



## WEEKLY WEATHER REPORT FOR THE WEEK 10-16 MARCH, 2016

[Table-1\(A\)](#) [Table-1\(B\)](#)

[Table-2](#) [Table-3](#) [Table-4](#) [Fig-1](#) [Fig-2](#)

[Annexure-1](#)

### CHIEF FEATURES

- Heavy rain/snow occurred at isolated places over Jammu & Kashmir and Himachal Pradesh on 12<sup>th</sup>.

#### **Thunderstorm/Thunder-squall/Hail**

- Thunder-squall with hail was observed over Jagdalpur and squall over Dum dum (Kolkata) on 16<sup>th</sup>.
- Hailstorm was reported at isolated places over Uttarakhand on 13<sup>th</sup> & 14<sup>th</sup>; over West Madhya Pradesh on 13<sup>th</sup>; over East Uttar Pradesh on 14<sup>th</sup> and over Chhattisgarh on 15<sup>th</sup>.
- Thunderstorm activity was observed at isolated places over Odisha, Jharkhand, Uttarakhand, Himachal Pradesh, Jammu & Kashmir, Chhattisgarh and Kerala on many days; over Bihar, Uttar Pradesh, Haryana, Chandigarh & Delhi and Punjab on a few days; and over Assam & Meghalaya, Manipur, West Bengal & Sikkim, Rajasthan, Madhya Pradesh, Vidarbha, Telangana & Tamilnadu on one or two days during the week.

#### **MINIMUM TEMPERATURES**

Minimum temperatures were markedly/appreciably above normal over West Bengal & Sikkim, Uttarakhand and Madhya Pradesh on few days of the week; and over Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Bihar, Uttar Pradesh Haryana, Chandigarh & Delhi, Punjab, Himachal Pradesh, Jammu & Kashmir, Rajasthan, Gujarat, Vidarbha, Telangana and Rayalseema on one or two days during the 1<sup>st</sup> half of the week.

#### **MAXIMUM TEMPERATURES**

Maximum temperatures were markedly/appreciably above normal over Sub-Himalayan West Bengal & Sikkim, Jharkhand, Bihar, Uttar Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Punjab, Himachal Pradesh, Jammu & Kashmir, East Rajasthan, Madhya Pradesh, Konkan & Goa, Madhya Maharashtra, Vidarbha and Telangana on one or two days during 1<sup>st</sup> half of the week. These were markedly/appreciably below normal over Jharkhand, West Uttar Pradesh, Punjab, Himachal Pradesh, Jammu & Kashmir, East Madhya Pradesh and Chhattisgarh on one or two days during 2<sup>nd</sup> half of the week.

### METEOROLOGICAL ANALYSIS

- Last week's upper air cyclonic circulation extending upto 0.9 km above mean sea level over southeast Madhya Pradesh & adjoining Vidarbha, laid over East Madhya Pradesh and adjoining Vidarbha & Chhattisgarh extending upto 1.5 km above mean sea level on 10<sup>th</sup>. It became less marked on 11<sup>th</sup>.
- Last week's western disturbance as an upper air trough in the mid-tropospheric levels ran roughly along Long. 57.0°E and north of Lat. 25.0°N on 10<sup>th</sup>. It was seen as an upper air cyclonic circulation extending upto 4.5 km above mean sea level over Afghanistan & neighbourhood with a trough aloft roughly along Long. 62.0°E and north of Lat. 20.0°N on 11<sup>th</sup>; over north Pakistan & neighbourhood with the trough aloft along Long. 66.0°E and north of Lat. 20.0°N on 12<sup>th</sup>; over north Pakistan and adjoining Jammu & Kashmir with the trough aloft roughly along Long. 68.0°E and north of Lat. 20.0°N on 13<sup>th</sup>; and persisted over the

same region with the trough aloft roughly along Long.  $70.0^{\circ}\text{E}$  and north of Lat.  $22.0^{\circ}\text{N}$  on 14<sup>th</sup>. It ran roughly along Long.  $74.0^{\circ}\text{E}$  and north of Lat.  $30.0^{\circ}\text{N}$  extending upto mid-tropospheric level on 15<sup>th</sup> and moved away east-northeastwards thereafter.

- An induced upper air cyclonic circulation associated with above mentioned western disturbance lay centred over central Pakistan & adjoining West Rajasthan extending upto 1.5 km above mean sea level on 10<sup>th</sup>. Thereafter, it lay centred as an induced low pressure area over central Pakistan and adjoining northwest Rajasthan & Punjab with associated upper air cyclonic circulation extending upto 1.5 km above mean sea level on 11<sup>th</sup>; over West Rajasthan & neighbourhood with associated upper air cyclonic circulation extending upto 0.9 km above mean sea level on 12<sup>th</sup>. The induced low pressure area became less marked on 13<sup>th</sup>. However, associated upper air cyclonic circulation laid over northwest Rajasthan & neighbourhood extended upto 1.5 km above mean sea level on 13<sup>th</sup>, over Punjab & neighbourhood on 14<sup>th</sup> and become less marked thereafter.
- Another western disturbance as an upper air cyclonic circulation lay centred over eastern parts of Iran & adjoining Afghanistan extending upto 3.1 km above mean sea level on 15<sup>th</sup> and over western parts of Afghanistan & neighbourhood extending upto 4.5 km above mean sea level on 16<sup>th</sup>.
- Last week's trough of low at mean sea level over equatorial Indian Ocean and adjoining southwest Bay of Bengal persisted over the same region on 10<sup>th</sup> and became less marked on 11<sup>th</sup>.
- A trough in lower level easterlies ran from southeast Arabian Sea to south Konkan and extended upto 0.9 km above mean sea level on 10<sup>th</sup>; along southeast Arabian Sea to south Madhya Maharashtra across south Konkan on 11<sup>th</sup> and became less marked on 12<sup>th</sup>.
- A feeble upper air cyclonic circulation lay centred over Comorin area & neighbourhood and extended upto 0.9 Km above mean sea level on 11<sup>th</sup> & 12<sup>th</sup> and become less marked on 13<sup>th</sup>.
- An upper air cyclonic circulation lay centred over northwest Madhya Pradesh & neighbourhood with a trough extending from this system to South Interior Karnataka across Marathawada & North Interior Karnataka upto 0.9 km above mean sea level on 12<sup>th</sup>; over Vidarbha and adjoining south Chhattisgarh & Telangana with the trough extending from this system to south Tamilnadu across Rayalaseema on 13<sup>th</sup>; over northwest Madhya Pradesh & adjoining East Rajasthan extending upto 1.5 km above mean sea level on 14<sup>th</sup>. It became less marked on 15<sup>th</sup>.
- An upper air cyclonic circulation lay centred over Vidarbha and adjoining Chhattisgarh & Telangana upto 0.9 above mean sea level with a trough extending from this system to south Tamilnadu across Rayalaseema on 13<sup>th</sup>; over Vidarbha & neighbourhood with a trough extending from this system to Comorin area across Telangana, Rayalaseema & interior Tamilnadu on 14<sup>th</sup>; over Marathawada & neighborhood with the trough extending from this system to Lakshadweep area across Interior Karnataka & Kerala and extended upto 1.5 km above mean sea level on 15<sup>th</sup>. The trough from this system to Lakshadweep area merged with the upper air cyclonic circulation over East Rajasthan & neighbourhood thereafter. The upper air cyclonic circulation lay centred over Vidarbha & neighbourhood and extended upto 1.5 km above mean sea level on 16<sup>th</sup> and a trough from this system extended upto south Tamilnadu across Telangana and Interior Karnataka on 16<sup>th</sup>.
- An upper air cyclonic circulation extending upto 1.5 km above mean sea level, laid over West Uttar Pradesh & neighborhood on 13<sup>th</sup> and became less marked thereafter.
- An upper air cyclonic circulation lay centred over northwest Madhya Pradesh & adjoining

East Rajasthan and extended upto 1.5 km above mean sea level on 14<sup>th</sup> and became less marked thereafter.

- An upper air cyclonic circulation extending upto 0.9 km above mean sea level, lay centred over East Rajasthan & neighbourhood on 15<sup>th</sup>. A north-south wind discontinuity extended from the above cyclonic circulation to Rayalaseema across West Madhya Pradesh, Vidarbha and Telangana on 15<sup>th</sup> and become less marked thereafter.
- An upper air cyclonic circulation extending upto 0.9 km above mean sea level, lay centred over Meghalaya and neighborhood on 13<sup>th</sup> and became less marked thereafter.  
An upper air trough in westerlies between 3.1km & 7.6 km above mean sea level ran roughly along Long. 85.0°E and north of Lat. 25.0°N on 16<sup>th</sup>.

