

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 30 December 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- I. Minimum Temperatures, Cold Wave and Dense Fog:
 - i) Minimum temperatures are in the range of 2-6°C over Punjab, north Rajasthan, Haryana and adjoining West UP and 3 to 5°C fall in Minimum Temperatures occurred over Haryana, north Rajasthan, UP and MP during past 24 hours. old Wave to Severe Cold Wave Conditions over Northwest India & Madhya Pradesh during next 3-4 days.
 - ii) Cold Wave/Severe Cold Wave conditions in some/many parts of Punjab during 31st December to 03rd January and in isolated/some parts over Haryana, Chandigarh & Delhi and Rajasthan during 31st December to 03rd January; over Madhya Pradesh during 31st December to 02nd January and over Uttar Pradesh during next 3 days.
 - iii) Dense fog in isolated pockets in night/morning hours very likely over Uttar Pradesh during next 5 days and over East & Northeast India during next 2-3 days.
- II. Increased rainfall activity over Southeast peninsular India during next 3 days and decrease thereafter.
- The Western Disturbance as a cyclonic circulation lies over East Uttar Pradesh & adjoining Bihar upto 3.1 km above mean sea level with the trough aloft with its axis at 5.8 km above mean sea along Long. 85°E to the north of Lat. 20°N in middle & upper tropospheric levels.
- Under the influence of the above system:
 - i) Light to moderate isolated to scattered rainfall very likely over Arunachal Pradesh, Assam & Meghalaya, West Bengal & Sikkim, Odisha, Jharkhand, Bihar and Chhattisgarh during next 24 hours and dry weather over the region thereafter. Isolated thunderstorm also likely over Arunachal Pradesh and Assam & Meghalaya during next 24 hours.
 - ii) Increased rainfall activity over Southeast peninsular India during next 3 days and decrease thereafter. Light to moderate scattered to fairly widespread rainfall very likely over Tamil Nadu, Puducherry & Karaikal and adjoining south Andhra Pradesh during next 3 days. Isolated Heavy Rainfall over coastal Tamil Nadu,

Puducherry & Karaikal on 31st December, 2021 & 01st January, 2022 and over south Coastal Andhra Pradesh on 01st January, 2022.

III. An intense Western Disturbance is likely to affect Western Himalayan Region during 04th to 07th (with possibility of isolated heavy falls on 05th & 06th) and over plains of northwest India during 05th to 07th January, 2022:

a. Isolated to scattered rainfall/snowfall likely over Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad & Himachal Pradesh on 01st to 03rd January, 2022.

b. A fresh active Western Disturbance and its induced cyclonic circulation is very likely to cause fairly widespread rainfall/snowfall during 04th to 07th with possibility of isolated heavy falls on 05th & 06th over Jammu & Kashmir and Himachal Pradesh.

c. Light/moderate scattered to fairly widespread rainfall over Punjab, Haryana, Chandigarh & Delhi, north Rajasthan & West Uttar Pradesh during 05th to 07th and light isolated rainfall is also likely over Madhya Pradesh, south Rajasthan & Gujarat on 06th & 07th January, 2022.

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

Main Weather Observations (IMD)

- Rainfall/thundershower observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over Bihar, Jharkhand, Sub-Himalayan West Bengal; at many places over Gangetic West Bengal, Chhattisgarh; at a few places over East Uttar Pradesh, Odisha and at isolated places over Uttarakhand, Madhya Pradesh, Vidarbha, Marathwada, Arunachal Pradesh, Assam & Meghalaya, Coastal Andhra Pradesh, Telangana and Tamil Nadu, Puducherry & Karaikal.
- Cold wave to severe cold wave conditions observed in some parts over Punjab; in isolated pockets over Haryana, Chandigarh & Delhi and old wave conditions in isolated pockets over north Rajasthan and West Uttar Pradesh.
- Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today):: at isolated places over Jharkhand, Bihar, Telangana, north Odisha and Chhattisgarh. Isolated hailstorm at isolated places over Vidarbha, Odisha and Sub-Himalayan West Bengal.
- Fog observed (at 0830 hours IST of today): Dense to very dense fog in isolated pockets over Uttar Pradesh and Madhya Pradesh and shallow to moderate fog in isolated pockets over north Punjab, Delhi, east Rajasthan, Chhattisgarh and Coastal Andhra Pradesh
- Minimum Temperature Departures (as on 30-12-2021): Minimum temperatures are markedly above normal (5.1°C or more) at isolated places over Odisha;

