



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

Dated: 02nd March, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (02nd to 15th March, 2023)

1. Salient Observed Features for week ending on 01st March, 2023

- Movement of Western Disturbances caused scattered to fairly widespread rainfall/snowfall/thunderstorm activity over Jammu, Kashmir & Ladakh and Himachal Pradesh on one or two days whereas isolated rainfall/snowfall/thunderstorm activity occurred over the same areas on two to three days and over Uttarakhand on three to four days during the week.
- Passage of the Western Disturbances along with an induced cyclonic circulation caused fairly widespread rainfall/thunderstorm activity over Punjab on a single day and isolated rainfall/thunderstorm activity over the same areas and over Haryana, Chandigarh & Delhi and West Rajasthan on one day each towards the end of the week.
- Remnants of Western Disturbances and troughs/cyclonic circulations in the lower tropospheric levels supported by moisture incursion over the areas had caused scattered to fairly widespread rainfall/snowfall/thunderstorm activity over Arunachal Pradesh on four to five days along with isolated rainfall/snowfall/thunderstorm activity over the same areas on the remaining days of the week; under their influence, scattered to fairly widespread rainfall/thunderstorm activity had occurred over Assam & Meghalaya and Sub Himalayan West Bengal & Sikkim on one or two days of the week along with isolated rainfall/thunderstorm activity over the same areas on the remaining days; Also, isolated rainfall/thunderstorm activity had occurred over Nagaland, Manipur, Mizoram & Tripura on three to four days and over Gangetic West Bengal and Odisha on one day each; under their influence, isolated heavy rainfall had occurred over Assam & Meghalaya on a single day whereas isolated hailstorm had occurred over Arunachal Pradesh and Assam & Meghalaya on one day each during the week.
- The highest maximum temperature of 38.7°C recorded at Bhuj (Saurashtra & Kutch) on 28th February, 2023.

➤ **Analysis of Weekly overall Rainfall distribution during the current week (23.02.2023 to 01.03.2023) and Winter Season’s Rainfall (01.01.2023 to 28.02.2023):**

The country as a whole, the weekly cumulative All India Rainfall till week ending on 01.03.2023 was 75% below from its long period average (LPA) and all India winter Season (01.01.2023 to 28.02.2023) cumulative rainfall during this year is 45% below LPA.

Details of the rainfall distribution over the four broad geographical regions of India are given in **Table 1** and Meteorological sub-division-wise rainfall both for week and season are given in **Annexure I and II** respectively.

Table 1: Rainfall status (Weekly and seasonal)

Region	WEEK			SEASON		
	23.02.2023 to 01.03.2023			01.01.2023 to 28.02.2023		
	Actual	Normal	% Departure	Actual	Normal	% Departure
East & Northeast India	8.4	9.3	-10	21.2	47.2	-55
Northwest India	0.7	12.7	-95	54.3	78.7	-31
Central India	0	1.9	-99	1.9	14.9	-87
South Peninsula	0.2	1.9	-88	6.3	15.7	-60
Country as a Whole	1.6	6.4	-75	21.9	39.8	-45

2. Large scale features

- The La Niña conditions are prevailing over the equatorial Pacific region. However, the strength of the La Niña has weakened since October 2022. The latest Monsoon Mission Climate Forecasting System (MMCFS) forecast indicates the transition of La Niña to ENSO-neutral conditions during the upcoming season.
- The neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue during the coming seasons.
- The Madden Julian Oscillation (MJO) Index is currently in Phase 7 with amplitude more than 1. It is very likely to move in Phase 8 with amplitude more than 1 towards end of the week.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (02nd to 08th March, 2023) and Week 2 (09th to 15th March, 2023)

Forecast for week 1 (02nd to 08th March, 2023):

- A Western Disturbance as a trough in middle tropospheric westerlies runs roughly along Long. 65°E to the north of Lat. 32°N. Another Western Disturbance as a trough in

middle tropospheric westerlies runs roughly along Long. 50°E to the north of Lat. 20°N. Under their influence:

- ✓ Light to moderate scattered rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh during 02nd-04th March. Light isolated rainfall also likely over Uttarakhand and Punjab on 02nd and 04th March. Dry weather likely over the region thereafter.
- ✓ Strong surface winds (speed 20-30 kmph) very likely over Uttar Pradesh on 03rd & 04th March.
- Under the influence of a north-south trough in lower level easterlies:
 - ✓ Isolated light rainfall is likely over north Maharashtra, south Madhya Pradesh and Gujarat during second half of the week.
 - ✓ Isolated light/moderate thunderstorm activity also likely over West Madhya Pradesh on 04th & 05th; over East Madhya Pradesh on 05th & 06th and over Vidarbha on 06th & 07th March, 2023.
- Squally weather (wind speed 40-45 kmph gusting to 55 kmph) very likely over Comorin area on 04th & 05th March.
- Light isolated to scattered rainfall very likely over Andaman & Nicobar Islands during first half of the week.
- No significant weather very likely over rest parts of the country during the week.

Rainfall for week 2 (09th to 15th March, 2023):

- **No active Western Disturbance likely to affect northwest India during the week.**
- No significant weather activity likely over rest parts of the country except extreme south Peninsular India, where light/moderate isolated to scattered rainfall is likely during some days of the week.
- Overall, rainfall activity is likely to be below normal over all the regions of the country except extreme south Peninsular India, where, it is likely to be above normal (**Annexure III**).

Maximum Temperatures and its forecast during Week 1 (02nd to 08th March, 2023) and Week 2 (09th to 15th March, 2023):

Maximum Temperature Forecast for week 1 (02nd to 08th March, 2023):

- **Maximum temperatures** are in the range of 28-32°C over most parts of Punjab, Haryana, north Rajasthan and Uttar Pradesh. These are 3-5°C above normal over the region.
- **Maximum temperatures** are in the range of 35-37°C over most parts of Gujarat, Vidarbha, Marathwada, south Konkan & Goa, Coastal Karnataka and Kerala. These are 2-4°C above normal over the region.
- No significant change in maximum temperatures very likely over Northwest & East

- India during most days of the week.
- No significant change in maximum temperatures very likely over Central India during first half of the week and fall by about 2°C thereafter.
- Maximum Temperatures are very likely to rise by 2-3°C over West India during next 2 days and no significant change thereafter.
- **No significantly heat wave conditions likely over any part of the country during the week.**

Maximum Temperature for week 2 (09 to 15 March, 2023):

- Maximum temperatures very likely to rise gradually by 1-2°C over Northwest, East and northeast India during the week.
- Maximum temperatures are very likely to be above normal by 2-4°C over most parts of Northwest India; by 2-4°C over many parts of East & northeast India during most days of the week. These are likely to below normal by 2-3°C over Peninsular & adjoining central India during most days of the week (**Annexure IV**).
- **No significantly heat wave conditions likely over any part of the country during the week.**

Legends:

Heavy Rain: 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain**> 204.4 mm

SPATIAL DISTRIBUTION (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/ Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

