

Weather

POST MONSOON SEASON (OCTOBER — DECEMBER 1971)

CHIEF FEATURES

Cyclonic storms/depressions

Three cyclonic storms formed in the Bay of Bengal and two in the Arabian Sea during this period. Their tracks are shown in Fig. 1. Of these, the severe cyclonic storm which struck Orissa coast on 30 October caused considerable damage to life and property in Cuttack and Balasore districts.

Monsoon and rainfall

The southwest monsoon further withdrew from east Madhya Pradesh, northeast India and north Peninsula by the second week of October. The rainfall during this season was normal to excess in northeast India, Uttar Pradesh and Madhya Pradesh. The total rainfall for the period 1 October to 31 December 1971 in terms of percentage departure from normal is shown in Figs. 2 (a) and 2 (b).

Western disturbances

Thirteen western disturbances moved across northwest India during this period, five in October, five in November and three in December. The rainfall associated with these systems was generally scanty in northwest India.

Temperatures

Night temperatures were appreciably below normal in the interior parts of the north Peninsula on many days in November, and in many parts of west Madhya Pradesh and Madhya Maharashtra on several days in December.

The important features of each month were as follows.

OCTOBER

A cyclonic storm from the Bay of Bengal, which moved across West Bengal close to Calcutta on the last day of September, weakened into a low pressure area over Bihar State on 1 October and thereafter into a trough over east Uttar Pradesh by the 3rd. A well marked low pressure area moved from west central Bay to Vidarbha between the 2nd and 6th. A trough at sea level extended from the Bihar Plains to north Assam across sub-Himalayan West Bengal from 7th to 10th. These systems caused a spell of good rainfall in northeast India, Madhya Pradesh, north Maharashtra State and north Andhra Pradesh during the course of the first 10 days. The *Brahmaputra* river flooded many villages in Kamrup district. Heavy rain caused damage to the railway track near Siliguri.

The southwest monsoon withdrew from east Madhya Pradesh and Maharashtra State on 9th, and from northeast India and north Andhra Pradesh on the 12th. It was subsequently confined

only to the south Peninsula. Good thundershower activity continued in many parts of the Peninsula during the last three weeks of the month, mainly in association with five to six troughs in the easterlies that moved westwards across the Peninsula.

A cyclonic storm, which formed in west central Bay on the 15th, crossed north Andhra coast as a depression on the same afternoon and moved inland across Madhya Pradesh to central Uttar Pradesh by the 18th. This system caused good rainfall in Orissa, Gangetic West Bengal, Madhya Pradesh, Uttar Pradesh and Bihar State. Floods in the Orissa rivers caused damage to paddy crops in Keonjargarh, Mayurbhanj and Balasore districts. A depression developed over the Laccadive area, intensified into a severe cyclonic storm in central Arabian Sea and moved away towards the Somalia coast in the last week. It caused good rainfall in Kerala and the Arabian Sea Islands from the 24th to the 27th. Another depression

