



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

**Press Release: Dated: 11 April 2024**

**Subject: Current Weather Status and Extended range Forecast for next two weeks (11-24 April 2024)**

**1. Salient Observed Features for week ending 10 April 2024**

- **Season's 1<sup>st</sup> spell of heat wave conditions was prevailed over Parts of south Peninsular India (Tamil Nadu, North Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh & Yanam and Telangana) and Odisha, Gangetic West Bengal, Jharkhand mainly during 5-7 April.** Maximum temperature over parts of these areas were at the range of 42-45 °C during the period. However, due to favorable synoptic conditions thereafter, parts of central India and adjoining parts of Peninsular and east coast of India experienced clouding and also scattered to fairly widespread rainfall accompanied with thunderstorms and gusty winds during 2<sup>nd</sup> half of the week resulting abatement of this heat wave spell.
- **Heavy rainfall** also occurred at isolated places over Meghalaya on 07<sup>th</sup> April; Odisha on 08<sup>th</sup> April.
- **Hailstorm** also reported at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh and Telangana on 09<sup>th</sup> April; at isolated places over Madhya Pradesh, Vidarbha, Sikkim and Marathwada on 10<sup>th</sup> April.
- **Maximum gusty winds reported** during the week was on 10<sup>th</sup> April due to thunderstorm activities: West Madhya Pradesh: Sehore - 58 kmph, Raisen - 54 kmph; East Madhya Pradesh: Singrauli - 90 kmph, Mandla - 74 kmph.
- **Temperature Scenario:** The highest maximum temperature of **44.5°C** had been recorded at Nandyal (Rayalaseema) on 06<sup>th</sup> April 2024 and the lowest minimum temperature of **13.0°C** had been recorded at Karnal (Haryana) on 09<sup>th</sup> April 2024 over the plains of the country during the week.

➤ **Analysis of Weekly overall Rainfall distribution during the week ending on 10 April 2024 and Summer Season's Rainfall Scenario (1 March- 10 April 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 10 April was - 58%. All India Seasonal cumulative rainfall % departure during this year's **Summer Season's** during **1 March to 10 April 2024** is -17% and over northwest India, it is - 20%. 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 (Week and season)**

Region	WEEK			SEASON		
	04.04.2024 TO 10.04.2024			01.03.2024 TO 10.04.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	12.6	25.5	-51%	80.8	96.2	-16%
NORTH-WEST INDIA	1	8.6	-89%	47	59.1	-20%
CENTRAL INDIA	3.5	1.8	+97%	19.3	10.3	+88%
SOUTH PENINSULA	0.5	5.8	-91%	4.1	23.1	-82%
COUNTRY AS A WHOLE	3.6	8.5	-58%	34.6	41.5	-17%

## 2. Large scale features

Madden Julian Oscillation (MJO) index is currently in Phase 4 with amplitude close to 1. In the forecasts of various models, the MJO signal is likely to continue in same phase till end of the week 1 with gradually decreasing amplitude. Thereafter, the different models along with their ensemble members show ambiguity and differ from each other in predicting the eastward propagation while the MJO signal is likely to be very weak during the second week. It is likely to portray slow meandering through phases 5 to 8 till the end of the forecast period. The ECMWF model suggests a quick looping of the MJO index in the phase diagram to enter into phase 3 at the end of week 2. Thus, MJO Phase may support convective over the Bay of Bengal (BoB) during the entire forecast period. However, considering the weakening of MJO signal with quick meandering/looping through various phases, the influence over convective activity may not be very significant over the North Indian Ocean (NIO).

