

# Monthly Weather Bulletin

No. 264  
APRIL 2008



**MET**  
éireann

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**Closure of stations  
after 50 years of  
record- page 2**

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**Ice disintegration due  
to warming seas**

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



April lived up to its reputation for producing frequent showers, with hail and thunder on many days. This picture shows one such heavy hail shower on the 13th, at Knightsbrook Golf Club, near Trim, Co. Meath. (picture courtesy Brendan Murphy)

## MAINLY DRIER AND SUNNIER THAN NORMAL; MEAN TEMPERATURES NEAR APRIL AVERAGE

The unsettled weather of most of March continued into this month also, with showers on many days and temperatures close to normal values. These showers were mainly light, but there were some heavier falls at times, with frequent hail and thunder. There were also long sunny spells between showers on many days and monthly sunshine totals were above normal everywhere. For the second successive month, mean temperatures were close to normal values. Both Birr and Shannon Airport recorded mean values below average for both March and April,

the first occurrence of successive cooler than normal months since June and July 2002. This month's mean air temperatures of between 7°C and 9°C generally were the lowest for April for 7 or 8 years. Ground frost was frequent during the first half of the month: there was a total of between 15 and 23 ground frosts at most inland stations, compared with between 10 and 12 in a typical April. It was a wetter than normal month in parts of the west and midlands, but rainfall totals were below normal generally. Because of the - Continued on page 3

## CLOSURE OF FOUR MANNED MET ÉIREANN STATIONS



*Above- Observer Noel O'Keeffe making the final observation from the roof of Kilkenny weather station on the morning of the 8th. As can be seen in the background, the expansion of the city had affected the exposure of the site since it opened in the 1950s. (picture courtesy Finbar Maher)*

The observations at 0900UTC on the morning of the 8th marked the end of manned observations at four of Met Éireann's stations: Kilkenny, Clones, Rosslare and Mullingar. Each of the stations had given a continuous record of hourly readings for more than fifty years, providing an important input into forecasts over this period and leaving behind an invaluable record of climatological data. Automatic equipment has replaced manned observations at Mullingar, while readings from Kilkenny, Clones and Rosslare have been replaced by automatic stations at Carlow (Oak Park), Ballyhaise, County Cavan and Johnstown Castle, County Wexford, respectively (*see map below*). The existing automatic station at Roche's Point, County Cork, has been upgraded and, like the other new stations, will be included in the Monthly Weather Bulletin tables from this month onwards. Other automatic stations will be joining the synoptic network in the near future.

Below is a table of extreme monthly values for certain elements at each of the four stations during their period of record—monthly means or totals are shown in brackets:

	CLONES	KILKENNY	MULLINGAR	ROSSLARE
<b>OPENED</b>	1951	1957	1950	1956
<b>WARMEST</b>	AUGUST 1995 (18.0°C)	AUGUST 1995 (18.7°C)	AUGUST 1995 (17.3°C)	AUGUST 1995 (17.9°C)
<b>COLDEST</b>	JANUARY 1963 (-0.2°C)	JANUARY 1963 (-0.5°C)	JANUARY 1963 (-0.7°C)	JANUARY 1963 (1.8°C)
<b>WETTEST</b>	AUGUST 1956 (192.7mm)	AUGUST 1997 (203.3mm)	NOVEMBER 1965 (205.1mm)	OCTOBER 2002 (282.8mm)
<b>DRIEST</b>	FEBRUARY 1963 (1.3mm)	SEPTEMBER 1972 (1.4mm)	SEPTEMBER 1986 (3.6mm)	MAY 1991 (1.7mm)
<b>SUNNIEST</b>	JUNE 1957 (258 HOURS)	AUGUST 1995 (275 HOURS)	AUGUST 1995 (272 HOURS)	JUNE 1959 (301 HOURS)
<b>DULLEST</b>	NOVEMBER 1983 (15 HOURS)	DECEMBER 1991 (22 HOURS)	JANUARY 1996 (20 HOURS)	JANUARY 1996 (11 HOURS)

### MET ÉIREANN SYNOPTIC NETWORK APRIL 2008





**showery nature of much of the precipitation, there was a wide range in percentage of normal values across the country, from 58% of normal at Birr to 128% at Claremorris. Between 9 and 17 wetdays were recorded (days with 1mm or more rainfall), close to normal for April. It was a sunnier than normal month everywhere, with daily sunshine values of over 10 hours measured on several days, especially in the period 13th to 17th. The monthly total of just over 200 hours of sunshine at Malin Head represents its sunniest April since 1974.**

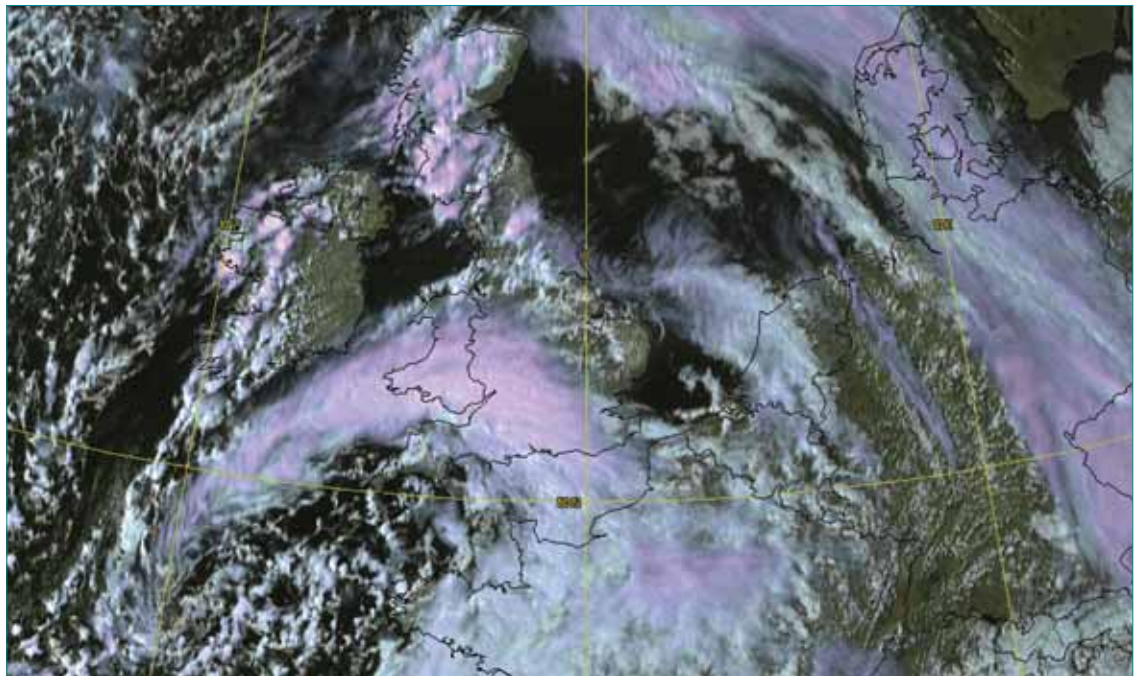
**1st to 13th:** Areas of low pressure were centred to the north or northwest of Ireland for most of this period, bringing a cool and showery northwest to northerly airstream over the country. Many of these showers were wintry between the 5th and 7th, but heaviest falls were measured late in the period, when thunderstorms were frequent. After a mild start, temperatures fell below normal after the 4th, despite long sunny periods on most days. Air frost was widespread at inland stations between the 6th and 8th, with ground frost occurring in almost all areas. Gale gusts were widely recorded on the 1st, as a deep depression moved north of Ireland.

**14th to 17th:** Pressure rose across the country as an anticyclone developed to the

east. This period was dry with long clear or sunny spells and light to moderate east to southeasterly winds. Daytime temperatures were near normal, but ground frost was widespread at night.

**18th to 30th:** Low pressure was again the dominant influence, bringing a return to unsettled weather. Spells of rain or showers were recorded on almost all days, with heaviest falls in midland and western areas between the 22nd and 29th, occasionally accompanied by thunder. Cool easterly winds at first were replaced by a milder south to southwesterly airstream after the 22nd, later veering more northerly and turning cooler at the end of the month.

**Wind and elements:** Mean windspeeds for the month of between 7 and 17 knots (13 and 31km/h) were above normal in places, particularly in the east. The strongest winds of the month were measured on the 1st, when the highest gust of 60 knots (111 km/h) was recorded at Malin Head. There was frequent thunderstorm activity, mainly in the periods 10th to 14th and 27th to 29th. Hail showers were widely recorded in the periods 5th to 7th and 10th to 13th, while snow was observed in the periods 5th to 7th and 10th to 11th. Fog was most widespread on the 2nd.



**Right**  
Low pressure centred to the south of Ireland on the 29th brought heavy showers over the western half of the country, where there were widespread thunderstorms during the afternoon, with hail in places also.

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)	7.6	260°	27	1/09	260°	41	1/0909	0	1	10					
CO. CAVAN BALLYHAISE	7.2	260°	23	1/11	250°	37	1/1112	0	1	14					
CO. CLARE SHANNON AIRPORT	9.2	240°	28	1/01	240°	38	1/0207	0	2	13	1	0	5	1	0
CO. CORK CORK AIRPORT	9.7	90°	26	17/15	90°	39	17/1422	0	7	11	1	0	4	0	8
ROCHE'S POINT	11.7	340°	29	6/14	340°	42	6/1342	0	5	35					
CO. DONEGAL MALIN HEAD	17.3	10°	46	6/07	250°	60	1/0743	6	14	186	2	0	4	0	1
CO. DUBLIN CASEMENT AERODROME	10.1	260°	36	1/13	260°	52	1/1204	1	6	37	2	0	8	5	0
DUBLIN AIRPORT	11.6	250°	34	1/12	250°	48	1/1130	1	5	31	1	0	3	2	0
CO. KERRY VALENTIA OBSERVATORY	9.0	290°	27	10/21	260°	43	10/1710	0	9	30	0	0	3	0	0
CO. MAYO BELMULLET	9.9	240°	33	1/02	240°	52	1/0156	0	9	50	4	0	6	1	1
KNOCK AIRPORT	9.9	260°	32	1/12	270°	44	1/0840	0	6	26	3	0	5	0	8
CO. OFFALY BIRR	7.4	260°	23	1/01	270°	39	1/0035	0	2	2	0	0	2	0	0
CO. WESTMEATH MULLINGAR	6.6	250°	17	1/09	240°	34	1/1058	0	1	2					
		80°	17	17/13											
CO. WEXFORD JOHNSTOWN CASTLE	7.6	70°	21	17/13	350°	31	6/1254	0	0	0					
					70°	31	17/1251								

