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

Press Release: Dated: 25th July, 2024

Subject: Current Weather Status and Extended range Forecast for next two weeks (25th July-7th Aug, 2024)

1. Salient Observed Features for week ending 24th July, 2024

- **Formation of Season's 1st monsoon depression over Northwest and adjoining Westcentral Bay of Bengal off Odisha and adjoining north Andhra Pradesh coasts on 19th July.**
- **Active and Vigorous monsoon conditions prevailed during the week over most parts of west coast of India and adjoining central parts India during many days in the week. It was mainly due:** 1) A low-pressure area formed over the central and adjoining North Bay of Bengal on 18th July, & concentrated into a Depression over Northwest and adjoining Westcentral Bay of Bengal off Odisha and adjoining north Andhra Pradesh coasts on 19th July, and moved northwestward across Orissa, Chhattisgarh and East Madhya Pradesh before becoming less marked on 23rd July. 2) The monsoon trough remained south of its normal position during the week, i.e., 18th to 24th July. 3) The off-shore trough was active along south Gujarat-north Kerala coasts at mean sea level and persisted during the week, i.e., 18th to 24th July. 4) The East-west shear line was also observed at middle tropospheric levels, tilting southwards with height later in the week.
- Under the influence of the above systems, isolated heavy to very heavy rainfall with isolated **extremely heavy rainfall** was recorded Odisha on 20th July; Chhattisgarh and Coastal Andhra Pradesh & Yanam during 19th -20th July; Vidarbha during 19th, 20th & 23rd July; East Madhya Pradesh on 23rd July; West Madhya Pradesh on 21st July; Saurashtra & Kutch during 19-24 July Gujarat Region on 22-24 July; Konkan & Goa during 20th -22th July; Madhya Maharashtra during 22nd to 24th July; West Uttar Pradesh and Gujarat State on 24th July; over Coastal Karnataka during 18th -19th July; South Interior Karnataka on 18th July; Tamil Nadu on 19th July;.

- **Very Heavy Rainfall** was recorded over Kerala & Mahe during 18th -19th July; Konkan & Goa during 18th -19th July & 23rd -24th July; Madhya Maharashtra on 18th & 21st July; Vidarbha during 18th to 23rd July; Telangana on 19th & 21st July; Coastal Karnataka during 20th to 23rd July; Gujarat Region and Assam & Meghalaya on 20th & 23rd July; South Interior Karnataka on 20th & 24th July; Uttarakhand during 20th -21st July; Chhattisgarh during 21st to 24th July; Odisha on 21st & 24th July; East Rajasthan, East Madhya Pradesh and Coastal Karnataka on 24th July; West Madhya Pradesh and Himachal Pradesh on 23rd July; Madhya Pradesh on 22nd July; East Madhya Pradesh and Saurashtra & Kutch on 21st July; West Uttar Pradesh on 20th July; Interior Karnataka, Madhya Maharashtra and Tripura on 19th July; Tamil Nadu, North Interior Karnataka and Himachal Pradesh on 18th July.
- **Exceptionally heavy rainfall was recorded over Saurashtra consecutive 2 days for 19th and 20th July: 19th July(Porbandar (dist Porbandar) 49, Kalyanpur (dist Devbhoomi Dwarka) 29 and also on 20th July (dist Devbhoomi Dwarka -Devbhoomi Dwarka-42 cm)** It was mainly due to 1)the influence of cyclonic circulation in the lower troposphere, 2)the presence of off-shore trough 3)the presence of depression in Bay of Bengal also strengthened the wind flow over the western coast.

Temperature Scenario: The highest maximum temperature of **43.0°C** had been recorded at **Sri Ganganagar (West Rajasthan)** on **19th & 20th July 2024** and the lowest minimum temperature of **18.0°C** had been recorded at **Yeotmal (Vidarbha)** on **19th, 20th, 23rd & 24th July 2024** over the plains of the country during the week.

