

Monthly Weather Bulletin

No. 274

FEBRUARY 2009



BECOMING MILD AFTER VERY COLD START; DRIER BUT DULLER THAN NORMAL

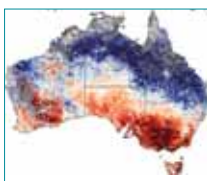
After exceptionally cold weather at the beginning of the month, with frequent falls of sleet or snow, much milder conditions developed over Ireland from the 10th onwards. The very cold east to northeasterly airstream which brought the wintry conditions was replaced by an area of high pressure over and to the south of the country, giving mainly dry weather with light winds during the second half of the month. Mean air temperatures for the first ten days were around four degrees below normal, but for the month overall they were higher than normal everywhere and were over a degree above normal in the west.

Air and ground frost were widespread and severe at times during the first ten days, but were much less frequent thereafter. Between 12 and 18 ground frosts were recorded during the month at most stations, compared with the normal range for February of between eight and 15. Valentia Observatory's grass minimum temperature of -8.8°C on the 2nd was its lowest such value for February since 1969. Rainfall totals were below normal except

Left

The winter of 2008/9 was the coldest for up to 18 years in places- there was a very cold spell during the first week of February, with some heavy snow over the east of the country in particular- see page 2.

INSIDE



Record high temperatures cause fires in Australia- page 3

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Coldest winter for up to 18 years in places

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

in the east and they were well below normal in the south. It was the driest February for between 11 and 23 years at many stations. Some heavy falls were recorded in eastern areas during the first week, but amounts at other times were generally small. Six or seven wetdays were recorded at the majority of stations (days with 1mm or more rainfall), but western stations recorded between 11 and 15 wetdays. Sunshine totals were below normal except in the

southwest and they were well below normal in the east. Most sunshine was recorded between the 6th and 10th.

1st to 10th: A very cold east to northeasterly airstream, with its origins over northern and eastern Europe, was drawn into the circulation of a depression situated to the southeast of Ireland (*see below*). Showers or longer spells of hail, sleet or snow in eastern areas at first became more widespread, with some

SNOW CAUSES WIDESPREAD DISRUPTION DURING FIRST WEEK



Visible satellite image at 1320UTC on 3rd

Heavy snow during the first few days of the month caused significant disruption of air, road and rail travel over northwest Europe. The snow was caused by a depression moving slowly northwestwards from France, combining with exceptionally cold air from eastern Europe. Falls of hail, sleet or snow began over eastern Ireland on the 2nd, with thundery outbreaks in places, and continued in most parts of the country over subsequent days. Falls were heaviest in eastern and upland areas, giving significant accumulation of snow at times and making road travel very hazardous- pictured below left is the scene near Blessington, Co. Wicklow. Dublin Airport, pictured below, closed due to snowfall on the 5th; subsequent freezing of snow forced the cancellation of flights on following days. The heaviest snowfalls for 20 years over parts of Britain and northern France brought air, rail and road systems to a halt and forced schools and businesses to close. Between 25 and 30cm of snow was measured in parts of southeast England; the estimated cost in losses to business in London was put at £48 million.

(pictures Seamus Walsh & Peter Lennon, satellite image courtesy Wokingham Weather, www.btinternet.com/~wokingham.weather)



Right

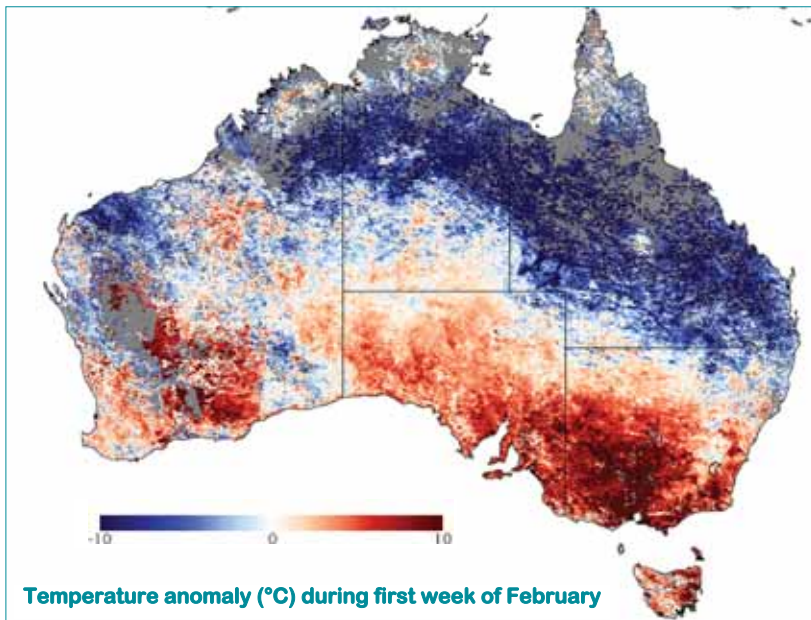
Saturated ground turned to mud during the Munster Schools Junior Cup rugby match at Rathcooney, Co. Cork, on the 4th. (picture Irish Examiner)



heavy falls in eastern and upland areas. There was some significant accumulation of snow over the Dublin and Wicklow mountains and widespread disruption of transport. Temperatures were between three and five degrees below normal, with fresh to strong east to northeasterly winds adding significant windchill. Later in the

Below

A heatwave over south Australia brought some of the continent's highest temperatures on record and, in combination with drought conditions, resulted in devastating forest fires. An all-time temperature record for the state of Victoria was set on the 7th, when Hopetoun reached 48.8°C. Seven other sites also exceeded previous records, including Melbourne, where the temperature reached 46.4°C. Wildfires decimated nearly 200,000 hectares of bushland in Victoria, burned over 2,000 homes and killed 210 people. The fires were the worst since 1983, when 75 people died. The map below shows mean weekly temperatures were up to ten degrees above the midsummer normal in the southeast; the data were collected by the Moderate Resolution Imaging Spectroradiometer (MODIS) on NASA's Terra satellite. (image: NOAA Climate Prediction Centre, US Department of Commerce)



Temperature anomaly (°C) during first week of February

period, the weather became drier with long clear or sunny spells, but a band of rain, sleet or snow affected all areas on the 8th.

11th to 28th: Pressure rose over the country as an anticyclone developed to the south of Ireland, bringing a change to much milder conditions. Weak frontal systems crossed the country at times, but amounts of rainfall were generally very small until the 28th, when some heavier falls were measured. A number of southern and eastern stations recorded totals of less than 5mm for this period. Winds were light, between southwesterly and northwesterly in direction, with mostly cloudy conditions throughout.

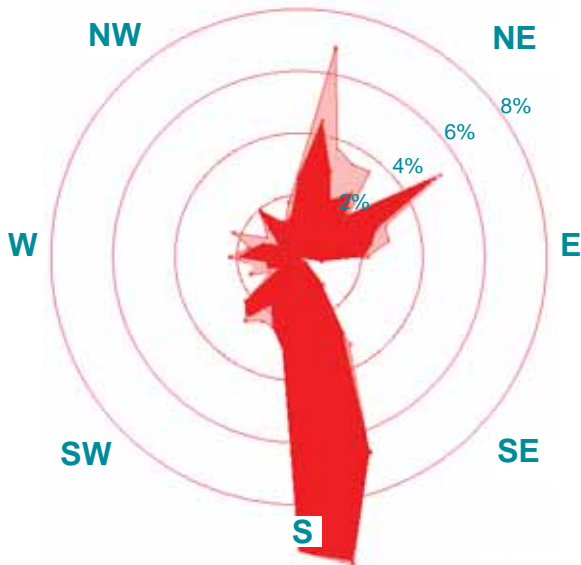
Wind and elements: Mean windspeeds for the month were the lowest on record for February at several stations. They varied between 6 and 10 knots generally (11 and 19km/h), around two thirds of normal strength for the month. Gale gusts were only measured at coastal stations and winds were particularly light after the first week. The month's highest gust, 44 knots (81km/h), was measured at both Malin Head and Belmullet between the 3rd and 7th. Snow and hail were recorded on each of the first ten days, while thunder was recorded only on the 2nd.

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)	5.8	180°	18	28/11	290°	24	22/0500	0	0	0					
CO. CAVAN Ballyhaise	6.2	090°	16	1/11	080°	28	3/2031	0	0	0					
		250°	16	21/17											
CO. CLARE Shannon Airport	6.3	350°	20	5/13	350°	33	5/1153	0	0	0	3	0	3	0	1
		270°	20	8/14											
CO. CORK Roche's Point	8.8	310°	24	3/04	330°	33	9/1942	0	0	0					
		310°	24	9/22											
Cork Airport	7.6	350°	23	5/15	350°	33	5/1420	0	0	0	5	0	0	0	5
CO. DONEGAL Malin Head	14.4	060°	36	3/12	060°	44	3/0717	3	9	87	9	2	4	0	3
					340°	44	6/2111								
CO. DUBLIN Dublin Airport	10.3	120°	29	3/21	130°	40	3/2110	0	4	9	6	1	0	1	3
Casement Aerodrome	8.8	080°	23	1/18	070°	34	1/1730	0	1	1	6	8	2	0	1
CO. KERRY Valentia Observatory	6.3	010°	23	5/19	010°	37	5/1529	0	1	3	3	1	5	0	0
CO. MAYO Belmullet	10.0	010°	29	5/07	030°	44	4/2232	0	4	37	7	1	9	0	0
					010°	44	5/0657								
Knock Airport	8.3	260°	24	26/15	250°	35	26/1612	0	2	2	8	5	0	0	13
CO. OFFALY Birr	5.7	210°	16	28/14	010°	25	5/0832	0	0	0	3	2	0	0	3
CO. WESTMEATH Mullingar	4.6	080°	15	1/15	080°	28	1/1242	0	0	0					
CO. WEXFORD Johnstown Castle	5.6	080°	17	1/09	060°	29	1/2311	0	0	0					
		160°	17	4/01											

