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Monthly Weather Bulletin December 2006

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Monthly Weather Bulletin

No. 248

DECEMBER 2006



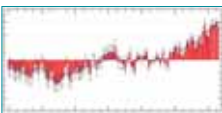
INSIDE

**End-of-year storm
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**Warmest year on
record in places**



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



The weather during the first half of the month was wet and windy, continuing the very unsettled spell since late November. This picture, taken in Cork early in the month, shows the results of another day of strong winds and heavy rain. (picture: Irish Examiner)

MILD, WET AND WINDY; SUNNIEST IN EAST AND NORTH

Summary: December was a month of contrasting weather types, as wet and windy weather during the first half of the month was replaced by much calmer conditions with little rainfall, but with widespread frost and fog at times. Late in the month, unsettled but very mild conditions returned. The early part of December was dominated by deep Atlantic depressions to the northwest of Ireland, bringing spells of heavy rain at times; following the very wet second half of November, there was significant river flooding in some midland and western areas. Rainfall

totals for the month were above normal everywhere and were significantly above normal in parts of the midlands, west and north. It was the wettest December for 6 or 7 years generally. There were between 15 and 23 wetdays (days with 1mm or more rainfall) during the month, slightly above the normal range for December. Most of the month was mild, but temperatures fell close to or below normal during the spell of calmer weather between the 15th and 25th. Air frost was mostly confined to the period between the 19th and 23rd; the total of between 3 and 5 air frosts

at inland stations was only around half of the normal number for December, while there was no air frost recorded at most coastal stations. Sunshine totals varied widely across the country; Dublin Airport's total of 69 hours was more than twice the amount recorded in parts of the west.

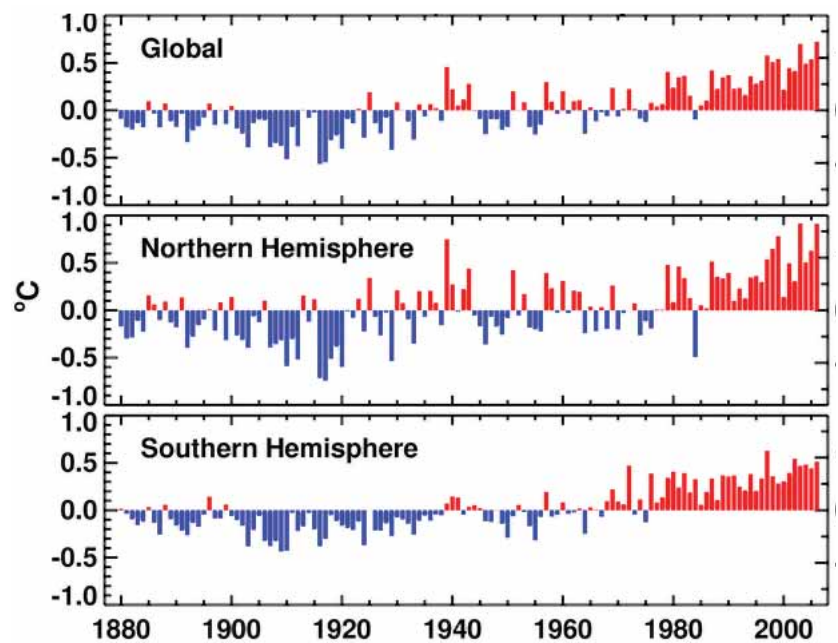
1st to 17th: A series of very deep depressions passing to the northwest of Ireland brought rain or showers each day, accompanied by strong southwesterly winds. Heaviest falls were recorded in the periods 2nd to 4th and 13th to 15th; close to 100mm of rain was measured in places in the 5-day period between November 30th and December 4th, causing some significant flooding. Further disruption

was caused by very strong winds at times, with gale gusts at all stations between the 1st and 3rd and also on the 7th and 13th. Thunder was frequent early in the period. Temperatures were near or above normal throughout, while many days during the period were dull.

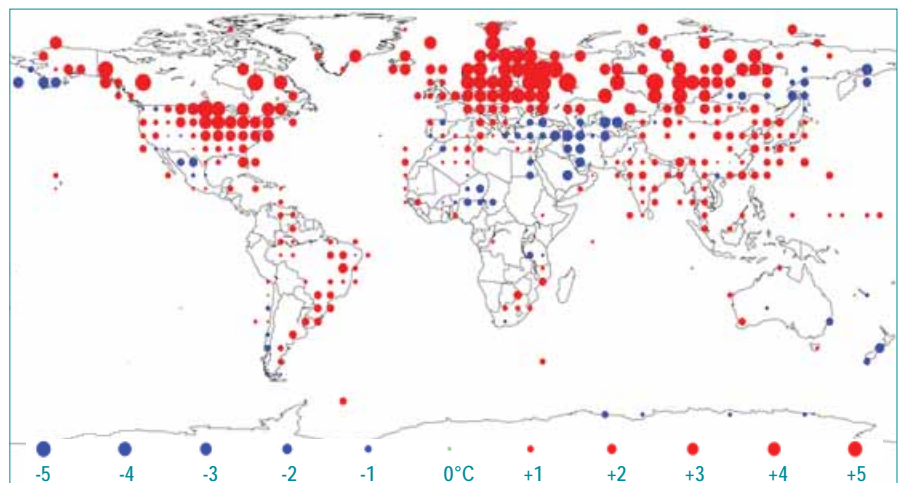
18th to 26th: An intense anticyclone drifted slowly eastwards across Ireland to become centred over southern England for much of the period. This period was dry apart from some light showers in places, but very light winds allowed fog to become dense and widespread between the 18th and 20th. Daytime temperatures fell below normal, especially in areas where fog was persistent, while ground frost was widespread up to the 23rd. Much of the

Warmest December on record globally

December global surface temperature anomalies, 1880-2006

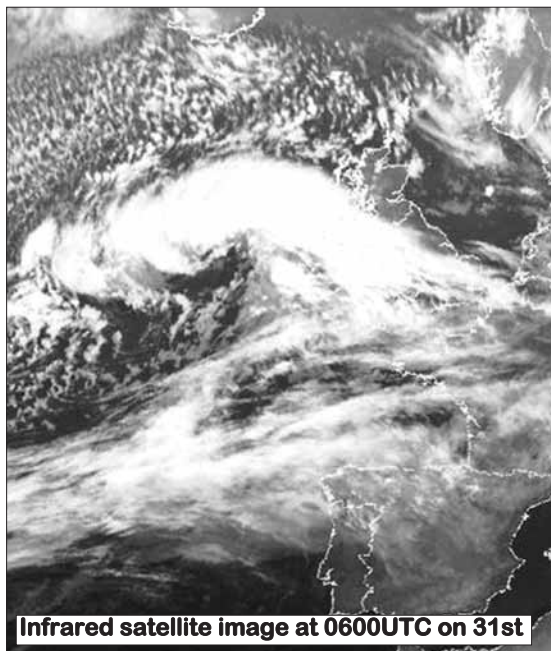


December 2006 Temperature anomalies with respect to 1961-90 base period



Right

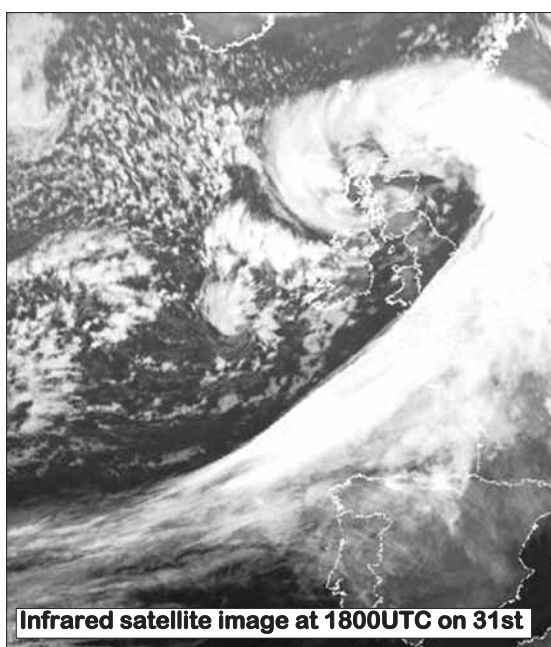
This month was the warmest December since global surface records began in 1880 for combined global land and ocean surface temperatures, with an overall value of 0.74°C above normal for the 1961-90 period. The previous warmest December was in 2003. (charts: NOAA / NCDC, U.S. Department of Commerce)



Infrared satellite image at 0600UTC on 31st



Infrared satellite image at 1200UTC on 31st



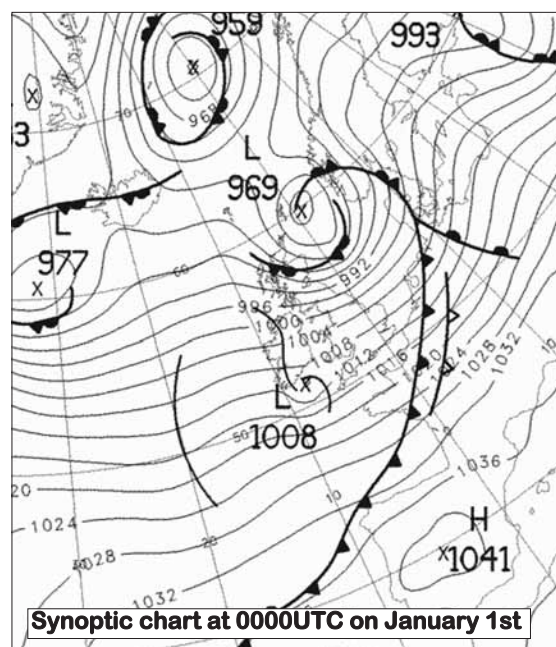
Infrared satellite image at 1800UTC on 31st

Right
 The year ended with a deep and rapidly-moving storm system passing close to Ireland's north coast on the 31st. Heavy rain over northern areas was followed by intense shower activity during the afternoon, producing hail and thunderstorms, with tornadoes reported over Ulster. Winds gusted above 100km/hour over the northern half of the country. Malin Head's gust of 79 knots (145km/hour) during the late afternoon was the highest gust of the year at any station, while mean speeds there at the same time reached 56 knots (103km/hour) or Beaufort force 11- violent storm force.

period was dull, but there were long sunny spells at first in some areas where fog cleared during daylight hours.

27th to 31st: As the anticyclone moved away eastwards, Atlantic depressions again moved close to the northwest coast, bringing a return to wet and windy conditions over Ireland. Heaviest falls on most days were in southern and western areas, but a deep depression on the 31st affected northern areas in particular- *see left and below*. Strong to gale force southerly winds brought very mild air across all parts of the country.

Wind and elements: Mean windspeeds for the month were between 9 and 13 knots generally (17 and 24km/hour) and up to 18 knots (33km/hour) in the north and northwest. These were the highest mean winds for December since 1999. The highest gust of the month, 79 knots (146 km/hour), was measured at Malin Head on the 31st, its highest December gust since 1998 and the highest gust at any station during 2006. Both hail and thunder were recorded on several days during the first half of the month, especially in the periods 1st to 3rd and 8th to 12th; they were also recorded in the period 29th to 31st. Most unusually for December, there was no snow observed at any station. Fog, with freezing fog in places, was very widespread between the 18th and 20th.

