



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

**Validity: (20<sup>th</sup> December 2019 to 2<sup>nd</sup> January 2020)**

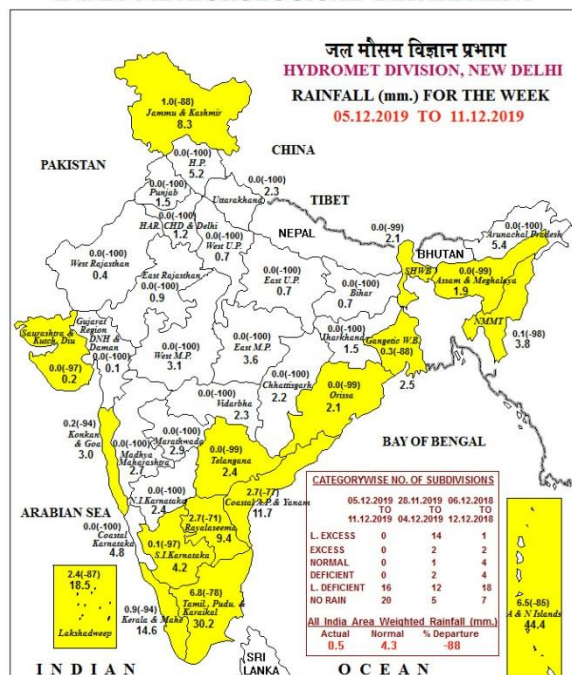
**Date of issue: 20<sup>th</sup> December 2019**

**Issued by**  
**Indian Council of Agricultural Research (ICAR)**  
**All India Coordinated Research Project on Agro meteorology (AICRPAM),**  
**Central Research Institute for Dryland Agriculture (CRIDA), Hyderabad.**  
**&**  
**Earth System Science Organization**  
**India Meteorological Department**

**Realized Rainfall and Extended Range Forecast**  
**(Rainfall and Temperatures)**

## Realized Rainfall (5<sup>th</sup> to 18<sup>th</sup> December, 2019)

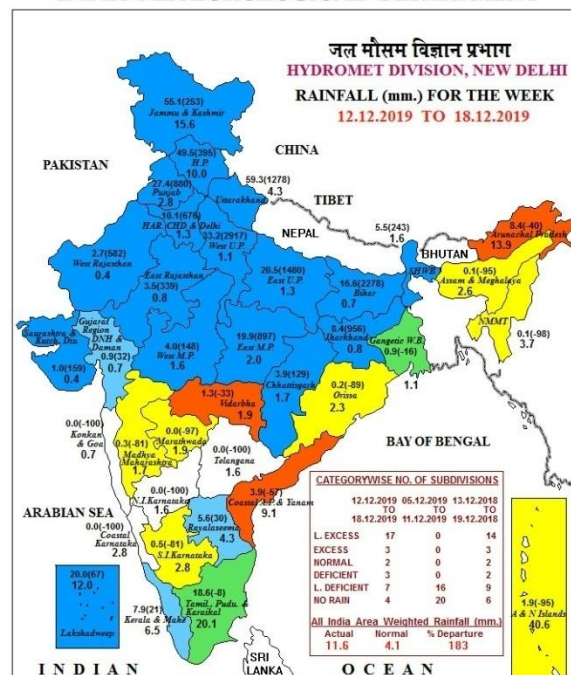
### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



**LEGEND:** ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)  
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

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

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



**LEGEND:** ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)  
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

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

- Normal or above normal rainfall occurred in during the period 12.12.2019 to 18.12.2019 in Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Bihar, Jharkhand, West Bengal & Sikkim, Gujarat, Madhya Pradesh, Chhattisgarh, Rayalaseema, Tamil Nadu Puducherry & Karaikal, Kerala & Mahe and Lakshadweep.
- Below normal rainfall/no rain occurred over rest of the country.

