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## Monthly Weather Bulletin December 1995

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# Monthly Weather Bulletin

published by the Meteorological Service, Glasnevin Hill, Dublin 9

DECEMBER  
1995

no. 116

*Most sunshine in a day:  
16 hours at Malin Head  
on June 26th*

*No air frost at Balmullet  
during Winter 1994/5*

*Sunniest year on record  
at Clones: 1468 hours*

*Severe flooding follows  
wettest winter on record  
in the west*

*Warmest, driest summer at  
Dublin (Phoenix Park) for  
over 100 years*

*Highest temperature of the  
year at Kilkenny: 30.8°C  
on August 2nd*

*Lowest ever December  
ground temperature at  
Valentia Observatory:  
-9.0°C on 26th*

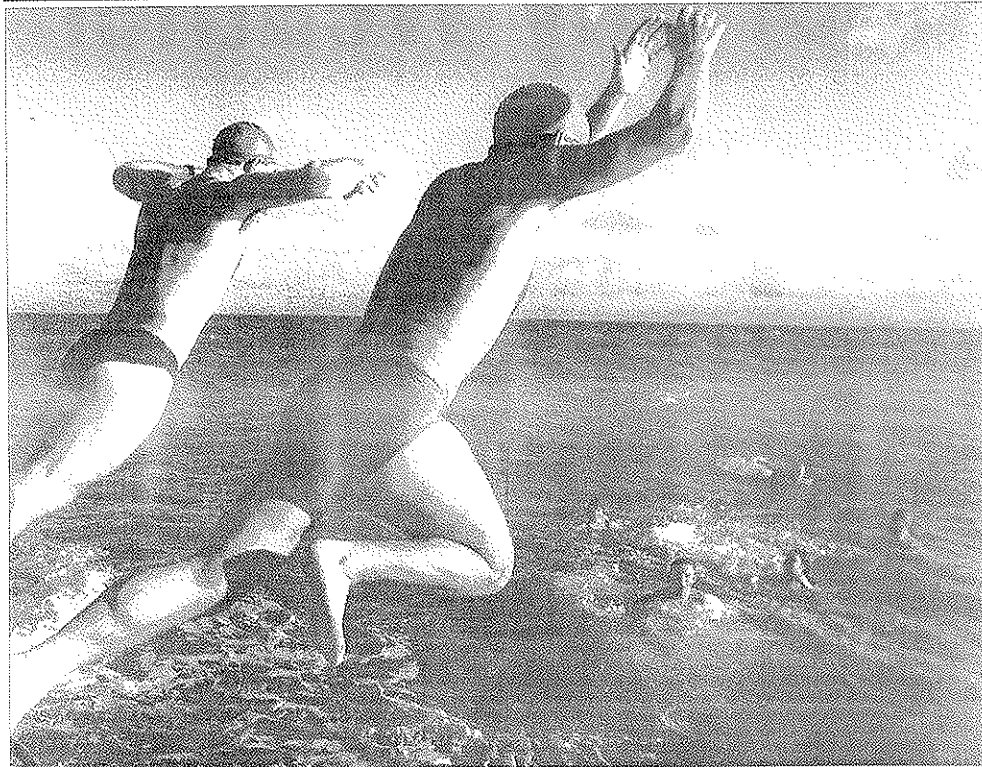
*Wettest day of the year:  
55.8mm at Cork Airport  
on October 16th*

*Highest gust ever recorded  
at Rosslare: 111m.p.h. on  
October 24th*

## THE WEATHER OF 1995

- see feature page

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**Above**  
Air temperatures just above freezing did not prevent the traditional Christmas Day swim at Sandycove, Co. Dublin. (picture Irish Times)

## VERY WINTRY DURING FINAL WEEK

Although there was some mild weather during December, mean temperatures for the month as a whole were below normal everywhere due mainly to some extremely low temperatures during the final week. The month began with mild southerly winds over Ireland as depressions in mid-Atlantic headed northwards towards Iceland. Winds veered northwesterly during the 3rd after a cold front had crossed the country during the morning and conditions brightened. However, an anticyclone over Scandinavia was building westwards causing pressure to rise well over and to the north of Ireland.

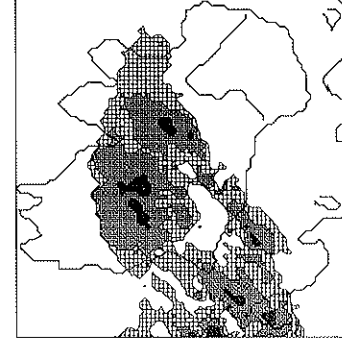
Winds veered gradually to an easterly direction on the 4th and the cold front, which had stalled over England late on the 3rd, returned westwards giving a little rain mainly in the east. The drop in temperatures continued on the 5th and 6th and there were wintry showers, mostly near the east, south and north coasts. During the 7th the Scandinavian high weakened as a trough approached slowly from the Atlantic, causing the flow to turn more southeasterly. A depression, forming on the trough line, slipped by the southwest of the country early on the 8th and pressure rose well over the country.

Anticyclones dominated the weather charts near Ireland from the 9th until the 19th. On the 9th there was sufficient maritime influence for daytime temperatures to be significantly higher than on the 8th. With a cell of high pressure forming just to the east there was a slow drop in temperature on the 10th and 11th in a slack southeasterly airflow. Another

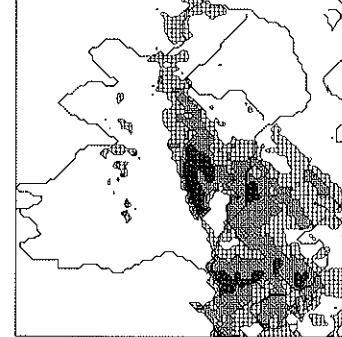
anticyclone moved eastwards across the Atlantic and became slow-moving off the northwest of Scotland late on the 12th, absorbing the anticyclone just to the east of Ireland. A very weak front moved southwards across Ireland causing winds to change to a northeasterly or easterly direction on the 13th. Between the 14th and 16th we were in a cold, fairly stiff easterly windflow with just a few showers. However, the anticyclone weakened gradually and, as depressions in the Biscay area began to move northwestwards, milder air with rain reached the south coast during the evening of the 16th. The rainbelt moved slowly northwards on the 17th to become slow-moving over the

**Below**  
Heavy rain moved steadily eastwards during the morning of the 21st as a depression lay just off the west coast. It was the wettest day of the month in many western and midland areas. (satellite picture Dundee University)

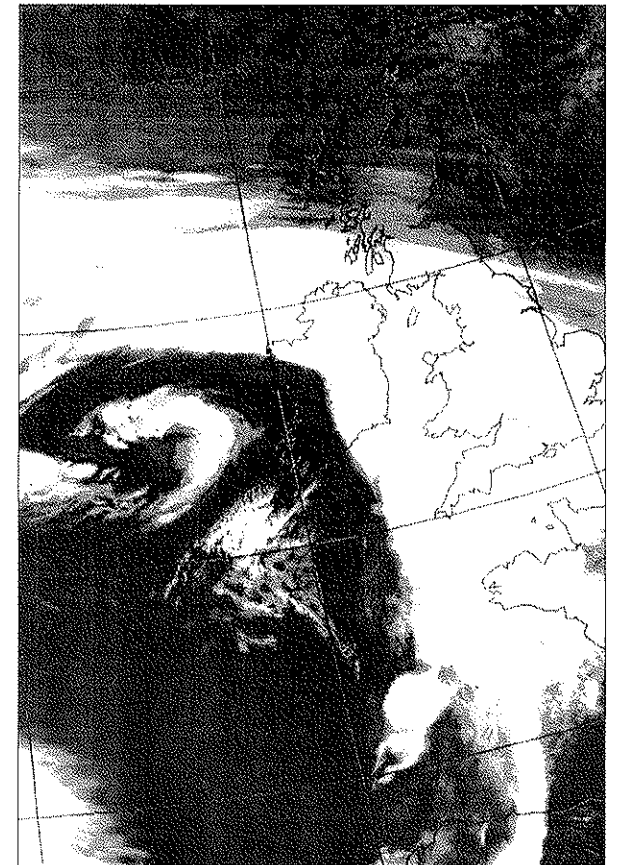
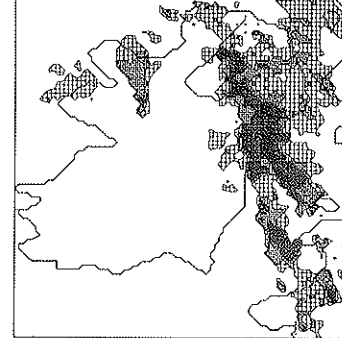
Radar plot at 0Z on 21 Dec 1995 Opt= IRL



Radar plot at 3Z on 21 Dec 1995 Opt= IRL



Radar plot at 9Z on 21 Dec 1995 Opt= IRL

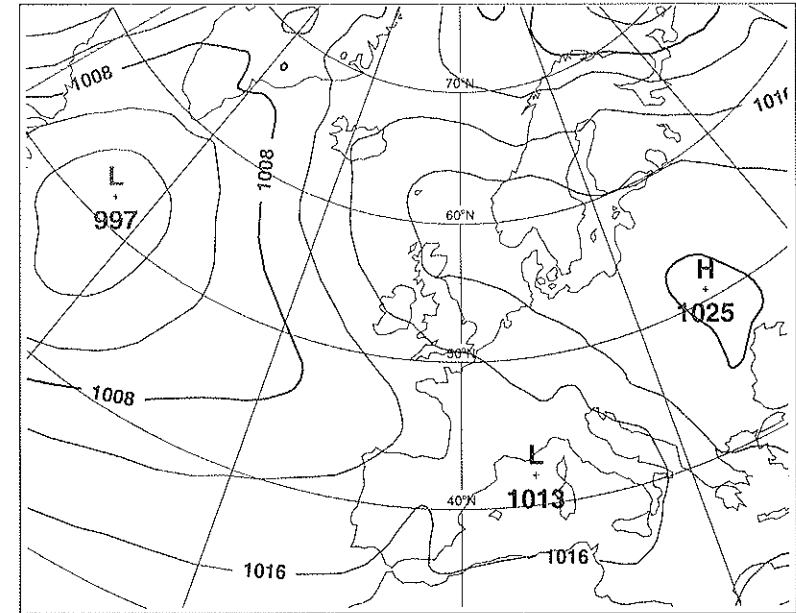
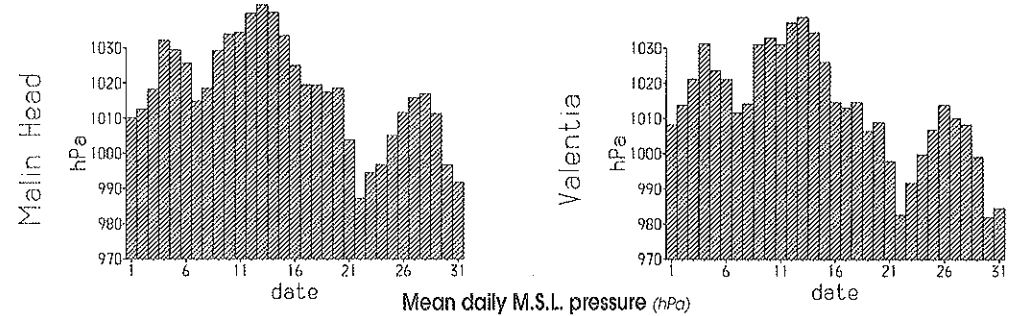


centre of the country as winds slackened. A high in the region of Greenland had a ridge extending southeastwards across Scotland on the 18th. As a depression approached slowly from the southwest easterly winds increased but there was little rain until the centre passed eastwards near the south coast on the 19th, producing over 30 millimetres of rain near the south coast but little or none