Valentia Observatory

Calm: 0.6%

N

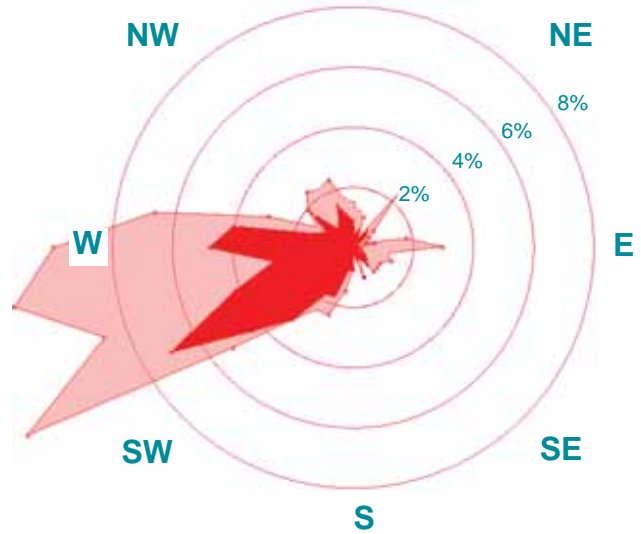


1-10 knots

Dublin Airport

Calm: 0.0%

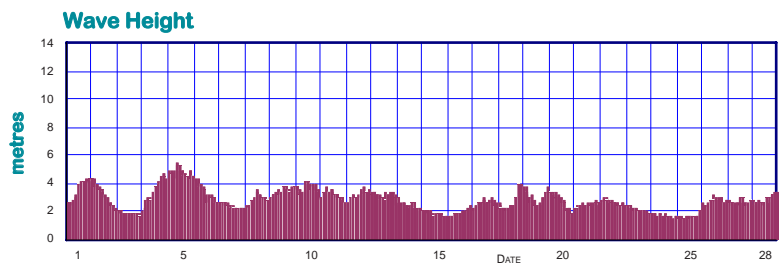
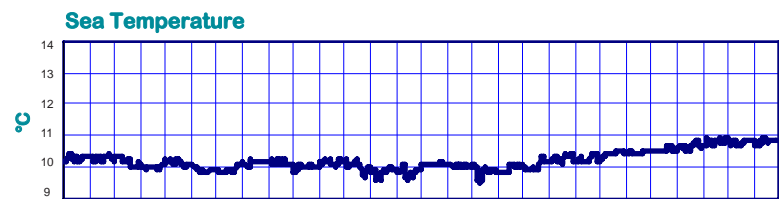
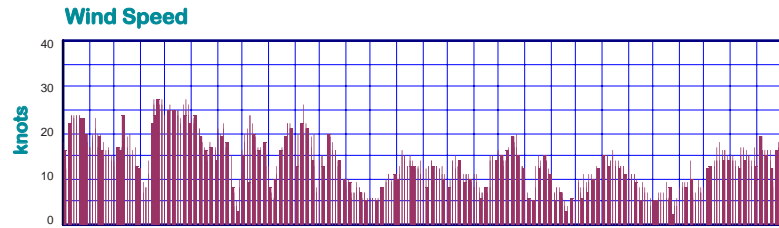
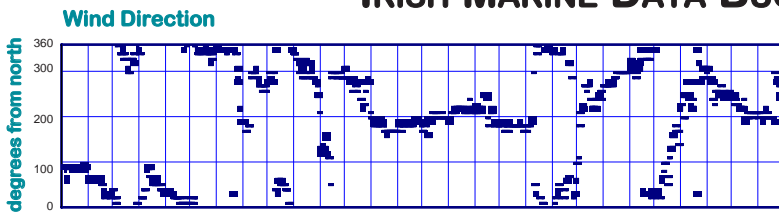
N



>10 knots

PERCENTAGE FREQUENCY OF WIND DIRECTION

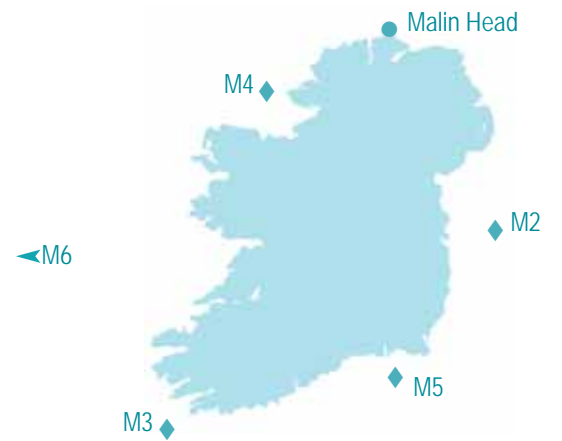
MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK



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

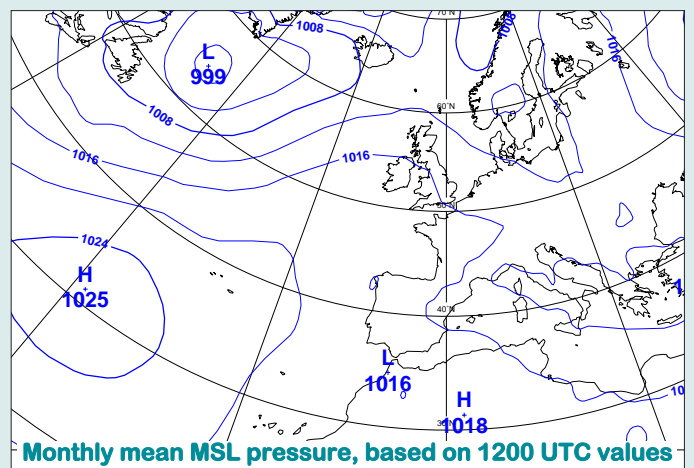
Buoy	Sea surface temp. (°C)	Mean wind speed (knots)	Max. 10-min wind (knots)	Mean wave height (m.)	Max. wave height (m.)
M2		not available			
M3	10.2	13.3	27	2.7	5.5
M4	10.0	n/a	n/a	3.1	6.1
M5	8.6	13.4	29	1.7	3.5
M6	11.3	15.9	29	n/a	n/a
Malin Head	6.9				

Summary of Mean Monthly Values

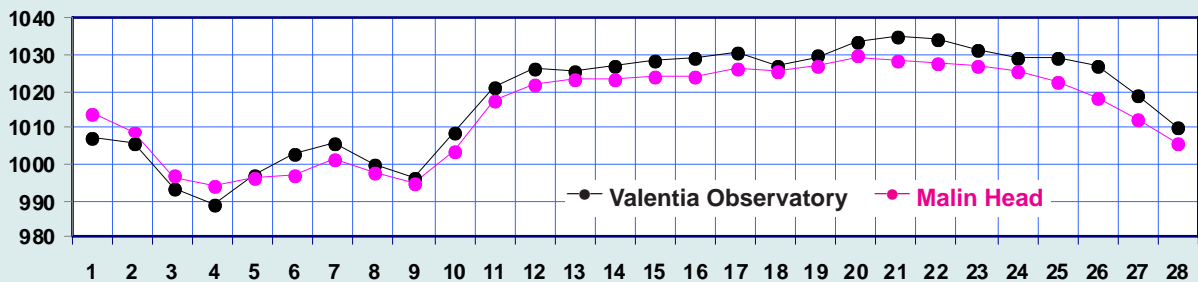


MEAN ATMOSPHERIC PRESSURE

Mean sea level pressure values for the month varied between 1016hPa in the north and 1018hPa in the southwest, around 5hPa above normal for February. After low pressure at the beginning of the month, high pressure was the dominant influence over Ireland from the 11th onwards. The lowest pressure of the month, 985.5hPa, was measured at Johnstown Castle on the 3rd, while the month's highest value, 1036.4hPa, was recorded at both Cork Airport and Roche's Point on the 21st.



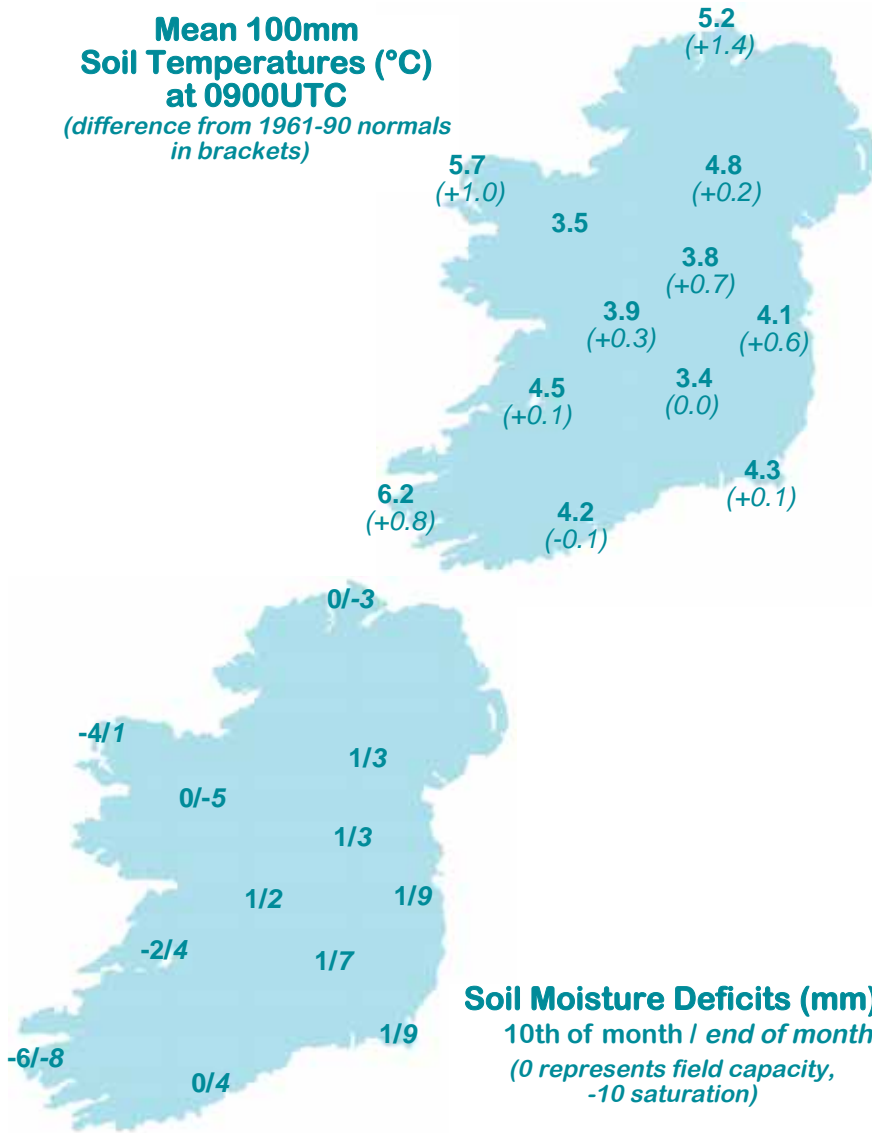
Monthly mean MSL pressure, based on 1200 UTC values



Mean daily Mean Sea Level pressure (hPa)

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

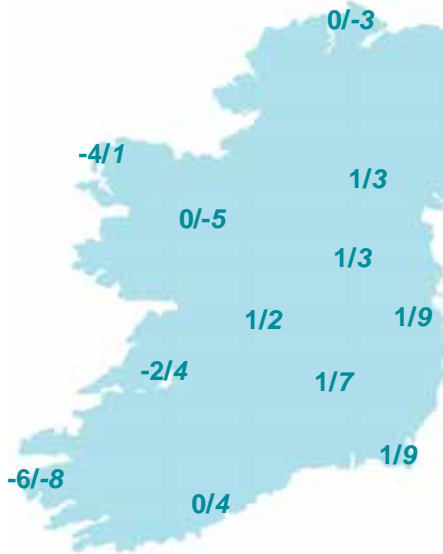
(difference from 1961-90 normals in brackets)



