



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

Press: Dated: 30 Sept, 2021

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(30 Sept-13 Oct 2021)**

1. Salient Features

- During the week ending on 29 Sept 2021, above normal rainfall activity was reported over India and weekly cumulative All India Monsoon Rainfall departure from its long period average(LPA) during the week was +46% (Refer Annex I, for week by week all India rainfall progress and Seasonal cumulative rainfall departure from LPA). This is the 4th consecutive week when above normal rainfall activity continued for India as whole. Weekly all India % departure from LPA for last four weeks i.e. for week ending on 8th Sept, 15th Sept, 22nd Sept and 29th Sept are +15%, + 53%, +28% and +46% respectively (refer Annexure I). **The all India seasonal monsoon rainfall departure from its LPA, for the period from 1 June till 30 Sept, has improved to -1 % from -9% which was till the 1st Sept.**
- **The major reasons of such above normal rainfall during the week were as follows**
 - **i)The east-west from north Konkan coast to eastern India across Peninsular India continued to remain active throughout the week at both lower and middle tropospheric level.**
 - **ii)Development of 2 low pressure systems over Bay of Bengal and its west-northwestward movements with one system intensified into a cyclone: 1st one was cyclonic storm “GULAB” during 24-28 September which crossed north Andhra Pradesh-south Odisha coasts on 26th evening and then weakened into a deep depression in the early hours of 27th September over north Andhra Pradesh and adjoining south Odisha, into a depression in the evening of same date over south Chhattisgarh**

and then as a well-marked low pressure area over western parts of Vidarbha & neighborhood on 28 Sept. Then, its remnant as low pressure area moved to south Gujarat coast across north Madhya Maharashtra during 28-29 Sept. Then the 2nd system was the remnant cyclonic circulation from northwest Pacific entered into East central Bay of Bengal & adjoining Myanmar coast on 27th September 2021 and under its influence, a Low Pressure Area has formed over Northwest Bay of Bengal & adjoining coastal areas on 28th which then moved over to western parts of Gangetic West Bengal and neighborhood on 29 Sept.

2. Rainfall distribution during the week 23-29 Sept 2021

➤ During the week ending on 29 Sept 2021, the monsoon remained active mainly over central and northwest India. Most of these areas received above normal rainfall, similar to the previous two weeks. The weekly cumulative monsoon rainfall departure from its LPA during the currently ending week of 29 Sept 2021 over these regions, were +127% and +91% respectively while for week ending on 22 Sept, values were +110% and +48% and 15 Sept, values were +150% and +53% respectively. The all India seasonal monsoon rainfall departure from its LPA, for the period from 1 June till 29 Sept, has further improved to -1% from -3% till 22 Sept. (Refer Annex I). 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		
	23.09.2021 TO 29.09.2021			01.06.2021 TO 29.09.2021		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	32.2	63.6	-49%	1228.4	1403.5	-12%
NORTH-WEST INDIA	30.0	16.6	81%	575.1	598.8	-4%

CENTRAL INDIA	66.8	29.4	127%	1003.1	973.3	3%
SOUTH PENINSULA	57.6	39.9	44%	801.7	720.3	11%
country as a whole	48.2	33.0	46%	867.8	877.0	-1%

3. Large scale features

- Currently cool ENSO neutral conditions prevailing over equatorial Pacific Ocean and negative IOD conditions over the Indian Ocean. The sea surface temperatures (SSTs) over central and east equatorial Pacific Ocean are showing cooling tendency and the latest global model forecasts indicate that there is an increased possibility of re-emergence of the La Niña conditions during northeast monsoon season. The negative IOD conditions are likely to weaken during the coming months.
- The madden Julian oscillation (MJO) index currently lies in Phase 4 with amplitude more than 1. It will continue in same phase on day 1 of week 1. Thereafter, it will move eastwards and enter into phase 5. It will continue in same phase during the entire forecast period. Hence it will support convective activity over the Bay of Bengal during weeks 1 & 2.

4. Forecast for next two week

Refer Annexure IV

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (30 September to 06 October, 2021) and Week 2 (07-13 October, 2021)

Withdrawal of southwest monsoon

- With westward movement of the Depression over northeast Arabian Sea, away from Indian Coast, Numerical Weather Prediction models consensus indicate, establishment of westerly & northwesterly winds at lower & middle tropospheric levels over northwest India and development of lower level anti-cyclonic circulation over the region from 5th Oct 2021. Under its influence, drastic reduction in moisture and absence of rainfall over extreme northwestern parts of India is very likely. **Thus conditions are very likely to**

be favourable for commencement of withdrawal of southwest monsoon from some parts of northwest India from around 6th October 2021.

