



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

Dated: 10 September 2020

Current Weather Status and Outlook for next two weeks (10-23 September 2020)

Significant Features of current week ended on 09 September 2020

- A Low Pressure Area was observed over southeast Arabian and adjoining east central Arabian Sea during 06-08 Sep off Karnataka coast.
- Monsoon trough oscillated north- south of its normal position during the week and its western end was very weak and north of the normal position in the 2nd half of the week.
- An east-west shear zone across south peninsular India at middle tropospheric level which moved from 10°N to 13 °N during 5th to 9th Sep.
- Two cyclonic circulations were observed a) Northeast Rajasthan & neighbourhood (06-07 Sep) and b) Madhya Pradesh and neighbourhood (03-07 Sep).
- An Off shore trough (08-09 Sep) from south Kerala coast to south Maharashtra coast
- As was predicted, weak monsoon conditions prevailed over central and north India towards 2nd half of the week while Peninsular India has received excess rainfall during the week. Rainfall over India as a whole was **deficient rainfall during the week (Fig. 1) with % departure from normal as -30%**.
- Heavy to very heavy rainfall with extremely heavy rainfall at isolated places had been occurred over north-eastern states and Coastal Karnataka on one day each during the week. Date wise 24 hours highest Rainfall (in cm) in the week, at time ending at 0830 IST of date
 - Madhya Pradesh: 03rd Sep: Vidisha-12 ; Rajasthan: 04th Sep: Chirawa-14
 - Chhattisgarh: 05th Sep: Bijapur-18 ; Assam: 06th Sep: Dhubri-19: Coastal Karnataka: 07th Sep: Vidipi-24; Kerala: 07th Sep: Cherthala-18 & Kottayam-18
 - West Bengal: 08th Sep: Jalpaiguri-14, 09 Sep : Darjeeling – 21

Temperature Scenario: The highest maximum temperature of **39.4° C** had been recorded at **Bikaner (West Rajasthan)** on **9th September 2020** over the plains of the country during the week.

LEGEND: A few days- 3 days, Many days- 4 to 5 days and Most days- 6 to 7 days during the week.

Weekly Rainfall Scenario (for week ended on 09 Sept 2020): During the week, rainfall was deficient with % departure from above Long Period Average (LPA) by -30% over the country as a whole. Details are given below:

Regions	Actual Rainfall(mm)	Normal Rainfall(mm)	%Departure from LPA
Country as a whole	33.2	47.3	-30%
Northwest India	27.2	36.1	-25%
Central India	24.4	54.0	-55%
South Peninsula	44.8	33.5	34%
East & northeast India	48.8	71.5	-32%

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

Seasonal Rainfall Scenario for Monsoon Season of 2020 (1 June-9 Sept 2020)

For the country as a whole, Seasonal cumulative rainfall during this year's southwest monsoon season upto 9 Sept 2020 was above Long Period Average (LPA) by +7%. 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	823.4	771.1	7%
Northwest India	478.9	536.3	-11%
Central India	999.4	869.5	15%
South Peninsula	739.1	609.8	21%
East & northeast India	1220.3	1215.0	0%

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

Chief synoptic conditions as on 10 Sept 2020

- ✓ Western end of monsoon trough lies north of its normal position.
- ✓ A cyclonic circulation lies over GWB at lower level.
- ✓ A trough from East UP to Vidharbha at lower level
- ✓ Offshore trough at MSL runs from Maharashtra coast to Kerala coast.
- ✓ A cyclonic circulation lies over EC Arabian Sea.
- ✓ East-west shear zone around 14 °N about 3 km above MSL.

Large scale features as on 10 Sept 2020

- The Madden Julian Oscillation (MJO) index is currently in Phase 3 with amplitude less than 1. It will remain in Phase 3 with slight enhancement in amplitude during week 1. It is likely to move into Phase 4 with amplitude less than 1 from the initial part of week 2 and continue in the same Phase for the rest of the forecast period.
- Currently, sea surface temperatures(SSTs) and atmospheric conditions over equatorial

Pacific Ocean indicate cool ENSO neutral conditions. MMCFS and other global models indicate SSTs over the region to cool further. However, ENSO neutral conditions to continue during remaining part of monsoon season.

