



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

Dated: 11 March, 2021

Subject: Current Weather Status and Outlook for next two weeks (11 to 24 March, 2021)

Salient Features

- Under the influence of Western Disturbance and associated induced cyclonic circulation, light to moderate scattered to fairly widespread rainfall occurred over Western Himalayan Region and light isolated rainfall over adjoining plains during 7 to 10 March, 2021.
- Due to trough in westerlies at lower levels, light to moderate scattered/fairly widespread rain/thundershower occurred over Arunachal Pradesh and isolated to scattered over rest parts of northeastern states.
- Rainfall activity over India as a whole was below normal by 54% of the Long Period Average (LPA) during past week (04 to 10 March, 2021).
- Under the influence of two Western Disturbances, scattered to fairly widespread rainfall with thunderstorm & lightening at isolated places very likely over Western Himalayan Region during most days of the week (11 to 17 March, 2021).
- Isolated to scattered rainfall with thunderstorm & lightening at isolated places very likely over plains of northwest India & central India during next 2-3 days.
- **No significant heat wave conditions are likely over the country during next one week.**

Weekly Rainfall Scenario (04 to 10 March, 2021)

During the week, rainfall for the country as a whole was below Long Period Average (LPA) by 54%. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	2.5	5.5	-54%
Northwest India	3.5	9.2	-62%
Central India	0.0	1.9	-100%
South Peninsula	0.4	2.9	-85%
East & northeast India	8.4	9.5	-11%

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

Pre-monsoon Rainfall Scenario (01 to 10 March, 2021)

For the country as a whole, cumulative rainfall during this year's pre-monsoon season till 10 March, 2021 is below LPA by 58%. 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	3.3	8.0	-58%
Northwest India	3.5	13.3	-73%
Central India	0.0	2.9	-100%
South Peninsula	0.4	3.5	-87%
East & northeast India	13.5	14.1	-4%

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

Weekly maximum temperature Scenario (04 to 09 March, 2021)

- The maximum temperatures were between 32 to 38°C over central and north Peninsular India. These were above normal by 3 to 6°C over most parts of central parts of the country and adjoining northwest India (**Annexure III**).

Chief synoptic conditions as on 11 March, 2021

- A Western Disturbance as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level runs along longitude 64°E to the north of latitude 25°N.

- An induced cyclonic circulation lies over central Pakistan & adjoining West Rajasthan at lower tropospheric levels.
- A cyclonic circulation lies over southeast Madhya Pradesh at lower levels.
- A cyclonic circulation lies over Comorin area & neighbourhood at lower levels.
- A fresh Western Disturbance is very likely to affect the Western Himalayan Region & adjoining plains of Northwest India from 13th March, 2021.

Large scale features as on 11 March, 2021

- Currently, moderate La Niña conditions are prevailing over equatorial Pacific and Sea Surface Temperatures (SSTs) are below normal over central & 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 that neutral IOD conditions are likely to continue during the coming months.
- The Madden Julian Oscillation (MJO) index lies in Western Hemisphere and Africa (Phase 8) with amplitude nearly one. As per the latest projections, it is likely to be in same phase with amplitude nearly one during next one week..

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (11 to 17 March, 2021) and Week 2 (18 to 24 March, 2021)

Rainfall for week 1: (11 to 17 March, 2021)

- Under the influence of Western Disturbance as a trough in mid & upper tropospheric westerlies with its axis at 5.8 km above mean sea level along longitude 64°E to the north of latitude 25°N, an induced cyclonic circulation over central Pakistan & adjoining West Rajasthan at lower tropospheric levels and due to interaction between Western Disturbance with lower level easterlies:
 - i. Fairly widespread to widespread light/moderate rainfall/snowfall with isolated thunderstorm/lightning/gusty winds (speed reaching 30-40 kmph)/hail very likely

over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh and Uttarakhand on 11th & 12th March. **Isolated heavy falls is also very likely over Jammu & Kashmir, Gilgit-Baltistan & Muzaffarabad on 11th March, 2021.**

