



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

**Dated: 31 December, 2020**

**Subject: Current Weather Status and Outlook for next two weeks (31 December, 2020 to 13 January, 2021)**

**Salient Features**

- **Dense to very dense fog** occurred over Punjab, Haryana, Chandigarh & Delhi, West Rajasthan and Uttar Pradesh during many days of the past week (24 to 30 December, 2020).
- **Cold Wave to Severe Cold Wave and Cold Day to Severe Cold Day** occurred over Punjab, Haryana, Chandigarh & Delhi, Rajasthan and Uttar Pradesh during many days of the week.
- Rainfall for the country as a whole was 73% below Long Period Average (LPA) during past week.
- An active Western Disturbance likely to affect northwest India from 03rd January, 2021 onwards. It is very likely to cause light/moderate scattered to fairly widespread rainfall/snowfall over Western Himalayan region during 03rd-06th January, 2021.
- Due to interaction between the above Western Disturbance and lower level easterlies from Bay of Bengal, scattered to fairly widespread rainfall accompanied with thunderstorm/hailstorm at isolated places likely over northwest India during 02nd-05th January, 2021.
- Due to likely southeasterlies winds over Northwest and Central India, minimum temperatures very likely to rise gradually by 3-5°C over most parts of Northwest and Central India during the week.. As a result, prevailing cold wave conditions likely to abate from 2<sup>nd</sup> January, 2021 onwards.

**Weekly Rainfall Scenario (24 to 30 December, 2020)**

During the week, rainfall for the country as a whole was below LPA by 73%. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	1.1	4.3	-73%
Northwest India	3.1	8.3	-62%
Central India	0.0	1.1	-100%
South Peninsula	0.9	4.0	-77%
East & northeast India	0.0	4.0	-99%

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

### Seasonal Rainfall Scenario (01 October to 30 December, 2020)

For the country as a whole, cumulative rainfall during this year's post-monsoon season upto 30 December, 2020 is above LPA by 1%. 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	124.1	123.3	1%
Northwest India	33.8	55.1	-39%
Central India	84.9	75.9	12%
South Peninsula	317.9	276.6	15%
East & northeast India	142.1	166.5	-15%

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

### Chief synoptic conditions as on 31 December, 2020

- A Western Disturbance as a cyclonic circulation lies over north Pakistan and adjoining Jammu & Kashmir between 3.1 & 3.6 km above mean sea level with a trough aloft in mid & upper tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long. 71°E to the north of Lat. 30°N.
- A fresh Western Disturbance is likely to affect Western Himalayan Region and adjoining plains from 03<sup>rd</sup> January, 2021.

### Large scale features as on 31 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 Nino 3.4 region and La Niña conditions likely 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 2 with weak amplitude. As per the latest projections, it is likely to be in Phase 2 with weak amplitude during next one week.

### Forecast for next two week

#### Weather systems & associated Precipitation during Week 1 (31 December, 2020 to 06 January, 2021) and Week 2 (07 to 13 January, 2021)

##### **Rainfall for week 1: (31 December, 2020 to 06 January, 2021)**

- A fresh active Western Disturbance likely to affect Western Himalayan Region & adjoining plains from 03rd January, 2021 onwards. It is very likely to cause light/moderate scattered to fairly widespread rainfall/snowfall over Western Himalayan region during 03rd-06th January, 2021.
- Due to interaction between the above Western Disturbance and lower level easterlies from Bay of Bengal, scattered to fairly widespread rainfall accompanied with thunderstorm/hailstorm at isolated places likely over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan, West Uttar Pradesh and northwest Madhya Pradesh during 02<sup>nd</sup>-05<sup>th</sup> with maximum intensity on 04th & 05th January, 2021..
- Under the influence of the weak easterly wave, light isolated to scattered rain/thundershowers very likely over Tamil Nadu, Puducherry & Karaikal and light isolated over Kerala & Mahe and Lakshadweep area during most days of the week.
- No significant rainfall likely over remaining parts of the country during the week (**Annexure III**).
- **Cumulatively, normal to above normal rainfall likely over central India and south peninsula and below normal rain/snow likely over Western Himalayan Region during week 1 (Annexure IV).**

##### **Rainfall for week 2: (07 to 13 January, 2021)**

- **Due to the absence of any active Western Disturbance, below normal rain/snow also likely over Western Himalayan Region and normal to above normal rainfall likely over central India (Annexure IV).**

##### **Temperature/fog for week 1 & 2: (31 December, 2020 to 13 January, 2021)**

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

many places over Uttarakhand, Punjab and West Uttar Pradesh; at a few places over Sub-Himalayan West Bengal & Sikkim; at isolated places over Gujarat region and near normal over rest parts of the country.

