



**Government of India
Ministry of Earth Sciences
India Meteorological Department**

Dated: 13th February, 2020

Current Weather Status and Outlook for next two weeks

Highlights of the past week

Significant weather systems & associated weather

- Confluence of cold & dry mid-latitude westerlies with warm & moist tropical easterlies caused scattered to fairly widespread rainfall/thunderstorm activity over east and adjoining parts of central and peninsular India along with isolated heavy falls over Chhattisgarh during the week.
- Passage of a Western Disturbance caused scattered to fairly widespread rainfall/snowfall over Western Himalayan Region towards the end of the week.
- Remnants of Western Disturbances also caused isolated to scattered rainfall activity over parts of northeast India.

Temperatures:

- **Cold Wave** conditions occurred in some parts over Punjab on two days; at isolated pockets over Haryana, Chandigarh & Delhi on five days, over Punjab, Odisha, East Madhya Pradesh and Chhattisgarh on two days each and over Bihar, Jharkhand and West Madhya Pradesh on one day each during the week.
- The **lowest minimum temperature of 2.0°C** had been recorded at **Hissar (Haryana) on 08th February 2020** over the plains of the country during the week.

Fog:

- **Dense to very dense fog** occurred at isolated pockets over Punjab and Chhattisgarh on two days each and over Haryana, Chandigarh & Delhi and Uttarakhand on one day each during the week.
- **Dense fog** occurred at isolated pockets over Haryana, Chandigarh & Delhi and Chhattisgarh on one day each during the week.

Weekly Rainfall Scenario (06th to 12th February 2020)

During the week, rainfall was below the Long Period Average (LPA) by 50% over the country as a whole. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	2.8	5.6	-50
Northwest India	0.6	10.7	-94
Central India	5.7	2.3	+149
South Peninsula	2.6	2.0	+29
East & northeast India	1.1	7.4	-85

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

Seasonal Rainfall Scenario (01st January to 12th February 2020)

For the country as a whole, cumulative rainfall during the winter season, so far, has been above LPA by 23%. 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	31.9	25.9	+23
Northwest India	58.0	49.3	+18
Central India	21.6	11.0	+96
South Peninsula	9.6	10.9	-12
East & northeast India	30.9	30.9	0

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

Chief synoptic conditions as on 13th February 2020

- A Western Disturbance (WD) as a trough in mid & upper tropospheric westerlies runs with its axis at 5.8 km above mean sea level roughly along Long. 62°E to the north of Lat. 30°N.
- Apart from the above, dry & stable air in association with anti-cyclonic circulation is prevailing over central & south peninsular India.

Large scale features as on 13th February 2020

- Currently, warm ENSO-neutral conditions are prevailing over equatorial Pacific Ocean and the latest Monsoon Mission Coupled Forecast System (MMCFS) output indicates cooling of SSTs in coming season and ENSO-neutral conditions are likely to continue for the entire forecast period.
- Weak positive IOD conditions are observed over Indian Ocean and the latest MMCFS forecast indicates that it is likely to weaken further and turn into neutral IOD conditions during the rest of the season.
- The convectively active phase of the Madden–Julian Oscillation (MJO) is currently in Phase-6 with amplitude slightly more than 1. It is likely to propagate eastwards, however remain in Phase-6 during weeks 1 & 2.

Forecast for next two weeks

Weather systems and associated Precipitation & Temperature pattern during week 1 (14th – 20th February 2020) and week 2 (21st – 27th February 2020)

Week 1 (14th – 20th February 2020)

- The rain / snow associated with the present WD affecting the western Himalayan region is very likely to reduce significantly from the early morning of tomorrow. However, higher reaches of Jammu & Kashmir and Ladakh could continue to receive isolated snowfall till 16th Feb. Subsequently, a fresh WD could cause isolated to scattered rain / snow over Jammu & Kashmir, Ladakh and Himachal Pradesh on 18th & 19th Feb.
- The prevailing strong northwesterly winds in the lower levels along the northern plains are likely to reduce in strength from 16th Feb. Subsequent changes in the circulation pattern and eastward shift in the low level anti-cyclone are likely to cause moisture incursion from the Bay of Bengal over to central India towards the end of week-1.
- Remnant westerly systems are likely to cause scattered to fairly widespread rain / snow over Arunachal Pradesh during later half of week-1. **(Annexure III & IV).**
- **Cumulative** precipitation is likely to be below normal over Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, west Uttar Pradesh, Bihar, Jharkhand, west Bengal, Arunachal Pradesh, south Kerala and south Tamil Nadu and near normal over the rest of the country. **(Annexure IV).**

