



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

Press: Dated: 7 July, 2022

**Subject: Current Weather Status and Extended range Forecast for next two weeks
(7-20 July 2022)**

1. Salient Observed Features for week ending on 6 July 2022

- The Southwest Monsoon has covered the entire country on 02nd July 2022, against the normal date of 08th July (6 days before the normal date of covering the entire India)
- Parts of coastal areas of Gujarat and Coastal and Ghats areas of Maharashtra(including Mumbai), Goa and Karnataka experiences Season's 1st spell of very heavy rainfall to isolated extremely heavy rainfall spell during 4 to 7 July, severely impacting the normal lives in the region. This was due to active monsoon conditions developed in association with formation of low pressure system over north Odisha and then its fast west-ward movement towards South Pakistan during 4-7 July 2022. There were also Convergence of strong monsoon westerlies and southwesterly along the west coast which had also caused this rain spell.
- Many parts of central India and south Rajasthan, remaining parts of Maharashtra and had also received isolated heavy /very heavy rainfall during 2-7 July due to establishment of the monsoon trough along south of the normal position which was also active during the period.
- Rainfall during the week over Northeast India rainfall has been reduced significantly and it received deficient rainfall in this week and this is the 1st week of this monsoon season of 2022, since 1 June, when the region received reduced rainfall activities during the week and it was due to absence of any winds and moisture support from Bay of Bengal to that region.
- **Analysis of Weekly overall Rainfall distribution during the current week ending on 6 July 2022 and Monsoon Season's Rainfall Scenario (01 June-6 July, 2022) shows rainfall status overly improved significantly:** It shows for the country as a whole, the weekly cumulative All India Rainfall departure till week ending on 6 July 2022, from its long period

average (LPA) was +28 %, with weekly cumulative rainfall over northwest India, central India and South Peninsula as +35%, +49% and +82% and over east and northeast India as -36% while all India Seasonal cumulative rainfall during this year's monsoon Season Rainfall during 01 June till 06 July 2022 is 0% i.e. very closed to the normal. 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		
	30.06.2022 TO 06.07.2022			01.06.2022 TO 06.07.2022		
	Actual	Normal	% Dep	Actual	Normal	% Dep
EAST & NORTH-EAST INDIA	62.4	96.9	-36%	446.5	412.7	8%
NORTH-WEST INDIA	47.5	35.2	35%	106.2	108.1	-2%
CENTRAL INDIA	94.1	63	49%	203.1	224.9	-10%
SOUTH PENINSULA	74.9	41.1	82%	207.8	196	6%
Country as a whole	70.9	55.6	28%	213	213.3	0%

2. Large scale features

➤ Currently, the sea surface temperatures (SSTs) as well as the atmospheric conditions over Equatorial Pacific Ocean indicate La Niña conditions. The latest forecasts from MMCFS and other global models indicate that La Niña conditions are likely to continue during remaining part of the monsoon season. 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. Currently, the SST conditions over Equatorial Indian Ocean are very close to the threshold level for negative Indian Ocean Dipole (IOD) conditions. The latest forecasts from MMCFS and other global models indicate negative IOD conditions are likely to develop during remaining part of the monsoon season.

➤ The Madden Julian Oscillation Index (MJO) currently lies in phase 5 with amplitude more than 1. It would continue in same phase during entire forecast period with amplitude becoming less than 1 from 8th onwards. Hence, MJO phase will support enhancement of convective activity over the Bay of Bengal (BoB) during entire forecast period.

3. Forecast for next two week

Forecast for next two week

Weather systems & associated Precipitation during Week 1 (07 to 13 July, 2022) and Week 2 (14 to 20 July, 2022)

Forecast for week 1 (07 to 13 July, 2022):