- ii. Isolated to scattered light/moderate rainfall very likely over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, West Uttar Pradesh and Madhya Pradesh during 11th night to 12th March evening. Isolated thunderstorm/lightning/gusty winds (speed reaching 30-40 kmph)/hail also likely over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Madhya Pradesh and West Uttar Pradesh during 11th night to 12th March evening.
 - iii. Due to eastward movement of the above Western Disturbance; isolated to scattered rainfall with thunderstorm/lightning & hail very likely over East Madhya Pradesh, Bihar, Jharkhand and West Bengal & Sikkim during 12th night to 13th March evening.
- Thereafter, a fresh Western Disturbance is very likely to affect the Western Himalayan Region & adjoining plains of Northwest India from 13th March night. Under its influence, isolated to scattered rainfall over the Western Himalayan Region during 14th & 15th March and isolated very light rainfall over northern parts of Punjab and Haryana & Chandigarh on 14th March, 2021.
 - Scattered to fairly widespread light/moderate rainfall/snowfall is very likely over Arunachal Pradesh and isolated to scattered light rain/thundershower is very likely over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during the week
 - Light rainfall/thundershower is also likely over Kerala & Mahe and Tamilnadu, Puducherry & Karaikal during the week (**Annexure IV**).
 - **Cumulatively, above normal rainfall likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Madhya Pradesh & adjoining Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim and northeastern states and normal to below normal rainfall over rest parts of country (Annexure V).**

Rainfall for week 2: (18 to 24 March, 2021)

- Due to trough/wind discontinuity at central & north Peninsular India, light to moderate rainfall with thunderstorm & lightening activity likely over West coast, north Peninsular & adjoining central India. Hence rainfall activity is likely to be normal to above normal over above areas. It is likely to be below normal to normal over remaining parts of the country (Annexure V).

Temperature for week 1 & 2: (11 to 24 March, 2021)

- Maximum temperatures are in the range of 34 to 39°C over most parts of plains of northwest India, central, east & south Peninsular India. These are 2 to 6°C above normal over most parts of plains of northwest, central & east India and near normal over remaining parts of the country.
- These are very likely to fall by 2-4°C over most parts of Northwest & Central India during 2 days and rise by 2-4°C during subsequent 3 days.
- No significant change in maximum temperatures over rest parts of the country during week 1.
- **Hence, no significant heat wave conditions are likely over the country during week 1.**
- During week 2, **the maximum temperatures likely to be normal to above normal over northwest, east & northeast India. These are likely to be below normal by 2-4°C over remaining parts of the country (Annexure VI).**

