



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

Press Release: Dated: 28 March 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (28 March -10 April 2024)

1. Salient Observed Features for week ending 27 March 2024

- Light to moderate rainfall accompanied with thunderstorm were recorded at many places over Nagaland, Manipur, Mizoram & Tripura and at a few places over Assam & Meghalaya during most dates in the week. Light to moderate rainfall/snowfall and thunderstorms were also recorded at most places over Arunachal Pradesh and Sub-Himalayan West Bengal & Sikkim during most dates in the week. This was due to i) **An east-west trough in the lower levels from Bihar to south Assam on 21st, 24th and 25th March;** ii) **cyclonic circulation and associated upper level north-south trough in the region during most dates;** iii) **Moisture laden southerly/southwesterly winds at lower levels to these areas from Bay of Bengal due to Anticyclone in lower levels over North Bay of Bengal.**
- **Heavy to very heavy** rainfall observed at isolated places over Bihar on 21 March and over Meghalaya on 26 March. **Heavy** rainfall observed at isolated places over Jharkhand on 21st March; Assam & Meghalaya on 22nd March; Coastal Karnataka on 23rd March; Assam & Meghalaya on 24th March and over Odisha on 26th March.
- **Hailstorm** was observed at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Coastal Andhra Pradesh and Telangana on 21st March; Gangetic West Bengal on 22nd March; Nagaland, Manipur, Mizoram & Tripura on 25th March; coastal Odisha and Chhattisgarh on 26th March.
- Due to sub-dued rainfall activities over northwest and central India, Maharashtra and Gujarat during the week, the maximum temperatures raised gradually during the week since 21 March and towards end of the week, on 27 May, it reached 1st time in this season at the range of 40-42°C at

some places over West Madhya Pradesh, Vidarbha, Gujarat Region, Marathwada, Madhya Maharashtra and West Rajasthan; at isolated places over North Interior Karnataka, Telangana, Rayalaseema, East Madhya Pradesh and East Rajasthan which were above normal by 3-4°C, in the range 36-39°C over at many parts of peninsular & central India and Odisha; at some parts over south Uttar Pradesh, Delhi and Saurashtra & Kutch which were above normal by 1-3°C.

- **Temperature Scenario:** The highest maximum temperature of **42.8°C** had been recorded at Akola (Vidarbha) on 27th March 2024 and the lowest minimum temperature of **12.2°C** had been recorded at Rewa (East Madhya Pradesh) on 22nd March 2024 over the plains of the country during the week.

➤ **Analysis of Weekly overall Rainfall distribution during the week ending on 27 March 2024 and Summer Season's Rainfall Scenario (1-27 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 27 March was -16%. All India Seasonal cumulative rainfall % departure during this year's **Summer Season's** during **1 to 27 March 2024** is -7% and over northwest India, it is -19%. 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.

2. Large scale features

Madden Julian Oscillation (MJO) index is currently in Phase 1 with amplitude greater than 1. The consensus between various forecasts (ECMWF, GEFSV12 and CFSv2 of NECP) indicate that the MJO index is likely to enter in phase 2 during next 2-3 days with a little reduction in amplitude. Thereafter, it would propagate eastward quickly across phase 2 during subsequent 3 days with amplitude less than 1 and then across phase 3 to reach phase 4 by the end of the week 1. It would continue to move eastward within phase 4 during first half of week 2 and then enter into phase 5 keeping amplitude slightly greater than 1 till end of the week. Considering the low amplitude and quick movement across phase 2 and 3, the MJO is not likely to provide support for the enhancement of convective activity over the North Indian Ocean (NIO) region.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	21.03.2024 TO 27.03.2024			01.03.2024 TO 27.03.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	30.2	16.4	84%	48.2	48.1	0%
NORTH-WEST INDIA	1.7	10.8	-84%	35.1	43.3	-19%
CENTRAL INDIA	1.3	1.1	14%	15.4	7	120%
SOUTH PENINSULA	1.1	4.4	-75%	2.8	13.8	-79%
Country as a whole	6	7.1	-16%	24.2	26	-7%

