



National Agromet Advisory Service Bulletin
Based on
Extended Range Weather Forecast (ERFS)

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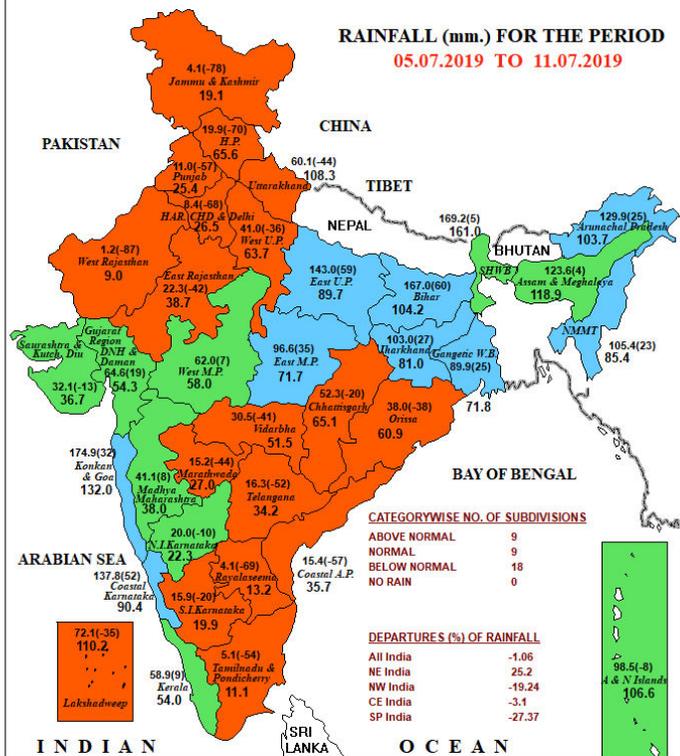
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Earth System Science Organization
India Meteorological Department

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 03 July) (5th July to 18th July 2019)

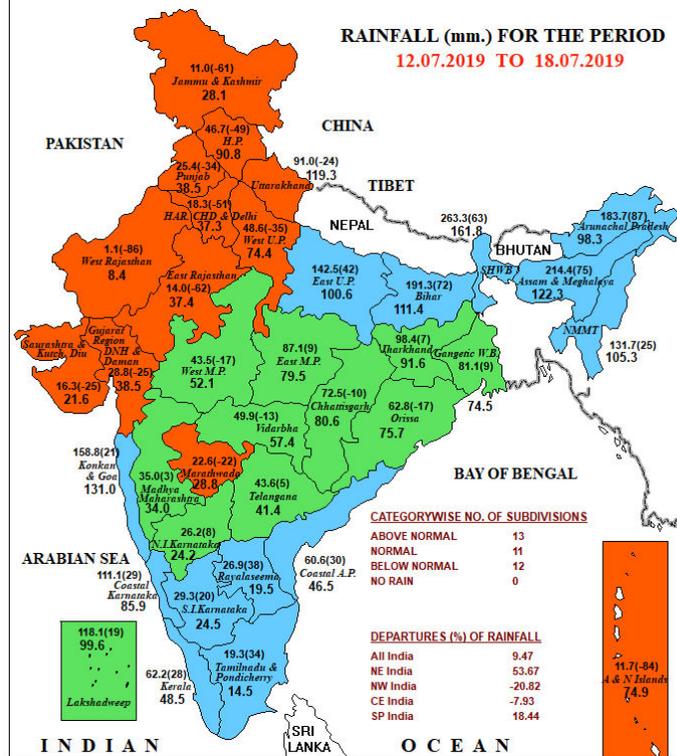
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

Rainfall Forecast Map - Normal RF Based Categories



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Rainfall Forecast Map - Normal RF Based Categories



