



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast (ERFS)

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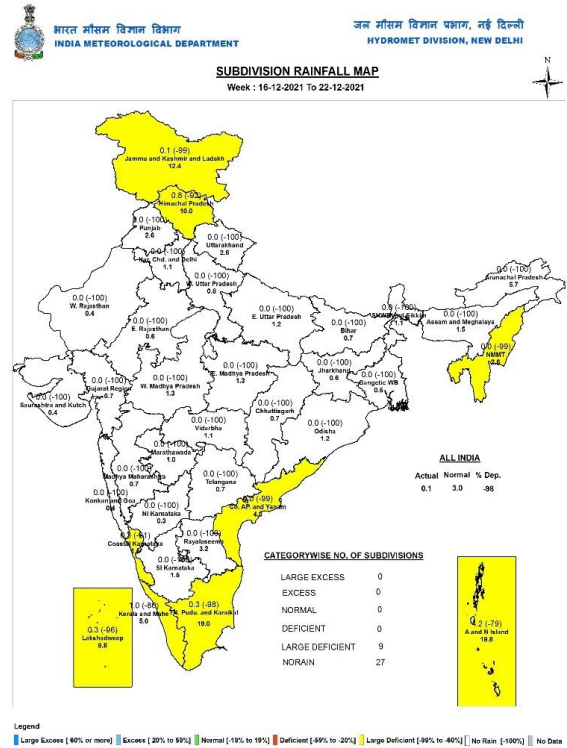
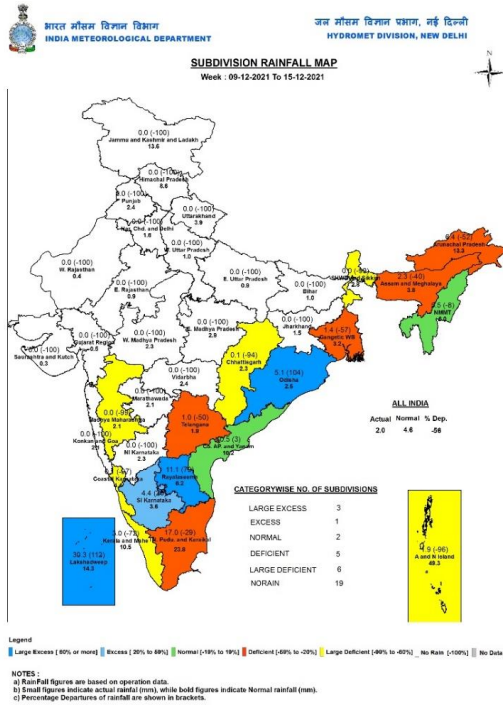
**AICRP on Agro-Meteorology (AICRPAM),
Central Research Institute for Dryland Agriculture (CRIDA),
Indian Council of Agricultural Research (ICAR)**

&

**India Meteorological Department (IMD),
Earth System Science Organization**

Realized Rainfall and Extended Range Forecast (Rainfall and Temperature)

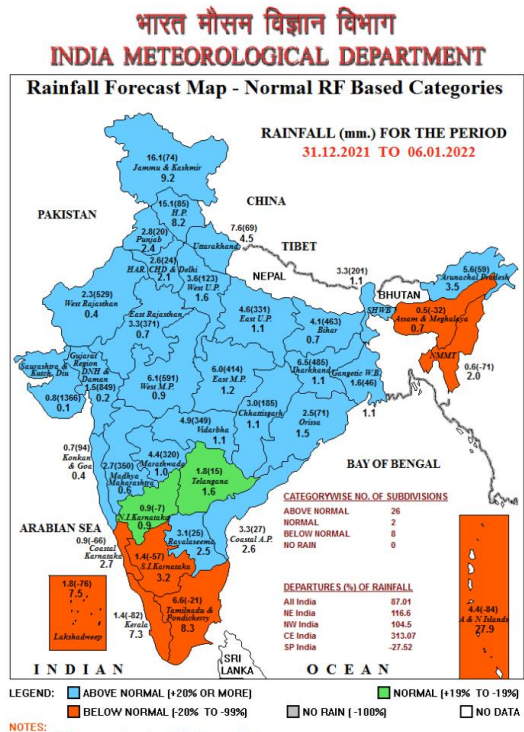
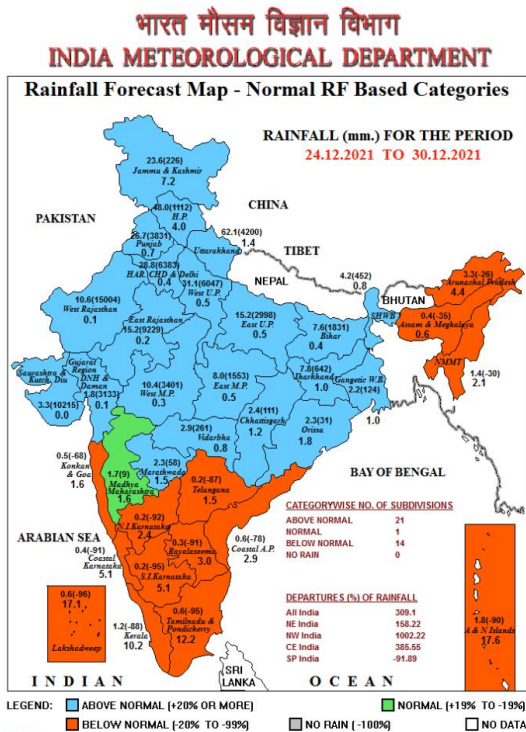
Realized Rainfall (9th to 22nd December, 2021)