- Neutral IOD conditions are prevailing over equatorial Indian Ocean. MMCFS forecast indicates development of negative IOD conditions during coming months.

Forecast for next two week

Week 1: (10-16 Sept)

Major likely weather systems

- An off-shore trough at mean sea level runs from Maharashtra coast to Kerala coast. The east-west shear zone runs roughly along 14°N across the peninsular India between 3.1 km & 3.6 km above mean sea level and likely to persists during next 4-5 days..
- The western end of the monsoon trough lies to the north of its normal position and its eastern end near to its normal position. The monsoon trough very likely to shift southward due to formation of a low pressure area over Westcentral Bay of Bengal off Andhra Pradesh coast around 13th September.

Weather warning for next 5 days

- ❖ Fairly widespread to widespread rainfall with isolated heavy falls, thunderstorm & lightning very likely over Peninsular India during next 4-5 days.
- ❖ Heavy to very heavy rainfall at isolated places very likely over Coastal Karnataka during 10th-13th; South Interior Karnataka and Kerala & Mahe on 10th & 11th September.
- ❖ Extremely heavy rainfall at isolated places also very likely over Coastal & South Interior Karnataka on 10th & 11th September, 2020.
- ❖ Heavy rainfall at isolated places also very likely over Sub-Himalayan West Bengal & Sikkim during next 4 days; and over Northeast India during next 4-5 days.

Cumulatively rainfall during week 1(10-16 Sept and Week 2(17-23 Sept)

- Northeast India and South Peninsular India will experience above normal rainfall activity during next 2-weeks.
- Northwest and Central India to get deficient rainfall during 11-17 Sep
- West central India to get above normal rainfall & East Central India to get deficient rainfall during 18-24 Sep
- In association with likely low pressure system on 13 Sept near north AP coast & its movement across Telangana, Vidarbha, excess rainfall with heavy to very heavy fall at some places very likely over AP, Telangana, Maharashtra, Karnataka & Kerala during 14-17 Sept..

- Withdrawal of SW monsoon is unlikely due to above mentioned low likely form on 13 Sept followed by another low around 20 Sept in the subsequent week, though there will be continuous mainly dry spell over NW Rajasthan (Refer Annexure III and IV for more information).

Maximum Temperature for week 1 & 2: (10-23 September, 2020):

During week 1 and week 2 Mostly above normal T max over central and plains of northern India during week 1 and week 2. (Annexure V).

Cyclogenesis: The phase of MJO will support convective activity over the north Indian Ocean during week 1 and week 2. Most of the numerical models including IMD GFS, GEFS, ECMWF, NEPS & NCUM are not indicating any cyclogenesis over the region during week 1 as well as NCEP GFS during weeks 1& 2. The Genesis Potential Parameter (GPP) based on IMD GFS is not indicating any potential zone for cyclogenesis during week-1. The GPP based on CGEPS (MME) is also not indicating any cyclogenesis during weeks-1 & 2. However, majority of the models indicate chances of formation of a low pressure area over west central Bay of Bengal off Andhra Pradesh coast during the first half of week-1 and another low pressure area over west central Bay of Bengal during the middle of week-2. **Considering the above, it may be concluded that there is no cyclogenesis likely over the north Indian Ocean during weeks 1 & 2.** (for details on cyclogenesis pls see <http://www.rsmcnewdelhi.imd.gov.in/images/bulletin/eroc.pdf>)

