



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

Press Release: Dated: 21 March 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (21 March -4 April 2024)

1. Salient Observed Features for week ending 20 March 2024

- Wet spell over Eastcentral India and east and northeast India during 2nd half of the week. The wet spell was observed with scattered to fairly widespread light to moderate rainfall accompanied with isolated thunderstorms, lightning & gusty winds over East Madhya Pradesh, Jharkhand, Vidarbha, Chhattisgarh, West Bengal and Sikkim and Odisha during 18th–20th and over Bihar, northeast India and Coastal Andhra Pradesh on 19th and 20th March.
- Heavy to very heavy rainfall occurred at isolated places over Coastal Andhra Pradesh on 20th March and over Bihar on 21st March. Heavy rainfall also occurred at isolated places over East Madhya Pradesh on 19th March; at isolated places over Odisha and Telangana on 20th March. Isolated **Hailstorm** was reported at isolated places over Madhya Pradesh, Vidarbha and Telangana from 18th to 20th March and over East Uttar Pradesh on 20th March.
- This persistent wet spell caused the fall in daily maximum temperature which remained at the range of 22-30°C on 19 and 20 March over some pockets of Odisha, Chhattisgarh, Jharkhand, Bihar Gangetic and West Bengal and Sikkim and it was appreciable below normal by 6-11°C in these areas.
- This 3-4 days wet spell during 18-20 March and accompanied severe weather caused by interactions of three systems: 1) Rapid Deepening and fast westward movement of a Western Disturbance(WD) from northwest India towards east and northeast India across east central India as a trough in westerly at middle and upper tropospheric levels during the period. This WD was observed as in-situ system as a trough in middle and upper tropospheric westerly with its axis at 5.8 km above mean sea level roughly along Long. 68°E to the north of Lat. 30°N on 18th March. It

moved rapidly westwards and then deepened southwards and was seen along Long. 76°E to the north of Lat. 22°N on 19th March. It was further intensified and was observed as a cyclonic circulation over Jharkhand & neighbourhood at 3.1 km above mean sea level with trough aloft ran from northeast Uttar Pradesh to east Vidarbha between 5.8 km & 12.6 km above mean sea level on 20th March; 2) An east-west trough ran from Jharkhand to south Assam at 0.9 km above mean sea level on 19th March; from northeast Madhya Pradesh to south Assam and extended upto 1.5 km above mean sea level with embedded cyclonic circulation over east Bangladesh & neighbourhood at 0.9 km above mean sea level on 20th March. 3) Wind and moisture convergence over East central India and east and northeast India emanating from lower level anti-cyclone located over north and adjoining central Bay of Bengal to these areas.

- **Temperature Scenario:** The highest maximum temperature of **41.7°C** had been recorded at Anantapur (Rayalaseema) on 17th March 2024 and the lowest minimum temperature of **8.0°C** had been recorded at Sikar (East Rajasthan) on 17th March 2024 over the plains of the country during the week.

➤ **Analysis of Weekly overall Rainfall distribution during the week ending on 21 March 2024 and Summer Season's Rainfall Scenario (1-21 March 2024):** It shows for the country as a whole, the weekly cumulative All India Rainfall in % departure from its long period average (LPA) till week ending on 21 March was -1%. All India Seasonal cumulative rainfall % departure during this year's **Summer Season's** during **1 to 21 March 2024** is 3% and over northwest India, it is -5%. 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 Annex I and II respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	14.03.2024 TO 20.03.2024			01.03.2024 TO 20.03.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	11	12.2	-10%	18.2	31.7	-43%
NORTH-WEST INDIA	3	10.8	-72%	33.5	32.5	3%
CENTRAL INDIA	10	1.6	523%	13.3	5.9	126%
SOUTH PENINSULA	1.5	2.9	-48%	1.7	9.4	-81%
Country as a whole	6.3	6.4	-1%	18	18.9	-5%

2. Large scale features

Currently Madden Julian Oscillation (MJO) index is in Phase 8 with amplitude close to 1. It would continue in same phase during first half of week 1 with amplitude remaining close to 1. Thereafter, it would move across phase 1 till beginning of week 2 with decreasing amplitude. It would then move across phase 2 with significantly less amplitude. Considering the amplitude, the movement across phase 2 may not support enhancement of any convective activity over the region.

