



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

Dated: 21 December, 2017

Current Weather Status and Outlook for next two weeks

Highlights of the past week

Fog

- Dense to Very Dense fog occurred at isolated places over Punjab, Haryana, Uttar Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura, Sub Himalayan West Bengal & Sikkim on three to four days, over Rajasthan, Uttarakhand and Bihar on two to three days and over Odisha, Chandigarh and Delhi on one day each during the week.

Cold Wave

- Severe cold wave conditions prevailed at many places over Punjab on one day and at isolated places on another day during the week.
- Cold wave conditions prevailed at isolated places over Haryana, West UP and northern parts of Rajasthan on one or two days during the week.
- The minimum temperature of 1.6 ° C recorded at Churu (West Rajasthan) on 17th December 2017 was the lowest minimum recorded in the plains during the week.

Cold Day

- Severe cold day conditions prevailed at many places over Punjab and Haryana and at isolated places over West Rajasthan and West Uttar Pradesh on one or two days during the week.
- Cold day conditions prevailed at most places over Punjab, West Rajasthan and Jammu Division and at isolated places over Rajasthan, Punjab, Chandigarh, West Uttar Pradesh and West Madhya Pradesh on one day each during the week.

Weekly Rainfall Scenario (14 to 20 December, 2017)

During the week, rainfall was below Long Period Average (LPA) by 79% over the country as a whole. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	0.6	3.0	-79%
Northwest India	1.2	3.9	-69%
Central India	0.0	1.0	-99%
South Peninsula	1.3	5.5	-77%
East & northeast India	0.1	3.0	-98%

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

Seasonal Rainfall Scenario (1 October to 20 December, 2017)

For the country as a whole, cumulative rainfall during this year's post-monsoon season 2017 upto 20 December is below LPA by 8%. Details of the rainfall distribution over the four broad homogeneous regions of India are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	112.1	121.3	-8%
Northwest India	26.4	51.6	-49%
Central India	72.3	78.2	-8%
South Peninsula	242.4	267.0	-9%
East & northeast India	200.9	166.2	21%

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

Chief synoptic conditions as on 21 December, 2017

- A Western Disturbance as a trough in middle and upper tropospheric westerlies runs roughly along Longitude 72.0°E to the north of Latitude 25.0°N.
- A cyclonic circulation lies over Bangladesh & adjoining Gangetic West Bengal between 1.5 km & 2.1 km above mean sea level.
- A cyclonic circulation lies over Gulf of Siam & neighbourhood between 3.1 km and 5.8 km above mean sea level. Under its influence, a low pressure area is likely to develop over south Andaman sea & adjoining southeast Bay of Bengal around 25th December.
- A fresh Western Disturbance likely to affect Western Himalayan region from 23rd December.

Large scale features as on 21 December, 2017

- La Niña conditions are prevailing currently and similar condition is likely to continue during next two weeks.
- Madden Julian Oscillation (MJO) is in phase 7 with amplitude more than 1 and is likely to move in phase 8 with decrease amplitude during the week.
- Indian Ocean Dipole (IOD) is in its negative phase (-0.5°C).

Forecast for next two week

Weather systems & associated Precipitation during Week 1(21 to 27 December 2017) and Week 2 (28 December to 03 January 2017)

- A Western Disturbance lies as a trough in middle and upper tropospheric westerlies roughly along Longitude 72.0°E to the north of Latitude 25.0°N. There is no Positive vorticity advection from Arabian Sea to Western Himalayan region (WHR). The divergence over the region is very less. Under above mentioned scenario, light isolated to scattered precipitation may occur over Jammu & Kashmir and Himachal Pradesh on today. Thereafter the system would move northeastwards away from WHR. Thereafter another Western Disturbances would affect WHR from 23rd & 24th and would cause very light precipitation over higher reaches of Jammu & Kashmir and Himachal Pradesh. 3rd Western Disturbances would affect Western Himalayan Region (WHR) from 26th & 27th December and may cause very light precipitation over higher reaches Jammu & Kashmir.
- As such, no induced Cyclonic Circulation would form over West Rajasthan & neighbourhood and no moisture feeding is likely to take place from Arabian Sea, **so no heavy precipitation is expected to occur over WHR and no rainfall over plains of northwest India during next one week.**
- Light isolated rainfall activity is likely over Tamilnadu.
- Light to moderate rainfall activity is very likely over Andaman & Nicobar Islands from 24th to 27th with isolated heavy falls on 24th & 25th (**Annexure III**).
- Overall normal rainfall activity is likely to be below normal over Western Himalayan region and extreme south Peninsula and above normal rainfall activity over Andaman & Nicobar Islands during week 1 (**Annexure IV**).
- During week 2, near normal rainfall activity is likely over Western Himalayan region and above normal over south Peninsula (**Annexure IV**).