- 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.
- Due to likely southeasterlies winds over Northwest and Central India, minimum temperatures very likely to rise gradually by 3-5°C over most parts of Northwest and Central India during the week. However, fall in minimum temperatures over most parts of East India by 2-3°C very likely during next 2 days and no significant change thereafter.
- Overall week as a whole, **the minimum temperatures would be below normal by 2-4°C over most parts of the country outside parts of central, northeast & south Peninsular India, where these are likely to be normal to above normal.**
- **Cold Wave to Severe Cold Wave conditions in isolated to some pockets very likely over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan and West Madhya Pradesh during next 24 hours and abatement of Cold Wave conditions from these regions thereafter.**
- **Cold Day to Severe Cold Day conditions in isolated to some pockets very likely over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and West Madhya Pradesh during next 2 days.**
- 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 2-3°C over most parts of the country outside parts of central, northeast & south Peninsular India, where these are likely to be normal to above normal (Annexure V).**

#### **Cyclogenesis:**

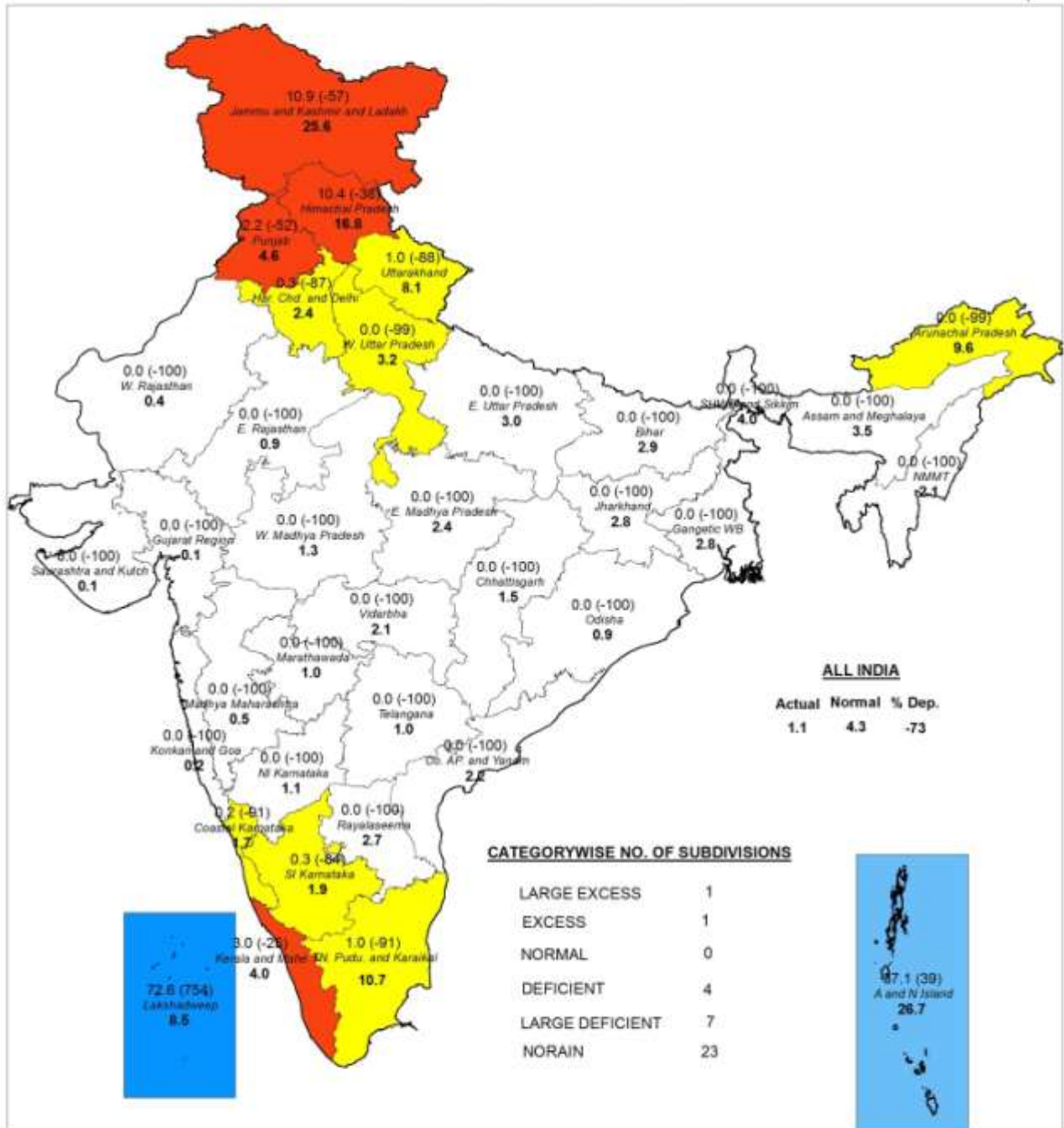
- No cyclogenesis is likely over the north Indian Ocean during next two weeks.

