



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

**Dated: 17 December, 2020**

**Current Weather Status and Outlook for next two weeks (17 to 30 December, 2020)**

**Significant Features of past week (10 to 16 December, 2020)**

- Two Western Disturbances and their induced cyclonic circulations in quick succession caused fairly widespread to widespread rainfall/snowfall/ thunderstorm activity over Western Himalayan Region and isolated to scattered rainfall/thunderstorm activity over adjoining plains of Northwest India during the 1<sup>st</sup> half of the week.
- An easterly waves caused scattered to fairly widespread rainfall/thunderstorm activity over Andaman & Nicobar Islands and isolated to scattered rainfall/thunderstorm activity over extreme south Peninsula and Lakshadweep islands during the week.
- Due to trough and wind confluence over central parts of the country, Central India received excess rainfall by 112% above Long Period Average (LPA) during past week.

**Weekly Rainfall Scenario (10 to 16 December, 2020)**

During the week, rainfall for the country as a whole was above LPA by 3%.

Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	4.6	4.5	3%
Northwest India	8.7	4.6	90%
Central India	4.0	1.9	112%
South Peninsula	2.7	8.8	-70%
East & northeast India	0.4	4.4	-92%

The Meteorological sub-division-wise rainfall for the week is given in **Annexure I**.

### Seasonal Rainfall Scenario (01 October to 16 December, 2020)

For the country as a whole, cumulative rainfall during this year's post-monsoon season upto 16 December, 2020 is above LPA by 5%. Details of the rainfall distribution over the four broad geographical regions of India are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	121.4	116.0	5%
Northwest India	30.7	42.4	-28%
Central India	84.8	73.9	15%
South Peninsula	310.3	267.2	16%
East & northeast India	140.5	160.7	-13%

Cumulative seasonal rainfall is given in **Annexure II**.

### Weekly minimum Rainfall Scenario (10 to 16 December, 2020)

- The minimum temperatures were near normal over most parts of the country outside northeastern states & parts of east India, where these were above normal by 2-3°C (**Annexure III**). However, towards end of the week, cold wave/cold day condition prevailed at isolated pockets over northwest India with fall in minimum & maximum temperatures.

### Chief synoptic conditions as on 17 December, 2020

- A cyclonic circulation lies over Comorin area & adjoining Sri Lanka persists at lower tropospheric levels.
- A fresh feeble Western Disturbance is likely to affect Western Himalayan region from 20th December, 2020.

### Large scale features as on 17 December, 2020

- Currently, moderate La Niña conditions are prevailing over equatorial Pacific and Sea Surface Temperatures (SSTs) are below normal over central and eastern equatorial Pacific Ocean. The latest Monsoon Mission Climate Forecasting System (MMCFS) forecast indicates that colder than normal SST anomaly is most likely to persist over the Nino 3.4 region and La Niña conditions likely to during coming seasons.
- At present, neutral Indian Ocean Dipole (IOD) conditions are observed over Indian Ocean and the latest MMCFS forecast indicates neutral IOD conditions are likely to continue during the coming months.

- The Madden Julian Oscillation (MJO) index is in Phase 6 with weak amplitude. As per the latest projections, it is likely to be in Phase 6 with weak amplitude during next one week.

### Forecast for next two week

#### Weather systems & associated Precipitation during Week 1 (17 to 23 December, 2020) and Week 2 (24 to 30 December, 2020)

##### **Rainfall for week 1: (17 to 23 December, 2020)**

- Under the influence of the easterly wave, scattered to fairly widespread rain/thundershowers very likely over Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep area during next 3 days. **Isolated heavy to very heavy rainfall very likely over Tamil Nadu, Puducherry & Karaikal on 17<sup>th</sup> December and isolated heavy falls on 18<sup>th</sup> & 19<sup>th</sup> December and over Kerala & Mahe on 18<sup>th</sup> December and over Lakshadweep on 19<sup>th</sup> & 20<sup>th</sup> December, 2020.**
- A fresh feeble Western Disturbance is very likely to cause light rain/snow over Western Himalayan region on 20<sup>th</sup> & 21<sup>st</sup> December, 2020.
- No significant rainfall likely over remaining parts of the country during the week (**Annexure IV**).
- **Cumulatively, above normal rainfall likely over south peninsula and below normal rain/snow likely over Western Himalayan Region during week 1 (Annexure V).**

