



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

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&
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India Meteorological Department

Realized Rainfall and Extended Range Forecast (Rainfall and Temperatures)

Realized Rainfall

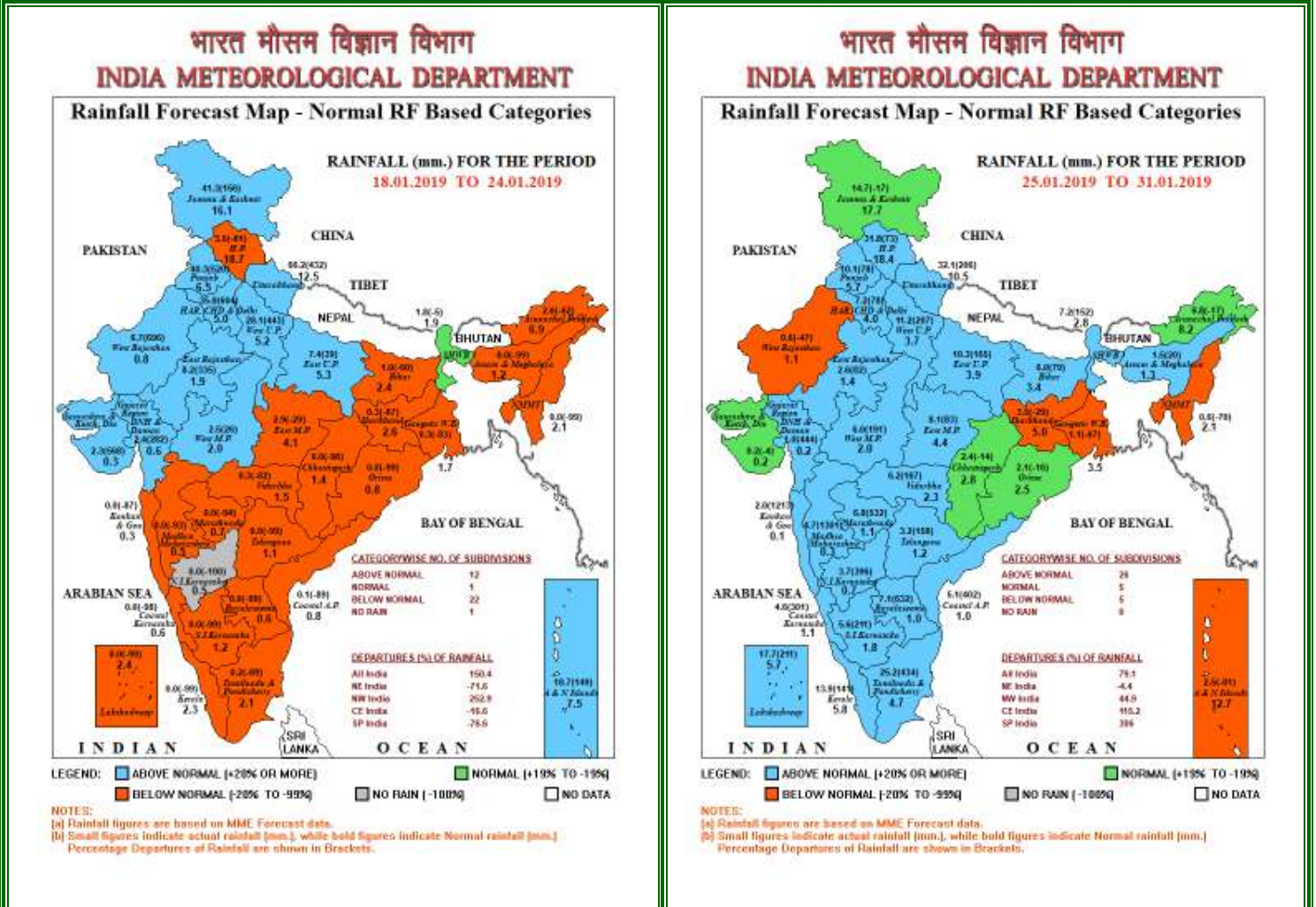
(3rd to 16th January 2019)