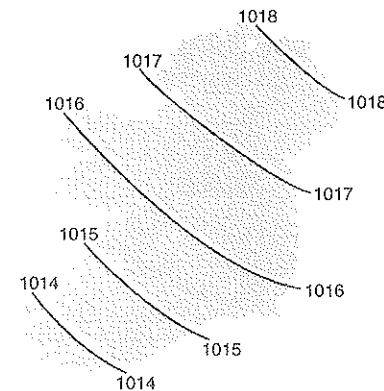
in the north and west. The depression filled late on the 19th so that a cold easterly wind with some wintry showers prevailed early on the 20th. Over the next few days milder air made its way slowly northwards as the next Atlantic depression approached slowly from the southwest. Rain, preceded by sleet or snow in places, moved northwards late on the 20th and during the 21st, when there was a marked rise in temperature. During the 22nd it remained mild but rainy. The depression turned eastwards to pass south of Ireland on the 23rd and the persistent ridge to the north extended its cold influence southwards as a northeast airflow developed.

Between the 24th and 26th the flow was mainly northerly and shallow depressions passed southeastwards from time to time near the northeast corner of Ireland. There were some showers of snow and hail but except in parts of Ulster and Connaught falls were slight. It became increasingly frosty so that on the 27th maximum temperatures were below freezing at some inland stations. It remained frosty on the 28th but the anticyclone was shifting slowly away eastwards and easterly winds increased gradually. Between the 29th and 31st depressions in mid-Atlantic moved slowly northwards; their rainbelts brought heavy rain, preceded by snow in places, to the southwest late on the 29th. They also brought the windiest conditions of the month. Milder weather with slack south to southeast winds behind the front made its way slowly northwards to all areas but did not reach the extreme northeast until late on the 31st.

**Left**  
The first wind-powered telephone system in the country, backed by a solar panel, was introduced during the month on Inishree, off the Donegal coast, to serve the island's six families. (picture Irish Times)



the above map is based on means of 1200 UTC values

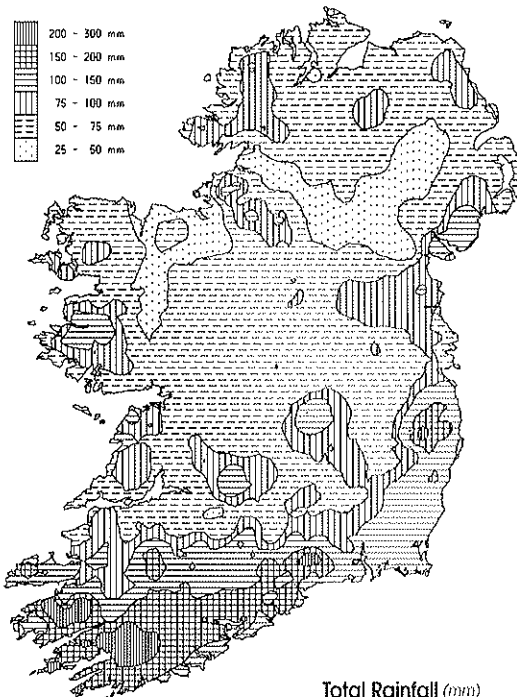


**MEAN ATMOSPHERIC PRESSURE**

The mean sea level pressure pattern for December was very unusual, with the highest mean values for the month in the north and the lowest in the southwest. Monthly mean pressures were close to normal in the south but around 10hPa higher than normal in the north. Pressure was generally high for the first half of the month, particularly between the 9th and 14th when it was above 1030hPa everywhere. Malin Head recorded the highest pressure of the month, 1043.0hPa on the 12th and 13th, its highest December value since 1970. Pressure fell sharply as a deep low approached the southwest on the 22nd and again on the 30th; Valentia Observatory recorded the month's lowest pressure value of 979.2hPa on the 30th.

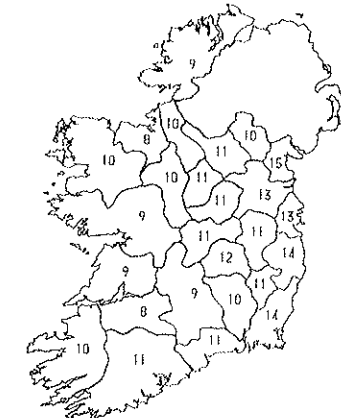
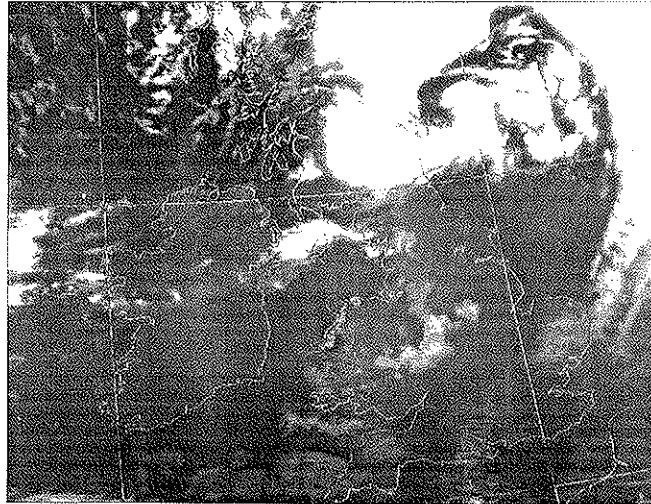
## Below normal except in south

It was a drier month than normal except in parts of the south and southeast, with percentage of normal rainfall ranging from just 33% at Clones to 131% at Rosslare. In parts of the midlands and west it was the driest December for between 19 and 24 years. Most rain was concentrated into the periods 1st to 3rd, 19th to 22nd and 29th to 31st, with many stations having their wettest day either on the 19th or 21st. Daily falls of over 20mm were recorded at southern stations on the 19th and again between the 29th and 31st; Dungarvan (Carriglea), Co. Waterford, recorded the highest daily fall of the month, 50.9mm on the 29th. There was a total of between 11 and 14 wetdays during the month in most places (days with 1.0mm or more rainfall), just over half the normal number.



Total Rainfall (mm)

*Below*  
Northerly winds associated with a depression in the North Sea brought some snow showers to the northern half of the country early on Christmas Day. (picture Dundee University)

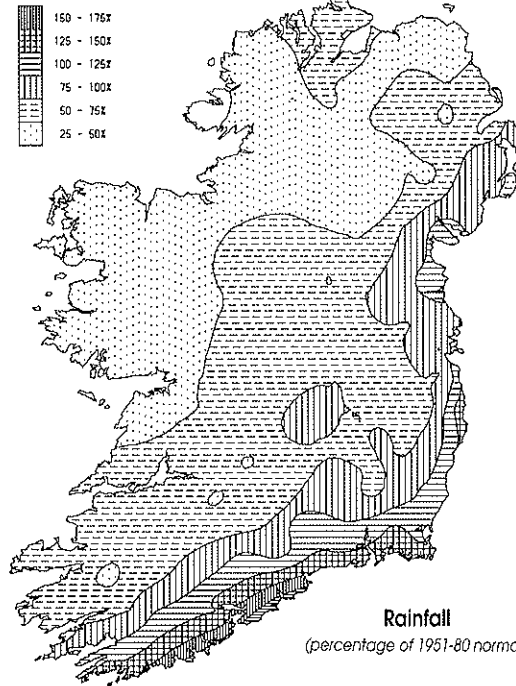


Above - The number of wetdays - days with 1mm or more of rain - in each county during December 1995

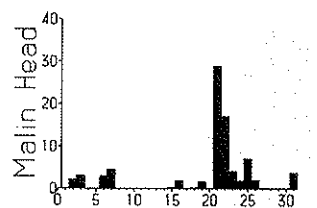
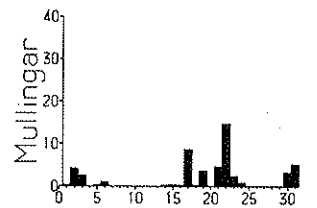
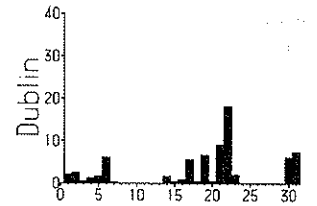
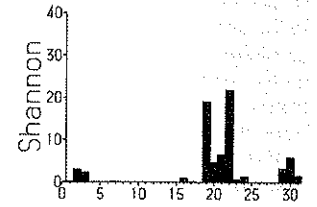
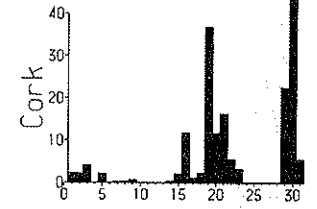
## DAILY RAINFALL EXPRESSED AS % OF MONTHLY NORMAL (1951-80)

