USDA Foreign Agricultural Service
GAIN Report
Global Agricultural Information Network

Date: 2/7/2019
GAIN Report Number: IN9005

India

Post: New Delhi

Northeast Monsoon fails to support winter planting - January 2019

Report Categories:
Agriculture in the Economy
Agriculture in the News
Climate Change/Global Warming/Food Security
Grain and Feed
Oilseeds and Products

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Report Highlights:
The cumulative rainfall for the Northeast Monsoon 2018 reported by the Indian Meteorological Department (IMD), as of January 4, 2019 was forty-four percent lower than the fifty-year average. The deficit rains have affected reservoir storage levels, currently at fifty percent capacity. Consequently, the pace of planting for the *Rabi* 2018/19 season has been lower by ten percent than the normal five-year average, with significant reductions in acreage of rice and coarse cereals.

General Information:
According to the Indian Meteorological Department (IMD), the northeast monsoon season from October to December is the chief rainy season for the southern states, with 48 percent (438.2 mm) of annual rainfall realized during this time. Hence, its performance is a key factor for regional agricultural activities. Further, the timeframe is also the primary cyclone season for the North Indian Ocean basin, comprised of the Bay of Bengal and the Arabian Sea. As cyclonic disturbances moving west/northwest-wards affect the coastal areas of the state of Tamil Nadu, which contribute significantly to northeast monsoon rainfall. As such, the northeast monsoon season is important from the agricultural, as well as, from the cyclone disaster management perspective.

Northeast Monsoon and the season of cyclones
As a whole, India received deficient rainfall from October 1 through December 31 with a forty-four percent downward departure from the long-period average (LPA) for the northeast monsoon. The rainfall data reported by the Indian Meteorological Department (IMD) as of December 31, 2018, indicates that 15 percent of the total 666 districts across India have received normal rainfall, while 65 percent districts have received deficit rains and 20 percent districts received no rains. During the northeast monsoon, six states/union territories have received normal rainfall, with thirty states reporting deficient rainfall. The state of Odisha and the union territory of Andaman and Nicobar Islands are the only regions reporting excess rains.

The cumulative rainfall in the country during the northeast monsoon/post monsoon season (October to December) has been forty-four percent lower than long period average (LPA). The season witnessed a very large number of 'high impact' weather events, including cyclones and floods, of which 'floods' were the most frequent and widespread phenomenon. The monsoon started its withdrawal from Rajasthan on September 29, delayed almost by a month, and exited the South Peninsula on October 21, six days behind normal. This was enough to delay the arrival of the northeast monsoon over the South Peninsula, exacerbated further by two strong cyclones in October, 'Luban' in the Arabian Sea and 'Titli' in the Bay of Bengal. After the onset of the Northeast monsoon on November 2, two more cyclones 'Gaja' and 'Phethai made landfall in southern and eastern India respectively causing damage to the standing crop.

Delayed Northeast Monsoon affects Rabi planting
According to the Ministry of Agriculture and Farmers Welfare (MOAFW) January 4, 2019 sowing report, planted area during the *Rabi* (winter) season has fallen by three percent from last year and ten percent lower than the five-year average. Despite a number of abnormal flooding situations in southern India, which provided adequate soil moisture, the planting of Rabi crop has slowed.

Planted area under rice has fallen by 25 percent as compared to last year mostly in the states of Tamil Nadu and Andhra Pradesh. The delay of the northeast monsoon and the prolonged dry spell has led to reduced rice planting in the Rabi season. Planted area under various coarse cereals has reduced by 17 percent as compared to last year with a significant reduction in acreage of sorghum (Jowar) in Maharashtra. Planting of wheat has increased by 2 percent as compared to last year. Higher area was reported from the state of Madhya Pradesh, which was offset by reductions in the state of Maharashtra and Gujarat. Oilseeds planting, specifically rapeseed and mustard in Rajasthan, Madhya Pradesh and Uttar Pradesh has been higher than last year, but overall acreage of oilseeds is marginally lower by 2

percent from last year.