Rainfall for week 1: (30 September to 06 October, 2021)

- The **Depression** over northeast Arabian Sea & adjoining Kutch moved nearly westwards with a speed about 28 kmph during past 03 hours and lay centered at 0830 hours IST of today, the 30th September 2021, over northeast Arabian Sea off Gujarat coast, near Lat. 22.7° N and Long. 68.6° E, about 60 km west-northwest of Devbhoomi Dwarka (Gujarat), 280 km east-southeast of Karachi (Pakistan) and 860 km east-southeast of Chabahar Port (Iran). It is very likely to move west-northwestwards and intensify into Deep Depression over northeast Arabian Sea off north Gujarat coast during next 12 hours. Then it is very likely to move further west-northwestwards and intensify into a Cyclonic Storm during the subsequent 24 hours. Thereafter, it is likely to continue to move west-northwestwards close to Pakistan- Makran coasts, moving away from the Indian coast.
- A **Well Marked Low Pressure Area** lies over north Jharkhand & adjoining Bihar and the associated cyclonic circulation extends upto middle tropospheric levels. The system & its remnant are very likely to move over Bihar & adjoining Sub-Himalayan West Bengal Sikkim during next 3-4 days.
- A trough in easterly runs from Southeast Bay of Bengal to south Andhra Pradesh coast at lower tropospheric levels and likely to persists during next 2-3 days..
- Due to above meteorological conditions:
 - ✓ **Under the influence of depression over northeast Arabian Sea off Gujarat coast, heavy to very heavy rainfall** very likely at isolated places over Saurashtra & Kutch on today, the 30th September, 2021.
 - ✓ **Under the influence of Well Marked Low Pressure Area** over north Jharkhand & adjoining Bihar and its remnant, fairly widespread to widespread rainfall with **isolated heavy falls** is very likely over Bihar and Sub-Himalayan West Bengal & Sikkim till 03rd October and over Jharkhand till 1st October and decrease in intensity thereafter; **very heavy rainfall** also likely over Gangetic West Bengal on 30th September.; over Bihar on 02nd October; over Sub-Himalayan West Bengal & Sikkim on 02nd & 03rd

October; **extremely heavy falls** (> 20 cm) very likely at isolated places over Jharkhand 30th September and over Bihar on 30th September & 01st October 2021.

- ✓ Due to easterly trough rainfall activity is very likely to increase over south Peninsular India from 01st to 06th October with fairly widespread to widespread rainfall with **isolated heavy falls** over Tamilnadu, Kerala, Coastal & South Interior Karnataka during 01st to 06th October. **Isolated very heavy falls** also likely over Tamilnadu during 02nd to 05th October, 2021.
- ✓ Light to moderate isolated/scattered rainfall is likely over remaining parts of the country during most days of the week outside parts of northwest India, where weather is likely to be dry during 2nd half of the week.
- **Overall rainfall activity very likely to be above normal likely over the country.**

Rainfall for week 2: (07 to 13 October, 2021)

- Southwest monsoon likely to withdraw further from some more parts of northwest India and some parts of central India.
- A Low Pressure are is likely to form over southwest Bay of Bengal in beginning of week 2.
- Scattered to fairly widespread rainfall activity very likely over south Peninsular & adjoining central India and east & northeast India during most of the days.
- Overall above normal rainfall activity likely over central & east India and normal to above normal over northwest, south Peninsular and northeast India.

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

Most of the numerical models including IMD GFS, NCEP-GFS, GEFS, NCUM, NEPS, ECMWF and MME (CFSV₂) are indicating that the depression over northeast Arabian Sea would move west-northwestwards and intensify into a cyclonic storm. However, there is large variation among various models w.r.t. peak intensity of the system and crossing point. GFS group of models are indicating that the system would skirt Pakistan-Makran coasts and weaken over Gulf of Oman while moving west-northwestwards around 5th October. However, ECMWF is indicating that the system would cross Pakistan-Iran coasts while moving west-northwestwards and thereafter, remerge into northwest Arabian Sea close to Gulf of Oman and weaken there. NCUM and NEPS are also indicating similar trend. Considering the current environmental conditions, favourable sea conditions, low vertical wind shear and sufficient warm moist air around the system area will support further

intensification of the system over northeast Arabian Sea during next 24 hours.

