



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

Press Release: Dated: 04th January, 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (04 to 17 January, 2024)

1. Salient Observed Features for week ending 03 January 2024

- ✓ **Dense to very dense fog** conditions observed during this week across northwest & central India and spread to over East India from 29 December.
- ✓ **Simultaneously, the lifted fog/low cloud created Cold day to Severe Cold day conditions** over the plains of Northwest India from 29 December to till date.
- ✓ No significant rainfall reported over the country except Tamilnadu, Puducherry & Karaikal where **very heavy rainfall** was reported on 29th December and **extremely heavy rainfall** was reported on 30th December at isolated places over south interior Tamil Nadu.
- ✓ **Analysis of weekly overall rainfall distribution during the week ending on 03rd January 2024 and post- monsoon Season's Rainfall Scenario (1 October- 31 December 2023):** The country as a whole, the weekly cumulative All India Rainfall in % departure from its long period average (LPA) till week ending on 03 January, 2024 is -92%. All India Seasonal cumulative rainfall % departure during this year's **Post-monsoon Season's Rainfall** during **1 October to 31 December 2023** is -9%. 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		
	28.12.2023 TO 03.01.2024			01.10.2023 TO 31.12.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
East & northeast India	0.1	2.7	-97	175.3	158.9	10
Northwest India	0.1	6.2	-98	52	52.6	-1
Central India	0.1	1.6	-93	59.3	76.1	-22
South Peninsula	1	3.7	-72	238.3	274.1	-13
Country as a whole	0.3	3.7	-92	110.7	121	-9

2. Large scale features

- ✓ Currently, strong El Niño conditions are prevailing over equatorial Pacific and the sea surface temperatures (SSTs) are above average over most of the equatorial Pacific Ocean. The latest MMCFS forecast indicates moderate to strong El Niño conditions are likely to continue during the upcoming season and weaken thereafter.
- ✓ At present, positive IOD conditions are observed over the Indian Ocean and the latest MMCFS forecast indicates weakening of positive IOD conditions and then turn to neutral conditions during the upcoming season.
- ✓ Madden Julian Oscillation (MJO) index is currently in phase 3 with amplitude greater than 1. It is likely to be in same phase with week amplitude towards end of the week 1.

3. Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (04 to 10 January, 2024) and Week 2 (11 to 17 January, 2024)

Weather systems & associated Precipitation during Week 1 (04 to 10 January, 2024)

Weather Systems and Forecast:

- A cyclonic circulation lies over Southeast Arabian Sea & adjoining Lakshadweep area and a trough runs from this cyclonic circulation to south Karnataka in lower tropospheric levels.
- The Western Disturbance lay as a cyclonic circulation over Haryana & neighbourhood in lower tropospheric levels and an induced cyclonic circulation lies over southwest Uttar Pradesh & neighbourhood
- A trough runs from North Interior Karnataka to the cyclonic circulation over southwest Uttar Pradesh in lower levels.

Rainfall Forecast:

- Light to moderate rainfall at some to many places very likely over south Tamil Nadu, south Kerala and Lakshadweep during the week.
- Isolated **heavy rainfall** very likely over Tamil Nadu during 04th- 08th; Kerala during 04th- 06th; over Lakshadweep, Coastal Karnataka on 04th & 05th; over South Interior Karnataka on 04th January.
- Light isolated to scattered rainfall very likely over Madhya Pradesh during the week.

- Light isolated rainfall also very likely over Chhattisgarh, Bihar and Jharkhand during 1st half of the week, over Uttar Pradesh on 04th & 05th January and over Telangana, Rayalaseema and Coastal Andhra Pradesh during 2nd half of the week.

Rainfall for week 2 (11 to 17 January, 2024):

- No active Western Disturbance likely to affect northwest India during the week.
- Light/moderate isolated to scattered rainfall is likely over south Peninsular India during many days of the week.
- Overall, rainfall activity is likely to be **below normal** over all the homogenous regions of India (**Annexure III**).