- Normal or above normal rainfall occurred in both the weeks in Andaman & Nicobar Islands.
- Normal or above normal rainfall occurred in either of the two weeks in Jammu & Kashmir, West Rajasthan and Himachal Pradesh.
- Below normal rainfall / no rain occurred over rest of the country.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 16 January) (18th to 31st January 2019)



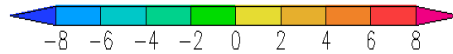
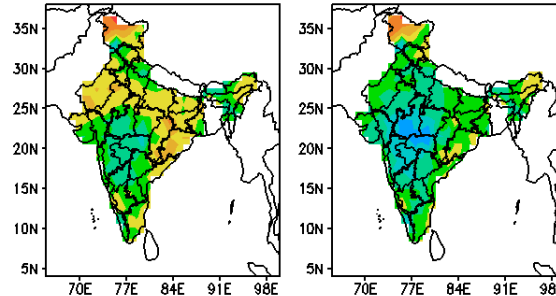
Extended Range Rainfall Forecast

- **Week 1 (18.01.2019 to 24.01.2019):** Western Disturbance associated precipitation over extreme north India is expected. South Bay of Bengal and adjoining Sri Lanka will remain active during the period.
- **Week 2 (25.01.2019 to 31.01.2019):** Western Disturbance associated precipitation over foot hills and adjoining eastern part of India. Southwest Bay of Bengal, Sri Lanka and adjoining south peninsula will remain active during the period.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 16 January)
(18th to 31st January 2019)**

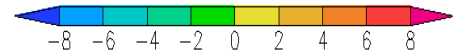
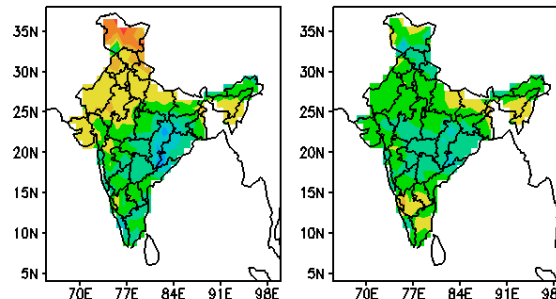
MME Bias Corrected Tmax Anomaly (Deg)

(Week1: 18Jan–24Jan) (Week2: 25Jan–31Jan)



MME Bias Corrected Tmin Anomaly (Deg)

(Week1: 18Jan–24Jan) (Week2: 25Jan–31Jan)



Maximum Temperature (Tmax)

- **Week 1 (18.01.2019 to 24.01.2019) and Week 2 (25.01.2019 to 31.01.2019):** Tmax over most of India during Week 2 is expected to be below normal. During week 1 Tmax is expected close to normal.

Minimum Temperature (Tmin)

- **Week 1 (18.01.2019 to 24.01.2019):** Below normal Tmin to continue over eastern parts of India (Odisha, Chhattisgarh and adjoining region), adjoining central India and also southern part. However, over northwest and north India it is expected to be slightly above normal.
- **Week 2 (25.01.2019 to 31.01.2019):** Below normal Tmin over most of India except some parts of eastern and south India is expected.

Strategic Agricultural Planning based on rainfall during next two weeks till 31st January 2019

Agromet Advisories

Kerala

No rainfall received during the period from 01 to 17 January 2019 over Kerala. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and above normal for week-2.

- Farmers are advised to spray Quinalphos (0.05%) 400 ml in 200 litres of water against coffee berry borer.
- White powdery spots are seen on the leaves of the cucurbitaceous vegetables. Apply 1.5 ml tebuconazole or 0.5 ml difenoconazole per one litre of water. After 10 days, apply 20 gram of Trichoderma viride per one litre of water to control powdery mildew disease of vegetables.
- There is a chance of aphids in cowpea. Apply 2% neem oil emulsion or apply 20 gram Verticillium *lecanii* per one litre of water in 10 days intervals. If aphid attack is severe, apply 3 ml Imidacloprid or 2 gram Thiamethoxam per 10 litre of water.
- Coconut palms are seen affected by red palm weevil. Apply 1 ml imidacloprid per one litre of water at spindle leaf area to reduce the adverse affect.

