



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

Press: Dated: 21 Sept, 2023

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(21-28 Sept 2023)**

1. Salient Observed Features for week ending 20 Sept 2023

- **As predicted, active monsoon conditions continued to prevail consecutively for 2nd week in this month, over most parts of Central India and Northwest India and Gujarat state, during many dates in the week with the monsoon trough at mean sea level remained south of its normal position during the week (see cumulative rainfall map of the week ending on 20 Sept given in Annex 1).**
- **This was mainly due to west-northwestward movement of two consecutive low pressure systems and their associated cyclonic circulations along the monsoon trough from Northwest Bay of Bengal towards central and western parts of India:** 1) Last week's well marked Low pressure which was over Northwest Bay of Bengal & adjoining North Odisha-West Bengal coasts on 14 Sept moved over to Southeast Rajasthan & adjoining West Madhya Pradesh as a low pressure area on 19 Sept and then subsequently its remnant as cyclonic circulation further moved over to south Pakistan and adjoining Kutch and extended upto 5.8 km above mean sea level on 21th Sept. 2) Formation of a fresh low pressure area over Northwest Bay of Bengal off West Bengal-Odisha coasts on 19 Sept, which then also moved westnorth-westwards to Southeast Jharkhand & neighbourhood on 21 Sept.
- **As a result of these systems; Exceptionally heavy rainfall recorded over southwest Madhya Pradesh on 16th Sept with past 24 hours rainfall reported at time ending at 0830 IST of 16 Sept at Bhimpur (Betul) – 45 cm and also over three districts in southwest Madhya Pradesh and one district in**

southeast Rajasthan on 17th Sept with past 24 hours rainfall reported at 0830 IST of 17 Sept at Kathiwada (dist. Alirajpur) – 34, Meghnagar (dist. Jhabua) – 32, Dhar-aws (dist. Dhar) – 30, Bagidora Sr (dist. Banswara) – 37. Isolated heavy to very heavy rainfall with isolated Extremely heavy rainfall also reported mainly over Odisha on 14, 15 and 19-21 Sept; Chhattisgarh and Vidarbha on 16 Sept and then East Madhya Pradesh, Rajasthan and Gujarat during 15-19 Sept 2023 and isolated heavy to very heavy rainfall reported over other parts of central and adjoining Peninsular India.

- **Due to monsoon trough was south of the normal position, northeast India received sub-due rainfall during most dates in the week.**
- **Analysis of Weekly overall Rainfall distribution during the week ending on 20 Sept 2023 and monsoon Season's Rainfall Scenario (1 June-20 Sept 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 20 Sept 2023 was +44%, over south Peninsula, it was -21%, central India as +139% while over northwest India had +86% and east & northeast India had got -52%. All India Seasonal cumulative rainfall % departure during this year's **monsoon Season's Rainfall** during **1 June to 20 Sept 2023** is -7% and over northwest India, it is +2%. 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		
	14.09.2023 TO 20.09.2023			01.06.2023 TO 20.09.2023		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	31.5	65.3	-52%	1008.9	1278.5	-21%
NORTH-WEST INDIA	37	19.9	+86%	579.4	565.7	+2%
CENTRAL	93.8	39.2	+139%	909.7	933.9	-3%

INDIA						
SOUTH PENINSULA	31.8	40.3	-21%	590.8	661	-11%
Country as a whole	54.2	37.7	+44%	761.3	822	-7%

2. Large scale features

- Currently, weak El Niño conditions are prevailing over the equatorial Pacific region. The latest forecast of MMCFS and other global model forecasts indicate that the El Niño conditions are likely to further intensity and continue up to early next year.
- In addition to ENSO conditions over Pacific, other factors such as the Indian Ocean Sea Surface Temperatures (SSTs) also have some influence on Indian monsoon. At present the border line positive IOD conditions are prevailing over the Indian Ocean and the latest MMCFS and other global model forecast indicate positive IOD conditions are likely to strengthen during the upcoming months.
- Most of the models are indicating that currently, MJO is in phase 3 with amplitude less than 1. It would move to phase 4 during next 2-3 days and will remain in Phase 4 till end of the week 1 and thereafter move across phase 5 during week 2 with amplitude remaining less than 1. Thus, MJO is conducive for enhancement of convective activity over the Arabian Sea during week 1 and over the Bay of Bengal (BoB) during entire forecast period.