Elements are not available for automatic stations

Valentia Observatory

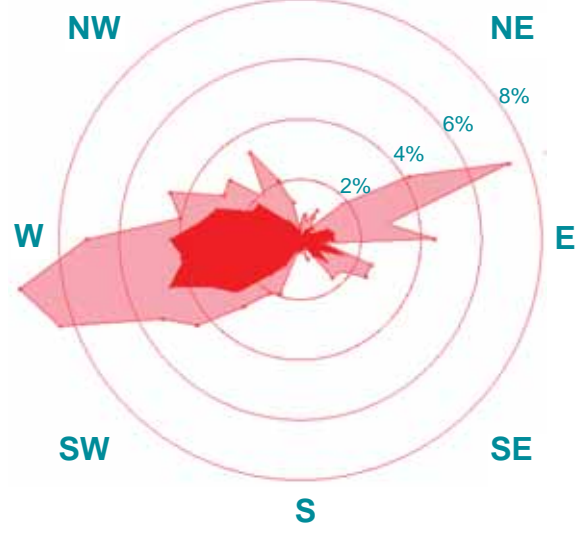
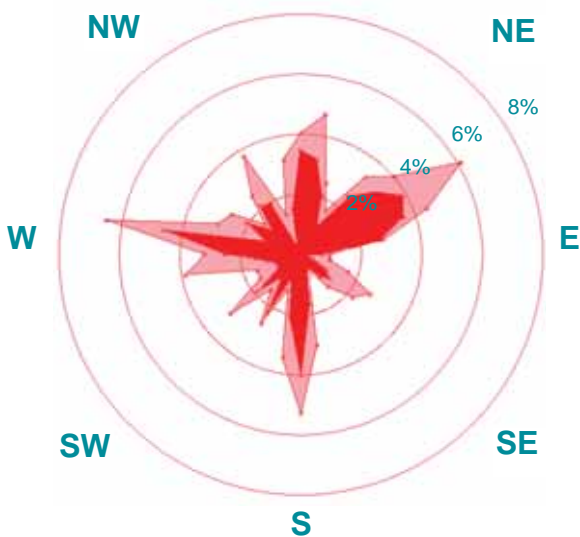
Dublin Airport

Calm: 0.1%

N

Calm: 0.0%

N

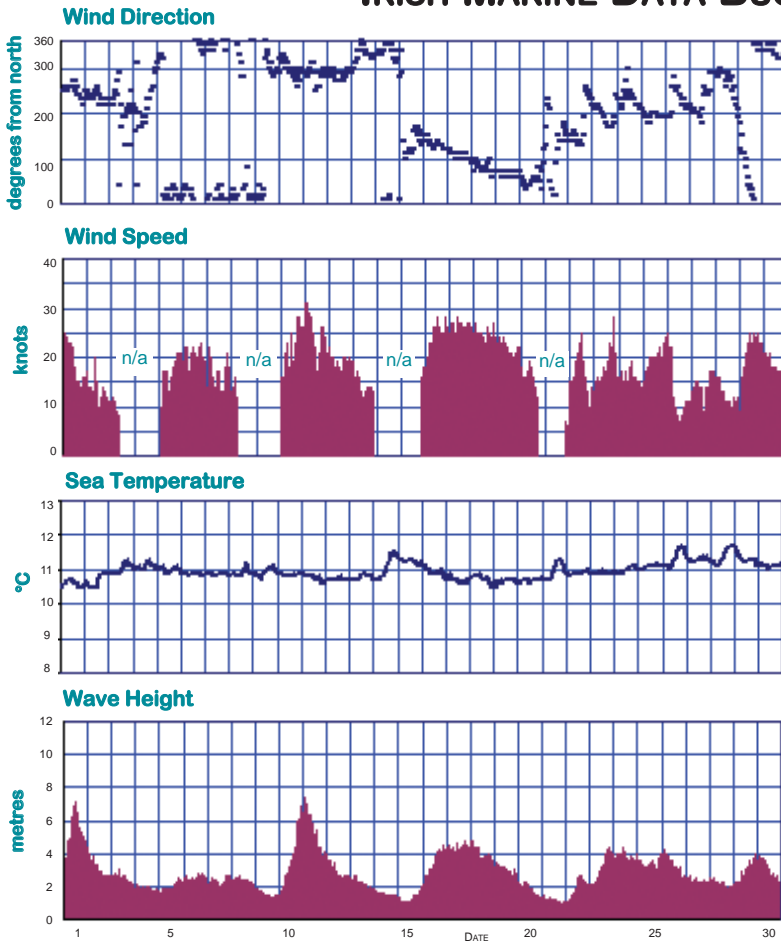


1-10 knots

>10 knots

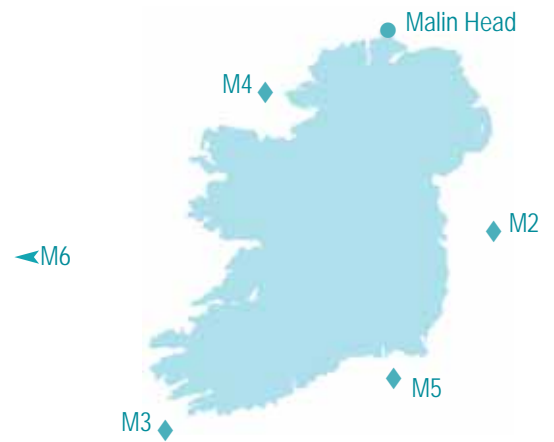
PERCENTAGE FREQUENCY OF WIND DIRECTION

### MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK



Buoy	Sea surface temp. (°C)	Mean wind speed (knots)	Max. 10-min wind (knots)	Mean wave height (m.)	Max. wave height (m.)
M2	8.0	15.3	31	1.2	3.0
M3	11.0	n/a	n/a	2.8	7.4
M4	10.2	17.4	38	2.7	7.7
M5	not available				
M6	11.2	16.7	31	3.5	10.8
Malin Head	8.8				

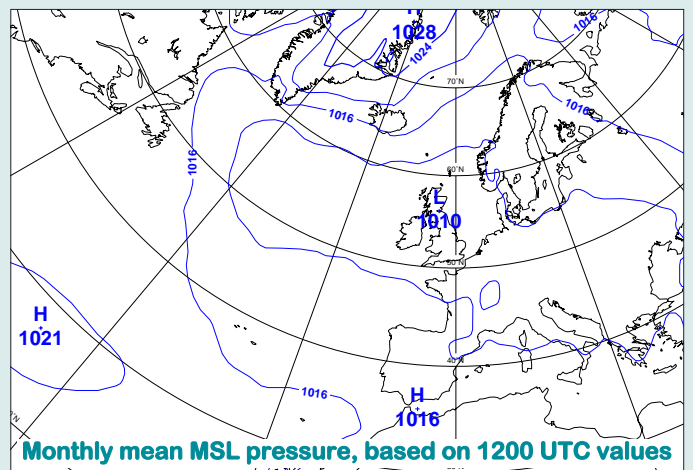
#### Summary of Mean Monthly Values



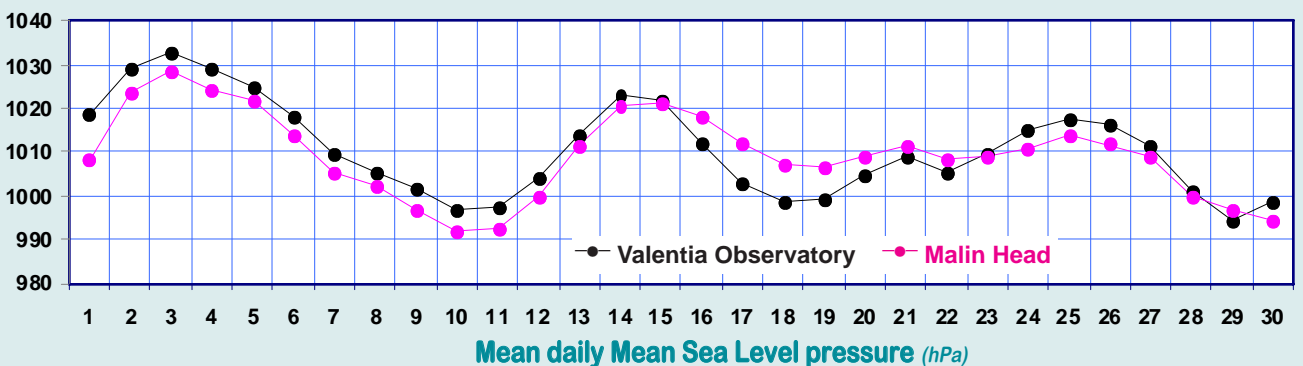
Hourly wind and wave conditions at M3 (51.22°N, 10.55°W)

### MEAN ATMOSPHERIC PRESSURE

As shown by the chart of mean sea level pressure values on the right, there was very little variation in mean monthly values over Ireland; they ranged between 1010hPa in the north and 1011hPa in the southwest. These values are around 5hPa below normal for April. Pressure was at its highest on the 3rd, when the month's highest value of 1034.0hPa was recorded at Valentia Observatory. The lowest pressure value of the month, 987.5hPa, was measured at Birr on both the 10th and 11th.

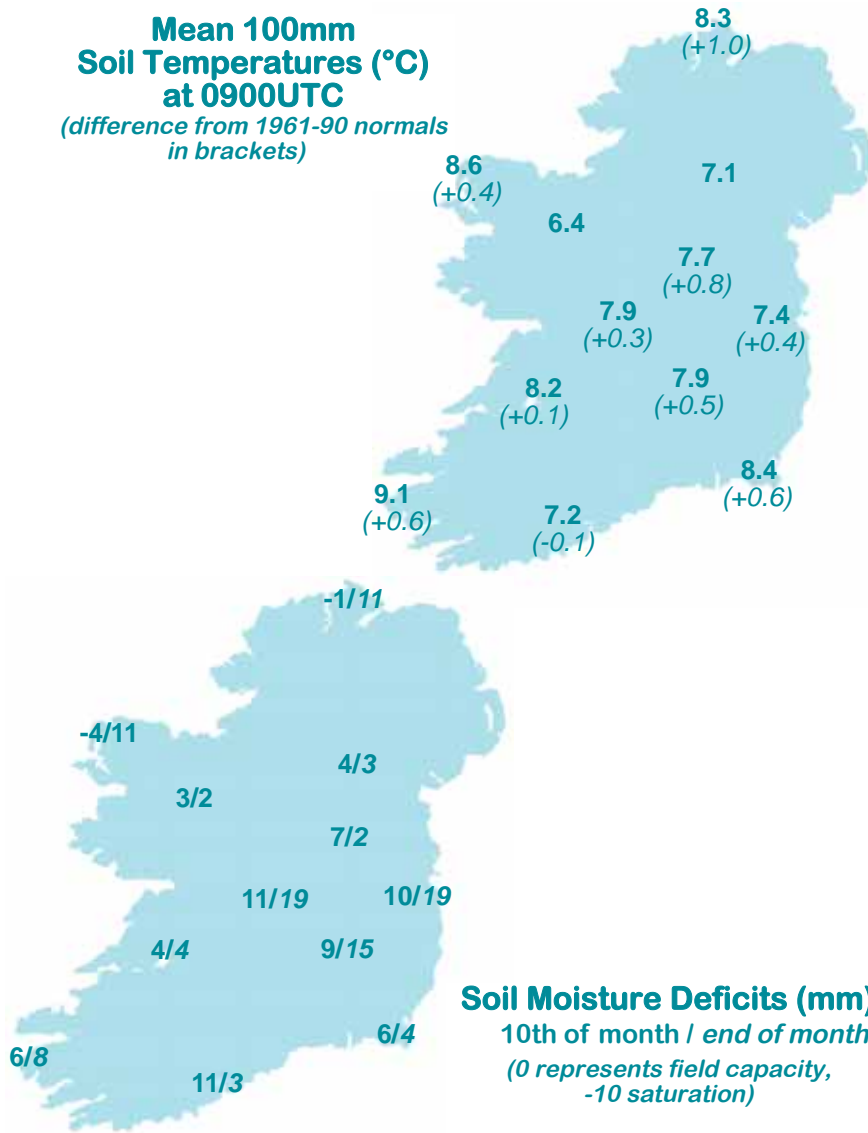


Monthly mean MSL pressure, based on 1200 UTC values



Mean daily Mean Sea Level pressure (hPa)