##### **Rainfall for week 2: (24 to 30 December, 2020)**

- **Due to the absence of any active Western Disturbance, near normal rain/snow also likely over Western Himalayan Region Under the influence of fresh easterly wave, normal to above normal rainfall activity likely over south peninsula (Annexure V).**

##### **Temperature/fog for week 1 & 2: (17 to 30 December, 2020)**

- Minimum temperatures are between 2.0°C to 6.0°C over most parts of northwest India. These are markedly below normal (-5.0°C or less) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Himachal Pradesh; appreciably below normal (-3.1°C to -5.0°C) at a few places over West Rajasthan and West Uttar Pradesh and at isolated places over East Rajasthan, East Uttar Pradesh, Saurashtra & Kutch and Haryana, Chandigarh & Delhi; below normal (-1.6°C to -3.0°C) at a few places over Punjab and Uttarakhand.

- No significant change in minimum and maximum temperatures would occur over Northwest India during next 2 days and rise by 2-3°C in minimum temperatures and 5-6°C in maximum temperatures during subsequent 3 days. Fall in minimum temperatures by 3-5°C would occur over East Madhya Pradesh, Vidharbha and Chhattisgarh and by 4-6°C over East India during first half of the 1<sup>st</sup> week. Fall in minimum temperatures by 2-3°C would occur over West India during next 2 days.
- Overall week as a whole, **the minimum temperatures would be below normal by 2-6°C over most parts of northwest, central & east India and near normal or slightly above normal over remaining parts of the country during week 1.**
- **Cold Wave to Severe Cold Wave conditions would occur in some pockets over Punjab, Haryana & Chandigarh, West Uttar Pradesh and north Rajasthan during first half of the 1<sup>st</sup> week and decrease thereafter.**
- **Cold Day to Severe Cold Day conditions would occur in some to many pockets over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan and northwest Uttar Pradesh during next 2 days and abate thereafter.**
- During week 2, there would be slight rise in minimum temperatures as compare to week 1. However, **the minimum temperatures would be below normal by 2-4°C over most parts of northwest, central & east India and near normal or slightly above normal over remaining parts of the country (Annexure VI).**

#### **Cyclogenesis:**

- There is low probability of cyclogenesis over south Andaman Sea and adjoining southeast Bay of Bengal during first half of week 2.

