USDA United States Department of Agriculture
Foreign Agricultural Service

GAIN Global Agricultural Information Network

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Report Name: India Southwest Monsoon Update - July 2021

Country: India

Post: Mumbai

Report Category: Agricultural Situation, Agriculture in the News, Climate Change/Global Warming/Food Security, Cotton and Products, Grain and Feed, Oilseeds and Products, Agriculture in the Economy, Market Development Reports, SP1 - Expand International Marketing Opportunities

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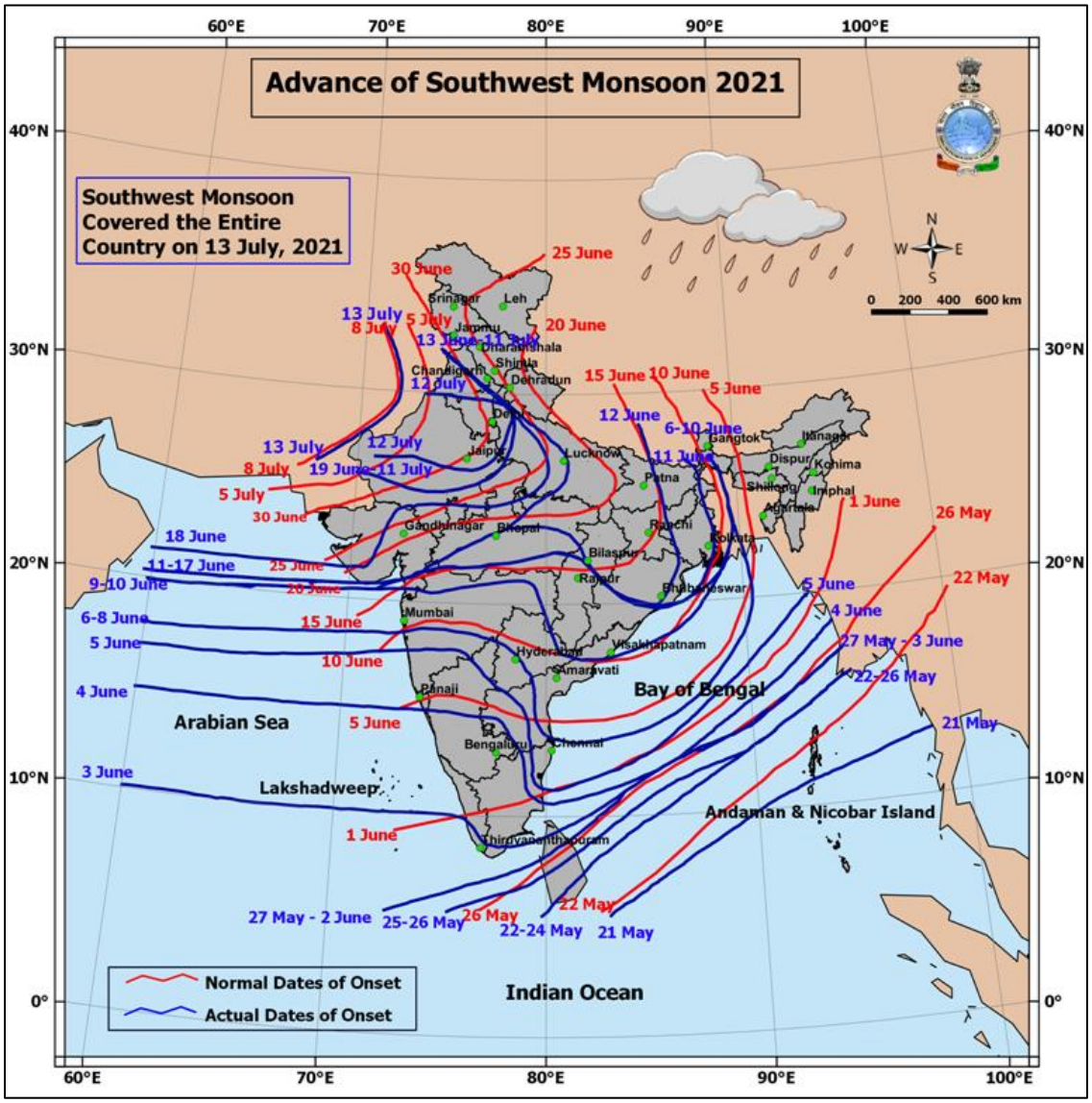
Report Highlights:

On August 2, the Indian Meteorological Department (IMD) issued its Long-Range Forecast for rainfall during the second half (August-September) of the 2021 Southwest Monsoon. The rainfall over the country during the second half of the season is likely to be normal between 95 to 105 percent of the long period average (LPA). The cumulative rainfall for the Southwest Monsoon 2021 as of July 31, 2021, was one percent below normal. Deficit rains during last two weeks of June delayed planting in southern India, which was compensated by excess rains in July. However, overall pace of kharif crop planting is five percent lower than last year, but still one percent above the five-year average.

