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

Dated: 13 December, 2018

Current Weather Status & Outlook for next two weeks (13 to 26 December, 2018)

Significant Features

- **Low Pressure system:** A Low Pressure Area formed over Equatorial Indian Ocean & adjoining central parts of South Bay of Bengal on 10th December 2018; it became Well Marked Low pressure area on 11th and lay over Southeast Bay of Bengal and adjoining Equatorial Indian Ocean towards the end of the week. This system caused fairly widespread to widespread rainfall activity over Andaman & Nicobar Islands with isolated heavy rainfall activity reported on two to three days, during the second half of the week.
- **Western Disturbances:** An active western disturbance affected northwest India during the second half of the week and caused fairly widespread to widespread rainfall/snowfall over Western Himalayan Region. It also caused isolated to scattered rainfall activity over the adjoining plains of northwest India on one or two days.
- **Fog:** Dense to very dense fog has been observed at isolated places over Punjab, Himachal Pradesh & Chhattisgarh on one/two days; dense fog at isolated places over West Uttar Pradesh and West Madhya Pradesh on one/two days each during the week.
- **Temperature:** The lowest minimum temperature of 5.0^0C has been recorded at Mandla (East Madhya Pradesh) on 12 December 2018, over the plains of the country during the week.

Weekly Rainfall Scenario (6-12 December, 2018)

During the week, rainfall was below Long Period Average (LPA) by 48 % over the country as a whole. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	2.3	4.4	-48%
Northwest India	3.3	3.3	-1%
Central India	1.0	2.0	-51%
South Peninsula	4.7	11.1	-57%
East & northeast India	0.2	3.0	-92%

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

Post- monsoon Seasonal Rainfall Scenario (01 October to 12 December, 2018)

For the country as a whole, cumulative rainfall during post-monsoon season 2018 (01 October to 12 December, 2018) was below LPA by -49% over the country as a whole.

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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	59.5	117.7	-49%
Northwest India	30.6	47.0	-35%
Central India	26.3	77.0	-66%
South Peninsula	157.7	260.3	-39%
East & northeast India	64.5	162.4	-60%

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

Chief synoptic conditions as on 13 December, 2018

- A depression formed over southeast bay of Bengal in the morning of 13th Dec 2018. It moved northwestwards with speed of 07 kmph and lay centered at 1130 hrs IST of today, the 13th December 2018 over southeast Bay of Bengal near Latitude 6.8°N and Longitude 88.5°E, about 820 km east-southeast of Trincomalee (Sri Lanka), 1140 km southeast of Chennai (Tamilnadu) and 1310 km south southeast of Machilipatnam (Andhra Pradesh). It is very likely to intensify further into a deep depression in next 12 hours and into a Cyclonic storm during subsequent 24 hours. It is very likely to move northwestwards towards Andhra Pradesh & adjoining north Tamilnadu coasts during next 72 hours.
- The western disturbance as a trough in mid-tropospheric westerlies with its axis at 5.8 km mean sea level runs roughly along Long. 75°E to the north of Lat. 30°N.
- Another feeble western disturbance as trough in mid & lower tropospheric westerlies with its axis at 3.1 km above mean sea level runs roughly along Long. 65°E to the north of Lat. 30°N.
- The cyclonic circulation over North Interior Karnataka & neighbourhood extends upto 0.9 km above mean sea level. The trough runs from this system to south Chhattisgarh across Telangana and Vidarbha extending upto 0.9 km above mean sea level.
- The cyclonic circulation lies over Bangladesh & neighbourhood and extends upto 2.1 km above mean sea level.

Large scale features as on 15 November, 2018

- Currently, moderate El Nino Southern Oscillation (ENSO) conditions are prevailing over equatorial Pacific Ocean. The current SST of Nino 3.4 is 1.0°C. Moderate El Niño conditions likely to prevail during next couple of months.
- At present, conditions over equatorial Indian Ocean have temporarily reached to positive IOD conditions and the latest MMCFS forecast indicates present positive

IOD conditions are likely to turn into neutral IOD conditions during the next month and persist thereafter.

