

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 28 December 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- I. Wet spell over northwest India on 28th; over central India on 28th & 29th and over east India during 28th - 30th December, 2021.
- The Western Disturbance seen as a cyclonic circulation over north Pakistan & neighbourhood at lower tropospheric levels with a trough aloft roughly along Long. 68°E to the north of Lat. 26°N in middle tropospheric levels. An induced cyclonic circulation lies over southwest Rajasthan & neighbourhood and a trough runs from the cyclonic circulation to north Telangana and a cyclonic circulation lies over central parts of Uttar Pradesh at lower tropospheric levels.
- Under the influence of above systems:
 - i) Light/moderate isolated to scattered rainfall/snowfall very likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad and Himachal Pradesh on 28th; and over Uttarakhand on 28th & 29th December, 2021.
 - ii) Light isolated rainfall very likely over Haryana, Chandigarh & Delhi, Rajasthan on 28th and scattered to fairly widespread rainfall over Uttar Pradesh on 28th & 29th December, 2021. Isolated thunderstorm, lightning & hailstorm also likely over East & adjoining West Uttar Pradesh on 28th December, 2021.
 - iii) Light/moderate isolated to scattered rainfall very likely over Madhya Pradesh, Vidarbha and Chhattisgarh; scattered to fairly widespread rainfall over Bihar, Jharkhand, Odisha and West Bengal & Sikkim during 28th to 30th December.
 - iv) Isolated thunderstorm, lightning & hailstorm also likely over East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim on 28th & 29th; over West Madhya Pradesh, Vidarbha, Jharkhand on 28th; over Chhattisgarh on 29th; over Arunachal Pradesh, Assam & Meghalaya on 29th & 30th and over Nagaland on 30th December, 2021.
- II) Minimum Temperatures, Cold Wave, Cold Day and Fog:
 - i) Minimum temperatures are 2-5°C above normal over many parts of Northwest, Central, East, Northeast and north peninsular India.

- ii) No significant change in minimum temperatures very likely over most parts of Northwest India during next 24 hours and fall by 2-4°C for subsequent 2 days and no significant change thereafter.
 - iii) No significant change in minimum temperatures over most parts of central & East India during next 2 days and fall by 2-4°C thereafter.
 - iv) Gradual fall in minimum temperatures by 2-4°C over Gujarat state during next 2 days and rise by 2-4°C thereafter.
 - v) Cold Wave Conditions likely to prevail over Punjab, Haryana and Chandigarh during 31st December- 02nd January and over north Rajasthan on 01st & 02nd January, 2022.
 - vi) Cold Day Conditions likely to prevail over Bihar on 29th & 30th December. vii) Dense fog in isolated pockets very likely over Punjab, Haryana and north Rajasthan in night/morning hours during next 3 days; over Madhya Pradesh, Chhattisgarh on 30th & 31st December and over East India during 31st December & 01st January.
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rainfall/snowfall observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at a few places over Jammu & Kashmir, Ladakh, GilgitBaltistan, Muzaffarabad; Rainfall/thundershower observed- at a few places over East Rajasthan, West Madhya Pradesh and at isolated places over West Rajasthan, West Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya and Telangana.
- Fog observed (at 0830 hours IST of today): Very Dense fog in isolated pockets over Vidarbha and Dense fog in isolated pockets over Himachal Pradesh; Shallow to Moderate fog in isolated pockets over Punjab, Delhi, Rajasthan, North Madhya Pradesh, East Uttar Pradesh, Saurashtra & Kutch, Jharkhand, North Odisha, South Chhattisgarh and North Rayalaseema.
- Minimum Temperature Departures (as on 28-12-2021): Minimum temperatures are markedly above normal (5.1°C or more) at a few places over Rajasthan and at isolated places over Haryana, Chandigarh & Delhi, Gujarat state, West Madhya Pradesh and Odisha; appreciably above normal (3.1°C to 5.0°C) at most places over Bihar and Chhattisgarh; at many places over Jharkhand, Gangetic West Bengal, Vidarbha and Marathwada; at a few places over East Uttar Pradesh and East Madhya Pradesh and at isolated places over West Uttar Pradesh, Telangana

and Madhya Maharashtra; above normal (1.6°C to 3.0°C) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Konkan & Goa, Kerala & Mahe, Tamilnadu Puducherry & Karaikal, Assam & Meghalaya and Andaman & Nicobar Islands. They are below normal (-1.6°C to -3.1°C) at isolated places over South Interior Karnataka and near normal over rest parts of the country. Today, the Lowest minimum temperature of 4.4°C reported at Ludhiana (Punjab) over the plains of the country.