- **A Well Marked Low Pressure Area over south Pakistan with the associated cyclonic circulation extending upto mid tropospheric levels tilting southwestwards with height. It is very likely to move westwards during next 24 hours.**
- **The monsoon trough is active and south of its normal position. The western end of the monsoon trough is likely to shift northwards during 2nd half of the week.**
- **An east-west shear zone runs roughly along 19°N in mid tropospheric levels tilting southwards with height across North Peninsular India.**
- **The off-shore trough at mean sea level runs from south Maharashtra coast to north Kerala coast.**
- **A cyclonic circulation lies over northwest & adjoining westcentral Bay of Bengal off south Odisha-north Andhra Pradesh Coasts and extends upto upper tropospheric levels tilting southwestwards with height.**
- **Under the influence of above systems:**
 - ✓ Fairly widespread/widespread rainfall & thunderstorm/lightning with isolated heavy rainfall very likely over Odisha, Chhattisgarh, Madhya Pradesh, Maharashtra, Gujarat state, Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Telangana and Karnataka during the week.
 - Isolated very heavy rainfall very likely over Gujarat region during 08th-11th; Saurashtra & Kutch during 07th-09th; Madhya Maharashtra on 10th & 11th; Coastal Karnataka on 09th; Coastal Andhra Pradesh & Yanam on 07th, 08th & 11th; Telangana on 07th, 08th & 11th; South Interior Karnataka on 07th & 08th; West Madhya Pradesh on 07th, 08th & 10th; East Madhya Pradesh on 11th; Vidarbha & Chhattisgarh on 07th & 11th July, 2022.
 - Scattered heavy to very heavy rainfall with isolated extremely heavy rainfall also likely over Konkan & Goa during the week and isolated extremely heavy rainfall likely over Telangana on 09th; Coastal Karnataka on 07th & 08th; Gujarat Region on 07th; Saurashtra & Kutch on 10th & 11th and over ghat areas of Madhya Maharashtra during 07th-09th July, 2022.
 - ✓ Isolated/scattered rainfall activity very likely over Tamil Nadu, Puducherry & Karaikal during the week with isolated heavy to very heavy rainfall also likely over Tamil Nadu, Puducherry & Karaikal on 07th and heavy rainfall on 08th July, 2022.

- ✓ Fairly widespread/widespread rainfall & isolated thunderstorm/lightning with:
 - Isolated heavy rainfall very likely over Jammu & Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad on 08th & 09th and over Himachal Pradesh & Uttarakhand on 07th & 10th July, 2022.
 - Isolated heavy to very heavy rainfall also likely over Himachal Pradesh & Uttarakhand on 08th & 09th July, 2022. Isolated extremely heavy falls also very likely over Uttarakhand on 09th July, 2022.
- ✓ Isolated/scattered rainfall activity with isolated thunderstorm/lightning very likely over East Uttar Pradesh during the week and over West Uttar Pradesh, Punjab, Haryana, Chandigarh-Delhi and Rajasthan on 07th & 08th and increase thereafter becoming fairly widespread to widespread rainfall activity likely over the region during 9th-10th July, 2022:
 - Isolated heavy rainfall likely over Punjab & Haryana, Chandigarh on 07th, 08th & 10th; West Uttar Pradesh during 08th-10th; Rajasthan on 07th, 08th & 10th July, 2022.
 - Isolated heavy to very heavy rainfall also likely over north Punjab & north Haryana, Chandigarh and south Rajasthan on 09th July, 2022.
- ✓ There are high chances of extremely heavy rainfall spell likely over south Odisha and south Chhattisgarh, and north Coastal Andhra Pradesh during 12-13 July **due to likely formation of a low/well marked pressure area over Odisha coast during the same period.**
- ✓ Isolated to scattered rainfall with thunderstorm likely to occur over rest parts of the country during most days of the week.

Rainfall for week 2 (14 to 20 July, 2022):

- **The monsoon trough is very likely to be active and south of its normal position during most days of the week. The main supporting system of continuity of active monsoon conditions in week 2 is** “The remnant of well-marked low pressure system which likely to form over Odisha coast around 12-13 July, is likely to move west wards and emerge into northeast Arabian Sea in the middle of week 2 and intensify marginally into a low pressure area/well marked low pressure area over the same areas
- **An east-west shear zone likely to persist across North Peninsular India during most days of the week.**
- **As a result** active monsoon conditions likely over Central parts of the country and over west coast, Gujarat with fairly widespread to widespread rainfall and **isolated heavy to very heavy falls** likely during most days of the week. Isolated extremely heavy also likely over Gujarat region and over west coast and central India during 14-16 July.
- **Overall, rainfall activity is likely to be above normal over central parts of the country; below normal over northeast & adjoining east India and south Peninsular India; and normal to above normal over rest parts of the country.**