3. Forecast for next two week

Weather systems & associated Precipitation during Week 1 (21 to 27 September, 2023) and Week 2 (28 Sept-4 Oct, 2023)

Week 1 (21 to 27 September, 2023)

Main Synaptic Systems, likely development of withdrawal features and overall rainfall activity India as a whole:

- ❖ A Low Pressure Area lies over Southeast Jharkhand & neighbourhood. Associated cyclonic circulation extends upto middle tropospheric levels tilting south-westwards with height. It is likely to move to southeast Uttar Pradesh during next 24-hours and become less marked thereafter. However, its

remnant likely to move as cyclonic circulation to northeast Bihar during subsequent 2-3 days.

- ❖ A trough runs from cyclonic circulation associated with the Low Pressure Area over southeast Jharkhand to southwest Uttar Pradesh in lower tropospheric levels.
- ❖ The Monsoon Trough currently lies south to its normal position. It is likely to gradually shift northwards during the next 2-3 days.
- ❖ A cyclonic circulation likely to form over Gujarat region on 27 Sept.
- ❖ Heavy to very heavy rainfall likely to continue over Odisha, Chhattisgarh, Madhya Pradesh, Vidarbha on 21st, over Bihar, Jharkhand, West Bengal & Sikkim on 21st & 22nd and over northeast India during 21st-23rd September and over Gujarat and adjoining Konkan areas during 26-27 Sept.
- ❖ Reduced rainfall activity likely to continue over northwest and adjoining westcentral India during next 5 days. However, the conditions for commencement of withdrawal of Southwest Monsoon rainfall from parts of West Rajasthan is likely to develop towards the end of the forecast period.
- ❖ **Overall monsoon rainfall is likely to be above normal over India as a whole.**

Weather Forecast and Warning for the country during week 1:

East India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over Sub-Himalayan West Bengal & Sikkim during 21st-24th; Bihar during 21st-23rd; Odisha, Jharkhand, Gangetic West Bengal on 21st & 22nd and 26-27 Sept and Andaman & Nicobar Islands during 23rd-27th September.

Isolated very heavy rainfall very likely over Sub-Himalayan West Bengal & Sikkim during 21st-23rd; Odisha, Jharkhand on 21st and Bihar on 21st & 22nd September.

Isolated extremely heavy rainfall very likely over Sub-Himalayan West Bengal & Sikkim on 21st September.

Northeast India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy to very heavy rainfall** activity very likely over Arunachal Pradesh, Assam & Meghalaya, Nagaland & Manipur during 21st-24th September.

Isolated extremely heavy rainfall very likely over Assam & Meghalaya on 21st September.

Central India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over East Madhya Pradesh, Chhattisgarh during 21st-23rd, West Madhya Pradesh and Vidarbha on 21st & 22nd September.

Isolated very heavy rainfall very likely over East Madhya Pradesh, Vidarbha and Chhattisgarh on 21st September.

South India: Light/moderate fairly widespread to widespread rainfall with isolated **heavy rainfall** very likely over Kerala, Tamil Nadu on 21st & 22nd; Coastal Andhra Pradesh and Telangana on 21st September and on 26 and 27 Sept.

Northwest India: Light/moderate scattered to fairly widespread rainfall/thunderstorm with isolated **heavy falls** very likely over Uttarakhand on 21st and East Uttar Pradesh on 21st & 22nd September.