Reservoir Storage

States having better storage than last year for the corresponding period are Himachal Pradesh, Punjab, Uttarakhand, Madhya Pradesh, Chhattisgarh, Karnataka and Tamil Nadu. The only state having equal storage as last year for the corresponding period is Rajasthan. States having lesser storage than last year for the corresponding period are Jharkhand, Odisha, West Bengal, Tripura, Gujarat, Maharashtra, Uttar Pradesh, Andhra Pradesh, Telangana and Kerala. According to the Central Water Commission, there are sixty-one reservoirs having storage of more than 80 percent, sixteen reservoirs having storage between 51-80 percent, eleven reservoirs having storage between 31-50 percent and three reservoirs with storage up to 30 percent of the norm. In terms of reservoirs having irrigation benefits, the total live storage as of January 3, 2019 was only 53 percent of the total capacity as compared to 62 percent last year.

Indian Meteorological Department (IMD) forecast for the next two weeks

IMD forecasts scattered to wide rainfall/snow activity over the western Himalayan Region in the two weeks of January 11 to 24, 2019. Isolated rainfall activity is also likely over the northern parts of Punjab and Haryana between January 11 to 17, and over Andaman & Nicobar
Islands from January 11 to 24. Due to persistent cold wave conditions/ground frost in Northern and Central India, the government has issued advisories for farmers to apply light and frequent irrigation/sprinklers in the evening to protect the crops from cold injury. To protect young fruit plants from cold winds, farmers should cover them with straw/polythene sheets/gunny bags.

In the northern states of Jammu and Kashmir, and Himachal Pradesh where heavy rain and snow are expected between January 11 to 17, farmers are advised to avoid irrigation, but should perform intercultural operations (between sowing and harvesting) and apply plant protection measures and fertilizers to the standing crops. Farmers have also been advised to provide adequate drainage in crop fields to avoid water logging.

IMD forecasts below normal rainfall activity over the extreme southern peninsula of India between January 11 to 17, and near normal rainfall over rest of the country during the two week period. Minimum temperatures are likely to be above normal for some areas of the Northwest, West and Northeast India, and normal/below normal temperatures over the rest of the country during January 11 to 17.

Above normal minimum temperatures are very likely over most parts of the western Himalayan region and some parts of Northwest, West and Northeast India, and near normal/below normal over the rest of the country from January 11 to 24. For more details, refer to the IMD press release dated January 10, 2018.

Table 1. India: Regional Rainfall Distribution from October 1- December 31

Regions	2018 Actual (mm)	2017 Actual (mm)	2016 Actual (mm)	Normal (mm)*	2018 Percentage Departure from Normal
Northwest India	34.8	27.5	16.7	62.7	-45
Central India	38.6	72.3	68.5	79.6	-51
Southern Peninsula	173.9	243.6	109.4	273.3	-36
East and Northeast India	83.8	200.9	125.0	171.4	-51
All India	**71.2**	**112.7**	**69.7**	**127.2**	**-44**

* Normal rainfall is the fifty year average of rainfall from 1951-2000
Source: Indian Meteorological Department

Table 2. India: Northeast Monsoon Monthly Rainfall

Month	2018 Actual (mm)	Normal (mm)**	2018 Percentage Departure from Normal
October	35.6	80.9	-56
November	21.0	29.7	-29
December	14.7	16.6	-11
All India	**71.2**	**127.2**	**-44**

Source: Indian Meteorological Department
** Normal rainfall is the fifty year average of rainfall from 1951-2000

Table 3. India. Storage Status at 91 Major Reservoirs in Billion Cubic Meters (BCM)

Region	Volume on January 10, 2019 (in BCM)	Total Capacity (in BCM)	Percentage of Capacity on January 10, 2018	Percentage of Capacity on January 10, 2017	10-Year Average (2008-2018) Capacity Level on January 10
Northern Region	11.62	18.01	65%	50%	51%
Eastern Region	11.79	18.83	63%	71%	66%
Western Region	11.88	31.26	38%	52%	53%
Central Region	22.95	42.30	54%	47%	54%
Southern Region	22.15	51.59	43%	44%	50%
All India	**80.39**	**161.99**	**50%**	**50%**	**53%**

