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

Press: Dated:19th Jan, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (19 Jan-1 Feb 2023)

1. Salient Observed Features during 13 Jan till 19 Jan 2023

- With the last week's WD moved away northeast-wards on 14 Jan 2023, a fresh spell of Cold Wave to sever cold wave conditions was prevailed mainly over Rajasthan, Haryana, Punjab, Chandigarh, Delhi and West Uttar Pradesh and northern parts of Madhya Pradesh during 15 to 18 Jan. With the impact of the fresh WD from 19th Jan, cold wave was abated on 19 Jan, from most parts of these areas. Cold Wave conditions was also observed over East Uttar Pradesh and Bihar on 17 and 18 Jan and then abated from 19th Jan.
- Dense fog was observed at isolated pockets over Rajasthan, Haryana, Uttar Pradesh on 13 and 14 Jan and over Bihar, Himachal Pradesh, Uttarakhand, West Bengal & Sikkim, Odisha and Assam during 12 to 18 Jan 2023.
- Analysis of Weekly overall Rainfall distribution during the week ending on 18 Jan 2023 and Winter Season's Rainfall Scenario (1 Jan-18 Jan 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 18 Jan 2023 was -28 % with south Peninsular India had -97% while all India Seasonal cumulative rainfall %departure during this year's Winter Season Rainfall during 01 Jan-18 Jan 2023 is -65% and over south Peninsula, it is -92%. 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		
	12.01.2023 TO 18.01.2023			01.01.2023 TO 18.01.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	1.7	3.4	-51%	1.7	8.7	-80%
NORTH-WEST INDIA	8.7	8.6	+1%	9.3	17.2	-46%
CENTRAL INDIA	0	1.5	-99%	0.1	4.3	-98%
SOUTH PENINSULA	0.1	2.2	-97%	0.5	6	-92%
Country as a whole	2.9	4.1	-28%	3.3	9.3	-65%

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 2 with amplitude more than 1. It will continue in same phase during first half of week 1 and move to phase 3 during later half of week 1 with same amplitude. Thereafter, it would continue in same phase with amplitude becoming less than 1 during week 2. Thus, MJO will support enhancement of convective activity over the North Indian Ocean (NIO) during the entire forecast period.currently in Phase 8 with amplitude more than 1. It will continue in same phase during first half of week 1 and move to phase1 during later half of week 1 with same amplitude. Thereafter, it would move to phase 2 and 3 with amplitude more than 1. Thus, MJO will not support enhancement of convective activity over the North Indian Ocean (NIO) during week 1.

3. Forecast for next two week

Forecast for next two weeks

(A) Weather systems & associated Precipitation

Forecast and warning for week 1 (19 to 25 January, 2023):

- A **Western Disturbance** as a trough in middle tropospheric westerlies runs along 70°E to the north of 30°N. There is Jet stream winds of order upto 120 Knots is along Latitude 26°N over Indian Region between 100 to 250 hPa levels. Under its influence, light/moderate scattered rainfall/snowfall very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 19th January, 2023. Isolated light rainfall also likely over north Punjab and Haryana, Chandigarh & Delhi on 19th & 20th and north Rajasthan on 19th January, 2023.
- **Another active Western Disturbance now seen as a trough in middle & upper tropospheric westerlies along Long. 60°E to the north of Lat. 25°N. It is very likely to move slowly eastwards and intensify further along-with high moisture feeding from Arabian Sea over northwest India at lower & middle tropospheric levels mainly during 23rd to 25th January, 2023.**

  It is very likely to affect Western Himalayan Region from the night of 20th till 26th and plains of northwest India during 23rd to 25th January, 2023.

- ✓ Under its influence, light/moderate isolated to scattered rainfall/snowfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand on 20th-22nd. Its intensity & distribution is likely to increase thereafter with scattered to widespread rainfall/snowfall during 23rd to 26th with **its peak intensity with possibility of heavy rainfall/snowfall on 23rd to 25th January, 2023**.
- ✓ **Isolated hailstorm also likely over Western Himalayan Region on 23rd & 24th January, 2023.**

- ✓ Light/moderate isolated to scattered rainfall/thundershower is likely over Punjab, Haryana & Chandigarh, north Rajasthan and West Uttar Pradesh during 23rd to 26th and over Delhi on 23rd to 25th January, 2023.
- ➢ Light isolated rainfall/snowfall is likely over Sikkim and Arunachal Pradesh during 1st half of the week; light isolated rainfall over Andaman Nicobar Islands during the week and over extreme south Peninsula during 2nd half of the week.

