Years of Service to the Nation
राष्ट्र सेवा के 150 वर्ष

Government of India

Earth System Science Organization

Ministry of Earth Sciences

India Meteorological Department

Press Release: Dated: 26th December, 2024

Subject: Current Weather Status and Extended range Forecast for the next two weeks (26th December 2024 to 08th January 2025)

1. Salient Observed Features for the week ending 25th December 2024:

- **Wet spell over Odisha, Andhra Pradesh and Tamil Nadu** continued during most dates in the week due to presence of the Well-Marked Low Pressure Area and its concentration into a Depression over west central Bay of Bengal off Andhra Pradesh coast. This system also caused isolated **heavy rainfall** over Odisha on 21st and 25th December; Coastal Andhra Pradesh on 21st December; Tamil Nadu from 19th to 22nd December; Andaman & Nicobar Islands on 24th December.

- **An active Western Disturbance** impacted West Himalayan Region and adjoining plains during 23-25 December and caused light rainfall at isolated places in the region.

- **Dense to very Dense Fog** was observed in isolated pockets of north Rajasthan on 21st December; Assam on 22nd Dec; Meghalaya on 24th Dec. **Dense Fog** was observed in isolated pockets of Punjab on 19th and 21st Dec; Himachal Pradesh 20th, 22nd and 24th Dec and Uttarakhand on 20th Dec, Haryana and Delhi 25th Dec.

- **Cold wave to severe cold wave** conditions observed in isolated pockets of Himachal Pradesh from 19th to 24th December, Punjab on 19th and 21st December.

- **Cold day to severe cold day** conditions observed in isolated pockets of Himachal Pradesh on 25th December and **Cold day conditions** in isolated pockets of Rajasthan on 25th Dec.

- **Weekly Average Minimum temperature** was above normal by 2-4ºC over southern parts of the country and nearly normal over rest parts of India during this week. **Weekly Average Maximum temperature** was below normal by 1-3ºC over north and northwest India during second half of this week and near normal over most parts of the country during this week.

❖ **Temperature Scenario:** The lowest minimum temperature of **1.8°C** had been recorded at **Adampur IAF (Punjab)** on **21st December 2024** and the highest maximum temperature of **35.2°C** had been recorded at **Madurai, (Tamilnadu)** on **20th December, Erode (Tamilnadu)** on **21st December, and Kozhikode (Kerala & Mahe)** on **22nd December 2024** over the plains of the country during the week.

❖ **Analysis of weekly overall rainfall distribution during the week ending** on 25th December and Post-monsoon Season's Rainfall Scenario (1st **October – 25th December, 2024):** The country as a whole, the weekly cumulative All India Rainfall (for 19th to 25th December 2024) in % departure from its long period average (LPA) is 11%. All India Seasonal cumulative rainfall % departure during this year's postmonsoon Season Rainfall (01st October – 25th December 2024) is -8%. 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 & II respectively.

Table 1: Rainfall status (Week and season)

Region	Week			Season		
	19.12.2024 TO 25.12.2024			01.10.2024 TO 25.12.2024		
	Actual (mm)	Normal (mm)	Departure (%)	Actual (mm)	Normal (mm)	Departure (%)
EAST & NORTHEAST INDIA	0.5	2.8	-80%	151.5	156.1	-3%
NORTH WEST INDIA	0.9	4.3	-78%	9.1	46.9	-81%
CENTRAL INDIA	4.1	0.7	+487%	61.4	75.3	-18%
SOUTH PENINSULA	7.4	4.6	+61%	311.8	270.7	+15%
COUNTRY AS A WHOLE	3.2	2.9	11%	108.9	117.9	-8%

2. Large scale features:

❖ Currently, neutral El Nino-Southern Oscillation (ENSO) conditions are observed over the equatorial Pacific. The probability forecast indicates a higher chance of La Niña conditions developing around the JF 2024 season and an enhanced probability of La Niña conditions until early next year. In addition to ENSO conditions over the Pacific, other factors, such as the Indian Ocean Sea Surface Temperatures (SSTs), also influence the Indian climate. Above average sea surface temperatures (SSTs) are currently seen across most of the Indian Ocean. Currently, neutral Indian Ocean Dipole (IOD) conditions are observed over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue for the next several months.