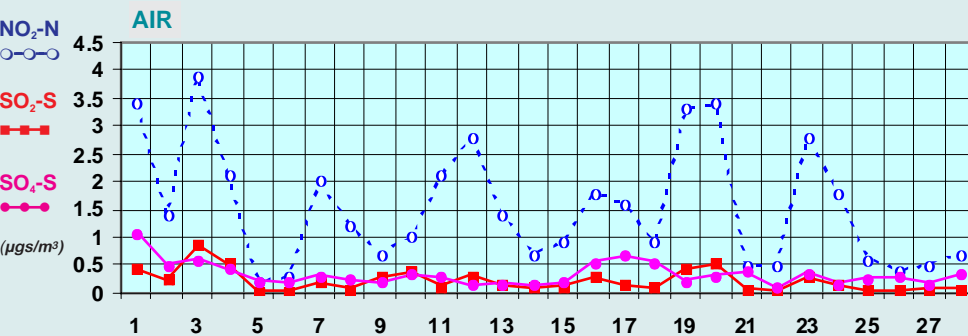
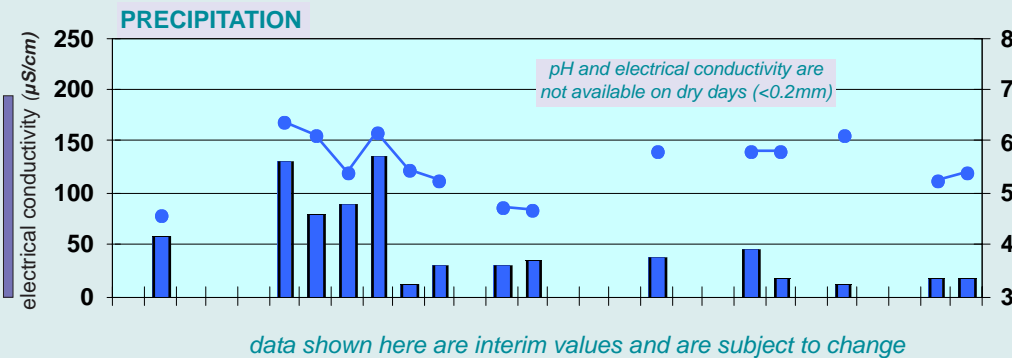
Soil Temperatures at 0900UTC

County/ Station	°C		
	100mm	200mm	300mm
CO. CARLOW			
CARLOW (OAK PARK)	3.4	4.1	4.4
CO. CAVAN			
BALLYHAISE	3.9	4.5	4.9
CO. CLARE			
SHANNON AIRPORT	4.5	5.0	5.7
CARRON	4.8		5.2
CO. CORK			
ROCHE'S POINT	4.7	5.3	5.9
FERMOY (MOOREPARK)	4.7	5.0	5.2
CORK AIRPORT	4.2	4.9	5.8
SHERKIN ISLAND	6.5	7.1	7.5
BALLINCURRIG (PEAFIELD)	4.1	4.7	5.4
CO. DONEGAL			
MALIN HEAD	5.2	6.1	6.5
CO. DUBLIN			
DUBLIN (PHOENIX PARK)	3.5	4.2	4.5
DUBLIN AIRPORT	3.7	4.1	4.6
CASEMENT AERODROME	4.1	4.6	4.9
CO. KERRY			
VALENTIA OBSERVATORY	6.2	6.9	7.9
CO. LIMERICK			
MOUNT RUSSELL	4.1	4.6	
CO. LOUTH			
ARDEE (BOHARNAMOE)	4.0	4.4	4.4
CO. MAYO			
BELMULLET	5.7	6.3	7.0
STRAIDE	4.5		
KNOCK AIRPORT	3.5	4.2	4.6
CO. MEATH			
WARRENSTOWN	3.5	4.1	4.3
CO. OFFALY			
BIRR	3.9	4.7	5.8
CO. TIPPERARY			
FETHARD (PARSONSHILL)	4.3	4.9	
CO. WATERFORD			
DUNGARVAN (CARRIGLEA)		4.9	5.4
CO. WESTMEATH			
MULLINGAR	3.8	4.4	4.9
CO. WEXFORD			
JOHNSTOWN CASTLE	4.3	4.8	5.1
JOHN F. KENNEDY PARK	4.1	4.9	5.9
CLONROCHE (KNOXTOWN)	4.2	4.8	5.2

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



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
Cavan (Loreto)	11-20	2.9	-	3	1	9.4	2.7	6.1	-	-1.7	20	2	23	1	-6.1	11	5	-	-	13.7	-
	21-end	3.7	-	5	1	10.7	5.8	8.3	-	0.5	21	0	32	2	-0.8	21	1	-	-	19.2	-
	month	23.7	-	14	7	8.1	2.2	5.2	-	-3.4	8	10	56	2	-8.1	8	14	-	-	67.1	-
Co. Cork	1-10	6.1	-	5	2	5.5	-0.6	2.5	-	-2.3	5	7	3	0	-6.7	5	9	2.7	3.9	39.3	-
Fermoy	11-20	4.3	-	4	2	9.7	2.1	5.9	-	-1.8	11	2	22	0	-5.0	11	6	4.8	5.3	7.2	-
	21-end	4.0	-	3	1	11.1	4.3	7.7	-	-0.5	21	1	29	2	-1.0	26	2	6.9	7.0	10.0	-
	month	14.4	17	12	5	8.6	1.8	5.2	0.0	-2.3	5	10	55	3	-6.7	5	17	4.7	5.3	56.5	83
Co. Donegal	1-10	24.2	-	8	8	4.9	-1.6	1.7	-	-3.5	8	9	2	0	-6.0	6	9	-	-	-	-
Glenties	11-20	9.1	-	5	2	10.4	4.3	7.4	-	-1.1	20	2	33	2	-2.9	20	3	-	-	-	-
	21-end	20.2	-	8	8	10.5	6.7	8.6	-	4.8	25	0	33	1	0.3	25	0	-	-	-	-
	month	53.5	48	21	18	8.5	2.9	5.7	1.4	-3.5	8	11	68	3	-6.0	6	12	-	-	-	-
Co. Kerry	1-10	8.5	-	7	4	6.4	-0.6	2.9	-	-2.8	2	6	7	0	-5.6	2	10	-	-	37.2	-
Ardfert	11-20	10.4	-	3	3	10.7	4.5	7.6	-	1.5	20	0	34	2	-1.0	20	3	-	-	11.0	-
	21-end	7.6	-	5	2	12.1	5.5	8.8	-	1.6	21	0	36	4	-1.0	21	1	-	-	16.8	-
	month	26.5	-	15	9	9.6	3.0	6.3	0.5	-2.8	2	6	76	6	-5.6	2	14	-	-	65.0	-
Co. Louth	1-10	16.9	-	5	3	4.2	-1.2	1.5	-	-3.4	8	9	1	0	-5.5	7	9	1.7	2.9	-	-
Ardee	11-20	0.2	-	1	0	10.1	2.5	6.3	-	-1.5	20	3	26	1	-2.9	12	3	4.2	4.3	-	-
	21-end	0.2	-	1	0	11.3	5.7	8.5	-	3.3	21	0	33	3	2.1	21	0	6.6	6.4	-	-
	month	17.3	28	7	3	8.3	2.1	5.2	0.8	-3.4	8	12	60	4	-5.5	7	12	4.0	4.4	-	-
Co. Waterford	1-10	17.9	-	6	4	5.8	-0.4	2.7	-	-2.0	7	6	5	0	-4.9	7	9	-	3.7	29.7	-
Dungarvan	11-20	0.8	-	2	0	10.7	2.8	6.8	-	-2.0	11	2	29	2	-4.7	11	5	-	5.6	15.8	-
	21-end	3.5	-	2	1	12.0	4.6	8.3	-	-0.2	21	1	33	4	-1.3	21	1	-	7.2	16.2	-
	month	22.2	-	10	5	9.3	2.1	5.7	0.1	-2.0	11	9	66	6	-4.9	7	15	-	5.4	61.7	95
Co. Wexford	1-10	22.9	-	7	6	4.9	-0.3	2.3	-	-1.8	8	6	3	0	-6.0	7	10	2.0	5.0	33.8	-
J.F.K. Park	11-20	1.2	-	1	1	10.2	2.9	6.6	-	-0.6	11	1	26	1	-5.8	11	5	4.7	5.9	25.8	-
	21-end	1.4	-	2	1	10.6	4.2	7.4	-	1.2	21	0	26	2	-3.8	21	5	6.1	7.1	16.0	-
	month	25.5	30	10	8	8.4	2.1	5.3	0.3	-1.8	8	7	54	3	-6.0	7	20	4.1	5.9	75.6	127

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE						P.E. (Penman)		GLOBAL SOLAR RADIATION (MJ/sq.m.)			
County/Station	Period	P.E. (mm)		Soil Moisture (mm)		Station	total(mm)	1st-10th	11th-20th	21st-end	Total
		Amount	Deficit	Accum'ltd	Deficit	Surplus					
Co. Kerry	1-10	6.8	-	0	10	Co. Carlow	16	39.93	43.59	32.24	115.76
Valentia Obs.	11-20	1.8	-	0	19	Carlow (Oak Park)					
	21-end	9.5	1	1	-	Co. Cavan	15	38.34	41.77	39.69	119.80
	month	18.1				Ballyhaise					
Co. Wexford	1-10	9.9	-	0	33	Co. Clare	17				
Johnstown Castle	11-20		not available			Shannon Airport					
	21-end		not available			Co. Cork	17				
	month					Cork Airport					
						Roche's Point		46.12	37.72	43.30	127.14
						Co. Donegal	22	33.78	43.17	37.04	113.99
						Malin Head					
						Co. Dublin	18	39.08	43.96	37.85	120.89
						Dublin Airport					
						Casement Aerodrome	17				
						Co Kerry	22	55.75	45.72	44.94	146.41
						Valentia Obs.					
						Co. Mayo	16	45.92	39.74	37.13	122.79
						Belmullet					
						Knock Airport	13				
						Co. Offaly	15	48.47	41.17	32.69	122.33
						Birr					
						Co. Westmeath	14	40.82	39.05	37.45	117.32
						Mullingar					
						Co. Wexford	18	39.08	47.76	41.68	128.52
						Johnstown Castle					

MONTHLY EVAPORATION (MM) FROM CLASS A PAN			
County	Station	Monthly Rainfall (mm)	Monthly Evaporation (mm)
Clare	Kilmaley	33.9	n/a
Cork	Fermoy (Moorepark)	14.4	12.8
Kerry	Valentia Observatory	55.0	20.5
Kildare	Poulaphuca	58.7	22.3
Mayo	Newport (Furnace)	61.8	5.0
Offaly	Derrygreenagh	22.9	5.8
Waterford	Dungarvan (Carriglea)	22.2	10.3
Wexford	J.F.K. Park	25.5	18.0

Sunday 1st: Rain and drizzle cleared westwards overnight and was followed by colder, clearer but misty weather. Some ground frost developed in eastern areas towards morning. Apart from patches of rain or drizzle in the southwest it was a dry, cold and windy day with sunny spells. Becoming very cold after dark with ground frost developing and scattered wintry showers along eastern coastal areas. Moderate easterly winds increased fresh to strong and gusty during the day, gradually easing by evening.

