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

Press Release: Dated: 25 January 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (25- Jan-7 Feb 2024)

1. Salient Observed Features for week ending 24 Jan 2024

- **No Significant weather Systems affected any parts of the country during the week.**
- Due to continued absence of significant winds at lower levels near surface, dense fog/low cloud cover prevailed across many parts of Indo-Gangetic plains throughout the week (18-14 Jan). It was extended upto north-eastern states across Sub-Himalayan West Bengal & Sikkim on most dates in the week and was also observed over Gangetic West Bengal on 20 and 22 Jan; over Jharkhand on 20 Jan and over north Chhattisgarh on 21 Jan. Sate-wise, it was mainly observed across Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, Uttar Pradesh, Bihar, Assam, Tripura, extreme northern parts of Madhya Pradesh and Sub-Himalayan West Bengal & Sikkim on most dates in the week.
- Persistent Fog and low cloud layer continued to cause Cold day to Severe Cold day conditions which mainly prevailed over Punjab, Haryana, Uttarakhand, north Rajasthan, northern parts of Madhya Pradesh, Uttar Pradesh and Bihar during all dates in the week.
- **It may be noted that this large-scale Indo-Gangetic fog and low clouds cover was 1st started around night-morning hours from 24-25 Dec 2023 in the north-western pains of India followed with cold day to severe cold days conditions developed over the same areas from 29 Dec 2023, which continued till end of the week i.e. 24 Jan 2024. When we consider areas across Punjab, Haryana, Chandigarh, north Rajasthan and west Uttar Pradesh, it shows that this long spell of large–scale fog/low cloud cover along with cold days spell over these areas, have been observed during almost all dates for last 4 weeks.**

- Cold wave to severe cold wave conditions: Cold wave conditions prevailed during most dates during the week over some parts of Punjab and Himachal Pradesh and for 4 days over Haryana, Chandigarh & Delhi and 2-3 days over Uttar Pradesh, north Rajasthan and North Madhya Pradesh during the week.
- Temperature Scenario: The highest maximum temperature of 36.8°C was recorded over Punalur (Kerala) on 23rd January 2024 and the lowest minimum temperature of 1.5°C was recorded over Meerut (West Uttar Pradesh) on 23rd January 2024 over the plains of the country during the week.

➢ **Analysis of Weekly overall Rainfall distribution during the week ending on 24 Jan 2024 and Winter Season's Rainfall Scenario (1-24 Jan 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 24 Jan 2024 was -75%. All India Seasonal cumulative rainfall % departure during this year's **Winter's Rainfall** during **1-24 Jan 2024** is -56% and over northwest India, it is -97%. 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		
	18.01.2024 TO 24.01.2024			01.01.2024 TO 24.01.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	2.3	4.5	-49%	3.3	12.8	-74%
NORTH-WEST INDIA	0	8	-99%	0.7	24	-97%
CENTRAL INDIA	1.6	1.1	43%	4.1	5.2	-21%
SOUTH PENINSULA	0.3	0.8	-59%	16.8	6.6	155%
Country as a whole	1	3.8	-75%	5.4	12.5	-56%

2. Large scale features

➢ Currently, the moderate to strong El Niño conditions are prevailing over equatorial Pacific and the sea

surface temperatures (SSTs) are above average over most parts of the central and eastern equatorial Pacific Ocean. The latest MMCFS forecast indicates that moderate to strong El Niño conditions are likely to continue during the upcoming season. In addition to El Nino-Southern Oscillation (ENSO) conditions over the Pacific, other factors such as the Indian Ocean SSTs also influence on Indian climate. At present, strong positive Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean and the latest MMCFS forecast indicates positive IOD conditions are likely to weaken and turn to neutral condition by early part the next year.

- Madden Julian Oscillation (MJO) index is currently in phase 4 (Indian Ocean) with amplitude greater than 1. It is likely to move to phase 5 with the same amplitude during next 4-5 days. Thereafter, it is likely to enter into phase 6 without any further amplification except last few days during remaining part of forecast period.

3. Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (18 to 24 January, 2024) and Week 2 (25 to 31 January, 2024)

Weather systems & associated Precipitation during Week 1 (18 to 24 January, 2024)

Weather systems:

- A Cyclonic circulation over northwest Uttar Pradesh & neighbourhood in lower levels.
- A Cyclonic circulation lies over South Assam & neighbourhood in lower levels.
- A Trough in easterlies runs from South Interior Karnataka to Central Chhattisgarh at lower levels.

Rainfall:

- Light to moderate rainfall in isolated to some places very likely over Bihar, Jharkhand, Chhattisgarh, Odisha, West Bengal & Sikkim and Northeast India on 18th January, 2024. **Isolated Hailstorm** also likely over Sikkim on 18th January, 2024.
- Light isolated rainfall is also likely over Andaman & Nicobar Islands during the week and northeast & adjoining east India during 2nd half of the week.
- No significant rainfall likely over rest parts of the country.

Rainfall for week 2 (25 to 31 January, 2024):

- ✓ Under the influence of Western Disturbance, light to moderate rainfall/snowfall at a few places likely over Western Himalayan Region and light rainfall at isolated places over plains of northwest India during some days of the week.

✓ Overall, rainfall activity is likely to be **normal to above normal** over northwest India and below normal over rest homogenous regions of India during the week.

Minimum temperature, Cold Wave and Fog forecast & warning for Week 1 (18 to 24 January, 2024) and Week 2 (25 to 31 January, 2024)

Minimum temperature, Cold Wave and Fog forecast & warning for Week 1 (18 to 24 January, 2024):

Minimum temperature and Cold Wave warning:

- **Minimum temperatures**: Minimum temperatures are in the range of 3-6°C over many parts of Punjab and some parts of Haryana-Chandigarh; in the range of 7-10°C over most parts of Delhi, Uttar Pradesh, Rajasthan, north Madhya Pradesh and Bihar. These are below normal by 1°C to 3°C over many parts of Punjab, Haryana-Chandigarh-Delhi and West Uttar Pradesh and in isolated pockets of Rajasthan. Today, the lowest minimum temperature of 3.1°C reported at Ludhiana (Punjab).
- No significant change in minimum temperatures very likely over Northwest & East India during next 2 days and rise by about 2°C for subsequent 3-4 days thereafter.
- No significant change in minimum temperatures very likely over East India during next 2 days and fall by 2-3°C for subsequent 3-4 days thereafter.
- **Cold wave to Severe Cold wave** conditions very likely to continue in some parts of Punjab and Haryana on 18th & 19thand cold wave conditions on 20th& 21stJanuary, 2024.
- **Cold wave** conditions very likely in isolated pockets of Himachal Pradesh on 18th & 19th and over north Rajasthan during 20th & 21st January, 2024.
- **Ground frost conditions** very likely over Himachal Pradesh and Uttarakhand during next 2 days.

Dense fog and Cold day warning:

- **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning over some parts of Punjab, Haryana and Chandigarh during 18th night to 20thmorning and dense fog in isolated pockets during 21st-23rd January morning.
- **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning in some parts of West Uttar Pradesh during 18th late night to 23rd January morning.