❖ The Madden Julian Oscillation (MJO) indicates that it has currently entered into phase 7 with an amplitude close to 1. The forecasts of various dynamical models suggest that the MJO is likely to advance very quickly eastwards across phase 7 during first half of the week 1. However, the MJO

movement is likely to show a looping characteristic in phase 7 during the second half of the first week. The MJO is likely to propagate eastwards and enter into phase 8 in the beginning of the second week. Thereafter, it is likely to further eastwards across phase 8 and reach up to phase 1 at the end of week 2.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (26 December to 01 January, 2024) and Week 2 (02 to 08 January, 2024)

Weather systems & associated Precipitation during Week 1 (26 December to 01 January, 2024):

Weather Systems, Forecast and warning:

❖ A cyclonic circulation lay over Southwest & adjoining Westcentral Bay of Bengal off South Andhra Pradesh- North Tamil Nadu in lower tropospheric levels. Under its influence:

✓ Light to moderate rainfall accompanied with thunderstorm, lightning very likely at isolated places with **heavy rainfall** at isolated places over Coastal Andhra Pradesh on 26th December.

✓ Light to moderate rainfall at a few places accompanied with thunderstorm, lightning over Tamil Nadu, Puducherry & Karaikal on 26th & 27th December.

❖ A Western disturbance seen as a trough in middle tropospheric westerlies runs roughly along Long. 60°E to the north of Lat. 30°N. It is very likely to interact with lower levels easterly winds over central parts of the country leading to high moisture feeding from Arabian Sea as well as Bay of Bengal mainly during 27th & 28th December. Under the influence of these systems:

✓ Scattered to Fairly widespread Rainfall/Snowfall is likely over Western Himalayan Region on 27th & 28th December.

✓ Isolated to Scattered rainfall accompanied with thunderstorm, lightning & gusty winds (wind speed 30-50 kmph) likely over Punjab, Haryana, Chandigarh, West Uttar Pradesh, East Rajasthan, Madhya Maharashtra, Marathwada on 27th, Madhya Pradesh on 27th & 28th; Isolated to Scattered rainfall accompanied with thunderstorm & lightning also likely over northwest Madhya Pradesh on 26th, West Rajasthan, Gujarat region on 27th, East Uttar Pradesh, Vidarbha, Chhattisgarh on 27th & 28th, West Uttar Pradesh on 28th December.

✓ **Thunderstorm accompanied with hailstorms also likely over Punjab, Haryana, Chandigarh, West Uttar Pradesh, Rajasthan, Vidarbha, Madhya Maharashtra, Marathwada & Gujarat Region on 27th and Madhya Pradesh on 27th & 28th December.**

Precipitation for week 2 (02 to 08 January, 2024):

❖ Under the influences of western disturbances, light to moderate scattered/fairly widespread rainfall/snowfall likely over Western Himalayan Region and isolated to scattered rainfall over adjoining plains of northwest India during many days of the week.

❖ Under the influence of easterly wave, isolated to scattered rainfall likely over extreme South Peninsular India during some days of the week.

- Overall, rainfall is likely to be normal to above normal over most parts of northwest India; near normal over extreme south Peninsular India; below normal over rest parts of the country during the week.

Minimum temperature and Fog forecast & warning for Week 1 (26 December to 01 January, 2024 and Week 2 (02 to 08 January, 2024)

Minimum temperature and Fog forecast & warning for Week 1 (26 December to 01 January, 2024):

ii. Temperature, Cold Wave and Fog Forecast:

Temperature Conditions during past 24 hours till 0830 hours IST of today:

- Minimum temperatures were **below 0°C** over many parts of Jammu, Kashmir & Ladak; **2-5°C** over plains of Uttarakhand & Himachal Pradesh; **5-12°C** over Northwest, Northeast India and Bihar; **12-18°C** over many parts of Central, West & East India. Today, **the lowest minimum temperature** of **5.0°C** is reported at **Churu (West Rajasthan)** over the plains of the country.
- There has been a rise by 1-2ºC in minimum temperature over some parts of Rajasthan, Saurashtra & Kutch, Maharashtra & Tamil Nadu and fall by 1-2ºC over some parts of Uttar Pradesh during past 24 hours.
- Minimum temperatures are **appreciably below normal (-3°C to -5°C)** at isolated places over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; **below normal (-1°C to -3°C)** at a few places over Lakshadweep and **above normal by 4-6°C** at many places over Madhya Pradesh, East Rajasthan, East Uttar Pradesh, Bihar, Odisha, Telangana, Rayalaseema, Coastal Andhra Pradesh & Maharashtra.