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. 18 March, 2021

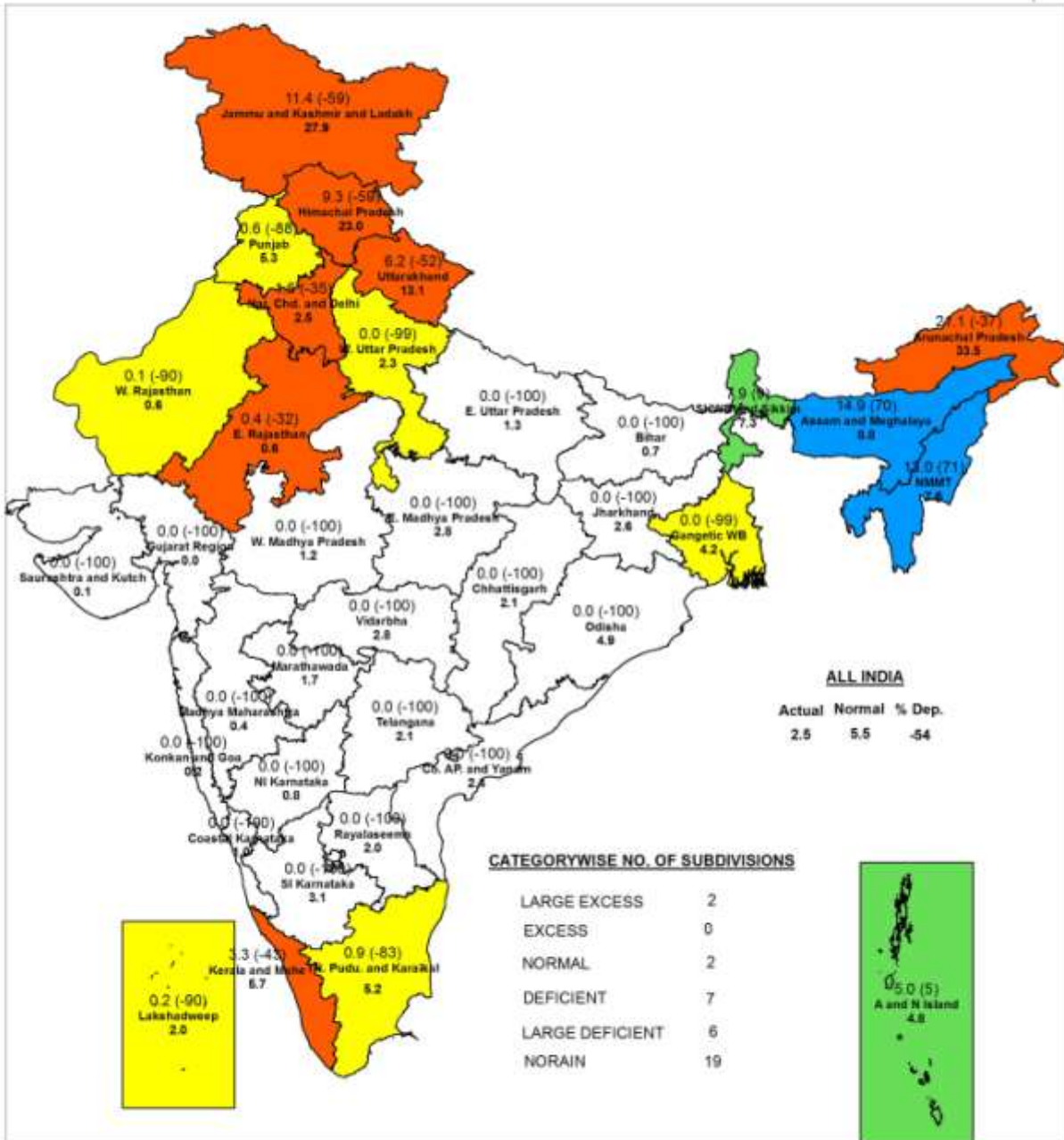


भारत मौसम विज्ञान विभाग
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HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Week : 04-03-2021 To 10-03-2021



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 rainfall (mm), while bold figures indicate Normal rainfall (mm).
- c) Percentage Departures of rainfall are shown in brackets.