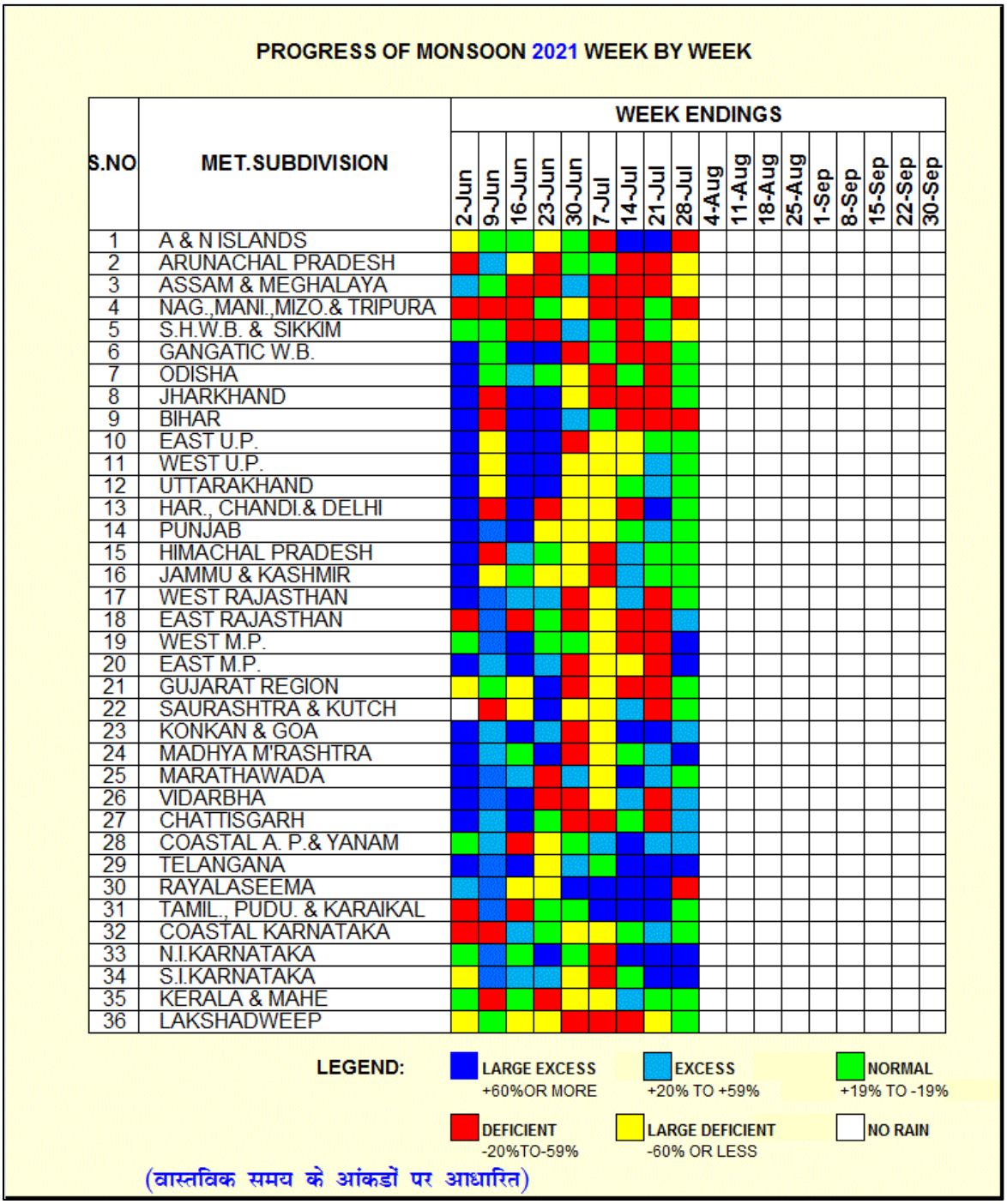
DISCLAIMER: The information contained in this report was retrieved from the Ministry of Earth Sciences/Indian Meteorological Department's (IMD) website https://mausam.imd.gov.in/. The U.S. Consulate General Mumbai – Foreign Agricultural Service (FAS) Office of Agricultural Affairs (OAA), USDA and/or 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 if they do not open in Internet Explorer].

GENERAL INFORMATION

Southwest Monsoon 2021 - Rains, Progress Slows Down: Earlier in June 2021, India received monsoon rainfall volumes 9.6 percent above normal rain levels. However, by July with monsoon rains stalling, rainfall drops 6.7 percent below normal levels in most of the Indian sub-continent.



Source: Indian Meteorological Department (Pune).



Source: Indian Meteorological Department (Pune).

The Indian Meteorological Department (IMD) is reporting precarious drops in rainfall levels this season in comparison to recent years. The rainfall deficit is particularly marked in northwest India (7.2 percent below normal), east and northeast India (25.8 percent below normal), and central India (7.3 percent below normal). Rainfall, however, has been noticeably excessive in the southern part of the Indian peninsula (27 percent above normal).

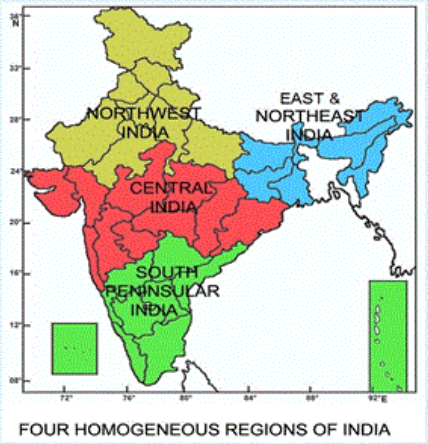
RAINFALL STATISTICS - MONSOON 2021

JUNE 2021	1- Jun	TO	30-Jun
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	182.9	166.9	9.6
NORTHWEST INDIA	85.7	75.3	13.9
EAST & NORTHEAST INDIA	357.3	347.1	-13.0
CENTRAL INDIA	198.8	169.2	17.5
SOUTH PENINSULA	166.2	160.2	3.7

JULY 2021	1- Jul	TO	31-Jul
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	266.1	285.1	-6.7
NORTHWEST INDIA	196.8	211.9	-7.2
EAST & NORTHEAST INDIA	320.3	432.0	-25.8
CENTRAL INDIA	299.1	322.8	-7.3
SOUTH PENINSULA	273.8	215.5	27.0

CUMULATIVE SEASONAL RAINFALL	1- Jun	TO	31-Jul
REGION	ACTUAL	NORMAL	% DEP
COUNTRY AS A WHOLE	449.0	452.2	-1.0
NORTHWEST INDIA	282.5	287.5	-2.0
EAST & NORTHEAST INDIA	677.7	779.1	-13.0
CENTRAL INDIA	497.9	492.0	1.0
SOUTH PENINSULA	440.0	376.9	17.0

(Based on real time data)



FOUR HOMOGENEOUS REGIONS OF INDIA

Source: Indian Meteorological Department (Pune).

