

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 28 December 2020

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- Under the influence of Western Disturbance, Fairly widespread to widespread rainfall/snowfall is very likely over Jammu, Kashmir, Ladakh, Gilgit, Baltistan & Muzaffarabad; scattered rainfall/snowfall over Himachal Pradesh, Uttarakhand and isolated rain/thundershowers over northern parts of Punjab, Haryana & Chandigarh on 28th December, 2020.
- After the passage of the above system and under the influence of the consequent strengthening of cold & dry northwesterly/northerly lower level winds:
 - i) Cold Wave to Severe Cold Wave conditions are likely to re-establish over Punjab, Haryana, Chandigarh & Delhi from 28th/29th December and over Rajasthan from 29th/30th December and Cold Wave conditions in isolated pockets over Uttarakhand, Himachal Pradesh, Uttar Pradesh and Madhya Pradesh from 29th/30th December. Northern parts of Saurashtra & Kutch is also likely to experience cold wave conditions on 28th-29th December.
 - ii) Ground Frost conditions are likely in isolated pockets over Uttarakhand, Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, Rajasthan and West Madhya Pradesh during 29th December 2020-1st January, 2021.
 - iii) Dense to very dense fog are likely over Punjab, Haryana, Chandigarh & Delhi and Dense fog also likely over Himachal Pradesh, Uttarakhand and Uttar Pradesh in morning hours during 29th December 2020-1st January, 2021.
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rain/Thundershowers observed (from 0830 hours IST to 1730 hours IST of yesterday): at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Punjab and Tamil Nadu, Puducherry & Karaikal.
- Fog observed (at 0530 hours IST of today): Dense fog in isolated pockets in East Uttar Pradesh and Tripura and moderate fog observed in isolated pockets over Assam & Meghalaya, Bihar, Punjab and East Uttar Pradesh.

- Yesterday, Cold Wave conditions were observed in isolated pockets over Himachal Pradesh and Gangetic West Bengal.
- Maximum Temperature Departures as on 27-12-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad; above normal (1.6°C to 3.0°C) at most places over east Rajasthan, West Madhya Pradesh, Vidarbha and Marathwada; at many places over Jharkhand, Madhya Maharashtra, Telangana, South Interior Karnataka, Kerala & Mahe and Arunachal Pradesh; at a few places over Haryana, Chandigarh & Delhi, Utrkhand, East Madhya Pradesh, Odisha, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim and North Interior Karnataka and at isolated places over Tamil Nadu, Puducherry & Karaikal. They were appreciably below normal (-3.1°C to -5.0°C) at a few places over Gangetic West Bengal and below normal (-1.6°C to -3.0°C) at a few places over Saurashtra & Kutch and Andaman & Nicobar islands and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 35.3°C was reported at Karwar (Coastal Karnataka) over the country.
- Minimum Temperature Departures as on 27-12-2020: Minimum temperatures were appreciably above normal (3.1°C to 5.0°C) at many places over West Rajasthan and Gujarat Region; at a few places over Saurashtra & Kutch and at isolated places over East Rajasthan and West Madhya Pradesh; above normal (1.6°C to 3.0°C) at most places over Madhya Maharashtra; at many places over Andaman & Nicobar Islands and at a few places over Konkan & Goa and Coastal Karnataka. They were appreciably below normal (-3.1°C to -5.0°C) at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Odisha and Gangetic West Bengal and at isolated places over Himachal Pradesh, West Uttar Pradesh and East Madhya Pradesh; below normal (-1.6°C to -3.0°C) at most places over East Uttar Pradesh, Jharkhand and Chhattisgarh; at many places over Telangana and Punjab; at a few places over Kerala & Mahe, Rayalseema and Bihar and at isolated places over Tamil Nadu, Puducherry & Karaikal, Haryana, Chandigarh & Delhi and Vidarbha. Yesterday, the lowest minimum temperature of 2.6°C is reported at Churk (East Uttar Pradesh) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 28 December (Day 1): Cold Wave to Severe Cold Wave conditions very likely at some pockets over Punjab and Haryana, Chandigarh & Delhi and Cold Wave conditions at isolated pockets over Saurashtra & Kutch.
- 29 December (Day 2): Cold Wave to Severe Cold Wave conditions very likely at some pockets over Punjab and Haryana, Chandigarh & Delhi and at isolated