(ii) Forecast and warning for week 2 (26 January to 01 February, 2023):

- ➢ **Under the influence of Western Disturbance and its induced cyclonic circulation, light/moderate scattered to fairly widespread rainfall/snowfall likely over Western Himalayan Region and light isolated to scattered rainfall over plains of northwest India and light isolated rainfall/thundershower over central India mainly during 1st half of the week.**
- ➢ Due to easterly wave, light isolated to scattered rainfall is likely over south Peninsular and Andaman & Nicobar Islands during many days of the week.
- ➢ Light to moderate isolated to scattered rainfall/snowfall is likely over Sikkim and Arunachal Pradesh mainly during 1st half of the week.
- ➢ Overall, rainfall activity is likely to be above normal over the country.

(B) Forecast of Temperature and Fog:

(i) Forecast and warning for week 1 (19-25 January, 2023):

Minimum Temperature: **Minimum temperatures** are in the range of 2-5°C over some parts of North Madhya Pradesh and isolated pockets over Haryana and East Uttar Pradesh. The Lowest Minimum Temperature of 2.0°C observed over Nowgong (East Madhya Pradesh). Rise in minimum temperatures by about 2°C very likely over many parts of Northwest India till 20th January and no significant change thereafter for subsequent days of the week. Rise in minimum temperatures by 3-5°C over Madhya Pradesh till 20th morning and no significant change thereafter for subsequent days of the week. No significant change in minimum temperatures over East India till 20th morning and rise by 2-4°C thereafter for subsequent 3 days and no change thereafter for rest days of the week.

Cold wave: No significant cold wave and cold day is likely over any part of the country during the week.

Fog: Dense fog very likely in isolated pockets during night & morning hours over Odisha, Assam & Meghalaya and Tripura during 19th-21st January 2023.

(ii) Forecast and warning for week 1 (26 January-1 Feb, 2023):

Minimum Temperatures: No significant change in Minimum temperatures likely over northwest India during 1st half of the week and fall by 3-5°C thereafter. Overall, Minimum temperatures are likely to be below normal by 2-4°C over many parts of the northwest & adjoining central India. It is likely to be above east & adjoining central India and over northeastern states.

Cold wave: Cold wave conditions likely in isolated pockets over parts of northwest India in 2nd half of 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

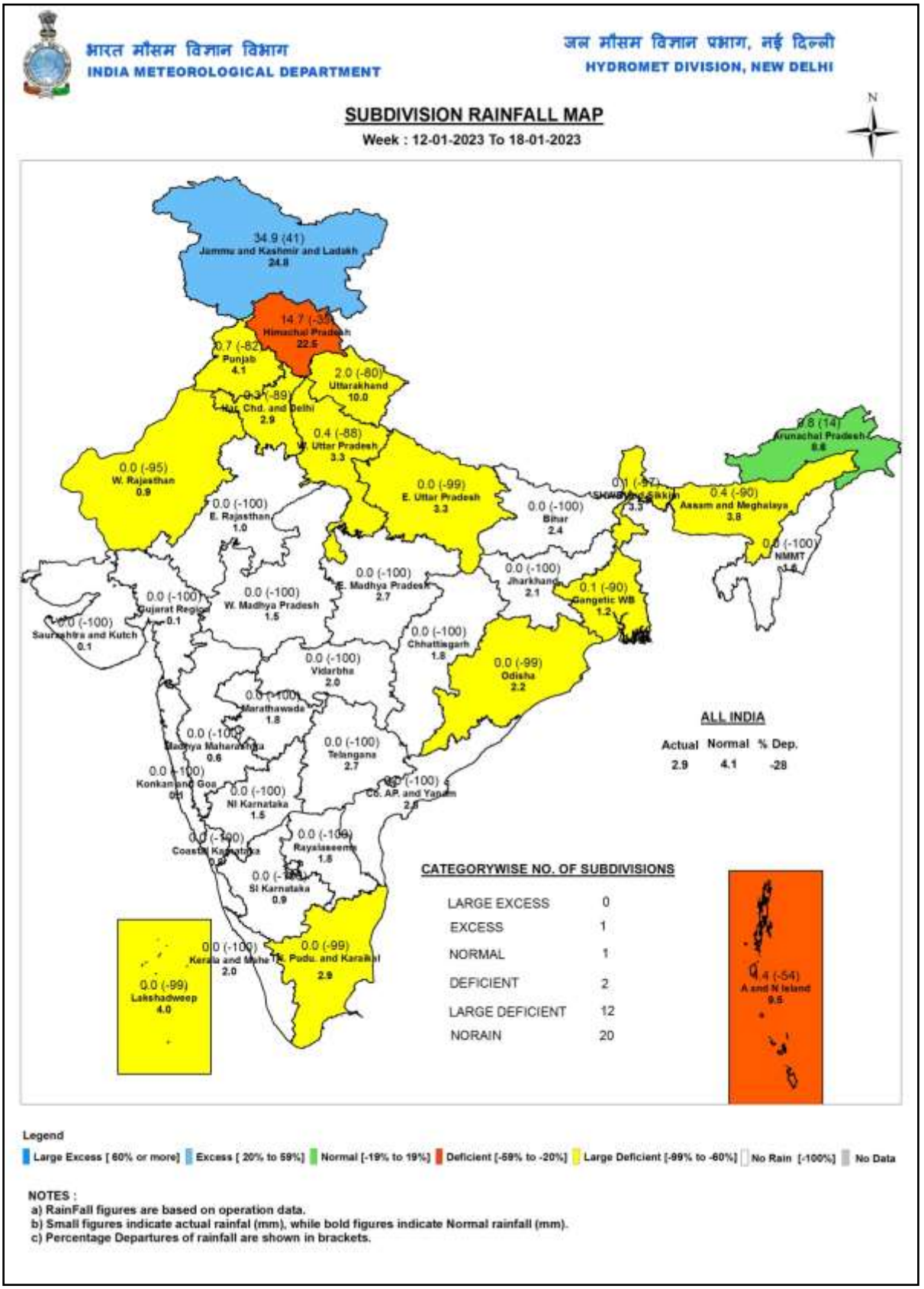
SPATIAL DISTRIBUTION (% of Stations reporting)

