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

Press Release: Dated: 11th July, 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (11 to 24 July, 2024)

1. Salient Observed Features for week ending 10 July, 2024

- Active monsoon conditions prevailed over many parts of the country during many dates in the week. Areas, where monsoon was active to vigorous, were over West Coast, Northwest including Western Himalayan region and central India.
- Main reasons are: 1) Monsoon trough was south of the normal position during most dates in the week and also extended in the lower tropospheric levels during 7 to 9 July. 2)East-west shear line was also observed at middle tropospheric levels tilting southwards with height during most dates in the week 3) A cyclonic circulation gradually moved from East central Bay of Bengal to Westcentral Bay of Bengal & adjoining northwest Bay of Bengal off north Andhra Pradesh in the middle tropospheric levels during 5-9 July 4)An off-shore trough at mean sea level was active and observed mainly off south Gujarat- north Kerala coasts throughout the week.
- Due to such highly favorable weather systems, both Mumbai and Goa also received season's 1st spell of extremely heavy rainfall during 7th to 9th July causing flash floods which affected normal lives of people.
- Isolated Heavy to very heavy rainfall with isolated extremely heavy rainfall fall occurred over East Uttar Pradesh during 4th to 7th July; Coastal Karnataka and South interior Karnataka on 4th, 6th & 08th July; Konkan & Goa and Madhya Maharashtra during 7th to

9th July; Gujarat Region during 5th to 7th July; Assam & Meghalaya during on 10th July and Sub-Himalayan West Bengal on 6th & 09th July.

- Due to northeastward movement of a Western Disturbance at middle tropospheric levels across north India and it interaction with monsoonal lower levels winds both from Bay of Bengal and Arabian Sea, Isolated Heavy to very heavy rainfall with isolated extremely heavy rainfall fall occurred over Uttarakhand during 6th to 8th Jul; Himachal Pradesh on 5th & 06th July and over West Uttar Pradesh during 5th to 8th July; and isolated heavy to very heavy over adjoining northwest plains of India during the same period.
- Exceptional heavy rainfall also observed over West Uttar Pradesh and Uttarakhand on 8th July (Baheri (dist Bareilly):46cm and Banbasa (Champawat)-43cm) which cased flash floods over the region and impacted lives of people.
- **Analysis of weekly overall rainfall distribution during the week ending on 10th July 2024 and monsoon Season's Rainfall Scenario (01 June-10 July, 2024):** The country as a whole, the weekly cumulative All India Rainfall (04.07.2024 to 10.07.2024) in % departure from its long period average (LPA) is 12%. All India Seasonal cumulative rainfall % departure during this year's monsoon Season's Rainfall (01 June to 10 July 2024) is 0%. Details of the rainfall distribution over the four broad geographical regions of India are given in Table 1 and Meteorological sub-division-wise rainfall both for week and season are given in Annexure I & II respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	04.07.2024 TO 10.07.2024			01.06.2024 TO 10.07.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
East & northeast India	92.2	98.9	-7%	451.6	469.6	-4%
Northwest India	66.6	40.1	+66%	139.0	132.0	+5%
Central India	66.4	67.4	-1%	250.9	265.1	-5%
South Peninsula	44.4	43.7	+2%	244.9	222.2	+10%
Country as a whole	66.3	59.3	+12%	247.3	248.3	0%

2. Large scale features

- ✓ Currently El Nino-Southern Oscillation (ENSO) neutral conditions are observed over the equatorial Pacific. The sea surface temperatures (SSTs) are above average in the equatorial western and central Pacific Ocean, and below-average over the eastern equatorial Pacific Ocean. The latest Monsoon Mission Climate Forecast System (MMCFS) indicates that the La Nina conditions are likely to develop during second half of the monsoon season.
- ✓ At present, neutral Indian Ocean Dipole (IOD) conditions are prevailing over the Indian Ocean. The latest climate model forecasts indicates neutral IOD conditions are likely to continue during the monsoon season.
- ✓ The Madden Julian Oscillation (MJO) index is currently located in phase 5 with amplitude more than 1. It is likely to continue in same phase with amplitude gradually becoming less than 1 in week 2. Thus, MJO phase and amplitude is favourable for enhancement of convective activity over the north Bay of Bengal (BoB) during the forecast period

