Mausam, (1987), 38, 2, 265-272

Weather

HOT WEATHER SEASON (MARCH-MAY 1986)*

1. Chief features

Hot weather season of the year 1986 was conspicuous for the absence of any cyclonic storm in the Indian seas. There was snowfall over Western Himalayas in March, April and May. Also during May, southwest monsoon advanced over Andaman and Nicobar Islands.

The rainfall for the season (Fig. 1) was in large excess in Bihar plains, hills of west Uttar Pradesh, Haryana and Punjab; moderately excess in Gangetic West Bengal, plains of west Uttar Pradesh, Himachal Pradesh and east Rajasthan; slightly excess in Orissa and west Rajasthan; normal in Andaman & Nicobar Islands, Bihar Plateau, east Uttar Pradesh, Jammu & Kashmir, East Madhya Pradesh and North Interior Karnataka; slightly deficient in Nagaland, Manipur, Mizoram & Tripura; Sub-Himalayan West Bengal & Sikkim and west Madhya Pradesh; moderately deficient in Arunachal Pradesh; Assam & Meghalaya, coastal Andhra Pradesh, Telangana, Tamil Nadu, south Interior Karnataka, Kerala & Lakshadweep and was largely deficient in the rest of the country.

2. March

2.1. *Synoptic systems and weather*

The last western disturbance of the previous month moved away eastwards across Western Himalayas by 2nd evening. Besides this, ten more western disturbances affected north Pakistan and Western Himalayas during the month. The eleventh western disturbance of the month lay over extreme north Pakistan and adjoining Jammu & Kashmir on the last day of the month.

During the first fortnight eastwest trough in the lower levels/lower tropospheric levels were observed on several days running across Bihar plains, Sub-Himalayan West Bengal and Assam. Sub-Himalayan West Bengal & Sikkim and Assam & adjacent States were affected by troughs in the lower tropospheric westerlies between 17th and 19th, 20th and 21st evening and 24th and 25th.

The other systems in westerlies which affected northwest India and neighbourhood are given in Table 1.

Apart from the above systems on most days of the month Peninsular wind discontinuity/trough at 0.9 km a.s.l. was observed.

During the month the western disturbances caused two spells of snowfall over Himachal Pradesh and Jammu & Kashmir. The first spell was from 13th to 19th and the second spell was from 22nd to 24th. During the first spell snow or rain was generally widespread on three to five days and was scattered or isolated one to two days, while during the second spell it was generally widespread or scattered on two days each. Rain or thundershowers were generally widespread over Jammu & Kashmir, Tamil Nadu and Lakshadweep on 11th, over hills of west Uttar Pradesh and Himachal Pradesh on 12th and also over Jammu & Kashmir on 28th and 29th. They were generally widespread on 6 days over Arunachal Pradesh and on 1 to 3 days over Nagaland, Manipur, Mizoram & Tripura, Haryana & Punjab between 13th and 21st. They were scattered or isolated on a few days over the rest of the country outside Bihar plains, east Uttar Pradesh, Konkan and Goa, Madhya Maharashtra, Marathwada and Rayalaseema where weather was mainly dry.

2.2. *Rainfall during the month*

Rainfall was excess in Punjab and Lakshadweep ; normal in hills of West Uttar Pradesh, Haryana, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh, Tamil Nadu, north Interior Karnataka and Kerala; deficient in Arunachal Pradesh, Sub-Himalayan West Bengal & Sikkim and plains of West Uttar Pradesh and was scanty over the rest of the country outside Rayalaseema, where there was no rain.