Minimum temperature for week 1 & Week 2

- Due to likely northeastwards movement of current Western Disturbance, minimum temperatures would fall by 2-4°C over northwest India and Madhya Pradesh during first half of the 1st week and no significant change in its second half. Considering the prevailing temperature tendency, **Cold wave at isolated places very likely over**

Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh and Rajasthan on 23rd & 24th morning hours.

- **Overall, minimum temperature is likely to be slightly above normal over northwest & northeast India and below normal by about 2-3°C over most parts of remaining parts of country during 1st week (Annexure V).**
- **During 2nd week, similar scenario may continue except Western Himalayan region, where minimum temperature may rise by 2-4°C (Annexure V).**

Cyclogenesis:

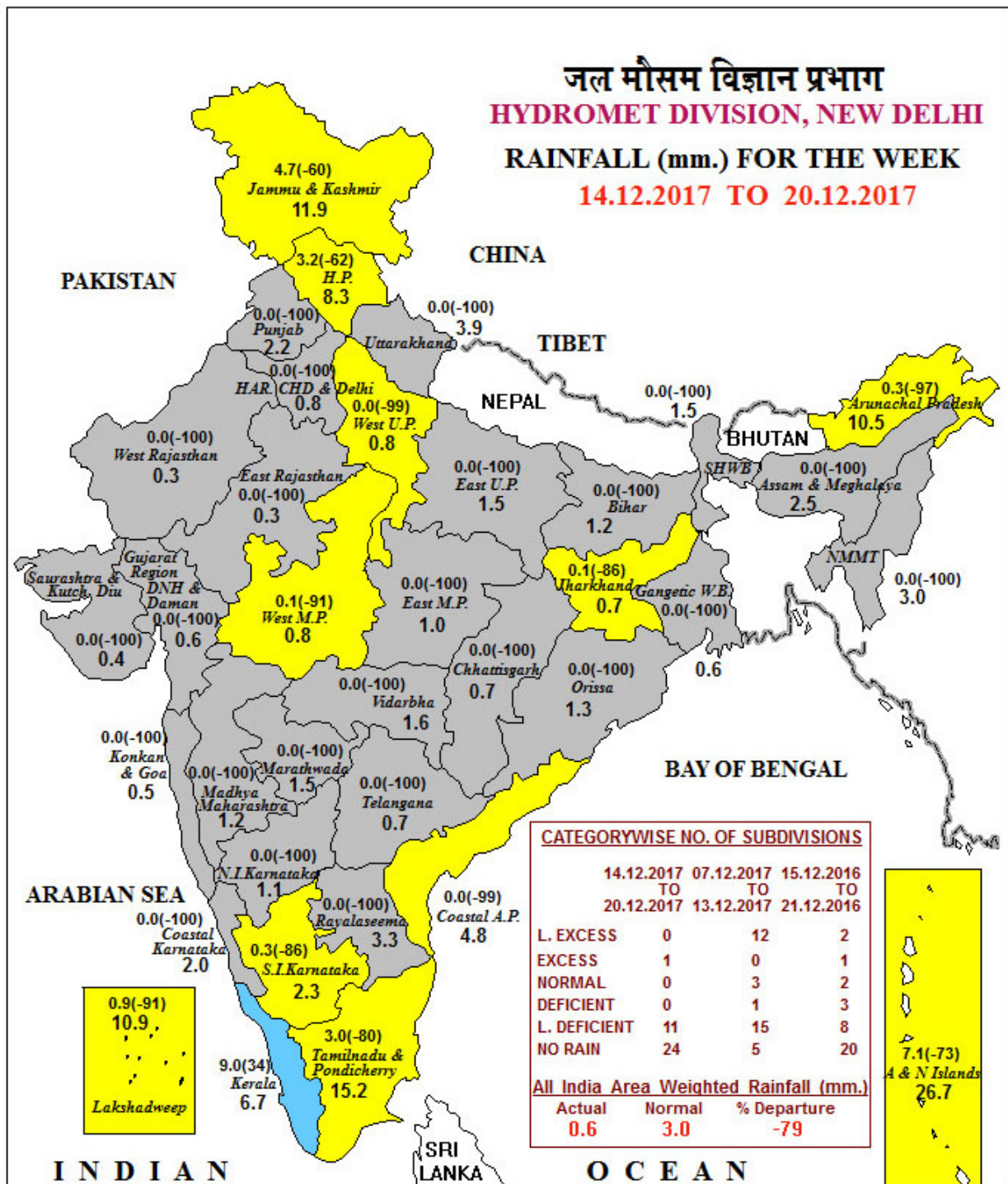
- a low pressure area is likely to develop over south Andaman sea & adjoining southeast Bay of Bengal around 25th December.

