



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

Press: Dated: 22 December, 2022

Subject: Current Weather Status and Extended range Forecast for next two weeks (22 December, 2022 to 04 January, 2023)

1. Salient Observed Features for week ending on 21 December, 2022

- Last week's **Depression** over Eastcentral & adjoining Southeast Arabian Sea moved west northwestwards, intensified into a **Deep Depression** in the early morning hours of 15th December; it weakened into a **Depression** in the evening of the 16th over Westcentral & adjoining Eastcentral Arabian Sea. It weakened into a **Well Marked Low pressure area** in the evening of 17th December 2022 over Westcentral Arabian Sea, further into a **Low Pressure Area** over Westcentral Arabian Sea on 19th and became less marked thereafter.
- **Dense to very dense fog** observed over Punjab, Haryana, northwest Rajasthan, Uttar Pradesh and Bihar some days of the week.
- **Cold wave conditions** at isolated places had been observed over Punjab, Himachal Pradesh and northern many days of the week.

➤

➤ **Analysis of Weekly overall Rainfall distribution during the current week (15 to 21.12.2022) and Post-monsoon Season's Rainfall Scenario till 21.12.2022:**

The country as a whole, the weekly cumulative All India Rainfall till week ending on 21.12.2022 was 83% below from its long period average (LPA) and all India Seasonal cumulative rainfall during this year's **post- monsoon Season Rainfall till 21.12.2022** is 21% above LPA.

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 and II** respectively.

Table 1: Rainfall status (Weekly and seasonal)

Region	WEEK			SEASON		
	15 to 21.12.2022			01.10.2022 to 21.12.2022		
	Actual	Normal	% Departure	Actual	Normal	% Departure
East & Northeast India	0.1	2.3	-95	165.1	154.1	07
Northwest India	0	3.3	-100	80.6	43.8	84
Central India	0.5	0.9	-40	94.8	74.8	27
South Peninsula	1.6	6.3	-75	292.3	268.2	09
Country as a Whole	0.5	3	-83	140.5	116	21

2. Large scale features

- The La Niña conditions are prevailing over the equatorial Pacific region. The latest Monsoon Mission Climate Forecasting System (MMCFS) forecast indicates that the La Niña conditions are likely to continue during December–February season (DJF 2022/23) and weaken thereafter.
- The neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest MMCFS forecast indicates that the neutral IOD conditions are likely to continue during the upcoming season.
- The Madden Julian Oscillation (MJO) Index is currently in Phase 5 with amplitude more than 1. It will move across Phase 5 and 6 during the week with amplitude remaining more than 1.

3. Forecast for next two week

[Weather systems & associated Precipitation during Week 1 \(22 to 28 December, 2022\) and Week 2 \(29 December, 2022 to 04 January, 2023\)](#)

Forecast for week 1 (22 to 28 December, 2022):

(A) Depression over southwest and adjoining southeast Bay of Bengal

Latest observations indicate that a Depression has formed over Southwest and adjoining Southeast Bay of Bengal at 0830 hours IST of today, the 22nd December near latitude 9.0°N and longitude 85.0°E about 420 km east-northeast of Trincomalee (Sri Lanka), 600 km south-southeast of Nagappattinam (Tamil Nadu) and 690 km southeast of Chennai (Tamil Nadu).

It is likely to continue to move north-northwestwards during next 24 hours and thereafter gradually recurve west-southwestwards towards Comorin Area across Sri Lanka during subsequent 48 hours.

Warnings:

Rainfall warning:

- ❖ Light to moderate rainfall at many places with **heavy rainfall** at isolated places is likely over south coastal Tamil Nadu on 25th & 26th December 2022.
- ❖ Light to moderate rainfall at a few places with **heavy rainfall** at isolated places is likely over south Kerala on 26th December 2022.

Wind warning:

- ❖ Southwest Bay of Bengal along & off Tamil Nadu and Sri Lanka coasts:
- ❖ Squally wind speed reaching 45-55 kmph gusting to 65 kmph is likely to prevail till 25th December morning becoming 40-50 kmph gusting to 60 kmph till 26th morning and decrease thereafter.
- ❖ Adjoining areas of southeast & westcentral Bay of Bengal:
- ❖ Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till 24th December morning and decrease thereafter.
- ❖ Gulf of Mannar and Comorin Area along & off south Tamil Nadu & west Sri Lanka coasts:
- ❖ Squally weather with wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail on 24th December becoming squally wind speed reaching 45-55 kmph gusting to 65 kmph during 25th and 26th December.

