

# Weather

## HOT WEATHER SEASON (MARCH-MAY 1983)

### 1. Chief features

The hot weather season, 1983 was characterised by mild summer over north India. In March moderate cold wave conditions prevailed in many parts of northwest India and in east Uttar Pradesh, west Madhya Pradesh and Gujarat region. Fairly widespread snowfall was reported over Western Himalayas during March and April.

The other important features of the season were the occurrence of (i) Tornado/whirl wind in Orissa in March, in Gangetic West Bengal in April and local severe storm in Gangetic West Bengal in May, (ii) Floods in Assam in May and (iii) Absence of cyclonic storms/depressions in Indian seas.

Rainfall for the season (Fig. 1) was in large excess in Nagaland, Manipur, Mizoram and Tripura, Bihar plains, Uttar Pradesh, northwest India and Gujarat region, in moderate excess in Gangetic West Bengal, Bihar plateau, west Madhya Pradesh and slight excess in Orissa, east Madhya Pradesh, Saurashtra and Kutch, Rayalaseema. It was normal in Assam and Meghalaya, Sub-Himalayan West Bengal and Sikkim and deficient over the rest of the country.

### 2. March

#### 2.1. Western disturbances

The last western disturbance of February and five other western disturbances moved across Punjab and Western Himalayas during the month. It affected mostly the weather in Jammu & Kashmir, Himachal Pradesh and hills of west Uttar Pradesh during the month except for the period from 13th to 18th when the weather was fair over these areas. These systems led to excess rainfall for the month in the Western Himalayas. Punjab received fairly widespread rain/thundershowers on 19th and 20th and scattered or isolated on a few days. Scattered or isolated rain/thundershowers also occurred in Haryana on 2nd, 3rd, 19th and 20th, in plains of west Uttar Pradesh from 19th to 21st, in west Rajasthan on 21st and in east Rajasthan on 26th.

#### 2.2. Snowfall

Jammu & Kashmir experienced snowfall on as many as 16 days, while Himachal Pradesh on 11 days

and hills of west Uttar Pradesh on 5 days during the month. There was heavy rain/snowfall in Jammu & Kashmir on 2nd, 12th, 20th and 26th.

Weather in northeast and Peninsular India was affected by seasonal wind discontinuity. Wind discontinuity trough at 0.9 km asl was seen on most days over Assam & Meghalaya and West Bengal & Sikkim. A low level cyclonic circulation/trough lay over Gangetic West Bengal and neighbourhood between 17th and 20th. The Peninsular wind discontinuity at 0.9 km asl was seen in the second fortnight of the month being pronounced in the later part of the 3rd week.

Northeast India outside Bihar State experienced good thundershower activities leading to excess or normal rainfall. Number of days of thundershowers were 16-18 in Assam and Meghalaya and Nagaland, Manipur, Mizoram and Tripura, 7-11 in Arunachal Pradesh, West Bengal & Sikkim and Orissa and only 2-4 in Bihar State. It was pronounced in the third week of the month when it was generally widespread on 2-4 days in Assam and adjacent States and on 1-2 days in other places outside Bihar plains.

Scattered/isolated thundershowers occurred on 1 to 2 days in east Madhya Pradesh and Vidarbha during the second week and on 1 to 3 days in east Madhya Pradesh, coastal Andhra Pradesh, Telangana, Rayalaseema, Tamil Nadu and Kerala between 19th and 24th.

#### 2.3. Tornado and whirl wind

A whirl wind on 20 March in Jalai, a village in Bolangir district in Orissa killed 2 persons and injured 10. A tornado hit Paradip port area at 0945 IST of 23rd damaging a Pan shop and 6 wooden cubicles placed on the ground.

#### 2.4. Hailstorms

In Baripada sub-division of Orissa, hailstorms occurred in the afternoon of 2nd in Pathuri, Budamara, Simileswar, Salbani and Golamundhakata villages of Bangriposi block.