appreciably above normal (3.1°C to 5.0°C) at most places over Bihar, Jharkhand, Gangetic West Bengal and Telangana; at a few places over Odisha; at isolated places over East Uttar Pradesh and Sub-Himalayan West Bengal; above normal (1.6°C to 3.0°C) at many places over Coastal Andhra Pradesh, East Madhya Pradesh, Marathwada, Madhya Maharashtra and Assam & Meghalaya; at a few places over Gujarat State and Andaman & Nicobar Islands; at isolated places over Karnataka and West Rajasthan. They are markedly below normal (-5.1°C or more) at isolated places over Madhya Pradesh; below normal (- 1.6°C to -3.1°C) at many places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh & Delhi, Kerala & Mahe, Tamil Nadu Puducherry & Karaikal and at isolated places over Rajasthan and near normal over rest parts of the country. Today, the Lowest minimum temperature of 2.0°C reported at Hissar (Haryana) over the plains of the country.

- Maximum Temperature Departures (as on 29-12-2021): Maximum temperatures were above normal (1.6°C to 3.0°C) at a few places over Kerala; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan, Muzaffarabad, Assam & Meghalaya, Telangana, Coastal Andhra Pradesh & Yanam, Rayalaseema and and Tamil Nadu, Puducherry & Karaikal. They were markedly below normal (-5.1°C or less) at most places over Sikkim; at many places over Madhya Pradesh and at isolated places over East Uttar Pradesh, Chhattisgarh, interior Odisha and Vidarbha; appreciably below normal (-3.1°C to -5.0°C) at most places over southeast Rajasthan, Gujarat Region and Jharkhand; at many places over rest East Uttar Pradesh and at isolated places over Saurashtra & Kutch and Gangetic West Bengal; below normal (-1.6°C to -3.0°C) at many places over Marathwada; at a few places over Bihar rest Saurashtra and Konkan & Goa and at isolated places over Himachal Pradesh, West Rajasthan, northeast Rajasthan and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.2°C was reported at Cannur (Kerala & Mahe).

Weather Warning during the next 5 days (IMD)

- 30 December (Day 1): Cold Wave to severe cold wave conditions in many parts very likely over Punjab; in some parts of Haryana, Chandigarh & Delhi; in isolated pockets over Rajasthan and cold wave conditions in isolated pockets over Himachal Pradesh, Uttarakhand, West Uttar Pradesh and Madhya Pradesh. Thunderstorm accompanied with lightning at isolated places very likely over Arunachal Pradesh and Assam & Meghalaya and Tamil Nadu, Puducherry & Karaikal. Cold day conditions in isolated pockets very likely over Madhya Pradesh. Ground frost in isolated pockets very likely over Punjab, Uttarakhand,

Haryana, North Rajasthan and West Madhya Pradesh. Dense to very dense fog in isolated pockets very likely over East Uttar Pradesh and dense fog in isolated pockets very likely over West Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.

- 31 December (Day 2): Cold Wave to severe cold wave conditions in many parts very likely over Punjab; in some parts of Haryana, Chandigarh & Delhi; in isolated pockets over Rajasthan; cold wave conditions in some parts with severe cold wave conditions in isolated pockets over West Madhya Pradesh and cold wave conditions in some parts over East Madhya Pradesh; in isolated pockets over Himachal Pradesh, Uttarakhand and West Uttar Pradesh. Cold day conditions in isolated pockets very likely over Madhya Pradesh. Ground frost in isolated pockets very likely over Punjab, Uttarakhand, Haryana, North Rajasthan and West Madhya Pradesh. Dense to very dense fog in isolated pockets very likely over East Uttar Pradesh and dense fog in isolated pockets very likely over West Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Heavy rainfall in isolated pockets very likely over Coastal Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning at isolated places very likely over south Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- 01 January (Day 3): Cold wave conditions in some parts with severe cold wave conditions in isolated pockets very likely over West Madhya Pradesh and cold wave conditions in some parts over Punjab, East Madhya Pradesh; in isolated pockets over Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan. Cold day conditions in isolated pockets very likely over Madhya Pradesh. Dense to very dense fog in isolated pockets very likely over East Uttar Pradesh and dense fog in isolated pockets very likely over West Uttar Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Heavy rainfall in isolated pockets very likely over south Coastal Andhra Pradesh & Yanam and Coastal Tamil Nadu, Puducherry & Karaikal. Thunderstorm accompanied with lightning at isolated places very likely over south Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- 02 January (Day 4): Cold wave conditions in isolated pockets likely over Punjab, Haryana, Chandigarh & Delhi and Rajasthan. Dense fog in isolated pockets likely over Uttar Pradesh. Thunderstorm accompanied with lightning at isolated places likely over Tamil Nadu, Puducherry & Karaikal.