**Next weekly update will be issued on next Thursday i.e. 07 January, 2020**



**SUBDIVISION RAINFALL MAP**

Week : 24-12-2020 To 30-12-2020



**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 :**

- 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.



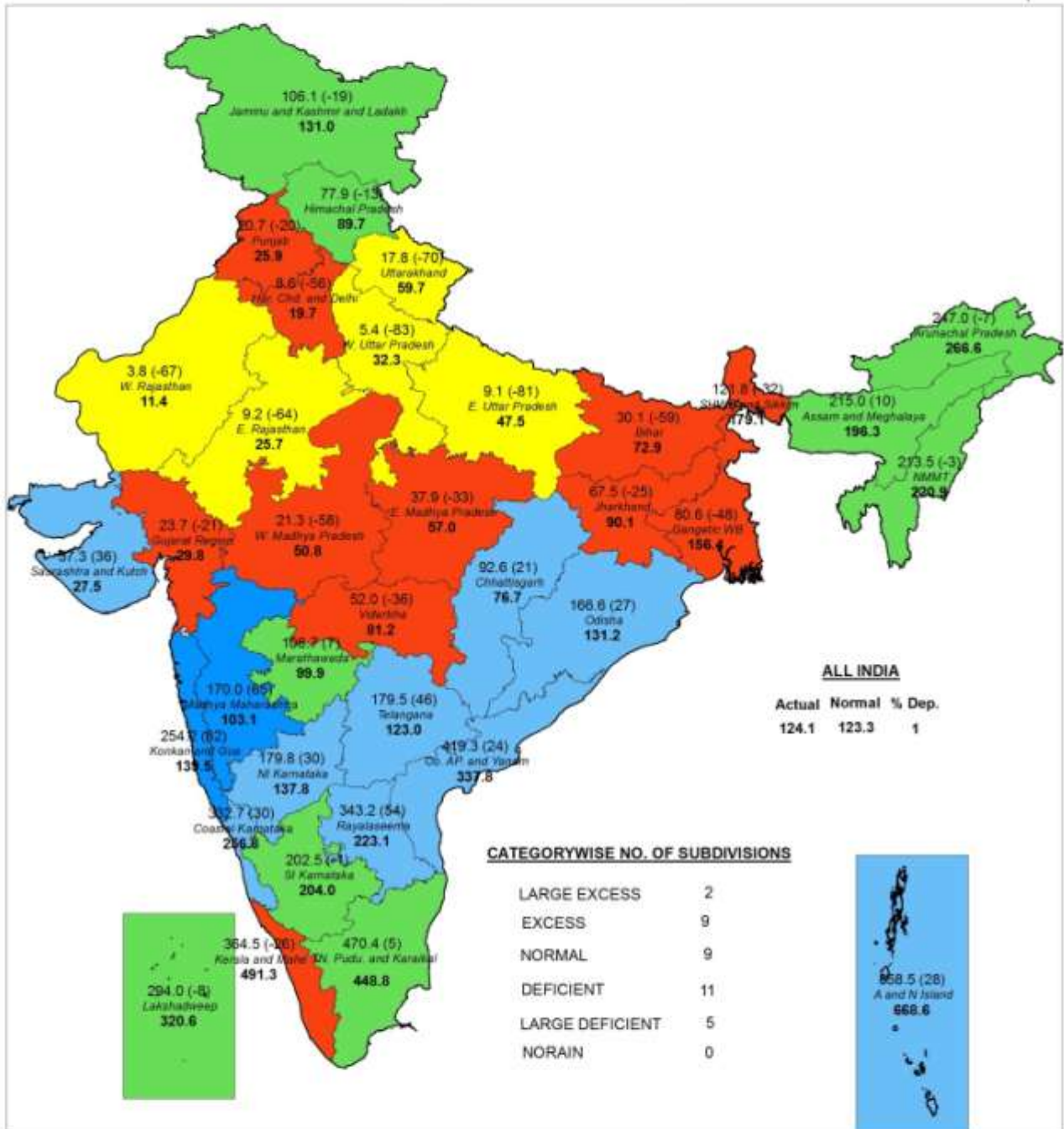


भारत मौसम विज्ञान विभाग  
INDIA METEOROLOGICAL DEPARTMENT