**Next weekly update will be issued on next Thursday i.e. 24 December, 2020**

# Annexure I

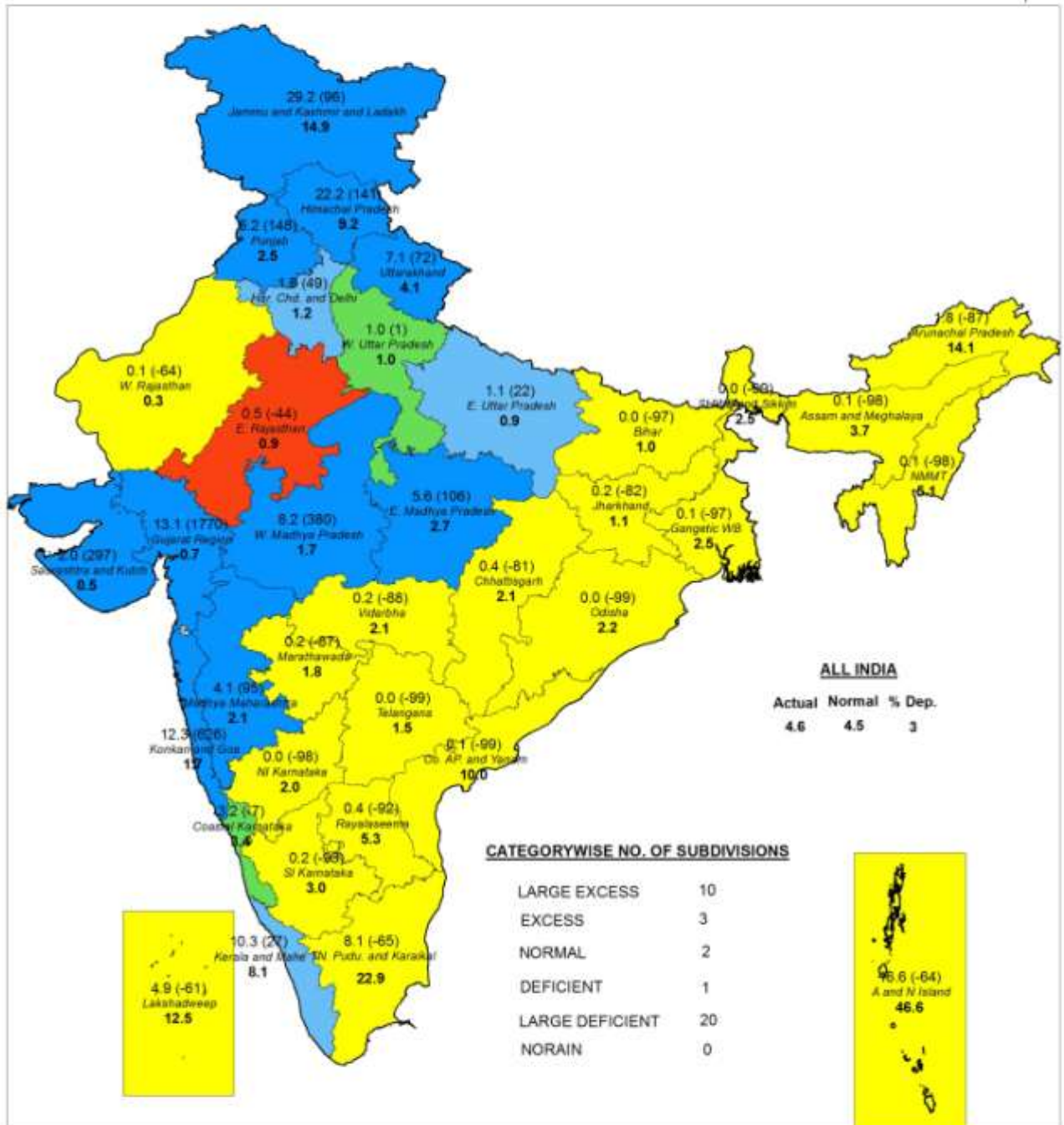


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## SUBDIVISION RAINFALL MAP

Week : 10-12-2020 To 16-12-2020



### 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 :

- Rainfall figures are based on operation data.
- Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- Percentage Departures of rainfall are shown in brackets.

