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Report Name: India's 2022 Southwest Monsoon Update - July 2022

Country: India

Post: Mumbai

Report Category: Agricultural Situation, Climate Change/Global Warming/Food Security, Cotton and Products, Grain and Feed, Oilseeds and Products

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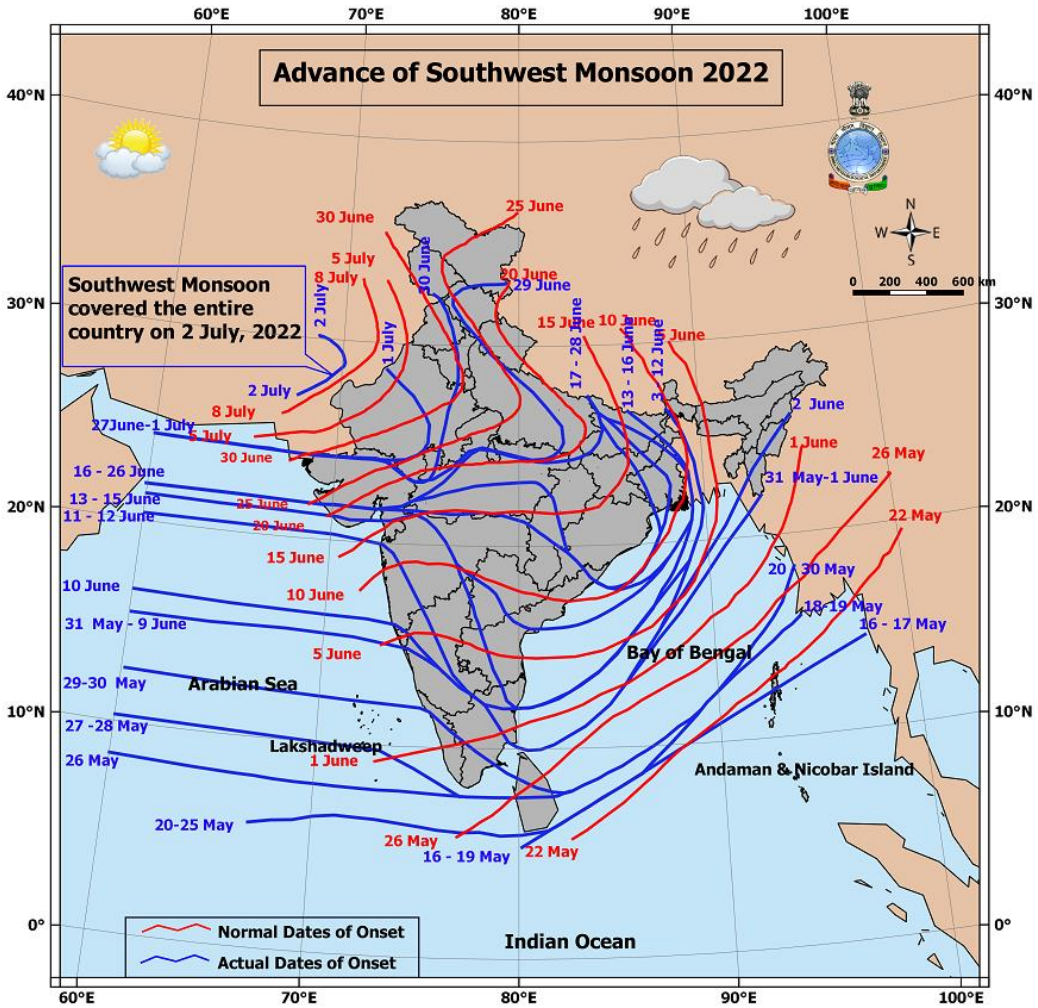
Report Highlights:

Erratic rainfall during the 2022 southwest monsoon to date has led to a lower kharif 2022 planting campaign across the major crops. The cumulative rainfall for the previous 2021 southwest monsoon (as of July 31, 2021), was eight percent above normal. The kharif 2022 season planting is progressing slowly as erratic rains have led to two percent slower pace of planting than last year, and almost 24 percent slower than normal five-year average. On August 1, the Indian Meteorological Department (IMD) issued its Long-Range Forecast for rainfall during the second half (August-September) of the 2022 southwest monsoon. The rainfall over the country during the second half of the season is likely to be normal, between 94 to 106 percent of the long-period average (LPA).

DISCLAIMER: The information contained in this report was retrieved from the Ministry of Earth Sciences/Indian Meteorological Department's (IMD) website https://mausam.imd.gov.in. The Foreign Agricultural Service (FAS) Office of Agricultural Affairs at the U.S. Consulate General in Mumbai, USDA, and/or the U.S. government make no claim of accuracy or authenticity. The Government of India has not officially endorsed this report. [Note: Use Google Chrome to access the links that do not open in Internet Explorer. Indian host sites will geo-block site access on a rolling basis].

GENERAL INFORMATION

Slow Start to the 2022 Southwest Monsoon – Despite the timely onset of the 2022 southwest monsoon, the rains in June across the country were eight percent lower than the normal 50-year average. However, the pace of rainfall did pick up, and by July registered 17 percent above normal rains. The slow start to the monsoon led to delays in farmers' planting decisions. The lack of water during early sowing window did affected plantings, which has led to reduced acreage across the 2022 *kharif* crop season. However, the reservoir storage position at this time has improved compared to that of last year.



Background:

Staggered Sowing Progress due to Erratic Monsoon Rains: On July 29, 2022, the Ministry of Agriculture and Farmers Welfare's (MoAFW) issued its "progress report of area coverage under kharif crops," indicating that 2022 kharif crop season's plantings are two percent lower (in area) than last year, but 24 percent lower than the five-year average. Planting of all major crops is similar or marginally higher than last year except area for rice, where planting is 13 percent lower than last year. Major reductions in rice area are seen in the Indian States of West Bengal, Uttar Pradesh, Bihar, Jharkhand, and Telangana.

Rains throughout June were eight percent below normal/deficit across the northwest, central and southern India delaying timely sowing. By July, however, there all three regions witnessed a reversal, experiencing crop damaging excessive rains. Farmers found themselves forced to resow with contingent crops such as sesame, pigeon pea, sunflower, pearl millet, fodder crops, and castor beans especially in western and central India.