- Maximum Temperature Departures (as on 27-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at many places over Bihar and Assam & Meghalaya; at a few places over West Uttar Pradesh, East Madhya Pradesh, Coastal Andhra Pradesh & Yanam and Gangetic West Bengal and at isolated places over Himachal Pradesh, Uttarakhand, Punjab, East Uttar Pradesh, Saurashtra & Kutch, Vidarbha, Madhya Maharashtra, Telangana, South Interior Karnataka, Tamilnadu, Puducherry & Karaikal, Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands. They were below normal (- 1.6°C to - 3.0°C) at a few places over West Rajasthan and at isolated places over Madhya Maharashtra and West Madhya Pradesh and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.0°C was reported at Jeur (Madhya Maharashtra).

Weather Warning during the next 5 days (IMD)

- 28 December (Day 1): Thunderstorm accompanied with lightning & hail at isolated places very likely over East & adjoining West Uttar Pradesh, Madhya Pradesh, Vidarbha, Jharkhand, Sub-Himalayan West Bengal & Sikkim and with lightning at isolated places over East Rajasthan, Chhattisgarh, Bihar and Marathwada. Dense Fog in isolated pockets very likely over Punjab, Haryana, north Rajasthan and Odisha.
- 29 December (Day 2): Thunderstorm accompanied with lightning & hail at isolated places very likely over East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and with lightning at isolated places over Vidarbha and Bihar. Dense Fog in isolated pockets very likely over Punjab, Haryana, north Rajasthan, Madhya Pradesh and Chhattisgarh. Cold Day conditions in isolated pockets very likely over Bihar.
- 30 December (Day 3): Thunderstorm accompanied with lightning & hail at isolated places very likely over Arunachal Pradesh, Assam & Meghalaya and Nagaland. Dense Fog in isolated pockets very likely over Punjab, Haryana, north Rajasthan, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim and Odisha. Cold Wave conditions in isolated pockets very likely over

Punjab, Haryana and Chandigarh. Cold Day conditions in isolated pockets likely over Bihar.

- 31 December (Day 4): Cold Wave conditions in isolated pockets likely over Punjab, Haryana, Chandigarh and north Rajasthan. Dense Fog in isolated pockets likely over Bihar, Jharkhand, West Bengal & Sikkim and Odisha. Thunderstorm accompanied with lightning at isolated places likely over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- 01 January (Day 5): Cold Wave conditions in isolated pockets likely over Punjab, Haryana, Chandigarh and north Rajasthan. Thunderstorm accompanied with lightning at isolated places likely over Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- The weather outlook for seven days i.e., 28 Dec to 05 Jan 2022 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)

Himachal Pradesh

Weather condition:

The maximum and minimum temperature ranged between 10.5 to 17.0 °C and 1.0 to 5.5 °C which was below normal by 0.4 to 5.8°C and 0.7 to 5.1 °C, respectively. No rainfall was received during the week against the normal of 11.6 mm. The relative humidity varied between 34-84 % and sunshine hours between 1.0-9.0 hrs/day with variable sky conditions (Octa 2-8). The evaporation rate varied 2.1-2.3 mm per day.

Contingency measure:

- Rabi Crops: Wheat: In the early planted wheat crop where weeds are 2-3 leaves stage, spray isoproturon @ 70 g or Vesta @ 16 g per 30 litres of water in one kanal for the control of weeds.
- Storage of Grains: Grains should be properly dried to right moisture level before storing. Godowns should be properly cleaned by removing all the grains and other storage matter of previous crop.
- Mustard: Thinning and weeding is recommended in timely sown mustard crop. Keeping in view of relative humidity farmers are advised for monitoring of mustard crop against attack of white rust. If infection is high than spraying of Dithane - M -45 @ 2 gram/ litre of water of water is advised. Keeping in view of weather, farmers are advised for monitoring of mustard crop against aphid

attack.