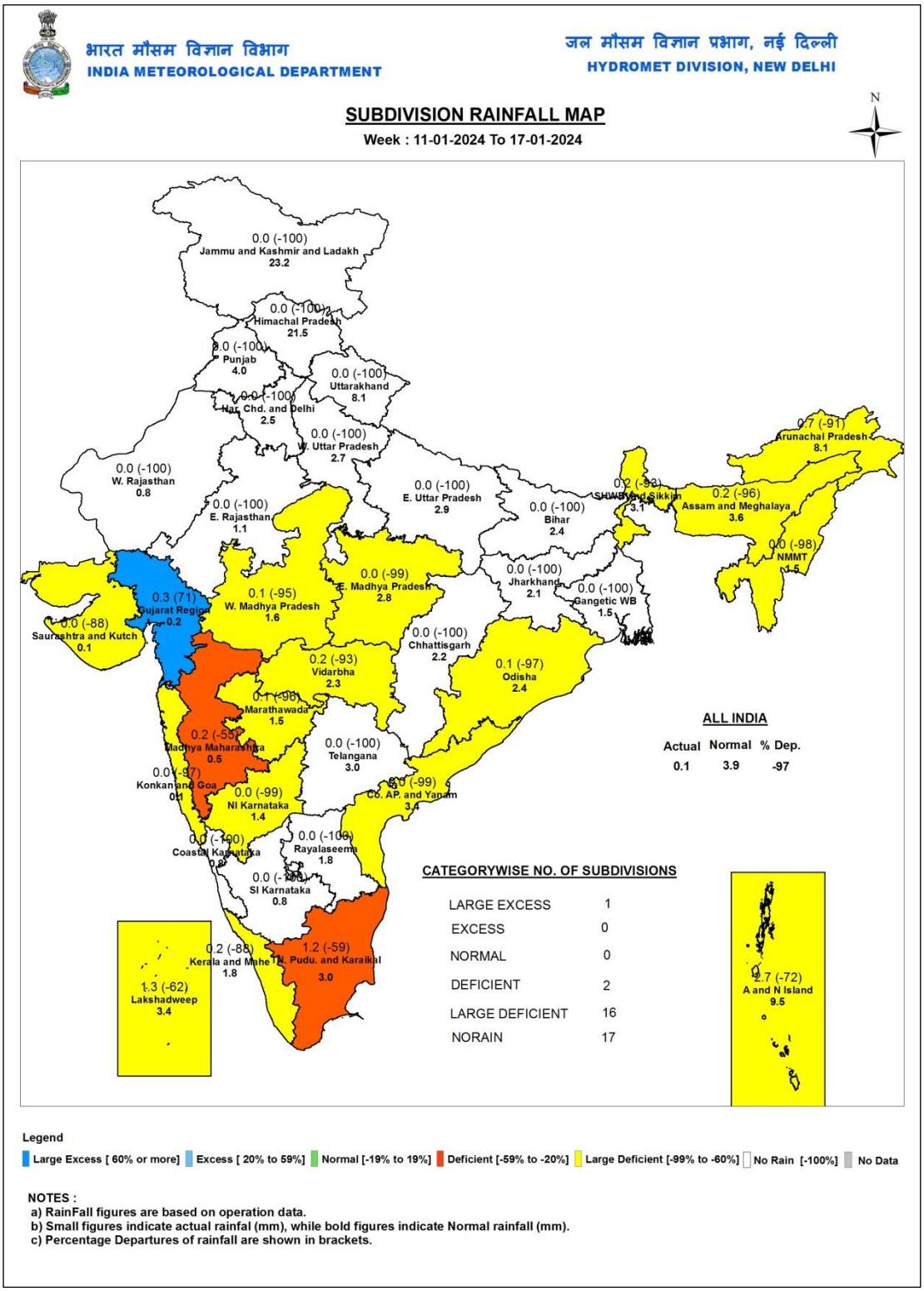
- **Dense to very dense fog** conditions very likely to prevail in morning hours in isolated pockets over Uttarakhand and north Rajasthan 18th& 19th January and dense fog in isolated pockets of north Rajasthan on 20th January, 2024.
- **Dense fog** conditions very likely to prevail in morning hours in isolated pockets of East Uttar Pradesh during 18th-22nd; over Odisha, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 18th-20th; over Himachal Pradesh and north Madhya Pradesh on 18th& 19thJanuary, 2024.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Punjab, Haryana-Chandigarh on 18th& 19th and **Cold Day** in isolated pockets on 20th & 21st January, 2024.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of East Uttar Pradesh on 18th and **Cold Day** in isolated pockets on 19th January, 2024.
- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts of Bihar and West Uttar Pradesh during 18th-22nd January and over West Rajasthan on 18th& 19th January, 2024.
- **Cold Day** conditions very likely to continue in some parts of Sub-Himalayan West Bengal & Sikkim during 18th-20th and in isolated pockets of East Rajasthan and north Madhya Pradesh on 18th& 19th January, 2024.