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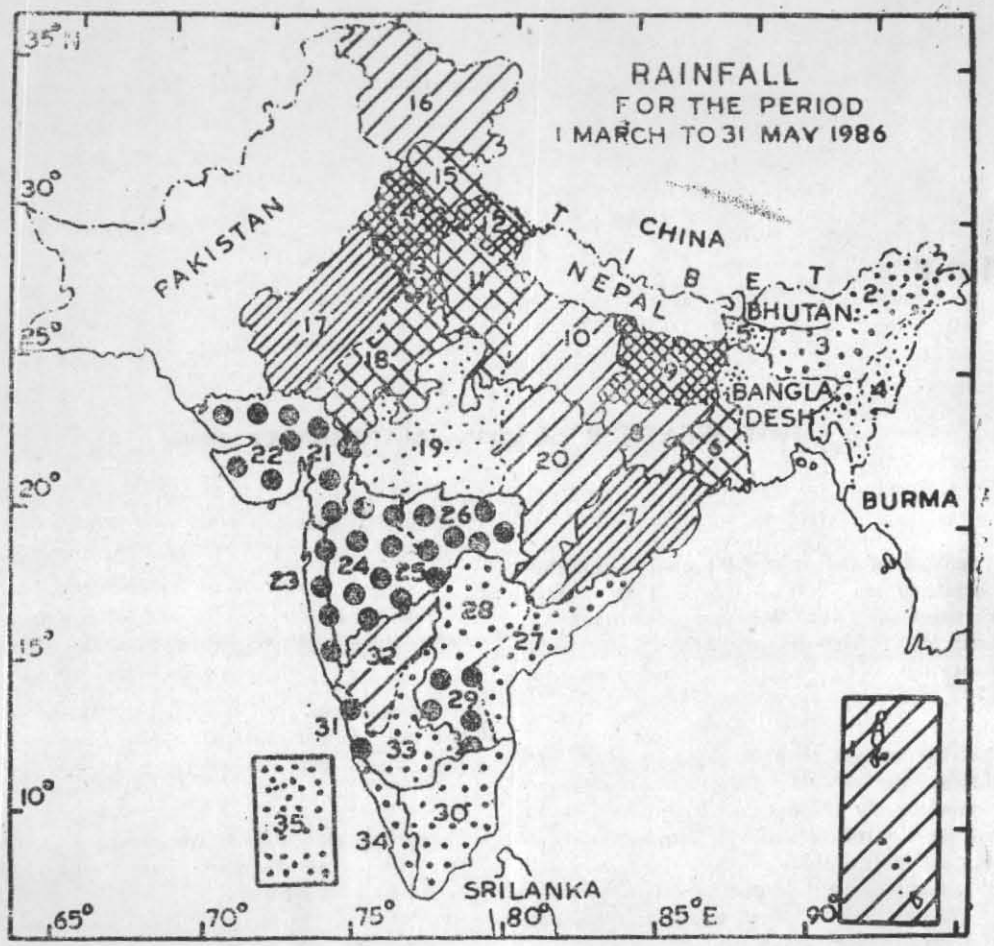

Sub-Div.	Dep. from normal	Sub-Div.	Dep. from normal	Sub-Div.	Dep. from normal
1. A & N Island	—9	13. Haryana	65	25. Marathwada	—85
2. Arunahchal Pradesh	—38	14. Punjab	123	56. Vjdarbha	—57
3. Assam & Megha.	—50	15. Himacha. Pradesh	37	27. Coastal A.P	—26
4. N. M. M. &T.	—18	16. Jammu & Kashmir	0	28. Telangana	—38
5. S. H. W. B. Sikkim	—25	17. West Rajasthan	16	29. rayalaseema	—53
6. G. West Bengal	32	18. East Rajassthan	39	30. Tamil Nadu	—37
7. Orissa	19	19. West M. P.	—21	31. Cot. Karnataka	—78
8. Bihar Plateau	5	20. East M. P.	8	32. N. I. Karnataka	—10
9. Bihar Plains	71	21. Gujarat Region	—66	33. S. I. Karnataka	—50
10. East U. P.	10	22. S & K	—92	34. Kerala	—40
11. Plains W. U. P.	38	23. Konka & Goa	—98	35. Lakshadweep	—41
12. Hills W. U. P.	127	24. Madhya Maharashtra	—61		

Fig. 1

Significant amounts (cm) of rainfall were :

1st Pachmari 3

3rd Mohadi 3

11th Cuddalora & Karaikal 9 each, Srinagar & Kupwara 5 each, Sherthala & Cochin AP 3 each

