Government of India
Earth System Science Organization
Ministry of Earth Sciences
India Meteorological Department

Dated: 4 March 2021

Subject: Current Weather Status and Outlook for next two weeks (4 to 17 March, 2021)

Salient Features

- Under the influence of a Western Disturbance and its induced cyclonic circulation, scattered to fairly widespread rainfall/snowfall/thunderstorms activity had occurred over Western Himalayan Region on four to five days and isolated to scattered rainfall/thunderstorm activity had occurred over adjoining plains on one or two days during the week.
- Remnants of Western Disturbances have caused fairly widespread to widespread rainfall/snowfall activity on four days over Arunachal Pradesh with isolated heavy rainfall on one day during the week; movement of these systems has also caused isolated to scattered rainfall/thunderstorm activity over remaining parts of Northeast India and adjoining areas of East India during the week.
- A trough/wind discontinuity in low level easterlies and presence of cyclonic circulations in the lower and middle levels have caused isolated rainfall/thunderstorm activity over parts of South Peninsular India during the week.
- **Heavy Rain:** occurred at isolated places over Arunachal Pradesh on one day during the week.
- **Temperature Scenario:**The highest maximum temperature of **40.6^{o} C** had been recorded at **Bhubaneshwar (Odisha)** on **27th February 2021** and the lowest minimum temperature of **5.4 ^{o} C** had been recorded at **Udaipur (East Rajasthan)** on **2nd March 2021** over the plains of the country during the week.

Weekly Rainfall Scenario (25 February to 03 March, 2021)

During the week, rainfall for the country as a whole was below Long Period Average (LPA) by 56%. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	2.9	6.6	-56%
Northwest India	5.9	12.8	-54%
Central India	0.0	1.9	-100%
South Peninsula	0.3	1.7	-85%
East & northeast India	6.6	10.3	-36%

The Meteorological sub-division-wise rainfall for the week is given in **Annexure I**.

Winter Rainfall Scenario (1Jan–28 Feb, 2021)

For the country as a whole, cumulative rainfall during this year's winter season till 28 February, 2021 is below LPA by 32%. Details of the rainfall distribution over the four broad geographical regions of India are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	27.8	40.8	-32%
Northwest India	39.1	78.9	-51%
Central India	8.8	15.2	-42%
South Peninsula	56.1	16.2	246%
East & northeast India	11.5	52.1	-78%

Cumulative seasonal rainfall is given in **Annexure II**.

Weekly minimum Rainfall Scenario (18 to 24 February, 2021)

- The maximum temperatures was warmer than normal in most parts of the country with above normal by 4 to 8ºC over most parts of north & adjoining central India (**Annexure III**).

Chief synoptic conditions as on 4 March, 2021

- A fresh Western Disturbance as a trough in westerlies at 3.1 km above mean sea level runs along Long. 65° E to north of Lat. 32° N.
- An induced cyclonic circulation lies over Central Pakistan & adjoining West Rajasthan at lower levels.
- A trough in westerlies runs along Long. 88°E to the north of Lat. 22°N at 3.1 km above mean sea level.
- A cyclonic circulation lies over East Bangladesh & neighbourhood at lower levels.

- A cyclonic circulation lies over Kerala at lower levels

Large scale features as on 25 February, 2021

- Currently, moderate La Niña conditions are prevailing over equatorial Pacific and Sea Surface Temperatures (SSTs) are below normal over central and eastern equatorial Pacific Ocean. The latest Monsoon Mission Climate Forecasting System (MMCFS) forecast indicates that colder than normal SST anomaly is most likely to persist over Nino 3.4 region and La Niña conditions likely to continue during coming seasons.
- At present, neutral Indian Ocean Dipole (IOD) conditions are observed over Indian Ocean and the latest MMCFS forecast indicates neutral IOD conditions are likely to continue during the coming months.
- The Madden Julian Oscillation (MJO) index currently lies in Phase 7 with amplitude close to 1. It is likely to move into Phase 8 during the first half of week 1 with gradual increase in amplitude and then into Phase 1 with amplitude greater than 1 towards the later part of week 2.

