

Monthly Weather Bulletin

No. 293

SEPTEMBER 2010

WARMER, WETTER AND SUNNIER THAN NORMAL ALMOST EVERYWHERE

September combined spells of relatively dry, settled conditions with periods of very wet weather, giving some record-breaking daily falls of rain at some stations. Temperatures were around two degrees higher than normal for most of the month, but cooler weather developed during the final week, bringing ground frost in some areas.

Monthly rainfall totals were above normal except in parts of Munster, with around twice the September average recorded in places; Mullingar had its wettest September since 1962. The number of wetdays during the month (days with 1mm or more rainfall) was between 13 and 19 at the majority of stations, a little higher than the normal range for September. Heaviest falls were measured in the period 5th to 7th and on the 9th, 13th and 21st/22nd. Widespread daily falls of between 20mm and 60mm on the 6th were the highest on record for September at some stations: Knock Airport's fall of 86.5mm on this day was the highest daily fall at the station for any month since rainfall measurements began there in 1988. Mean monthly air temperatures were



There was heavy rain at times during the month, but also some fine weather during the first and final weeks- this picture was taken in Dublin's Saint Stephen's Green on the 26th (picture Peter Lennon)

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Highest maximum air temperatures for each month at Irish stations

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Notes on the tables and map showing location of stations appear in January issue

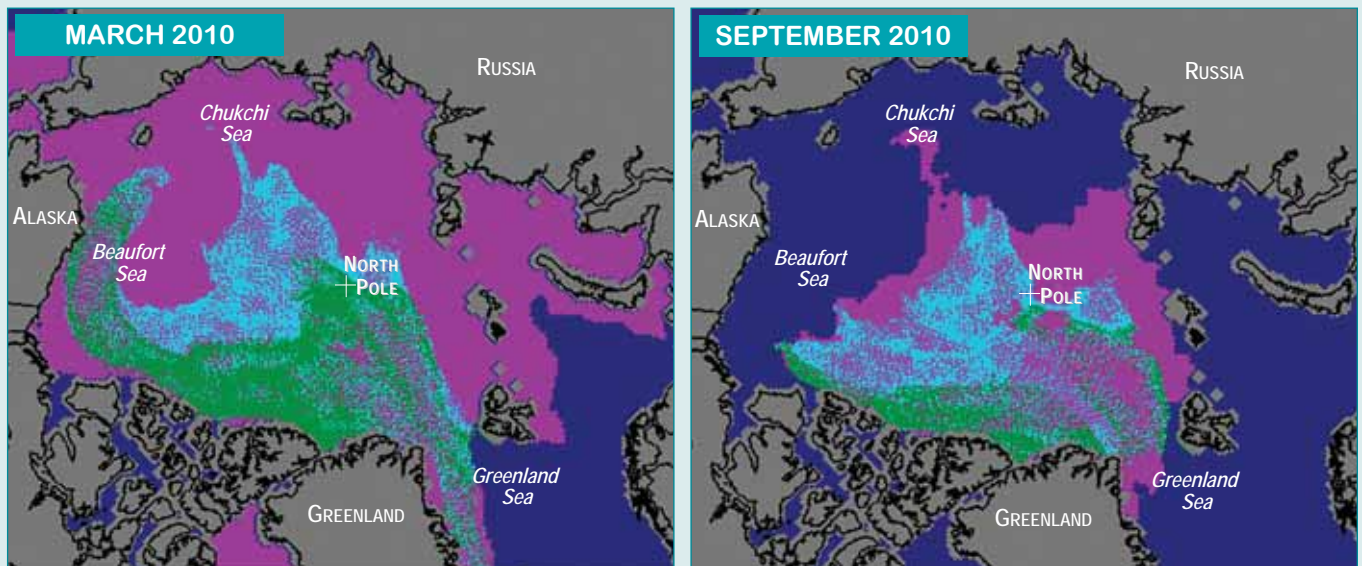


around one degree higher than normal and it was a particularly warm month in western and northwestern areas. The highest daily values were measured during the first four days of the month, when maxima of over 20°C were widely recorded. In contrast, temperatures fell well below normal at times during the final week, when some very low air and ground temperatures for September

were measured in midland and eastern areas. Sunshine totals for the month were higher than normal almost everywhere, with most stations recording their sunniest days in the period 1st to 4th.

1st to 3rd: A large area of high pressure over Ireland brought dry and mostly sunny conditions with light southeasterly winds.

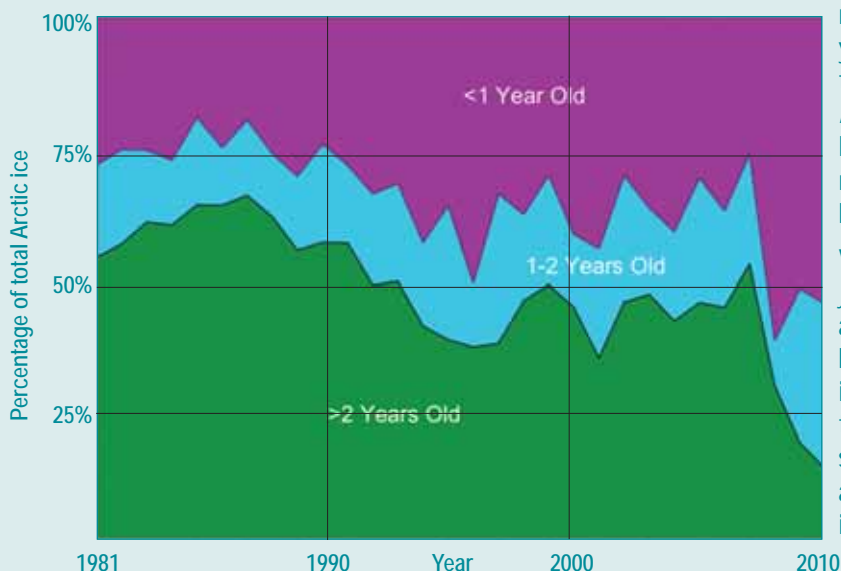
RAPID DECLINE IN OLDER ARCTIC SEA ICE



Arctic sea ice change during summer 2010

First-year ice (<1 year old)
 Second-year ice (1-2 year old)
 Multiyear ice (>2 year old)
 Open sea

The images above show the change in the age of Arctic sea ice which occurred between spring and autumn of this year. The sharply negative phase of the Arctic Oscillation last winter, which was responsible for the extremely cold conditions across many parts of the northern hemisphere, slowed the export of older ice out of the Arctic during the winter, but a large amount of older ice melted away during summer 2010. Researchers often look at ice age as a way of estimating ice thickness. Older ice tends to be thicker than younger, one- or two-year-old ice. Last winter, the wind patterns associated with the negative phase of the Arctic Oscillation transported a great deal of multiyear ice from the coast of the Canadian Arctic into the Beaufort and Chukchi seas. Scientists speculated that much of this ice, some five years or older, would survive the summer melt period. Instead, it mostly melted away. By the end of summer 2010, less than 15% of the ice



remaining in the Arctic was more than two years old, compared with 50 to 60% during the 1980s. There is very little of the oldest (at least five-year old) ice remaining in the Arctic; less than 60,000 square kilometers of such ice remains, compared to 2 million square kilometers during the 1980s.

Whether younger multiyear ice (two- or three-year old) in the Arctic Ocean will continue to age and thicken depends on two things: firstly, how much of that ice stays in the Arctic instead of being transported southwards into the North Atlantic through Fram Strait, and second, whether the ice survives its transit across the Beaufort and Chukchi Seas or instead melts away.

Text and images courtesy National Snow and Ice Data Centre, <http://nsidc.org/arcticseaicenews/>



Above
Astronauts aboard the International Space Station took this photograph of the eye of Hurricane Igor at 1356UTC on the 14th. At the time, Igor was a category four hurricane in mid-Atlantic, with maximum sustained winds of 213 km/h and gusts of 259 km/h. By the 21st, the storm reached Newfoundland, where more than 200mm of rainfall was reported, along with winds gusting to 145 km/h. The storm quickly dissipated over land, but caused significant disruption, knocking down trees and power lines and washing away some roads. (image courtesy NASA Space Observatory)

Daytime temperatures were well above normal, but nights were cool in eastern areas.

4th to 14th: Slow-moving depressions over Ireland brought spells of rain or showers each day, some of which were very heavy and accompanied by thunder. The heaviest falls were recorded early in the period: four-day falls of between 60mm and 100mm were measured in many places between the 4th and 7th. Most thunder was observed in southern and eastern areas, while a tornado was reported from Allenwood, Co. Kildare, on the 10th. This period was generally mild and cloudy, with south to southwesterly winds. There were widespread gale gusts on the 13th and 14th, when a deep depression passed to the north of the country.

15th to 31st: Falls of heavy rain were widespread on the 22nd and 28th, but rainfall amounts on most other days during

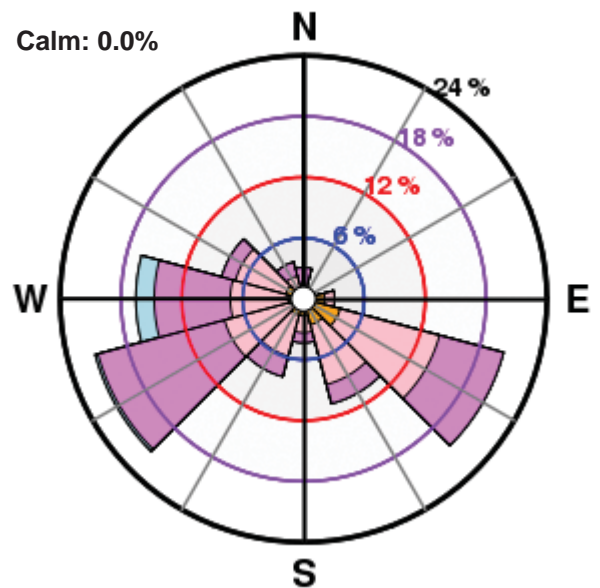
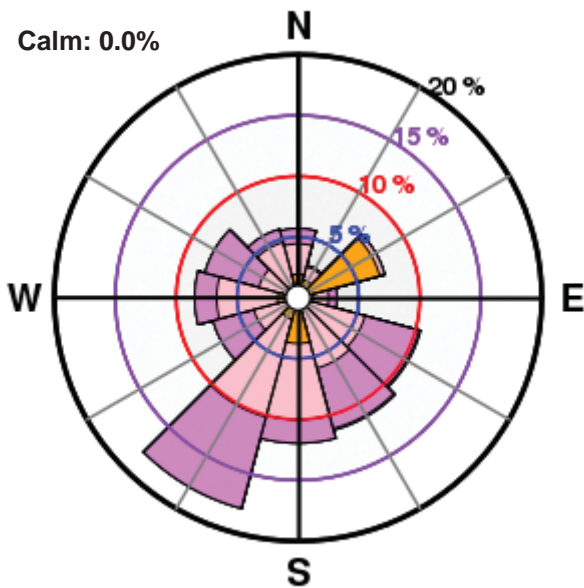
this period were small, especially in eastern and southern areas. Little or no rain was recorded between the 24th and 27th. Temperatures were variable, with warm weather between the 19th and 22nd, before falling well below normal in a northerly airstream between the 23rd and 26th. Sunny spells were recorded each day, particularly in eastern areas.

Wind and elements: Mean windspeeds for the month of between 6 and 15 knots (11 and 28km/h) were above normal everywhere, the highest September means for five or six years generally. The strongest winds of the month were on the 5th/6th and in the period 13th to 15th; Malin Head measured the highest gust of 54 knots (100km/h) during the early morning of the 6th. Thunderstorms were widespread at times between the 3rd and 11th, and particularly on the 22nd, but there were no reports of hail.