COUNTY	DAY																															TOTAL				
	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31					
Carlow	4	2	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	5	-	-	18	8	6	9	-	-	-	-	-	-	4	6	11	...	76	
Cavan	3	3	-	-	1	2	-	-	-	-	-	-	-	-	-	-	-	3	4	-	-	7	9	4	2	-	-	-	-	-	-	-	4	8	...	50
Clare	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	15	4	6	13	-	1	-	-	-	-	-	3	5	2	...	54	
Cork	3	4	-	-	1	-	1	-	-	-	-	-	-	-	-	-	-	6	1	4	25	10	9	3	1	-	-	-	-	1	16	16	9	...	112	
Donegal	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	16	7	2	2	3	1	-	-	-	-	3	4	...	44	
Dublin	3	1	-	1	4	5	-	-	-	-	1	2	-	6	9	1	9	6	11	8	2	-	-	-	-	-	-	-	-	-	-	1	15	6	...	91
Galway	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	-	4	5	10	4	-	1	-	-	-	-	-	5	9	3	...	49
Kerry	2	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	2	18	4	7	3	1	1	-	1	-	-	6	5	3	...	59	
Kildare	2	3	-	-	7	-	-	-	-	-	-	-	-	1	-	6	4	1	10	3	4	9	-	1	-	-	-	-	-	-	-	9	7	...	67	
Kilkenny	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	18	9	4	12	-	-	-	-	-	-	-	2	7	15	...	75	
Laois	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	25	7	8	13	2	-	-	-	-	-	2	5	10	...	86	
L Leitrim	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	3	-	7	13	4	-	2	1	-	-	-	-	-	1	4	6	...	50
Limerick	3	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	18	6	5	5	-	-	-	-	-	-	-	7	2	3	...	51	
Longford	4	3	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	5	5	3	9	13	9	3	1	-	-	-	-	-	1	7	7	...	73	
Louth	3	3	-	1	7	8	-	2	-	-	-	1	2	2	3	2	4	11	12	7	13	-	-	-	-	-	-	-	-	-	-	-	17	4	...	102
Mayo	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	4	9	4	1	2	3	-	-	-	-	-	-	2	5	1	...	39
Meath	4	2	-	3	5	-	1	-	-	-	-	-	-	1	1	1	4	8	-	5	8	14	7	5	-	-	-	-	-	-	-	12	6	...	87	
Monaghan	2	4	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	3	10	1	6	3	1	-	-	-	-	-	-	2	4	...	36	
Offaly	5	3	-	-	1	1	-	1	-	-	-	-	-	1	3	2	1	1	4	10	10	1	-	-	-	-	-	-	-	-	-	2	7	6	...	69
Westmeath	4	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	-	1	5	13	5	-	2	-	-	-	-	-	2	9	6	...	55
Sligo	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	-	5	8	1	2	2	1	1	-	-	-	-	2	4	...	31	
Tipperary	1	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	1	18	7	3	8	-	-	-	-	-	-	-	7	3	11	...	69
Waterford	3	2	-	-	-	-	2	1	-	-	-	-	-	1	9	-	1	21	18	9	6	-	-	-	-	-	-	-	-	-	-	15	9	7	...	104
Westmeath	4	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	5	-	4	11	7	2	1	-	-	-	-	-	-	2	6	6	...	56
Wexford	3	2	-	2	3	4	12	-	-	-	-	-	-	-	8	-	1	22	12	14	10	-	-	-	-	-	-	-	-	-	-	9	14	5	...	121
Wicklow	4	2	-	-	3	2	-	-	-	-	-	-	-	2	1	-	7	2	1	5	7	9	9	1	-	-	-	-	-	-	-	4	12	6	...	87
MEAN	3	3	-	-	1	2	-	1	-	-	-	-	-	-	-	-	-	3	2	1	10	7	9	7	2	1	-	-	-	-	-	4	8	6	...	70

NOTE: In the above table, each value represents the percentage of the monthly normal that fell on each day. Stations within each county are averaged together. For example, 4% of the average monthly rainfall in Co. Carlow fell on the 1st.



Rainfall (percentage of 1951-80 normals)

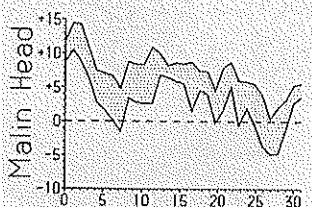
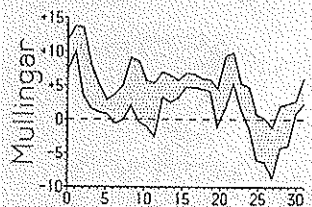
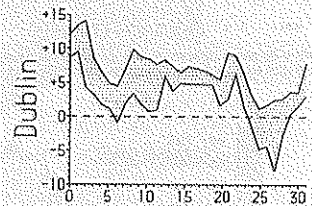
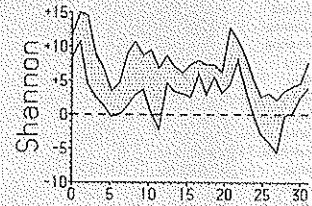
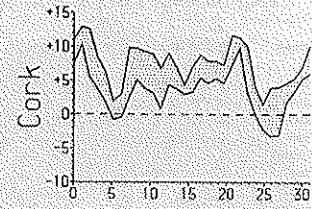
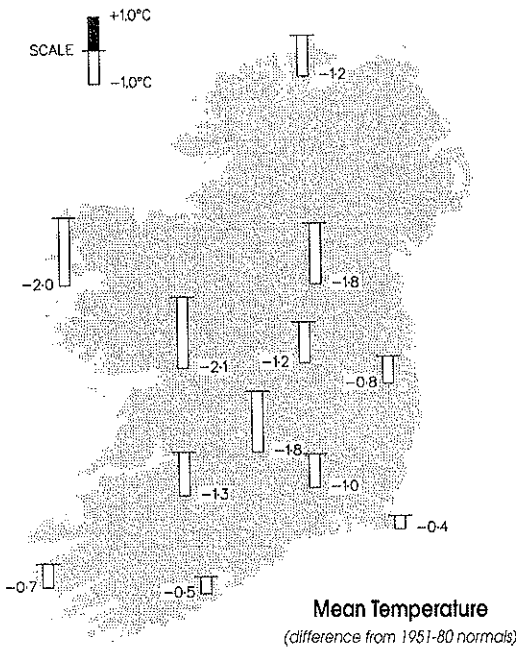


Daily rainfall amounts (millimetres)

## Extremely cold final week

Mean air temperatures for the month were below normal everywhere, ranging from 2.5°C at Markree Castle, Co. Sligo, to 7.2°C at Sherkin Island, Co. Cork. Temperatures were running close to normal for most of the month but the exceptionally cold weather of the last week meant that they ended between half a degree and two degrees below normal, coldest in the north. There was some very mild weather in the early part of the month and Belmullet had its warmest ever December day on the 3rd with a high of 14.0°C. Shannon Airport recorded the highest temperature of the month, 15.0°C on the 2nd.

Air frost was confined mostly to inland stations until the 24th of the month, but then it became widespread and severe until the 29th. Clones recorded its lowest ever December air temperature, -11.0°C on the 27th, while Letterkenny (Magherenan), Co. Donegal, recorded the lowest value of the month, -13.3°C on the 28th, its lowest temperature for any month since it opened in 1978. The lowest grass minimum temperature of the month, -13.7°C, was recorded at both Mount Russell, Co. Limerick, on the 27th and Straide, Co. Mayo, on the 29th. Both Shannon Airport and Valentia Observatory recorded their lowest ever grass minimum temperatures for December on the 26th, with values of -12.1°C and -9.0°C respectively.



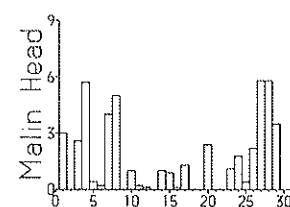
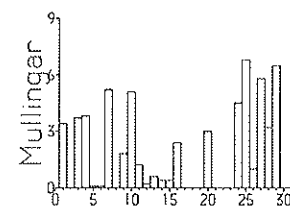
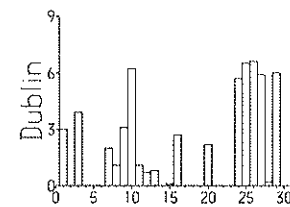
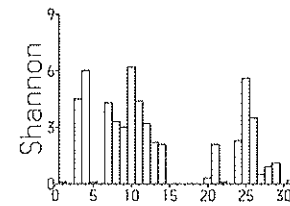
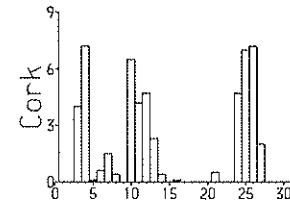
Daily maximum and minimum temperatures (°C)

## Sunniest on record at Belmullet, but dull in southeast

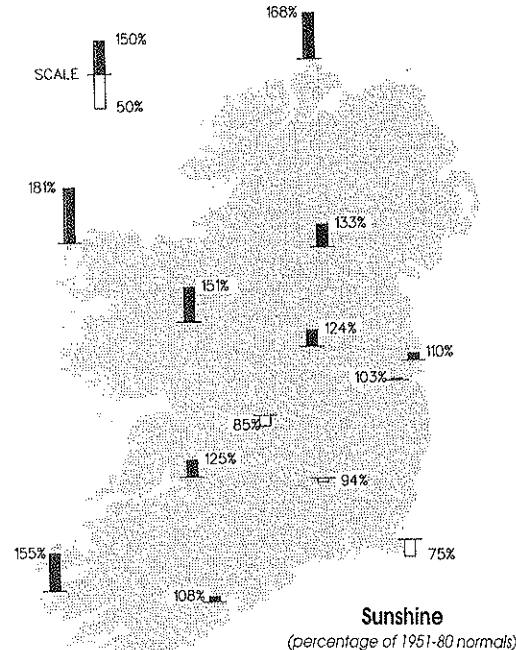
It was a very sunny month over the western half of the country, with monthly totals at several stations and a total of 61 hours at Belmullet, its highest December total since observations began there in 1957. It was the sunniest for between 25 and 35 years at several other stations, but the prevailing east or southeasterly winds brought much cloudier conditions in the south and east. Clonroche, Co. Wexford, normally one of the sunniest locations in the country, managed a monthly total of just 28 hours, the lowest of any station.

Percentage of normal sunshine ranged from 58% at Clonroche to 181% at Belmullet.

The sunniest periods of the month were the 3rd to 4th, particularly in the west and south, 10th to 12th and especially between the 24th and 27th, when around 7 hours daily sunshine was recorded at a number of stations despite the shortness of the days. Cork Airport recorded the highest daily total of the month, 7.2 hours on both the 4th and 26th, its highest ever December values. The duller periods of the month were from the 17th to 23rd and 30th to 31st. Rosslare recorded a total of 20 days with half an hour of sunshine or less during the month compared with 11 at Belmullet.

