



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

Press: Dated: 20 July, 2023

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(20 July-2 August 2023)**

1. Salient Observed Features for week ending 19 July 2023

- The monsoon trough was active and was near normal or south of its normal position during most days of the week. In addition, a shear zone is also developed over north Peninsular India in middle tropospheric levels during 2nd half of the week.
- A Low pressure area formed over north Odisha and adjoining Gangetic West Bengal & Jharkhand in the morning hours 16th; it lay over south Jharkhand and adjoining north Interior Odisha in the evening of the same day; It has become less marked however, its associated cyclonic circulation lay over south Jharkhand & neighbourhood and extended middle tropospheric levels on 17th; it lay over south Chhattisgarh & neighbourhood in lower tropospheric levels 18th & 19th July 2023.
- As a result of both the above mentioned meteorological features, southwest monsoon rainfall was normal to above normal over central & north Peninsular India during the week.
- **Heavy Rainfall: Heavy to very heavy rainfall with extremely heavy rainfall at isolated places** had occurred over Odisha, Uttarakhand, Konkan & Goa and Madhya Maharashtra on two days each; over Assam & Meghalaya, Sub Himalayan West Bengal & Sikkim, Bihar, West Uttar Pradesh, Jammu Kashmir & Ladakh, West Madhya Pradesh, Gujarat Region, Saurashtra & Kutch, Tamil Nadu, Puducherry & Karaikal and Coastal Karnataka on one day each during the week. **Heavy to very heavy rainfall** had occurred **at isolated places** over Himachal Pradesh on five days; over Uttarakhand and Vidarbha on four days each; over Odisha, East Rajasthan, Saurashtra & Kutch, Chhattisgarh, Telangana and Coastal Karnataka on three days each; over Assam & Meghalaya, East & West Uttar Pradesh, East & West Madhya Pradesh, Gujarat Region and Konkan & Goa on two days each; over Sub Himalayan West Bengal & Sikkim, Bihar, Haryana, Chandigarh & Delhi

and North Interior Karnataka on one day each during the week.

- **Heavy rainfall** had occurred **at isolated places** over East & West Madhya Pradesh and Gujarat Region on four days each; over Arunachal Pradesh, East Uttar Pradesh, East Rajasthan, Coastal Andhra Pradesh & Yanam and Telangana on three days each; over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Odisha, Jharkhand, Bihar, West Uttar Pradesh, Haryana, Chandigarh & Delhi, Punjab, Himachal Pradesh, West Rajasthan, Konkan & Goa, Madhya Maharashtra, Vidarbha, Coastal & South Interior Karnataka and Kerala & Mahe on two days each; over Andaman & Nicobar Islands, Sub Himalayan West Bengal & Sikkim, Gangetic West Bengal, Uttarakhand, Jammu Kashmir & Ladakh, Marathwada, Chhattisgarh and North Interior Karnataka on one day each during the week.
- **Temperature Scenario:** The highest maximum temperature of **41.7°C** had been recorded at **Jaisalmer (West Rajasthan)** on **19th July 2023** and the lowest minimum temperature of **19.4°C** had been recorded at **Narsinghpur (East Madhya Pradesh)** on **16th** and **17th July 2023** over the plains of the country during the week.
- **Analysis of Weekly overall Rainfall distribution during the week ending on 19 July 2023 and monsoon Season's Rainfall Scenario (1 June-19 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 19 July 2023 was -1%, over south Peninsula, it was just normal with 0%, central India as 22% while over northwest India had -3 %. All India Seasonal cumulative rainfall % departure during this year's **monsoon Season's Rainfall** during **1 June to 19 July 2023** is +2% and over northwest India, it is +46%. 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 I and II respectively.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	13.07.2023 TO 19.07.2023			01.06.2023 TO 19.07.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	60.5	95.5	-37%	479.8	595.5	-19%
NORTH-WEST INDIA	49.7	51.5	-3%	290.4	198.5	+46%

CENTRAL INDIA	90.6	74.6	+22%	386.4	359	+8%
SOUTH PENINSULA	47.6	47.4	0%	228.7	283.2	-19%
Country as a whole	64.8	65.6	-1%	340.8	332.5	+2%

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 4 with amplitude less than 1. It would migrate to and remain in phase 5 during next 4-5 days. Thereafter, it would move to phase 6 during the latter part of week 1 with amplitude remaining less than 1. ECMWF forecast shows that the MJO index will enter into phase 7 in the beginning of week 2 and migrate quickly into phase 1 at the end of the week. Whereas, the GEFS forecast indicate little movement of MJO index in phase 6 during week 2. Hence, MJO is not likely to be very much favorable for enhancement of convective activity of monsoon over north Bay of Bengal (BoB) and Indian region during latter part of week 1 and week 3.

Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (20 to 26 July, 2023) and Week 2 (27 July to 02 August, 2023)

Weather systems & associated Precipitation during Week 1 (20 to 26 July, 2023)

Significant Weather features:

- ❖ Under the influence of yesterday’s cyclonic circulation, a low pressure area has formed over Northwest Bay of Bengal & adjoining Odisha in the morning of today. It is likely to move slowly west-north westwards across Odisha coast during 2-3 days.

- ❖ The Monsoon Trough is active, runs south of its normal position and passes through Jaisalmer, Kota, Guna, Damoh, Raipur, centre of low pressure area over northwest Bay of Bengal and adjoining and thence east-southeast wards to East central Bay of Bengal at mean sea level.
- ❖ The shear zone runs roughly along Lat. 20° N in lower & middle tropospheric levels tilting southwards with height.
- ❖ A fresh Western Disturbance as cyclonic circulation is seen over Iran and neighbourhood.
- ❖ **A fresh low pressure area is likely to form over northwest and adjoining west-central Bay of Bengal off south Odisha and north Andhra Pradesh coasts around 24th July. The system is likely to intensify into a depression over the same region and move west-northwestward across south Odisha & north Andhra Pradesh coasts during subsequent 2 days.**

Weather Forecast and Warning (Annexure III):

Northwest India: Light/moderate fairly widespread to widespread rainfall very likely over northwest India during the week. Isolated **heavy rainfall** is also very likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad during 20th-23rd; over Himachal Pradesh, Uttarakhand and East Rajasthan during 20th-26th; over Punjab and Haryana on 22nd; over West Rajasthan on 23rd to 25th; over Uttar Pradesh on 24th to 26th July 2023.

Isolated very heavy rainfall also very likely over Uttarakhand on 21st-22nd and over East Rajasthan on 21st July.

Central India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** is very likely over the region during the week. **Isolated very heavy rainfall** also likely over Chhattisgarh on 20th July, over West Madhya Pradesh on 21st July and over Vidarbha on 20th-21st July.

West India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy to very heavy rainfall** very likely to continue over Konkan & Goa, ghat areas of Madhya Maharashtra, Gujarat State during the week and light to moderate fairly widespread rainfall over the rest parts of the region during same period.

Isolated heavy to very heavy rainfall very likely to continue over Mumbai during next 02 days.

Isolated extremely heavy rainfall likely over Konkan & Goa, ghat areas of Madhya Maharashtra, Gujarat state on 20th & 21st July.

South India: Light/moderate fairly widespread to widespread rainfall with **isolated heavy rainfall** very likely to over Kerala, Karnataka, Coastal Andhra Pradesh & Yanam & Telangana during the week and over Tamil Nadu on 20th July and light to moderate scattered to fairly widespread rainfall over the rest parts of the region during same period.

Isolated extremely heavy rainfall very likely over Telangana on 20th and **isolated very heavy rainfall very** likely over Telangana on 21st& 24th; over Coastal Karnataka & North Interior Karnataka on 20thJuly.

East India: Light/moderate widespread rainfall with isolated **heavy to very heavy rainfall** very likely over Odisha during 20th to 24th, isolated **heavy rainfall** over Andaman & Nicobar Islands during 21st-24thJuly and light to moderate scattered to fairly widespread rainfall over the rest parts of the region during the week.

Northeast India: Light/moderate Scattered to Fairly widespread rainfall likely over the region. **Isolated heavy rainfall** likely over Nagaland, Manipur, Mizoram & Tripura during 20th to 22nd; over Assam & Meghalaya on 22nd to 24th and over Arunachal Pradesh on 23rd & 24th July and light to moderate fairly widespread rainfall over the rest parts of the region during same period.