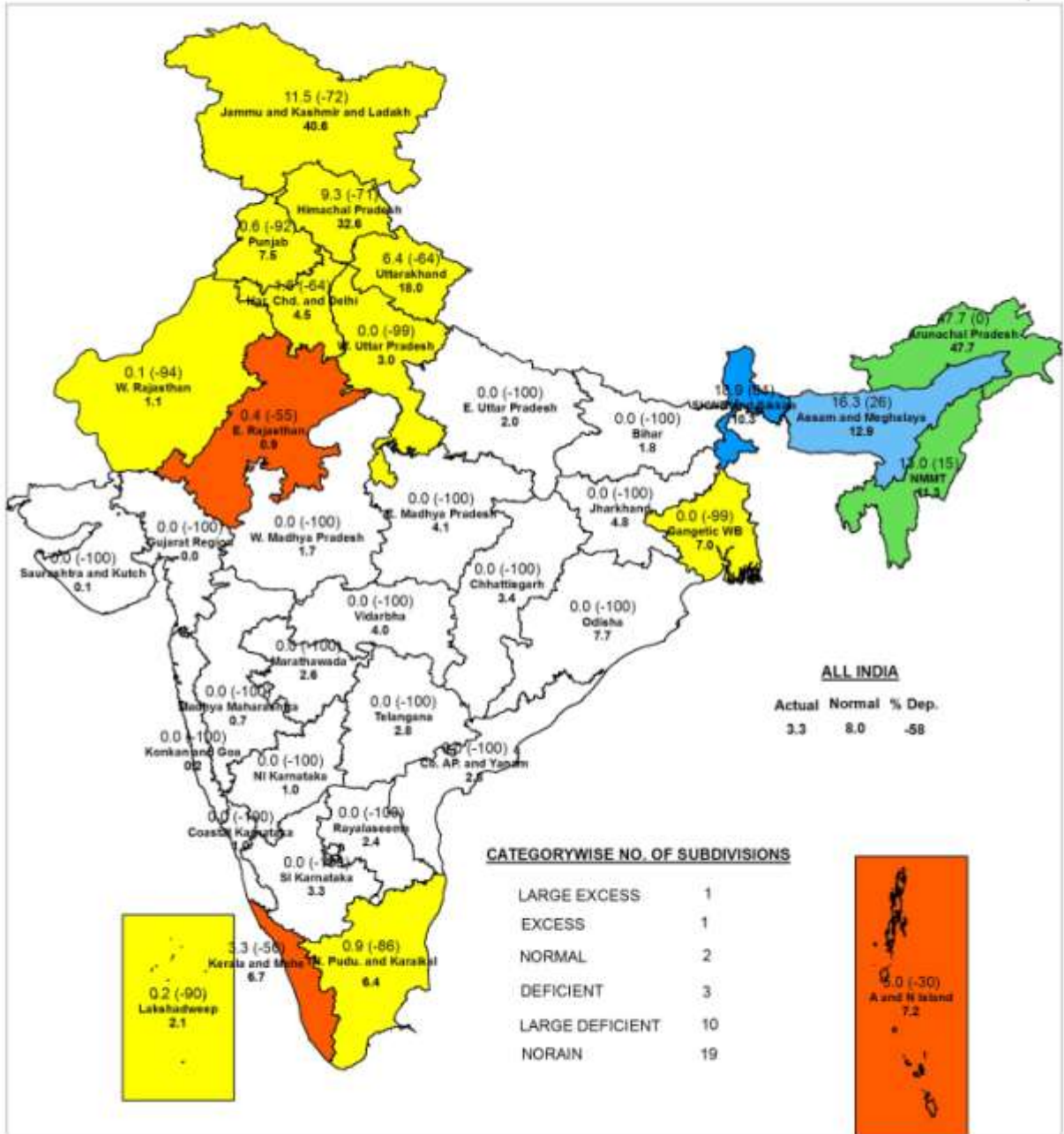


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HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Period : 01-03-2021 To 10-03-2021



Legend

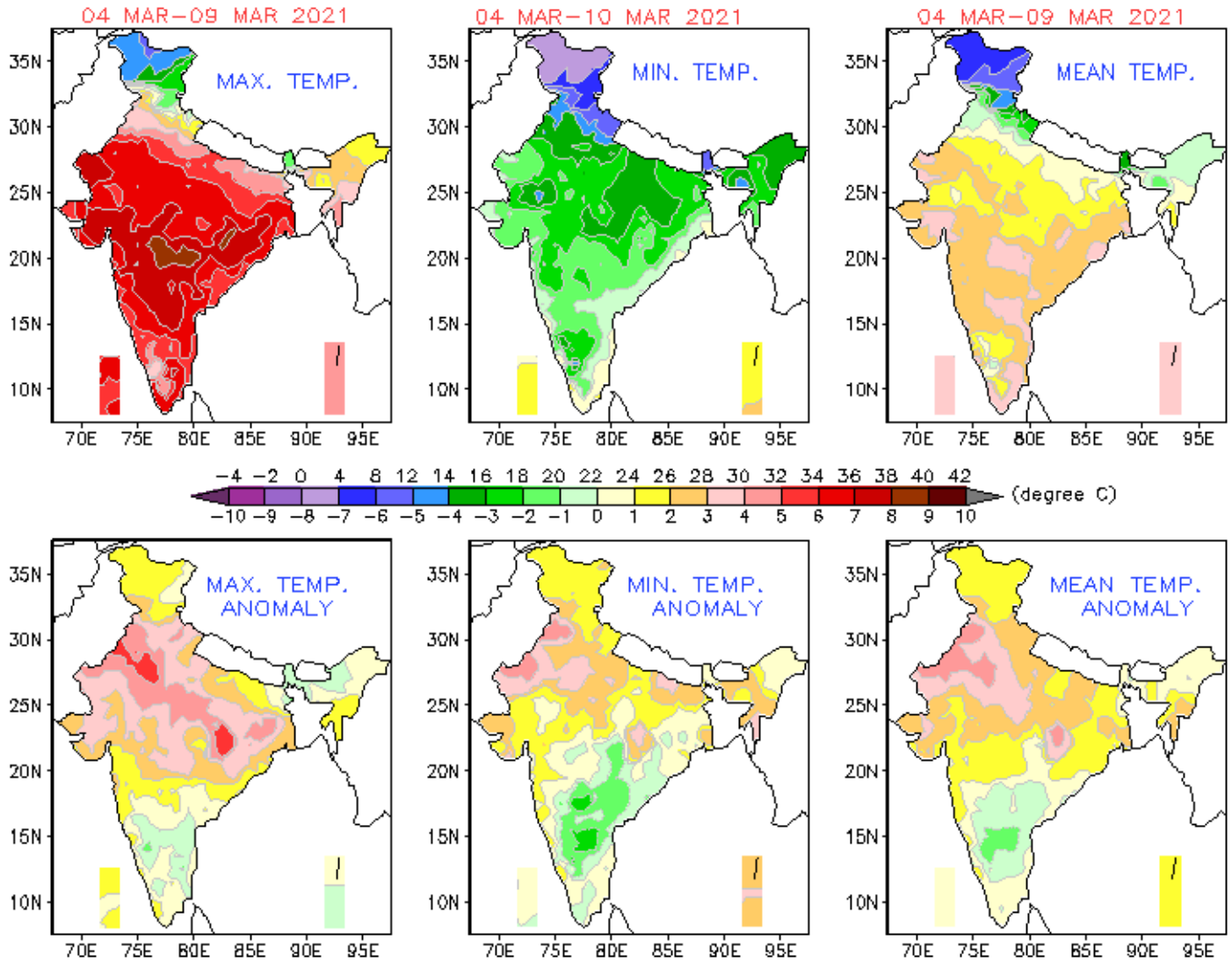
Large Excess [80% or more] Excess [20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-99% to -40%] No Rain [-100%] No Data