- Madden Julian Oscillation (MJO) index is in Phase 3 with amplitude more than 1, it is likely to remain in phase 3 during the week and likely to move in phase 4 during with amplitude (more than 1) during second weeks.

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (13 to 19 December, 2018) and Week 2 (20 to 26 November, 2018)

- The present depression over southeast Bay of Bengal is very likely to intensify further into a deep depression in next 12 hours and into a Cyclonic storm during subsequent 24 hours. It is very likely to move northwestwards towards Andhra Pradesh & adjoining north Tamilnadu coasts during next 72 hours. After landfall over Andhra Pradesh coast around 17th Dec. early morning, it may move northeastwards across coastal areas of east India as a weak system and cause isolated to scattered rainfall over parts of east and northeast India.
- The western disturbance as a trough in mid-tropospheric westerlies with its axis at 5.8 km mean sea level runs roughly along Long.75°E to the north of Lat. 30°N.
- Another feeble western disturbance as a trough in mid & lower tropospheric westerlies with its axis at 3.1 km mean sea level runs roughly along Long. 65°E to the north of Lat. 30°N. Under the influence of both western disturbances, no significant change in minimum temperatures is likely over most parts of northwest and adjoining west and central India during next 3-4 days and fall by 2-4^0 C thereafter over the region.
- Scattered to fairly widespread rainfall activity likely to north coastal Tamilnadu & Coastal Andhra Pradesh and isolated to scattered over rest Peninsular India, East India and Nagaland, Manipur, Mizoram & Tripura during first week. Isolated rainfall activity likely over south peninsular India during second week. **Annexure III.**.
- Normal and above normal rainfall likely over Paninsualar & East India and over Andaman & nicobar Islands; below normal over Jammu & Kashmir during first week. Below normal rainfall activity likely to continue over Jammu & Kashmir during the second week and near normal over rest of the country during week 1 and week2 **Annexure IV**.
- Minimum temperatures are likely to be slight above normal over south peninsular India and northeastern states and near normal over rest of the country during week 1. During week 2 it is likely to above normal over western parts of peninsular and northeastern states and near normal over most parts of the country (**Annexure V**).
- Dense fog likely at isolated places over northern plains during next 3-4 days. Shallow to moderate fog likely at isolated pockets over northeastern states during next 4-5 days

Cyclogenesis:

- Cyclo-genesis is prevailing over north Indian Ocean. No further cyclogenes is likely during second week.