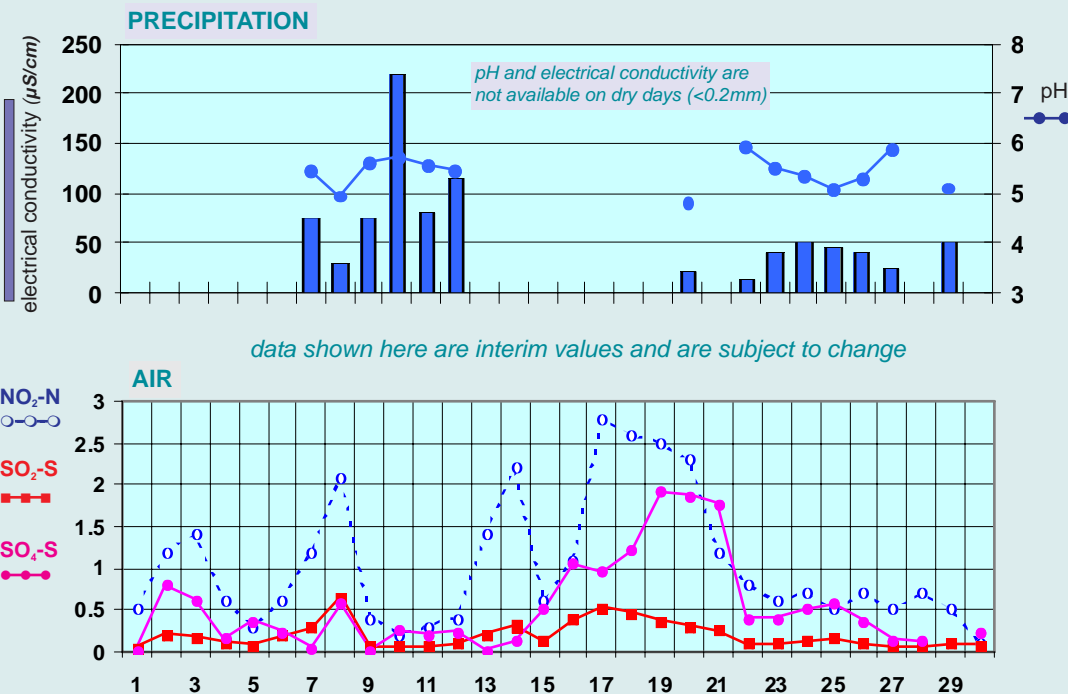
**Mean 100mm Soil Temperatures (°C) at 0900UTC**  
(difference from 1961-90 normals in brackets)



**Soil Temperatures at 0900UTC**

County/ Station	°C		
	100mm	200mm	300mm
<b>CO. CARLOW</b>			
CARLOW (OAK PARK)	7.9	7.9	8.2
<b>CO. CAVAN</b>			
BALLYHAISE	7.1	7.6	7.2
<b>CO. CLARE</b>			
SHANNON AIRPORT	8.2	8.7	9.1
CARRON	8.5		9.0
<b>CO. CORK</b>			
FERMOY (MOORE PARK)	8.0	8.4	8.7
CORK AIRPORT	7.2	7.7	8.9
SHERKIN ISLAND	10.0		10.3
BALLINCURRIG (PEAFIELD)	7.4	8.1	8.9
ROCHE'S POINT	8.0	8.2	8.9
<b>CO. DONEGAL</b>			
MALIN HEAD	8.3	8.8	9.2
<b>CO. DUBLIN</b>			
DUBLIN AIRPORT	7.3	7.7	8.3
CASEMENT AERODROME	7.4	7.6	8.5
<b>CO. KERRY</b>			
VALENTIA OBSERVATORY	9.1	9.6	10.9
<b>CO. LIMERICK</b>			
MOUNT RUSSELL	6.7	7.6	
<b>CO. LOUTH</b>			
ARDEE (BOHARNAMOE)	7.2	7.3	8.6
<b>CO. MAYO</b>			
BELMULLET	8.6	9.3	10.6
STRAIDE	7.7		
KNOCK AIRPORT	6.4	7.2	7.4
<b>CO. MEATH</b>			
WARRENSTOWN	7.5	8.1	9.0
<b>CO. OFFALY</b>			
BIRR	7.9	8.3	9.4
<b>CO. TIPPERARY</b>			
FETHARD (PARSONSHILL)	6.6	7.7	
<b>CO. WATERFORD</b>			
DUNGARVAN (CARRIGLEA)		8.8	9.2
<b>CO. WESTMEATH</b>			
MULLINGAR	7.7	8.3	9.1
<b>CO. WEXFORD</b>			
JOHNSTOWN CASTLE	8.4	8.5	8.9
JOHN F. KENNEDY PARK	8.6	8.8	10.4
CLONROCHE (KNOXTOWN)	7.9	8.4	8.8

**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.



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
Co. Cavan Cavan (Loreto)	1-10	12.0	-	8	4	11.4	3.5	7.5	-	-1.1	7	1	35	7	-3.2	7	6	-	-	62.3	-
	11-20	17.9	-	4	3	11.0	2.3	6.7	-	-0.5	15	3	28	3	-4.0	12	6	-	-	69.5	-
	21-end	28.2	-	7	6	14.5	5.8	10.2	-	0.5	29	0	59	14	-2.4	29	2	-	-	55.3	-
	month	58.1	-	19	13	12.3	3.9	8.1	-	-1.1	7	4	122	24	-4.0	12	14	-	-	187.1	-
Co. Cork Fermoy	1-10	3.9	-	3	1	12.0	3.7	7.9	-	0.0	7	0	39	8	-4.2	9	6	7.6	8.4	56.3	-
	11-20	2.3	-	4	0	11.4	3.2	7.3	-	-0.1	12	1	33	4	-4.8	12	7	7.0	8.0	62.7	-
	21-end	27.1	-	8	8	13.9	6.2	10.1	-	2.0	22	0	58	14	-2.2	22	3	9.6	9.8	39.3	-
	month	33.3	56	15	9	12.4	4.4	8.4	0.3	-0.1	12	1	130	26	-4.8	12	16	8.0	8.7	158.3	111
Co. Donegal Glenties	1-10	25.9	-	10	9	10.8	3.4	7.1	-	-0.1	9	1	32	3	-2.5	8	5	-	-	-	-
	11-20	10.1	-	5	4	12.0	0.8	6.4	-	-2.1	11	5	29	5	-4.1	17	10	-	-	-	-
	21-end	33.3	-	9	8	14.2	6.1	10.2	-	3.9	30	0	58	14	0.9	30	0	-	-	-	-
	month	69.3	87	24	21	12.3	3.4	7.9	0.4	-2.1	11	6	119	22	-4.1	17	15	-	-	-	-
Co. Kerry Ardfert	1-10	7.7	-	4	1	13.1	3.6	8.4	-	-2.3	7	2	44	11	---	n/a	---	-	-	62.1	-
	11-20	5.3	-	3	2	13.1	3.2	8.2	-	0.0	15	0	41	8	---	n/a	---	-	-	72.0	-
	21-end	22.3	-	8	4	15.0	6.7	10.9	-	3.9	29	0	65	18	---	n/a	---	-	-	62.8	-
	month	35.3	-	15	7	13.7	4.5	9.1	-	-2.3	7	2	149	36	---	n/a	---	-	-	196.9	-
Co. Louth Ardee	1-10	10.1	-	na	na	12.1	3.5	7.8	-	-1.3	7	2	39	8	-2.6	7	3	6.8	8.0	-	-
	11-20	7.6	-	na	na	10.7	2.0	6.4	-	-1.5	16	2	26	3	-2.5	16	6	5.9	7.7	-	-
	21-end	10.9	-	5	4	14.6	5.8	10.2	-	1.8	29	0	59	15	-0.9	29	1	9.0	10.1	-	-
	month	28.6	52	na	na	12.5	3.8	8.2	-	-1.5	16	4	125	26	-2.6	7	10	7.2	8.6	-	-
Co. Waterford Dungarvan	1-10	5.5	-	5	1	13.2	3.6	8.4	-	-1.5	8	2	45	12	-4.0	8	6	-	8.9	65.0	-
	11-20	7.8	-	5	4	11.9	3.2	7.6	-	-0.3	15	1	36	5	-2.8	16	4	-	8.3	67.5	-
	21-end	23.0	-	9	6	14.2	6.2	10.2	-	2.5	23	0	59	14	-0.3	23	1	-	10.2	48.6	-
	month	36.3	-	19	11	13.1	4.3	8.7	-	-1.5	8	3	139	31	-4.0	8	11	-	9.2	181.1	119
Co. Wexford Johnstown Castle	1-10	10.0	-	6	2	12.2	3.1	7.7	-	-0.7	8	2	38	8	-2.8	8	6	7.6	8.3	64.5	-
	11-20	10.0	-	6	4	10.9	4.0	7.5	-	0.0	15	0	33	3	-1.8	15	3	7.4	8.1	62.6	-
	21-end	22.8	-	7	7	13.1	7.1	10.1	-	4.9	29	0	57	9	1.8	29	0	10.4	10.3	49.7	-
	month	42.8	67	19	13	12.1	4.7	8.4	0.4	-0.7	8	2	129	21	-2.8	8	9	8.4	8.9	176.8	107

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE						P.E. (Penman)		GLOBAL SOLAR RADIATION (MJ/sq.m.)				
Station	Period	P.E. (mm)		Soil Moisture (mm)		Station	total(mm)	1st-10th	11th-20th	21st-end	Total	
		Amount	Deficit	Accum'td	Deficit	Surplus						
Co. Kerry Valentia Obs.	1-10	16.0	1	1	-	-	Co. Carlow Carlow (Oak Park)	52	119.30	129.00	137.20	385.50
	11-20	15.2	-	1	-	-	Co. Cavan Ballyhaise	52	127.90	125.10	139.10	392.10
	21-end	30.9	4	5	-	-	Co. Clare Shannon Airport	58				
	month	62.1					Co. Cork Cork Airport	53				
Co. Wexford Johnstown Castle	1-10	9.2	-	0	1	1	Co. Cork Roche's Point	n/a	142.40	142.60	128.20	413.20
	11-20	22.3	12	12	-	-	Co. Donegal Malin Head	55	107.20	189.72	158.45	455.37
	21-end	6.5	-	0	17	17	Co. Dublin Dublin Airport	55	131.90	123.43	148.65	403.98
	month	38.0					Casement Aerodrome	56				
<b>MONTHLY EVAPORATION (MM) FROM CLASS A PAN</b>												
County	Station	Monthly Rainfall (mm)		Monthly Evaporation (mm)								
Clare	Kilmaley	60.4		48.9		Co. Kerry Valentia Obs.	63	158.91	151.53	159.68	470.12	
Cork	Fermoy (Moorepark)	33.3		61.4		Co. Mayo Belmullet	54	121.24	151.39	159.85	432.48	
Kerry	Valentia Observatory	51.0		70.6		Co. Offaly Knock Airport	52					
Kildare	Poulaphuca	40.4		46.7		Co. Offaly Birr	55	125.51	141.68	143.14	410.33	
Mayo	Newport (Furnace)	67.6		49.0		Co. Westmeath Mullingar	50	133.28	112.90	141.70	387.88	
Offaly	Derrygreenagh	47.2		52.3		Co. Wexford Johnstown Castle	51	136.60	136.10	136.10	408.80	
Waterford	Dungarvan (Carriglea)	36.3		55.1								
Wexford	Johnstown Castle	42.8		75.7								

**Tuesday 1st:** Windy during the night with some heavy showers in the north and west. Remaining windy during the day with showers becoming more extensive, however rainfall amounts were generally low. Long sunny spells also in most areas. Temperatures were near normal, but feeling cooler in the strong breeze. Southwesterly winds were strong to gale force, easing later.

