



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

Press: Dated: 7th Dec, 2023

Subject: Current Weather Status and Extended range Forecast for next two weeks (7-20 Dec 2023)

1. Salient Observed Features for week ending 6 Dec 2023

- Severe Cyclonic Storm “MICHAUNG” (pronounced as MIGJAUM) moved northwestwards close to north Tamil Nadu Coast on 4th Dec and then northwards almost parallel and close to south Andhra Pradesh coast and crossed south Andhra Pradesh coast close to south of Bapatla during 1230 to 1430 hours IST of the 5th December 2023 as a Severe Cyclonic Storm with maximum sustained wind speed of 90-100 kmph. It caused Heavy to very heavy rainfall at a few places with isolated extremely heavy rainfall reported over northern parts of over coastal Tamil Nadu (mainly covering districts of Chennai, Tiruvallur, Chengalpattu and Kancheepuram) and isolated heavy to very heavy rainfall reported over Rayalaseema and south Coastal Andhra Pradesh(Nellore and Tirupati) on 4th Dec and then isolated Heavy to very heavy rainfall with extremely heavy falls observed at isolated places over northern parts of over coastal Tamil Nadu(mainly covering districts of Chennai, Tiruvallur, Chengalpattu and Kancheepuram), Coastal Andhra Pradesh(Nellore and Bapatla) and Rayalaseema(Tirupati) on 6th Dec.
- **Dense to Very Dense Fog** observed at isolated pockets of East Uttar Pradesh on two days and Meghalaya, Bihar, Haryana, Chandigarh & Delhi and East Rajasthan on one day each during the week.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 6th Dec 2023 and monsoon Season’s Rainfall Scenario (1 Oct-6 Dec 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 6 Dec 2023 was +362%. All India Seasonal cumulative rainfall % departure during this year’s **Post monsoon Season’s Rainfall** during **1 Oct to 6 Dec 2023** is -8% and over northwest India, it is +48%. 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 II and III respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	30.11.2023 TO 06.12.2023			01.10.2023 TO 06.12.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	1.1	1.9	-43%	149.5	147.2	+2%
NORTH-WEST INDIA	7.4	1.4	+430%	51.3	34.7	+48%
CENTRAL INDIA	9.1	1.5	+509%	52.4	72.1	-27%
SOUTH PENINSULA	51.7	10.7	+384%	213.9	251.5	-15%
Country as a whole	15.7	3.4	+362%	99.3	107.9	-8%

2. Large scale features

- Currently, the moderate to strong El Niño conditions are prevailing over equatorial Pacific Ocean 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 winter season. In addition to El Niño-Southern Oscillation (ENSO) conditions over the Pacific, other factors such as the Indian Ocean SSTs also influence on Indian climate. At present, strong positive IOD conditions are observed over the Indian Ocean and the latest MMCFS forecast indicates that positive IOD conditions are likely to weaken and turn to neutral by the end of this year.
- Currently MJO lay in Phase 4 and Most of the models are indicating that MJO is likely to move eastwards in the 2nd half of the week 2 from phase 4 to Phase 6 across phase 5 and then to phase 7 with amplitude near 1 across phase 6 till end of the week 2.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (07 to 13 December, 2023) and Week 2 (14 to 20 December, 2023)

Weather systems & associated Precipitation during Week 1 (07 to 13 December, 2023)

Weather systems:

- A Cyclonic Circulation lies over south Chhattisgarh & adjoining Vidarbha in lower tropospheric levels.
- A Western Disturbance as a Cyclonic Circulation lies over Haryana & neighbourhood in lower tropospheric levels with a trough aloft in middle tropospheric levels roughly along Long. 75°E to the north of Lat. 28°N.
- A Cyclonic Circulation lies over southeast Arabian Sea & neighbourhood in lower tropospheric levels.
- A fresh Western Disturbance is likely to affect Northwest India from 11th December.

Rainfall Forecast & Warning:

- Light to moderate rainfall at a few places with isolated thunderstorm & lightning very likely over Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal, Lakshadweep and Andaman & Nicobar Islands during the week. Light isolated rainfall is also likely over rest parts of the south Peninsular India during most days of the week. Isolated **heavy rainfall** also very likely over Kerala and Tamil Nadu on 08th & 09th December and over Lakshadweep on 08th December.
- Light to moderate rainfall at isolated/scattered very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during most days of the week; isolated **heavy rainfall** is also likely over Nagaland, Manipur, Mizoram & Tripura on today, the 07th December.
- Light isolated rainfall/snowfall is very likely over Western Himalayan Region on 11th & 12th December, 2023.
- No significant rainfall is likely over rest parts of the country.