The department is, however, now forecasting rainfall to recover to more normal levels during the second half of the current monsoon season. Recovery will help further crop development, as well as recharge groundwater and improve reservoir levels.

Long Range Forecast for August-September: On August 2, 2021, the Indian Meteorological Department issued its Long-Range Forecast for Rainfall for the second half (August–September) of the 2021 Southwest Monsoon. According to the IMD, rainfall over the country during the second half of the season is likely to be more consistent. Rainfall volume should come in between 95 to 105 percent of the long period average (LPA). The LPA (1961-2010) for the August-September period is 428.3 millimeters (mm).

The department is forecasting more normal August rainfall amounts trending to 94 to 106 percent of the long period average. The LPA (1961-2010) for August is 258.1 millimeters. According to the forecast (figure 1), the spatial distribution suggests that below normal to normal rainfall is likely over most parts of the northwest, east, and northeast parts of the country. Normal to above normal rainfall is expected over most parts of peninsular India and adjacent central India. The seasonal (June-September) rainfall over the country overall is likely to be normal coming in at 96 -104 percent of LPA as mentioned in the earlier June 1, 2021, updated forecast.

Figure 1: India, IMD forecast for August-September 2021 Rainfall

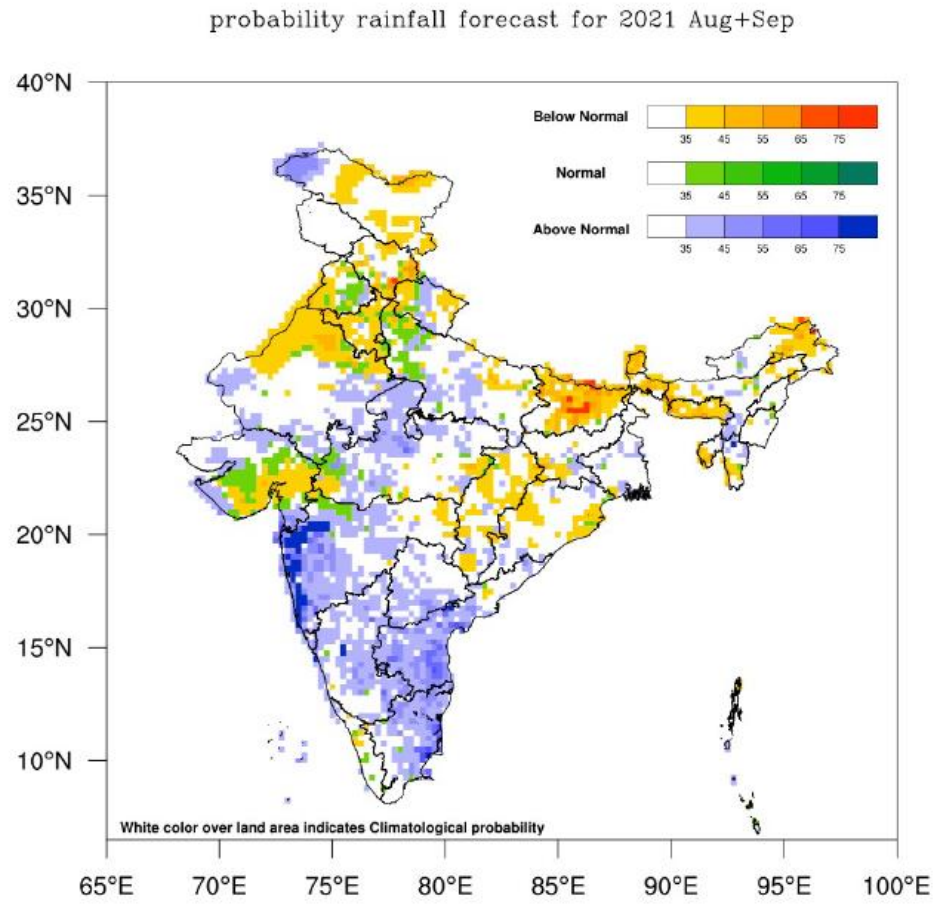


Fig.1. Probability forecast of tercile categories* (below normal, normal and above normal) of rainfall for the second half (August to September) of the 2021 southwest monsoon season over India. The figure illustrates the most likely categories as well as their probabilities. The white shaded areas within the land area represent climatological probabilities. The probabilities were derived using the MME forecast prepared from a group of coupled climate models. (*Tercile categories have equal climatological probabilities, of 33.33% each).

Source: Ministry of Earth Sciences/Indian Meteorological Department.

Weather Outlook: The Indian Meteorological Department is forecasting from August 4 onwards a reduction in the intense rainfall activity over central India and the adjoining plains of northwest India (i.e., western Madhya Pradesh and eastern Rajasthan). Its forecast sees reduced rainfall activity over vast swaths of peninsular India and the adjoining states of Maharashtra and Gujarat through the second week of August. Weak monsoon conditions in the southern part of peninsular India are anticipated through much of the first half of August. More normal monsoon conditions are foreseen prevailing in northern India around the August 9-11 dates.

Sowing Progress: On August 6, 2021, the Ministry of Agriculture and Farmers Welfare's (MoAFW) issued its "All India Weather Summary and Forecast Bulletin," indicating that *kharif* 2021 crop season's

plantings are two percent lower (in area) than last year, but one percent higher than the five-year average.[1] Planting of all the major crops (i.e., rice, oilseeds, cereals, and cotton) are lower than last year due to a two-week delay in monsoon rains in last two weeks of June. However, planted area under rice, oilseeds, sugarcane, and cotton is still higher than the five-year average.