**Rainfall:** nil to 4mm, heaviest at Malin Head, nil at Roche's Point  
**Temperature:** max. 10°C to 15°C, min. 6°C to 10°C, no ground frost  
**Sunshine:** trace to 10 hours, sunniest at Cork Airport, trace at Malin Head

**Wednesday 2nd:** Rain or drizzle in many areas during the night, becoming confined to northern areas by morning. Poor visibility in many areas also. Mainly dry throughout the remainder of the day. Overcast in the north and northwest, sunny spells elsewhere, mainly in the south. Mild with daytime temperatures above normal. Winds were light southwesterly or variable.

**Rainfall:** nil to 1mm generally, 4mm at Dublin Airport  
**Temperature:** max. 10°C to 17°C, min. 6°C to 10°C, no ground frost  
**Sunshine:** nil to 10 hours, sunniest at Cork Airport, nil at Malin Head and Belmullet

**Thursday 3rd:** A dry day countrywide and warm for early April. Long spells of sunshine in the southeast, progressively cloudier further north and west, with overcast conditions in the west. Winds were light, generally south or southwesterly in direction.

**Rainfall:** nil to trace  
**Temperature:** max. 12°C to 18°C, min. 5°C to 10°C, ground temperatures down to -1°C at Birr  
**Sunshine:** nil to 8 hours, sunniest at Valentia, nil at Belmullet

**Friday 4th:** Some showers in the north during the morning, mostly dry elsewhere. During the late afternoon, patchy rain spread from the north of the country, mainly affecting eastern and southern areas; this rain and drizzle cleared southwards later. Slight ground frost developed after dark. Winds were light, southwesterly in direction.

**Rainfall:** nil to 1mm generally, 4mm at Malin Head  
**Temperature:** max. 10°C to 15°C, min. 2°C to 8°C, ground temperatures down to -2°C at Birr  
**Sunshine:** 1 to 5 hours, sunniest at Dublin Airport, 1 hour at Birr

**Saturday 5th:** Some showers in the north and northwest overnight. The showers continued in the north during the day, generally dry elsewhere with sunshine. The showers in north became more wintry during the late evening, some with sleet and hail. Winds were northerly in direction, moderate to strong and gusty, strongest in the north and northwest.

**Rainfall:** nil to 1mm generally, 3mm at Malin Head  
**Temperature:** max. 8°C to 11°C, min. 0°C to 5°C, ground temperatures down to -4°C at Casement Aerodrome  
**Sunshine:** 6 to 11 hours, sunniest at Dublin Airport, 6 hours at Belmullet

**Sunday 6th:** It was a very cold, windy day with scattered wintry showers of hail, sleet and snow. Long sunny spells also. The northern half of the country received most showers, with snow lying in some areas. Shower activity became largely confined to north Connacht and Ulster in the evening. Winds were north to northwesterly, fresh to strong and gusty, easing slightly by evening.

**Rainfall:** nil to 5mm, heaviest at Belmullet  
**Temperature:** max. 6°C to 10°C, min. -2°C to 2°C, ground temperatures down to -5°C at Casement Aerodrome  
**Sunshine:** 6 to 10 hours, sunniest at Shannon Airport, 6 hours at Belmullet

**Monday 7th:** Heavy thundery showers in the northwest overnight. Sunny spells after dawn, especially in the east. Showers became widespread during the afternoon, some of hail or sleet, clearing all but northern coasts by late night. Winds were northerly, moderate to strong and gusty.

**Rainfall:** nil to 9mm, heaviest at Belmullet, nil at Birr  
**Temperature:** max. 7°C to 10°C, min. -2°C to 4°C, ground temperatures below zero at all inland stations, down to -6°C at Claremorris  
**Sunshine:** 3 to 10 hours, sunniest at Valentia, 3 hours at Malin Head

**Tuesday 8th:** Overnight showers, some heavy, with sleet or snow on high ground. The showers were mainly in western regions. Showers continued during the morning and afternoon, some of these heavy in the west. Some rain or drizzle in other areas, but amounts were small generally. During the evening, a weak frontal trough passed south over the country, bringing further showers. Some sunny spells in western areas. Winds were north to northwesterly, light to moderate in strength.

**Rainfall:** nil to 2mm generally, 6mm at Belmullet  
**Temperature:** max. 8°C to 11°C, min. -1°C to 5°C, ground temperatures down to -5°C at Carlow (Oak Park)  
**Sunshine:** 2 to 8 hours, sunniest at Knock Airport, 2 hours at Birr

**Wednesday 9th:** Very cold overnight with ground frost in places. Some mist or fog patches also with scattered showers, mainly along Atlantic coasts and in Ulster. It was a cool day with scattered showers and sunny spells. Winds were generally light to moderate, westerly or northwesterly in direction.

**Rainfall:** nil to 5mm, heaviest at Malin Head  
**Temperature:** max. 9°C to 12°C, min. 0°C to 4°C, ground temperatures down to -5°C at Claremorris  
**Sunshine:** 3 to 9 hours, sunniest at Knock Airport, 3 hours at Cork Airport

**Thursday 10th:** Showers overnight and through the day, heavy and thundery in the west and southwest during the afternoon and evening. Temperatures below normal. Sunny spells also between the showers. Winds were moderate, south or southwesterly near coasts, lighter inland.

**Rainfall:** trace to 9mm, heaviest at Shannon Airport, trace at Dublin Airport  
**Temperature:** max. 8°C to 10°C, min. 1°C to 4°C, ground temperatures down to -3°C at Claremorris  
**Sunshine:** 3 to 10 hours, sunniest at Malin Head, 3 hours at Valentia

**Friday 11th:** A few showers during the night, mainly in western areas. Showers increased during the day to affect all areas by afternoon, some of these of hail or sleet and thundery also. The showers persisted into the evening. Temperatures were below normal in the northwesterly airflow. Some long sunny periods between the showers. Winds were west to northwesterly, mainly light, occasionally moderate.

**Rainfall:** nil to 10mm, heaviest at Ballyhaise, nil at Malin Head  
**Temperature:** max. 8°C to 11°C, min. 1°C to 5°C, ground temperatures down to -3°C at Birr  
**Sunshine:** 3 to 10 hours, sunniest at Malin Head, 3 hours at Valentia

**Saturday 12th:** Showers in the north and northwest overnight. The showers continued in the west and north during the morning, remaining mainly dry over the rest of the country with some sunny spells. By early afternoon, the showers had spread countrywide, accompanied by hail and thunder in places. The showers died out by nightfall. Winds were light to moderate, variable.

**Rainfall:** trace to 10mm, heaviest at Knock Airport, trace at Cork Airport  
**Temperature:** max. 8°C to 12°C, min. 0°C to 6°C, ground temperatures down to -4°C at Mullingar  
**Sunshine:** 1 to 10 hours, sunniest at Valentia, 1 hour at Knock Airport

**Sunday 13th:** The day started dry and clear, but showers began to develop in the west towards noon and became widespread and heavy, some with thunder during the afternoon. The showers died out soon after dark. After a sunny morning, cloud increased during the afternoon. Winds were light, occasionally moderate, north or northwesterly in direction.

**Rainfall:** nil to 4mm, heaviest at Dublin Airport, nil at Valentia and Claremorris  
**Temperature:** max. 10°C to 13°C, min. 0°C to 7°C, ground temperatures down to -6°C at Birr  
**Sunshine:** 7 to 12 hours, sunniest at Malin Head, 7 hours at Casement Aerodrome

**Monday 14th:** Cold, dry and frosty overnight. A sunny, mainly dry day followed with just a few light showers in the west and north. Frost returned in the late evening. Cool. Winds were light north or northwesterly.

**Rainfall:** nil to trace generally, <1mm at Cork Airport  
**Temperature:** max. 9°C to 13°C, min. 0°C to 6°C, ground temperatures below zero at all inland stations, down to -6°C at Birr  
**Sunshine:** 10 to 13 hours, sunniest at Shannon Airport, 10 hours at Knock Airport

**Tuesday 15th:** Generally dry and clear overnight, apart from some heavy showers in the extreme north. The morning was generally dry with sunshine, with isolated showers in the west. Dry during the afternoon with prolonged sunny spells. Dry and clear during the evening, with frost setting in after dark. Winds were light and variable in direction.

**Rainfall:** nil to trace generally, 2mm at Malin Head  
**Temperature:** max. 10°C to 14°C, min. -2°C to 4°C, ground temperatures below zero at all inland stations, down to -9°C at Birr  
**Sunshine:** 8 to 12 hours, sunniest at Malin Head, 8 hours at Casement Aerodrome



**Wednesday 16th:** Clear spells overnight with frost in places and light winds. Dry with sunny spells during the morning. The afternoon continued dry and sunny in most places, but with more cloud along the southwest coast. Remaining dry and clear during the evening and night. Winds were light southeasterly, increasing to moderate with gale gusts around coasts.

**Rainfall:** nil to trace

**Temperature:** max. 9°C to 14°C, min. -1°C to 8°C, ground temperatures down to -5°C at Dublin Airport

**Sunshine:** 2 to 13 hours, sunniest at Malin Head, 2 hours at Valentia

**Thursday 17th:** Cool overnight with a slight ground frost inland. Some showers during the late morning, mainly in the midlands, however rainfall amounts were generally low. Long spells of sunshine in most parts, but more overcast in parts of the east and south. Winds were light to moderate easterly, stronger around coasts with occasional gale gusts.

**Rainfall:** nil to 1mm, heaviest at Ballyhaise

**Temperature:** max. 7°C to 12°C, min. 3°C to 7°C, ground temperatures down to -2°C at Birr

**Sunshine:** 4 to 13 hours, sunniest at Malin Head, 4 hours at Cork Airport

**Friday 18th:** Dry and clear overnight apart from a few scattered showers in the northern half of the country. Sunny spells in many parts, however the east remained mostly overcast. Showers developed in the south during the late afternoon, giving some heavy falls, particularly in the southeast. Winds were easterly, light to moderate, stronger with gale gusts around coasts.

**Rainfall:** nil to 4mm, heaviest at Johnstown Castle

**Temperature:** max. 9°C to 13°C, min. 1°C to 7°C, ground temperatures down to -3°C at Carlow (Oak Park)

**Sunshine:** trace to 9 hours, sunniest at Belmullet, trace at Casement Aerodrome

**Saturday 19th:** Some rain or drizzle in the southeast at first overnight, largely dry elsewhere. The day was generally dry with a cold easterly wind. Sunny in Ulster and north Connacht, but dull elsewhere. Rain and drizzle in the afternoon and evening in some southern areas. Moderate to fresh and gusty east or northeasterly winds, easing slightly later.

**Rainfall:** nil to 3mm, heaviest at Johnstown Castle

**Temperature:** max. 8°C to 13°C, min. 3°C to 7°C, no ground frost

**Sunshine:** nil to 10 hours, sunniest at Malin Head

**Sunday 20th:** Rain in parts of Munster around dawn, gradually moving further north during the morning. It became dry almost everywhere by late afternoon. Sunny in Ulster but dull elsewhere. Winds were moderate northeasterly, occasionally fresh or strong on exposed coasts, gradually decreasing light through the day.

