



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

Dated: 19 March, 2020

Current Weather Status and Outlook for next two weeks (19 March to 01 April, 2020)

Significant Features

- A very intense Western Disturbance in the form of a Western Depression affected northwest India in the beginning of the week and caused fairly widespread to widespread rainfall/thunderstorm over the region. Isolated to scattered hailstorm activity also occurred over the region during first half of the week.
- Remnants of Western Disturbances caused scattered to fairly widespread rainfall/thunderstorm activity over northeast India during the week.
- **Heavy rainfall (≥ 64.5 mm)** occurred at isolated places over Himachal Pradesh on three days; over Uttarakhand and East Uttar Pradesh on two days each; over Jharkhand and West Rajasthan on one day each during the week.
- The highest maximum temperature of 40.3° C recorded at Anantapur (Rayalseema) on 17th March 2020 and the lowest minimum temperature of 7.0° C had been recorded at Ludhiana (Punjab) on 15th March 2020, over the plains of the country during the week.

Weekly Rainfall Scenario (12 to 18 March, 2020)

During the week, rainfall was above Long Period Average (LPA) by 131% over the country as a whole. Details are given below:

Regions	Actual Rainfall (mm)	Normal Rainfall (mm)	% Departure from LPA
Country as a whole	14.1	6.1	131%
Northwest India	24.7	10.1	145%
Central India	8.5	2.1	305%
South Peninsula	4.0	3.3	23%
East & northeast India	17.9	9.9	81%

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

Seasonal Rainfall Scenario (01 to 18 March, 2020)

For the country as a whole, cumulative rainfall during this year's pre-monsoon season (upto 18 March, 2020) is above LPA by 82%. 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	16.9	9.3	82%
Northwest India	28.1	15.5	82%
Central India	10.6	3.4	212%
South Peninsula	5.5	4.4	26%
East & northeast India	22.7	15.6	46%

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

Chief synoptic conditions as on 19 March, 2020

- A cyclonic circulation lies over west Vidarbha & neighbourhood extending upto 0.9 km above mean sea level.
- A wind discontinuity runs from the above cyclonic circulation to north Interior Tamil Nadu across Interior Karnataka at 0.9 km above mean sea level.
- A trough runs from the cyclonic circulation over west Vidarbha to interior Odisha at 0.9 km above mean sea level.
- A fresh Western Disturbance lies as a cyclonic circulation over northeast Afghanistan & adjoining Pakistan between 1.5 & 3.1 km above mean sea level.
- A fresh Western Disturbance is likely to affect western Himalayan region from 23rd March.

Large scale features as on 19 March, 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 Sea Surface Temperatures (SSTs) in coming season and ENSO-neutral conditions are likely to continue upto April-May-June period.
- At present neutral Indian Ocean Dipole (IOD) conditions are observed over Indian Ocean and the latest MMCFS forecast indicates that it is likely to continue during the forecast period.
- The convectively active phase of the Madden–Julian Oscillation (MJO) is currently in Phase-1 with amplitude more than 1. It is likely to move over Indian Ocean (phase 2 and 3) with amplitude more than 1 during next one week.

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (19 to 25 March, 2020) and Week 2 (26 March to 01 April, 2020)

Week 1: (19 to 25 March, 2020)