Next weekly update will be issued on next Thursday i.e. 17 Sept 2020

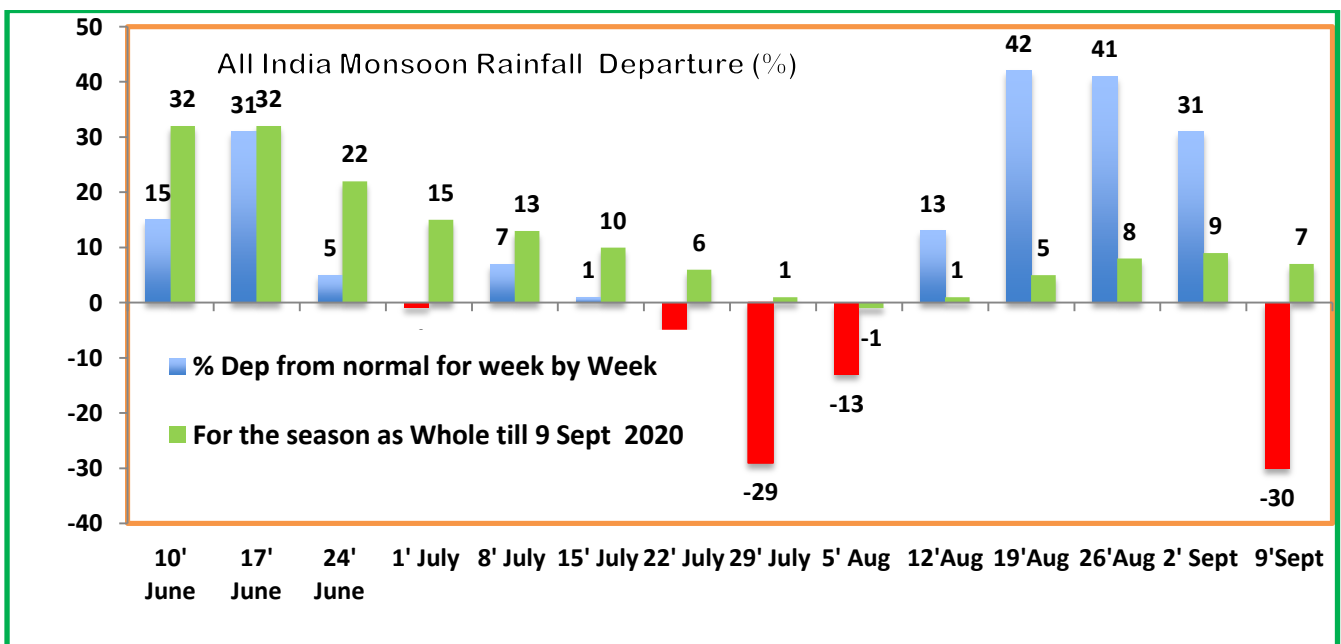
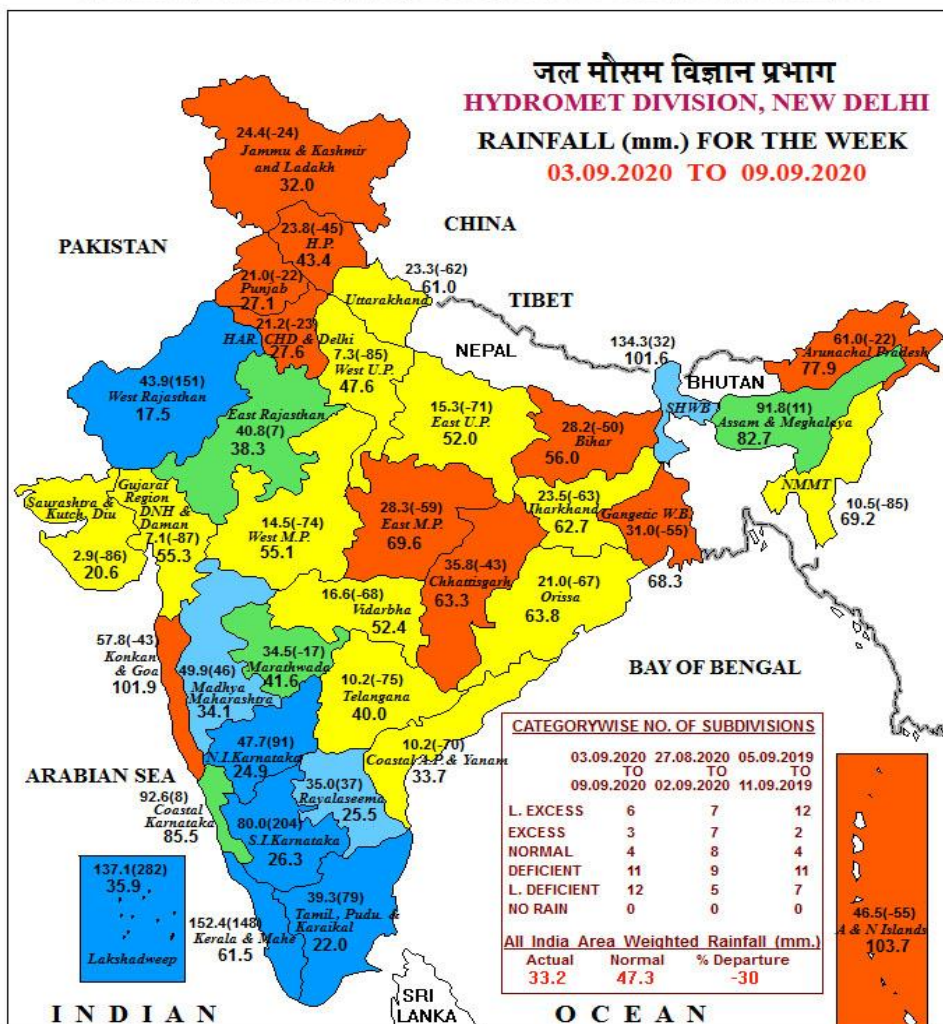


