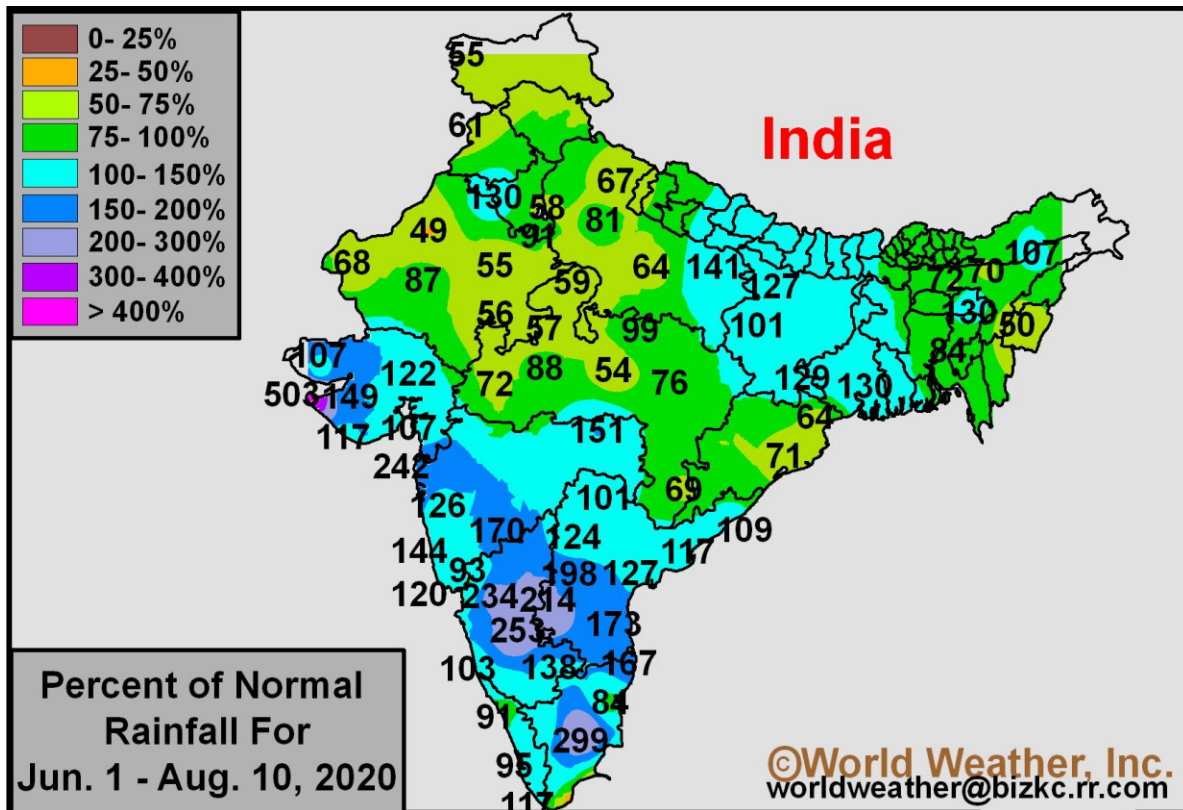


Pakistan, Central and Northern India Rain To Improve

By Andrew Owen and Drew Lerner

Kansas City, August 10 (World Weather Inc.) – *The bulk of India’s monsoonal precipitation has been well-timed and beneficial for crops in the majority of the nation this year. However, rainfall deficits are continuing for many crop areas from central through northern parts of India and in a portion of Pakistan. Rainfall patterns in the coming week should bring greater rain to central and northwestern India and a part of Pakistan which may help to reduce some of the moisture deficits while improving some crop conditions that have been driest. Most crop areas in India will continue to get enough rain to favorably support grain, oilseeds, cotton and rice development through the next couple of weeks.*