#### **RAINFALL AND TEMPERATURE**

- Sub-divisionwise daily distribution of realised rainfall is shown in [Table-1\(A\)](#).
- Maximum & Minimum temperature is shown in [Table 4](#).
- Sub-divisionwise weekly rainfall is shown in [Annexure-1](#).

#### **Rainfall During The Week ( 10-16 March, 2016)**

Rainfall was excess/normal in **19**, deficient/scanty in **11** and no rain in **6** out of **36** meteorological sub-divisions. (All India Actual: **11.5** mm, Normal: **6.6** mm and Departure: **+75%**).

#### **Cumulative Seasonal Rainfall (1 March to 16 March, 2016)**

Rainfall was excess/normal in **24**, deficient/scanty in **10** and no rain in **2** out of **36** meteorological sub-divisions. (All India Actual: **17.0** mm, Normal: **14.3** mm and Departure: **+19%**).

The sub-division wise weekly and seasonal rainfall distribution is presented in [Fig.1](#) and [Fig.2](#).

Statewise distribution of number of districts with excess, normal, deficient, scanty and no rainfall is shown in [Table-2](#).

A comparative data of cumulative seasonal rainfall during the corresponding period in the last five years is given in [Table-3](#).

#### **METEOROLOGICAL ANALYSIS AS ON 17 MARCH 2016**

- A western disturbance as an upper air cyclonic circulation lies over Afghanistan & adjoining north Pakistan and extends upto 4.5 km above mean sea level.
- An induced upper air cyclonic circulation lies over central Pakistan & adjoining West Rajasthan and extends upto 1.5 km above mean sea level.
- An upper air cyclonic circulation lies over Vidarbha & neighbourhood and extends upto 0.9 km above mean sea level.

A trough extends from the above system to south Tamilnadu across Telangana and Interior Karnataka.

#### **FORECAST & WARNING FOR THE NEXT WEEK 17-23 MARCH 2016**

- Detailed seven days Sub-division wise rainfall-forecast & weather-warning is given in [Table-1\(B\)](#).

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Table-1(A)

METEOROLOGICAL SUB-DIVISIONWISE DAILY DISTRIBUTION OF REALISED RAINFALL (10-16 MARCH 2016)								
S.No.	SUB-DIVISIONS	10 MAR	11 MAR	12 MAR	13 MAR	14 MAR	15 MAR	16 MAR
1	ANDAMAN & NICOBAR ISLANDS	DRY	DRY	DRY	DRY	DRY	DRY	DRY
2	ARUNACHAL PRADESH	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
3	ASSAM & MEGHALAYA	ISOL	ISOL	ISOL	DRY	ISOL	ISOL	DRY
4	NAGA.MANI.MIZO.& TRIPURA	ISOL	DRY	ISOL	DRY	ISOL	DRY	ISOL
5	SUB-HIM.WEST BENGAL & SIKKIM	ISOL	DRY	DRY	ISOL	ISOL	DRY	ISOL
6	GANGETIC WEST BENGAL	ISOL	DRY	DRY	DRY	ISOL	ISOL	ISOL
7	ODISHA	DRY	DRY	DRY	ISOL	ISOL	SCT	SCT
8	JHARKHAND	ISOL	DRY	ISOL	ISOL	SCT	ISOL	ISOL
9	BIHAR	DRY	DRY	DRY	ISOL	ISOL	ISOL	DRY
10	EAST UTTAR PRADESH	DRY	DRY	ISOL	ISOL	ISOL	ISOL	DRY
11	WEST UTTAR PRADESH	DRY	DRY	ISOL	SCT	ISOL	ISOL	DRY
12	UTTARAKHAND	DRY	ISOL	FWS	WS	FWS	ISOL	ISOL
13	HARYANA CHANDIGARH & DELHI	DRY	DRY	SCT	SCT	ISOL	ISOL	DRY
14	PUNJAB	DRY	DRY	SCT	SCT	ISOL	ISOL	DRY
15	HIMACHAL PRADESH	DRY	ISOL	FWS	FWS	FWS	ISOL	ISOL
16	JAMMU & KASHMIR	DRY	ISOL	FWS	FWS	FWS	SCT	DRY
17	WEST RAJASTHAN	DRY	DRY	ISOL	ISOL	ISOL	DRY	DRY
18	EAST RAJASTHAN	DRY	DRY	ISOL	DRY	ISOL	ISOL	DRY
19	WEST MADHYA PRADESH	DRY	DRY	ISOL	ISOL	ISOL	DRY	DRY
20	EAST MADHYA PRADESH	DRY	DRY	ISOL	SCT	SCT	DRY	DRY
21	GUJARAT REGION D.D. & N.H.	DRY	DRY	DRY	DRY	DRY	DRY	DRY
22	SAURASTRA KUTCH & DIU	DRY	DRY	DRY	DRY	ISOL	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	ISOL	ISOL	DRY	ISOL
27	CHHATTISGARH	DRY	DRY	DRY	ISOL	SCT	ISOL	SCT
28	COASTAL ANDHRA PRADESH	DRY	DRY	DRY	DRY	ISOL	ISOL	ISOL
29	TELANGANA	DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
30	RAYALASEEMA	DRY	DRY	DRY	DRY	ISOL	DRY	ISOL
31	TAMILNADU & PUDUCHERRY	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
32	COASTAL KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
33	NORTH INTERIOR KARNATAKA	DRY	DRY	DRY	DRY	DRY	DRY	DRY
34	SOUTH INTERIOR KARNATAKA	ISOL	DRY	DRY	ISOL	ISOL	ISOL	ISOL
35	KERALA	DRY	DRY	ISOL	ISOL	ISOL	ISOL	ISOL
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	NO STATION REPORTED RAINFALL			
*	ACTIVE (R/F $1\frac{1}{2}$ times the normal & WS/FWS, at least 2 stations should be 5 cm. along west coast & 3 cm. elsewhere )	**	VIGOROUS (R/F More than 4 times the normal & WS/FWS, at least 2 stations should be 8 cm. along west coast & 5 cm. elsewhere)					

Table-1(B)

MET. SUB-DIVISIONWISE WEEKLY RAINFALL FORECAST & WEATHER WARNINGS (17-23 MARCH 2016)									
S.No.	SUB-DIVISIONWISE		17 MAR	18 MAR	19 MAR	20 MAR	21 MAR	22 MAR	23 MAR
1	ANDAMAN & NICO.ISLANDS		DRY	DRY	DRY	DRY	DRY	ISOL	ISOL
2	ARUNACHAL PRADESH		ISOL	DRY	ISOL	SCT	FWS	SCT	ISOL
3	ASSAM & MEGHALAYA		DRY	DRY	TS ISOL \$	TS SCT \$	FWS	SCT	ISOL
4	NAGA.MANI.MIZO.& TRIPURA		DRY	ISOL	TS SCT \$	TS FWS \$	FWS	ISOL	ISOL
5	SUB-HIM.W. BENG. & SIKKIM		DRY	ISOL	ISOL	ISOL	ISOL	ISOL	DRY
6	GANGETIC WEST BENGAL		DRY	ISOL	ISOL	DRY	DRY	DRY	DRY
7	ODISHA		ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
8	JHARKHAND		DRY	ISOL	ISOL	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		ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
12	UTTARAKHAND		ISOL	TS SCT \$#	SCT	ISOL	ISOL	DRY	DRY
13	HARYANA CHD. & DELHI		ISOL \$#	TS ISOL \$#	ISOL	DRY	DRY	DRY	DRY
14	PUNJAB		TS SCT \$#	TS ISOL \$#	ISOL	DRY	DRY	DRY	DRY
15	HIMACHAL PRADESH		TS FWS \$#	** TS WS \$#	FWS	SCT	ISOL	DRY	DRY
16	JAMMU & KASHMIR		** TS WS \$#	** TS WS \$#	FWS	FWS	ISOL	ISOL	DRY
17	WEST RAJASTHAN		ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
18	EAST RAJASTHAN		ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
19	WEST MADHYA PRADESH		DRY	DRY	DRY	ISOL	ISOL	DRY	DRY
20	EAST MADHYA PRADESH		DRY	DRY	DRY	ISOL	ISOL	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		ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
27	CHHATTISGARH		ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
28	COASTAL ANDHRA PRADESH		ISOL	DRY	DRY	DRY	DRY	DRY	DRY
29	TELANGANA		ISOL	DRY	DRY	DRY	DRY	DRY	DRY
30	RAYALASEEMA		ISOL	DRY	DRY	DRY	DRY	DRY	DRY
31	TAMILNADU & PUDUCHERRY		ISOL	DRY	DRY	DRY	DRY	DRY	DRY
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		ISOL	ISOL	DRY	DRY	DRY	ISOL	ISOL
35	KERALA		ISOL	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
36	LAKSHADWEEP		DRY	ISOL	ISOL	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	DRY (Nil Rainfall)		
F Fog	\$ Thunder Squall	! Cold Wave		! Severe Cold Wave		* Heavy Rainfall			
* Snowfall	# Hailstorm	* ! Cold Day		** ! Severe Cold Day		** Heavy to Very Heavy Rainfall			
DS/TS	Dust Storm /Thunder Storm		!! Heat wave	!! Severe Heat Wave		!!! Extremely Heavy Rainfall			

