



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

Press: Dated: 27 July, 2023

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(27 July-9 August 2023)**

1. Salient Observed Features for week ending 26 July 2023

- During most days in the week, monsoon continued to remain active to vigorous over Maharashtra (including over Mumbai), Goa and Karnataka and adjoining Peninsular India. Isolated heavy to very heavy with isolated extremely heavy also observed in most dates in the week over these areas.
- It was mainly due to the i) Formation of two back to back low pressure systems(20-22 July and 24-27 July) over Bay of Bengal off south Odisha–north Andhra Pradesh coasts and their gradual west-northwest ward movements (2nd system was a well marked low pressure area); ii)Locations of the Monsoon trough to the south of its normal position iii) east-west shear zone persisted all 7-days in the week while oscillating roughly within Lat. 17° N to Lat 20° N between 3.1 & 7.6 km above mean sea level tilting southwards with height.
- This prolonged heavy rainfall spell had caused flash floods in some locations in the region. A major land slide was reported from the district of Raigad of Konkan region on 22 July. Major cities like Mumbai and Goa and their sub-urban areas also reported isolated heavy to very heavy in most dates during the week. Mumbai also reported isolated extremely heavy rainfall on 22 and 27 July. Ahmedabad airport reported very heavy rainfall of 18.5cm on 23 July. All these events have caused urban flash floods in these cities and impacted lives of the people.
- During the week, Exceptional heavy rainfall observed on two dates i.e. on 20 July over Raigad (Matheran: 40cm) and then observed on 27th July over Telangana (Laxmidevipeta in Mulugu dist65

cm, Chityal (dist J. Bhupalpally) 62 cm, Regonda (dist J. Bhupalpally) 47 cm) which also have severely impacted respective areas.

- **Analysis of Weekly overall Rainfall distribution during the week ending on 26 July 2023 and monsoon Season's Rainfall Scenario (1 June-26 July 2023):** It shows for the country as a whole, the weekly cumulative All India Rainfall in % departure from its long period average (LPA) till week ending on 26 July 2023 was 20%, over south Peninsula, it was 129%(large-excess rainfall reported, central India as 42%(excess) while over northwest India had -13 % and east & northeast India had got sub-due rainfall of -57%. All India Seasonal cumulative rainfall % departure during this year's **monsoon Season's Rainfall** during **1 June to 26 July 2023** is +5% and over northwest India, it is +34%. 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 Annex II and III respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	20.07.2023 TO 26.07.2023			01.06.2023 TO 26.07.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	40.5	94.3	-57%	520.3	689.8	-25%
NORTH-WEST INDIA	44.6	51.1	-13%	335	249.6	+34%
CENTRAL INDIA	110.6	77.9	+42%	497	436.9	+14%
SOUTH PENINSULA	114.5	49.9	+129%	341.3	333.1	+2%
Country as a whole	79.9	66.7	20%	420.3	399.2	+5%

2. Large scale features

- Currently, warm ENSO neutral conditions are prevailing over the equatorial Pacific. The sea surface temperatures (SSTs) across most of the equatorial Pacific Ocean are warmer than normal

and near El Niño threshold value. The latest forecasts from MMCFS and other global models indicate high probabilities for the El Niño conditions to develop during the middle of the monsoon season and continue till the first quarter of 2024.

- The Madden–Julian Oscillation (MJO) Index is currently in Phase 6 with amplitude less than 1. It would move across phases 6,7 & 8 during the week 1 with amplitude remaining less than 1. Thereafter during week 2, it will move to phase 1 with amplitude remaining less than 1. Thus, during first half of week 1, MJO would support enhancement of convective activity over central and north India. **3. Forecast for next two week**

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (27 July-2 August 2023) and Week 2 (3-9 August, 2023)

Weather systems & associated Precipitation during Week 1 (27 July-2 August, 2023)

Significant Weather features:

- ❖ Yesterday's **Well Marked Low Pressure Area** over Westcentral & adjoining Northwest Bay of Bengal off north Andhra Pradesh-south Odisha coasts has weakened into a **Low Pressure Area** over south Odisha & adjoining north Coastal Andhra Pradesh today morning. Various deterministic models including ECMWF, IMD GFS, NCEP GFS, NCUM, NEPS and GEFS are indicating existing low pressure area (LPA) over South Odisha and adjoining North Andhra Pradesh would move northwestwards during next 24 hours and gradually recurve northeastwards and reach Gangetic West Bengal by 31st July. It is likely to move to Head Bay of Bengal temporarily and toward end of the week.
- ❖ Presently, the Monsoon Trough is active & is south of its normal position and passes through Bikaner, Kota, Raisen, Durg, centre of Low Pressure Area over south Odisha & adjoining north Coastal Andhra Pradesh and thence east-southeastwards to Eastcentral Bay of Bengal and extends upto lower tropospheric levels. The western end is likely to gradually shift northwards during next 3 days while eastern end likely to gradually shift northwards and likely to be along the normal position from 30 July.
- ❖ The shear zone now runs roughly along Lat. 18° N in middle tropospheric levels tilting southwards with height. It is likely to become less marked by 29 July.
- ❖ A cyclonic circulation lies over Punjab & neighbourhood in lower tropospheric levels. It is also likely to become less marked by 29 July.

Under their influence:

Weather Forecast and Warning:

Northwest India: Light/Moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over Uttarakhand during 27th-31st; Himachal Pradesh, Punjab, Haryana-Chandigarh-Delhi and West Uttar Pradesh during 27th-29th; over East Uttar Pradesh during 28th-31st; over Rajasthan and Jammu and Kashmir on 27th& 28th July, 2023.

Isolated very heavy rainfall also likely over Himachal Pradesh and West Rajasthan on 27th July, 2023.

Central India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over the region during 27th-29th July. **Isolated extremely heavy falls also likely over Vidarbha on 27th July. Isolated very heavy rainfall also likely over Chhattisgarh on 27th& 28th July; Vidarbha on 28th July.**

West India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** very likely to continue over Konkan & Goa and ghat areas of Madhya Maharashtra during 27th-29th July; over Gujarat Region on 27th & 28th and Marathwada on 27th July, 2023. **Isolated extremely heavy rainfall very likely over Konkan & Goa and ghat areas of Madhya Maharashtra on 27th July, 2023. Isolated extremely heavy rainfall very likely over Mumbai city & adjoining areas on 27th and very heavy rainfall on 28th July.**

South India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** very likely over Telangana, Coastal Karnataka, North Interior Karnataka on 27th & 28th and over Rayalaseema & South Interior Karnataka on 27th July.

Isolated extremely heavy rainfall very likely over Telangana on 27th July, 2023.

East India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Odisha during 27th-31st; Sub-Himalaya West Bengal & Sikkim during 27th-29th July and over Jharkhand during 29th-31st and over Bihar on 30th & 31st July, 2023.