Forecast of temperature:

- Rise in minimum temperatures by about 2°C likely over Northwest India during 1st half of the week and gradual fall by 2-3°C thereafter.
- No significant change in minimum temperatures likely over Central India during 1st half of the week and fall by 2-4°C thereafter.
- No significant change in minimum temperatures likely over East India during most days of the week.
- Rise in minimum temperatures by 2-3°C likely over West India during next 2 days and gradual fall by 2-3°C thereafter **(Annexure IV**).

Cold Wave Warnings:

Cold wave to severe cold wave conditions very likely in isolated pockets of Himachal Pradesh on 26th December.

Cold wave conditions very likely in isolated pockets over Himachal Pradesh on 29th & 30th, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad on 26th, 29th & 30th December **(Annexure VI**).

Cold Day Warnings:

Cold day to severe cold day conditions very likely in some parts of Himachal Pradesh on 28th December.

Cold Day conditions very likely in some parts of Himachal Pradesh on 27th and in isolated pockets of West Rajasthan on 26th December.

Dense Fog Warnings:

Dense fog conditions very likely to prevail during late night/early morning hours in isolated pockets of Himachal Pradesh on 26th, 27th & during 29th – 31st, Punjab, Haryana, Chandigarh during 26th-31st, Assam & Meghalaya during 26th-28th, Odisha on 26th & 27th, Rajasthan during 28th-31st December.

Ground Frost Warnings:

Ground Frost conditions very likely in isolated pockets of Himachal Pradesh on 26th, 29th & 30th December.

Minimum temperature forecast and dense fog warning for Week 2 (02 to 08 January, 2024):

- No significant change in the minimum temperatures are likely over most parts of the country as compared to week 1, however, these are likely to be less than 10°C over most parts of northwest, central & east India during the week.
- Minimum temperatures are likely to be near normal or slightly above normal over most parts of northwest India and northeast & adjoining east India. It is likely to below normal by 1-2°C north Peninsular & adjoining central India during the week **(Annexure IV).**
- **Dense fog is likely to occur in isolated places of Indo Gangetic plains during some days of the week.**