Minimum temperature, Cold Wave and Fog forecast & warning for Week 1 (04 to 10 January, 2024) and Week 2 (11 to 17 January, 2024)

Minimum temperature, Cold Wave and Fog forecast & warning for Week 1 (04 to 10 January, 2024):

Minimum temperature and Cold Wave warning:

- **Minimum Temperature** Minimum Temperatures are likely to rise gradually by 2-3°C over East India during 1st half of the week. No significant change in minimum temperatures likely over rest parts of north India during most days of the week.
- There is high probability of **Cold wave** conditions very likely in isolated pockets over Punjab, Haryana and north Rajasthan; and moderate probability over Uttar Pradesh, rest parts of Rajasthan and north Madhya Pradesh mainly during 1st half of the week (**Annexure IV & V**).

Dense fog and Cold day warning:

- **Dense to very dense fog** conditions very likely to prevail for a few hours in night/morning in some parts over Punjab, Haryana-Chandigarh, Uttar Pradesh, East Rajasthan during 04th to 06th January; in isolated pockets on 07th and **Dense fog** in isolated pockets for subsequent 2 days.
- **Dense to very dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over West Rajasthan on 05th & 06th January and in isolated pockets on 07th January.
- **Dense to very dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over Bihar on 05th January and **Dense fog** in some parts on 06th & 07th January.
- **Dense fog** conditions very likely to prevail for a few hours in morning in isolated pockets over Jammu division, Himachal Pradesh, Uttarakhand, Odisha, West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during 05th-07th January and over north Madhya Pradesh on 05th January.

- **Cold Day to Severe Cold Day** conditions very likely to continue in some parts over Punjab, Haryana-Chandigarh during 04th-06th and Uttar Pradesh & Rajasthan on 04th & 05th January.

Minimum temperature, Cold Wave and Fog forecast & warning for Week 2 (11 to 17 January, 2024):

- **Minimum temperatures:** The Minimum temperatures are likely to be below normal by 2-4°C over most parts of east & adjoining central India. These are likely to be above normal by 1-3°C over most parts of Western Himalayan Region and Gujarat and near normal 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 moderate possibility of cold wave in isolated pockets of Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Rajasthan and north Madhya Pradesh (Annexure IV & V).**