- Normal or above normal rainfall occurred in both the weeks in **none** of the States or UTs.
- Normal or above normal rainfall occurred in either of the two weeks in Nagaland Manipur Mizoram & Tripura (NMMT), Odisha, South Interior Karnataka, Coastal Andhra Pradesh & Yanam, Rayalaseema and Lakshadweep.
- Below Normal rainfall/no rain occurred in both the weeks over rest of the States & UTs.

Extended Range Forecast System

Rainfall forecast maps for the next 2 weeks (IC – 22 December) (24th December, 2021 to 6th January, 2022)



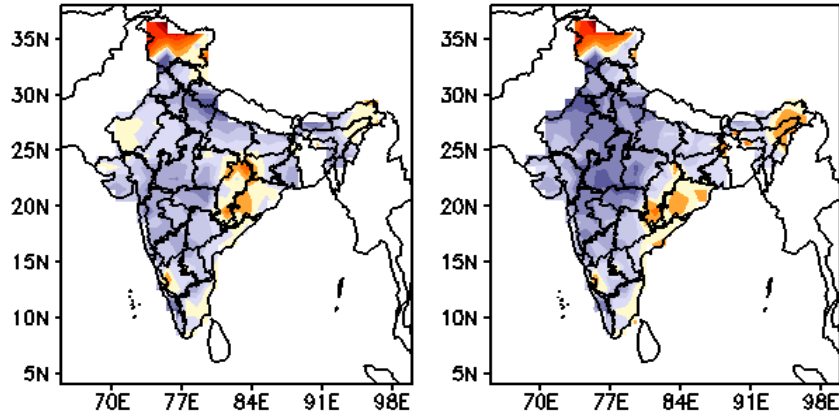
- **Week 1 (24.12.2021 to 30.12.2021):** Western Disturbances associated rainfall is expected over extreme north covering Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab, East Uttar Pradesh, etc. Northeast monsoon rainfall will be below normal.
- **Week 2 (31.12.2021 to 06.01.2022):** Rainfall associated with Western Disturbance is likely over some parts of extreme north India during the period. Rainfall will be normal to below normal over remaining parts of the country.

**Maximum and Minimum temperature anomaly ($^{\circ}\text{C}$) forecast
for next 2 weeks (IC – 22 December)
(24th December, 2021 to 6th January, 2022)**

MME forecast Tmax anomaly (Deg C)

(Week1: 24Dec–30Dec)

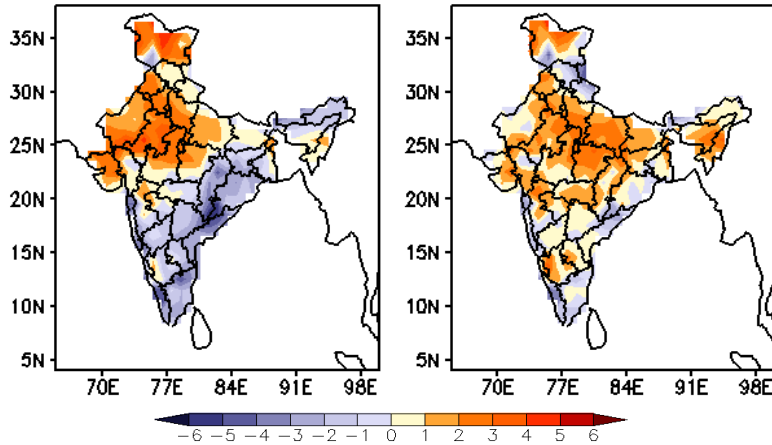
(Week2: 31Dec–06Jan)