12th Mana (HP) 5, Jabalpur & Sidhi 3 each

13th Srinagar 5, Kukernag 4, Manali & Coonoor 3 each

14th Manali 9, Kupwara 6, Mana 5 (HP), Tadong Alleppey & Punalur 3 each

15th Mana (HP) 11, Manali 4, Jullundur 3

16th Dalhousie 6

17th Chamoli 10

18th Mana (HP) 10, Dalhousie, & Udhampur AP 6 each, Quazigund 5, Gadag 3

19th Mana (HP) 15, Chamba 7, Dalhousie 5, Jullundur 4, Katra & Ludhiana 3 each

20th Kottayam 5, Cochin AP 4

21st Cochin AP 3

23rd Poonch & Kalpa 3 each

24th Punalur 3

28th Pahalgam & Batote 3 each

TABLE 1

March 1986 — Systems in westerlies

	Weather systems	Period	Place of first location	Track followed	Place of dissipation	Remarks
Cyclonic circulations						
(*i*)	Lower tropospheric levels	2nd-4th evening	Sub-Himalayan West Bengal & Sikkim and neighbourhood	—	—	*in situ*
(*ii*)	Do.	6th-8th	Central Pakistan and adjoining Rajasthan	Eastery	Northwest Madhya Pradesh and adjoining Rajasthan	
(*iii*)	Do.	10th-12th evening	Central Pakistan and adjoining northwest Rajasthan	Do.	West Uttar Pradesh & neighbourhood	
(*iv*)	Lower levels	13th-15th	Do.	Do.	Haryana & adjoining northwest Rajasthan	
(*v*)	Do.	17th-20th	Do.	Do.	West Uttar Pradesh and neighbourhood	A trough at 0.9 km a.s.l. extended from the system to north interior Karnataka on 19th.
(*vi*)	Lower tropospheric levels	21st-23rd evening	West Rajasthan	Do.	South Uttar Pradesh and adjoining northeast Madhya Pradesh.	
(*vii*)	Do.	28th evening to 30th	Punjab and neighbourhood	Do.	Hills of west Uttar Pradesh	

2.3. *Temperature*

Day temperatures were appreciably above normal on most of the days in Jammu & Kashmir and Rajasthan in the first fortnight. They were generally above normal in Gangetic West Bengal, Orissa, Bihar State, Uttar Pradesh, Haryana, west Madhya Pradesh, Gujarat region, Madhya Maharashtra and Marathwada between 7th and 16th, in Telangana and Rayalaseema in the second fortnight and in Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura between 21st and 31st. Appreciably to markedly below normal day temperatures were recorded at a few places in hills of west Uttar Pradesh and northwest India on most days during the period from 18th to 25th.

Night temperatures were in general, appreciably below normal in Punjab, Himachal Pradesh and Jammu & Kashmir between 15th and 25th and were below normal in Orissa and Bihar in the first week. They were appreciably above normal in Rajasthan, west Madhya Pradesh and Madhya Maharashtra on several days between 4th and 14th.

3. April

During the month there was enhanced thundershower activity over northeast India but subdued activity over most parts of the Peninsula.

3.1. *Synoptic systems and weather .*

Apart from the last western disturbance of the previous month, which moved away eastwards across Western Himalayas on 5th, five more western disturbances affected Western Himalayas during the month.

The sixth western disturbance of the month appeared over north Pakistan and Jammu & Kashmir on 30th.

Several other synoptic systems in westerlies were observed over the sub-continent during the month, which are given in Table 2.

Over Peninsular India, the seasonal wind discontinuity/trough at 0.9 km a.s.l. was observed throughout the month. On some occasions the equatorial trough in the lower tropospheric levels appeared in the sea areas and adjoining India, details of which are also given in Table 2.