LEGEND: ■ ABOVE NORMAL (+20% OR MORE) ■ NORMAL (+19% TO -19%)
■ BELOW NORMAL (-20% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 [a] Rainfall figures are based on MME Forecast data.
 [b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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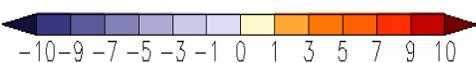
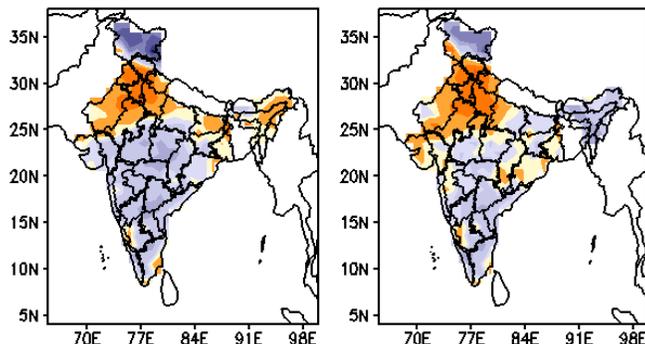
- **Week 1 (05.07.2019 to 11.07.2019):** Mostly above normal rainfall over Indo-Gangetic plains, North-eastern states, West coast and parts of Central India. However, it will be below normal over Southern peninsula and also over Northwest India. For the country as a whole, it will be normal.
- **Week 2 (12.07.2019 to 18.07.2019):** For the country as a whole, week 2 is also likely to be normal. Monsoon rainfall will increase over Northeast India, South peninsula and also over central India (particularly the West coast). Below normal rainfall over Northwest India is likely to continue.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 03 July)
(5th July to 18th July 2019)**

MME forecast Tmax anomaly (Deg C)

(Week1: 05Jul–11Jul)

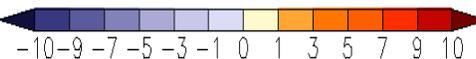
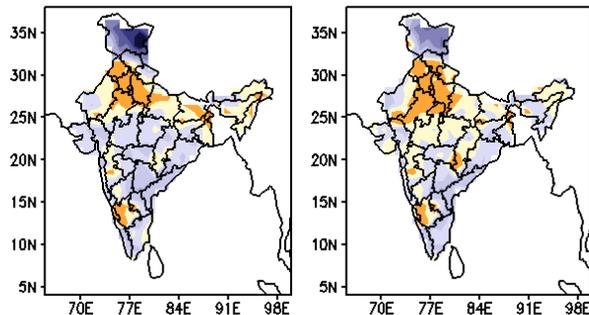
(Week2: 12Jul–18Jul)



MME forecast Tmin anomaly (Deg C)

(Week1: 05Jul–11Jul)

(Week2: 12Jul–18Jul)



Maximum Temperature (Tmax)

Week 1 (05.07.2019 to 11.07.2019) and Week 2 (12.07.2019 to 18.07.2019): Tmax anomaly is likely to be positive over North India during week 1 and week 2, whereas, it is expected to be normal to below normal over rest of the region.

Minimum Temperature (Tmin)

Week 1 (05.07.2019 to 11.07.2019) and Week 2 (12.07.2019 to 18.07.2019): Mainly above normal Tmin over parts of Northwest India and normal over rest of the region.

Strategic Agricultural Planning based on rainfall during next two weeks till 18th July 2019

Agromet Advisories

Kerala

Amount of rainfall received during the period from 01 June to 04 July 2019 over Kerala is 378.3 mm (48% deficit). The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is normal for week-1 and above normal for week-2.

- Since there is a chance for rainfall, the farmers are advised to go for planting of cardamom. As a prophylactic measure to Azhukal/capsule rot diseases in cardamom, spray Bordeaux mixture (1%) and drench the plant basins with copper oxychloride (0.2%).
- There is a chance of thrips in paddy during the dry spell between monsoon period. Apply 3 ml imidacloprid per 10 litre of water to control them.
- The farmers are advised to go for land preparation and planting of ginger. Apply green leaf mulching to prevent soil erosion and to increase the organic matter content in the soil.
- There is a chance of Epilachna beetle in vegetables. Cut and remove the leaves along with grub and their eggs. Then apply 2% Neemoil emulsion to control them.

Karnataka

Amount of rainfall received over North Interior Karnataka is 121.2 mm (3% excess), South Interior Karnataka is 118.8 mm (28% deficit) and Coastal Karnataka is 670.3 mm (32 % deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) over North Interior Karnataka is normal for both the weeks, over South Interior Karnataka is below normal week-1 and above normal for week-2 and over Coastal Karnataka is above normal for both the weeks.

North Interior Karnataka

- The farmers are advised to take up plant protection measures carefully in horticultural crops like tomato for fruit rot and leaf curl, pomegranate for bacterial blight and lime for leaf minor.
- As normal to excess rainfall has been received in most of the districts, sowing of *Kharif* crops like maize, Bt. cotton, redgram, bajra, sesamum and groundnut (bunch type) may be taken up on preference.

South Interior Karnataka

- TVX-944, KBC-1 are recommended varieties of groundnut and PS-16, PDM-84,178 are recommended varieties of greengram.
- Farmers are advised to go for inter cultural operations in mango orchard.
- Ganga-11, Deccan -103, Vijaya composite, Composite NAC- 6004, 6002, Hybrid-Nityashree (NAH-2049) are recommended varieties of maize.