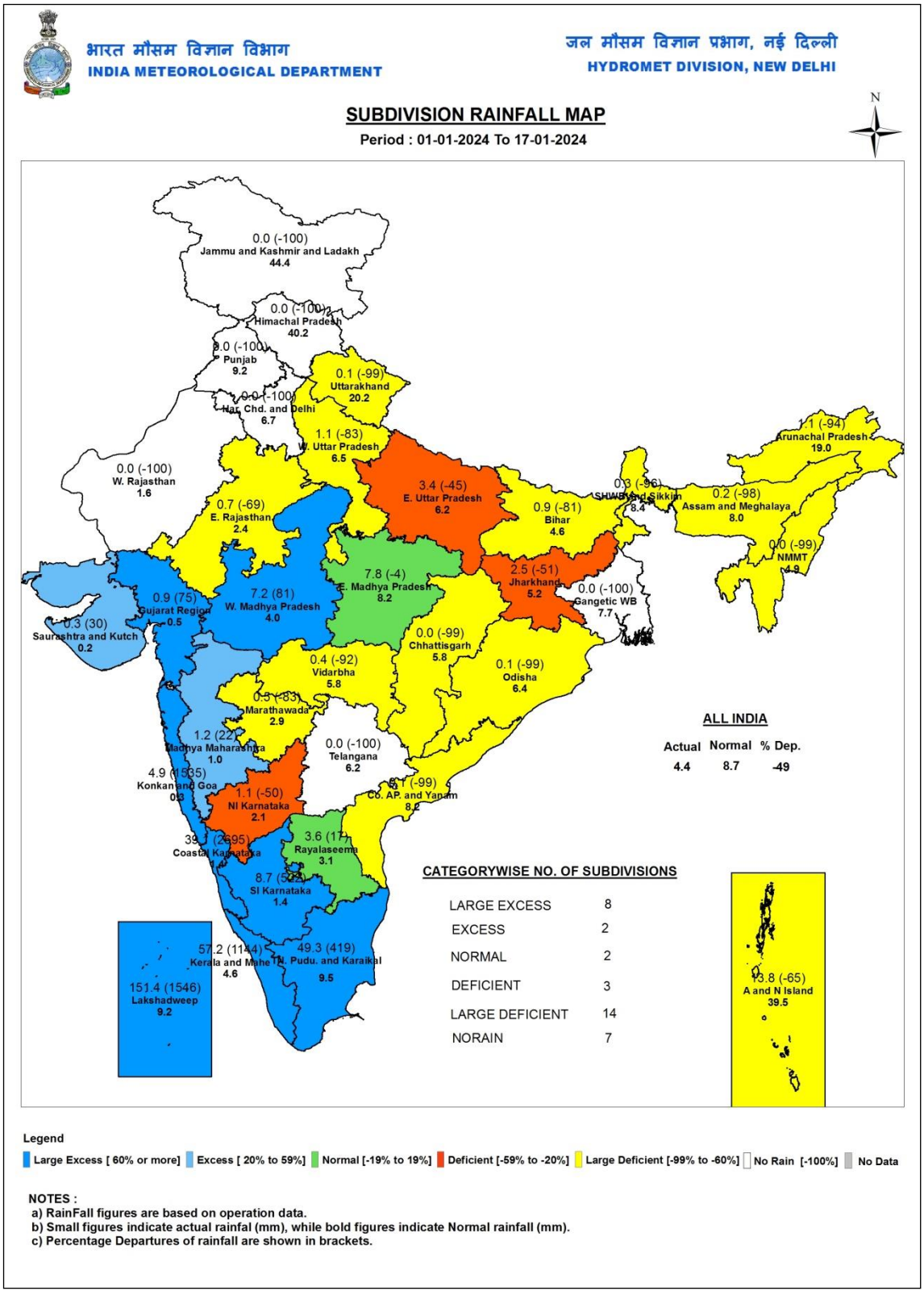
Minimum temperature, Cold Wave and Fog forecast & warning for Week 2 (25 to 31 January, 2024):