Table 1. India, Kharif 2022 Sown Area (in million hectares)

Crop	Area Sown 2022 (July 29, 2022)	Area Sown 2021 (July 29, 2021)	Normal Area July 29**	Y-o-Y Change	Change from Normal	Absolute Change
Rice	23.16	26.71	39.71	-13%	-42%	-3.55
Pulses	10.62	10.32	14.02	3%	-24%	0.30
Coarse Cereals	14.22	13.53	18.36	5%	-23%	0.69
Oilseeds	16.43	16.30	18.41	1%	-11%	0.13
Sugarcane	5.45	5.44	4.74	0%	15%	0.01
Jute and Mesta	0.69	0.69	0.71	0%	-3%	0.00
Cotton	11.77	11.17	12.56	5%	-6%	0.60
Total	**82.34**	**84.17**	**108.50**	**-2%**	**-24%**	**-1.83**

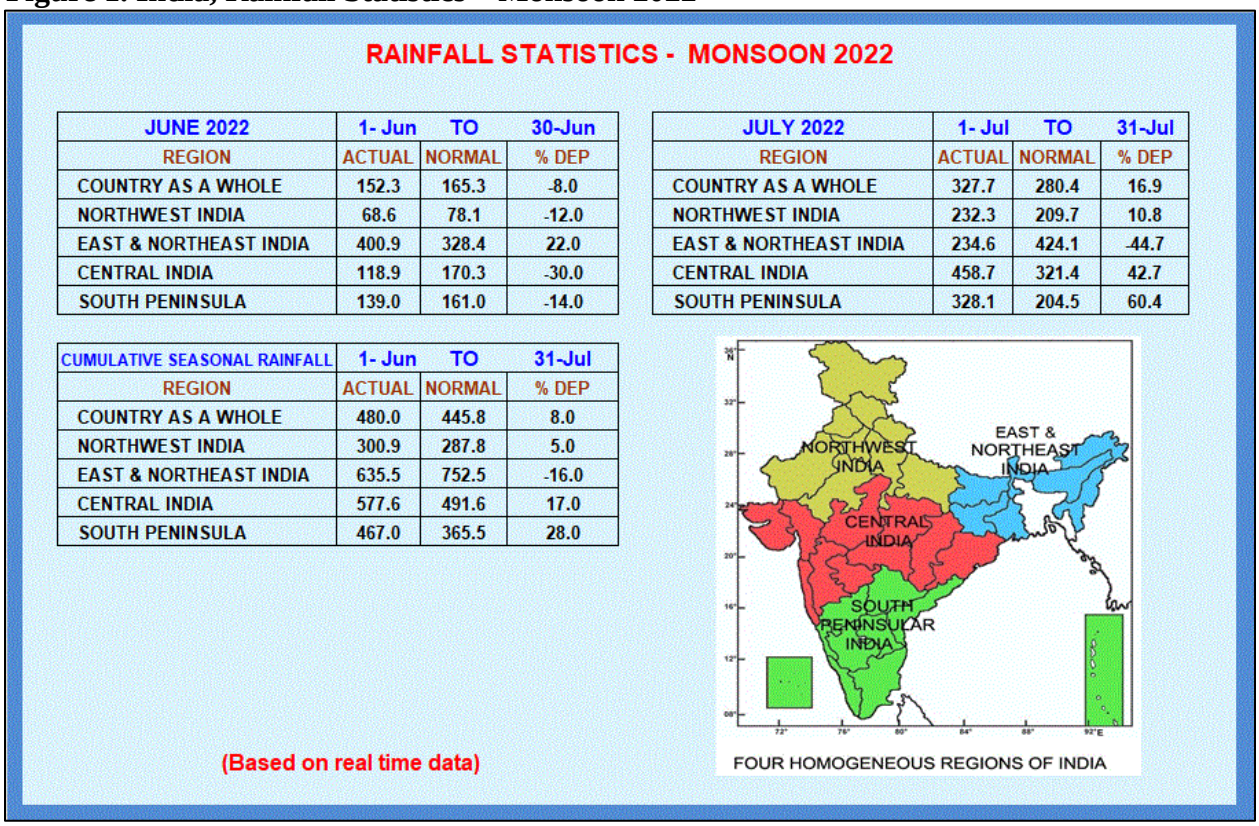
Note: (**) Normal Area is the five-year average of the area from 2017-2021.
Source: Ministry of Agriculture and Famers Welfare.

Table 2. India, Southwest Monsoon Onset Date (actual vs forecast)

Year	Actual Onset Date	Forecast Onset Date	Actual Rainfall (% of LPA)
2013	June 1	June 3	106
2014	June 6	June 5	88
2015	June 5	May 30	86
2016	June 8	June 7	97
2017	May 30	May 30	95
2018	May 29	May 29	91
2019	June 8	June 6	110
2020	June 1	June 5	109
2021	June 3	May 31	99
2022	May 29	May 27	-

Source: Indian Meteorological Department.

Figure 1. India, Rainfall Statistics – Monsoon 2022



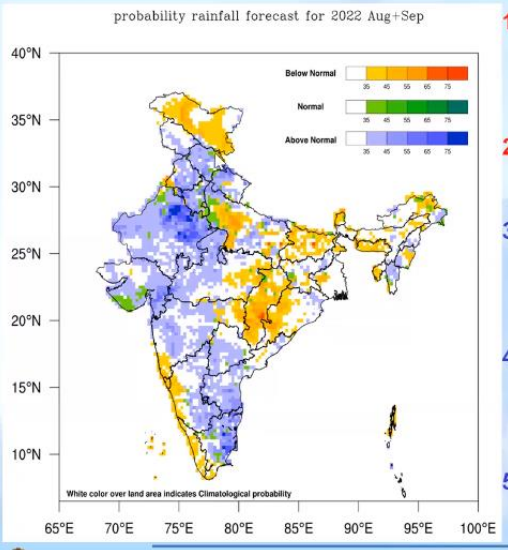
Source: Indian Meteorological Department.