County / Station	WIND (KNOTS)						ELEMENTS							
	Mean speed	Max. dir.	10-min. speed	mean date/hour	Max. dir.	Gust speed date/time	Days with gales	gale gusts	Hours with gale gusts	Snow	Snow Lying	Hail	Thunder	Fog
CO. CARLOW CARLOW (OAK PARK)	7.2	220°	19	13/16	280°	31 14/1757	0	0	0					
		260°	19	14/12										
CO. CAVAN BALLYHAISE	6.2	220°	18	13/14	230°	32 13/1433	0	0	0					
CO. CLARE SHANNON AIRPORT	9.0	230°	25	13/19	290°	38 14/1420	0	4	7	0	0	0	0	1
CO. CORK ROCHE'S POINT	10.8	290°	26	15/14	140°	33 5/2252	0	0	0					
CORK AIRPORT	9.0	140°	24	5/19	150°	35 5/1931	0	1	2	0	0	0	0	8
CO. DONEGAL MALIN HEAD	15.2	280°	38	15/04	130°	54 6/0319	6	13	114	0	0	0	0	0
CO. DUBLIN DUBLIN AIRPORT	9.6	280°	27	14/16	250°	37 13/1737	0	3	14	0	0	0	0	0
		260°	37	14/1130										
CASEMENT AERODROME	8.9	140°	27	5/24	250°	39 14/1146	0	4	12	0	0	0	2	0
CO. KERRY VALENTIA OBSERVATORY	8.8	130°	25	5/17	130°	41 5/1736	0	1	4	0	0	0	1	0
CO. MAYO BELMULLET	11.3	210°	28	13/13	230°	45 13/1316	0	8	46	0	0	0	0	0
KNOCK AIRPORT	9.2	250°	28	13/15	250°	45 13/1437	0	5	17	0	0	0	0	12
CO. TIPPERARY GURTEEN	8.3	280°	22	14/16	280°	33 14/1347	0	0	0					
CO. WESTMEATH MULLINGAR	5.9	120°	17	5/22	220°	29 13/1452	0	0	0					
CO. WEXFORD JOHNSTOWN CASTLE	6.3	230°	16	13/15	240°	28 13/1206	0	0	0					
		210°	16	19/13										

Valentia Observatory

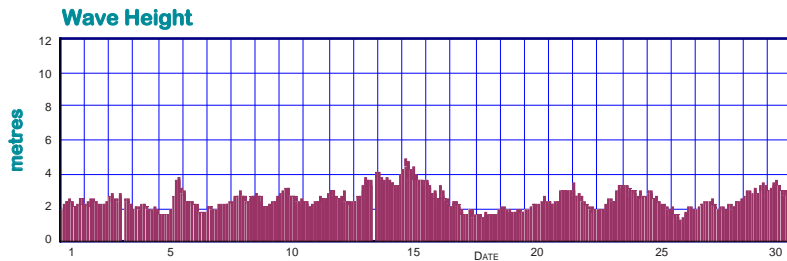
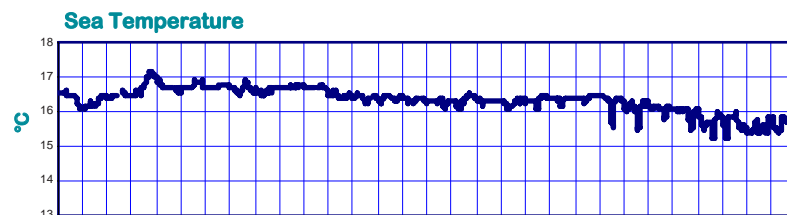
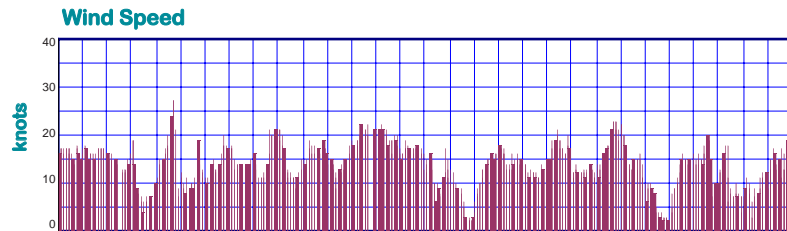
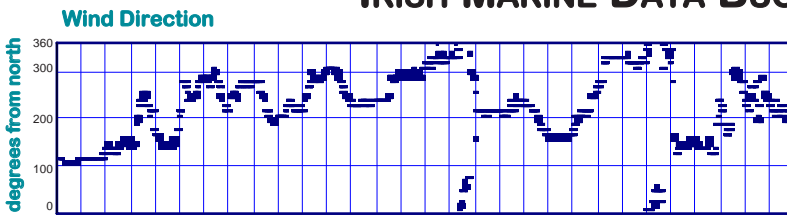
Dublin Airport



< 5
 5 - 10
 10 - 20
 20 - 35
 > 35
windspeed in knots

PERCENTAGE FREQUENCY OF WIND DIRECTION

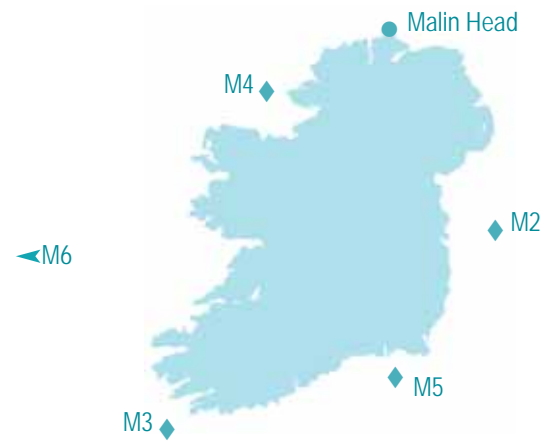
MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK



Hourly wind and wave conditions at M3 (51.22°N, 10.55°W)

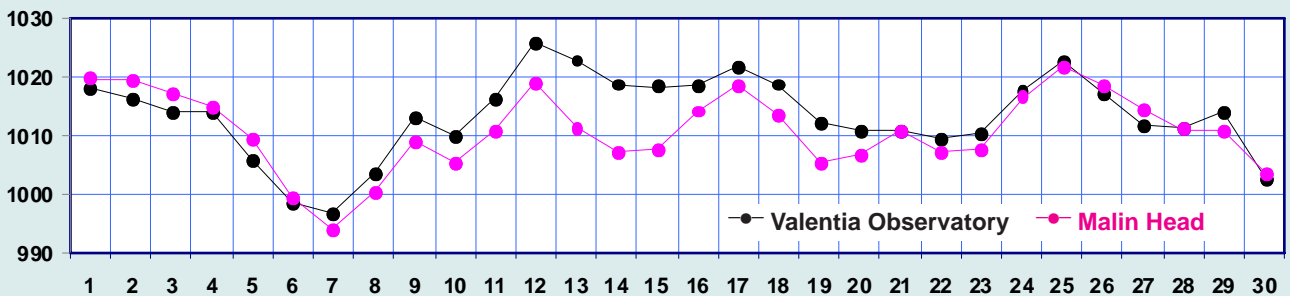
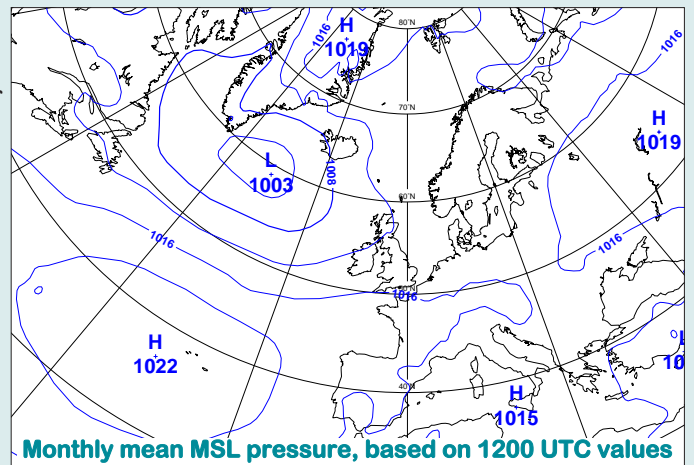
Buoy	Sea surface temp. (°C)	Mean wind speed (knots)	Max. 10-min wind (knots)	Mean wave height (m.)	Max. wave height (m.)
M2		not available			
M3	16.3	13.7	27	2.5	4.9
M4	14.2	16.2	32	n/a	n/a
M5		not available			
M6		not available			
Malin Head	14.5				

Summary of Mean Monthly Values



MEAN ATMOSPHERIC PRESSURE

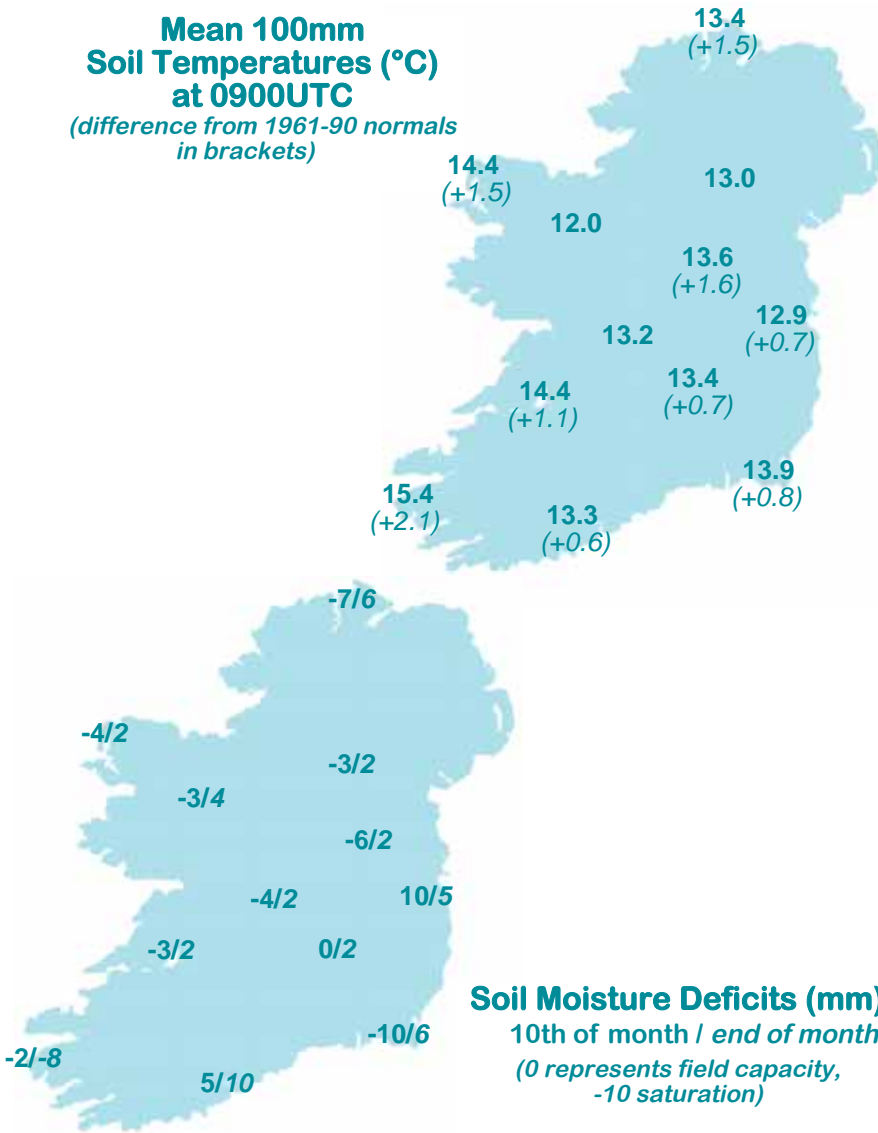
Mean sea level pressure values for the month were near or a little below normal, ranging from 1012hPa in the north to 1014hPa in the south. The month's lowest pressure values were measured when a depression passed over the north of the country on the 7th; Belmullet's value of 991.0hPa on this day was the lowest of the month. Highest values were recorded around mid-month, when a large anticyclone lay to the southwest of Ireland; the highest value of 1027.9hPa was recorded at Cork Airport on the 12th.