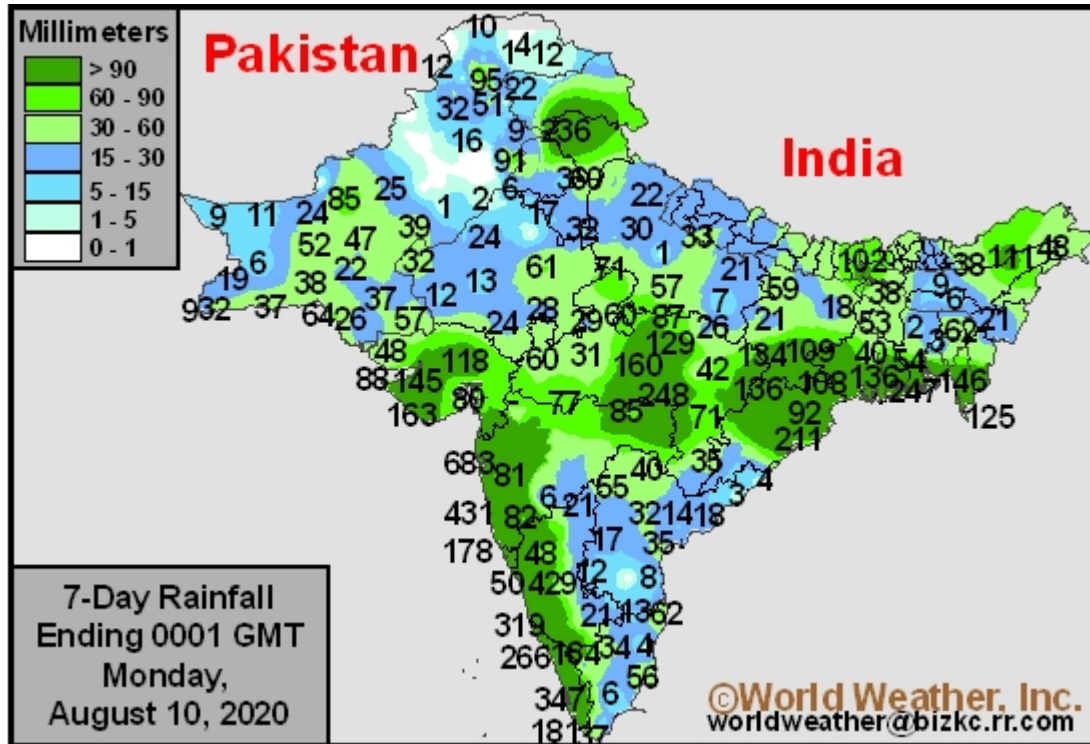
Crop prospects in India remain mostly favorable despite some uneven distribution of the monsoonal rainfall this season. Gujarat and Maharashtra into much of southern India have been wetter biased since early June. Flooding has occurred in several areas in recent weeks, potentially damaging some of the crops. In contrast, portions of the region from Odisha and Chhattisgarh into northern India and Rajasthan have received less than usual rainfall. Northwestern Rajasthan is still struggling with significant moisture deficits stemming from drought that began in 2018. Most other areas received enough rain to support generally favorable crop development.



Rainfall was variable across India during the past week. Gujarat and western Maharashtra into Madhya Pradesh, Chhattisgarh, northern Odisha, Jharkhand, West Bengal,

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and southern Bangladesh received some of the most significant rain. Moisture totals for the seven-day period ending this morning ranged from 2.36 to 6.42 inches and local amounts up to 9.76 inches in eastern Madhya Pradesh. Most other areas received 0.55 to 2.44 inches of rain with a local amount of 9.29 inches in Himachal Pradesh. Pockets in the Eastern States also received up to 5.75 inches of rain. Heavy rain was also noted from Kerala into coastal sections of Karnataka and Maharashtra, where severe flooding and landslides were noted in some areas.