3. Forecast for next two week

Forecast for next two week

[Weather systems & associated Precipitation during Week 1 \(28 March to 03 April, 2024\) and Week 2 \(04 to 10 April, 2024\)](#)

[Weather systems & associated Precipitation during Week 1 \(28 March to 03 April, 2024\)](#)

- ❖ A cyclonic circulation lies over Bihar and another over south Assam in lower tropospheric levels. Under the influence of these systems:
- ✓ Isolated to scattered rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 28th & 29th and increase thereafter with fairly widespread to wide spread light to moderate rainfall/snowfall with isolated **thunderstorms & lightning** very likely over Arunachal Pradesh and scattered to fairly widespread over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during 30th March-03rd April, 2024.

- ✓ *Isolated heavy rainfall/snowfall very likely over Arunachal Pradesh and isolated heavy rainfall over Assam & Meghalaya during 30th March - 01st April with possibility of isolated very heavy falls over Arunachal Pradesh & Assam & Meghalaya on 31st March, 2024.*
- ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** very likely over Gangetic West Bengal and Odisha during 28th March - 01st April, 2024.
- ✓ Isolated light to moderate rainfall very likely over Bihar on 28th, 30th and over Jharkhand with **thunderstorms & lightning** on 28th, 30th & 31st March, 2024.
- ❖ A Western Disturbance as a trough in lower & middle tropospheric westerlies runs roughly along Long. 56°E to the north of Lat. 22°N. A cyclonic circulation lies over northwest Rajasthan & neighbourhood in lower tropospheric levels. Under their influence:
- ✓ Fairly widespread to widespread light rainfall/snowfall with isolated **thunderstorms & lightning** likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand during 28th-31st March, 2024.
- ✓ Isolated **heavy rainfall/snowfall** very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad and Himachal Pradesh on 29th& 30th March, 2024.
- ✓ Isolated light to moderate rainfall with **thunderstorms & lightning** likely over Punjab, Haryana, Chandigarh, West Uttar Pradesh during 28th -31st; Rajasthan and East Uttar Pradesh on 29th & 30th March, 2024.
- ✓ Isolated **hailstorm** also likely over Jammu & Kashmir on 29th; over Himachal Pradesh on 28th & 29th; over Uttarakhand during 29th-31st, Punjab and Haryana & Chandigarh on 29th & 30th March, 2024.

[Rainfall for week 2 \(04 to 10 April, 2024\):](#)

- ✓ No significant Western Disturbance likely to affect northwest India during the week.
- ✓ No significant weather likely over any part of the country. Overall, rainfall activity is likely to be below **normal** over all the regions of India.

[Maximum temperatures for Week 1 \(28 March to 03 April, 2024\) and Week 2 \(04 to 10 April, 2024\)](#)