Rainfall for week 2 (14 to 20 December, 2023):

- ✓ No active Western Disturbance likely to affect northwest India during the week.
- ✓ Light/moderate scattered to fairly widespread rainfall is likely over south Peninsular India during the week. Isolated **heavy rainfall** is also likely over Tamil Nadu and Kerala during some days of the week.
- ✓ Overall, rainfall activity is likely to be **above normal** over South Peninsular India and below normal over remaining regions of India.

Minimum temperature forecast for Week 1 (07 to 13 December, 2023) and Week 2 (14 to 20 December, 2023)

Minimum temperature forecast for Week 1 (07 to 13 December, 2023):

- ✓ **Minimum Temperature** are markedly above normal (5.1°C or more) at most places over Bihar, Jharkhand; at many places over East Uttar Pradesh, Nagaland, Manipur, Mizoram & Tripura and Assam & Meghalaya; at isolated places over Chhattisgarh, Vidarbha, Marathwada and East Madhya Pradesh; appreciably above normal (3.1°C to 5.0°C) at most places over Arunachal Pradesh, Gangetic West Bengal, Odisha, Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka and Gujarat

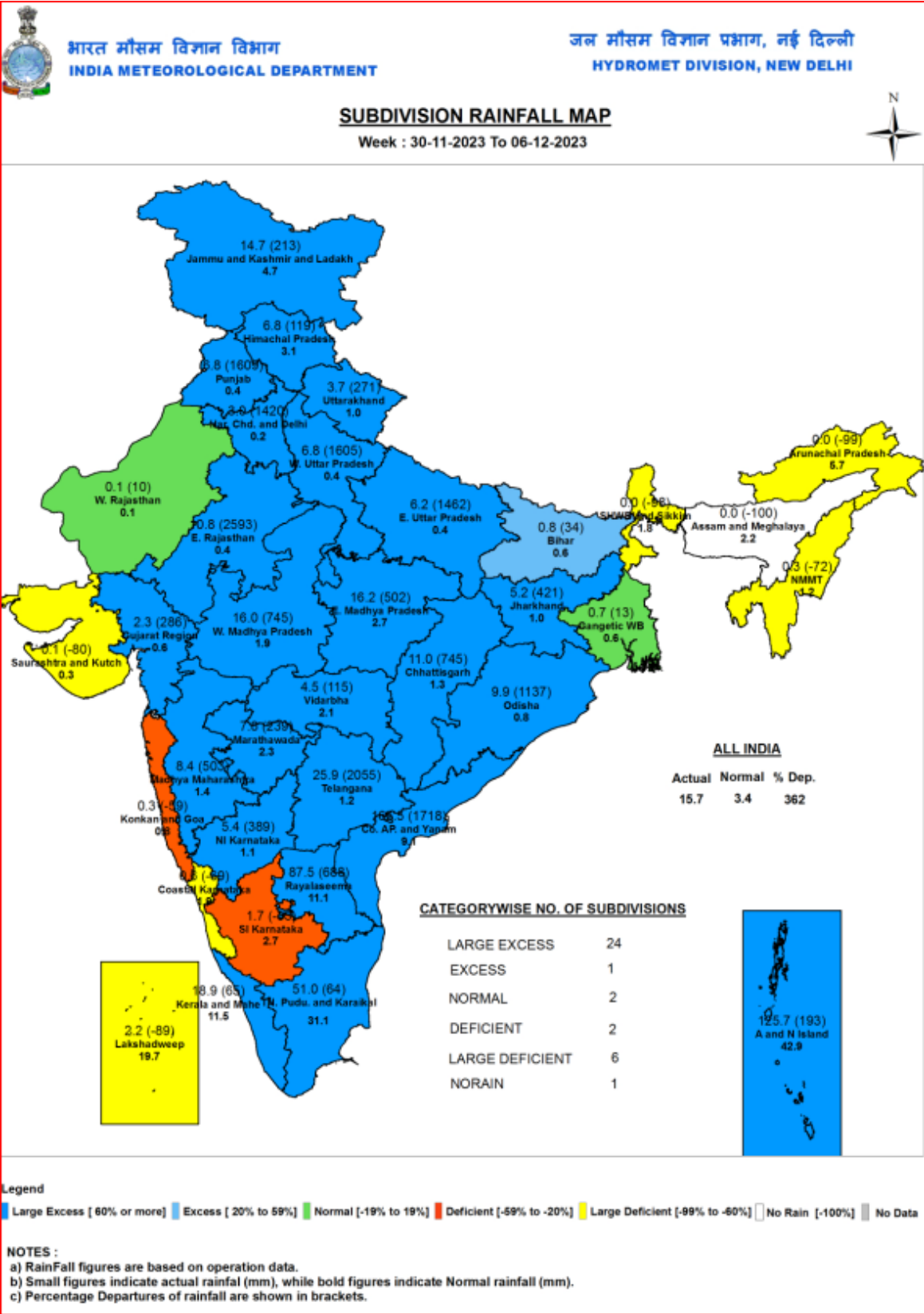
Region; at many places over Telangana, Tamil Nadu, Puducherry & Karaikal, South Interior Karnataka and West Madhya Pradesh; at isolated places over Sub-Himalayan West Bengal & Sikkim; above normal (1.6°C to 3.0°C) at many places over Kerala & Mahe, Rajasthan, Saurashtra & Kutch, Uttarakhand; at a few places over Punjab; at isolated places over West Uttar Pradesh, Coastal Karnataka and near normal over rest parts of the country.