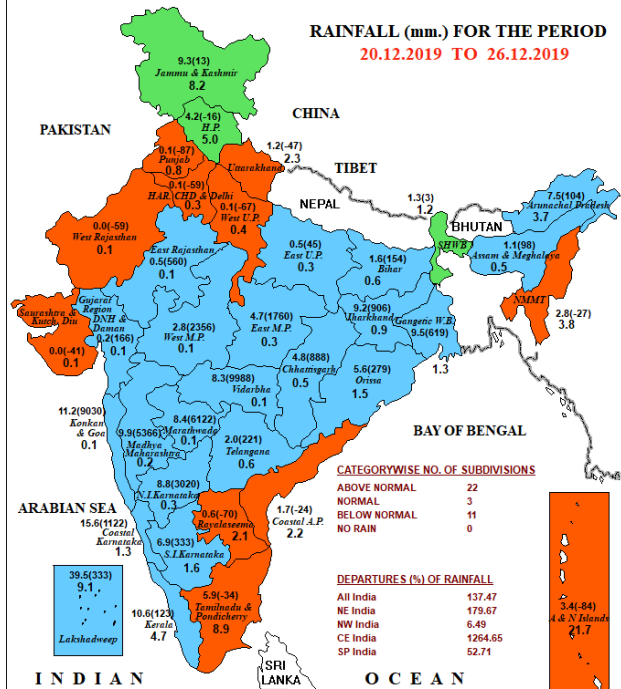
# Extended Range Forecast System

## Rainfall forecast maps for the next 2 weeks (IC – 18 December)

(20<sup>th</sup> Dec. 2019 to 2<sup>nd</sup> Jan. 2020)

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

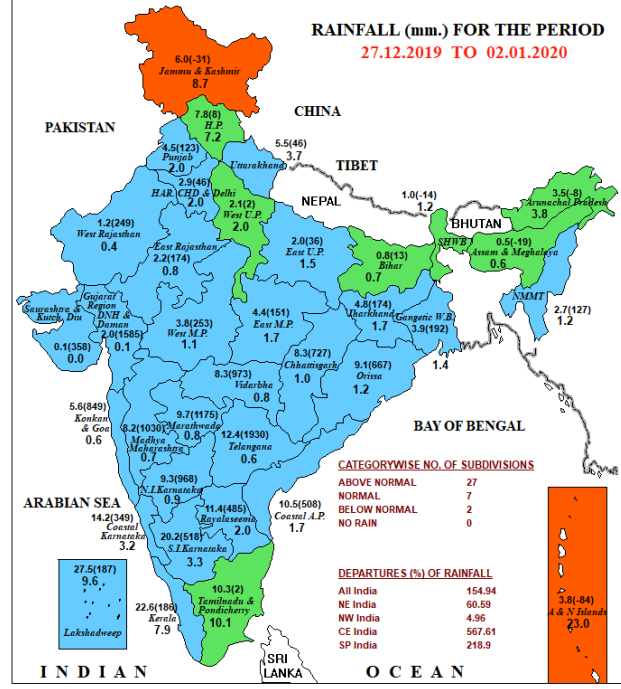
Rainfall Forecast Map - Normal RF Based Categories



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.

### भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

Rainfall Forecast Map - Normal RF Based Categories



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.

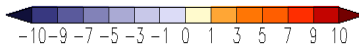
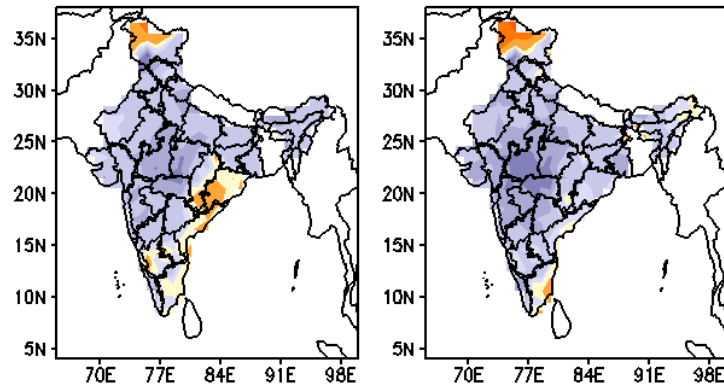
- **Week 1 (20.12.2019 to 26.12.2019) and Week 2 (27.12.2019 to 02.01.2020):** Central India and adjoining South Peninsula will remain active during the period.