West India: Light/moderate fairly widespread to widespread rainfall/thunderstorm & lightning with **isolated heavy rainfall** very likely over north Konkan on 21st, 24th -27 Sept; Madhya Maharashtra and Marathawada on 21st & 22nd September, Gujarat during 26-27 Sept.

Isolated to scattered light/moderate rainfall likely over rest parts of the country during next 7 days.

Week 2 (28 Sept-4 Oct 2023)

Weather Systems and Forecast for the country during week 2

A WD likely to affect northwest India during 1st half of the week.

- ✓ Light to moderate rainfall likely at a few places over western Himalayan region and adjoining plains during 1st half of the week
- ✓ Light to moderate fairly widespread to widespread rainfall activity with **isolated heavy to very heavy falls** are likely over most parts of central, east & northeast India during the week.
- ✓ Rainfall activity is likely to be **above normal** over central India and adjoining northwest and northern parts of Peninsular India, South Gujarat and Maharashtra and along west coast of India; normal over rest parts of India outside northeast India where it is likely to be to below normal to normal rainfall during the week. **Overall, above normal rainfall activity is likely over country as a whole during week 2.**

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

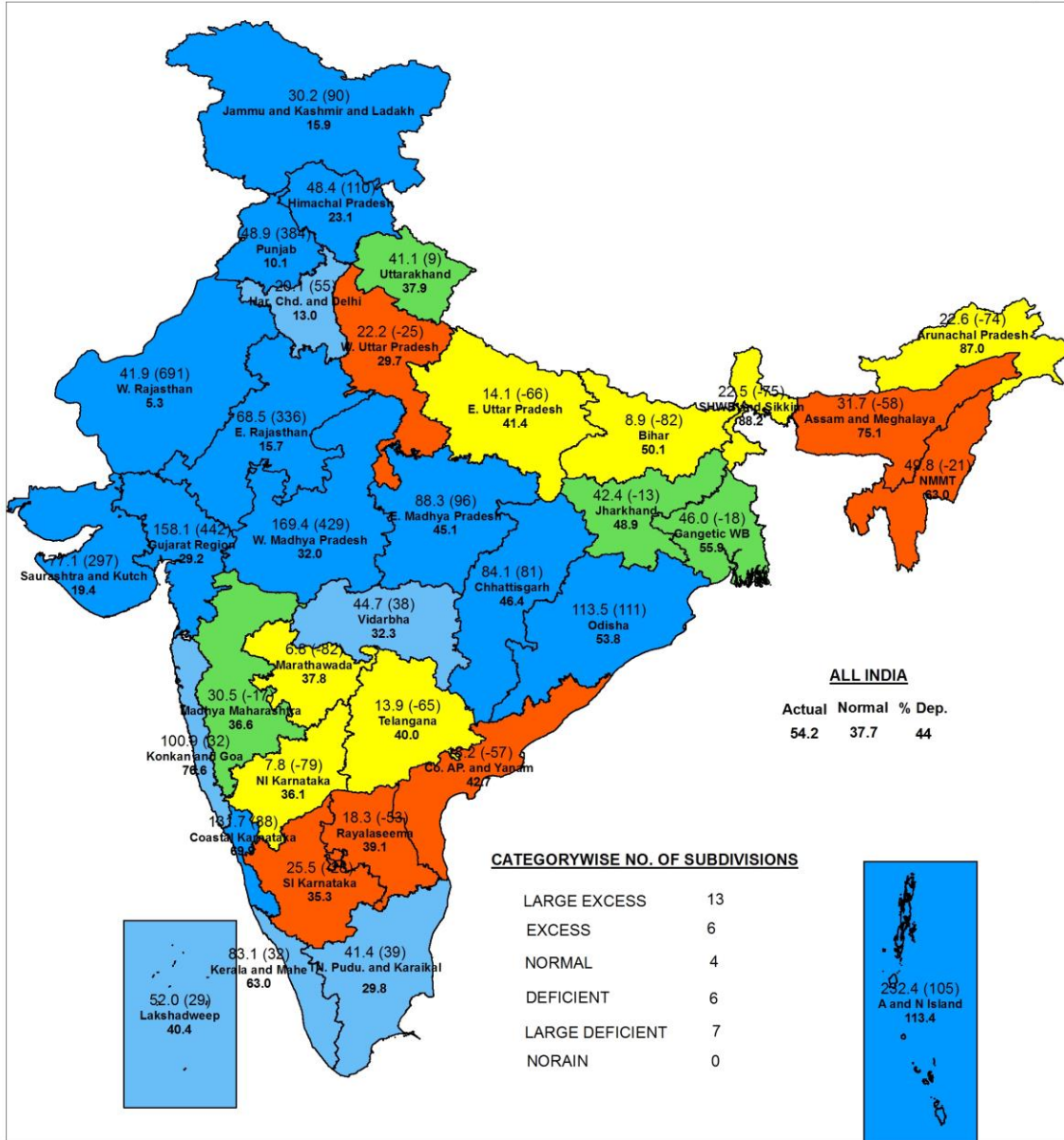


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

जन मौसम विज्ञान प्रभाग, नई दिल्ली
HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Week : 14-09-2023 To 20-09-2023