MME forecast Tmin anomaly (Deg C)

(Week1: 24Dec–30Dec)

(Week2: 31Dec–06Jan)



Maximum Temperature (Tmax)

- **Week 1 (24.12.2021 to 30.12.2021) and Week 2 (31.12.2021 to 06.01.2022):** Mostly below normal Tmax over most parts of India in week 1, except some isolated regions of extreme north India, eastern coastal States and isolated regions over northeast India.

Minimum Temperature (Tmin)

- **Week 1 (24.12.2021 to 30.12.2021) and Week 2 (31.12.2021 to 06.01.2022):** Rise in minimum temperature over northwest India in week 1 and week 2 is expected. Most parts of the country will have above normal Tmin in week 2.

Strategic Agricultural Planning based on rainfall during next two weeks till 06 January 2022

Agro-met Advisories

Kerala

Amount of rainfall received over Kerala is 1027 mm (111% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) is below normal for week-1 and week-2.

- Due to increase in atmospheric temperature, there is a chance of sucking pest infestation in vegetables. To control, it is advised to spray neem oil emulsion 2%, once in a week or spray *Lecanicillium lecanii* @ 20 g per litre of water.
- Current weather conditions may favour the rice bug infestation in paddy. To control, it is advised to spray fish jaggery extract @ 20 ml per litre of water or spray chitin-based *Pseudomonas fluorescens* @ 20 g in one litre of water. If the attack is severe then spray Azadirachtin @ 10 ml or Malathion @ 2 ml per litre of water.

Tamil Nadu

Amount of rainfall received over Tamil Nadu is 704 mm (61% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) is below normal for week-1 and week-2.

- Current weather condition is favorable for shoot weevil infestation in cotton. To prevent, soil application of Carbofuran 3G @ 30 kg is advised 20 days after sowing and earthing up.
- Prevailing weather conditions are congenial for tristeza wilt in acid lime. Farmers are advised for periodic spray of insecticide like Monocrotophos 0.05% to reduce the secondary spread of the disease in the orchard.

Maharashtra

Rainfall received over Madhya Maharashtra is 181 mm (76% large excess); Marathwada is 119 mm (20% excess); Vidarbha is 62 mm (-21% deficit) and Konkan region is 266 mm (91% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Konkan is below normal, over Vidarbha, Marathwada is above normal and Madhya Maharashtra is normal for week-1; During week-2, above normal rainfall is expected over Konkan, Madhya Maharashtra, Marathwada and Vidarbha regions.

Vidarbha

- Partly cloudy weather and lowering night time temperature favours infestation of pod borer in timely sown chickpea in early stages. To manage the initial incidence of pod borer (*Helicoverpa*), it is advised to erect bird perches @ 20/ha randomly in the field. If pod borer damage is above ETL, spraying of 5% NSKE or Azadirachtin 300 ppm @ 50 ml per 10 litres of water or Emamectin benzoate 5 % @ 4.5 g per 10 litres of water is advised.

- Application of organic mulches in fruit crops tree basins is advised for thermal insulation to reduce cooling of soil surface during cold weather period.

Madhya Maharashtra

- For the management of wilt and root rot in chickpea, drenching of Trichoderma @ 50 g per 10 litres of water is recommended.
- To avoid fruit drop in mango, application of Imidacloprid @ 1 ml per litre of water is recommended.

Marathwada

- To reduce the negative impact of low temperature in Banana orchard, flood irrigation is advised during early morning.
- Cracking may be observed in grapes due to low temperature. To protect the fruits from cracking, proper irrigation management in grape orchard is advised.

Hisar

Amount of rainfall received over Hisar is 27 mm (56% excess) during 01 October - 23 December 2021. The extended range rainfall forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Hisar is above normal for week-1 and week-2.

- Under prevailing weather condition, farmers are advised to complete the sowing of wheat/barley as soon as possible
- There is a possibility of fall in night temperature and variable weather. Therefore, farmers are advised to keep the animal under sheds and clean the surrounding to control fly and mosquito in cattle shed.