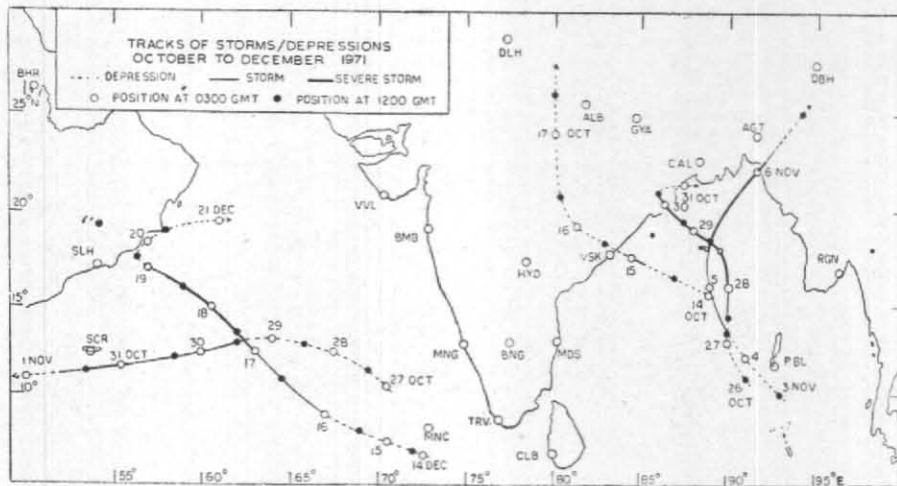


Fig. 1

formed over southeast Bay of Bengal, intensified into a severe cyclonic storm and crossed the Orissa coast on the 30th morning very close to the port of Paradeep. Considerable damage to life and property was caused by this cyclone in Cuttack and Balasore districts. According to official estimates, about 10,000 people lost their lives, 50,000 heads of cattle died and about 8 lakh houses were damaged. The lowest pressure recorded near the centre of the storm was 966 mb and the maximum wind speed was 150-170 kmph. Much of the damage was caused by a storm surge, which reached heights of the order of 4 to 5 metres in the coastal region north of Chandbali. The surge inundated many low lying areas with saline water.

Five western disturbances moved across the Western Himalayas during this month causing scattered precipitation in that area. Rainfall was also scattered in the plains of northwest India on many days between 14th and 24th, in association with two induced lows that moved across northwest India.

The principal amounts of very heavy rainfall during the month were:

Date (Oct)	Station	Rainfall (cm)
1	Malda	24
	Patna AP	15
	Jalpaiguri	23

Date (Oct)	Station	Rainfall (cm)
2	Purnea	14
	Muhammadabad (East UP)	12
7	Cooch Behar	20
	Passighat	14
	Jalpaiguri	12
8	Cooch Behar	13
11	Kolar	12
15	Jajpur (Orissa)	17
	Chandbali	12
17	Balasore	13
18	Gorakhpur	15
	Farukhabad	13
	Nainital	12
24	Nellore	32
	Madras	18
	Sulurpet (CAP)	13
25	Wollapalem (CAP)	13
28	Pollachi (Tamil Nadu)	12
31	Midnapore	22
	Contai, Balasore	20
	Baripada	18
	Sagar Island	17

Day temperatures were appreciably above normal in Rajasthan and Himachal Pradesh on many days in the first fortnight and in Uttar Pradesh in the second week. They were appreciably to markedly below normal in northeast India and interior north Peninsula in the 1st week, in Uttar Pradesh in the 3rd week and in south Peninsula in the last week. Night temperatures were appreciably above normal in many parts of Madhya Pradesh in the second and third week and in south Uttar Pradesh in the third week.