Forecast for next two week

Rainfall Forecast

➢ **Weeks 1 (4 – 10 March, 2021)**

- Under the influence of current Western Disturbance (WD), light isolated rainfall/snowfall very likely over WHR on 4th & 5th March, 2021.Thereafter, a fresh WD is very likely to affect WHR & adjoining plains from 6th March and cause fairly widespread to widespread rainfall/snowfall over the region during 06th - 08th March with peak intensity on 07th March. Isolated heavy rainfall/snowfall alongwith lightning & hailstorm very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh and Uttarakhand on 07th March. Isolated to scattered light rain/drizzle very likely over Punjab on 06th & 07th and isolated light rain/drizzle over north Haryana, Chandigarh and adjoining West Uttar Pradesh on 07th March.

➢ Thereafter, two fresh WDs in quick succession are very likely to affect WHR from 9th to

15th March and cause scattered to fairy widespread rainfall/snowfall over the region

- Scattered to fairly widespread rainfall with isolated thunderstorm/lightning very likely over northeastern states during the week 1.
- Overall rainfall activity is very likely to above normal over WHR and northeastern states during Week 1 **(Annex IV and V)**
- Isolated to scattered light rainfall with isolated thunderstorm/lightning very likely over East Uttar Pradesh, Bihar, East Madhya Pradesh, Chhattisgarh, Jharkhand & Odisha during 11-13th March 2021.
- **Weeks 2 (11 – 17 March, 2021)**

  • In Week 2, it is very likely to be above normal rainfall over Jammu & Kashmir and normal to above normal over rest WHR and northeastern states. It is likely to below normal to normal over remaining parts of the country. (refer Fig 4 and 5).

Temperature Forecast for Week 1 (4 – 10 March) and Week 2 (11 – 17 March), 2021

- No significant heat wave conditions are likely over any part of the country during next two weeks.
- The prevailing near normal maximum temperatures over of range 35 ° to 39°C over most parts of Peninsular India likely to continue during next 4-5 days.
- Above normal temperatures by 2-5°C are prevailing over most parts of plains of northwest India and central parts of the country likely to continue till 6th and fall by 2-3°C during subsequent 3 days over northwest & adjoining central India.
- In Week 2, maximum temperatures are likely to be above normal by 2-4°C over most parts of northwest & east India and northeastern states and below normal to normal over remaining parts of the country.

Cyclogenesis:

- No cyclogenesis is likely over the north Indian Ocean during next two weeks.