Karnataka

No rainfall received during the period from 01 to 17 January 2019 over different meteorological sub-divisions of Karnataka viz, North Interior Karnataka, South Interior Karnataka and Coastal Karnataka. The extended range weather forecast provided for 18 to 24 and 25 to 31 January over North Interior Karnataka is no rain for week-1 and above normal rain for week-2, over South Interior Karnataka is below normal for week-1 and above normal for week-2 and over coastal Karnataka is below normal for week-1 and above normal for week-2.

South Interior Karnataka

- One protection irrigation to *rabi* crops due to lack of soil moisture.
- Due to continuous dry spell since October month, the termite attack is common in horticulture and Forestry tree and shrubs hence to control, apply Aldrin termiticides.
- To protect the pulse grains from storage pests apply oils of Castor/ linseed/honge/neem oil @ 3-5 ml per kg of grains.
- Proper ventilation should be maintained for free circulation of air in the dairy sheds.

Tamil Nadu

No rainfall received during the period of 01 to 17 January 2019 over Tamil Nadu. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and above normal for week-2.

- Prevailing weather condition is favorable for Smut disease in sorghum. To control spray Mancozeb @ 1kg/ha or Carbendazim @ 500 g/ha.
- There is possibility of leafhopper, thrips and stem weevil incidence in cotton. To control sucking pest, spray Imidacloprid 200 SL 100 ml/ha or Fipronil 5%SC 1500-2000 ml/ha.

- There is possibility of Thrips and Aphids infestation in chilli. To control sucking pests in chilli, apply Carbofuran 3% G @ 33 kg/ha or phorate 10 % G @ 10 kg/ha.

Maharashtra

No rainfall received during 01 to 17 January 2019 over different meteorological sub divisions of the state viz., Konkan, Madhya Maharashtra, Vidarbha and Marathwada. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) over all the subdivisions of Maharashtra is below normal for week-1 and above normal for week-2.

Marathwada

- For the control of field rats in wheat crop, prepare a mixture with 1 part Zinc Phosphide + 1 part Jaggery + 50 parts wheat flour and edible oil. Apply this mixture in the burrows and close them.
- For management of pod borer in chickpea, take spray of Quinalphos 25 % @ 400 ml or Emamectin benzoate 5 % @ 80 gram per acre.
- Land preparation should be done for plantation of seasonal sugarcane crop.
- Apply 50 gm potash per plant in Banana orchard and irrigation management should be done in banana orchard.

Madhya Maharashtra

- To control pod borer in chick pea, install Helilure traps @ 5 no./ ha. If the incidence is more, spray Chlorpyrifos/ Quinolphos @ 15-20 + 10 litre of water.
- In timely sown irrigated wheat, application of half of recommended dose of Nitrogen should be given after 3 weeks of sowing i.e. after first weeding at the time of irrigation.
- For good fruit setting in Mango, spraying of 0:52:34 @ 100 gram per 10 litre water is recommended.
- Necessary arrangements for sowing of summer groundnut and sunflower should be done and sowing should be done in second fortnight of January.

Konkan

- There is possibility of incidence of tea mosquito bug and thrips during fruit bearing stage of cashewnut, if incidence is noticed spray Lambda cyhalothrin 5%EC @6 ml per 10 litre of water.
- Farmers are advised to provide irrigation to fruit crop nursery regularly.

Chhattisgarh

No rainfall received over Chhattisgarh during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and normal for week-2.

- For the control of aphids in the mustard crop farmers are advised to spray Dimethoate @ 0.05% at evening hours.
- Vegetables growing farmers are advised to spray Spynosad @ 150 ml /ha. for the control of leaf caterpillar.

- The vegetable which are transplanted in last month should be given nitrogenous fertilizer after inter-cultural operations.
- For control of pod borer in pigeon pea, spray Indoxacarb @300 gram/ha. dissolved in 500 litre water.