Mean daily Mean Sea Level pressure (hPa)

Mean 100mm Soil Temperatures (°C) at 0900UTC

(difference from 1961-90 normals in brackets)



Soil Moisture Deficits (mm)
10th of month / end of month
(0 represents field capacity, -10 saturation)

Soil Temperatures at 0900UTC

County/ Station	°C		
	100mm	200mm	300mm
CO. CARLOW			
CARLOW (OAK PARK)	13.4	13.8	14.0
CO. CAVAN			
BALLYHAISE	13.0	13.7	14.2
CO. CLARE			
SHANNON AIRPORT	14.4	15.0	15.6
CARRON	14.8		15.5
CO. CORK			
ROCHE'S POINT	14.0	14.6	14.8
FERMOY (MOOREPARK)	14.1	14.5	15.4
CORK AIRPORT	13.3	13.7	14.8
SHERKIN ISLAND	14.6	15.0	15.3
BALLINCURRIG (PEAFIELD)	12.9	12.9	14.0
CO. DONEGAL			
MALIN HEAD	13.4	14.3	14.9
CO. DUBLIN			
DUBLIN (PHOENIX PARK)	13.6	14.6	15.0
DUBLIN AIRPORT	12.7	13.3	14.1
CASEMENT AERODROME	12.9	13.6	14.5
CO. KERRY			
VALENTIA OBSERVATORY	15.4	15.9	16.7
CO. LIMERICK			
MOUNT RUSSELL	13.2	14.0	
CO. MAYO			
BELMULLET	14.4	15.6	16.4
STRAIDE	14.1		
CONNACHT AIRPORT	12.0	12.9	13.8
CO. MEATH			
WARRENSTOWN	13.6	14.5	15.4
CO. TIPPERARY			
GURTEEN	13.2	13.6	14.2
FETHARD (PARSONSHILL)	13.6	14.5	
CO. WATERFORD			
DUNGARVAN (CARRIGLEA)		14.3	14.8
CO. WESTMEATH			
MULLINGAR	13.6	14.4	15.4
CO. WEXFORD			
JOHNSTOWN CASTLE	13.9	14.3	14.7
JOHN F. KENNEDY PARK	14.4	15.0	16.3
CLONROCHE (KNOXTOWN)	14.0	14.6	14.9

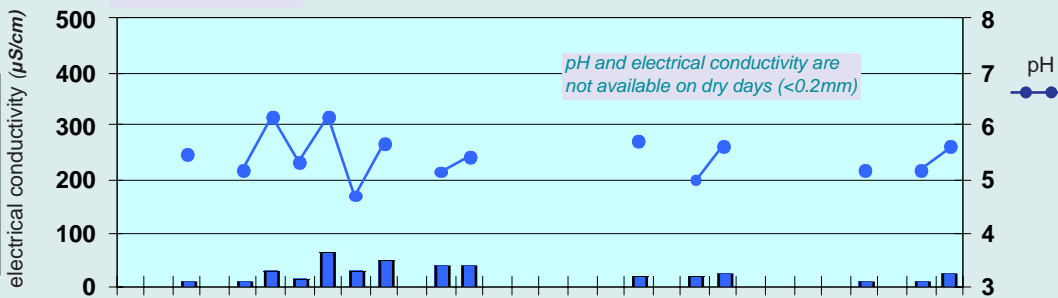
Chemical Analysis of Precipitation and Air Samples at Valentia Observatory

Acid rain occurs when pollutants combine with moisture in the air to form sulphuric or nitric acid. pH is the simplest way of measuring the acidity of precipitation. Usually pH of 7.00 is considered neutral but this is not the case in rainfall samples. Pure water in the atmosphere has an equilibrium pH value of 5.65 at 20°C owing to carbon dioxide in the air dissolving to form carbonic acid. Any value below pH 5.65 is considered acid while any value above is considered alkaline.

Sulphur dioxide and sulphate in air contribute to the formation of sulphuric acid; nitrate in air contributes to the formation of nitric acid.

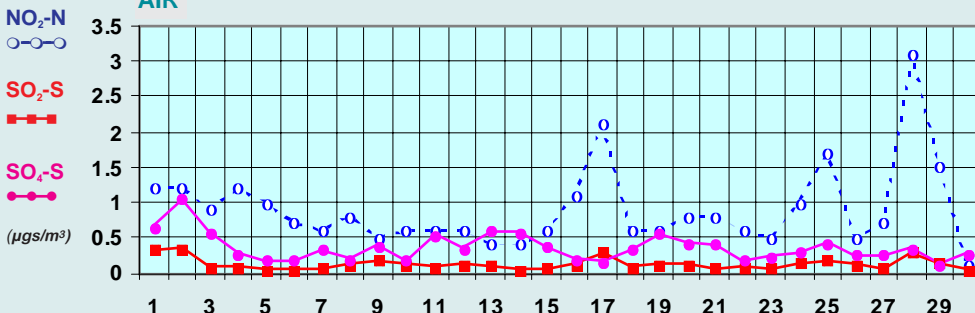
Conductivity measures the total ion activity in the rainfall, i.e. the higher the conductivity the greater the number of ions present.

PRECIPITATION



data shown here are interim values and are subject to change

AIR



10-DAY VALUES FOR SELECTED AGROMETEOROLOGICAL STATIONS		RAINFALL (MM)				TEMPERATURE (°C)												SUNSHINE (HOURS)			
Station	period	amount	% of average	rain days	wet days	mean max.	mean min.	mean daily	diff. from average	lowest min.	date	days with air frost	degree days > 4.4°C	degree days > 10.0°C	lowest "grass-min."	date	days with ground frost	mean 10cm at 0900h	mean 30cm at 0900h	total no. of hours	% of average
Cavan (Loreto)	11-20	52.1	-	10	7	16.5	10.0	13.3	-	5.4	17	0	88	35	1.9	17	0	-	-	33.7	-
	21-end	32.4	-	6	5	15.0	8.8	11.9	-	3.7	27	0	75	25	-0.4	27	1	-	-	37.5	-
	month	212.6	-	24	19	16.7	10.1	13.4	-	3.7	27	0	270	112	-0.4	27	1	-	-	117.0	-
Co. Cork	1-10	70.8	-	8	7	19.4	11.9	15.7	-	9.0	9	0	113	57	8.8	9	0	14.4	14.8	47.9	-
Ballincurrag	11-20	5.0	-	5	2	17.5	9.6	13.6	-	4.6	18	0	91	39	4.4	18	0	12.6	14.0	44.1	-
(Peafield)	21-end	26.8	-	6	4	15.7	8.6	12.2	-	2.6	25	0	78	29	2.4	25	0	11.6	13.2	39.1	-
	month	102.6	-	19	13	17.5	10.0	13.8	-	2.6	25	0	282	125	2.4	25	0	12.9	14.0	131.1	-
Co. Donegal	1-10	57.8	-	8	7	19.9	12.8	16.4	-	11.4	1	0	119	63	7.1	1	0	-	-	-	-
Glenties	11-20	59.0	-	9	7	16.4	9.9	13.2	-	5.2	17	0	87	34	1.9	17	0	-	-	-	-
	21-end	64.1	-	5	5	15.2	8.2	11.7	-	2.6	29	0	73	25	0.1	29	0	-	-	-	-
	month	180.9	125	22	19	17.2	10.3	13.8	1.5	2.6	29	0	280	122	0.1	29	0	-	-	-	-
Co. Kerry	1-10	48.5	-	6	6	20.2	12.5	16.4	-	11.0	5	0	119	63	4.6	5	0	-	-	44.2	-
Ardfert	11-20	20.2	-	8	7	18.1	11.3	14.7	-	6.1	18	0	103	49	0.5	18	0	-	-	37.0	-
	21-end	31.6	-	7	5	17.1	10.0	13.6	-	5.4	26	0	92	39	-0.2	26	1	-	-	40.2	-
	month	100.3	-	21	18	18.5	11.3	14.9	1.6	5.4	26	0	314	151	-0.2	26	1	-	-	121.4	-
Co. Monaghan	1-10	n/a	-	na	na	18.9	10.7	14.8	-	5.8	3	0	104	50	-0.4	3	1	-	-	-	-
Carrickmacross	11-20	n/a	-	na	na	16.9	10.3	13.6	-	6.1	18	0	92	38	-1.5	18	1	-	-	-	-
	21-end	27.4	-	6	5	15.8	7.5	11.7	-	0.9	27	0	74	25	-6.0	27	4	-	-	-	-
	month	148.9	191	na	na	17.2	9.5	13.4	-	0.9	27	0	269	114	-6.0	27	6	-	-	-	-
Co. Waterford	1-10	100.2	-	8	6	20.0	11.9	16.0	-	7.0	2	0	115	61	5.0	1	0	-	16.0	50.8	-
Dungarvan	11-20	1.9	-	na	na	18.4	10.8	14.6	-	5.4	18	0	102	48	3.8	18	0	-	14.6	45.9	-
	21-end	20.9	-	6	4	16.5	9.1	12.8	-	2.6	25	0	84	35	1.2	25	0	-	13.7	44.4	-
	month	123.0	-	na	na	18.3	10.6	14.5	1.1	2.6	25	0	302	144	1.2	25	0	-	14.8	141.1	114
Co. Wexford	1-10	112.2	-	8	8	18.3	12.4	15.4	-	10.1	7	0	109	53	8.0	7	0	15.8	16.8	46.4	-
J.F.K. Park	11-20	3.9	-	3	2	17.4	10.0	13.7	-	6.0	18	0	93	40	2.5	18	0	14.0	16.4	39.3	-
	21-end	25.3	-	6	4	15.8	8.8	12.3	-	4.2	26	0	79	30	2.5	26	0	13.3	15.7	45.7	-
	month	141.4	163	17	14	17.1	10.4	13.8	0.8	4.2	26	0	281	123	2.5	18	0	14.4	16.3	131.4	113

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE					
Station	Period	P.E. (mm)		Soil Moisture (mm)	
		Amount	Deficit	Accum'd Deficit	Surplus
Co. Kerry	1-10	35.8	-	7	29
Valentia Obs.	11-20	9.1	-	1	6
	21-end	23.2	-	0	15
	month	68.1			

MONTHLY EVAPORATION (MM) FROM CLASS A PAN			
County	Station	Monthly Rainfall (mm)	Monthly Evaporation (mm)
Kerry	Valentia Observatory	125.1	67.3
Kerry	North Kerry Landfill	171.9	25.0
Mayo	Newport (Furnace)	262.4	31.9
Offaly	Derrygreenagh	169.3	31.2
Waterford	Dungarvan (Carriglea)	123.0	41.9
Wexford	J.F.K. Park	141.4	75.6

Station	P.E. (Penman)	GLOBAL SOLAR RADIATION (MJ/sq.m.)			
	total(mm)	1st-10th	11th-20th	21st-end	Total
Co. Carlow					
Carlow (Oak Park)*	45	104.96	88.80	90.51	284.27
Co. Cavan					
Ballyhaise*	40	103.09	86.13	89.24	278.46
Co. Clare					
Shannon Airport	47	global solar radiation values for stations marked * are provisional			
Co. Cork					
Cork Airport	44				
Roche's Point*		120.74	108.87	96.63	326.24
Co. Donegal					
Malin Head	49	109.75	91.11	95.45	276.31
Co. Dublin					
Dublin Airport	45	111.04	101.35	95.01	307.40
Casement Aerodrome	45				
Co Kerry					
Valentia Obs.	51	113.62	102.29	91.09	307.00
Co. September					
Belmullet	43	110.94	93.24	77.77	281.95
Knock Airport	42				
Co. Tipperary					
Curteen*	44	116.85	92.35	86.89	296.09
Co. Westmeath					
Mullingar*	41	103.96	95.18	89.13	288.27
Co. Wexford					
Johnstown Castle*	40	100.33	99.50	88.44	288.27

Wednesday 1st: Occasional outbreaks of rain skirting the northwest coast during the early hours, otherwise dry. Generally cloudy overnight except in the east, where there were clear spells. A warm, dry and sunny day followed, but it was cloudier in the west. Light southwesterly winds.