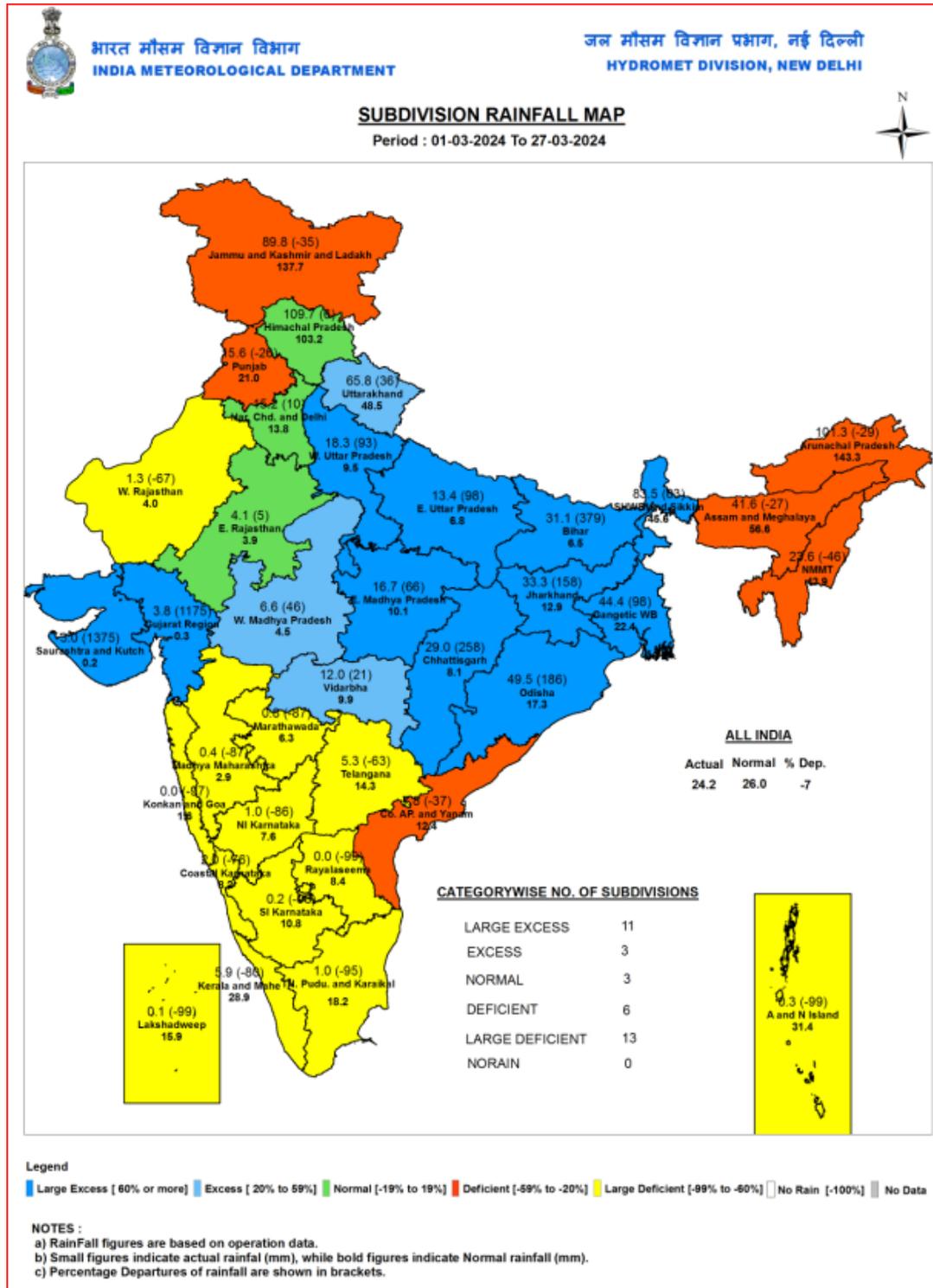
Maximum temperatures for Week 1 (28 March to 03 April, 2024):