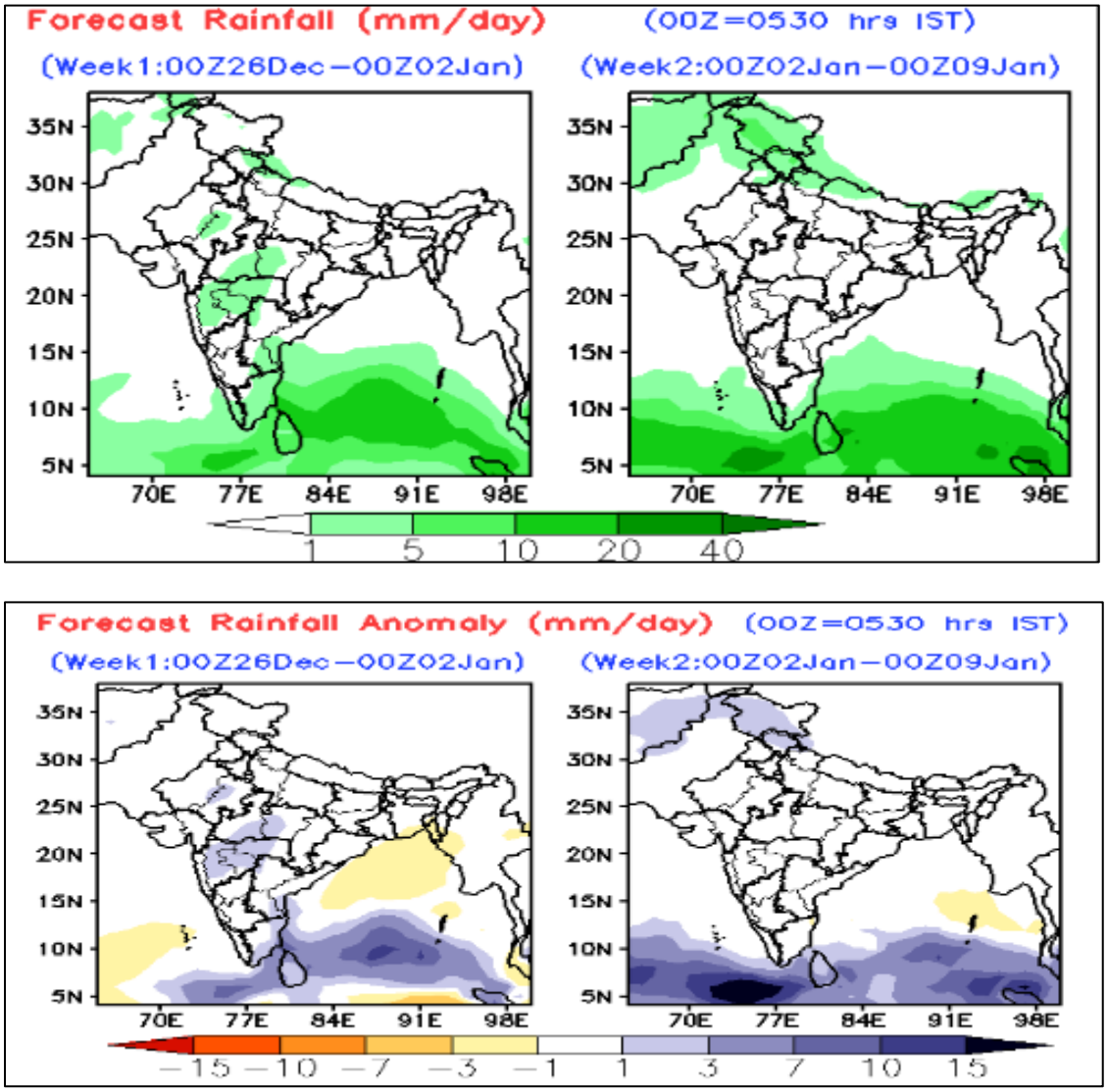
Annexure I


भारत मौसम विज्ञान विभाग
India Meteorological Department
जल मौसम विज्ञान प्रभाग, नई दिल्ली
Hydromet Division, New Delhi
SUBDIVISION RAINFALL MAP
Week: 19-12-2024 to 25-12-2024
Years of Service to the Nation
N
0.0 (-99%) J & K AND LADAKH 12.9
5.7 (-40%) HIMACHAL PRADESH 9.5
3.2 (2%) PUNJAB 3.1
1.8 (-48%) UTTARAKHAND 3.4
2.3 (80%) HARY. CHD & DELHI 1.2
0.9 (129%) WEST RAJ. 0.4
0.2 (-87%) WEST U.P 1.5
0.4 (-72%) EAST U.P 1.5
0.0 (-95%) EAST RAJASTHAN 0.7
0.0 (-100%) BIHAR 1.5
1.8 (-61%) SHWB&SIKKIM 3.0
0.2 (-96%) ARUNACHAL PRADESH 4.5
0.0 (-99%) ASSAM & MEGHALAYA 2.2
0.1 (-95%) NMMT 2.6
0.2 (-85%) JHARKHAND 1.8
2.9 (-46%) GANGETIC WB 5.3
0.2 (-90%) EAST M.P 1.5
0.0 (-93%) WEST M.P 0.7
0.0 (-100%) SAURASHTRA & KUTCH 0.2
0.0 (-100%) GUJARAT 0.4
2.5 (252%) CHHATTISGARH 0.7
26.8 (3725%) ODISHA 0.7
0.0 (-100%) VIDARBHA 0.8
0.0 (-100%) MARATHWADA 0.3
0.0 (-100%) MAHARASHTRA 0.4
0.0 (-100%) KONKAN & GOA 0.6
2.4 (687%) TELENGANA 0.3
0.2 (129%) N. I. KARNATAKA 0.1
27.5 (1269%) COASTAL A. & YANAM 2.1
5.0 (59%) RAYALASEEMA 3.3
0.0 (-100%) COASTAL KARNATAKA 0.4
0.0 (-99%) S. I. KARNATAKA 1.4
10.2 (-36%) TAMIL, PUDU. & KARAIKAL 15.8
0.2 (-93%) KEARALA & MAHE 3.4
8.3 (-30%) LAKSHADWEEP 11.8
31.3 (31%) A & N ISLAND 23.9
ALL INDIA
Actual Normal %Dep
3.2 2.9 11%
Legend
Large Excess [60% or more]
Excess [20% to 59%]
Normal [-19% to 19%]
Deficient [-59% to -20%]
Large Deficient [-99% to -60%]
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 II