Karnataka

Rainfall received during 01 October - 23 December 2021 over South Interior Karnataka is 502 mm (149% large excess) and North Interior Karnataka is 173 mm (27% excess). The extended range weather forecast (rainfall) for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over South Interior Karnataka and North Interior Karnataka is below normal for week-1 and; below normal over South Interior Karnataka and normal over North Interior Karnataka for week-2.

North Interior Karnataka

- In the areas where heavy and continuous rainfall has been received during past days may adversely impact the growth and development of crops. Therefore, it is advised to drain out excess and standing water by making proper channels in the field.
- As the soil moisture condition is good, sowing of chickpea and wheat (irrigated and *Dicoccum*) may be taken up.

South Interior Karnataka

- Under prevailing weather condition, sowing of horse gram- (var. *PHG-9, KBH-1, Niger*); field bean (var. *HA-3 and 4*) and sunflower (var. *KBSH-1, 41, 42, 44 and 53*); cowpea (var. *KBC-1, TVX-944 and PKB-4*) for vegetable purpose is advised.
- To protect the pulse grains from storage pests, it is advised to apply oils of castor/ linseed/pongamia/neem oil @ 3-5 ml per kg of grains.

Uttar Pradesh

Rainfall received during 01 October - 23 December 2021 over East Uttar Pradesh is 87 mm (96% large excess) and West Uttar Pradesh is 93 mm (219% large excess). The extended range weather forecast (rainfall) for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over East Uttar Pradesh and West Uttar Pradesh is above normal for week-1 and week-2.

Western Uttar Pradesh

- Under prevailing weather condition, it is advised for sowing of late sown wheat varieties under irrigated condition. Recommended late sown varieties are *HUW-234, K-7903, UP-2338, K-9162, K-9533, HD-2643, HP-1744, NW-1014, K-8020, UP-2425, NW-2036, DBW-14, K-9423, PBW-524 NW-1076* and *HUW-510*.
- As per forecast clear weather appearing in upcoming week and no rainfall forecast. Farmers are advised for threshing of paddy crop as early as possible.

Eastern Uttar Pradesh

- Intercultural operation is advised to check the evapotranspiration losses and proper utilization of nutrient to the crop.
- Better pulverization should be made for conservation of soil moisture followed by planking for sowing of wheat.

Jammu

Amount of rainfall received over Jammu is 115 mm (9% excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Jammu is above normal for week-1 and week-2.

- Protect the onion crop from frost/ minimum temperature by providing irrigation in vegetable crops.
- Under prevailing weather condition, it is advised to spray Imidacloprid @ 1ml/3 litres of water to control cabbage butterfly, and caterpillar in *cole* crops.

Assam

Amount of rainfall received over Assam is 150 mm (-22% deficit) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Assam is below normal for week-1 and week-2.

- Due to the receipt of deficit to large deficit rainfall in many districts of Assam, farmers are advised to provide irrigation in the *rabi* vegetable crops like cauliflower, cabbage, broccoli, knol khol, brinjal etc.
- Under prevailing weather condition, farmers are advised to continue the harvesting of ripened *sali* paddy and transfer the harvested paddy to safe place after proper sun drying.

Chhattisgarh

Amount of rainfall received over Chhattisgarh is 63 mm (-17% deficit) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Chhattisgarh is above normal for week-1 and week-2.

- In the extreme cold condition, there is a chance of yellow vein mosaic incidence in vegetable crops. Therefore, farmers are advised to go for spraying of systemic fungicides.

Madhya Pradesh

Amount of rainfall received over Madhya Pradesh is 63 mm (-17% deficit) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Madhya Pradesh is above normal for week-1 and week-2.

- Farmers are advised to protect vegetables and pulses from frost due to lowering of night temperature and apply light and frequent irrigation / sprinkler irrigation in the evening hours.

Gujarat

Amount of rainfall received over Gujarat is 60 mm (103% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Gujarat is above normal for week-1 and week-2.

- To control pod borer in *kharif* pigeon pea, it is advised to spray Quinalphos 20 ml or Chlorpyrifos 15 ml in 10 litres of water at flowering stage and pod formation stage.

Himachal Pradesh

Amount of rainfall received over Himachal Pradesh is 74 mm (1% excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Himachal Pradesh is below normal for

week-1 and above normal for week-2.