3. Forecast for next two week

[Weather systems & associated Precipitation during Week 1 \(21 to 27 March, 2024\) and Week 2 \(28 March-3 April, 2024\)](#)

[Weather systems & associated Precipitation during Week 1 \(21 to 27 March, 2024\)](#)

- ❖ A cyclonic circulation lies over north Jharkhand and a trough runs from this circulation to Manipur in lower tropospheric levels. Another cyclonic circulation lies over Northeast Jharkhand in middle & upper tropospheric levels. Under the influence of these systems:

- ✓ Fairly widespread/widespread light to moderate rainfall with isolated thunderstorms & lightning very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during the week.
- ✓ Isolated **heavy rainfall/snowfall** very likely over Arunachal Pradesh during 21st-23rd & 25th; over Sikkim on 21st & 23rd and isolated **heavy rainfall** over Assam & Meghalaya 21st - 23rd & 25th March, 2024.
- ✓ Isolated to scattered light to moderate rainfall with isolated **thunderstorms, lightning** very likely over Gangetic West Bengal, Bihar, Jharkhand, Chhattisgarh and Odisha on 21st March and significant reduction thereafter.
- ✓ Isolated to scattered light to moderate rainfall with isolated **thunderstorms & lightning** very likely over Tamil Nadu, Puducherry & Karaikal and Kerala on 21st & 22nd March, 2024.
- ❖ The Western Disturbance now seen as a trough in middle tropospheric westerlies roughly along Long. 60°E to the north of Lat. 30°N. Another fresh Western Disturbance is likely to affect Western Himalayan Region from the night of 23rd March, 2024. Under their influence:
 - ✓ Scattered to fairly widespread light rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh on 21st & 22nd and Isolated to scattered light rainfall/snowfall on 23rd & 24th March, 2024. Isolated to scattered light rainfall/snowfall over Uttarakhand during 21st-24th March. Isolated light rainfall likely over Punjab on 21st, 22nd & 24th and over Haryana on 24th March, 2024.
 - ✓ **Isolated hailstorm** also very likely over Jammu-Kashmir-Ladakh on 21st and over Himachal Pradesh on 21st & 22nd March.
 - ✓ **Strong surface winds (25-35 kmph)** very likely to prevail over Punjab, Haryana-Chandigarh-Delhi and Uttar Pradesh on 21st March, 2024.

[Rainfall for Week 1 \(21 to 27 March, 2024\)::](#)

- ✓ Under the influence of Western Disturbance, light/moderate scattered to fairly widespread rainfall/snowfall likely over Western Himalayan Region during 1st half of the week.
- ✓ Due to trough and winds from Bay of Bengal to northeast India at lower levels, light/moderate scattered to fairly widespread rainfall/snowfall likely over northeast India

during many days of the week. Isolated heavy rainfall is also likely during some days of the week.

- ✓ Overall, rainfall activity is likely to be normal to above **normal** over northeast India, near normal over Western Himalayan Region and below normal over rest parts of the country.

Maximum temperatures for Week 1 (21 to 27 March, 2024):

- ❖ **Yesterday's Maximum temperatures** are below normal by 9-12°C over many parts of Odisha, West Bengal & Sikkim, Bihar; by 7-9°C over Jharkhand, Chhattisgarh and west Assam; by 2-4°C over East Madhya Pradesh, East Uttar Pradesh, east Vidarbha, Telangana, north Coastal Andhra Pradesh and Nagaland, Manipur, Mizoram & Tripura. These are above normal by 6-8°C over many parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; by 2-4°C over Himachal Pradesh, Punjab, north Haryana, Gujarat State and near normal over rest parts of the country.
- ❖ Gradual rise in maximum temperatures by 6-10°C very likely over East India during next 4 days no significant change thereafter.
- ❖ Gradual rise in maximum temperatures by 3-5°C very likely over Maharashtra and Central India during the week.
- ❖ Fall in maximum temperatures by about 2°C very likely over many parts of Northwest India during next 24 hours and gradual rise by 2-4°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during most days of the week.