Annex II

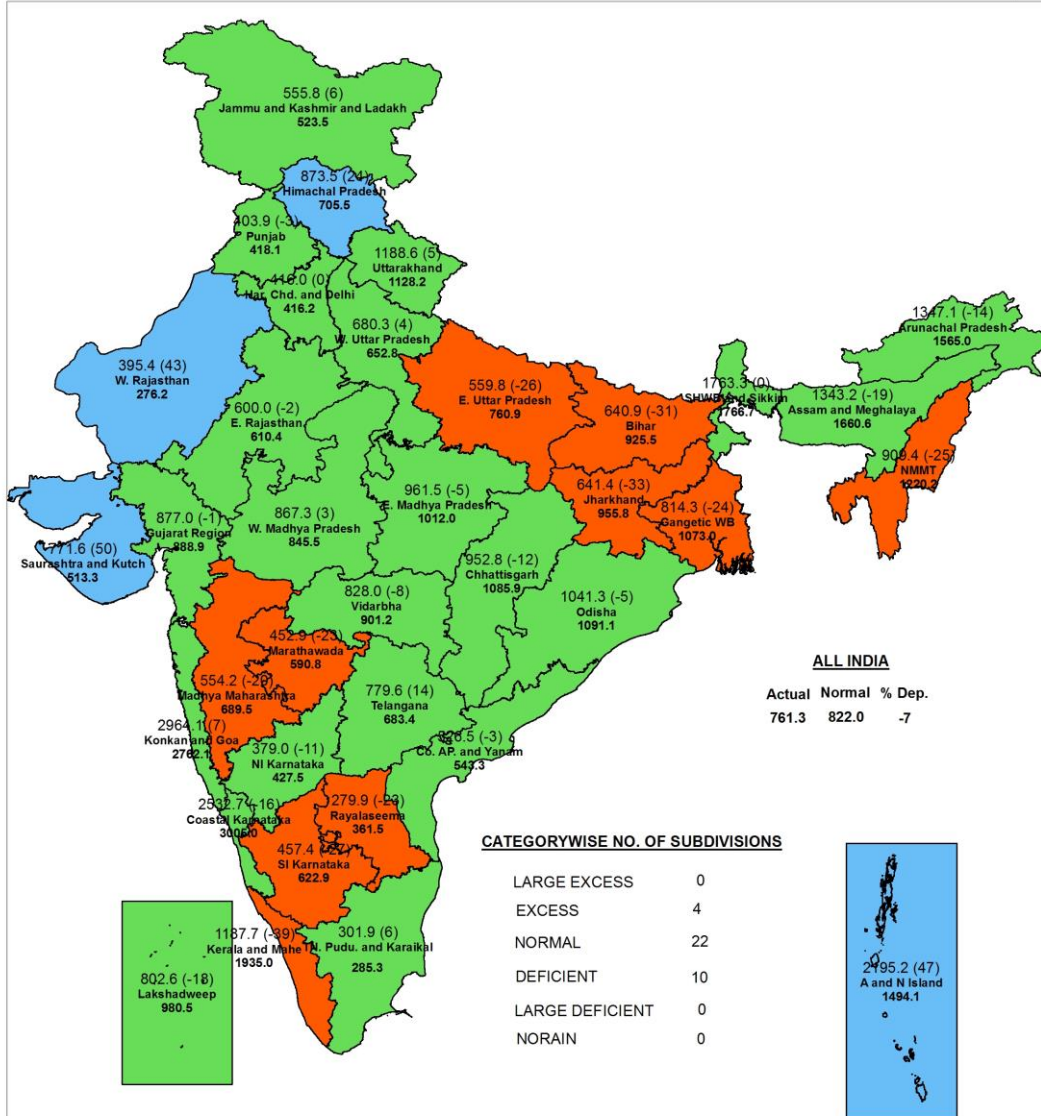


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SUBDIVISION RAINFALL MAP

Period : 01-06-2023 To 20-09-2023



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 :

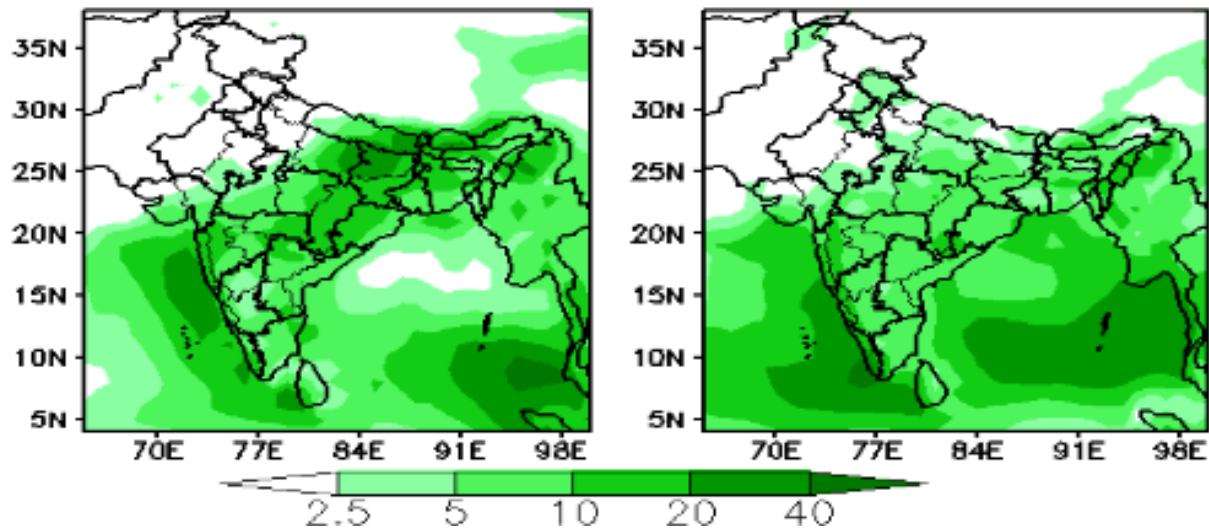
- Rainfall figures are based on operation data.
- Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- Percentage Departures of rainfall are shown in brackets.

Forecast Rainfall (mm/day)

(00Z=0530 hrs IST)

(Week1:00Z21Sep–00Z28Sep)

(Week2:00Z28Sep–00Z05Oct)

**Forecast Rainfall Anomaly (mm/day)** (00Z=0530 hrs IST)

(Week1:00Z21Sep–00Z28Sep)

(Week2:00Z28Sep–00Z05Oct)