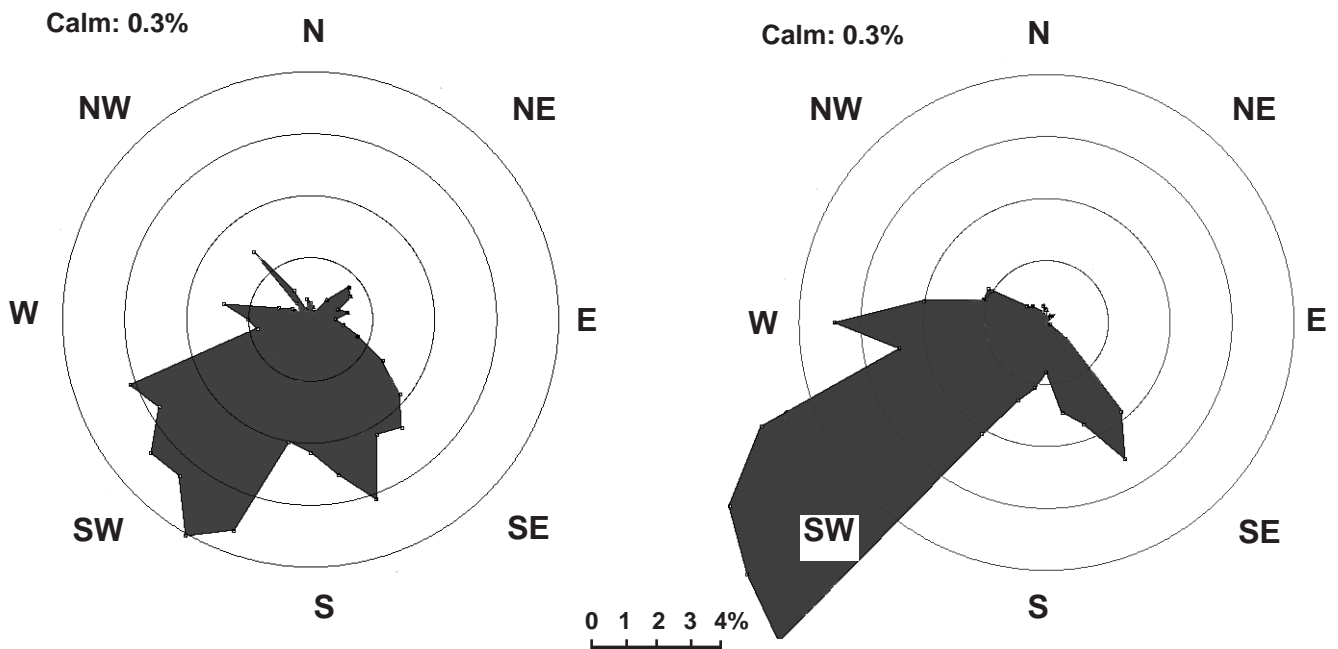


Synoptic chart at 0000UTC on January 1st

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. CLARE SHANNON AIRPORT	11.4	230°	42	31/15	230°	58	3/1054	4	14	100	0	0	3	1	4
CO. CORK CORK AIRPORT	12.0	190°	36	2/23	190°	61	2/2240	2	17	171	0	0	0	0	5
CO. DONEGAL MALIN HEAD	17.5	280°	56	31/18	280°	78	31/1718	9	21	248	0	0	8	3	2
CO. DUBLIN CASEMENT AERODROME	13.0	180°	39	3/02	240°	62	3/1336	6	15	158	0	0	0	0	3
DUBLIN AIRPORT	13.1	190°	39	29/07	240°	67	3/1402	2	16	138	0	0	0	0	0
CO. KERRY VALENTIA OBSERVATORY	12.6	230°	39	31/12	240°	58	31/1437	4	19	186	0	0	6	2	0
CO. KILKENNY KILKENNY	9.2	250°	35	3/13	250°	54	3/1239	3	10	70	0	0	0	0	4
		220°	35	31/12	220°	54	31/1144								
CO. MAYO BELMULLET	16.0	230°	45	31/10	250°	69	31/1319	9	20	255	0	0	10	2	1
KNOCK AIRPORT	10.9	240°	35	3/09	240°	65	3/0850	2	14	109	n/a	0	----	n/a	---
		240°	35	31/15											
CO. MONAGHAN CLONES	9.4	200°	37	29/22	220°	56	31/1440	1	10	66	n/a	0	----	n/a	---
CO. OFFALY BIRR	9.0	230°	31	31/13	230°	52	31/1254	0	9	52	n/a	0	----	n/a	---
CO. WESTMEATH MULLINGAR II	8.4	230°	31	31/14	230°	52	31/1425	0	7	45	n/a	0	----	n/a	---
CO. WEXFORD ROSSLARE	12.8	190°	40	3/01	190°	64	2/2346	2	16	229	0	0	1	0	2

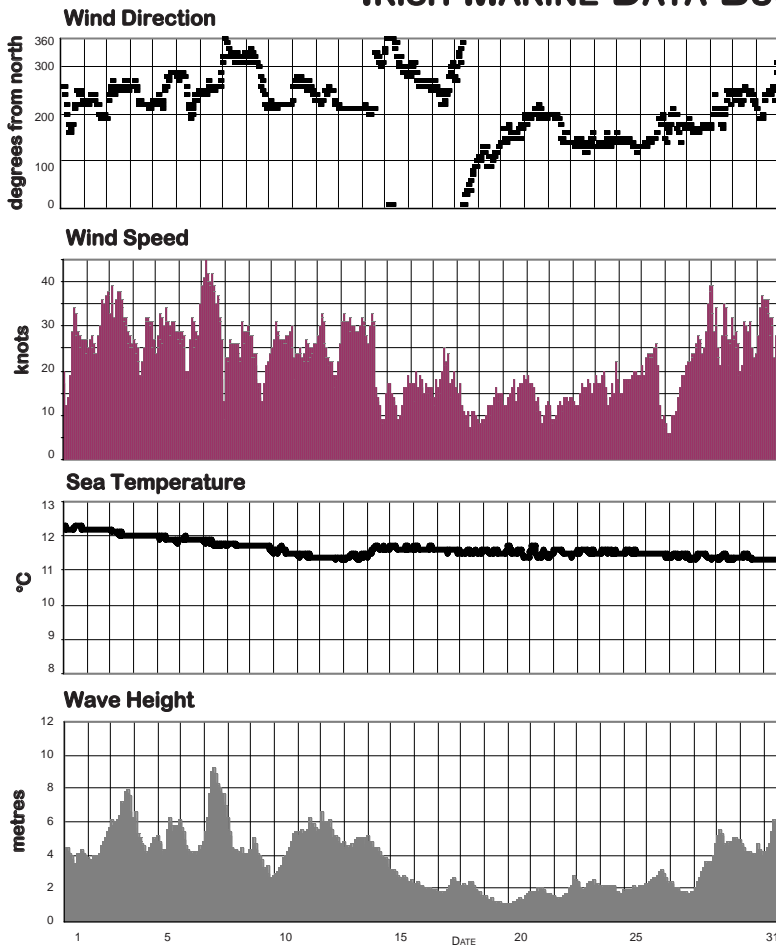
Valentia Observatory

Dublin Airport



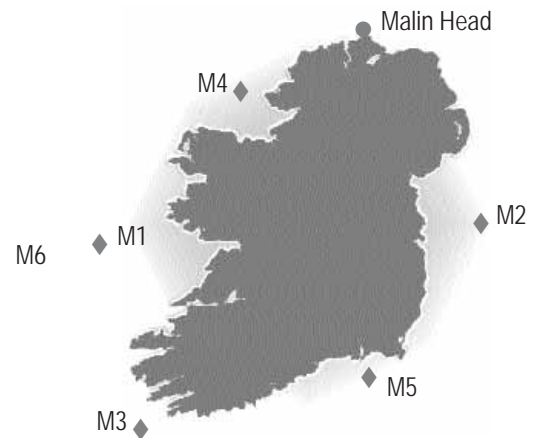
FREQUENCY OF WIND DIRECTION

MARINE OBSERVATIONS FROM IRISH MARINE DATA BUOY NETWORK



Buoy	Sea surface temp. (°C)	Mean wind speed (knots)	Max. 10-min wind (knots)	Mean wave height (m.)	Max. wave height (m.)
M1		not available			
M2		not available			
M3	11.6	21.6	45	3.5	9.3
M4	10.7	20.3	47	4.0	9.1
M5	11.7	20.4	43	3.2	8.1
M6	11.6	24.0	49	5.3	13.8
Malin Head	10.2	(1.7°C above normal)			

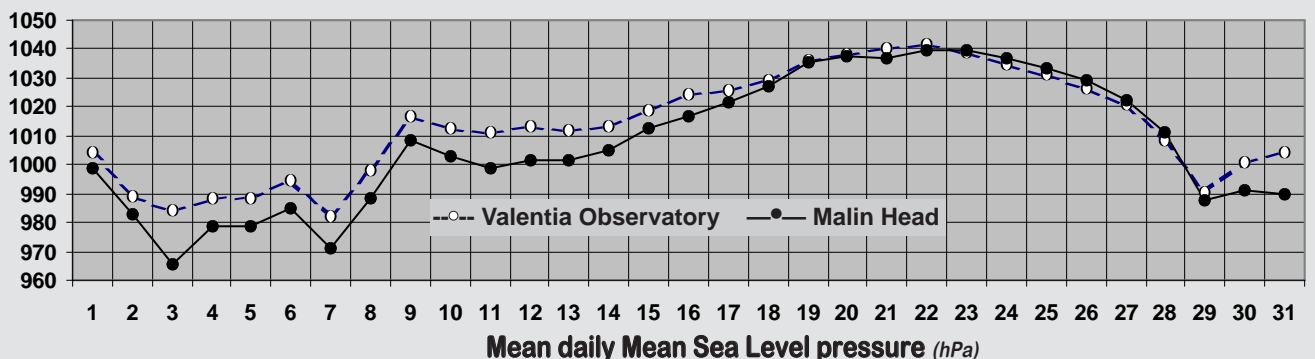
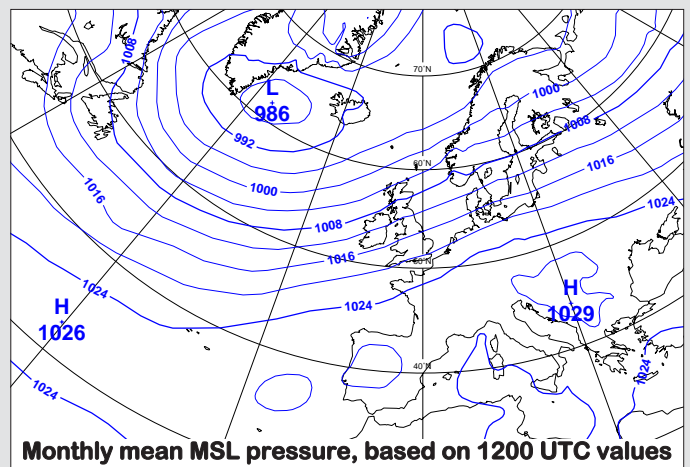
Summary of Mean Monthly Values



