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

**Press: Dated:23 Feb, 2023**

## Subject: Current Weather Status and Extended range Forecast for next two weeks (23 Feb-8 March 2023)

### 1. Salient Observed Features during 16-22 Feb 2023

♦ Movement of a Western Disturbance during 19-22 Feb had caused fairly widespread rainfall/snowfall/thunderstorm activity over Western Himalayan Region and isolated rainfall/snowfall/thunderstorm activity over the same areas (excluding Uttarakhand) during the second half week; isolated hailstorm activity also had been reported over Himachal Pradesh and Uttarakhand on 21 Feb.

♦ Remnants of Western Disturbances had caused fairly widespread to widespread rainfall/snowfall/thunderstorm activity over Arunachal Pradesh and isolated to scattered rainfall/snowfall/thunderstorm activity over the same areas during 19-22 Feb; under their influence, isolated to scattered rainfall/thunderstorm activity had occurred over Sub Himalayan West Bengal & Sikkim and Assam & Meghalaya whereas isolated rainfall/thunderstorm activity had occurred over Gangetic West Bengal and Nagaland, Manipur, Mizoram & Tripura during the same period.

♦ Markedly above normal maximum temperatures of the order of 37-39ºC had been reported over Gujarat State and Konkan & Goa and that of the order of 36-38ºC had been reported over parts of Rajasthan during 16-19 Feb. Temperature Scenario: The highest maximum temperature of **40.3ºC** had been recorded at **Bhuj (Saurashtra & Kutch)** on **16th February 2023** and the lowest minimum temperature of **8.0ºC** had been recorded at **Jalgaon (Madhya Maharashtra)** on **16th February 2023** over the plains of the country during the week.

- **Analysis of Weekly overall Rainfall distribution during the week ending on 22 Feb 2023 and Winter Season's Rainfall Scenario (1 Jan-22 Feb 2023):** 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 22 Feb 2023 was -83 % with northwest India had -90% while all India Seasonal cumulative rainfall %departure during this year's Winter Season Rainfall during 01 Jan-22 Feb 2023 is -40% 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 Annex I and II respectively.

**Table 1: Rainfall status (Week and season)**

| Region | WEEK | | | SEASON | | |
|---|---|---|---|---|---|---|
| | 16.02.2023 TO 22.02.2023 | | | 01.01.2023 TO 22.02.2023 | | |
| | Actual | Normal | % Dep | Actual | Normal | % Dep |
| EAST & NORTH-EAST INDIA | 4.1 | 9.5 | -57% | 13.5 | 39.3 | -66% |
| NORTH-WEST INDIA | 1.2 | 11.9 | -90% | 54 | 67.7 | -20% |
| CENTRAL INDIA | 0 | 1.7 | -99% | 1.9 | 13.4 | -86% |
| SOUTH PENINSULA | 0.1 | 2.1 | -93% | 6.2 | 14.1 | -56% |
| Country as a whole | 1 | 6.1 | -83% | 20.6 | 34.3 | -40% |

## 2. Large scale features

- Currently La Niña conditions are prevailing over Equatorial Pacific Ocean and near normal Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest global model forecasts indicate that the La Niña conditions are likely to continue till end of the Winter months.
- The Madden Julian Oscillation (MJO) Index is currently in Phase 6 with amplitude less than 1. It will move in same phase with gradually increasing amplitude till end of week 1. During the end of week 1, it would move to phase 7 with amplitude becoming more than 1. It will continue in same phase with increased amplitude during remaining part of the week. Thus, MJO will not support enhancement of

convective activity over the Bay of Bengal (BoB) and Arabian Sea (AS) during entire forecast period.