NOTES :

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

Annexure III

TEMPERATURE FOR WEEK ENDING 10 MAR & ITS ANOMALY



Annexure IV

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

Sr. No	MET.SUB-DIVISIONS	11 MAR	12 MAR	13 MAR	14 MAR	15 MAR	16 MAR	17 MAR
1	ANDAMAN & NICO.ISLANDS	ISOL	ISOL	ISOL	ISOL	D	ISOL	ISOL
2	ARUNACHAL PRADESH	FWS ^L	ISOL	FWS ^{L•}	FWS ^L	SCT	SCT	SCT
3	ASSAM & MEGHALAYA	SCT ^L	ISOL	FWS ^{L•}	FWS ^L	ISOL	ISOL	ISOL
4	NAGA.MANI.MIZO.& TRIPURA	ISOL ^L	ISOL	SCT ^L	SCT ^L	ISOL	ISOL	ISOL
5	SUB-HIM.W. BENG. & SIKKIM	SCT ^{L#}	ISOL	SCT ^{L#}	ISOL	ISOL	ISOL	ISOL
6	GANGETIC WEST BENGAL	SCT ^L	ISOL ^{L#}	SCT ^{L#}	D	D	D	
7	ODISHA	ISOL	ISOL ^L	ISOL	D	D	D	
8	JHARKHAND	ISOL	ISOL ^{L#}	SCT ^{L#}	D	D	D	D
9	BIHAR	ISOL ^L	ISOL ^{L#}	ISOL ^L	D	D	D	D
10	EAST UTTAR PRADESH	D	ISOL ^{L#}	D	D	D	D	D
11	WEST UTTAR PRADESH	ISOL	SCT ^{L#}	D	D	D	D	D
12	UTTARAKHAND	SCT ^{L#}	FWS ^{L#}	ISOL	ISOL	ISOL	ISOL	ISOL
13	HARYANA CHD. & DELHI	ISOL ^L	SCT ^{L#}	D	ISOL	D	D	D
14	PUNJAB	SCT ^{L#}	SCT ^{L#}	D	ISOL	D	D	D
15	HIMACHAL PRADESH	WS ^{L#}	FWS ^{L#}	ISOL	SCT ^{L#}	ISOL	D	ISOL
16	JAMMU & KASHMIR AND LADAKH	WS ^{L#•/•}	FWS ^L	ISOL	FWS ^{L#}	SCT ^L	SCT	FWS
17	WEST RAJASTSAN	ISOL ^L	ISOL ^{L#}	D	D	D	D	D
18	EAST RAJASTSAN	ISOL ^L	ISOL ^{L#}	D	D	D	D	D
19	WEST MADHYA PRADESH	ISOL ^L	SCT ^{L#}	D	D	D	D	D
20	EAST MADHYA PRADESH	ISOL ^L	SCT ^{L#}	ISOL	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	ISOL ^L	ISOL ^L	ISOL	D	D	D	D
27	CHHATTISGARH	ISOL ^L	ISOL ^L	ISOL	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	ISOL ^{L•}	D	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	ISOL	D	D	D	D	D	D
33	NORTH INTERIOR KARNATAKA	D	D	D	D	D	D	D
34	SOUTH INTERIOR KARNATAKA	ISOL	D	D	D	D	D	D
35	KERALA & MAHE	FWS ^{L•}	ISOL ^L	ISOL	ISOL	ISOL	ISOL	ISOL
36	LAKSHADWEEP	FWS ^L	D	D	D	D	D	D