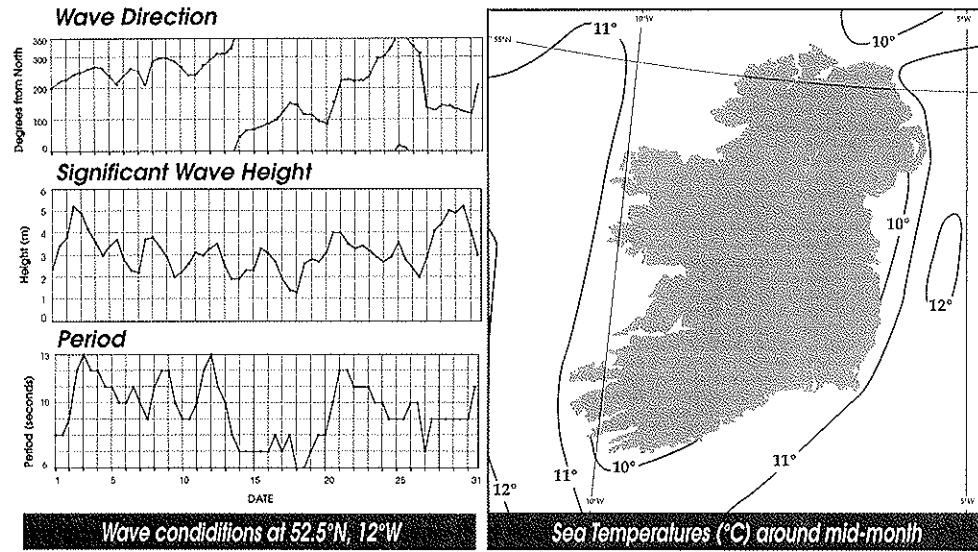


Daily sunshine amounts (hours)

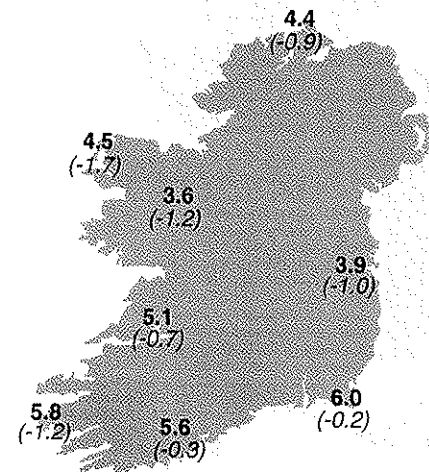


### SEA TEMPERATURES

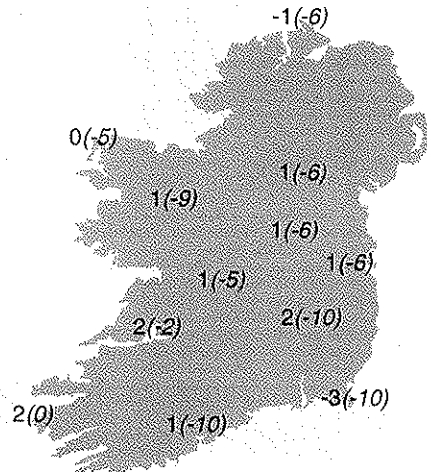
The very cold spell towards the end of December was reflected in the sea temperatures around the coast, as they fell to between 8°C and 11°C by the end of the month. At Malin Head, for example, the sea temperature fell by around three degrees between the 18th and 31st. Sea temperatures were above normal for most of the month, however; the mean monthly temperature of 9.3°C at Malin Head was almost a degree above normal.



Mean 10cm Soil Temperatures (°C)  
(difference from 1961-90 normals in brackets)



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



Station	period	RAINFALL				TEMPERATURE										SUNSHINE								
		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	mean wind speed (ms) 2m agl.	P.E. (Penman) (mm)	
Co. Cork Ferryoy	1-10	12.5	-	4	3	8.6	2.8	5.7	-	-2.0	8	4	25	3	-6.5	6	5	6.4	8.5	10.7	-	1.8	-	
	11-20	52.2	-	5	4	8.0	2.1	5.1	-	-3.2	12	3	14	0	-7.1	12	3	5.5	6.9	11.1	-	3.2	-	
	21-end	53.3	-	5	5	6.7	0.8	3.8	-	-7.0	27	5	18	1	-10.0	26	7	4.4	6.1	14.5	-	2.8	-	
	month	118.0	104	14	12	7.7	1.8	4.8	-1.1	-7.0	27	12	57	4	-10.0	26	15	5.4	7.1	36.3	69	2.6	0	
Co. Donegal Letterkenny	1-10	6.1	-	3	2	8.4	2.0	5.2	-	-4.0	8	4	23	3	-	-	-	-	-	-	-	-	-	
	11-20	6.9	-	2	1	5.8	0.0	2.9	-	-2.2	11	5	5	0	-	-	-	-	-	-	-	-	-	
	21-end	51.6	-	6	6	3.1	-3.5	-0.2	-	-13.3	28	8	3	0	-	-	-	-	-	-	-	-	-	
month	64.6	-	11	9	5.7	-0.6	2.6	-	-13.3	28	17	31	3	-	-	-	-	-	-	-	-	-	-	
Co. Kerry Ardfert	1-10	13.6	-	5	2	9.1	2.9	6.0	-	-3.2	7	2	27	4	-7.0	7	7	-	-	-	-	-	-	-
	11-20	34.3	-	4	3	7.6	2.1	4.9	-	-1.4	12	3	13	0	-5.5	12	5	-	-	-	-	-	-	-
	21-end	48.1	-	9	8	6.0	0.7	3.4	-	-6.0	26	5	15	1	-10.2	26	6	-	-	-	-	-	-	-
month	96.0	-	18	13	7.5	1.8	4.7	-	-6.0	26	10	55	5	-10.2	26	18	-	-	-	-	-	-	-	-
Co. Leitrim Ballinamore	1-10	14.3	-	5	4	7.8	3.3	5.6	-	-0.7	8	3	21	2	-5.1	8	5	7.2	8.2	7.9	-	1.6	-	
	11-20	22.2	-	3	3	6.0	1.2	3.6	-	-2.5	11	3	5	0	-4.6	11	5	5.4	6.4	12.2	-	2.1	-	
	21-end	47.7	-	9	7	3.6	-3.1	0.3	-	-10.1	27	8	3	0	-11.0	29	8	3.7	4.9	12.9	-	2.2	-	
month	84.2	66	17	14	5.7	0.4	3.1	-1.7	-10.1	27	14	29	2	-11.0	29	18	5.4	6.5	33.0	91	1.9	0		
Co. Louth Ardara	1-10	22.7	-	8	3	9.1	3.2	6.2	-	-0.1	10	1	25	3	-4.1	4	6	6.3	7.1	-	-	-	-	
	11-20	18.8	-	9	7	7.4	1.8	4.6	-	-3.4	11	3	12	0	-5.7	11	5	4.7	5.2	-	-	-	-	
	21-end	43.8	-	6	5	5.7	-2.7	1.5	-	-8.9	27	9	7	0	-10.5	29	9	2.5	3.4	-	-	-	-	
month	85.3	95	23	15	7.3	0.7	4.0	-	-8.9	27	13	64	3	-10.5	29	20	4.4	5.2	-	-	-	-	-	
Co. Waterford Dungarvan	1-10	8.8	-	3	3	10.0	4.1	7.1	-	-1.9	10	2	34	6	-4.0	10	5	8.6	11.8	-	-	1.5	-	
	11-20	74.9	-	5	4	8.7	2.9	5.8	-	-1.0	12	1	18	1	-3.3	12	3	7.0	6.7	-	-	1.9	-	
	21-end	133.3	-	5	5	7.7	2.1	4.9	-	-4.2	26	4	21	2	-9.6	27	6	6.2	11.0	-	-	2.3	-	
month	217.0	-	13	12	8.8	3.0	5.9	-	-4.2	26	7	73	9	-9.6	27	14	7.2	29.5	-	-	1.9	0		
Co. Wexford Johnstown Castle	1-10	18.0	-	7	6	9.7	4.9	7.3	-	1.2	6	0	33	5	-0.8	10	3	6.0	8.0	11.5	-	1.1	-	
	11-20	49.7	-	6	4	8.6	4.7	6.7	-	2.6	12	0	23	0	-0.6	11	2	4.9	6.2	6.7	-	2.0	-	
	21-end	62.2	-	5	5	6.5	1.2	3.9	-	-3.6	27	5	16	1	-4.8	27	6	3.1	5.0	21.8	-	1.8	-	
month	129.9	117	18	15	8.2	3.5	5.9	-0.4	-3.6	27	5	72	6	-4.8	27	11	4.6	6.3	40.0	77	1.6	0		

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.)  
AND SOIL MOISTURE

County/ Station	Period	P.E. (mm)		Soil Moisture (mm)	
		Amount	Deficit	Accumulated	Surplus
Co. Carlow Carlow (Oak Park)	1-10	10.3	5	5	-
	11-20	13.5	-	-	15
	21-end	12.7	-	-	23
	month	36.5	-	-	-
Co. Dublin Kinsealy	1-10	0.4	-	-	13
	11-20	0.0	-	-	23
	21-end	-	not available	-	-
Co. Kerry Valentia Obs.	1-10	3.3	-	-	15
	11-20	10.1	-	-	27
	21-end	7.4	-	-	25
month	20.8	-	-	-	
Co. Leitrim Ballinamore	1-10	1.1	-	-	13
	11-20	8.2	-	-	14
	21-end	-	not available	-	-
month	-	-	-	-	
Co. Wexford Johnstown Castle	1-10	1.7	-	-	16
	11-20	0.2	-	-	50
	21-end	0.0	-	-	72
month	1.9	-	-	-	

SEE BACK PAGE FOR NOTES ON THE DATA

County/ Station	GLOBAL SOLAR RADIATION (MJ/sq. m)			P.E. (Penman)
	10-day totals	total for month	total for month (mm)	
Co. Donegal Malin Head	1-10	10.35	14.72	17
	11-20	10.35	59.29	-
	21-end	14.72	-	-
month	17.11	59.29	-	
Co. Dublin Dublin Airport	1-10	13.73	21.63	2
	11-20	13.73	54.87	-
	21-end	21.63	-	-
month	19.51	54.87	-	
Co. Kerry Valentia Obs.	1-10	18.37	67.03	8
	11-20	18.37	-	-
	21-end	22.97	-	-
month	25.69	67.03	-	
Co. Kilkenny Kilkenny	1-10	13.16	53.33	0
	11-20	13.16	-	-
	21-end	20.27	-	-
month	19.90	53.33	-	
Co. Mayo Belmullet	1-10	14.25	55.18	3
	11-20	14.25	-	-
	21-end	20.23	-	-
month	20.70	55.18	-	
Co. Monaghan Clones	1-10	13.26	48.20	0
	11-20	13.26	-	-
	21-end	18.37	-	-
month	16.57	48.20	-	
Co. Offaly Birr	1-10	14.06	55.21	0
	11-20	14.06	-	-
	21-end	19.74	-	-
month	21.41	55.21	-	

SUMMARY OF SIGNIFICANT WEATHER WORLDWIDE DURING DECEMBER 1995

# RECORD LOW TEMPERATURES IN SCOTLAND

New Orleans recorded some extreme temperatures during the early part of December. Having equalled its December record of 28.9°C on the 5th, much colder air originating in Canada brought the temperature down to -1.1°C by the 10th, less than three degrees short of the monthly extreme low. Further north in the United States, Helena, Montana, recorded a low of -25.6°C on the 8th, sixteen degrees below average, while at Chattanooga, Tennessee, the temperature fell to -11.7°C early on the 10th, thirteen degrees below normal. Very wet weather affected parts of the Mediterranean during the first half of the month. The island of Minorca recorded its monthly average rainfall in 36 hours when 83mm fell between the 4th and 6th, while at the same time Socoa, near Toulouse, had 88mm, 21mm above the monthly normal. On the 9th and 10th, Faro and Valencia received their monthly mean falls of 67mm and 36mm respectively, thanks to widespread thundery showers. Another wet European location was Turnu Severin in southwest Romania, where 66mm of precipitation fell on the 4th and 5th, giving a snow cover 46cm deep. Conversely in northern Iceland the temperature at Raufarhofn reached 11.8°C on the 10th, a record high for December.

