

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 20 December 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- Cold Wave and Fog Warning:
- Cold Wave to Severe Cold Wave conditions very likely to continue in some parts of Punjab, Haryana, Chandigarh & Delhi, Rajasthan and Madhya Pradesh during next 24 hours and cold wave conditions at isolated pockets for subsequent 24 hours. It is very likely to abate thereafter over above areas.
- Cold wave conditions at isolated pockets very likely over Uttarakhand, East Uttar Pradesh, Vidarbha, Bihar, Jharkhand during next 48 hours; over Jammu, Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Gangetic West Bengal during next 24 hours; over Chhattisgarh and Odisha during next 72 hours and very likely to abate thereafter.
- Cold Day to severe Cold Day Conditions very likely at some places over Madhya Pradesh and Cold Day Conditions in isolated pockets over West Uttar Pradesh during next 24 hours and abate thereafter.
- Dense fog in the morning hours in isolated pockets very likely over Punjab and Haryana during 23rd - 25th and over West Rajasthan on 24th & 25th December, 2021.
- Ground frost conditions in the morning hours in isolated pockets very likely over Punjab, Haryana, north Rajasthan during next 2 days and over Madhya Pradesh during next 24 hours.
- Wet spell over northwest & northeast India:
- Under the influence of two Western Disturbance in quick succession, the 1st from 22nd and 2nd from 24th December, 2021, Light to moderate isolated/scattered rainfall/snowfall very likely over Western Himalayan Region during 22nd to 25th December. Light isolated rainfall is also likely over Punjab on 24th December, 2021.
- Light to moderate isolated/scattered rainfall with thunderstorm & lightning very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during 21st to 24th December. Isolated hailstorm also likely over the region on 22nd & 23rd December.

- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rainfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at a few places over Andaman & Nicobar Islands and at isolated places over Lakshadweep and Kerala & Mahe.
- Fog observed (at 0830 hours IST of today): Dense fog in isolated pockets over East Uttar Pradesh, Moderate fog in isolated pockets over Punjab and Shallow fog in isolated pockets over Himachal Pradesh, Uttarakhand, Delhi and Manipur.
- Cold Wave conditions observed: Cold Wave to Severe Cold Wave conditions prevailed in some parts of Haryana, Punjab, Rajasthan and West Madhya Pradesh; Cold Wave conditions in isolated pockets over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh and East Madhya Pradesh.
- Cold Day conditions observed: Cold Day to Severe Cold Day conditions prevailed in some parts of Madhya Pradesh and Cold Day conditions in isolated pockets of Uttar Pradesh.
- Minimum Temperature Departures (as on 20-12-2021): Minimum temperatures are above normal (1.6°C to 3.0°C) at isolated places over Nagaland, Manipur, Mizoram & Tripura. They are markedly below normal (-5.1°C or less) at many places over Madhya Pradesh; at a few places over Rajasthan; at isolated places over Jharkhand and Gangetic West Bengal; appreciably below normal (-3.1°C to -5.0°C) at many places over Jammu & Kashmir, Ladakh, Gilgit, Baltistan, Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Vidarbha and Chhattisgarh; at a few place over Saurashtra & Kutch, Telangana and Odisha; below normal (-1.6°C to -3.0°C) at many place over Gujarat Region and Sub-Himalayan West Bengal & Sikkim; at a few places over Andhra Pradesh & Yanam, Karnataka, Tamilnadu, Puducherry & Karaikal and Konkan & Goa; at isolated places over Assam & Meghalaya and near normal over rest parts of the country. Today, the Lowest minimum temperature of -0.5°C is reported at Churu & Sikar (Rajasthan) over the plains of the country.
- Maximum Temperature Departures (as on 19-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Assam & Meghalaya; at a few places over Kerala & Mahe; at isolated places over Tamilnadu, Puducherry & Karaikal . They were markedly below normal (-5.1°C or less) at many places over West Madhya Pradesh; at a few places over East Madhya Pradesh and East Uttar

Pradesh; at isolated places over West Uttar Pradesh; appreciably below normal (-3.1°C to -5.0°C) at most places over Bihar; at many places over Haryana, Chandigarh & Delhi, Gujarat region, Gangetic West Bengal, Jharkhand and Chhattisgarh; at a few places over Vidarbha and Odisha; at isolated places over Saurashtra & Kutch and Uttarakhand; below normal (-1.6°C to -3.0°C) at most places over East Rajasthan and Marathwada; at many places over Punjab; at a few places over Telangana, South Interior Karnataka and Andaman & Nicobar Islands; at isolated places over West Rajasthan, Himachal Pradesh and Madhya Maharashtra and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.3°C was reported at Alapuzha (Kerala).

