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Weather

WINTER SEASON (JANUARY AND FEBRUARY 1975)

CHIEF FEATURES

Western disturbances

Fifteen western disturbances, seven in January and eight in February, moved eastwards across northwest India during the season causing normal to excess precipitation in the Western Himalayas, normal rainfall in the Punjab and deficient or scanty rainfall in the rest of northwest India.

Depressions/Cyclones

A depression formed in Andaman Sea in th second week of January, moved northwards and weakened into a low over Burma. Its track is shown in Fig. 1.

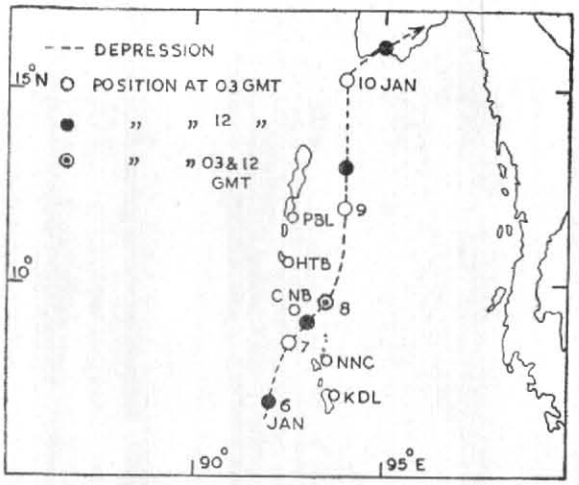

Fig. 1. Track of the depression in January 1975

Rainfall

The rainfall was in excess in Bay Islands, Kerala, north Interior Karnataka, Vidarbha and Telangana, normal in Arunachal Pradesh and Marathwada and deficient or scanty over the rest of the country. The total rainfall for the period from 1 January to 28 February 1975, in terms of percentage departure from normal is shown in Figs. 2 (a) and 2(b).

Temperature

Moderate cold wave conditions prevailed in west Madhya Pradesh on a few days in the first and third week of January and moderate to severe cold wave conditions in Rajasthan in the third week of February.

The important features of each month were as follows :

JANUARY

Seven western disturbances moved eastwards across northwest India during the month. Most of them were troughs/cyclonic circulations in the lower and middle troposphere. Five induced lows moved eastwards across the plains of north India during the periods 1st to 2nd, 7th to 10th, 15th to 18th, 20th to 23rd and 30th to 31st. The first and third moved from Rajasthan to Bihar State while the other three moved from Rajasthan to Madhya Pradesh. In association with these systems, rain or snow was fairly widespread in the Western Himalayas on 10 to 12 days. Isolated heavy falls occurred over this area on 23rd and 31st. Rain or thundershowers were also fairly widespread in Haryana on 1st, 2nd, 30th and 31st; in Punjab on 9th, 22nd, 30th and 31st; in west Uttar Pradesh on 31st, in east Uttar Pradesh on 22nd and in Bihar plains on 2nd and 23rd. The principal amounts of rainfall (cm) associated with the western disturbances were—Gurgaon, New Delhi and Chandigarh IAF 2 each on 1st; Mukteswar 4, Nainital, Dharchula and Munsyari 3 each, Askote and Chapra 2 each on 2nd; Manna 5, Manali and Gohana 2 each on 9th; Dehra Dun, Askote, Uttar Kashi, Bilaspur and Bhuntar 2 each on 10th; Munsyari 2 on 11th; Kalpa 2 on 12th; Malari 3 on 13th; Uttar Kashi, Tehri, Dehra Dun, Bhuntar, Dharamsala, Pathankot, Dasuya, Raya, Gurdaspur and Vidisha 2 each on 22nd; Nainital 8, Lansdowne 5, Askote, Dharchula, and Dharamsala 4 each, Najibabad 3 on 23rd; Mandla 3, Champa 2 on 24th ; Manali 2 on 28th