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## Table-2

### STATEWISE DISTRIBUTION OF NO. OF DISTRICTS WITH EXCESS, NORMAL, DEFICIENT, SCANTY AND NO RAINFALL

S. NO.	STATES	PERIOD FROM : 01.03.2016 TO 16.03.2016						
		E	N	D	S	NR	ND	TOTAL
1	A & N ISLAND (UT)	0	0	0	0	3	0	3
2.	ARUNACHAL PRADESH	5	3	3	2	0	3	16
3.	ASSAM	4	1	7	11	3	1	27
4.	MEGHALAYA	0	0	0	4	3	0	7
5.	NAGALAND	0	0	2	2	1	6	11
6.	MANIPUR	1	0	0	2	1	5	9
7.	MIZORAM	0	0	0	1	3	5	9
8.	TRIPURA	0	0	1	3	0	0	4
9.	SIKKIM	1	1	1	1	0	0	4
10.	WEST BENGAL	0	4	4	8	2	1	19
11.	ODISHA	5	3	7	11	4	0	30
12.	JHARKHAND	13	1	3	5	2	0	24
13.	BIHAR	8	4	3	3	20	0	38
14.	UTTAR PRADESH	36	11	4	9	10	1	71
15.	UTTARAKHAND	5	5	3	0	0	0	13
16.	HARYANA	20	1	0	0	0	0	21
17.	CHANDIGARH (UT)	1	0	0	0	0	0	1
18.	DELHI	6	1	2	0	0	0	9
19.	PUNJAB	17	2	0	0	1	0	20
20.	HIMACHAL PRADESH	10	0	2	0	0	0	12
21.	JAMMU & KASHMIR	9	7	0	0	1	5	22
22.	RAJASTHAN	22	1	2	3	5	0	33
23.	MADHYA PRADESH	27	4	6	5	8	0	50
24.	GUJARAT	15	0	0	1	10	0	26
25.	DADRA & NAGAR HAVELI (UT)	0	0	0	0	0	1	1
26.	DAMAN & DIU (UT)	1	0	0	0	1	0	2
27.	GOA	0	0	0	0	2	0	2
28.	MAHARASHTRA	29	3	0	0	3	0	35
29.	CHHATISGARH	14	1	2	0	1	0	18
30.	ANDHRA PRADESH	0	2	4	5	2	0	13
31.	TELANGANA	5	1	1	3	0	0	10
32.	TAMILNADU	0	1	1	11	19	0	32
33.	PUDUCHERRY (UT)	0	0	0	1	1	2	4
34.	KARNATAKA	8	1	1	7	13	0	30
35.	KERALA	4	4	1	3	2	0	14
36.	LAKSHADWEEP (UT)	0	0	0	1	0	0	1
	<b>TOTAL</b>	<b>266</b>	<b>62</b>	<b>60</b>	<b>102</b>	<b>121</b>	<b>30</b>	<b>641</b>
CATEGORYWISE DISTRIBUTION OF DISTRICTS OUT OF THE 611 WHOSE DATA RECEIVED		43%	10%	10%	17%	20%		

### PERCENT DISTRIBUTION OF DISTRICTS IN EARLIER YEARS SINCE 1st MARCH

DATE	E	N	D	S	NR
18.03.2015	69%	4%	6%	15%	6%
19.03.2014	53%	6%	6%	12%	23%
13.03.2013	10%	1%	3%	13%	73%
14.03.2012	12%	6%	10%	17%	55%
16.03.2011	6%	4%	11%	23%	56%

**Table-3****RAINFALL DURING PRE-MONSOON SEASON**

S. No.	Meteorological Sub-Divisions	For the period from 1 <sup>st</sup> March to						
			16 Mar 2011	14 Mar 2012	13 Mar 2013	19 Mar 2014	18 Mar 2015	16 Mar 2016
1.	Andaman & Nicobar Islands	A	147	11	41	0	0	0
		N	12	10	10	15	14	12
		D	+1091	+7	+327	-100	-100	-100
2.	Arunachal Pradesh	A	18	56	7	28	82	63
		N	85	76	69	107	100	85
		D	-79	-26	-89	-74	-18	-26
3	Assam & Meghalaya	A	4	10	4	1	4	14
		N	27	24	21	34	32	27
		D	-84	-58	-81	-96	-88	-48
4.	Naga., Mani., Mizo. & Tripura	A	2	32	2	0	5	5
		N	25	22	20	31	28	25
		D	-90	+43	-91	-100	-83	-78
5.	Sub-Himalayan West Bengal & Sikkim	A	7	11	10	16	16	25
		N	27	24	21	35	32	27
		D	-74	-53	-53	-54	-50	-7
6.	Gangetic West Bengal	A	17	5	0	9	7	5
		N	12	11	10	14	13	12
		D	+40	-59	-100	-36	-47	-59
7.	Odisha	A	2	0	0	25	5	8
		N	15	14	13	16	16	15
		D	-84	-99	-100	+57	-72	-44
8.	Jharkhand	A	3	2	0	24	7	17
		N	9	8	7	10	9	9
		D	-63	-80	-100	+154	-28	+96
9.	Bihar	A	*	7	0	8	7	4
		N	4	4	4	5	5	4
		D	-95	+69	-100	+72	+59	-4
10.	East Uttar Pradesh	A	1	5	0	15	41	9
		N	5	5	5	5	5	5
		D	-76	+18	-100	+182	+713	+93
11.	West Uttar Pradesh	A	2	3	0	22	59	10
		N	6	5	5	7	6	6
		D	-69	-55	-100	+237	+836	+72
12.	Uttarakhand	A	11	30	1	61	102	38
		N	27	25	24	34	30	27
		D	-60	+22	-96	+80	+235	+40
13.	Haryana, Chandigarh & Delhi	A	2	*	0	17	65	20
		N	7	7	6	8	8	7
		D	-75	-96	-100	+109	+737	+180
14.	Punjab	A	5	2	*	17	61	30
		N	13	11	11	16	15	13
		D	-63	-83	-99	+4	+324	+131

S. No.	Meteorological Sub-Divisions	For the period from 1 <sup>st</sup> March to						
			16 Mar 2011	14 Mar 2012	13 Mar 2013	19 Mar 2014	18 Mar 2015	16 Mar 2016
15.	<b>Himachal Pradesh</b>	A	42	39	3	87	166	75
		N	56	48	45	70	65	56
		D	-25	-19	-94	+24	+155	+33
16.	<b>Jammu &amp; Kashmir</b>	A	53	42	1	157	253	93
		N	72	64	61	95	87	72
		D	-27	-34	-98	+66	+189	+29
17.	<b>West Rajasthan</b>	A	1	0	0	2	29	6
		N	1	1	1	1	1	1
		D	-26	-100	-100	+27	+1856	+389
18.	<b>East Rajasthan</b>	A	*	0	0	4	53	3
		N	1	1	1	1	1	1
		D	-83	-100	-100	+213	+3700	+134
19.	<b>West Madhya Pradesh</b>	A	1	0	0	4	53	2
		N	2	2	2	3	3	2
		D	-71	-100	-100	+67	+2025	-4
20.	<b>East Madhya Pradesh</b>	A	1	1	0	18	71	17
		N	7	6	6	8	7	7
		D	-90	-83	-100	+129	+842	+168
21.	<b>Gujarat Region</b>	A	0	0	0	*	7	1
		N	0	0	0	0	0	0
		D	-100	-100	-100	+2071	+66383	+5749
22.	<b>Saurashtra, Kutch &amp; Diu</b>	A	0	0	0	*	5	*
		N	*	0	0	*	*	*
		D	-100	-100	-100	+19	+4648	+176
23.	<b>Konkan &amp; Goa</b>	A	0	0	0	*	34	3
		N	0	0	0	0	0	0
		D	-100	-100	-100	+2470	+339093	+28613
24.	<b>Madhya Maharashtra</b>	A	1	0	0	21	38	6
		N	1	1	1	1	1	1
		D	-34	-100	-100	+1844	+3671	+567
25.	<b>Marathawada</b>	A	1	0	1	70	32	10
		N	3	3	3	4	4	3
		D	-84	-100	-80	+1739	+762	+230
26.	<b>Vidarbha</b>	A	1	0	0	49	64	17
		N	7	6	5	8	7	7
		D	-81	-100	-100	+551	+766	+161
27.	<b>Chhattisgarh</b>	A	1	0	0	19	17	20
		N	6	5	5	7	7	6
		D	-82	-100	-100	+174	+155	+238
28.	<b>Coastal Andhra Pradesh</b>	A	*	1	4	6	3	3
		N	6	6	5	7	6	6
		D	-93	-74	-18	-6	-45	-48
29.	<b>Telangana</b>	A	*	0	*	48	29	11
		N	5	5	4	6	5	5
		D	-95	-100	-98	+736	+420	+113