Next weekly update will be issued on next Thursday i.e. 11 March, 2021

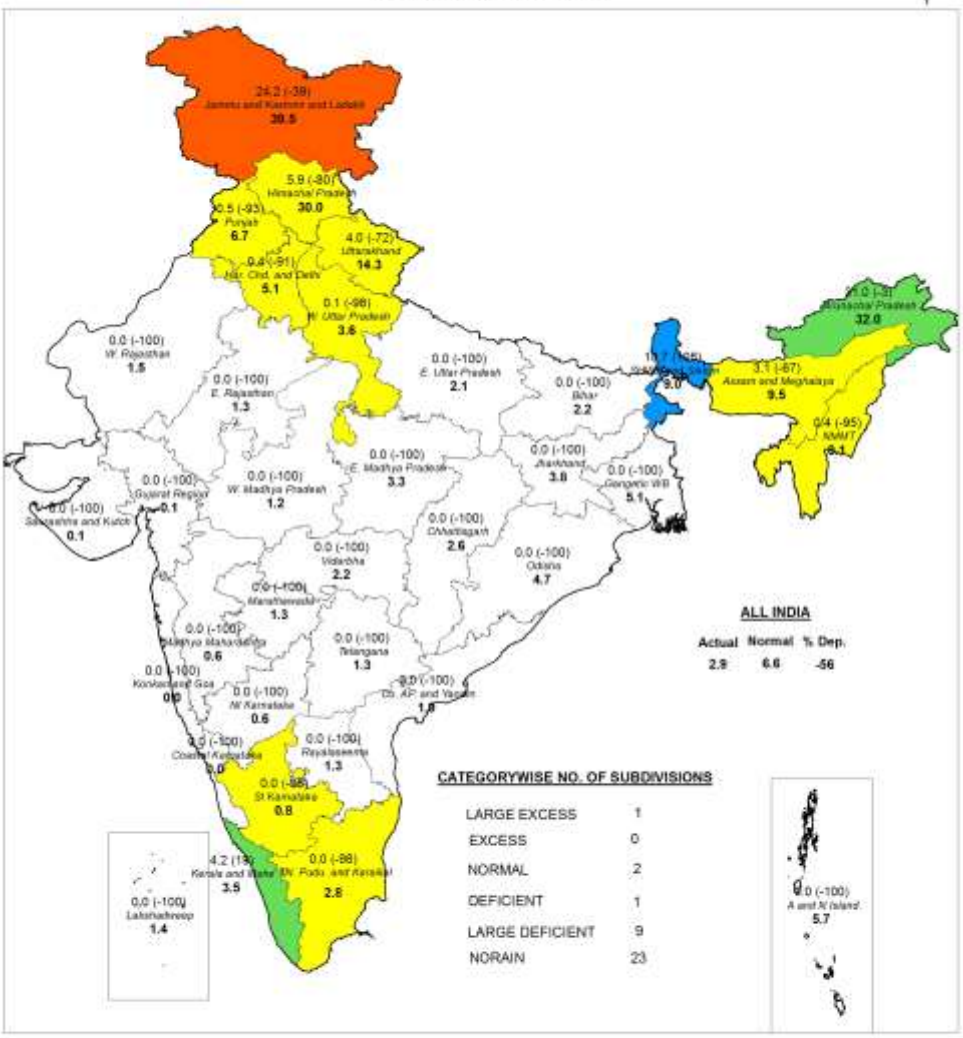
Annexure I

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Week : 25-02-2021 To 03-03-2021

