**Date:** 4/5/2018
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# India

**Post:** New Delhi

# Official Pre-Monsoon Conditions Forecast

**Report Categories:**
Climate Change/Global Warming/Food Security
Agricultural Situation
Agriculture in the News
Market Development Reports
Cotton and Products
Oilseeds and Products
Grain and Feed
Agriculture in the Economy

**Approved By:**
Adam Branson
**Prepared By:**
Dhruv Sood

**Report Highlights:**
On April 1, the Indian Meteorological Department (IMD) issued its temperature outlook for April to June 2018. This is when temperatures climb before the onset of the Southwest Monsoon. The forecast indicates warmer than normal temperatures in north and northwestern India and normal to slightly below normal temperatures for eastern, east-central, and southern parts of India. Monsoon progress, reservoir levels, and pre-monsoon showers deserve monitoring to assess India's 2018/19 *Kharif* potential.

**General Information:**

**Heat Wave Conditions Forecast in North and Northwest India**

IMD forecast above-normal high temperatures for the months of April to June with above normal sub-divisional average seasonal temperatures (maximum, minimum, and mean) over most of the meteorological sub-divisions of the country. The IMD forecast also predicts slightly below normal seasonal temperatures in the eastern, east-central, and southern subdivisions of the country. Overall, the seasonal temperature anomalies are likely to be colder than those observed during the corresponding season in 2017. For details, refer to the April 1, 2018, IMD Press Release.

Note: According to the IMD, a heat wave is considered if the maximum temperature of a weather station reaches at least 40°C or more in plain areas, 37°C or more for coastal areas, and at least 30°C or more for hilly areas.

**Much of India Not Feeling Wet**

As temperatures climb before the monsoon begins, greater attention is paid towards reservoir levels and pre-monsoon rainfall. Nationwide, rainfall has been lower than the fifty-year average though land area in the southern peninsula has seen greater precipitation. The additional rainfall in the southern region is important as the area experienced deficient rains last monsoon and reservoir levels remain lower considerably than the average for the past decade.

**Table 1. India: Regional Rainfall Distribution (Pre-Monsoon) from March 1- April 4, 2018**

| Regions | 2018 Actual (mm) | Normal (mm)* | 2018 Percentage Departure from Normal |
|---|---|---|---|
| Northwest India | 18.1 | 52.3 | -65% |
| Central India | 3.1 | 11.0 | -72% |
| Southern Peninsula | 24.2 | 14.5 | 67% |
| East and Northeast India | 45.8 | 80.4 | -43% |
| **All India** | **18.7** | **35.6** | **-48%** |

* Normal rainfall is the fifty year average of rainfall from 1951-2000

Source: Indian Meteorological Department

**Reservoir Levels Close to Average Across Central India with Lower Levels at Northern and Southern Extremes**

States having better storage than last year for the corresponding period are West Bengal, Tripura, Maharashtra, Uttarakhand, Andhra Pradesh, Karnataka, Kerala and Tamil Nadu. Rajasthan is the only state having equal storage as last year for the corresponding period. States having lower storage than last year for the corresponding period are Himachal Pradesh, Punjab, Jharkhand, Odisha, Gujarat, Uttar Pradesh, Madhya Pradesh, Chhattisgarh, and Telangana.

**Table 1. India. Storage Status at 91 Major Reservoirs in Billion Cubic Meters (BCM)**

| **Region** | **Volume on March 23, 2018 (in BCM)** | **Total Capacity (in BCM)** | **Percentage of Capacity on March 23, 2018** | **Percentage of Capacity on March 23, 2017** | **10-Years Average Capacity Level on March 23** |
|---|---|---|---|---|---|
| Northern Region | 3.34 | 18.01 | 19% | 23% | 28% |
| Eastern Region | 9.45 | 18.83 | 50% | 57% | 46% |
| Western Region | 10.67 | 31.26 | 34% | 39% | 37% |
| Central Region | 13.35 | 42.30 | 32% | 48% | 35% |
| Southern Region | 10.97 | 51.59 | 21% | 16% | 27% |
| **All India** | **47.78** | **161.99** | **29%** | **34%** | **34%** |