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (11 to 17 July, 2024) and Week 2 (18 to 24 July, 2024)

Weather systems & associated Precipitation during Week 1 (11 to 17 July, 2024)

Weather Systems

✓ The Monsoon trough is near its normal position at mean sea level. Its eastern end is likely to shift southwards gradually during the week.

✓ The off-shore trough at mean sea level runs along south Gujarat-north Kerala coasts.

✓ A cyclonic circulation over Odisha and another over north Madhya Maharashtra in lower tropospheric levels.

✓ A cyclonic circulation over northeast Assam & neighbourhood in lower tropospheric levels.

Forecast & Warnings (Annexure II)

❖ West and South Peninsular India

✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm &lightning very likely over Konkan & Goa, Madhya Maharashtra, Kerala & Mahe, Lakshadweep, Karnataka, Gujarat Region; scattered to fairly widespread light to moderate rainfall over Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam, Telangana, Marathwada; isolated to scattered light to moderate rainfall over Tamil Nadu, Puducherry & Karaikal and Rayalaseema during the week.

✓ Isolated **heavy rainfall very likely over** Gujarat Region 11th-15th; Saurashtra & Kutch on 11th & 12th; Telangana and North Interior Karnataka during most days of the week; Coastal Andhra Pradesh & Yanam during 2nd half of the week.

✓ **Isolated heavy to very heavy rainfall very likely over Konkan & Goa; ghat areas of Madhya Maharashtra, Coastal Karnataka, Kerala and South Interior Karnataka during most days of the week.**

❖ East & Northeast India

✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm, lightning very likely over Andaman & Nicobar Islands, Sub-Himalayan West Bengal & Sikkim, Bihar and Northeast India; scattered to fairly widespread light to moderate rainfall overGangetic West Bengal, Jharkhand, Odisha during the week.

✓ **Heavy rainfall** very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Bihar, Arunachal Pradesh and Assam & Meghalaya during the week; isolated **heavy rainfall** over Odisha during 13th-15th; Andaman & Nicobar Islands on 13th & 14th; Nagaland and Manipur on 11th, 14th & 15th July.

✓ **Isolated very heavy rainfall also likely over Sub-Himalayan West Bengal & Sikkim, Bihar on 11th & 12th; Arunachal Pradesh on 12th July.**

✓ **Isolated extremely heavy rainfall very likely over Arunachal Pradesh on 11th and Meghalaya on 11th& 12thJuly.**

❖ **Northwest & Central India**

✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Uttarakhand and Central India; scattered to fairly widespread light to moderate rainfall over Himachal Pradesh, Uttar Pradesh, Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad; isolated to scattered over Rajasthan during the week; Punjab, Haryana-Chandigarh-Delhi during 1st half of the week.

✓ Isolated **heavy rainfall** very likely over Uttarakhand, East Rajasthan, Madhya Pradesh, Chhattisgarh, East Uttar Pradesh and Vidharbha during most days of the week; West Uttar Pradesh, Punjab on 11th & 12th; Himachal Pradesh during 11th-13th; Jammu on 12th & 13th and north Haryana on 12th July.