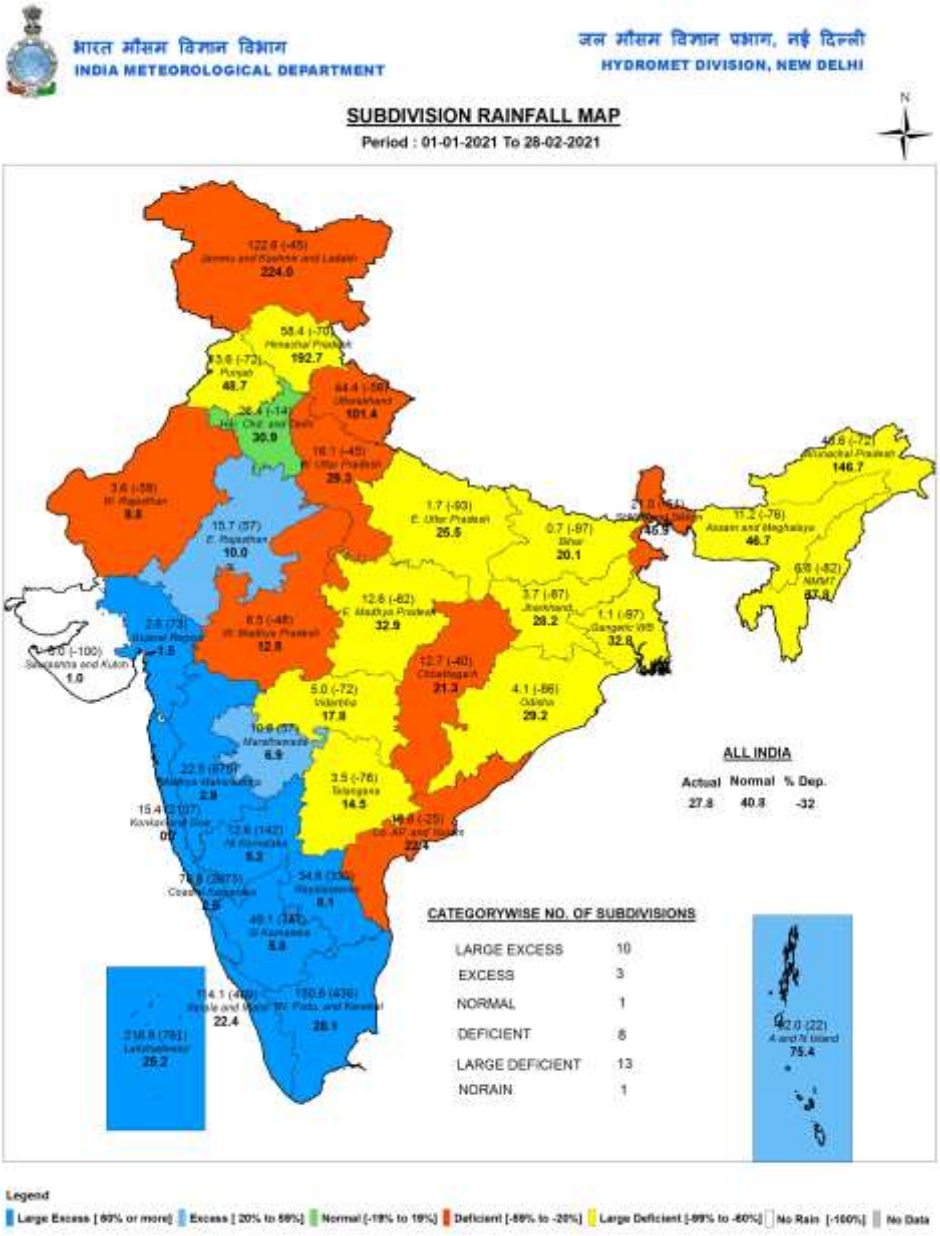


Legend

Large Excess [60% or more] | Excess [20% to 59%] | Normal [-19% to 19%] | Deficient [-59% to -20%] | Large Deficient [-99% to -60%] | No Rain [-100%] | No Data

NOTES :
a) RainFall figures are based on operation data.
b) Small figures indicate actual rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

Annexure II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INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Period : 01-01-2021 To 28-02-2021
N
ALL INDIA
Actual Normal % Dep.
27.8 40.8 -32
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 10
EXCESS 3
NORMAL 1
DEFICIENT 8
LARGE DEFICIENT 13
NORAIN 1
Legend
Large Excess [60% or more] Excess [20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-99% to -60%] No Rain [-100%] No Data
NOTES :
a) RainFall figures are based on operation data.
b) Small figures indicate actual rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2021

Sr. No	MET.SUB-DIVISIONS	04 MAR	05 MAR	06 MAR	07 MAR	08 MAR	09 MAR	10 MAR
1	ANDAMAN & NICO.ISLANDS	ISOL	SCT	ISOL	D	ISOL	D	D
2	ARUNACHAL PRADESH	FWS L	WS L•	WS L	FWS L	SCT	SCT	D
3	ASSAM & MEGHALAYA	ISOL L	FWS $ #	SCT L	SCT	SCT	ISOL	D
4	NAGA.MANI.MIZO.& TRIPURA	ISOL L	SCT L	SCT L	SCT L	SCT	ISOL	D
5	SUB-HIM.W. BENG. & SIKKIM	ISOL	ISOL	SCT	ISOL	ISOL	ISOL	D
6	GANGETIC WEST BENGAL	D	D	D	D	D	D	D
7	ODISHA	D	D	D	D	D	D	D
8	JHARKHAND	D	D	D	D	D	D	D
9	BIHAR	D	D	D	D	D	D	D
10	EAST UTTAR PRADESH	D	D	D	D	D	D	D
11	WEST UTTAR PRADESH	D	D	D	ISOL L	D	D	D
12	UTTARAKHAND	ISOL	ISOL	SCT L #	WS L # •/*	FWS L #	D	SCT
13	HARYANA CHD. & DELHI	D	D	D	ISOL L	D	D	D
14	PUNJAB	D	D	ISOL	SCT L	D	D	D
15	HIMACHAL PRADESH	D	D	FWS L #	WS L # •/*	SCT	ISOL	SCT
16	JAMMU & KASHMIR AND LADAKH	ISOL	D	FWS L #	WS L # •/*	SCT	SCT	SCT
17	WEST RAJASTSAN	D	D	D	D	D	D	D
18	EAST RAJASTSAN	D	D	D	D	D	D	D
19	WEST MADHYA PRADESH	D	D	D	D	D	D	D
20	EAST MADHYA PRADESH	D	D	D	D	D	D	D
21	GUJARAT REGION	D	D	D	D	D	D	D
22	SAURASTRA & KUTCH	D	D	D	D	D	D	D
23	KONKAN & GOA	D	D	D	D	D	D	D
24	MADHYA MAHARASHTRA	D	D	D	D	D	D	D
25	MARATHAWADA	D	D	D	D	D	D	D