Rainfall: nil to trace

Temperature: max. 17°C to 21°C, min. 5°C to 15°C, no ground frost

Sunshine: 3 to 10 hours, sunniest at Casement Aerodrome, 3 hours at Malin Head

Thursday 2nd: Early mist and fog cleared soon after dawn and there were long sunny spells in most places. Cloudier in the south and southwest, as a front lingered near the southwest coast during the day and moved northwards during the latter half of the day. For the rest of the country it was a warm, dry and sunny day. Winds were light and generally southerly in direction.

Rainfall: nil generally, <1mm in the south

Temperature: max. 17°C to 22°C, min. 6°C to 15°C, no ground frost

Sunshine: 2 to 12 hours, sunniest at Dublin Airport, 2 hours at Valentia

Friday 3rd: There was some drizzle for a time around dawn in the east but this quickly cleared to give a warm, dry and sunny day. The south coast was the only area with cloud that persisted for almost all of the day, but even here it was warm and dry. A front off the west coast brought outbreaks of drizzle to the southwest during the evening. Winds were light, southerly.

Rainfall: nil generally, <1mm in the south

Temperature: max. 17°C to 23°C, min. 6°C to 16°C, no ground frost

Sunshine: trace to 11 hours, sunniest at Knock Airport, trace at Valentia

Saturday 4th: A narrow band of heavy rain moved into the southwest in the early hours and crossed the country overnight and during the morning. There were some pulses of very heavy thundery rain, particularly in Ulster. It was mostly dry for the rest of the day, but some very heavy isolated showers developed in Munster during the late afternoon. Cloudy in the east, sunshine further west. Winds were light to moderate, southeast to southwesterly.

Rainfall: 1 to 21mm, heaviest at Gurteen, 1mm at Belmullet

Temperature: max. 16°C to 22°C, min. 10°C to 15°C, no ground frost

Sunshine: nil to 9 hours, sunniest at Valentia, nil at Casement Aerodrome

Sunday 5th: After a relatively dry start, showery rain developed in the southwest in the early afternoon. This rain spread very slowly eastwards during the afternoon and evening. It was mostly light at first, but became progressively heavier as it crossed the country. Mostly overcast. Winds were southeasterly, light at first, increasing during the day, becoming strong by late evening.

Rainfall: nil to 26mm, heaviest at Valentia, nil at Casement Aerodrome

Temperature: max. 16°C to 20°C, min. 11°C to 15°C, no ground frost

Sunshine: nil to 2 hours, sunniest at Malin Head,

Monday 6th: Heavy rain affected all areas overnight. A wet morning with outbreaks of heavy rain in many areas, turning to showers in southern areas during the morning. The afternoon continued wet over much of the country, with some thundery showers and sunny spells over southern parts. Continuing wet over the northern part of the country overnight. Winds were southeasterly, light to moderate, stronger in the north and northwest with gale gusts.

Rainfall: 7 to 87mm, heaviest at Knock Airport, 7mm at Valentia

Temperature: max. 15°C to 19°C, min. 12°C to 14°C, no ground frost

Sunshine: nil to 7 hours, sunniest at Valentia

Tuesday 7th: Showers overnight, some heavy. Heavy rain in parts of the west and northwest during the morning, while elsewhere there were frequent heavy showers with some sunny spells also. Heavy rain continued in parts of the west and northwest during the afternoon, with showers elsewhere, some heavy and of hail. During the evening and night, the rain continued in parts of the northwest. Winds were light to moderate, southeasterly or variable in direction.

Rainfall: 1 to 42mm, heaviest at Shannon Airport, 1mm at Carlow (Oak Park)

Temperature: max. 14°C to 18°C, min. 10°C to 13°C, no ground frost

Sunshine: nil to 7 hours, sunniest at Valentia, nil at Belmullet

Wednesday 8th: Patchy rain and showers overnight with some clear spells also. Plenty of showers throughout the day, some of which were heavy, with sunny spells also. Showers became well-scattered during the evening and night with some clear spells developing. Winds were light and variable in direction.

Rainfall: trace to 7mm, heaviest at Johnstown Castle, trace at Shannon Airport

Temperature: max. 17°C to 21°C, min. 10°C to 13°C, no ground frost

Sunshine: 2 to 8 hours, sunniest at Valentia, 2 hours at Malin Head

Thursday 9th: Scattered showers overnight with some clear spells also. Showers with some sunny spells continued during the morning. Rain reached the southwest coast by mid-afternoon and spread slowly northeastwards, reaching the east coast around nightfall. A wet night everywhere with some heavy falls of rain in places. Winds were light, variable.

Rainfall: 2 to 12mm, heaviest at Belmullet, 2mm at Roche's Point

Temperature: max. 17°C to 21°C, min. 10°C to 14°C, no ground frost

Sunshine: <1 to 6 hours, sunniest at Malin Head, <1 hour at Valentia

Friday 10th: Rain continued overnight, mostly light, with some heavy falls in the north and west. A clearance moved into the northwest around dawn and spread southeastwards. Sunny spells also, mainly in the northwest and north. Rain in the south during the afternoon moved northeastwards, giving some heavy falls in the southeast. Isolated heavy showers developed in the midlands at this time also. Winds were moderate southwesterly, falling light in the afternoon and evening.

Rainfall: 2 to 10mm, heaviest at Johnstown Castle, 2mm at Carlow (Oak Park)

Temperature: max. 17°C to 21°C, min. 13°C to 16°C, no ground frost

Sunshine: nil to 9 hours, sunniest at Belmullet, nil at Valentia

Saturday 11th: Heavy showers continued during the early morning over the western half of the country, dying out for a while. Shower activity picked up again in the west after dawn and spread countrywide by late morning or early afternoon. Sunshine between the showers, particularly in the south. Mild. Winds were southwest to westerly, moderate or fresh in the west and north, lighter further east.

Rainfall: trace to 10mm, heaviest at Knock Airport, trace at Valentia

Temperature: max. 16°C to 19°C, min. 10°C to 14°C, no ground frost

Sunshine: 6 to 11 hours, sunniest at Cork Airport, 6 hours at Casement Aerodrome

Sunday 12th: Generally dry overnight. Cloudy in the west, some sunshine elsewhere. Patchy light rain developed in the western half of the country during the afternoon. This rain quickly crossed the country, with a clearance following into the west by late evening. Winds were light westerly, gradually increasing and backing southwesterly, strong in the west, moderate elsewhere.

Rainfall: trace to 5mm, heaviest at Belmullet, trace at Shannon Airport

Temperature: max. 14°C to 18°C, min. 8°C to 13°C, no ground frost

Sunshine: nil to 6 hours, sunniest at Cork Airport, nil at Belmullet

Monday 13th: Showery rain in places overnight. Persistent rain affected Ulster in the late morning. A band of rain over the northwest during the early afternoon moved very slowly southeastwards, giving some significant falls in the west. Very mild and humid. Overcast countrywide. Winds were southwesterly, generally moderate, fresh or strong in places during the afternoon, up to gale force in the north.

Rainfall: trace to 19mm, heaviest at Malin Head, trace at Johnstown Castle

Temperature: max. 17°C to 21°C, min. 13°C to 15°C, no ground frost

Sunshine: nil to trace

Tuesday 14th: Showers persisted in Ulster overnight and became widespread and heavy from morning on. The showers spread to Connacht and north Leinster during the late morning and afternoon, dying out later in the evening. Sunny spells in most parts. Winds were moderate southwesterly, gradually veering westerly and increasing strong in the west and north.

Rainfall: 1 to 8mm, heaviest at Shannon Airport, 1mm at Ballyhaise

Temperature: max. 15°C to 18°C, min. 9°C to 14°C, no ground frost

Sunshine: 3 to 9 hours, sunniest at Dublin Airport, 3 hours at Cork Airport

Wednesday 15th: Well-scattered light showers continued overnight in Ulster, dry elsewhere. Showers during the morning, spreading to all areas before noon. The showers were mostly light, with isolated heavier falls in the north. Generally dry by evening apart from the extreme north. Spells of sunshine between the showers everywhere. Cool in the north, milder further south. Winds were moderate northwesterly, but stronger on western and northern coasts.

Rainfall: nil to 2mm, heaviest at Belmullet, nil in the south

Temperature: max. 14°C to 19°C, min. 8°C to 13°C, no ground frost

Sunshine: 2 to 6 hours, sunniest at Shannon Airport, 2 hours at Valentia

Thursday 16th: Mostly dry overnight with isolated light showers along the west coast. The day was mainly fair with sunny periods and well-scattered showers, some heavy. Mainly dry during the evening with a few light showers. Winds were light, northerly in direction.

Rainfall: nil to 2mm, heaviest at Ballyhaise

Temperature: max. 14°C to 18°C, min. 7°C to 12°C, no ground frost

Sunshine: 5 to 8 hours, sunniest at Shannon Airport, 5 hours at Valentia

Friday 17th: Mostly dry overnight with some mist and fog in places, and some patchy rain in parts of the north. The morning was dry with some sunny spells, particularly in the south. This pattern continued during the afternoon and evening. Winds were light, north to northwesterly in direction.

Rainfall: nil to <1mm, heaviest at Valentia

Temperature: max. 13°C to 16°C, min. 4°C to 11°C, no ground frost

Sunshine: 3 to 10 hours, sunniest at Valentia, 3 hours at Casement Aerodrome

Saturday 18th: Rain moved into Connacht and Ulster from the northwest during the night. It continued during the morning, while moving eastwards. Little or no rain fell in the south. The rain turned to showers during the afternoon, while remaining overcast and mild. Winds were light, southwesterly.

Rainfall: nil to 16mm, heaviest at Knock Airport, nil in the south

Temperature: max. 14°C to 17°C, min. 4°C to 11°C, no ground frost

Sunshine: nil to <1 hour, sunniest at Casement Aerodrome

Sunday 19th: Cloudy and wet overnight with outbreaks of rain in most parts of the country. During the morning, the rain became more broken and showery. The afternoon continued cloudy with bands of rain and drizzle moving eastwards across the country. Generally dry by evening, apart from a few scattered showers in the north and west. Winds were moderate, southwesterly.

Rainfall: nil to 13mm, heaviest at Ballyhaise, nil at Johnstown Castle

Temperature: max. 15°C to 19°C, min. 12°C to 14°C, no ground frost

Sunshine: trace to 2 hours, sunniest at Cork Airport

Monday 20th: Overnight rain and drizzle affected much of the country, mainly western and northern counties. Drier weather followed during the morning, although it remained mostly cloudy. The afternoon was drier with sunny spells in most places and just a few spots of drizzle, mainly in western counties. The evening and night brought cloudier weather and occasional outbreaks of drizzle. Winds were moderate, southwesterly in direction.

Rainfall: nil to 4mm, heaviest at Knock Airport

Temperature: max. 17°C to 20°C, min. 12°C to 15°C, no ground frost

Sunshine: 3 to 8 hours, sunniest at Malin Head, 3 hours at Cork Airport

Tuesday 21st: Patchy rain and drizzle in the south overnight. It was a mostly cloudy morning in most parts of the country, with only a few sunny breaks. Shortly after midday, a band of rain developed along the west coast and spread across Munster, Connacht and Ulster during the afternoon and evening. The rain became widespread during the late evening and night, affecting almost all of the country. Winds were southerly, light to moderate.