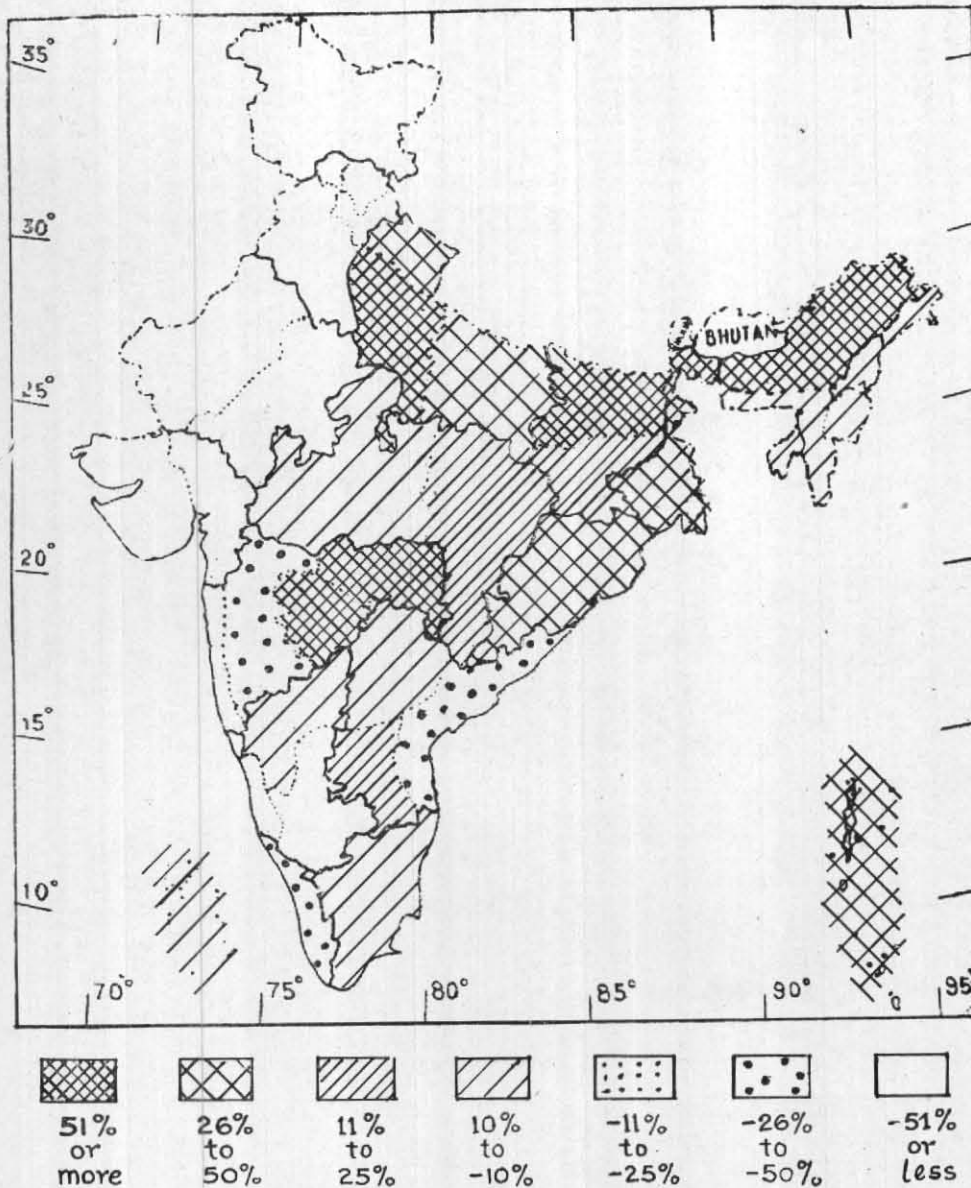


Fig. 2(a)

Rainfall for the period October to December 1971 (Percentage departure from normal)

NOVEMBER

The severe cyclonic storm which crossed Orissa coast on 30 October, weakened into a depression, recurved towards the head Bay of Bengal and weakened further into a low near Sundarbans coast on 1 November, causing fairly widespread rain in West Bengal, Assam and Bihar Plateau on the 1st. A depression formed in the Andaman Sea on the 3rd. It intensified into a severe cyclonic storm on 5th, moved north-northeastwards and crossed the coast near Chittagong on the 6th. It weakened rapidly into a low over southeast Assam on the

7th. This system caused heavy rain and floods in the Manipur rivers and some damage to crops in that area. Heavy damage to other property was also reported from Mizoram. Cherrapunji recorded 10 cm of rain and Kohima 9 cm on 7th.

Five western disturbances moved across north-west India during November. Of these, the first one caused widespread rain and snow in the Western Himalayas leading to an excess of rainfall in that area for the month. Isolated rain or thunder-showers also occurred in the adjoining plains.