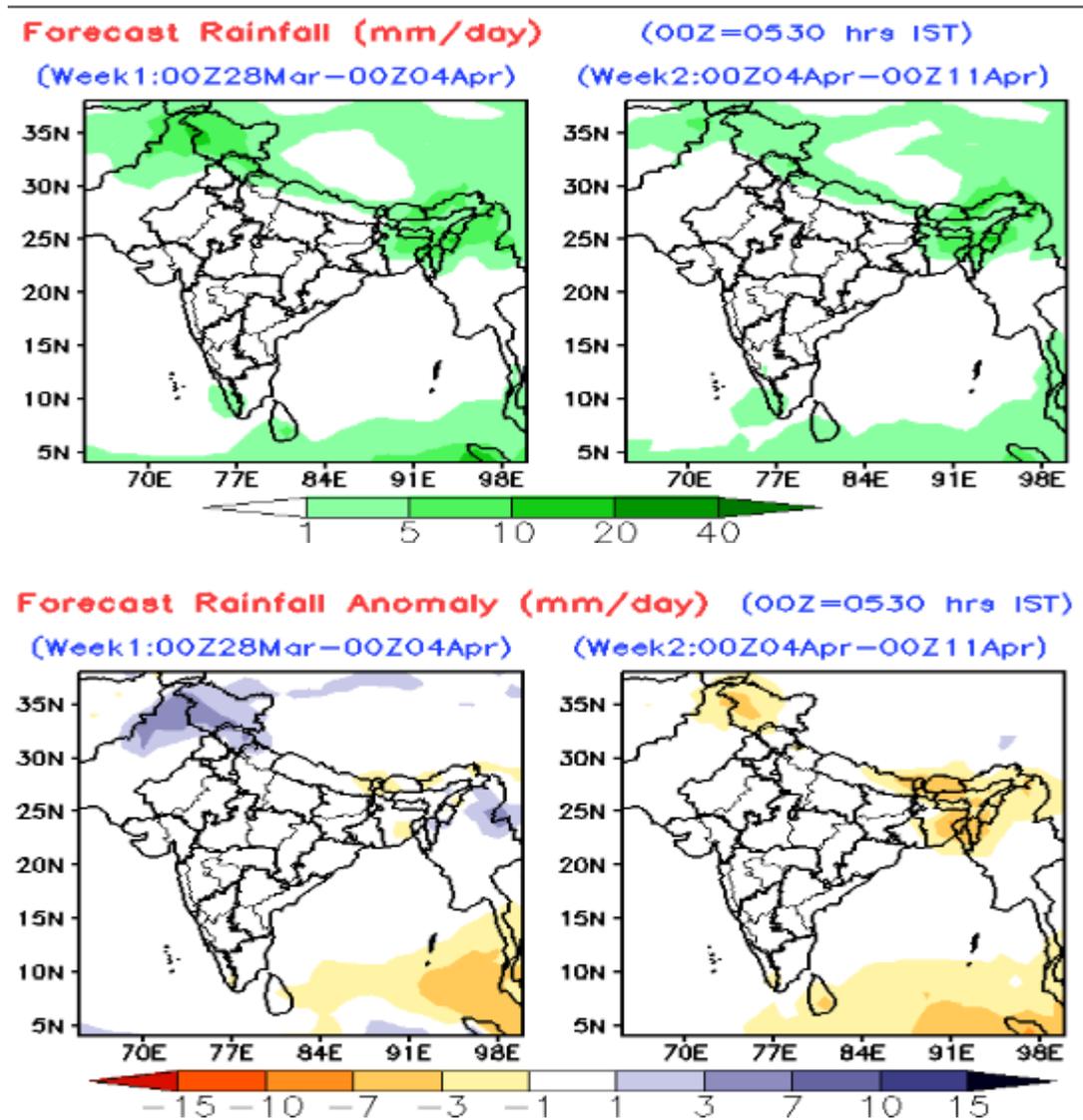
- ❖ Yesterday's, the maximum temperatures were in the range 40-42°C at some places over West Madhya Pradesh, Vidarbha, Gujarat Region, Marathawada, Madhya Maharashtra and West Rajasthan; at isolated places over North Interior Karnataka, Telangana, Rayalaseema, East Madhya Pradesh and East Rajasthan which were above normal by 3-4°C, in the range 36-39°C over at many parts of peninsular & central India and Odisha; at some parts over south Uttar Pradesh, Delhi and Saurashtra & Kutch and at isolated pockets over south Haryana, south Gangetic West Bengal, Jharkhand and south Bihar which were above normal by 1-2°C and in the range 32-35°C over states of Indo-Gangetic plane comprising of Punjab and remaining parts of north Haryana and north Uttar Pradesh, north Bihar at isolated pockets of remaining parts of Tripura, and south Assam which were below normal by 1-2°C.
- ❖ Currently, the maximum temperatures are exceeding 95th percentile of climatological value at many places over Delhi and adjoining south Haryana; at few pockets of West Madhya Pradesh and adjoining East Madhya Pradesh, Marathawada and adjoining Vidarbha, Madhya Maharashtra; isolated pockets over Rajasthan, West Uttar Pradesh, Saurashtra & Kutch and adjoining Gujarat Region, Kerala & Mahe, costal Tamil Nadu. These are likely to continue to exceed 95th percentile of climatological value over extended areas of Rajasthan, Madhya Pradesh, Maharashtra, interior Odisha, interior Karnataka and Kerala & Mahe on 28th & 29th March.
- ❖ Gradual rise in maximum temperatures by 2-4°C very likely over Central & East India during the week.
- ❖ Maximum temperatures are likely to fall gradually by 2-3°C during 1st half of the week and rise by 2-4°C during 2nd half of the week.
- ❖ No significant change in maximum temperatures very likely over rest part of the country during most days of the week.
- ❖ **Heat wave conditions** very likely in isolated pockets over West Madhya Pradesh on 28th; North Interior Karnataka on 28th & 29th and Vidarbha on 29th & 30th March, 2024.
- ❖ **Warm night** very likely to prevail in isolated pockets over Gujarat, Marathawada and Madhya Maharashtra during 1st half of the week.