- Fodder Crops: Intercultural operations on already sown berseem, lucerne and oats for fodder of Rabi season also advised. The lantana weeds in the grasslands may be cut so that regenerated growth during September can be sprayed with 1% glyphosate for its control.
- Vegetable Crops: Add mulch material in space between two rows of vegetables crops for conservation of soil moisture and maintaining the soil temperature.
- Onion & Garlic: Sowing of garlic and onion is advised. Farmers are advised to monitor their fields regularly. Spray of Imidacloprid 17.8 % SC@ 1.0 ml/3 lit of water is recommended against white flies and other sucking pests in all crop and vegetables when sky is clear.
- Radish & Turnip: Thinning of turnip, carrot and radish is advised. Maintain a plant to plant distance of 7 -10 cm.
- Cabbage & Cauliflower: Advised to complete transplanting of seedlings of cabbage, cauliflower, knoll khol and broccoli are advised. Mix well rotten FYM prior to transplanting. The downy mildew is expected in cruciferous vegetables, for control spray redomil M -Z @ 25 g per litres of water at 15 days interval.
- Potato: Farmers are advised to start earthing -up in potato if crop has attained a height of 15 -22 cm. If so required, the practice may be repeated after 15 days . Due to high relative humidity, infection of blight may occur in potato and tomato. Constant monitoring is advised. If symptoms appears than spray of Carbandizam @ 1.0 gm / litre of water or Dithane - M -45 @ 2.0 gm / litre of water is recommended.
- Poly House Agriculture: Advised tomato, cucumber and capsicum sowing and transplanting. For control of powdery mildew, aphids and spodoptera spray recommended chemicals. Keep yellow sticky trap in polyhouse and after transplanting drench plant with imidachlorpid. Leaf spot/blight is expected in shimla mirch and tomato for control spray tilt 1ml per liters of water.
- Tea: Training, skiffing and cleaning work can be completed in the tea orchards. Do lopping of the tree in the tea orchards to have more sunlight. The skiffed material may be used to prepare compost so that it could be applied in next season.
- Livestock: Ecto-parasite attack is expected in this weather for control spray Butox @ 2 ml per litre in cowshed Give mixture of hay & green fodder. The weather is suitable for the attack of pink eye disease in newly born calves, for control prepare the solution of 1% boric acid in boiled water and wash eyes at regular interval of three hours. Give mixture of hay & green fodder. Advised not to allow

animals to eat lantana these days. Dry bedding may be provided to save the animals from cold. Young calves must be kept in the sheds during nights.

- Poultry: Make sure to deworm your older flocks every month against roundworms. Ensure proper ventilation in poultry houses. Replace the poultry houses with fresh litter and keep the houses clean and ensure drinking water to the birds. For precautionary measures spray formaline 40% @ 1litre in 9 litres of water in outside or surrounding of farm. Provide vitamin A and vitamin B-complex with water. Ensure proper space for egg laying of birds and provide 14- to 16 hours light including day light. Normal feeding schedule should be continued and add mineral in the diet if stress is seen.
- Mushrooms: Dingri can be sown in closed room, maintain temperature of 25-28 degree Celsius and relative humidity of 80-85 % for good crop. Advised to fill compost bags with span for button mushrooms.
- Horticulture: Keep the basins of the plants free from weeds. The new growth appearing below bud union may be cut. If a termite outbreak appears on the trees, spray Chlorpyrifos 20 EC @ 3ml/l. Monitor foliar pest on plants of Citrus species. Spray Chlorantraniliprole 18.5SC @ 0.4 ml/l or lambda-cyhalothrin 4.90CS @0.8 ml/l for pomegranate butterfly. Advised recommended spray of chemicals for control of citrus canker. In peach gum is coming out from tree trunk, for control bordeaux paint may be applied in the affected area. Advised planting of strawberry. Wrapping of plastic sheets around mango trunk should be done for preventing climbing of young mealy bugs. Apply grease to seal any cracks in the polythene sheets. If the stem borer problem is there in spray insecticide or control them with applying kerosene oil. Keep the basins of the plants free from weeds. Prepare the pits for planting the winter plants like peacannut, walnut, almond plum and peach. In peach gum is coming out from tree trunk, for control bordeaux paint may be applied in the affected area.
- Fruit Trees: Sowing of mango, litchi, guava, papaya, pecanut and kagzi lime is recommended under these weather conditions. Air layering of litchi, guava, kagzi lime and lemon is recommended. Side veneer grafting in mango and inverted T-budding in citrus is recommended. Transplanting of seedlings of rough lemon (Khatti) in the nursery beds, if not done during July. Weeding in nursery is recommended.