Sea condition:

- ❖ **Southwest Bay of Bengal along & off Tamil Nadu and Sri Lanka coasts:**
Sea condition is likely to be rough to very rough till 26th December morning and improve thereafter.
- ❖ **Adjoining areas of southeast & westcentral Bay of Bengal:**
Sea condition is likely to be rough till 24th December morning and improve thereafter.
- ❖ **Gulf of Mannar and Comorin Area along & off south Tamil Nadu & west Sri Lanka coasts:**
Sea condition is likely to be rough to very rough during 25th and 26th December.

Fishermen are advised not to venture into:

- ❖ Southwest Bay of Bengal and along & off Sri Lanka coast during 22nd – 25th December.
- ❖ Gulf of Mannar and Comorin Area along & off south Tamil Nadu and west Sri Lanka coasts during 23rd-26th December.

(B) Other Weather systems and its associated rainfall/thunderstorm Forecast.

- Light isolated rainfall activity is very likely over rest parts of Tamilnadu & Kerala and over Coastal Andhra Pradesh during most days of the week.

- Under the influence of a Western Disturbance, isolated rainfall/snowfall is likely over Western Himalayan Region during 2nd half of the week.
- No significant weather likely over rest parts of the country during most days of the week.

Rainfall for week 2 (29 December, 2022 to 04 January, 2023):

- **Under the influence of a fresh Western Disturbance, light/moderate isolated to scattered rainfall/snowfall is likely over Western Himalayan Region during 1st half of the week.**
- Light/moderate isolated to scattered rainfall is likely over Peninsular, east & northeast India during some days of the week.
- Overall, rainfall activity is likely to be normal to above normal over south Peninsular, central, east & northeast India. It is likely to be below normal over northwest India (**Annexure III**).

Minimum Temperatures and its forecast during Week 1 (22 to 28 December, 2022) and Week 2 (29 December, 2022 to 04 January, 2023):

Minimum Temperature Forecast, Cold Wave/Day & Fog Warnings for week 1 (22 to 28 December, 2022):

Fog Warning

- Due to moisture and light winds at lower tropospheric levels over Indo-Gangetic plains, **Dense to very dense fog** in many/most pockets very likely over Punjab, Haryana, Chandigarh and Uttar Pradesh in night/morning hours during next 48 hours.
- Subsequently, moisture at lower tropospheric levels over Indo-Gangetic plains is very likely to decrease over above regions, hence **dense fog** in isolated pockets very likely over Punjab and Haryana & Chandigarh for subsequent days of the week.
- Dense Fog in isolated pockets also very likely over Himachal Pradesh, Uttarakhand, north Rajasthan, Bihar, Sub-Himalayan West Bengal & Sikkim and Tripura in night/morning hours during 1st half of the week.

Minimum Temperature Forecast & Cold Wave/Day Warning

- **Minimum temperatures** are in the range of 7-10°C & near normal over many parts of plains of northwest India & adjoining north Madhya Pradesh.
- **No significant change in minimum temperatures likely over northwest India during most days of the week.**
- Fall in minimum temperature 2-4°C over Gujarat State during 1st half of the week and no significant change thereafter.
- No significant change in minimum temperatures likely over central India and

- Maharashtra during 1st half of the week and fall by 2-4°C thereafter.
- No significant change in minimum temperatures likely over East India during 1st half of the week and rise by 2-3°C thereafter.
- **Due to dry north/northwesterly winds from Himalayas over plains of northwest India, Cold Wave Conditions very likely in isolated pockets over Punjab, Haryana and north Rajasthan during 2nd half of the week.**
- **Cold Day to severe cold day Conditions also very likely in isolated pockets over Punjab, Haryana and west Uttar Pradesh; Cold Day Condition also very likely in isolated pockets over east Uttar Pradesh during 1st half of the week.**

Minimum Temperatures for week 2 (29 December, 2022 to 04 January, 2023):