**Rainfall:** nil to 3mm, heaviest at Cork Airport, nil at Malin Head

**Temperature:** max. 8°C to 12°C, min. 4°C to 7°C, no ground frost

**Sunshine:** nil to <1 hour generally, 5 hours at Malin Head

**Monday 21st:** Dry and cool during the night with some frost in midland areas but this cleared quickly during the morning. Mainly cloudy at first, with some sunny spells during the afternoon. Remaining mainly dry with some light rain or drizzle in northern areas. Winds were light and variable.

**Rainfall:** nil to trace

**Temperature:** max. 10°C to 15°C, min. 4°C to 8°C, ground temperatures down to -4°C at Birr

**Sunshine:** nil to 6 hours, sunniest at Casement Aerodrome, nil at Shannon Airport

**Tuesday 22nd:** Sunny spells in eastern areas. A frontal trough approached the southwest coast in the early afternoon and moved slowly eastwards during the afternoon. Rain in western areas reached all areas by late evening. Winds were light southeasterly initially, veering south to southwesterly later, mainly light, but moderate to fresh in places.

**Rainfall:** nil to 7mm, heaviest at Roche's Point, nil at Malin Head

**Temperature:** max. 11°C to 16°C, min. 1°C to 9°C, ground temperatures down to -5°C at Birr

**Sunshine:** 1 to 12 hours, sunniest at Casement Aerodrome

**Wednesday 23rd:** A dry, warm sunny day generally, however by early evening a narrow band of heavy rain approached the southwest, spreading northeastwards during the evening and early night. Sunny for most of the day but turning cloudier in the south and southwest later. Winds were light southerly, backing southeasterly and increasing moderate in the evening.

**Rainfall:** nil to 8mm, heaviest at Cork Airport, nil at Casement Aerodrome

**Temperature:** max. 12°C to 17°C, min. 3°C to 8°C, ground temperatures down to -2°C at Birr

**Sunshine:** 4 to 10 hours, sunniest at Dublin Airport, 4 hours at Cork Airport

**Thursday 24th:** Outbreaks of rain, heavy at times and accompanied by mist, cleared the north coast by dawn. Showers then affected southern coasts and these spread quickly to most parts by noon, becoming heavy and thundery and with hail at times during the afternoon. Between the showers there were sunny spells. The showers died out in the early evening. Winds were light to moderate, south to southwesterly in direction.

**Rainfall:** trace to 12mm, heaviest at Ballyhaise, trace at Valentia

**Temperature:** max. 11°C to 15°C, min. 5°C to 8°C, no ground frost

**Sunshine:** 8 to 12 hours, sunniest at Belmullet, 8 hours at Knock Airport

**Friday 25th:** Rain in the south early in the period spread northwards during the morning, affecting most places for a while. The afternoon was mostly dry with some patchy rain in places, while winds increased significantly. By late afternoon the rain had ceased completely, although fog developed in the south. The evening and night continued dry and breezy apart from isolated showers in the west. Winds were southerly, light to moderate, gusty around coasts.

**Rainfall:** nil to 5mm, heaviest at Roche's Point, nil at Malin Head

**Temperature:** max. 11°C to 17°C, min. 6°C to 10°C, no ground frost

**Sunshine:** nil to 2 hours, sunniest at Shannon Airport

**Saturday 26th:** Mild, humid and windy overnight with outbreaks of rain and drizzle, mainly in the western half of the country. This dull, damp weather moved eastwards in the morning and lingered over the east and southeast for much of the day, only clearing the extreme southeast in the evening. Elsewhere there were sunny spells and isolated showers. Winds were southerly, moderate to fresh and gusty, easing gradually.

**Rainfall:** nil to 5mm, heaviest at Claremorris

**Temperature:** max. 11°C to 16°C, min. 4°C to 10°C, ground temperatures down to -2°C at Birr

**Sunshine:** <1 to 12 hours, sunniest at Belmullet, <1 hour at Dublin Airport

**Sunday 27th:** Showery outbreaks of rain began to affect western coastal areas after dawn, moving eastwards during the day and reaching the east coast by late evening. Heaviest falls were in the southwest and west with some thunderstorms recorded also. Sunny generally, particularly in the east and the extreme north. Winds were generally light to moderate, variable in direction.

**Rainfall:** trace to 16mm, heaviest at Shannon Airport, trace at Dublin Airport

**Temperature:** max. 12°C to 16°C, min. 0°C to 9°C, ground temperatures down to -5°C at Birr

**Sunshine:** 1 to 9 hours, sunniest at Dublin Airport, 1 hour at Shannon Airport

**Monday 28th:** Rain or drizzle was widespread overnight, with showers in western areas. The showers became more frequent during the day and were heavy and thundery in places. Some long sunny periods also, mainly in coastal areas. Showers eased during the evening and skies cleared, with a slight to sharp frost inland. Winds were southwest to westerly, light to moderate.

**Rainfall:** trace to 9mm, heaviest at Malin Head, trace at Roche's Point

**Temperature:** max. 9°C to 14°C, min. 3°C to 8°C, ground temperatures down to -4°C at Birr

**Sunshine:** 2 to 12 hours, sunniest at Valentia, 2 hours at Birr

**Tuesday 29th:** The morning was mainly fair with a few scattered showers. The showers became more widespread in the afternoon and were heavy and thundery, largely dying out after dark. Long sunny spells in many areas. Winds were light to moderate, easterly for much of the day, later falling light.

**Rainfall:** nil to 8mm, heaviest at Claremorris

**Temperature:** max. 11°C to 15°C, min. 0°C to 8°C, ground temperatures down to -5°C at Birr

**Sunshine:** 4 to 13 hours, sunniest at Casement Aerodrome, 4 hours at Belmullet

**Wednesday 30th:** Dry overnight and for much of the day. Scattered light showers developed during the afternoon and evening. Persistent rain affected northern and eastern Ulster during the evening. Cloudy in the east and northeast, sunny further west. Winds were moderate northwesterly.

**Rainfall:** nil to 5mm, heaviest at Valentia

**Temperature:** max. 10°C to 14°C, min. 4°C to 8°C, ground temperatures down to -2°C at Birr

**Sunshine:** 1 to 11 hours, sunniest at Belmullet, 1 hour at Dublin Airport

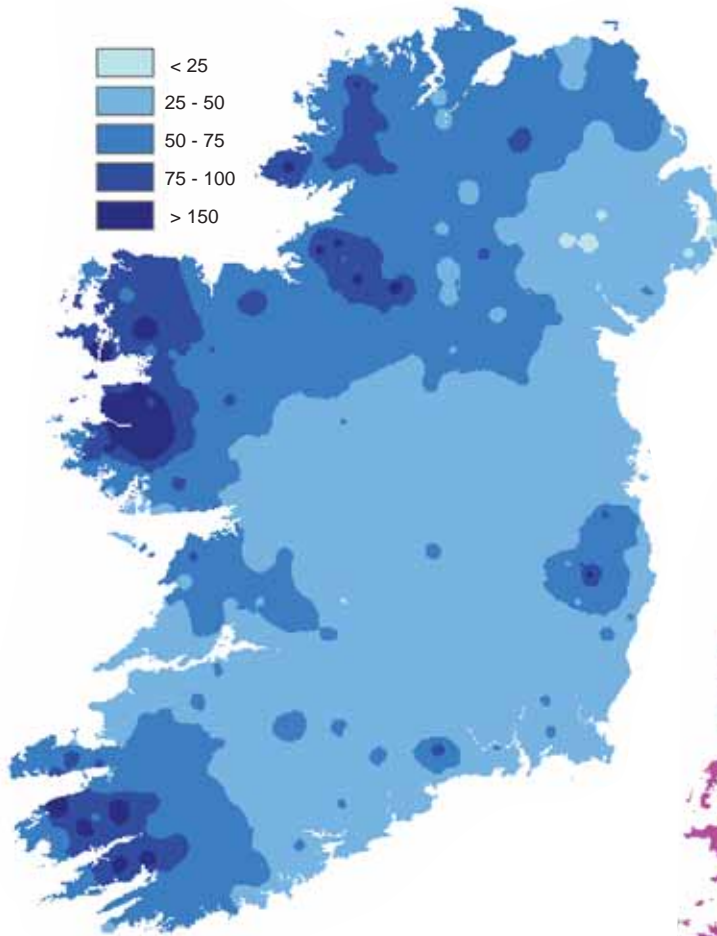
## Drier than normal generally but wet in northwest

While April rainfall totals were above normal in parts of the northwest, it was a drier month than normal generally, with less than half of normal rainfall recorded at some stations in the south and east. Monthly totals ranged from 24mm at Dublin (Merrion Square) to 116mm at Maam Valley, Co. Galway, with percentage of normal values between 48% at Merrion Square and 119% at Belmullet. Although totals were below normal generally, at no station was it as dry as the record-breaking April of last year.

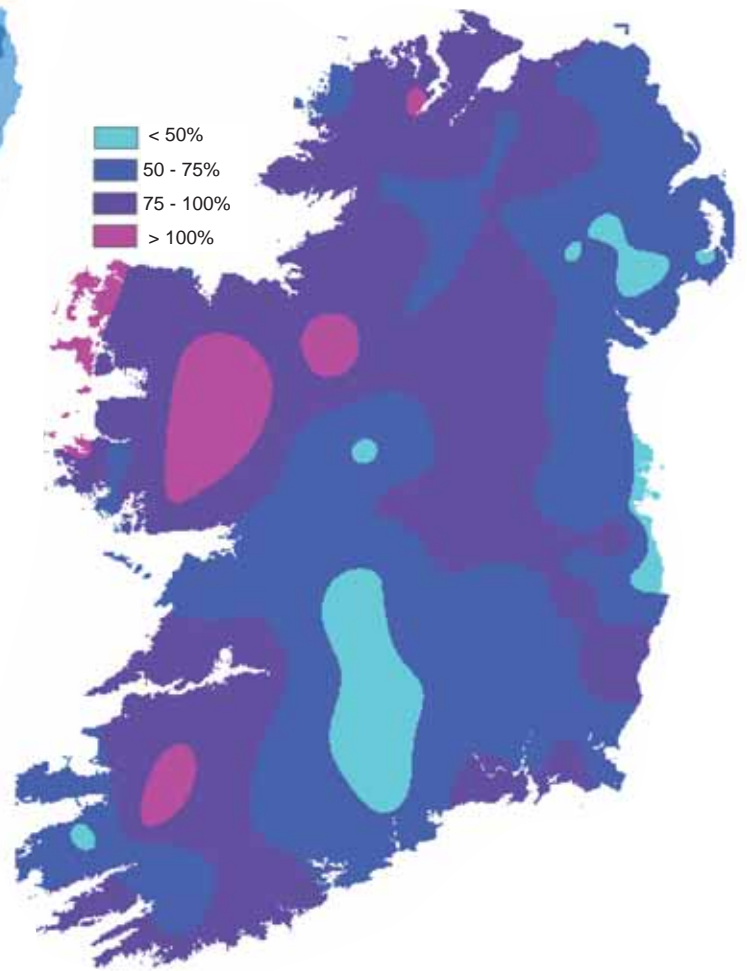
Much of the month's precipitation was in the form of showers, which were heavy and thundery in many areas between the 10th and 13th and again during the final week. The month's heaviest daily fall, 20.9mm, was measured at Maam Valley on the 25th. The only relatively dry spell during the month was in the period between the 14th and 17th. Given the showery nature of the month, there was a wide variation in the amount of wetdays recorded across the country (*days with 1mm or more of rainfall*), with between 7 and 11 wetdays recorded over much of the east and south, while 17 or more wetdays were measured in some western and northern areas.

