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Weather

WINTER SEASON (JANUARY and FEBRUARY 1972)

CHIEF FEATURES

Western disturbances

Twelve western disturbances, six each in January and February, moved across Western Himalayas causing fairly widespread rain and snow in that area in the last week of January and the first fortnight of February.

Rainfall

The rainfall during this season was normal to excess in northeast India, Bihar State, Uttar Pradesh, Western Himalayas, Gujarat State, north Andhra Pradesh and Kerala and deficient or scanty over the rest of the country, ouside Marathwada and coastal Mysore where there was no rain. The total rainfall for the period from 1 January to 29 February 1972 in terms of percentage departure from normal is shown in Figs. 1(a) and 1(b).

Temperature

Moderate cold wave conditions prevailed in Bihar State, Madhya Pradesh, south Uttar Pradesh and West Bengal on some days between 8 and 17 January and in many parts of northwest India, Uttar Pradesh, Bihar State, Madhya Pradesh and Gujarat State on many days and in West Bengal and north Interior Maharashtra on some days in February.

The important features of each month were as follows.

JANUARY

The first two western disturbances which moved across Western Himalayas during 1st to 3rd and 6th to 8th, did not cause any precipitation in northwest India. The third one moved across Western Himalayas between the 13th and 15th causing scattered light rain and snow there. It induced a cyclonic circulation over Uttar Pradesh on the 15th, which moved eastwards to Assam by the 18th causing scattered or isolated rain in Assam and neighbourhood between the 15th and 18th. Chaparmukh reported 4 cm of rain and Tangla, Gohpur 3 cm each on the 16th.

Three more western disturbances moved across the Western Himalayas between the 20th and 30th causing widespread rain or snow there on many days during this period. They induced lows over Rajasthan and neighbourhood, which moved eastwards causing scattered thundershowers in the plains of north India. The chief amounts of rainfall during this period were :

Date	*Station*	*Rainfall (cm)*
22	Manna	6
	Garbyang, Banihal	5 each
	Quazigund, Udhampur, Joshimath	4 each
29	Behri	4
31	Gohana	5
	Banihal	4

The Kumaon hills region experienced hailstorms also on the 28th.

A cyclonic circulation which moved eastwards across north Assam between 6th and 9th caused scattered or isolated rain there between the 6th and 9th. Lakhimpur recorded 3 cm and Digboi 2 cm of rain on the 8th.

Two troughs in the lower tropospheric easterlies moved westwards across extreme south Peninsula during the periods 1st to 3rd and 16th to 20th causing isolated rain or thundershowers in Tamil Nadu on the 1st and again from the 18th to 20th, in Kerala from 1st to 3rd and in coastal Andhra Pradesh between the 18th and 20th. Pamban and Palayamkottai recorded 2 cm of rain each on the 1st and Fort Cochin 4 cm on the 2nd.

The Bay Islands had scattered or isolated rainfall on many days between the 1st and 13th in association with the seasonal trough of low pressure that was well marked over extreme south Andaman Sea and adjoining southeast Bay during that period.

Moderate cold wave conditions prevailed in Bihar State and Madhya Pradesh and the adjoining parts of Uttar Pradesh and West Bengal on some days between the 8th and 17th. About 100 persons were reported to have died in Bihar State due to this cold wave.