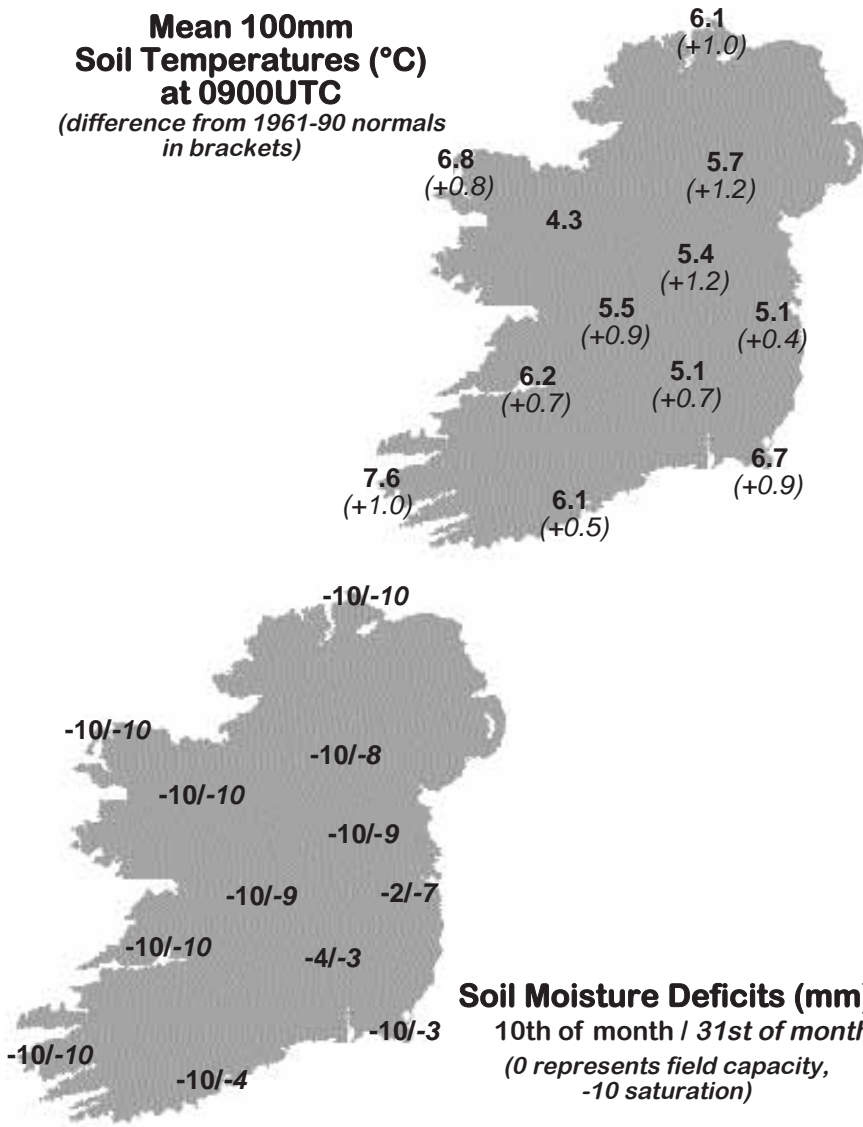
Hourly wind and wave conditions at M3 (51°13'N, 10°33'W)

MEAN ATMOSPHERIC PRESSURE

There was a wide variation in pressure values during the month, with low pressure during the first and final weeks, but above normal values during the middle part of the month. Mean sea level pressure values overall varied between 1009hPa in the north and 1015hPa in the southeast, close to normal values for December. The highest pressure value of the month, 1044.8hPa, was recorded at Kilkenny on both the 21st and 22nd, while the lowest value, 957.9hPa, was measured at Malin Head on the 3rd.



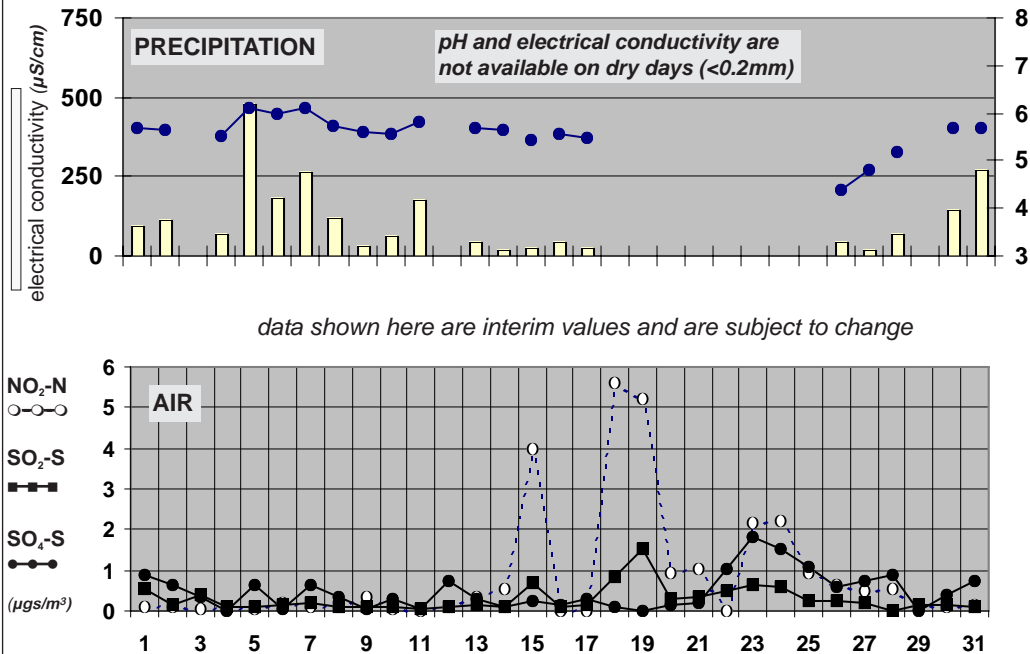
**Mean 100mm
Soil Temperatures (°C)
at 0900UTC**
*(difference from 1961-90 normals
in brackets)*



Soil Temperatures at 0900UTC

County/ Station	°C		
	100mm	200mm	300mm
CO. CLARE			
SHANNON AIRPORT	6.2	6.8	7.6
CARRON	6.8		7.3
CO. CORK			
FERMOY (MOORE PARK)	6.8	7.3	7.7
CORK AIRPORT	6.1	6.9	7.9
SHERKIN ISLAND	8.4		9.6
BALLINCURRIG (PEAFIELD)	5.2	6.2	7.2
CO. DONEGAL			
MALIN HEAD	6.1	6.9	8.1
CO. DUBLIN			
DUBLIN AIRPORT	5.1	5.7	6.6
CASEMENT AERODROME	5.1	5.8	6.8
CO. KERRY			
VALENTIA OBSERVATORY	7.6	8.4	9.3
CO. KILKENNY			
KILKENNY	5.1	5.8	6.7
CO. LIMERICK			
MOUNT RUSSELL	5.8	6.4	
CO. LOUTH			
ARDEE (BOHARNAMOE)	6.1	6.5	6.5
CO. MAYO			
BELMULLET	6.8	7.7	8.3
STRAIDE	6.3		
KNOCK AIRPORT	4.3	5.2	6.3
CO. MEATH			
WARRENSTOWN	5.0	5.9	6.4
CO. MONAGHAN			
CLONES	5.7	6.1	6.5
CO. OFFALY			
BIRR	5.5	6.5	7.4
CO. TIPPERARY			
FETHARD (PARSONSHILL)	5.5	6.5	
CO. WATERFORD			
DUNGARVAN (CARRIGLEA)		6.6	7.3
CO. WESTMEATH			
MULLINGAR II	5.4	6.1	6.9
CO. WEXFORD			
JOHNSTOWN CASTLE	6.2	6.8	7.0
ROSSLARE	6.7	7.5	8.1
JOHN F. KENNEDY PARK	5.6	6.8	8.4
CLONROCHE (KNOXTOWN)	6.0	6.5	7.5

**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	42.8	-	7	5	7.9	2.6	5.3	-	-1.0	19	2	17	1	-2.9	19	6	-	-	10.8	-
	21-end	36.6	-	6	6	8.9	3.3	6.1	-	-2.8	23	3	27	2	-4.6	23	3	-	-	11.5	-
	month	180.5	-	23	21	9.1	3.4	6.3	-	-2.8	23	5	74	5	-4.6	23	9	-	-	33.0	-
Co. Cork	1-10	71.3	-	9	9	11.0	4.2	7.6	-	1.0	8	0	35	3	-5.0	9	7	7.0	8.3	18.2	-
Fermoy	11-20	27.7	-	7	5	8.7	3.0	5.9	-	-1.5	16	3	25	4	-5.6	17	7	6.7	7.7	12.7	-
	21-end	56.7	-	8	5	9.9	4.6	7.3	-	-2.6	22	2	37	3	-7.5	22	6	6.7	7.2	7.2	-
	month	155.7	143	24	19	9.9	4.0	7.0	1.2	-2.6	22	5	97	10	-7.5	22	20	6.8	7.7	38.1	93
Co. Donegal	1-10	154.0	-	10	10	9.7	3.8	6.8	-	1.5	10	0	26	2	-1.1	10	3	-	-	-	-
Glenties	11-20	81.8	-	8	7	8.8	2.0	5.4	-	-2.1	20	3	19	1	-4.5	20	6	-	-	-	-
	21-end	69.7	-	6	5	8.9	4.5	6.7	-	0.4	21	0	27	1	-1.4	21	3	-	-	-	-
	month	305.5	180	24	22	9.1	3.5	6.3	1.1	-2.1	20	3	71	4	-4.5	20	12	-	-	-	-
Co. Kerry	1-10	91.6	-	10	10	11.0	5.4	8.2	-	3.5	9	0	39	3	-3.0	1	5	-	-	5.8	-
Ardfert	11-20	57.8	-	7	7	9.3	4.0	6.7	-	-2.3	19	2	29	2	-8.0	19	6	-	-	9.4	-
	21-end	36.1	-	6	5	10.5	4.2	7.4	-	0.5	23	0	35	3	-5.1	23	7	-	-	9.6	-
	month	185.5	-	23	22	10.3	4.5	7.4	0.7	-2.3	19	2	103	9	-8.0	19	18	-	-	24.8	-
Co. Louth	1-10	52.6	-	9	9	10.1	4.8	7.5	-	1.9	8	0	32	2	-1.1	3	3	6.8	7.4	-	-
Ardee	11-20	26.1	-	5	5	8.5	2.8	5.7	-	-0.6	20	1	19	1	-1.7	20	3	6.2	6.5	-	-
	21-end	17.9	-	7	7	8.9	2.9	5.9	-	-3.0	24	3	26	2	-4.6	24	3	5.5	5.7	-	-
	month	96.6	118	21	21	9.1	3.5	6.3	1.3	-3.0	24	4	76	5	-4.6	24	9	6.1	6.5	-	-
Co. Waterford	1-10	86.0	-	9	8	11.3	4.6	8.0	-	1.3	10	0	37	4	0.4	10	0	-	7.8	26.4	-
Dungarvan	11-20	30.0	-	6	5	9.1	3.6	6.4	-	0.4	19	0	26	3	-0.9	17	3	-	7.1	21.1	-
	21-end	77.4	-	6	5	10.5	5.2	7.9	-	-0.8	22	1	41	5	-2.4	22	2	-	7.0	8.8	-
	month	193.4	-	21	18	10.3	4.5	7.4	1.2	-0.8	22	1	105	11	-2.4	22	5	-	7.3	56.3	126
Co. Wexford	1-10	86.3	-	7	7	10.9	5.3	8.1	-	3.4	9	0	38	3	-2.4	10	3	6.6	7.9	21.1	-
Johnstown Castle	11-20	25.0	-	5	4	9.3	4.6	7.0	-	1.2	16	0	28	2	-3.2	20	4	5.9	6.8	19.4	-
	21-end	51.1	-	7	6	10.3	5.3	7.8	-	1.1	23	0	39	3	-3.7	23	3	6.2	6.6	7.3	-
	month	162.4	148	19	17	10.2	5.1	7.7	1.6	1.1	23	0	105	8	-3.7	23	10	6.2	7.0	47.8	-