♦ **Analysis of weekly overall rainfall distribution during the week ending on 24th July 2024 and monsoon Season's Rainfall Scenario (01 June-24 July, 2024):** The country as a whole, the weekly cumulative All India Rainfall (04.07.2024 to 24.07.2024) in % departure from its long period average (LPA) is +41%. All India Seasonal cumulative rainfall % departure during this year's monsoon Season's Rainfall (01 June to 24 July 2024) is +1%. 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		
	11.07.2024 TO 17.07.2024			01.06.2024 TO 17.07.2024		
	Actual	Normal	% Dep	Actual	Normal	% Dep
East & northeast India	46.6	83.3	-44%	570.2	664.3	-14%
Northwest India	34.1	43.2	-21%	197.8	234.5	-16%
Central India	137.8	66.6	+107%	463.8	414.9	+12%
South Peninsula	82.6	42.0	+97%	394.3	318.9	+24%
Country as a whole	80.5	57.2	+41%	385.3	380.3	+1%

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 currently entered into phase 6 with amplitude less than 1. The ensemble members both GEFS and ECMWF are showing large spread in the MJO forecast for the next two weeks. Both the forecasts as well as CFS forecast indicate that the MJO index is likely to progress eastward during the week and enter into phase 7 at the end of first week. The eastward propagation of MJO index during second week is not very coherent in GEFS and ECMWF forecasts compared to CFS but it is likely reach phase 8 maintaining amplitude less than 1 during first half of second week and there is probability to enter into phase 1 during later part of the week. Thus, MJO phase and amplitude are less favorable for the convective activity over the North Indian Ocean (NIO) region during first week but it would gradually support the enhancement of convective activities over NIO during second week

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (25 to 31 July, 2024) and Week 2 (01 to 07 August, 2024)

Weather systems & associated Precipitation during Week 1 (25 to 31 July, 2024)

Weather Systems

✓ The **Monsoon trough** is active and lies near its normal position. It is likely to continue to remain near its normal position during most days of the week.

- ✓ The **shear zone** lies along 22°N over Indian region in lower & middle tropospheric levels tilting southwards with height. It is likely to persists over Indian region during most days of the week
- ✓ A **cyclonic circulation** lies over Gangetic West Bengal & adjoining Bangladesh in lower & middle tropospheric levels tilting southwards with height.
- ✓ The **off-shore trough** at mean sea level runs along South Gujarat-north Kerala coasts.

Forecast & Warnings for week 1

❖ **West& Central India**

- ✓ Fairly widespread to widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over the region during the week.
- ✓ **Isolated extremely heavy rainfall very likely over ghat areas of Madhya Maharashtra during 25th-27th; Konkan & Goa on 25th & 26th and Gujarat region on 25th July.**
- ✓ **Very heavy rainfall very likely at isolated places over Madhya Pradesh on 25th& 26th; Saurashtra & Kutch, Vidarbha, Marathwada on 25th; Konkan & Goa on 27th & 28th; Madhya Maharashtra on 28th & 29th; Gujarat region on 26th & 27th July.**
- ✓ **Heavy rainfall** very likely at isolated places over Chhattisgarh, Vidarbha, Saurashtra & Kutch, Madhya Pradesh, Gujarat Region, Konkan & Goa and Madhya Maharashtra during remaining days of the week.

❖ **Northwest India**

- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm & lightning** very likely over Himachal Pradesh, Uttarakhand; scattered to fairly widespread rainfall over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Punjab, Haryana-Chandigarh-Delhi, Uttar Pradesh and Rajasthan during the week.
- ✓ **Isolated very heavy rainfall also likely over East Rajasthan on 25th and Uttarakhand on 26th & 27th July.**
- ✓ Isolated **heavy rainfall** very likely over Himachal Pradesh, Uttarakhand, Rajasthan and West Uttar Pradesh during the week; East Uttar Pradesh on 25th, 26th, 30th & 31st; Haryana-Chandigarh on 26th & 27th; Punjab on 27th July.