- Due to strengthening of anti-cyclone over Bay of Bengal and consequent moisture feeding over East & adjoining Central India, light/moderate scattered to fairly widespread rainfall activity is very likely over Odisha, Jharkhand and West Bengal & Sikkim during 1st half of the week with peak intensity on 21st March and light isolated rainfall thereafter. Light/moderate Isolated to scattered rainfall activity is very likely over East Madhya Pradesh, Vidarbha and Chhattisgarh during the same period with peak intensity on 20th March.
- Thunderstorm accompanied with lightning/hail/gusty winds (speed reaching 30-40 kmph) is likely over Odisha, Jharkhand and West Bengal & Sikkim during 1st half of the week with maximum intensity on 19th March; and over Chhattisgarh, Vidarbha and East Madhya Pradesh during 19th-20th March; Thunderstorm accompanied with lightning & gusty winds (speed reaching 30-40 kmph) likely over Coastal Andhra Pradesh & Yanam and Telangana during 19th-21st March.
- Under the influence of a fresh **Western Disturbance** from the night of 20th March, light to moderate scattered rainfall/snowfall very likely over Western Himalayan Region on 21st March.
- Thereafter another Western Disturbance is likely to affect Western Himalayan Region from 23rd March, 2020 onwards and very likely to cause scattered to fairly widespread rainfall/snowfall over Western Himalayan Region and isolated to scattered rainfall over plains of northwest India (**Annexure III**).
- Isolated to scattered rainfall is also likely to continue over northeastern states during the week.
- **Cumulatively, near normal to above normal rainfall very likely over Jammu & Kashmir, Punjab, Himachal Pradesh, Uttarakhand, West Bengal & Sikkim, Mizoram & Tripura, Kerala and South Interior Karnataka; below normal rainfall likely over Arunachal Pradesh, Assam & Meghalaya, Tamilnadu and Nicobar Islands during week 1 (Annexure IV).**

Rainfall for week 2: (26 March to 01 April, 2020)

- **During week 2, above normal rainfall likely over Kerala & Karnataka; near normal over Western Himalayan Region and below normal over northeastern states and Andaman & Nicobar Islands (Annexure IV).**

Maximum Temperature for week 1 & 2: (19 March to 01 April, 2020)

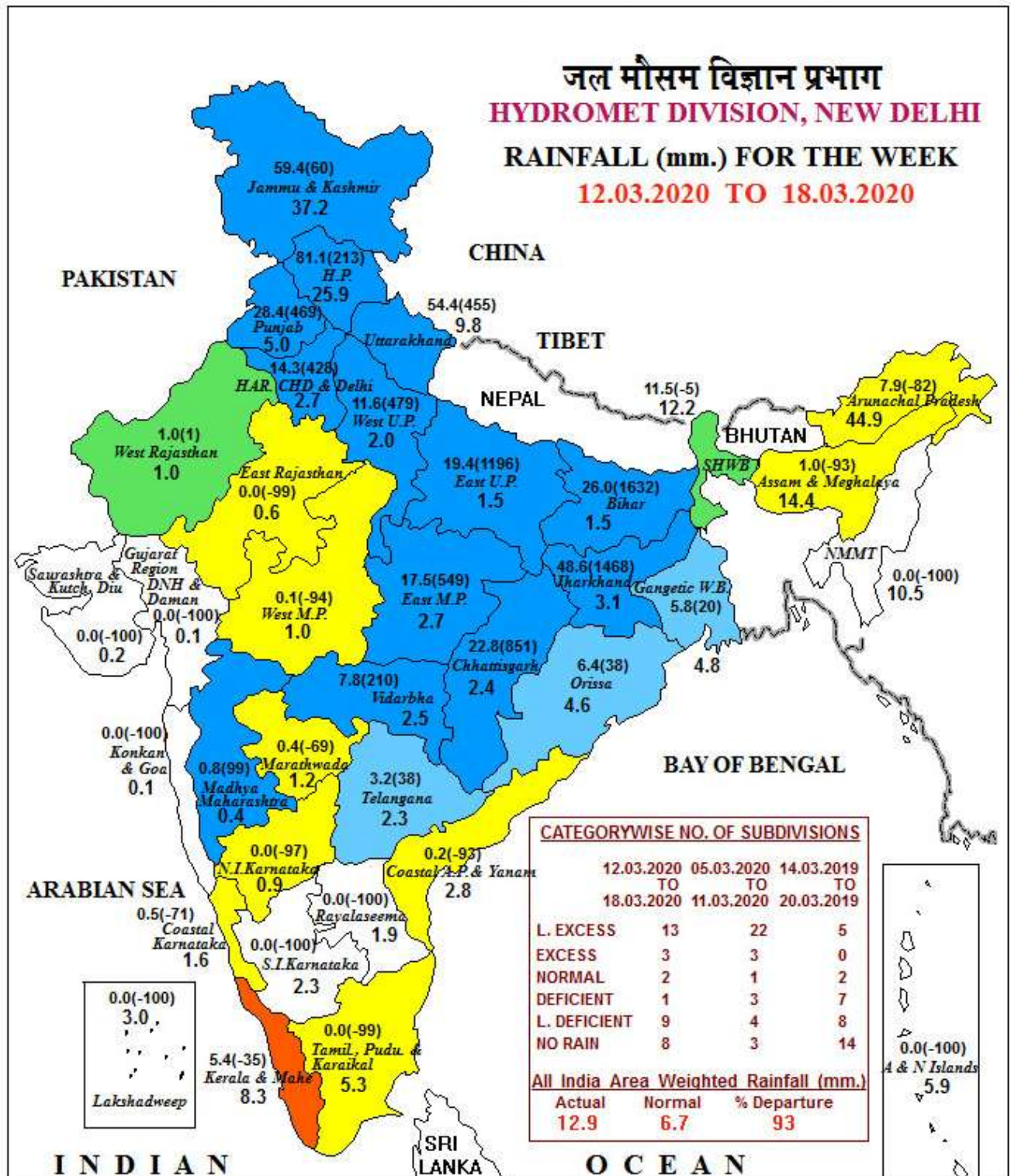
- Due to ongoing rainfall/thunderstorm activity over most parts of the country, maximum temperatures are likely to be below normal by 2-4°C over most parts of the country outside Jammu, Kashmir, Ladakh & Gilgit-Baltistan, Himachal Pradesh and Tamilnadu , where these are likely to be above normal by 1-2°C during week 1.
- During week 2, there is likely slight rise in maximum temperatures, however these are likely to be below normal by 1-3°C over Central and adjoining east & south Peninsular India (Annexure V).