County/ Station	Total Amount (mm)	% of 1961-90 average	Most in		Number of	
			date	date	Raindays (≥0.2mm)	Wetdays (≥1mm)
<b>CO. CARLOW</b>						
CARLOW (OAK PARK)	31.7	67	7.3	27	16	10
<b>CO. CAVAN</b>						
BALLYHAISE	64.3	116	9.5	11	23	15
CAVAN (LORETO COLLEGE)	58.1		9.6	11	19	13
<b>CO. CLARE</b>						
SHANNON AIRPORT	49.2	88	17.1	27	15	13
CARRON	57.0	66	15.8	27	22	12
<b>CO. CORK</b>						
FERMOY (MOORE PARK)	33.3	56	6.8	23	15	9
CORK AIRPORT	53.7	77	8.6	23 27	17	12
SHERKIN ISLAND	50.1	77	9.8	28	15	9
BALLINCURRIG (PEAFIELD)	52.8		14.0	28	17	11
ROCHE'S POINT	38.2	72	7.0	22	15	11
<b>CO. DONEGAL</b>						
MALIN HEAD	54.2	93	12.7	27	18	14
BALLYSHANNON (CATHLEEN'S FALL)	50.9	89	8.6	9 27	21	17
GLENTIES	69.3	87	9.2	23	24	21
<b>CO. DUBLIN</b>						
DUBLIN (PHOENIX PARK)	38.2	72	7.5	12 27	18	10
DUBLIN AIRPORT	27.0		4.4	22	17	9
CASEMENT AERODROME	32.4	64	8.7	12	17	10
DUBLIN (MERRION SQUARE)	23.7	48	4.7	12	18	11
<b>CO. GALWAY</b>						
GALWAY (UNIV. COLL.)	53.0	79	9.5	27	20	13
MAAM VALLEY	115.6		20.9	25	21	17
CONNEMARA NATIONAL PARK	83.9	101	11.7	11	20	16
BALLYGAR	39.0	64	6.7	23	20	9
<b>CO. KERRY</b>						
VALENTIA OBSERVATORY	51.0	66	8.8	10	19	11
ARDFERT (LISCAHANE)	35.3		10.9	23	15	7
<b>CO. LIMERICK</b>						
MOUNT RUSSELL	63.1		13.8	27	19	17
<b>CO. LOUTH</b>						
ARDEE (BOHARNAMOE)	28.6	52	4.2	13	---	n/a ---
<b>CO. MAYO</b>						
BELMULLET	67.7	119	11.4	11	22	17
STRAIDE	75.7	118	11.2	11	18	16
KNOCK AIRPORT	64.4		8.2	28	22	16
<b>CO. MEATH</b>						
WARRENSTOWN	39.7	68	7.3	22	17	10
<b>CO. OFFALY</b>						
BIRR	28.6	54	5.9	28	16	11
DERRYGREENAGH	47.2	83	9.2	12	15	11
<b>CO. SLIGO</b>						
ARDTARMON	61.2		12.6	24	21	14
<b>CO. TIPPERARY</b>						
FETHARD (PARSONSHILL)	25.6		6.6	27	18	10
<b>CO. WATERFORD</b>						
WATERFORD (TYCOR)	52.6	86	14.8	30	16	13
DUNGARVAN (CARRIGLEA)	36.3		6.0	22	19	11
<b>CO. WESTMEATH</b>						
MULLINGAR	57.0	96	17.1	27	20	12
<b>CO. WEXFORD</b>						
JOHNSTOWN CASTLE	42.8	67	5.5	23	19	13
JOHN F. KENNEDY PARK	39.1	61	7.8	22	15	12
CLONROCHE (KNOXTOWN)	51.5		8.3	22	17	12

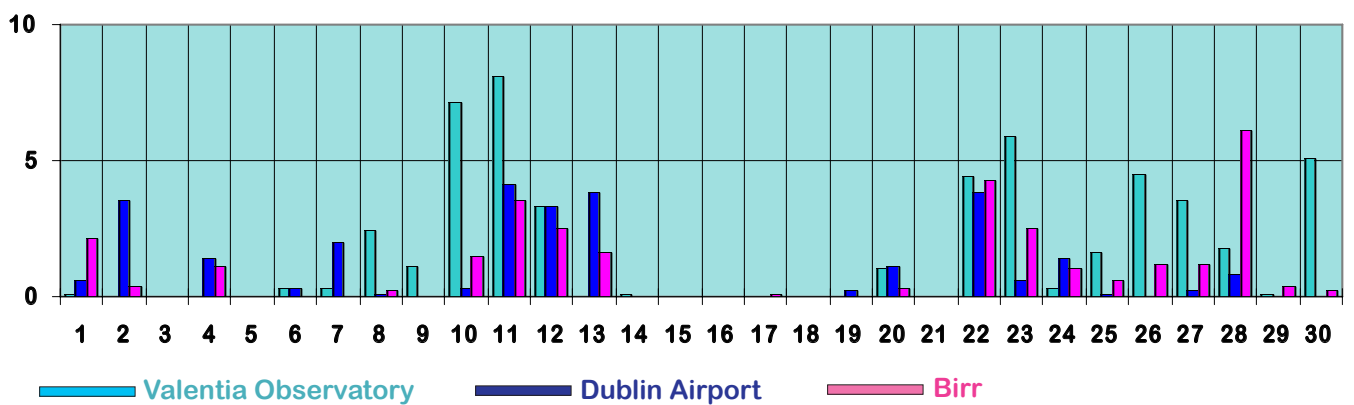
**Total rainfall (mm)**



**Percentage of normal rainfall**



**Daily 0-24h rainfall values (mm)**

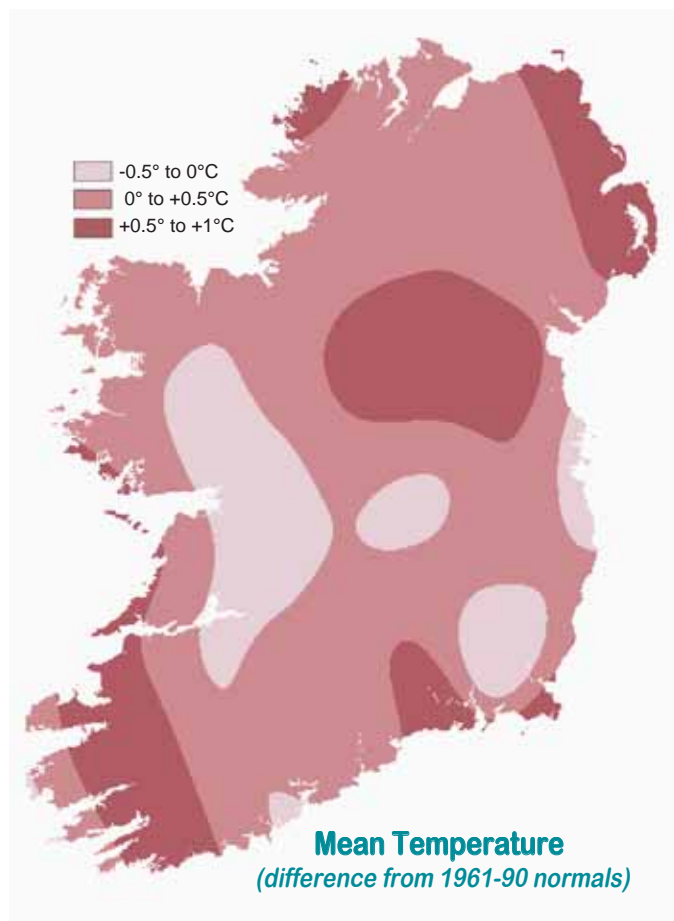




## Mean temperatures close to normal

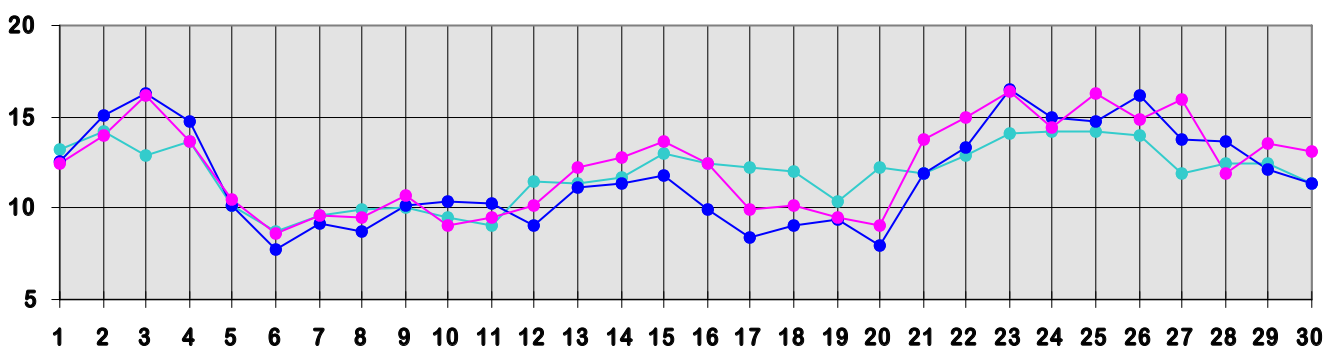
Although temperatures were above normal near the beginning and end of April, there was a long spell of relatively cool weather around the middle of the month. Mean air temperatures overall were therefore close to normal generally; they were a little above normal at many stations, but near or slightly below normal in parts of the west and southeast. They varied between 6.9°C at Knock Airport and 9.5°C at Sherkin Island, Co. Cork. It was the coldest April at many stations for seven or eight years.

The month began with some warm weather up to the 4th, but temperatures did not rise above normal again until the 22nd at most stations. The highest daily values of the month were measured on either the 3rd or 23rd generally; the month's highest temperature, 18.6°C, was recorded at Waterford (Tycor) on the 3rd. Air and ground frost were widely recorded on several days between the 5th and 16th. The month's lowest air temperature, -2.3°C, was recorded at both Ardfert (Lis Cahane), Co. Kerry and at Derrygreenagh, Co. Offaly, on the 7th, while Birr measured the lowest grass minimum value of -9.0°C

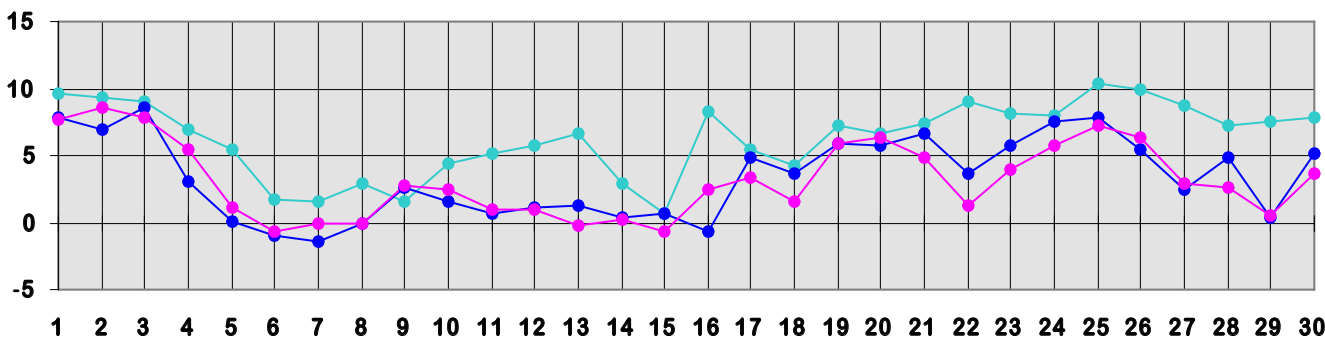


on the 15th. There was a total of between 12 and 16 ground frosts at most inland stations, with 24 ground frosts recorded at Birr.