In Buffalo, New York, snow was measured to a depth of 83cm on the 11th, but in contrast the Texan town of Midland was enjoying a near record December temperature of 27.8°C on the 14th, twelve degrees above normal. Meanwhile Gran Canaria saw little of its famed winter sun as frequent showers resulted in 66mm of rain between the 12th and 14th at La Palma, compared with a monthly normal of 29mm. Tropical storm Frank, originally over the southeast Indian Ocean, came ashore over northwestern Australia, giving Onslow a fall

of 119mm on the 15th, compared to a monthly average of just 5mm. Further south, Andamooka reached a blistering 44°C on the 16th, just two degrees below its record. Very wet weather continued in some parts of Australia, however, with Brisbane measuring 94mm on the 23rd, three quarters of its monthly average of 127mm. Parts of South Africa also had heavy midsummer rain, with Durban receiving a week's rainfall total of over 120mm between the 12th and 19th.

The extremely cold weather which had affected Scandinavia

in early winter returned towards the end of December. In Sweden, Kiruna recorded -36°C and Kirkenes in Norway recorded -31°C on the 21st, both around twenty degrees below average. The temperature at Oslo on Christmas Eve dipped to -23°C, fifteen degrees below normal. In the USA, a foot of snow fell at New York and Boston during the 19th and 20th. Louisiana and Alabama witnessed heavy rain on the 18th and 19th, with Lake Charles, Louisiana, recording its monthly mean of 143mm and Mobile, Alabama, recording 195mm, well over its monthly average of 140mm. King Khaled Military City in Saudi Arabia also had a wet week with 60mm of rain falling, six times the usual December amount. Monsoon rainfall badly affected Malacca on the western side of the Malayan Peninsula, where 123mm of rain fell between the 19th and 24th, close to its monthly average of 127mm.

Bitterly cold weather hit Scotland at the end of December. On the 29th the Highlands village of Altnaharra reported a low of -27°C, the lowest temperature recorded in Britain since 1986. The temperature at Glasgow Airport fell to record lows on successive nights, reaching -19.7°C on the 28th. In contrast, Thessaloniki and Larissa in Greece reported a temperature of 23°C on the 20th, setting a new December record at Thessaloniki.

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THE WEATHER OF 1995

# Warmest on record

It was the warmest year on record at most stations in the country, the majority of these with records since the 1950s. At the long-term stations of Valentia Observatory and Dublin (Phoenix Park) it was the warmest since 1949, while 1959 was warmer at Malin Head. Mean temperatures ranged between 10°C and 11°C generally, around a degree higher than normal. August was the warmest of any month ever recorded at most stations, while mean temperatures were also well above normal in February, July, October and November. December was the only month with below normal temperatures everywhere. Kilkenny recorded the highest temperature of the year, 30.8°C on August 2nd. The lowest temperatures of the year were observed during the last week of December. Clones recorded an air temperature of -11.0°C on December 27th, the lowest at any station since 1982, while the same station also recorded the lowest grass minimum temperature of the year, -13.4°C on December 26th. Rainfall totals for the year were near normal in most places, ranging from 90% of normal at Rosslare to 113% at Malin Head. The first three months of the year were very wet, particularly in the west, while April, June and August were the driest relative to normal. It was the driest summer on record at a number of stations, with some eastern counties recording only around half the normal rainfall for the period from April to September. Cork Airport measured the year's highest daily fall of 55.8mm on October 16th. Sunshine was above normal for the year at all stations except Belmullet, ranging from 94% of normal here to 124% at Clones, where it was the sunniest year on record. June and August were exceptionally sunny and all stations recorded their highest daily values of the year during late June, the highest of all being 16.0 hours recorded at Malin Head on June 26th, its sunniest day since 1971. On October 24th Rosslare recorded the highest gust of the year, 96 knots (111 m.p.h.), the highest gust ever recorded at the station.

● Temperatures above normal most months, warmest summer on record

● Very wet during first 3 months, long dry spell during summer

● Very sunny summer and autumn after extremely dull opening months

Note: This summary is based on midnight to midnight readings from the thirteen synoptic stations operated by the Meteorological Service.

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. CLARE SHANNON AIRPORT	1031.7	112	39.3 29 Jul	11.4	+1.3	30.2 -5.6	3.86	106	15.7 27 Jun	204	15	20	29	6	30	63
CO. CORK CORK AIRPORT	1254.1	102	55.8 16 Oct	10.7	+1.2	28.0 -3.2	4.33	110	15.6 27 Jun	204	21	24	16	7	90	77
CO. DONEGAL MALIN HEAD	1176.3	113	47.5 24 Oct	10.1	+0.6	25.2 -4.8	3.74	106	16.0 26 Jun	242	39	17	67	8	10	191
CO. DUBLIN DUBLIN AIRPORT	711.2		39.0 16 Jul	10.1		27.1 -7.9	4.41	110	15.9 27 Jun	180	31	33	17	7	27	86
CASEMENT AERODROME	691.9	95	31.4 25 Jan	10.3	+1.0	28.8 -7.9	4.17	109	15.8 27 Jun	172	25	31	20	5	14	93
CO. KERRY VALENTIA OBSERVATORY	1540.7	110	42.6 16 Oct	11.5	+0.9	28.3 -3.5	3.66	103	15.3 22 Jun	231	9	7	29	13	11	123
CO. KILKENNY KILKENNY	822.5	100	51.5 24 Oct	10.7	+1.3	30.8 -7.2	4.15	113	15.9 27 Jun	183	n/a	42		n/a		65
CO. MAYO CLAREMORRIS	1107.9	99	24.5 16 Jan	10.0	+1.0	29.0 -6.6	3.79	115	15.8 27 Jun	226	41	45	35	6	28	79
BELMULLET	1203.2	109	41.8 25 Oct	10.7	+0.7	28.0 -3.2	3.49	94	15.9 27 Jun	248	35	12	59	11	17	159
CO. MONAGHAN CLONES	962.9	105	48.2 24 Oct	10.1	+1.2	29.3 -11.0	4.02	124	15.8 26 Jun	214	n/a	35		n/a		85
CO. OFFALY BIRR	828.6	102	55.1 24 Oct	10.4	+1.0	29.7 -7.1	3.62	102	15.7 27 Jun	198	n/a	48		n/a		65
CO. WESTMEATH MULLINGAR II	894.4	97	53.7 24 Oct	9.9	+1.1	28.3 -8.6	4.16	115	15.8 27 Jun	201	n/a	44		n/a		52
CO. WEXFORD ROSSLARE	801.6	90	26.6 27 Jan	11.2	+1.0	24.7 -2.0	4.63	104	15.5 23 Jun	160	6	6	21	4	30	108

**Friday 1st:** As a trough cleared the northeast of the country before dawn winds slackened. A mild south-southeasterly followed with sunny spells in the north and east and cloudy elsewhere with just isolated showers but more general rain spread into the southwest and west during the evening with the approach of a warm front.

*Rainfall:* nil to 5mm  
*Temperature:* max. 11°C to 14°C, min. 7°C to 9°C inland, up to 11°C coastal  
*Sunshine:* nil to 4 hours

**Saturday 2nd:** Overnight rain, associated with a warm front, cleared early in the day and warm sector conditions prevailed thereafter, in a mainly south-southeasterly airflow, giving scattered outbreaks of rain and drizzle in the west and south. Cloudy in all areas.

*Rainfall:* nil to 5mm generally, 8mm at Valentia Observatory.  
*Temperature:* max. 13°C to 15°C, min. 9°C to 12°C  
*Sunshine:* nil or trace

**Sunday 3rd:** A warm front crossed the country early in the day with fresh to strong southerly winds. A cold front followed later in the night and during the morning bringing a decrease of winds as they veered to a northwesterly direction and then northerly as pressure rose. Rainfall amounts small.

*Rainfall:* 1mm to 2mm in the east and southeast, 2mm to 6mm in the west and southwest.  
*Temperature:* max. 13°C to 15°C, min. 2°C to 6°C inland, 6°C to 9°C coastal; ground frost down to -3°C in Claremorris  
*Sunshine:* 2 to 6 hours

**Monday 4th:** Airflow turned easterly and then southeasterly as an occluded front weakened as it crossed the country westwards. Amounts of rain small. Sunny spells in the south and west.

*Rainfall:* nil to 1mm  
*Temperature:* max. 8°C to 11°C, min. -1°C to 4°C inland, up to 7°C coastal; ground frost down to -6°C in Birr  
*Sunshine:* nil to 3 hours in the east and southeast, 4 to 7 hours in the west and southwest.

**Tuesday 5th:** With a moderate easterly wind, it was a cold cloudy day almost everywhere, with showery outbreaks of rain, hail or sleet confined mainly to the eastern half of the country.

*Rainfall:* nil to 2mm  
*Temperature:* max. 5°C to 8°C, min. zero to 2°C inland, 3°C to 4°C coastal; ground frost down to -8°C in Kilkenny  
*Sunshine:* nil or trace generally, up to 4 hours in Belmullet

**Wednesday 6th:** The light to moderate easterly airflow became progressively colder, so Wednesday was a much colder day and again cloudy almost everywhere with showers of rain, hail, sleet and of snow on higher ground but the west escaped lightly.

*Rainfall:* nil to 3mm generally, up to 6mm in the east  
*Temperature:* max. 2°C to 7°C, min. -2°C to 2°C; ground frost down to -8°C in Kilkenny  
*Sunshine:* nil to 1 hour generally, 6 hours in Valentia Observatory.

**Thursday 7th:** A light easterly airflow continued to bring cold continental air in over Ireland. Mainly dry and cloudy. A few showers mainly in the east and southeast but locally heavy and with hail or snow in places. Mist or fog in many places and also spots of rain in the southwest during the evening.

*Rainfall:* nil to 1mm generally, 5mm in Malin Head and 19mm in Rosslea.  
*Temperature:* max. 3°C to 7°C, min. -1°C to zero inland, -3°C to 3°C coastal; ground frost down to -6°C in Valentia  
*Sunshine:* nil to 5 hours

**Friday 8th:** High pressure over the country maintained a slack south-southeasterly airflow. Winds light variable or southerly. Mist and fog in many places early and late. Some showers of light rain occurred. With temperatures rising in the south and east. Sunny spells, mainly in the west. Frost early and late.

*Rainfall:* nil to 1mm generally, 4mm in Rosslea  
*Temperature:* max. 3°C to 12°C, min. -2°C to 3°C inland, up to 5°C coastal; ground frost down to -8°C in Kilkenny  
*Sunshine:* nil to 1 hour generally, 3 to 6 hours in the west and northwest.

**Saturday 9th:** High pressure covered the country maintained by an anticyclone over the North Sea. Winds were generally light to calm during the day. There were some early mist and fog patches. Fog and mist returned after dark. There was a little rain in some southern areas.