✓ **Isolated very heavy rainfall also likely over East Uttar Pradesh on 11th& 12thand Uttarakhand on 12thJuly.**

Rainfall for week 2 (18 to 24 July, 2024):

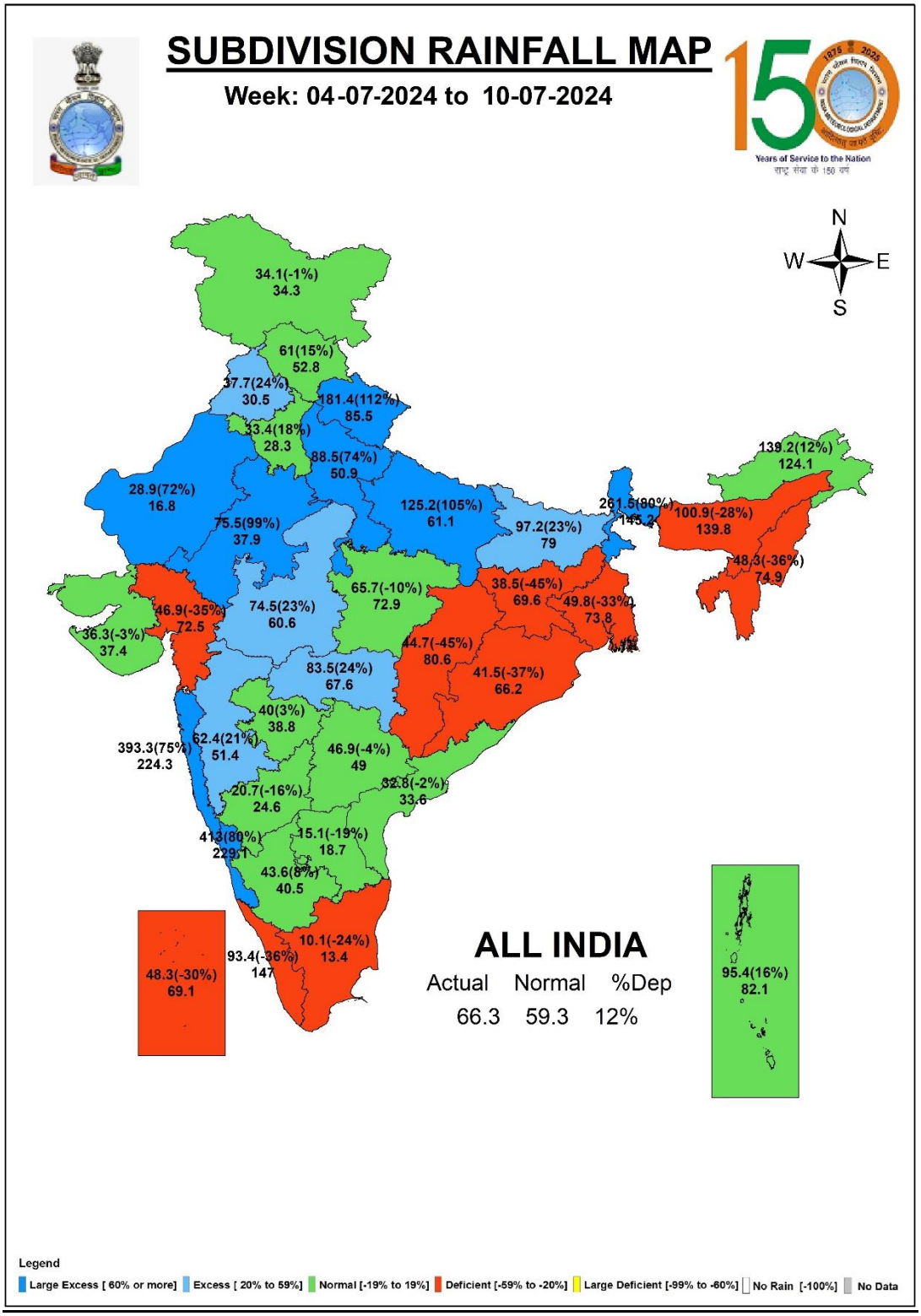
❖ Monsoon trough is likely to be active and near normal or south of its normal position during most days of the week. Off-shore trough along west coast is likely to prevail during the week.