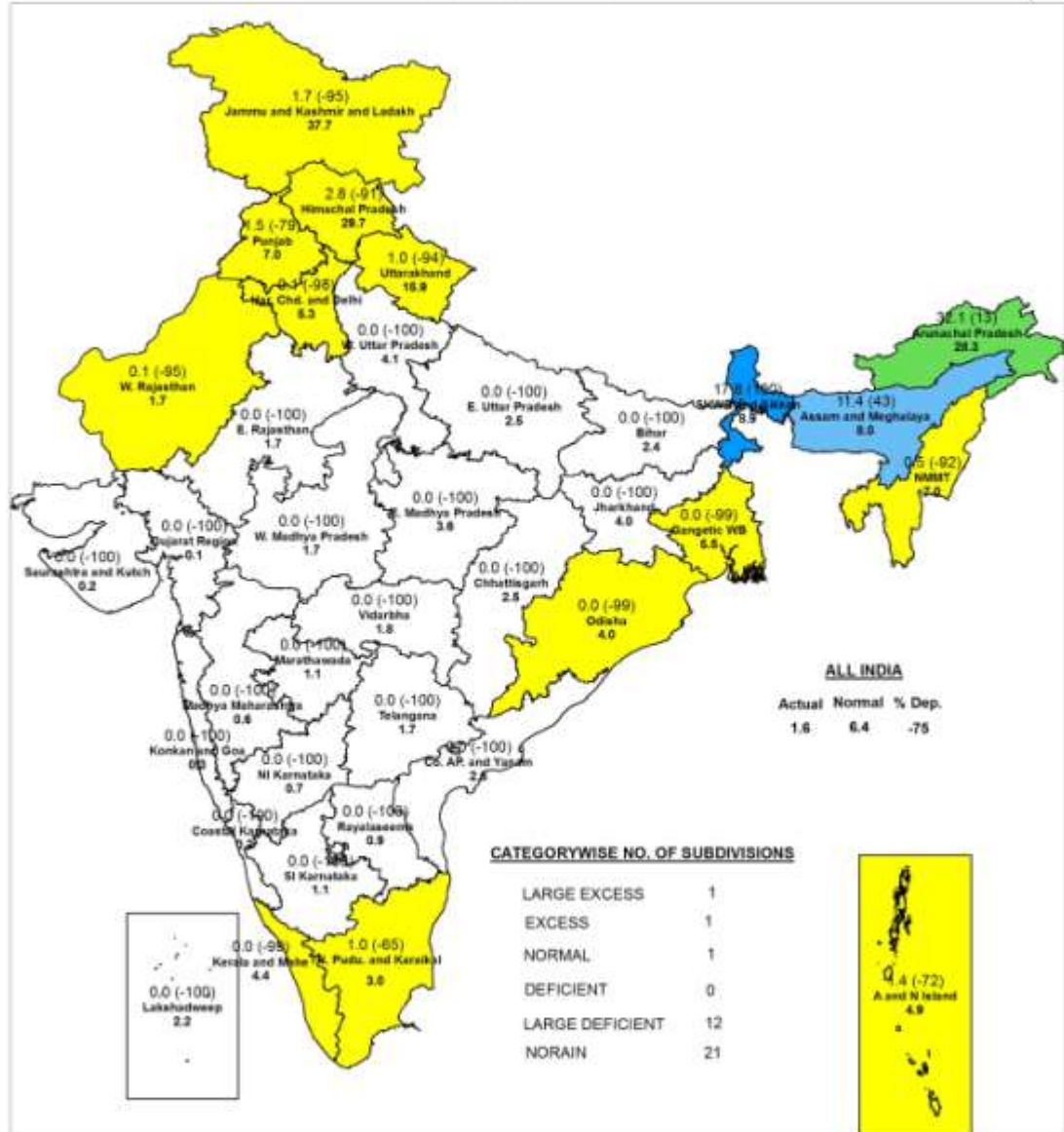


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INDIA METEOROLOGICAL DEPARTMENT

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HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Week : 23-02-2023 To 01-03-2023



Legend

Large Excess [60% or more] Excess [25% to 59%] Normal [-19% to 19%] Deficient [-20% to -49%] Large Deficient [-50% to -99%] 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 II