- 03 January (Day 5): Dense fog in isolated pockets likely over Uttar Pradesh.
- The weather outlook for seven days i.e., 30 Dec to 07 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)

Punjab

Weather condition:

The maximum temperature during the week ranged between 13.0-20.4 °C and minimum temperature ranged between 2.0-8.4 °C. The morning and evening relative humidity during the week varied between 90-97 and 35-73%, respectively. The sunshine hours during the week ranged between 1.8-7.4 hrs/day. The evaporation rate during the week ranged between 1.0-1.2 mm day⁻¹. Daily average wind speed varied from 1.0-5.3 kmhr⁻¹.

Contingency measure:

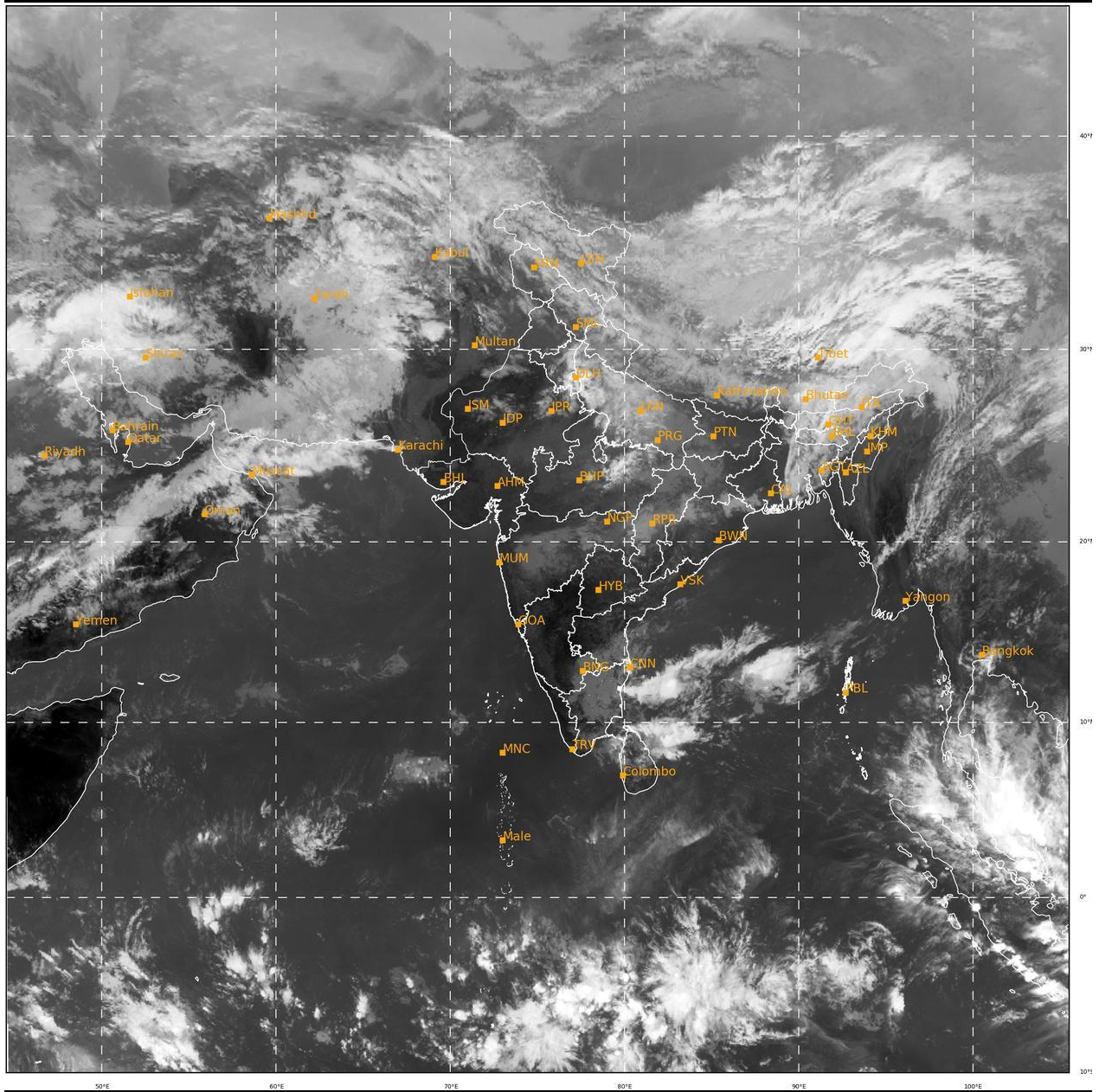
- Field Crops: Avoid irrigation in the coming days as there are chances of rainfall.
Wheat: Manage rodent pests in wheat crop sown with Happy Seeder by burrow baiting with 2% zinc phosphide twice at an interval of 10-15 days after sowing of crop (a week before or after irrigation) during this period. Use only recommended dose of weedicide for effective control of weeds in wheat crop. If yellowing of leaves appear due to manganese deficiency in wheat crop, spray the crop with manganese sulphate. If symptoms of sulphur deficiency are noticed, broadcast one quintal gypsum/acre followed by a light irrigation or if the soil is in proper moisture condition, this may be mixed by hoeing.
- Oilseeds: Avoid irrigation to sarson /raya during the period to manage Sclerotinia stem rot.
- Sugarcane: Wait for rain if sufficient rain is not received only then apply light irrigations to the sugarcane crop regularly during winter months. The ratoon crop should also be irrigated properly.
- Vegetables: Mulching can be done to vegetable crops i.e cauliflower, spinach, fenugreek, coriander, radish, turnip, pea, tomato, brinjal, chilli and capsicum. It also reduces heat loss from the surface. Regularly survey the potato crop during these days and rogue out virus affected potato plants from the seed crop. To protect potato crop from late blight, spray Indofil M-45/Mass M-45/Markzeb/Antracol/ Kavach @ 500- 700 g or Copper Oxychloride 50 WP/Mark copper @ 750- 1000 g/acre in 250- 350 litres of water at 7 days interval.