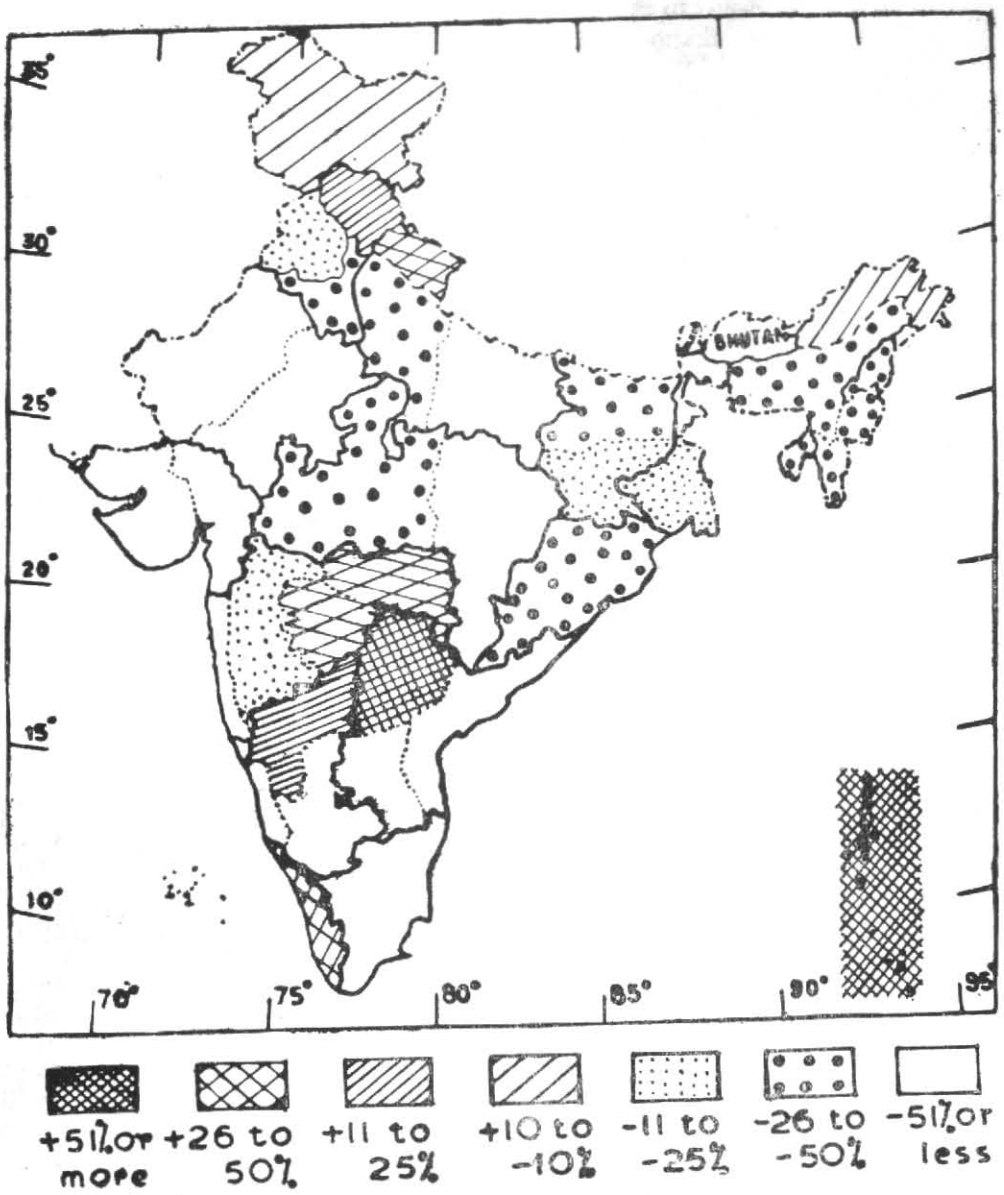

Fig. 2(a). Rainfall for the period 1 January to 28 February 1975 (Percentage departure from normal)

Quazigund 3 on 29th; Joshimath 5, Bhuntar 3, Uttar Kashi and Chandigarh IAF 2 each on 30th; Dharamsala 8, Pathankot IAF 7, Fatehabad 4, Gurdaspur and Nainital 3 each on 31st.

A low moved from the east into south Andaman Sea on 6th and concentrated into a depression that evening near 7°N, 92°E. Moving practically northwards, it became deep on the morning of 9th, near 12°N, 93·5°E. Continuing to move in a northerly direction upto 10th and later northeastwards, it weakened into a low over Burma on 11th. This system caused generally widespread rain with scattered heavy to very heavy falls in Bay Islands from 5th to 10th.