- **Minimum temperatures**: The Minimum temperatures are likely to rise gradually over northwest India. It is likely to be above normal by 1-3°C over most parts of northwest India and near normal or below normal by 1-3°C over rest parts of the country.
- **Dense Fog in isolated pockets is also likely over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh during some Days of the week.**
- **There is no possibility of cold wave in any parts of the country (Annexure 4 and 5).**

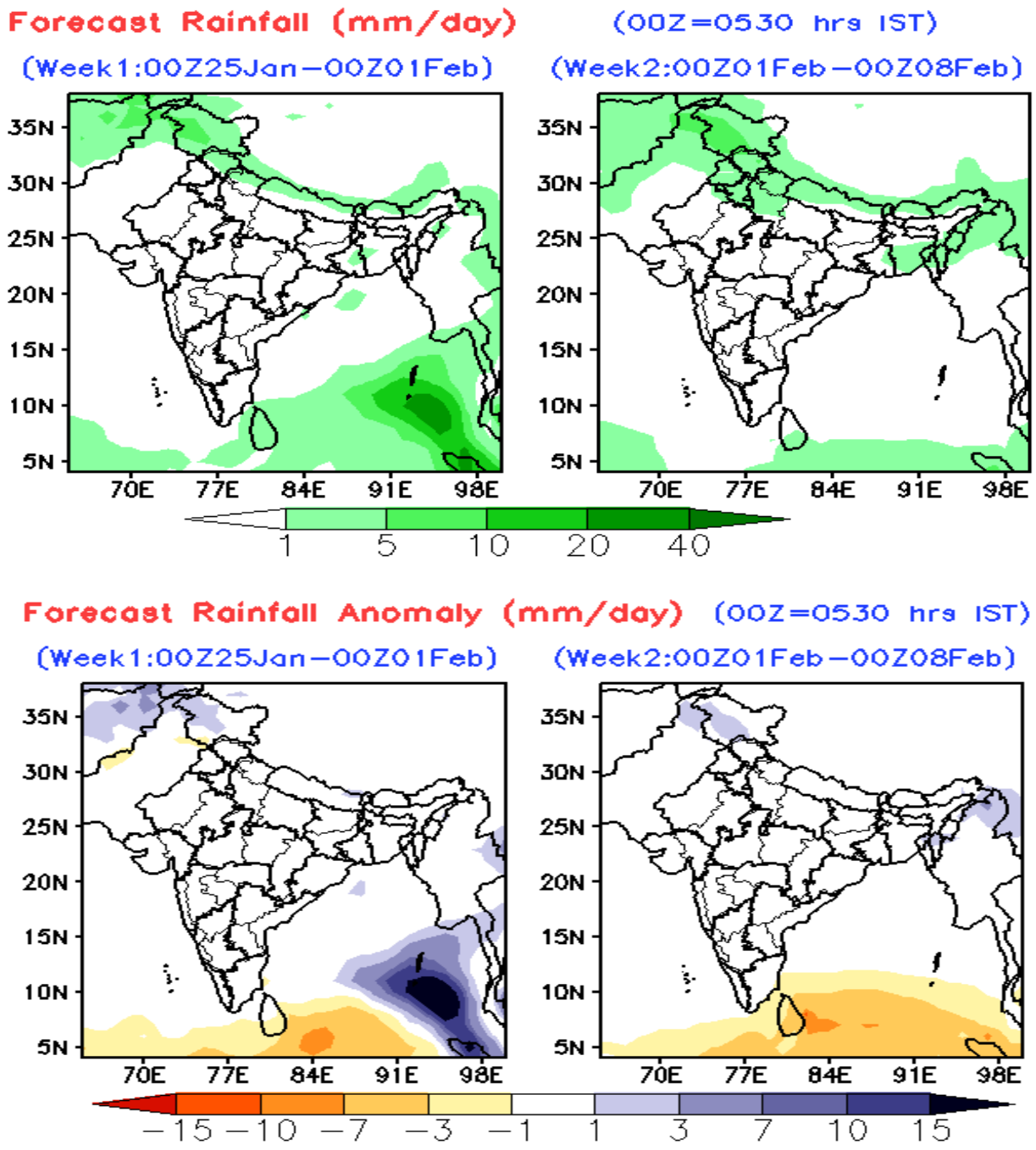
Legends: **Heavy Rain:** 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain**> 204.4 mm