S. No.	Meteorological Sub-Divisions	For the period from 1 <sup>st</sup> March to						
		16 Mar 2011	14 Mar 2012	13 Mar 2013	19 Mar 2014	18 Mar 2015	16 Mar 2016	
30.	Rayalaseema	A 0	1	7	14	11	1	
		N 3	3	3	4	3	3	
		D -100	-82	+158	+266	+205	-77	
31.	Tamil Nadu & Pondicherry	A 1	2	23	7	20	1	
		N 11	10	9	12	11	11	
		D -86	-81	+161	-38	+79	-89	
32.	Coastal Karnataka	A 0	*	10	2	19	0	
		N 1	1	1	2	2	1	
		D -100	-88	+770	+13	+877	-100	
33.	North Interior Karnataka	A 0	0	1	30	27	4	
		N 1	1	1	2	2	1	
		D -100	-100	-54	+1385	+1317	+181	
34.	South Interior Karnataka	A 0	*	8	18	24	2	
		N 4	3	3	5	4	4	
		D -99	-91	+142	+294	+454	-52	
35.	Kerala	A 8	9	20	10	45	13	
		N 13	11	10	15	14	13	
		D -39	-19	+107	-31	+220	+7	
36.	Lakshadweep	A 1	0	37	4	4	2	
		N 7	6	5	9	8	7	
		D -81	-100	+573	-56	-54	-71	
<b>Country as whole</b>		A <b>6.7</b>	<b>7.6</b>	<b>2.4</b>	<b>27.4</b>	<b>49.2</b>	<b>17.0</b>	
		N <b>14.3</b>	<b>12.7</b>	<b>11.9</b>	<b>17.6</b>	<b>16.6</b>	<b>14.3</b>	
		D <b>-53</b>	<b>-41</b>	<b>-80</b>	<b>+55</b>	<b>+197</b>	<b>+19</b>	

## SUMMARY

No. of Sub-Divisions with rainfall	For the period from 1 <sup>st</sup> March to					
	16 Mar 2011	14 Mar 2012	13 Mar 2013	19 Mar 2014	18 Mar 2015	16 Mar 2016
Excess	02	03	07	23	26	20
Normal	00	04	01	04	01	04
<b>Total</b>	<b>02</b>	<b>07</b>	<b>08</b>	<b>27</b>	<b>27</b>	<b>24</b>
Deficient	05	06	02	05	05	06
Scanty	23	10	09	02	03	04
No rain	06	13	17	02	01	02
<b>Total</b>	<b>34</b>	<b>29</b>	<b>28</b>	<b>09</b>	<b>09</b>	<b>12</b>
Data Inadequate	00	00	00	00	00	00
<b>TOTAL</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>36</b>

\* Data is rounded off to nearest full figure according to Meteorological convention.

### SEASONS:

Winter Season (January–February) Pre-Monsoon Season (March–May)

Monsoon Season (June–September) Post-Monsoon Season (October–December)

### LEGEND:

Excess :	+20% or more	A : Actual Rainfall (mm)
Normal :	+19% to-19%	N : Normal Rainfall (mm)
Deficient :	-20% to-59%	D : Departure from normal
Scanty :	-60% to-99%	**: Data Inadequate
No Rain :	-100%	*: Rainfall upto 0.4 mm

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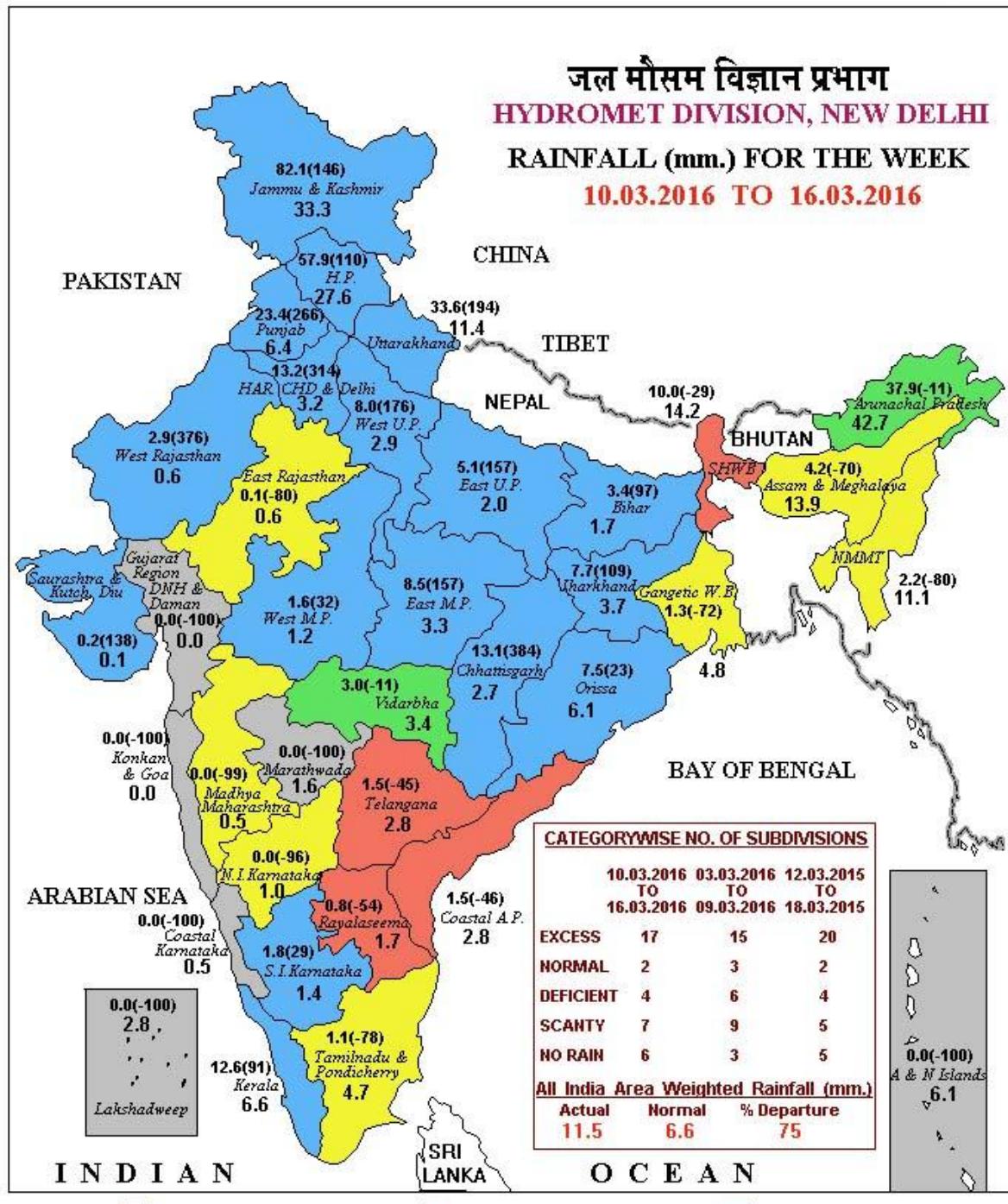
Table-4