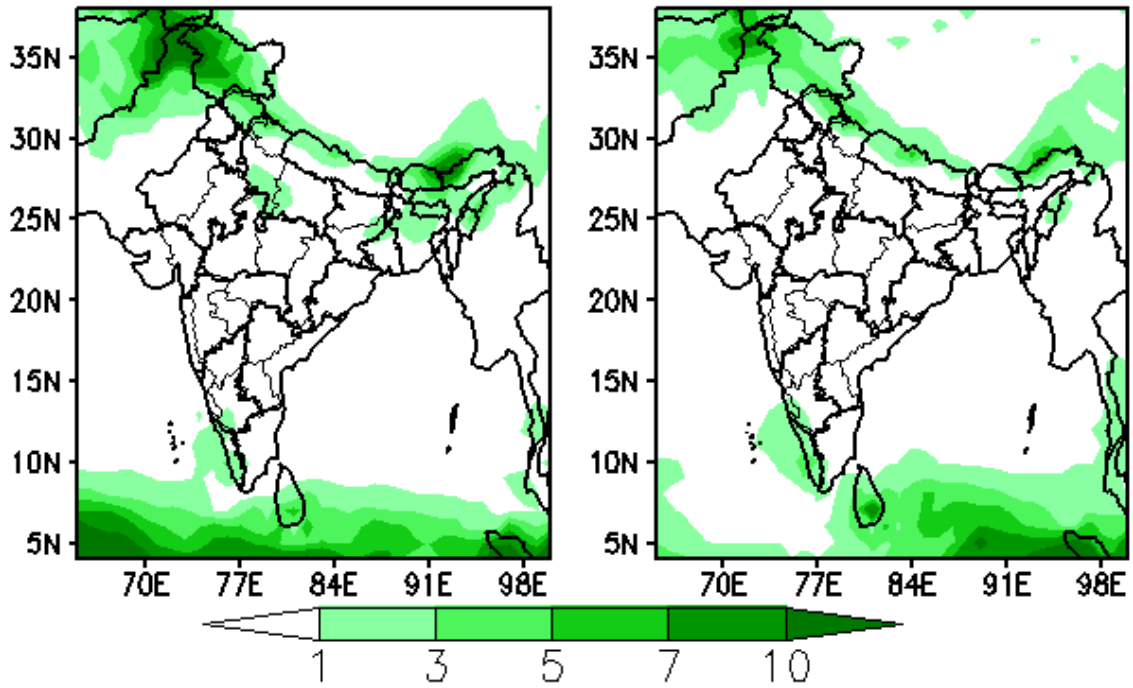
LEGENDS:

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 Dust storm	S 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 Normal ≤ -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)				

Forecast Rainfall (mm/day)

(Week1: 12Mar-18Mar)