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

**SUBDIVISION RAINFALL MAP**

Period : 01-10-2020 To 30-12-2020



**Legend**

Large Excess [ 80% 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.

## Annexure III

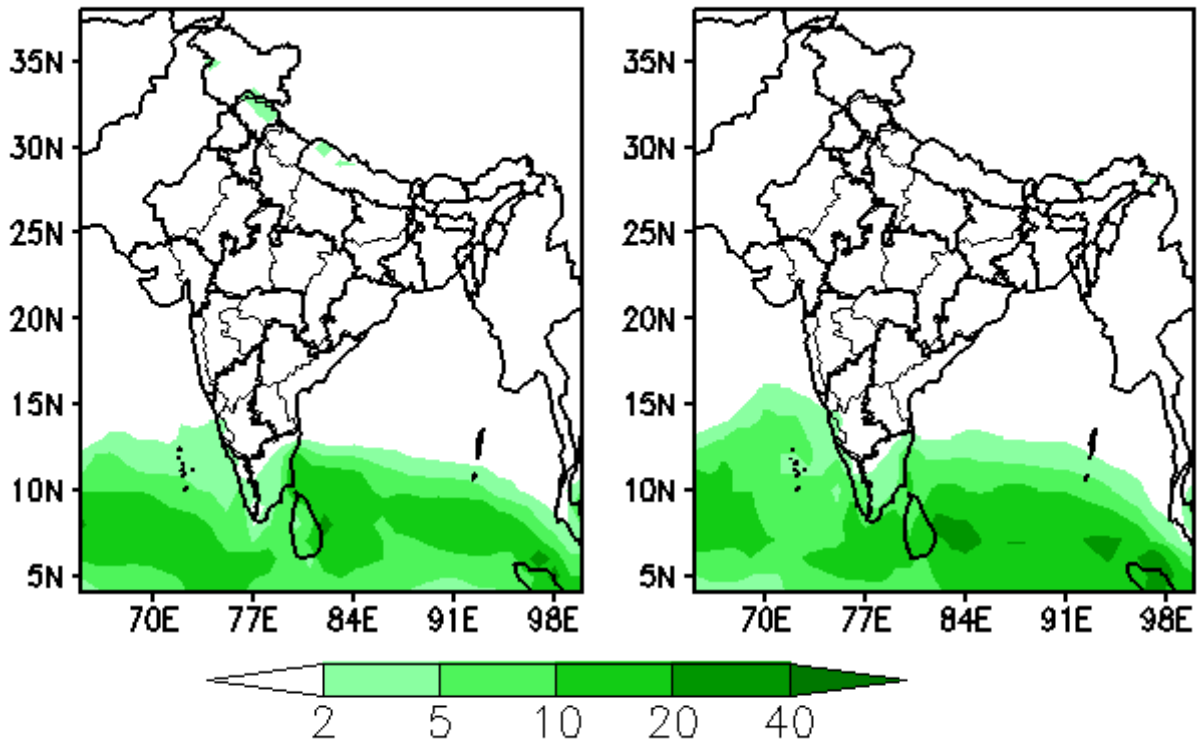
## METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST &amp; Wx. WARNINGS-2020-21