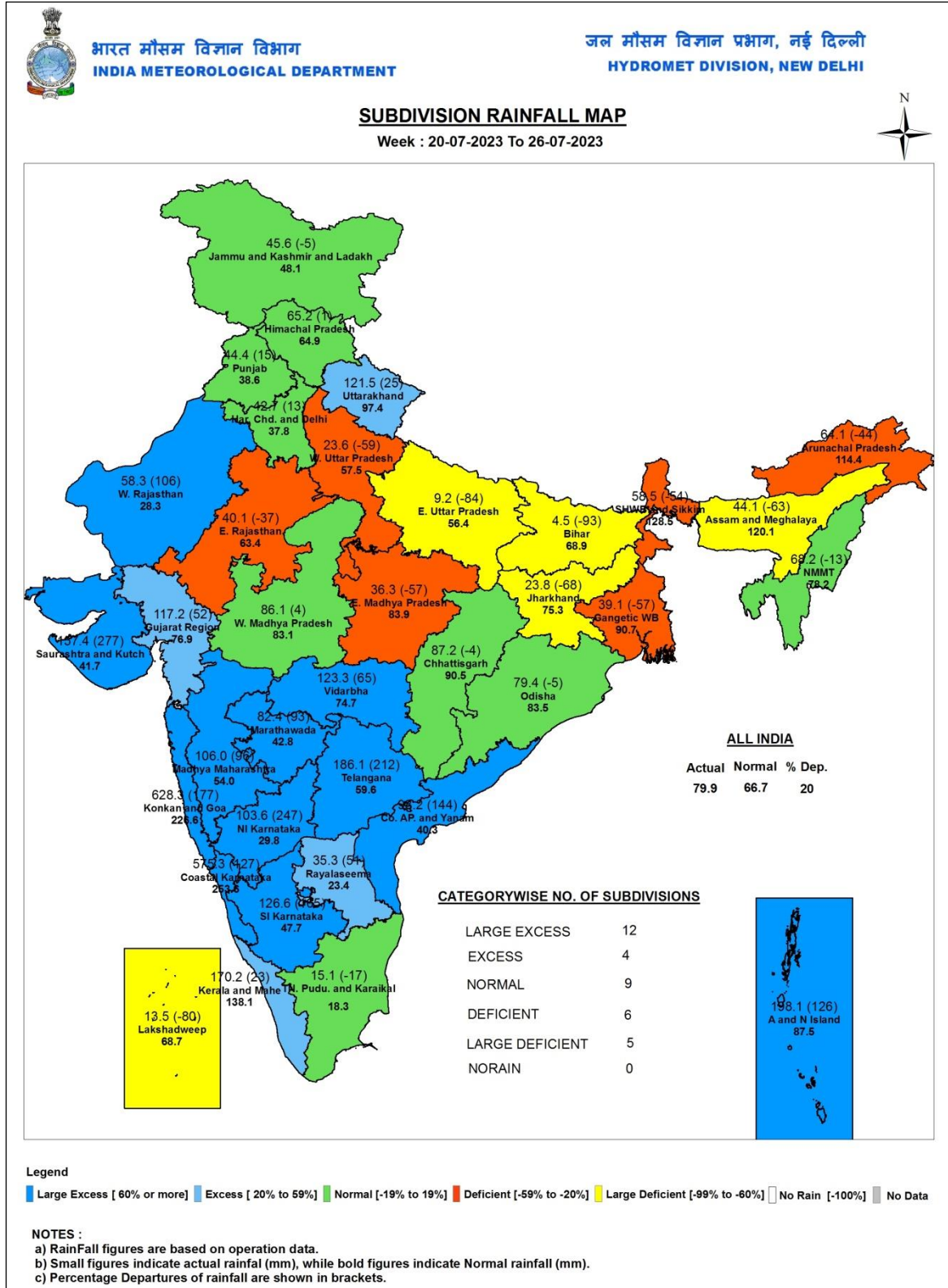
Northeast India: Light/moderate fairly widespread rainfall with **isolated heavy rainfall** very likely over the region during 27th July to 2 Aug. **Isolated very heavy rainfall likely over Arunachal Pradesh and Assam & Meghalaya on 27th & 28th July, 2023 and then during 30 July-2 Aug .**

Weather systems Rainfall for week 2 (3-9 August, 2023):