- ❖ **Hot and humid weather** very likely to prevail over Saurashtra & Kutch during 1st half of the week; over Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe during most days of the week.

Maximum temperatures for Week 2 (04 to 10 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 be above normal by 2-3°C over many parts of East India and Western Himalayan Region. 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 and Andhra Pradesh during some days of the week.**
- **There is low probability of heat wave over isolated pockets of Odisha, Gangetic West Bengal, Jharkhand and Bihar during some days of the week.**



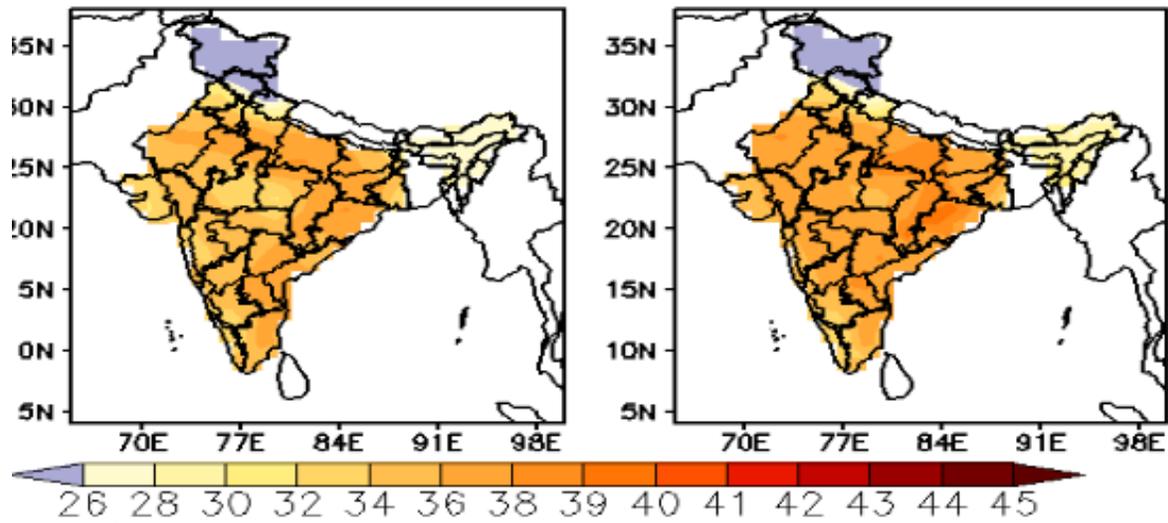


Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies (lower panels) from IMD MME

MME Bias corrected forecast Tmax (Deg C)

(Week1: 29Mar-04Apr)