❖ **South Peninsular India:**

- ✓ Scattered to fairly widespread light to moderate rainfall accompanied with thunderstorm & lightning very likely over Kerala & Mahe, Karnataka, Lakshadweep, Telangana and

isolated to scattered rainfall over Coastal Andhra Pradesh & Yanam, Rayalaseema, Tamil Nadu, Puducherry & Karaikal during the week.

- ✓ **Very heavy rainfall very likely at isolated places over South Interior Karnataka, Coastal Karnataka during 25th-27th and North Interior Karnataka on 25th & 26th July.**
- ✓ **Heavy rainfall** very likely at isolated places over Telangana on 25th; Tamil Nadu on 25th & 26th; Kerala & Mahe during the week and Coastal & South Interior Karnataka on remaining days of the week.

❖ **East & Northeast India**

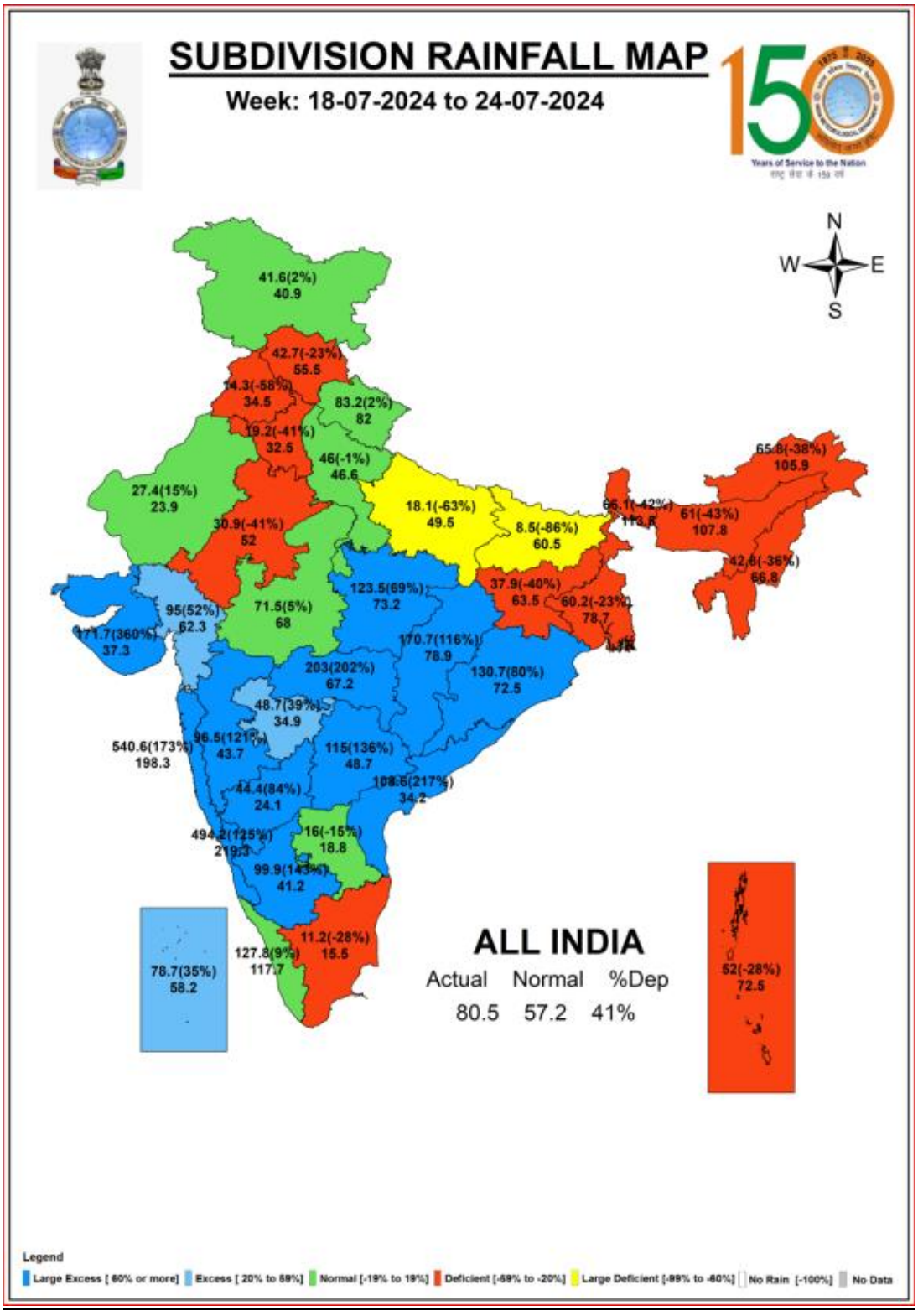
- ✓ Fairly widespread to widespread light to moderate rainfall **accompanied with thunderstorm, lightning** very likely over East & Northeast India during the week.
- ✓ **Very heavy rainfall very likely at isolated places over Odisha on 25th & 26th July.**
- ✓ Isolated **heavy rainfall** very likely over Assam & Meghalaya during the week; Gangetic West Bengal on 25th & 26th; Jharkhand on 26th; Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura and Sub-Himalayan West Bengal & Sikkim during the week and over Odisha during remaining days of the week.