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

The guidance from various deterministic & ensemble numerical models including IMD GFS, NCEP

GFS, ECMWF, NCUM, NEPS, GEFS and IMD MME CFS(V2) etc. indicate that the existing cyclonic circulation over northwest & adjoining westcentral BoB would move west-northwestwards as a cyclonic circulation or a low pressure area without any significant intensification. Models are also indicating likely formation of another cyclonic circulation over central parts of BoB with likely formation of low pressure area/depression over northwest BoB in the later part of week 1. Further, it is also indicated that the remnant cyclonic circulation of this LPA/depression would emerge into northeast AS and move west-northwestwards with marginal intensification into a WML. The genesis potential parameter index indicates a potential zone of cyclogenesis over north AS on 7th and another over northwest BoB off Odisha coast on 9th. It also indicates another potential zone for cyclogenesis over central parts of north BoB on 12th moving towards northwest BoB on 13th. ECMWF EPS indicates likely formation of depression during later part of week 1 over northwest BoB off Odisha coast and likely emergence of it's remnant into northeast AS during first half of week 2 with very low probability of it's intensification into depression. NCEP GFS also indicates likely Issued on 07.07.2022 Week1: 08.07.2022-14.07.2022 Week2: 15.07.2022-21.07.2022 formation of a cyclonic circulation/low pressure area over northwest BoB off Odisha coast at the end of week 2. Hence, considering the model guidance and environmental features, following inferences are drawn:

Considering the model guidance and environmental features, following inferences are drawn:

- i) The existing cyclonic circulation over northwest & adjoining westcentral BoB would move westnorthwestwards during next 2-3 days as a cyclonic circulation or a low pressure area with no further intensification
- ii) A fresh cyclonic circulation is likely to form over central parts of BoB with gradual west-northwestwards movement and intensification into a low pressure area/depression over northwest BoB off Odisha coast during later part of week 1 with low probability for further intensification into a depression. The remnant of this system is likely to emerge into northeast AS in the middle of week 2 and intensify marginally into a low pressure area/well marked low pressure area over northwest AS.

For details Refer:

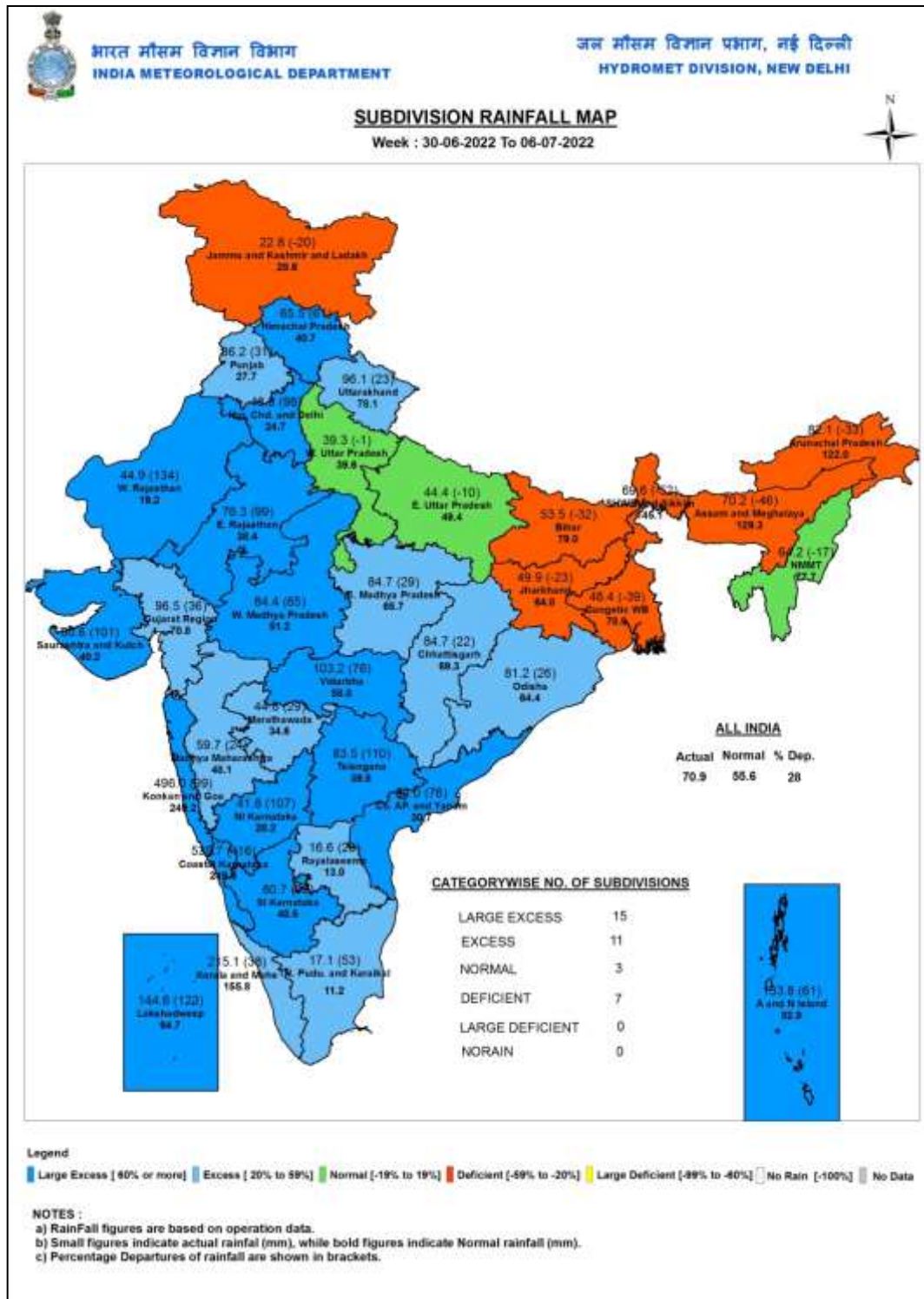
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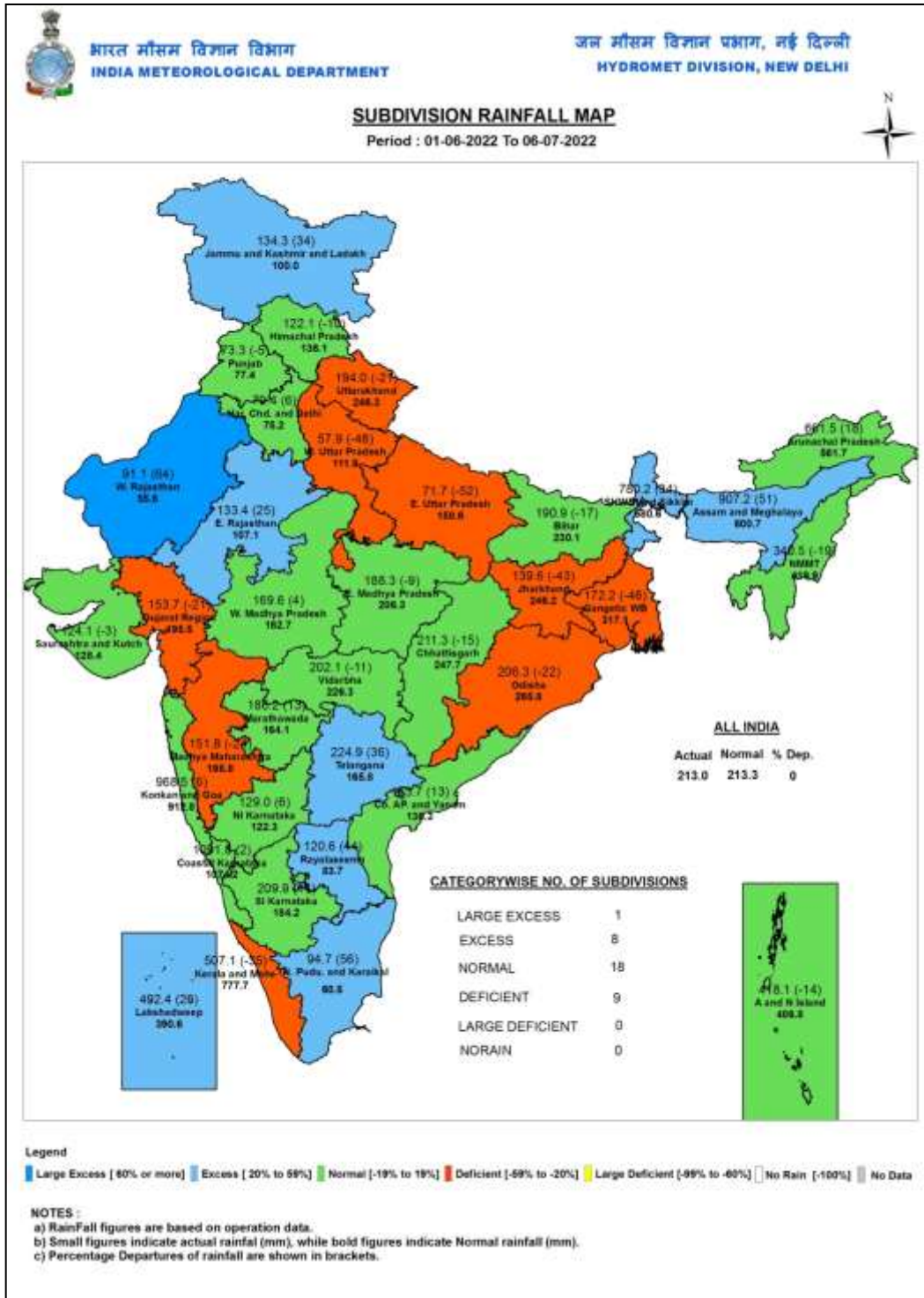
Next weekly update will be issued on next Thursday i.e. 14 July 2022