**Maximum and Minimum temperature anomaly ( $^{\circ}\text{C}$ ) forecast  
for next 2 weeks (IC – 18 December)  
(20<sup>th</sup> Dec. 2019 to 2<sup>nd</sup> Jan. 2020)**

**MME forecast Tmax anomaly (Deg C)**

(Week1: 20Dec–26Dec)

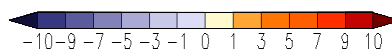
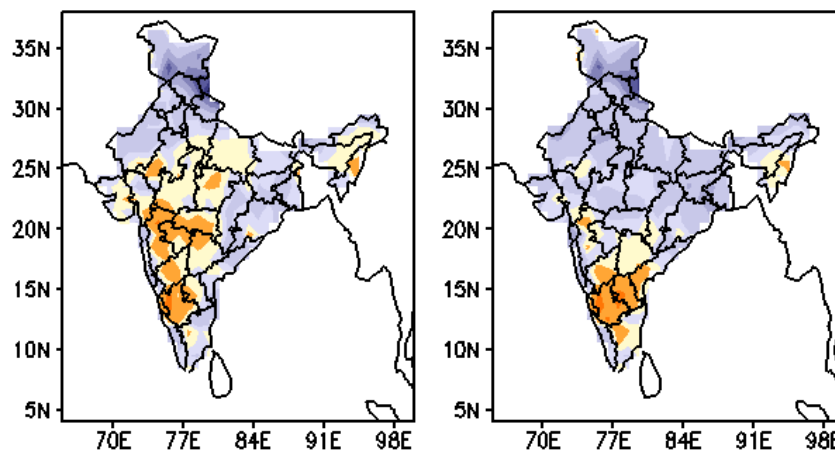
(Week2: 27Dec–02Jan)



**MME forecast Tmin anomaly (Deg C)**

(Week1: 20Dec–26Dec)

(Week2: 27Dec–02Jan)



**Maximum Temperature (Tmax)**

- **Week 1 (20.12.2019 to 26.12.2019) and Week 2 (27.12.2019 to 02.01.2020):** Tmax anomaly is mostly negative over central, western and southern parts of India. (Favourable condition for cold day condition).

**Minimum Temperature (Tmin)**

- **Week 1 (20.12.2019 to 26.12.2019):** Below normal Tmin expected over extreme north India.
- **Week 2 (27.12.2019 to 02.01.2020):** Below normal Tmin over extreme north India during week 1 is expanded into entire central India during week2 thereby the cold wave region will be expanded in week 2.

## **Strategic Agricultural Planning based on rainfall during next two weeks till 2<sup>nd</sup> January 2020**

### **Agromet Advisories**

#### **Kerala**

Amount of rainfall received over Kerala is 622.5 mm (28% excess) during the period of 01 Oct.-19 Dec. 2019. The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) is above normal for week-1 and week-2.

- Due to cloudy weather condition, there is a chance of leaf folder attack in Mundakan paddy. It is advised to use Trichogramma cards @ 2CC per one acre. If the attack is severe, spray Quinalphos @ 2ml/liter of water.
- To control fruit borer in cowpea, apply 5% Neem Kernel suspension in the initial stage. Spray Flubendamide 2ml/10 litre of water or Chlorantraniliprole 3 ml/10litre if the attack is severe.