pockets over Rajasthan; Cold Wave conditions at isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh, Saurashtra & Kutch and West Madhya Pradesh. Dense fog very likely in isolated pockets over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh. Ground Frost very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Himachal Pradesh, Uttar Pradesh, West Madhya Pradesh and Rajasthan.

- 30 December (Day 3): Cold Wave to Severe Cold Wave conditions likely at some pockets over Punjab and Haryana, Chandigarh & Delhi and at isolated pockets over Rajasthan; Cold Wave conditions at isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh and Madhya Pradesh. Dense to very dense fog likely in isolated pockets over Punjab, Haryana, Chandigarh & Delhi and Dense fog in isolated pockets over Himachal Pradesh, Uttarakhand and Uttar Pradesh. Ground Frost likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Himachal Pradesh, Uttar Pradesh, West Madhya Pradesh and Rajasthan.
- 31 December (Day 4): Cold Wave to Severe Cold Wave conditions likely at some pockets over Punjab and Haryana, Chandigarh & Delhi and at isolated pockets over Rajasthan; Cold Wave conditions at isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh and Madhya Pradesh. Dense to very dense fog likely in isolated pockets over Punjab, Haryana, Chandigarh & Delhi and Dense fog in isolated pockets over Himachal Pradesh, Uttarakhand and Uttar Pradesh. Ground Frost likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Himachal Pradesh, Uttar Pradesh, West Madhya Pradesh and Rajasthan.
- 01 January (Day 5): Cold Wave to Severe Cold Wave conditions likely at some pockets over Punjab and Haryana, Chandigarh & Delhi and at isolated pockets over Rajasthan; Cold Wave conditions at isolated pockets over Himachal Pradesh, Uttarakhand, Uttar Pradesh and Madhya Pradesh. Dense to very dense fog likely in isolated pockets over Punjab, Haryana, Chandigarh & Delhi and Dense fog in isolated pockets over Himachal Pradesh, Uttarakhand and Uttar Pradesh. Ground Frost likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttarakhand, Himachal Pradesh, Uttar Pradesh, West Madhya Pradesh and Rajasthan.
- The weather outlook for seven days i.e., 28 December to 05 January 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)

Maharashtra-Vidarbha

Weather condition:

Weekly average means (51 MW) at AICRPAM Akola centre: T max 29.0°C (normal 29.2°C), T min 10.7°C (normal 10.6 °C). RH I 83% (normal 70 %), RH II 33% (normal 28 %). Evaporation rate 3.6 mm (normal 3.9 mm), Wind speed 0.7 km/hr (normal 3.4 km/hr) and BSH 7.2 hrs (normal 8.3 hrs). Maximum temperature across the week was 0.4°C below normal with a deviation of -0.8 to +0.9°C from normal. Minimum temperature across the week 0.1°C above normal with a deviation of -3.8 to 6.0°C from normal.

Contingency measure:

