

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 24 Jul 2021

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- A Low Pressure Area lies over Jharkhand & adjoining north Chhattisgarh. The associated cyclonic circulation extends upto mid-tropospheric levels. It is likely to move slowly west-northwest wards till tomorrow.
- The monsoon trough at mean sea level runs south of its normal position. It is likely to continue to remain south of the normal position during next 48 hours.
- The off-shore trough at mean sea level now runs from Karnataka coast to Kerala coast.
- A fresh Low Pressure Area is likely to form over North Bay of Bengal & neighbourhood around 28th July, 2021.
- Further reduction in rainfall intensity is very likely along the west coast including Konkan & Goa & adjoining interior Maharashtra during next 24 hours. Fairly widespread to widespread rainfall with isolated heavy to very heavy falls very likely to continue over west coast including Maharashtra on 24th July and isolated heavy falls thereafter.
- Scattered to fairly widespread rainfall with isolated heavy to very heavy falls likely to continue over Gujarat state till 25th July and reduction thereafter.
- Fairly Widespread to widespread rainfall with isolated heavy to very heavy falls likely to continue over east and adjoining central India today with reduction thereafter. Isolated extremely heavy falls also likely over West Madhya Pradesh today.
- Fairly widespread rainfall with isolated heavy to very heavy falls likely to continue over East Rajasthan till 26th July and reduction thereafter. Isolated extremely heavy falls also likely over East Rajasthan tomorrow.
- Rainfall activity likely to increase over northwest India from tomorrow. Fairly widespread to widespread rainfall with isolated heavy to very heavy falls likely over Uttarakhand during 25th-28th July; Himachal Pradesh, Haryana and West Uttar Pradesh during 26th-28th July and Punjab & East Uttar Pradesh on 27th & 28th July. Isolated extremely heavy falls also likely over Himachal Pradesh and Uttarakhand on 27th & 28th July, 2021.

- Strong surface winds (speed reaching 20-30 kmph) very likely over East Uttar Pradesh during next 24 hours
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rain/Thundershowers observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at most places over West Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Telangana, Coastal Karnataka, Lakshadweep and Kerala & Mahe; at many places over East Rajasthan, East Madhya Pradesh, Vidarbha, Bihar, Arunachal Pradesh, Marathawada, Coastal Andhra Pradesh & Yanam and Interior Karnataka; at a few places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Assam & Meghalaya and at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, West Rajasthan, Gujarat state and Tamil Nadu, Puducherry & Karaikal and Rayalaseema.
- Heavy Rainfall recorded (from 0830 hours IST of yesterday to 0830 hours IST of today): Extremely Heavy Rainfall at isolated places over East Rajasthan, West Madhya Pradesh and Madhya Maharashtra; Very Heavy Rainfall at isolated places over East Madhya Pradesh, Karnataka and Tamil Nadu, Puducherry & Karaikal and Heavy Rainfall at isolated places over East Uttar Pradesh, West Rajasthan, Vidarbha, Haryana, Jharkhand, Gangetic West Bengal, Odisha, Konkan & Goa, Telangana and Kerala & Mahe.
- Thunderstorm observed (from 0830 hours IST of yesterday to 0830 hours IST of today): at isolated places over Rajasthan, Haryana, Madhya Maharashtra, Assam & Meghalaya, Vidarbha, Uttar Pradesh, Bihar, West Bengal & Sikkim, Madhya Pradesh, Coastal Andhra Pradesh & Yanam and Chhattisgarh.
- Maximum Temperature Departures as on 23-07-2021: Maximum temperatures were markedly above normal (5.1°C or more) at isolated places over Arunachal Pradesh; appreciably above normal (3.1°C to 5.0°C) at many places over Assam & Meghalaya; at isolated places over East Madhya Pradesh and Saurashtra & Kutch; above normal (1.6°C to 3.1°C) at many places over Bihar, East Uttar Pradesh and Uttarakhand; at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands; at isolated places over Rajasthan and West Uttar Pradesh. They were markedly below normal (-5.1°C or less) at isolated places over West Madhya Pradesh; appreciably below normal (-3.1°C to -5.0°C) at many

places over Vidarbha and Interior Karnataka; at a few place over Rayalaseema; at isolated places over Telangana, Odisha and Madhya Maharashtra; below normal (-1.6°C to -3.0°C) at many places over Coastal Andhra Pradesh & Yanam and Marathawada; at a few places over Tamilnadu, Puducherry & Karaikal; at isolated places over Gangetic West Bengal and Konkan & Goa and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 40.2°C was reported at Phalodi (West Rajasthan).