TABLE 2

Weather systems during April 1986

	Weather systems	Period	Place of first location	Track followed	Place of dissipation	Remarks
			systems in westerly			
A.	*Cyclonic circulations*					
1	Lower tropospheric levels	1st-3rd	Central Pakistan and adjoining northwest Rajasthan	North-easterly	Punjab and northwest Rajasthan and Pakistan	
2	Do.	5th-7th	Bangla Desh and adjoining Tripura	Easterly	Mizoram and adjoining Tripura and neighbourhood	
3	Do.	8th-10th	Central Pakistan and adjoining Rajasthan	North-easterly	Northwest Rajasthan and adjoining Punjab and north Pakistan	
4	Lower levels	8th-10th	North Madhya Pradesh and adjoining south Uttar Pradesh	Easterly	North Bangla Desh and neighbourhood	A trough at 0.9 km a.s.l. from the system extended to Nagaland on 8th.
5	Lower tropospheric levels	10th evening to 13th evening	South Pakistan	North-easterly	Punjab, Haryana and adjoining north west Rajasthan	
6	Do	10th evening to 17th evening	Bihar plains	Eastwards	Assam and neighbourhood	
7	Lower levels	17th to 20th evening	West Rajasthan	—	*in situ*	
8	Do.	19th evening to 23rd evening	Bihar Plateau and neighbourhood	Easterly	Gangetic West Bengal and adjoining Bihar plateau	
9	Do.	25th-26th	North Rajasthan and adjoining Haryana, Punjab and Pakistan.	—	*in situ*	
10	Do.	26th-28th evening	Central Pakistan	Easterly	Punjab and adjoining Haryana	
11	Do.	28th-30th	Northwest Madhya Pradesh.	Do.	—	Lay over Bihar plains and neighbourhood on 30th
12	Low pressure area	3rd-4th	Bihar State	—	*in situ*	Associated cyclonic circulation extended to 3.6 km a.s.l.
			Systems in easterlies			
A.	*Cyclonic circulations*					
1	Lower levels	3rd evening to 5th evening	Tamil Nadu and neighbourhood	Westerly	Kerala and neighbourhood	
2	Between 0.9 and 1.5 km a.s.l.	13th-15th	Southeast Arabian Sea west of Lakshadweep	—	*in situ*	
3	Between 1.5 and 2.1 km a.s.l.	16th-17th evening	Sri Lanka	—	*in situ*	

Generally widespread rain or thundershowers occurred on 11 to 15 days over Assam and adjacent States during the month. They were generally widespread over Sub-Himalayan West Bengal & Sikkim during 24th to 30th on each day, two to four days over Gangetic West Bengal, hills of west Uttar Pradesh, Punjab, Himachal Pradesh and Jammu & Kashmir and on one day each over Orissa, Bihar, south Interior Karnataka and Kerala during the same period. Generally widespread rain or thundershowers also occurred on 14th over Jammu & Kashmir and on 16th over Kerala. They were scattered or isolated on most days of the month over Kerala; on 10 to 14 days over West Bengal and Sikkim, Orissa, Jammu & Kashmir and Interior Karntaka and on a few days over the rest of the country outside Rajasthan, Gujarat State, Konkan & Goa, Marathwada & Vidarbha where the weather was mainly dry. Snowfall was reported at a few places in Himachal Pradesh on 3rd.

3.2. *Rainfall during the month*

Rainfall was excess in Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, West Bengal & Sikkim, Orissa, Bihar plains, plains of west Uttar Pradesh and Himachal Pradesh; normal in Assam & Meghalaya, Bihar Plateau, east Uttar Pradesh, hills of west Uttar Pradesh, Punjab, Jammu & Kashmir, east Madhya Pradesh, coastal Andhra Pradesh and north interior Karnataka; deficient in Haryana, Telangana, Rayalaseema and Kerala and scanty over the rest of the country outside Gujarat State, Marathwada and Vidarbha where there was no rain.

The significant amounts (cm) of rainfall were :