Weather Warning during the next 5 days (IMD)

- 20 December (Day 1): Cold Wave in some pockets to severe cold wave conditions in isolated pockets very likely over Madhya Pradesh and Cold wave to severe cold wave conditions in a few pockets over Punjab, Haryana, Chandigarh & Delhi and in isolated pockets over Rajasthan. Cold Wave conditions in isolated pockets over Jammu & Kashmir, Ladakh, GilgitBaltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal and Odisha. Cold Day in some pockets to severe cold day conditions in isolated pockets over Madhya Pradesh; Cold Day conditions in isolated pockets over West Uttar Pradesh. Ground frost conditions in the morning hours in isolated pockets very likely over Rajasthan, Punjab, Haryana, Chandigarh & Delhi and Madhya Pradesh.
- 21 December (Day 2): Cold Wave conditions in some pockets very likely over Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh and in isolated pockets over Uttarakhand, East Uttar Pradesh, Rajasthan, Vidarbha, Chhattisgarh, Bihar, Jharkhand and Odisha. Cold day conditions in some pockets very likely over Madhya Pradesh and in isolated pockets over West Uttar Pradesh. Ground frost conditions in the morning hours in isolated pockets very likely over Rajasthan, Punjab and Haryana, Chandigarh & Delhi. Thunderstorm accompanied with lightning over Assam & Meghalaya.
- 22 December (Day 3): Cold wave conditions in isolated pockets very likely over East Madhya Pradesh, Chhattisgarh and Odisha. Dense fog in isolated pockets very likely over Punjab, Haryana & Chandigarh. Thunderstorm accompanied with lightning & hail very likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

- 23 December (Day 4): Dense fog in isolated pockets likely over Punjab, Haryana & Chandigarh and West Rajasthan. Thunderstorm accompanied with lightning & hail likely over Arunachal Pradesh and Assam & Meghalaya.
- 24 December (Day 5): Dense fog in isolated pockets likely over Punjab, Haryana & Chandigarh and West Rajasthan.
- The weather outlook for seven days i.e., 20 Dec to 28 Dec 2021 forecasted (Provided by Real-Time Weather Forecasts from NOAA/NCEP collected from <http://monsoondata.org/wx2/>) rain/thundershower may occur over Some parts of Extreme northern parts of India. (Fig. 2).

Agricultural activities (AICRPAM-CRIDA)

Jharkhand

Weather condition:

Maximum and minimum temperature range between 23.8 to 28.4°C and 5.2 to 9.5°C respectively. Maximum and minimum actual average temperatures are 25.6°C and 7.5 °C, whereas normal maximum and minimum temperature are 23.4°C and 8.1°C respectively.

Contingency measure:

- General: Inter culture operation must be done to conserve soil moisture as well as to control weeds in different crop and vegetable field. After inter-culture operation irrigate the field and broadcast urea as per the requirement of the crop. Farmers wishing to cultivate wheat after harvesting of rice must select its late variety. Present weather condition is conducive for the attack of Blight disease in potato and tomato crop, white rust disease in cucurbitaceous vegetables, fruit borer insect in pea & pigeon pea, stem & fruit borer insect in brinjal crop. Hence, spray recommended fungicide or insecticide immediately, as and when symptoms of disease or insects appears on plant.
- Wheat: Farmers wish to cultivate wheat crop must select its recommended late varieties (H.I.-1583, D.B.W.-107, H.D.-3118 etc.). Late sowing requires slightly higher seed rate (50 kg per acre) and reduced spacing i.e., 18 cm (row to row) and 7 cm (plant to plant). Before seeding the seed must be treated with the fungicide. To keep the field weed free conduct inter - culture operation after 20-25 days of sowing. After inter culture operation irrigate the field and broadcast urea (20-22 kg per acre), next day of irrigation. Existing weather condition favors the attack of leaf spot disease. Spray immediately the fungicide Indofil M-45 @ 2.5 gm. per liter of water as and when symptom of disease (small oval shaped yellow-

brownish spot forms on leaves) appears on leaves.