Long Range Forecast for August-September: On August 1, 2022, the Indian Meteorological Department (IMD) issued its Long-Range Forecast for Rainfall for the second half (August–September) of the 2022 Southwest Monsoon. According to the IMD, rainfall over the country during the second half of the season is likely to be normal. Rainfall volume should come in between 94 to 106 percent of the long-period average (LPA). The LPA (1971-2020) for the August-September period is 422.8 millimeters (mm).

The department is forecasting normal August rainfall trending between 94 to 106 percent of the long-period average. The LPA (1971-2020) for August is 254.9 millimeters. According to the forecast, the spatial distribution suggests that normal to above normal rainfall is likely over most parts of the southeast, northwest, and adjoining parts of west central India. Below normal is expected over west coast and areas of east central, east, and northeast India. The seasonal (June-September) rainfall over the country overall is likely to be normal coming in at 94 -106 percent of LPA.

Highlights of the IMD presentation dated August 1, 2022, are below for reference.

Probabilistic Forecast for Rainfall over the Country During Aug+Sep, 2022.



1. The rainfall during August to September, 2022 averaged over the country as a whole is most likely to be normal (96 to 104 % of LPA).
2. LPA of the August to September rainfall over the country as a whole based on data of 1971-2020 is 422.8 mm.
3. Normal to above normal rainfall is very likely to over most parts of south India except west coast, westcentral India and northwest India.
4. Below normal rainfall is likely over many parts of west coast and some parts of eastcentral, east & northeast India.
5. White shaded areas within the land region represent climatological probabilities.

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Probabilistic Forecast of Temperatures over the Country during August 2022

Maximum Temperature:

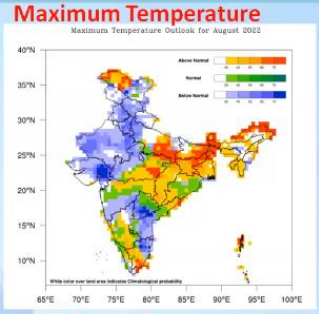
1. Above normal maximum temperatures are likely over many parts of the eastcentral, east and northeast India and some parts of northwest and south interior peninsular India.
2. The normal to below normal maximum temperatures are likely over remaining parts of the country

Minimum Temperature :

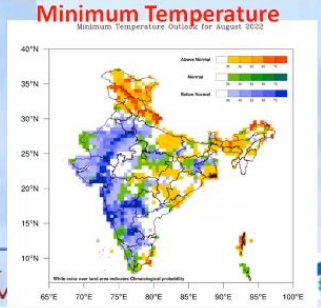
Above normal minimum temperatures are likely over some parts of east central, east, northeast and hilly areas of northwest India.

The normal to below normal minimum temperatures are very likely over many parts of northwest, westcentral and south India

Maximum Temperature



Minimum Temperature



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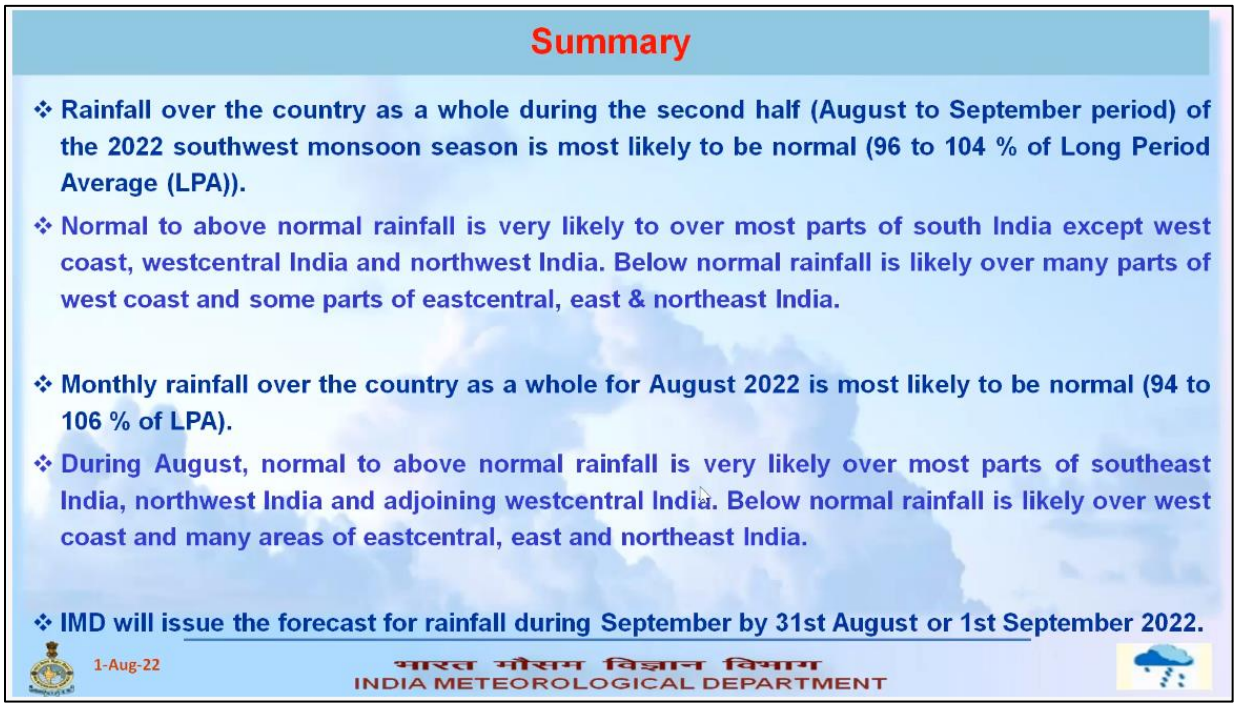


The IMD Revises the 'New Normal' Fifty-Year Average: The New All-India rainfall normal computed based on data of 1971-2020 for the southwest monsoon (June-September) is 868.6 mm. It will replace the earlier normal of 880.6 mm based on data of 1961-2010. There is a decrease of 12 mm in mean rainfall during the southwest monsoon season. According to the IMD, during the southwest monsoon season (June-September), India receives about 868.6 mm rainfall which is about 75 percent of the annual rainfall (1160.1mm). June, July, August, and September contribute 19.1 percent, 32.3 percent, 29.4 percent, and 19.3 percent respectively to the total southwest monsoon seasonal rainfall. Out of the twelve months, July receives maximum rainfall of 280.4 mm followed by August (254.9mm).