- Minimum temperatures are likely to be below normal by 1-2^o C over most parts of the northwest, central, east & north Peninsular India. Near normal or slightly above normal likely over rest parts of the country (**Annexure IV**).
- **Cold wave in isolated pockets likely over northwest India during some days 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 Widespread (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

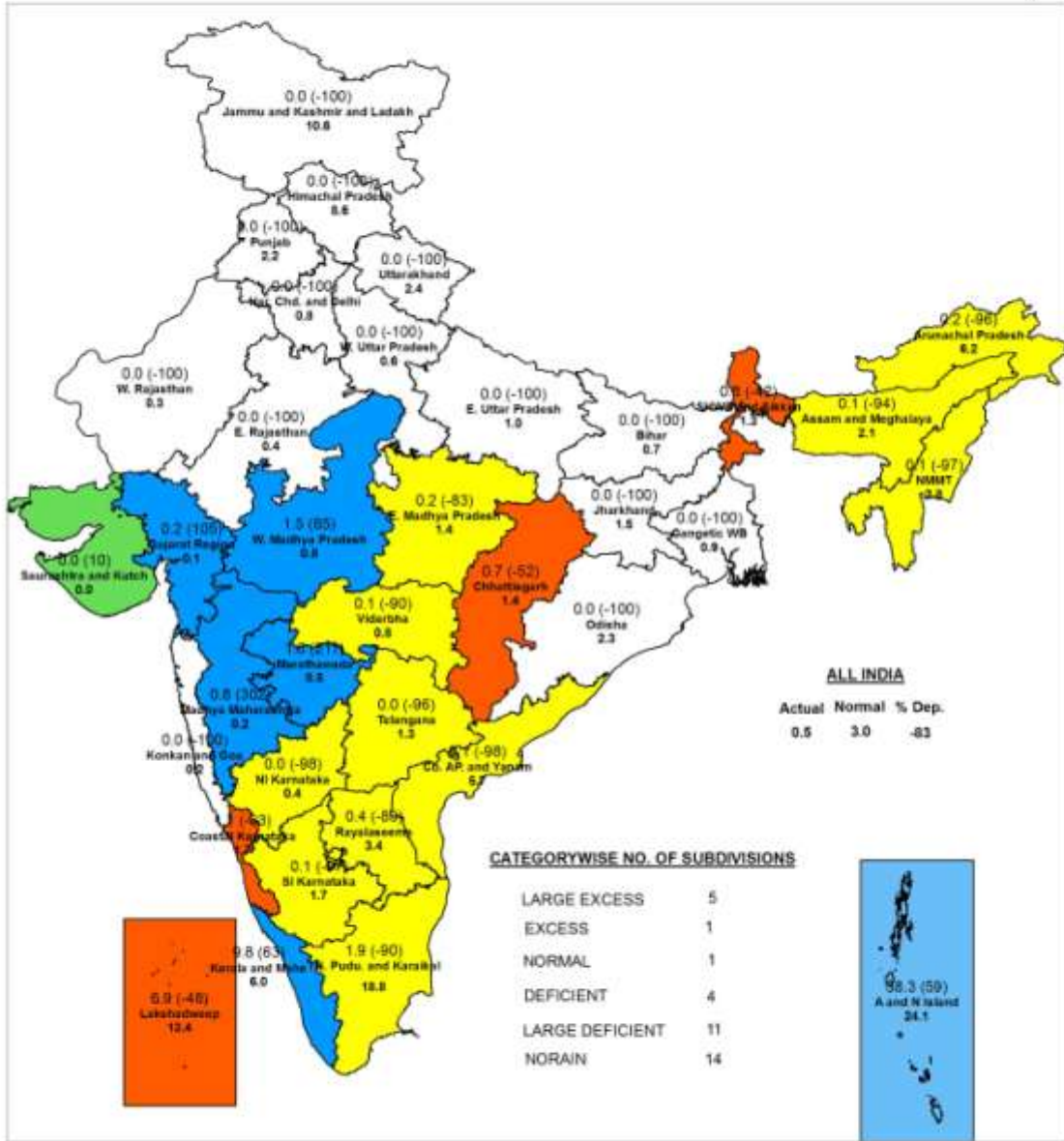


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SUBDIVISION RAINFALL MAP

Week : 15-12-2022 To 21-12-2022



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).