Rainfall for week 2 (01 to 07 August, 2024):

- ❖ Monsoon trough is likely to be active and near normal or south of its normal position during most days of the week.
- ❖ The shear zone likely to prevail over north peninsular India in middle tropospheric levels 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 & central India and heavy spell over northwest, east & northeast and rest parts of south Peninsular India during most days of the week.
- ❖ Overall, rainfall is likely to be above normal over most parts of the central India and normal to above normal over rest parts of the country.

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

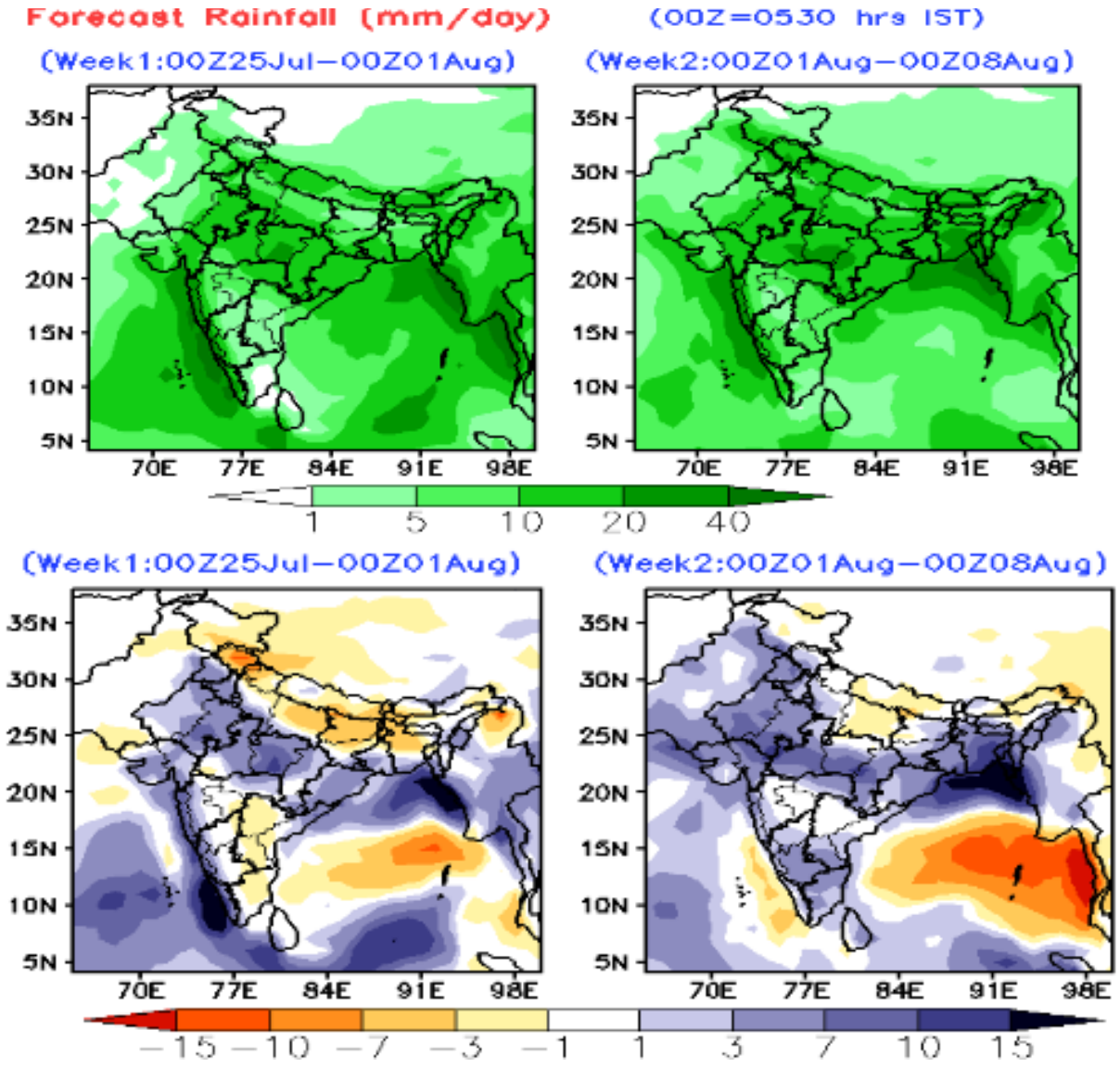
Annexure I


SUBDIVISION RAINFALL MAP
Week: 18-07-2024 to 24-07-2024
150
Years of Service to the Nation
N
W
E
S
41.6(2%)
40.9
42.7(-23%)
55.5
14.3(-58%)
34.5
83.2(2%)
82
19.2(-41%)
32.5
46(-1%)
46.6
27.4(15%)
23.9
30.9(-41%)
52
18.1(-63%)
49.5
8.5(-86%)
60.5
65.8(-38%)
105.9
61(-43%)
107.8
42.6(-36%)
66.8
37.9(-40%)
63.5
60.2(-23%)
78.7
123.5(69%)
73.2
95(52%)
62.3
71.5(5%)
68
171.7(360%)
37.3
170.7(116%)