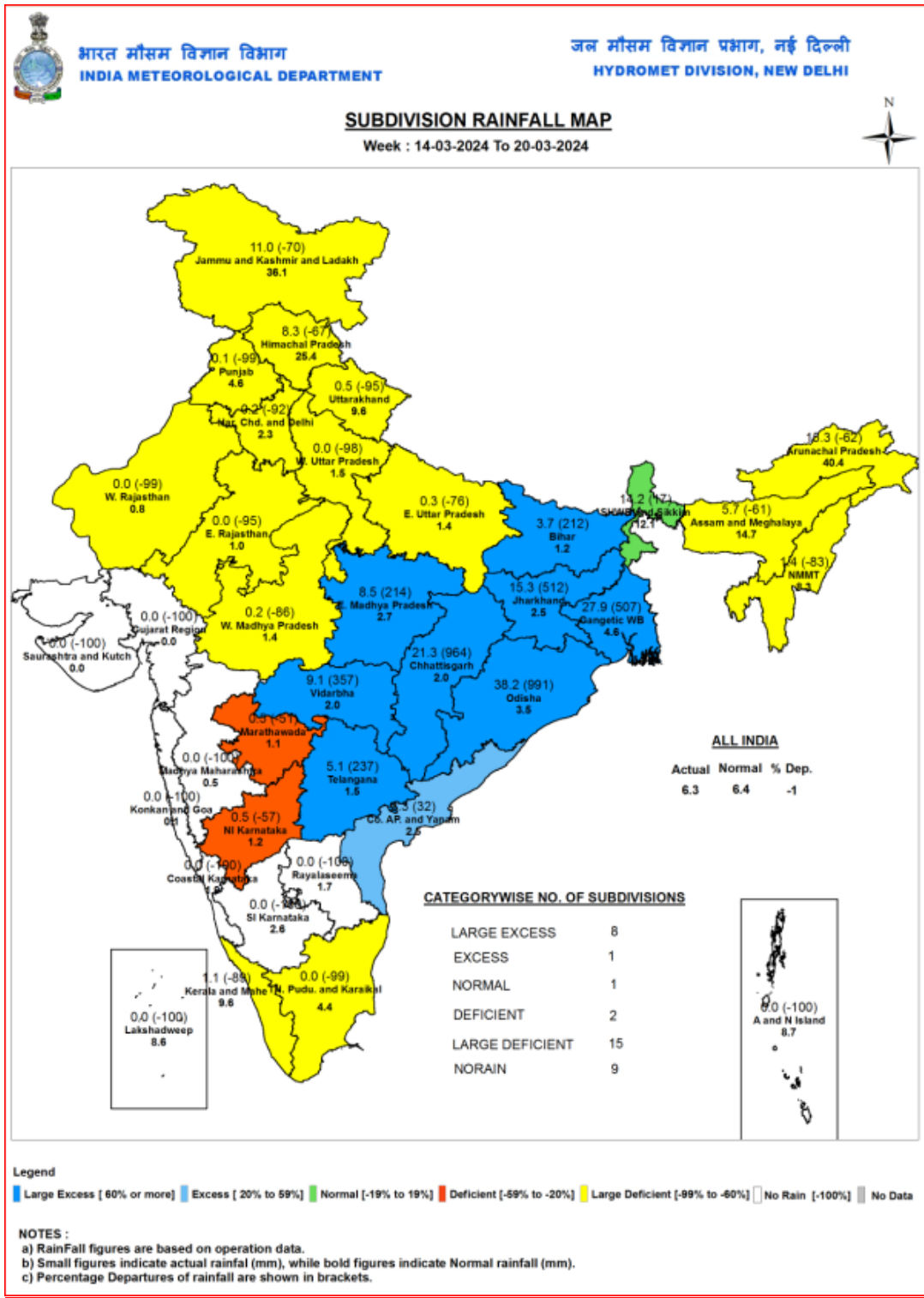
Heat wave warning:

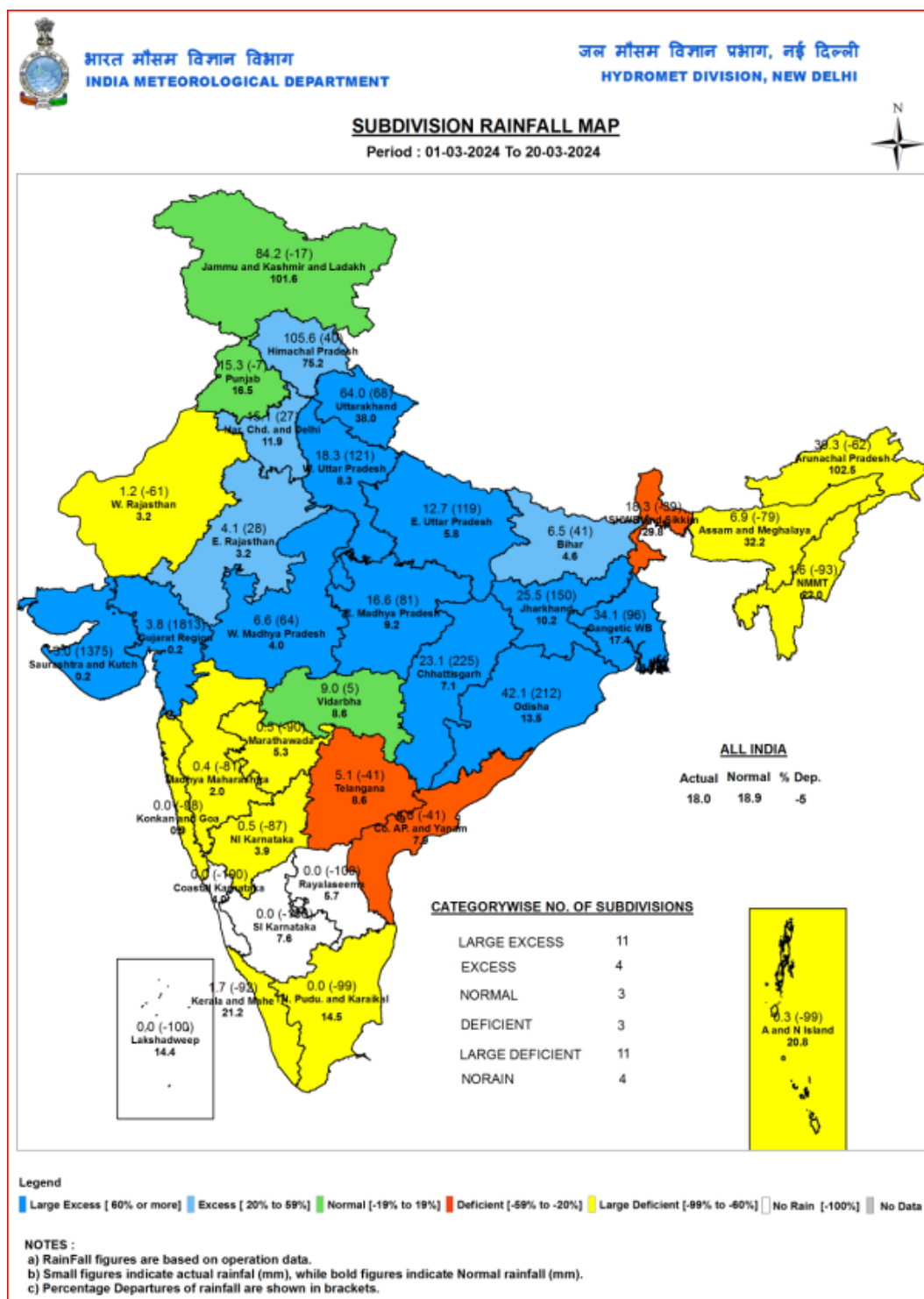
- ❖ **There is low probability of heat wave conditions** in isolated pockets over Saurashtra & Kutch and West Rajasthan towards end of the week 1.
- ❖ **Hot and humid weather** very likely to prevail over Rayalaseema, Kerala & Mahe, Saurashtra & Kutch during most days of the week and Tamil Nadu, Puducherry & Karaikal during 1st half of the week.