Table 3. India, IMD Reported Monthly Rainfall, 1961-2020

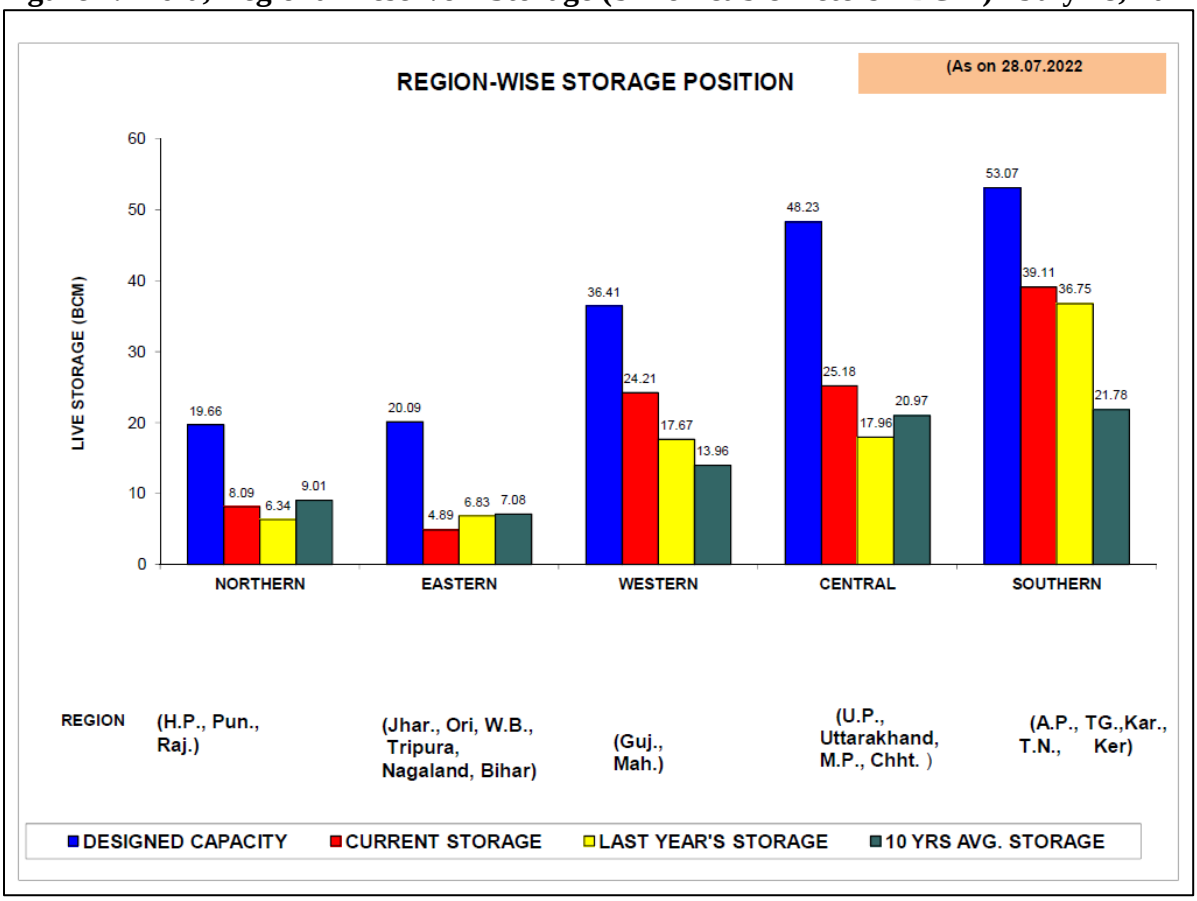
Table 1(a): Monthly Normal Rainfall over India based on 1971-2020 & 1961-2010

	1961-2010			1971-2020		
Months	Rainfall (mm)	% of Annual Rainfall(mm)	% of Seasonal Rainfall (mm)	Rainfall (mm)	% of Annual Rainfall(mm)	% of Seasonal Rainfall (mm)
January	17.3	1.5	42.4	17.1	1.5	43.0
February	23.5	2.0	57.6	22.7	2.0	57.0
March	30.4	2.6	23.1	29.9	2.6	23.0
April	39.3	3.3	29.8	39.3	3.4	30.1
May	62.0	5.3	47.1	61.4	5.3	47.1
June	166.9	14.2	19.0	165.4	14.3	19.1
July	285.4	24.3	32.4	280.4	24.2	32.3
August	258.1	21.9	29.3	254.9	22.0	29.4
September	170.2	14.5	19.3	167.9	14.4	19.3
October	76.0	6.5	61.4	75.4	6.5	62.3
November	30.4	2.6	24.6	29.7	2.6	24.6
December	17.4	1.5	14.1	15.9	1.4	13.2

Source: Indian Meteorological Department.

Reservoir Storage: India's Central Water Commission monitors the live storage status of 130 reservoirs on a weekly basis. The latest reservoir storage bulletin (July 28, 2022) puts live storage in these reservoirs at 101.47 billion cubic meters (BCM) - 57 percent of total live storage capacity. The live storage in these reservoirs last year was 85.54 BCM (48 percent), and the average of the last ten years was 72.79 BCM (41 percent). As such, the current storage position is better than the same period last year, and higher than the average storage level of the last ten years during the same period (figure 2).