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

28-12-2021/(0800 to 0826) GMT
28-12-2021/(1330 to 1356) IST

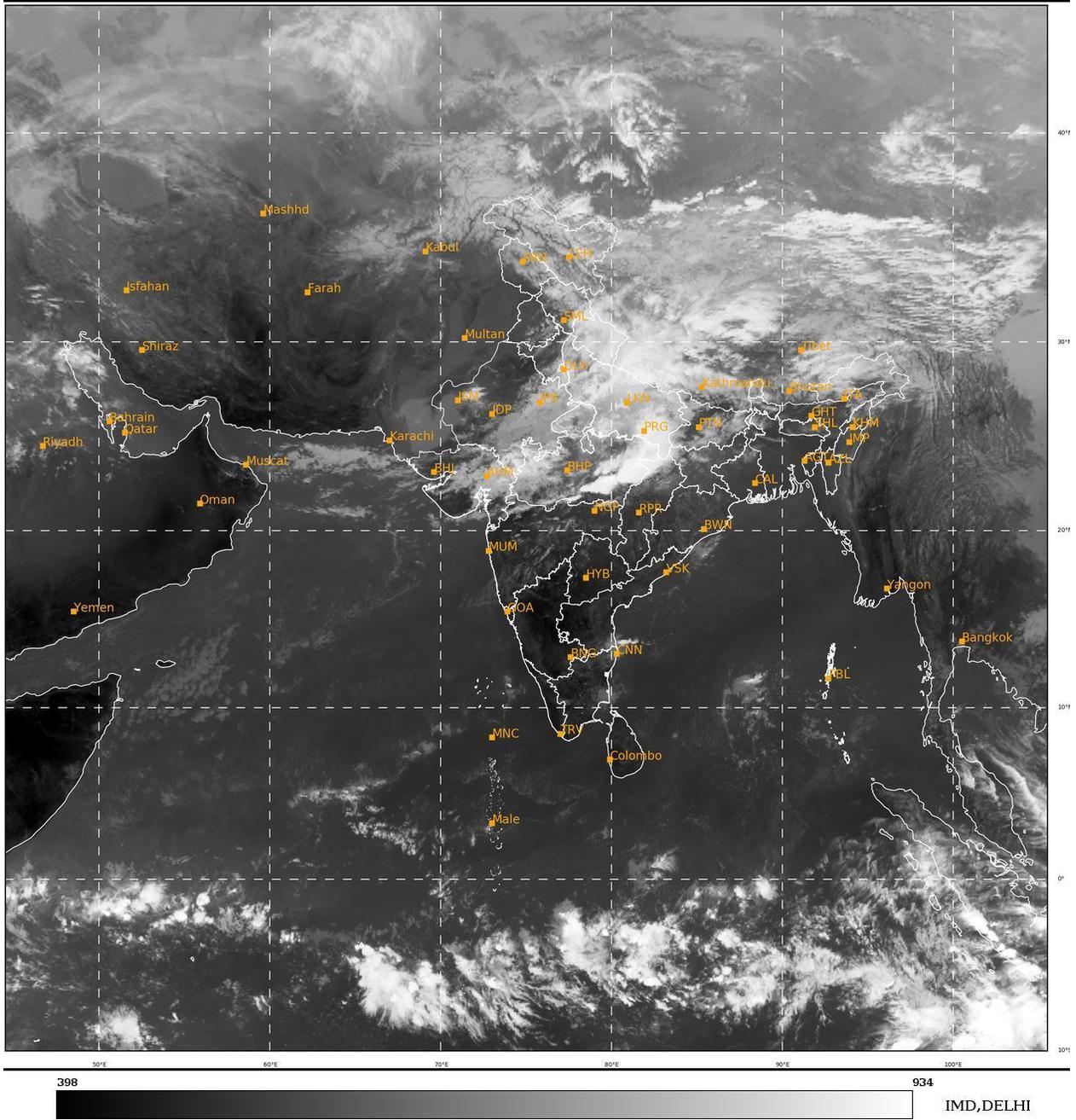


Figure: 1. Latest available satellite picture as on 28 Dec 2021 at 1356 Hrs (IST). (Source: IMD).