1st	Gulmarg 3
2nd	Gulmarg 3
3rd	Quilon & Kalpa 3 each
4th	Punalur 5, Berhampore 3
7th	Kottayam 3
8th	Trivandrum 4, Agartala AP 3
9th	Agartala AP 7, Tiruvallur 4, Cherrapunji 3
10th	Agartala AP 5, Kailashahar 4, Belgaum AP & Silchar 3 each
11th	Cherrapunji 10
12th	Tezpur & Kailashahar 6 each, Gauhati AP 4
13th	Agartala AP 5, Tezpur 4
14th	Silchar 6, Gangtok 5, Gauhati AP & Agartala AP 3 each
15th	Cherrapunji 18, Gangtok 7, Punalur & Silchar 6 each
16th	Cherrapunji 17, Tezu 7, Quilon 4, Dibrugarh AP 3
17th	Cherrapunji 13, Dibrugarh AP & Pasighat 4 each, North Lakhimpur & Trivandrum 3 each
18th	Cherrapunji 44, Pasighat 6, Tezu 4
19th	Pasighat 11, Kailashahar 5, Agartala AP & Kondul 3 each
20th	Gangtok 6, Balasore 4, Kailashahar, Aijal & Kondul 3 each
21st	Berhampore 4, Visakhapatnam & Hyderabad AP 3 each
24th	Dhubri 6, Jagdalpur 3
25th	Quazigund 7, Dalhousie, 6, Gangtok 5, Aijal, Dhubri & Kailashahar 4 each, Bhawanipatna & Bagati (Magra) 3 each
26th	Puri 9, Chamba 7, Bhubaneswar AP & Dharamsala 5 each, Daporijo, North Lakhimpur & Batote 4 each
27th	Gangtok 5, Pasighat & Ferozepore 4 each, Tangla 3
28th	Dharmapuri 6, Cherrapunji, Trivandrum & Mana AP 5 each, Raipur & Kothagudam 4 each
29th	Thanjavur 6, Panagarh AP 4, Cuttack 3
30th	Gangtok 5, Vijayawada AP & Punalur 4 Malda & Aijal 3 each

3.3. *Temperature*

Day temperatures were appreciably to markedly above normal on two days each in Rajasthan and Saurashtra and Kutch between 6th and 9th and on two to four days in Punjab, Himachal Pradesh Jammu & Kashmir and Rajasthan between 21st and 24th. They were generally above normal in interior Maharashtra, Telangana, Rayalaseema and Tamil Nadu during the month. They were as low as 9°C to 11°C below normal on one to two days in hills of west Uttar Pradesh, Punjab, Himachal Pradesh and Jammu & Kashmir between 26th and 28th.

3.4. *Damages due to severe weather*

According to press reports, severe local storms in north 24-Parganas and Burdwan districts on 6th morning claimed 2 lives and several cattle heads died. 50 persons were injured when a local severe storm swept through Kamalapur sub-division of Tripura on 13th. In a flash flood in Dharwad district of north Interior Karnataka on 12th, 5 persons lost their lives. Also heavy rains and floods claimed 15 lives in Haryana, Punjab and Jammu & Kashmir and three persons were swept away in swollen nullah in Dharamsala in Himachal Pradesh during the last week of the month.

4. May

Thundershower activity over Assam and adjacent States was rather subdued, while it was above normal over the Gangetic plains during the month. Also the equatorial trough in the lower tropospheric levels became established over sea areas adjoining India in the second fortnight. Prior to that the wind discontinuity/trough was observed in the lower levels over the Peninsula.

4.1. *Synoptic systems and weather*

The western disturbance, which lay over north Pakistan and adjoining Jammu & Kashmir on the last day of the previous month moved away eastwards across Western Himalayas on 1st evening.

Seven more western disturbances affected north Pakistan and Western Himalayas and neighbourhood during the month. The eighth western disturbance of the month appeared over north Pakistan on 30th, which persisted there on 31st. Also a trough in mid and upper tropospheric westerlies affected central and northeast India between 4th and 6th.

The synoptic features that affected the weather over India during the month have been given in Table 3.

Southwest monsoon advanced over Andaman & Nicobar Islands, Andaman Sea and adjoining southeast Bay on 20th. Rain or thundershowers were generally widespread on 14 days over Andaman & Nicobar Islands and on four to six days over Arunachal Pradesh, Assam & Meghalaya, West Bengal & Sikkim, Bihar plains, Jammu & Kashmir and Kerala during the month. Generally widespread rain or thundershowers also occurred on one to three days in Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra and coastal Karnataka in the first week and on one to six days in Orissa, Bihar Plateau, east Uttar Pradesh, hills of West Uttar Pradesh, Haryana, Punjab, Himachal Pradesh, Rajasthan, coastal Andhra Pradesh, south Interior Karnataka and Lakshadweep during the second fortnight of the month. Scattered or isolated rainfall occurred on 15 to 23 days in Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, West Bengal & Sikkim, Orissa, Tamil Nadu, south Interior Karnataka and Kerala. As per press reports, there was heavy snowfall over the hills of west Uttar Pradesh in the last week of the month.