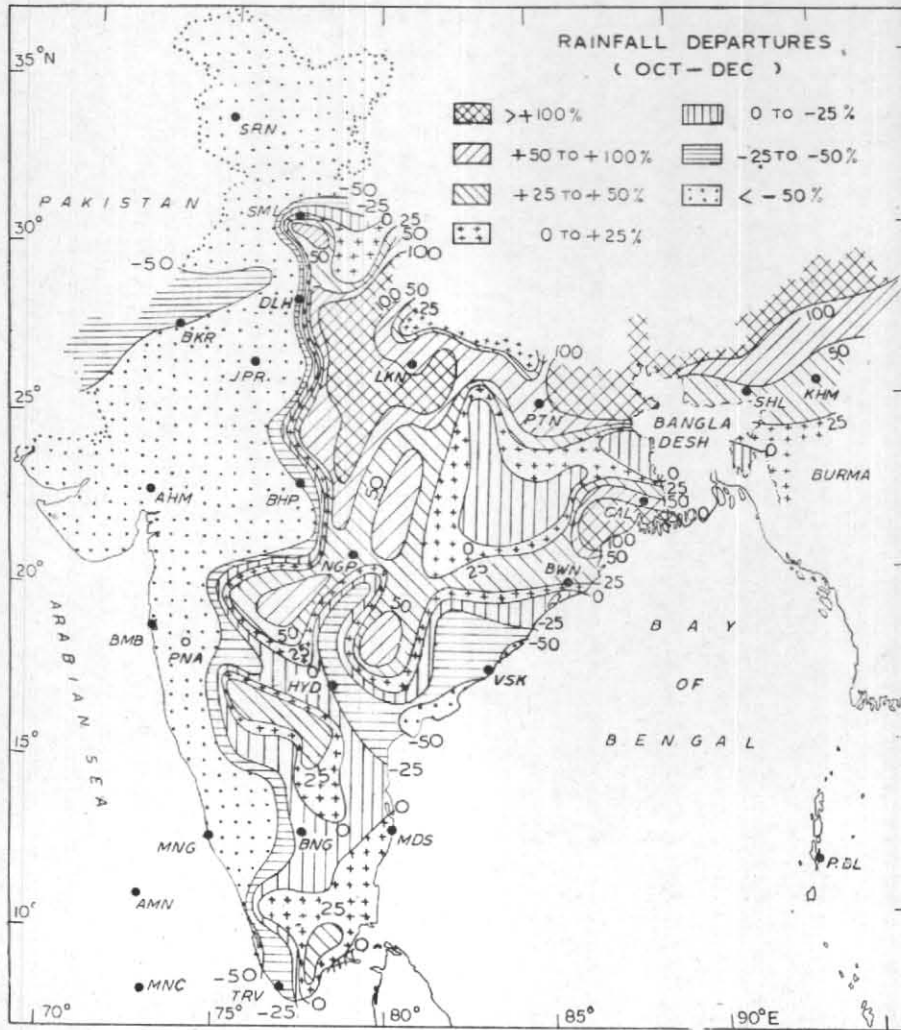


Fig. 2 (b)

Percentage departure from normal of rainfall recorded during 1 October to 31 December 1971

Banihal and Gulmarg recorded 4 cm of rain each on 2nd and Nainital and Mussoorie 4 cm each on 3rd. The rest of the systems caused little or no precipitation in the Western Himalayas.

A well marked low pressure area from southwest Bay moved across Ceylon-Tamil Nadu coasts and south Peninsula into the Laccadive area during the 2nd week. A trough in the easterlies also moved across south Peninsula between 18th and 20th. These systems caused a spell of rainfall in the south Peninsula which was deficient or scanty for the month. Weather was mainly dry in Madhya Pradesh, Gujarat and Maharashtra States, Telengana and north Interior Mysore.

The heavy rainfall amounts in the Peninsula were :

Date (Nov)	Stations	Rainfall (cm)
4	Muvattapuzha (Kerala)	15
	Metupalayam (Tamil Nadu)	9
	Punalur	
13	Ariyalur (Tamil Nadu)	7
14	Rapur (CAP)	8
	Sulurpet (CAP)	7
17	Minicoy	8

Night temperatures were appreciably below normal in Madhya Maharashtra on many days and in the rest of north Peninsula, Gujarat region, south Madhya Pradesh and Orissa on some days.

DECEMBER

Two low pressure areas and a trough moved westwards across extreme south Peninsula in the first fortnight. A deep depression formed over southeast Arabian Sea on the 15th. It intensified into a severe cyclone and moved away towards the Oman coast. These systems caused generally widespread rain in Tamil Nadu during the first fortnight with isolated heavy to very heavy falls on a few days. Kerala and the Arabian Sea Islands also had good rainfall. According to press reports, heavy rain in Tamil Nadu caused floods in the *Vaigai* river which washed away many huts and rendered many people homeless in and around Madurai City in the middle of the month.

The seasonal trough over south Andaman Sea and south Bay was well marked in the second fortnight. It caused good rainfall in the Bay Islands on many days in the second fortnight. The principal amounts of heavy rainfall during this month were:

Date (Dec)	Station	Rainfall (cm)
3	Nagapattinam	13
	Ariyalur	11
8	Nagapattinam	21
	Vedaranniyam, Mayuram	16

Date (Dec)	Station	Rainfall (cm)
10	Arantangi	10
11	Atirampattinam	16
	Vedaranniyam	12
	Tondi, Arantangi	10
14	Minicoy	16
	Ariyalur	11
16	Kallakurichohi	15
	Cuddalore	12
17	Kodaikanal	10
	Atirampattinam	10

Three western disturbances moved eastwards across Western Himalayas during the month. Of these, the second one caused scattered light to moderate rain or snow in the Western Himalayas between 22nd and 24th. The other two did not cause any precipitation.

Night temperatures were appreciably below normal in many parts of Madhya Maharashtra and west Madhya Pradesh on many days, particularly during the first three weeks, being 6-7°C below normal in southwest Madhya Pradesh and Madhya Maharashtra on 20th. Night temperatures were appreciably above normal in coastal Mysore from 14th to 17th and in many parts of northwest India from 21st to 23rd.