Annex: I


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Week : 11-01-2024 To 17-01-2024
N
0.0 (-100) Jammu and Kashmir and Ladakh 23.2
0.0 (-100) Himachal Pradesh 21.5
0.0 (-100) Punjab 4.0
0.0 (-100) Uttarakhand 8.1
0.0 (-100) Har. Chd. and Delhi 2.5
0.0 (-100) W. Uttar Pradesh 2.7
0.0 (-100) W. Rajasthan 0.8
0.0 (-100) E. Rajasthan 1.1
0.0 (-100) E. Uttar Pradesh 2.9
0.0 (-100) Bihar 2.4
0.2 (-93) Sikkim 3.1
0.7 (-91) Arunachal Pradesh 8.1
0.2 (-96) Assam and Meghalaya 3.6
0.0 (-98) NMMT 1.5
0.0 (-100) Jharkhand 2.1
0.0 (-100) Gangetic WB 1.5
0.0 (-99) E. Madhya Pradesh 2.8
0.3 (71) Gujarat Region 0.2
0.1 (-95) W. Madhya Pradesh 1.6
0.0 (-88) Saurashtra and Kutch 0.1
0.0 (-100) Chhattisgarh 2.2
0.2 (-93) Vidarbha 2.3
0.1 (-97) Odisha 2.4
0.1 (-96) Marathawada 1.5
0.2 (-55) Madhya Maharashtra 0.5
0.0 (-100) Telangana 3.0
0.0 (-97) Konkan and Goa 0.1
0.0 (-99) Co. AP. and Yanam 3.4
0.0 (-99) NI Karnataka 1.4
0.0 (-100) Rayalaseema 1.8
0.0 (-100) Coastal Karnataka 0.2
0.0 (-100) SI Karnataka 0.8
0.2 (-88) Kerala and Mahe 1.8
1.2 (-59) N. Pudu. and Karaikal 3.0
1.3 (-62) Lakshadweep 3.4
2.7 (-72) A and N Island 9.5
ALL INDIA
Actual Normal % Dep.
0.1 3.9 -97
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 1
EXCESS 0
NORMAL 0
DEFICIENT 2
LARGE DEFICIENT 16
NORAIN 17
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.