Source: Ministry of Water Resources

India Meteorological Department
Hydromet Division, New Delhi

SUBDIVISION-WISE RAINFALL DISTRIBUTION

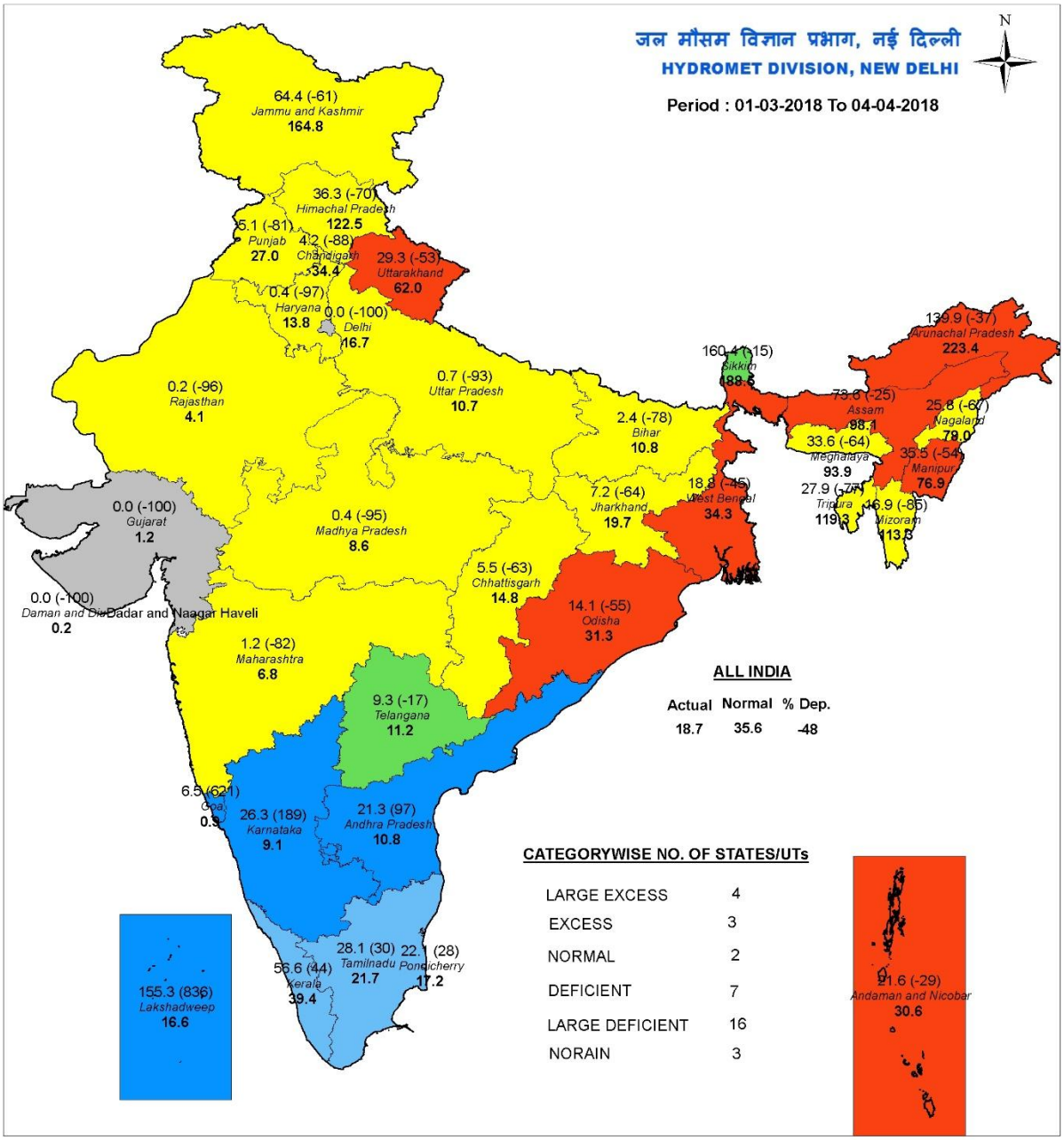
| | | Week :29-03-2018 To 04-04-2018 | | | | Period:01-03-2018 To 04-04-2018 | | | |
|---|---|---|---|---|---|---|---|---|---|
| S NO | MET. SUBDIVISION/UT/STATE/DISTRICT | ACTUAL (mm) | NORMAL (mm) | %DEP. | CAT. | ACTUAL (mm) | NORMAL (mm) | % DEP. | CAT. |
| | REGION : EAST AND NORTH EAST INDIA | 8.3 | 23.3 | -65% | | 45.8 | 80.4 | -43% | |
| 1 | ARUNACHAL PRADESH | 7.7 | 62.3 | -88% | LD | 139.9 | 223.4 | -37% | D |
| 2 | ASSAM & MEGHALAYA | 10.1 | 31.3 | -68% | LD | 68.7 | 97.2 | -29% | D |
| 3 | N M M T | 9.0 | 30.8 | -71% | LD | 25.0 | 95.9 | -74% | LD |
| 4 | SHWB & SIKKIM | 14.3 | 18.9 | -24% | D | 62.5 | 74.5 | -16% | N |
| 5 | GANGETIC WEST BENGAL | 11.9 | 8.2 | 45% | E | 14.9 | 33.0 | -55% | D |
| 6 | JHARKHAND | 7.7 | 4.8 | 60% | LE | 7.2 | 19.7 | -64% | LD |
| 7 | BIHAR | 2.4 | 2.2 | 8% | N | 2.4 | 10.8 | -78% | LD |
| | REGION : NORTH WEST INDIA | 1.4 | 7.4 | -81% | | 18.1 | 52.3 | -65% | |
| 1 | EAST UTTAR PRADESH | 0.2 | 1.9 | -88% | LD | 0.2 | 10.1 | -98% | LD |
| 2 | WEST UTTAR PRADESH | 0.0 | 1.8 | -100% | NR | 1.4 | 12.3 | -88% | LD |
| 3 | UTTARAKHAND | 6.3 | 8.9 | -29% | D | 29.3 | 62.0 | -53% | D |
| 4 | HAR. CHD & DELHI | 0.0 | 2.0 | -100% | NR | 0.4 | 14.0 | -97% | LD |
| 5 | PUNJAB | 0.0 | 2.9 | -100% | NR | 5.1 | 27.0 | -81% | LD |
| 6 | HIMACHAL PRADESH | 1.5 | 16.0 | -91% | LD | 36.3 | 122.5 | -70% | LD |
| 7 | JAMMU & KASHMIR | 4.5 | 23.1 | -80% | LD | 64.4 | 164.8 | -61% | LD |
| 8 | WEST RAJASTHAN | 0.0 | 0.8 | -100% | NR | 0.1 | 4.3 | -98% | LD |
| 9 | EAST RAJASTHAN | 0.0 | 0.7 | -100% | NR | 0.3 | 4.1 | -93% | LD |
| | REGION : CENTRAL INDIA | 2.5 | 2.6 | -5% | | 3.1 | 11.0 | -72% | |
| 1 | ODISHA | 13.2 | 8.1 | 63% | LE | 14.1 | 31.3 | -55% | D |
| 2 | WEST MADHYA PRADESH | 0.0 | 0.7 | -100% | NR | 0.5 | 4.9 | -90% | LD |