## 3. Forecast for next two week

**Weather systems & associated Precipitation during Week 1 (23 February to 01 March, 2023) and Week 2 (02 to 08 March, 2023)**

### Forecast for week 1 (23 February to 01 March, 2023):

- A trough runs roughly along Long 90°E to the north of Lat. 22°N in lower tropospheric levels. Under its influence:
- ✓ Light to moderate scattered to fairly widespread rainfall very likely over Arunachal Pradesh and light isolated to scattered rainfall over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland & Manipur during next 24 hours and decrease in intensity & distribution thereafter.
- ✓ Isolated heavy rainfall very likely over Arunachal Pradesh on 23rd February.
- ✓ Isolated thunderstorm with lightning very likely over Sub-Himalayan West Bengal & Sikkim on 23rd & 24th and Nagaland & Manipur on 23rd February and with hail over Arunachal Pradesh, Assam and Sub-Himalayan West Bengal & Sikkim on 23rd February.
- A fresh Western Disturbance is likely to affect Western Himalayan Region from 25th February. Under its influence, light to moderate isolated to scattered rainfall/snowfall likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad, Himachal Pradesh and Uttarakhand during 25th-27$^{th}$ February.
- Another fresh Western Disturbance is likely to affect Western Himalayan Region from 28$^{th}$ February. It is very likely to cause light to moderate isolated to scattered to fairly widespread rainfall/snowfall likely over Western Himalayan Region during 28$^{th}$ February to 02$^{nd}$ March. **Isolated heavy fall is also likely over Kashmir Valley and Himachal Pradesh on 28$^{th}$ February & 01$^{st}$ March, 2023**
- Light isolated to scattered rainfall very likely over Andaman & Nicobar Islands during the week.
- No significant weather very likely over rest parts of the country during the week.

### Rainfall for week 2 (02 to 08 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 including Andaman & Nicobar Islands, 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 including Andaman & Nicobar Islands, where, it is likely to be above normal.

## Maximum Temperatures and its forecast during Week 1 (23 February to 01 March, 2023) and Week 2 (02 to 08 March, 2023):

### Maximum Temperature Forecast for week 1 (23 February to 01 March, 2023):

- **Maximum temperatures** are in the range of 35-37°C in most parts of interior Maharashtra and Telangana; many parts of Jharkhand and Chhattisgarh; some parts of Odisha and isolated pockets of Gujarat, Madhya Pradesh and Gangetic West Bengal.
- **Maximum temperatures** are above normal by 3-5°C in most parts of Northwest, Central and East India.
- No significant change in maximum Temperatures very likely over Northwest India during next 2 days and rise by 2-3°C thereafter.
- No significant change in maximum Temperatures very likely over Gujarat state during 1st half of the week and gradual rise by about 2°C thereafter.
- No significant change in maximum Temperatures very likely over rest parts of the country during the week.
- **However, these are very likely to be above normal by 3-5°C over most parts of Northwest, Central and East India during most days of the week.**
- **No significantly heat wave conditions likely over any part of the country during the week.**

### Maximum Temperature for week 2 (02 to 08 March, 2023):

- Maximum temperatures very likely to rise gradually by 1-2º C over Northwest, Central and East India during the week.
- **However, these are very likely to be above normal by 2-4°C over most parts of Northwest, Central and East India during most days of the week.**
- **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 Widespred (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 |