Sowing of cucumber can be done under low tunnel technology to get early yield. Fruits: Protect the evergreen fruit plants especially younger plants from severe cold. Thatches by using paddy straw, doob grass, date palm leave etc can be erected on these plants by keeping the sun side open. For management of canker in citrus, spray streptomycin 50 g + 25 g copper sulphate in 500 litres of water per acre or Bordeaux mixture (2:2:250) during this month. Powdery mildew in ber can be managed with spray of wettable sulphur @ 2.5 g per litre of water and black spot disease in ber can be managed with spray of Bordeaux mixture (2:2:250) during this month. Apply one irrigation to ber orchards at this time as the trees are laden with fruits if sufficient rain is not received. Preparations can be started for establishment of new orchards of deciduous fruits such as pear, peach, plum, grapes, fig etc. For management of mango mealy bug, alkathane sheet can be wrapped/fixed tightly around the tree trunks in this month. Application of well rotten farm yard manure or other organic manures can be started for all major fruit plants except guava and ber.

- Animal Husbandary: After milking, never rub milk on the teats. Use teat dips (glycerine and iodine in ratio of 1:4) for injured teats regularly. To prevent bloat in animals, mix berseem with dry fodder like wheat straw. Never feed rice straw alone. If nutritional reasons are responsible for bloat, we can give turpentine oil (50-60 ml) or 250-300 ml of any oil (like mustard oil). In addition to these, timpol powder (50-60 gm) or bloatosil (70-100 ml) can be given as required in animals.

