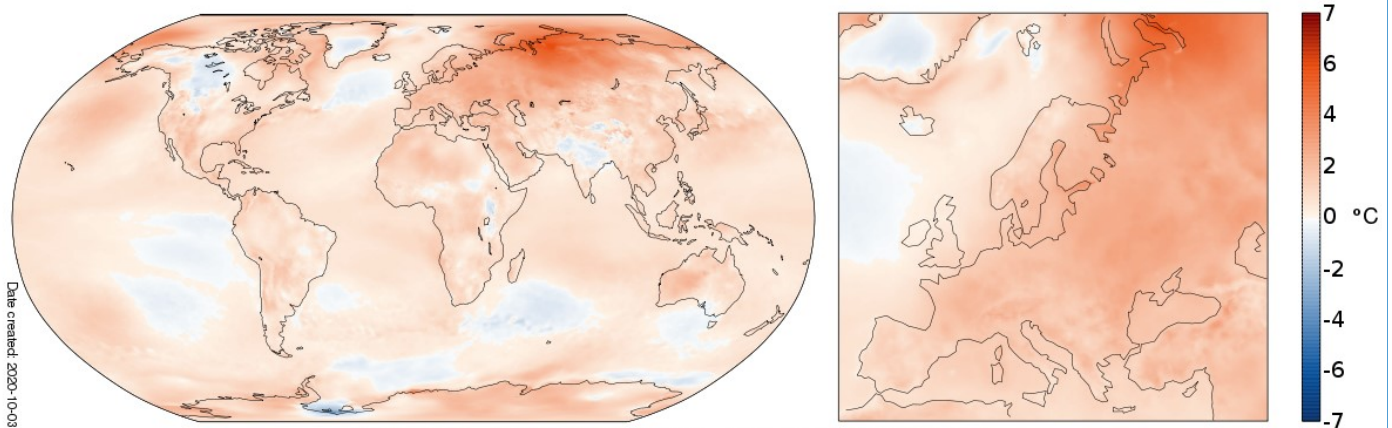


Surface air temperature anomaly for September 2020 relative to the September average for the period 1981-2010. Data source: ERA5. Credit: Copernicus Climate Change Service/ECMWF. <https://climate.copernicus.eu/surface-air-temperature-september-2020>

## The last 12 months - October 2019 to September 2020

The last twelve-month period was 0.65°C warmer than average. Temperatures were well above the 1981-2010 average over a large part of Siberia and the Arctic Ocean to the north of Siberia and Alaska. They were above average over virtually all of Europe, more so in the east and over most other areas of land and ocean. They were below average over a few land areas, particularly parts of western Canada, Greenland and northern India. Below average over several oceanic areas in the Southern Hemisphere, over the eastern equatorial Pacific and over the North Atlantic between Newfoundland and Ireland.

## Surface air temperature anomaly for October 2019 to September 2020



(Data: ERA5. Reference period: 1981-2010. Credit: C3S/ECMWF)



Surface air temperature anomaly for October 2019 to September 2020 relative to the average for 1981-2010. Data source: ERA5. Credit: Copernicus Climate Change Service/ECMWF. <https://climate.copernicus.eu/surface-air-temperature-september-2020>