4.2. *Rainfall during the month*

Rainfall was excess over Gangetic West Bengal, Orissa, Bihar State, Uttar Pradesh, Haryana, Punjab, Himachal Pradesh, Rajasthan and east Madhya Pradesh; normal in Andaman & Nicobar Islands, west Madhya Pradesh, Vidarbha, coastal Andhra Pradesh, Telangana and north Interior Karnataka and deficient over Nagaland, Manipur, Mizoram & Tripura, Sub-Himalayan West Bengal & Sikkim, Jammu & Kashmir, Gujarat region, Madhya Maharashtra, Rayalaseema, Tamil-Nadu, south Interior Karnataka, Kerala and Lakshadweep. Rainfall was scanty over the rest of the country.

The significant amounts (cm) of rainfall were :

1st	Jenapur 8, Diamond Harbour 6, Anandpur 5, Krishnagar & Trichur 4 each
2nd	Cherrapunji, Mandya, Trivandrum & Kustagi 4 each
4th	Cochin AP 16, Thumba 10, Parli 9, Agartala AP, Gangtok & Kolhapur 6 each, Majbat 5
5th	Car Nicobar 7, Midnapore 6, Chaparmukh 4
6th	Kondul 9, Gangtok 5
7th	K. Paramathy 9, Ariyalur 8
8th	Long Island 7, Hut Bay 5
9th	Mannargudi 7, Vedarnayam & Namakkal 5 each, Car Nicobar & Kondul 4 each
10th	Shillong 7, Car Nicobar 6
11th	Kondul 9
12th	Car Nicobar 10, Nancowry 6
13th	Sivaganga 9, Sandheads 8, Nancowry 6, Kondul 5
14th	Sandheads 8, Panagarh AP & Sriniketan 7 each, Kozhikode & Satyamangalam 4 each
15th	Sabour 5, Panambur, Mysore, Alleppey & Purnea 4 each
16th	Kailashahar & Cochin AP 7 each, Muzaffarpur & Dumka 6 each, Gangtok & Dharmapuri 4 each
17th	Bhagalpur 5, Quilon & Nancowry 4 each
18th	Kalimpong 5
19th	Long Island 13, Maya Bandar 8, Port Blair 7, Jogindernagar 6, Kalpa, Jullundar & Cooch Behar 5 each, Patiala & Manali 4 each
20th	Pantnagar 7, Calcutta AP & Kheri Lakhimpur 6 each, Mussoorie 5
21st	Panagarh AP 8, Sriniketan, & Dharamsala 5 each, Paradip, Bhadarwah, Kangra & Chamba 4 each
23rd	Kondul & Port Blair 6 each
24th	Car Nicobar 9, Kondul 6, Peermade 5
25th	Nilakottai 5, Kondul 4
26th	Uthagamandalam 4
27th	Kandaghat 5
28th	Dumka 9, Gangtok 6, Sriniketan & Paradip 5 each, Mukteshwar 4
29th	Ongole 7, Rentachintala 4
30th	Mandya 6, Udaipur 4
31st	Tirupattur 7, Amini Divi 5