A cyclonic circulation extending upto 2·1 km a.s.l. lay over Bangla Desh and adjoining parts of Assam and adjacent States from 11th to 15th. A westerly trough in the middle troposphere associated with one of the western disturbances moved eastwards across northeast India between 12th and 14th. These systems caused generally scattered rain or thundershowers in Assam and adjacent States from 12th to 14th.

Three troughs in the low level easterlies moved westwards from Andaman Sea to Comorin-Maldive area and adjoining south Peninsula in the second half of the month. A wind discontinuity at 900/1500 m a.s.l. extended from Interior Karnataka

to Madhya Pradesh and thence to northeast India on 23rd and 24th. Under the influence of these systems, scattered to fairly widespread rain or thundershowers occurred in Bay Islands from 16th to 20th and isolated rainfall in that area on a few days in the last week. Isolated rain or thundershowers occurred in Tamil Nadu from 19th to 21st, in Kerala on 21st and over many parts of the Peninsula from 22nd to 25th. Rainfall was fairly widespread in Gangetic West Bengal on 24th and scattered or isolated in Gangetic West Bengal on 23rd and 25th, in Orissa on 24th and 25th and in Assam and adjacent States from 24th to 26th.

The principal amounts of rainfall (cm) associated with the above mentioned systems were—Nancowry 8 and Kondul 5 on 5th; Kondul, Long Island and Port Blair 3 each on 6th; Car Nicobar 13, Nancowry 7 on 7th; Maya Bandar 7 and Long Island 3 on 8th; Maya Bandar 11, Long Island 10, Port Blair 9, Kondul and Hut Bay 3 each on 9th; Long Island 16 and Maya Bandar 11 on 10th; Tezu 3 and Pasighat 2 on 12th; Chaparmukh 2 on 14th; Long Island and Port Blair 4 each on 19th; Long Island 6 and Maya Bandar 5 on 20th; Nagapattinam and Mannargudi 4 each, Trivandrum AP 2 on 21st; Cuddalore and Coonoor 2 each on 22nd; Sagar (Karnataka) 3, Gadag and Coonoor 2 each on 23rd; Bidar 4, Mahbudabad, Sangareddypet and Tirutani 3 each, Purulia, Rapur, Udayagiri, Alwaye, Nedumangad and Irinjalkuda 2 each on 24th; Medak and Hyderabad 5 each, Tangla 3, Pasighat and Bhawanipatna 2 each on 25th.

Moderate cold wave conditions prevailed in west Madhya Pradesh on 2nd, 3rd, 18th and 19th, in north Madhya Maharashtra on 2nd and 3rd, in interior Andhra Pradesh on 6th and 7th, in north Interior Karnataka on 7th and in east Rajasthan on 18th. Night temperatures were appreciably below normal in many parts of Madhya Pradesh and interior parts of Maharashtra State on many days in the month, in Interior Karnataka, Gujarat and Rajasthan on many days in the first fortnight, in Andhra Pradesh and Orissa between 6th and 19th, in Bihar and Gangetic West Bengal on many days in the third week; in Tamil Nadu in the second week and in Uttar Pradesh, Himachal Pradesh and east Rajasthan on a few days in the second fortnight.

FEBRUARY

Eight western disturbances moved eastwards across northwest India during the month. Except the western disturbance which moved across northwest India as a depression from 12th to 15th, the rest were generally troughs or cyclonic circulations in the lower and middle troposphere. An induced low which lay over north central Madhya Pradesh on 31 January, moved eastwards to Assam and adjacent States by 3 February and dissipated on 4th. Five more induced lows moved across the plains of north India, three in the first fortnight and two in the second fortnight. In association with the above systems, fairly widespread rain or snow occurred in the Western Himalayas on 7 to 10 days during the month. Rain or thundershowers were fairly widespread in Arunachal Pradesh on 2nd and 3rd, in Punjab on 13th and 20th, in the plains of Uttar Pradesh on 14th and in the plains of west Uttar Pradesh on 20th and scattered in Punjab on 9th and 14th, in Haryana on 13th and 20th and in west Madhya Pradesh on 20th. Heavy snowfall in Jammu Kashmir on 13th and 14th was reported to have disrupted road communications in that area on those days.