As of August 6, 2021, higher planted area under rice and coarse cereals has been reported in Madhya Pradesh state, while Maharashtra and Gujarat state report higher area under oilseeds. Telangana leads the area under cotton production along with increase planting area under rice. Major reductions in rice area plantings are occurring in Assam and Odisha. Similar reductions are being observed in Rajasthan for pulses and coarse cereals, while Andhra Pradesh is experiencing a drop in oilseeds plantings. Likewise, Gujarat is seeing a drop in cotton plantings, while Maharashtra is cutting back on both cotton and coarse cereals plantings.

Table 1: India, *Kharif* 2021 Sown Area (in million hectares)

Crop	Area Sown in 2021 (August 6)	Area Sown in 2020 (August 6)	Normal Area on August 6**	Y-o-Y Change	Change from Normal	Absolute Change
Rice	31.017	31.888	30.562	-2.73%	1.49%	-0.871
Pulses	11.954	11.736	12.169	1.86%	-1.77%	0.218
Coarse Cereals	15.305	15.629	15.892	-2.07%	-3.69%	-0.324
Oilseeds	17.350	17.971	16.488	-3.46%	5.23%	-0.621
Sugarcane	5.446	5.366	5.064	1.49%	7.54%	0.080
Jute and Mesta	0.699	0.692	0.706	1.01%	-0.99%	0.007
Cotton	11.617	12.364	11.422	-6.04%	1.71%	-0.747
TOTAL	**93.388**	**95.646**	**92.303**	**-2.36%**	**1.18%**	**-2.258**

Source: Ministry of Agriculture and Famers Welfare.
**Normal Area is the five-year average of the area from 2015-2019.

Table 2: India, Southwest Monsoon Regional Rainfall Distribution (June 1 to July 31, 2021

Regions	2021 Actual (mm)	Normal (mm)*	2021 Percentage Departure from Normal
Northwest India	282.5	287.5	-2%
Central India	497.9	492.0	+1%
Southern Peninsula	440.0	376.9	+17%
East and Northeast India	677.7	779.1	-13%
ALL INDIA	**449.0**	**452.2**	**-1%**

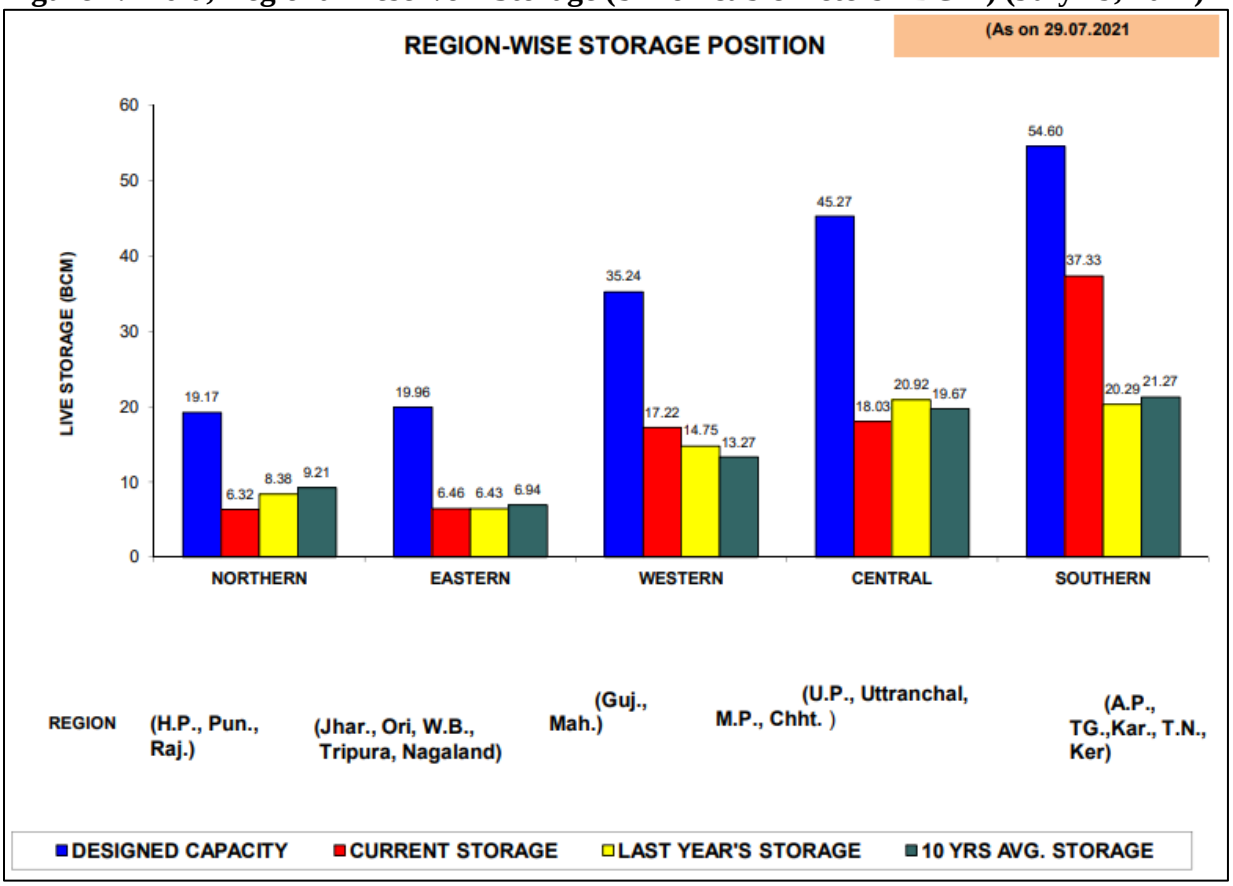
*Normal Rainfall is the fifty-year average from 1951-2000.
Source: Ministry of Earth Sciences/Indian Meteorological Department.