Week 2 (21st – 27th February 2020)

- Another WD is likely to affect western Himalayan region during the second half of week-2 (from around 24th Feb. onwards).
- A wind confluence favouring isolated to scattered convective rainfall over central & eastern India (comprising Madhya Pradesh, north Chhattisgarh, Jharkhand and adjoining west Bengal) is likely during the initial days of week-2.
- Arunachal Pradesh is likely to receive scattered to fairly widespread rain / snow during the initial half of the week, in continuation with past week's rains.
- Easterly winds in the equatorial belt are also likely to strengthen briefly during the initial half of week-2, resulting in isolated rainfall over southern parts of Tamil Nadu and Kerala.
- **Cumulatively**, above normal precipitation is likely over parts of west Madhya Pradesh, near normal over the rest of the country outside Jammu & Kashmir, Ladakh, Himachal Pradesh, Uttarakhand and Nicobar Islands, where the rainfall is likely to be below normal.

Minimum Temperatures for week 1: (14th – 20th February 2020)

- Night minimum temperatures are likely to remain below normal during a few days over major parts of India outside western parts of Jammu & Kashmir, Gujarat and adjoining east Rajasthan, Madhya Maharashtra, coastal & south interior Karnataka, Arunachal Pradesh, Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura, where above normal night temperatures are likely to prevail on some of the days during the week. (**Annexure V**).

Minimum Temperatures for week 2: (21st – 27th February 2020)

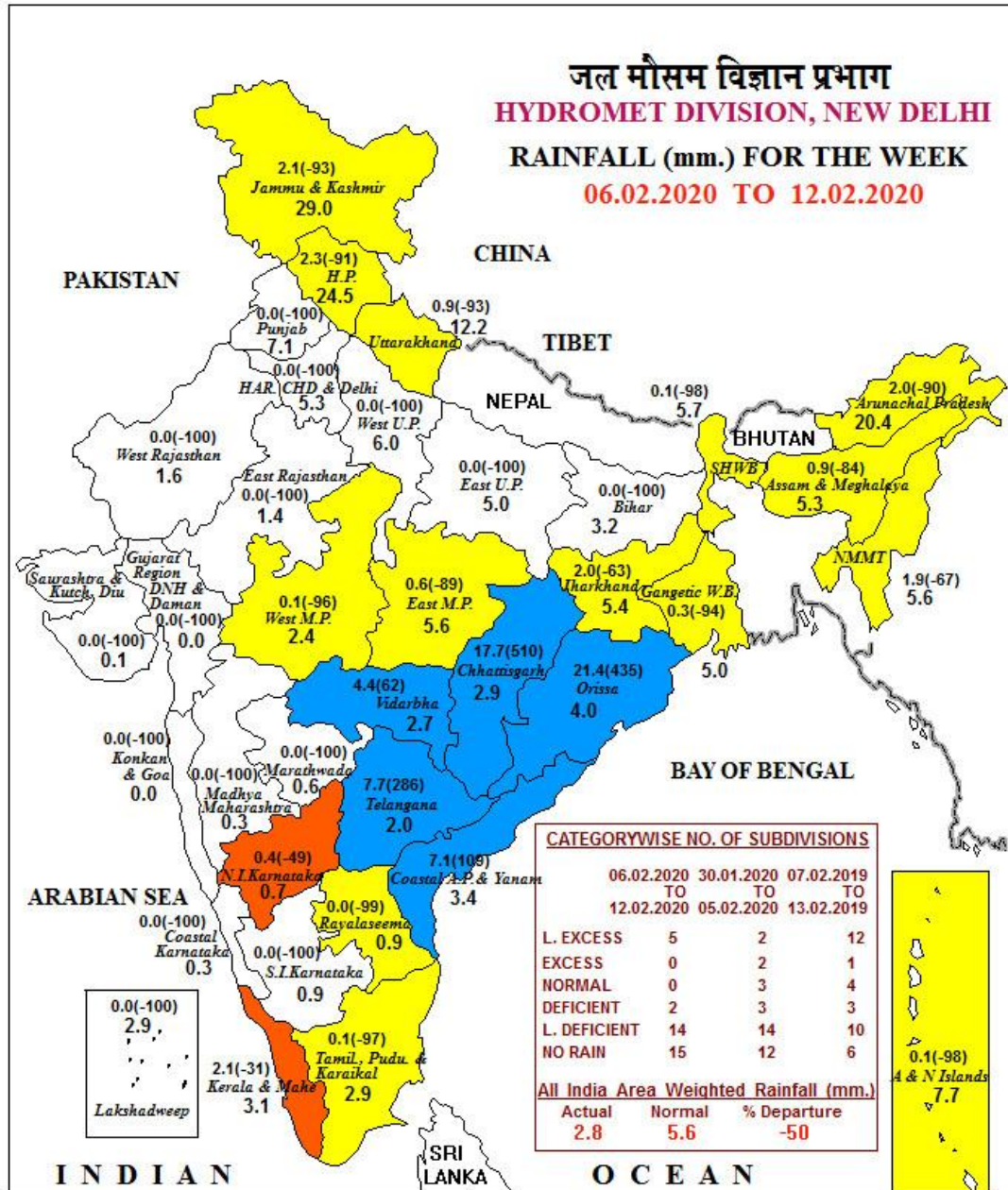
- Western India and Indo- Gangetic plains are likely to warm up during Week 2. Above normal Night minimum temperatures are likely to prevail over major parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, west Madhya Pradesh, Gujarat, north Madhya Maharashtra, Bihar, west Bengal, Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura and coastal and south interior Karnataka. They are likely to remain normal to below normal over the rest of the country. (**Annexure V**).