Next weekly update will be issued on next Thursday i.e. 20 December, 2018

Annexure-I

METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2018

Sr. No	MET.SUB-DIVISIONS	13 DEC	14 DEC	15 DEC	16 DEC	17 DEC	18 DEC	19 DEC
1	ANDAMAN & NICO.ISLANDS	WS	FWS	SCT	SCT	SCT	SCT	SCT
2	ARUNACHAL PRADESH	D	ISOL	D	D	ISOL	ISOL	ISOL
3	ASSAM & MEGHALAYA	D	D	D	D	ISOL	ISOL	D
4	NAGA.MANI.MIZO.& TRIPURA	ISOL	D	ISOL	D	ISOL	ISOL	D
5	SUB-HIM.W. BENG. & SIKKIM	D	D	D	D	ISOL	ISOL	D
6	GANGETIC WEST BENGAL	D	D	D	ISOL	ISOL	ISOL	D
7	ODISHA	ISOL	D	D	SCT	SCT	ISOL	D
8	JHARKHAND	D	D	D	ISOL	SCT	ISOL	D
9	BIHAR	D	D	D	D	ISOL	ISOL	D
10	EAST UTTAR PRADESH	ISOL	D	D	ISOL	ISOL	D	D
11	WEST UTTAR PRADESH	ISOL	D	D	D	D	D	D
12	UTTARAKHAND	ISOL	D	D	D	D	D	D
13	HARYANA CHD. & DELHI	D	D	D	D	D	D	D
14	PUNJAB	D	D	D	D	D	D	D
15	HIMACHAL PRADESH	ISOL	D	D	D	D	D	D
16	JAMMU & KASHMIR	SCT	D	D	D	D	D	ISOL
17	WEST RAJASTHAN	D	D	D	D	D	D	D
18	EAST RAJASTHAN	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	ISOL	ISOL	D	D
21	GUJARAT REGION D.D. & N.H.	D	D	D	D	D	D	D
22	SAURASTRA KUTCH & DIU	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	ISOL	D	ISOL	ISOL	ISOL	D	D
27	CHHATTISGARH	ISOL	D	ISOL	ISOL	SCT	D	D
28	COASTAL ANDHRA PRADESH	D	D	SCT •	WS ••	SCT•	D	D
29	TELANGANA	ISOL	D	D	SCT	SCT	D	D
30	RAYALASEEMA	D	D	ISOL	FWS	ISOL	D	D
31	TAMILNADU & PUDUCHERRY	D	D	SCT •	SCT	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	D	D	D	ISOL	ISOL	D	D
33	NORTH INT.KARNATAKA	D	D	D	ISOL	ISOL	D	D
34	SOUTH INT.KARNATAKA	D	D	D	ISOL	ISOL	D	D
35	KERALA	D	D	D	D	ISOL	D	D
36	LAKSHADWEEP	D	D	D	D	D	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	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 (+4.5 °C to +6.4 °C)	SEVERE HEAT WAVE (> +6.4)
$ THUNDERSTORM WITH SQUALL/GUSTY WIND		DS/TS DUST/THUNDERSTORM	COLD WAVE (-4.5 °C to -6.4 °C)	SEVERE COLD WAVE (< -6.4)