- Minimum Temperature Departures as on 24-07-2021: Minimum temperatures are above normal (1.6°C to 3.0°C) at many places over Uttarakhand and Punjab; at a few places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, West Rajasthan and Gujarat Region; at isolated places over Haryana, Chandigarh & Delhi, Saurashtra & Kutch and Sub-Himalayan West Bengal & Sikkim. They are appreciably below normal (-3.1°C to -5.0°C) at a few places over Telangana; below normal (-1.6°C to -3.0°C) at many places over Coastal Andhra Pradesh & Yanam; at isolated places over Madhya Pradesh, Madhya Maharashtra and Tamil Nadu, Puducherry & Karaikal and near normal over rest parts of the country. Today, the lowest minimum temperature of 18.0°C is reported at Khandwa (West Madhya Pradesh).

Weather Warning during the next 5 days (IMD)

- 24 July (Day 1): Heavy to Very Heavy Rainfall with Extremely Heavy Rainfall very likely at isolated places over West Madhya Pradesh; Heavy to Very Heavy Rainfall at isolated places over East Rajasthan, Gujarat region, Konkan & Goa, Madhya Maharashtra, ghat areas of Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Coastal & South Interior Karnataka and Heavy rainfall at isolated places over southwest Uttar Pradesh, Gangetic West Bengal, Odisha, Jharkhand, East Madhya Pradesh, Vidarbha, Chhattisgarh, Mizoram & Tripura, Saurashtra & Kutch, Marathawada, North Interior Karnataka and Telangana. Thunderstorm accompanied with lightning & gusty wind (speed 40-50 kmph) very likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Uttar Pradesh, Rajasthan, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Tamil Nadu, Puducherry & Karaikal. Strong winds (speed 50-60 kmph gusting to 70 kmph) very likely over Southwest & westcentral Arabian Sea and along & off Andhra Pradesh coast; (speed 40-50 kmph gusting to 60 kmph) over Eastcentral, Southeast Arabian Sea along & off Maharashtra-Goa-Karnataka-Kerala coasts & Lakshadweep area; North Bay of

Bengal along & off West Bengal and Odisha coasts; South & adjoining Central Bay of Bengal along & off south Tamilnadu coast, Gulf of Mannar, Comorin-Maldives areas and Andaman sea. Fishermen are advised not to venture into these areas.

- 25 July (Day 2): Heavy to Very Heavy Rainfall with Extremely Heavy Rainfall very likely at isolated places over East Rajasthan; Heavy to Very Heavy Rainfall at isolated places over Uttarakhand and Gujarat Region and Heavy rainfall at isolated places over West Uttar Pradesh, Himachal Pradesh, north Haryana, West Madhya Pradesh, Andaman Islands, Odisha, Arunachal Pradesh, Assam & Meghalaya, Mizoram & Tripura, Madhya Maharashtra, Konkan & Goa, Saurashtra & Kutch, Kerala & Mahe, ghat areas of Tamil Nadu, Puducherry & Karaikal and Coastal & South Interior Karnataka. Thunderstorm accompanied with lightning & gusty wind (speed 40-50 kmph) very likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Uttar Pradesh, Rajasthan, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Tamil Nadu, Puducherry & Karaikal. Strong winds (speed 50-60 kmph gusting to 70 kmph) very likely over Southwest & Westcentral Arabian Sea; (speed 40-50 kmph gusting to 60 kmph) over Eastcentral, Southeast Arabian Sea along & off Karnataka-Kerala coasts & Lakshadweep area; South & adjoining Central Bay of Bengal, Gulf of Mannar, Comorin-Maldives areas and Andaman sea. Fishermen are advised not to venture into these areas.
- 26 July (Day 3): Heavy to Very Heavy Rainfall very likely at isolated places over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, West Uttar Pradesh, northeast Rajasthan, Arunachal Pradesh and Assam & Meghalaya and Heavy rainfall at isolated places over Punjab, Bihar, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Gujarat region, Kerala & Mahe and Coastal Karnataka. Thunderstorm accompanied with lightning & gusty wind (speed 40-50 kmph) very likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Odisha, Bihar, West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Strong winds (speed 40-50 kmph gusting to 60 kmph) very likely over Southwest & central Arabian Sea; Northeast Arabian Sea along & off Gujarat coast; Southeast Arabian Sea along & off Karnataka-Kerala coasts & Lakshadweep area; South & adjoining Central Bay of Bengal and Andaman sea. Fishermen are advised not to venture into these areas.