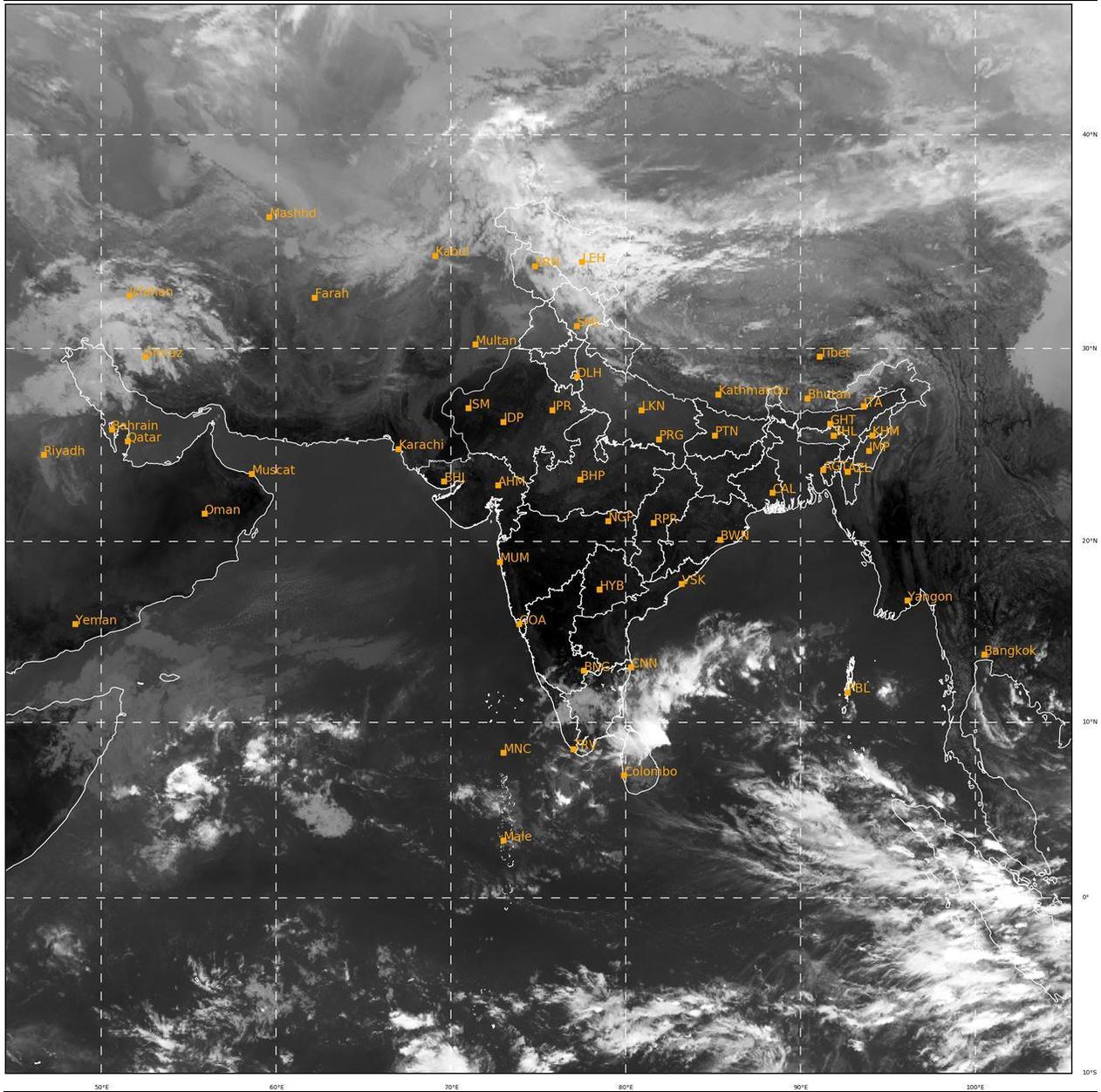
- The forecast (IMD) suggests mainly dry and cold weather conditions will remain for next five days over Vidharbha with cold wave conditions likely at isolated places during 24-25 December 2020 over most of the parts of central India.
- During this time with prevalence of cold weather apply light and frequent irrigation as per need to protect the susceptible field crops (pigeonpea), orchards and vegetables from cold. Dry soils are poor heat conductors, store less heat and therefore result in a higher risk of declining minimum temperature. Create air blanket of smoke over the field by burning waste materials/weeds and crop residues in the evening/ night. This will trap the outgoing long wave radiation and the fall in temperature is reduced to a great extent.
- In chickpea install pheromone traps (hexalure) @ 5/ha for monitoring the incidence of pod borer (*Helicoverpa*) and also undertake control measures if 8 to 10 adult moths are observed in the trap over 3 consecutive days. For management of pod borer (*Helicoverpa*) in chickpea undertake first spray at 50% flowering stage with 5% NKSE OR Azadirachtin 1500 PPM @ 25 ml OR HaNPV (1x10⁹ POB/ml) 500 LE/ha, OR quinolphos 25%EC @ 20 ml per 10 litres of water. After 15 days of first spray undertake second spray of Emamectin benzoate 5% SG @ 3 g OR Ethion 50% EC @ 25ml OR Flubendiamide 20% WG @ 5 g OR Chlorantraniliprole 18.5 % SG @ 2.5 g per 10 litres of water.
- To manage the incidence of pod borer (*Helicoverpa*) in pigeonpea at flowering stage/pod formation (3/plant or 5 to 10% pod damage) undertake first spray of 5% NKSE OR Azadirachtin 300 PPM @ 50 ml per 10 litres of water OR Azadirachtin 1500 PPM @ 25 ml OR HaNPV (1x10⁹ POB/ml) 500 LE/ha, OR quinolphos 25% EC @ 20 ml OR Thiodicarb 75% WP @ 20 g per 10 litres of water. After 15 days of first spray undertake second spray of Chlorantraniliprole 18.5% SC @ 3 ml OR