Cyclogenesis:

- No cyclogenesis is expected over North Indian Ocean during weeks 1 and 2.

Next weekly update will be issued on next Thursday i.e. 26 March, 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

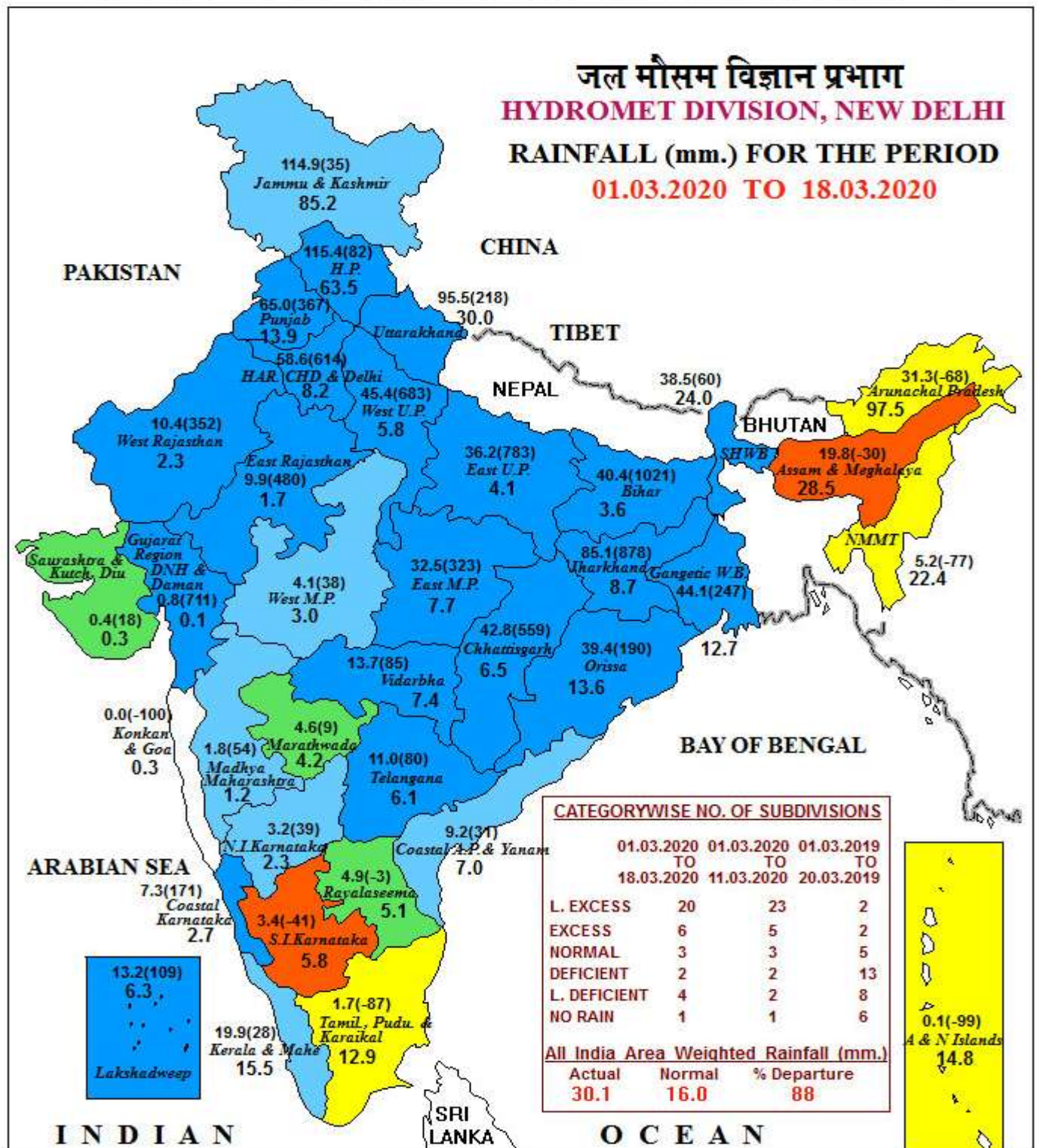
NOTES:

(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.

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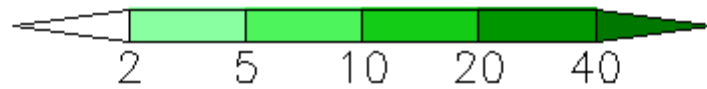
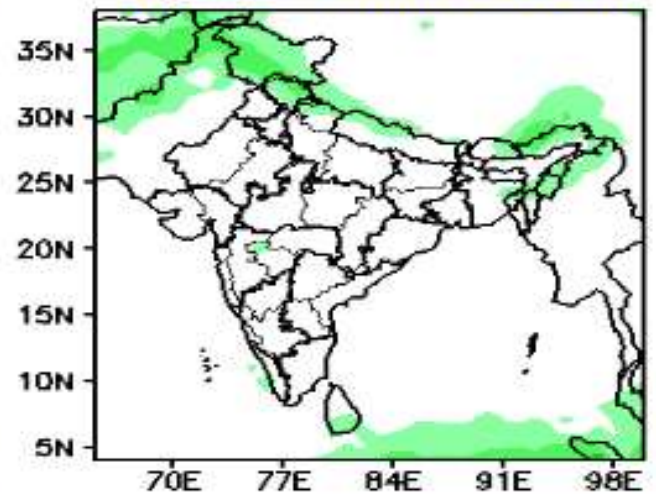
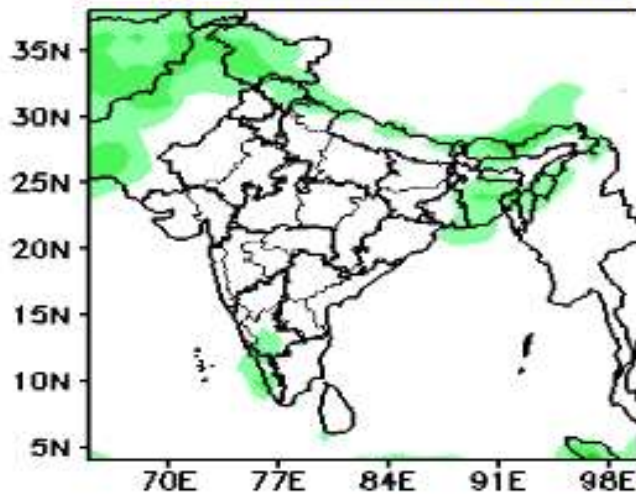
Annexure III

METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS -2020								
Sr. No	MET.SUB-DIVISIONS	19 MAR	20 MAR	21 MAR	22 MAR	23 MAR	24 MAR	25 MAR
1	ANDAMAN & NICO.ISLANDS	D	D	D	D	D	D	D
2	ARUNACHAL PRADESH	SCT ^{TS #}	FWS ^{TS}	SCT ^{TS}	SCT	ISOL	ISOL	SCT ^{TS}
3	ASSAM & MEGHALAYA	ISOL ^{TS}	SCT ^{TS}	ISOL ^{TS}	ISOL	ISOL	ISOL	SCT ^{TS}
4	NAGA.MANI.MIZO.& TRIPURA	D	ISOL	ISOL ^{TS}	ISOL	ISOL	ISOL	SCT
5	SUB-HIM.W. BENG. & SIKKIM	ISOL ^{TS #}	ISOL ^{TS}	FWS ^{TS}	FWS ^{TS}	ISOL	ISOL	ISOL
6	GANGETIC WEST BENGAL	ISOL ^{TS}	ISOL ^{TS}	SCT ^{TS}	ISOL ^{TS}	ISOL	D	D
7	ODISHA	FWS ^{TS #}	SCT ^{TS}	FWS ^{TS}	SCT ^{TS}	ISOL ^{TS}	ISOL ^{TS}	ISOL
8	JHARKHAND	SCT ^{TS #}	SCT ^{TS}	FWS ^{TS #}	ISOL ^{TS}	D	D	D
9	BIHAR	ISOL ^{TS #}	D	ISOL ^{TS}	ISOL ^{TS}	D	D	D
10	EAST UTTAR PRADESH	ISOL	D	ISOL ^{TS}	D	D	D	D
11	WEST UTTAR PRADESH	D	D	ISOL ^{TS}	D	D	ISOL	ISOL
12	UTTARAKHAND	ISOL	ISOL	SCT	ISOL	ISOL	SCT ^{TS}	ISOL
13	HARYANA CHD. & DELHI	ISOL	ISOL	ISOL ^{TS}	D	ISOL	SCT ^{TS #}	SCT ^{TS #}
14	PUNJAB	ISOL	ISOL	SCT ^{TS}	D	ISOL	SCT ^{TS #}	SCT ^{TS #}
15	HIMACHAL PRADESH	ISOL	ISOL	SCT ^{TS}	ISOL	SCT	WS ^{TS #}	SCT ^{TS}
16	JAMMU & KASHMIR	ISOL	ISOL	FWS ^{TS}	ISOL	SCT	WS ^{TS}	WS ^{TS}
17	WEST RAJASTSAN	D	D ^{TS}	D ^{TS}	D	ISOL	ISOL ^{TS}	SCT ^{TS}
18	EAST RAJASTSAN	D	ISOL ^{TS}	ISOL ^{TS}	D	ISOL	ISOL ^{TS}	SCT ^{TS}
19	WEST MADHYA PRADESH	D	ISOL	ISOL	D	D	ISOL ^{TS}	SCT ^{TS}
20	EAST MADHYA PRADESH	SCT ^{TS #}	ISOL ^{TS}	ISOL	D	D	ISOL	ISOL
21	GUJARAT REGION D.D. & N.H.	D	D	D	D	D	ISOL	ISOL ^{TS}
22	SAURASTRA KUTCH & DIU	D	D	D	D	D	ISOL	ISOL
23	KONKAN & GOA	D	D	D	D	D	ISOL	ISOL
24	MADHYA MAHARASHTRA	D	D	D	D	D	ISOL	SCT ^{TS #}
25	MARATHAWADA	ISOL	D	D	D	D	ISOL	SCT ^{TS #}
26	VIDARBHA	SCT ^{TS #}	ISOL ^{TS}	ISOL	D	D	ISOL ^{TS}	SCT ^{TS #}
27	CHHATTISGARH	SCT ^{TS #}	SCT ^{TS #}	ISOL ^{TS}	D	D	ISOL	ISOL ^{TS}
28	COASTAL A. PR. & YANAM	ISOL ^{TS}	ISOL ^{TS}	ISOL ^{TS}	ISOL	ISOL	ISOL	ISOL
29	TELANGANA	ISOL ^{TS}	ISOL ^{TS}	ISOL	D	D	ISOL	ISOL
30	RAYALASEEMA	D	D	D	D	D	D	D
31	TAMIL. PUDU. & KARAIKAL	D	D	ISOL	ISOL	D	ISOL	ISOL
32	COASTAL KARNATAKA	D	D	D	D	D	ISOL	ISOL
33	NORTS INT.KARNATAKA	ISOL ^{TS}	D	D	D	D	ISOL	ISOL
34	SOUTS INT.KARNATAKA	ISOL	ISOL	D	D	D	ISOL	ISOL
35	KERALA & MAHE	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL ^{TS}	ISOL
36	LAKSHADWEEP	SCT	D	D	D	D	SCT	SCT
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		# HALSTORM		↓ COLD WAVE (-4.5 °C to -6.4 °C)		↓ SEVERE COLD WAVE (< -6.4)
* TSUNDE RSTORM WITS SQUALL/GUSTY WIND			* DS/TS DUST/TSUNDE RSTORM		↑ HEAT WAVE (+4.5 °C to +6.4 °C)		↑ SEVERE HEAT WAVE (> +6.4)	