- For conservation of soil moisture and maintaining the soil temperature, it is advised to add mulch material in the space between two rows of vegetables crops. Application of mulch also prevents the growth of weeds.
- Under prevailing weather condition, suitable varieties of cauliflower, capsicum and tomato should be transplanted in polyhouse.

West Bengal

Rainfall received during 01 October - 23 December 2021 over Gangetic West Bengal is 271 mm (77% large excess) and Sub-Himalayan West Bengal is 281 mm (61% large excess). The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Gangetic West Bengal and Sub-Himalayan West Bengal is above normal for week-1 and week-2.

- Due to water logging condition because of recent depression rainfall, newly sown potato and mustard crops are totally affected. Therefore, farmers are advised to go for sowing of direct seeded spinach, radish, carrot etc.

Jharkhand

Amount of rainfall received over Jharkhand is 138 mm (58% excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Jharkhand above normal for week-1 and week-2.

- To avoid the adverse effect of low temperature on various crops/vegetables, it is advised to maintain the soil moisture in the field and irrigate them at a regular interval and smoking around the field also helps to maintain the temperature.
- Prevailing weather condition is congenial for blight disease in potato, it is advised to spray fungicide Ridomil @ 1.5 g per litre of water.

Andhra Pradesh

Rainfall received during 01 October - 23 December 2021 over Rayalaseema is 466 mm (111% large excess) and Coastal Andhra Pradesh and Yanam is 360 mm (7% excess). The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Rayalaseema and Coastal Andhra Pradesh below normal for week-1 and above normal for week-2.

- Present weather conditions are congenial for collar rot disease incidence in chickpea grown in Ananthapuramu, Kurnool districts. To control, farmers are advised to drench soil with Carbendazim @ 1 g or Mancozeb @ 3 g /litre of water.

- Current weather conditions are congenial for infestation of pink boll worm in cotton grown in Srikakulam, Prakasam, Guntur, Krishna, Ananthapuram, YSR Kadapa, and Kurnool districts. For effective control, farmers are advised to spray Profenophos @ 2ml/litre or Thiodicarb 1.5g/litre of water.

Odisha

Amount of rainfall received over Odisha is 166 mm (27% excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Odisha is above normal for week-1 and week-2.

- Cover the recently planted *cole* crops with paper pockets during night time to avoid low temperature.
- Because of low temperature, it is advised to apply light irrigation in paddy nursery area during evening time to maintain the soil temperature favourable for seedling growth. In severe cold affected areas use polythene cover at night-time.

Bihar

Amount of rainfall received over Bihar is 190 mm (174% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Bihar is no rainfall for week-1 and below normal for week-2.

- Monitoring is advised for infestation of fruit and shoot borers in brinjal, tomato, chilli, gram and pea. If infestation occurs, installation of pheromone traps @ 3-4 traps per acre is advised. If insect population is observed to be above ETL, then spraying of Spinosad 1.0 ml/4 litre of water is advised.
- Under prevailing weather condition, sowing of late varieties of wheat crop is advised. Recommended varieties are *PBW-373*, *HD-2285*, *HW-2045*, *HUW-234*, *WR-544*, *DBW-14*, *HD-2643*, *HD-2967* and *NW-2036* are recommended for North Bihar region.

Uttarakhand

Amount of rainfall received over Uttarakhand is 216 mm (318% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Uttarakhand is above normal for week-1 and week-2.

- In view of rainfall in coming days, farmers are advised to postpone irrigation and any spray of chemicals.
- Under prevailing cold weather condition, it is advised to provide more fodder and mineral-rich compounds to animals and protect the young calves by covering their body with jute bags during

the night time.

Rajasthan

Amount of rainfall received over Rajasthan is 60 mm (142% large excess) during 01 October - 23 December 2021. The extended range weather forecast (rainfall) provided for next two weeks (24 - 30 December 2021 and 31 December 2021 - 06 January 2022) over Rajasthan is above normal for week-1 and week-2.

- In the coming days, there is a possibility of frost with a drop in the temperature. Therefore, farmers are advised to irrigate the crop and spray 0.1 % Sulphuric acid.
- Due to high relative humidity, incidence of blight may occur in tomato. If symptoms appear, it is advised to spray Carbendazim @ 1.0 g/litre of water or Dithane-M-45 @ 2.0 g / litre of water.

Disclaimer:

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