MEASURED POTENTIAL EVAPOTRANSPIRATION (P.E.) AND SOIL MOISTURE					
County/ Station	Period	P.E. (mm)		Soil Moisture (mm)	
		Amount	Deficit	Accum'ltd	Surplus
Co. Kerry	1-10	18.9	-	0	114
Valentia Obs.	11-20	0.0	-	0	64
	21-end	24.6	-	0	29
	month	43.5			
Co. Wexford	1-10	21.1	-	0	66
Johnstown Castle	11-20	0.0	-	0	48
	21-end	5.7	-	0	42
	month	26.8			

MONTHLY EVAPORATION (MM) FROM CLASS A PAN			
County	Station	Monthly Rainfall (mm)	Monthly Evaporation (mm)
Clare	Kilmaley	275.1	19.4
Cork	Fermoy (Moorepark)	155.7	14.8
Kerry	Valentia Observatory	224.0	65.0
Kildare	Poulaphuca	145.1	0.6
Mayo	Newport (Furnace)	260.3	7.4
Offaly	Derrygreenagh	125.7	4.2
Waterford	Dungarvan (Carriglea)	193.4	6.8
Wexford	Johnstown Castle	162.4	21.1

P.E. (Penman)		GLOBAL SOLAR RADIATION (MJ/sq. m.)			
County/ Station	total for month(mm)	10-day totals			Total for month
		1-10	11-20	21-end	
Co. Clare	Shannon Airport	7			
Co. Cork	Cork Airport	0			
Co. Donegal	Malin Head	16	15.81	14.98	14.76
Co. Dublin	Dublin Airport	8	22.91	19.45	18.09
	Casemt Aerodrome	9			
Co. Kerry	Valentia Obs.	20	18.21	18.73	17.82
Co. Kilkenny	Kilkenny	2	24.17	16.16	17.28
Co. Mayo	Belmullet	14	13.05	14.14	15.90
	Knock Airport	0			
Co. Monaghan	Clones	0	16.63	14.30	15.93
Co. Offaly	Birr	2	18.72	17.98	17.27
Co. Westmeath	Mullingar	0			
Co. Wexford	Rosslare	8			

SEE BACK PAGE OF JANUARY ISSUE FOR NOTES ON THE DATA

Friday 1st: Bands of heavy thundery showers moved into the southwest and west during the morning, crossing the country through the afternoon. The shower activity decreased and became confined to the west by evening. Sunny in parts of the east; broken cloud elsewhere allowed just a little sunshine. Winds were light southwesterly, increasing moderate to strong during the afternoon, later easing but continuing fresh to strong near western coasts.

Rainfall: trace to 11mm, heaviest at Valentia, trace at Dublin Airport
Temperature: max. 9°C to 14°C, min. 2°C to 7°C, ground temperatures down to -4°C at Kilkenny

Sunshine: trace to 5 hours, sunniest at Casement Aerodrome, trace at Belmullet

Saturday 2nd: A dry, sunny morning in the midlands and east, but showers in the west continued through the morning, with strong winds. Rain in western areas by early afternoon spread quickly eastwards with some heavy outbreaks in places, and south to southwesterly winds increased further also. The evening and night were very windy throughout, with rain in all parts of the country.

Rainfall: 2 to 33mm, heaviest at Belmullet, 2mm at Dublin Airport
Temperature: max. 11°C to 13°C, min. 4°C to 9°C, ground temperatures down to -1°C at Kilkenny

Sunshine: trace to 5 hours, sunniest at Dublin Airport, trace at Valentia

Sunday 3rd: It was a cool, wet and very windy day generally with frequent showers or outbursts of rain. Some of these were heavy and of hail. Some short sunny spells in the southern half of the country in the afternoon. Fresh to strong and gusty southwesterly winds with some severe gusts during the day.

Rainfall: 3 to 14mm generally, 32mm at Mullingar, 3mm at Valentia
Temperature: max. 9°C to 13°C, min. 4°C to 8°C, no ground frost

Sunshine: nil to 3 hours, sunniest at Rosslare

Monday 4th: Scattered showers overnight and windy in the northern half of the country. Continuous rain moved into the southwest by mid-morning and spread to all parts during the day, heavy at times. Generally dull with little or no sunshine. Moderate to fresh and gusty southwesterly winds, gale force at times.

Rainfall: 3 to 15mm, heaviest at Valentia, 3mm at Malin Head
Temperature: max. 11°C to 14°C, min. 5°C to 9°C, ground temperatures down to -1°C at Kilkenny

Sunshine: nil to <1 hour generally, 2 hours at Clones

Tuesday 5th: Showers, sometimes heavy, continued during the entire period, prolonged in many areas. Some sunny periods during the day, mainly in northern areas. Winds were southwesterly initially, light to moderate during the night, veering westerly during the afternoon and steadily increasing during the evening, up to gale force at times with strong gusts.

Rainfall: 2 to 16mm, heaviest at Shannon Airport, 2mm at Clones
Temperature: max. 7°C to 13°C, min. 4°C to 7°C, ground temperatures below zero at Kilkenny

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

Wednesday 6th: The day was cold and breezy with scattered showers and sunny spells. Milder, wetter weather moved in from the Atlantic in the late afternoon and spread to all areas during the evening. Some thunder was reported also. Winds were southwesterly, moderate to fresh and gusty.

Rainfall: 1 to 18mm, heaviest at Clones, 1mm at Casement Aerodrome
Temperature: max. 7°C to 12°C, min. 4°C to 8°C, no ground frost

Sunshine: trace to 6 hours, sunniest at Rosslare, trace at Mullingar

Thursday 7th: Heavy showers throughout the 24 hour period, merging into more organised bands of persistent rain during the afternoon in parts of the south and west. Mainly cloudy, some sunshine in the southeast. Winds were strong southwesterly, reaching gale or strong gale at times in the south and southwest, veering northwesterly and gradually decreasing by evening.

Rainfall: 1 to 20mm, heaviest at Mullingar, 1mm at Rosslare
Temperature: max. 8°C to 12°C, min. 4°C to 8°C, no ground frost

Sunshine: nil to 2 hours, sunniest at Rosslare and Cork Airport

Friday 8th: Dry during the morning in eastern areas, but showery in the west. This pattern continued for the rest of the period with just the odd shower in eastern regions. Some of the showers were heavy and prolonged and some of hail. Some periods of sunshine also, mainly in eastern areas. Winds were from a northwesterly direction, light in eastern areas mainly but up to gale force in western areas with stronger gusts.

Rainfall: nil to 9mm, heaviest at Knock Airport

Temperature: max. 6°C to 9°C, min. 2°C to 7°C ground temperatures down to -1°C at Shannon Airport

Sunshine: trace to 6 hours, sunniest at Rosslare, trace at Belmullet

Saturday 9th: Showers in western areas overnight, dry further east with some clear spells and some ground frost also. The showers continued in parts of the west during the morning, with sunny spells elsewhere. Cold. The afternoon was mostly dry apart from well scattered showers in western coastal areas. Winds were northwesterly, moderate to strong with gusts along coastal areas.

Rainfall: nil to 6mm, heaviest at Malin Head

Temperature: max. 5°C to 10°C, min. 2°C to 5°C, ground temperatures down to -5°C at Kilkenny

Sunshine: 2 to 7 hours, sunniest at Rosslare, 2 hours at Malin Head

Sunday 10th: Patchy, drizzly rain early in the night was followed by heavier persistent rain spreading into the southwest. By dawn it was raining in all areas, with heavy pulses in both the southeast and the northwest. It remained generally wet countrywide through daylight hours. Mild. Winds were southwesterly, near gale force in the west, fresh to strong elsewhere, decreasing slightly later.

Rainfall: 4 to 28mm, heaviest at Valentia, 4mm at Casement Aerodrome

Temperature: max. 11°C to 14°C, min. 2°C to 10°C, no ground frost

Sunshine: nil

Monday 11th: Scattered showers for much of the day, heaviest and most frequent in the west and north. By evening the showers were mainly confined to northwestern coasts. Some sunny spells also, particularly in the east. Winds were southwest or westerly, fresh to strong, up to gale force in the west. The winds decreased gradually during the day, but remained strong in the west.

Rainfall: 1 to 9mm, heaviest at Malin Head, 1mm at Clones

Temperature: max. 8°C to 13°C, min. 2°C to 7°C, ground temperatures down to -1°C at Kilkenny

Sunshine: 1 to 6 hours, sunniest at Rosslare, 1 hour at Belmullet

Tuesday 12th: Rain in the northwest late in the night spread southeastwards, with winds becoming very strong overnight. A windy morning with rain or showers affecting all areas. Showers during the afternoon with some sunny spells. Winds were southwesterly, strong and gusty, generally easing by evening.

Rainfall: nil to 21mm, heaviest at Shannon Airport, nil at Dublin Airport

Temperature: max. 8°C to 13°C, min. 2°C to 8°C, ground temperatures down to -5°C at Kilkenny

Sunshine: nil to 3 hours, sunniest at Mullingar, nil at Valentia

Wednesday 13th: Dry early in the night in most places with occasional outbreaks of rain in the northwest and north. This rain quickly spread to all areas except the southeast and east where it remained dry throughout. Generally dull and mild throughout. Winds were southwesterly, strong to gale force with gale gusts throughout, strongest in the northwest.

Rainfall: nil to 24mm, heaviest at Malin Head, nil in the east

Temperature: max. 11°C to 14°C, min. 6°C to 12°C, no ground frost

Sunshine: nil generally, trace at Casement Aerodrome

Thursday 14th: Mild, wet and windy overnight. Temperatures fell during the night as a cold front moved in from the Atlantic. It was a dull, wet day generally with little or no sunshine. The rain became more patchy in Ulster and Connacht in the evening. Winds were southwesterly, fresh to strong and gusty, decreasing light to moderate with the passage of the front.

Rainfall: 3 to 20mm, heaviest at Valentia, 3mm at Kilkenny

Temperature: max. 11°C to 15°C, min. 5°C to 7°C, no ground frost

Sunshine: nil

Friday 15th: Heavy rain associated with a cold front affected mostly western and southwestern areas at the start of the day. This rain, lying in a line from Loop Head to Carlingford Lough, moved slowly southeastwards during the day. It was cold everywhere with temperatures considerably lower than of late. Dull everywhere with only small amounts of sunshine along the north and west coast. Ground frost setting in after dark, sharp in places. Winds were light to moderate, variable or southwesterly with occasional gusts.

Rainfall: <1 to 18mm, heaviest at Rosslare, <1mm at Clones

Temperature: max. 5°C to 9°C, min. 0°C to 6°C, ground temperatures down to -6°C at Kilkenny

Sunshine: nil to 1 hour, sunniest at Belmullet

Saturday 16th: It was a cold and dry day generally with sunny spells and scattered wintry showers affecting Atlantic coastal regions. Becoming very cold again after dark in the east and midlands with ground frost in places. Winds were light to moderate west to southwesterly, gusty on northwestern coasts.

Rainfall: nil to 5mm, heaviest at Malin Head

Temperature: max. 6°C to 10° min. -1°C to 7°C, ground temperatures down to -7°C at Kilkenny

Sunshine: 2 to 7 hours, sunniest at Rosslare, 2 hours at Malin Head

Sunday 17th: The first half of the day was cold with well-scattered showers on Atlantic coasts and some short sunny spells. Duller, wetter weather moved into western coasts, affecting all areas by the afternoon. Clearer weather with scattered showers followed on in the evening. Light, sometimes moderate southwesterly winds slowly became more southerly during the day.