Tamil Nadu

Amount of rainfall received during the period of 01 June to 04 July 2019 over Tamil Nadu is 34.1 mm (42 % deficit). The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal week-1 and above normal for week-2.

- Prevailing dry weather condition is favorable for citrus canker incidence. To control, spray Copper Oxy Chloride 0.2% at fortnight intervals.
- Prevailing weather condition is favorable for Die back / Anthracnose disease incidence in chilli. To control, three sprayings with Captan 0.2% or Miltox 0.2% is recommended.
- In the prevailing weather condition, rhinoceros beetle occurrence is noticed in coconut. To control, collect and destroy the various bio-stages of the beetle from the manure pits (breeding ground of the pest) whenever manure is lifted from the pits.

Maharashtra

Amount of rainfall received over Madhya Maharashtra is 160.3 mm (12% deficit), over Marathwada is 108.4 mm (30% deficit), Vidarbha is 147.6 mm (25% deficit) and Konkan region 861.3 mm (7% excess) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) over Vidarbha and Marathwada is below normal, normal over Madhya Maharashtra and above normal over Konkan for week-1 and normal over Madhya Maharashtra and Vidarbha, below normal over Marathwada and above normal over Konkan for week-2.

Marathwada

- Sowing of cotton crop and pigeon pea can be done till 15th July.
- Plantation of banana crop should not be done until sufficient amount of rainfall is received. Intercultural operation should be done in banana orchard.
- Plantation of custard apple crop should not be done until sufficient amount of rainfall is received.
- Sowing of black gram / green gram can be done up to 07 July.

Madhya Maharashtra

- If sufficient moisture is available in soil, carryout sowing of all dry land *kharif* crops like Tur, blackgram, greengram, bajra and sunflower. For intercropping, bajra + tur (2:1) and Sunflower + Tur (2:1) should be followed.
- To protect pigeonpea, greengram, blackgram, cowpea, soybean, sunflower etc. from soil borne wilt and root rot diseases, treat the seed with Trichoderma @ 5 kg per seed.
- Wherever the incidence of white grub, termites, nematodes are observed, mix the granular insecticide (10% phorate) with the applying fertilizers @ 15 kg/ha.

Konkan

- Due to forecast of heavy rain, make arrangement to drain out excess water from nursery of finger millet and vegetables.
- Due to increase in humidity during rainy season, there is a possibility for incidence of 'koleroga' disease in arecanut orchard. To prevent the incidence of fungal disease, give second spray of 1 % Bordo mixture along with sticker during rainy season.

Vidarbha

- In areas with sufficient realized rains, continuation of *kharif* sowing is advisable. Areas with insufficient soil moisture condition, *kharif* crops should be sown only upon receipt of sufficient rainfall.
- For cotton sowing, recommended desi varieties like AKA-5, AKA-7 and AKA-8 with seed rate of 12 to 15kg/ha and spacing of 60 x 15 cm should be taken up.
- Complete the sowing of greengram and blackgram as sole crop by first week of July.
- Prepare rice seed beds at 1.2 x 4.0 m size for rice nursery on uplands field. The seed rate of fine and coarse varieties are 35 - 40 kg/ha & 50 kg/ha respectively.
- Recommended greengram varieties are PKV- green gold, PKV mug -8802 and black gram are AKU-15, TAU-1, TAU-2 and PDKV black gold.

Jharkhand

Amount of rainfall received over Jharkhand during 01 June to 04 July 2019 is 132.2 mm (42 % deficit). The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is above normal for week-1 and normal for week-2.

- For direct seeding of rice, select recommended varieties like Birsa Vikas Dhan 110 & 111, Vandana, Lalat, Sahbhagi, IR-64 (DRT-1) etc.
- Medium duration varieties of maize crops like Suwan composite-1, HQPM-1, Ganga safed, Vinay, Saktiman-1 etc may be sown for green cobs.
- Recommended varieties of groundnut are Birsa Bold, Birsa ground nut - 1, Birsa ground nut – 2, Birsa ground nut -3, Birsa ground nut -4 and A.K.12-14.

Bihar

Amount of rainfall received over Bihar during 01 June to 04 July 2019 is 110.4 mm (45 % deficit). The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is above normal for both the weeks.