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

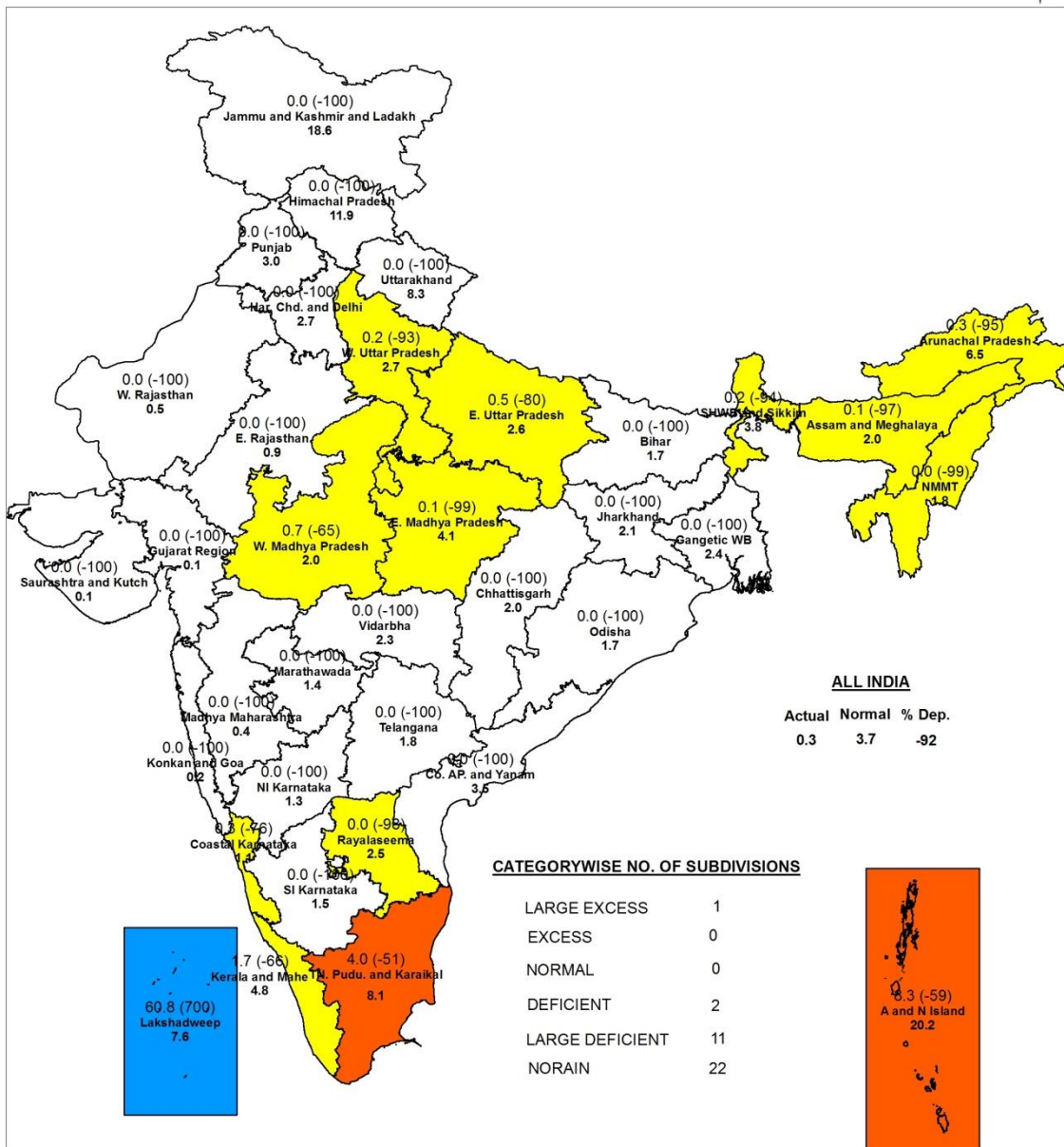


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INDIA METEOROLOGICAL DEPARTMENT

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

SUBDIVISION RAINFALL MAP

Week : 28-12-2023 To 03-01-2024



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 rainfall (mm), while bold figures indicate Normal rainfall (mm).
- c) Percentage Departures of rainfall are shown in brackets.