26	VIDARBHA	D	D	D	D	D	D	D
27	CHHATTISGARH	D	D	D	D	D	D	D
28	COASTAL ANDHRA PR. & YANAM	D	D	D	D	D	D	D
29	TELANGANA	D	D	D	D	D	D	D
30	RAYALASEEMA	D	D	D	D	D	D	D
31	TAMIL. PUDU. & KARAIKAL	D	D	ISOL	ISOL	ISOL	ISOL	D
32	COASTAL KARNATAKA	D	D	D	D	D	D	D
33	NORTH INTERIOR KARNATAKA	D	D	D	D	D	D	D
34	SOUTH INTERIOR KARNATAKA	D	D	D	D	D	D	D
35	KERALA & MAHE	ISOL	D	D	ISOL	ISOL	ISOL	D
36	LAKSHADWEEP	D	D	D	D	D	D	D

LEGENDS:

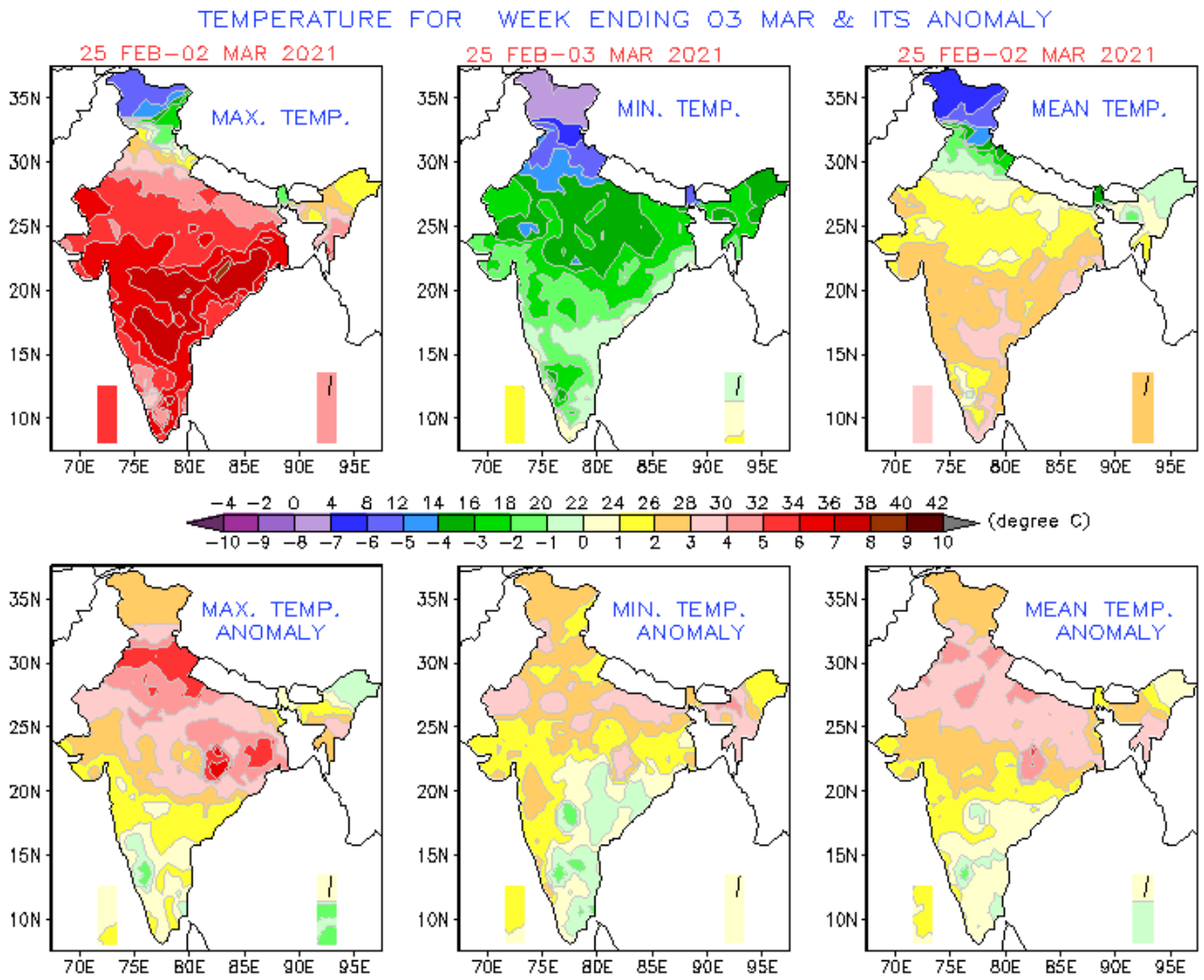
WS - WIDE SPREAD / MOST PLACES (76-100%)	FWS - FAIRLY WIDE SPREAD / MANY PLACES (51% to 75%)	
SCT - SCATTERED / FEW PLACES (26% to 50%)	ISOL - ISOLATED (up to 25%)	D / DRY - NO RAINFALL