Annexure II

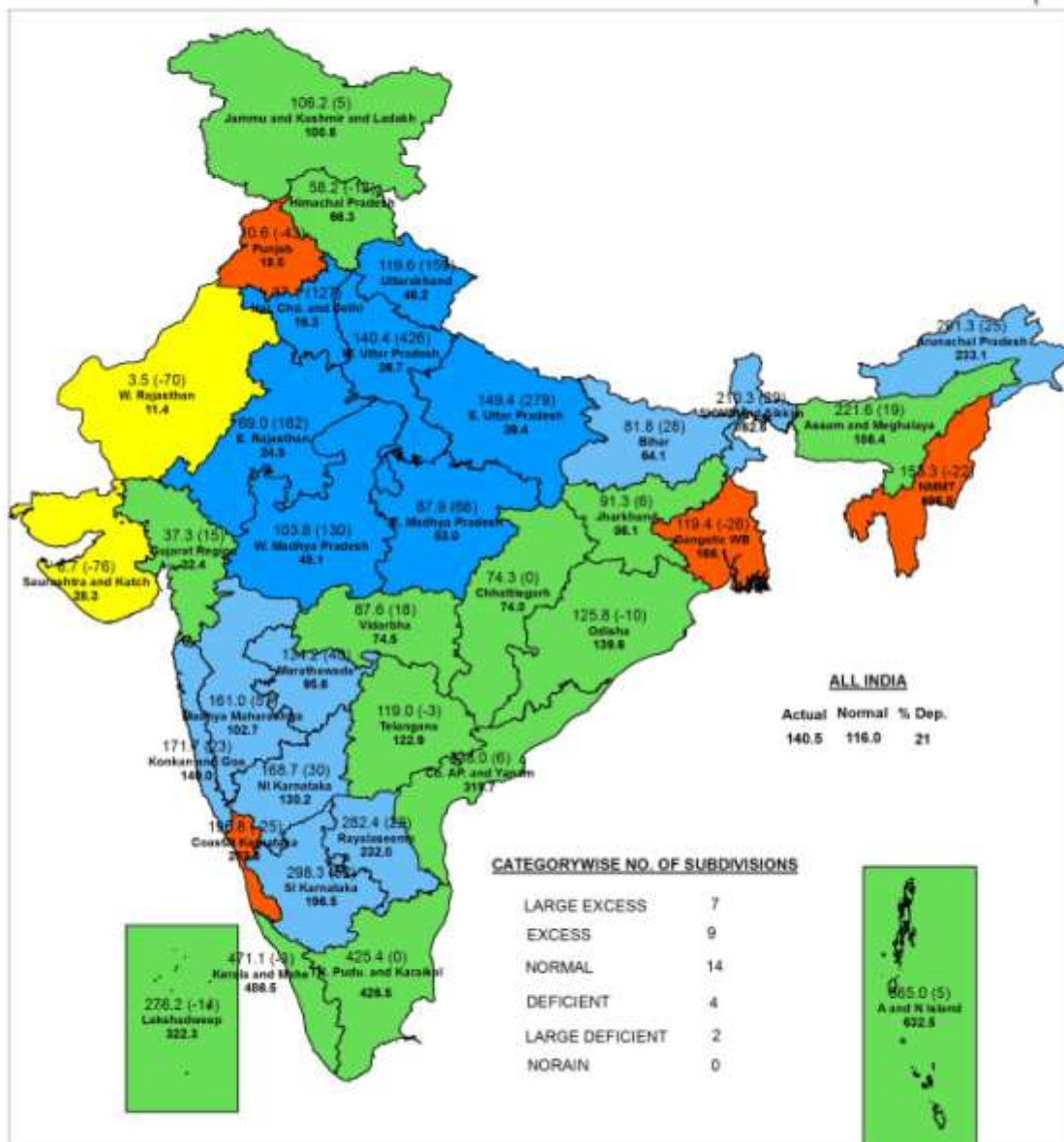


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SUBDIVISION RAINFALL MAP

Period : 01-10-2022 To 21-12-2022



Legend

Large Excess [60% or more] Excess [20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-69% to -60%] No Rain [-100%] No Data