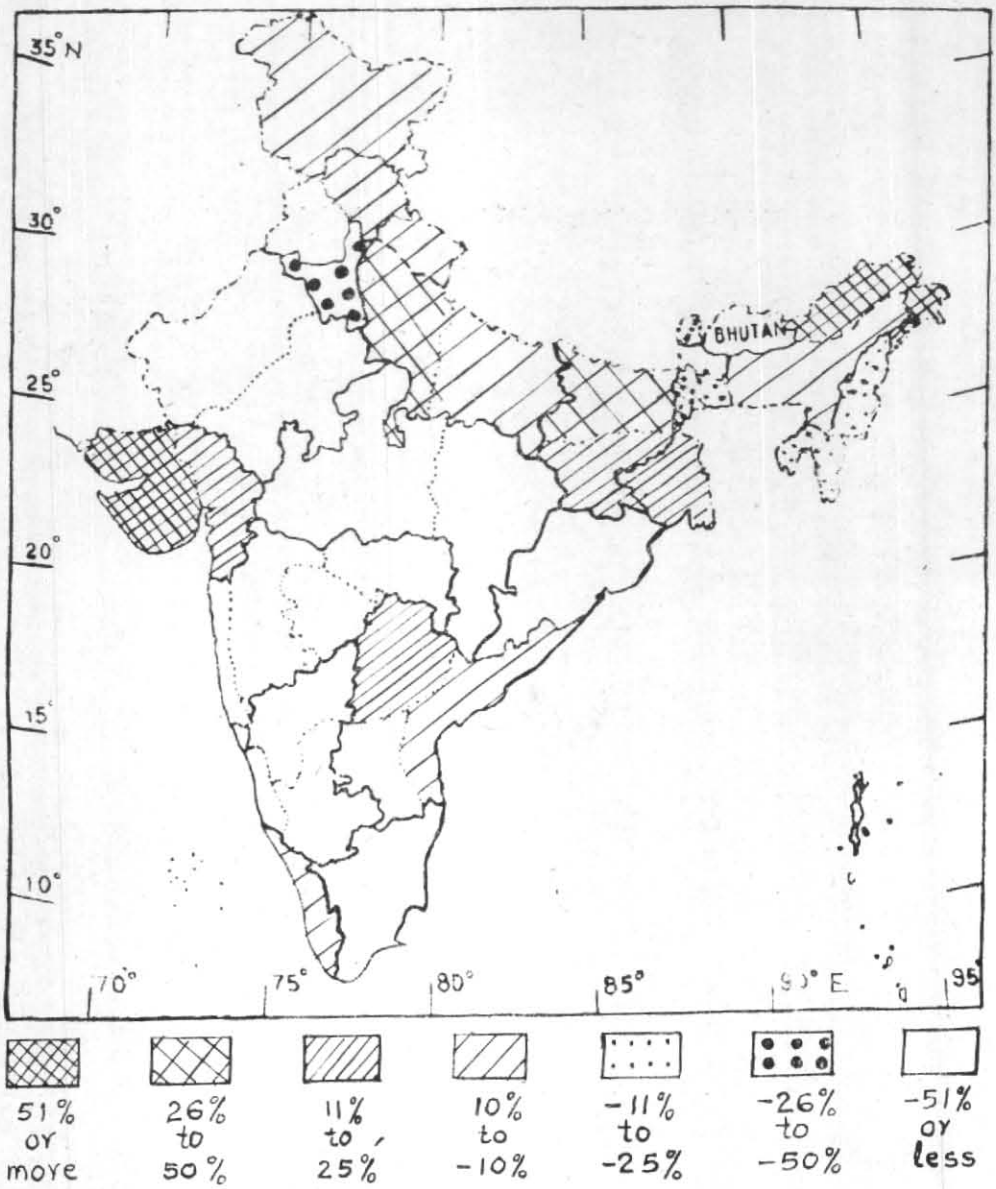

Fig. 1(a)

Rainfall for the period 1 January to 29 February 1972 (Percentage departure from normal)

FEBRUARY

Six western disturbances moved across north-west India during this month. Four of them which moved in the first fortnight were active.

The first one which moved across the Western Himalayas between 31 January and 2 February, induced a low pressure area over south Pakistan and adjoining Rajasthan on 29 January which moved to east Rajasthan by 1 February and became unimportant. The second western disturbance moved across the Western Himalayas between the 3rd and 6th. An induced low moved from south Pakistan and adjoining Kutch and Rajasthan to the hills of west Uttar Pradesh and adjoining Nepal-Himalayas between the 4th and the 6th. The third and fourth western disturbances moved in quick succession between the 11th and 15th inducing low pressure areas which moved from south Pakistan and adjoining Rajasthan eastwards between the 10th and 14th. These systems caused fairly widespread rain and heavy snowfall in the Western Himalayas and scattered rain or thundershowers in the