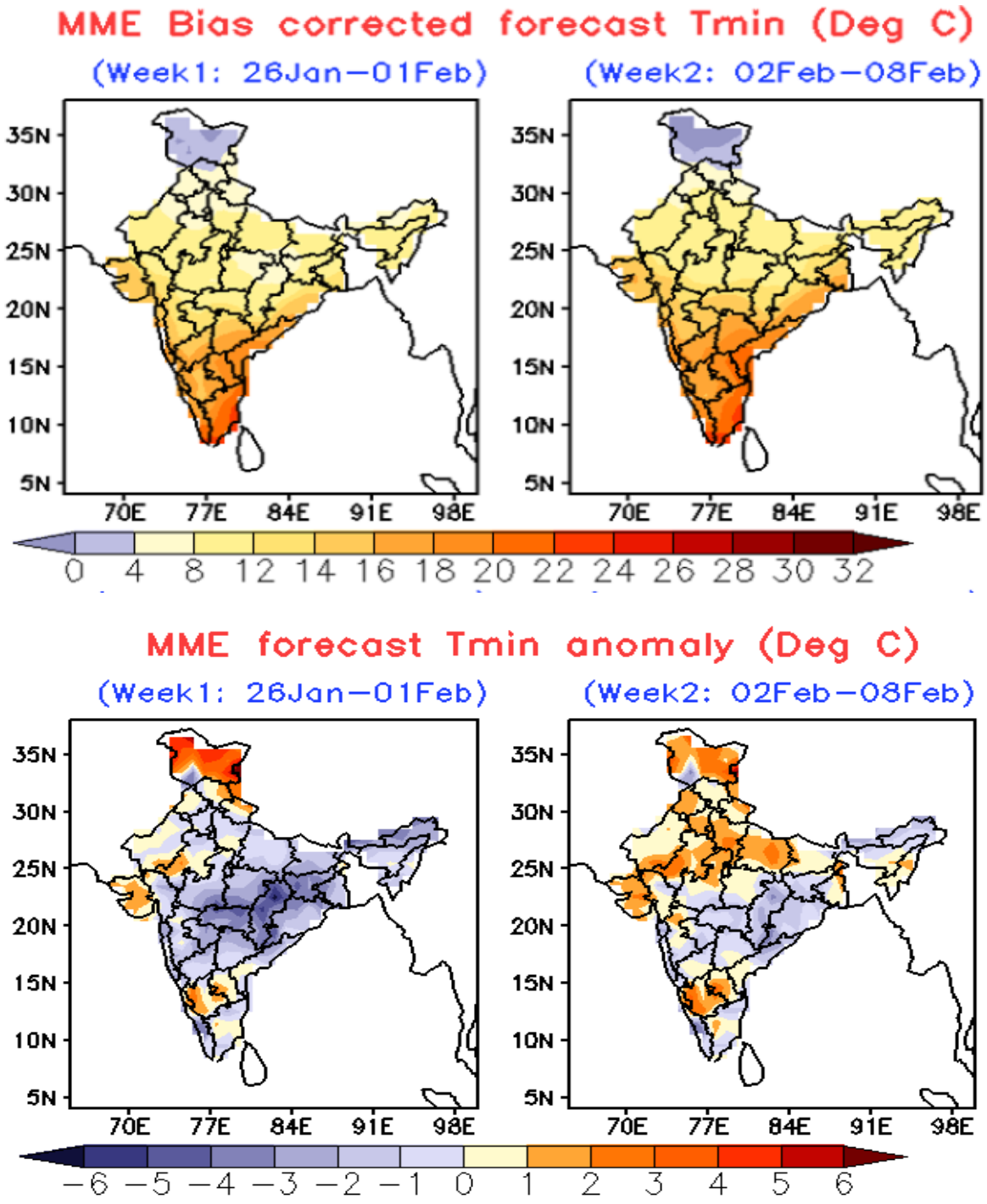

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT
जल मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Period : 01-01-2024 To 17-01-2024
N
0.0 (-100) Jammu and Kashmir and Ladakh 44.4
0.0 (-100) Himachal Pradesh 40.2
0.0 (-100) Punjab 9.2
0.1 (-99) Uttarakhand 20.2
0.0 (-100) Har. Chd. and Delhi 6.7
1.1 (-83) W. Uttar Pradesh 6.5
0.0 (-100) W. Rajasthan 1.6
0.7 (-69) E. Rajasthan 2.4
3.4 (-45) E. Uttar Pradesh 6.2
0.9 (-81) Bihar 4.6
0.3 (-96) Sikkim 8.4
0.2 (-98) Assam and Meghalaya 8.0
1.1 (-94) Arunachal Pradesh 19.0
0.0 (-99) NMMT 4.9
2.5 (-51) Jharkhand 5.2
0.0 (-100) Gangetic WB 7.7
7.8 (-4) E. Madhya Pradesh 8.2
0.9 (75) Gujarat Region 0.5
7.2 (81) W. Madhya Pradesh 4.0
0.3 (30) Saurashtra and Kutch 0.2
0.0 (-99) Chhattisgarh 5.8
0.1 (-99) Odisha 6.4
0.4 (-92) Vidarbha 5.8
0.5 (-83) Marathawada 2.9
1.2 (22) Madhya Maharashtra 1.0
0.0 (-100) Telangana 6.2
4.9 (-35) Konkan and Goa 0.3