METEOROLOGICAL SUB-DIVISIONWISE DAILY DISTRIBUTION OF MAXIMUM & MINIMUM TEMPERATURES (10-16 MARCH 2016)															
S.No	SUB-DIVISIONS	MINIMUM TEMPERATURE							MAXIMUM TEMPERATURE						
		10 MAR	11 MAR	12 MAR	13 MAR	14 MAR	15 MAR	16 MAR	10 MAR	11 MAR	12 MAR	13 MAR	14 MAR	15 MAR	16 MAR
1	ANDAMAN & NICOBAR ISLANDS	N	N	N	N	N	N	N	N	N	N	N	N	N	
2	ARUNACHAL PRADESH	N	N	AN	N	AN	N	N	N	N	N	N	N	N	
3	ASSAM & MEGHALAYA	N	N	AN	N	AN	N	N	N	N	N	N	N	N	
4	NAGA.MANI.MIZO.&TRIPURA	AAN	MAN	AN	N	AN	N	N	N	N	N	N	N	N	
5	SUB-HIMA.WEST BEN. & SIKKIM	N	N	AAN	AAN	AAN	N	N	N	N	N	N	N	N	
6	GANGETIC WEST BENGAL	AAN	AAN	AAN	N	N	N	N	N	N	N	N	N	N	
7	ODISHA	N	N	N	AN	N	N	N	N	N	N	N	N	N	
8	JHARKHAND	AAN	MAN	AN	N	N	N	N	N	N	N	N	N	N	
9	BIHAR	AAN	AAN	N	N	N	AN	N	N	N	N	N	N	N	
10	EAST UTTAR PRADESH	N	AN	AAN	AAN	AN	N	N	N	N	N	N	N	N	
11	WEST UTTAR PRADESH	AAN	AAN	AAN	N	AN	N	N	N	N	N	N	N	N	
12	UTTARAKHAND	AAN	AAN	AAN	N	N	N	N	N	N	N	N	N	N	
13	HARYANA CHAND. & DELHI	N	MAN	N	N	AN	N	N	N	N	N	N	N	N	
14	PUNJAB	AAN	MAN	N	AN	AN	N	N	N	N	N	N	N	N	
15	HIMACHAL PRADESH	N	N	N	N	N	N	N	N	N	N	N	N	N	
16	JAMMU & KASHMIR	N	MAN	N	N	AN	N	N	N	N	N	N	N	N	
17	WEST RAJASTHAN	AAN	MAN	N	N	N	N	N	N	N	N	N	N	N	
18	EAST RAJASTHAN	N	MAN	AAN	N	N	N	N	N	N	N	N	N	N	
19	WEST MADHYA PRADESH	AAN	AAN	AAN	N	N	N	N	N	N	N	N	N	N	
20	EAST MADHYA PRADESH	N	AAN	AAN	AAN	N	N	N	N	N	N	N	N	N	
21	GUJARAT REGION D.D. & N.H.	N	AAN	AAN	AN	N	N	N	N	N	N	N	N	N	
22	SAURASTRA KUTCH & DIU	N	AAN	N	AN	N	N	N	N	N	N	N	N	N	
23	KONKAN & GOA	N	N	N	N	N	N	N	N	N	N	N	N	N	
24	MADHYA MAHARASHTRA	N	N	N	N	N	N	N	N	N	N	N	N	N	
25	MARATHAWADA	N	N	AN	N	N	N	N	N	N	N	N	N	N	
26	VIDARBHA	N	N	AAN	AN	N	N	N	N	N	N	N	N	N	
27	CHHATTISGARH	N	N	AN	N	N	N	N	N	N	N	N	N	N	
28	COASTAL ANDHRA PRADESH	N	N	N	N	N	N	N	N	N	N	N	N	N	
29	TELANGANA	AN	AAN	AAN	AN	N	N	N	N	N	N	N	N	N	
30	RAYALASEEMA	N	N	N	N	AAN	AAN	N	N	N	N	N	N	N	
31	TAMILNADU & PUDUCHERRY	N	N	N	AN	N	N	N	N	N	N	N	N	N	
32	COASTAL KARNATAKA	AN	AN	AN	AN	N	N	N	N	N	N	N	N	N	
33	NORTH INTERIOR KARNATAKA	AN	AN	AN	N	N	N	N	N	N	N	N	N	N	
34	SOUTH INTERIOR KARNATAKA	AN	AN	AN	N	N	N	N	N	N	N	N	N	N	
35	KERALA	AN	N	N	N	AN	AN	N	N	N	N	N	AN	N	
36	LAKSHADWEEP	N	N	N	N	N	N	N	N	N	N	N	N	N	
LEGENDS:															
N NORMAL (-1.5 to +1.5)°C			BN BELOW NORMAL (-1.6 to 3.0)°C			ABN APERCIABLY BELOW NORMAL (-3.1 to -5.0)°C			MBN MARKEDLY BELOW NORMAL (-5.0 °C or less)						
AN ABOVE NORMAL (+1.6 to 3.0)°C		AAN	APRECIAILY ABOVE NORMAL (+3.1 to 5.0)°C			MAN MARKEDLY ABOVE NORMAL (+5.0 °C or more)									
*	Cold wave conditions ( Min.Temp.Dep.is -4.5 to -6.5)°C		**	Severe Cold wave conditions ( Min.Temp.Dep.is -6.4 °C or less )			*	Cold day conditions (Max.Temp.Dep.is -4.5 to -6.5)°C			**	Severe Cold day conditions (Max.Temp.Dep.is -6.5°C or less)			
#	Heat wave conditions( Max.Temp.Dep.is +4.5 to +6.4)°C		##	Severe Heat wave conditions ( Max.Temp.Dep.is +6.4 °C or more )			\$	Hot day conditions			\$\$	Severe Hot day conditions			

Fig-1

# भारत मौसम विज्ञान विभाग

## INDIA METEOROLOGICAL DEPARTMENT

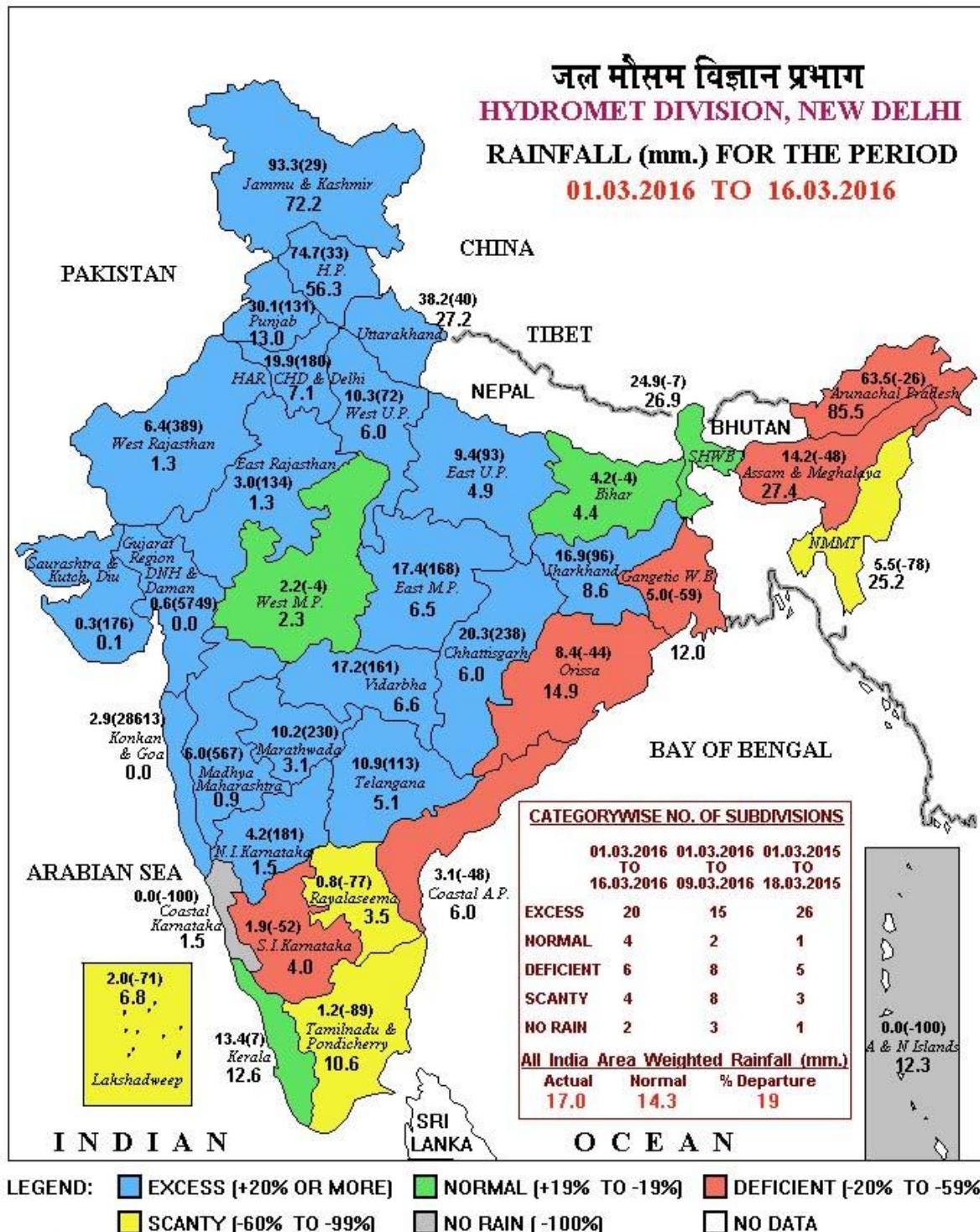
**NOTES:**

- (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.