Rainfall: <1 to 9mm, heaviest at Valentia, <1mm at Kilkenny

Temperature: max. 6°C to 10° min. 2°C to 7°C, ground temperatures down to -3°C at Kilkenny

Sunshine: nil to <1 hour, sunniest at Rosslare

Monday 18th: Mist or fog formed during the morning and persisted through the period, very dense in some areas. Sunshine amounts varied, with up to 6 hours in the southwest. A few showers in western areas. Winds were light and variable throughout. Sharp to severe frost after dark.

Rainfall: nil to 5mm, heaviest at Valentia

Temperature: max. 6°C to 11°C, min. -1°C to 5°C, ground temperatures down to -4°C at Birr

Sunshine: nil to 6 hours, sunniest at Cork Airport

Tuesday 19th: Widespread fog overnight, with some ground frost in places. Some sunny spells in eastern areas at first but the fog persisted in places for most of the day apart from northern and southwestern coastal areas. Cold throughout. Frost set in again shortly after dark. Winds were light and variable.

Rainfall: nil to trace generally, <1mm at Knock Airport

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

Sunshine: nil to trace generally, 6 hours at Valentia, 5 hours at Malin Head

Wednesday 20th: Widespread frost and fog overnight, with freezing fog in places, except along the western seaboard. The fog gradually turned to mist in eastern and southeastern parts but elsewhere it persisted throughout the day. Sunny spells in the east and southeast where the fog lifted. Frost in most areas, sharp or severe in the east. Winds were light to moderate, variable.

Rainfall: nil to trace

Temperature: max. 2°C to 10°C, min. -3°C to 6°C, ground temperatures below zero at most inland stations, down to -6°C at Mullingar

Sunshine: nil to 6 hours, sunniest at Dublin Airport

Thursday 21st: Dry everywhere except for the northwest where outbreaks of drizzle, heavy at times, occurred during the latter part of the day. Cool with ground frost, slight to sharp in places. Bright spells during the day with winds light and variable generally, somewhat stronger in the extreme west.

Rainfall: nil generally, trace at Belmullet

Temperature: max. 8°C to 11°C, min. -2°C to 8°C, ground temperatures down to -7° at Kilkenny

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

Friday 22nd: Dry and clear overnight in most areas with frost and some fog. Patchy rain in the northwest. Generally dry and sunny during the morning, some mist and fog during the afternoon. The night was dry and frosty in the midlands and east, cloudier and milder in the west. Winds were light, variable.

Rainfall: nil to trace generally, 1mm at Belmullet

Temperature: max. 5°C to 10°C, min. -3°C to 9°C, ground temperatures down to -9°C at Kilkenny

Sunshine: nil to 7 hours, sunniest at Casement Aerodrome

Saturday 23rd: Very cold overnight with the frost clearing only slowly in the morning. It was a very cold, dry and dull day generally, apart from the north which had some sunshine. Temperatures did not fall much after dark and there was no frost. Winds were southeasterly or variable, generally light.

Rainfall: nil

Temperature: max. 4°C to 10°C, min. -4°C to 8°C, ground temperatures down to -9°C at Kilkenny

Sunshine: nil to 6 hours, sunniest at Malin Head

Sunday 24th: Cloudy during the day with the exception of the northwest and in Dublin, where there were long sunny periods, otherwise dull. Any fog cleared but mist continued in places. Clear skies after dark in western parts but elsewhere cloudy with patches of mist and fog. Light southerly winds.

Rainfall: nil

Temperature: max. 3°C to 10°C, min. 1°C to 9°C, ground temperatures down to -2°C at Malin Head

Sunshine: nil to <1 hour generally, 5 hours at Casement Aerodrome

Monday 25th: Slight to sharp frost and fog in a few inland areas overnight. Low cloud and poor visibility during the day with a little drizzle in places. Temperatures around normal with very little sunshine, the exception being the north of the country. No frost during the evening. Winds were light, variable.

Rainfall: nil generally, <1mm at Rosslare

Temperature: max. 5°C to 10°C, min. 2°C to 8°C, no ground frost

Sunshine: nil generally, 2 hours at Malin Head

Tuesday 26th: Cold and misty overnight with outbreaks of mostly light rain or drizzle, mainly in the eastern half of the country. It was a dull, misty day generally with light rain or drizzle, mostly in the east. Short sunny spells in western areas. No frost. Light to moderate southeasterly winds were fresh and gusty on southern coasts in the evening.

Rainfall: nil to 4mm, heaviest at Cork Airport

Temperature: max. 6°C to 11°C, min. 4°C to 8°C, no ground frost

Sunshine: nil to <1 hour generally, 2 hours at Belmullet

Wednesday 27th: Mainly dry in eastern areas during the night with outbreaks of rain in many other places. During the morning the rain and drizzle extended to most areas giving some heavy falls, dying out in most parts by evening. Only a few brief sunny periods. Light south to southeasterly winds throughout.

Rainfall: trace to 18 mm, heaviest at Kilkenny, trace at Knock Airport

Temperature: max. 7°C to 12°C, min. 4°C to 9°C, ground temperatures down to -1°C at Kilkenny

Sunshine: nil to 1 hour generally, 3 hours at Cork Airport

Thursday 28th: A few light showers during the night, otherwise dry. Generally overcast apart from the east coast, where there were long sunny spells. A band of heavy rain moved into the west by late afternoon and crossed the country, giving some heavy falls in the southwest. Winds were southerly, light to moderate, becoming moderate to strong and gusty.

Rainfall: 1 to 12mm, heaviest at Valentia, 1mm at Mullingar

Temperature: max. 10°C to 13°C, min. 4°C to 11°C, no ground frost

Sunshine: nil to 4 hours, sunniest at Casement Aerodrome

Friday 29th: Some rain overnight accompanied by very strong winds with some heavy downpours, especially in western areas. More rain spread into the west during the early morning with the strong to gale force southerly winds continuing. Rain or heavy showers during the afternoon and evening. The winds eased during the afternoon before increasing again by evening.

Rainfall: 5 to 35mm, heaviest at Belmullet, 5mm at Clones

Temperature: max. 11°C to 14°C, min. 5°C to 10°C, no ground frost

Sunshine: trace to 2 hours, sunniest at Dublin Airport, trace at Cork Airport

Saturday 30th: Heavy showers in the western half of the country overnight, isolated light showers further east. The shower activity continued throughout the day with some heavy falls, particularly in the southeast. Mild. Breaks in the cloud everywhere, with most sunshine in the midlands. Winds were moderate to fresh southwesterly, decreasing light to moderate by the afternoon.

Rainfall: <1 to 9mm, heaviest at Rosslare, <1mm at Dublin Airport

Temperature: max. 7°C to 11°C, min. 3°C to 7°C, no ground frost

Sunshine: <1 to 5 hours, sunniest at Clones, <1 hour at Valentia

Sunday 31st: By dawn, rain reached the west coast and gradually spread to all but eastern coastal areas. As the rain cleared away northwards there were very heavy showers associated with a cold front, heaviest in the west and northwest. Heavy thundery showers throughout the rest of the day with hail in places. Strong to storm force southwesterly winds countrywide (see page 3).

Rainfall: 4 to 26mm, heaviest at Belmullet, 4mm at Rosslare

Temperature: max. 10°C to 13°C, min. 3°C to 7°C, no ground frost

Sunshine: nil to 2 hours, sunniest at Kilkenny

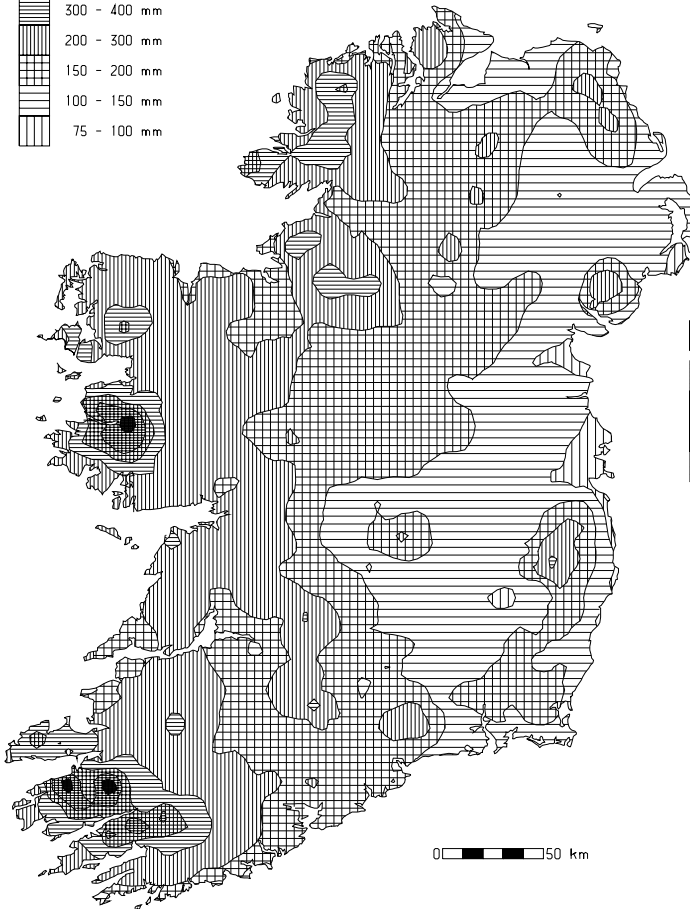
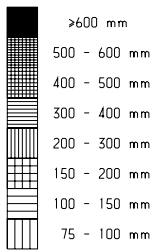
Wetter than normal everywhere, very wet in west

Rainfall totals for the month were above normal everywhere and were significantly above normal over most of the western half of the country. It was the wettest December for 6 or 7 years in most places and the wettest for 13 years at Mullingar. Totals ranged from 84mm at Dublin (Merrion Square) to 590mm at Maam Valley, Co. Galway, where it was the wettest December since records began in the area in 1968. Percentage of normal values were between 115% at Merrion Square and 208% at Belmullet.

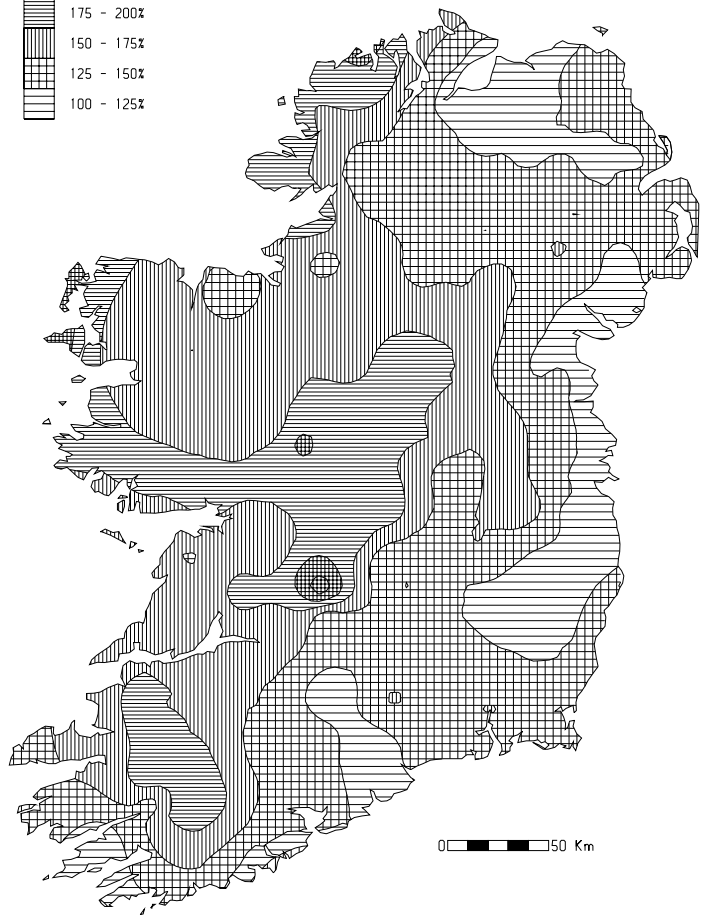
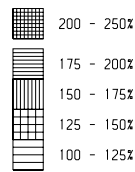
Apart from the period between the 19th and 25th, rain was widespread on most days during the month, with heavy falls on several days. Most stations measured their highest falls of the month on the 2nd, when falls of over 25mm were widely recorded, with over 50mm in parts of Connacht. Maam Valley recorded a fall of 81.8mm on this day, its highest December daily fall since 1997. There were between 15 and 18 wetdays during the month at stations in the east and southeast (days with 1mm or more rainfall), but more than 20 wetdays in most other areas; these values are slightly above the normal range for December.