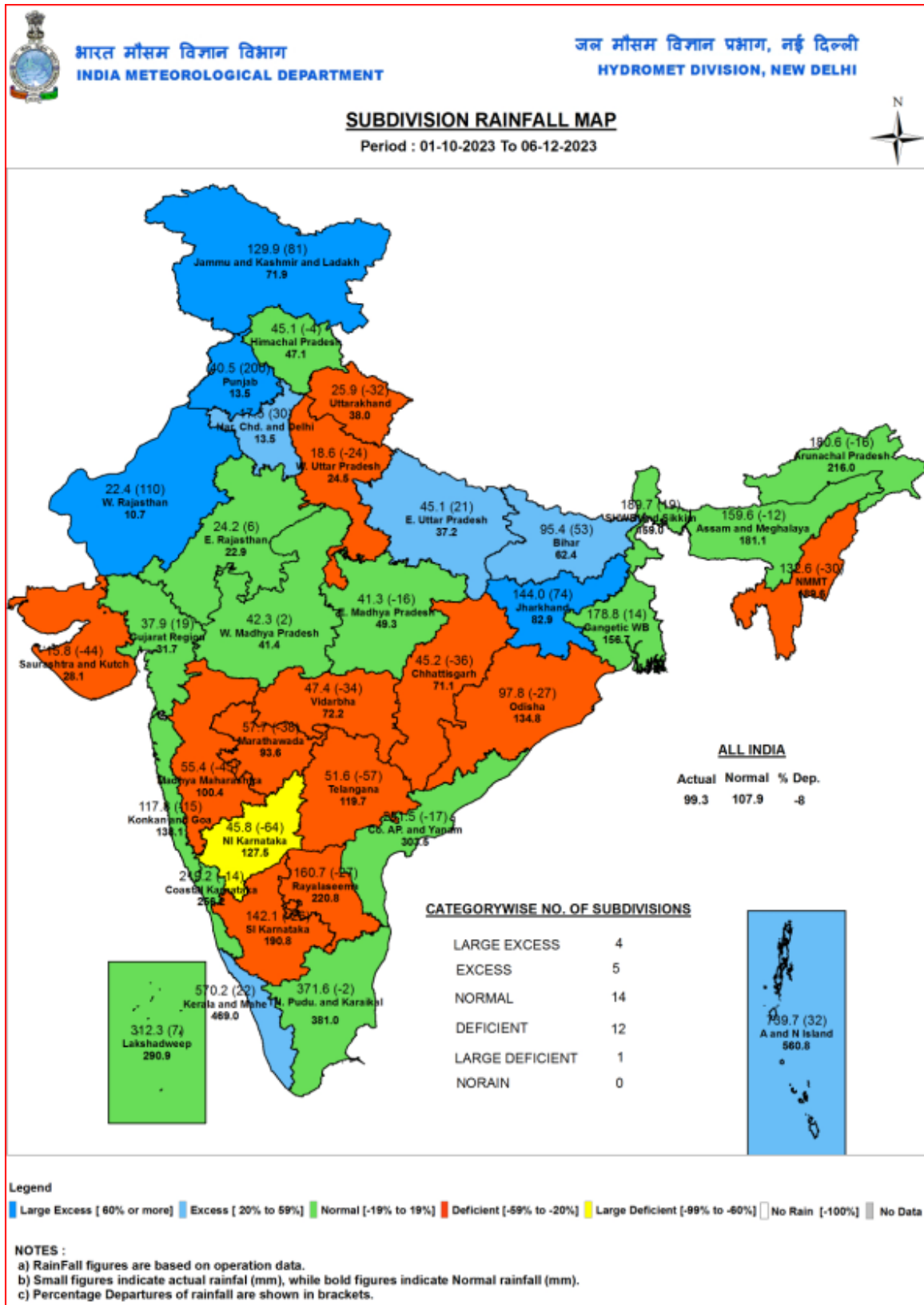
- ✓ Gradual fall in Minimum Temperatures by 2-3°C are likely over Northwest India and by 3-5°C over East India during 1st half of the week and no significant change thereafter. No significant change in Minimum Temperatures over rest parts of the country during the week.

