

All India Coordinated Research Project on Agrometeorology

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Daily Crop Weather Information as on 17 June 2019

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- The Cyclonic Storm 'VAYU' (pronounced as VAA'YU) over northeast Arabian Sea & neighborhood moved northeastwards with a speed of about 13 kmph in last six hours, weakened into a Deep Depression and lay centered at 0830 hrs IST of 17th June, 2019 near latitude 21.9°N and longitude 66.8°E over Northeast Arabian Sea & neighborhood, about 260 km west-southwest of Naliya (Gujarat), 240 km west-southwest of Dwarka (Gujarat) and 340 km west-southwest of Bhuj (Gujarat). The system is very likely to weaken into a Depression during next 06 hours. The system is very likely to move northeastwards and cross north Gujarat coast by midnight of 17th June 2019 as a Depression.
- Fishermen are advised not to venture into north Arabian Sea, northern parts of central Arabian Sea and along & off Gujarat coast.
- Conditions are becoming favorable for further advance of Southwest Monsoon into some more parts of Central Arabian Sea, Karnataka, some parts of south Konkan & Goa, Andhra Pradesh, remaining parts of Tamil Nadu, some more parts of West Bay of Bengal, remaining parts of northeast India, Sub-Himalayan West Bengal & Sikkim and some parts of Odisha in the next 4-5 days.
- Northern Limit of Monsoon (NLM) continues to pass through Lat. 13°N/Long. 60°E, Lat. 13°N/Long. 70°E, Mangaluru, Mysuru, Salem, Cuddalore, Lat. 14°N/Long. 86°E, Goalpara, Alipurduar, Gangtok and Lat. 28°N/Long. 88°E.
- The images showing the latest satellite picture in 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 Chhattisgarh, Coastal Karnataka, Arunachal Pradesh and Andaman & Nicobar Islands; at many places over Odisha, Konkan & Goa, Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya; at a few

places over Haryana, Chandigarh & Delhi, East Rajasthan, Saurashtra & Kutch, Kerala & Mahe and Lakshadweep and at isolated places over Jammu & Kashmir, Himachal Pradesh, West Rajasthan, Gangetic West Bengal, Madhya Pradesh, Vidarbha, Uttar Pradesh, Gujarat region, Jharkhand, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Madhya Maharashtra, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal. Rainfall observed at 0830 hours IST of today (3 cm or more) are: Cherrapunji-36; Jagdalpur-6; Haflong-5; Silchar-4; Churu, Satna, Rajnandgaon, Port Blair, Maya Bandar, North Lakhimpur and Goalpara-3 each. Extremely Heavy rainfall observed at isolated places over Assam & Meghalaya. Thunderstorm observed (from 0530 hours IST of yesterday to 0830 hours IST of today): at a few places over Chhattisgarh and Coastal Andhra Pradesh and at isolated places over Jammu & Kashmir, Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Odisha, Haryana, Chandigarh & Delhi, Bihar, West Rajasthan and Andaman & Nicobar Islands. Yesterday, Heat Wave Conditions were observed at some places with severe Heat wave at isolated places over Bihar. Heat Wave Conditions were observed at many places over Vidarbha, Coastal Andhra Pradesh & Yanam and Telangana and in isolated pockets over Gangetic West Bengal, Jharkhand, East Uttar Pradesh, Marathawada, Chhattisgarh and Tamil Nadu, Puducherry & Karaikal.