The principal amounts of rainfall associated with the western disturbances were—Bhuntar and Munsyari 3 each, Dharchula Joshimath, Quazigund and Gohpur 2 each on 1st; Pasighat, Along and Shillong 2 each on 2nd; Pasighat 3 on 3rd; Munsyari 4, Bhuntar 2 on 5th; Banihal, Gulmarg, Bhuntar, Kalpa and Ajanala 2 each on 6th; Manali 3, Joshimath 2 on 7th; Gulmarg 3, Quazigund 2 on 8th; Banihal and Gulmarg 4 each, Quazigund and Mandi 2 each on 9th; Gulmarg 9, Dalhousie 8, Ferozepore 5, Bhuntar, Dharmslala and Raya 4 each, Mussoorie, Amritsar, Adampur, Mandi and Srinagar 3 each on 13th; Dharamsala 6, Roorkee and Tehri 4 each, Uttar Kashi, Joshimath, Dehra Dun and Chandigarh 3 each on 14th; Seoni 4, Dharamsala, Kalpa, Balanpur, Khair and Nawashahar 2 each on 20th; Mandi, Joshimath and Munsyari 2 each on 21st; Hoshangabad 4 on 22nd and 2 on 27th; Banihal 3 on 28th.

A cyclonic circulation in the lower troposphere lay over Assam and adjacent States on many days from 6th to 18th. It caused fairly widespread rain or thundershowers in Arunachal Pradesh from 8th to 11th and scattered or isolated rainfall over the rest of Assam and adjacent States on many days between 6th and 18th.

A wind discontinuity at 900/1500 m a.s.l. lay over the interior parts of the Peninsula extending to east Madhya Pradesh and adjoining parts of Bihar and Orissa on many days in the first three weeks. A well marked trough in the westerlies in the middle and upper troposphere associated with a western disturbance moved eastwards across the north Peninsula and central

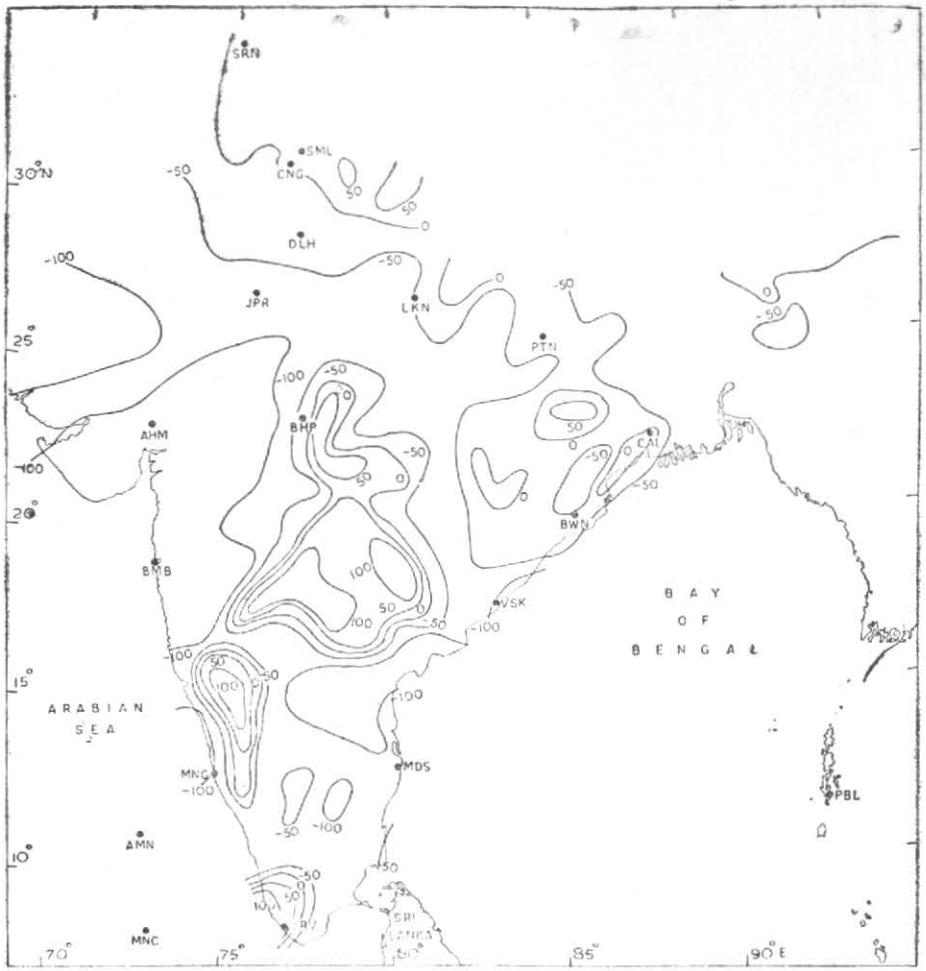

Fig. 2(b). Percentage departure from normal of rainfall during 1 January to 28 February 1975