- 27 July (Day 4): Heavy to Very Heavy Rainfall with Extremely heavy falls likely at isolated places over Himachal Pradesh and Uttarakhand; Heavy to very rainfall at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Haryana, Chandigarh & Delhi, Punjab, Uttar Pradesh and Bihar and Heavy rainfall at isolated places over East Rajasthan, East Madhya Pradesh, Chhattisgarh, Odisha, West Bengal & Sikkim, Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and Kerala & Mahe. Thunderstorm accompanied with lightning & gusty wind (speed 40-50 kmph) likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Jharkhand, Odisha, Bihar and Gangetic West Bengal. Strong winds (speed 40-50 kmph gusting to 60 kmph) likely over South & Westcentral Arabian Sea; Northeast Arabian Sea along & off Gujarat coast; Eastcentral Arabian Sea along & off Maharashtra-Goa coasts and Andaman sea. Fishermen are advised not to venture into these areas.
- 28 July (Day 5): Heavy to Very Heavy Rainfall with Extremely heavy falls likely at isolated places over Himachal Pradesh and Uttarakhand; Heavy to very rainfall at isolated places over Jammu, Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Haryana, Chandigarh & Delhi, Punjab, Uttar Pradesh, Odisha, Gangetic West Bengal and Bihar and Heavy rainfall at isolated places over Bihar, Jharkhand, Nagaland, Manipur, Mizoram & Tripura and Konkan & Goa. Thunderstorm accompanied with lightning & gusty wind (speed 40-50 kmph) likely at isolated places over Andaman & Nicobar Islands and with lightning at isolated places over Uttar Pradesh, Rajasthan, Jharkhand and Bihar. Strong winds (speed 40-50 kmph gusting to 60 kmph) likely over South & Westcentral Arabian Sea; Northeast Arabian Sea along & off Gujarat coast; Eastcentral Arabian Sea along & off Maharashtra-Goa coasts and Andaman sea. Fishermen are advised not to venture into these areas.
- The weather outlook for seven days i.e., 24 Jul to 01 Aug 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)

Himachal Pradesh

Weather condition:

The maximum and minimum temperature ranged between 22.5 to 28.5 °C and 18.5 to 21.5 °C which was mostly above normal by 0.6 to 2.7 °C and 0.3 to 1.8 °C, respectively. 281.8 mm rainfall was received during the week against the normal of 161.9 mm. The relative humidity varied between 84-100 % and sunshine hours between 0.0-5.5 hrs/day with variable sky conditions (Octa 4-8). The evaporation rate varied 1.4-3.3 mm per day.

Contingency measure:

- Kharif Crops: Rice: Farmers are advised to make bund for conserving rain water in the field. Bund should be higher and wider so that more rain water can be conserved in the field.
- Maize: Hoeing and weeding should be done in it to improve the root growth and save the water consumption. Spray recommended herbicides to control fall army worms attack.
- Pulses: Advised to inter-cultural operation and weed free in moong and mash in irrigated areas advised. In rainfed region ensure proper moisture. For weed control in leguminous crops, sprinkle 3 liters or stomp 4.5 liters according to per hectare within 48 hours.
- Fodder Crops: Advised to sowing of fodder maize along with cowpeas and soybean in irrigated areas. Chari bajra for fodder sowing may be completed. In mid hill region root slips of setaria, hathi grass may be planted in grasslands. Advised to sowing of fodder maize along with cowpeas and soybean in irrigated areas.
- Vegetable Crops: Ensure proper drainage in field in view of rainfall.
- Bhindi & Frenchbean: Monitoring of lady finger crop against attack of mite is advised. Weed control in bhindi and frenchbean is advised.
- Tomato, Chilli, Capsicum and Brinjal: Shoot and fruit borer in brinjal and tomato crops, expected. Install pheromone trap @25 per hectare. If pest population is high, spraying of recommended chemicals is advised when sky is clear. Constant monitoring of the chilli crop against attack of mites is advised. Advised to transplant of nursery crop on field with healthy seedlings. Damping off disease expected in seedling raising of tomato, brinjal, chillies and capsicum etc. Drenching of seedbeds with recommended chemical.
- Poly House Agriculture: Open the side and top for temperature control. During rains top and side bent should be closed. Advised nursery sowing of Tomato,

Brinjal, chillies and capsicum crops in poly house. Cucurbits plantation may be done in polytubes under the polyhouse. Mites expected in polyhouse. For control of mites in polyhouse spray recommended chemicals.