- Maximum temperature departures as on 16-06-2019: Maximum temperatures were markedly above normal (5.1°C or more) at most places over Jharkhand; at many places over Bihar, Telangana and Coastal Andhra Pradesh & Yanam; at a few places over Chhattisgarh and at isolated places over East Uttar Pradesh, Gangetic West Bengal, Vidarbha and Tamil Nadu, Puducherry & Karaikal; appreciably above normal (3.1°C to 5.0°C) at most places over Marathawada, North Interior Karnataka and Rayalaseema; at many places over Coastal & South Interior Karnataka and Kerala & Mahe; at isolated places over Madhya Maharashtra; above normal (1.6°C to 3.0°C) at most places over Lakshadweep; at many places over Konkan & Goa; at a few places over Madhya Pradesh and Odisha and at isolated places over Sub-Himalayan West Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura. They were markedly below normal (-5.1°C or less) at many places over Haryana, Chandigarh & Delhi; at isolated places over West Rajasthan; appreciably below normal (-3.1°C to -5.0°C) at isolated places over Jammu & Kashmir, West Uttar Pradesh and Arunachal Pradesh; below normal (-1.6°C to -3.0°C) at many places over Punjab and at isolated places over Himachal Pradesh, East Rajasthan, Saurashtra & Kutch, Assam & Meghalaya and Andaman & Nicobar Islands and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 45.3°C was recorded at Allahabad (East Uttar Pradesh).
- Minimum temperature departures as on 17-06-2019: Minimum temperatures are markedly above normal (5.1°C or more) at isolated places over Vidarbha; appreciably above normal (3.1°C to 5.0°C) at many places over Bihar and Coastal

Andhra Pradesh & Yanam; at a few places over Rayalaseema; at isolated places over West Bengal & Sikkim, Telangana, Kerala & Mahe and West Madhya Pradesh; above normal (1.6°C to 3.0°C) at most places over Jharkhand; at many places over West Rajasthan, Coastal Karnataka and Tamil Nadu, Puducherry & Karaikal; at a few places over Madhya Maharashtra; at isolated places over Gujarat region, Odisha, Interior Karnataka and Konkan & Goa. They are appreciably below normal (-3.1°C to -5.0°C) at isolated places over Jammu & Kashmir and East Madhya Pradesh; below normal (-1.6°C to -3.0°C) at a few places over Himachal Pradesh and at isolated places over Haryana, Chandigarh & Delhi and near normal over rest parts of the country.

Weather Warning during next 5 days (IMD)

- 17 Jun (Day 1): Thunderstorm & lighting accompanied with squall (50-60 kmph) at isolated places over Vidarbha; with gusty winds (40-50 kmph) at isolated places over Uttarakhand and Chhattisgarh; gusty winds (30-40 kmph) at isolated places over Jammu & Kashmir, Himachal Pradesh, East Rajasthan, Madhya Pradesh, Jharkhand, Odisha, Marathawada, Coastal Andhra Pradesh & Yanam and Telangana; with lighting at isolated places over Sub-Himalayan West Bengal & Sikkim; dust storm & gusty winds (30-40 kmph) at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Rajasthan and Uttar Pradesh. Heavy to Very Heavy Rainfall at isolated places very likely over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya; Heavy rainfall at isolated places over Coastal Andhra Pradesh & Yanam, Gujarat and Andaman & Nicobar Islands. Heat wave conditions in some parts with severe heat wave in isolated pockets very likely over Bihar, Telangana and Vidarbha. Heat wave conditions in some parts likely over Coastal Andhra Pradesh & Yanam and in isolated pockets over East Uttar Pradesh, Gangetic West Bengal, Jharkhand, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Marathawada. Squally wind speed of the order of 50-60 kmph gusting to 70 kmph is prevailing over northeast Arabian Sea and adjoining central Arabian Sea and it is very likely to decrease gradually becoming 40-50 kmph gusting to 60 kmph by the night of 17th June, 2019. Squally wind speed of the order of 40-50 kmph gusting to 60 kmph very likely to commence along & off Gujarat coast from the evening of 17th June. The Sea condition is very rough over northeast Arabian Sea and adjoining area of central Arabian sea and likely to become rough to very rough by evening of 17th June. The Sea condition is very likely to be rough to very rough along & off Gujarat coast on 17th June. Fishermen are advised not to venture into north Arabian Sea, northern parts of central Arabian Sea and along & off Gujarat coast during next 24 hours. Total Suspension of Fishing Operations.
- 18 Jun (Day 2): Thunderstorm & lighting accompanied with gusty winds (40-50 kmph) at isolated places very likely over Uttarakhand and Chhattisgarh; with gusty winds (30-40 kmph) at isolated places over Jammu & Kashmir, Himachal Pradesh,

Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, Madhya Pradesh, Vidarbha, Jharkhand, Odisha, Gangetic West Bengal, Coastal Andhra Pradesh and Telangana; with lighting at isolated places over Sub-Himalayan West Bengal & Sikkim; with dust storm & gusty winds (30-40 kmph) at isolated places over West Rajasthan and Uttar Pradesh. Heavy rainfall at isolated places over Coastal Andhra Pradesh, Gujarat, East Rajasthan, Andaman & Nicobar Islands and Sub-Himalayan West Bengal & Sikkim. Heat wave conditions in some parts with severe heat wave in isolated pockets very likely over Vidarbha and Bihar. Heat wave conditions in some parts over Coastal Andhra Pradesh and in isolated pockets over East Uttar Pradesh, Jharkhand, Gangetic West Bengal, Telangana, Rayalaseema, Tamil Nadu, Puducherry & Karaikal and Marathwada. Strong wind speed of the order of 35-45 kmph is very likely over southwest Arabian Sea off Somalia Coast and along Tamil Nadu & Puducherry coasts.

- 19 Jun (Day 3): Thunderstorm & lighting accompanied with hail & gusty winds (40-50 kmph) at isolated places over Uttarakhand; with gusty winds (40-50 kmph) at isolated places over East Uttar Pradesh and Chhattisgarh; gusty winds (30-40 kmph) at isolated places over Punjab, Haryana, Chandigarh & Delhi, East Rajasthan, West Uttar Pradesh, Vidarbha, Jharkhand and Coastal Andhra Pradesh & Yanam; with lighting at isolated places over Bihar and Odisha; dust storm & gusty winds (30-40 kmph) at isolated places over West Rajasthan. Heavy rainfall at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, Konkan & Goa, Odisha and Nagaland, Manipur, Mizoram & Tripura. Heat wave conditions in some parts likely over Bihar and in isolated pockets over Vidarbha, Tamil Nadu, Puducherry & Karaikal and Marathwada. Strong wind speed of the order of 35-45 kmph is very likely over southwest Arabian Sea off Somalia Coast.
- 20 Jun (Day 4): Thunderstorm & lighting accompanied with gusty winds (40-50 kmph) at isolated places over Chhattisgarh; gusty winds (30-40 kmph) at isolated places over East Rajasthan, Vidarbha and Gangetic West Bengal; with lighting at isolated places over Bihar and Odisha; dust storm & gusty winds (30-40 kmph) at isolated places over West Rajasthan. Heavy rainfall at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka, Telangana, Chhattisgarh, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. Heat wave conditions in isolated pockets over Vidarbha. Strong wind speed of the order of 35-45 kmph is very likely over southwest Arabian Sea off Somalia Coast.
- 21 Jun (Day 5): Thunderstorm & lighting accompanied with gusty winds (40-50 kmph) at isolated places over Chhattisgarh; gusty winds (30-40 kmph) at isolated places over Vidarbha and Gangetic West Bengal; with lighting at isolated places over Bihar and Odisha. Heavy rainfall at isolated places over Kerala & Mahe, Coastal Andhra Pradesh & Yanam, Coastal & South Interior Karnataka, Telangana,

Chhattisgarh, Odisha, and Assam & Meghalaya. Heat wave conditions in isolated pockets over Vidarbha. Strong wind speed of the order of 35-45 kmph is very likely over southwest Arabian Sea off Somalia Coast.

- The weather outlook for the period of seven days *i.e* 17 to 25 June 2019 forecasted (*Provided by Real-Time Weather Forecasts from NOAA/NCEP collected from <http://monsoondata.org/wx2/>*) rain/thundershower may occur over Sub-Himalayan West Bengal & Sikkim, Bihar, Madhya Pradesh, Odisha, Konkan & Goa, Vidarbha, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh, Rayalaseema, North Interior Karnataka, Coastal & South Interior Karnataka, Kerala, Tamil Nadu & Puducherry, Lakshadweep, Andaman & Nicobar Islands and North Eastern States. (Fig. 2).

Agricultural activities (AICRPAM-CRIDA)

Himachal Pradesh

Weather condition:

Very light rainfall received in Himachal Pradesh state during past few days. The maximum temperature was ranged between 27-36°C and minimum temperature was ranged between 19-24°C.