Reservoir Storage: India's Central Water Commission monitors the live storage status of 130 reservoirs around the country on a weekly basis. The latest reservoir storage bulletin (July 29, 2021) puts live storage in these reservoirs at 85.356 billion cubic meters (BCM) - 49 percent of total live storage capacity. The live storage in these reservoirs for the corresponding period last year was 70.771 BCM

[1] The Indian Meteorological Department's 72-page report, of August 6, 2021, is available at https://agricoop.nic.in/sites/default/files/CWWG Data as on 06.08.2021_0.pdf.

(41 percent), and the average of the last ten years was 70.35 BCM (40 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 29, 2021)

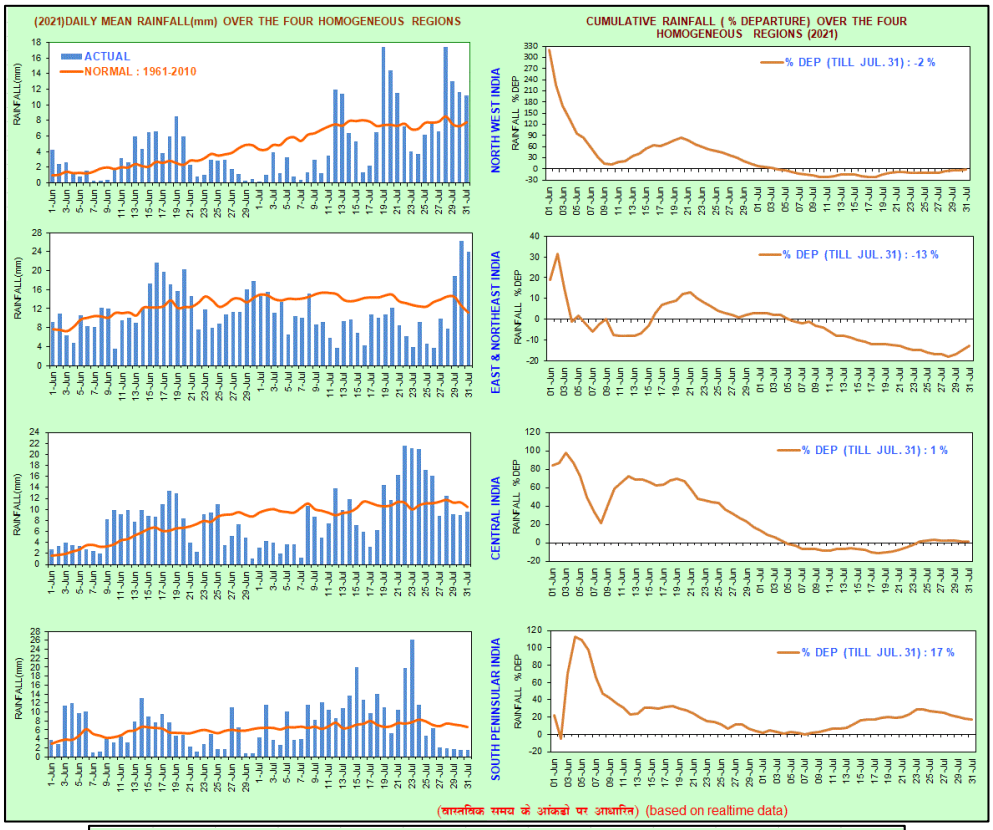


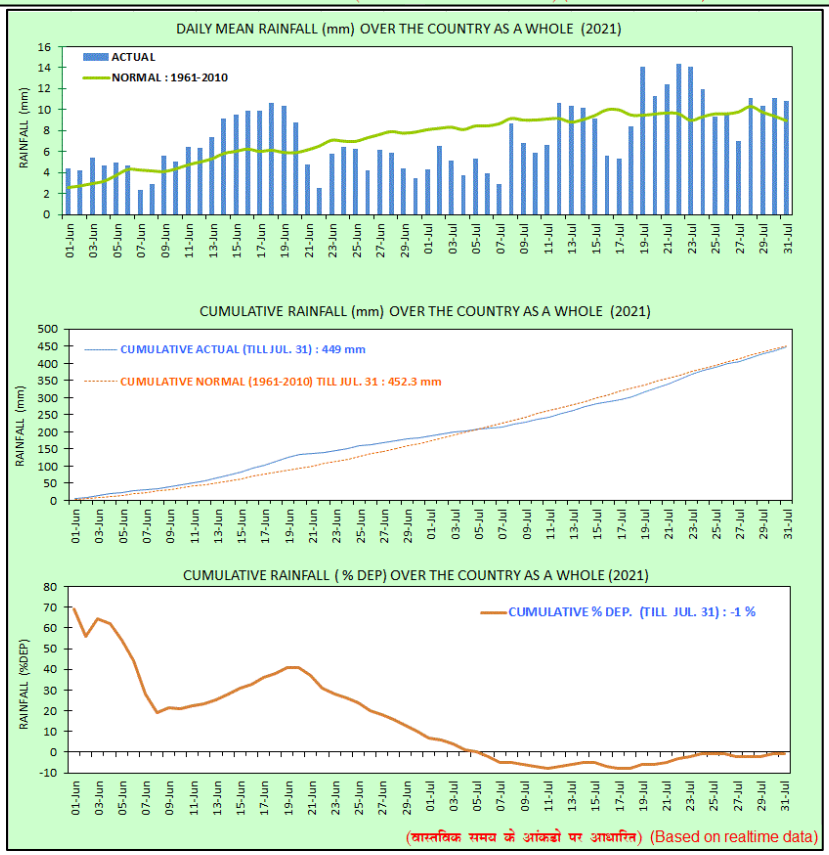
Source: Ministry of Jal Shakti/Central Water Commission.