• Heavy Rainfall (64.5-115.5 mm)	•• Heavy to Very Heavy Rainfall (115.6-204.4 mm)	••• Extremely Heavy Rainfall (204.5 mm or more)

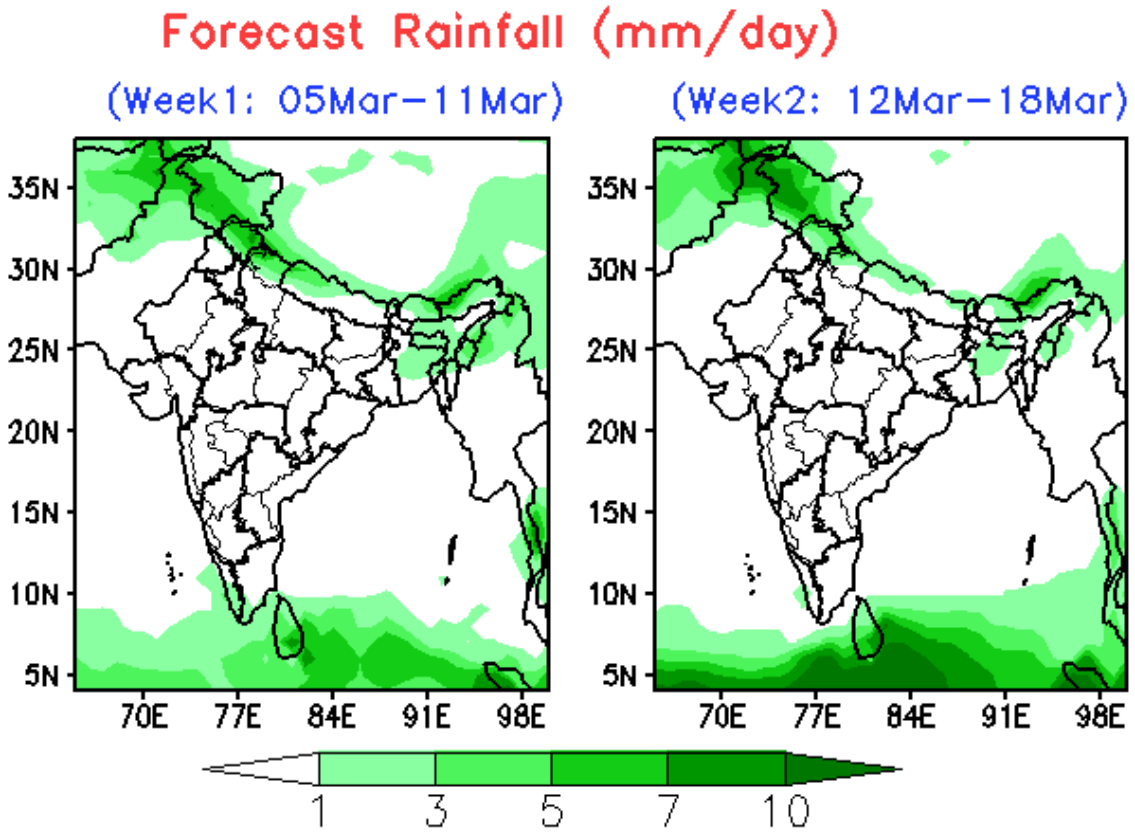
F Fog	* Snowfall	D Duststorm	$ Thunderstorm with Squall	L Thunderstorm with Lightning	# Thunderstorm with Hail