- Pigeon Pea (Red Gram/ Arhar) : Most of the crops are at fruiting stage. Attack of Fruit borer insect is possible at this stage. Spray immediately the insecticide Endoxacarb @ 0.5 ml per liter of water to control the insect.
- Potato: If the symptoms of blight disease (small, light- brown spots appear on lower leaves and later it spread on upper leaves also, resulted into fall of leaves) appears in the crop immediately spray the fungicide Redomyl (@ 1.5 gm per litre of water). In early potato, which is approaching maturity stage within 7-10 days, remove the upper leaves of the plant. Removing of leaves helps in hardening of the tuber and its skin. After digging of early potato, the field may be used for cultivation of onion.
- Vegetable Pea: At existing weather condition, there is a chance of the attack of powdery mildew disease, in which white powder appears on leaves, fruits and stem. To control this disease, spray Kairathen @ 1.5 ml per liter of water or Sulfex @ 3 gm per liter of water. At existing weather, crops at fruiting stage are vulnerable to the attack of Fruit borer insect. Spray immediately the insecticide Spinosed (1 ml per liter of water) to control the insect.
- Tomato: If the symptoms of blight disease (small, light- brown spots appear on lower leaves and later it spread on upper leaves also, resulted into fall of leaves) appears in the crop immediately spray the fungicide Redomyl M. Z. @ 1.5 gm per litre of water.
- Bottle Gourd: Present weather is conducive for the attack of powdery mildew disease in cucurbitaceous plant (in which white powder appears on leaf and stem). Spray Kairathen @ 1.5 ml per liter of water to control the disease.
- Brinjal: Spray the insecticide Kungfu or Karate @ 2 ml per liter of water to control stem or fruit borer. However, after spraying of the insecticide do not pluck the fruits for next 7-8 days.