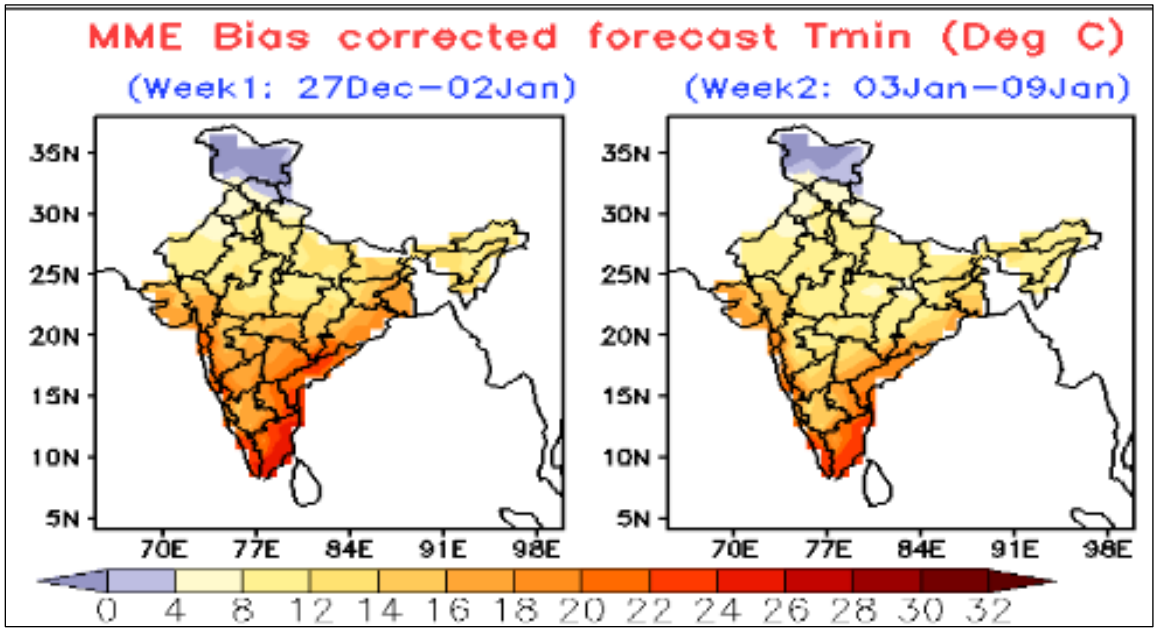

भारत मौसम विज्ञान विभाग
India Meteorological Department
जल मौसम विज्ञान प्रभाग, नई दिल्ली
Hydromet Division, New Delhi
SUBDIVISION RAINFALL MAP
Period: 01-10-2024 to 25-12-2024
150
Years of Service to the Nation
N
21.0 (-81%)
J & K AND LADAKH
109.9
8.1 (-89%)
HIMACHAL PRADESH
72.0
3.9 (-72%)
PUNJAB
21.0
6.4 (-87%)
UTTARAKHAND
48.7
2.8 (-84%)
HR. CHD & DELHI
17.4
5.4 (-54%)
WEST RAJ.
11.7
0.6 (-98%)
WEST U.P
28.1
21.5 (-54%)
EAST RAJASTHAN
25.1
3.5 (-91%)
EAST U.P
40.6
19.7 (-70%)
BIHAR
65.3
176.0 (7%)
SHWB&SIKKIM
165.1
277.4 (18%)
ARUNACHAL PRADESH
235.5
210.4 (12%)
ASSAM & MEGHALAYA
187.6
130.4 (-34%)
NMMT
197.6
17.1 (-69%)
EAST M.P
54.2
62.9 (-28%)
JHARKHAND
87.5
208.4 (22%)
GANGETIC WB
171.3
49.8 (75%)
SAURASHTRA & KUTCH
28.5
81.1 (26%)
GUJARAT
32.7
35.0 (-23%)
WEST M.P
45.5
33.4 (-55%)
CHHATTISGARH
74.6
108.7 (-22%)
ODISHA
140.2
42.4 (-44%)
VIDARBHA
75.1
72.3 (-25%)
MARATHWADA
95.8
104.6 (2%)
MAHARASHTRA
103.0
241.4 (72%)
KONKAN & GOA
140.6
81.1 (-34%)
TELENGANA
123.1
136.2 (5%)
N. I. KARNATAKA
130.3
273.1 (-15%)
COASTAL A. P& YANAM
320.9
333.7 (43%)
RAYALASEEMA
233.9
352.7 (34%)
COASTAL KARNATAKA
262.6
283.1 (43%)
S. I. KARNATAKA
197.5
575.7 (32%)
TAMIL , PUDU. & KARAIKAL
435.0
322.1 (-2%)
LAKSHADWEEP
328.1
484.9 (-1%)
KEARALA &MAHE
487.9
ALL INDIA
Actual Normal %Dep
108.9 117.9 -8%
771.3 (10%)
A & N ISLAND
648.3
Legend
Large Excess [60% or more]
Excess [20% to 59%]
Normal [-19% to 19%]
Deficient [-59% to -20%]
Large Deficient [-99% to -60%]
No 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.