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



● Valentia Observatory

● Dublin Airport

● Birr

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		
<b>CO. CARLOW</b>										
CARLOW (OAK PARK)	12.2	4.2	8.2	0.1	17.4 3	-0.6 8	-5.0 8	2	16	
<b>CO. CAVAN</b>										
BALLYHAISE	11.9	4.1	8.0		15.9 23	-0.3 6	-2.2 15	3	8	
CAVAN LORETO COLLEGE	12.3	3.9	8.1		16.4 23 26	-1.1 7	-3.2 7	4	14	
<b>CO. CLARE</b>										
SHANNON AIRPORT	12.4	5.1	8.8	-0.1	17.1 25	0.3 7	-3.1 15	0	12	
CARRON	11.4	4.1	7.8	0.1	15.6 25	0.5 7	-6.7 15	0	18	
<b>CO. CORK</b>										
SHERKIN ISLAND	12.5	6.5	9.5	0.7	14.6 23	1.0 9	-2.0 7	0	5	
FERMOY (MOORE PARK)	12.4	4.4	8.4	0.4	17.5 3	-0.1 12	-4.8 12	1	16	
CORK AIRPORT	11.4	4.4	7.9	0.0	16.6 2	-0.8 7	-4.8 8	2	10	
BALLINCURRIG (PEAFIELD)	12.5	3.1	7.8		17.0 3	-1.7 8	-2.4 15	4	10	
ROCHE'S POINT	11.4	5.7	8.6	0.0	16.5 2	1.1 7	-1.4 27	0	6	
<b>CO. DONEGAL</b>										
GLENTIES HATCHERY	12.3	3.4	7.9	0.4	17.1 23	-2.1 11	-4.1 12	6	14	
MALIN HEAD	10.5	5.8	8.2	0.4	17.0 23	1.5 7 11	-1.1 11	0	4	
BALLYSHANNON (CATHLEEN'S FALL)	11.6	4.6	8.1	0.2	17.0 23	-0.5 11		1		
<b>CO. DUBLIN</b>										
DUBLIN AIRPORT	11.7	3.8	7.8		16.5 23	-1.4 7	-5.3 16	4	12	
DUBLIN (PHOENIX PARK)	12.2	4.3	8.3	0.4	17.2 23	-0.9 6	n/a	3	n/a	
CASEMENT AERODROME	11.8	4.0	7.9	0.2	16.4 22	-2.1 6	-4.7 16	5	15	
DUBLIN (MERRION SQUARE)	11.6	6.0	8.8	-0.1	17.3 23	0.9 6		0		
<b>CO. GALWAY</b>										
CONNEMARA NATIONAL PARK	11.9	5.5	8.7		15.1 3	0.3 7		0		
BALLYGAR	12.9	3.6	8.3		17.0 23 26	-0.6 6 7	-3.0 13	3	14	
GALWAY (UNIV.COLL.)	12.7	4.5	8.6	-0.1	17.0 23	-1.0 15	-4.0 15	1	12	
MAAM VALLEY	12.4	4.8	8.6		16.2 4	0.3 7	-3.2 15	0	11	
<b>CO. KERRY</b>										
VALENTIA OBSERVATORY	11.9	6.5	9.2	0.2	14.2 2 24	0.6 15	-6.0 15	0	6	
ARDFERT (LISCAHANE)	13.7	4.5	9.1	0.7	18.1 2	-2.3 7	n/a	2	n/a	
<b>CO. LIMERICK</b>										
MOUNT RUSSELL	11.4	4.3	7.9		16.4 3	-1.6 7	-5.0 7	2	11	
<b>CO. LOUTH</b>										
ARDEE (BOHARNAMOE)	12.5	3.8	8.2	0.7	16.7 3	-1.5 16	-2.6 7	4	10	
<b>CO. MAYO</b>										
BELMULLET	12.1	5.4	8.8	0.4	15.3 23	1.2 7	-1.7 9 29	0	7	
STRAIDE	12.5	3.7	8.1	0.0	16.0 3 23	-1.7 15	-5.5 15	5	17	
KNOCK AIRPORT	10.3	3.5	6.9		15.0 23	-0.8 7	-2.9 29	3	11	
<b>CO. MEATH</b>										
WARRENTOWN	12.2	4.2	8.2	0.5	16.6 26	-1.4 8	-5.4 8	3	11	
<b>CO. OFFALY</b>										
DERRYGREENAGH	12.8	2.2	7.5	0.1	17.7 27	-2.3 7	-4.9 7	8	12	
BIRR	12.3	3.6	8.0	0.0	16.4 23	-0.6 6 15	-9.0 15	5	24	
<b>CO. SLIGO</b>										
ARDTARMON	12.4	5.0	8.7		16.4 23	1.0 6 7	-3.2 11	0	9	
<b>CO. TIPPERARY</b>										
FETHARD (PARSONSHILL)	11.8	3.7	7.8		17.0 3	-1.6 7	-2.8 7	3	3	
<b>CO. WATERFORD</b>										
DUNGARVAN (CARRIGLEA)	13.1	4.3	8.7	0.2	18.5 3	-1.5 8	-4.0 8	3	10	
WATERFORD (TYCOR)	12.9	5.2	9.1	0.7	18.6 3	0.2 6		0		
<b>CO. WESTMEATH</b>										
MULLINGAR	12.0	3.5	7.8	0.4	16.4 23	-1.9 15	-5.7 15	4	17	
<b>CO. WEXFORD</b>										
JOHNSTOWN CASTLE	12.1	4.7	8.4	0.5	18.2 3	-0.7 8	-2.8 8	4	9	
JOHN F. KENNEDY PARK	12.3	4.1	8.2	0.0	17.6 3	-1.6 7	-2.6 8	4	8	
CLONROCHE (KNOXTOWN)	11.7	3.4	7.6		16.6 3	-1.5 8	-5.4 8	6	15	

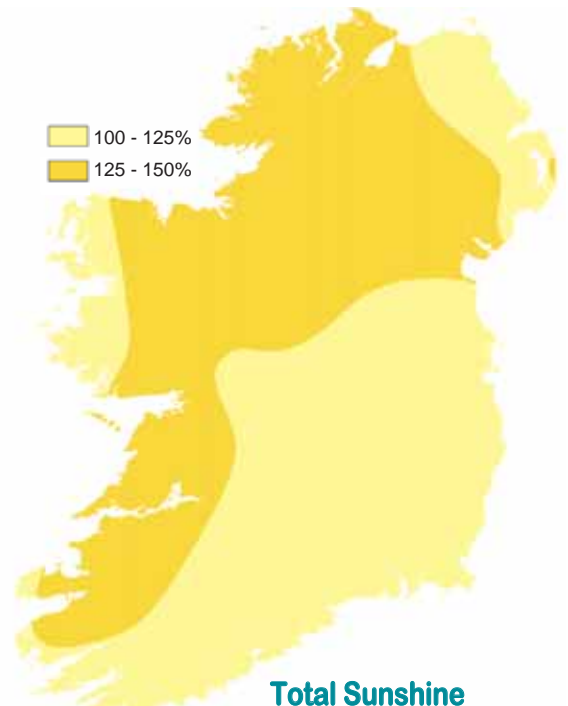
County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date
<b>CO. CAVAN</b>				
CAVAN (LORETO COLLEGE)	6.23		45	11.4 13
<b>CO. CLARE</b>				
SHANNON AIRPORT	6.45	131	46	12.7 14
<b>CO. CORK</b>				
FERMOY (MOORE PARK)	5.28	111	38	11.8 15
CORK AIRPORT	5.64	108	41	12.6 14
SHERKIN ISLAND	6.49	110	47	12.5 28
BALLINCURRIG (PEAFIELD)	5.73			12.4 14
<b>CO. DONEGAL</b>				
MALIN HEAD	6.73	132	48	13.1 16
BALLYSHANNON (CATHLEEN'S FALL)	6.63	140	47	12.9 15
<b>CO. DUBLIN</b>				
DUBLIN AIRPORT	6.19	119	44	12.3 14
CASEMENT AERODROME	5.59	114	40	12.9 29
<b>CO. GALWAY</b>				
GALWAY (UNIV.COLL.)	6.36	128	45	12.7 14
<b>CO. KERRY</b>				
VALENTIA OBSERVATORY	6.24	125	45	12.1 28
ARDFERT (LISCAHANE)	6.56		47	12.2 14
<b>CO. MAYO</b>				
BELMULLET	6.28	119	45	12.3 16
STRAIDE	6.93			12.8 16
KNOCK AIRPORT	6.06			11.7 13 16
<b>CO. OFFALY</b>				
BIRR	5.58	120	40	12.0 16
<b>CO. WATERFORD</b>				
DUNGARVAN (CARRIGLEA)	6.04	119	43	12.1 14 16
<b>CO. WEXFORD</b>				
JOHNSTOWN CASTLE	5.89	110	42	12.5 16
JOHN F. KENNEDY PARK	6.02	122	43	12.2 16
CLONROCHE (KNOXTOWN)	6.14			11.5 16

Sunshine values are not available for automatic synoptic stations

## Sunnier than normal everywhere

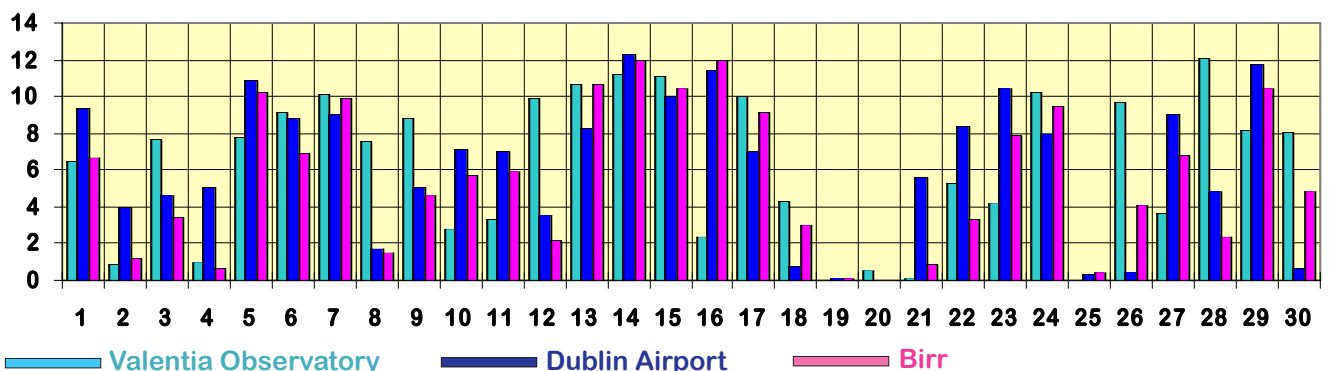
Sunshine totals for April were above normal everywhere and were well above normal in the northwest. Totals ranged from 158 hours at Fermoy (Moorepark), Co. Cork, to 208 hours at Straide, Co. Mayo, with percentage of normal values between 108% of normal at Cork Airport and 140% at Ballyshannon (Cathleen's Fall), Co. Donegal. Malin Head had its sunniest April since 1974.

