



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

Dated: 9 Sept, 2021

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(9-22 Sept 2021)**

1. Salient Features

- During the week ending on 8 Sept 2021, above normal rainfall activity was reported over India and weekly cumulative **All India Monsoon Rainfall in % departure from its long period average(LPA) during the week was +15%** (Refer Annex I, for week by week all India rainfall progress and Seasonal cumulative rainfall in % departure from LPA). Such above normal rainfall activity for India as whole had occurred, after gap of 5 consecutive weeks since week ending on 28 July 2021, when observed weekly all India % departure from LPA was also +15%, i.e. above normal (refer Fig1).
- The increased rainfall activity was due to **a)** Remnant cyclonic circulation of the Low pressure area from the previous week extending upto mid-tropospheric levels which was located over Saurashtra & neighbourhood on 2 Sept moved very slowly westward to Kutch areas on 6 Sept **b)** Formation of another Low Pressure Area Northwest & adjoining Westcentral Bay of Bengal off south Odisha-north Andhra Pradesh coasts on 6th which then moved as a Well Marked Low Pressure Area to southwest Madhya Pradesh and neighbourhood on 8th September 2021 across Odisha and South Chhattisgarh **c)** Monsoon trough also lay to the south of its normal position due to presence of these two systems **d)** Along with these favorable synoptic features, an east –west shear zone also was seen along Latitude 10°N on 2 Sept, which moved to 18°N on 8 Sept, in the lower and middle tropospheric levels tilting southwards with height.

2. Rainfall during the week 1-8 Sept 2021

Weekly cumulative rainfall for the country as a whole for the week ending on 1st Sept is 15 % above its Long Period Average (LPA), while the Seasonal cumulative rainfall during 1st June to 1 Sept, 2021 is 7 % below the LPA. Details of the rainfall distribution over the four broad geographical regions of India are given in **Table 1** and Met sub-division-wise rainfall both for week and season are given in Annex II and III.

Table 1: Rainfall status (Week and season)

Region	WEEK			SEASON		
	26.08.2021 TO 01.09.2021			01.06.2021 TO 01.09.2021		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	44.6	70.9	-37%	1083.6	1205.2	-10%
NORTH-WEST INDIA	26.4	35.9	-26%	455.1	530.8	-14%
CENTRAL INDIA	74.0	55.3	34%	770.0	862.5	-11%
SOUTH PENINSULA	74.7	34.0	120%	688.6	605.1	14%
country as a whole	54.8	47.6	15%	707.2	764.5	-7%

3. Large scale features

- Neutral El-Nino Southern Oscillation (ENSO) conditions were observed over the equatorial Pacific. In the month, Equatorial SSTs were near-to-below average across most of the equatorial Pacific Ocean, and were above-average in the western and far eastern Pacific Ocean, Atlantic Ocean, and near Indonesia. The latest global model forecasts indicate that the current neutral ENSO conditions are likely to continue during the month over the equatorial Pacific Ocean. However, sea surface temperatures over central and east equatorial Pacific Ocean is showing cooling tendency and there is an increased possibility

- of re-emergence of the La Nina condition at the end of the monsoon season or thereafter.
- Negative Indian Ocean Dipole (IOD) conditions prevailed over the Indian Ocean. The latest forecast from the MMCFS and other global models together indicate negative IOD conditions over the Indian Ocean are likely to continue during remaining part of the monsoon season.
 - The madden Julian oscillation (MJO) index currently lies currently lies in Phase 3 with amplitude slightly more than than 1. It is likely to move eastwards with enhanced amplitude and enter into Phase 4 during the first half of Week 2. Then it is likely to further propagate eastwards within Phase 4 with gradual reduction in amplitude during the remaining period of week 2. Hence the phase of MJO would favor the convective activity and hence the formation of low pressure systems over North Indian Ocean (NIO) during weeks 1 & 2. The conjunction of favourable MJO, quasi-biweekly oscillation and other synoptic scale features will support enhancement of convective activity over the BoB and central parts of India during the forecast period.