Indoxacarb 15.8% EC @ 6.6 ml OR Lambda cyhalothrin 5% EC @ 10ml OR Flubendiamide 20% WG @ 5 g OR Emamectin benzoate 5% SG @ 4.4 g OR Chlorantraniliprole 9.3% + Lambda cyhalothrin 4.6% zc @ 4 ml per 10 litres of water. Undertake all spraying operations during clear and calm weather.

- For very late sowing of irrigated wheat (December 15-January 7) use varieties - AKAW 4627 and PDKV Sardar (AKAW 4210-6). Follow seed treatment with carbendazim @ 2.5 g/kg seed and also Azotobacter and PSB each @ 250 g per 10-12 kg of seed. Use recommended seed rate for very late sowing @ 150kg/ha. Use fertilizer @ 40:40:40 kg NPK/ha at sowing and remaining N @ 40 kg/ha at 18-20 days stage at first irrigation.
- At cotton collection and storage centers cleanliness and mass trapping for pink boll worm through pheromone trap is advisable to reduce carry over in next season. For better nutrition of hasta bahar bearing kagzi lime undertake spray of zinc sulphate, ferrous sulphate and manganese sulphate each @ 50 g + lime 40 g in 10 litres of water.
- Transplanting of 4-6 week old seedlings of tomato, brinjal, cabbage and cauliflower and seed sowing radish carrot, leafy vegetables can be initiated during this period.
- In view of decline in minimum temperature it is advised to keep the animals in closed shelter and take special care of young cattle to protect from cold. Shelter floor should be covered with straw litter which provides a thermal mulch. Protect poultry birds/chicks from cold winds by hanging curtain/clothing from outside the poultry shed. Use of electric bulbs (5-6 hrs) for heat is advisable.

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

28-12-2020/(0700 to 0727) GMT
28-12-2020/(1230 to 1257) IST



422

945

IMD, DELHI

Figure: 1. Latest available satellite picture as on 28 December 2020 at 1257 Hrs (IST).
(Source: IMD).