Figure 2. India, Regional Reservoir Storage (billion cubic meters - BCM) - July 28, 2022

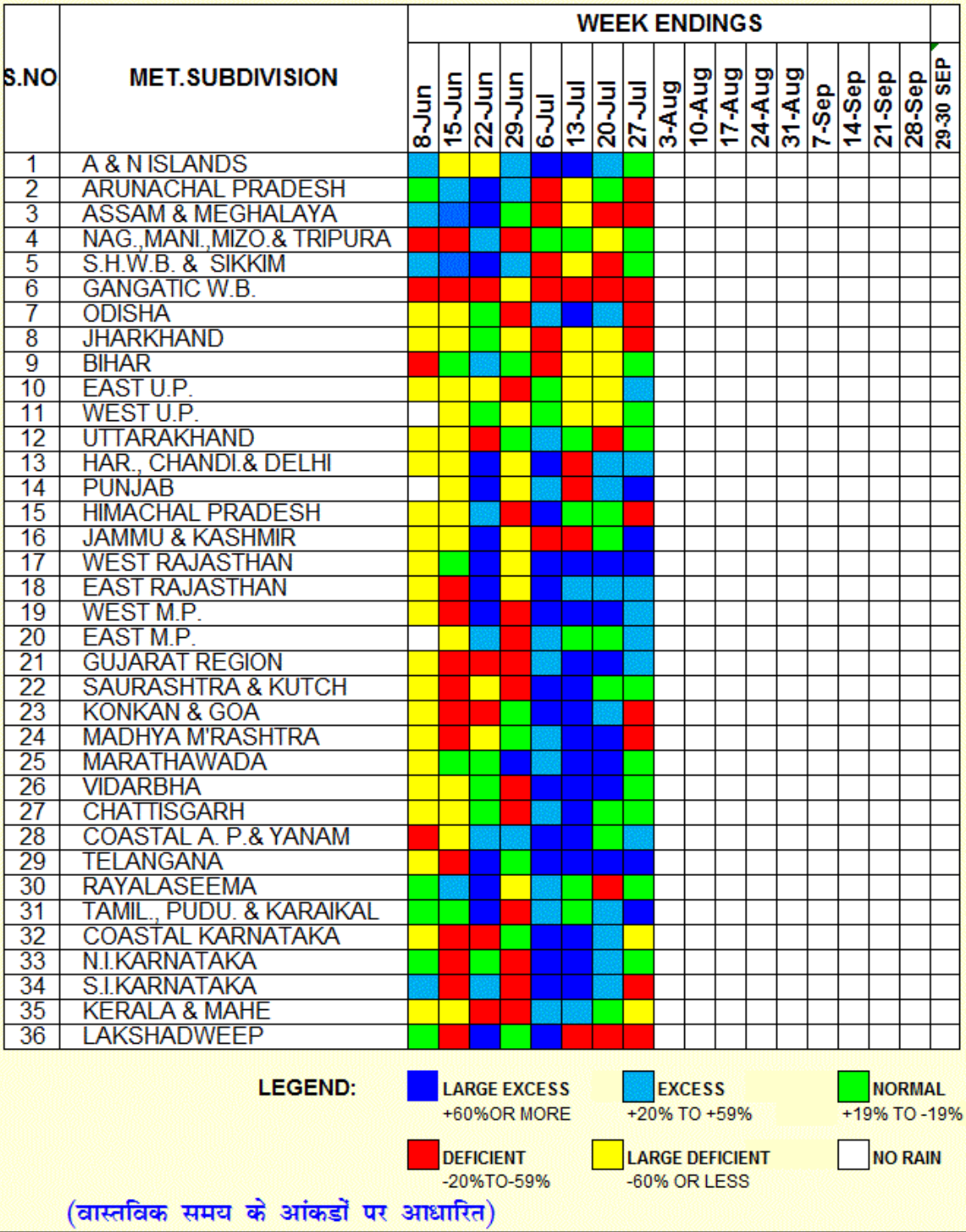


Source: Ministry of Jal Shakti/Central Water Commission.

Those states having better storage volumes than last year for same period include Himachal Pradesh, Punjab, Rajasthan, Nagaland, Gujarat, Maharashtra, Madhya Pradesh, Chhattisgarh, Andhra Pradesh/Telangana (two combined projects in both states), Telangana, Karnataka, and Tamil Nadu.

Out of 130 reservoirs, 115 reservoirs reported more than 80 percent of normal storage levels and 28 reservoirs reported 80 percent or below of normal storage. Out of these 28 reservoirs, 16 reservoirs have storage between 51 percent and 80 percent of normal storage, and 12 reservoirs have stored up to 50 percent of normal storage. According to the Central Water Commission, normal storage represents the average storage level of the last ten years. Close to normal storage represents a shortfall of up to 20 percent of normal. While deficient storage indicates that the shortfall is greater than 20 percent of the normal and up to 60 percent of the normal. Highly deficient means shortfall is more than 60 percent of normal.

PROGRESS OF MONSOON 2022 WEEK BY WEEK



Source: Indian Meteorological Department.