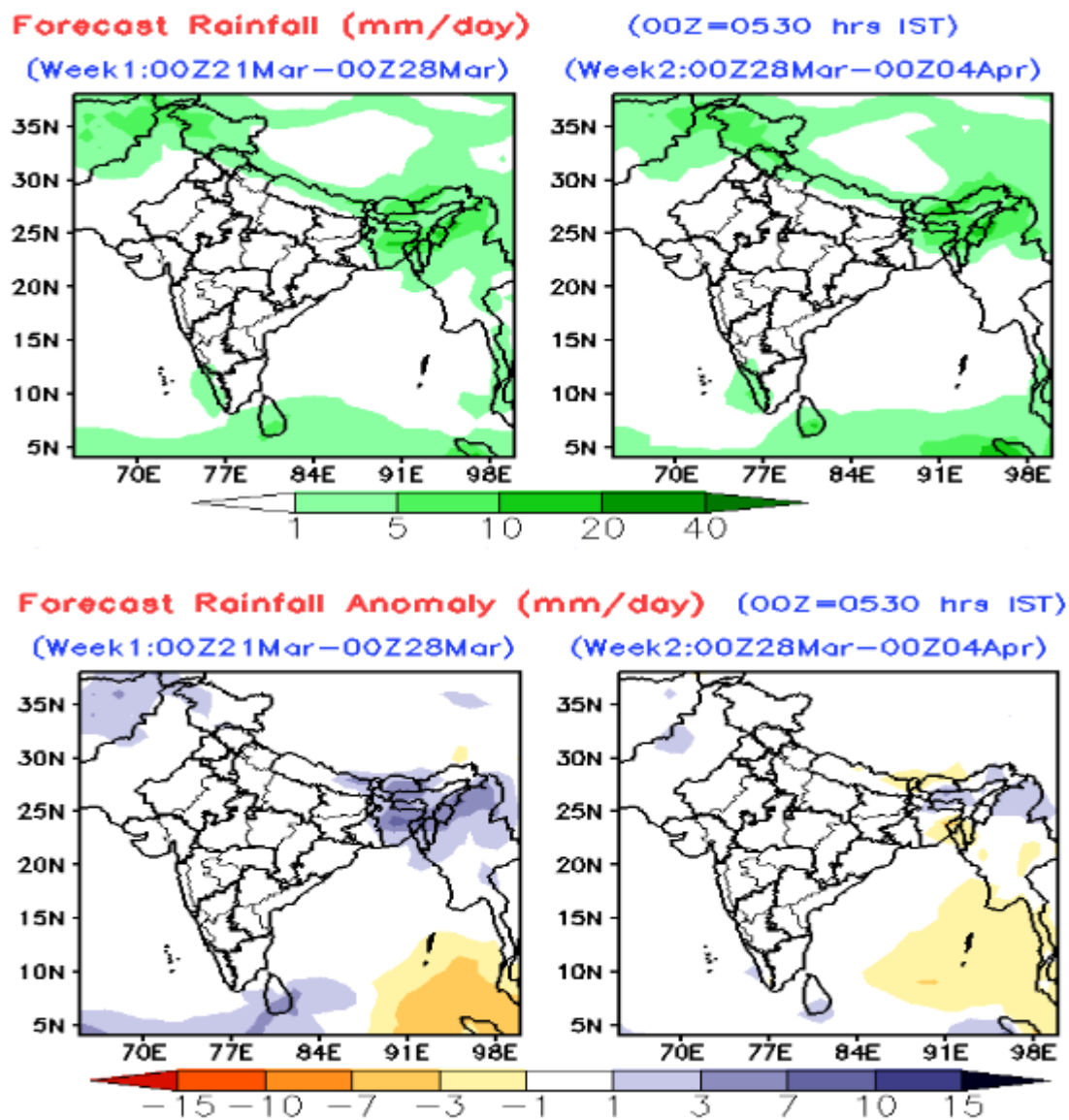
Maximum temperatures for Week 2 (28 March-3 April, 2024):