# Annexure II

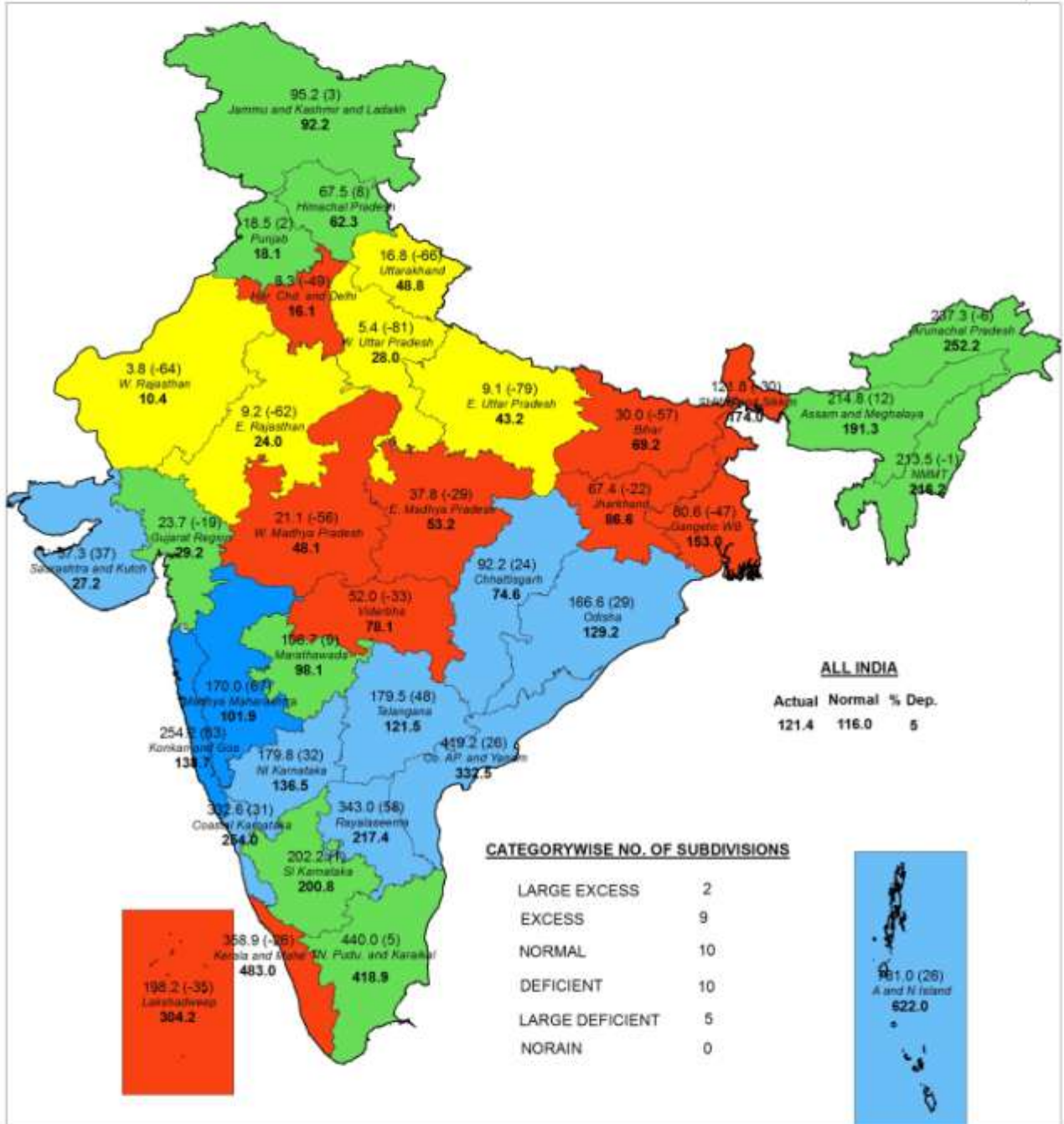


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## SUBDIVISION RAINFALL MAP

Period : 01-10-2020 To 16-12-2020



### Legend

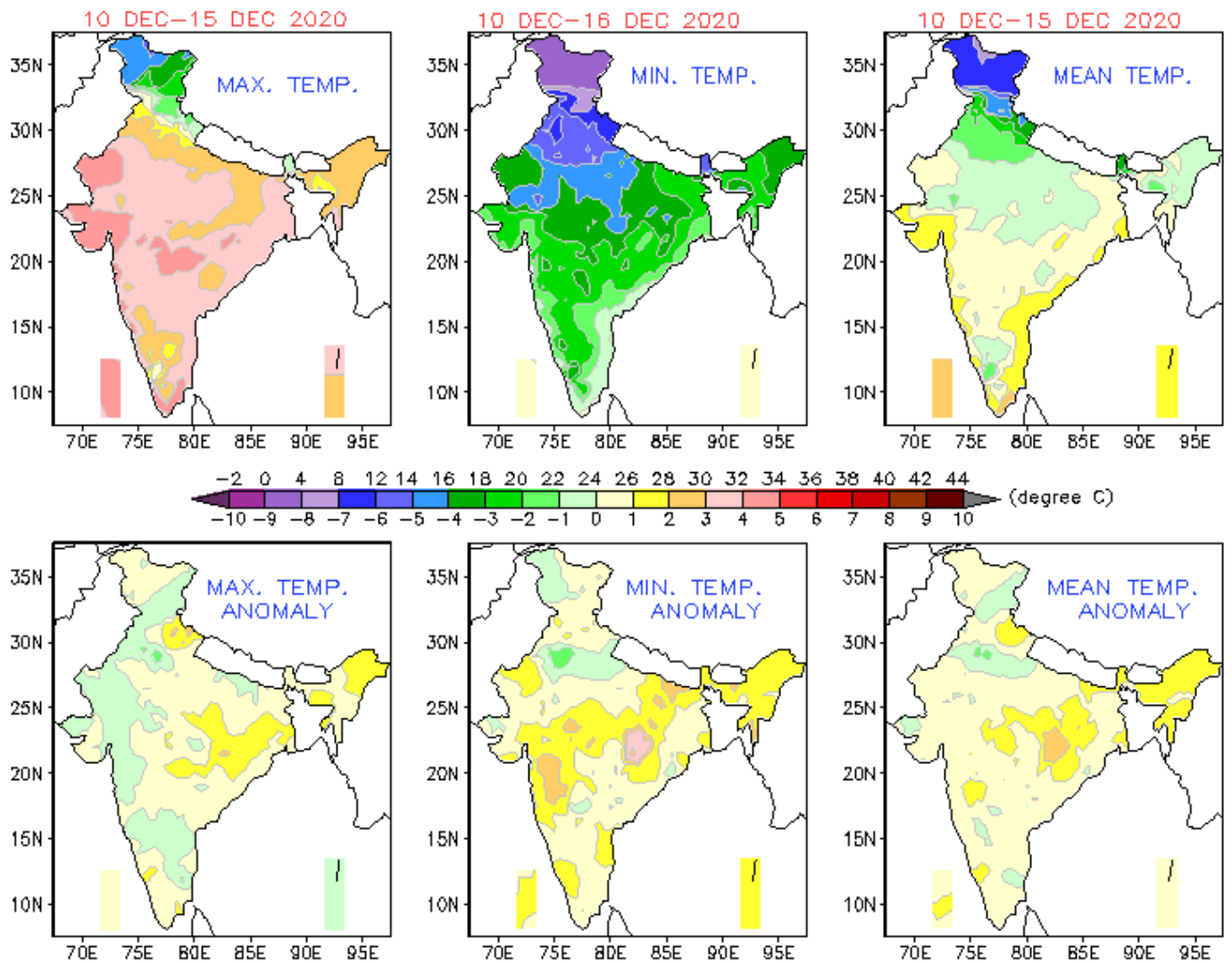
Large Excess [ 60% or more] Excess [ 20% to 59%] Normal [-19% to 19%] Deficient [-59% to -20%] Large Deficient [-99% to -60%] No Rain [-100%] No Data

### NOTES :

- Rainfall figures are based on operation data.
- Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- Percentage Departures of rainfall are shown in brackets.