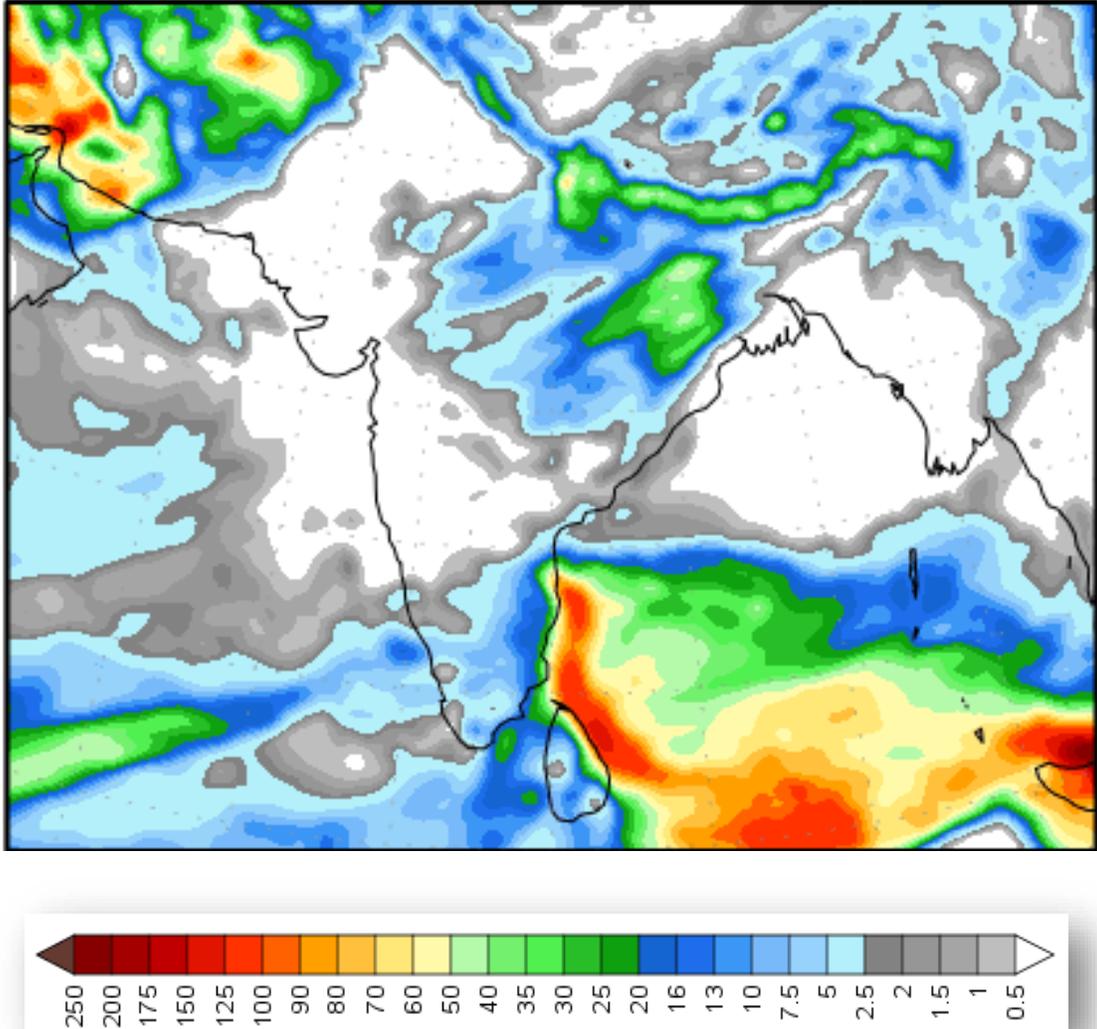


Figure:2. Precipitation forecast for 28 Dec to 05 Jan 2022 (Source: NOAA NCEP).

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