Odisha

No rainfall received over Odisha during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and normal for week-2.

- The rice seedlings for summer crop at 4-5 leaf stage are ready for transplanting. Plant 2 to 3 seedling per hill shallow and upright in lines. Seedling root dip should be done with 10 kg Azospirillum in 6 litre water before transplanting.
- Spodoptera in cabbage and cauliflower may be found. To control, alternate spraying of B.T product 1 kg or 250 LE SLNPV/acre at weekly interval or use 4 Trichogramma cards per acre.
- Farmers are advised to complete the sowing of summer groundnut and sunflower by this week .

Uttar Pradesh

Amount of rainfall received over East Uttar Pradesh region is 0.9 mm (87% deficit) and West Uttar Pradesh is 0.1 mm (99% deficit) during 01 to 17 January 2019. The extended range weather forecast provided for two weeks (18 to 24 and 25 to 31 January) for West and East Uttar Pradesh is above normal for both the weeks.

- Weather will be dry during this week, therefore, farmers are advised to irrigate their *rabi* crops as per need.
- Irrigation should be taken up at CRI and tillering which is critical stages of the wheat crop. Top dressed $\frac{1}{4}$ Urea after irrigation at optimum moisture during CRI stage.
- Light irrigation should be given at flowering and pod formation stage in mustard crop.
- Need based irrigation should be taken up for protection of fog and frost condition in potato crop and spray mancozeb 2gram / litre water to counter the effect of late blight disease at 10-15 days intervals.
- Light irrigation should be taken up in chickpea, pea and lentil at vegetative stage.

Bihar

Amount of rainfall received over Bihar is 0.2 mm (97% deficit) during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and above normal for week-2.

- Give 2nd irrigation in the timely sown wheat crop, which is in 40-50 days stage. In view of prevailing higher temperature, farmers are advised to maintain proper soil moisture in the crop field.
- Regular monitoring is advised for infestation of cut worm in potato crop. If infestation is observed in the crop field, spraying of Chlorpyrifos 20EC @ 2.5-3 ml per litre of water is advised.
- There is possibility of pod borer infestation in pea crop. To avoid the adverse effect, installation of Pheromone trap @ 3-4 traps per acre is advised when 15-20 % flowering is observed.
- Regular monitoring is advised for infestation of pod borers in pigeon pea, which reaches in flowering /pod formation stages. If infestation is found, spraying of Cartap hydrochloride @ 1.5ml/litre of water is advised.

West Bengal

No rainfall received over Gangetic West Bengal during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for both the weeks.

- Due to increase in temperature, phoma and blight infestation is observed in Potato. Second application of fungicide (Metalaxyl + Mancozeb mixture @ 2.5 g per litre of water) should be done.

Jharkhand

No rainfall received over Jharkhand during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for both the weeks.

- Timely sown pulse crops like pea, lentil, gram etc. are at pod formation stage. If the crops are attacked by pod borer insect, spray insecticide Monochrotophos @ 1 ml per litre of water immediately.
- Mustard Crops are now approaching the maturity stage. Harvest the crops when siliqua turns into bright yellow colour and dry the harvested crop in the sun for 2-3 days before threshing.
- Farmers wishing to cultivate summer vegetables, specially cucurbitaceous plant like sponge gourd, bottle gourd, bitter gourd, pumpkin, water melon, musk melon etc. may sow the seeds of these vegetables in pit and maintain the distance between two pits.

Rajasthan

Amount of rainfall received over West Rajasthan is 2.1 mm (16% excess) and no rainfall received over East Rajasthan during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) for West Rajasthan is above normal for week-1 and below normal for week-2 and East Rajasthan is above normal for both the weeks.

- There is a possibility of pod borer infestation in gram crop, to control spray of monochrotophos 36 SL 1.0 litre per hectare by dissolve with water should be done.
- For control of thrips in timely sown onion crops, spray of Imidacloprid @ 0.5 ml per litre of water with sticky material (Tipol 1.0 gram /litre) should be done.
- Irrigation should be done after 65-70 days in wheat at jointing and booting stage, at flowering in barley and also in mustard where the crop is at grain development stage.