Temperatures continued to rise.  
*Rainfall:* nil to 1mm  
*Temperature:* max. 8°C to 13°C, min. 1°C to 7°C; ground frost down to -3°C in Belmullet  
*Sunshine:* nil to 4 hours

**Sunday 10th:** High pressure persisted over the country as an anticyclone over Northern Europe continued to dominate. A weak warm front moved towards the south coast. Winds were generally light and variable mainly from an easterly direction. There were some fog patches early in the day in some areas.

*Rainfall:* nil or trace  
*Temperature:* max. 6°C to 11°C, min. -2°C to 5°C; ground frost down to -6°C in Kilkenny  
*Sunshine:* 3 to 7 hours generally, 1 hour in the northwest

**Monday 11th:** Pressure remained high over the country with an anticyclone to the east of Ireland. Winds light east to southeasterly. Dry with some mist, fog and frost at night, severe in places.

*Rainfall:* nil  
*Temperature:* max. 4°C to 13°C, min. -3°C to 3°C inland, up to 7°C coastal; ground frost down to -9°C in Birr  
*Sunshine:* trace to 1 hour in the north and east, 3 to 6 hours elsewhere

**Tuesday 12th:** Pressure was high over the country. Light variable or mainly northerly winds. Early frost in many places, fog also, mainly in the midlands. Dry. Maximum temperatures about normal for the time of year.

*Rainfall:* nil  
*Temperature:* max. 4°C to 11°C, min. -5°C to 1°C inland, up to 8°C coastal; ground frost down to -6°C in Birr  
*Sunshine:* nil to 3 hours, up to 5 hours in the southwest

**Wednesday 13th:** An anticyclone to the north of Ireland maintained high pressure over the country in a northeasterly airflow. Winds light variable or northeasterly mainly. Cloudy generally but some early morning slight to sharp frost. The odd shower or spot of rain in the east.

*Rainfall:* nil  
*Temperature:* max. 6°C to 10°C, min. zero to 6°C inland, up to 8°C coastal; ground frost down to -4°C in Claremorris  
*Sunshine:* nil to 3 hours

**Thursday 14th:** The cold and fresh east-northeasterly airstream was maintained over the country giving mostly dry weather apart from some showers along coastal counties of the east and south, some of which penetrated further inland. Ground frost in the west and north.

*Rainfall:* nil to 3mm  
*Temperature:* max. 6°C to 9°C, min. zero to 5°C inland, up to 7°C coastal; ground frost down to -4°C in Claremorris  
*Sunshine:* nil to 3 hours

**Friday 15th:** A cold, fresh east to northeasterly airflow covered the country. Mainly dry apart from some light scattered showers mainly along the east coast. Ground frost reported in some midland and western areas.

*Rainfall:* nil to 2mm  
*Temperature:* max. 4°C to 9°C, min. 1°C to 6°C; ground frost down to -1°C in Claremorris and Birr  
*Sunshine:* nil to 1 hour

**Saturday 16th:** A cold, fresh to strong and gusty east to northeasterly airflow continued over the country. Dry for most of the day. Frost reported in the midlands. Outbreaks of rain and drizzle in the south and east during the evening.

*Rainfall:* nil to 2mm generally, 4mm to 8mm in the southeast, 11mm at Cork Airport  
*Temperature:* max. 7°C to 9°C, min. -2°C to 6°C; ground frost down to -2°C in Birr and Kilkenny  
*Sunshine:* nil to 4 hours

**Sunday 17th:** With a light easterly airflow and a front slow-moving over the centre of the country, it was a dull cloudy misty day almost everywhere with outbreaks of rain, heaviest in the east and Midlands.

*Rainfall:* nil to 2mm in the south, 3mm to 6mm in the east and west, up to 9mm in Mullingar and 12mm at Casement Aerodrome  
*Temperature:* max. 6°C to 12°C, min. 2°C to 7°C  
*Sunshine:* nil to 2 hours

**Monday 18th:** Monday was a dull cloudy day throughout, with mist or fog in many areas. For the first half of the day there were outbreaks of rain or drizzle but it was largely dry for the afternoon and evening. Winds were generally light easterly. Highest temperatures in the south.

*Rainfall:* nil to 2mm  
*Temperature:* max. 5°C to 10°C, min. 3°C to 5°C inland, 5°C to 8°C coastal; ground frost down to -3°C at Shannon Airport  
*Sunshine:* nil

**Tuesday 19th:** A cool, wet miserable day with rain heavy at times in Munster and Leinster but Connaught and Ulster escaped lightly. Moderate to fresh easterly winds, gusty in some coastal areas. There was no sunshine anywhere. Mist or fog in places also.

*Rainfall:* nil to 2mm in the northwest, 4mm to 8mm in the east, 16mm to 37mm in the south  
*Temperature:* max. 5°C to 11°C, min. 3°C to 7°C  
*Sunshine:* nil

**Wednesday 20th:** Cold with easterly winds. Occasional wintry showers near the east coast died out and it was mostly dry at first. Rain, preceded by sleet in places reached the southwest towards evening and spread slowly northwards to affect Munster and south Leinster.

*Rainfall:* nil to 5mm generally, 11mm at Cork Airport  
*Temperature:* max. 3°C to 10°C, min. -2°C to 6°C; ground frost down to -5°C in Clones  
*Sunshine:* nil to 3 hours

**Thursday 21st:** An occlusion moving slowly northwards across the country dominated the weather during the day as a depression approached from the southwest. The winds were from an easterly direction to begin with but later became light to moderate southeasterly. There were outbreaks of rain in the early part of the day in most parts but these tended to die out as the day progressed although there was some heavy rain in the southwest and south late in the day. Milder.

*Rainfall:* 2mm to 9mm generally, 15mm to 17mm in the south, 29mm in Malin Head  
*Temperature:* max. 8°C to 13°C, min. -1°C to 7°C inland; up to 10°C coastal; ground frost down to -2°C in Clones  
*Sunshine:* nil to 2 hours

**Friday 22nd:** Frontal troughs moved northwards over the country, early, but became slow-moving. Winds were mainly northeasterly in the northern half of the country and were from a more southerly direction further south. Rain was fairly widespread in northern and midland regions. It was lighter and more patchy further south.

*Rainfall:* 5mm to 18mm generally, 22mm at Shannon Airport  
*Temperature:* max. 9°C to 13°C, min. 4°C to 10°C  
*Sunshine:* nil to 2 hours

**Saturday 23rd:** An area of low pressure to the southeast maintained an east to northeasterly airflow over the country. Temperatures fell gradually. Winds light generally though moderate near the north and southeast coasts with the odd gale gust. Occasional rain or showers, mainly in the east and north but drier than of late. Early morning frost also in parts of the north and west.

*Rainfall:* nil to 6mm  
*Temperature:* max. 4°C to 11°C, min. -2°C to 5°C; ground frost down to -8°C in Claremorris  
*Sunshine:* nil to 1 hour generally, up to 5 hours in the west

**Sunday 24th:** A slack but very cold north to northwesterly airflow covered the country. Showers of hail, rain and snow mainly over the north and northwest in the evening when strong winds developed in the north with gusts up to 54kt at Malin Head. Frost in the morning and evening with fog and mist in places also.

*Rainfall:* nil to 4mm  
*Temperature:* max. 3°C to 7°C, min. -3°C to zero inland, zero to 2°C coastal; ground frost down to -8°C in Claremorris  
*Sunshine:* 2 to 4 hours in the southwest, elsewhere 5 to 7 hours, trace in Birr

**Monday 25th:** The cold, unstable northerly airflow continued through the day, with widespread severe frost early and late, except for some coastal areas in the south and southwest. Scattered showers of sleet, snow or hail fell mainly in the north and west.

*Rainfall:* nil to 2mm, 7mm in Malin Head  
*Temperature:* max. 1°C to 6°C, min. -6°C to -2°C inland, -1°C to zero coastal; ground frost down to -12°C in the Midlands  
*Sunshine:* trace to 3 hours in the northwest, elsewhere 6 to 7 hours

**Tuesday 26th:** The Arctic weather continued over Ireland in a slack northerly airflow, with a ridge building over the country later in the day. A shallow trough over Ulster gave snow showers in the north and west. Frost persisted through the day in many inland areas, together with freezing fog.

*Rainfall:* nil to 2mm  
*Temperature:* max. zero to 6°C, min. -7°C to -3°C inland; up to -1°C coastal; ground frost down to -13°C in the midlands, -12°C at Shannon Airport  
*Sunshine:* nil to 2 hours inland, 4 to 7 hours generally

**Wednesday 27th:** Widespread freezing fog in the midlands throughout the night cleared most places by mid-morning. The Arctic conditions continued with widespread severe frost. Winds light variable mainly between northeast and southeasterly. Bright and sunny in most places but very cold.

*Rainfall:* nil or trace  
*Temperature:* max. -6°C to 6°C, min. -11°C to -1°C; ground frost down to -13°C in the midlands  
*Sunshine:* 2 to 6 hours generally, 1 hour at Shannon Airport

**Thursday 28th:** Light east to southeasterly airflow over the country. Continuing cold in northern areas, but temperatures rising a little in the south. Widespread frost with ground temperatures staying below zero in most areas throughout the day. Bright or sunny conditions in many areas.

*Rainfall:* nil  
*Temperature:* max. -4°C to 6°C, min. -7°C to 2°C inland, up to 5°C coastal; ground frost down to -11°C in the midlands  
*Sunshine:* nil to 3 hours generally, 6 hours in Malin Head

**Friday 29th:** After a cold frosty night, the day was very cold due mainly to the fresh to strong southeasterly wind. It was mostly dry and bright in the northern half of the country, but frontal troughs off the south coast kept southern parts mostly cloudy and brought rain, sleet and snow to these areas after dark.

*Rainfall:* nil to 3mm, 22mm at Cork Airport  
*Temperature:* max. 2°C to 8°C, min. -7°C to 3°C inland, up to 5°C coastal; ground frost down to -10°C in Claremorris  
*Sunshine:* zero to 1 hour in the south, 3 to 7 hours in the east and west

**Saturday 30th:** Overnight it was cold and windy with frost in northern areas. The rain and sleet in southern parts pushed slowly northwards during the day turning to snow in some places, especially on high ground, and with the strong southeasterly winds it was a bitterly cold day. The rain was again heaviest in the extreme south.

*Rainfall:* nil to 12mm generally, 17mm to 44mm in the south  
*Temperature:* max. 3°C to 11°C, min. 1°C to 5°C inland, up to 8°C coastal; ground frost down to -1°C in Clones  
*Sunshine:* nil or trace

**Sunday 31st:** An occluded front moved northwards across the country during the night and became slow-moving as it did so. There were some outbreaks of rain and drizzle to the north of the front, also some of sleet in places. Conditions to the south of the front were much milder and there were some outbreaks of rain.