Annexure-II

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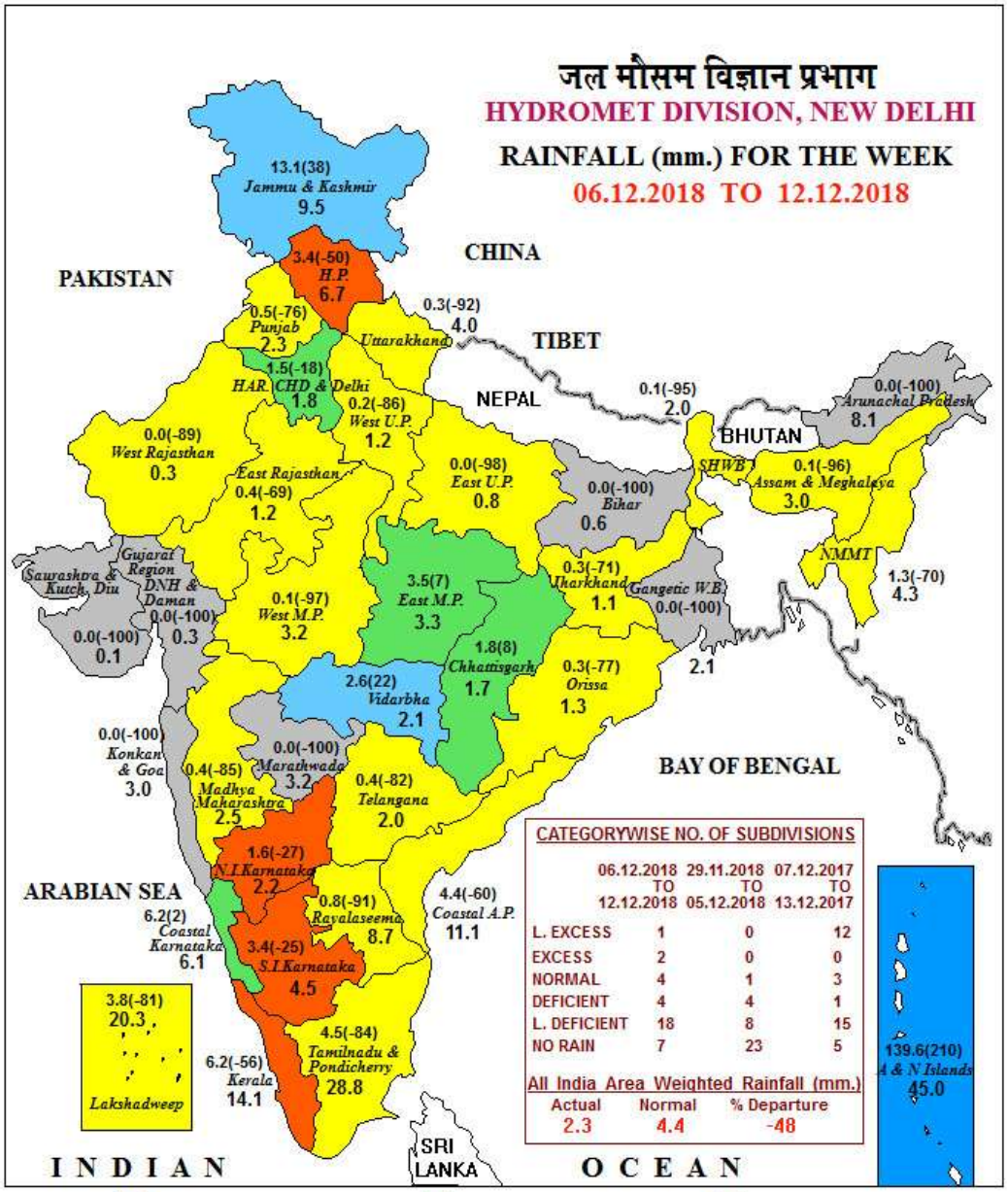
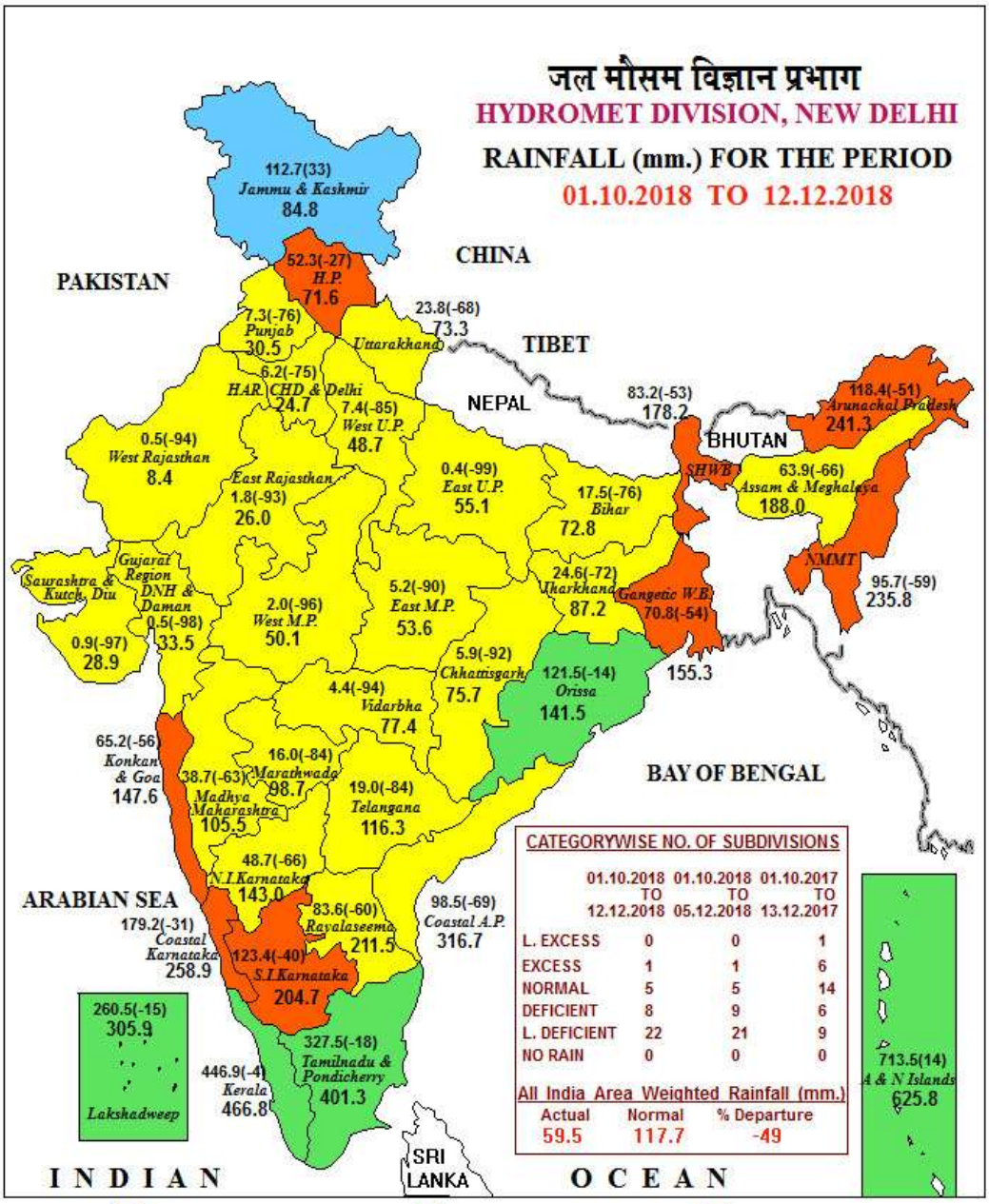
INDIA METEOROLOGICAL DEPARTMENT