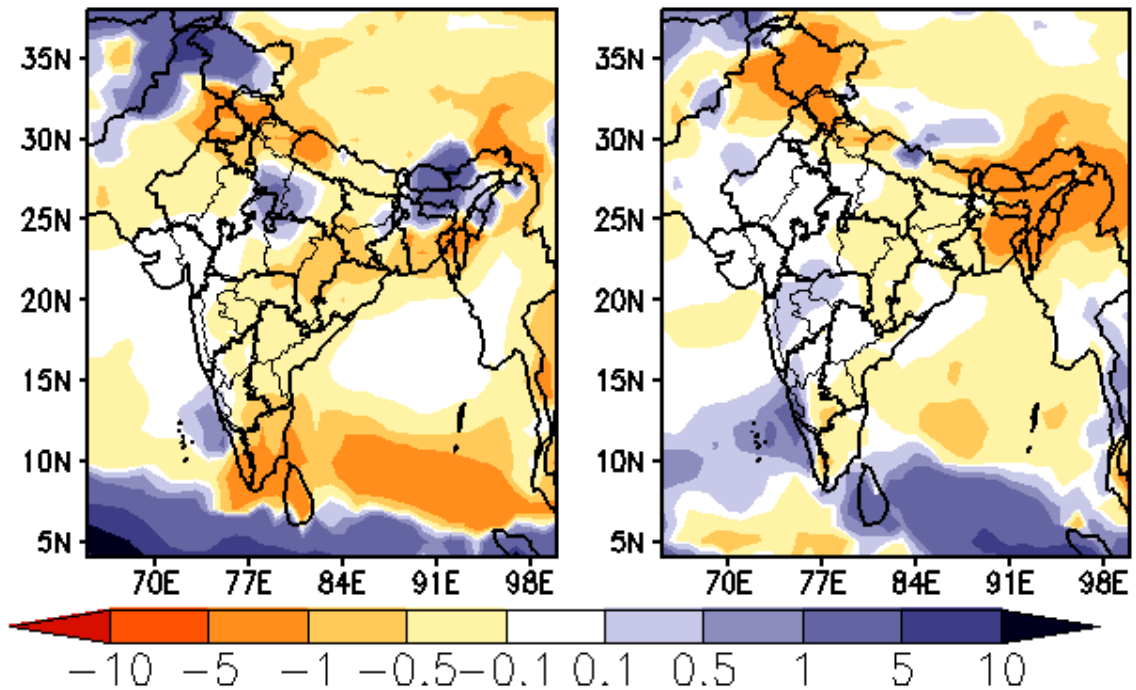
(Week2: 19Mar-25Mar)



Forecast Rainfall Anomaly (mm/day)

(Week1: 12Mar-18Mar)

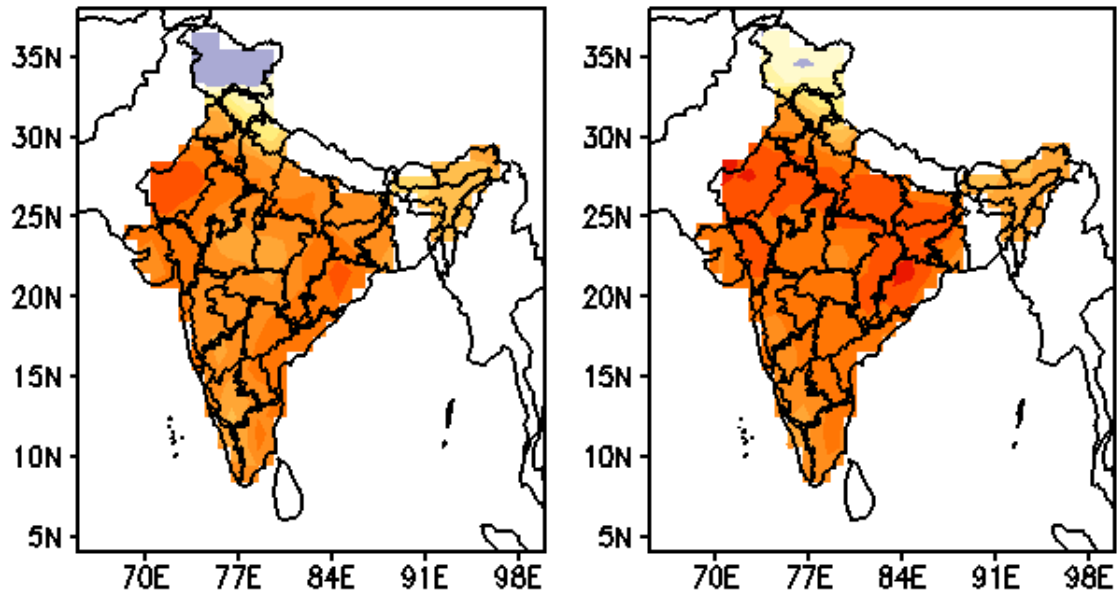
(Week2: 19Mar-25Mar)



MME Bias corrected forecast Tmax (Deg)

(Week1: 12Mar-18Mar)

(Week2: 19Mar-25Mar)



MME forecast Tmax anomaly (Deg C)

(Week1: 12Mar-18Mar)

(Week2: 19Mar-25Mar)