Northeast Monsoon rains:

- Northeast monsoon rainfall activity is likely to be below normal during next one week.

Next weekly update will be issued on next Thursday i.e. 28 December, 2017

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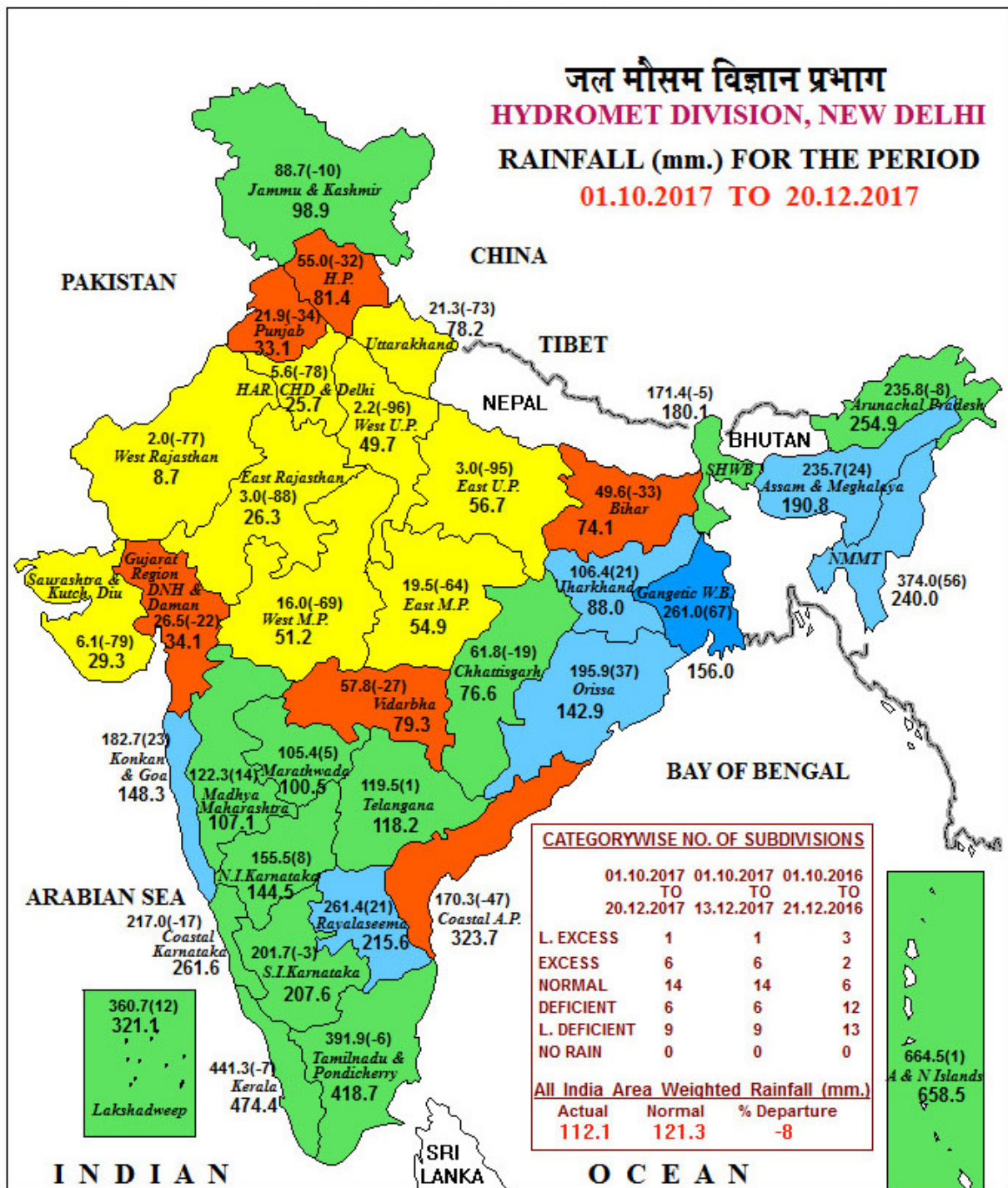
LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
 ■ DEFICIENT [-20% TO -59%] ■ L. DEFICIENT [-60% TO -99%] ■ NO RAIN [-100%] ■ NO DATA