**Fig-2**

# भारत मौसम विज्ञान विभाग

## INDIA METEOROLOGICAL DEPARTMENT

**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.

## **RAINFALL DURING THE WEEK (in cm.)**

**(10 - 16 MARCH 2016)**

### **10 MARCH 2016**

**ARUNACHAL PRADESH:** NAHARLAGUN-4, ITANAGAR-4, NAMSAI-3, TAWANG AWS-2, TEZU-2, CHANGLANG-2, MIAO-2, DEOMALI-1, TUTING-1, **ASSAM & MEGHALAYA:** MARGHERITA-4, B P GHAT-2, KHOWANG-2, DHOLLA BAZAR-2, NAHAR KATIA-2, A P GHAT-2, N.LAKHIMPUR/LILABARI-1, SILCHAR-1, TINSUKIA-1, SIVASAGAR-1, BIHUBAR-1, MORANHAT-1, D/MOHANBARI AERO-1, GOLAGHAT PTO-1, LAKHIPUR-1, **NAGALAND, MANIPUR, MIZORAM & TRIPURA:** CHOTTABEKRA-3, **SUB-HIMALAYAN WEST BENGAL & SIKKIM:** MANGAN-3, **GANGETIC WEST BENGAL:** SONAMUKHI ARG-1.

### **11 MARCH 2016**

**ARUNACHAL PRADESH:** MIAO-2, CHANGLANG-1, TAWANG AWS-1, DEOMALI-1, **ASSAM & MEGHALAYA:** BIHUBAR-1, MARGHERITA-1, **HIMACHAL PRADESH:** SARAHAN-1, THEOG-1, **JAMMU & KASHMIR:** BATOTE-1.

### **12 MARCH 2016**

**ARUNACHAL PRADESH:** CHANGLANG-2, TUTING-1, **ASSAM & MEGHALAYA:** DILLIGHAT-2, AMRAGHAT-1, LAKHIPUR-1, **JHARKHAND:** SATGAON-1, **WEST UTTAR PRADESH:** RAMPUR-1, SAHARANPUR-1, BUDHANA-1, MOTH-1, ORAI-1, BAREILLY TEHSIL-1, BAREILLY PBO-1, KALPI TEHSIL-1, **UTTARAKHAND:** RANIKHET (G)-1, BHATWARI-1, BARKOT-1, DUNDA-1, NAINITAL-1, MUSSOORIE-1, MUKTESHWAR-1, **HARYANA, CHANDIGARH & DELHI:** SONEPAT-2, KHARKHODA ARG-2, KHARKODA-2, SAHAHBAD ARG-1, UCHANA-1, DUJANA-1, PALAM-1, DUBWALI-1, CHHACHHRAULI-1, GANAUR-1, MUSTAFABAD-1, GUHLA-1, NARWANA-1, TOHANA-1, RATTIA-1, FATEHABAD-1, CHANDIGARH SASE AWS-1, CHANDIGARH-1, SAFDARJUNG-1, SADHAURA-1, BAWAL-1, KAITHAL-1, BILASPUR-1, REWARI-1, SADALPUR AWS-1, SOHANA-1, LODI ROAD-1, **PUNJAB:** KAPURTHALA AWS-4, PHAGWARA-4, PHANGOTA-3, NAKODAR-3, MALAKPUR-3, KAPURTHALA-3, MADHOPUR-3, MUKERIAN-2, TIBRI-2, SHAHPUR KANDI-2, RANJIT SAGAR DAM SITE-2, AMRITSAR-2, NANGAL-1, ZIRA-1, BHATINDA-1, NAWANSHAHR-1, BALACHAUR-1, ANANDPUR SAHIB-1, SAMRALA-1, LUDHIANA-1, MUKTSAR-1, DERABASSI(BASI)-1, SANGRUR-1, MALERKOTLA-1, PHILLAUR-1, TALWANDI SABO-1, MOGA-1, **HIMACHAL PRADESH:** BHARMAUR-15, DALHOUSI ALHA AWS-9, SALONI-7, MANALI-6, KHERI-5, JOGINDARNAGAR-4, BANGANA R-4, DHARMSALA-4, CHHATRARI-4, SUJANPUR TIRA-4, BANGANA F-3, SEO BAGH-3, DEHRA GOPIPUR-3, DHARMSHALA AWS-3, PALAMPUR-3, ARKI-3, NADAUN-3, KEYLONG-3, NAGROTA SURIAN-3, KANGRA AERO-3, AMB-2, UNA-2, SARAHAN-2, GULER-2, BHUNTAR AERO-2, SIMLA-2, KARSOG-2, SARKAGHAT-2, GHAMROOR-2, KOTKHAI-2, CHESLEA SCHOOL AWS-2, GOHAR-2, KALPA-2, NURPUR/JASSUR-2, KUMARSAIN-2, SHIMLA AERO-1, RECKONG PEO AWS-1, BAIJNATH-1, KHADRALA-1, BANJAR-1, BAJURA AWS-1, AGHAR-1, RAMPUR BUSHAR-1, BAJURA AGRO-1, BERTHIN AGRO-1, SOLAN-1, BALDWARA-1, SANGRAHA-1, JANJEHLI-1, MEHRE (BARSAR)-1, GHUMARWIN-1, SUNIBHAJJI-1, BARTHIN-1, BHORANJ-1, R L BBMB-1, SUNDARNAGAR-1, DHARAMPUR-1, NAINA DAVI-1, PACHHAD-1, JUBBAL-1, **JAMMU & KASHMIR:** BATOTE-9, BANIHAL-7, BADARWAH-6, PAHALGAM-5, UDHAMPSUR(IAF)-4, KUPWARA-4, KATRA-4, QAZI GUND-3, GULMARG R.S.-3, KUKERNAG-3, ANANTNAG-3, ANANTNAG AWS-3, RAJHANI AWS-3, KATHUA-3, JAMMU-3, SHALIMAR AGRO-2, RAJOURI-2, PAHALGAM AWS-2, SRINAGAR AERO-2, GUND-2, SRINAGAR-2, JAMMU AERO-2, HARRAN AWS-2, RAMBAGH AWS-2, KONIBAL-1, AWANTIPUR IAF-1, SAMBA-1, **WEST RAJASTHAN:** KAJUWALA SR-3, RAJGARH / SADULPUR-1, ANUPGARH TEHSIL SR-1, KARANPUR-1, GARSANA SR-1, PUNGAL SR-1, SRIGANGANAGAR TEHSIL SR-1, RAISINGNAGAR-1, GANGANAGAR-1, NOHAR SR-1, **TAMILNADU & PUDUCHERRY:** PERIYAR-1, PECHIPARAI-1, **KERALA:** KANJIRAPPALLY-4, KURUDAMANNIL-3, CHENGANNUR-2, NEDUMANGAD-2, THIRUVANANTHAPURAM-1, PUNALUR-1, KONNI-1, KAYAMKULAM-1.

### **13 MARCH 2016**

**ARUNACHAL PRADESH:** CHANGLANG-2, **JHARKHAND:** BISHRAMPUR-1, MANATU-1, CHATRA-1, RAIDIH-1, KURU-1, DALTONGANJ-1, KURDEGE-1, **BIHAR:** RAFIGANJ-1, **EAST UTTAR PRADESH:** DUDHI-1, KORAON-1, **WEST UTTAR PRADESH:** MORADABAD OBSY-3, HARPUR-3, NAGINA-2, BAGHPAT-2, MEERUT-2, AMROHA-2, BUDHANA-1, MUZAFFARNAGAR-1, RAMPUR-1, SAHABAD-1, MEERUT TEH-1, MAWANA-1, DHAMPUR-1, MORADABAD-1, BIJNOR-1, SAHARANPUR-1, GUNNAUR-1, NAKUR-1, **UTTARAKHAND:** CHAMOLI-5, KARNAPRAYAG-5, RANIKHET (G)-5, JOSHIMATH-3, BHATWARI-3, DEOPRAYAG-2, TEHRI-2, BARKOT-2, PUROLA-2, MUSSOORIE-2, UTTAR KASHI-2, UTTAR KASHI (CWC)-2, MUKTESHWAR-2, MUNSIYARI-2, DUNDA-2, NAINITAL-2, BAGESHWAR (THMO)-2, TEHRI (CWC)-1, DEHRA DUN-1, KOSANI (U PROB)-1, JAKHOLI-1, PITHORAGARH-1,