States having better storage than last year for same period include Rajasthan, Jharkhand, Odisha, Maharashtra, Uttarakhand, Andhra Pradesh/Telangana (two combined projects in both states), Andhra Pradesh, Telangana, Karnataka, Kerala, and Tamil Nadu.

Out of 130 reservoirs, 96 reservoirs reported more than 80 percent of normal storage levels and 34 reservoirs reported 80 percent or below of normal storage. Out of these 34 reservoirs, 24 reservoirs have storage between 51 percent and 80 percent of normal storage, and 10 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.





Source: Indian Meteorological Department (Pune).

India Meteorological Department
Hydromet Division, New Delhi

STATE-WISE RAINFALL DISTRIBUTION

S NO	MET. SUBDIVISION/UT/STATE/DISTRICT	Day:31-07-2021 ACTUAL (mm)	NORMAL (mm)	%DEP.	CAT.	Period:01-06-2021 To 31-07-2021 ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
REGION : EAST AND NORTH EAST INDIA									
1	ARUNACHAL PRADESH	4.4	11.7	-63%	LD	644.1	1014.5	-37%	D
2	ASSAM	15.4	9.8	57%	E	686.7	864.7	-21%	D
3	MEGHALAYA	31.6	21.8	45%	E	1218.1	1769.1	-31%	D
4	NAGALAND	29.2	11.8	148%	LE	460.5	621.9	-26%	D
5	MANIPUR	8.2	10.0	-18%	N	307.0	803.0	-62%	LD
6	MIZORAM	6.5	10.9	-40%	D	649.8	869.0	-25%	D
7	TRIPURA	10.9	11.2	-3%	N	675.0	862.8	-22%	D
8	SIKKIM	27.7	15.2	82%	LE	1002.1	883.9	13%	N
9	WEST BENGAL	18.2	12.6	44%	E	825.0	736.5	12%	N
10	JHARKHAND	75.1	8.5	784%	LE	588.9	522.2	13%	N
11	BIHAR	16.2	10.3	57%	E	613.1	516.7	19%	N
REGION : NORTH WEST INDIA									
1	UTTAR PRADESH	11.8	7.1	67%	LE	364.3	360.5	1%	N
2	UTTARAKHAND	9.7	15.5	-37%	D	634.3	585.5	8%	N
3	HARYANA	11.5	5.6	106%	LE	306.2	202.8	51%	E
4	CHANDIGARH (UT)	0.1	8.0	-98%	LD	267.5	413.5	-35%	D
5	DELHI (UT)	10.3	5.9	75%	LE	368.4	257.6	43%	E
6	PUNJAB	1.2	7.3	-84%	LD	224.9	226.6	-1%	N
7	HIMACHAL PRADESH	10.4	8.6	21%	E	373.7	373.5	0%	N
8	JAMMU & KASHMIR (UT)	4.5	10.9	-59%	D	250.5	277.7	-10%	N
9	LADAKH (UT)	2.0	0.4	402%	LE	12.8	19.6	-35%	D
10	RAJASTHAN	17.3	5.2	232%	LE	183.9	203.8	-10%	N
REGION : CENTRAL INDIA									
1	ODISHA	7.5	11.2	-33%	D	456.3	562.3	-19%	N
2	MADHYA PRADESH	16.3	11.6	40%	E	446.2	432.1	3%	N
3	GUJARAT	0.8	8.0	-90%	LD	247.1	373.4	-34%	D
4	DADAR & NAGAR HAVELI (UT)		35.8		ND	1140.2	1182.0	-4%	N
5	DAMAN & DIU (UT)	0.8	25.0	-97%	LD	692.1	911.7	-24%	D
6	GOA	16.9	32.4	-48%	D	2267.5	1966.8	15%	N
7	MAHARASHTRA	6.2	10.0	-38%	D	669.9	538.5	24%	E
8	CHHATTISGARH	17.0	11.0	54%	E	576.0	569.0	1%	N
REGION : SOUTH PENINSULA									
1	ANDAMAN & NICOBAR (UT)	1.2	12.8	-90%	LD	851.1	815.7	4%	N
2	ANDHRA PRADESH	0.6	4.6	-87%	LD	298.0	222.0	34%	E
3	TELANGANA	0.5	7.4	-93%	LD	561.4	363.1	55%	E
4	TAMIL NADU	0.1	2.4	-95%	LD	187.1	125.0	50%	E
5	PUDUCHERRY (UT)	0.3	2.1	-88%	LD	149.0	165.8	-10%	N
6	KARNATAKA	2.8	7.8	-64%	LD	531.3	463.5	15%	N
7	KERALA	4.7	19.3	-76%	LD	986.0	1363.0	-28%	D
8	LAKSHADWEEP (UT)	0.0	6.5	-100%	NR	316.5	624.3	-49%	D
	COUNTRY :	10.8	8.9	21%		449.0	452.2	-1%	

CATEGORYWISE DISTRIBUTION OF NO.OF STATES

CATEGORY	Day:31-07-2021 NO.OF STATES	Period:01-06-2021 To 31-07-2021 NO.OF STATES
Large Excess	8	0
Excess	7	6
Normal	2	18
Deficient	6	12
Large Deficient	12	1
NoRain	1	0
NoData	1	0