Rainfall: nil to trace generally, 4mm at Cork Airport

Temperature: max. 5°C to 9°C, min. 0°C to 3°C, ground temperatures down to -4°C at Valentia

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

Monday 2nd: Very cold overnight, with showers of snow and sleet in many eastern areas. The rest of country remained dry but very cold. Sleet and snow persisted in eastern areas throughout the day, turning more to rain by evening. Sunny periods in the western half of the country. Snow reached some midland areas during the evening, with heavy falls in places. Sharp to severe frost in most areas overnight. Winds were north to northeasterly, moderate to fresh, reaching gale force at times in northern areas.

Rainfall: nil to 10mm, heaviest at Casement Aerodrome

Temperature: max. 1°C to 6°C, min. -3°C to 2°C, ground temperatures down to -9°C at Valentia

Sunshine: <1 to 8 hours, sunniest at Knock Airport, <1 hour at Casement Aerodrome

Tuesday 3rd: Bitterly cold and frosty overnight with wintry showers of rain, sleet or snow extending eastwards across the country. This gave further accumulations of snow and ice. The wintry showers continued throughout the day, with eastern and midland areas receiving most. Some short sunny spells between showers. Becoming largely dry in Ulster after dark, while showers, heaviest in the east and midlands, turned increasingly to rain. Winds were northerly, moderate to fresh and gusty, gale force on northern coasts.

Rainfall: 1 to 29mm, heaviest at Dublin Airport, 1mm at Shannon Airport

Temperature: max. 1°C to 6°C, min. -2°C to 2°C, ground temperatures down to -4°C at Cork Airport

Sunshine: nil to 2 hours, sunniest at Knock Airport

Wednesday 4th: Bitterly cold and frosty overnight with spells of rain, sleet and snow. Continuing very cold during the day with rain, sleet and snow in the midlands and east pushing southwards. Drier weather in the north in the afternoon, with only occasional wintry showers. Some sunny spells in the western half of the country. Further bands of sleet or snow pushed southwards over the country during the evening. Winds were east or northeasterly, light to moderate, backing northerly and increasing strong to gale force on northern coasts.

Rainfall: nil to 14mm, heaviest at Casement Aerodrome, nil at Shannon Airport

Temperature: max. 4°C to 7°C, min. -3°C to 3°C, ground temperatures down to -8°C at Cork Airport

Sunshine: trace to 6 hours, sunniest at Knock Airport

Thursday 5th: Very cold during the night with frost, sharp to severe in most areas. Showers of hail, sleet or snow in many areas. Showers of snow and sleet became heavier during the day, but were mainly confined to eastern and northern areas. The showers continued for the afternoon and extended westwards, though more isolated in these regions. Sharp to severe frost during the evening, leading to treacherous roads in many areas. Some sunny periods in western areas. Winds were mainly northerly throughout, fresh to strong at times, up to gale force in many areas with stronger gusts.

Rainfall: nil to 8mm, heaviest at Johnstown Castle, nil at Birr

Temperature: max. 1°C to 6°C, min. -1°C to 3°C, ground temperatures down to -7°C at Shannon Airport

Sunshine: nil to 7 hours, sunniest at Knock Airport, nil at Dublin Airport

Friday 6th: Very frosty overnight with some hail showers in the west. Frost widespread during the morning. Mainly dry and sunny weather during the morning, but with some hail showers on western coasts. The afternoon was dry and sunny apart from the odd hail shower in the west, staying very cold. Frost setting in again after dark. Winds were northerly, moderate to strong and gusty.

Rainfall: nil to 1mm generally, 3mm at Belmullet

Temperature: max. 3°C to 7°C, min. -5°C to 4°C, ground temperatures below zero at all inland stations, down to -11°C at Birr

Sunshine: 4 to 9 hours, sunniest at Dublin Airport, 4 hours at Malin Head

Saturday 7th: Wintry showers in the north and west overnight, dry elsewhere with a severe frost. A dry and sunny day followed, but remaining cold. Very cold again by evening. Rain or sleet spread into the southwest and west before midnight. Winds were north or northwesterly in direction, strong in the north, generally moderate elsewhere, becoming light and variable by evening.

Rainfall: nil generally, 1 to 2mm in the west

Temperature: max. 3°C to 7°C, min. -5°C to 2°C, ground temperatures below zero at all inland stations, down to -9°C at Birr

Sunshine: 4 to 9 hours, sunniest at Dublin Airport, 4 hours at Belmullet

Sunday 8th: A band of mainly light snow in the western half of the country continued to move eastwards overnight and during the morning. A clearance followed into western areas before dawn, finally reaching the east coast by mid afternoon. Mostly dry after the clearance, with the exception of some wintry showers in the northwest. Cloudy in Ulster, progressively more sunshine further south. Very cold throughout. Winds were light, mainly southeasterly, veering southwesterly with the clearance.

Rainfall: 2 to 8mm, heaviest at Valentia, 2mm at Mullingar

Temperature: max. 3°C to 10°C, min. -4°C to 4°C, ground temperatures down to -7°C at Casement Aerodrome

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

Monday 9th: Bitterly cold overnight with widespread frost and fog, leading to icy stretches on roads. The frost and fog cleared slowly and it was a cold, mainly dry and sunny day with a few wintry showers, mainly along Atlantic coasts. Becoming very cold again after dark with frost and fog returning. Light southerly or variable winds turned northerly early in the afternoon and increased to moderate in the south and east.

Rainfall: nil to 1mm generally, 5mm at Belmullet

Temperature: max. 1°C to 7°C, min. -3°C to 3°C, ground temperatures down to -7°C at Claremorris

Sunshine: nil to 7 hours, sunniest at Belmullet, nil at Cork Airport

Tuesday 10th: Bitterly cold overnight with widespread frost leading to icy roads. Scattered wintry showers, mainly in the western half of the country. Ice and fog cleared during the morning and it was a cold, clear day with scattered wintry showers, some of sleet or snow over high ground. The showers were more isolated in the eastern half of the country. Sunny spells everywhere. Rain moved into the southwest by evening. Light west or northwesterly winds, moderate at times on exposed coasts, backing southwesterly in the evening.

Rainfall: nil to 7mm, heaviest at Valentia

Temperature: max. 6°C to 9°C, min. -2°C to 4°C, ground temperatures down to -6°C at Shannon Airport

Sunshine: 4 to 8 hours, sunniest at Casement Aerodrome, 4 hours at Belmullet

Wednesday 11th: Very cold overnight away from Atlantic coasts with frost and fog and icy stretches on roads. Scattered wintry showers in the north and northwest, some of sleet or snow. More continuous rain in the extreme southwest, but largely dry elsewhere. Frost and fog cleared only slowly during the morning and it was a mostly dry day with spells of hazy sunshine. Light variable winds were moderate at times on northern coasts.

Rainfall: nil to <1mm generally, 9mm at Valentia

Temperature: max. 6°C to 10°C, min. -3°C to 5°C, ground temperatures down to -8°C at Birr

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

Thursday 12th: Mild in the western half of the country during the night with drizzle and light rain, dry and colder in the eastern half. During the morning rain and drizzle spread to all areas, although amounts were quite small. Fog persisted in places until the afternoon. A few light showers during the afternoon, dying out in all areas by evening. A few brief sunny spells and warmer than of late. Winds were mostly light and variable.

Rainfall: trace to 3mm, heaviest at Valentia, trace at Mullingar

Temperature: max. 9°C to 12°C, min. 0°C to 8°C, ground temperatures down to -2°C at Casement Aerodrome

Sunshine: nil to trace generally, 2 hours at Malin Head

Friday 13th: It was a mostly dry day with just a little rain or drizzle in places. Mild with afternoon temperatures up to or slightly above normal. Some short sunny spells. Continuing fairly mild after dark. Light southwesterly or variable winds, moderate occasionally on northern coasts.

Rainfall: nil to 1mm generally, 7mm at Malin Head
Temperature: max. 9°C to 12°C, min 4°C to 8°C, ground temperatures down to -1°C at Shannon Airport
Sunshine: trace to 2 hours, sunniest at Belmullet

Saturday 14th: Light but persistent rain in the southwest and west overnight. Scattered patchy light rain for much of the day became confined to the east by evening, with amounts generally small. Mainly cloudy with a little sunshine in the southwest. Winds were light, mainly southerly in direction.

Rainfall: nil to 1mm generally, 4mm at Valentia
Temperature: max. 8°C to 11°C, min 4°C to 8°C, ground temperatures below zero at Shannon Airport
Sunshine: nil to trace generally, 1 hour at Valentia

Sunday 15th: Dry during the night with only a little drizzle in northern areas and slight to sharp frost in places. Some fog in inland areas, clearing during the morning. Dry during the day with a few sunny periods. Temperatures near normal. Remaining dry during the evening. Winds were light southerly.

Rainfall: nil to trace generally, >1mm at Valentia
Temperature: max. 10°C to 12°C, min. 3°C to 7°C, ground temperatures down to -3°C at Shannon Airport
Sunshine: <1 to 5 hours, sunniest at Valentia, <1 hour at Knock Airport

Monday 16th: Dry overnight with some clear spells and fog in places. The fog cleared during the morning, giving a few sunny spells. Dry and mild during the afternoon and evening. Winds were light, southwesterly in direction.

Rainfall: nil to trace
Temperature: max. 9°C to 12°C, min. 1°C to 8°C, ground temperatures down to -4°C at Birr
Sunshine: nil to 2 hours, sunniest at Malin Head

Tuesday 17th: A dry day everywhere with variable cloud amounts. Generally cloudy in the west and south, with sunny spells in the north and east during the morning and early afternoon, becoming overcast here also during the evening. A mild day with light southwesterly winds.

Rainfall: nil to trace
Temperature: max. 8°C to 12°C, min 1°C to 8°C, ground temperatures down to -3°C at Claremorris
Sunshine: nil to 7 hours, sunniest at Dublin Airport, nil in the west

Wednesday 18th: A largely dry and cloudy day with just the odd sunny spell in the west. Mild. Some drizzle in the west and south. Winds were light to moderate, southeast to southwesterly in direction.

Rainfall: nil to 1mm, heaviest at Belmullet
Temperature: max. 6°C to 10°C, min. 5°C to 8°C, no ground frost
Sunshine: nil generally, <1 hour at Belmullet

Thursday 19th: Rain and drizzle over the northern half of the country spread slowly southwards during the night. The rain and drizzle continued in the southern half of the country during the morning, with some showers and sunny spells in the north. Showers and sunny spells in most parts during the afternoon, mainly dry by evening. Winds were light, mainly northerly in direction.