Fig 1. Week by week and cumulative rainfall all India in % Dep from normal over Country as a whole-All India Rainfall 2020 monsoon performances so far

Annexure I

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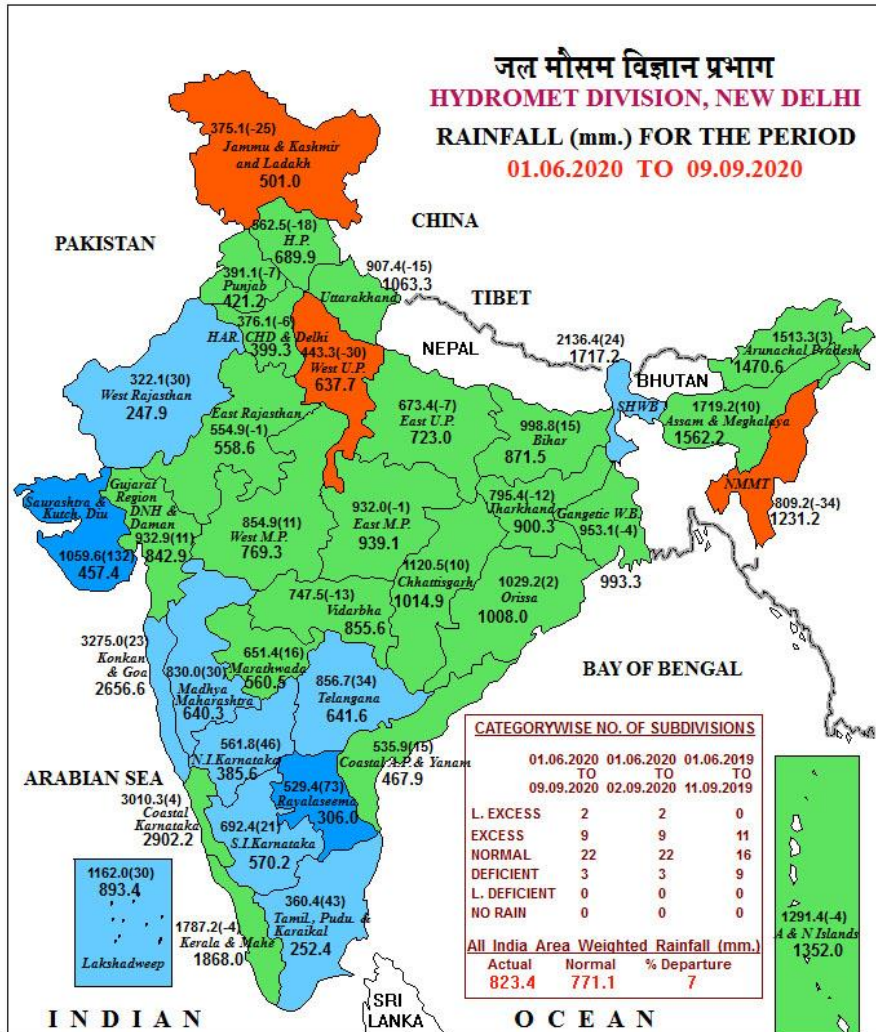
LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

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.