Rainfall: nil to 10mm, heaviest at Valentia, nil in the east

Temperature: max. 17°C to 20°C, min. 11°C to 16°C, no ground frost

Sunshine: trace to 4 hours, sunniest at Casement Aerodrome, trace at Valentia

Wednesday 22nd: Rain overnight in most areas, heavy in places. The rain cleared into the Irish Sea during the morning, followed by sunny spells and showers. Heavy thundery showers during the afternoon and evening, with some sunny spells also. Some showers persisted during the night. Mild throughout the day. Winds were light to moderate, southerly, veering northerly.

Rainfall: 2 to 30mm, heaviest at Casement Aerodrome, 2mm at Valentia

Temperature: max. 16°C to 20°C, min. 10°C to 14°C, no ground frost

Sunshine: 1 to 7 hours, sunniest at Shannon Airport, 1 hour at Malin Head

Thursday 23rd: Cloudy with showers in western areas overnight, and some patchy drizzle in the east. The morning saw widespread showers over the country, with some sunny periods also. Showers continued during the afternoon and for the remainder of the day, with some heavy ones in places. Winds were northerly, light to moderate.

Rainfall: trace to 8mm, heaviest at Dublin Airport, trace at Roche's Point

Temperature: max. 13°C to 17°C, min. 10°C to 12°C, no ground frost

Sunshine: trace to 6 hours, sunniest at Cork Airport, trace at Malin Head

Friday 24th: Showers overnight, mainly in the western half of the country. Mainly dry during the morning, with a few showers in western parts. Staying generally dry for the rest of the day, with sunny spells and cloud also. Isolated patches of ground frost in the east late in the day as the skies cleared after dark. Cold throughout, with fresh northerly winds declining gradually during the day, falling light by evening.

Rainfall: nil to trace generally, <1mm at Valentia

Temperature: max. 12°C to 15°C, min. 3°C to 10°C, ground temperatures down to -2°C at Carlow (Oak Park)

Sunshine: 3 to 8 hours, sunniest at Cork Airport, 3 hours at Belmullet

Saturday 25th: Cold overnight with some patches of frost in sheltered places. The day was dry with sunshine in the south, some sunny spells in the midlands and east, while overcast in the north and northwest. It remained cold throughout the day. Winds were light, northerly in direction.

Rainfall: nil

Temperature: max. 10°C to 14°C, min. 1°C to 9°C, ground temperatures down to -2°C at Carlow (Oak Park)

Sunshine: nil to 10 hours, sunniest at Cork Airport, nil at Malin Head

Sunday 26th: Overnight conditions were dry and calm with very little wind and patchy cloud cover. It remained settled for the morning. Cloud cover during the day varied, with some sunny breaks in parts. Remaining dry and calm throughout the evening and night. Winds were light and variable or southeasterly in direction.

Rainfall: nil

Temperature: max. 10°C to 15°C, min. 3°C to 9°C, ground temperatures down to -1°C at Carlow (Oak Park)

Sunshine: trace to 7 hours, sunniest at Malin Head, trace at Shannon Airport

Monday 27th: Patchy rain and drizzle in the southwest overnight cleared by morning. It was generally cloudy during the morning. Sunny breaks during the afternoon, particularly in the east. Some persistent showery activity in the south of Munster during the afternoon, while most other areas remained dry. During the evening and night some patches of light rain and drizzle affected the west of the country. Winds were southeasterly, light to moderate.

Rainfall: nil generally, 10mm at Valentia, 3mm at Cork Airport

Temperature: max. 13°C to 17°C, min. 1°C to 14°C, ground temperatures down to -3°C at Casement Aerodrome

Sunshine: nil to 10 hours, sunniest at Casement Aerodrome, nil at Valentia

Tuesday 28th: A band of rain moved into the southwest during the early morning and spread eastwards across the country. It brought rain to much of the midlands and west by midday. The afternoon saw some sunny spells in the west as the rain moved to affect the eastern half of the country. It remained wet in the east of the country during the evening and night with some patchy rain and drizzle at times. Winds were light, southerly.

Rainfall: 2 to 10mm, heaviest at Ballyhaise, 2mm at Dublin Airport

Temperature: max. 14°C to 17°C, min. 5°C to 11°C, no ground frost

Sunshine: nil to 6 hours, sunniest at Valentia, nil at Malin Head

Wednesday 29th: The eastern half of the country saw rain overnight, clearing by morning. It was a dry start to the day in most places with patchy mist or fog clearing quickly. Showers moved into western areas before midday, however, and tracked eastwards across the country during the afternoon, mostly dying out by evening. Despite this there were spells of sunshine throughout. Winds were light, southwesterly in direction.

Rainfall: nil to 3mm, heaviest at Dublin Airport, nil at Knock Airport

Temperature: max. 15°C to 19°C, min. 4°C to 9°C, no ground frost

Sunshine: 6 to 9 hours, sunniest at Belmullet, 6 hours at Valentia

Thursday 30th: Some showers overnight in the west, dry over the rest of the country with some fog in places. The showers continued in the west during the morning, while the east remained dry with sunny spells. There were some sunny spells in the west during the afternoon, with showers continuing at times. Rain in the southwest during the late afternoon and evening, heavy in some places. Winds were light, southerly in direction.

Rainfall: nil to 10mm, heaviest at Valentia, nil at Casement Aerodrome

Temperature: max. 14°C to 17°C, min. 4°C to 11°C, no ground frost

Sunshine: 1 to 3 hours, sunniest at Malin Head, 1 hour at Cork Airport

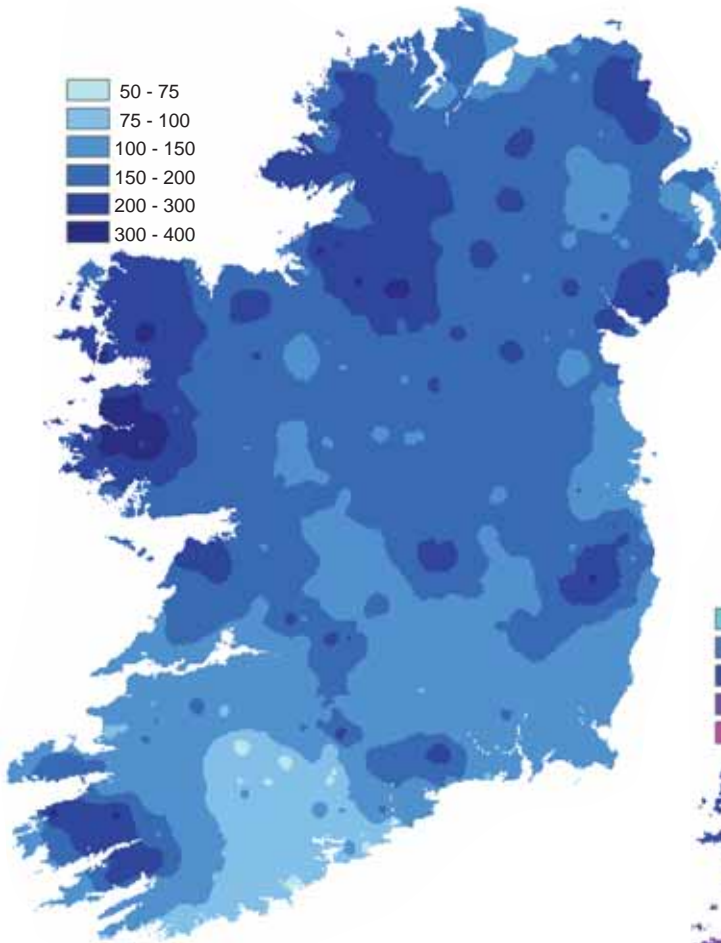
Wetter than normal almost everywhere

September rainfall totals were below normal over parts of Cork and Kerry, but it was a wet month in most places, especially in the east. Totals varied between 66mm at Sherkin Island, Co. Cork and 324mm at Delphi Lodge, Co. Mayo, with percentage of normal values ranging from 69% of normal at Sherkin Island to 226% at Ballyhaise. More than twice the normal amount was measured in parts of Leinster, and Mullingar had its wettest September since 1962.

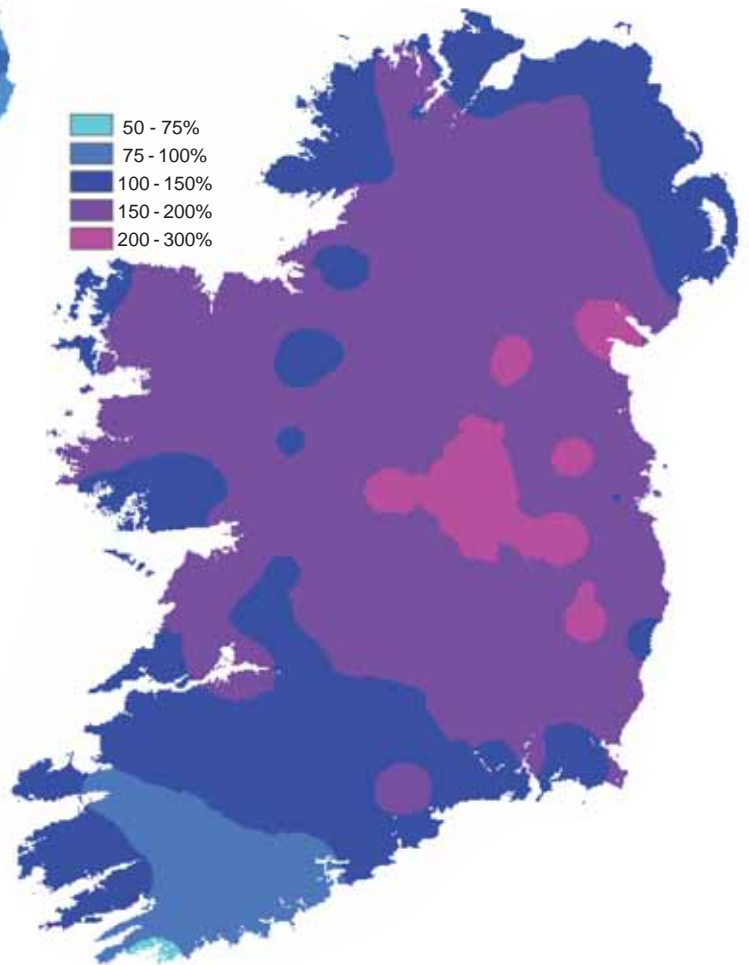
After a dry start to the month, heavy rain was recorded in all areas between the 4th and 7th, with some exceptionally heavy falls in places. Dungarvan (Carriglea) recorded 71.0mm on the 5th, the highest September fall since records began in the area in 1963. Knock Airport measured a 24-hour fall of 86.5mm up to midnight on the 6th, the highest daily fall there for any month since records began in the area in 1988. Later in the month, another spell of heavy rain affected most parts of the country on the 21st/22nd, as a band of thundery rain cleared to heavy showers. There was a total of between 13 and 19 wetdays at the majority of stations (*days with 1mm or more of rainfall*), a little higher than the normal range for September.