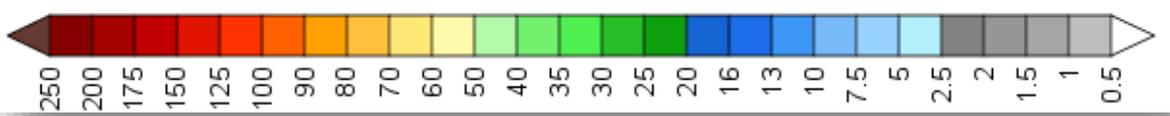
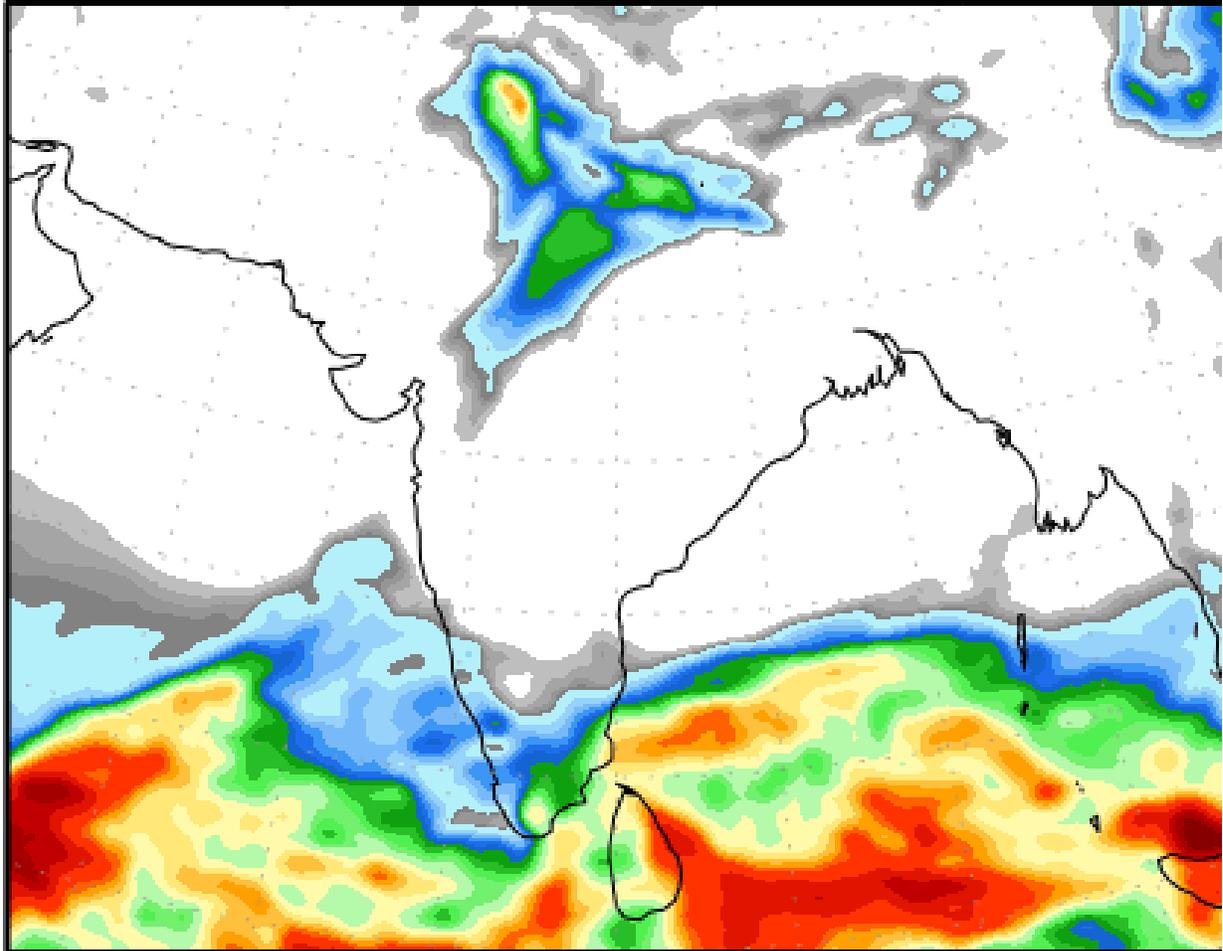


Figure:2. Precipitation forecast for 28 Dec to 05 Jan 2021 (Source: NOAA NCEP).

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