<i>County/ Station</i>	Total Amount (mm)	% of 1961-90 average	Most in a day / date		Number of Raindays (≥0.2mm)	Wetdays (≥1mm)
CO. CAVAN CAVAN (LORETO COLLEGE)	180.5		26.0	2	23	21
CO. CLARE SHANNON AIRPORT	170.3	172	17.0	11	24	22
CARRON	248.6	152	29.5	6	25	22
CO. CORK FERMOY (MOORE PARK)	155.7	143	32.5	2	24	19
CORK AIRPORT	183.0	134	32.3	2	23	20
SHERKIN ISLAND	161.4	126	23.2	2	23	20
BALLINCURRIG (PEAFIELD)	191.4		33.8	2	22	19
CO. DONEGAL MALIN HEAD	184.7	179	19.1	13	23	23
BALLYSHANNON (CATHLEEN'S FALL)	198.0	185	22.2	2	24	22
GLENTIES	305.5	180	31.2	2	24	22
CO. DUBLIN DUBLIN (PHOENIX PARK)	100.6	123	14.7	14	23	17
DUBLIN AIRPORT	94.4		13.4	14	19	16
CASEMENT AERODROME	107.9	146	20.5	14	22	16
DUBLIN (MERRION SQUARE)	84.2	115	15.2	14	22	18
CO. GALWAY GALWAY (UNIV. COLL.)	219.2	181	33.5	2	23	22
MAAM VALLEY	589.7		81.8	2	26	23
CONNEMARA NATIONAL PARK	301.7	186	45.6	2	24	24
BALLYGAR	209.4	203	24.8	2	26	22
CO. KERRY VALENTIA OBSERVATORY	224.0	141	28.1	28	23	22
ARDFERT (LISCAHANE)	185.5		27.4	2	23	22
CO. KILKENNY KILKENNY	117.6	134	16.2	2	23	17
CO. LIMERICK MOUNT RUSSELL	163.1		17.4	2 14	27	22
CO. LOUTH ARDEE (BOHARNAMOE)	96.6	118	10.2	14	20	20
CO. MAYO BELMULLET	247.1	208	36.3	2	25	23
STRAIDE	228.7	176	27.3	2	24	22
KNOCK AIRPORT	203.9		26.8	2	25	22
CO. MEATH WARRENTOWN	133.2	148	15.3	10	24	18
CO. MONAGHAN CLONES	136.5	152	15.7	2	21	20
CO. OFFALY BIRR	139.7	179	15.4	2	23	20
DERRYGREENAGH	125.7	141	16.6	7	25	19
CO. SLIGO ARDTARMON	175.4		24.8	2	24	21
CO. TIPPERARY FETHARD (PARSONSHILL)	142.8		18.0	2	26	19
CO. WATERFORD WATERFORD (TYCOR)	142.4	134	27.8	2	20	16
DUNGARVAN (CARRIGLEA)	193.4		31.3	26	21	18
CO. WESTMEATH MULLINGAR II	160.6	175	20.3	3	23	22
CO. WEXFORD JOHNSTOWN CASTLE	162.4	148	27.2	2	19	17
ROSSLARE	141.5	144	22.7	2	19	17
JOHN F. KENNEDY PARK	159.3	152	29.8	2	19	15
CLONROCHE (KNOXTOWN)	163.5		34.7	2	20	18

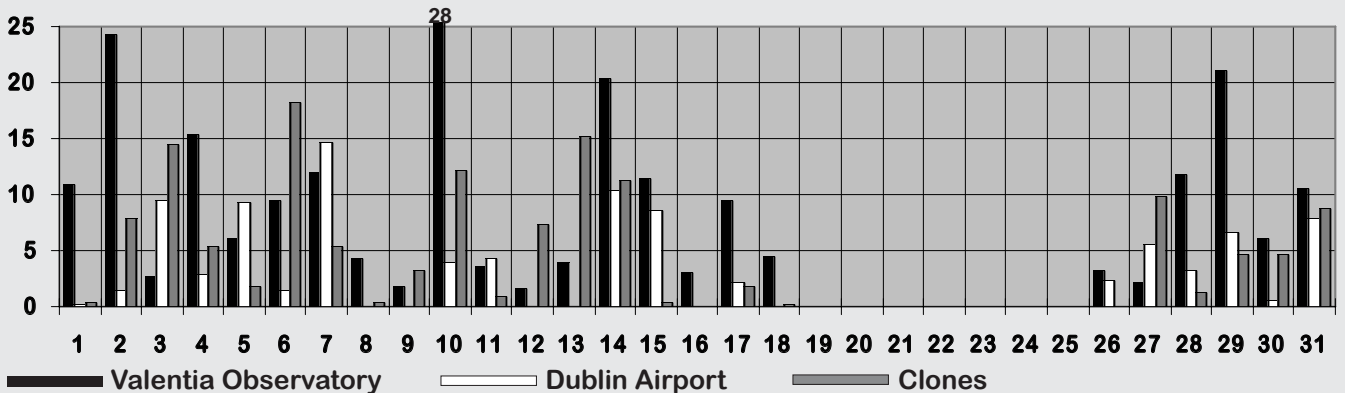
Total rainfall (mm)



Percentage of normal rainfall



Daily 0-24h rainfall values (mm)

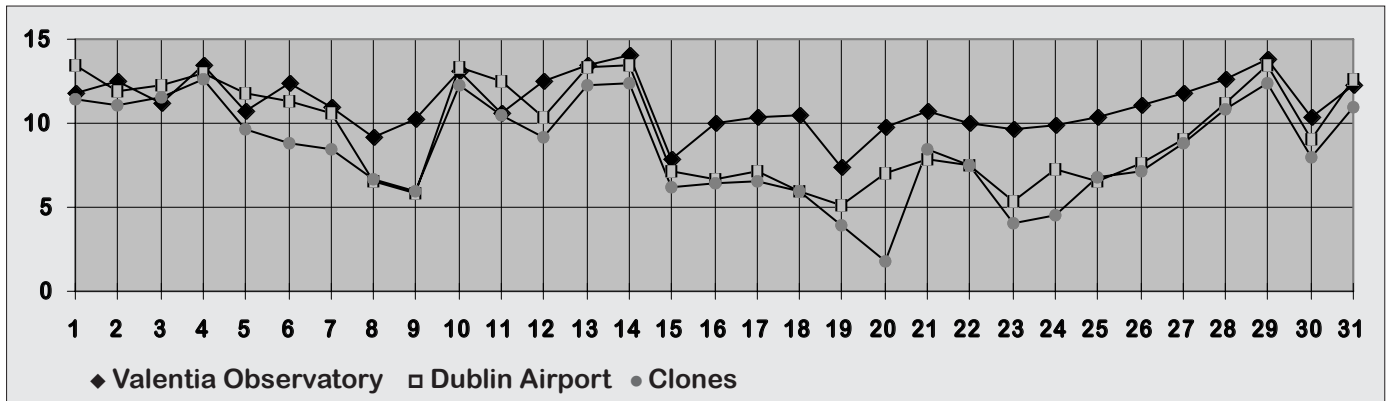


Warmer than normal for most of month

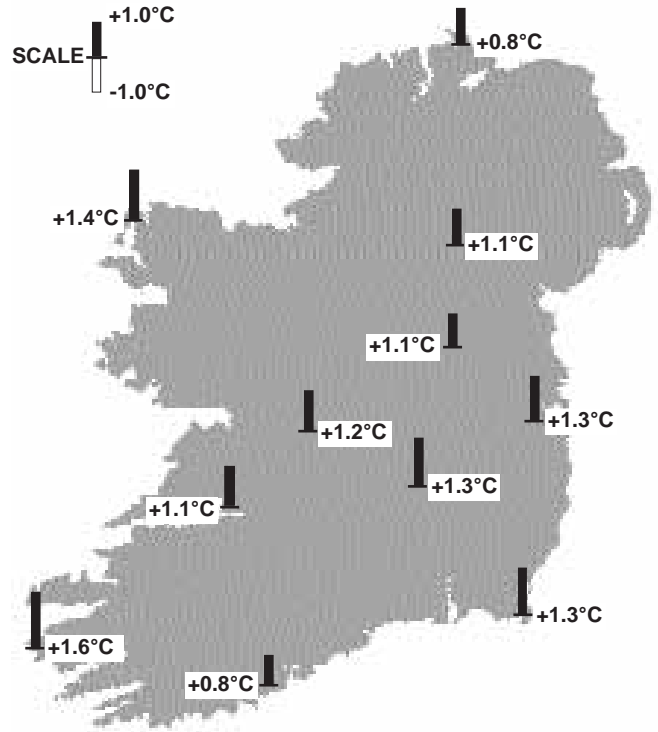
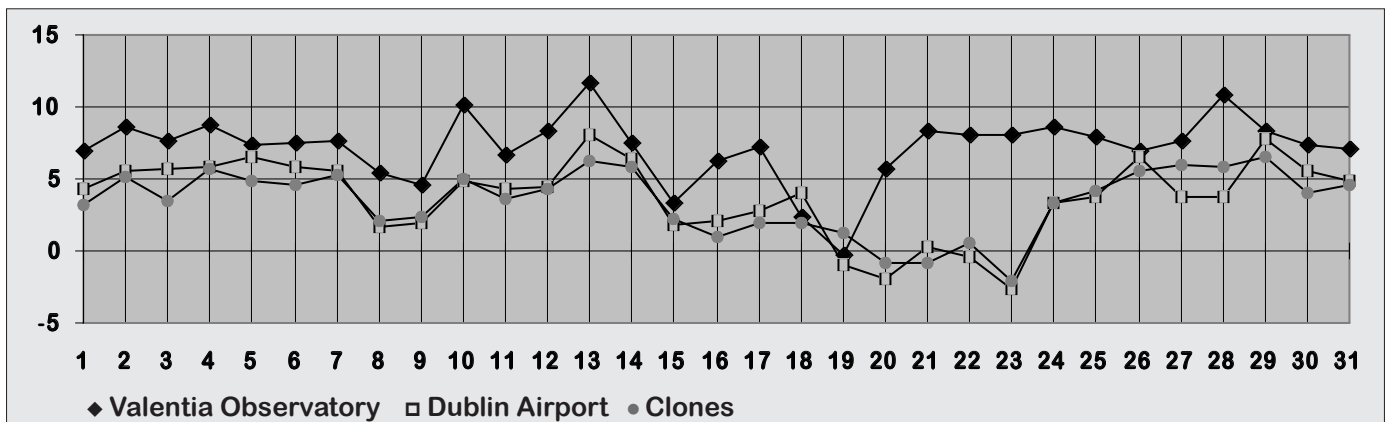
Most of the month was mild with little or no frost, but temperatures fell close to or below normal during a spell of anticyclonic weather between the 15th and 25th. Mean air temperatures for the month as a whole were above normal everywhere, by more than one degree generally and it was the warmest December for between 9 and 18 years at some eastern and midland stations. Mean values ranged from 5.4°C at Knock Airport to 9.2°C at both Valentia Observatory and Sherkin Island, Co. Cork.