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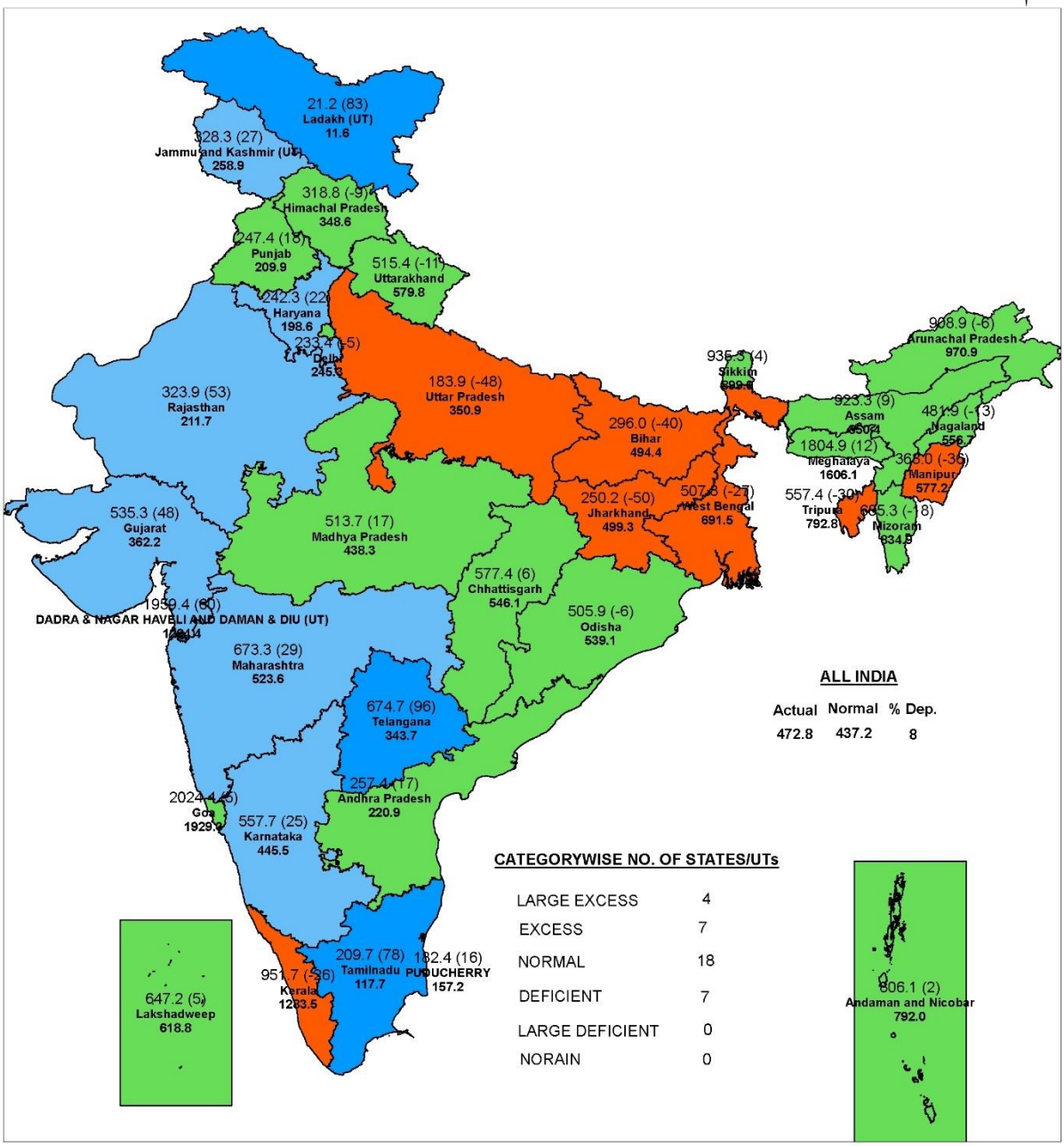
HYDROMET DIVISION, NEW DELHI

STATE RAINFALL MAP

Period : 01-06-2022 To 30-07-2022



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 rainfal (mm), while bold figures indicate Normal rainfall (mm).
c) Percentage Departures of rainfall are shown in brackets.

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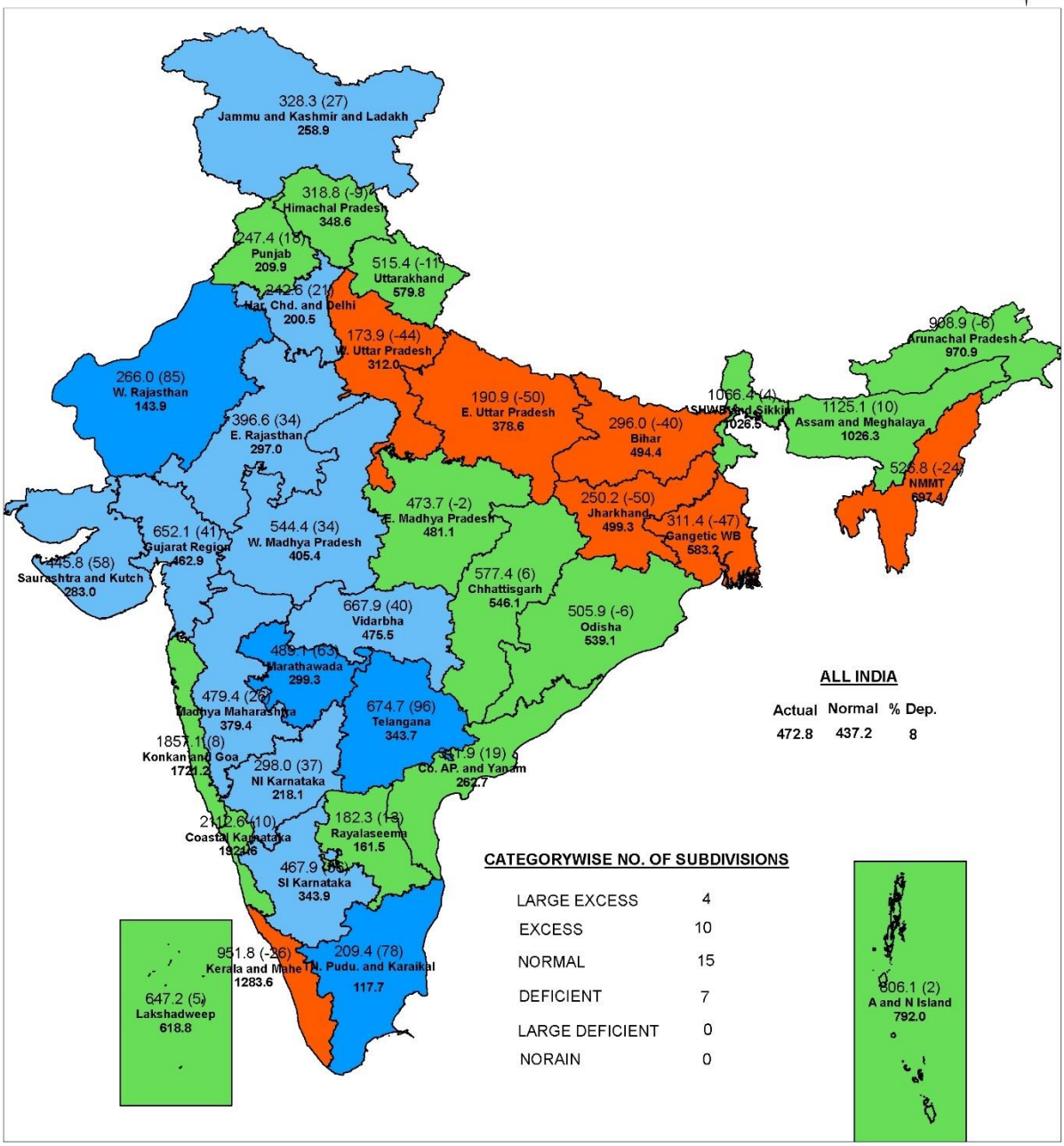
HYDROMET DIVISION, NEW DELHI