78.9
203(202%)
67.2
130.7(80%)
72.5
48.7(39%)
34.9
540.6(173%)
198.3
96.5(121%)
43.7
115(136%)
48.7
44.4(84%)
24.1
108.6(217%)
34.2
494.2(125%)
219.3
16(-15%)
18.8
99.9(143%)
41.2
11.2(-28%)
15.5
127.8(9%)
117.7
78.7(35%)
58.2
52(-28%)
72.5
ALL INDIA
Actual Normal %Dep
80.5 57.2 41%
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 24-07-2024
150
Years of Service to the Nation
N
W
E
S
146.6(-31%)
212.7
182.3(-38%)
293.9
180.7(-44%)
180.3
475.4(-3%)
491.7
104.7(-39%)
171.9
267.9(4%)
257
114.8(-3%)
119
231.7(-5%)
243.1
276.9(-15%)
323.9
308.9(-29%)
432.2
1302.6(41%)
926.9
963.1(4%)
930
795.5(-10%)
884.1
443.6(-29%)
625.9
232.5(-47%)
434.7
279.5(-46%)
514.4
394.7(-5%)
414
352.7(4%)
337.8
345.7(-10%)
382.7
404.2(67%)
242.5
462.2(-3%)
477
410.8(-12%)
466.6
534.4(28%)
416.8
334.6(27%)
262.7
2175.4(43%)
1516.2
432.5(31%)
330.2
389.3(31%)
297.4
359.1(55%)
231.9
234.6(21%)
193.9
2196.5(27%)
1723.4
225(59%)
141.6
392.1(29%)
304.3
171.7(67%)
103
915.5(-21%)
1161.5
590.4(3%)
573.1
828(16%)
713.9
ALL INDIA
Actual Normal %Dep
385.3 380.3 1%
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