Assam

Rainfall received over Assam is 1.3 mm (84% deficit) during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and above normal for week-2.

- Due to low night temperature and thick fog, farmers may observe Late Blight attack in Potato crop. To control, spraying of Mancozeb @ 2.5 gm/litre of water at an interval of 7-10 days as a protective measure is recommended.
- Due to favourable weather, late blight disease may be observed in tomato crop. To control, spray Indofil M-45 @ 2.5gram/litre of water against the disease. However, spraying with 1% Bordeaux mixture (10 gram Copper sulphate + 10gram lime + 1 litre water) is also effective in controlling blight in tomato.
- Protect poultry birds from cold by using gunny bags or plastic sheets around the poultry sheds during night.

Haryana

Rainfall received over Haryana is 1.8 mm rainfall (78% deficit) during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is above normal for both the weeks.

- Farmers are advised to do intercultural operation to conserve soil moisture and apply need based irrigation in wheat and gram crop.
- Apply need based irrigation and keep monitoring for insect/pest and diseases in mustard crop.
- Due to fall in night temperature, keep the animals under shed. Provide 50 grams iodized salt and 50 to 100 grams mineral mixture daily with animal feed/fodder to keep them healthy.

Punjab

Rainfall received over Punjab is 2.1 mm rainfall (79% deficit) during 01 to 17 January 2019. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is above normal for both the weeks.

- Irrigation process in wheat crop can be delayed as rainfall is expected in next 3-4 days.
- Farmers are advised to monitor the symptoms of late blight in potato, if symptoms observed in the field then protect the crop by spraying Indofil M-45/Mass M-45/Markzeb/Antracole/Kavach @ 500-700 gram or Mark copper/Copper oxychloride at 750-1000 gram per acre using 250-350 litres of water per acre.
- To control aphids in spinach, spray 350 ml Malathion 50 EC in 80 litres of water per acre as and when pest is noticed. Harvest the crop 7 days after spray.
- To protect the cabbage/ cauliflower from aphids, farmers are advised to spray 250-500 ml of Malathion 50 EC in 80-100 litres of water per acre. Repeat spray after 10 days, if necessary.

Himachal Pradesh

Himachal Pradesh has received 26.4 mm of rainfall during 01 to 17 January 2019, which is 40% deficit. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is below normal for week-1 and above normal for week-2.

- Thinning and weeding is recommended in timely sown mustard crop.
- Add mulch material in space between two rows of vegetables crops for conservation of soil moisture and maintaining the soil temperature.
- Advised for Intercultural operations of radish, carrot, turnip, palak and methi carrot, broccoli, lettuce can be done.
- Planting of onion bulbs in 30x10 cm spacing is recommended.

Uttrakhand

Uttrakhand has received 5.7 mm of rainfall during 01 to 17 January 2019, which is 75% deficit. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) is above normal for both the weeks.

- Keeping in view of optimum weather conditions, farmers are advised to transplant onion seedling as early as possible.
- To save the young plants from frost, it should be covered with the plastic sheet with proper circulation of wind and light.
- Sowing of Pea, coriander, fenugreek and cumin should be done.
- Mulching should be done on Cole crops for conserve moisture.

Jammu

Rainfall received during 01 to 17 January 2019 over Jammu is 41.5 mm, which is 7% deficit. The extended range weather forecast provided for next two weeks (18 to 24 and 25 to 31 January) over Jammu is above normal for week-1 and normal for week-2.

- Apply urea @ 2.5 kg as 1st top dressing in very late sown wheat crop when the crop is 25-30 DAS old.
- If aphid attack is observed in Mustard, spray Chlorpyriphos 20EC @ 0.05% or Monochrotophos 36 WSC @ 0.04%.
- Farmers are advised to protect *rabi* pulses from wilt and blight attack, if observed, apply Bavistin/carbendazim @ 3gm/litre of water.
- Remove the haulms of Potato crop and leave crop in field for suberization.

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