Annexure-II

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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

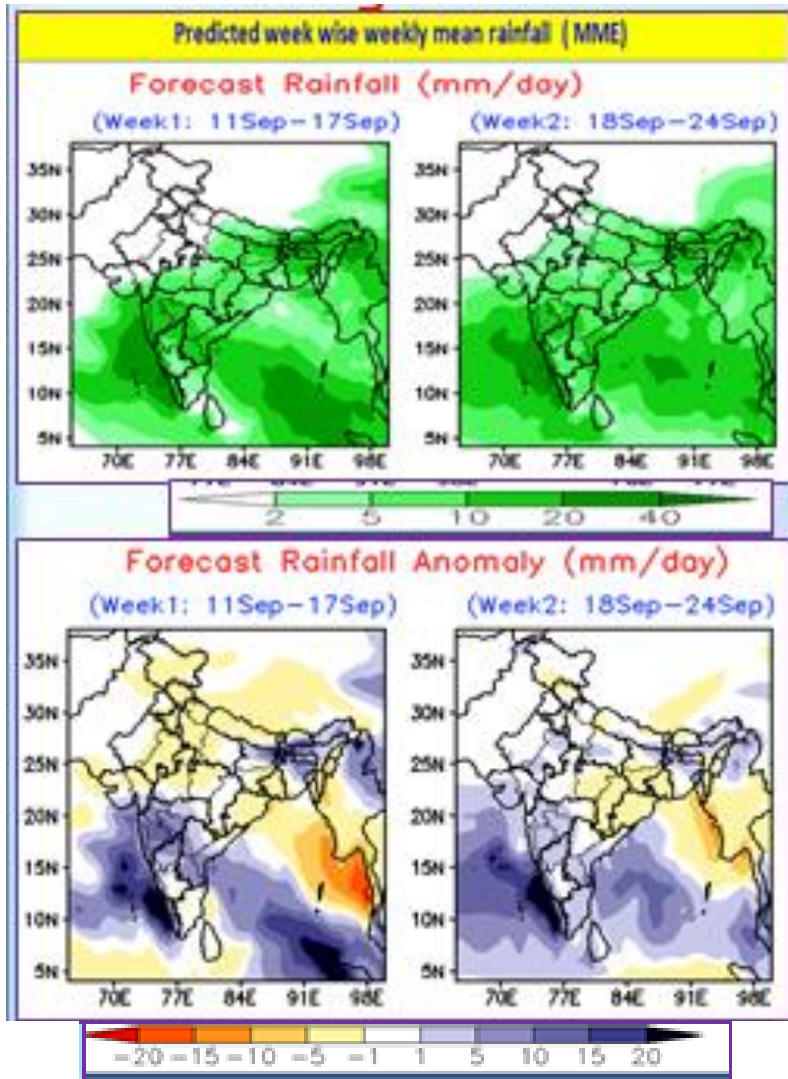
METEOROLOGICAL SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & Wx. WARNINGS-2020