Sr. No	MET.SUB-DIVISIONS	31 DEC	01 JAN	02 JAN	03 JAN	04 JAN	05 JAN	06 JAN
1	ANDAMAN & NICO.ISLANDS	SCT	SCT	ISOL	ISOL	ISOL	SCT	SCT
2	ARUNACHAL PRADESH	D	D	D	D	D	D	D
3	ASSAM & MEGHALAYA	D <sup>F</sup>	D <sup>F</sup>	D	D	D	D	D
4	NAGA.MANI.MIZO.& TRIPURA	D <sup>F</sup>	D <sup>F</sup>	D	D	D	D	D
5	SUB-HIM.W. BENG. & SIKKIM	D	D	D	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 <sup>F</sup>	D <sup>F</sup>	D	D	D	D	D
10	EAST UTTAR PRADESH	D <sup>F</sup> ↓	D <sup>F</sup>	ISOL	ISOL	ISOL	D	D
11	WEST UTTAR PRADESH	D <sup>F</sup> ↓	ISOL <sup>F</sup> ↓	ISOL <sup>L</sup>	SCT <sup>#</sup>	FWS <sup>#</sup>	SCT	ISOL
12	UTTARAKHAND	D <sup>F</sup>	D	ISOL	ISOL	FWS	FWS	SCT
13	HARYANA CHD. & DELHI	D <sup>F</sup> ↓	ISOL <sup>F</sup>	ISOL <sup>L</sup>	SCT <sup>#</sup>	WS <sup>#</sup>	FWS	ISOL
14	PUNJAB	D <sup>F</sup> ↓	D <sup>F</sup>	ISOL <sup>L</sup>	SCT <sup>#</sup>	WS <sup>*#</sup>	FWS	SCT
15	HIMACHAL PRADESH	D ↓	D	ISOL	ISOL	FWS	FWS	SCT
16	JAMMU & KASHMIR AND LADAKH	D	D	ISOL	ISOL <sup>L</sup>	WS <sup>*/**</sup>	FWS	SCT
17	WEST RAJASTSAN	D ↓	D	ISOL	ISOL	ISOL	ISOL	D
18	EAST RAJASTSAN	D ↓	ISOL	ISOL <sup>L</sup>	SCT <sup>L</sup>	SCT <sup>#</sup>	ISOL	D
19	WEST MADHYA PRADESH	D <sup>F</sup> ↓	ISOL	ISOL <sup>L</sup>	ISOL <sup>L</sup>	ISOL <sup>L</sup>	D	D
20	EAST MADHYA PRADESH	D	D	D	D	D	D	D
21	GUJARAT REGION	D	D	ISOL	ISOL	D	D	D
22	SAURASTRA & KUTCH	D	D	D	D	D	D	D
23	KONKAN & GOA	ISOL	D	D	D	D	D	D
24	MADHYA MAHARASHTRA	D	ISOL	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	D	D	D	D	D	D	D
29	TELANGANA	D	D	D	D	D	D	D
30	RAYALASEEMA	D	D	D	D	D	D	D
31	TAMIL. PUDU. & KARAIKAL	SCT <sup>*L</sup>	ISOL	ISOL	ISOL <sup>L</sup>	ISOL <sup>L</sup>	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 <sup>L</sup>	D	D	D	D	D	D
35	KERALA & MAHE	ISOL <sup>L</sup>	D	D	ISOL	ISOL <sup>L</sup>	ISOL	SCT
36	LAKSHADWEEP	SCT <sup>L</sup>	D	D	D	SCT <sup>L</sup>	SCT	SCT
<b>LEGENDS:</b>								
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: 01Jan-07Jan)

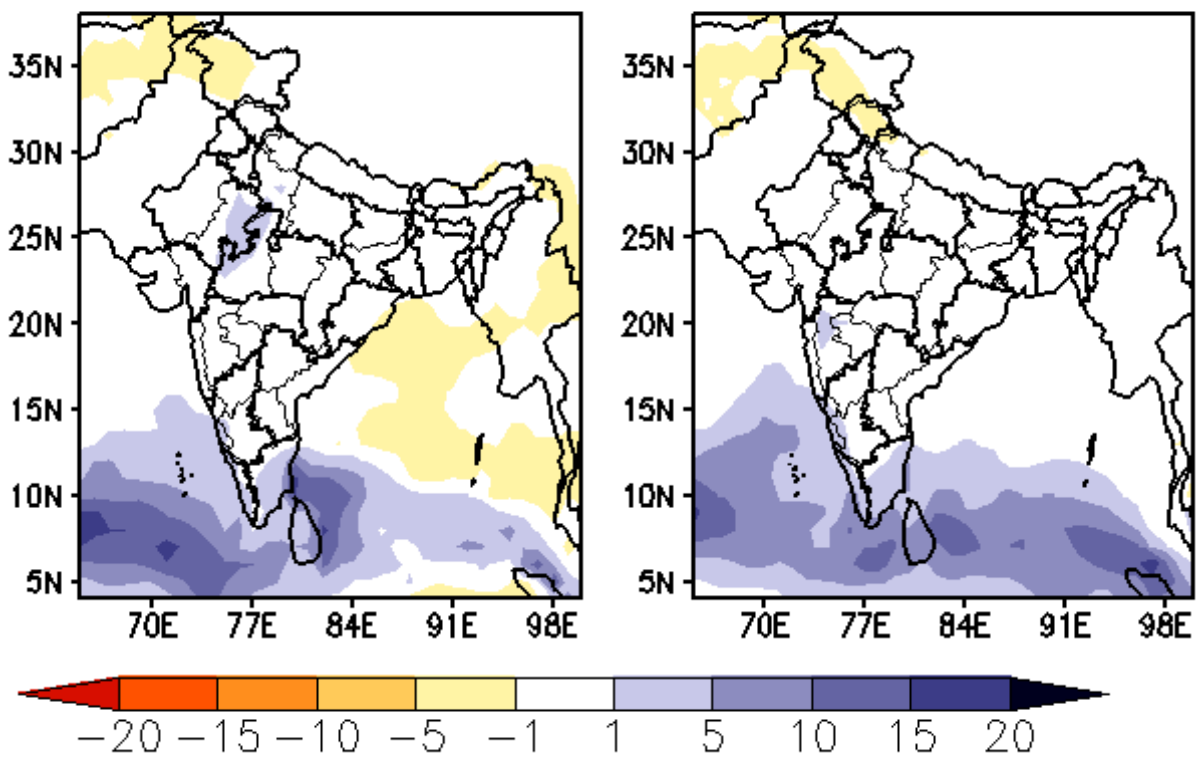
(Week2: 08Jan-14Jan)