Rainfall: nil to 4mm, heaviest at Knock Airport, nil at Johnstown Castle
Temperature: max. 8°C to 11°C, min. 1°C to 5°C, ground temperatures down to -5°C at Birr
Sunshine: nil to 8 hours, sunniest at Valentia, nil at Casement Aerodrome

Friday 20th: Very cold overnight with frost and fog in many areas. The frost and fog cleared slowly during the morning to give a dry and mostly sunny day generally. Mild. Cloudy in Ulster and north Connacht. Winds were light variable or southwesterly, moderate on northwest coasts.

Rainfall: nil
Temperature: max. 8°C to 11°C, min. -2°C to 3°C, ground temperatures below zero at all inland stations, down to -7°C at Birr
Sunshine: nil to 6 hours, sunniest at Cork Airport, nil at Malin Head

Saturday 21st: A cloudy, dry day in most parts. Some sunny spells at times, particularly in the east and south during the morning, while further north it remained cloudy for most of the day with only a few sunny spells. A band of light rain or drizzle in the north moved southeastwards, but amounts were very small. Winds were light southwesterly.

Rainfall: nil to <1mm, heaviest at Belmullet

Temperature: max. 10°C to 12°C, min. -1°C to 9°C, ground temperatures down to -5°C at Carlow (Oak Park)
Sunshine: trace to 4 hours, sunniest at Shannon Airport, trace at Malin Head

Sunday 22nd: Some light drizzle or showers during the night, but otherwise dry. This pattern continued during the day and evening. A few sunny periods also during the day, mainly in southern areas. Winds were mostly light westerly, but fresher in northern areas.

Rainfall: nil to 3mm, heaviest at Valentia
Temperature: max. 10°C to 12°C, min. 6°C to 9°C, no ground frost
Sunshine: <1 to 6 hours, sunniest at Cork Airport, <1 hour Casement Aerodrome

Monday 23rd: Mist or fog overnight cleared during the morning, giving a mild, cloudy day with patches of light rain or drizzle in places, although many areas stayed dry. Eastern areas were sunniest during the afternoon. Mild. Winds were light west or northwesterly, moderate on exposed coasts.

Rainfall: nil to 2mm, heaviest at Valentia, nil in the east
Temperature: max. 9°C to 13°C, min. 3°C to 8°C, ground temperatures down to -2°C at Birr
Sunshine: nil to 3 hours, sunniest at Casement Aerodrome, nil at Valentia

Tuesday 24th: Mainly dry overnight and for much of the day, with only occasional light rain or drizzle. Although rain was persistent in some areas, many places remained dry. Cloudy countrywide. Winds were light and variable, becoming southwesterly by evening, but moderate in the northwest.

Rainfall: nil to <1mm, heaviest at Birr
Temperature: max. 9°C to 11°C, min. 4°C to 8°C, ground temperatures down to -1°C at Valentia
Sunshine: nil to trace

Wednesday 25th: Light rain or drizzle overnight. The drizzle continued during the morning, mainly in eastern areas. All areas became dry during the afternoon and evening, becoming cooler also. Slight to sharp frost in inland areas during the late evening. Long sunny periods in the west. Winds were light southwesterly, veering westerly, remaining mostly light to moderate, but fresher in western and northwestern areas.

Rainfall: nil to 1mm, heaviest at Valentia and Knock Airport
Temperature: max. 9°C to 11°C, min. 3°C to 7°C, ground temperatures down to -2°C at Birr
Sunshine: <1 to 6 hours, sunniest at Belmullet, <1 hour at Shannon Airport

Thursday 26th: Patches of drizzle or light rain during the morning in western areas, spreading to other areas during the afternoon and evening, but amounts were quite small. Cloudy overall, with a few brief sunny spells. Winds were southwesterly, light initially, strengthening during the period and becoming fresher by evening.

Rainfall: nil to 1mm generally, 4mm at Malin Head
Temperature: max. 10°C to 12°C, min. 2°C to 8°C, ground temperatures down to -2°C at Birr
Sunshine: nil to 2 hours, sunniest at Valentia, nil at Belmullet

Friday 27th: Outbreaks of light rain or drizzle overnight in the western half of the country, dry further east. Light showers developed in the west during the afternoon, with spots of light rain in many places through the day, more persistent near the south coast. Some sunshine also in places. Mild. Winds were moderate, southwesterly in direction, lighter inland.

Rainfall: nil to 2mm, heaviest at Malin Head
Temperature: max. 9°C to 11°C, min. 5°C to 8°C, no ground frost
Sunshine: trace to 4 hours, sunniest at Malin Head, trace at Birr

Saturday 28th: Rain reached southwest Munster by dawn, and during the morning this rain spread to many parts, although it became patchy as it moved eastwards and there were some sunny spells in the east during the morning. A band of heavier rain approached the southwest by noon and moved slowly eastwards during the afternoon and evening. A clearance to scattered showers in the west by evening. Mild, especially in any sunshine. Winds were moderate southwesterly.

Rainfall: trace to 4mm generally 10mm, at Valentia, trace at Dublin Airport
Temperature: max. 9°C to 12°C, min. 4°C to 7°C, no ground frost
Sunshine: nil to 3 hours, sunniest at Casement Aerodrome, nil at Valentia

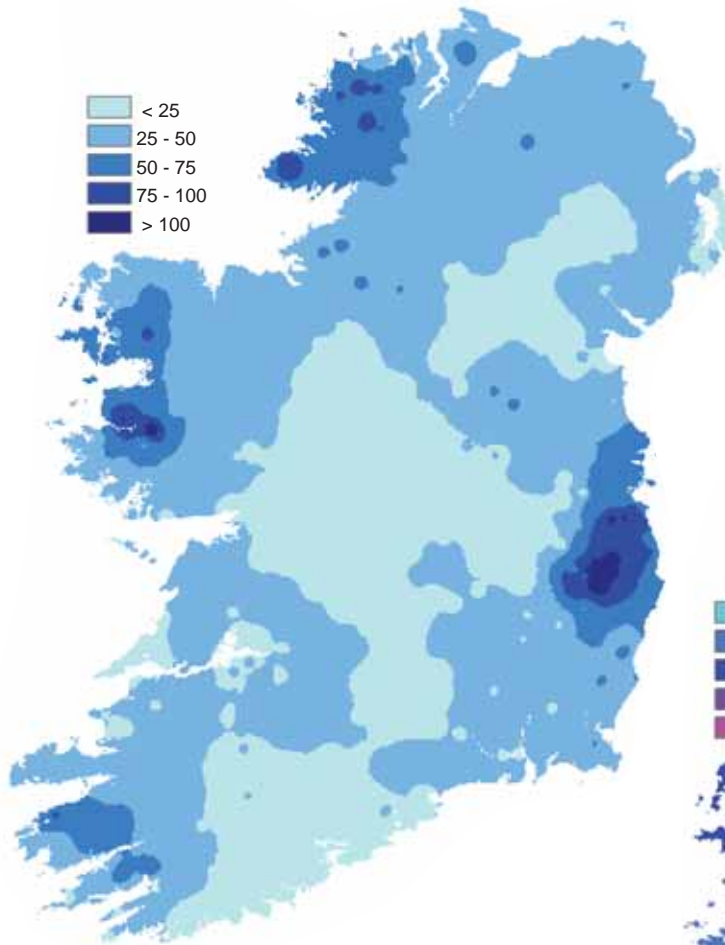
Drier than normal except in east

February rainfall totals were below normal except in the Dublin area, with less than half of the monthly normal over much of the country and less than a quarter of the average in many parts of the southwest. Totals ranged from 13mm at Roche's Point to 70mm at Dublin (Phoenix Park), with percentage of normal values between 15% at Cork Airport and 133% at Dublin (Merrion Square). At many stations it was the driest February for between 11 and 23 years.

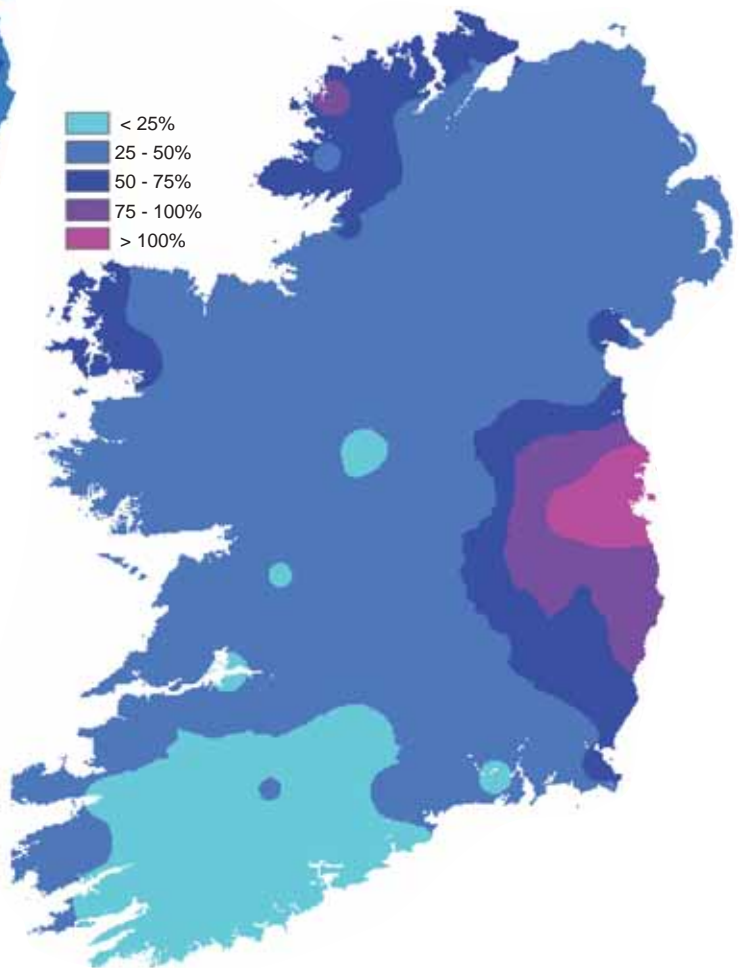
The wettest part of the month was during the first week, especially in the east. Wintry showers during this period were heavy in places, while a longer spell of rain, sleet or snow became slow-moving over Leinster between the 2nd and 4th. The highest daily fall, 35.3mm, was measured at Dublin (Merrion Square) on the 3rd; this was the highest daily fall for February at the station since 1967. The number of wetdays recorded during the month (*days with 1mm or more of rainfall*) was below normal almost everywhere, varying between 5 and 9 generally, but up to 15 or more wetdays were measured in parts of the west.