Cyclogenesis probability:

- No cyclogenesis likely as per the numerical model guidance during the forecast period.

Next weekly update will be issued on Thursday, the 20th February 2020.

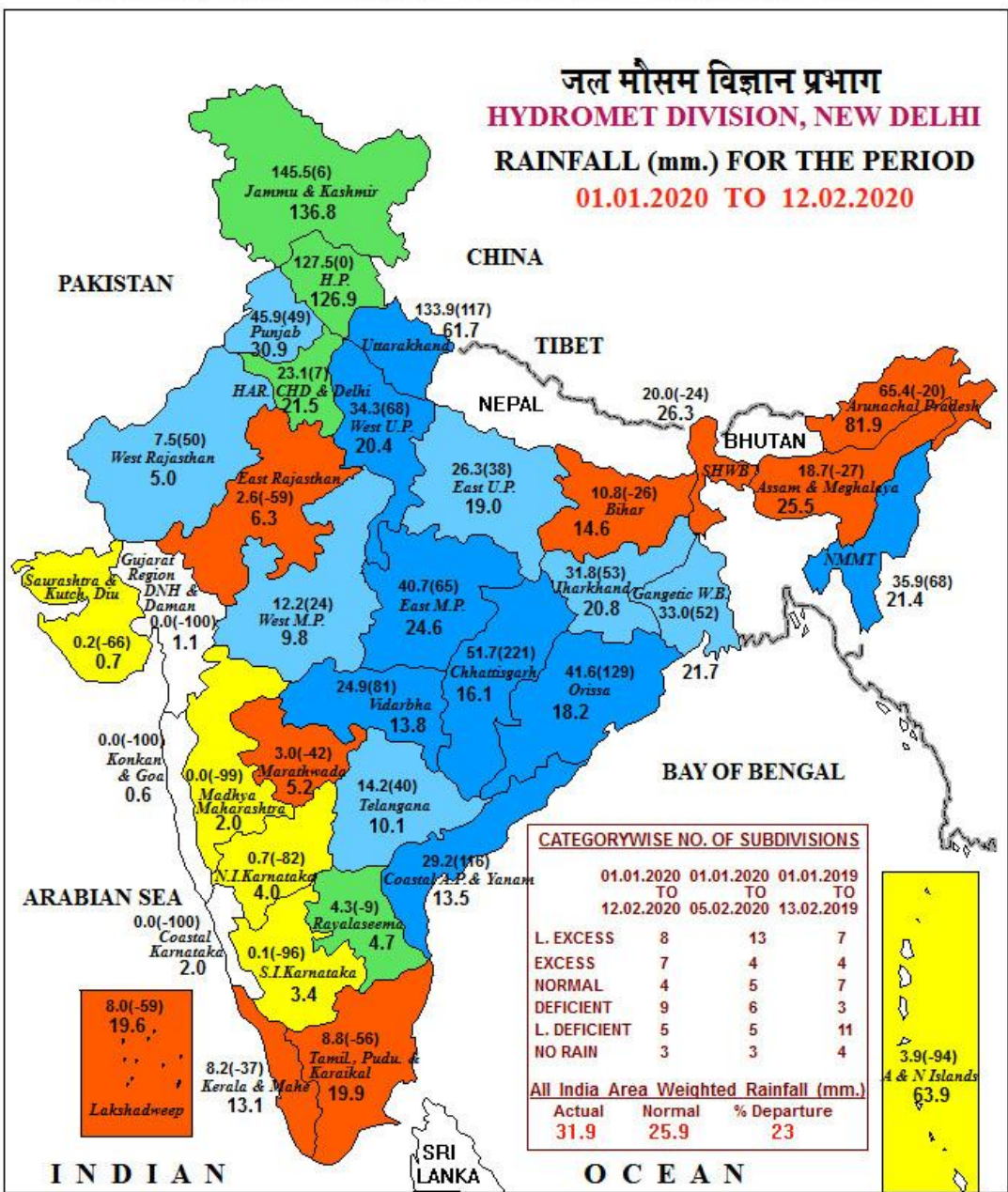
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