❖ Due to above favourable meteorological features, widespread rainfall with heavy to very heavy falls are likely along the west coast and heavy spell over central & adjoining northwest India during most days of the week.

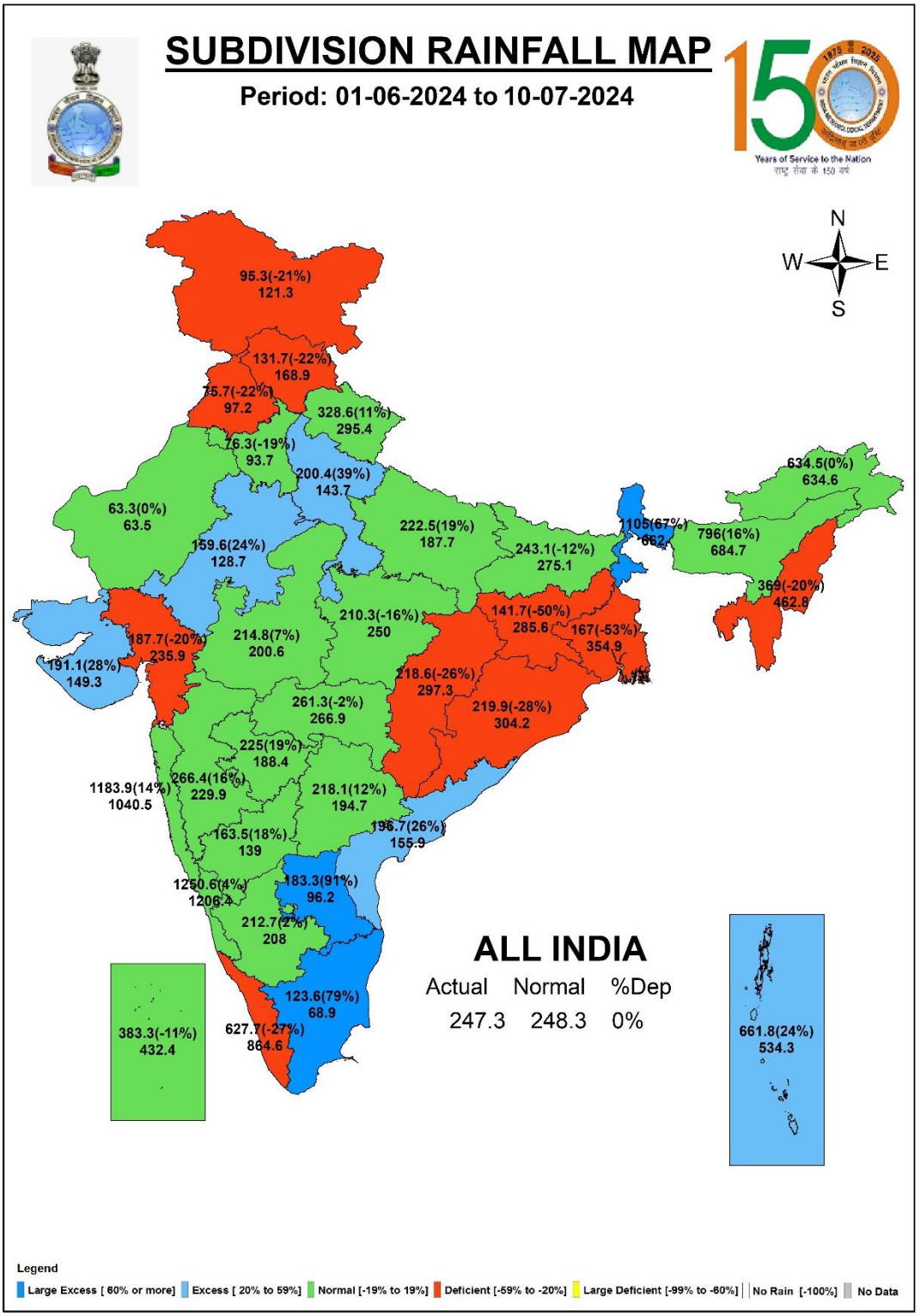
❖ Overall, rainfall is likely to be above normal over most parts of the central India; normal to above normal over plains of northwest India and over South Peninsular India; near normal over northeastern states and below normal over East India and Western Himalayan Region.