The first half of the month was exceptionally mild, with both daytime and nighttime temperatures typically three degrees above the December normal. Air frost was mostly confined to the period between the 19th and 23rd; the total of between 3 and 5 air frosts at most inland stations compares with the normal range for December in these areas of between 9 and 11. The lowest air temperature of the month, -4.3°C, was measured at Mullingar on the 23rd, while the lowest grass minimum value, -8.9°C, was recorded at Kilkenny on the 22nd. Most stations

Daily 0-24h maximum temperatures (°C)



Daily 0-24h minimum temperatures (°C)



Mean Temperature
(difference from 1961-90 normals)

recorded their highest temperatures of the month on the 13th; the highest value, 14.4°C, was measured at Merrion Square on both the 13th and 29th.

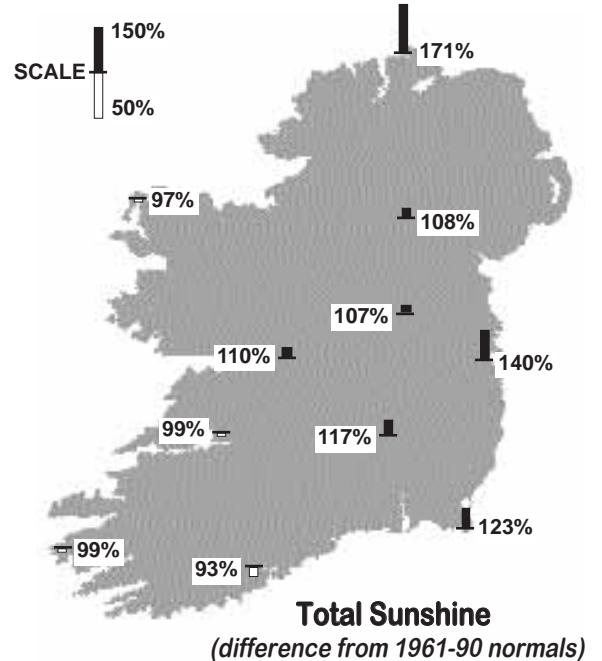
County/ Station	°C											
	Mean max.	Mean min.	Mean/ deviation from 1961-90 average		Highest max./date		Lowest min./date		Lowest grass min./date		Days with air frost ground frost	
CO. CAVAN												
CAVAN (LORETO COLLEGE)	9.1	3.4	6.3		13.4	4	-2.8	23	-4.6	23	5	9
CO. CLARE												
SHANNON AIRPORT	9.8	4.9	7.4	1.1	13.9	13	0.2	20 21	-1.9	22	0	9
CARRON	8.8	3.6	6.2	1.0	12.5	13	-0.2	20	-4.0	16	1	12
CO. CORK												
FERMOY (MOORE PARK)	9.9	4.0	7.0	1.2	13.9	4	-2.6	22	-7.5	22	5	20
CORK AIRPORT	9.1	4.4	6.8	0.8	12.6	4	0.2	19 20	-2.1	22	0	8
SHERKIN ISLAND	11.2	7.1	9.2	1.6	13.5	13	1.5	19	-1.7	19	0	1
BALLINCURRIG (PEAFIELD)	9.6	3.0	6.3		12.5	1 4	-1.0	19 20	-3.5	16	3	10
CO. DONEGAL												
MALIN HEAD	9.3	4.9	7.1	0.8	13.0	10 13	0.0	20	-1.7	25	0	5
BALLYSHANNON (CATHLEEN'S FALL)	9.3	4.4	6.9	1.2	13.4	10	0.2	20			0	
GLENTIES	9.1	3.5	6.3	1.1	12.9	13	-2.1	20	-4.5	20	3	12
CO. DUBLIN												
DUBLIN (PHOENIX PARK)	9.1	3.9	6.5	1.2	13.7	13	-3.0	23	-6.3	23	5	12
DUBLIN AIRPORT	9.3	3.9	6.6		13.5	29	-2.7	23	-7.1	23	3	13
CASEMENT AERODROME	9.5	3.7	6.6	1.3	14.3	13	-3.4	20	-6.0	23	4	7
DUBLIN (MERRION SQUARE)	9.8	5.5	7.7	1.0	14.4	13 29	-0.6	20			2	
CO. GALWAY												
GALWAY (UNIV. COLL.)	9.8	4.8	7.3	1.0	13.2	13	0.2	25	-3.7	25	0	10
MAAM VALLEY	10.3	5.2	7.8		13.6	10	-0.1	19	-3.4	20	1	4
CONNEMARA NATIONAL PARK	10.0	5.3	7.7		12.0	2 10	-1.0	19 20			2	
BALLYGAR	8.7	3.5	6.1		12.8	13	-0.8	20	-2.9	16	1	9
CO. KERRY												
VALENTIA OBSERVATORY	11.4	6.9	9.2	1.6	14.1	14	-0.3	19	-6.6	19	1	4
ARDFERT (LISCAHANE)	10.3	4.5	7.4	0.7	13.4	13 29	-2.3	19 20	-8.0	19	2	18
CO. KILKENNY												
KILKENNY	9.3	3.6	6.5	1.3	13.5	13 14	-3.4	22	-8.9	22	4	14
CO. LIMERICK												
MOUNT RUSSELL	9.6	4.5	7.1		13.3	4	-0.9	19	-2.8	20	2	7
CO. LOUTH												
ARDEE (BOHARNAMOE)	9.1	3.5	6.3	1.3	13.1	29	-3.0	24	-4.6	24	4	9
CO. MAYO												
BELMULLET	10.1	5.8	8.0	1.4	12.7	13	0.3	19	-3.7	19	0	3
STRAIDE	9.3	4.2	6.8	1.1	13.7	10	-1.4	25	-6.0	25	4	11
KNOCK AIRPORT	7.7	3.0	5.4		11.3	10 13	-1.6	20	-2.4	19	3	5
CO. MEATH												
WARRENTOWN	8.8	3.6	6.2	1.2	13.2	13 29	-3.4	23	-7.5	23	3	13
CO. MONAGHAN												
CLONES	8.3	3.5	5.9	1.1	12.6	4	-2.1	23	-6.6	23	4	10
CO. OFFALY												
BIRR	9.1	4.0	6.6	1.2	13.7	13	-1.6	21	-8.3	23	3	11
DERRYGREENAGH	8.6	3.1	5.9	1.3	13.3	13	-4.1	23	-5.6	23	4	10
CO. SLIGO												
ARDTARMON	9.1	4.8	7.0		13.2	13	0.1	20	-2.1	19	0	7
CO. TIPPERARY												
FETHARD (PARSONSHILL)	9.0	3.6	6.3		12.4	14	-2.1	21	-3.1	20	2	12
CO. WATERFORD												
WATERFORD (TYCOR)	10.4	4.9	7.7	1.6	13.1	1	-0.3	22			1	
DUNGARVAN (CARRIGLEA)	10.3	4.5	7.4	1.2	13.4	4	-0.8	22	-2.4	22	1	5
CO. WESTMEATH												
MULLINGAR II	8.5	3.1	5.8	1.1	13.0	29	-4.3	23	-8.1	23	5	11
CO. WEXFORD												
JOHNSTOWN CASTLE	10.2	5.1	7.7	1.6	13.0	4	1.1	23	-3.7	23	0	10
ROSSLARE	10.4	6.2	8.3	1.3	13.2	4	2.5	16	-1.9	23	0	4
JOHN F. KENNEDY PARK	9.6	3.9	6.8	1.0	12.2	4 29	-0.6	22	-4.0	22 23	4	13
CLONROCHE (KNOXTOWN)	9.2	3.4	6.3		12.5	4 29	-3.0	22 23	-7.0	23	5	12

County/ Station	Daily mean (hours/day)	% of average	% of possible	Most in a day/date
CO. CAVAN				
CAVAN (LORETO COLLEGE)	1.06		15	5.0 16
CO. CLARE				
SHANNON AIRPORT	1.41	99	18	5.8 21
CO. CORK				
FERMOY (MOORE PARK)	1.23	93	16	4.3 3
CORK AIRPORT	1.46	93	18	6.3 16
SHERKIN ISLAND	1.49	111	19	6.2 18
BALLINCURRIG (PEAFIELD)	1.84			6.7 18
CO. DONEGAL				
MALIN HEAD	1.54	171	21	5.6 23
BALLYSHANNON(CATHLEEN'S FALL)	1.05	106	14	4.6 30
CO. DUBLIN				
DUBLIN AIRPORT	2.21	134	29	6.6 21
CASEMENT AERODROME	2.10	140	28	6.6 22
CO. GALWAY				
GALWAY (UNIV.COLL.)	1.28	109	17	5.7 18
CO. KERRY				
VALENTIA OBSERVATORY	1.15	99	15	6.0 18 19
ARDFERT (LISCAHANE)	0.80		10	2.4 20
CO. KILKENNY				
KILKENNY	1.74	117	23	6.4 9
CO. MAYO				
BELMULLET	1.05	97	14	5.7 18
STRAIDE	1.05			4.8 16
KNOCK AIRPORT	0.95			5.7 18
CO. MONAGHAN				
CLONES	1.23	108	16	5.3 16
CO. OFFALY				
BIRR	1.54	110	20	5.9 22
CO. WATERFORD				
DUNGARVAN (CARRIGLEA)	1.82	126	23	6.5 9
CO. WESTMEATH				
MULLINGAR II	1.63	107	21	6.2 16
CO. WEXFORD				
JOHNSTOWN CASTLE	1.54		20	5.2 9
ROSSLARE	2.15	123	28	6.6 16
JOHN F. KENNEDY PARK	1.87	129	24	5.7 9 11
CLONROCHE (KNOXTOWN)	2.04			6.5 11

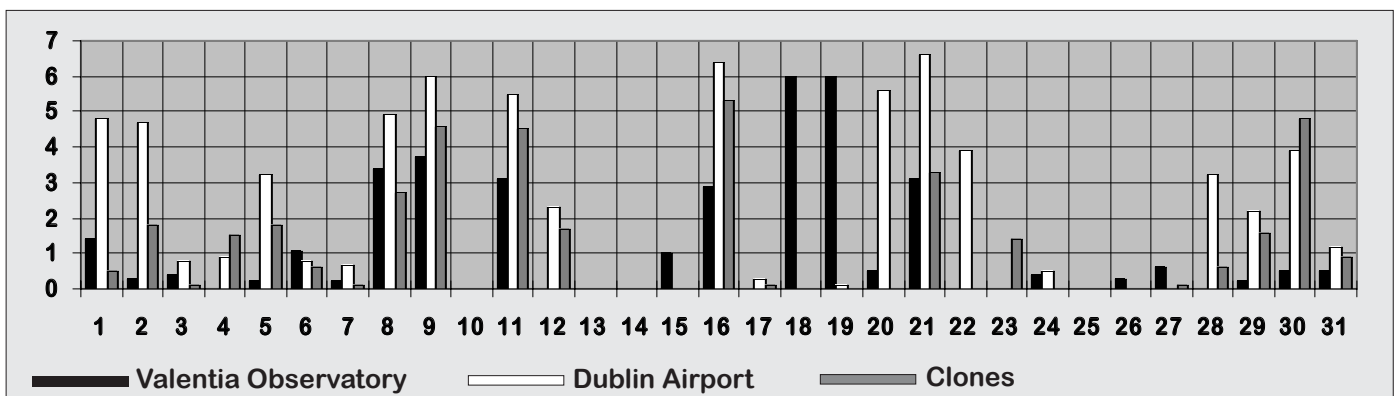
Sunniest in east and north

There was a wide variation in sunshine totals across the country; while it was much sunnier than normal in parts of the north and east, it was a relatively dull month in most southern and western areas. Totals ranged from 25 hours at Ardfert (Liscahane), Co. Kerry, to 69 hours at Dublin Airport, with percentage of normal values between 93% of normal at Cork Airport and 171% at Malin Head.