SAT : INSAT-3D IMG
IMG_TIR1 10.8 um
L1C Mercator

20-12-2021/(0800 to 0827) GMT
20-12-2021/(1330 to 1357) IST

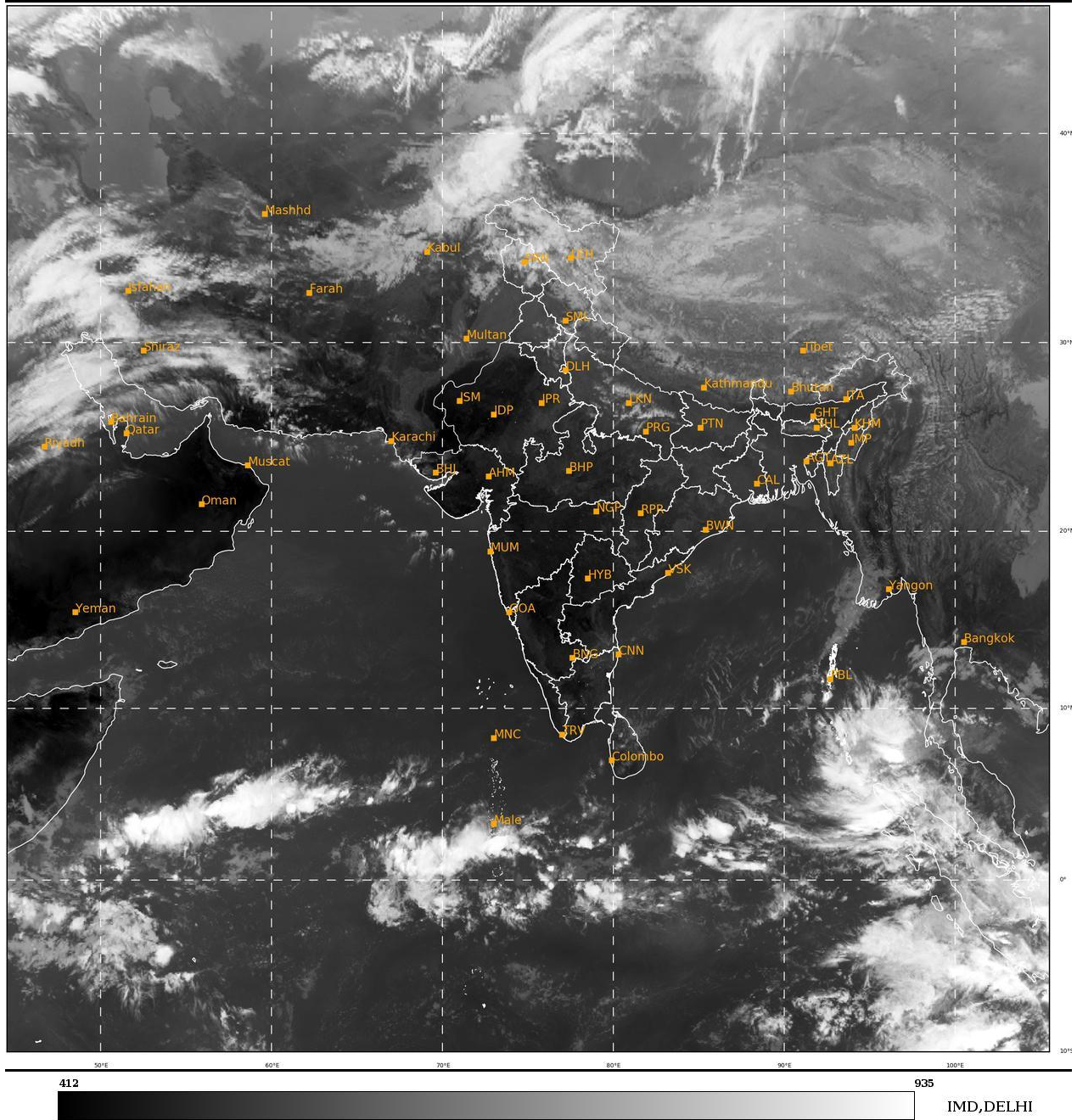


Figure: 1. Latest available satellite picture as on 20 Dec 2021 at 1357 Hrs (IST). (Source: IMD).

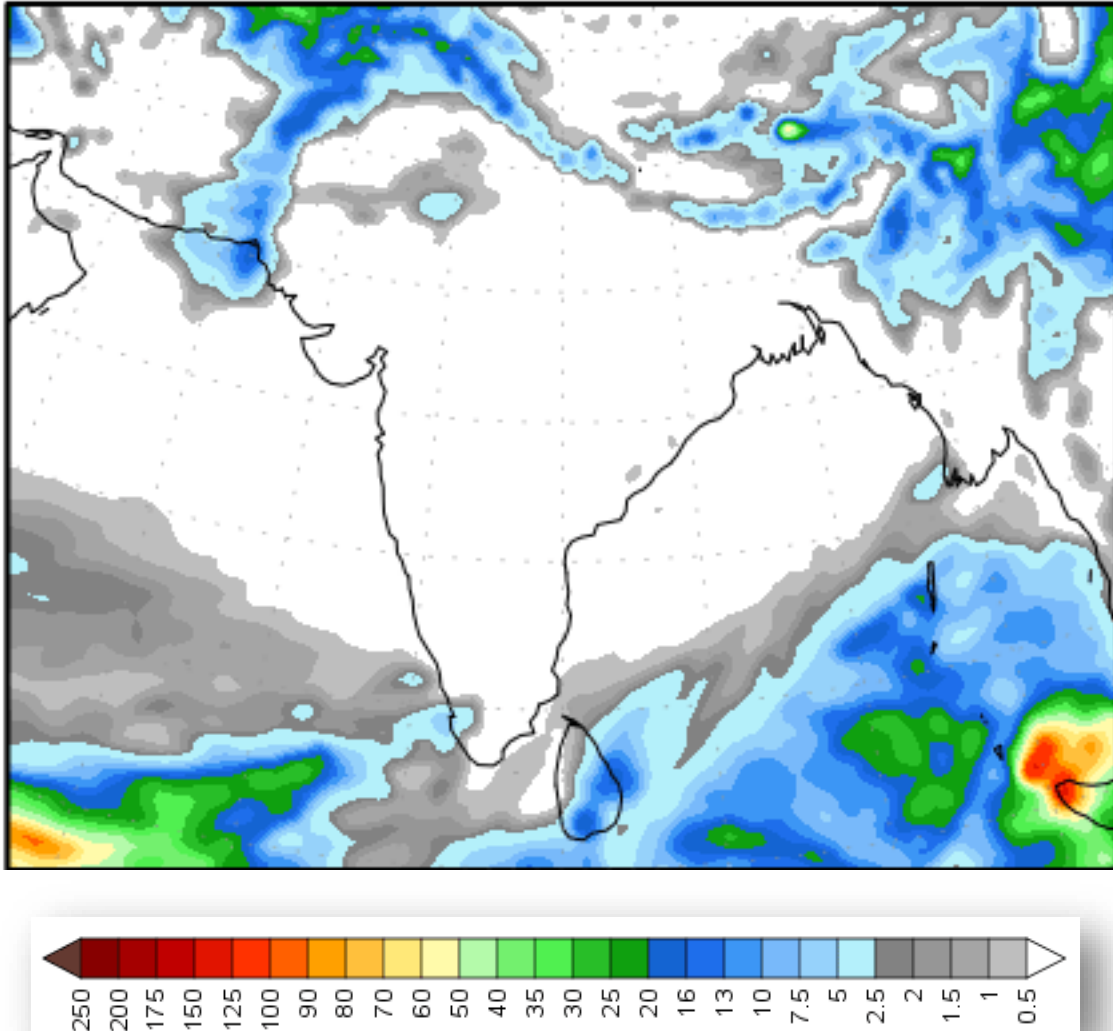


Figure:2. Precipitation forecast for 20 Dec to 28 Dec 2021 (Source: NOAA NCEP).

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