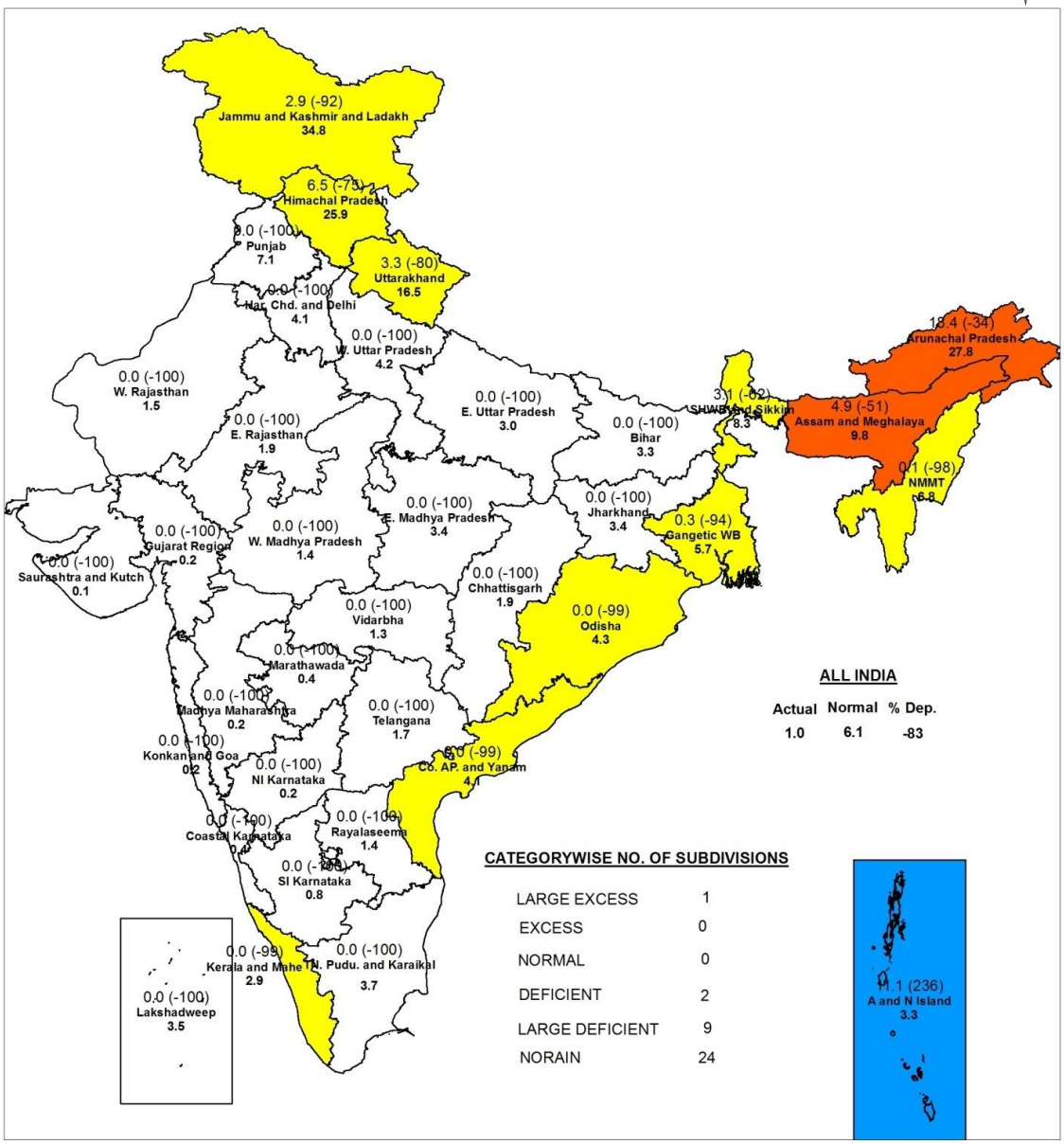
**Annex 1**

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI

# SUBDIVISION RAINFALL MAP

**Week : 16-02-2023 To 22-02-2023**



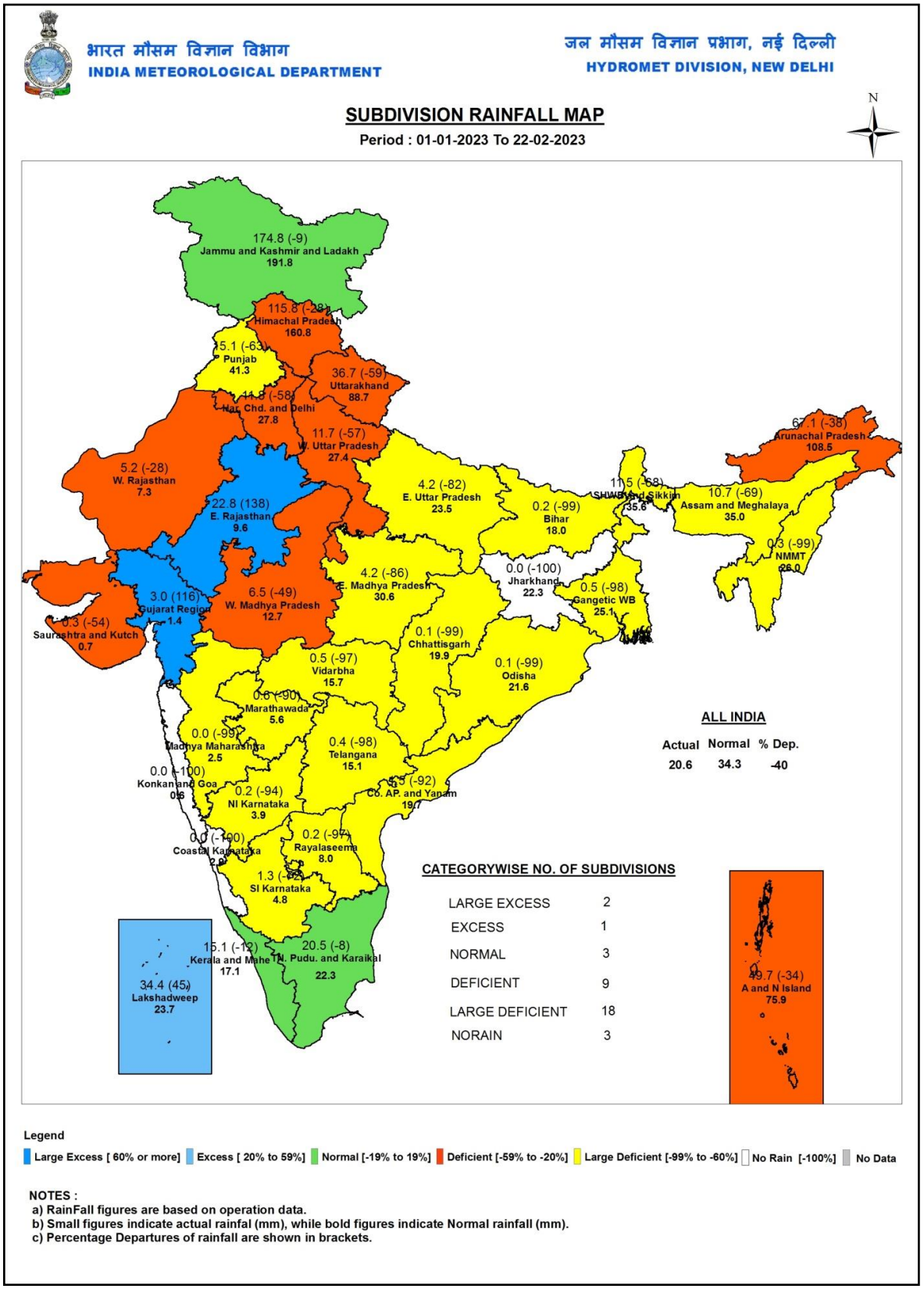

**Legend**

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

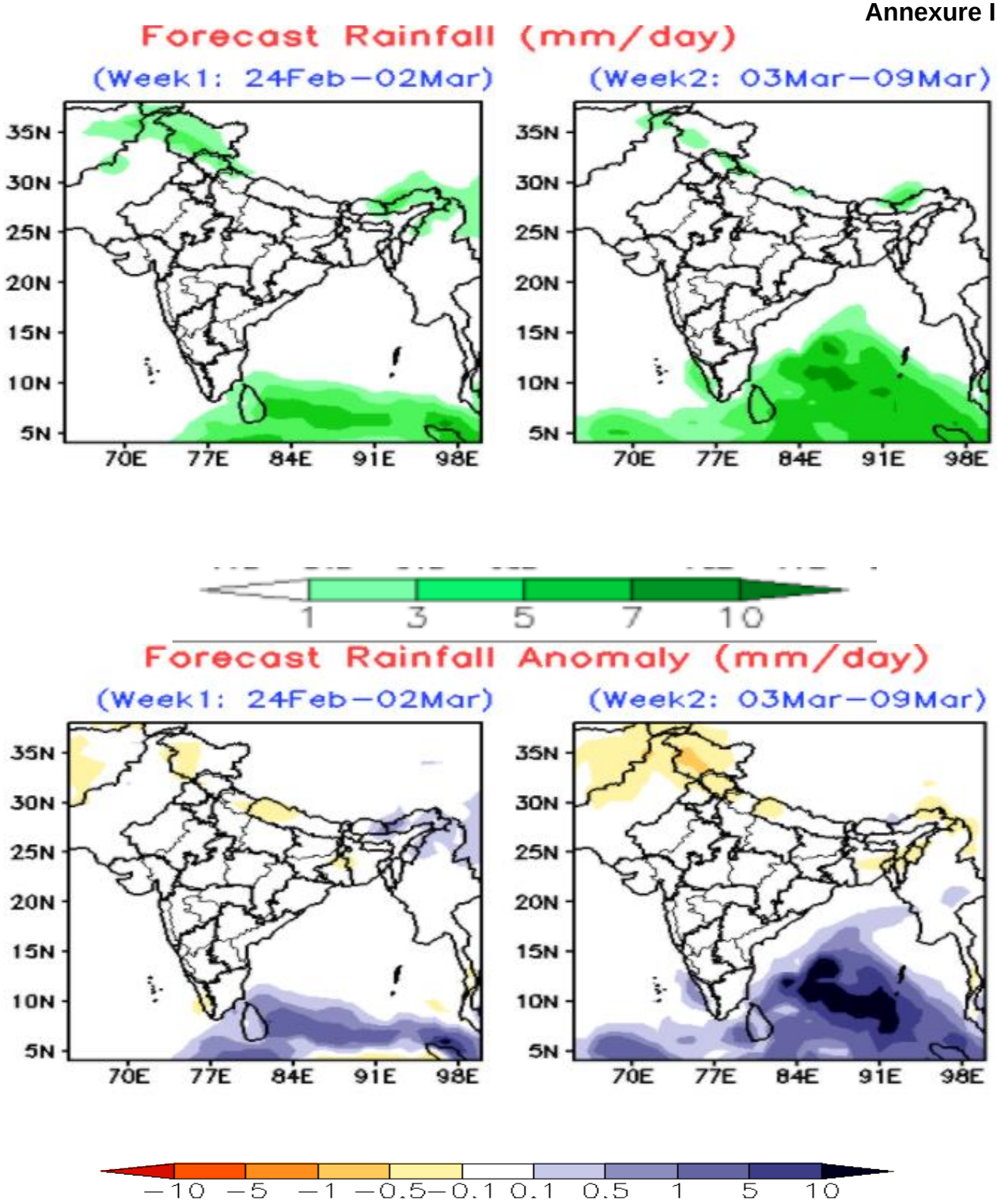
**NOTES :**

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

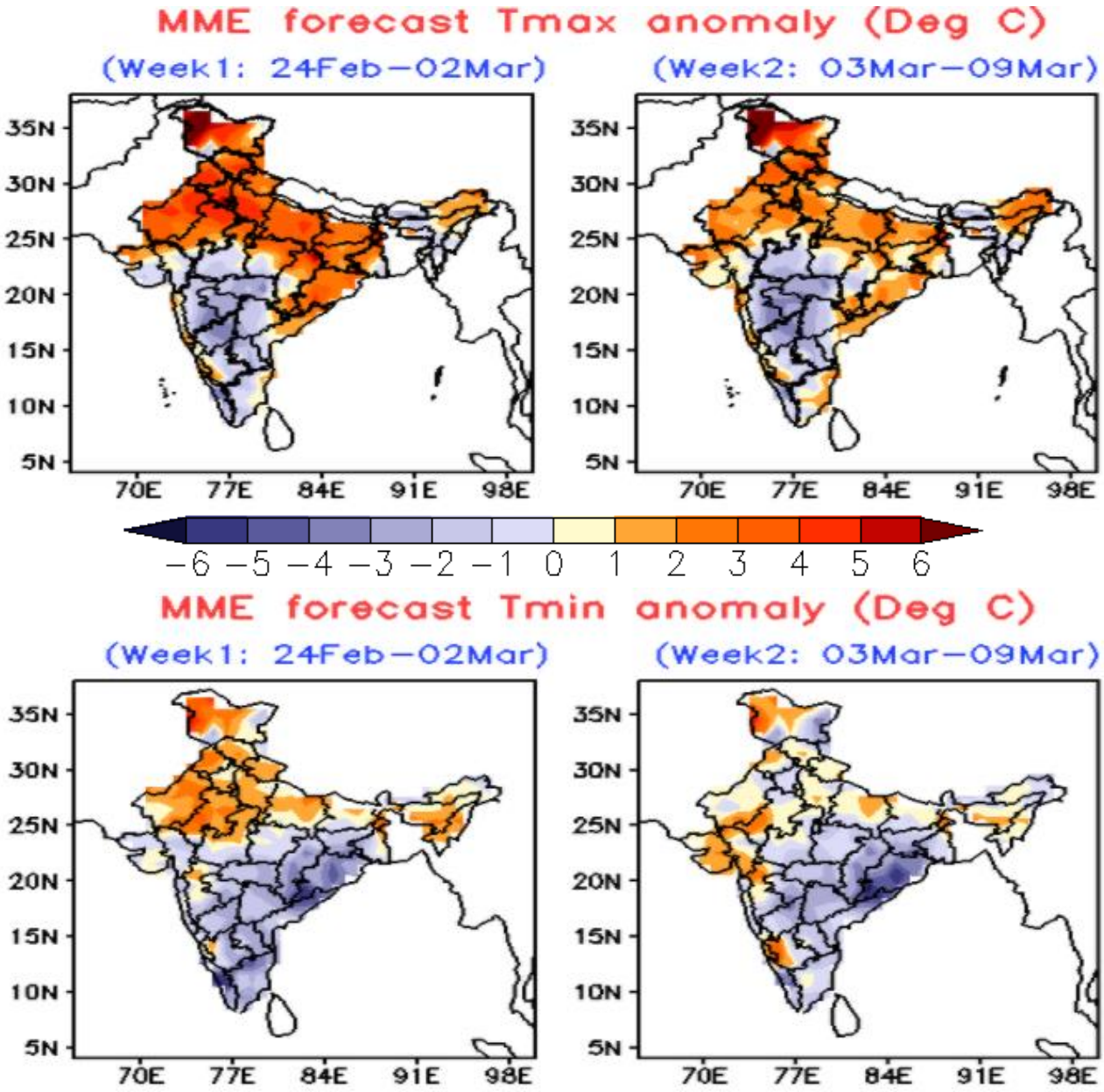
# Annex: II


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Period : 01-01-2023 To 22-02-2023