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)	30.3	47	9.6	2	12	7
CO. CAVAN						
BALLYHAISE	21.9	31	4.5	2 3	15	6
CAVAN LORETO COLLEGE	23.7		4.7	4	14	7
CO. CLARE						
SHANNON AIRPORT	15.7	22	3.1	10	12	7
CARRON	43.2	42	7.8	8	21	12
CO. CORK						
ROCHE'S POINT	13.1	16	3.6	7	10	6
FERMOY (MOOREPARK)	14.4	17	3.4	28	12	5
CORK AIRPORT	17.0	15	3.1	7	12	6
SHERKIN ISLAND	25.7	23	6.9	7	12	8
BALLINCURRIG (PEAFIELD)	22.3		4.4	4 7	13	7
CO. DONEGAL						
MALIN HEAD	42.0	55	6.5	12	18	9
GLENTIES HATCHERY	53.5	48	6.2	4	21	18
BALLYSHANNON (CATHLEEN'S FALL)	36.5	49	7.2	28	19	11
CO. DUBLIN						
DUBLIN (PHOENIX PARK)	69.6	127	34.8	3	9	6
DUBLIN AIRPORT	56.8		28.1	3	10	6
CASEMENT AERODROME	58.9	120	32.2	3	12	7
DUBLIN (MERRION SQUARE)	67.8	133	35.3	3	10	4
CO. GALWAY						
GALWAY (UNIV. COLL.)	24.3	30	4.0	28	16	9
MAAM VALLEY	48.4		8.7	3	20	15
CONNEMARA NATIONAL PARK	46.5	42	6.9	3	19	15
BALLYGAR	22.7	30	5.1	3	15	8
CO. KERRY						
VALENTIA OBSERVATORY	55.0	45	9.6	10	20	15
ARDFERT (LISCAHANE)	26.5		7.7	11	15	9
CO. LIMERICK						
MOUNT RUSSELL	36.6		5.4	28	20	12
CO. LOUTH						
ARDEE (BOHARNAMOE)	17.3	28	6.8	2	7	3
CO. MAYO						
BELMULLET	46.0	58	7.1	7	18	15
STRAIDE	29.8	34	4.7	6	18	12
KNOCK AIRPORT	27.8		6.3	28	18	10
CO. MEATH						
WARRENTOWN	48.4	79	27.8	3	14	8
CO. OFFALY						
BIRR	15.6	29	3.5	28	14	6
DERRYGREENAGH	22.9	37	10.5	3	13	5
CO. SLIGO						
ARDTARMON	30.0		4.9	18	17	11
CO. TIPPERARY						
FETHARD (PARSONSHILL)	24.4		6.9	3	15	7
CO. WATERFORD						
WATERFORD (TYCOR)	19.1	21	7.6	3	7	6
DUNGARVAN (CARRIGLEA)	22.2		7.4	3	10	5
CO. WESTMEATH						
MULLINGAR	25.8	38	14.2	3	11	6
CO. WEXFORD						
JOHNSTOWN CASTLE	51.6	61	18.6	3	10	9
JOHN F. KENNEDY PARK	25.5	30	10.0	3	10	8
CLONROCHE (KNOXTOWN)	23.0		8.6	3	11	5

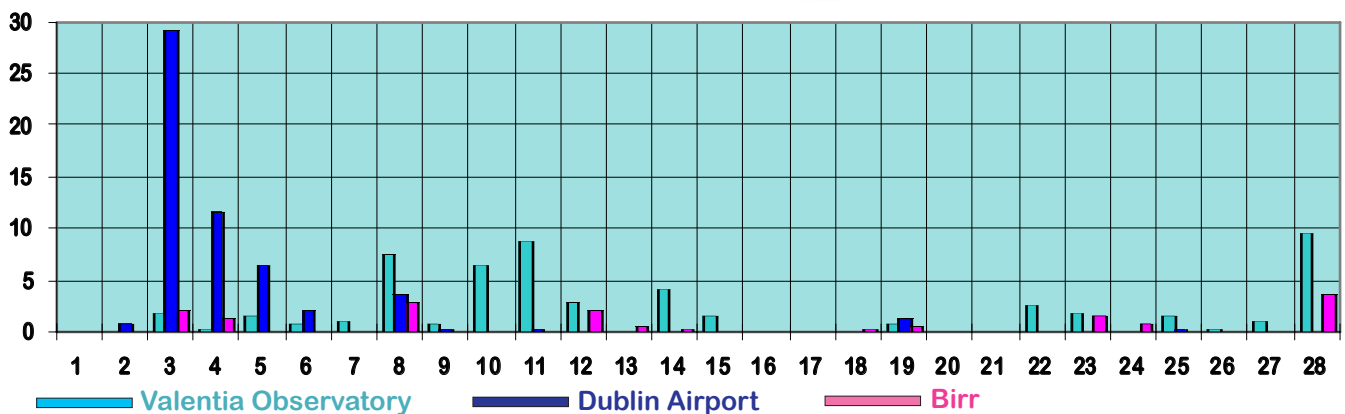
Total rainfall (mm)



Percentage of normal rainfall



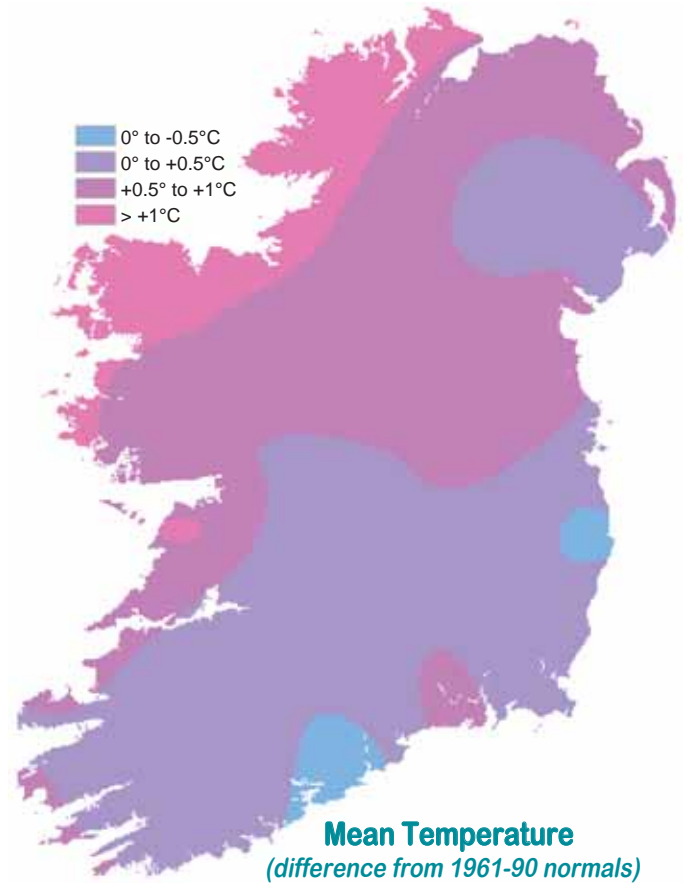
Daily 0-24h rainfall values (mm)



Temperatures a little higher than normal

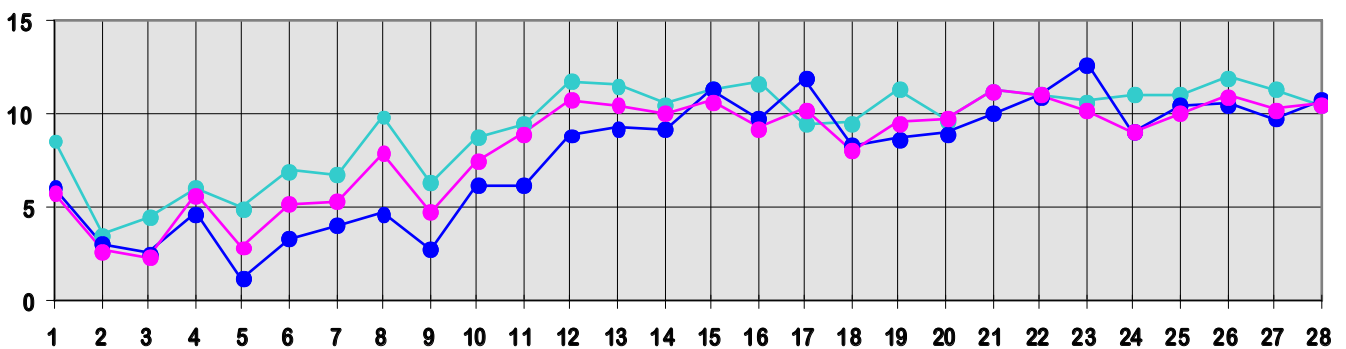
Mean air temperatures for the month varied between 4.6°C at both Fethard (Parsonshill), Co. Tipperary and Derrygreenagh, Co. Offaly and 7.1°C at both Valentia Observatory and Sherkin Island, Co. Cork. They were a little above normal generally, but over a degree higher than normal near western and northwestern coasts.

Temperatures were well below normal at the beginning of the month, but recovered to normal or above normal values from the 12th onwards. Air and ground frost were widespread between the 2nd and 11th and were severe in places on the 2nd and in the period 6th to 9th. The lowest air temperature of the month, -5.1°C, was recorded at Casement Aerodrome on the 6th, while the lowest grass minimum temperature of -10.8°C was measured at Birr on the same day. There was a total of between 12 and 17 ground frosts at most inland stations, a little above normal for February, with over 20 ground frosts recorded in parts of the southeast. The month's highest air temperature, 14.0°C, was recorded at both Dungarvan (Carriglea), Co.

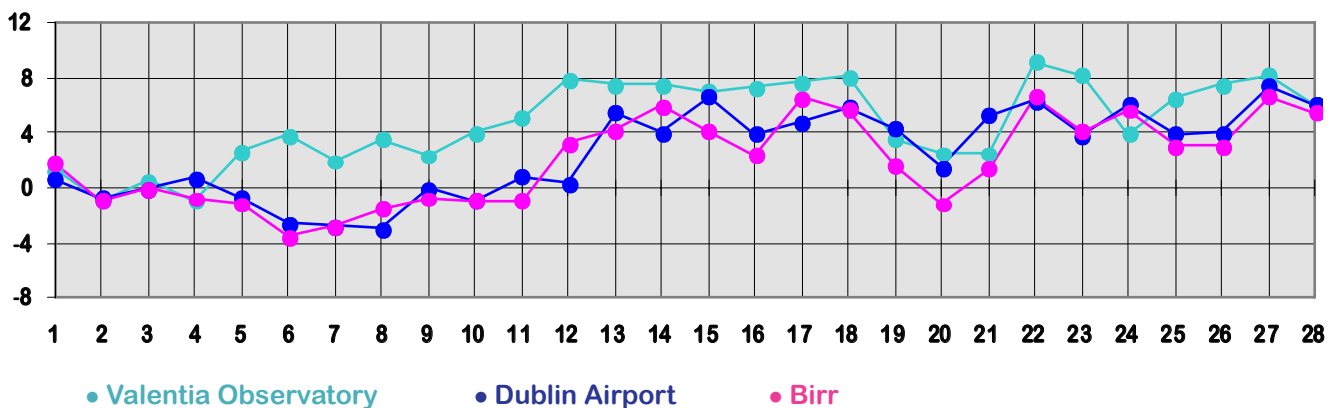


Waterford, on the 22nd and at Ardferf (Lisachane), Co. Kerry, on the 26th.