Legends: **Heavy Rain:** 64.5 to 115.5 mm **Very Heavy Rain:** 115.6 to 204.4 mm, **Extremely Heavy Rain**> 204.4 mm

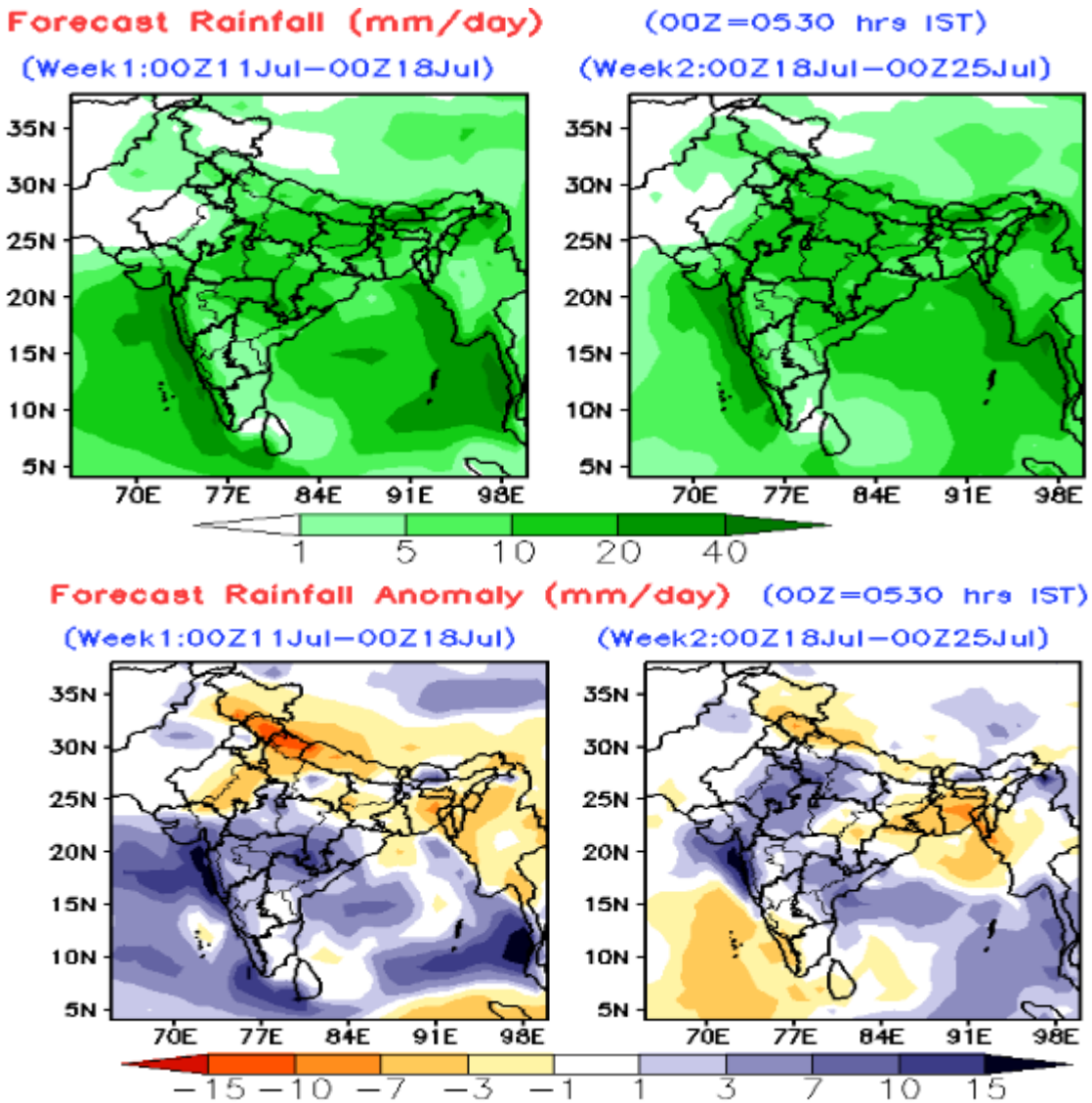
Annexure I


SUBDIVISION RAINFALL MAP
Week: 04-07-2024 to 10-07-2024
Years of Service to the Nation
N
W
E
S
34.1(-1%)
34.3
61(15%)
52.8
37.7(24%)
30.5
181.4(112%)
85.5
33.4(18%)
28.3
88.5(74%)
50.9
28.9(72%)
16.8
75.5(99%)
37.9
125.2(105%)
61.1
97.2(23%)
79
261.5(90%)
137.2
139.2(12%)
124.1
100.9(-28%)
139.8
48.3(-36%)
74.9
65.7(-10%)
72.9
38.5(-45%)
69.6
49.8(-33%)
73.8
46.9(-35%)
72.5
74.5(23%)
60.6
36.3(-3%)
37.4
44.7(-45%)
80.6
41.5(-37%)
66.2
83.5(24%)
67.6
40(3%)
38.8
393.3(75%)
224.3
62.4(21%)
51.4
46.9(-4%)
49
32.6(-2%)
33.6
20.7(-16%)
24.6
413(80%)
229.1
15.1(-19%)
18.7
43.6(8%)
40.5
10.1(-24%)
13.4
93.4(-36%)
147
48.3(-30%)
69.1
95.4(16%)
82.1
ALL INDIA
Actual Normal %Dep
66.3 59.3 12%
Legend
Large Excess [60% or more]
Excess [20% to 59%]
Normal [-19% to 19%]
Deficient [-59% to -20%]
Large Deficient [-99% to -60%]
No Rain [-100%]
No Data

Annexure II


SUBDIVISION RAINFALL MAP