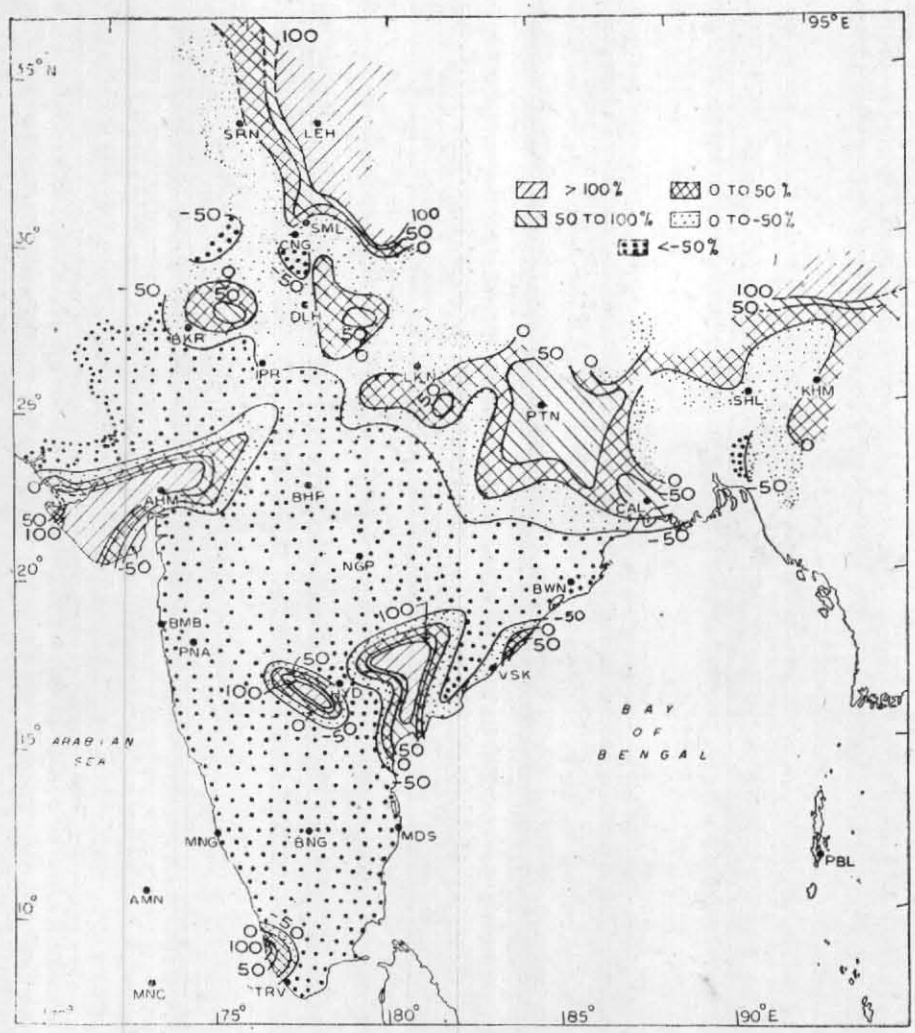

Fig. 1(b)

Percentage departure from normal of rainfall occurred during the period 1 January to 29 February 1972

adjoining plains during the first fortnight. Delhi, Meerut and Mussoorie reported hailstorms on the 12th. The fifth western disturbance moved across extreme north Pakistan and adjoining Jammu & Kashmir between the 22nd and the 24th causing isolated rain or snow in the Western Himalayas during this period, the precipitation being fairly widespread in Jammu & Kashmir on the 23rd. The sixth one did not cause any precipitation over northwest India.

The principal amounts of rainfall associated with these systems were :

Date	*Station*	*Rainfall (cm)*
1	Dalhousie	10
	Dharamsala and Banihal	6 each
5	Roorkee, Hoshiarpur	7 each
6	Mainpuri	7
12	Quazigund	8
13	Phillaur	8
	Srinagar	7
	Quazigund, Banihal, Dehradun	6 each

A low pressure area moved from Nepal-Himalayas to Arunachal Pradesh between the 1st and 3rd, persisted there upto 7th and moved away eastwards later. Another low which formed over east Madhya Pradesh on the 3rd, moved to Orissa by the 6th and weakened. These systems caused fairly widespread rain or thundershowers in northeast India and scattered or isolated thundershowers in Madhya Pradesh between the 3rd and 6th. Hailstorms in Bankura district on the 5th caused some damage to houses and wheat and potato crops. A low pressure area which moved from Gujarat to Orissa between the 11th and 15th caused fairly widespread rain or thundershowers in east Madhya Pradesh, Bihar State, West Bengal and Assam and adjacent States on the 13th and 14th and scattered or isloated precipitation in west Madhya Pradesh on 13th and in Orissa from the 14th to 16th. Pendra reported hail on the 15th.

A trough of low pressure that lay over Laccadive-Maldive area from the 10th to 13th caused scattered thundershowers in Kerala during that period.

A wind discontinuity at 900 m a.s.l. passing from south Peninsula to Orissa and adjoining Bihar caused scattered or isolated precipitation in Andhra Pradesh on the 15th and 16th, in east Madhya Pradesh from the 16th to 18th and in Gangetic West Bengal, Orissa and Bihar State on the 17th. Thundershower activity continued in Andhra Pradesh from the 17th to 19th and occurred in Interior Mysore on the 19th and 20th.

The principal amounts of rainfall in association with these systems were :

Date	*Station*	*Rainfall (cm)*
4	Pasighat	5
6	Pasighat	6
	Silchar	5
10	Alleppey	8
	Quilon	7
11	Punalur	5
13	Alwaye	6
16	Gannavaram	5
17	Gudivada	9
	Waltair	5
18	Hanamkonda	6
19	Eluru	5

Moderate cold wave conditions prevailed in many parts of northwest India, Uttar Pradesh, Madhya Pradesh, Bihar and Gujarat States on many days and in West Bengal and north interior Maharashtra on some days in the month. The cold wave was severe in north Gujarat State, Rajasthan, south Uttar Pradesh, west Madhya Pradesh and north interior Maharashtra on a few days. The cold wave is reported to have caused some deaths in Uttar Pradesh and some damage to banana, grape, potato and sugarcance crops in Maharashtra State.