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



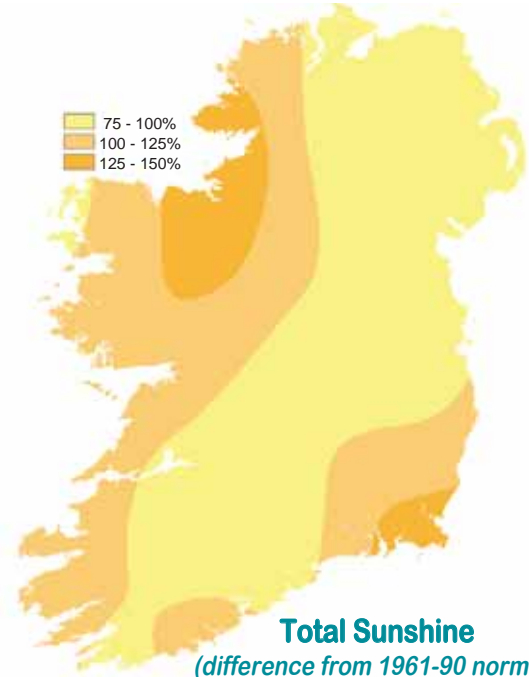
County/ Station	°C											
	Mean max.	Mean min.	Mean/ deviation from 1961-90 average		Highest max./date		Lowest min./date		Lowest grass min./date		Days with air frost ground frost	
CO. CARLOW												
CARLOW (OAK PARK)	7.9	1.8	4.9	0.2	11.6	15	-3.2	8	-8.4	8	13	16
CO. CAVAN												
BALLYHAISE	7.6	2.3	5.0		11.1	17	-3.5	8	-7.6	8	11	13
CAVAN (LORETO COLLEGE)	8.1	2.2	5.2		11.9	23	-3.4	8	-8.1	8	10	14
CO. CLARE												
SHANNON AIRPORT	8.9	2.8	5.9	0.3	12.1	12	-2.5	2	-8.3	7	8	18
CARRON	8.0	2.6	5.3	1.0	11.4	23	-1.6	2	-7.4	8	8	15
CO. CORK												
ROCHE'S POINT	8.4	3.8	6.1	-0.2	11.7	26	-1.3	4	-3.8	4	3	11
FERMOY (MOOREPARK)	8.6	1.8	5.2	0.0	12.0	26	-2.3	5	-6.7	5	10	17
CORK AIRPORT	7.6	2.7	5.2	0.1	11.8	22	-3.3	4	-10.3	7	6	15
SHERKIN ISLAND	9.3	4.8	7.1	0.5	13.1	19	-1.7	4	-3.2	4	2	7
BALLINCURRIG (PEAFIELD)	8.2	1.3	4.8		12.0	21	-4.0	4	-6.3	4	11	17
CO. DONEGAL												
MALIN HEAD	8.3	4.5	6.4	1.2	11.3	21 27	-1.0	8	-2.3	8	3	4
GLENTIES HATCHERY	8.5	2.9	5.7	1.4	12.6	17	-3.5	8	-6.0	6	11	12
BALLYSHANNON (CATHLEEN'S FALL)	8.3	3.0	5.7	1.1	11.8	17	-2.4	10			8	
CO. DUBLIN												
DUBLIN (PHOENIX PARK)	8.1	2.7	5.4	0.7	13.4	23	-3.2	8	-5.7	6 8	8	13
DUBLIN AIRPORT	7.7	2.5	5.1		12.7	23	-3.0	8	-6.3	8	9	13
CASEMENT AERODROME	7.4	2.2	4.8	0.2	12.0	23	-5.1	6	-7.6	6	10	14
DUBLIN (MERRION SQUARE)	8.1	3.9	6.0	0.2	12.7	23	-0.6	6			4	
CO. GALWAY												
GALWAY (UNIV. COLL.)	8.9	3.2	6.1	0.6	12.2	22	-2.5	6 8	-7.2	6	9	14
MAAM VALLEY	9.6	3.9	6.8		12.2	23 27	-1.0	10	-5.9	9	5	11
CONNEMARA NATIONAL PARK	8.7	4.4	6.6		11.4	12	-1.0	2			3	
BALLYGAR	8.8	2.4	5.6		12.9	22	-2.9	6	-7.0	6	10	15
CO. KERRY												
VALENTIA OBSERVATORY	9.4	4.7	7.1	0.5	12.0	26	-1.0	2 3	-8.8	2	4	13
ARDFERT (LISCAHANE)	9.6	3.0	6.3	0.5	14.0	26	-2.8	2	-5.6	2	6	14
CO. LIMERICK												
MOUNT RUSSELL	7.7	2.9	5.3		11.5	13 26	-3.6	4	-9.0	4	8	13
CO. LOUTH												
ARDEE (BOHARNAMOE)	8.3	2.1	5.2	0.8	13.2	23	-3.4	8	-5.5	7	12	12
CO. MAYO												
BELMULLET	9.1	4.5	6.8	1.2	11.2	13	-1.4	8	-6.6	8	4	12
STRAIDE	9.2	2.4	5.8	1.0	12.5	21	-3.0	9	-8.2	9	10	15
KNOCK AIRPORT	7.1	2.3	4.7		10.2	21	-2.3	2	-7.3	8 9	9	12
CO. MEATH												
WARRENSTOWN	7.8	2.4	5.1	0.8	12.6	23	-3.0	8	-7.5	8	11	14
CO. OFFALY												
BIRR	8.3	2.1	5.2	0.4	11.3	21	-3.6	6	-10.8	6	11	17
DERRYGREENAGH	8.1	1.0	4.6	0.6	11.5	21	-4.8	8	-6.9	8	12	16
CO. SLIGO												
ARDTARMON	8.7	3.6	6.2		11.3	21	-1.3	2	-5.2	8	3	16
CO. TIPPERARY												
FETHARD (PARSONSHILL)	7.4	1.8	4.6		10.5	22	-2.2	6	-4.4	8	9	14
CO. WATERFORD												
WATERFORD (TYCOR)	9.2	2.7	6.0	0.7	13.1	15	-0.7	6			6	
DUNGARVAN (CARRIGLEA)	9.3	2.1	5.7	0.1	14.0	22	-2.0	7 11	-4.9	7	9	15
CO. WESTMEATH												
MULLINGAR	7.8	1.8	4.8	0.6	11.0	17	-4.6	8	-8.0	8	11	13
CO. WEXFORD												
JOHNSTOWN CASTLE	8.3	2.7	5.5	0.3	12.3	23	-1.8	10	-3.7	10	7	13
JOHN F. KENNEDY PARK	8.4	2.1	5.3	0.3	12.0	15 22	-1.8	8	-6.0	7	7	20
CLONROCHE (KNOXTOWN)	7.9	1.8	4.9		11.5	15	-2.5	8	-10.0	8	10	24

County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date
CO. CAVAN				
CAVAN LORETO COLLEGE	2.40			7.8 25
CO. CLARE				
SHANNON AIRPORT	2.19	94	22	7.6 6 7
CO. CORK				
FERMOY (MOOREPARK)	2.02	83	20	7.8 7
CORK AIRPORT	2.32	102	23	8.3 7
SHERKIN ISLAND	2.71	97	27	7.2 2 7
BALLINCURRIG (PEAFIELD)	2.34			7.9 7
CO. DONEGAL				
MALIN HEAD	1.97	91	21	5.9 11
BALLYSHANNON (CATHLEEN'S FALL)	2.82	132	29	7.8 10
CO. DUBLIN				
DUBLIN AIRPORT	2.38	95	24	8.5 6 7
CASEMENT AERODROME	2.08	85	21	8.1 10
CO. GALWAY				
GALWAY (UNIV. COLL.)	2.74	120	28	8.0 8
CO. KERRY				
VALENTIA OBSERVATORY	2.39	111	24	7.8 19
ARDFERT (LISCAHANE)	2.32		23	5.8 21
CO. MAYO				
BELMULLET	2.24	93	23	6.6 9
STRAIDE	2.99			7.5 5
KNOCK AIRPORT	2.42			8.1 2
CO. OFFALY				
BIRR	2.14	92	22	8.0 10
CO. WATERFORD				
DUNGARVAN (CARRIGLEA)	2.20	95	22	7.8 7
CO. WEXFORD				
JOHN F. KENNEDY PARK	2.70	127	27	7.1 7
CLONROCHE (KNOXTOWN)	2.54			7.3 6

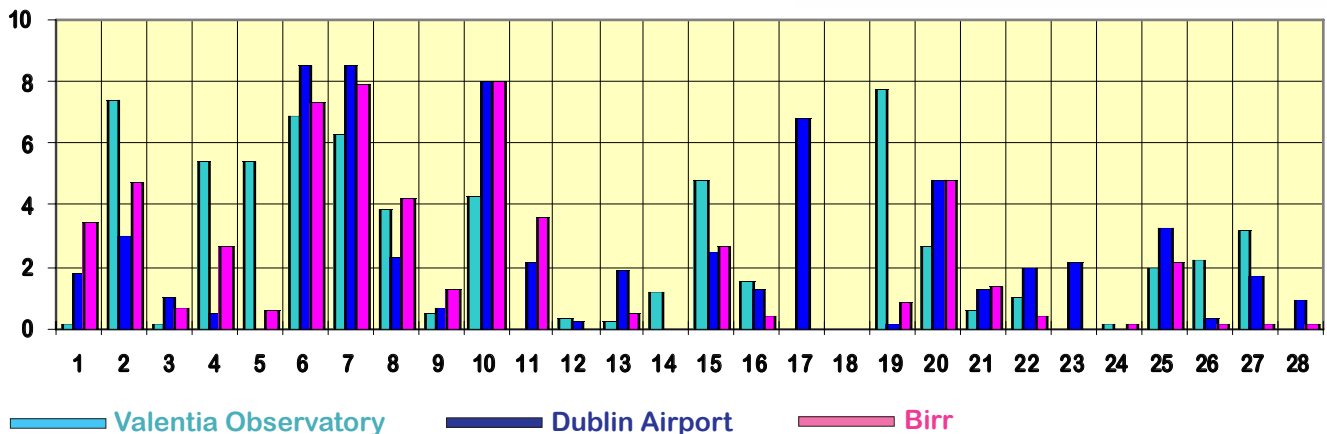
Sunny in southeast and northwest

Sunshine totals for February were below normal in many eastern and northern areas, but were above normal in the west and southeast. Totals ranged from 55 hours at Malin Head to 84 hours at Straide, Co. Mayo, with percentage of normal values between 83% at Fermoy (Moorepark), Co. Cork, and 132% of normal at Ballyshannon (Cathleen's Fall), Co. Donegal.