Minimum temperature forecast for Week 2 (14 to 20 December, 2023):

- ✓ **Minimum Temperature** are likely to fall gradually over most parts of the country during the week and become near normal or below normal by 1-3°C over most parts of the country except parts of Western Himalayan Region, northeastern states and Gujarat, where these are likely to be above normal by 1-3°C.

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



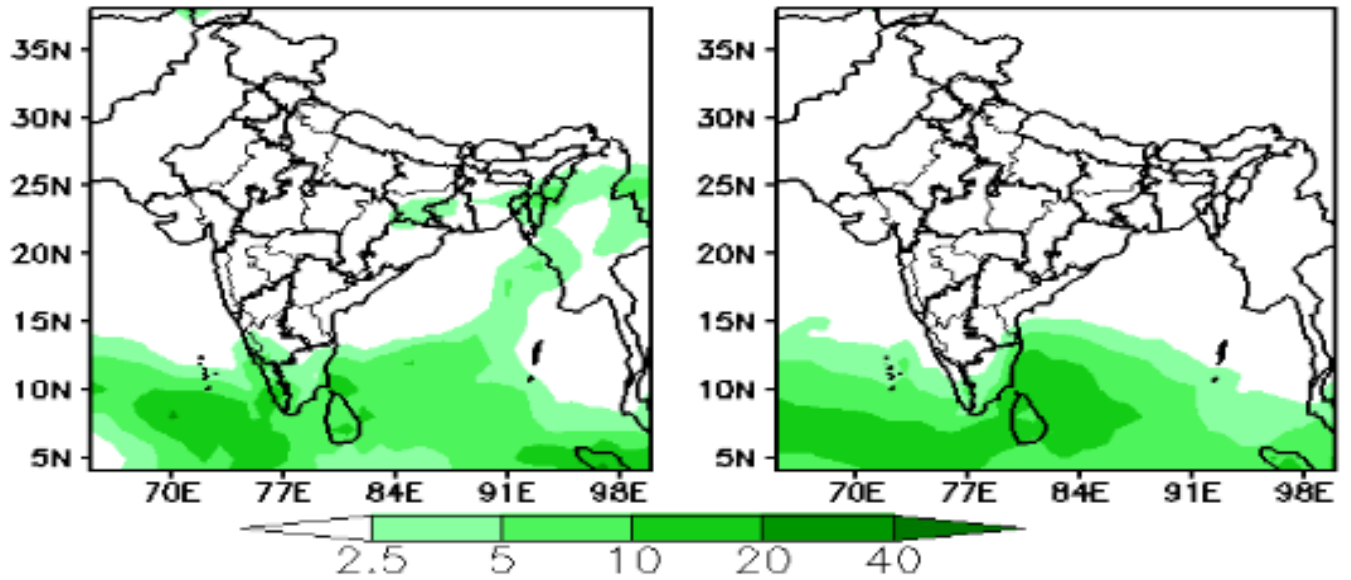


Forecast Rainfall (mm/day)