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.

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.

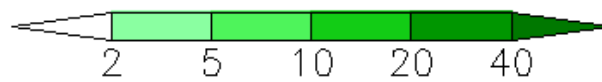
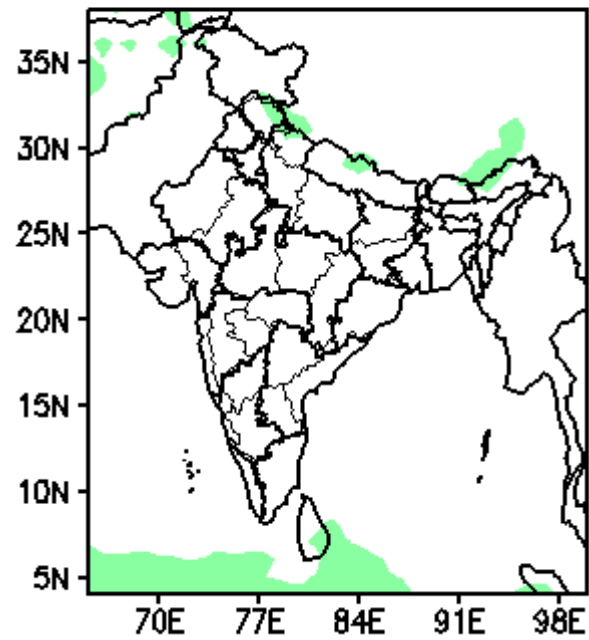
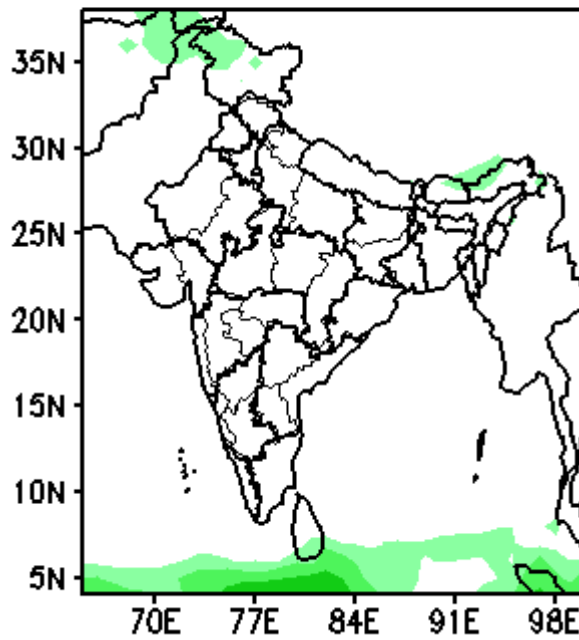
Annexure-III

METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2020								
Sr. No	MET.SUB-DIVISIONS	13 FEB	14 FEB	15 FEB	16 FEB	17 FEB	18 FEB	19 FEB
1	ANDAMAN & NICO.ISLANDS	D	D	D	D	D	ISOL	SCT
2	ARUNACHAL PRADESH	D	ISOL	ISOL	SCT	FWS	FWS	WS*
3	ASSAM & MEGHALAYA	D	ISOL	ISOL	D	ISOL	ISOL	ISOL
4	NAGA.MANI.MIZO.& TRIPURA	D	ISOL	D	D	ISOL	D	D
5	SUB-HIM.W. BENG. & SIKKIM	D	D	ISOL	ISOL	ISOL	ISOL	ISOL
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	D	D
11	WEST UTTAR PRADESH	D	D	D	D	D	D	D
12	UTTARAKHAND	D	D	D	D	D	D	ISOL
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	ISOL	ISOL
16	JAMMU & KASHMIR	FWS	D	D	D	D	SCT	ISOL
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. & 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	D	D	D	D	D	D	D
27	CHHATTISGARH	D	D	D	D	D	D	D
28	COASTAL A. 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	ISOL	D	D	D	D	D	D
32	COASTAL KARNATAKA	D	D	D	D	D	D	D
33	NORTS INT.KARNATAKA	D	D	D	D	D	D	D
34	SOUTS INT.KARNATAKA	D	D	D	D	D	D	D
35	KERALA & MAHE	D	D	D	D	D	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		↓ COLD WAVE (-4.5 °C to -6.4 °C)		↓ SEVERE COLD WAVE (< -6.4)		
§ TSUNDERSTORM WITS SQUALL/GUSTY WIND		DS/TS DUST/TSUNDERSTORM		↑ HEAT WAVE (+4.5 °C to +6.4 °C)		↑ SEVERE HEAT WAVE (> +6.4)		

Forecast Rainfall (mm/day)

(Week1: 14Feb-20Feb)

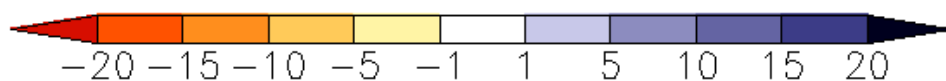
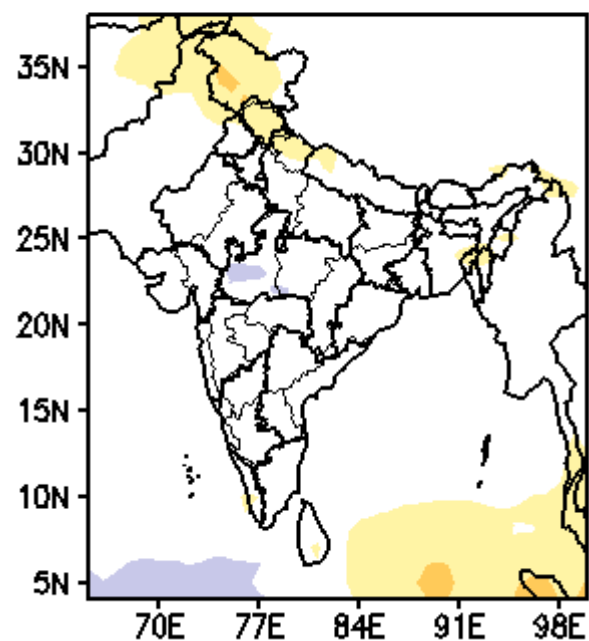
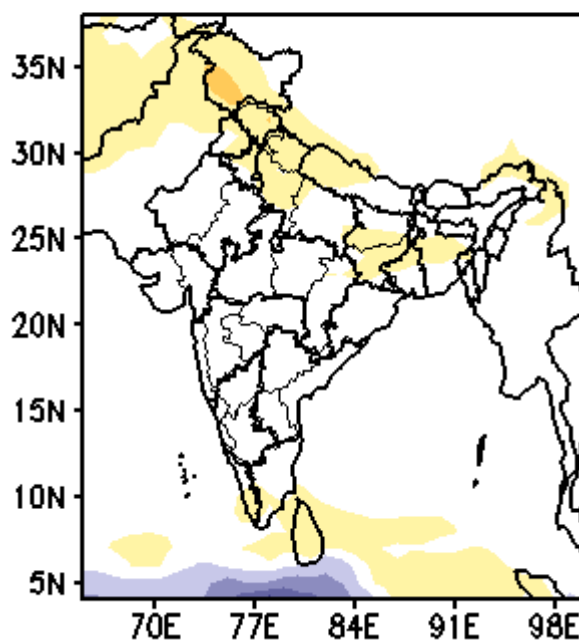
(Week2: 21Feb-27Feb)