4. Forecast for next two week

Forecast for next two week 1 (09 to 15 September, 2021) and Week 2 (16 to 22 September, 2021)

Refer Annexure IV

Weather systems & associated Precipitation during week 1: (09 to 15 September, 2021)

- A cyclonic circulation lies over central parts of West Madhya Pradesh & adjoining East Rajasthan extending upto middle tropospheric levels tilting southwestwards with height. It is very likely to persist near same area during next 4-5 days.
- The monsoon trough lies to the south of its normal position. It is very likely to be active and lies south of its normal position or near normal during the week.
- **A low pressure area is likely to form over North and adjoining Central Bay of Bengal around 11th September, 2021 and it is very to concentrate into a Depression over northwest & adjoining west-central Bay of Bengal around 13th September, 2021. It is very likely to move west-northwestwards across Odisha, north Chhattisgarh and north Madhya Pradesh.**
- **Due to above meteorological conditions:**

- ✓ Fairly widespread to widespread rainfall with isolated heavy to very heavy falls likely over Gujarat region during 9th to 15th; Konkan & Goa during 12th to 15th; over Odisha, Chhattisgarh during 12th to 14th September. **Isolated extremely heavy rainfall is also likely over Konkan & Goa on 14th & 15th September, 2021.**
 - ✓ Under the influence of cyclonic circulation over West Madhya Pradesh; fairly widespread rainfall with isolated heavy to very heavy falls are likely over southeast Rajasthan and West Madhya Pradesh during 09th to 12th September.
 - ✓ Rainfall activity is likely to increase with isolated heavy falls over south Haryana, southwest Uttar Pradesh during 10th to 11th September. Isolated heavy to very heavy falls are likely over Uttarakhand and isolated heavy falls are likely over Jammu division and Himachal Pradesh during 1st half of the week.
 - ✓ Reduced rainfall activity very likely to continue over south interior peninsular India during 1st half of the week and increase thereafter with scattered to fairly widespread rainfall. Isolated heavy falls are likely over Karnataka, Kerala, Telangana and Andhra Pradesh on 13th & 14th September.
- **Overall rainfall activity is very likely to be above normal over northwest & central India, near normal over east India and below normal over northeast & south Peninsular India.**

Rainfall for week 2: (16 to 22 September, 2021)

- The monsoon trough is very likely to be active and near normal/ south of its position during most days of the week.
- **A low pressure area is likely to form over Central Bay of Bengal.**
- Fairly widespread to widespread rainfall activity with isolated heavy falls very likely over northwest, central & east India during most of the days.
- Overall above normal rainfall activity likely over northwest, central, east & northeast India and below normal over south Peninsular India.

5. On withdrawal of southwest Monsoon from Northwest India

Conditions are not likely to be favorable for commencement of withdrawal of monsoon from parts of northwest India before the end of the week 2.

6. Cyclogenesis forecast for North Indian Ocean during next 2 weeks

Based on Numerical Models guidance, it may be concluded that there is a high probability of the formation of a low pressure area over North & adjoining Central BoB around 11th September. There is also moderate probability of cyclogenesis (formation of depression) during middle part of week 1 (around 13th September). Another low pressure is also likely to form over central parts of the BoB during beginning of week 2