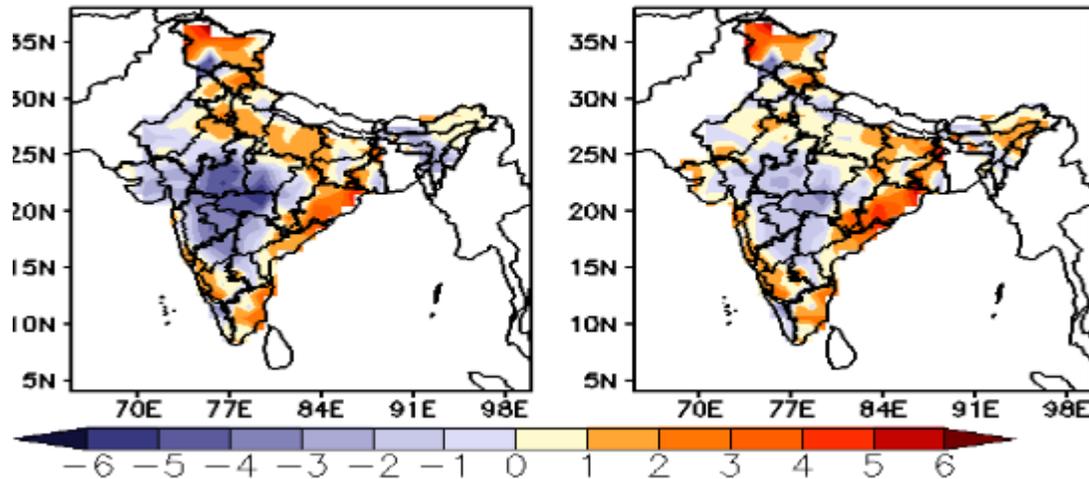
(Week2: 05Apr-11Apr)



MME forecast Tmax anomaly (Deg C)

(Week1: 29Mar-04Apr)

(Week2: 05Apr-11Apr)



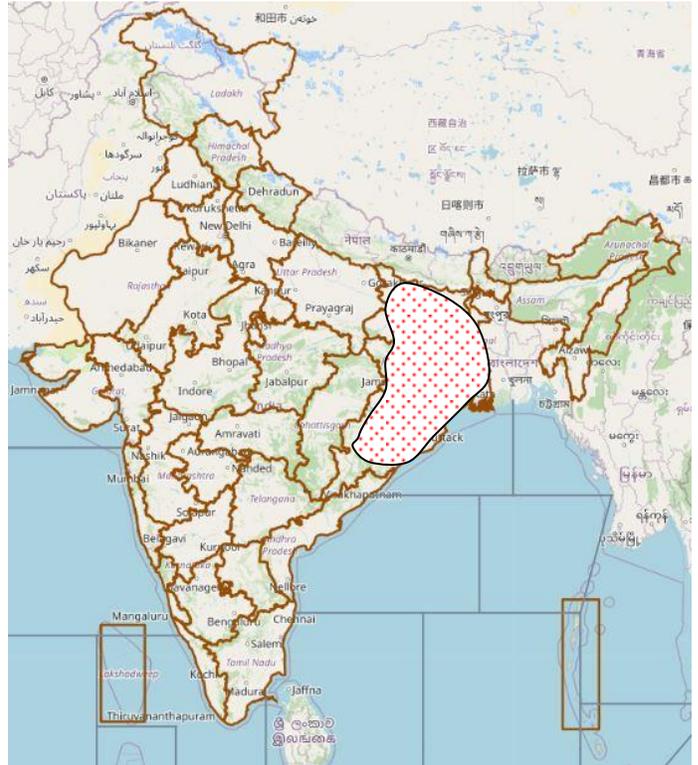
Extended range forecast of Maximum Temperature (top panel) and anomalies(lower panels) from IMD MME

EXTENDED RANGE OUTLOOK FOR HEATWAVE

Week 1: 29.03.2024 - 04.04.2024



Week2: 05.04.2024 - 11.04.2024



PROBABILITY OF HEATWAVE

CONFIDENCE

LOW (1-33% PROBABILITY)



MODERATE (34-67% PROBABILITY)



HIGH (68-100% PROBABILITY)