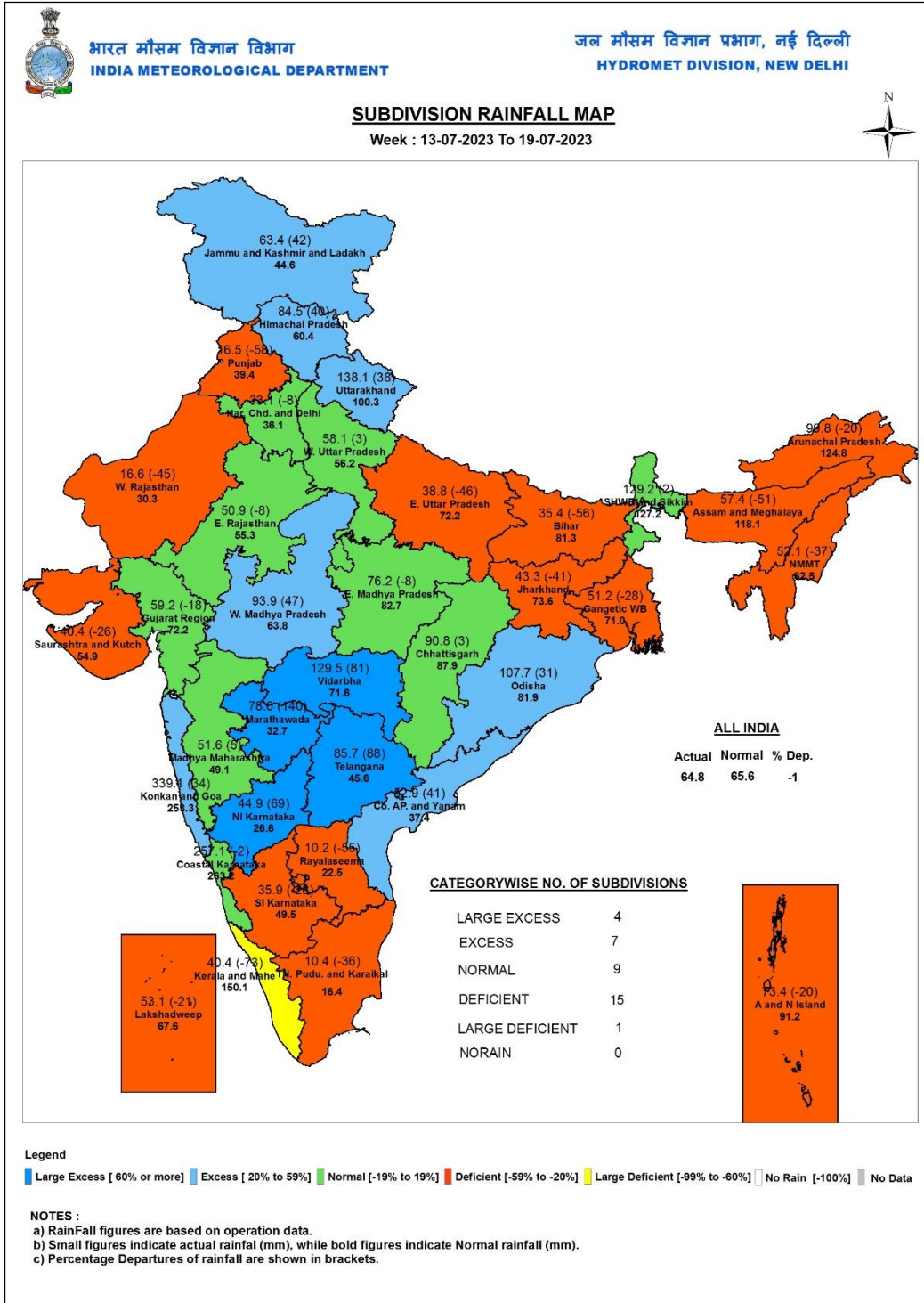
Rainfall for week 2 (27 July to 02 August, 2023):

- ✓ Monsoon trough is likely to be active and near normal or south of its normal position during most days of the week.
- ✓ The low pressure system of the week 1 likely to move **west-northwestward across south Odisha & north Andhra Pradesh coasts** during 1st half of the week 2
- ✓ Off shore trough likely from Gujarat coast to north Kerala coast during many days of the week.

- ✓ Strong westerly/southwesterly winds are likely along west coast during many days of the week.
- ✓ Under above scenario
 - Light to moderate fairly widespread to widespread rainfall activity with isolated heavy falls are likely over central parts of the country and along the west coast.
 - Light to moderate fairly widespread to widespread rainfall activity is also likely over rest parts of South Peninsular India during most days of the week.
 - Light to moderate scattered/fairly widespread rainfall/thunderstorm is likely over northwest & northeast India during the week. Isolated heavy rainfall is also likely over these areas during many days of the week.
 - **Overall, rainfall activity is likely to be normal to above normal over northwest, central and south Peninsular India; near normal over northeast India and below normal over East India (except Odisha, where it is likely to be near 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