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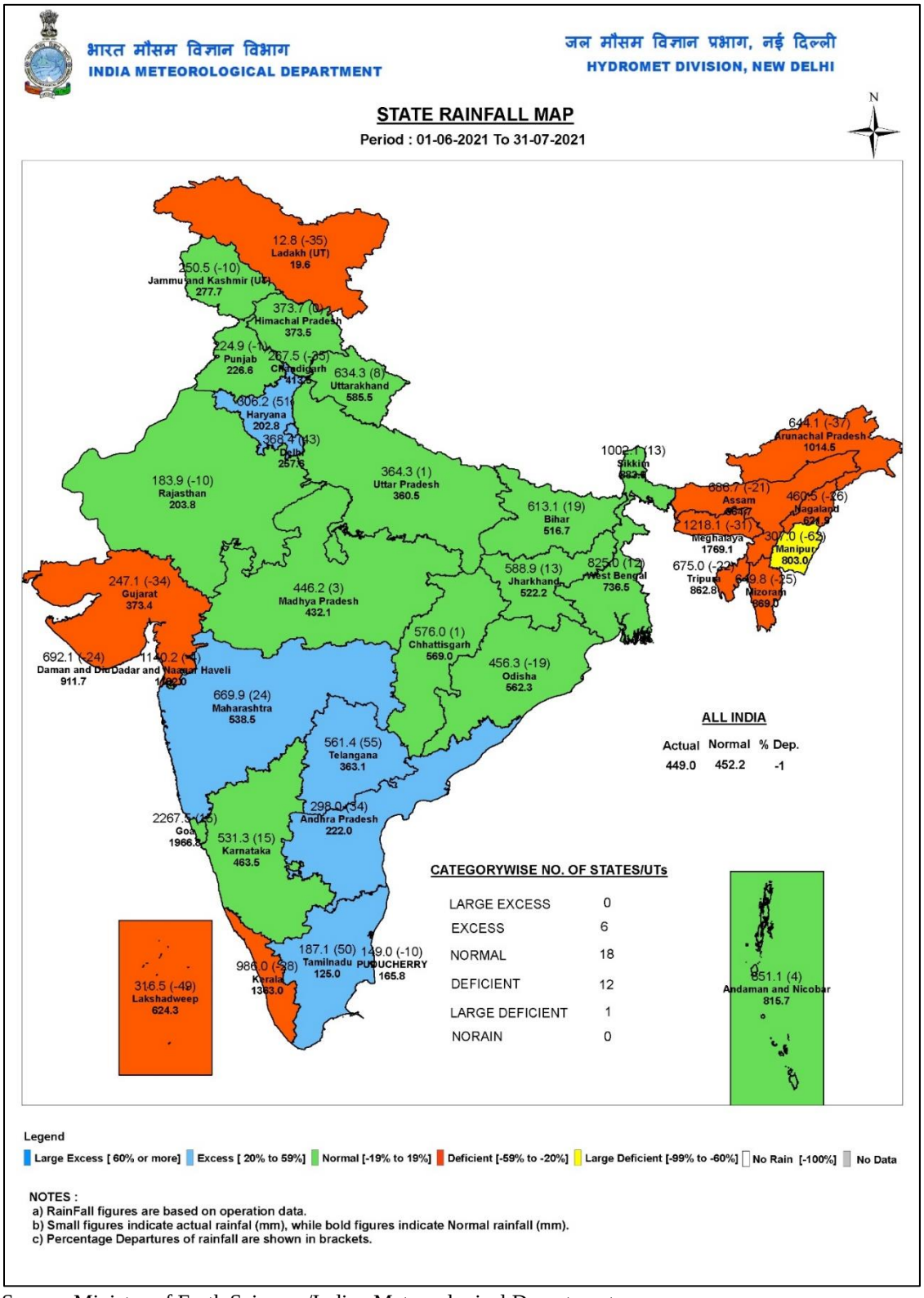
Note: "The rainfall values are rounded off upto one place of decimal"

Source: Ministry of Earth Sciences/Indian Meteorological Department.



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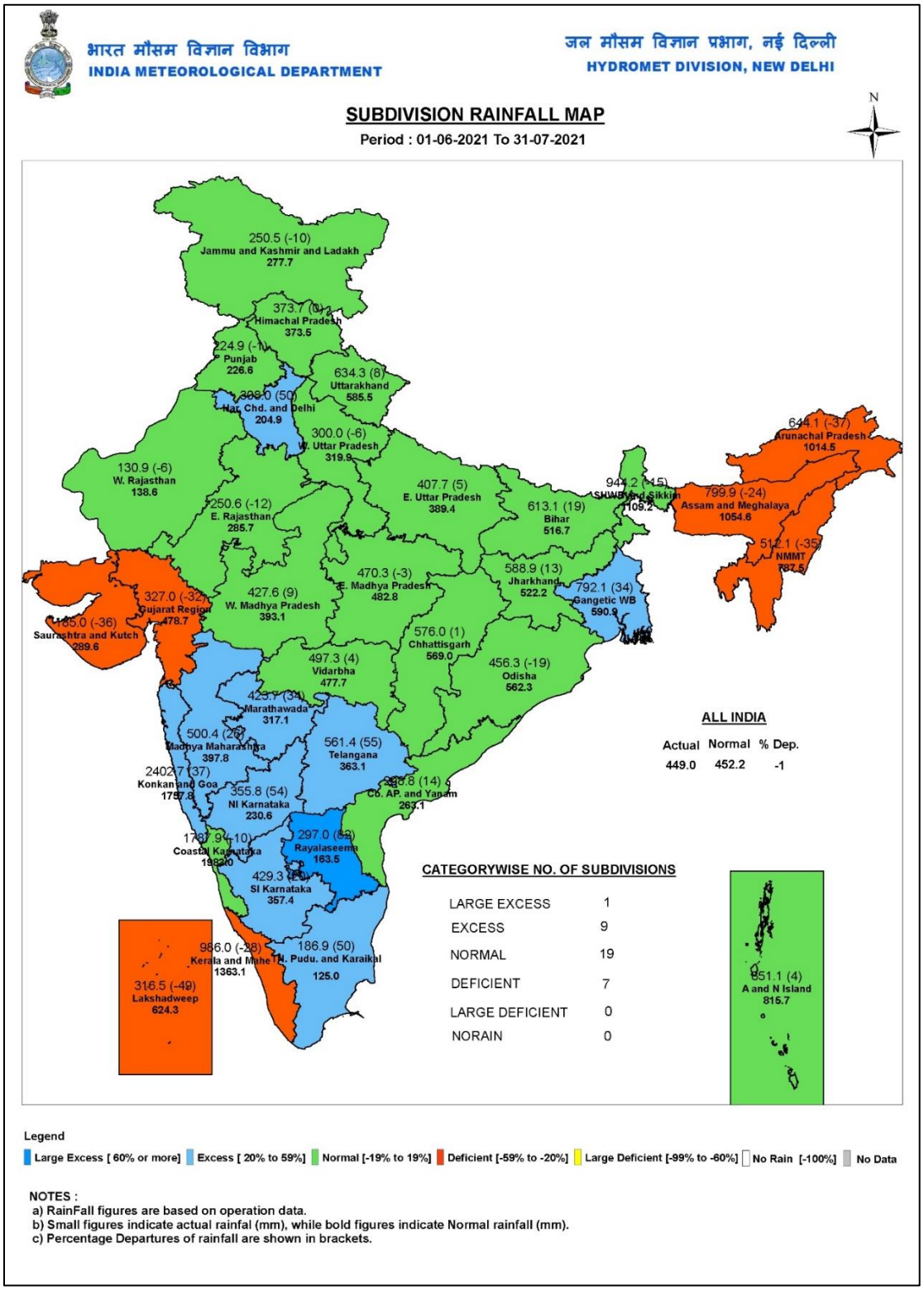