### Forecast Rainfall Anomaly (mm/day)

(Week1: 01Jan-07Jan)

(Week2: 08Jan-14Jan)

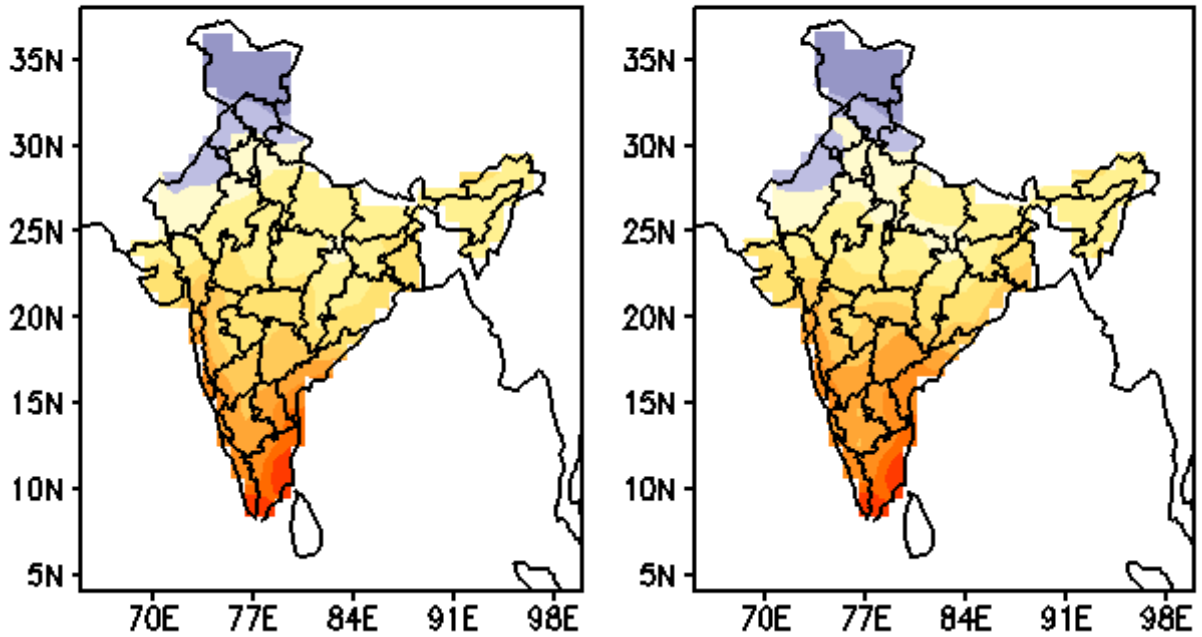




### MME Bias corrected forecast Tmin (Deg)

(Week1: 01Jan-07Jan)

(Week2: 08Jan-14Jan)



### MME forecast Tmin anomaly (Deg C)

(Week1: 01Jan-07Jan)

(Week2: 08Jan-14Jan)