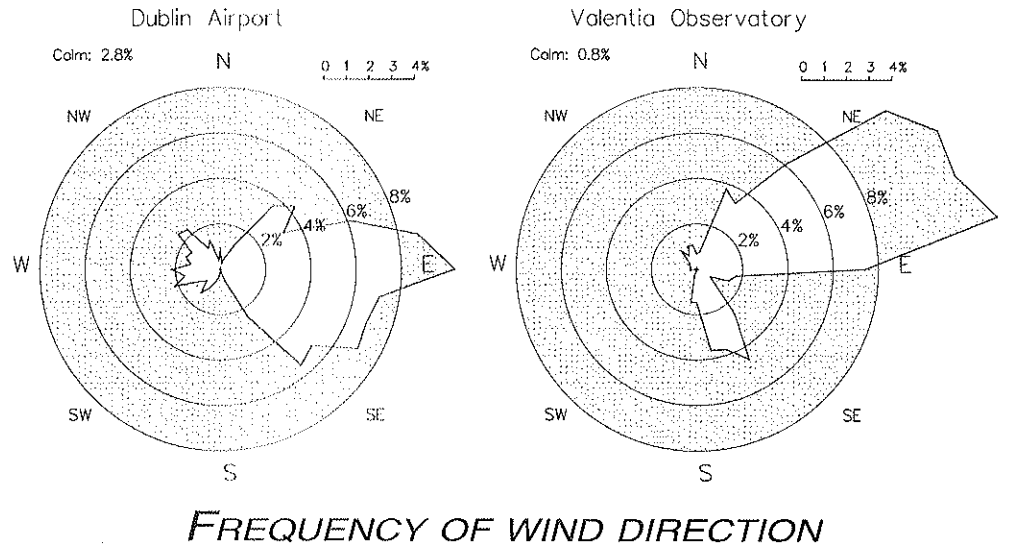
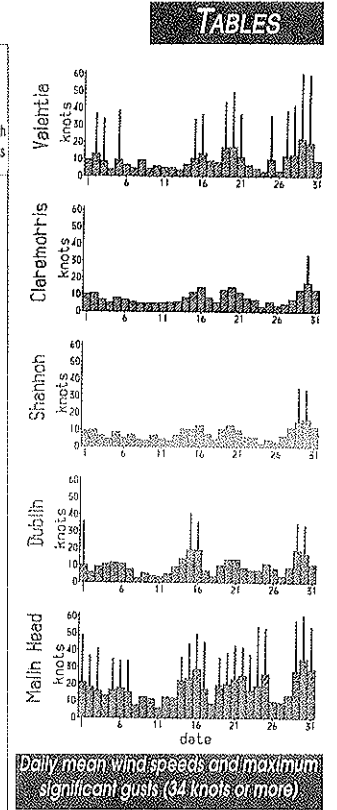
*Rainfall:* 2mm to 8mm generally, 16mm in Kilkenny  
*Temperature:* max. 6°C to 12°C, min. 2°C to 6°C inland, up to 8°C coastal  
*Sunshine:* nil or trace generally, 2 hours at Casement Aerodrome

County / Station	TEMPERATURE (°C)						
	Mean max.	Mean min.	Mean/ deviation from average	Highest max./date	Lowest min./date	Lowest grass min./date	
CO. CARLOW							
CARLOW (OAK PARK)	7.5	1.4	4.5 -1.0	14.0 2	-6.0 27	-9.8 27	
CO. CLARE							
SHANNON AIRPORT	7.5	2.2	4.9 -1.3	15.0 2	-5.6 28	-12.1 26	
CARRON	5.9	0.8	3.4	12.4 2	-6.3 27	-10.5 26	
CO. CORK							
FERMOY (MOORE PARK)	7.7	1.8	4.8 -1.1	13.5 2	-7.0 27	-10.0 26	
CORK AIRPORT	7.8	3.2	5.5 -0.5	12.9 2	-3.2 26 27	-10.2 27	
SHERKIN ISLAND	9.8	4.5	7.2 -0.6	13.4 1 2	-3.1 26	-5.5 26	
CO. DONEGAL							
MALIN HEAD	7.4	2.9	5.2 -1.2	14.4 2	-4.8 28	-6.6 27	
BALLYSHANNON (CATHLEEN'S FALL)	5.9	1.1	3.5 -2.3	14.0 2	-6.1 28		
LETTERKENNY (MAGHERANAN)	5.7	-0.6	2.6	14.0 2	-13.3 28		
CO. DUBLIN							
DUBLIN AIRPORT	6.8	2.1	4.5	14.1 2	-7.9 28	-9.6 27	
CASEMENT AERODROME	7.0	1.9	4.5 -0.8	14.4 2	-7.9 27	-10.6 27	
DUBLIN (MERRION SQUARE)	7.5	3.9	5.7 -1.1	14.5 2	-4.9 27		
CO. GALWAY							
GALWAY (UNIV. COLL.)	6.8	1.7	4.3 -1.9	14.1 2	-5.8 27		
MAAM VALLEY	7.5	2.1	4.8	14.9 2	-4.6 27	-8.5 27	
BALLYGAR	5.9	0.7	3.3	13.9 2	-6.5 27	-10.0 26 28	
CO. KERRY							
VALENTIA OBSERVATORY	9.8	4.1	7.0 -0.7	14.4 2	-3.5 26	-9.0 26	
ARDFERT (LISCAHANE)	7.5	1.8	4.7	14.7 2	-6.0 26	-10.2 26	
CO. KILDARE							
NAAS (GOWRAN GRANGE)	6.5	1.5	4.0	13.5 2	-7.6 27	-9.4 27	
CO. KILKENNY							
KILKENNY	7.0	1.6	4.3 -1.0	14.2 2	-7.2 28	-13.3 26	
CO. LEITRIM							
BALLINAMORE	5.7	0.4	3.1 -1.7	13.9 2	-10.1 27	-11.0 29	
CO. LIMERICK							
MOUNT RUSSELL	6.9	1.8	4.4	13.8 2	-7.5 27	-13.7 27	
CO. LOUTH							
ARDEE (BOHARNAMOE)	7.3	0.7	4.0	14.2 2	-8.9 27	-10.5 29	
CO. MAYO							
CLAREMORRIS	6.1	0.1	3.1 -2.1	13.6 2	-6.6 29	-10.4 29	
BELMULLET	7.7	2.0	4.9 -2.0	14.0 2	-3.2 27	-7.4 27	
STRAIDE	6.1	-0.3	2.9	13.9 2	-7.6 28	-13.7 29	
CO. MEATH							
WARRENSTOWN	6.3	2.0	4.2 -0.8	13.9 2	-8.0 27	-9.5 29	
CO. MONAGHAN							
CLONES	5.3	0.7	3.0 -1.8	13.9 2	-11.0 28	-13.4 26	
CO. OFFALY							
BIRR	6.5	0.7	3.6 -1.8	14.8 2	-7.1 27	-13.0 26	
DERRYGREENAGH	6.0	0.6	3.3 -1.3	13.5 2	-7.5 28	-13.5 29	
CO. SLIGO							
MARKREE CASTLE	6.0	-1.0	2.5 -2.6	14.0 2	-9.6 27		
CO. TIPPERARY							
FETHARD (PARSONSHILL)	5.9	1.8	3.9	13.4 2	-6.6 27	-8.0 27	
CO. WATERFORD							
WATERFORD (TYCOR)	7.8	3.0	5.4 -0.7	13.9 2	-5.3 27		
DUNGARVAN (CARRIGLEA)	8.8	3.0	5.9	14.0 2	-4.2 26	-9.6 27	
CO. WESTMEATH							
MULLINGAR II	5.9	1.0	3.5 -1.2	13.8 2	-8.6 27	-8.5 26	
CO. WEXFORD							
JOHNSTOWN CASTLE	8.2	3.5	5.9 -0.4	14.0 2	-3.6 27	-4.8 27	
ROSSLARE	8.4	4.9	6.7 -0.4	13.3 1	-2.0 26	-3.3 26	
CLONROCHE	6.7	2.8	4.8 -0.8	12.8 2	-4.4 26	-11.0 27	
JOHN F. KENNEDY PARK	7.3	3.2	5.3 -0.6	13.0 1	-6.0 27	-10.0 27	

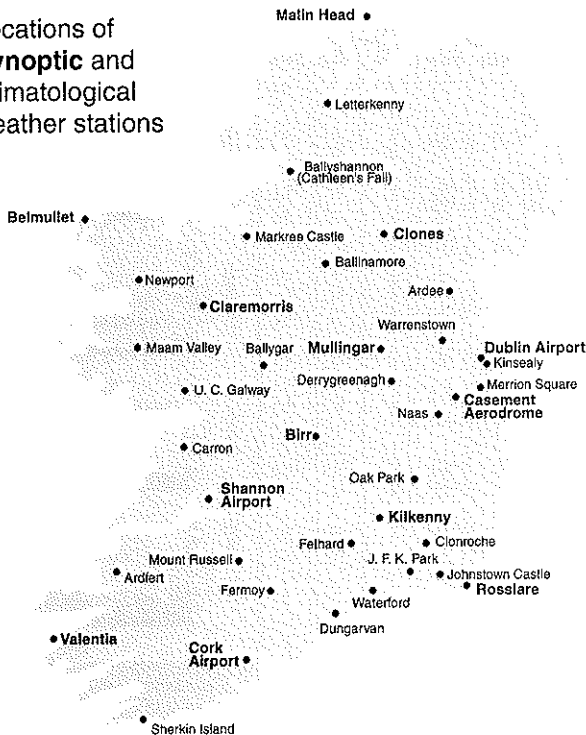
County / Station	RAINFALL (MM)			SUNSHINE (HRS)			
	Total amount	% of average	Most in a day/date	Daily mean (hrs./day)	% of average	% of possible	Most in a day/date
CO. CARLOW							
CARLOW (OAK PARK)	68.9	79	19.5 19	1.04	74	13	5.9 25
CO. CLARE							
SHANNON AIRPORT	73.0	69	20.4 22	1.81	125	23	6.2 10
CARRON	66.7	39	16.0 19				
CO. CORK							
FERMOY (MOORE PARK)	118.0	104	34.6 19	1.17	89	15	5.0 24 25
CORK AIRPORT	173.9	125	36.9 30	1.72	108	22	7.2 4 26
SHERKIN ISLAND	173.4	135	33.2 19	1.74	105	22	6.9 25
CO. DONEGAL							
MALIN HEAD	80.9	72	31.8 21	1.56	168	22	5.8 27 28
BALLYSHANNON (CATHLEEN'S FALL)	42.0	38	11.0 21	1.25	125	17	4.8 8
LETTERKENNY (MAGHERANAN)	64.6		20.0 21				
CO. DUBLIN							
DUBLIN AIRPORT	71.2		14.2 21	1.86	110	25	6.6 26
CASEMENT AERODROME	75.3	98	13.0 30	1.56	103	21	5.8 25 29
DUBLIN (MERRION SQUARE)	75.0	99	14.1 30				
CO. GALWAY							
GALWAY (UNIV. COLL.)	59.7	47	10.2 19	1.60	118	21	6.6 25
MAAM VALLEY	102.1		22.6 30				
BALLYGAR	61.5	56	11.9 21				
CO. KERRY							
VALENTIA OBSERVATORY	85.6	54	36.5 19	1.89	155	24	6.2 25
ARDFERT (LISCAHANE)	96.0		27.9 19				
CO. KILDARE							
NAAS (GOWRAN GRANGE)	55.4		8.3 19				
CO. KILKENNY							
KILKENNY	75.1	82	18.7 19	1.41	94	18	7.0 25
CO. LEITRIM							
BALLINAMORE	84.2	66	20.7 21	1.06	92	14	4.7 29
CO. LIMERICK							
MOUNT RUSSELL	113.4		33.5 19				
CO. LOUTH							
ARDEE (BOHARNAMOE)	85.3	95	13.5 30				
CO. MAYO							
CLAREMORRIS	49.8	40	11.4 21	1.84	151	25	6.1 4
BELMULLET	58.9	48	12.4 21	1.97	181	27	6.4 8
STRAIDE	48.4		9.2 21				
CO. MEATH							
WARRENSTOWN	71.8	76	11.3 21				
CO. MONAGHAN							
CLONES	31.7	33	10.2 21	1.54	133	21	6.1 29
CO. OFFALY							
BIRR	52.2	61	15.8 19	1.21	85	16	6.0 25
DERRYGREENAGH	67.3	74	12.0 21				
CO. SLIGO							
MARKREE CASTLE	not available						
CO. TIPPERARY							
FETHARD (PARSONSHILL)	71.7		18.5 19				
CO. WATERFORD							
WATERFORD (TYCOR)	129.0	117	25.6 19				
DUNGARVAN (CARRIGLEA)	217.0		50.9 29	0.95		27	5.2 4
CO. WESTMEATH							
MULLINGAR II	53.6	55	11.2 21	1.91	124	25	6.8 25
CO. WEXFORD							
JOHNSTOWN CASTLE	129.9	117	26.2 19	1.29	77	17	6.3 25
ROSSLARE	128.8	131	23.3 19	1.39	75	18	6.8 24
CLONROCHE	130.0	105	22.9 19	0.89	58	11	4.7 10
JOHN F. KENNEDY PARK	129.6	117	22.3 19	1.29	88	17	6.4 24