- The maximum temperatures are likely to rise gradually by 2-3°C over many parts of the country as compared to week 1.

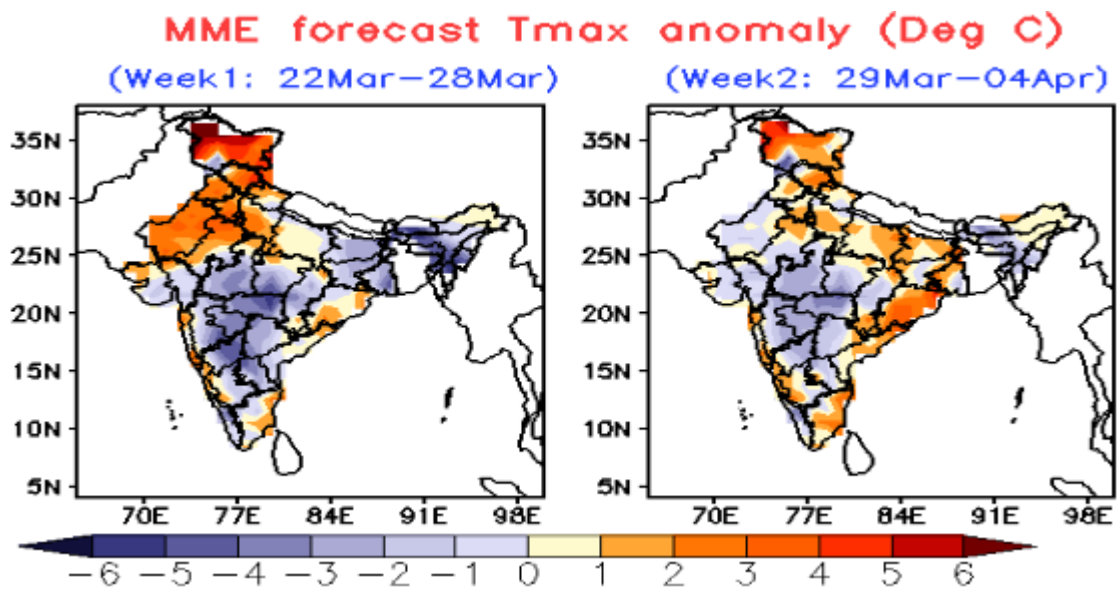
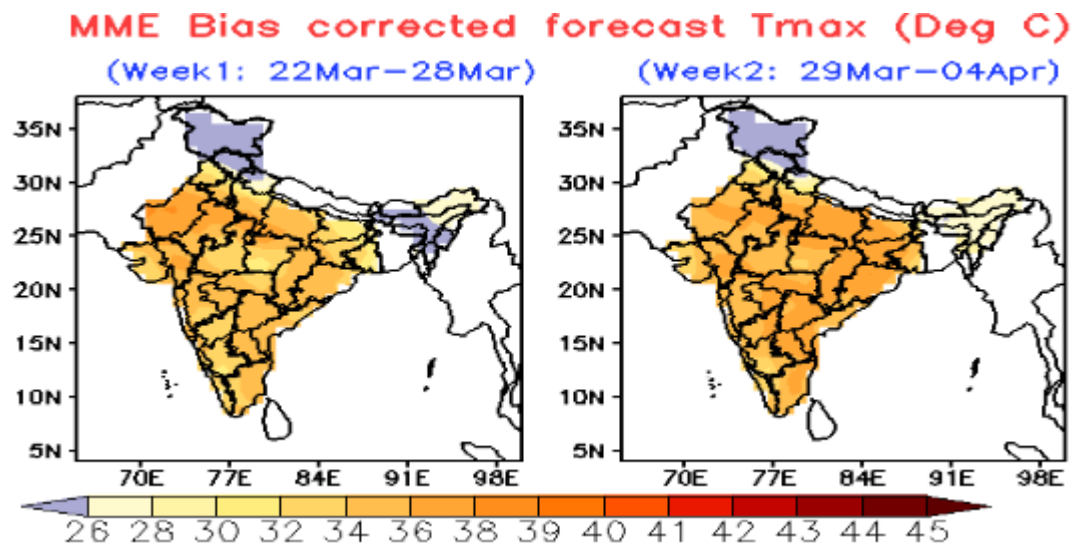
- These are very likely to above normal by 2-3°C over many parts of north India and east & west coast. These are likely to be near normal over rest parts of the country.
- **Hot and humid weather likely to prevail over isolated pockets of Maharashtra & Karnataka Coast, Tamilnadu, Andhra Pradesh and Odisha during some days of the week.**
- **There is low probability of heat wave over isolated pockets of Odisha during some days of the week.**