Forecast Rainfall Anomaly (mm/day)

(Week1: 14Feb-20Feb)

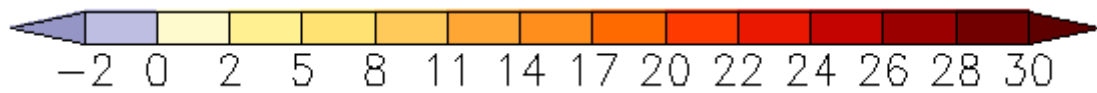
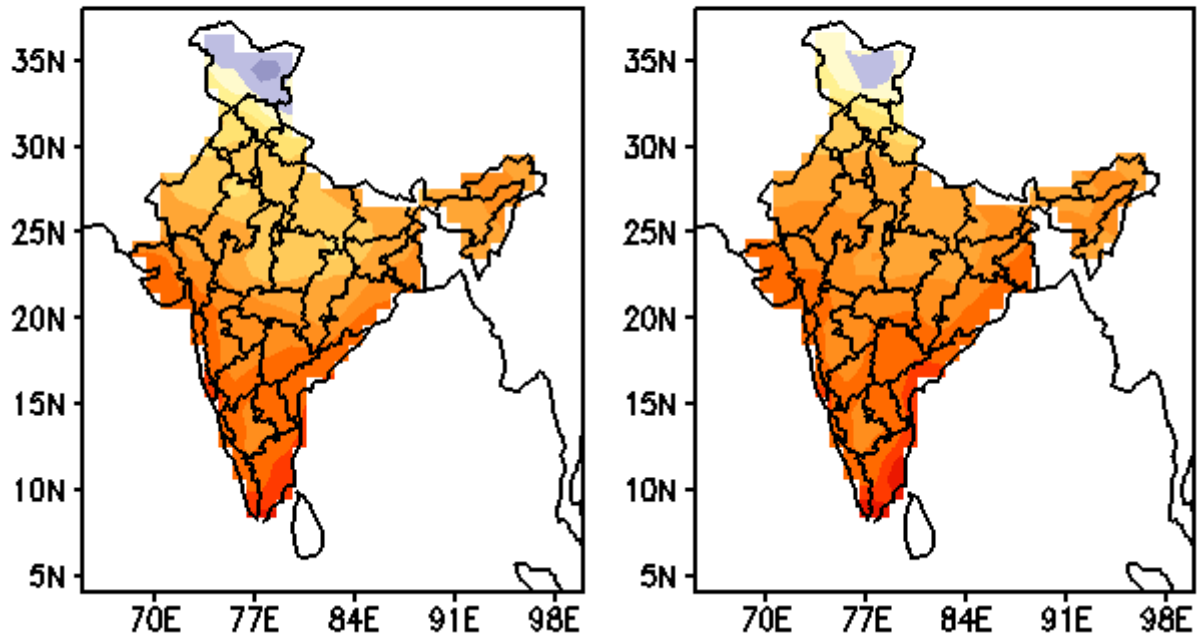
(Week2: 21Feb-27Feb)



MME Bias corrected forecast Tmin (Deg)

(Week1: 14Feb-20Feb)

(Week2: 21Feb-27Feb)



MME forecast Tmin anomaly (Deg C)

(Week1: 14Feb-20Feb)

(Week2: 21Feb-27Feb)