Source: Ministry of Water Resources, River Development and Ganga Rejuvenation

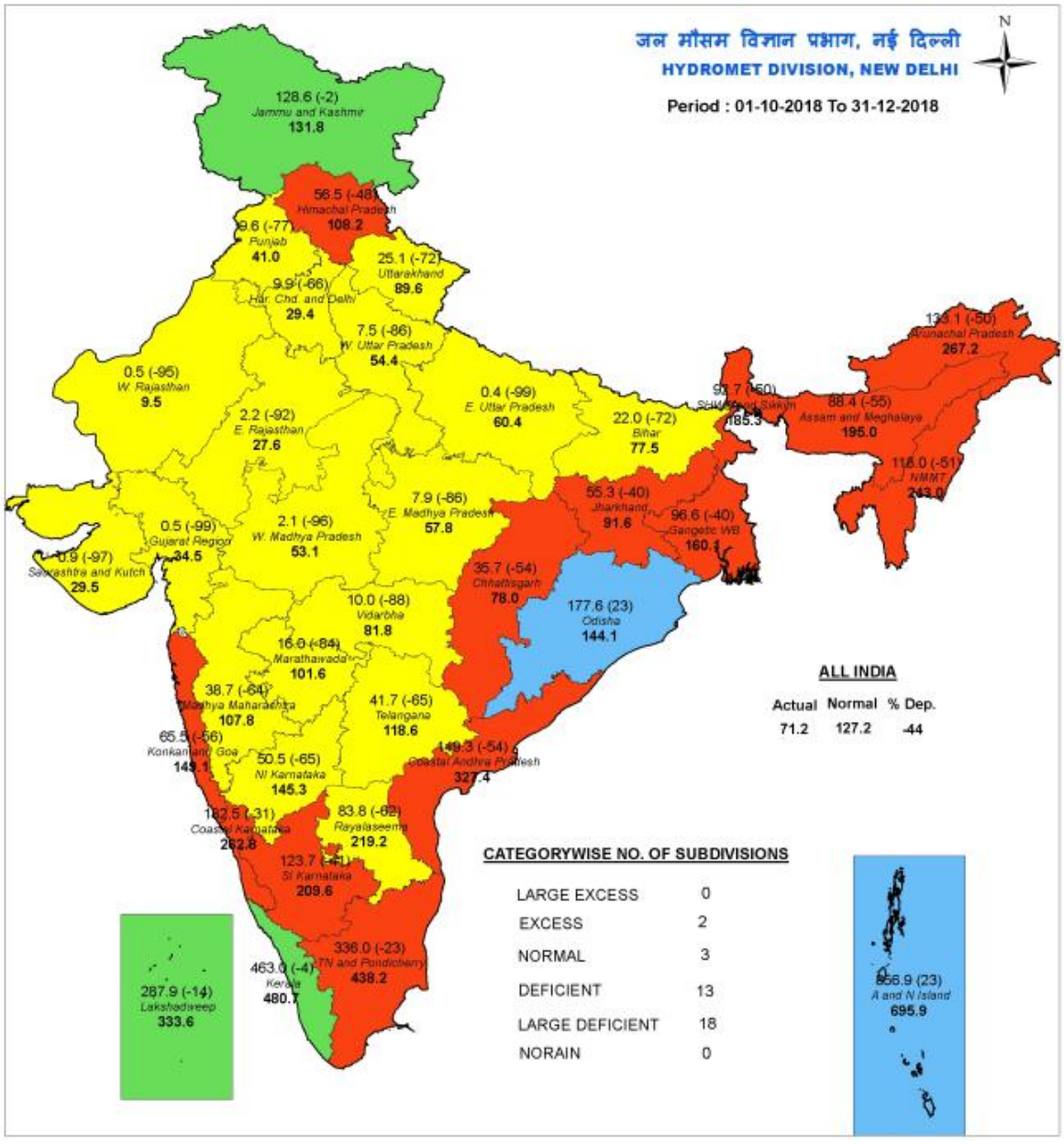
Table 4. India. Rabi 2018 Sown Area (in million hectares)

Crop	Area Sown in 2019 on January 4, 2019	Area Sown in 2018 on January 4, 2018	Normal Area on January 4 (2011-2015)**	Y-o-Y Change	Change from Normal
Wheat	28.837	28.355	30.629	2%	-6%
Rice	1.401	1.864	4.16	-25%	-66%
Pulses	14.356	15.344	14.084	-6%	2%
Coarse Cereals	4.333	5.240	6.055	-17%	-28%
Oilseeds	7.516	7.634	8.036	-2%	-6%
Total	**56.443**	**58.437**	**62.964**	**-3%**	**-10%**

Source: Ministry of Agriculture and Farmers Welfare, Government of India
** Normal Area is the five year average of the area from 2011-2015

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

SUBDIVISION RAINFALL MAP



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.