- Agro Forestry: Nursery of medicinal plants viz. aswagandha, tulsi, digitalis, jangli bhindi and agarkara can be grown in the fields. Plantation of beunce can also be done. Trees saplings grown in the polythene bags may be shifted into the fields.
- Tea: Advised picking in tea at 8-10 days interval to maintain the quality and productivity. Monitor for mites and Milli bug expected in the orchards, for control of milli bug spray recommended chemicals.
- Livestock: High temperature expected. Protects animals from high temperature stress with splash water on their body 2-3 times a day. Milk the animals at cooler place. Monitor the animals for FMD and advised protect calves against parasites, get them dewormed with piperazine liquid @ 4 ml/kg body weight, first at 10 days of age, then 15 days and then monthly upto three months of age and then quarterly upto one year of age. Vaccination. Ecto-parasite attack is expected in this weather for control spray Butox @ 2ml per litre in cowshed Give mixture of hay & green fodder.
- Poultry: Make sure to deworm your older flocks every month against round-worms. Temperature is rising above 300C, so 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 form a line 40% @ 1litre in 9 litres of water in outside or surrounding of farm. Provide vitamin A and vitamin B-complex with water.
- Mushrooms: Maintain room temperature 18-22oC and relative humidity around 85% for successful cultivation.
- Horticulture: Spray micro nutrients of zinc, copper, manganese, iron and boron in mango, grape, citrus and guava orchards. If a termite outbreak appears on the trees, sprinkle recommended chemicals. Monitor foliar pest on plants of Citrus species. Spray approved medicine for pomegranate butterfly and fruit borer insect in pomegranate and litchi by dissolving in water.
- Apiculture: Insert the brood chamber without frame for ensuring aeration. Dust suplhur on sealed brood in the colony and not on larvae to control mites attack on honeybees. Also insert empty frame /combs for egg laying to the queen as the population starts builds up. For protection from ants, put the legs of apiary into water so that ants could not attack apiary. Keep the colonies in shady places and sprinkle water if possible to reduce the heat as temperature rising high in the

region.

- **Water Storage:** Farmers are advised make arrangement for storing rain water in pond made in the field. This water can be used for irrigation in the crops at suitable time during dry spell. Mulch material may also be arranged to use during dry spell. Farmers are also advised to increase the amount of potash it helps in minimizing the losses due to the moisture stress during dry spell. In rain fed areas, use of mulches is beneficial for conservation of moisture in the soil. Farmers are advised to do proper arrangement for storing rain water at one portion in the field. This water can be used for irrigation in the crops at suitable time during dry spell.

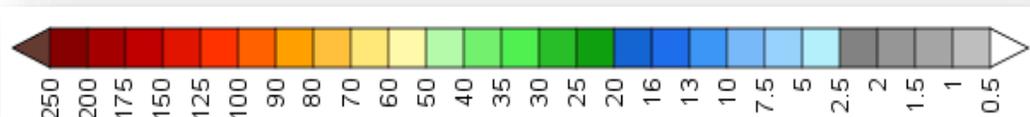
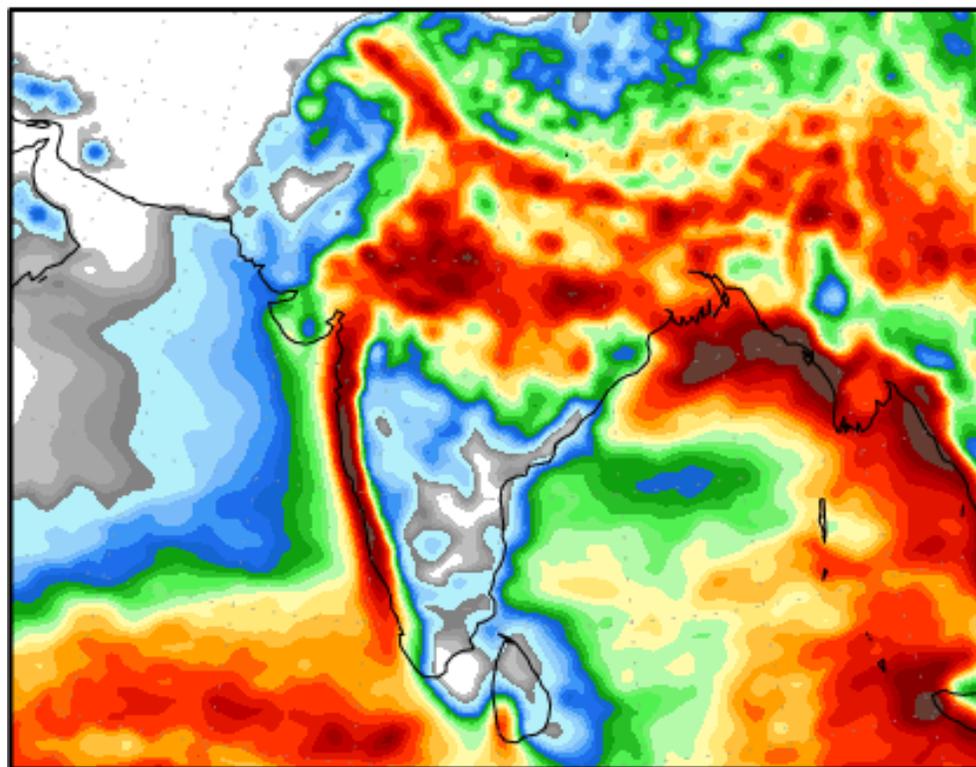


Figure:2. Precipitation forecast for 24 Jul to 01 Aug 2021 (Source: NOAA NCEP).

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