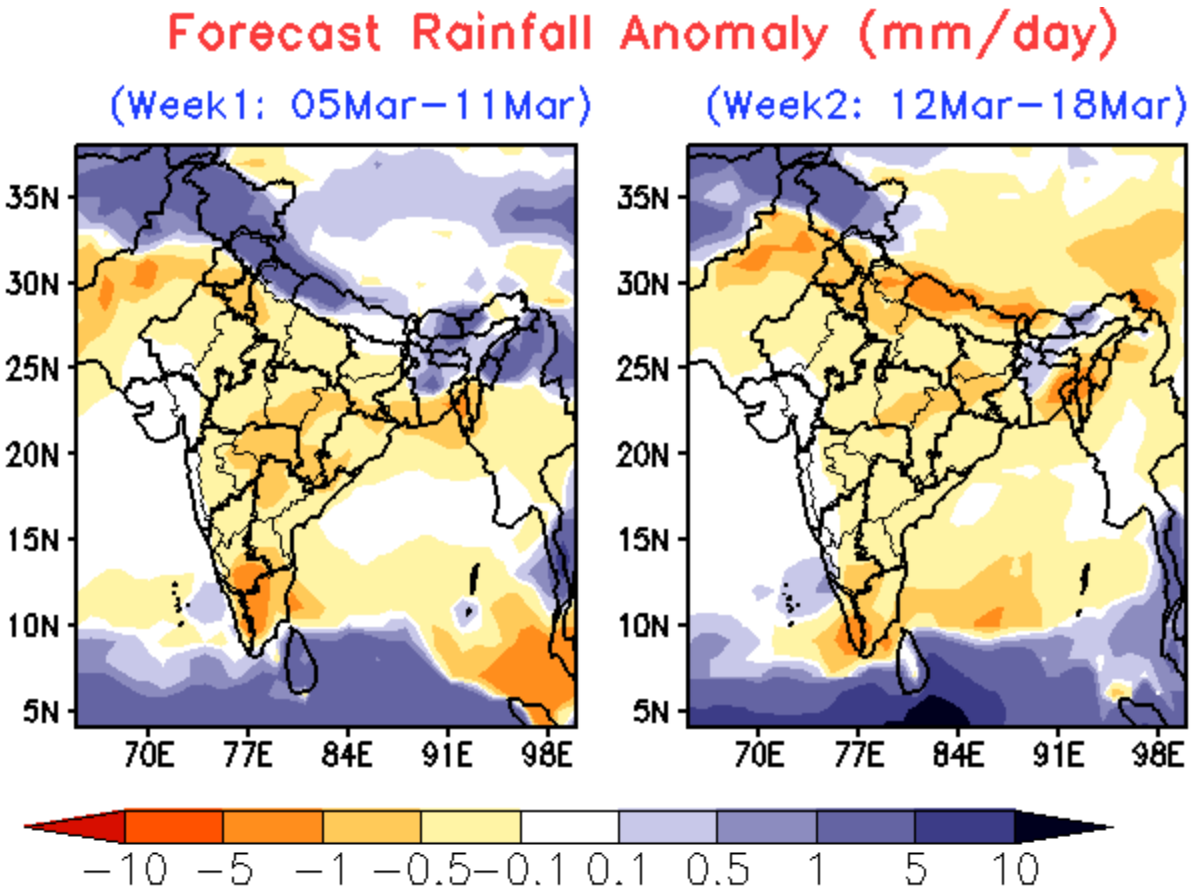
Cold Wave (Minimum temperature departure from Normal -4.5 °C to -6.4°C)	Severe Cold Wave (Minimum temperature departure from Norma ≤ -6.5°C)
Heat Wave (Maximum temperature departure from Normal +4.5 °C to +6.4°C)	Severe Heat Wave (Maximum temperature departure from Normal ≥ +6.5°C)