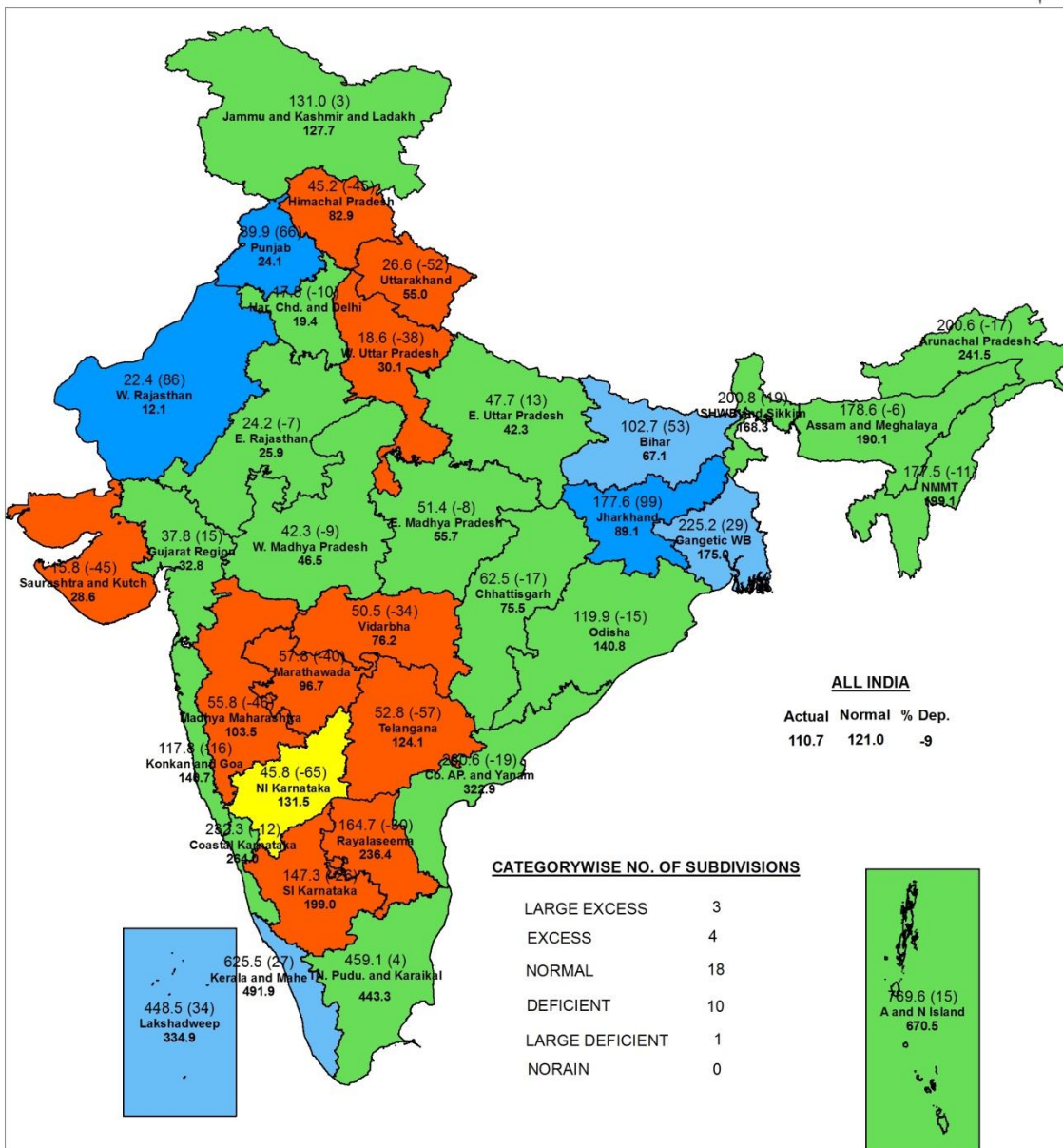


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SUBDIVISION RAINFALL MAP

Period : 01-10-2023 To 31-12-2023



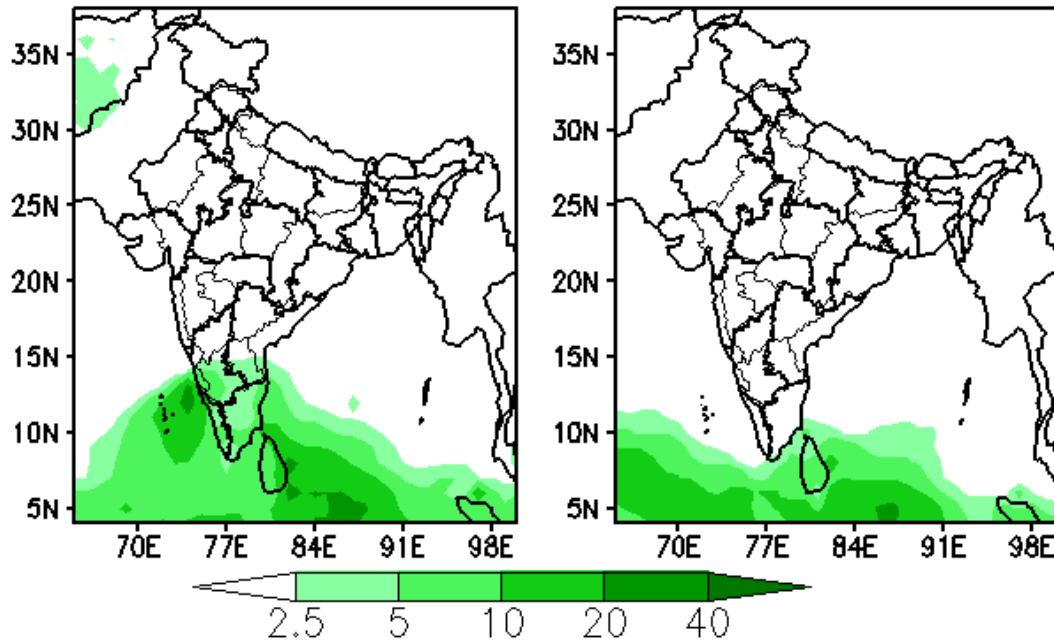
Legend

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

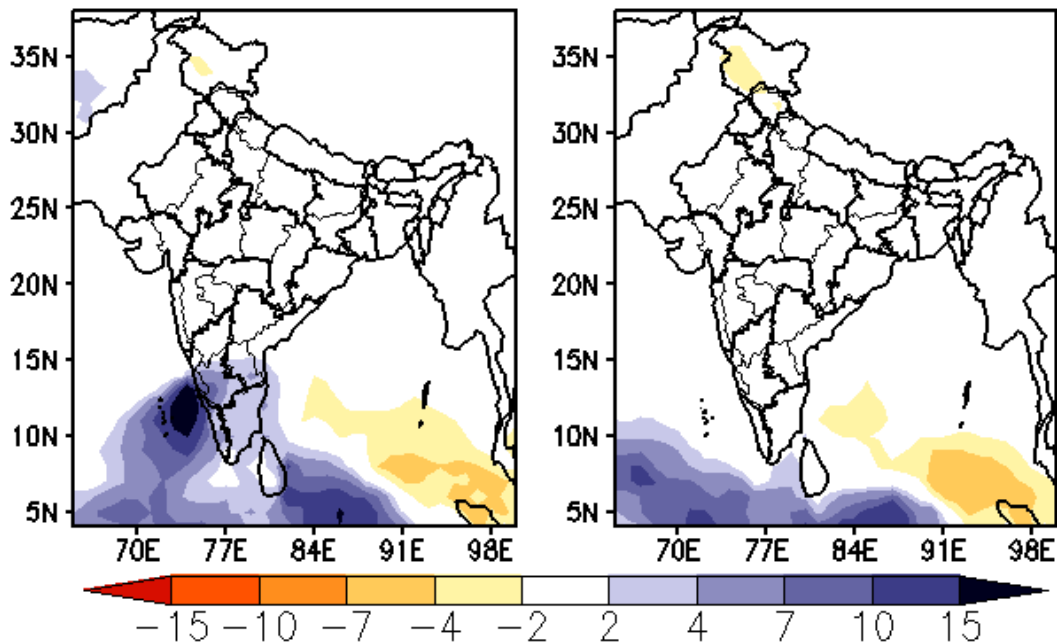
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- c) Percentage Departures of rainfall are shown in brackets.

Forecast Rainfall (mm/day) (00Z=0530 hrs IST)
(Week1:00Z04Jan-00Z11Jan) (Week2:00Z11Jan-00Z18Jan)



Forecast Rainfall Anomaly (mm/day) (00Z=0530 hrs IST)
(Week1:00Z04Jan-00Z11Jan) (Week2:00Z11Jan-00Z18Jan)