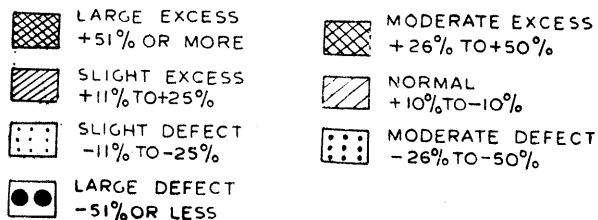
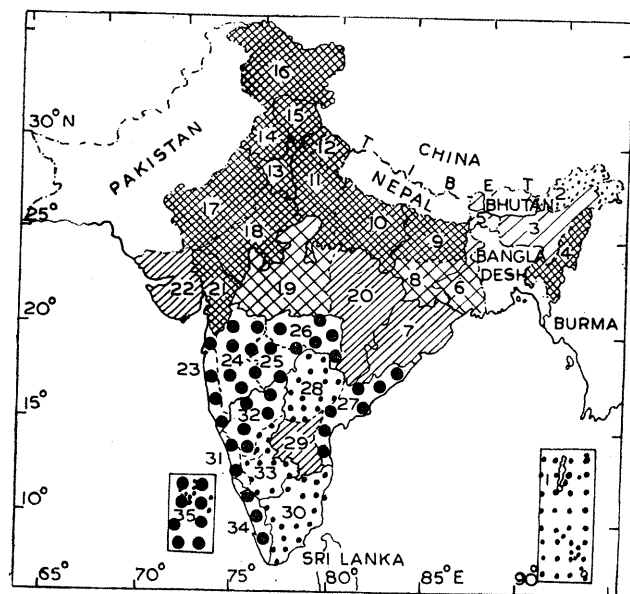


Fig. 1. Percentage departure of rainfall from normal for the period 1 March to 31 May 1983

### 2.5. Rainfall during the month

Rainfall was excess in Assam and adjacent States, Gangetic West Bengal, Orissa, Himachal Pradesh and Jammu & Kashmir, normal in Bihar plains, hills of west Uttar Pradesh, Haryana and Rayalaseema, deficient or scanty over the rest of the country outside Gujarat State, Konkan and Goa, Madhya Maharashtra, coastal and north interior Karnataka & Lakshadweep where there was no rain.

The notable amounts (cm) of rainfall during the month were :

2nd	Kathua 7
3rd	Kalpa 7
12th	Katra 7
19th	Pahalgam 11, Katra 7
20th	Batote 9, Bhaderwah 8, Kalpa, Katra, Quazigund, Contai 7 each
21st	Baghdogra 8
22nd	Kailashahar 11, Rangiya 8, Imphal 7
26th	Batote 8

### 2.6. Temperature

Day temperatures were above or appreciably above normal in Andhra Pradesh, Tamil Nadu, Rajasthan, Madhya Pradesh, interior Maharashtra and interior

Karnataka on most days and on a few days in West Bengal & Sikkim, Bihar and Kerala during the month. They were generally, normal or below normal in Assam and adjacent States during the month and so from 1st to 8th in West Bengal & Sikkim, Bihar, Uttar Pradesh, northwest India, Madhya Pradesh, Gujarat State and Konkan & Goa. Appreciably to markedly below normal day temperatures were recorded at a few places in Uttar Pradesh, northwest India, Madhya Pradesh and Gujarat State on many days during the period from 21st to 31st.

Night temperatures were below or appreciably below normal on a few days in plains of north India, Western Himalayas, Saurashtra & Kutch, Konkan & Goa and Madhya Maharashtra upto 10th and so on most days in Uttar Pradesh, northwest India, Madhya Pradesh, Gujarat and Maharashtra States from 21st to 31st.

### 2.7. Cold wave

Moderate cold wave conditions prevailed in east Uttar Pradesh, west Madhya Pradesh, south Madhya Maharashtra and Telangana on 22nd and 23rd, Himachal Pradesh on 23rd, Jammu & Kashmir on 3rd and 22nd, west Rajasthan on 22nd, east Rajasthan on 22nd, 23rd and 29th and Gujarat region on 29th.

## 3. April

### 3.1. Western disturbances

Northwest India & Uttar Pradesh received, in general, good rainfall upto 19th from western disturbance and their induced systems. Last western disturbance of the preceding month and ten others along with five induced systems affected these parts of the country during this month. The active western disturbances were those which moved across the Western Himalayas and Punjab between 7th and 11th, 9th and 12th, 12th and 17th and 17th and 20th. The induced low which developed over west Rajasthan and adjoining Pakistan on 14th, moved northwards and merged with the western disturbance over Punjab and neighbourhood on 17th causing generally widespread rain in Rajasthan on 14th and 15th.

Generally widespread rainfall occurred on 6 to 11 days in Western Himalayas and Punjab and on 1 to 3 days in plains of Uttar Pradesh and Haryana during the month with isolated heavy to very heavy falls on a couple of days in Haryana, Punjab & Himachal Pradesh and Jammu & Kashmir between 13th and 17th.