Forecast Rainfall (mm/day)

(Week1: 20Mar-26Mar)

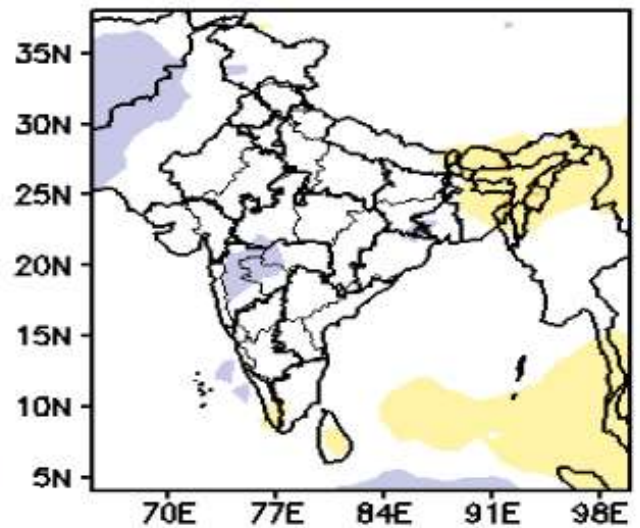
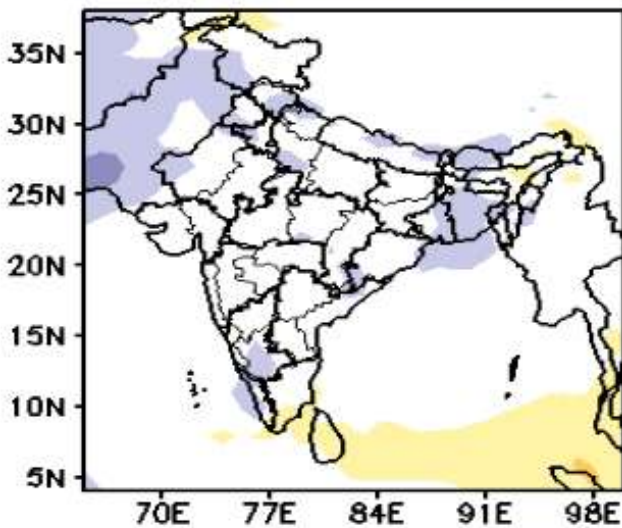
(Week2: 27Mar-02Apr)



Forecast Rainfall Anomaly (mm/day)

(Week1: 20Mar-26Mar)

(Week2: 27Mar-02Apr)



MME forecast Tmax anomaly (Deg C)

(Week1: 20Mar-26Mar)

(Week2: 27Mar-02Apr)