County/ Station	Total Amount (mm)	% of 1961-90 average	Most in a day / date		Number of Raindays (>0.2mm)	Wetdays (≥1mm)
CO. CARLOW						
CARLOW (OAK PARK)	113.1	159	28.8	5	23	14
CO. CAVAN						
BALLYHAISE	182.9	226	40.0	6	24	21
CAVAN LORETO COLLEGE	212.6		40.1	5	24	19
CO. CLARE						
SHANNON AIRPORT	139.8	170	52.3	6	22	17
CARRON	223.2	157	34.6	9	25	19
CO. CORK						
ROCHE'S POINT	89.1	99	35.4	5	20	14
FERMOY (MOOREPARK)			not available			
CORK AIRPORT	81.4	84	16.7	5	22	15
SHERKIN ISLAND	66.2	69	13.8	5	15	13
BALLINCURRIG (PEAFIELD)	102.6		45.7	5	19	13
CO. DONEGAL						
MALIN HEAD	144.1	141	29.1	6	23	17
GLENTIES HATCHERY	180.9	125	26.4	22	22	19
BALLYSHANNON (CATHLEEN'S FALL)	158.8	154	25.8	6	21	19
CO. DUBLIN						
DUBLIN (PHOENIX PARK)	97.5	143	12.8	6	20	16
DUBLIN AIRPORT	105.5		17.7	6	19	16
CASEMENT AERODROME	104.2	165	26.2	22	20	15
DUBLIN (MERRION SQUARE)	114.0	184	35.2	7	9	8
CO. GALWAY						
GALWAY (UNIV. COLL.)	165.0	151	37.6	5	21	18
MAAM VALLEY	284.7		43.1	7	25	20
BALLYGAR	160.5	171	37.9	6	23	16
CO. KERRY						
VALENTIA OBSERVATORY	125.1	100	30.3	5	22	18
ARDFERT (LISCAHANE)	100.3		19.5	6	21	18
CO. LIMERICK						
MOUNT RUSSELL	115.7		20.8	5	24	20
CO. MAYO						
BELMULLET	151.9	139	25.6	7	22	18
STRAIDE	191.8	183	36.0	6	23	21
CONNACHT AIRPORT	205.8		62.6	5	24	20
DELPHI LODGE II	324.4		48.5	7	26	24
CO. MEATH						
WARRENTOWN	170.8	222	51.8	7	18	16
CO. MONAGHAN						
CARRICKMACROSS (DUNOGE)	148.9	191	n/a		n/a	n/a
CO. OFFALY						
DERRYGREENAGH	169.3	212	37.5	5	19	16
CO. SLIGO						
ARDTARMON	132.5		19.3	22	22	19
CO. TIPPERARY						
GURTEEN	116.6		20.6	4	21	17
FETHARD (PARSONSHILL)	96.5		42.7	5	23	15
CO. WATERFORD						
WATERFORD (TYCOR)	120.1	140	47.6	5	18	13
DUNGARVAN (CARRIGLEA)	123.0		71.0	5	18	10
CO. WESTMEATH						
MULLINGAR	166.4	193	46.9	5	22	17
CO. WEXFORD						
JOHNSTOWN CASTLE	126.7	149	45.6	6	19	12
JOHN F. KENNEDY PARK	141.4	163	57.2	5	17	14
CLONROCHE (KNOXTOWN)	132.5		46.3	5	19	16

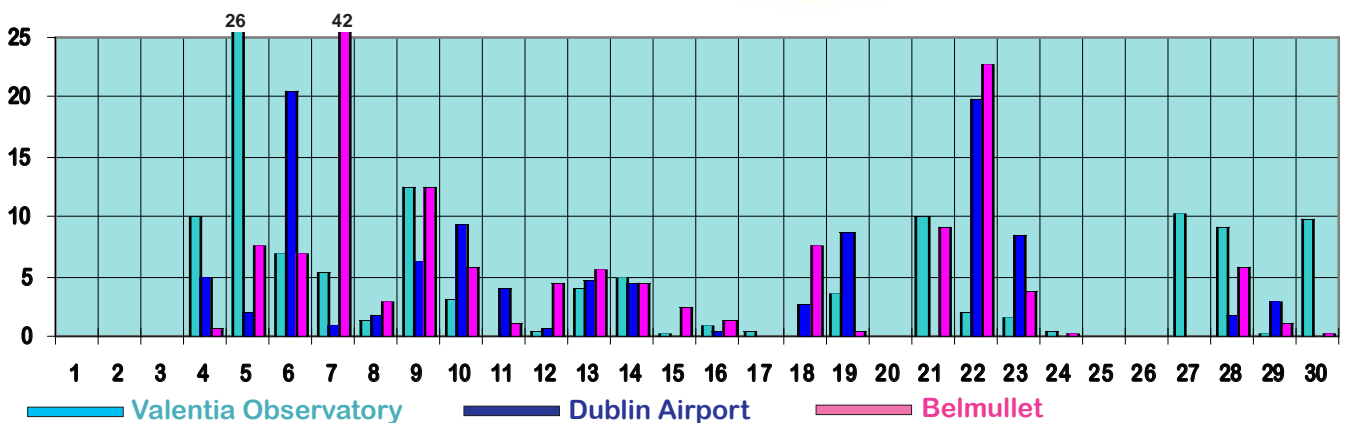
Total rainfall (mm)



Percentage of normal rainfall



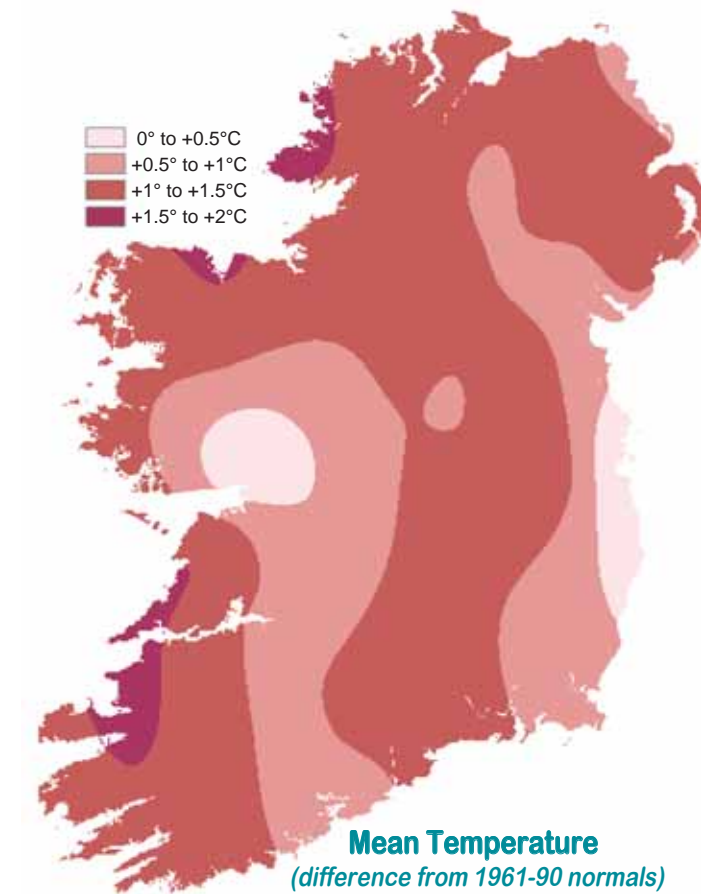
Daily 0-24h rainfall values (mm)



Warmer than normal despite cool last week

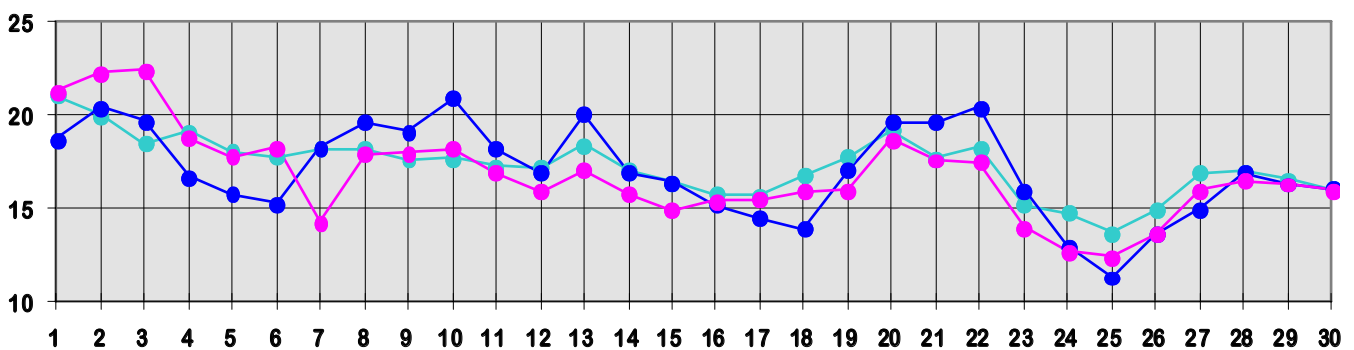
Temperatures were well above normal throughout much of September, but cool weather at the end of the month brought mean monthly values to around a degree higher than normal overall. Mean monthly air temperatures varied between 12.7°C at Connacht Airport and 15.1°C at Sherkin Island, Co. Cork. The highest departures from normal were close to northwestern and southwestern coasts.

The month began with very fine conditions, bringing high daytime temperatures, but also some low nighttime values in eastern and southeastern areas. The temperature rose above 20°C in almost all areas between the 2nd and 4th; the month's highest temperature, 24.5°C, was measured at Ardfer (Liscahane), Co. Kerry, on the 3rd. Virtually all stations recorded their lowest values of the month between the 25th and 27th. The month's lowest air temperature of 0.7°C was recorded at Fermoy (Moorepark), Co. Cork, on the 25th, while the lowest grass minimum value of -6.0°C was measured at Carrickmacross (Dunoge), Co. Monaghan, on the 27th. Casement Aerodrome's grass minimum of

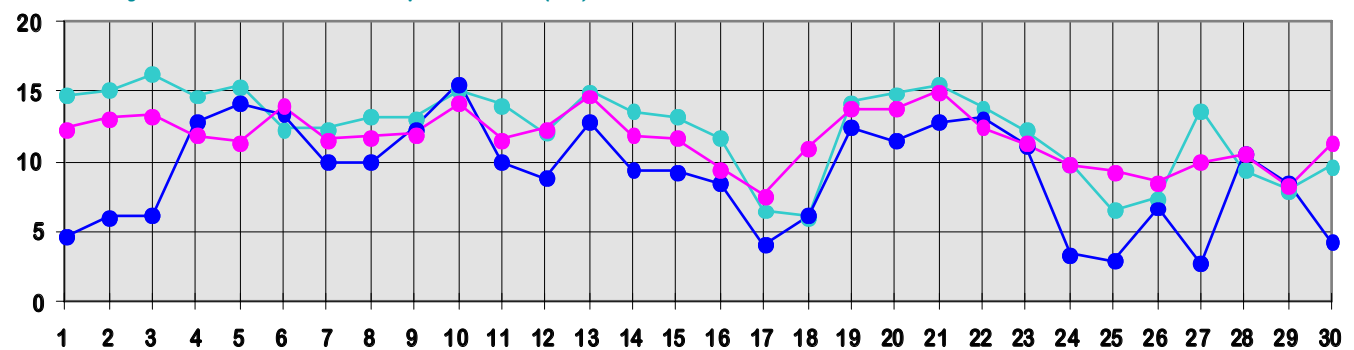


-3.1°C, also on the 27th, was the lowest such value at the station since 1986.