(00Z=0530 hrs IST)

(Week1:00Z07Dec-00Z14Dec)

(Week2:00Z14Dec-00Z21Dec)

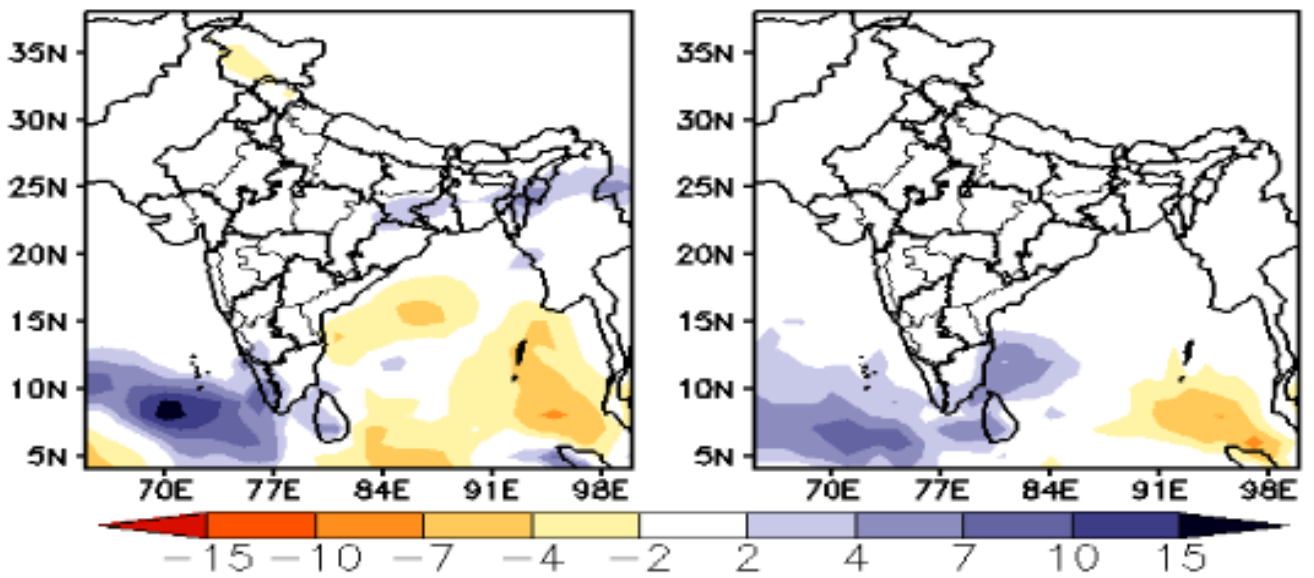


Forecast Rainfall Anomaly (mm/day)

(00Z=0530 hrs IST)

(Week1:00Z07Dec-00Z14Dec)

(Week2:00Z14Dec-00Z21Dec)