NOTES:

(a) Rainfall figures are based on operational data.

(b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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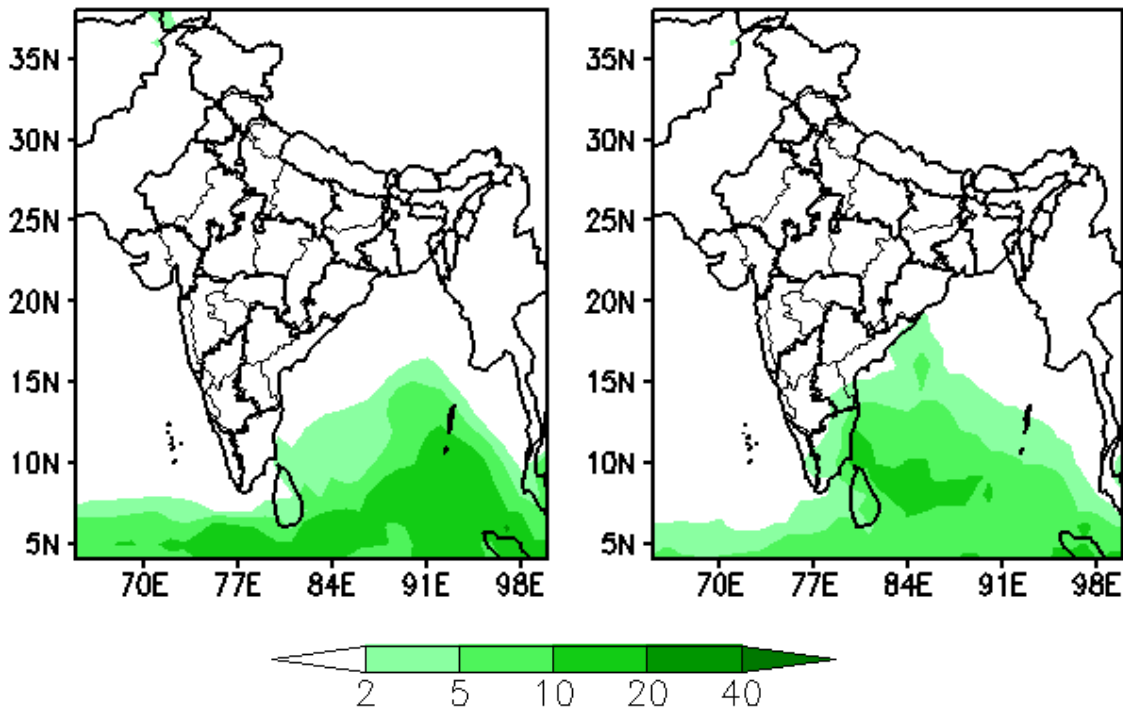
Annexure III

METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2017								
Sr. No	MET.SUB-DIVISIONS	21 DEC	22 DEC	23 DEC	24 DEC	25 DEC	26 DEC	27 DEC
1	ANDAMAN & NICO.ISLANDS	DRY	DRY	ISOL	FWS [•]	FWS [•]	SCT	ISOL
2	ARUNACHAL PRADESH	DRY	DRY	DRY	ISOL	ISOL	ISOL	ISOL
3	ASSAM & MEGHALAYA	DRY [•]	DRY [•]	DRY [•]	ISOL [•]	ISOL [•]	DRY	DRY
4	NAGA.MANI.MIZO.& TRIPURA	DRY [•]	DRY [•]	DRY [•]	DRY [•]	ISOL [•]	DRY	DRY
5	SUB-HIM.W. BENG. & SIKKIM	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY	DRY
6	GANGETIC WEST BENGAL	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY	DRY
7	ODISHA	DRY [•]	DRY	DRY	DRY	DRY	DRY	DRY
8	JHARKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
9	BIHAR	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY	DRY
10	EAST UTTAR PRADESH	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY	DRY
11	WEST UTTAR PRADESH	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY [•]	DRY	DRY
12	UTTARAKHAND	DRY	DRY	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHD. & DELHI	DRY [•]	DRY [•] ↓	DRY [•] ↓	DRY [•]	DRY [•]	DRY	DRY
14	PUNJAB	DRY [•]	DRY [•] ↓	DRY [•] ↓	DRY [•]	DRY [•]	DRY	DRY
15	HIMACHAL PRADESH	ISOL	DRY	ISOL	ISOL	DRY	DRY	DRY
16	JAMMU & KASHMIR	SCT	DRY	ISOL	ISOL	DRY	ISOL	ISOL
17	WEST RAJASTHAN	DRY	DRY ↓	DRY ↓	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY ↓	DRY ↓	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
21	GUJARAT REGION D.D. & N.H.	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASTRA KUTCH & DIU	DRY	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
24	MADHYA MAHARASHTRA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
25	MARATHAWADA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
26	VIDARBHA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU & PUDUCHERRY	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
33	NORTH INT.KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INT.KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
35	KERALA	ISOL	DRY	DRY	DRY	DRY	ISOL	DRY
36	LAKSHADWEEP	DRY	DRY	DRY	DRY	DRY	DRY	DRY
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%)		DRY	NIL 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)		
[•] FOG		[*] SNOWFALL		[#] HAILSTORM		[↓] HEAT WAVE		[↑] SEVERE HEAT WAVE
⁵ THUNDER SQUALL		^{DS/TS} DUST/THUNDERSTORM		[↓] COLD WAVE		[↓] SEVERE COLD WAVE		

Actual Rainfall (mm/day)

(Week1: 22Dec-28Dec)

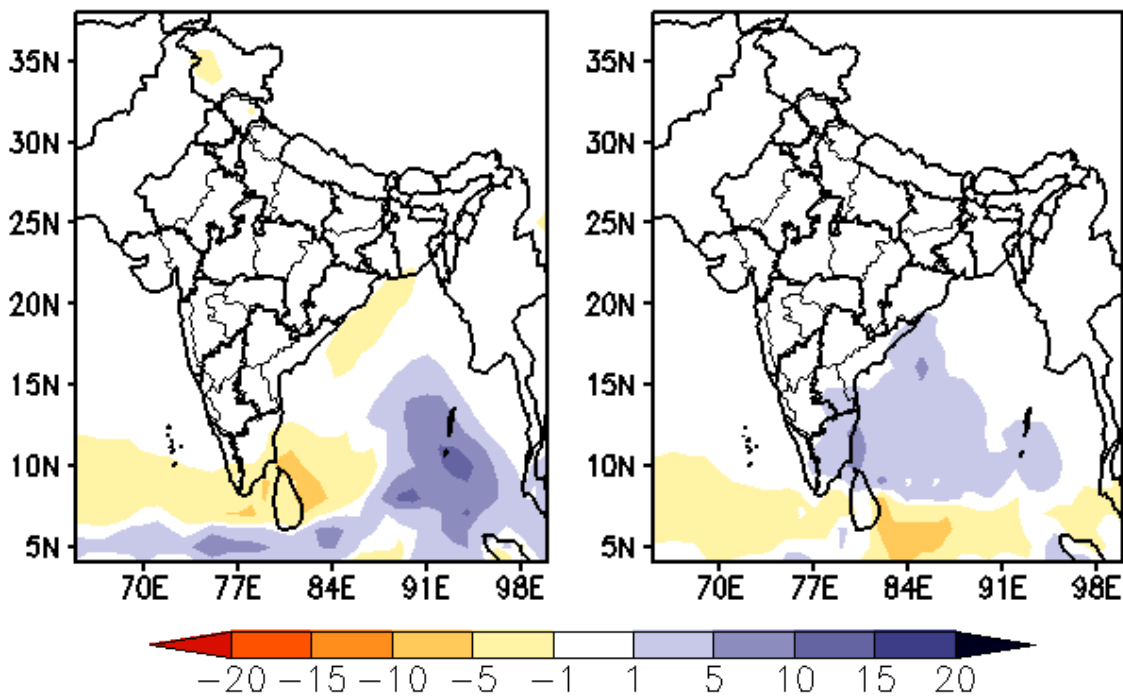
(Week2: 29Dec-04Jan)