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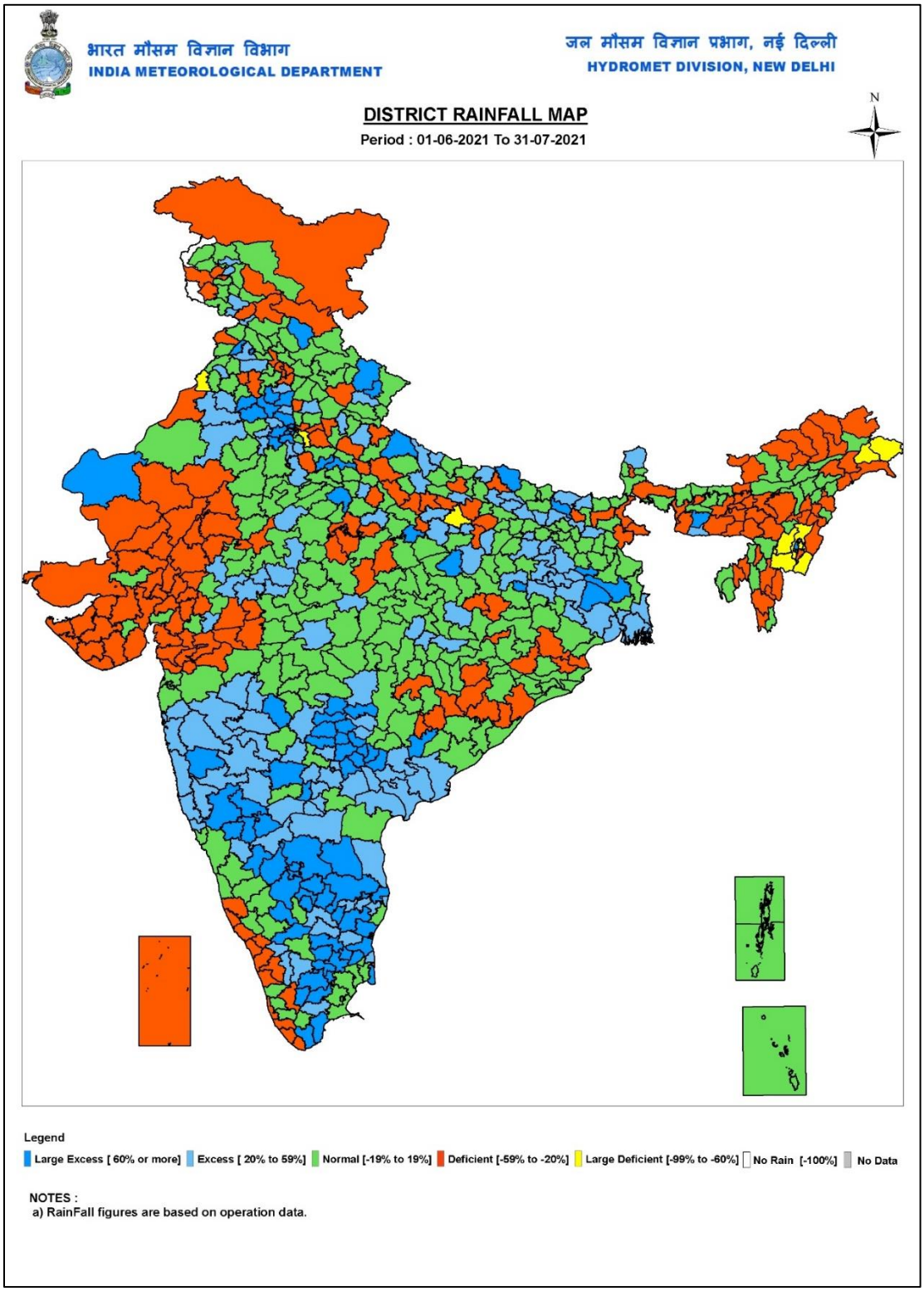

Source: Ministry of Earth Sciences/Indian Meteorological Department.

Attachments:

No Attachments.