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



● Valentia Observatory ● Dublin Airport ● Belmullet

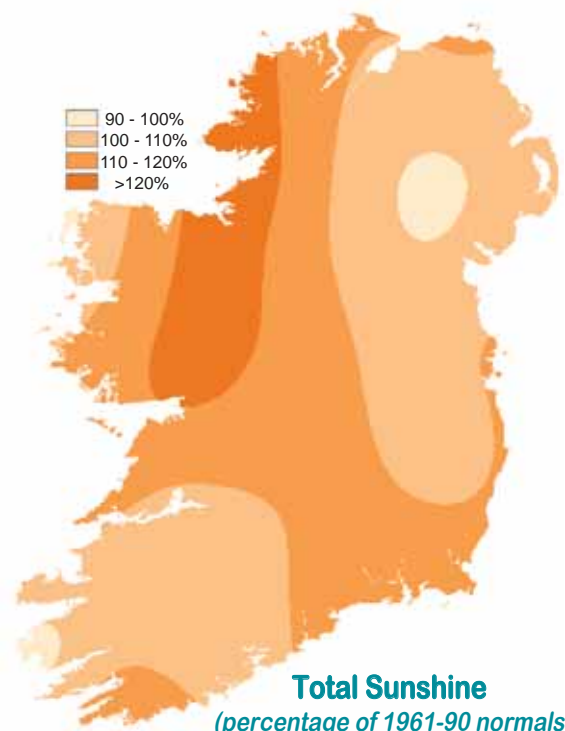
County/ Station	°C											
	Mean max.	Mean min.	Mean/ deviation from 1961-90 average		Highest max./date		Lowest min./date		Lowest grass min./date		Days with air frost ground frost	
CO. CARLOW												
CARLOW (OAK PARK)	17.8	10.1	14.0	1.0	22.4	2	1.8	27	-2.9	27	0	3
CO. CAVAN												
BALLYHAISE	16.4	9.9	13.2		22.3	3	1.0	27	-1.7	27	0	1
CAVAN LORETO COLLEGE	16.7	10.1	13.4		22.1	3	3.7	27	-0.4	27	0	1
CO. CLARE												
SHANNON AIRPORT	17.8	11.5	14.7	1.0	22.0	2	5.7	25	4.0	17	0	0
CARRON	16.6	10.6	13.6	1.3	21.1	2	6.6	29	0.7	17	0	0
CO. CORK												
ROCHE'S POINT	17.0	12.0	14.5	0.9	19.9	8	5.4	25	2.1	18	0	0
FERMOY (MOOREPARK)	not available				23.5	4	0.7	25	-0.5	25	0	1
CORK AIRPORT	16.6	10.8	13.7	0.9	20.8	4	4.1	25	-0.5	26	0	2
SHERKIN ISLAND	17.8	12.4	15.1	1.4	20.0	4	5.7	26	3.4	26	0	0
BALLINCURRIG (PEAFIELD)	17.5	10.0	13.8		23.0	4	2.6	25	2.4	25	0	0
CO. DONEGAL												
MALIN HEAD	16.1	11.7	13.9	1.1	22.5	3	6.1	27	3.4	27	0	0
GLENTIES HATCHERY	17.2	10.3	13.8	1.5	23.3	3	2.6	29	0.1	29	0	0
BALLYSHANNON (CATHLEEN'S FALL)	17.1	11.0	14.1	1.4	22.6	2 3	4.9	27			0	
CO. DUBLIN												
DUBLIN (PHOENIX PARK)	17.8	9.9	13.9	0.9	22.1	2	3.1	25	-1.2	25	0	2
DUBLIN AIRPORT	17.0	9.6	13.3		20.9	10	2.7	27	-1.4	27	0	2
CASEMENT AERODROME	17.4	10.0	13.7	0.8	22.3	2	1.4	25	-3.1	27	0	2
DUBLIN (MERRION SQUARE)	17.0	11.4	14.2	0.1	20.4	10 13	6.4	25			0	
CO. GALWAY												
GALWAY (UNIV. COLL.)	18.2	9.2	13.7	0.3	23.3	2	4.1	29	1.4	29	0	0
MAAM VALLEY	17.6	11.1	14.4		22.8	2	5.7	29	1.8	29	0	0
BALLYGAR	17.8	10.0	13.9		23.0	2	3.9	29	1.2	29	0	0
CO. KERRY												
VALENTIA OBSERVATORY	17.3	12.7	15.0	1.3	21.1	1	6.1	18	0.6	26	0	0
ARDFERT (LISCAHANE)	18.5	11.3	14.9	1.6	24.5	3	5.4	26	-0.2	26	0	1
CO. LIMERICK												
MOUNT RUSSELL	17.0	10.6	13.8		21.9	4	4.0	25	-0.4	25	0	1
CO. MAYO												
BELMULLET	16.9	11.7	14.3	1.3	22.4	3	7.6	18	4.3	18	0	0
STRAIDE	17.5	10.1	13.8	1.3	22.4	3	3.0	29	-1.7	29	0	3
CONNACHT AIRPORT	15.7	9.7	12.7		21.7	2	5.3	27	2.0	18	0	0
DELPHI LODGE II	17.2	12.0	14.6		22.4	2	6.5	29	1.7	18	0	0
CO. MEATH												
WARRENSTOWN	17.6	9.8	13.7	1.1	22.9	2	2.6	27	-2.4	27	0	3
CO. MONAGHAN												
CARRICKMACROSS (DUNOGE)	17.2	9.5	13.4		22.6	3	0.9	27	-6.0	27	0	6
CO. OFFALY												
DERRYGREENAGH	17.6	9.0	13.3	1.1	22.5	2	1.1	27	-3.4	27	0	2
CO. SLIGO												
ARDTARMON	17.5	11.2	14.4		23.6	3	6.4	27	2.2	29	0	0
CO. TIPPERARY												
GURTEEN	17.1	10.0	13.6		22.0	2	3.8	25	-0.5	25	0	1
FETHARD (PARSONSHILL)	17.2	9.8	13.5		22.0	2	5.0	25	2.9	25	0	0
CO. WATERFORD												
WATERFORD (TYCOR)	18.1	11.2	14.7	1.4	20.3	2	4.5	25			0	
DUNGARVAN (CARRIGLEA)	18.3	10.6	14.5	1.1	22.2	4	2.6	25	1.2	25	0	0
CO. WESTMEATH												
MULLINGAR	16.9	9.6	13.3	1.0	21.9	2	2.5	27	-1.1	27	0	2
CO. WEXFORD												
JOHNSTOWN CASTLE	16.9	10.8	13.9	0.9	19.0	2	4.9	27	2.7	27	0	0
JOHN F. KENNEDY PARK	17.1	10.4	13.8	0.8	20.0	8	4.2	26	2.5	18 26	0	0
CLONROCHE (KNOXTOWN)	17.2	9.3	13.3		20.7	2	1.6	27	-2.6	27	0	4

County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date	
CO. CAVAN					
CAVAN LORETO COLLEGE	3.90		30	10.8	2
CO. CLARE					
SHANNON AIRPORT	4.00	108	31	10.5	3
CO. CORK					
CORK AIRPORT	4.30	104	34	11.3	11
SHERKIN ISLAND	5.20	118	41	11.2	11
BALLINCURRIG (PEAFIELD)	4.37			10.7	1
CO. DONEGAL					
MALIN HEAD	3.88	112	30	10.7	2
BALLYSHANNON (CATHLEEN'S FALL)	4.01	122	31	10.2	2
CO. DUBLIN					
DUBLIN AIRPORT	4.68	110	37	12.3	2
CASEMENT AERODROME	4.35	107	34	11.7	2
CO. GALWAY					
GALWAY (UNIV.COLL.)	4.45	121	35	9.8	29
CO. KERRY					
VALENTIA OBSERVATORY	3.55	98	28	9.5	17
ARDFERT (LISCAHANE)	4.05		32	9.4	4
CO. MAYO					
BELMULLET	3.63	99	28	9.3	10
STRAIDE	3.96			11.0	3
CONNACHT AIRPORT	3.53			11.4	3
CO. WATERFORD					
DUNGARVAN (CARRIGLEA)	4.70	114	37	11.1	1
CO. WEXFORD					
JOHN F. KENNEDY PARK	4.38	113	34	10.3	1
CLONROCHE (KNOXTOWN)	4.49			10.3	2

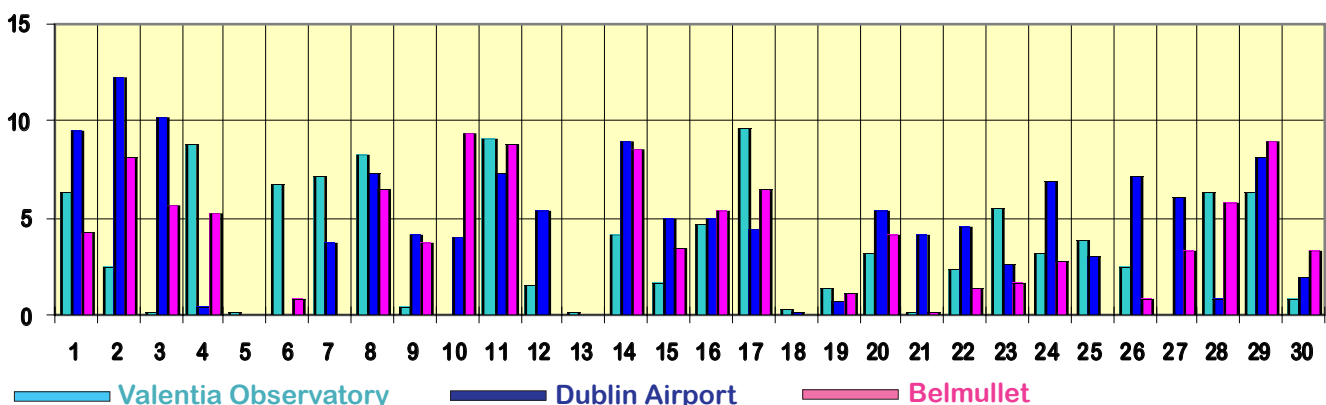
Sunnier than normal almost everywhere

Sunshine totals were above normal except in some coastal parts of the west and southwest. Totals ranged from 106 hours at Connacht Airport to 156 hours at Sherkin Island, Co. Cork, with percentage of normal values between 98% of normal at Valentia Observatory and 122% at Ballyshannon (Cathleen's Fall), Co. Donegal.

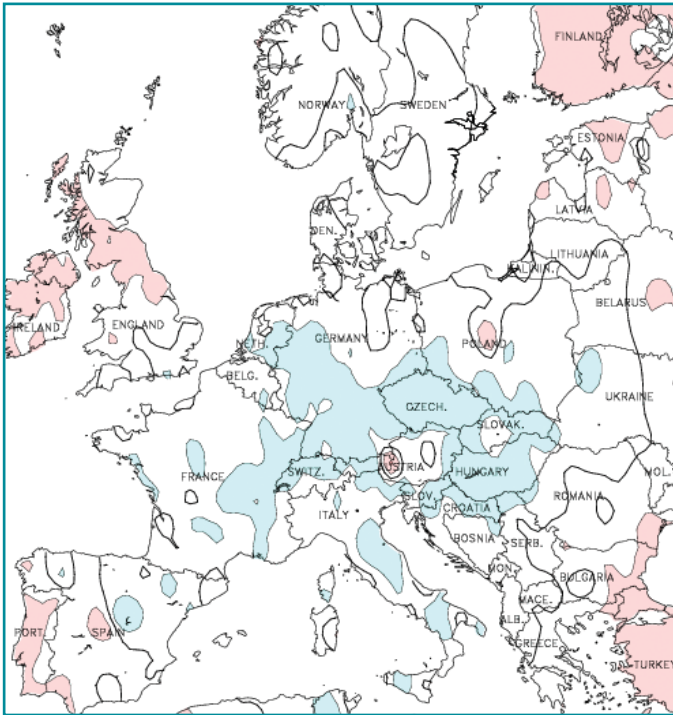
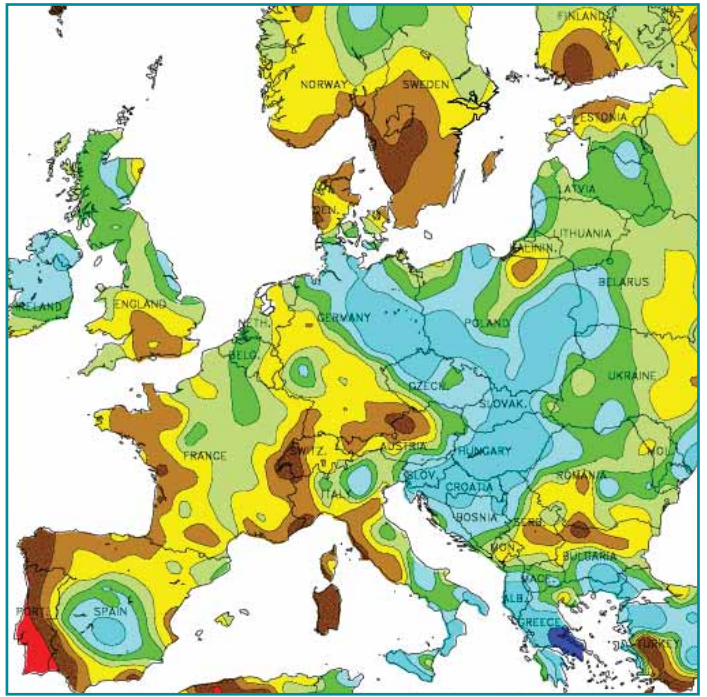
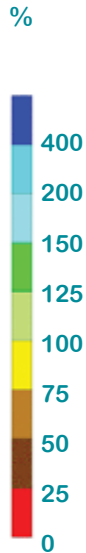
Some very high daily values for September were recorded early in the month, with more than 10 hours of sunshine in parts of the country on each day between the 1st and 3rd. Dublin Airport measured 12.3 hours on the 2nd, the highest September value at the station since 2000. Global solar radiation totals were close to normal, ranging from 97% of normal at Malin Head to 108% at Dublin Airport.