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

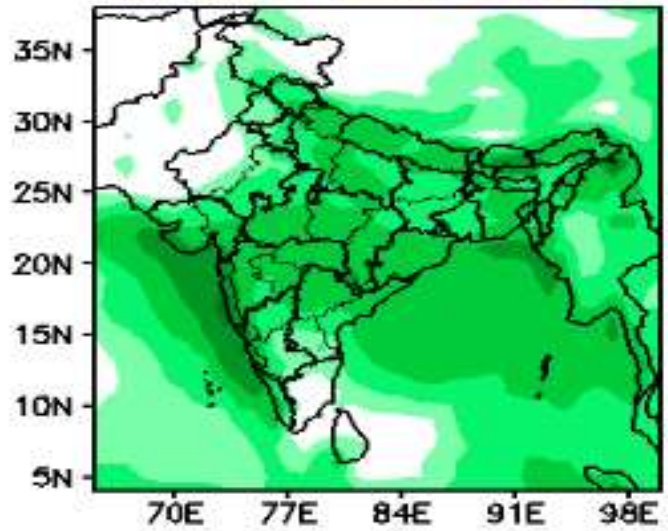
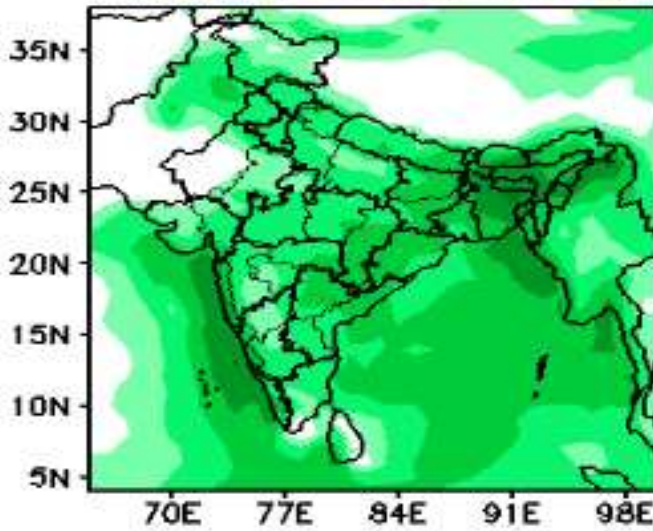




Forecast Rainfall (mm/day)

(Week1: 08Jul-14Jul)

(Week2: 15Jul-21Jul)



Forecast Rainfall Anomaly (mm/day)

(Week1: 08Jul-14Jul)

(Week2: 15Jul-21Jul)