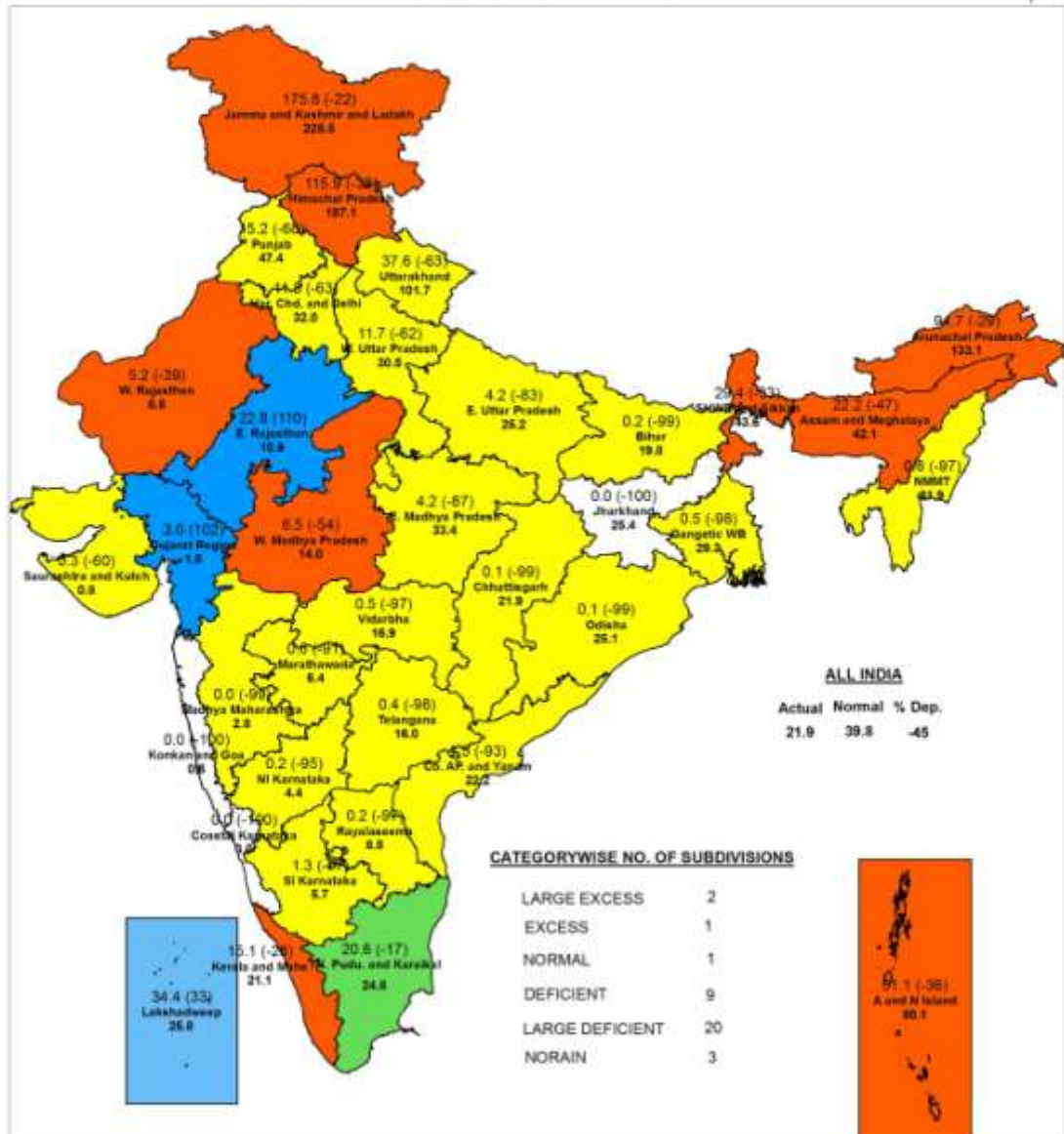


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SUBDIVISION RAINFALL MAP

Period : 01-01-2023 To 28-02-2023



Legend

Large Excess [80% or more] Excess [20% to 80%] Normal [-19% to 19%] Deficient [-89% to -20%] Large Deficient [-99% to -60%] No Rain [-100%] No Data