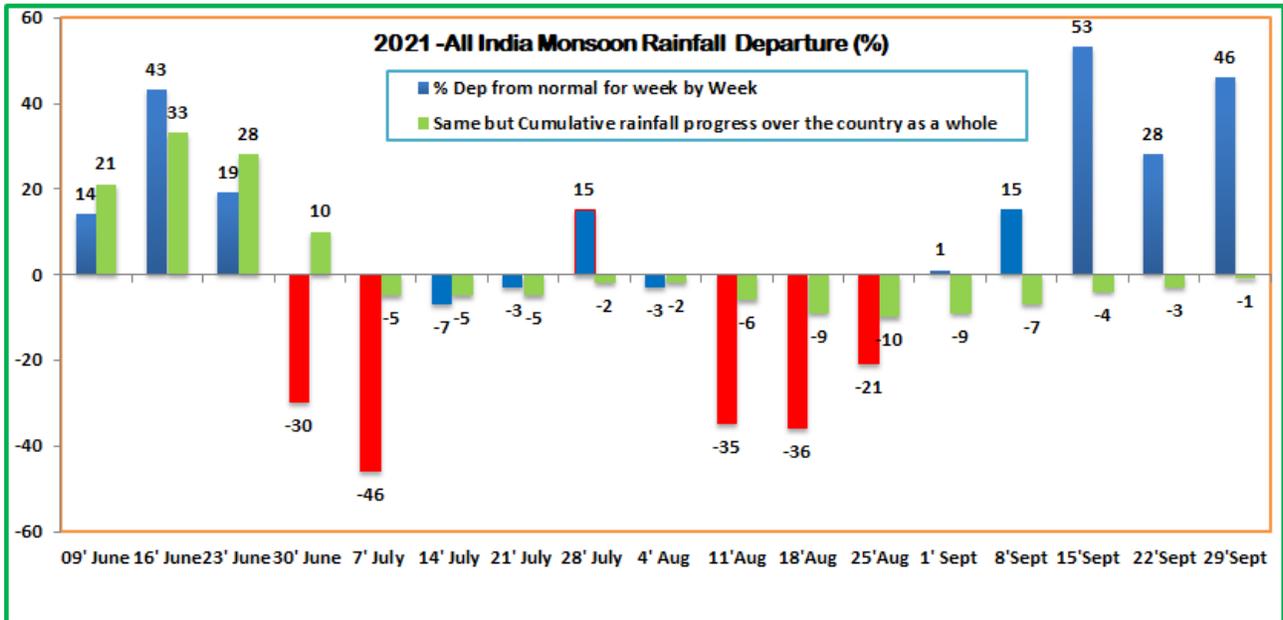
Models are also indicating development of a fresh low pressure area (LPA) during first half of week 2 over westcentral & adjoining southwest Bay of Bengal and another LPA over eastcentral Bay of Bengal & adjoining north Andaman Sea during later part of week 2. Both the systems are expected to move slightly northwestwards without any significant intensification.

Next weekly update will be issued on next Thursday i.e. 7Oct 2021(last date of this monsoon season for rainfall account)

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)