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

30-12-2021/(0800 to 0826) GMT
30-12-2021/(1330 to 1356) IST



408

932

IMD,DELHI

Figure: 1. Latest available satellite picture as on 30 Dec 2021 at 1356 Hrs (IST). (Source: IMD).

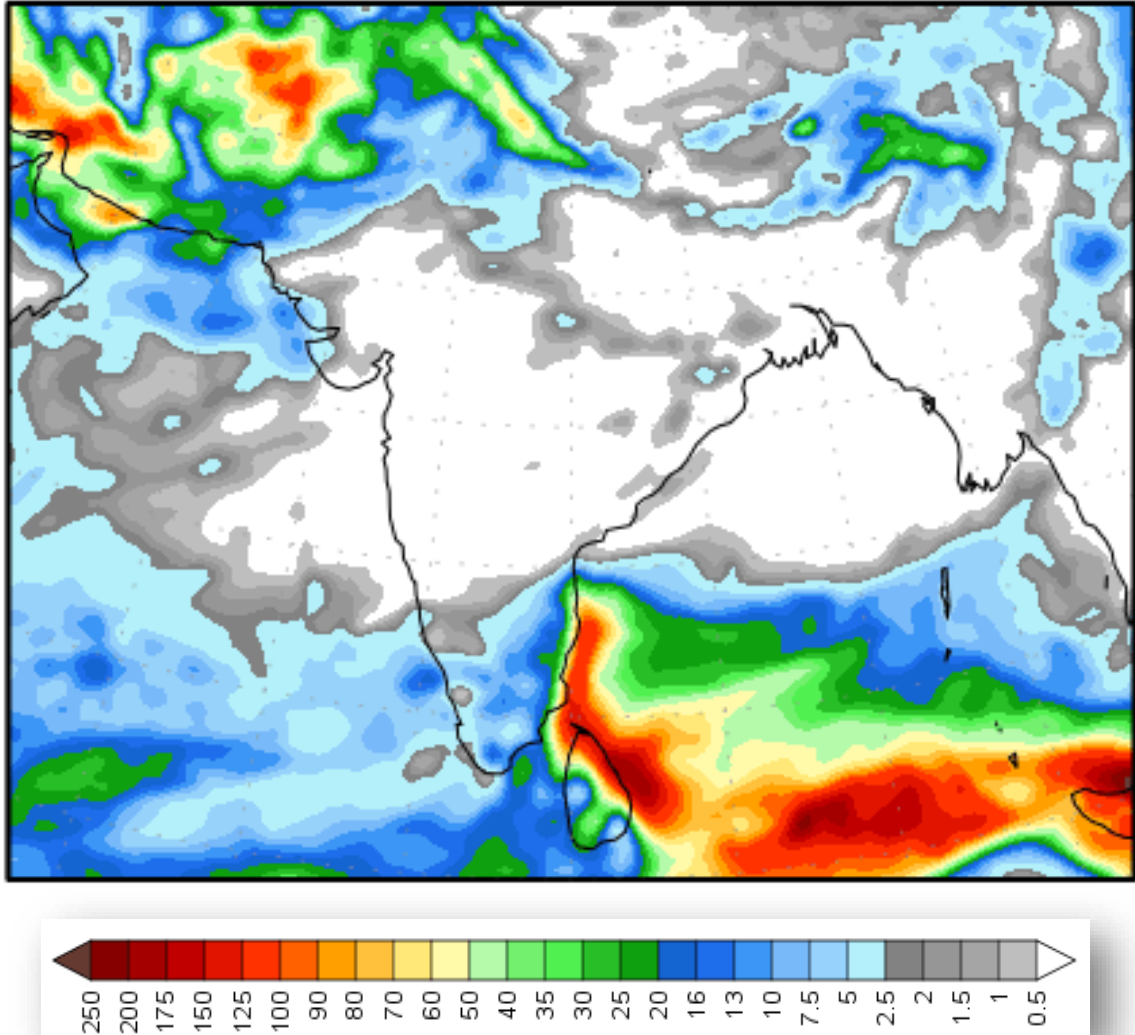


Figure:2. Precipitation forecast for 30 Dec to 07 Jan 2022 (Source: NOAA NCEP).

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