#### **Tamil Nadu**

Amount of rainfall received over Tamil Nadu is 443.5 mm (4% normal) during the period of 01 Oct.-19 Dec. 2019. The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) is below normal for week-1 and normal for week 2.

- Prevailing weather condition is favorable for tobacco caterpillar in sunflower. It is advised to spray either Dichlorvos 76 EC 500 ml/ha or Phosalone 35 EC 1000 ml/ha.
- Prevailing weather conditions are favorable for leaf hopper and aphid incidence in cotton. Spray Dimethoate 30 EC 500ml/ha for the control of leaf hopper and Methyl demeton 25 EC 500ml/ha for the control of aphid.

#### **Maharashtra**

Rainfall received over Madhya Maharashtra is 228.3 mm (123% large excess), over Marathwada is 255.6 mm (159% large excess), Vidharbha is 65.0 mm (-18% deficit) and Konkan region 281.5 mm (103% large excess) during 01 Oct.-19 Dec. 2019. The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) over Madhya Maharashtra, Konkan, Marathwada and Vidharbha are above normal for week-1 and week-2.

#### *Marathwada*

- For the management of stem fly in wheat crop, spray Cypermethrin 10% EC @ 11 ml/10 litre of water.
- To control rhizome fly, earthing up is advised in turmeric crop along with drenching of Chloropyriphos 50 % @500 ml/acre in water.

#### *Madhya Maharashtra*

- Spray 0.5% Zinc Sulphate 50 g/litre of water in zinc deficient dryland sorghum field.
- For control of aphid of safflower crop, spray Dimethoate 20 EC @15 ml/10 litre of water.

- For the management of army worm attack on maize and sorghum, spray of Spinetoram (11.7% SC) 10ml or Chlorantranilprole (18.5 % SC) 3 to 4 ml/10 litre of water + 10 ml sticker.

### **Rajasthan**

Rainfall received during 01 Oct.-19 Dec. 2019 over East Rajasthan is 37.8 mm (57% excess). The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) over East Rajasthan is above normal for week-1 and week-2.

- Because of prevailing cold waves, farmers are advised to spray 0.1% sulphuric acid or apply irrigation or produce smoke in the frost sensitive crops for protection.
- To control pod borer in gram, dusting of Methyl Parathion 2% @ 25 kg/ha before flowering, and spray Acephate 75 s.p. @500 g/ha after 10 to 15 days are advised.
- To control *phalaris minor* and wild oat in barley spray of Isoproturon @0.75 kg/ha for light soil and @1.25 kg/ha in heavy soil at 30-35 DAS.

### **Jammu**

Rainfall received during 01 Oct.-19 Dec. 2019 in Jammu is 244.5 mm (151% large excess). The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) is normal for week-1 and below normal for week-2.

- Protect young plants of vegetable and horticulture crops from low temperature. Remove the stock sprout, suckers and water sprout from budded/grafted plants.
- Farmers are advised to go for sowing of wheat where sufficient moisture is available with recommended varieties viz. WH-1021, PBW-590, PBW-373, Raj-3077, Raj-3765, DBW-16.

### **Odisha**

Amount of rainfall received over Odisha is 187.1 mm (44% excess) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) over Odisha is above normal for week-1 and week-2.

- To control crocidolomia and saw fly in mustard, spray of Ithofenprox 200 ml or Deltamethrin 200 ml per acre are advised.
- Gundhibug infestation in the late duration rice at milking stage is observed. It is advised to dust 10 kg Malathion using duster or spray 200 ml DDVP/acre.
- For safe storage, paddy grains need to be dried to below 14% and for seed purpose it should be dried to below 12% moisture content.

### **Himachal Pradesh**

Amount of rainfall received over Himachal Pradesh is 120.7 mm (82% large excess) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over Himachal Pradesh is normal for week-1 and for week-2.