### 3. Forecast for next two weeks

#### Weather systems & associated Precipitation during Week 1 (11 to 17 April, 2024) and Week 2 (18 to 24 April, 2024)

#### Weather systems & associated Precipitation during Week 1 (11 to 17 April, 2024)

- ❖ A cyclonic circulation lies over southwest Rajasthan and a trough/wind discontinuity runs from this cyclonic circulation to Coastal Karnataka and another cyclonic circulation lies over east Bihar in lower tropospheric levels. Under the influence of these systems:
  - ✓ Isolated to scattered light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 Kmph)** very likely over Madhya Pradesh, Chhattisgarh, Vidarbha, Marathwada, Madhya Maharashtra during 11<sup>th</sup>-13<sup>th</sup>. **Squally wind speed reaching 50-60 gusting to 70 Kmph likely at isolated places over Madhya Pradesh on 11<sup>th</sup> & 12<sup>th</sup> April, 2024.**
  - ✓ Isolated light/moderate rainfall accompanied with **thunderstorm, lightning** very likely over Gangetic West Bengal, Jharkhand, Odisha, Bihar and Andaman & Nicobar Islands during 11<sup>th</sup>-13<sup>th</sup> April, 2024.
  - ✓ Isolated light/moderate rainfall accompanied with **thunderstorm, lightning & gusty winds (30-40 Kmph)** very likely over Telangana, Kerala & Mahe, Interior Karnataka during next 7 days and over Coastal Andhra Pradesh-Yanam, Tamil Nadu, Puducherry-Karaikal during 11<sup>th</sup>-15<sup>th</sup> April, 2024.
  - ✓ **Hailstorm activity also very likely at isolated places over Madhya Pradesh, Vidarbha & Marathwada during 11<sup>th</sup>-12<sup>th</sup> April, 2024.**
  
- ❖ An intense **Western Disturbance** as a cyclonic circulation lies over west Iran in middle & upper tropospheric westerlies and another one in middle tropospheric westerlies runs along Long. 72°E to the north of Lat. 32°N. High moisture feeding from Arabian Sea is likely into Northwest India during 13<sup>th</sup>-15<sup>th</sup> April. As a result:
  - ✓ Isolated light rainfall/snowfall very likely over Jammu-Kashmir, Himachal Pradesh, Uttarakhand during 11<sup>th</sup>-12<sup>th</sup> and fairly widespread to widespread light to moderate rainfall/snowfall with **thunderstorm, lightning & gusty winds (30-40 Kmph)** over the region during 13<sup>th</sup>-15<sup>th</sup> April, 2024.
  - ✓ Scattered to fairly widespread rainfall with **thunderstorm, lightning & gusty winds (30-40 kmph)** very likely over Northwest Uttar Pradesh, Punjab and Haryana during 13<sup>th</sup>-15<sup>th</sup> April and isolated to scattered light to moderate rainfall with **thunderstorm, lightning** very likely over Rajasthan during 11<sup>th</sup>-15<sup>th</sup> April, 2024.
  - ✓ **Isolated heavy rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 13<sup>th</sup> & 14<sup>th</sup> and Himachal Pradesh on 14<sup>th</sup> April, 2024.**

- ✓ **Isolated hailstorm very likely over Jammu, Punjab, Haryana, Rajasthan on 13<sup>th</sup>; Himachal Pradesh on 13<sup>th</sup> & 14<sup>th</sup> and Uttarakhand and on 14<sup>th</sup> and over West Uttar Pradesh on 14<sup>th</sup> April.**
- ✓ **Dust storm/ thunder squall (50-60 Kmph) very likely over Rajasthan on 13<sup>th</sup> & 14<sup>th</sup> April, 2024.**
- ✓ Scattered to fairly widespread light/moderate rainfall/snowfall with isolated thunderstorm & lightning very likely over Arunachal Pradesh; isolated to scattered light to moderate rainfall with isolated thunderstorm, lightning & gusty winds over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 7 days. Isolated hailstorm very likely over Sikkim today (**Annexure III**).

#### **Rainfall for week 2 (18 to 24 April, 2024):**

- ✓ Under the influence of Western Disturbances, light to moderate scattered/fairly widespread rainfall/snowfall activity likely over Western Himalayan Region and light to moderate isolated/scattered rainfall/thunderstorm likely over plains of northwest India during some days of the week.
- ✓ Due to trough/wind discontinuity over central & south peninsular India, light to moderate isolated/scattered rainfall/thunderstorm & lightening likely over these areas during many days of the week.
- ✓ Overall, rainfall activity is likely to be below **normal** east & north India (except Odisha) and above normal over rest parts of the country during the week. (**Annexure III**).