Annexure III

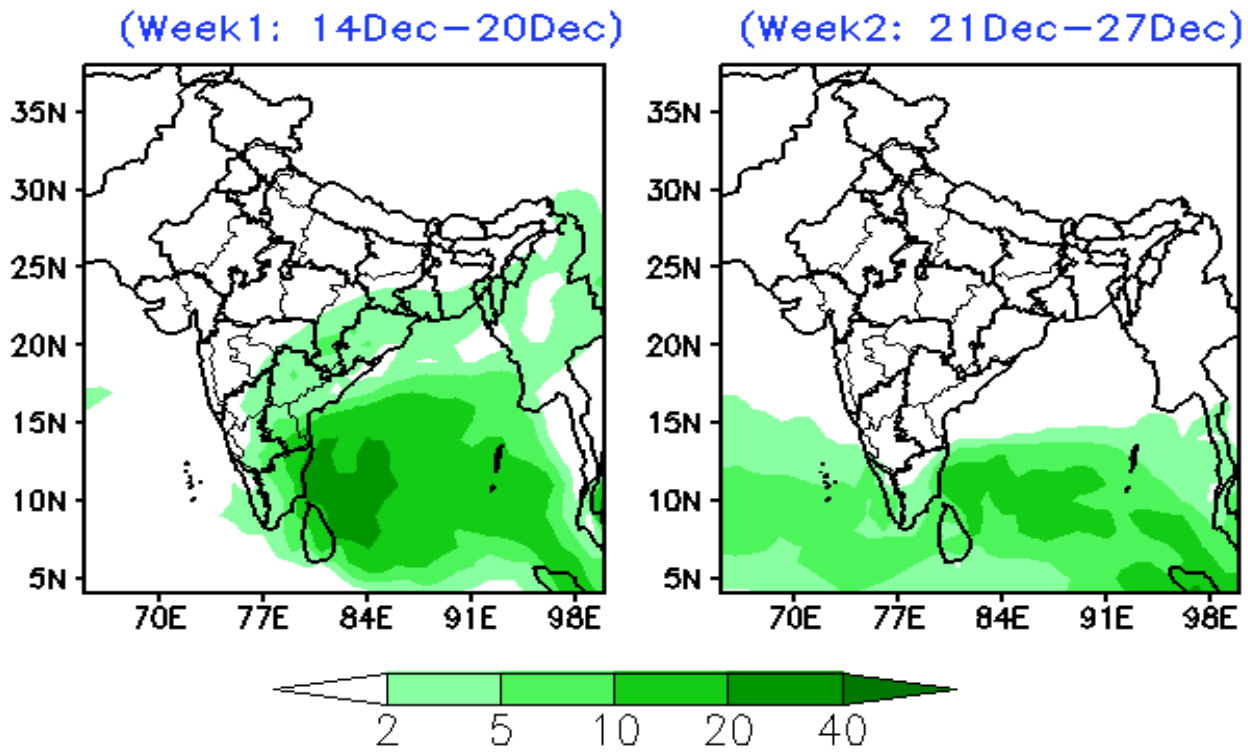
भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT



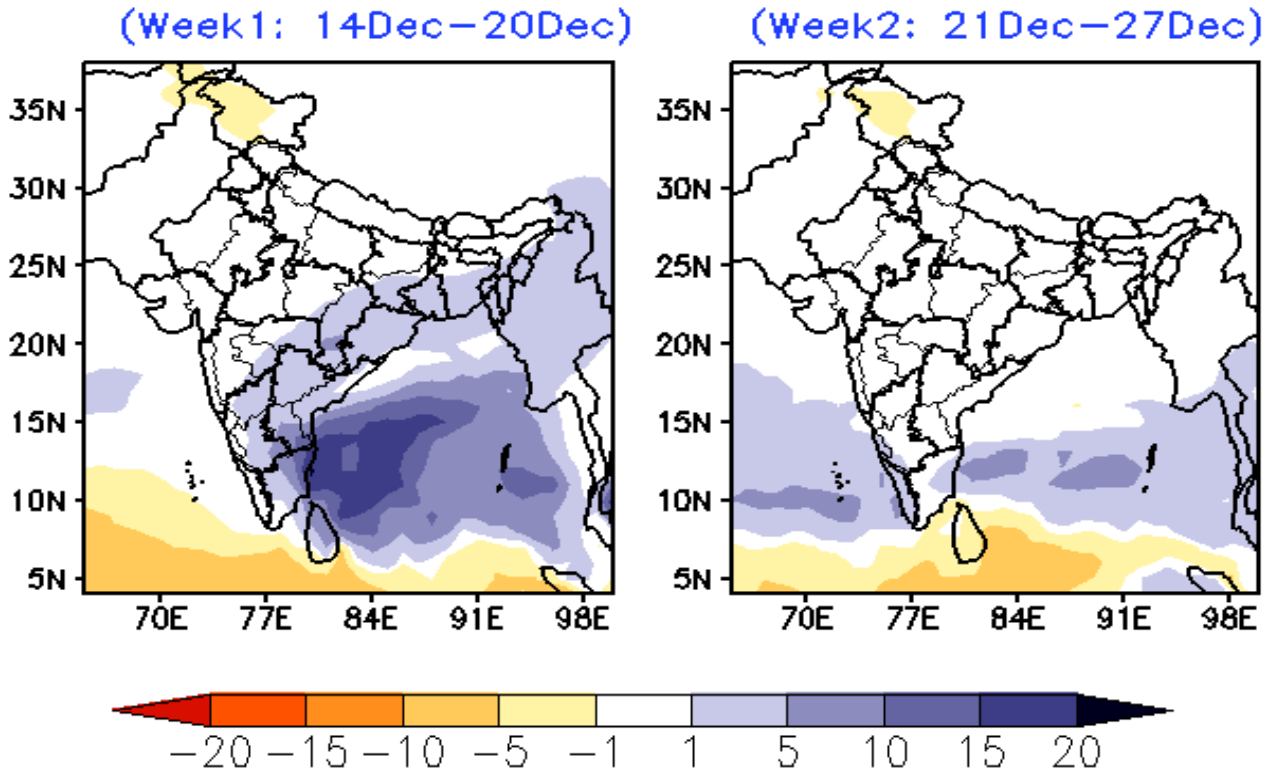
LEGEND: L. EXCESS (+60% OR MORE) EXCESS (+20% TO +59%) NORMAL (+19% TO -19%)
DEFICIENT (-20% TO -59%) L. DEFICIENT (-60% TO -99%) NO RAIN (-100%) NO DATA

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.