% 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)

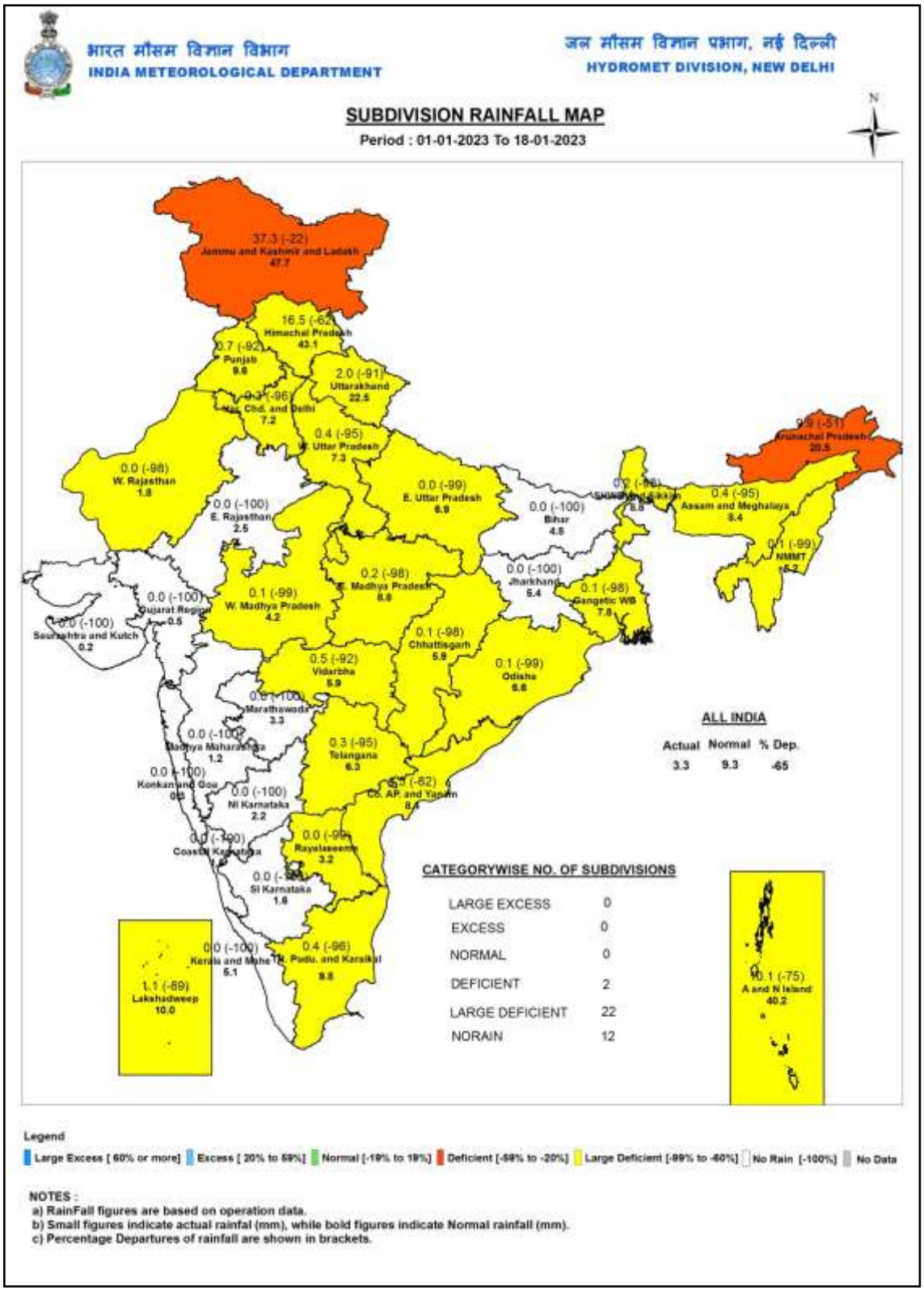
Probabilistic Forecast

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 : 12-01-2023 To 18-01-2023
N
34.9 (41)
Jammu and Kashmir and Ladakh
24.8
14.7 (-35)
Himachal Pradesh
22.5
0.7 (-82)
Punjab
4.1
2.0 (-80)
Uttarakhand
10.0
0.3 (-89)
Har. Chd. and Delhi
2.9
0.4 (-88)
W. Uttar Pradesh
3.3
0.0 (-95)
W. Rajasthan
0.9
0.0 (-100)
E. Rajasthan
1.0
0.0 (-99)
E. Uttar Pradesh
3.3
0.0 (-100)
Bihar
2.4
0.1 (-97)
Sikkim
3.3
0.4 (-90)
Assam and Meghalaya
3.8
9.8 (14)
Arunachal Pradesh
8.6
0.0 (-100)
NMMT
1.6
0.0 (-100)
Gujarat Region
0.1
0.0 (-100)
W. Madhya Pradesh
1.5
0.0 (-100)
E. Madhya Pradesh
2.7
0.0 (-100)
Jharkhand
2.1
0.1 (-90)
Gangetic WB
1.2
0.0 (-100)
Saurashtra and Kutch