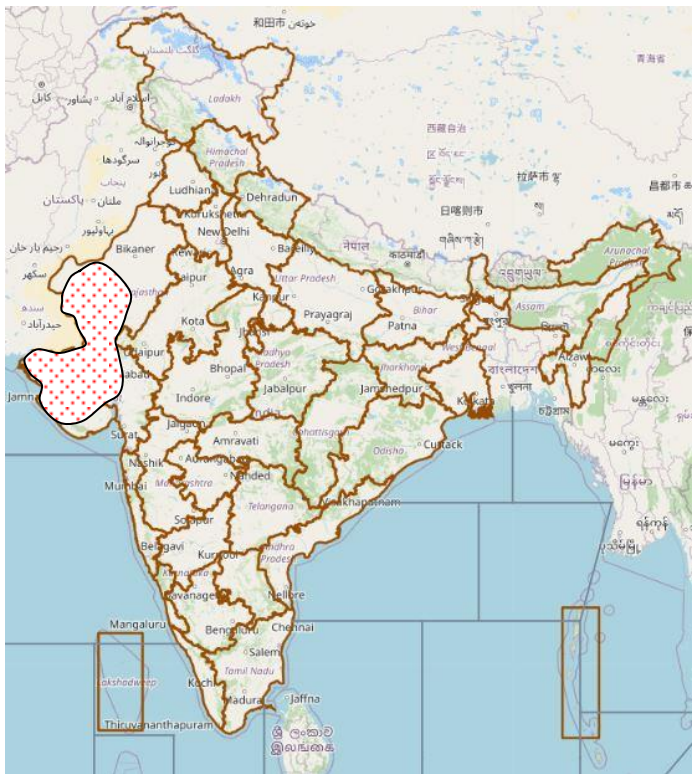
Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies (lower panels) from IMD MME



Extended range forecast of Maximum Temperature (top panel) and anomalies(lower panels) from IMD MME

EXTENDED RANGE OUTLOOK FOR HEATWAVE

Week 1: 22.03.2024 - 28.03.2024



Week2: 29.03.2024 - 04.04.2024



PROBABILITY OF HEATWAVE	CONFIDENCE
LOW (1-33% PROBABILITY)	
MODERATE (34-67% PROBABILITY)	
HIGH (68-100% PROBABILITY)	