1.1 (-50) NI Karnataka 2.1
0.1 (-99) Co. AP. and Yanam 8.2
39.1 (269) Coastal Karnataka
3.6 (17) Rayalaseema 3.1
8.7 (522) SI Karnataka 1.4
57.2 (1144) Kerala and Mahe 4.6
49.3 (419) TN. Pudu. and Karaikal 9.5
151.4 (1546) Lakshadweep 9.2
13.8 (-65) A and N Island 39.5
ALL INDIA
Actual Normal % Dep.
4.4 8.7 -49
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 8
EXCESS 2
NORMAL 2
DEFICIENT 3
LARGE DEFICIENT 14
NORAIN 7
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



Extended range froecast of weekly dsitirubtion of rainfall in mm per day (top panel) and anomalies (lower panesl) from IMD MME

Annexure IV

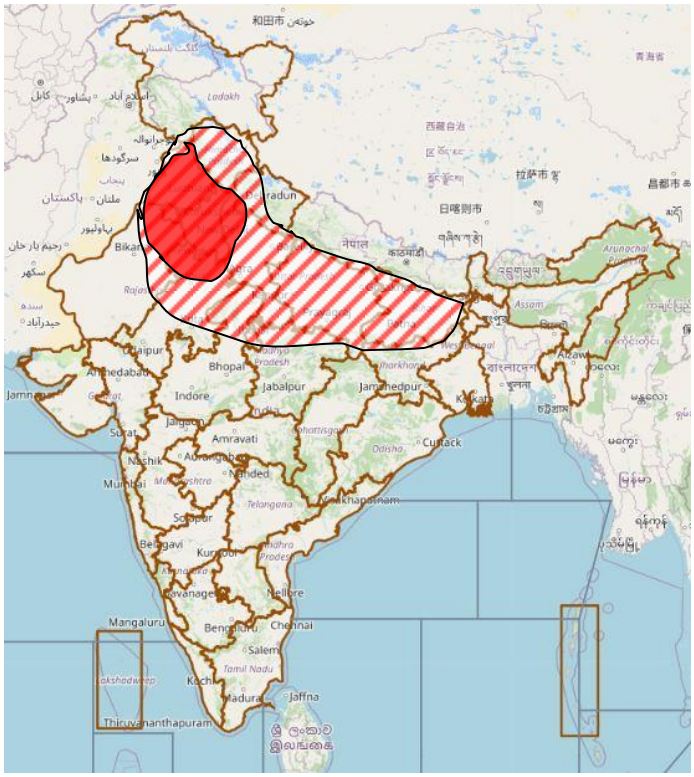


Extended range froecast of Minimum Tmperature (top panel) and anomalies(lower panesl) from IMD MME

Annexure V

EXTENDED RANGE OUTLOOK FOR COLDWAVE

Week 1: 19.01.2024 - 25.01.2024



Week 2: 26.01.2024 - 01.02.2024

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