0.1
0.0 (-100)
Chhattisgarh
1.8
0.0 (-100)
Vidarbha
2.0
0.0 (-99)
Odisha
2.2
0.0 (-100)
Marathawada
1.8
0.0 (-100)
Madhya Maharashtra
0.6
0.0 (-100)
Telangana
2.7
0.0 (-100)
Konkan and Goa
0.0
0.0 (-100)
NI Karnataka
1.5
0.0 (-100)
Co. AP. and Yanam
2.6
0.0 (-100)
Rayalaseema
1.8
0.0 (-100)
Coastal Karnataka
0.0
0.0 (-100)
SI Karnataka
0.9
0.0 (-100)
Kerala and Mahe
2.0
0.0 (-99)
Tn. Pudu. and Karaikal
2.9
0.0 (-99)
Lakshadweep
4.0
0.4 (-54)
A and N Island
9.5
ALL INDIA
Actual Normal % Dep.
2.9 4.1 -28
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 0
EXCESS 1
NORMAL 1
DEFICIENT 2
LARGE DEFICIENT 12
NORAIN 20
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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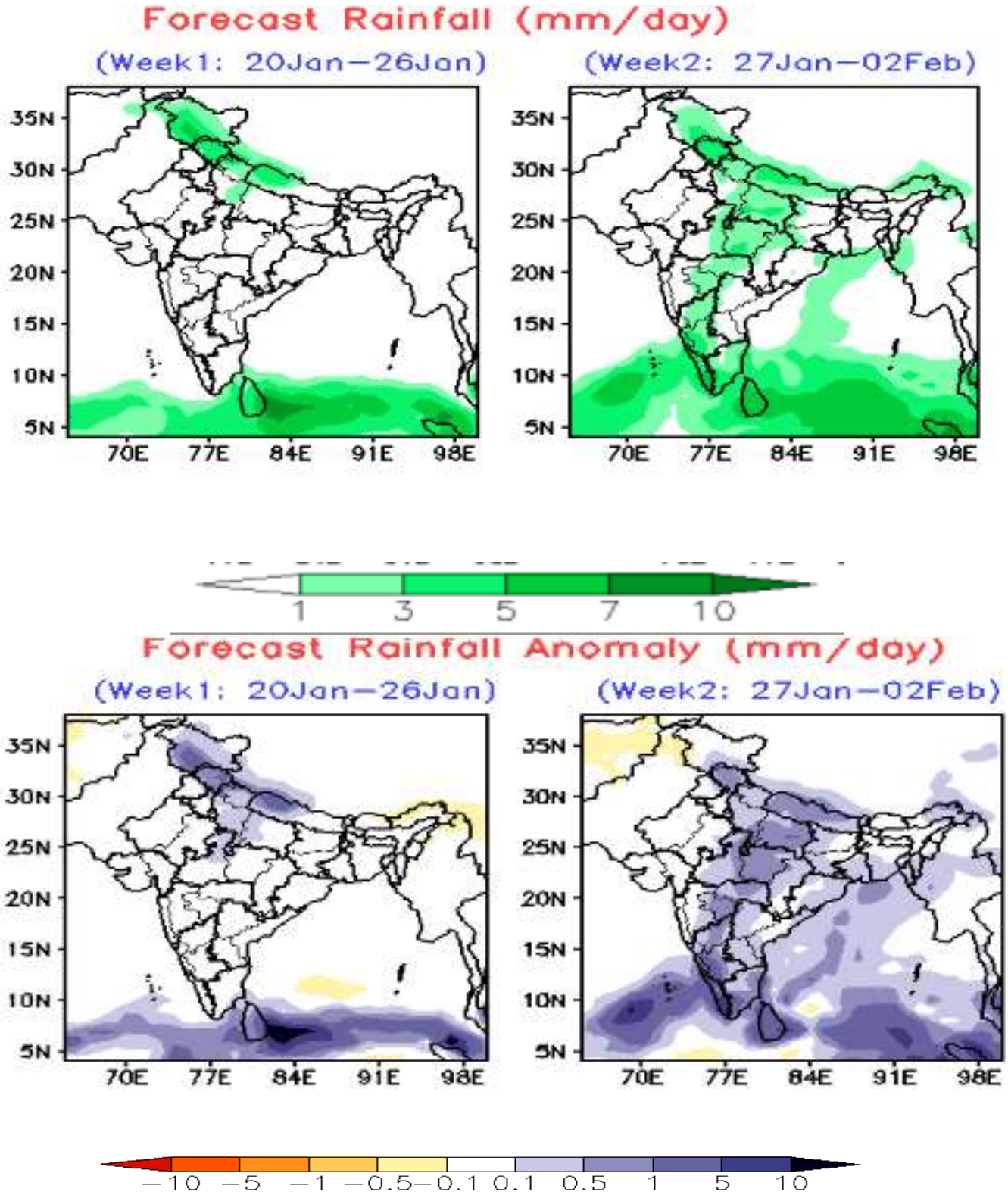