#### **Maximum temperatures for Week 1 (11 to 17 April, 2024) and Week 2 (18 to 24 April, 2024)**

##### **Maximum temperatures for Week 1 (11 to 17 April, 2024):**

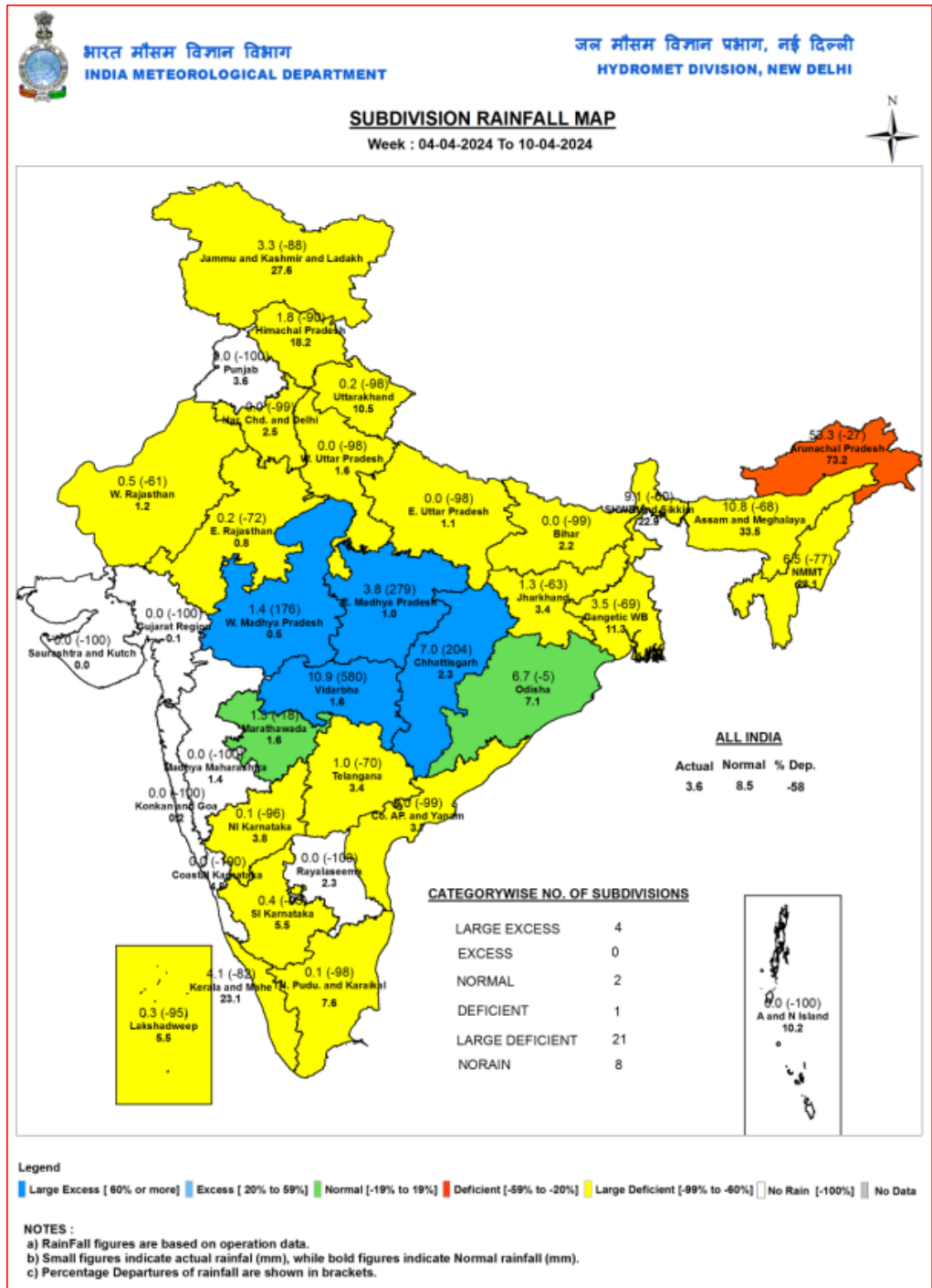
- ❖ Yesterday, maximum temperatures were in the range of 40-42°C over many parts of West Rajasthan, Gujarat Region; at isolated places over Uttar Pradesh, Madhya Maharashtra, Saurashtra & Kutch, Marathawada and East Rajasthan. These were above normal by 2-4 °C over these areas.
- ❖ **No significant change in maximum temperatures very likely over Northwest India during next 2 days and gradual fall by 3-5°C thereafter for subsequent 3 days.**
- ❖ **No significant change** in maximum temperatures very likely over Central & East India during 1<sup>st</sup> half of the week and gradual rise by 2-4°C thereafter.
- ❖ Gradual fall by 2-3°C very likely over many parts of West India during 1<sup>st</sup> half of the week and gradual rise by 2-3°C thereafter.
- ❖ No significant change in maximum temperatures very likely over rest parts of the country.