Southern India into Maharashtra and Gujarat has been wetter than normal this monsoon season. Rainfall as a percent of normal from June 1 – August 10 ranged from 101-253% of normal with one location in Tamil Nadu reporting nearly three times' normal precipitation. West Bengal, Jharkhand, Bihar, and southeastern Uttar Pradesh were also wetter than normal receiving 101-141% of normal precipitation. Odisha and Chhattisgarh into Madhya Pradesh, Rajasthan, Punjab, Haryana, and the remaining portions of Uttar Pradesh generally received 54-99% of normal precipitation since the beginning of June. Much of Bangladesh and the Eastern States received near to below normal rainfall, though a few pockets were slightly wetter than normal.

Despite the moisture deficits in parts of India, the nation's summer crops are rated quite favorably because of the timeliness of what rain has occurred. A good start to the rainy season bolstered topsoil moisture for planting and routinely occurring rainfall since then has helped to maintain a good environment for ongoing crop development. There has also been a lack of hot weather which has helped to conserve soil moisture through lower evaporation rates.

Some of the rainfall statistics published by India's Meteorological Department suggest some impressive moisture deficits so far this season. However, there are other areas that have been wetter biased. Eastern and northeastern India have received an average of 8%

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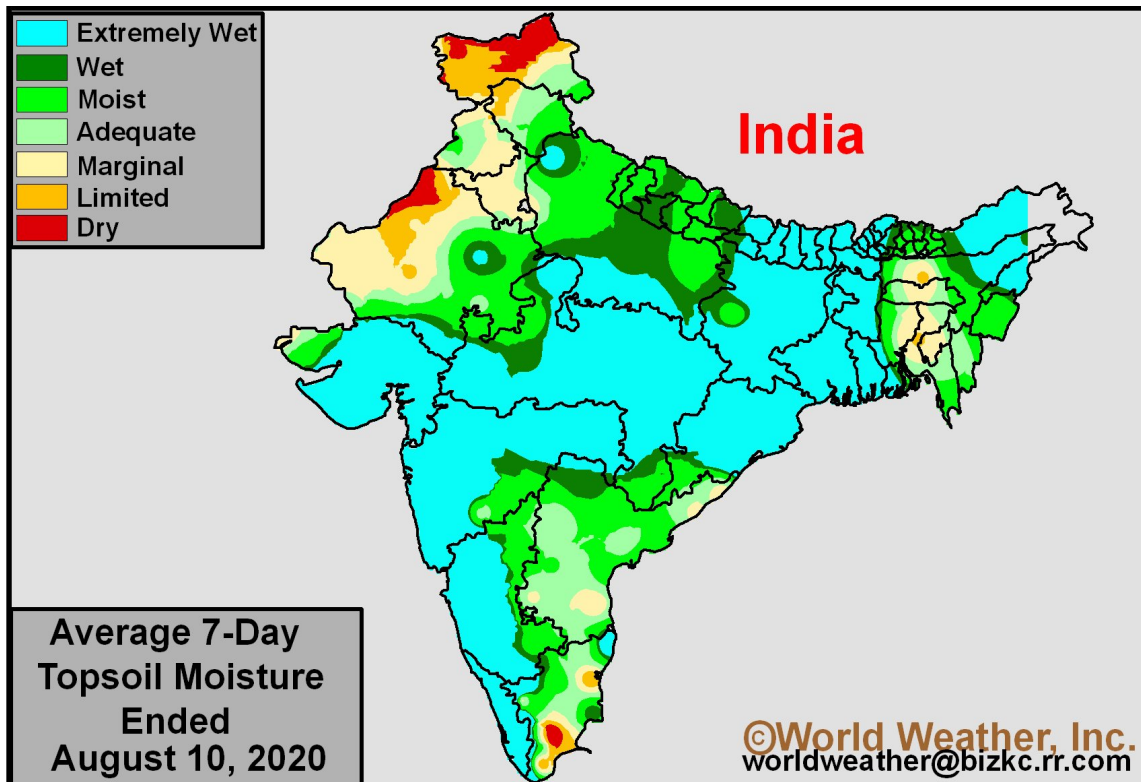
more than the usual rainfall so far this monsoon season while northwestern India has reported a 23% deficit from normal rainfall. Within northern India, the area noting the greatest departure from normal rainfall has been in Jammu and Kashmir where less than half of the usual rain has fallen thus far. Eastern Rajasthan has reported rainfall 27% below average while western Rajasthan's deficits are only 10% below the norm. Both Himachal Pradesh and western Uttar Pradesh are reporting more than 30% less rain than usual.