Most sunshine was recorded around the middle of the month, particularly in the periods 13th to 17th. The highest daily value, 13.1 hours, was measured at Malin Head on the 16th. Global solar radiation totals were also above normal for April everywhere, ranging from 103% of normal at both Birr and Kilkenny to 117% at Malin Head.



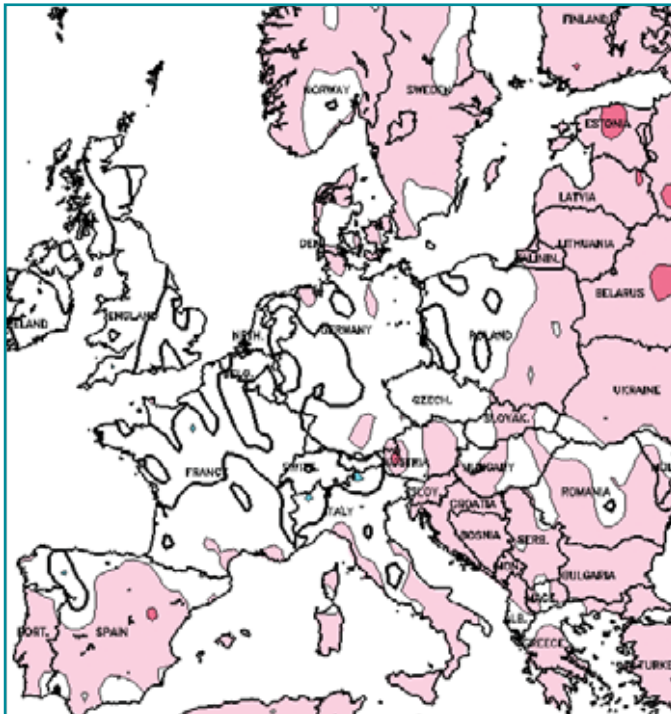
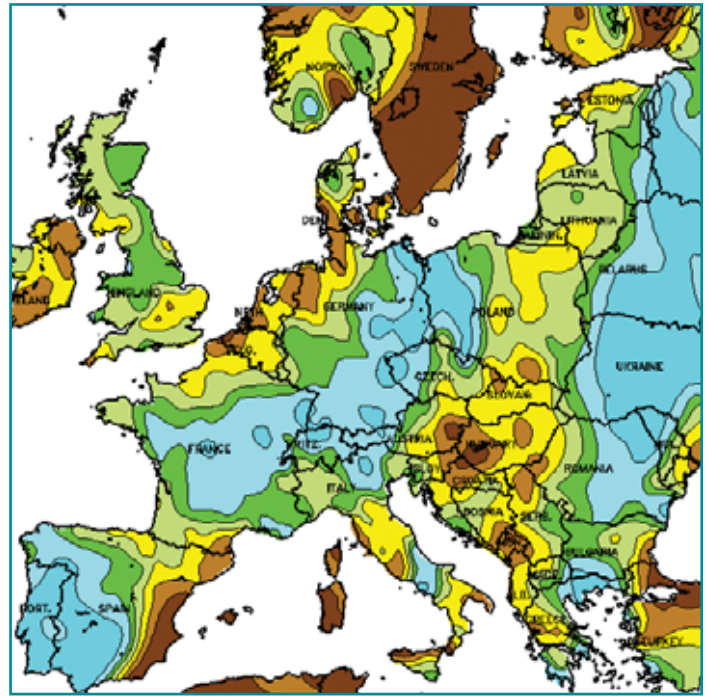
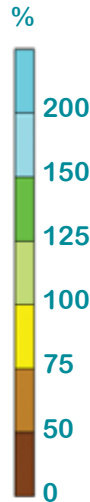
**Total Sunshine**  
(percentage of 1961-90 normals)

### Daily sunshine values (hours)



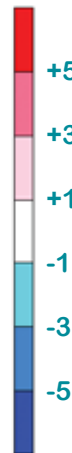


**APRIL RAINFALL**  
(percentage of 1961-1990 normal)



°C

**APRIL MEAN TEMPERATURE**  
(difference from 1961-1990 normal)



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

It was a month of exceptional tornado activity across the southern and eastern U.S.A. Between the 9th and 11th, severe weather affected Texas and Oklahoma, causing almost 200,000 homes and businesses to be without power. The same storm caused two fatalities in Missouri, when up to 100mm of rain in just a few hours caused widespread flooding.

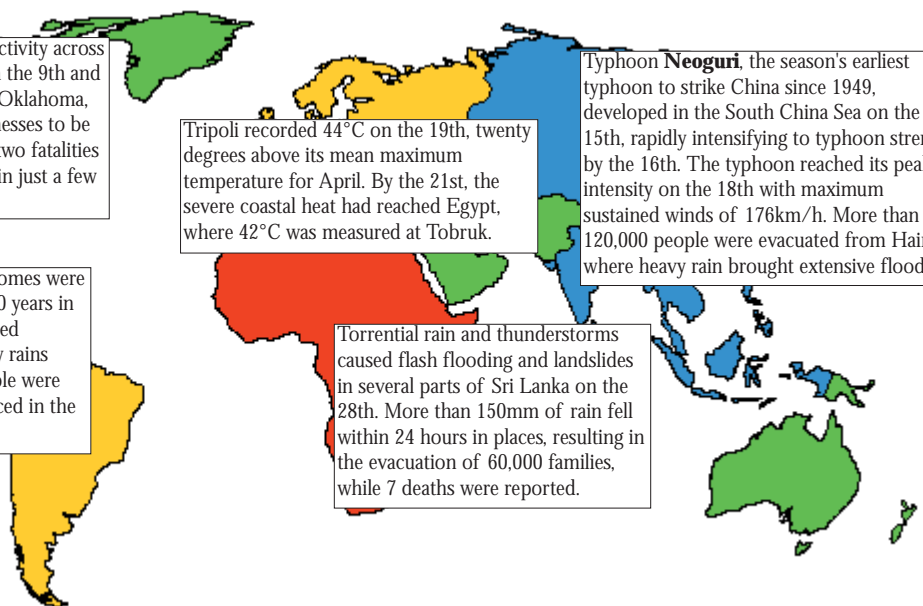
In Bolivia, more than 1.2 million homes were affected by the worst flooding in 50 years in some regions. Brazil also experienced widespread floods, caused by heavy rains during the first two weeks; 15 people were killed and more than 30,000 displaced in the northeastern part of the country.

Tripoli recorded 44°C on the 19th, twenty degrees above its mean maximum temperature for April. By the 21st, the severe coastal heat had reached Egypt, where 42°C was measured at Tobruk.

Typhoon **Neoguri**, the season's earliest typhoon to strike China since 1949, developed in the South China Sea on the 15th, rapidly intensifying to typhoon strength by the 16th. The typhoon reached its peak intensity on the 18th with maximum sustained winds of 176km/h. More than 120,000 people were evacuated from Hainan, where heavy rain brought extensive flooding.

Torrential rain and thunderstorms caused flash flooding and landslides in several parts of Sri Lanka on the 28th. More than 150mm of rain fell within 24 hours in places, resulting in the evacuation of 60,000 families, while 7 deaths were reported.

**Global weather highlights of the month**



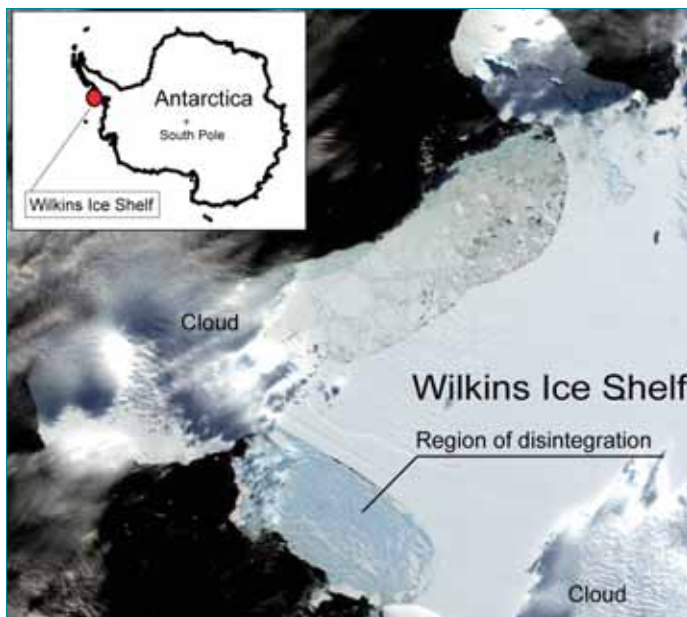
## ICE DISINTEGRATION DUE TO WARMING SEAS

Following the melting of the Larsen B Ice Shelf in Antarctica in 2002, another ice sheet three times as large began to break apart during March of this year, an event attributed to strong warming due to climate change by the U.S. National Snow and Ice Data Centre. The Wilkins Ice Shelf (an area of 13,680km<sup>2</sup>, or two thirds the size of *Leinster*- see maps below) is several hundred years old. The onset of the Antarctic winter has halted its decline, but this is expected to resume next year. The disintegration of the Wilkins Ice Shelf will not change global sea level significantly, as the ice is already floating in the ocean. Antarctic ice shelves are important, however, because of their ability to insulate glaciers along the coast, and their disappearance allows more rapid melting of the glaciers they hold back.

According to a NASA study published in February of this year, melting of ice on the Antarctic Peninsula and along the ocean edges of the West Antarctic Ice Sheet is contributing about 0.5mm/year to sea level rise in the world's oceans, up from 0.3 mm/year in 1996. While most of Antarctica cooled during the period 1981 to 2004, that part of the Antarctic Peninsula where the Wilkins Ice Shelf lies warmed by about 1°C. Sea surface temperatures also increased by about 1°C in the same area and these warmer waters may be primarily responsible for the disintegration of the shelf. Since 2004, almost all of Antarctica has warmed, cancelling out much of the cooling observed between 1981 and 2004 (see chart below right).

*Below- left: Satellite image from March 8th, showing disintegrating ice from the Wilkins Ice Shelf in western Antarctica*

*right: Trends in Antarctic surface temperatures between 1981 and 2007, as observed by NOAA's AHVRR satellite measurements. Areas along the edges of the Western Antarctic Ice Sheet have seen the strongest warming. (pictures courtesy: NASA, NOAA, US National Snow and Ice Data Centre)*



In the northern hemisphere, Arctic sea ice was at its lowest areal extent at the end of summer 2007 since satellite measurements began in 1979 (see *Monthly Weather Bulletin of September 2007*). Although the total area of ice was slightly greater at the end of March 2008 compared with the same time last year due to a relatively cold Arctic winter (see chart below), much of the older, thicker ice has been replaced by thin one-year-old ice. If Arctic summer weather this year is similar to that of last year, i.e. high pressure and unusually clear skies, it is likely that much of this thin ice will disappear, raising the possibility that ships may be able to reach the North Pole for the first time by September. There is also the possibility of the Northwest Passage becoming a commercially viable route for shipping in the near future, whereby a relatively ice-free shipping lane could be maintained along Canada's northern border. This would shorten the voyage for ships travelling between western Europe and eastern Asia by around a quarter.

*Below- Comparison of Arctic ice conditions between March 2007 and 2008 (picture courtesy US National Snow and Ice Data Centre)*