parts of the country from 19th to 22nd. In association with these systems, rain or thundershowers were fairly widespread in Kerala on 13th and 17th, in Gangetic West Bengal and Bihar Plateau on 16th and 23rd and in Vidharbha from 20th to 22nd , and scattered or isolated in east Madhya Pradesh, Vidarbha, Andhra Pradesh, Orissa, Gangetic West Bengal, Bihar Plateau, Kerala and Tamil Nadu for about a week, in Madhya Maharashtra and Marathwada from 20th to 22nd and in interior Karnataka on a few days. A hailstorm was reported to have occurred at Chandur Bazar near Amaravati on 22nd evening.

A trough in the low level easterlies moved from Andaman Sea to south Peninsula during the period 20th to 24th. Another trough which lay over Andaman Sea from 24th to 26th moved to southwest Bay by 28th. These systems caused fairly widespread rain or thundershowers in Bay Islands on 21st, 27th and 28th and isolated rainfall in that area on 20th and from 22nd to 26th and in Andhra Pradesh, Tamil Nadu and Kerala on a few days between 23rd and 28th.

The principal amounts of rainfall (cm) associated with the above mentioned systems during the month were—Gopalpur 3 on 4th; Palayankottai 2 on 5th; Alleppey and Chandbali 8 each, Kottayam 5 on 6th; Hyderabad 4 on 7th; Along and Jamshedpur 2 each on 8th; Chandbali 5, Bhubaneswar, Imphal, Kailashahar and Khonsa 2 each on 12th; Kovalam 6, Alleppey 4, Cochin (NAS) and Tezu 2 each on 13th; Punalur, Thodupyzha and Kodungallur 2 each on 14th; Punalur and Kunnamkulam 2 each on 15th; Thodupuzha 4, Calcutta and Sagar Island 3 each, Bankura, Burdwan, Midnapore, Bagati, Dum Dum, Sambalpur, Ranchi, Champa, Rentachintala, Ramagundam and Mannarghat 2 each on 16th; Kovalam 7, Alleppey 5, Trivandrum AP 4, Thumba, Mannarghat, Punalur, Nalgonda, Ranchi, Bolangir and Bankura 2 each on 17th; Puri 3, Trivandrum 2 on 18th; Adilabad 3 on 19th; Wardha and Pusad 4 each, Mohal (Maharashtra) 3, Kondul, Gondula and Nagar-Kurnool 2 each on 20th and Nander 4, Sholapur and Chandrapur 3 each, Car Nicobar, Hut Bay and Sironcha 2 each on 21st; Udgir (Marathwada)

4, Akola AP 2 on 22nd; Nanguneri 4 on 23rd; Tiruangadi 5, Manjeri and Kodaikanal 3 each on 24th; Kondul and Woolapalam 2 each on 25th; Car Nicobar 2 on 26th; Car Nicobar and Port Blair 2 each on 27th.

Moderate cold wave conditions prevailed in Rajasthan in the third week, in north Gujarat from 16th to 18th; in Haryana, Punjab and some parts of Uttar Pradesh on 17th and 18th, in north Madhya Maharashtra on 16th, in north west Madhya Pradesh on 18th and in Bihar Plains on 19th, being severe in some parts of Rajasthan on 17th and 18th and in south central Uttar Pradesh on 18th. Night temperatures were appreciably below normal in northwest India, Gujarat State, Madhya Pradesh and Uttar Pradesh on many days between 16th and 24th and in west Maharashtra on a few days during this period. They were also appreciably below normal in Himachal Pradesh, Rajasthan, Uttar Pradesh, Madhya Pradesh and Bihar on a few days in the first week. Night temperatures were appreciably above normal in Andhra Pradesh from 5th to 8th, in Gujarat State between 8th and 13th and in some parts of Madhya Pradesh from 11th to 14th.