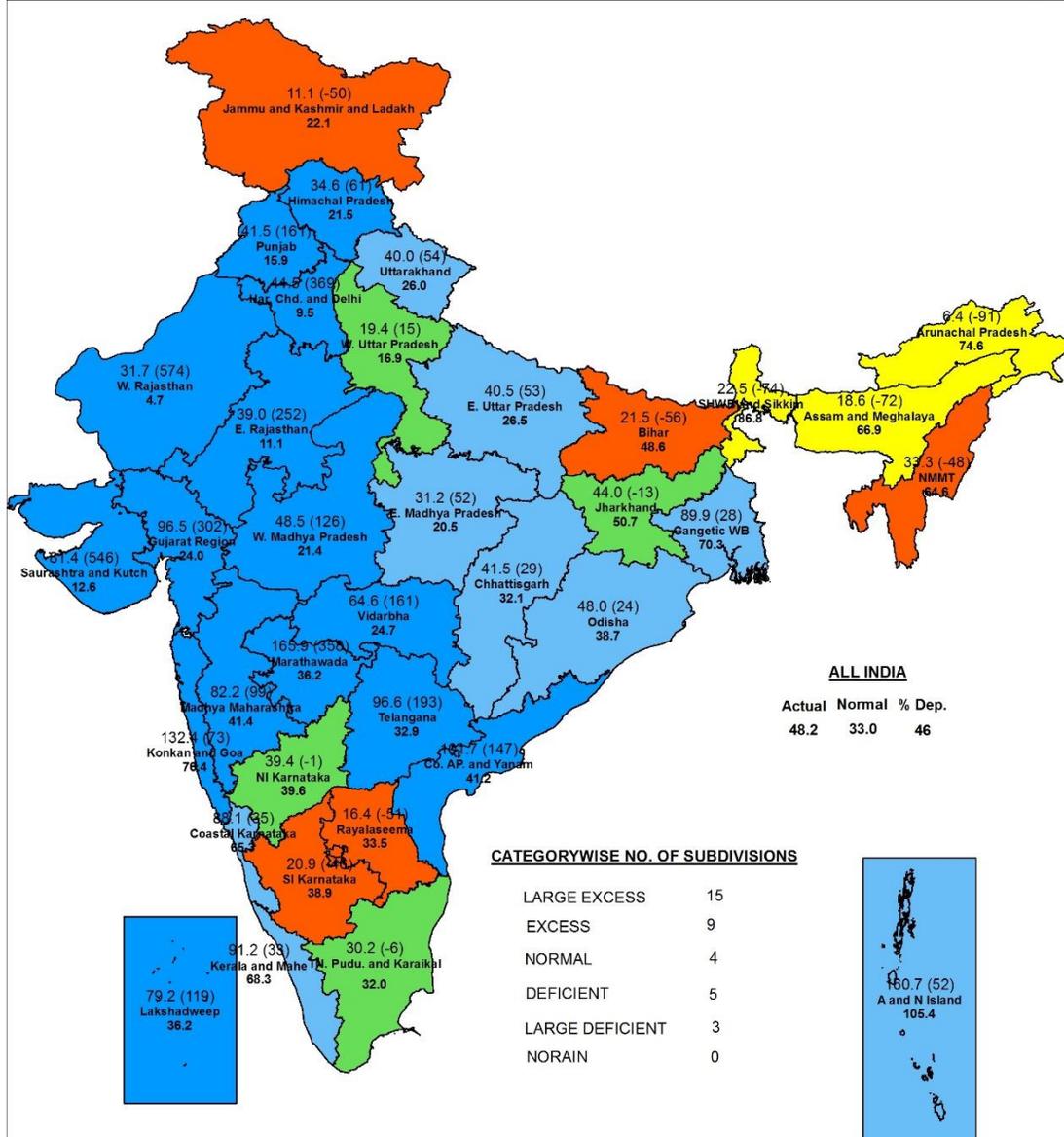
Probabilistic Forecast	
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75





SUBDIVISION RAINFALL MAP

Week : 23-09-2021 To 29-09-2021



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 :

- 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.