- ✓ Monsoon trough is likely to remain along the normal or north of the normal position during the week.
- ✓ Most of the NWP Models are indicating remnant of the system from the week1, over eastern parts of India (i.e. which is likely to be over Gangetic West Bengal during the beginning of the week 2), likely to move to Head Bay of Bengal temporarily and then move west-northwestwards during 2-6th August.
- ✓ **Under above scenario**
 - Light to moderate fairly widespread to widespread rainfall activity with isolated heavy to very heavy rainfalls are likely over east and northeast India.
 - Light to moderate scattered to fairly widespread rainfall activity with isolated heavy to very heavy rainfall is also likely over western Himalayan region and adjoining plains of India, Uttar Pradesh, Jharkhand and northern parts of Chhattisgarh, extreme South Peninsular India during most days of the week.
 - Reduction in rainfall activity over Maharashtra and Gujarat and south Rajasthan.
 - **Overall, rainfall activity is likely to be normal to above normal over parts of West central India and adjoining plains of northwest India, Uttar Pradesh and east and northeast India (mainly covering Bihar, northern parts Gangetic west Bengal and Sub-Himalayan west Bengal and Sikkim and Assam and Meghalaya). It is likely to be normal over rest of the country, except over Eastcentral India (mainly covering Odisha, Chhattisgarh and Vidarbha) and adjoining northern parts of Peninsular India and west coast of India(including many parts of Maharashtra), where it is likely to be normal to below normal during the week.**