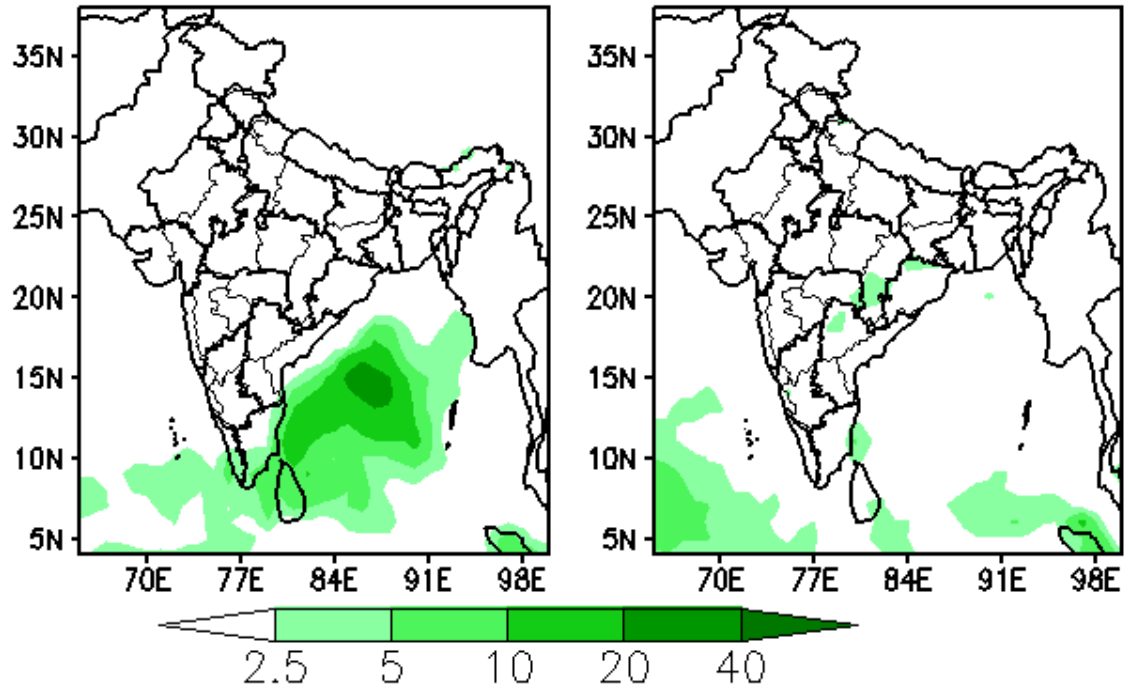
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Forecast Rainfall (mm/day)

(Week1: 23Dec-29Dec)

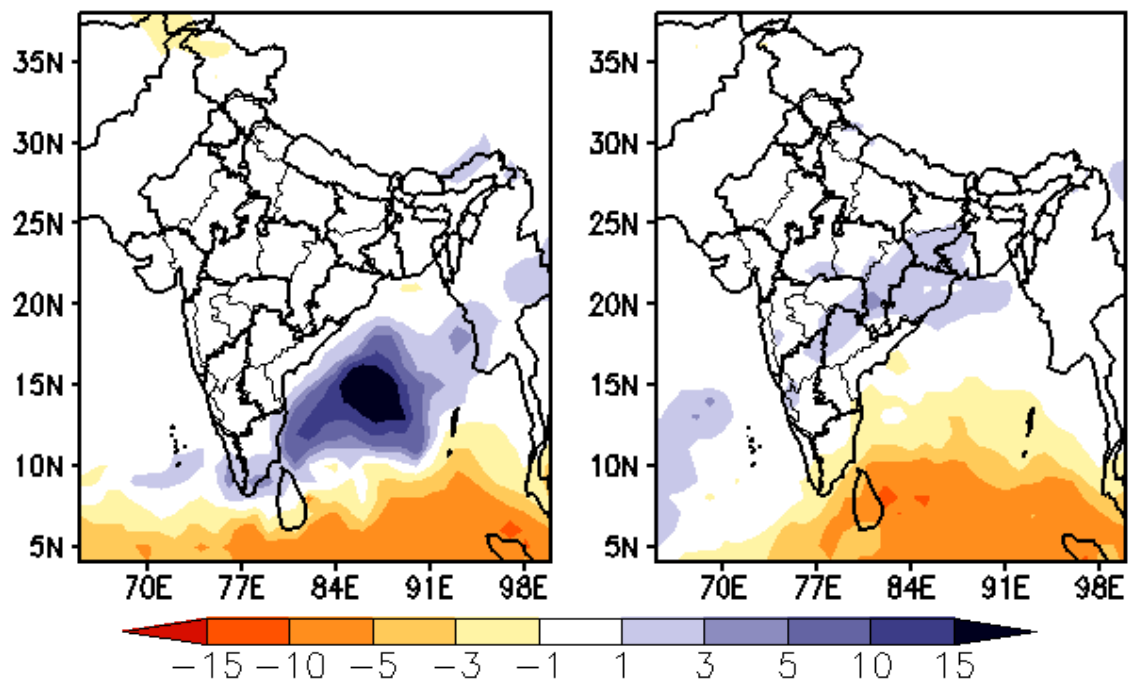
(Week2: 30Dec-05Jan)