SUBDIVISION RAINFALL MAP

Period : 01-06-2022 To 30-07-2022



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HYDROMET DIVISION, NEW DELHI

DISTRICT RAINFALL MAP

Period : 01-06-2022 To 30-07-2022

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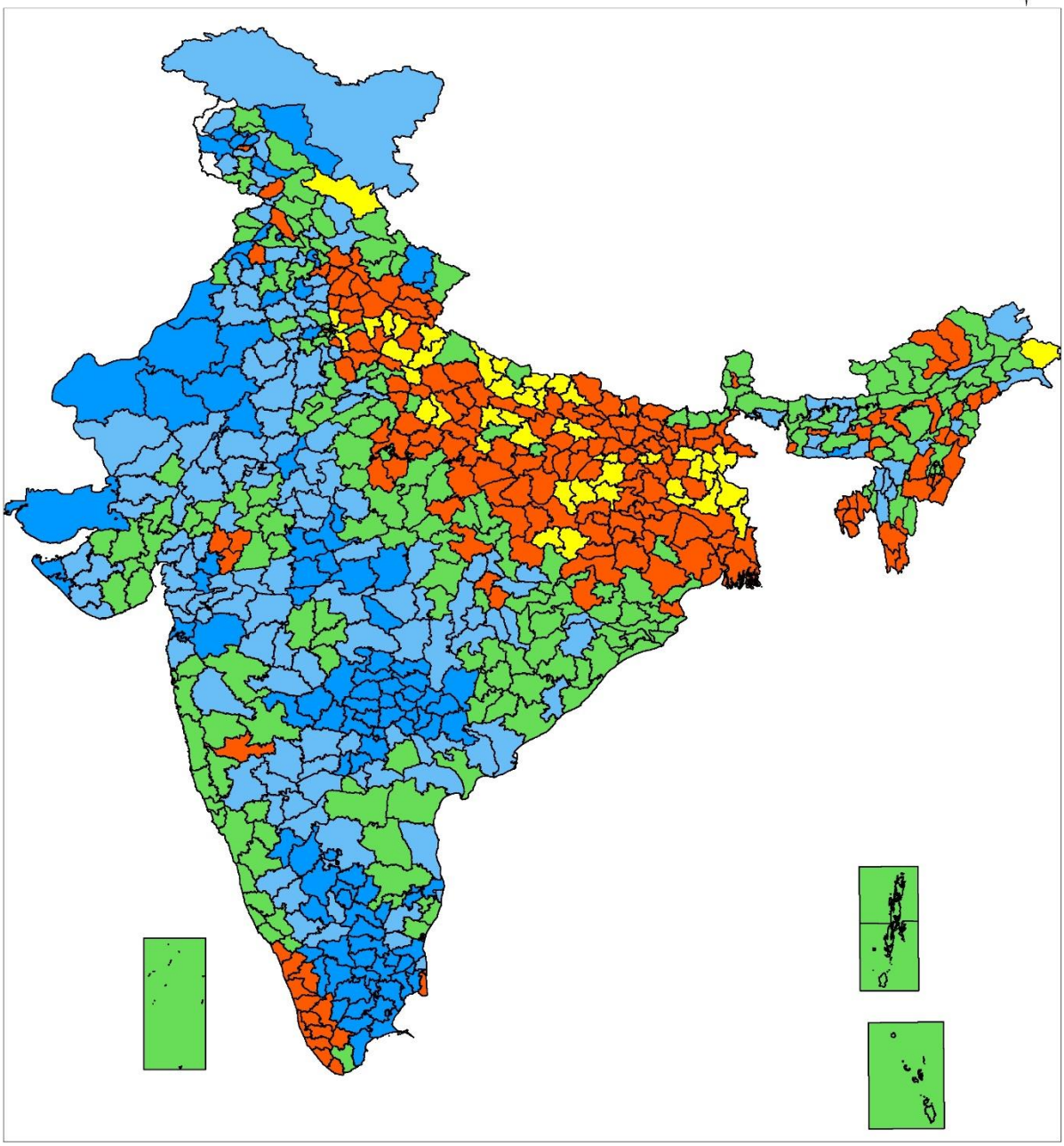