- Dingri mushroom can be sown in closed room, with temperature at 25-28°C and relative humidity of 80-85 % for good crop.
- It is advised to cover the small horticulture plants with grass to avoid cold paralysis.
- Training, skiffing and cleaning work can be completed in the tea.

### **Hisar**

Amount of rainfall received over Hisar is 28.3 mm (71% large excess) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over Hisar is below normal for week-1 and above normal for week-2.

- Irrigate the wheat crop at CRI stage.
- Apply requirement based irrigation and recommended doses of fertilizers in existing vegetable crops and monitor for insect-pests and diseases. Adopt effective weed management measures.
- Due to fall in night temperature and cloudy weather keep the animals under shed. Provide 50 g iodized salt and 50 to 100 g mineral mixture daily with animal feed/fodder to keep them healthy.

### **Assam**

Amount of rainfall received over Assam is 203.9 mm (6% normal) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over Assam is above normal for weeks-1 and normal for week-2.

- Due to low temperature, occurrence of saw fly may be seen in the rapeseed & mustard crop. To control, spray Chloropyriphos 20EC @ 5mm/litre of water.
- The weather conditions are favourable for occurrence of late blight in potato. To control, spray Mancozeb @ 2.5g/litre of water in the fair weather.
- Farmers are advised to protect the poultry from cold injury by keeping the coop clean and dry and use dry paddy straw as litter material and cover the sides of the coop with thick cloths during night.

### **Jharkhand**

Amount of rainfall received over Jharkhand is 136.5 mm (57% normal) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over Jharkhand is below normal for weeks-1 and above normal for week-2.

- Because of cool and humid weather, there is infestation of late blight disease in potato crop. It is advised to spray Krilaksil or Ridomil MZ chemical @ 1.5 g/litre of water to check it from further spreading.
- For more branching and flowering, nipping is advised at 30 DAS in gram. After nipping, light irrigation and broadcast of 5 kg urea is highly recommended.

### **Uttar Pradesh**

Rainfall received during 01 Oct.-19 Dec. 2019 over East Uttar Pradesh is 46.4 mm (5% normal) and West Uttar Pradesh is 52.0 mm (83% large excess). The extended range weather forecast for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) over East Uttar Pradesh is above normal for week-1

and week-2.

- Under prevailing weather conditions, there is a possibility for attack of fruit borer in brinjal. Hence, it is advised to save them by using suitable plant protection measures.
- Pulverization is advised for conservation of soil moisture followed by planking for sowing of wheat.

## **Gujarat**

Amount of rainfall received over Gujarat is 83.9 mm (187% large excess) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over Gujarat is above normal for weeks-1 and week-2.

- “T” shaped bird perches in and around chickpea crop field is advised to install for natural controlling of prodenia and heliothes population. If infestation cross ETL, spray Emamectin Benzoate 5 % SG 7 g in 10 litre of water.
- For control of leaf curling/sucking pest in *kharif* vegetable crops, spraying with Neem seed powder 500 g (5% extract) or Neem based insecticide 20 ml (1 EC) to 40 ml (0.15 EC) in 10 litre of water is advised.

## **West Bengal**

Amount of rainfall received over West Bengal is 234.2 mm (53% normal) during 01 Oct.-19 Dec. 2019. The extended range weather forecast provided for next two weeks (20-26 Dec. and 27 Dec. 2019 - 02 Jan. 2020) on rainfall over West Bengal is above normal for weeks-1 and week-2.

- It is advised to start nursery bed preparation for boro rice with improved varieties like Supriya, Jamini, Bhupen, IET-2233 etc.

*Disclaimer: The predictability of weather depends on many factors which are dynamic in nature. The success of Agromet advisories provided here depends on the accuracy of the forecasts. In no event will India Meteorological Department (IMD) and Indian Council of Agricultural Research (ICAR) be liable to the user or to any third party for any direct, indirect, incidental, consequential, special or exemplary damages or lost profit resulting from any use or misuse of the information on this bulletin.*