Annexure III

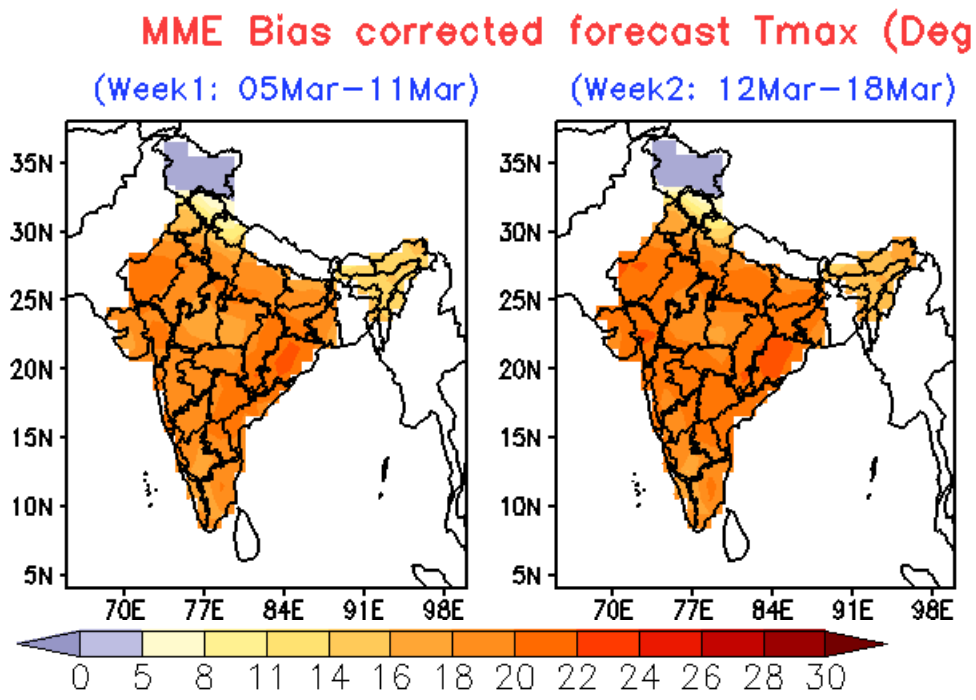


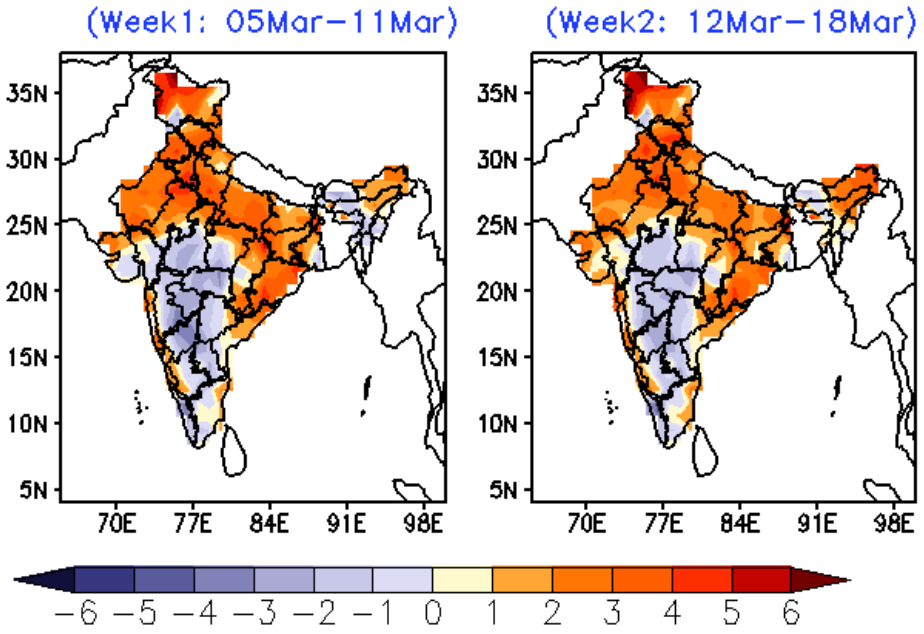
Annexure IV


Forecast Rainfall (mm/day)
(Week1: 05Mar-11Mar)
(Week2: 12Mar-18Mar)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
1
3
5
7
10


Forecast Rainfall Anomaly (mm/day)
(Week1: 05Mar-11Mar)
(Week2: 12Mar-18Mar)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
-10 -5 -1 -0.5 -0.1 0.1 0.5 1 5 10

Annexure VI


MME Bias corrected forecast Tmax (Deg
(Week1: 05Mar-11Mar)
(Week2: 12Mar-18Mar)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
0 5 8 11 14 16 18 20 22 24 26 28 30


MME forecast Tmax anomaly (Deg C)
(Week1: 05Mar-11Mar)
(Week2: 12Mar-18Mar)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
-6 -5 -4 -3 -2 -1 0 1 2 3 4 5 6