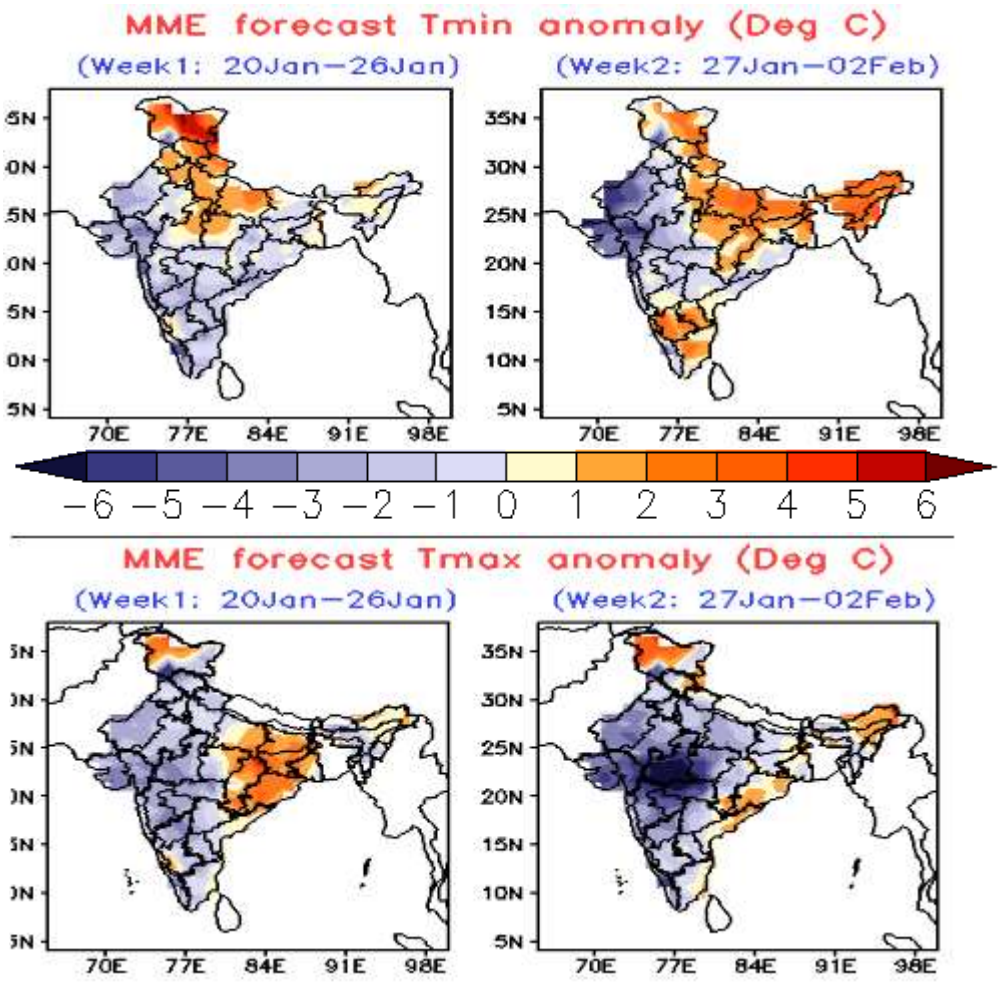
HYDROMET DIVISION, NEW DELHI
SUBDIVISION RAINFALL MAP
Period : 01-01-2023 To 18-01-2023
N
37.3 (-22)
Jammu and Kashmir and Ladakh
47.7
16.5 (-62)
Himachal Pradesh
43.1
0.7 (-92)
Punjab
9.6
2.0 (-91)
Uttarakhand
22.5
0.3 (-96)
Hry, Chd. and Delhi
7.2
0.4 (-95)
W. Uttar Pradesh
7.3
0.0 (-98)
W. Rajasthan
1.8
0.0 (-100)
E. Rajasthan
2.5
0.0 (-89)
E. Uttar Pradesh
6.9
0.0 (-100)
Bihar
4.8
0.0 (-96)
Sikkim
8.8
0.4 (-95)
Assam and Meghalaya
8.4
9.9 (-51)
Arunachal Pradesh
20.5
0.1 (-99)
NMMT
15.2
0.0 (-100)
Gujarat Region
0.5
0.0 (-100)
Saurashtra and Kutch
0.2
0.1 (-99)
W. Madhya Pradesh
4.2
0.2 (-98)
E. Madhya Pradesh
8.8
0.0 (-100)
Jharkhand
5.4
0.1 (-98)
Gangetic WB
7.8
0.1 (-98)
Chhattisgarh
5.8
0.5 (-92)
Vidarbha
5.9
0.1 (-99)
Odisha
8.8
0.0 (-100)
Marathawada
3.3
0.0 (-100)
Madhya Maharashtra
1.2
0.0 (-100)
Konkan and Goa
0.3
0.0 (-100)
NI Karnataka
2.2
0.3 (-95)
Telangana
6.3
0.4 (-82)
Cs, AP and Yanam
8.4
0.0 (-100)
Coastal Karnataka
0.0 (-99)
Rayalaseema
3.2
0.0 (-100)
SI Karnataka
1.6
0.0 (-100)
Kerala and Mahe
5.1
0.4 (-96)
TN, Pudu. and Karaikal
9.8
1.1 (-89)
Lakshadweep
10.0
0.1 (-75)
A and N Island
40.2
ALL INDIA
Actual Normal % Dep.
3.3 9.3 -65
CATEGORYWISE NO. OF SUBDIVISIONS
LARGE EXCESS 0
EXCESS 0
NORMAL 0
DEFICIENT 2
LARGE DEFICIENT 22
NORAIN 12
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 Tmin anomaly (Deg C)
(Week1: 20Jan–26Jan)
(Week2: 27Jan–02Feb)
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 Tmax anomaly (Deg C)
(Week1: 20Jan–26Jan)
(Week2: 27Jan–02Feb)