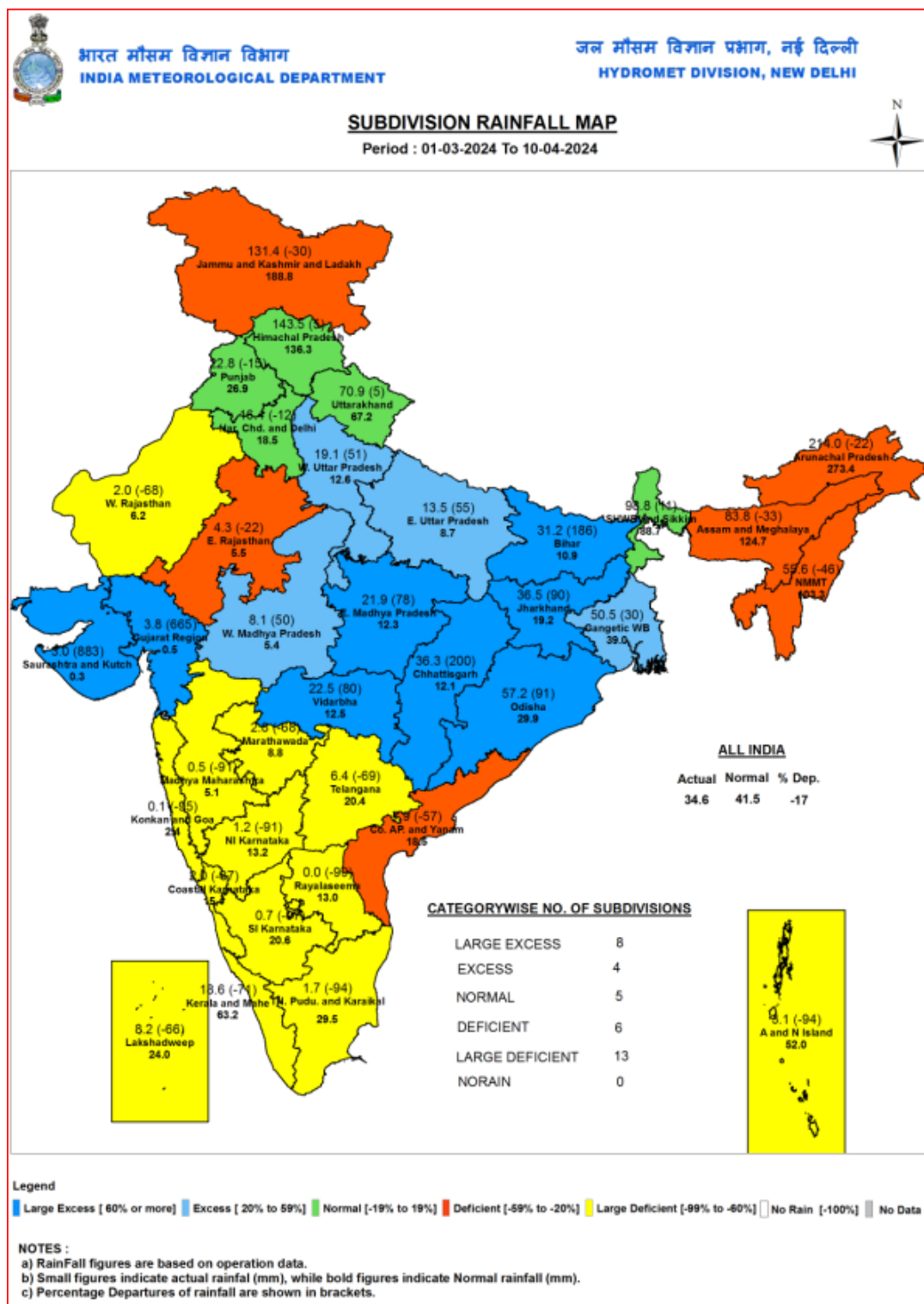
### **Heat wave, Warm Night and Hot & Humid weather warning:**