Daily sunshine values(hours)



SEPTEMBER RAINFALL
(percentage of 1961-1990 normal)



°C



SEPTEMBER MEAN TEMPERATURE
(difference from 1961-1990 normal)

Data supplied by NOAA
Climate Prediction Centre,
US Department of Commerce

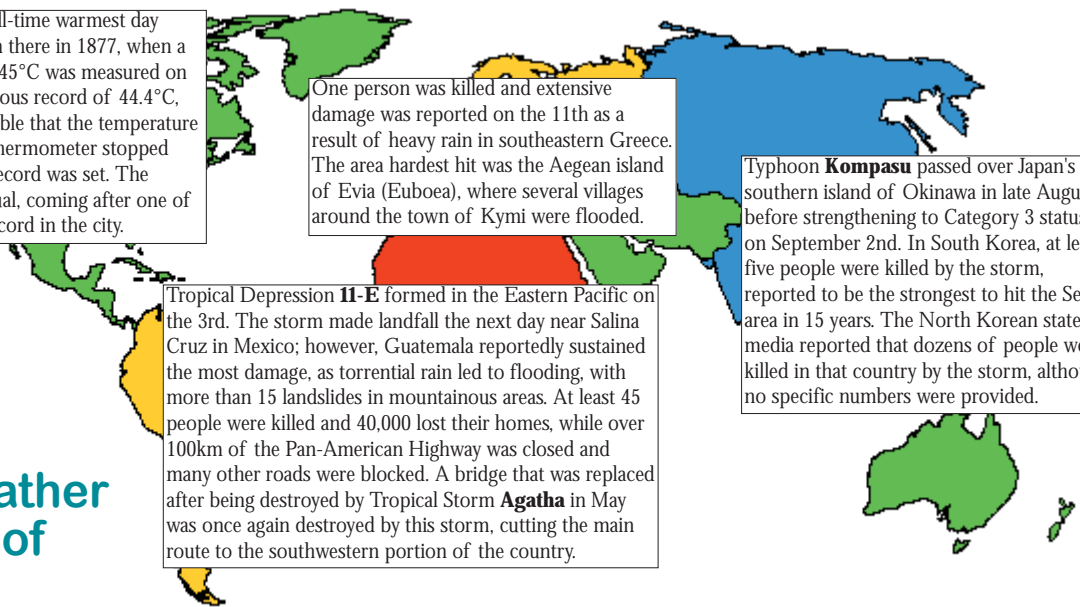
Los Angeles recorded its all-time warmest day since record keeping began there in 1877, when a maximum temperature of 45°C was measured on the 27th, breaking its previous record of 44.4°C, set in June 1990. It is possible that the temperature rose even higher, but the thermometer stopped working shortly after the record was set. The record is particularly unusual, coming after one of the coolest summers on record in the city.

One person was killed and extensive damage was reported on the 11th as a result of heavy rain in southeastern Greece. The area hardest hit was the Aegean island of Evia (Euboea), where several villages around the town of Kymi were flooded.

Typhoon **Kompasu** passed over Japan's southern island of Okinawa in late August before strengthening to Category 3 status on September 2nd. In South Korea, at least five people were killed by the storm, reported to be the strongest to hit the Seoul area in 15 years. The North Korean state media reported that dozens of people were killed in that country by the storm, although no specific numbers were provided.

Tropical Depression **11-E** formed in the Eastern Pacific on the 3rd. The storm made landfall the next day near Salina Cruz in Mexico; however, Guatemala reportedly sustained the most damage, as torrential rain led to flooding, with more than 15 landslides in mountainous areas. At least 45 people were killed and 40,000 lost their homes, while over 100km of the Pan-American Highway was closed and many other roads were blocked. A bridge that was replaced after being destroyed by Tropical Storm **Agatha** in May was once again destroyed by this storm, cutting the main route to the southwestern portion of the country.

Global weather highlights of the month



ABSOLUTE MAXIMUM AIR TEMPERATURES (°C) FOR EACH MONTH AT SELECTED STATIONS

COUNTY/ STATION/ PERIOD OF RECORD		JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Co. Clare Shannon Airport <i>Oct 1938-present</i>	MAX YEAR DATE	14.8 1993 16th	15.5 2008 7th	20.2 1965 30th	23.5 2003 17th	27.2 1997 31st	31.6 1976 29th	30.6 1983 13th	29.8 1995 17th	26.1 1991 5th	23.0 1959 4th	18.2 1971 1st	16.2 1948 2nd
Co. Cork Cork Airport <i>Nov 1961-present</i>	MAX YEAR DATE	16.1 2003 26th	14.0 1995 27th	15.7 2003 8th	21.2 1993 28th	23.6 1991 24th	27.5 1995 30th	28.7 1983 14th	28.0 1995 3rd	24.7 1991 2nd	21.4 1997 1st	16.2 1992 4th	13.8 2007 6th
Co. Donegal Malin Head <i>Jan 1885-present</i>	MAX YEAR DATE	14.4 1998 11th	15.0 1891 24th	19.0 1965 28th	20.7 2003 16th	24.7 1978 31st	27.2 1950 6th	27.0 1976 1st	27.1 1955 24th	28.9 1906 1st	22.8 1908 3rd	17.6 1997 15th, 16th	16.8 1948 2nd
Co. Dublin Casement Aerod. <i>May 1958-present</i>	MAX YEAR DATE	15.4 1971 10th	15.9 1998 15th	21.0 1965 28, 29	22.7 2003 16th	24.9 2010 23rd	27.6 2000 18th	31.0 2006 19th	30.5 1975 3rd	25.4 1959, 99 23rd 5th	23.4 1959 3rd	17.7 1990 12th	15.4 1972 18th
Co. Dublin Dublin Airport <i>Oct 1939-present</i>	MAX YEAR DATE	16.6 1971 10th	16.2 1998 15th	21.3 1965 28th	20.5 1987 26th	23.5 2010 23rd	27.3 1940 8th	27.6 1983 15th	28.7 1990 2nd	24.6 2003 17th	21.2 1971 22nd	18.0 1990 12th	17.1 1948 2nd
Co. Dublin Phoenix Park <i>Jan 1881-present</i>	MAX YEAR DATE	17.0 1971 10th	18.1 1891 23rd	23.4 1965 29th	22.2 1945 2003 20th 16th	26.8 1922 31st	28.7 1950 6th	29.8 1934 10th	30.6 1990 2nd	27.6 1906 2nd	24.2 1959 3rd	19.4 1927 2nd	17.1 1948 2nd
Co. Kerry Valentia Obs. <i>Apr 1892-present</i>	MAX YEAR DATE	14.8 1998 10th	16.8 1960 28th	20.7 2005 19th	24.0 1984 23rd	27.2 1997 31st	28.1 1995 27th	29.7 1976 1st	29.8 1955 24th	28.4 1991 5th	23.9 1908 3rd	19.8 1989 14th	15.7 1948 2nd
Co. Kilkeny Kilkenny <i>Jun 1957-Apr 2008</i>	MAX YEAR DATE	14.1 1990 98 2002 15 10 27	15.9 2008 13th	19.2 2005 19th	23.5 1975 25th	26.0 1989 23rd	31.5 1976 29th	31.4 1983 13th, 14th	30.8 1995 2nd	26.6 1991 3rd, 5th	23.7 1959 4th	17.5 2007 1st	15.5 1994 10th
Co. Mayo Belmullet <i>Oct 1956-present</i>	MAX YEAR DATE	13.9 1998 10th	15.1 2008 13th	19.5 2005 19th	24.4 2003 17th	26.6 1997 31st	28.3 1957 18th	29.9 2006 19th	27.7 2003 8th	25.4 1998 21st	22.1 1969 10th	16.3 2003 7th	14.9 1998 13 14
Co. Mayo Claremorris <i>Dec 1943-present</i>	MAX YEAR DATE	15.7 2003 26th	13.8 1953 27th	20.1 1965 28th	22.5 2003 17th	25.4 1998 19th	29.8 1976 30th	30.5 1983 13th	29.5 2003 8th	25.1 1991 5th	21.7 1959 4th	16.1 46 03 5th, 7th	15.7 1948 2nd
Co. Monaghan Clones <i>Jan 1951-Apr 2008</i>	MAX YEAR DATE	14.8 2003 26th	16.3 1998 13th	20.6 1965 28th	21.9 1975 25th	25.9 1997 31st	29.3 1995 29th	30.5 1983 13th	28.8 1955 25th	25.4 1959 11th	22.1 1969 10th	16.9 2007 1st	14.8 1985 1st
Co. Offaly Birr <i>Jan 1881-Sep 2009</i>	MAX YEAR DATE	15.0 1920 17th	15.6 1920 29th	21.7 1929 30th	23.7 1975 25th	25.7 1989, 90 23rd, 3rd	31.2 1976 29th	30.8 1983 13th	29.4 1995 17th, 18th	26.6 1906 1st	23.3 1926 3rd	17.9 1947 20th	15.6 1918 8th
Co. Westmeath Mullingar <i>Nov 1943-present</i>	MAX YEAR DATE	13.8 1993 16th	15.4 1998 13th	20.5 1946 31st	22.6 1975 25th	25.5 1952 17th	29.8 1949 29th	29.7 1983 13th	29.5 1955 25th	25.5 1959 10th	22.9 1959 4th	17.3 1990 12th	14.6 1985 1st
Co. Wexford Rosslare <i>Dec 1956-Dec 2007</i>	MAX YEAR DATE	14.1 2003 26th	14.1 1995 27th	15.8 1997 26th	20.1 1975 26th	22.3 2007 17th	25.5 2004 14th	26.2 1983 14th	25.9 1990 3rd	22.0 1999 5th	21.5 1997 1st	17.2 1958 2nd	15.6 1956 6th
Highest values recorded in Ireland:	MAX YEAR DATE STATION	18.5 1998 10th Gl asnevin (Dublin)	18.1 1891 23rd Phoeni x Park (Dublin)	23.6 1965 28th Tri ni ty Col lege (Dublin)	25.8 1984 26th Gl enties (Donegal)	28.4 1997 31st Ardfert Li scahane (Kerry)	33.3 1887 26th Ki lkeny Cast le	32.3 2006 19th El phi n (Roscommon)	31.5 recorded on 3. 8. 1975 at Bal l ybri ttas (Laoi s) al so on 2. 8. 1995 at Car low (Oak Park)	29.1 1906 1st Cl ongowes Wood Col lege (Ki l dare)	25.2 1908 3rd Cl ongowes Wood Col lege (Ki l dare)	20.0 1946 4th Rathfarnham Cast le (Dublin)	18.1 1948 2nd Peamont (Dublin)