S NO		MET. SUBDIVISION/UT/STATE/DISTRICT		Day: 10-08-2020				Period: 01-06-2020 To 10-08-2020			
				ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.	ACTUAL (mm)	NORMAL (mm)	% DEP.	CAT.
		REGION : EAST AND NORTH EAST INDIA		11.1	10.7	4%		957.8	886.5	8%	
1		ARUNACHAL PRADESH	18.6	10.7	74%	LE	1223.2	1116.2	10%	N	
2		ASSAM & MEGHALAYA	15.5	13.1	18%	N	1391.4	1175.5	18%	N	
3		N M M T	9.8	12.6	-22%	D	646.2	904.1	-29%	D	
4		SHWB & SIKKIM	29.6	16.1	84%	LE	1716.9	1254.4	37%	E	
5		GANGETIC WEST BENGAL	2.9	8.9	-67%	LD	646.4	697.2	-7%	N	
6		JHARKHAND	5.8	8.4	-30%	D	543.9	625.6	-13%	N	
7		BIHAR	5.2	8.2	-37%	D	626.2	600.3	38%	E	
		REGION : NORTH WEST INDIA		7.5	6.9	9%		278.8	359.7	-23%	
1		EAST UTTAR PRADESH	8.1	9.2	-12%	N	513.8	471.4	9%	N	
2		WEST UTTAR PRADESH	7.2	9.0	-20%	D	278.0	406.1	-32%	D	
3		UTTARAKHAND	21.4	14.0	53%	E	612.7	722.0	-15%	N	
4		HAR. CHD & DELHI	8.9	4.8	86%	LE	235.3	263.0	-11%	N	
5		PUNJAB	5.2	6.1	-15%	N	258.7	293.0	-12%	N	
6		HIMACHAL PRADESH	18.6	9.8	89%	LE	325.6	473.2	-31%	D	
7		JAMMU & KASHMIR AND LADAKH	3.1	5.9	-48%	D	168.4	350.9	-52%	D	
8		WEST RAJASTHAN	3.0	2.6	17%	N	153.4	171.1	-10%	N	
9		EAST RAJASTHAN	11.1	7.9	40%	E	264.7	363.5	-27%	D	
		REGION : CENTRAL INDIA		14.1	10.1	39%		589.5	604.7	-3%	
1		ODISHA	8.8	10.4	-15%	N	601.7	688.1	-13%	N	
2		WEST MADHYA PRADESH	11.0	11.2	-2%	N	450.9	502.3	-10%	N	
3		EAST MADHYA PRADESH	20.6	10.3	100%	LE	537.2	612.9	-12%	N	
4		GUJARAT REGION	32.0	10.5	205%	LE	391.0	596.3	-34%	D	
5		SAURASHTRA & KUTCH	3.7	6.3	-42%	D	534.2	348.9	53%	E	
6		KONKAN & GOA	15.3	28.0	-45%	D	2340.8	2066.2	13%	N	
7		MADHYA MAHARASHTRA	2.7	6.9	-60%	LD	544.4	475.3	15%	N	
8		MARATHWADA	6.7	6.7	0%	N	496.6	378.0	31%	E	
9		VIDARBHA	21.2	10.2	108%	LE	502.5	591.9	-15%	N	
10		CHHATTISGARH	22.0	11.1	99%	LE	673.5	697.7	-3%	N	
		REGION : SOUTH PENINSULA		16.6	7.1	134%		543.6	442.3	23%	
1		A & N ISLAND	7.9	12.6	-37%	D	1117.6	940.7	19%	N	
2		COASTAL AP and YANAM	12.6	5.8	118%	LE	392.1	315.8	24%	E	
3		TELANGANA	31.2	10.5	197%	LE	518.9	441.8	17%	N	
4		RAYALASEEMA	10.3	4.0	158%	LE	417.9	196.4	113%	LE	
5		TN PUDU and KARAİKAL	4.0	2.2	82%	LE	249.5	153.8	62%	LE	
6		COASTAL KARNATAKA	81.0	31.3	159%	LE	2381.9	2299.7	4%	N	
7		N. I. KARNATAKA	4.7	4.5	3%	N	405.5	273.6	48%	E	
8		S. I. KARNATAKA	11.4	6.4	78%	LE	512.8	423.4	21%	E	
9		KERALA & MAHE	45.1	15.7	187%	LE	1539.1	1527.3	1%	N	
10		LAKSHADWEEP	30.8	7.7	300%	LE	996.0	695.2	43%	E	
		COUNTRY :		12.1	8.7	39%		543.6	542.4	0%	