### 3.2. Snowfall

Snowfall was reported from many places in Western Himalayas from 14th to 19th. Isolated heavy fall of rain/snow was reported in Himachal Pradesh on 16th and 17th and in Jammu & Kashmir on 16th.

Weather in northeast and Peninsular India and Madhya Pradesh was affected by seasonal wind discontinuity/trough. Other than this a low pressure area with associated cyclonic circulation in the lower levels

lay over southeast Madhya Pradesh & adjoining Bihar plateau and Orissa on several days during the third week of the month. Also a low pressure area with cyclonic circulation upto 1.5 km moved across Comorin areas and adjoining south Peninsula between 16th and 19th and another low pressure area moved from south Andaman Sea across south Bay and south Peninsula between 25th and 31st.

In association with these systems rain/thundershowers were generally widespread on 7 to 8 days in Assam & adjacent States and on a couple of days in rest of northeast India and in Kerala on 29th and 30th. Scattered or isolated rain/thundershowers occurred on a few days in Madhya Pradesh, northeast and Peninsular India outside Marathwada.

### 3.3. Tornado and hailstorms

A severe tornado ripped through Gaighata block of Bongaon sub-division in West Bengal around 7.45 P.M. of 12th killing 28 people, injuring about 500 and destroying several thousand huts. Hailstorm was reported in some parts of Allahabad on 8th.

### 3.4. Rainfall during the month

The rainfall for the month was excess in Nagaland, Manipur, Mizoram & Tripura, Orissa, Bihar, north-west India, Madhya Pradesh and Gujarat State, normal in Arunachal Pradesh, Assam & Meghalaya, Gangetic West Bengal and deficient or scanty over the rest of the country outside Marathwada where there was no rainfall.

The significant amounts (cm) of rainfall during the month were :

8th	Dalhousie 9
9th	Silchar 7
13th	Bhaderwah 9, Pathankot 8, Jammu AP 7
16th	Patiala 14, New Delhi (SFD) 13, Udhampur 12, Narnaul, Amritsar, Nahan 9 each, Katra 8, Nazibabad, Muzaffarnagar, Pathankot, Bilaspur (Himachal Pradesh) 7 each
17th	Ambala, Bareilly IAF, Bilaspur (Himachal Pradesh) 8 each
28th	Kailashahar 8
29th	Trivandrum 8, Uluberia 7
30th	Gauhati 9, Silchar 8

### 3.5. Temperature

Day temperatures were generally below normal in most parts of northeast and northwest India, Uttar Pradesh, Madhya Pradesh, and Gujarat State, being appreciably to markedly so on 17 to 18 days in Haryana and Punjab, on 10 to 13 days in Uttar Pradesh, rest of northwest India, west Madhya Pradesh and Gujarat region and on 4 to 8 days in northeast India, east Madhya Pradesh and Saurashtra & Kutch. They were as much as 10 deg. to 15 deg. C below normal on several days at few places in Bihar, Uttar Pradesh, northwest India and west Madhya Pradesh between 13th and 19th.

They were generally above normal in the Peninsula, being appreciably so on a number of days in Tamil Nadu.

## 4. May

### 4.1. Western disturbances

The last western disturbance of April and eleven others along with a few induced systems affected northwest India and Uttar Pradesh during this month. During the first five days Jammu & Kashmir and hills of west Uttar Pradesh received fairly widespread rain/thundershowers on 2 days. The western disturbances which moved across Western Himalayas and neighbourhood between 8th evening and 14th, 13th and 16th, 17th evening and 20th evening and 19th and 25th and three induced systems which moved across Rajasthan, Haryana, Punjab and west Uttar Pradesh during this period caused generally widespread rain/thundershowers on 4 to 6 days in Western Himalayas, Haryana and Punjab and on 1 to 2 days in plains of Uttar Pradesh and Rajasthan between 11th and 21st. Scattered or isolated rain/thundershowers occurred on 12 days in plains of west Uttar Pradesh, on 7 to 9 days in east Uttar Pradesh, Rajasthan and Western Himalayas. The rainfall over northwest India outside Western Himalayas was practically absent during the first week and was generally of isolated nature over northwest India for a few days except for generally widespread/thundershowers in Rajasthan on 29th in the last week. East Uttar Pradesh experienced isolated heavy fall on 20th.

### 4.2. Hailstorms and cloud-burst

According to reports hailstorms lashed Jammu city on 20th. A cloud burst had claimed 26 lives in Himachal Pradesh during 3rd week.