Period: 01-06-2024 to 10-07-2024
150
Years of Service to the Nation
राष्ट्र सेवा के 150 वर्ष
N
W
E
S
95.3(-21%)
121.3
131.7(-22%)
168.9
75.7(-22%)
97.2
328.6(11%)
295.4
76.3(-19%)
93.7
200.4(39%)
143.7
63.3(0%)
63.5
159.6(24%)
128.7
222.5(19%)
187.7
243.1(-12%)
275.1
1105(67%)
662
634.5(0%)
634.6
796(16%)
684.7
369(-20%)
462.8
141.7(-50%)
285.6
167(-53%)
354.9
210.3(-16%)
250
214.8(7%)
200.6
187.7(-20%)
235.9
191.1(28%)
149.3
218.6(-26%)
297.3
219.9(-28%)
304.2
261.3(-2%)
266.9
225(19%)
188.4
266.4(16%)
229.9
1183.9(14%)
1040.5
218.1(12%)
194.7
196.7(26%)
155.9
163.5(18%)
139
1250.6(4%)
1206.4
183.3(91%)
96.2
212.7(2%)
208
123.6(79%)
68.9
627.7(-27%)
864.6
383.3(-11%)
432.4
661.8(24%)
534.3
ALL INDIA
Actual Normal %Dep
247.3 248.3 0%
Legend
Large Excess [60% or more]
Excess [20% to 59%]
Normal [-19% to 19%]
Deficient [-59% to -20%]
Large Deficient [-99% to -60%]
No Rain [-100%]
No Data

Annexure III



Extended range froecast of weekly dsitirubtion of rainfall in mm per day (top panel) and anomalies(lower panesl) from IMD MME