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

Annex: I

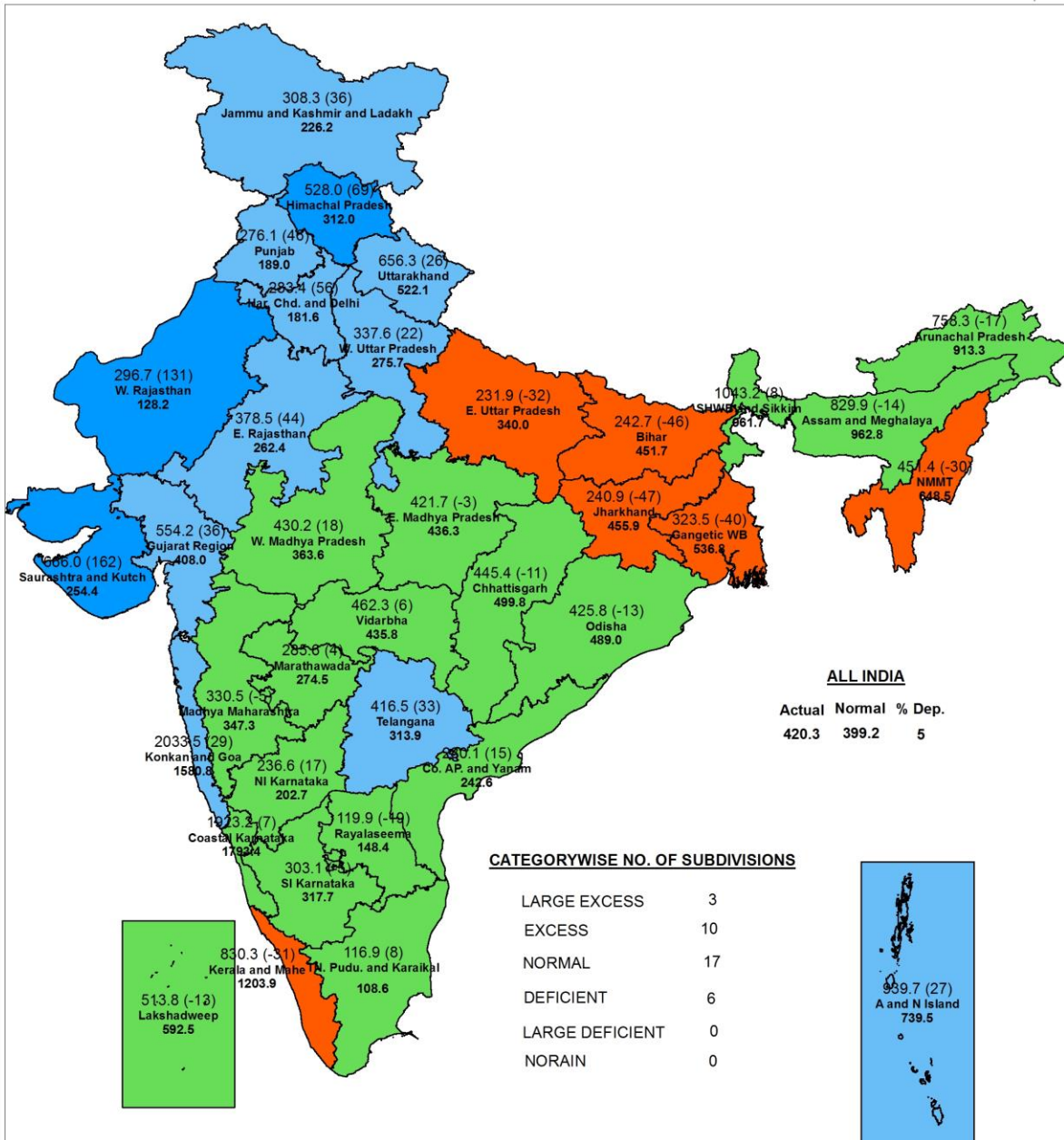


Annex II



SUBDIVISION RAINFALL MAP

Period : 01-06-2023 To 26-07-2023

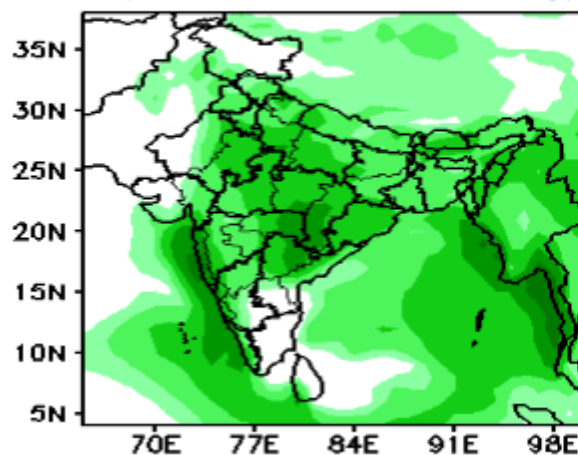
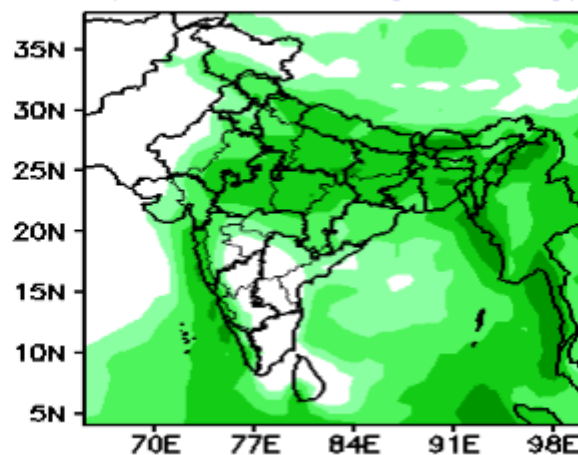
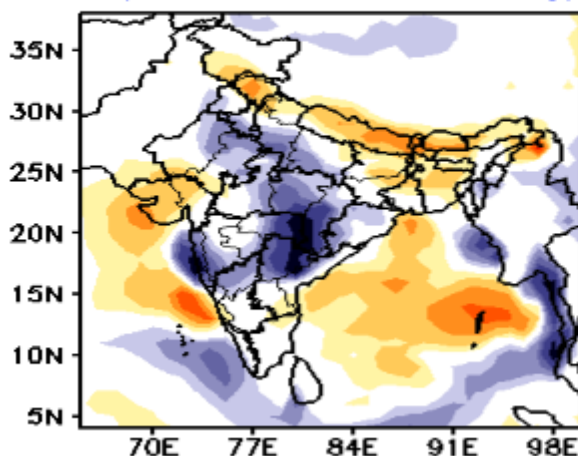


Legend

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

NOTES :

- Rainfall figures are based on operation data.
- Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- Percentage Departures of rainfall are shown in brackets.

Forecast Rainfall (mm/day)**(Week1: 28Jul–03Aug)****(Week2: 04Aug–10Aug)****Forecast Rainfall Anomaly (mm/day)****(Week1: 28Jul–03Aug)****(Week2: 04Aug–10Aug)**