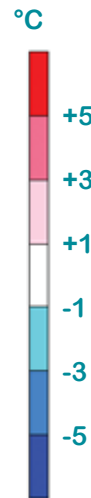
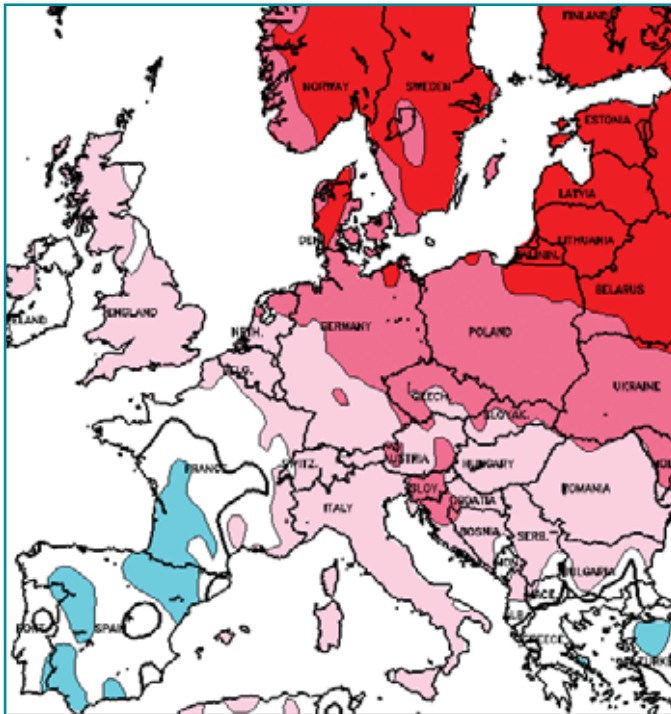
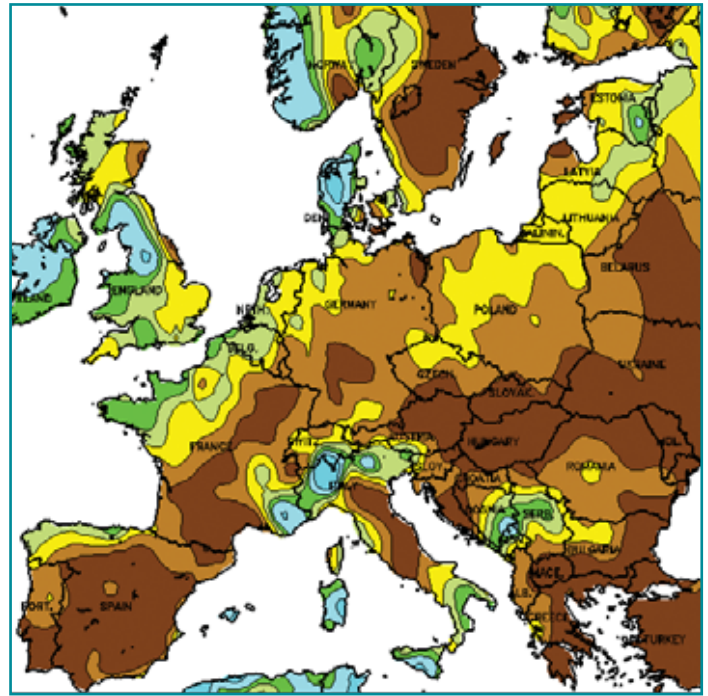
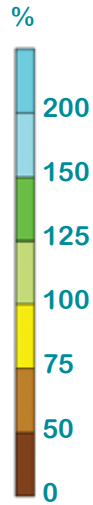
The sunniest period of the month was between the 16th and 22nd, but widespread fog also at this time meant that sunshine amounts were variable. The highest daily value, 6.7 hours, was recorded at Ballincurrig (Peafield), Co. Cork, on the 18th. Global solar radiation totals were between 93% of normal at both Valentia Observatory and Birr and 118% at Malin Head.



Daily sunshine values (hours)



DECEMBER RAINFALL
(percentage of 1961-1990 normal)



DECEMBER 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 several text boxes providing highlights of global weather events from December 2006.

- Northwestern U.S.:** A powerful storm system over the northwestern U.S. between the 13th and 15th produced strong winds and heavy rainfall, with snow at higher elevations. Hurricane-force wind gusts caused power outages that affected 1.5 million homes across Washington and Oregon. There were 4 fatalities.
- Northwest London:** A tornado caused significant property damage and injured at least six people in northwest London on the 7th. Up to 150 houses and many cars were damaged. The tornado was classified as F2 on the Fujita scale, with estimated windspeeds of between 181 and 250 km/hour.
- Horn of Africa:** Heavy rainfall that began in October across the Horn of Africa continued into early December. Flooding in areas of Somalia, Ethiopia and Kenya affected hundreds of thousands of people. In Kenya alone, the number of displaced people was estimated at 723,000.
- Philippines and Vietnam:** After devastating parts of the Philippines during late November, typhoon **Durian** moved westwards along the south coast of Vietnam during the first few days of this month, causing another 67 fatalities.
- Indonesia:** During the last ten days of the month, heavy rains in Indonesia's Aceh province produced severe flooding that displaced 127,000 people. There were 126 deaths on Sumatra island, with 76 of the fatalities occurring in Aceh province.

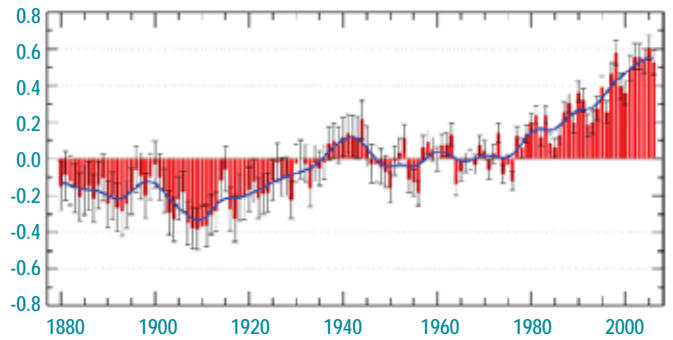
Warmest on record in some places; mainly wet but sunny

Mean air temperatures for the year were over one degree above normal for the 1961-90 period in most places. At many stations it was the warmest year since 1997, while it was the warmest year on record at Casement Aerodrome, Kilkenny, Rosslare and also at Malin Head, where temperature records extend back to 1885. The mean annual temperature of 10.6°C at Dublin (Phoenix Park) was its highest value in a series that extends back to 1855; nine of the twelve warmest years at the station over this period have been recorded since 1995. Over the country as a whole during 2006, March was the only month where mean temperatures were near or a little below normal, while June, July, September and October were particularly warm months relative to normal. The hottest weather of the year was during mid-July, when the highest temperature, 32.3°C, was measured at Elphin, Co. Roscommon, on the 19th; this was the highest value recorded in Ireland since June 1976. For the second successive year, the lowest air and ground temperatures of the year at almost all stations were recorded during exceptionally cold weather in early March.

Annual rainfall totals were above normal over most of the country, but they were a little below normal in parts of the east and south. Rainfall was very unevenly

distributed throughout the year; January, February and June were drier than normal everywhere, while March, May and the autumn months were wet. Widespread heavy falls during the last three months of the year led to flooding in places, especially in midland and western areas. Most stations recorded their heaviest daily falls of the year on either October 25th or November 15th. The number of raindays (days with 0.2mm or more rainfall) measured during the year was close to normal in most places; there were fewer than 200 raindays in most eastern areas, with close to 250 wetdays in parts of Connacht. Annual sunshine totals were above normal everywhere. April, June and July were particularly sunny months relative to normal and only March was duller than normal at all stations. Shannon Airport had its sunniest year since 1968, while at Dublin Airport it was the sunniest since 1959.

GLOBAL TEMPERATURE ANOMALIES, 1880-2006 (RELATIVE TO PERIOD 1901-2000)



The global annual temperature for combined land and ocean surfaces for 2006 was 0.54°C higher than normal, similar to that of each of the last five years; it was the sixth warmest year in the period of record in the series extending back to 1880. The land and ocean surface temperatures for the northern and southern hemisphere ranked second and sixth warmest respectively (chart: NOAA Climate Prediction Centre, US Department of Commerce)

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	968.5	105	47.8 21 Sep	11.1	+1.0	30.2	-5.8	4.08	112	15.3 6 Jun	211	3	23	10	5	23	68
CO. CORK																	
CORK AIRPORT	1198.3	98	42.2 25 Oct	10.4	+1.0	25.4	-4.0	4.29	109	15.4 2 Jun	202	6	7	5	4	89	80
CO. DONEGAL																	
MALIN HEAD	1156.9	111	34.3 23 Nov	10.6	+1.3	25.9	-1.5	3.92	111	15.8 25 Jun	231	8	6	35	5	11	171
CO. DUBLIN																	
DUBLIN AIRPORT	740.0		29.7 15 Nov	10.3		26.5	-5.8	4.51	112	15.6 2 Jun	192	8	32	7	6	24	75
CASEMENT AERODROME	676.5	93	37.6 15 Nov	10.6	+1.3	31.0	-7.5	4.24	111	15.0 17 Jul	177	5	39	11	9	15	82
CO. KERRY																	
VALENTIA OBSERVATORY	1760.7	126	55.3 25 Oct	11.5	+1.1	26.8	-2.8	3.89	109	15.6 2 Jun	240	3	5	17	7	8	76
CO. KILKENNY																	
KILKENNY	895.2	108	40.6 15 Nov	10.6	+1.3	30.2	-6.4	4.29	117	15.4 2 Jun	194	n/a	43	---	n/a	---	33
CO. MAYO																	
BELMULLET	1399.2	127	50.5 21 Sep	11.1	+1.5	29.9	-4.6	3.96	106	15.0 27 Jun	245	8	11	36	10	16	125
KNOCK AIRPORT	1205.6		39.2 25 May	9.1		25.9	-3.4	3.10		14.5 14 May	249	9	28	10	1	123	68
CO. MONAGHAN																	
CLONES	1054.1	115	26.7 25 Oct	10.1	+1.3	28.9	-6.6	3.75	102	15.2 15 Jul	222	n/a	32	---	n/a	---	42
CO. OFFALY																	
BIRR	911.3	112	26.7 25 Oct	10.4	+1.1	30.1	-7.8	3.87	109	14.8 15 Jul	203	n/a	32	---	n/a	---	34
CO. WESTMEATH																	
MULLINGAR II	1004.5	109	31.8 3 Dec	10.0	+1.2	29.4	-7.2	4.12	114	15.3 1 Jun	226	n/a	39	---	n/a	---	16
CO. WEXFORD																	
ROSSLARE	904.5	102	32.3 15 Nov	11.4	+1.3	23.3	-2.3	4.85	108	15.5 2 Jun	168	3	5	6	7	25	113