- Complete the nursery sowing of paddy up to 10 July. Sahbhagi, Prabhat, Dhanlakshmi, Richariya, Saket-4, Rajendra Sweta and Rajendra Bhagwati are the early varieties of paddy, which are recommended for sowing in north Bihar.
- As light rainfall has occurred over North Bihar districts and in view of the rainfall forecast, farmers are advised for rice transplanting in medium and low land areas.
- Sowing of *kharif* vegetables such as lady's finger, pumpkin, cucumber, sponge gourd, bottle gourd is advised in upland area.
- Land preparation is advised for sowing of pigeon pea (Arhar) and sunflower. Application of well decomposed FYM/Compost is suggested during land preparation.

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh is 53.7 mm (57% deficit) and West Uttar Pradesh is 28.9 mm (67% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) over West Uttar Pradesh is below normal for both the weeks and over East Uttar Pradesh is above normal for both the weeks.

- As per rainfall received and delayed onset of monsoon, farmers are advised to sow short duration rice varieties such as Narendra-118, Narendra-80, Narendra-1, Narendra-2, Pant dhan-12, IR-50, Barani deep, Narendra lalmati, Shusk Samarat, HUR-3032 or CO-51.
- Thinning and weeding of *Kharif* maize crop should be done at 15-20 days after sowing.

Chhattisgarh

Amount of rainfall received over Chhattisgarh during 01 June to 04 July 2019 is 194.1 mm (14 % deficit). The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal for week-1 and normal for week-2.

- Monsoon rainfall has started in maximum portions of Chhattisgarh state. Therefore farmers should start sowing of *kharif* crops like paddy, soybean, arhar, sesamum, maize, Urd, moong, groundnut etc. Seed treatment should be done before sowing.
- In line sown paddy crop, pre-emergence herbicides should be used within three days of sowing the rice.
- Groundnut, soybean and other pulse crops should be sown with proper drainage arrangement. For this seeds should be treated with culture before sowing. The quantity of Rhizobium culture @ 5 g + PSB @ 10 g/Kg seed should be used for this seed treatment.
- Intercultural operations should be done in ginger, turmeric, okra and cowpea.

Rajasthan

Amount of rainfall received over East Rajasthan is 86.1 mm (4% excess) and West Rajasthan is 30.3 mm (32% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) over East and West Rajasthan is below normal for both the weeks.

- Sufficient soil moisture is available due to receipt of good rainfall. Hence, farmers are advised to complete sowing of maize, soybean, bajra, sorghum, groundnut. Recommended varieties for maize are Aravali Makka-1, Pratap Makka-3, Pratap Makka-5, Pratap Hybrid-1, Bio-9637 and for soybean: PK-472, JS-335, Pratap Soya-1, Pratap Soya-2, Pratap Raj Soya-24.
- Farmers are advised to sow bajra and cluster bean in western and eastern parts of the state. The improved varieties of bajra are HHB-67, Raj-171, ICMH-356, RHB-121, RHB-173 and for cluster bean recommended varieties are RGC-197, RGC-936, RGC-986, RGC-1002 & 1003, RGC-1033. Use seed rate of 15-20 kg/ha with application of 10 kg N/ha and 40 kg P₂O₅/ha at sowing.
- Spray Pendimethalin 1 kg in 500-600 litre of water before emergence for the control of weeds in soybean.

Gujarat

Amount of rainfall received over Gujarat region is 142.9 mm (17% deficit) and in Saurashtra and Kutch 67.5 mm (42% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) over Gujarat region and Saurashtra and Kutch is normal for week-1 and below normal for week-2.

- Sowing of pigeon pea, green gram, soybean, cow pea and black gram should be done on receipt of good rainfall. Seed should be treated with captan @ 3g/kg seed. Before sowing seed should also be treated with biofertilizer (Rhizobium +PSB).
- Select varieties like GHB-558, GHB-744, GHB-905, GHB-732, GHB-538 of pearl millets for *kharif* season. Sowing of seed with spacing of 45 cm between two rows and 10 to 15 cm between two plants

is recommended.

- In brinjal, to control shoot and fruit borer, apply Chlorpyrifos 20 EC 20 ml or DDVP 76 EC 7 ml or Emamectin Benzoate 5 SP 3 g.

Assam

Rainfall received over Assam is 403.3 mm (28% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is normal for week-1 and above normal for week-2.

- Farmers may start transplanting of sali rice seedlings in medium low land areas. In case of short duration and high yielding varieties, the age of seedlings during the time of transplanting should be 21 days and for long duration varieties the age of seedling should be 30-40 days.
- Farmers can plant the sucker, slip and crown of pine apple at a distance of 30, 60 and 90 cm from plant to plant, row to row & bed to bed respectively. Apply 24g urea, 12g SSP and 16g MOP per plant. Treat the planting materials by dipping in Mancozeb 2g/litre to protect from bud rot.
- To control red rot disease of sugarcane, water stagnation in the field should be avoided.
- Farmers may initiate land preparation for sesamum cultivation. Well drained sandy loam soils are best suited for the crop. Select recommended varieties such as SP 1181 (Madhavi), Gauri, Vinayak, ST 1683 and Punjab Til No.1.