Forecast Rainfall Anomaly (mm/day)

(Week1: 23Dec-29Dec)

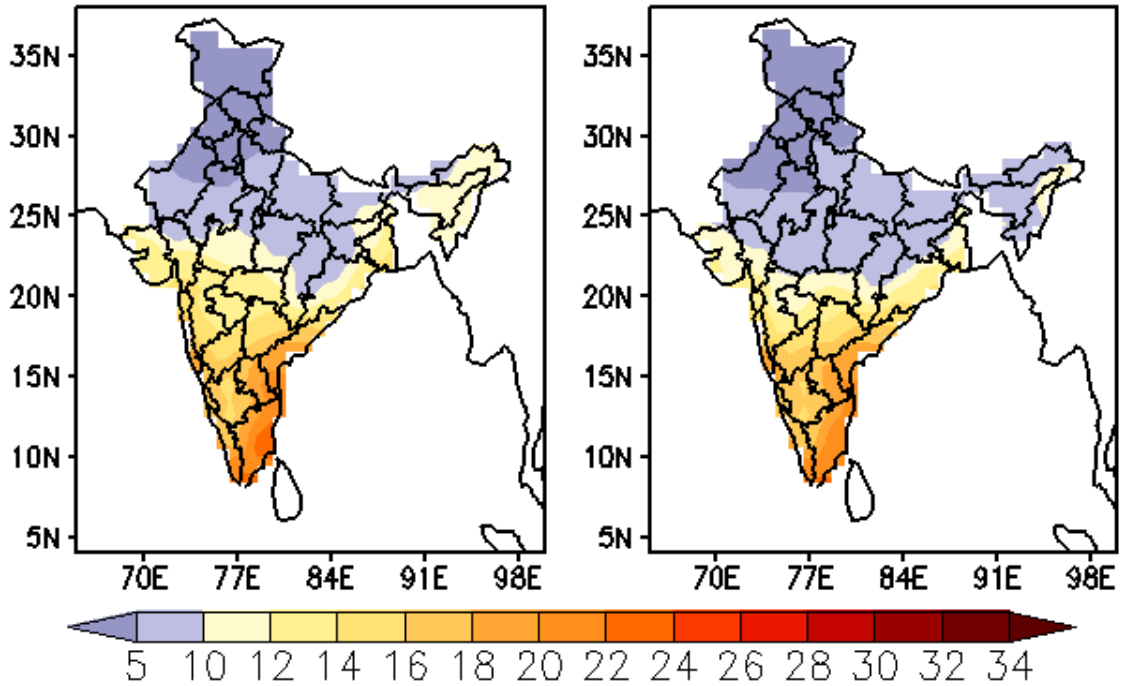
(Week2: 30Dec-05Jan)



MME Bias corrected forecast Tmin (Deg)

(Week1: 23Dec-29Dec)

(Week2: 30Dec-05Jan)



MME forecast Tmin anomaly (Deg C)

(Week1: 23Dec-29Dec)

(Week2: 30Dec-05Jan)