The weather over northeast, central and Peninsular India was affected by the following system :

(i) East-west trough from north Madhya Pradesh to Nagaland, Manipur, Mizoram and Tripura on many days between 7th and 16th.

(ii) Eastwards moving cyclonic circulations in the lower levels across Bihar, Gangetic West Bengal and Assam between (a) 30 April and 5 May, (b) 21 and 24 May.

(iii) Cyclonic circulation in the lower, middle and upper troposphere moving across Bay of Bengal, south Peninsula between (a) 4th and 9th, (b) 12 and 15th, (c) 16th and 18th and (d) 28th and 29th.

(iv) A few low pressure areas over Andaman Sea and south Bay.

In association with these systems rain/thundershowers were generally widespread on 12 to 15 days in Assam & Meghalaya, Sub-Himalayan West Bengal and Sikkim, on 6 to 9 days in Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gangetic West Bengal and south interior Karnataka and on 1 to 3 days in Orissa, Bihar, Telangana, Tamil Nadu, coastal Karnataka, Kerala and Lakshadweep. Isolated heavy to very heavy falls

occurred on 3 to 5 days in Andaman and Nicobar Islands, West Bengal and Sikkim and on 1 to 2 days in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Tamil Nadu and Kerala.

#### 4.3. Local severe storms

As per the reports a local severe storm which swept through nine villages under Nannur police station in Birbhum district on 5th claimed one life, injured 75 persons and 400 families were rendered homeless. Three bogies of a passenger train in Burdwan-Katwa narrow gauge railways were blown off the track by a squall on 29th killing 4 persons.

Due to lightning 11 people were killed and 7 injured on 11th around Balagarh of Hooghly district in West Bengal.

#### 4.4. Floods and damages

According to the reports the swollen *Jhanji* river breached its embankment at Bonai Pathar in Sibsagar district of Assam on 6th affecting over 1000 families. Road communication had been disrupted by the flood waters of *Jhanji* and *Teok* in Teok and Simaluguri areas. Floods in Cachar district, in the first week, affected about 150 villages.

#### 4.5. Rainfall during the month

Rainfall was excess in West Bengal & Sikkim, Bihar, Uttar Pradesh, northwest India, Madhya Pradesh, Rayalaseema and Tamil Nadu, normal in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Orissa, Telangana and north interior Karnataka, deficient in Andaman & Nicobar Islands, Arunachal Pradesh, coastal Andhra Pradesh, south interior Karnataka and Lakshadweep and scanty over the rest of the country outside Saurashtra & Kutch where there was no rain.

The significant amounts (cm) of rainfall were :

7th	Gangtok, Tadong 18 each
8th	Berhampore 11
9th	Gangavati 10, Hagribormanhalli 8

10th	Alattur 12, Chittur 10, Kallakkurichchi 7
11th	Jogindernagar 10, Nurpur 9
12th	Cooch Behar 8
13th	Jalpaiguri 10
15th	Dhubri, Gauhati AP 8 each
17th	Honavar 7
18th	Tadong 14, Gangtok 10, Chaparmukh 7
20th	Gangtok 9, Unnao 8, Cherrapunji 7
21st	Baghdogra 10, Kailashahar 7
23rd	Kailashahar, Krishnanagar, Bilaspur 9 each
24th	Minicoy 11
25th	K. Paramathy 8
27th	Car Nicobar 7
29th	Long Island 7
30th	Car Nicobar 13, Mayabandar 7, Port Blair 5

#### 4.6. Temperature

Day temperatures were generally normal or above normal in Maharashtra State, Tamil Nadu, Karnataka and Kerala. They were so on many days in Andhra Pradesh during the month and in Assam & adjacent States, Gangetic West Bengal and Orissa during the second fortnight of the month. Appreciably above normal day temperatures were recorded on a few days in these areas.

They were generally below normal in Bihar, Uttar Pradesh, Haryana, Punjab, Himachal Pradesh and Jammu & Kashmir during the month and so in Assam & adjacent States, West Bengal & Sikkim and Orissa during the first fortnight of the month. They were appreciably to markedly below normal on several days in these areas. As much as 10 deg. to 15 deg. C below normal day temperatures were reported in some places of east Uttar Pradesh on 12th and 24th, in Haryana and Punjab on 12th, 19th to 22nd and 24th, in Himachal Pradesh on 12th, 22nd and in Jammu & Kashmir on 12th, 22nd, 29th and 30th.