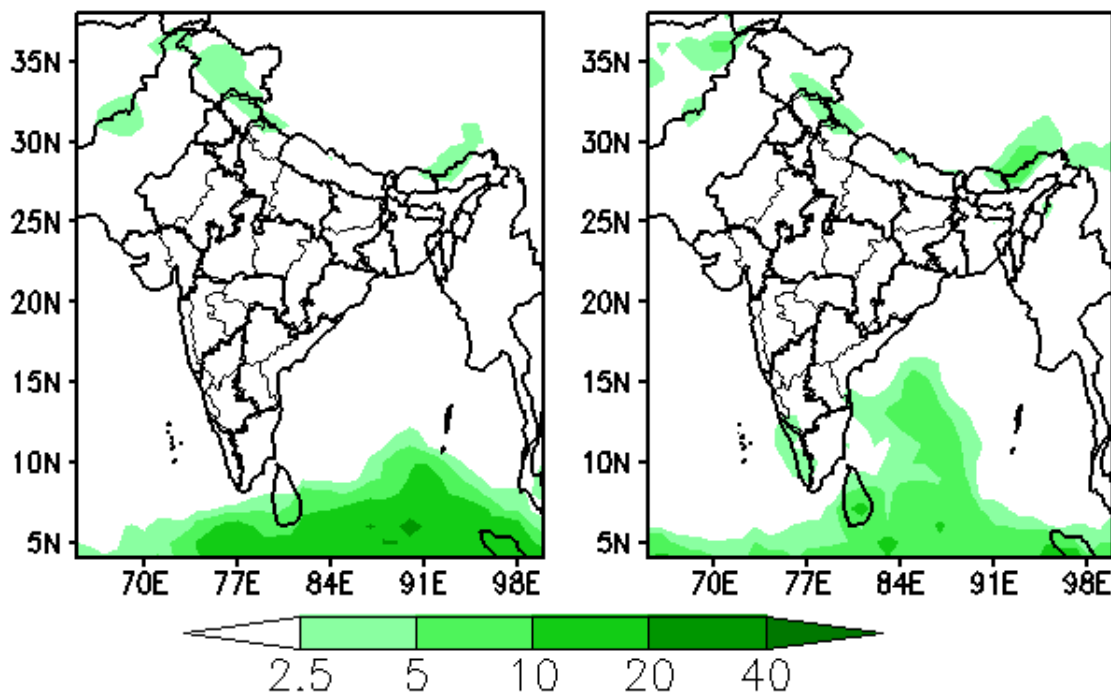
NOTES :

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

Forecast Rainfall (mm/day)

(Week1: 03Mar-09Mar)

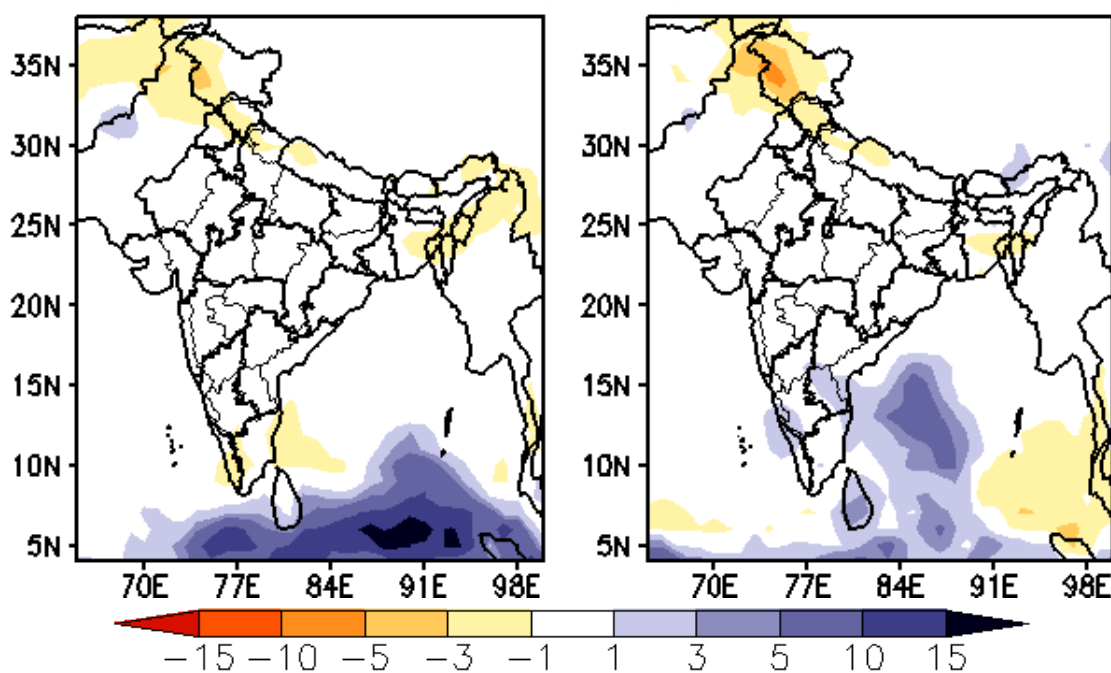
(Week2: 10Mar-16Mar)