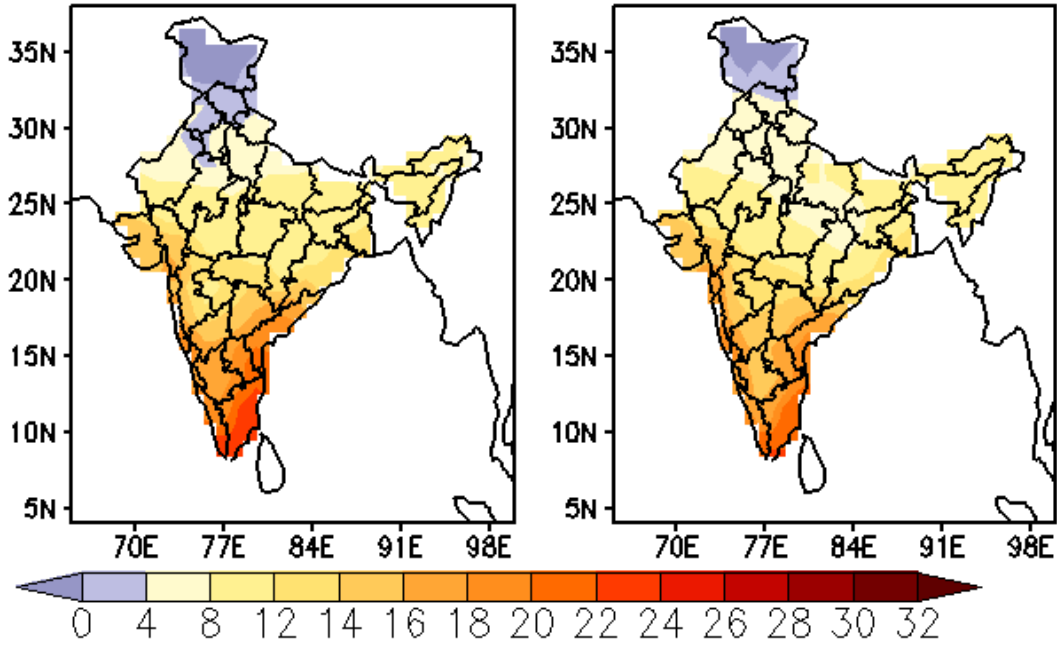


Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies(lower panesl) from IMD MME

MME Bias corrected forecast Tmin (Deg C)

(Week1: 05Jan-11Jan)

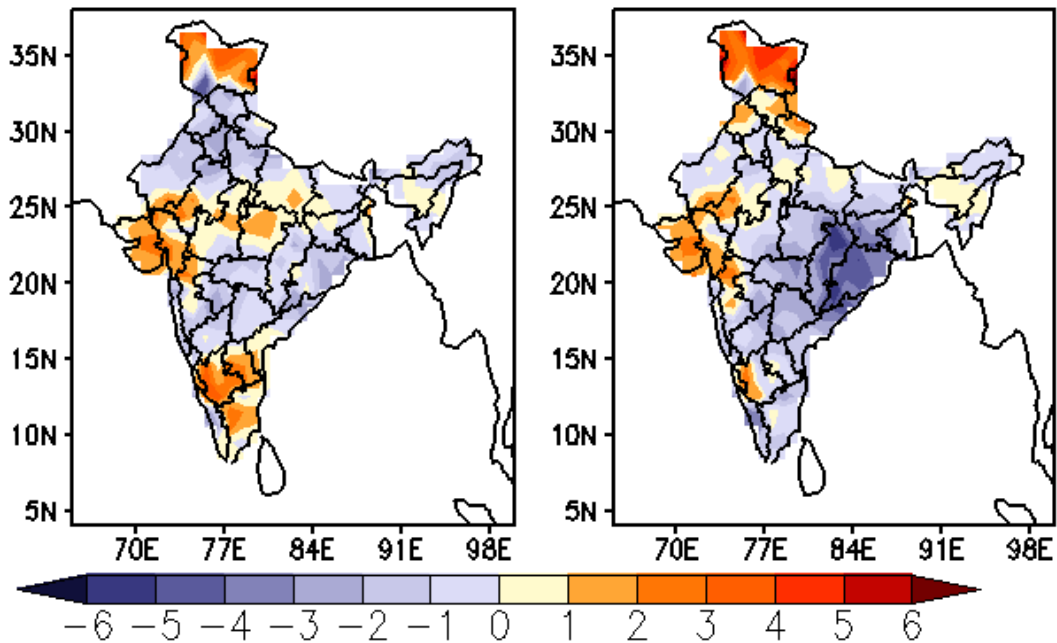
(Week2: 12Jan-18Jan)



MME forecast Tmin anomaly (Deg C)

(Week1: 05Jan-11Jan)