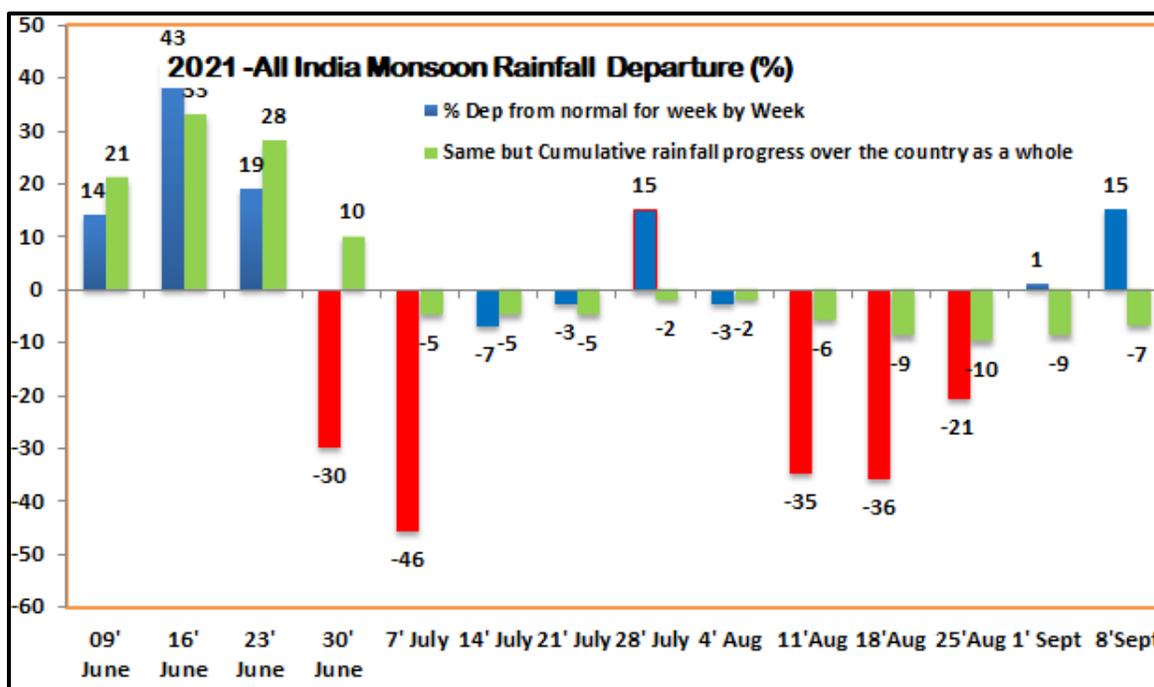
Next weekly update will be issued on next Thursday i.e. 16 Sept 2021

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

SPATIAL DISTRIBUTION (% of Stations reporting)			
% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)

Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75

Annex I

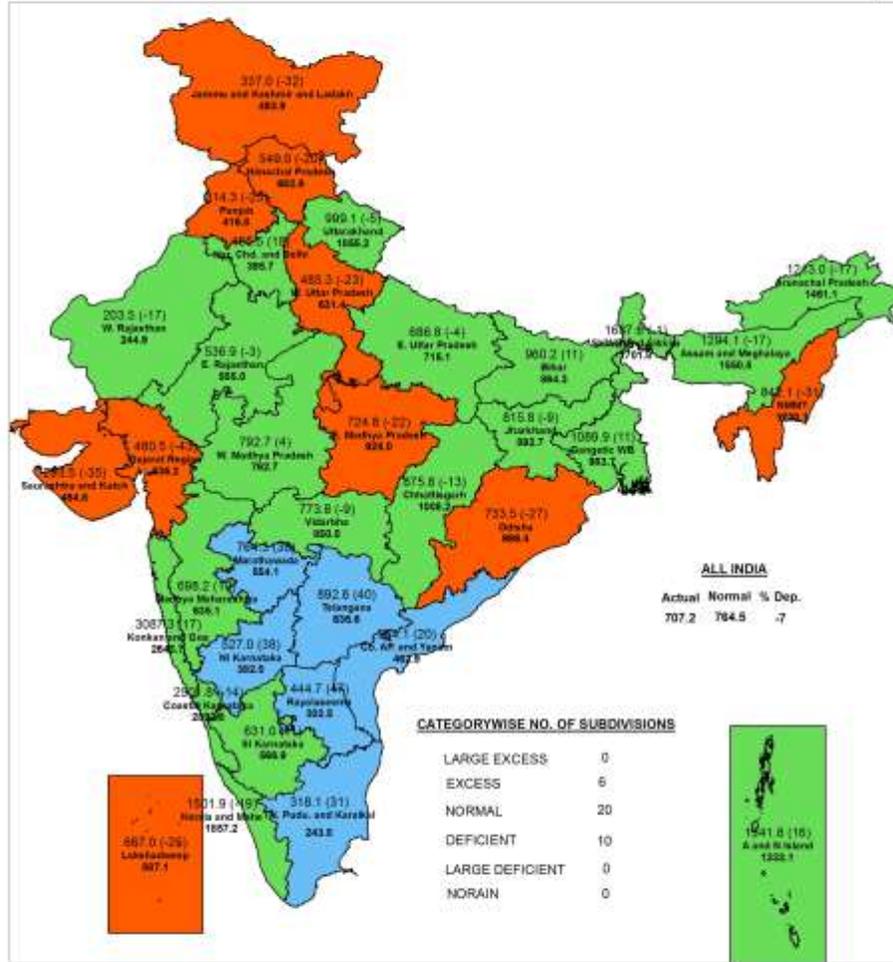


Annexure II



SUBDIVISION RAINFALL MAP

Period : 01-06-2021 To 08-09-2021



Legend
■ Large Excess (80% or more) ■ Excess (20% to 59%) ■ Normal (-19% to 19%) ■ Deficient (-59% to -20%) ■ Large Deficient (-60% to -80%) No Rain (-100%) No Data

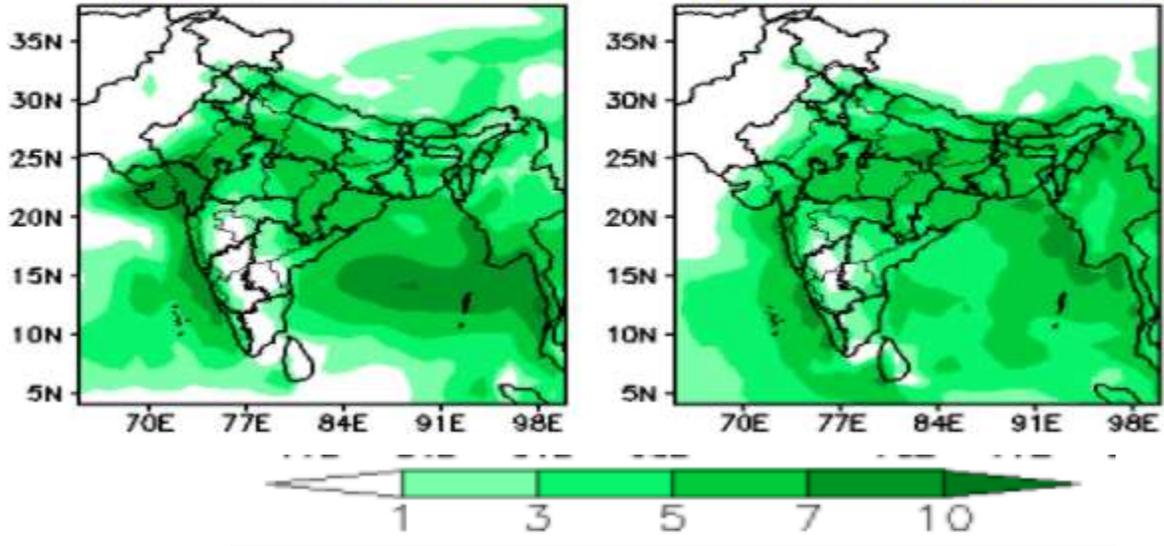
NOTES :
a) Rainfall figures are based on operation data.
b) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

Annex IV

Forecast Rainfall (mm/day)

(Week1: 10Sep-16Sep)

(Week2: 17Sep-23Sep)



Forecast Rainfall Anomaly (mm/day)

(Week1: 10Sep-16Sep)

(Week2: 17Sep-23Sep)