N
174.8 (-9)
Jammu and Kashmir and Ladakh
191.8
115.8 (-28)
Himachal Pradesh
160.8
15.1 (-63)
Punjab
41.3
36.7 (-59)
Uttarakhand
88.7
14.8 (-58)
Nat. Chd. and Delhi
27.8
11.7 (-57)
W. Uttar Pradesh
27.4
5.2 (-28)
W. Rajasthan
7.3
22.8 (138)
E. Rajasthan
9.6
4.2 (-82)
E. Uttar Pradesh
23.5
0.2 (-99)
Bihar
18.0
11.5 (-68)
Sikkim
35.6
67.1 (-38)
Arunachal Pradesh
108.5
10.7 (-69)
Assam and Meghalaya
35.0
0.3 (-99)
NMMT
26.0
4.2 (-86)
E. Madhya Pradesh
30.6
0.0 (-100)
Jharkhand
22.3
0.5 (-98)
Gangetic WB
25.1
6.5 (-49)
W. Madhya Pradesh
12.7
3.0 (116)
Gujarat Region
1.4
0.3 (-54)
Saurashtra and Kutch
0.7
0.1 (-99)
Chhattisgarh
19.9
0.1 (-99)
Odisha
21.6
0.5 (-97)
Vidarbha
15.7
0.6 (-90)
Marathawada
5.6
0.0 (-99)
Madhya Maharashtra
2.5
0.4 (-98)
Telangana
15.1
0.0 (-100)
Konkan and Goa
0.6
0.2 (-94)
NI Karnataka
3.9
0.5 (-92)
Co. AP. and Yanam
19.7
0.0 (-100)
Coastal Karnataka
2.8
0.2 (-97)
Rayalaseema
8.0
1.3 (-92)
SI Karnataka
4.8
15.1 (-12)
Kerala and Mahe
17.1
20.5 (-8)
N. Pudu. and Karaikal
22.3
34.4 (45)
Lakshadweep
23.7
49.7 (-34)
A and N Island
75.9
ALL INDIA
Actual Normal % Dep.
20.6 34.3 -40
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 2
EXCESS 1
NORMAL 3
DEFICIENT 9
LARGE DEFICIENT 18
NORAIN 3
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 rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

**Annexure III**



**Annexure IV**


MME forecast Tmax anomaly (Deg C)
(Week1: 24Feb–02Mar)
(Week2: 03Mar–09Mar)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
−6 −5 −4 −3 −2 −1 0 1 2 3 4 5 6
MME forecast Tmin anomaly (Deg C)
(Week1: 24Feb–02Mar)
(Week2: 03Mar–09Mar)