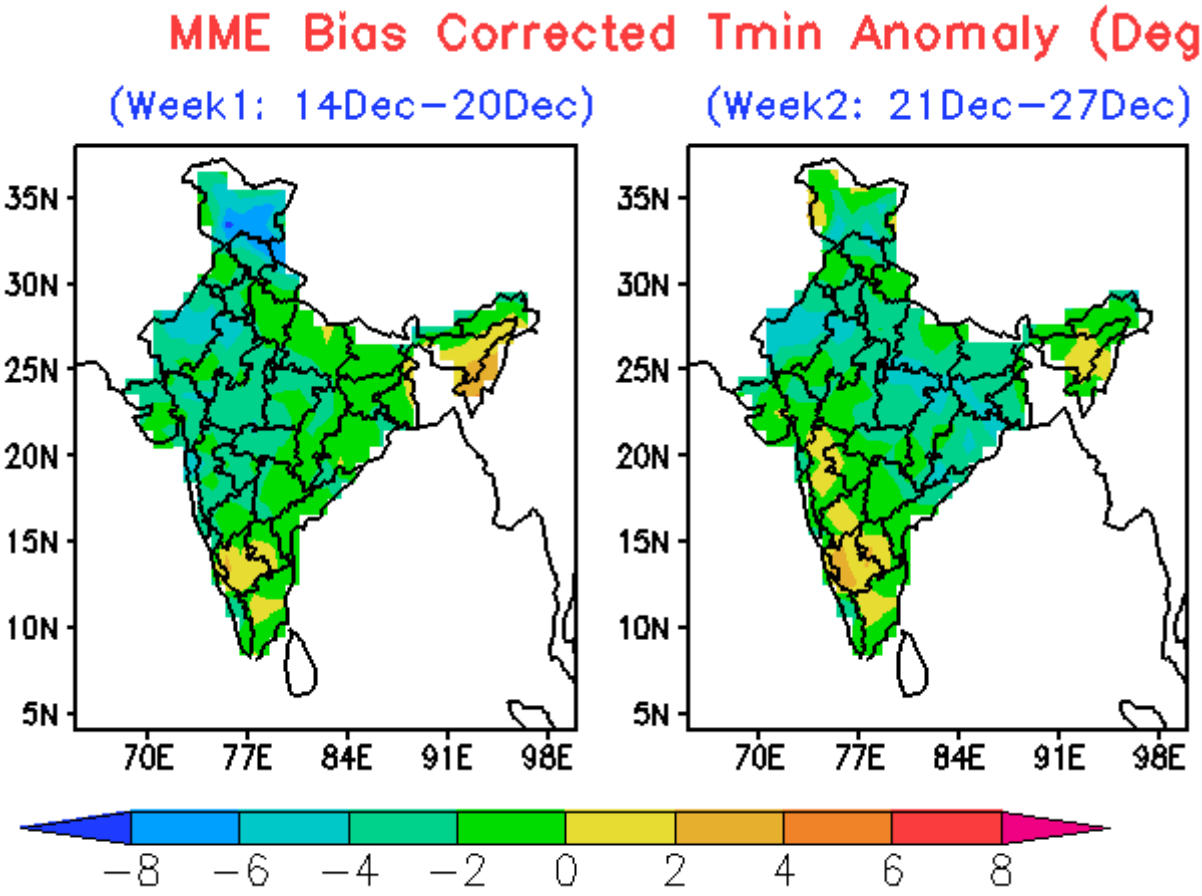
Forecast rainfall (mm per day)



Forecast rainfall anomaly (mm per day)



(Annexure V).


MME Bias Corrected Tmin Anomaly (Deg
(Week1: 14Dec-20Dec)
(Week2: 21Dec-27Dec)
35N
30N
25N
20N
15N
10N
5N
70E
77E
84E
91E
98E
-8
-6
-4
-2
0
2
4
6
8