County / Station	WEATHER — No. OF DAYS WITH									MEAN 0900 SOIL TEMPERATURES (°C)		
	Rain days	Wet days	Air frost	Ground frost	Snow	Snow lying	Hail	Thunder	Fog	10cm	20cm	30cm
<b>CO. CARLOW</b>												
CARLOW (OAK PARK)	10	9	11	15						3.7	4.4	5.8
<b>CO. CLARE</b>												
SHANNON AIRPORT	13	11	8	21	2	0	0	0	6	4.6	6.0	7.1
CARRON	16	12	12	20						4.0		5.6
<b>CO. CORK</b>												
FERMOY (MOORE PARK)	14	12	12	15						5.4	6.2	7.1
CORK AIRPORT	18	13	6	10	4	0	0	0	9	5.2	6.3	7.3
SHERKIN ISLAND	21	16	4	8						7.3		8.6
<b>CO. DONEGAL</b>												
MALIN HEAD	15	13	8	12	5	5	6	0	0	4.2	5.3	7.4
BALLYSHANNON (CATHLEEN'S FALL)	12	12	9									
LETTERKENNY (MAGHERENAN)	11	9	17									
<b>CO. DUBLIN</b>												
DUBLIN AIRPORT	17	15	6	18	8	0	3	1	6	4.8	6.3	6.9
CASEMENT AERODROME	18	14	7	16	5	0	2	0	3	3.6	4.6	5.6
DUBLIN (MERRION SQUARE)	19	14	4									
<b>CO. GALWAY</b>												
GALWAY (UNIV. COLL.)	12	11	11									
MAAM VALLEY	15	12	11	20								
BALLYGAR	16	12	16	22								
<b>CO. KERRY</b>												
VALENTIA OBSERVATORY	12	10	5	12	1	0	1	0	0	5.4	6.5	8.4
ARDFERT (LISCAHANE)	18	13	10	18								
<b>CO. KILDARE</b>												
NAAS (GOWRAN GRANGE)	19	11	11	18						4.3		
<b>CO. KILKENNY</b>												
KILKENNY	10	9	10	17		0				4.3	5.2	6.4
<b>CO. LETRIM</b>												
BALLINAMORE	17	14	14	18						5.4	6.3	6.5
<b>CO. LIMERICK</b>												
MOUNT RUSSELL	16	13	11	18						4.1	5.1	
<b>CO. LOUTH</b>												
ARDEE (BOHARNAMOE)	23	15	13	20						4.4	4.9	5.2
<b>CO. MAYO</b>												
CLAREMORRIS	14	11	16	23	8	3	0	0	7	3.1	4.1	5.2
BELMULLET	13	12	9	19	7	0	4	0	1	4.3	5.1	6.5
STRAIDE	12	11	19	24						3.5		
<b>CO. MEATH</b>												
WARRENTOWN	18	13	8	14						3.6	4.5	5.5
<b>CO. MONAGHAN</b>												
CLONES	15	10	11	18		6				4.7	5.6	6.5
<b>CO. OFFALY</b>												
BIRR	13	9	15	19		0				3.9	5.2	6.2
DERRYGREENAGH	18	16	12	23								
<b>CO. SLIGO</b>												
MARKREE CASTLE			18									
<b>CO. TIPPERARY</b>												
FETHARD (PARSONSHILL)	14	10	8	12						5.0	5.6	
<b>CO. WATERFORD</b>												
WATERFORD (TYCOR)	18	14	5									
DUNGARVAN (CARRIGLEA)	13	12	7	14							6.6	7.2
<b>CO. WESTMEATH</b>												
MULLINGAR II	17	12	11	20		6				3.4	4.6	5.7
<b>CO. WEXFORD</b>												
JOHNSTOWN CASTLE	18	15	5	11						4.6	5.6	6.3
ROSSLARE	18	16	2	7	2	0	4	0	1	5.6	6.8	8.1
CLONROCHE	16	14	7	18						5.1	5.8	6.7
JOHN F. KENNEDY PARK	16	14	5	15						5.1	6.0	8.0

County / Station	WIND (KTS)						Days with gales	Days with gale gusts	Hours with gale gusts
	Mean speed	Max. 10-min. dir. speed	mean date/hour	Max. Gust dir. speed	date/time				
<b>CO. CLARE</b>									
SHANNON AIRPORT	7.8	110°	24 29/21	110°	35 29/2044	0	2	2	
<b>CO. CORK</b>									
CORK AIRPORT	10.7	090°	27 30/06	100°	38 29/1621	0	4	28	
				090°	38 30/0528				
<b>CO. DONEGAL</b>									
MALIN HEAD	17.9	040°	42 24/24	110°	61 30/1635	9	20	202	
<b>CO. DUBLIN</b>									
CASEMENT AERODROME	8.5	110°	31 29/22	110°	46 29/2215	6	4	28	
DUBLIN AIRPORT	9.6	070°	26 15/16	070°	43 15/1532	6	5	23	
<b>CO. KERRY</b>									
VALENTIA OBSERVATORY	9.4	080°	32 29/17	080°	61 29/1647	0	13	66	
<b>CO. KILKENNY</b>									
KILKENNY	4.6	110°	18 16/03	090°	32 15/2234	0	6	0	
				080°	32 16/1916				
<b>CO. MAYO</b>									
BELMULLET	11.0	190°	33 1/05	280°	50 3/0305	6	13	64	
<b>CLAREMORRIS</b>	8.1	080°	22 30/12	090°	34 30/1148	6	1	1	
<b>CO. MONAGHAN</b>									
CLONES	6.0	080°	19 30/13	080°	38 30/1116	0	1	5	
<b>CO. OFFALY</b>									
BIRR	4.2	060°	22 16/17	050°	38 16/1140	0	1	10	
<b>CO. WESTMEATH</b>									
MULLINGAR II	4.4	070°	17 16/13	070°	36 16/1239	0	1	1	
<b>CO. WEXFORD</b>									
ROSSLARE	11.3	050°	27 19/22	070°	44 15/1959	6	8	70	



## Locations of Synoptic and Climatological weather stations



## Notes on the tables

### A. General

1. Rainfall amounts are given in millimetres, temperature in degrees Celsius, sunshine duration in hours and wind speed in knots. (1 knot=1.15 m.p.h.)
2. Rainfall amounts are measured at climatological stations at 0900GMT and credited to the previous day. At synoptic stations daily totals refer to the 24-hour period ending at 0600GMT the following day. The term rainfall includes all forms of precipitation, such as snow and hail, and deposition from dew or frost, measured as equivalent rain.
3. 'Raindays' and 'wetdays' are days during which the total rainfall is not less than 0.2mm and 1.0mm respectively.
4. A 'day' for the purposes of this publication refers to the period from 0900GMT on this particular day to 0900GMT on the following day. (This is because climatological stations make their daily observations at 0900GMT.)
5. The mean daily air temperature over a period is taken as the mean of the daily maxima and daily minima (averaged separately over the period).
6. Days with air frost are those during which the minimum air temperature was below 0°C. Similarly days with ground frost indicate days when the grass minimum temperature was below 0°C. (Grass minimum temperatures are measured by a thermometer placed horizontally on pegs just above the tips of short grass.)
7. Mean soil and earth temperatures are based on readings taken at 0900GMT.
8. A gale is a mean wind over a 10 minute period of 34 knots or more. A gale gust is a gust of 34 knots or more. All wind speeds refer to the wind at an effective height of 10 metres above the ground.
9. 'e' denotes that the value is calculated using one or more estimated readings.
10. Data from Northern Ireland is kindly provided by the Belfast Weather Centre.

### B. Agmet

11. Calculated Potential Evapotranspiration (P.E.) values are based on values of temperature, sunshine, wind speed and vapour pressure using the Penman formula. Because of formula limitations, negative values can occur in winter; these are replaced in the table by zero. Measured P.E. values are those measured by means of soil-filled tanks sunk into the ground with their upper grass-covered ends at surface level.
12. Soil moisture deficits and surpluses are computed from the differences between rainfall and actual evapotranspiration (A.E.). Estimates of A.E. are derived from measured values of P.E. (See Agmet Memo No. 1, 1968). Soil moisture surpluses are assumed to be removed by drainage and surface runoff and are not therefore carried forward from one period to the next. Soil moisture deficits are regarded as being cumulative. Where heavy rain occurs near the end of the fixed period, the date of cut-off may be adjusted to avoid error due to insufficient run-off time.
13. Degree day totals are calculated using the method set out by McVicker in the Journal of Heating and Ventilating Engineers (Vol. 14 No. 18, Nov-Dec 1946).
14. Global solar radiation values are given in MJ/sq.m. correct to two decimal places (3.6MJ=1kWh).

The **Monthly Weather Bulletin** is produced by the Climatology and Observations Division of the Meteorological Service. The annual subscription to the bulletin costs £36. Further climatological information is available from the Climate Enquiries Office, Glasnevin Hill, Dublin 9, telephone 01-8375436, fax 01-8369115.

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