### Annexure III

#### TEMPERATURE FOR WEEK ENDING 16 DEC & ITS ANOMALY



## Annexure IV

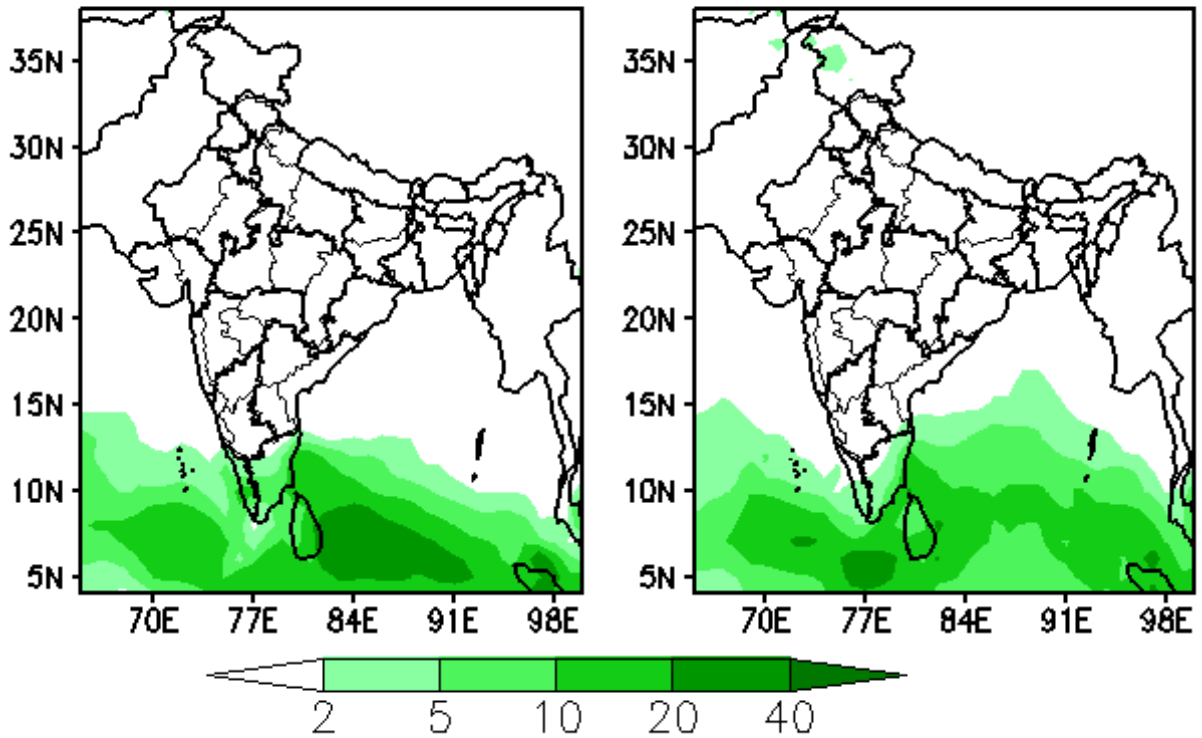
METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2020								
Sr. No	MET.SUB-DIVISIONS	17 DEC	18 DEC	19 DEC	20 DEC	21 DEC	22 DEC	23 DEC
1	ANDAMAN & NICO.ISLANDS	FWS	FWS	SCT	SCT	ISOL	ISOL	ISOL
2	ARUNACHAL PRADESH	SCT	ISOL	D	D	D	D	D
3	ASSAM & MEGHALAYA	ISOL <sup>F</sup>	D <sup>F</sup>	D <sup>F</sup>	D	D	D	D
4	NAGA.MANI.MIZO.& TRIPURA	D <sup>F</sup>	D <sup>F</sup>	D <sup>F</sup>	D	D	D	D
5	SUB-HIM.W. BENG. & SIKKIM	D	D	ISOL	D	D	D	D
6	GANGETIC WEST BENGAL	D	D	D	D	D	D	D
7	ODISHA	D	D	D	D	D	D	D
8	JHARKHAND	D	D	D	D	D	D	D
9	BIHAR	D	D	D	D	D	D	D
10	EAST UTTAR PRADESH	D↓	D↓	D↓	D	D <sup>F</sup>	D	D
11	WEST UTTAR PRADESH	D↓.	D↓.	D↓.	D↓	D <sup>F</sup>	D	D
12	UTTARAKHAND	D <sup>F</sup>	D	D	D	D	D	D
13	HARYANA CHD. & DELHI	D↓	D↓.	D↓.	D↓	D <sup>F</sup>	D	D
14	PUNJAB	D↓	D↓.	D↓.	D↓	D <sup>F</sup>	D	D
15	HIMACHAL PRADESH	D <sup>F</sup>	D	D	D	ISOL	D	D
16	JAMMU & KASHMIR AND LADAKH	D	D	D	ISOL	ISOL	D	D
17	WEST RAJASTSAN	D↓	D↓.	D↓.	D↓	D	D	D
18	EAST RAJASTSAN	D↓	D↓.	D↓.	D↓	D	D	D
19	WEST MADHYA PRADESH	D	D↓	D↓	D	D	D	D
20	EAST MADHYA PRADESH	D	D↓	D↓	D	D	D	D
21	GUJARAT REGION	D	D	D	D	D	D	D
22	SAURASTRA & KUTCH	D	D	D	D	D	D	D
23	KONKAN & GOA	D	D	D	D	D	D	D
24	MADHYA MAHARASHTRA	D	D	D	D	D	D	D
25	MARATHAWADA	D	D	D	D	D	D	D
26	VIDARBHA	D	D	D	D	D	D	D
27	CHHATTISGARH	D	D	D	D	D	D	D
28	COASTAL ANDHRA PR. & YANAM	ISOL	D	D	D	D	D	D
29	TELANGANA	D	D	D	D	D	D	D
30	RAYALASEEMA	ISOL	D	D	D	D	D	D
31	TAMIL. PUDU. & KARAICAL	FWS <sup>L**</sup>	FWS <sup>L*</sup>	SCT <sup>L*</sup>	ISOL	ISOL	ISOL	SCT
32	COASTAL KARNATAKA	ISOL	D	D	D	D	D	D
33	NORTH INTERIOR KARNATAKA	D	D	D	D	D	D	D
34	SOUTH INTERIOR KARNATAKA	ISOL	ISOL	D	D	D	D	D
35	KERALA & MAHE	FWS <sup>L</sup>	FWS <sup>L*</sup>	SCT <sup>L</sup>	ISOL	ISOL	ISOL	ISOL
36	LAKSHADWEEP	FWS <sup>L</sup>	FWS <sup>L</sup>	FWS <sup>L*</sup>	SCT <sup>L*</sup>	SCT	D	D
LEGENDS:								
WS - WIDE SPREAD / MOST PLACES (76-100%)			FWS - FAIRLY WIDE SPREAD / MANY PLACES (51% to 75%)					
SCT - SCATTERED / FEW PLACES (26% to 50%)			ISOL - ISOLATED (up to 25%)				D / DRY - NO RAINFALL	
* Heavy Rainfall (64.5-115.5 mm)		** Heavy to Very Heavy Rainfall (115.6-204.4 mm)			*** Extremely Heavy Rainfall (204.5 mm or more)			
<sup>F</sup> Fog	<sup>*</sup> Snowfall	<sup>D</sup> Duststorm	<sup>S</sup> Thunderstorm with Squall	<sup>L</sup> Thunderstorm with Lightning			<sup>#</sup> Thunderstorm with Hail	
↓ Cold Wave (Minimum temperature departure from Normal -4.5°C to -6.4°C)				↓ - Severe Cold Wave (Minimum temperature departure from Normal ≤ -6.5°C)				
↑ Heat Wave (Maximum temperature departure from Normal +4.5°C to +6.4°C)				↑ Severe Heat Wave (Maximum temperature departure from Normal ≥ +6.5°C)				