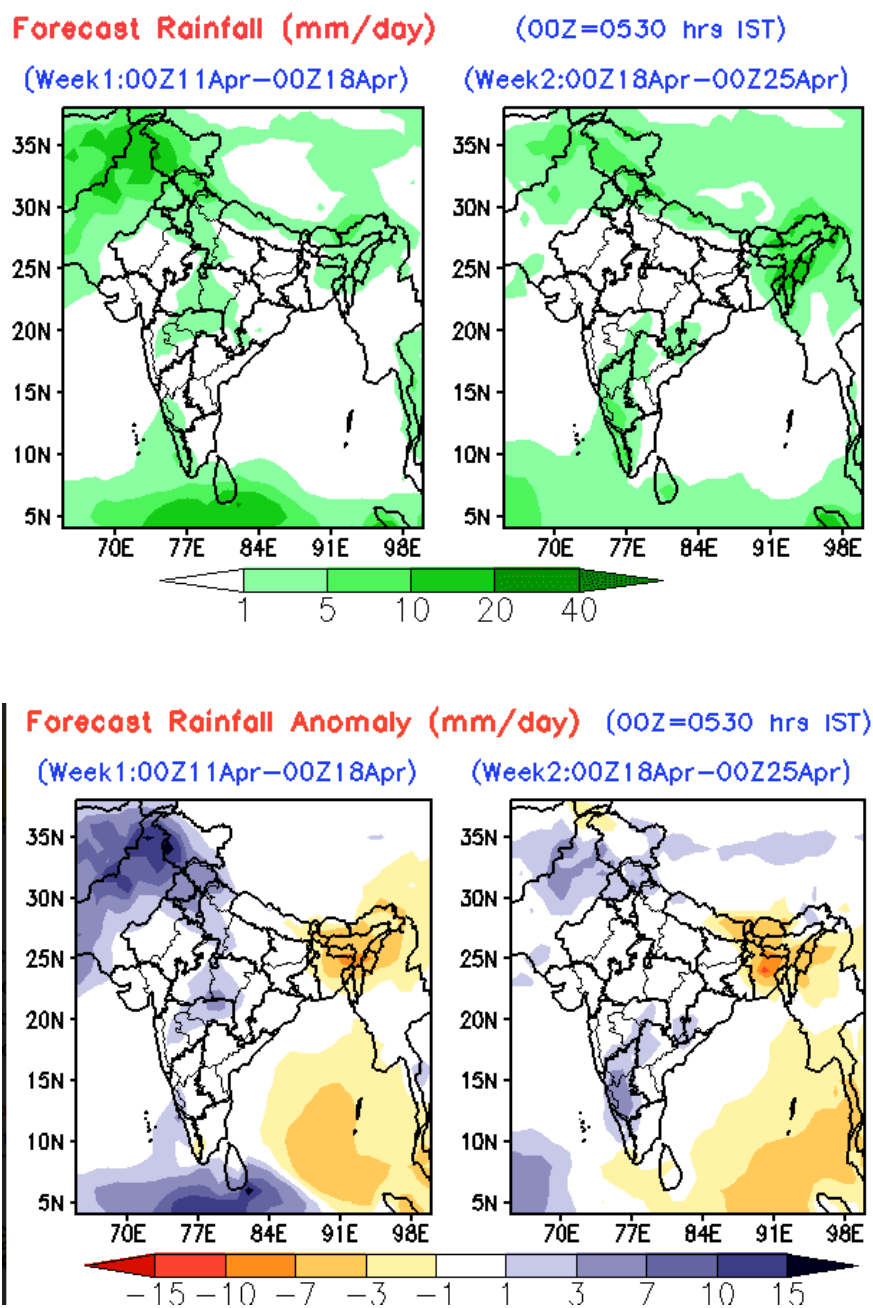
- ❖ **Hot and humid weather** very likely to prevail over Kerala & Mahe during the week; over Coastal Andhra Pradesh & Yanam, Coastal Karnataka, Rayalaseema during 11<sup>th</sup>-12<sup>th</sup>, Tamil Nadu on 11<sup>th</sup> and Odisha on 14<sup>th</sup> April,2024 (**Annexure IV**).
- ❖ **Heat Wave conditions** likely over isolated places over Odisha and Coastal Andhra towards end of the week (**Annexure V**).