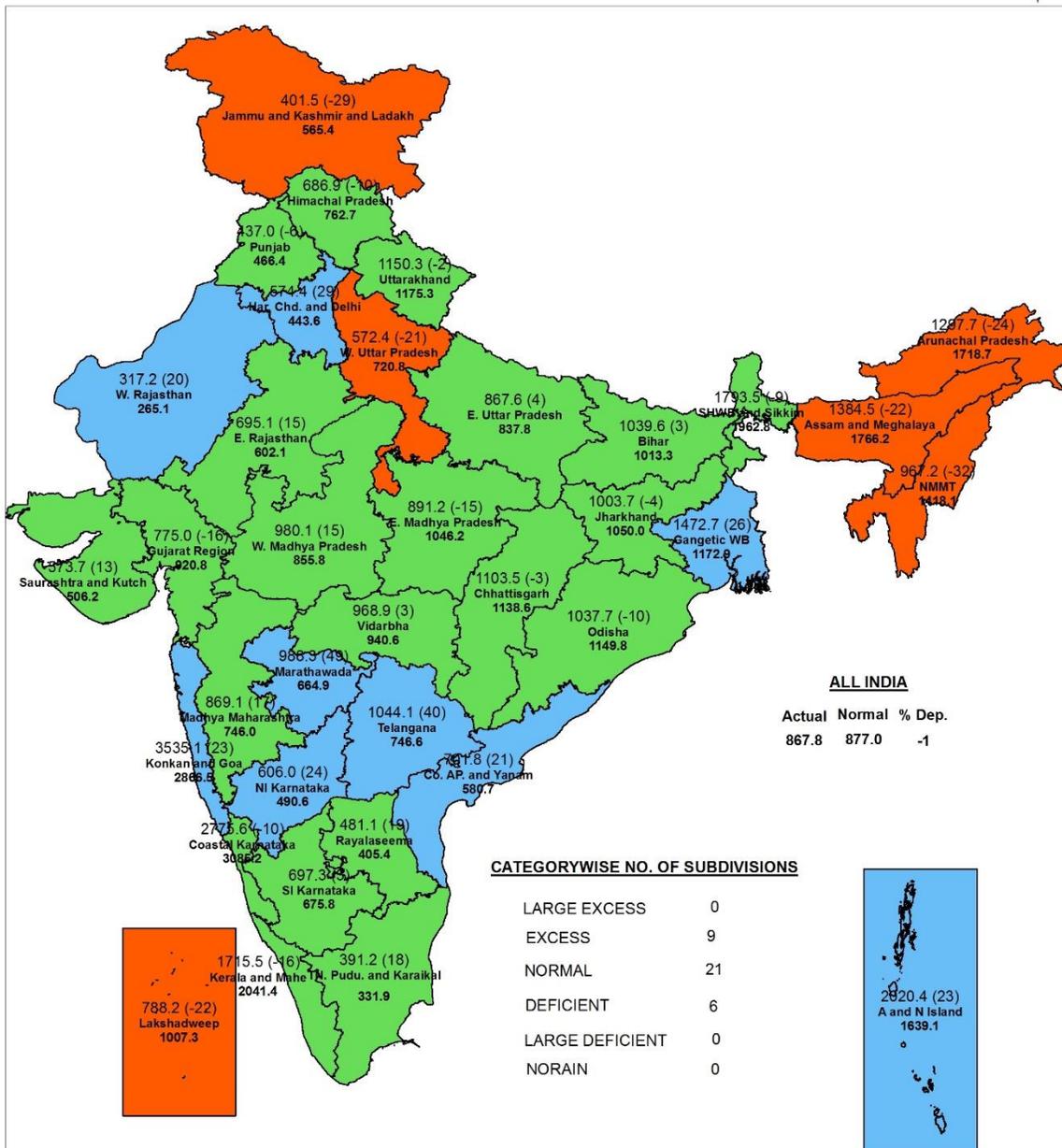


भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

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

SUBDIVISION RAINFALL MAP

Period : 01-06-2021 To 29-09-2021



Legend

Large Excess [80% 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 :

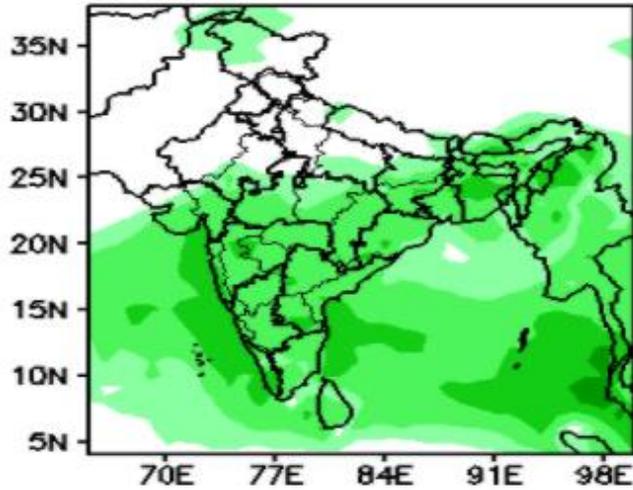
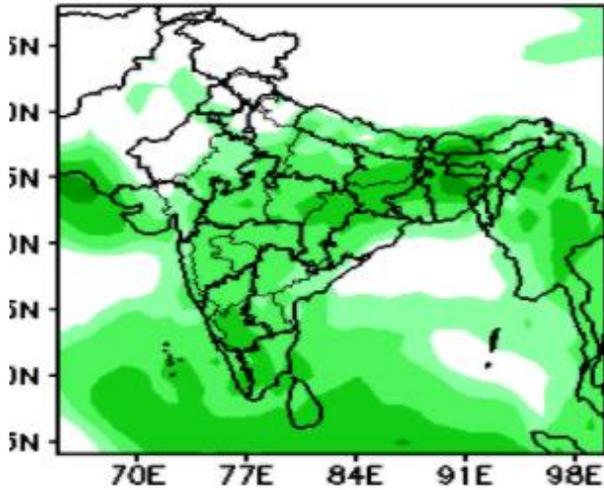
- a) Rainfall figures are based on operation data.
- b) Small figures indicate actual rainfall (mm), while bold figures indicate Normal rainfall (mm).
- c) Percentage Departures of rainfall are shown in brackets.

Annex IV

Forecast Rainfall (mm/day)

(Week1: 01Oct-07Oct)

(Week2: 08Oct-14Oct)



Forecast Rainfall Anomaly (mm/day)

(Week1: 01Oct-07Oct)

(Week2: 08Oct-14Oct)