RUDRAPRAYAG-1, PAURI-1, ALMORA-1, KEERTINAGAR-1, **HARYANA, CHANDIGARH & DELHI:** SAMALKHA-4, ISRANA-4, PANIPAT-4, GANAUR-3, CHANDIGARH-3, CHANDIGARH SASE AWS-3, CHANDIGARH AWS-3, KARNAL-3, SADHAURA-3, KARNAL REV-3, GUHLA-3, PANCHKULA AWS-2, KHARKODA-2, CHANDIGARH IAF-2, AMBALA-2, SIRSA-2, BAPOULI-2, NARAINGARH-2, JAGADHARI-1, CHHACHHRAULI-1, DUBWALI-1, ASSANDH-1, FATEHABAD-1, ROHTAK AWS-1, PUNHANA-1, GHARAUNDA-1, GURGAON-1, TOHANA-1, AMBALA REV-1, MUSTAFABAD-1, BILASPUR-1, BERI-1, UJHA PANIPAT AWS-1, GOHANA-1, ROHTAK-1, KURUKSHETRA-1, NILOKHERRI-1, DUJANA-1, RATTIA-1, PEHOWA-1, SONEPAT-1, **PUNJAB:** FARIDKOT-3, MUKTSAR-3, PATIALA REV-3, FATEHGARH SAHIB-3, TARAN TARAN-3, FATEHGARH SAHIB ARG-3, RAJPURA-3, PATIALA-3, TALWANDI SABO-3, KAPURTHALA-2, PHANGOTA-2, SANGRUR-2, DERABASSI(BASI)-2, ROPAR-2, BALACHAUR-2, DHURI-2, RANJIT SAGAR DAM SITE-2, ANANDPUR SAHIB-1, JALABAD ARG-1, SUNAM-1, SHAHPUR KANDI-1, SAMRALA-1, TIBRI-1, MADHOPUR-1, NABHA-1, MOGA-1, AMRITSAR-1, SAMANA-1, ZIRA-1, BHATINDA-1, MUKERIAN-1, **HIMACHAL PRADESH:** TISSA-8, GOHAR-7, BANJAR-5, KASAULI-5, DHARAMPUR-5, SHIMLA AERO-5, KARSOG-5, MANALI-5, KANDAGHAT-4, SIMLA-4, BAJAURA AGRO-4, BHUNTAR AERO-4, ARKI-4, RAMPUR BUSHAR-4, KUMARSAIN-4, BIJAH-4, SUNIBHAJI-4, KOTKHAI-4, CHESLEA SCHOOL AWS-4, SARAHAN-3, KUFRI AWS-3, JANJEHLI-3, SOLAN-3, SEO BAGH-3, PACHHAD-3, JHANDUTTA-3, RAJGARH-3, SARKAGHAT-3, DALHOUSI ALHA AWS-3, JOGINDARNAGAR-3, KAHU-3, DHARMSALA-3, AMB-3, SUNDARNAGAR-2, KHERI-2, KEYLONG-2, NAINA DAVI-2, RECKONG PEO AWS-2, BERTHIN AGRO-2, BARTHIN-2, BILASPUR AWS-2, BALDWARA-2, JUBBAL-2, DHARMSHALA AWS-2, ROHRU-2, SANGRAHA-2, MANDI-2, GULER-2, PALAMPUR-2, NAGROTA SURIAN-2, PANDOH-2, MEHRE (BARSAR)-1, KANGRA AERO-1, AGHAR-1, BANGANA F-1, NADAUN-1, SALONI-1, R L BBMB-1, BANGANA R-1, CHHATRARI-1, KALPA-1, NAHAN-1, NURPUR/JASSUR-1, PAONTA-1, KHADRALA-1, SUJANPUR TIRA-1, UNA-1, BAIJNATH-1, GHUMARWIN-1, **JAMMU & KASHMIR:** JAMMU-5, KATRA-4, JAMMU AERO-4, GOVINDPURA AWS-4, BATOTE-3, RAJOURI-3, BANIHAL-2, KUPWARA-2, UDHAMPUR(IAF)-2, KATHUA-2, BADARWAH-2, GULMARG R.S.-1, PAHALGAM AWS-1, SAMBA-1, GUND-1, SRINAGAR AERO-1, HARRAN AWS-1, SHALIMAR AGRO-1, PAHALGAM-1, RAJHANI AWS-1, **WEST RAJASTHAN:** SANGRIA SR-2, SRIGANGANAGAR TEHSIL SR-1, **WEST MADHYA PRADESH:** MHOW-2, BARELI-1, **EAST MADHYA PRADESH:** REWA-AWS-1, LANJI-1, UMARIA-AWS-1, WARASEONI-1, **VIDARBHA:** CHIMUR-1, KAMPTEE-1, UMERKHED-1, SAONER-1, HINGANGHAT-1, WARDHA-1, ARNI-1, SELU-1, **CHHATTISGARH:** RAMANUJGANJ-1, KATGHORA-1, CHAMPA-1, BEMETARA-1, KORBA-1, **TAMILNADU & PUDUCHERRY:** PERIYAR-2, VALPARAI PTO-1, CHINNAKALAR-1, **SOUTH INTERIOR KARNATAKA:** SARGUR-2, GUNDLUPET ARG-1, **KERALA:** VADAKARA-6, VYTTRI-3, KANJIRAPPALLY-3, PEERMADE TO-3, KOTTAYAM-2, IDUKKI-2, PARUMBIKULAM-2, PUNALUR-2, THODUPUZHA-1, MUNNAR KSEB-1, MANCOMPU-1.

## 14 MARCH 2016

**ARUNACHAL PRADESH:** TUTING-2, **NAGALAND, MANIPUR, MIZORAM & TRIPURA:** KOHIMA-1, **SUB-HIMALAYAN WEST BENGAL & SIKKIM:** MANGAN-1, **ODISHA:** KUCHINDA-1, SOHELA-1, ATABIRA ARG-1, BARGARH-1, JHARBANDH ARG-1, **JHARKHAND:** DALTONGANJ-2, BARKISURIYA-2, MANATU-2, BISHRAMPUR-2, LATEHAR-1, HAZARIBAGH-1, PATHALGADA-1, HUNTERGANJ-1, GIRIDIH-1, CHATRA-1, KONER-1, TILAIYA-1, MADHUPUR-1, **BIHAR:** CHENARI-2, INDRAPURI-2, DEHRI-1, BHABHUA-1, RAFIGANJ-1, GAYA AERO-1, AURANGABAD-1, **EAST UTTAR PRADESH:** BINDKI-2, GYANPUR-2, CHURK-2, ROBERTSGANJ-2, KORAON-2, BANDA-1, ZAMANIA-1, MIRzapur TEHSIL-1, HANDIA-1, DUDHI-1, CHUNAR-1, GHORAWAL-1, **WEST UTTAR PRADESH:** MAHRONI-3, HAMIRPUR OBSY-2, MUZAFFARNAGAR-2, RATH-1, MAUDAH-1, MAURANIPUR-1, RAMPUR-1, **UTTARAKHAND:** BAGESHWAR (THMO)-3, NAINITAL-3, KOSANI (U PROB)-3, ALMORA-2, MUKTESHWAR-2, LANDSDOWN-2, TEHRI (CWC)-2, RANIKHET (G)-1, PUROLA-1, ROORKEE-1, KOTDWARA-1, BAMBASA-1, CHAMOLI-1, **HARYANA, CHANDIGARH & DELHI:** PANIPAT-4, SONIPAT ARG-3, GUHLA-3, GHARAUNDA-2, JAFARPUR AWS-1, CHANDIGARH IAF-1, JULANA-1, AYA NAGAR-1, GANAUR-1, CHANDIGARH SASE AWS-1, CHANDIGARH AWS-1, CHANDIGARH-1, MORN-1, AYA NAGAR AWS-1, SONEPAT-1, PANCHKULA AWS-1, BAHADURGARH-1, PANCHKULA-1, **PUNJAB:** PHANGOTA-2, DERABASSI(BASI)-2, SHAHPUR KANDI-1, MUKERIAN-1, PHAGWARA-1, MALAKPUR-1, NAKODAR-1, **HIMACHAL PRADESH:** KHERI-5, TISSA-4, PACHHAD-4, RAJGARH-4, ARKI-3, ROHRU-3, DALHOUSI ALHA AWS-3, SOLAN-3, RENUKA / DADHAI-2, SALONI-2, GHUMARWIN-2, KANDAGHAT-2, SIMLA-1, BAIJNATH-1, SANGRAHA-1, BHORANJ-1, NAINA DAVI-1, SUNDARNAGAR-1, JUBBAL-1, UNA-1, MANALI-1, MANDI-1, CHESLEA SCHOOL AWS-1, KASAULI-1, BHARMAUR-1, SHIMLA AERO-1, NURPUR/JASSUR-1, PALAMPUR-1, DHARAMPUR-1, SUNIBHAJI-1, KUFRI AWS-1, GOHAR-1, **JAMMU & KASHMIR:** RAJOURI-3, KUPWARA-2, BANIHAL-2, BATOTE-2, QAZI GUND-2, GULMARG R.S.-2, PAHALGAM-2, GUND-1, ANANTNAG-1, BADARWAH-1, JAMMU AERO-1, UDHAMPUR(IAF)-1, BARAMULLA AWS-1, KATRA-1, GOVINDPURA AWS-1, PAHALGAM AWS-1, JAMMU-1, **WEST MADHYA PRADESH:** GANJBASODA-1, **EAST MADHYA PRADESH:** TIKAMGARH-AWS-4, CHAHTARPUR-AWS-3, BUXWAHA-2, PUSHPAJGARH-2, JAITHARI-2, REWA-AWS-2, KEOLARI-2, AJAIGARH-1, RAJNAGAR-1, NAGODE-1, MALANKHAND-1, KHAJURAHO AERO-1, SATNA-AWS-1, LAKHNADON-1, **VIDARBHA:** CHIMUR-2, PAUNI-1, GONDIA-1, DEORI-1, SADAKARJUNI-1, **CHHATTISGARH:** BEMETARA-2, DHAMTARI-2, BAIKUNTHPUR-2, MANENDRAGARH-1, CHAMPA-1, JANAKPUR-1, GANDAI-1, DONGARGARH-1,