### **Maximum temperatures for Week 2 (18 to 24 April, 2024):**

- Due to rainfall/thunderstorm activity over most parts of the country, maximum temperatures are likely to be below normal to near normal over most parts of the country except over many parts of Coastal Andhra Pradesh, Odisha, West Bengal, East Jharkhand and Bihar, where these are likely to above normal by 2-3°C (**Annexure IV**).
- **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 moderate probability of heat wave over isolated pockets of Coastal Andhra Pradesh, Odisha, West Bengal, East Jharkhand and Bihar during some days of the week (Annexure V).**

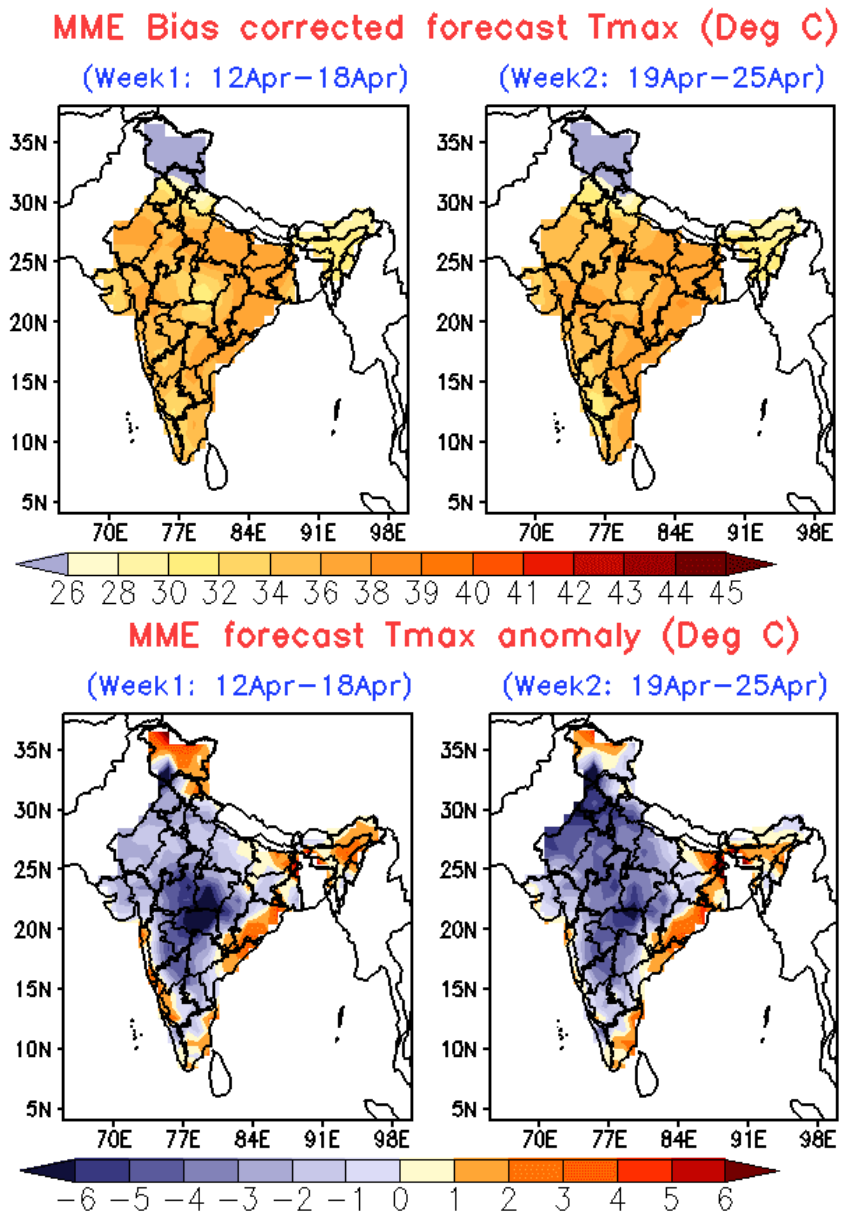






Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies (lower panels) from IMD MME



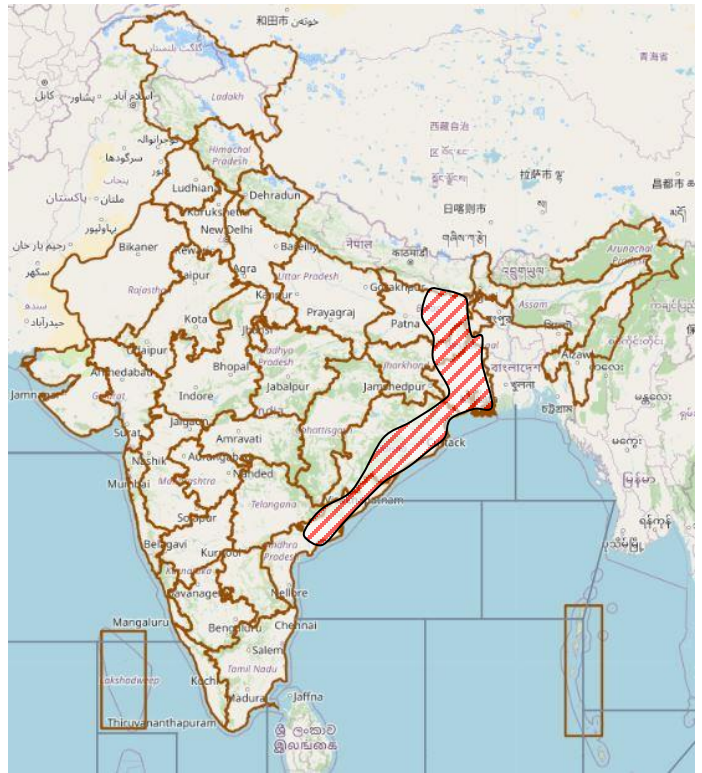


Extended range forecast of Maximum Temperature (top panel) and anomalies(lower panels) from IMD MME

**EXTENDED RANGE OUTLOOK FOR HEATWAVE**

**Week 1: 12.04.2024 - 18.04.2024**

**Week 2: 19.04.2024 - 25.04.2024**



**PROBABILITY OF HEATWAVE**

**CONFIDENCE**

**LOW (1-33% PROBABILITY)**



**MODERATE (34-67% PROBABILITY)**



**HIGH (68-100% PROBABILITY)**