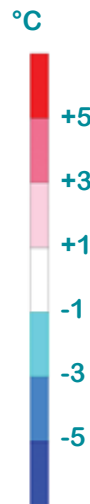
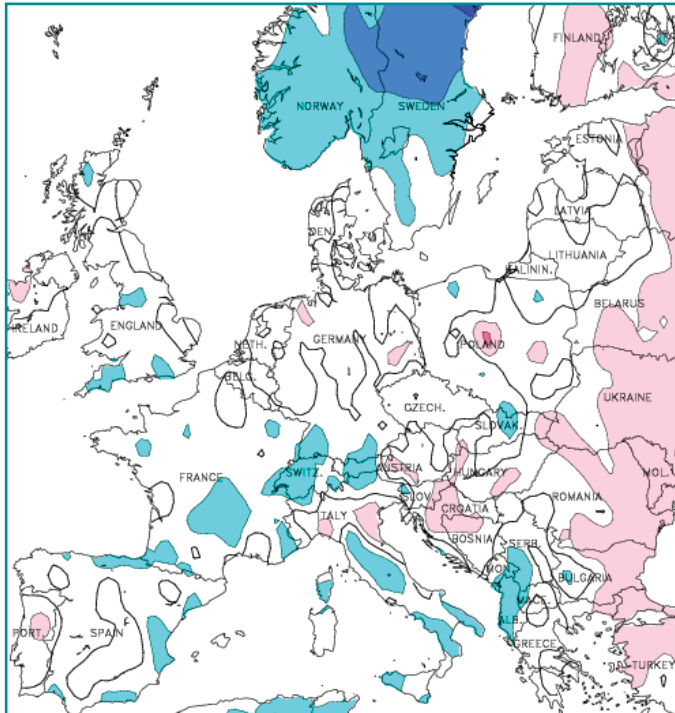
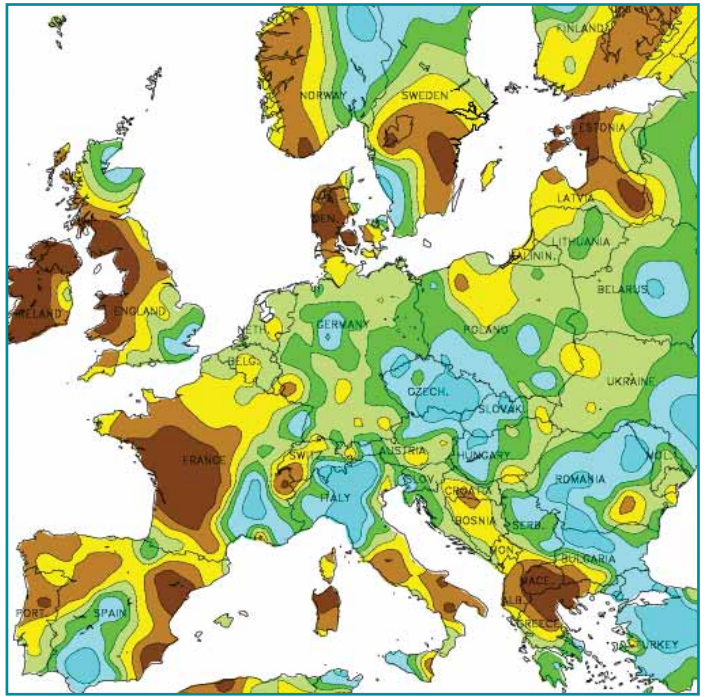
Most sunshine was recorded during the first ten days of the month. Dublin Airport measured the highest daily value of the month, 8.5 hours, on both the 6th and 7th; almost half the monthly total at this station was recorded between the 6th and 10th. Global solar radiation totals were around normal, ranging from 93% of normal at Birr to 107% at Dublin Airport.



Daily sunshine values (hours)



FEBRUARY RAINFALL
(percentage of 1961-1990 normal)



FEBRUARY MEAN TEMPERATURE
(difference from 1961-1990 normal)

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

Global weather highlights of the month

A world map with callout boxes highlighting weather events. The boxes contain the following text:

- Oklahoma:** A cluster of tornadoes touched down across parts of central Oklahoma during the afternoon of the 10th, with many reports of hail and wind damage. A total of 15 people were killed by the storms, including eight in one incident at Lone Grove, where a tornado reached EF4 intensity (the second highest on the scale).
- France:** Winds of up to 140 km/h hit northern and western France on the 10th, disrupting power supplies and transport routes. The two main airports serving Paris were closed for the first time in 34 years, while ferry services were suspended. The strongest winds were reported to the south of a depression moving eastwards along the English Channel, with 141km/h recorded at l'Ile d'Yeu and at Pointe du Raz on the west coast.
- Colombia:** Heavy downpours caused widespread floods over large areas of western Colombia around mid-month. The torrential rain triggered the overflowing of rivers, inundating several towns on Colombia's Pacific coast. Six fatalities were reported, with 14 others missing. Nearly 2,500 families were affected by the floods.
- China:** On the 5th, China declared its highest level of emergency in eight provinces that were suffering from their worst drought in 50 years. The drought conditions, which began last November, affected over four million people, leaving them without adequate drinking water, and threatened more than 10 million hectares of crops.
- Australia:** While a severe heatwave affected southeastern Australia (see page 3), torrential rain fell over the northeast of the country. Heavy downpours during the first week generated floods, inundating homes and destroying nearly one-fifth of the sugar cane crop. Over 60% of Queensland was submerged by water and much of the state was declared a disaster area. The hardest-hit region was around the town of Ingham, which received over 400mm of rain on the 3rd and another 366mm on the 4th.

The Weather of December, January and February

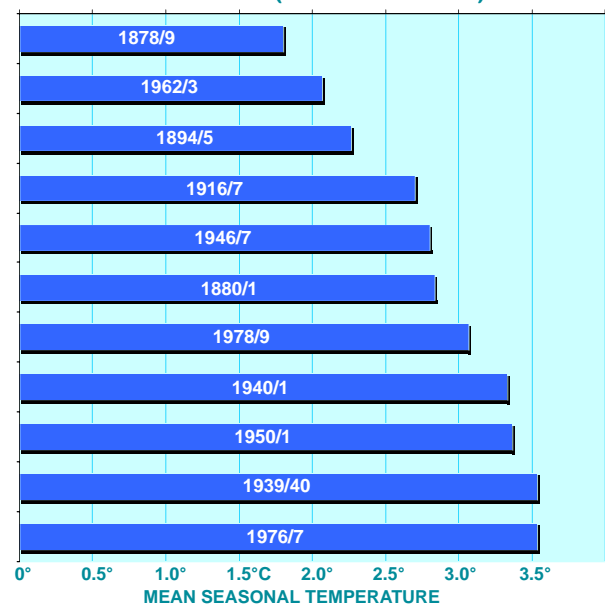
COLDEST WINTER FOR BETWEEN 13 AND 18 YEARS IN PLACES

Mean air temperatures for the season were a little below normal for the 1961-90 period at most stations, but it was slightly warmer than normal near Atlantic coasts; here, it was the coldest winter for eight years, while it was the coldest for between 13 and 18 years elsewhere. Mean temperatures were below normal everywhere in December, while they were close to normal in both January and February. Most stations measured their lowest temperatures of the season between January 5th and 9th. Between 24 and 65 ground frosts were recorded during the three-month period, compared with the normal range for winter of between 20 and 48.

Seasonal rainfall totals were below normal almost everywhere, with percentage of normal values between 69% and 102% of normal, but totals were not as low generally as the very dry winter of 2005/6. January was a wet month except in parts of the east and north, but both December and February were dry. Heavy falls during January resulted in flooding over southern counties at the end of the month. Cork Airport's fall of 50.1mm on January 30th was its highest daily value for winter since 1990. There were between 31 and 52 wetdays recorded (days with 1mm or more rainfall), compared with the normal for the 3-month period of between 36 and 54 wetdays. Sunshine totals were above normal everywhere, particularly in

the north. Both December and January were relatively sunny months, but February was dull, especially in the east. Mean windspeeds for the season were below normal everywhere and were well below normal in the south and southwest; both Cork Airport and Valentia Observatory's mean windspeeds were their lowest on record for winter. A severe storm on January 17th affected all areas, however, with Belmullet measuring a gust of 94 knots (168km/h) on this day, its highest winter gust since January 1957.

Coldest winters on record at Dublin (Phoenix Park)



Although relatively cold when compared with recent winters, the mean temperature for this season at Dublin (Phoenix Park) of 4.7°C was much higher than the lowest such values on record at the station, shown above.

County/ Station	RAINFALL (mm)			TEMPERATURE (°C)			SUNSHINE (HOURS)			NO. OF DAYS WITH:						
	Total	% of average	Most in a day amount date(s)	Mean	diff. from average	Extremes Highest Lowest	Daily mean	% of average	Most in a day amount date(s)	Rain	Snow	Air frost	Hail	Thunder	Fog	Gale gusts
CO. CARLOW Carlow (Oak Park)	190.4	84	16.0 30 Jan	4.3	-0.5	13.0 -7.0				40	37					9
CO. CAVAN Ballyhaise	202.7	81	33.6 30 Jan	4.1		11.6 -5.7				53	37					4
CO. CLARE Shannon Airport	211.0	81	18.6 12 Dec	5.6	0.0	13.0 -3.7	1.88	106	7.6 6 Feb	53	5	23	7	1	9	10
CO. CORK Cork Airport	278.9	71	50.1 30 Jan	5.1	-0.2	11.8 -3.3	2.00	101	8.3 7 Feb	52	10	14	1	0	21	15
Roche's Point	195.6	69	39.0 30 Jan	6.2	-0.4	12.7 -1.6				42	6					19
CO. DONEGAL Malin Head	221.9	76	19.7 13 Dec	5.9	0.3	13.1 -1.1	1.72	114	6.7 9 Jan	60	18	5	18	1	3	46
CO. DUBLIN Dublin Airport	157.4	79	29.2 3 Feb	4.5		12.7 -4.2	2.15	103	8.5 6 Feb	47	10	29	0	1	6	22
Casement Aerodrome	170.7	88	23.9 3 Feb	4.4	-0.3	12.2 -5.3	2.10	107	8.1 10 Feb	41	10	30	3	0	2	21
CO. KERRY Valentia Observatory	449.0	102	41.0 14 Jan	7.5	0.5	13.3 -1.0	1.57	101	7.8 19 Feb	60	5	4	17	3	0	26
CO. MAYO Belmullet	279.2	88	17.7 11 Jan	6.4	0.3	12.8 -1.5	1.72	105	6.9 27 Dec	62	13	10	22	3	2	39
Knock Airport	282.6		23.2 25 Jan	4.0		11.0 -3.8	1.76		8.1 2 Feb	62	19	32	3	0	43	21
CO. OFFALY Birr	204.1	95	36.3 30 Jan	4.6	-0.2	12.3 -6.5	1.86	106	8.0 10 Feb	50	6	29	0	0	7	7
CO. WESTMEATH Mullingar	187.2	75	28.2 30 Jan	4.1	-0.3	12.1 -7.3				45	34					2
CO. WEXFORD Johnstown Castle	245.1	83	21.2 12 Dec	5.4	-0.1	13.0 -4.1				43	17					8