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Central India has a collective 3% deficit from normal rainfall so far this summer with Gujarat rainfall most below average, despite the Saurashtra and Kutch region of Gujarat reporting 53% more rain than usual. Southern India has reported the greatest surplus of rainfall with a collective surplus of 23% above the mean rainfall for June 1 to August 10.

Western and northern Rajasthan still have moisture deficits despite some rain in recent weeks. Punjab and Haryana also have short to marginally adequate moisture. Tamil Nadu and Andhra Pradesh have mostly adequate soil moisture with a few pockets that have a shortage of topsoil moisture. The remaining production areas have adequate to excessive moisture. [The lack of areas reporting dry soil conditions in India speaks volumes to the mostly good crop environment, despite all of the rainfall deficits noted above.](#)



Planted acreage of rice, corn, soybeans, cotton, and most pulses and other crops are higher than what was planted last year. Monsoonal rain was earlier than normal in many areas and has consistently performed well enough to support production potentials. Crop prospects are favorable and there is already potential for a bumper crop in several locations. However, there are some concerns over the drier biased areas in parts of central through northern India. Northwestern Rajasthan produces much of the nation's guar and greater rain is needed in the region to improve production potentials.

[Rain is expected to increase in many areas across India during the next two weeks. Sufficient increases will occur to reduce the moisture deficits noted above in many areas.](#) Monsoonal rain this week will be greatest from Gujarat and much of Rajasthan (outside the far northwest) into Madhya Pradesh, Uttar Pradesh, Bihar, Jharkhand, West Bengal, and neighboring areas. [Rainfall will range from 3.00 to 7.00 inches with several pockets receiving 7.00 to 12.00 inches by next Monday morning. The rain may trigger some flooding at times and that could damage some crops.](#)