| 3 | EAST MADHYA PRADESH | 0.0 | 2.5 | -98% | LD | 0.3 | 13.7 | -97% | LD |
| 4 | GUJARAT REGION | 0.0 | 0.0 | -100% | NR | 0.0 | 1.1 | -100% | NR |
| 5 | SAURASHTRA & KUTCH | 0.0 | 0.0 | -100% | NR | 0.0 | 1.2 | -100% | NR |
| 6 | KONKAN & GOA | 0.0 | 0.0 | -100% | NR | 0.9 | 0.0 | 9271% | LE |
| 7 | MADHYA MAHARASHTRA | 0.0 | 1.1 | -100% | NR | 0.5 | 3.4 | -86% | LD |
| 8 | MARATHWADA | 0.0 | 1.3 | -100% | NR | 1.7 | 6.4 | -74% | LD |
| 9 | VIDARBHA | 0.0 | 2.5 | -100% | NR | 2.1 | 13.3 | -84% | LD |
| 10 | CHHATTISGARH | 5.0 | 4.1 | 22% | E | 5.5 | 14.8 | -63% | LD |
| | REGION : SOUTH PENINSULA | 5.5 | 4.0 | 38% | | 24.2 | 14.5 | 67% | |
| 1 | A & N ISLAND | 0.8 | 7.5 | -89% | LD | 21.6 | 30.6 | -29% | D |
| 2 | COASTAL ANDHRA PRADESH | 7.5 | 3.2 | 135% | LE | 15.8 | 13.1 | 20% | E |
| 3 | TELANGANA | 3.8 | 2.6 | 44% | E | 9.3 | 11.2 | -17% | N |
| 4 | RAYALASEEMA | 5.9 | 1.8 | 231% | LE | 29.0 | 7.6 | 281% | LE |
| 5 | TAMILNADU & PONDICHERY | 2.7 | 4.9 | -44% | D | 28.1 | 21.6 | 30% | E |
| 6 | COASTAL KARNATAKA | 2.0 | 2.7 | -25% | D | 26.3 | 6.1 | 331% | LE |
| 7 | N. I. KARNATAKA | 0.6 | 3.1 | -79% | LD | 9.2 | 7.4 | 25% | E |
| 8 | S. I. KARNATAKA | 12.6 | 4.2 | 200% | LE | 40.8 | 11.4 | 258% | LE |
| 9 | KERALA | 10.6 | 13.7 | -23% | D | 56.6 | 39.4 | 44% | E |
| 10 | LAKSHADWEEP | 0.0 | 6.2 | -100% | NR | 155.3 | 16.6 | 836% | LE |
| | COUNTRY : | 3.7 | 7.7 | -52% | | 18.7 | 35.6 | -48% | |

CATEGORYWISE NO.OF SUBDIVISIONS AND % AREA(SUBDIVISIONAL)OF THE COUNTRY

| CATEGORY | Week :29-03-2018 To 04-04-2018 | | Period:01-03-2018 To 04-04-2018 | |
|---|---|---|---|---|
| | NO.OF SUBDIVISIONS | SUBDIVISIONAL %AREA OF COUNTRY | NO.OF SUBDIVISIONS | SUBDIVISIONAL %AREA OF COUNTRY |
| Large Excess | 5 | 15% | 5 | 7% |
| Excess | 3 | 10% | 4 | 10% |
| Normal | 1 | 3% | 2 | 4% |
| Deficient | 5 | 8% | 6 | 14% |
| Large Deficient | 9 | 27% | 17 | 59% |
| NoRain | 13 | 37% | 2 | 6% |

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

# STATE 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.