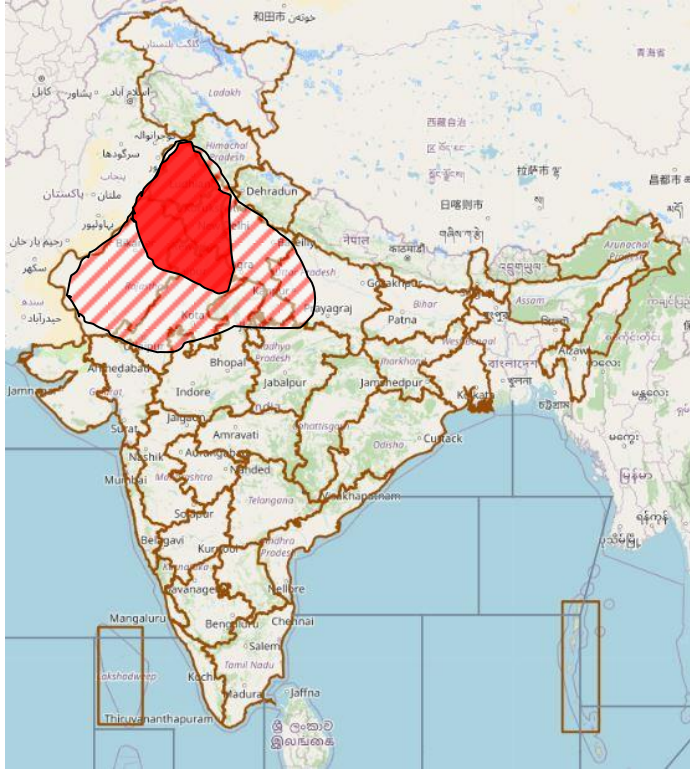
(Week2: 12Jan-18Jan)



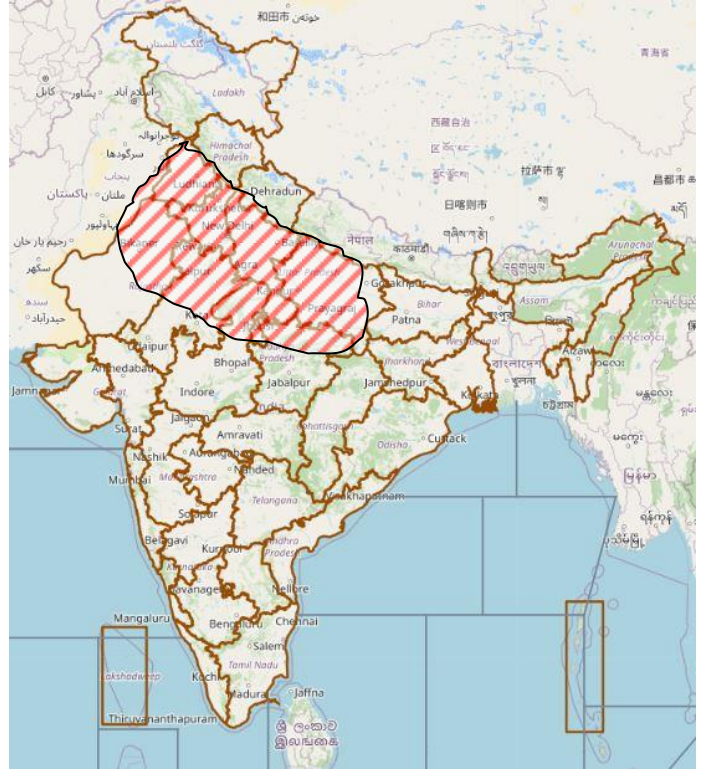
Extended range forecast of Minimum Temperature (top panel) and anomalies(lower panesl) from IMD MME

EXTENDED RANGE OUTLOOK FOR COLDWAVE

Week 1: 05.01.2024-11.01.2024



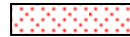
Week 2: 12.01.2024-18.01.2024



PROBABILITY OF COLDWAVE

CONFIDENCE

LOW (1-33% PROBABILITY)



MODERATE (34-67% PROBABILITY)



HIGH (68-100% PROBABILITY)