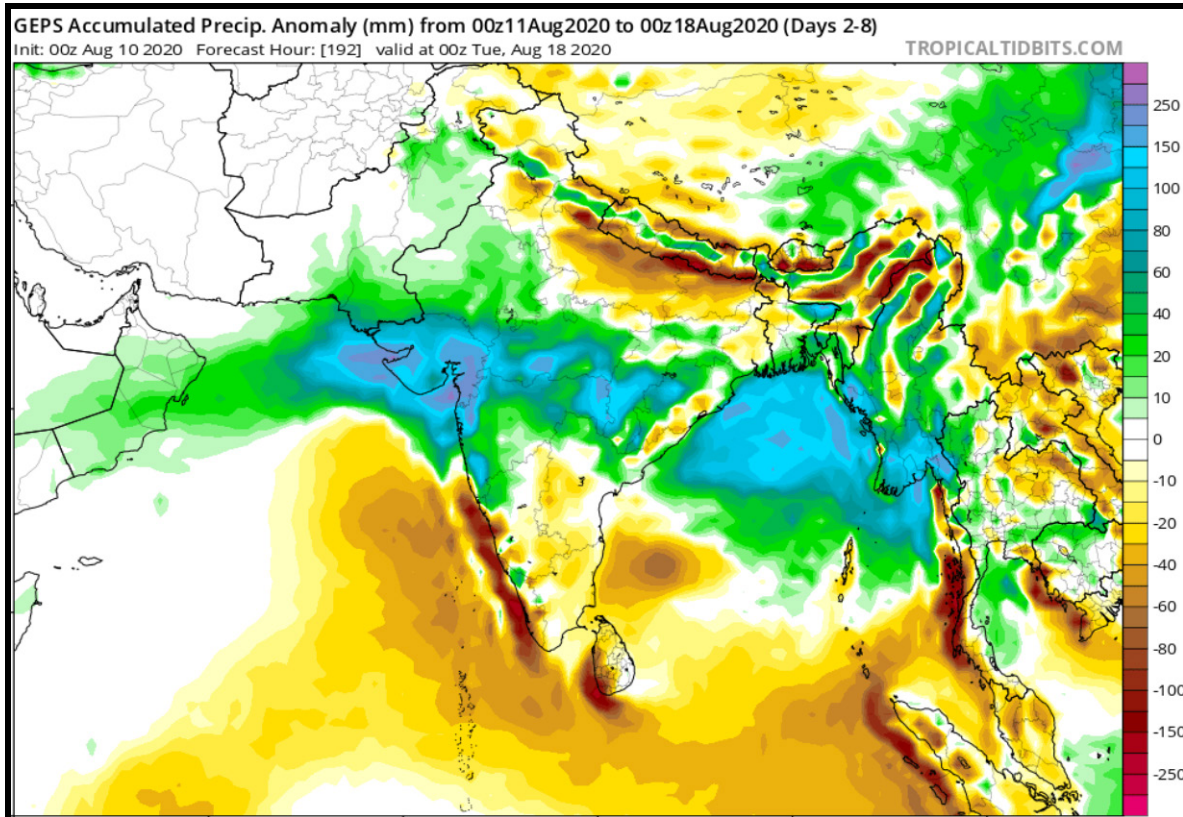
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Southern India and western Rajasthan will receive the least amount of rain in this coming week. Light rain will still be scattered across these areas at times. However, rain totals by next Monday morning will only range from 0.25 to 1.50 inches with locally greater amounts in some locations. Daytime temperatures will be in the upper 80s and 90s Fahrenheit most often and aggressive drying is expected. Southern India will still have plenty of moisture to maintain favorable crop conditions outside the driest areas in Tamil Nadu. Northwestern Rajasthan will get some rain a little later in the forecast period resulting in some improvement in crop conditions.

Maharashtra and the remaining portions of northern, central, and eastern India will see a good mix of monsoonal rain and sunshine this week. Rain totals by next Monday morning will range from 2.00 to 6.00 inches most often with locally greater amounts in Odisha, Bangladesh, and the Eastern States. Soil moisture will remain at adequate to excessive levels. Crop development conditions will be mostly favorable.

Southern India and western Rajasthan may see a slight boost in monsoonal rain August 18 – 24. The rain will be beneficial for most crops, though moisture shortages will likely persist in western Rajasthan. Frequent monsoonal rain is slated for the remaining production areas in India.

It is very important to note that rainfall over this coming week will be greater than usual from central through northwestern India and in a few far northern locations. That trend will lead to reductions in the moisture deficits noted above and ensure that crop development will advance favorably. There will be less than usual rain in Uttar Pradesh, Bihar and Jharkhand as well as a few areas in far southern India as noted above, but these areas will get greater rain a little later in the monsoon season.



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