TABLE 3

Weather systems during May 1986

S. No.	Weather system	Period	Place of first location	Track followed	Place of dissipation	Remarks
Cyclonic circulations						
1	Lower levels	30 Apr-2 May	*Bihar plains and neighbourhood	Easterly	Bangla Desh and neighbourhood	*Systems developed first over northwest Madhya Pradesh on 28 April
2	Do.	30 Apr-2 May	Southwest Madhya Pradesh	North-easterly	Bihar plains	
3	Do.	3rd-6th	Bihar plains and neighbourhood	Easterly	Sub-Himalayan West Bengal & Sikkim and neighbourhood	
4	Lower and mid tropospheric levels	7th-11th evening	Bihar State and neighbourhood	Do.	Assam & adjacent States	
5	Lower tropospheric levels	8th-9th evening	Central Madhya Pradesh	Do.	Orissa and adjoining Gangetic West Bengal	
6	Do.	9th-10th	Southeast Madhya Pradesh and adjoining Vidarbha	Do.	Orissa and adjoining southeast Madhya Pradesh	
7	Lower levels/Lower tropospheric levels	12th-19th	East Uttar Pradesh	Do.	Assam and neighbourhood	
8	Lower levels	12th-13th	West Bengal and neighbourhood	Do.	*in situ*	
9	Lower tropospheric levels	15th-17th	Assam	Easterly	Northeast Assam and neighbourhood	
10	Do.	14th evening-17th evening	Central Pakistan	East-north-easterly	Punjab and neighbourhood	
11	Lower levels*	16th-17th	Northeast Madhya Pradesh	North-easterly	*Both of them merged with the circulation under S. No. 10 over Bihar State on 17th	
12	Do.	16th-17th	Orissa	Northerly		
13	Lower tropospheric levels	18th-21st	Bihar Plateau and neighbourhood	—	*in situ*	
14	Do.	18th-20th	Central Pakistan	Easterly	North Rajasthan and neighbourhood	
15	Lower levels	21st-22nd evening	South Orissa and neighbourhood	North easterly	Bangla Desh and adjoining Gangetic West Bengal	
16	*Lower tropospheric levels	23rd-28th	Central Pakistan	Easterly	Northwest Rajasthan	
17	Do.	25th-31st	Bihar Plateau and neighbourhood	Southerly	—	*Remained quasi-stationary upto 27th and lay over north Tamil Nadu on 31st
18	Do.	30th-31st	East Vidarbha and neighbourhood	Eastnorth-easterly	East Madhya Pradesh	

TABLE 3—(*contd.*)

S.N.	Weather systems	Period	Place of first location	Track followed	Place of dissipation	Remarks
			Systems in easterlies			
1	Low pressure area	7th-10th evening	South Andaman Sea and adjoining southeast Bay	North-easterly	Thailand	Became well marked over north Andaman Sea on 8th evening
	Cyclonic circulations					
1	Between 2.1 and 4.5 km a.s.l.	5th evening 8th evening	Southwest Bay and adjoining Sri Lanka	Westerly	Sri Lanka and adjoin ng Comorin	
2	Lower tropospheric levels	15th-17th	Southwest Bay off Tamil Nadu coast	South-westerly	Sri Lanka and neighbourhood	
3	Between 3.1 and 3.6 km a.s.l.	21-23rd	South Madhya Maharashtra and neighbourhood	Westerly	East central Arabian Sea off Maharashtra Goa coast	
4	Between 3.6 and 9.5 km a.s.l.	21st evening 25th	East central Arabian Sea off Karnataka coast	—	*in situ*	

4.3. *Temperature*

Day temperatures were appreciably above normal on most days in Assam & Meghalaya between 21st and 31st. They were generally above normal in Telangana, Rayalaseema, Tamil Nadu and coastal Karnataka during the month. 8°C to 14°C below normal day temperatures were reported at a few places on one to three days in Bihar State between 17th and 21st and on three to four days in west Uttar Pradesh, Haryana, Punjab, Himachal Pradesh and Jammu & Kashmir between 20th and 23rd. Day temperatures were generally below normal in West Bengal & Sikkim, Orissa, Bihar State during the month.

4.4. *Damages due to disastrous weather*

According to press reports, 9 people were killed in some parts of Nalanda district in Bihar State when a local severe storm swept through the district on 3rd night.

As per report, a squall accompanied with hailstorm on 16th evening claimed 17 lives and 512 cattle heads in Bharatpur and Dholpur districts of Rajasthan. The estimated loss due to damage was about Rs. 25 lakhs in Nadbai town and surrounding areas in Bharatpur district and Rs. 129 lakhs in Dholpur district.

As per reports, 12 persons lost their lives on 29th near Badrinath and Kedarnath due to extreme cold owing to heavy snowfall. Also 19 persons in Bellary district of Karnataka were washed away by flash flood in a hill stream caused by heavy rain on 31st.