Sr. No	MET.SUB-DIVISIONS	10 SEP	11 SEP	12 SEP	13 SEP	14 SEP	15 SEP	16 SEP
1	ANDAMAN & NICO.ISLANDS	WS [•]	WS [•]	WS [•]	WS	WS	WS [•]	WS [•]
2	ARUNACHAL PRADESH	FWS [•]	FWS [•]	FWS [•]	WS [•]	WS [•]	FWS	FWS
3	ASSAM & MEGHALAYA	WS ^{•TS}	WS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	FWS [•]	FWS [•]
4	NAGA.MANI.MIZO.& TRIPURA	WS ^{•TS}	FWS ^{TS}	FWS ^{•TS}	FWS ^{TS}	FWS ^{TS}	FWS	FWS
5	SUB-HIM.W. BENG. & SIKKIM	WS ^{•TS}	WS ^{•TS}	WS [•]	WS [•]	WS	FWS	FWS
6	GANGETIC WEST BENGAL	FWS ^{TS}	SCT ^{TS}	SCT	SCT	FWS	FWS	FWS
7	ODISHA	FWS ^{•TS}	SCT ^{TS}	SCT	FWS ^{••}	FWS [•]	SCT	SCT
8	JHARKHAND	SCT ^{TS}	SCT ^{TS}	SCT ^{TS}	ISOL ^{TS}	ISOL	SCT	SCT
9	BIHAR	SCT ^{TS}	FWS ^{•TS}	SCT ^{•TS}	SCT	SCT	SCT	SCT
10	EAST UTTAR PRADESH	ISOL ^{TS}	ISOL	ISOL	SCT	SCT ^{TS}	FWS	FWS
11	WEST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	SCT ^{TS}	SCT	FWS
12	UTTARAKHAND	ISOL	ISOL	ISOL	SCT	SCT ^{TS}	SCT	SCT
13	HARYANA CHD. & DELHI	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
14	PUNJAB	DRY	DRY	DRY	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
16	JAMMU & K. AND LADAKH	DRY	DRY	DRY	DRY	DRY	DRY	DRY
17	WEST RAJASTSAN	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
18	EAST RAJASTSAN	ISOL	ISOL	ISOL	ISOL	SCT ^{TS}	SCT	FWS
19	WEST MADHYA PRADESH	ISOL ^{TS}	ISOL ^{TS}	SCT ^{•TS}	SCT ^{•TS}	SCT ^{•TS}	FWS [•]	FWS [•]
20	EAST MADHYA PRADESH	SCT ^{TS}	SCT ^{TS}	SCT ^{•TS}	SCT ^{•TS}	SCT ^{•TS}	SCT	SCT
21	GUJARAT REGION D.D. & N.H.	ISOL	SCT [•]	SCT [•]	SCT [•]	SCT [•]	FWS	SCT
22	SAURASTRA KUTCH & DIU	ISOL	ISOL	SCT [•]	SCT [•]	SCT	SCT	SCT
23	KONKAN & GOA	FWS ^{•TS}	WS ^{TS}	WS ^{••}	WS [•]	WS [•]	WS ^{••}	WS ^{••}
24	MADHYA MAHARASHTRA	FWS ^{•TS}	FWS ^{•TS}	WS [•]	WS [•]	WS [•]	WS [•]	FWS
25	MARATHAWADA	FWS ^{•TS}	FWS ^{TS}	WS [•]	WS [•]	WS ^{••}	WS [•]	FWS
26	VIDARBHA	FWS ^{TS}	WS ^{•TS}	WS ^{•TS}	WS ^{•TS}	WS ^{••TS}	WS [•]	FWS
27	CHHATTISGARH	FWS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	SCT	SCT
28	COASTAL A. PR. & YANAM	SCT ^{•TS}	FWS ^{•TS}	WS ^{•TS}	WS ^{••TS}	FWS ^{TS}	SCT	SCT
29	TELANGANA	FWS ^{•TS}	FWS ^{•TS}	FWS ^{•TS}	WS ^{••TS}	WS ^{••TS}	FWS	SCT
30	RAYALASEEMA	SCT ^{•TS}	SCT ^{•TS}	FWS ^{•TS}	SCT ^{TS}	ISOL ^{TS}	ISOL	ISOL
31	TAMIL. PUDU. & KARAIKAL	SCT ^{••TS}	ISOL ^{•TS}	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	WS ^{•••TS}	WS ^{•••TS}	WS ^{••TS}	WS [•]	WS [•]	WS [•]	WS [•]
33	NORTH INT.KARNATAKA	WS ^{••TS}	WS ^{••TS}	WS ^{•TS}	WS [•]	WS [•]	SCT	SCT
34	SOUTH INT.KARNATAKA	WS ^{•••TS}	WS ^{•••TS}	WS ^{•TS}	WS	FWS	SCT	SCT
35	KERALA & MAHE	WS ^{••TS}	WS ^{••TS}	WS [•]	WS [•]	WS [•]	WS [•]	WS [•]
36	LAKSHADWEEP	WS	WS	WS	WS	WS	WS	WS

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/THUNDERSTORM	↑ HEAT WAVE (+4.5°C to +6.4°C)
↑ SEVERE HEAT WAVE (> +6.4)			

Annexure IV



Annexure V