Forecast Rainfall Anomaly (mm/day)

(Week1: 03Mar-09Mar)

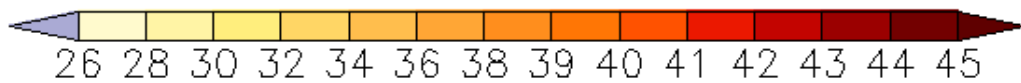
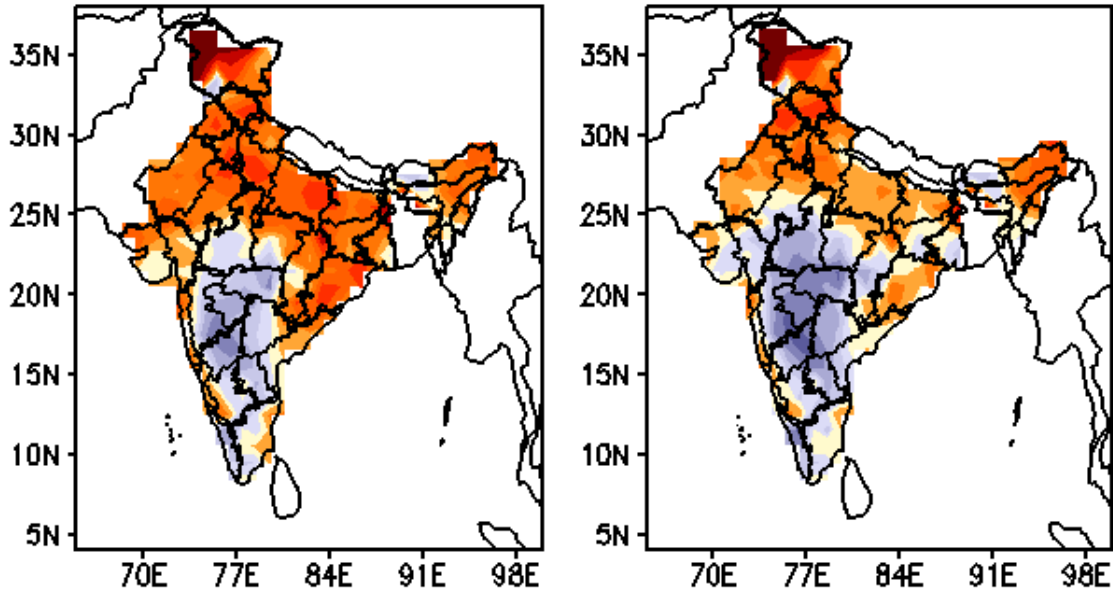
(Week2: 10Mar-16Mar)



MME forecast Tmax anomaly (Deg C)

(Week1: 03Mar-09Mar)

(Week2: 10Mar-16Mar)



MME Bias corrected forecast Tmax (Deg)

(Week1: 03Mar-09Mar)

(Week2: 10Mar-16Mar)