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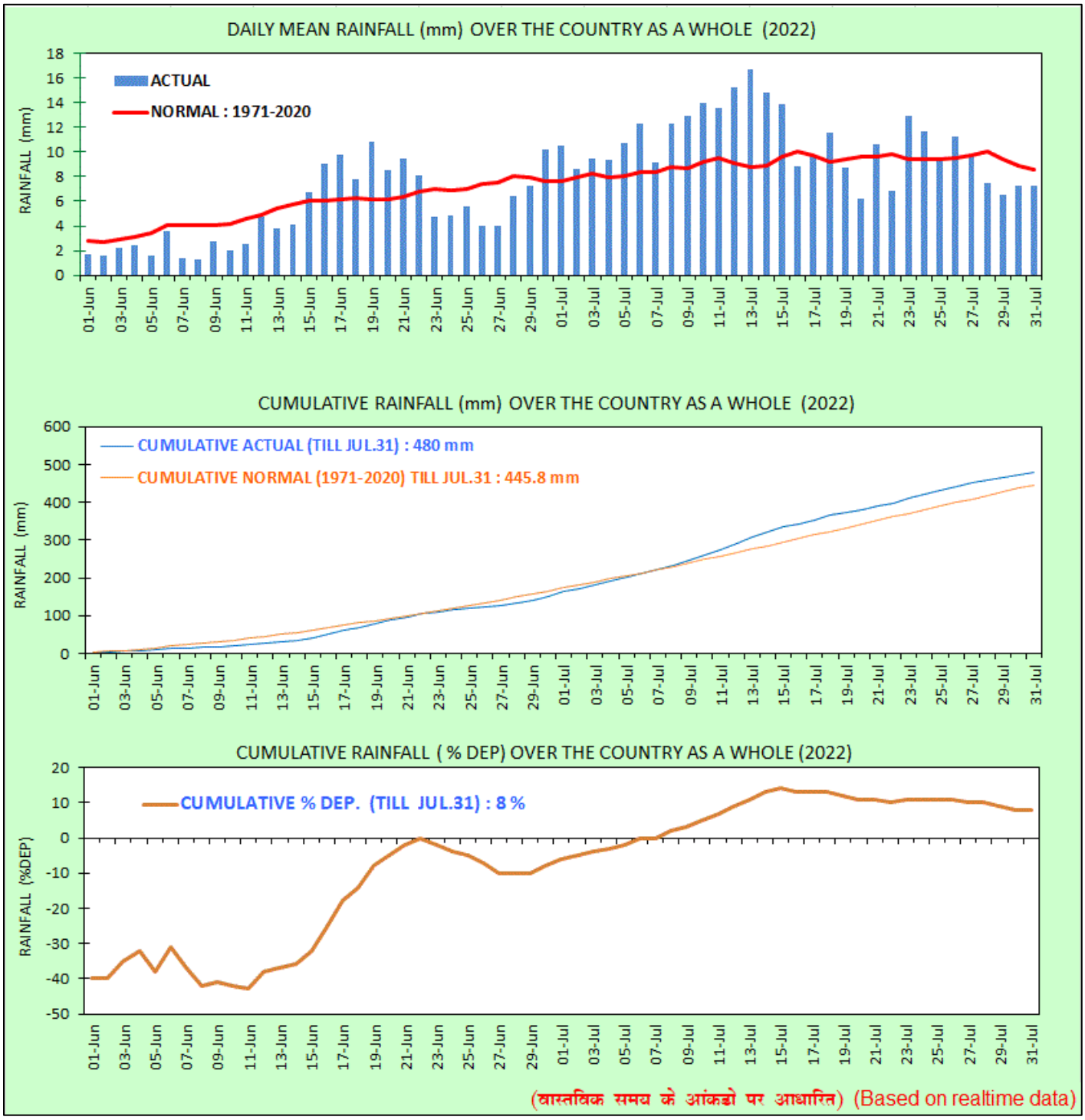

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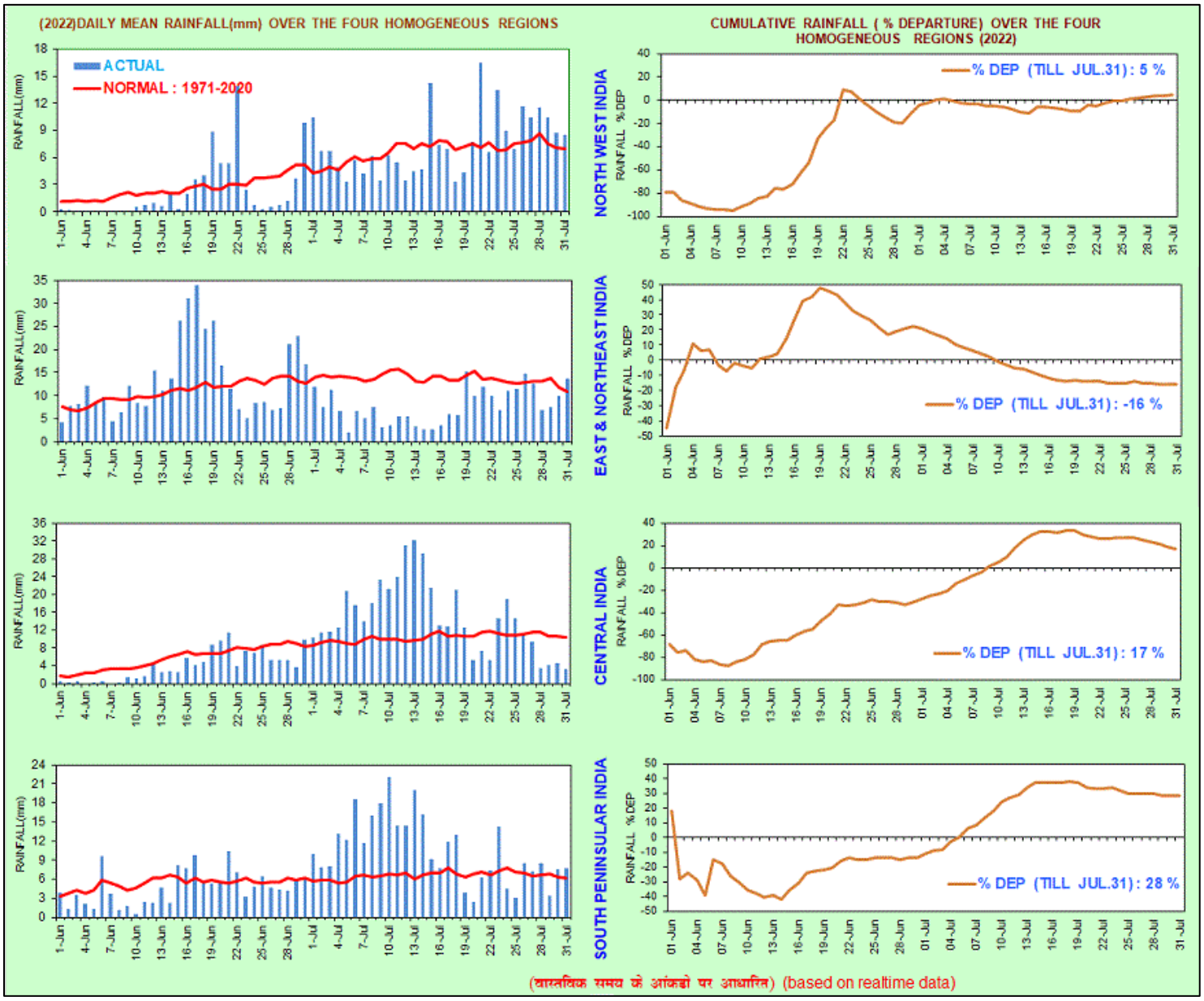

Source: Indian Meteorological Department.

Attachments:

No Attachments.