West Bengal

Rainfall received over Gangetic West Bengal is 19.4 mm rainfall (66% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is above normal for week-1 and normal for week-2.

- Rainfall is expected in coming days. Thus, complete the sowing operations of aman rice as soon as possible. Ensure weed free seed bed and make proper drainage channel. Use suitable and improved varieties like IET-4786, Khitish, Swarna, IR-36, etc. Farmers may start the preparation of main land for transplanting.
- At present attack of jute semilooper, bihar hairy caterpillar and stem weevil in jute is becoming severe. To control, apply Dichlorvos @ 3 ml per 4 litre of water or Endosulphan 2 ml per litre of water.
- In pumpkin, ridge-gourd, pointed gourd and cucumber, there is a chance of attack of Red-Pumpkin Beetle during current weather condition. To control, apply Dimecron or rogor (1ml per litre of water).

Haryana

Rainfall received over Haryana is 19.4 mm rainfall (66% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal for both the weeks.

- Transplant 25-30 days old paddy seedlings and avoid deep planting for better crop establishment and fill up the gaps within a week. Maintain 5-6 cm standing water up to maximum tillering stage.
- Possibilities of rain, farmers are advised not to start the sowing of guar, bajra, maize. Keep fields prepared for sowing after rains and procure the certified seeds of recommended varieties of guar, bajra, maize, cluster bean.

- Farmers are advised to postpone irrigation and spraying operations in vegetable crops. Make arrangement to avoid plant damage (particularly staked creeper) from anticipated gusty winds. Make arrangement to raise new orchard during monsoon season.

Himachal Pradesh

Rainfall received over Himachal Pradesh is 57.5 mm rainfall (50% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal for both the weeks.

- Maize sowing should be completed where sufficient rains has been occurred.
- Apply second dose of nitrogen in apple orchard.
- To control the mango hopper, spray Mascran or Nuacran @ 40 ml or 200 ml per 200 litres of water.
- Transplant the samplings of tomato, capsicum, chilli etc. in the well prepared fields.

Uttarakhand

Rainfall received over Uttarakhand is 96.0 mm rainfall (53% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal for both the weeks.

- Harvest matured fruits of tomatoes, chilli, capsicum, brinjal and cucurbitaceous crops. Staking and mulching should be done. Avoid water logging and postpone any type of chemical spray.
- Transplanting may be done in paddy. Apply Butachlor herbicide as per recommendation within 1-3 days of transplanting. Apply FYM/fertilizers as per recommendation of soil testing.
- Prepare drainage channel properly in rainfed ginger and potato crop.

Punjab

Rainfall received over Punjab is 27.4 mm rainfall (56% deficit) during 01 June to 04 July 2019. The extended range weather forecast for next two weeks (05-11 and 12 - 18 July) is below normal for both the weeks.

- Apply 1/3 nitrogen at the time of transplanting or upto 7 days after transplanting and second 1/3 dose 21 days after transplanting of rice.
- For control of weeds in maize, use Atrazine 50 WP as pre-emergence application @ 500g per acre on light textured soils and @ 800 g per acre on heavy textured soils. Atrazine can also be sprayed 10 days after sowing maize for controlling weeds.
- Apply remaining half dose of nitrogen at flowering stage of cotton. Eradicate the weeds like kanghi buti, peeli buti, puth kanda, etc. growing on cotton field bunds, waste lands, road side and irrigation channels/canals to avoid further spread of whitefly to cotton field.
- It is the right time for sowing of all the cucurbits, okra, rainy season tomato varieties, brinjal, cowpeas and early varieties of cauliflower.

Jammu

Rainfall received during 01 June to 04 July 2019 over Jammu is 82.4 mm, which is 4% deficit. The extended range weather forecast for next two weeks (05 to 11 and 12 to 18 July) is below normal for

both the weeks.

- Farmers may go for sowing of maize crop with seed rate of 20-30 kg/ha after the receipt of rain under sub-tropical region of Jammu.
- Keeping in view of chances of rainfall harvest and thresh the summer pulse crop as early as possible.
- Go for direct sowing of paddy crop without any further delay. Apply full dose of Phosphorous and Potassium and 1/3 dose of Nitrogen fertilizer.
- Keep the rice nursery and field bunds free from weeds either by hand weeding or by application of butachlor weedicide@30 kg/ha.

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