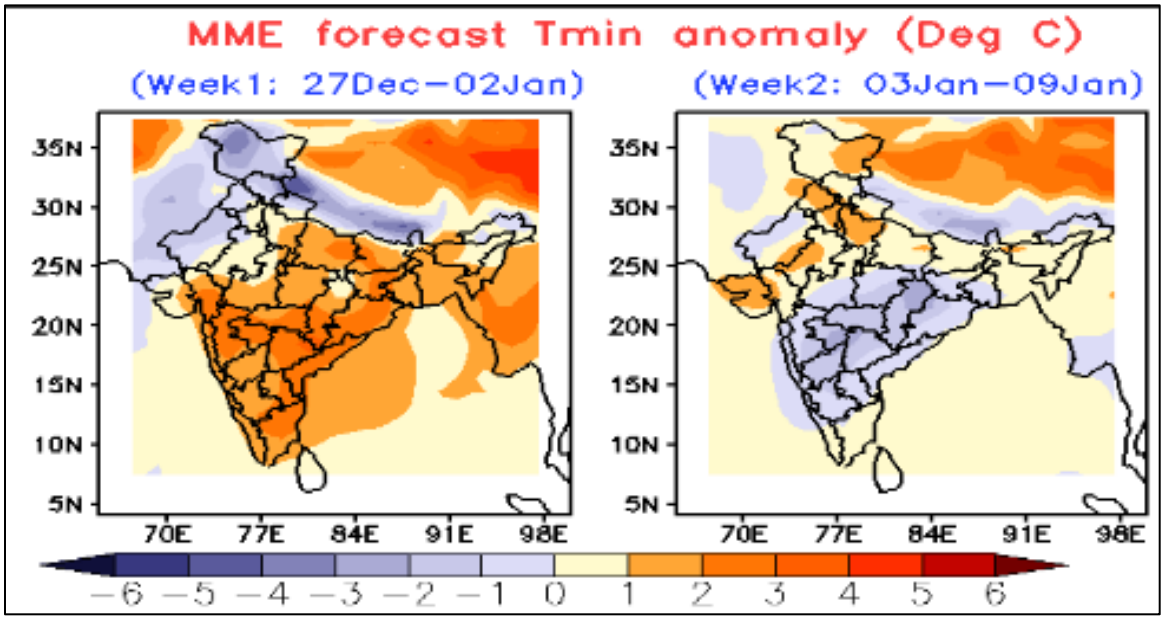
Annexure III



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

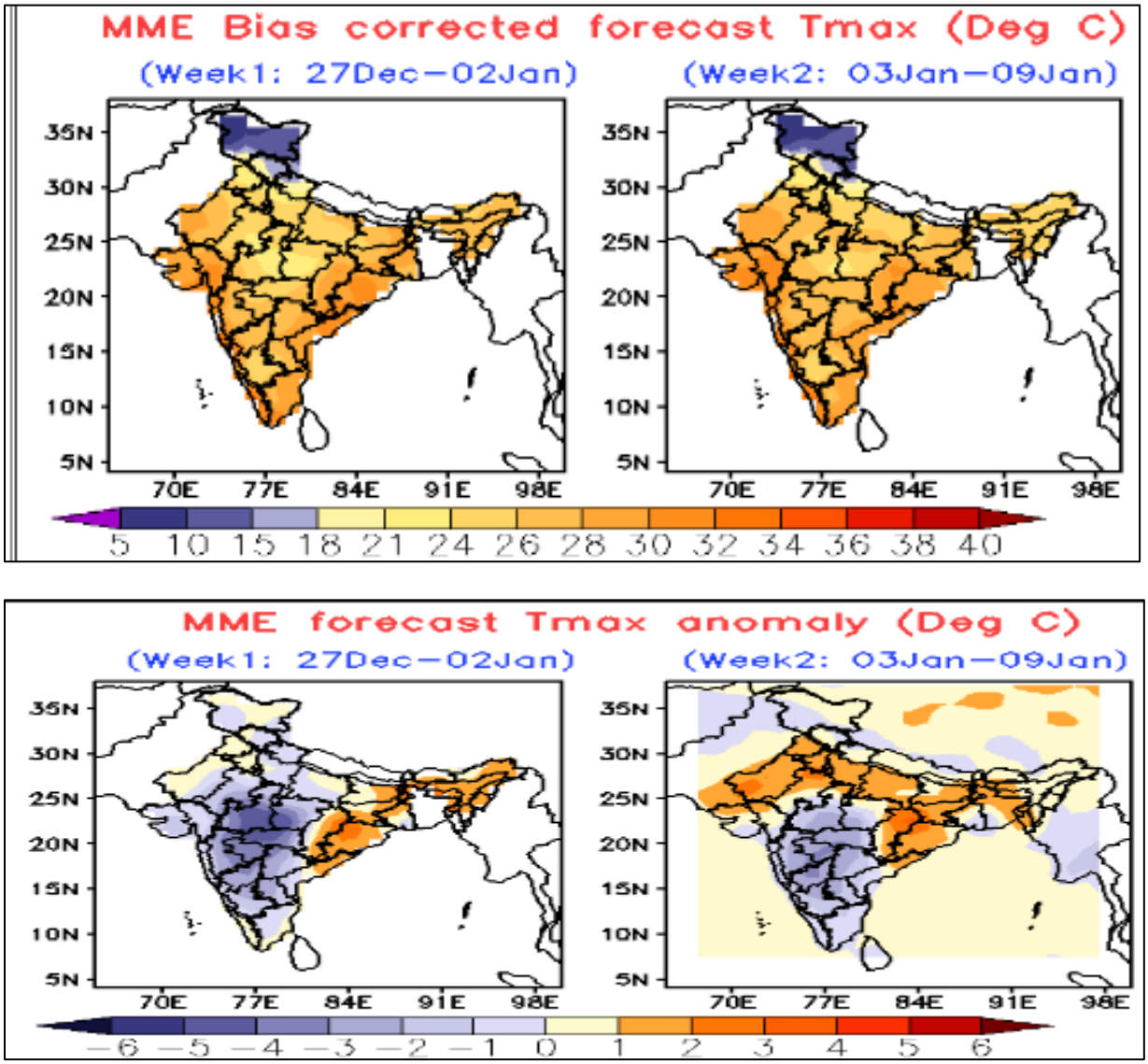
Annexure IV





Extended range forecast of weekly distribution of Minimum Temperature in °C (top panel) and anomalies (lower panel) from IMD Bias Corrected Forecast

Annexure V



Extended range forecast of weekly distribution of Maximum Temperature in °C (top panel) and anomalies (lower panel) from IMD Bias Corrected Forecast

Annexure VI

Cold Wave forecast during next 2 weeks

EXTENDED RANGE OUTLOOK FOR COLDWAVE

Week 1: 27.12.2024-02.01.2025

Week2: 03.01.2025-09.01.2025

PROBABILITY OF HEATWAVE CONFIDENCE

LOW (1-33% PROBABILITY)

MODERATE (34-67% PROBABILITY)

HIGH (68-100% PROBABILITY)

Cold wave warning:

Week 1 (06.12.2024- 12.12.2024)

There is a moderate probability of cold wave conditions **over Jammu & Kashmir and Himachal Pradesh during the 1st half of week 1.**

Week 2 (13.12.2024- 19.12.2024)

There is NIL probability of Cold Wave event over any parts of the country.