### Forecast Rainfall (mm/day)

(Week1: 18Dec-24Dec)

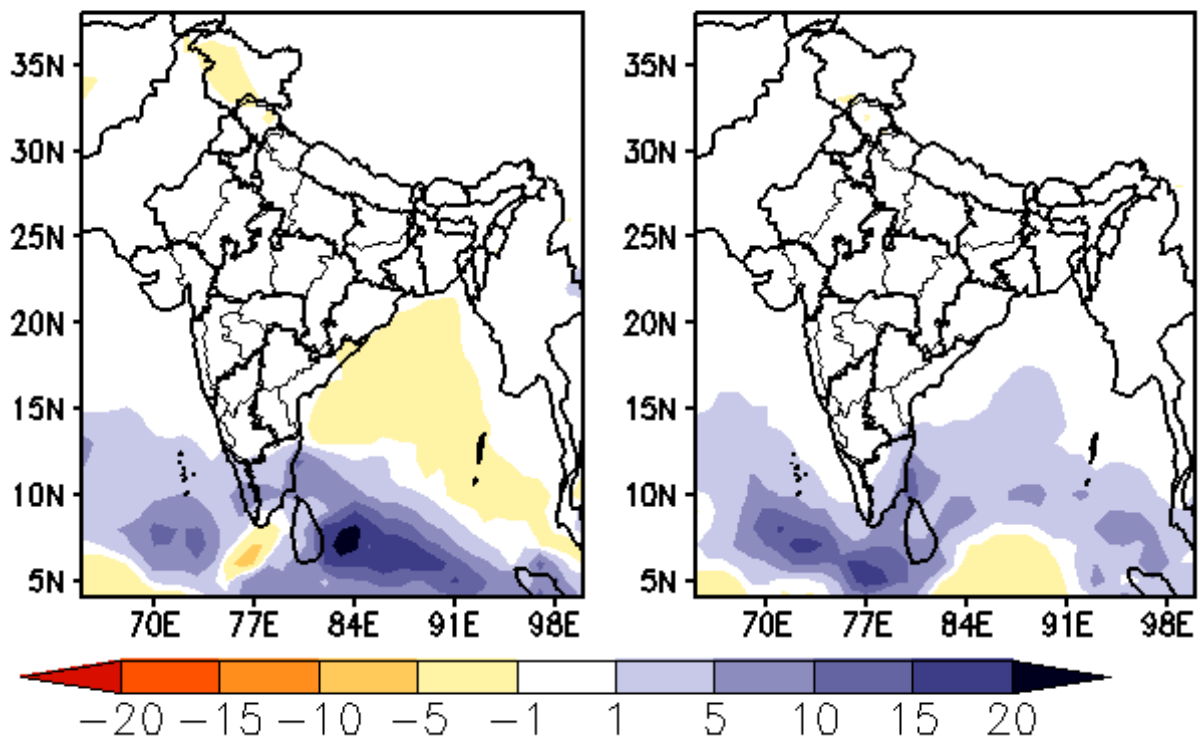
(Week2: 25Dec-31Dec)