Rainfall Anomaly (mm/day)

(Week1: 22Dec-28Dec)

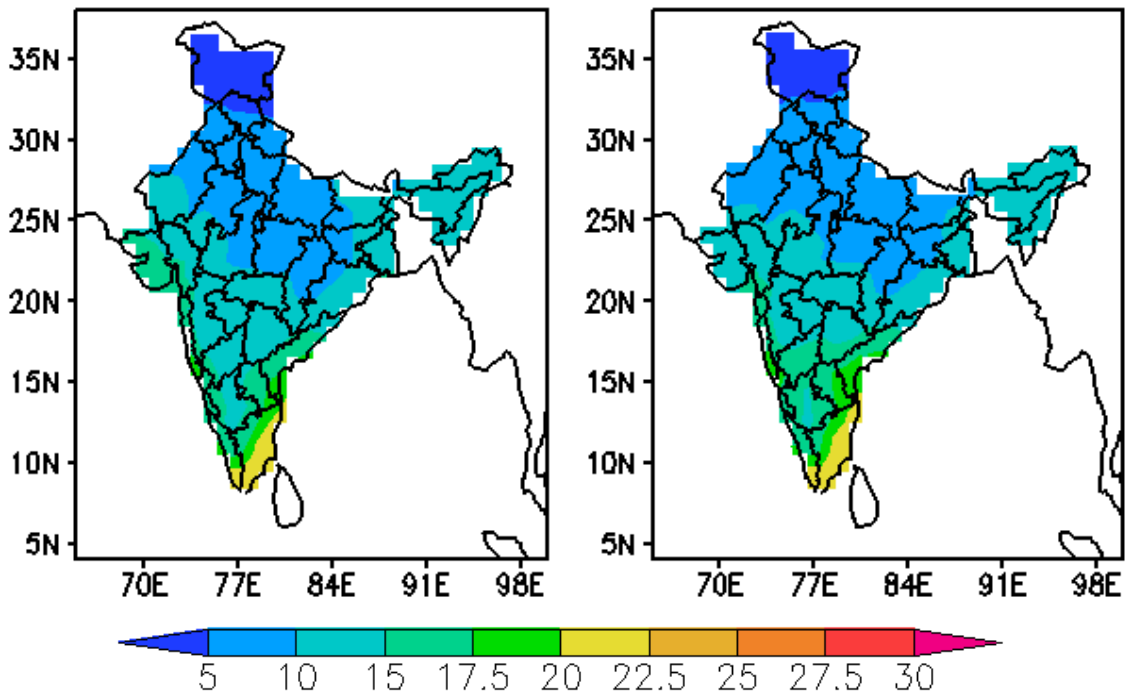
(Week2: 29Dec-04Jan)



MME Bias Corrected Actual Tmin (Deg C)

(Week1: 22Dec-28Dec)

(Week2: 29Dec-04Jan)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 22Dec-28Dec)

(Week2: 29Dec-04Jan)