RAJNANDGAON-1, DONGARGAON-1, GARIABUND-1, **COASTAL ANDHRA PRADESH:** YERRAGONDAPALEM-2, YERRAGONDAPALEM(ARG)-2, **TAMILNADU & PUDUCHERRY:** VALPARAI PTO-5, CHINNAKALAR-3, **SOUTH INTERIOR KARNATAKA:** HUNSUR-1.

## 15 MARCH 2016

**ARUNACHAL PRADESH:** TUTING-10, **ODISHA:** JHORIGAM ARG-4, KANKADAHAD ARG-4, CHANDAHANDI ARG-3, ALTUMA CWC-3, PALLAHARA-3, ATHMALIK-3, K NUAGAON ARG-3, TELKOI-2, ODAGAON ARG-2, UMARKOTE-2, RAJKISHORENAGAR-2, ANANDPUR-1, NAKTIDEUL-1, BARPALLI ARG-1, ANGUL-1, BANGIRIPOS-1, TIKABALI-1, PHIRINGIA ARG-1, DHENKANAL-1, DANAGADI ARG-1, PANPOSH-1, SUNDARGARH-1, TENTULIKHUNTI ARG-1, KOREI ARG-1, BANARPAL ARG-1, BALIGUDA-1, NAWARANGPUR-1, BHUBAN ARG-1, TALCHER-1, KAPTIPADA ARG-1, BHAWANIPATNA-1, KEONJHARGARH-1, **JHARKHAND:** KURU-1, HINDGIR-1, KOLEBIRA-1, **BIHAR:** ISLAMPUR-1, BARHIYA-1, BIHAR SHRIF-1, **EAST UTTAR PRADESH:** BIKAPUR-3, SIDHAULI-3, MOHAMMEDABAD (Y)-2, MAHARAJGANJ-2, KERAKAT-2, LUCKNOW (AP)-2, MOHANLALGANJ-2, SORAON-2, HAIDARGARH-2, RAM SANEH GHAT TEHSIL-1, PHOOLPUR ALB-1, HANDIA-1, VARANASI-B.H.U.-1, SIKANDRA KNP-1, HARAIYA-1, SIRauli GAUSPUR TEHSIL-1, **WEST UTTAR PRADESH:** MORADABAD-1, SAMBHAL-1, **UTTARAKHAND:** ROORKEE-1, MUKTESHWAR-1, JAKHOLI-1, **HARYANA, CHANDIGARH & DELHI:** DUJANA-1, SONIPAT ARG-1, **PUNJAB:** RANJIT SAGAR DAM SITE-2, SHAHPUR KANDI-1, **HIMACHAL PRADESH:** DALHOUSI ALHA AWS-3, KHERI-3, ROHRU-1, CHAMBA AWS-1, **JAMMU & KASHMIR:** BANIHAL-4, BATOTE-4, KUPWARA-3, GULMARG R.S.-2, AWANTIPUR IAF-2, KATRA-2, GUND-2, SRINAGAR AERO-2, KONIBAL-2, PAHALGAM-2, UDHAMPUR(IAF)-2, SRINAGAR-1, JAMMU-1, JAMMU AERO-1, QAZI GUND-1, KUKERNAG-1, SHALIMAR AGRO-1, RAJOURI-1, KATHUA-1, ANANTNAG-1, **CHHATTISGARH:** SARAIPALI-2, DEOBHOG-2, BALOD-1, MANA-RAIPUR-AP-1, NARAYANPUR-1, RAJIM-1, **COASTAL ANDHRA PRADESH:** CUMBUM-3, MARKAPUR-2, BESTAVARIPETA-1, **TELANGANA:** RAMANNAPETA-3, BHUPALALLE-3, MOGULLAPALLE-2, PARKAL-1, **TAMILNADU & PUDUCHERRY:** KUZHITHURAI-3, KETTI-2, PECHIPARAI-2, KOTHAGIRI-1, **KERALA:** MANCOMPU-5, KUMARAKAM-4, ALAPUZHA-3, NEYYATTINKARA-3.

## 16 MARCH 2016

**ARUNACHAL PRADESH:** TUTING-4, ALONG AWS-1, TAWANG AWS-1, PASIGHAT AERO-1, **NAGALAND, MANIPUR, MIZORAM & TRIPURA:** DHARMANAGAR/ PANISAGAR-1, KAILASHAHAAR AERO-1, **SUB-HIMALAYAN WEST BENGAL & SIKKIM:** MANGAN-1, MAJITAR-1, TADONG-1, GANGTOK-1, **GANGETIC WEST BENGAL:** BARRACKPUR(IAF)-1, DUM DUM-1, **ODISHA:** TIKABALI-5, RAYAGADA-4, NAYAGARH-3, NAWARANGPUR-3, PHIRINGIA ARG-3, PHULBANI-2, POTTANGI-2, GHATAGAON-2, TENTULIKHUNTI ARG-2, KANKADAHAD ARG-2, KOSAGUMDA-2, DASPALLA-2, JHORIGAM ARG-2, RAIKIA ARG-2, MADHABARIDA-1, NARSINGHPUR-1, SAINTALA ARG-1, SORADA-1, GUNUPUR-1, UMARKOTE-1, TIGIRIA ARG-1, SORO-1, NUAGADA ARG-1, HARICHANDANPUR ARG-1, G UDAYAGIRI AWS-1, TITLAGARH-1, BALIGUDA-1, KESINGA ARG-1, LANJIGARH-1, KORAPUT-1, ASKA-1, ATHGARH-1, PATNAGARH-1, BOLANGIR-1, TALCHER-1, CHANDANPUR-1, **JHARKHAND:** KURDEGE-1, RANCHI AERO-1, **VIDARBHA:** ARJUNI MORGON-5, SINDEWAHI-4, NAGBHIR-2, MUL-1, WARORA-1, BRAMHAPURI-1, LAKHANDUR-1, **CHHATTISGARH:** JAGDALPUR-4, KONDAGAON-3, AMBAGARH CHOWKI-3, DONDILOHARA-2, GANDAI-1, BALOD-1, **COASTAL ANDHRA PRADESH:** KURUPAM-4, KOMARADA-2, SALUR-2, THERLAM-2, PALASA-1, PATHAPATNAM-1, VEERAGHATTAM-1, BOBBILI-1, **TELANGANA:** PEGADAPALLE-3, SULTANABAD-2, JULAPALLE-1, MALLIAL-1, JAGTIAL-1, **RAYALASEEMA:** AROGYAVARAM-1, MANDAPALLE-1, AROGYAVARAM(ARG)-1, KALAKADA-1, **TAMILNADU & PUDUCHERRY:** SHOOLAGIRI-2, VALPARAI PTO-2, PERIYAR-1, KETTI-1, **SOUTH INTERIOR KARNATAKA:** BENGALURU HAL AP OBSY-7, HOSKOTE-2, BENGALURU CITY OBSY-1, NELAMANGALA-1, KOLAR PWD-1, **KERALA:** PUNALUR-3, KANJIRAPPALLY-2, KURUDAMANNIL-2, PARUMBIKULAM-2, KONNI-2, MYLADUMPARA AGRI-1, IDUKKI-1.

### LEGEND:

(A) / AWS--Automated Weather Station  
AP—Airport  
ARG--Automated Rain-Gauge  
CDR--Cyclone Detection Radar  
CWC--Central Water Commission

FMO--Flood Met Office  
IAF--Indian Air Force  
IMD--India Meteorological Department.  
PBO--Pilot Balloon Obsy  
PT / PTO--Part Time Observatory

PWD--Public Welfare Department  
SR--State Raingauge