### Forecast Rainfall Anomaly (mm/day)

(Week1: 18Dec-24Dec)

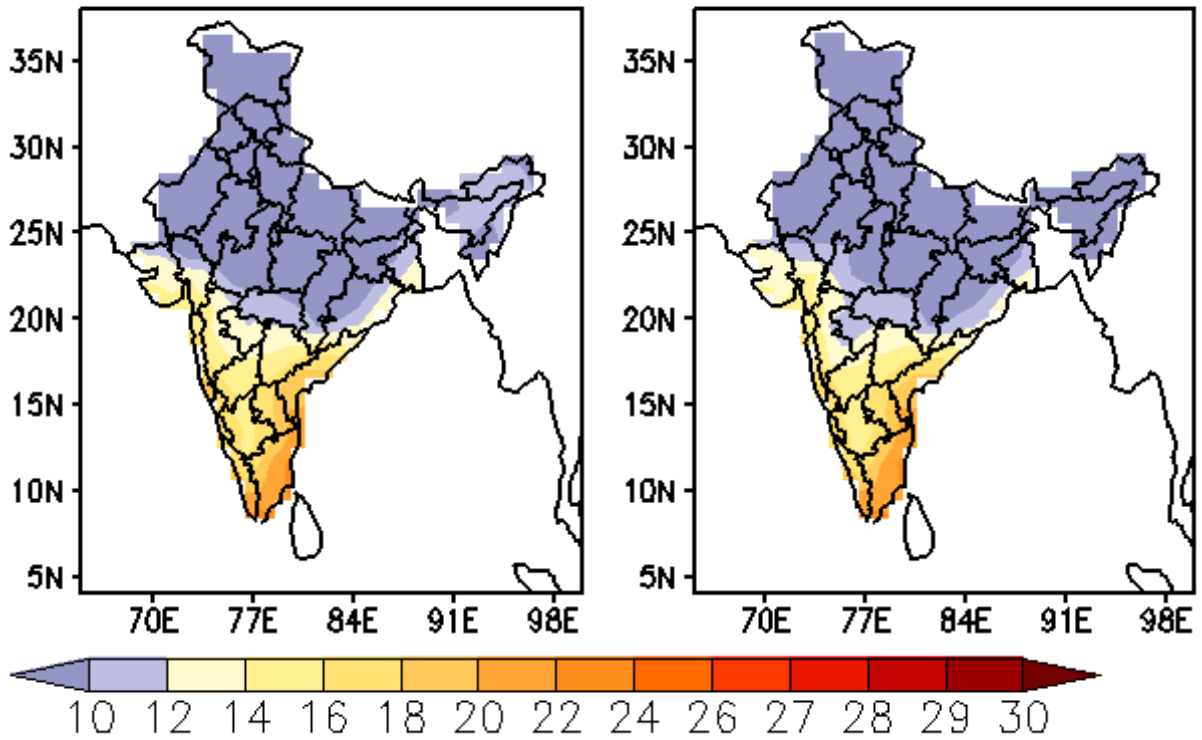
(Week2: 25Dec-31Dec)



**MME Bias corrected forecast Tmin (Deg)**

(Week1: 18Dec-24Dec)

(Week2: 25Dec-31Dec)



**MME forecast Tmin anomaly (Deg C)**

(Week1: 18Dec-24Dec)

(Week2: 25Dec-31Dec)