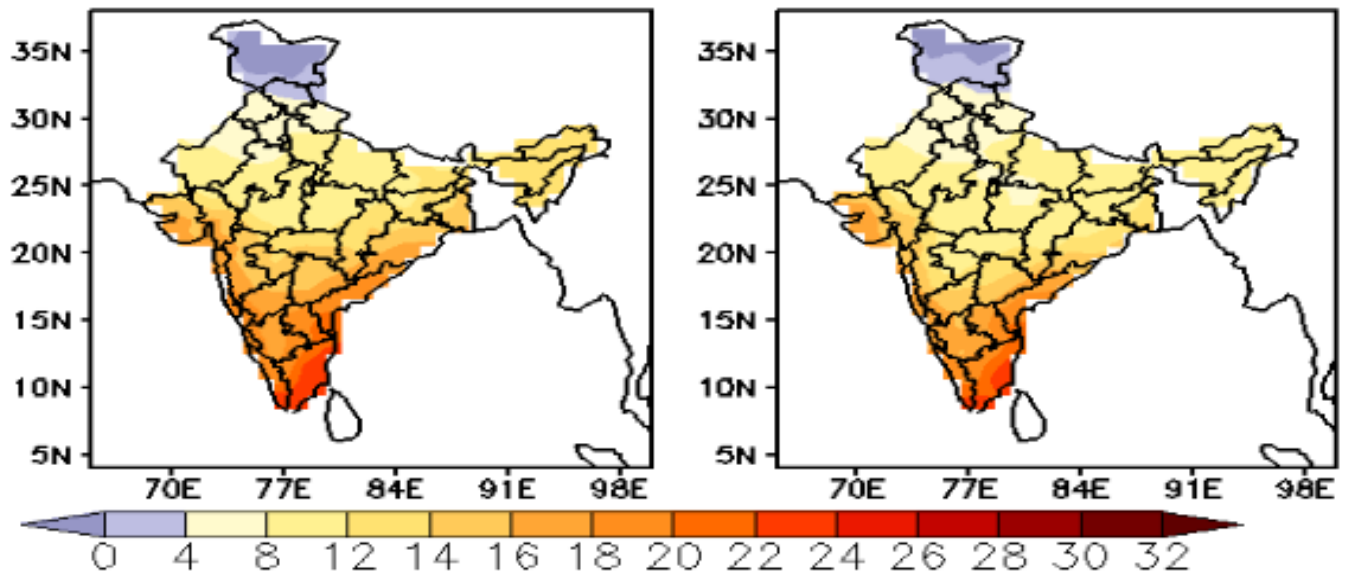


Extended range forecast of weekly distribution of rainfall in mm per day (top panel) and anomalies (lower panels) from IMD MME

MME Bias corrected forecast Tmin (Deg C)

(Week1: 08Dec-14Dec)

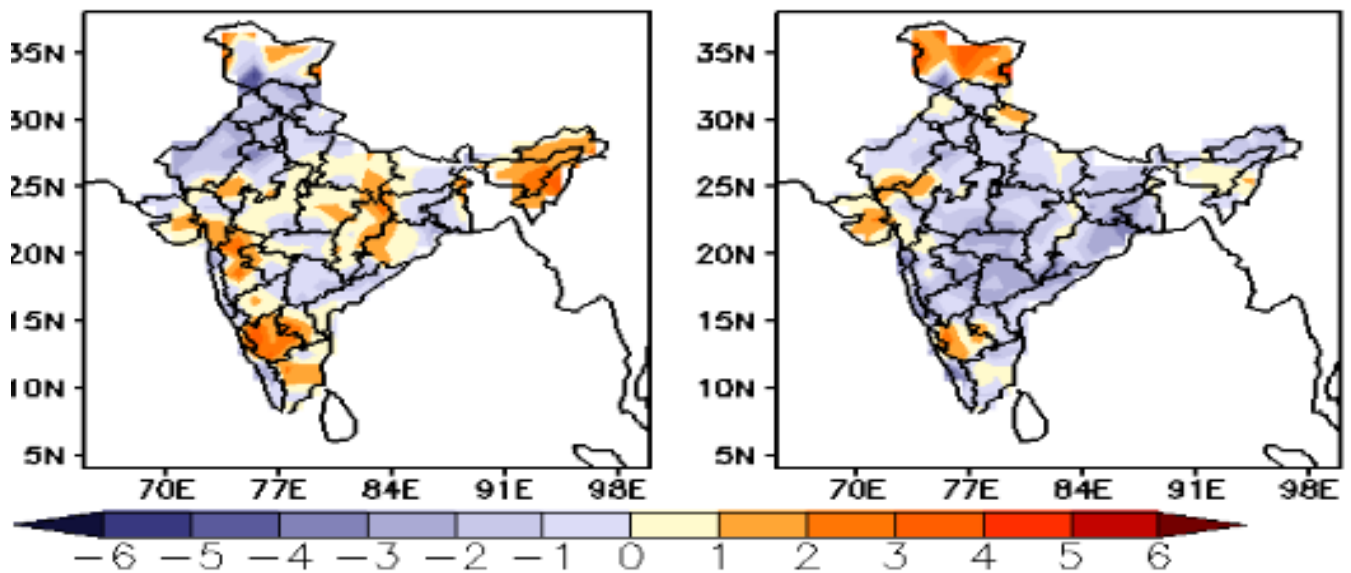
(Week2: 15Dec-21Dec)



MME forecast Tmin anomaly (Deg C)

(Week1: 08Dec-14Dec)

(Week2: 15Dec-21Dec)



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