Contingency measure:

- RABI CROPS: In Mid and high hill regions Advised harvesting of wheat on clear days and store the grains at appropriate (12 %) moisture.
- KHARIF CROP PREPARATION: Do deep ploughing of fields after harvesting of Rabi crops. It helps in destroying the eggs and pupating stages of insects and weed seeds. After harvesting of rabi crops farmers are advised to test their soil from certified agencies and to do laser leveling in their field if required. Sowing of green manure crop is advised where harvesting of rabi crop is over. For green manuring cluster bean, daincha, senai, lobia etc may be sown and ensure proper moisture for proper germination and growth of the crop. Deep ploughing of fields after harvesting of rabi crops is advised so that eggs and pupating stages of insects and weed seeds are destroyed.

- RICE NURSERY: Time is approaching for sowing of Paddy nursery sowing after 20th May. Treat the seed with Bavistin for fungal diseases.
- PULSES: Advised to do intercultural operations and weed free in moong and mash in irrigated areas advised. In rainfed region ensure proper moisture.
- FODDER CROPS: Advised to sowing of fodder maize along with cowpeas and soybean in irrigated areas. Directed to spray glyphosate 1% solutions in the grasslands/pastures having lantana bushes with 2-3 leaves stage. For Ageratum, erigeron, bidens and parthenium in grasslands, spray 2-4-D @ 60 ml in 30 litre of water in one kanal. Ensure spray during morning and evening in low wind conditions. Avoid spray near to crop lands where crop is ready for harvest. In mid hill regions one cut of berseem can be taken.
- VEGETABLE CROPS: Irrigation in Vegetables crops after ensuring the rains. Optimum moisture level should be maintained in cucurbitaceous crops by light and frequent irrigation as dry conditions may lead to poor pollination and thus drop in yield of the crop. RADISH AND TURNIP, ONION & PEAS: High temperature expected, farmers are advised for harvesting of mature vegetables at morning and evening and after harvesting of crops keep them under the shade. In lower regions, start sowing of cucurbits crops in this week.
- GINGER, TURMERIC, CALCOCASIA AND ELEPHANT FOOT AND LEAFY VEGETABLES: For the control of downy mildew in garlic spray Diathane M 45 2.5 g or Bavistin 1 g per litre.
- POLY HOUSE AGRICULTURE: It is optimum time for nursery sowing of Tomato, Brinjal, chillies and capsicum crops in poly house. Cucurbits plantation may be done in polytubes under the polyhouse.
- HORTICULTURE: In mango orchard, start monitoring for mango hopper and destroy infected inflorescence if mango malformation is found. Apply alkathene or sticky grease band 15-20 cm wide on mango plants to control upward movement of mango mealy bug. If Mango plant hopper may attack, to control plant hopper spray, BUPROFEZIN 25% SC 1-2 ml per litres of water Or DELTAMETHRIN 2.8% EC 0.03 to 05% solution. Pomegranate fruit is in flowering stage and Anar butter fly is the major problem in this weather for control of it spray cypermethrin 10 EC @ 1 ml per litre of water at 15 days interval. In litchi fruit borer is appearing for control of it spray cypermethrin 10 EC @ 1 ml per litre of water at 15 days interval.
- TEA: It is optimum time to resume picking in tea at 8 days interval to maintain the quality and productivity.

- MUSHROOMS: Maintain room temperature 18-22°C and relative humidity around 85% for successful cultivation.
- FLORICULTURE: Transplant the bulbs of gladiolus and rajnigandha. It is optimum time for raising nursery of summer annuals like gladiolus, portulaca, gomphrina and china aster etc. Weather is conducive for appearance of aphids in rose, for control of it spray rogur @1 ml per litres of water.
- LIVESTOCK: Ensure cleanliness in cows having advanced pregnancy to avoid mastitis. Monitor the animals for FMD and advised to 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 to control it spray Butox @ 2ml per litre in cowshed. Give mixture of hay & green fodder.

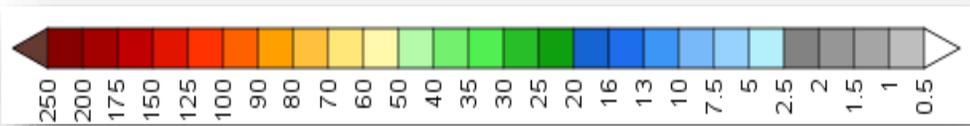
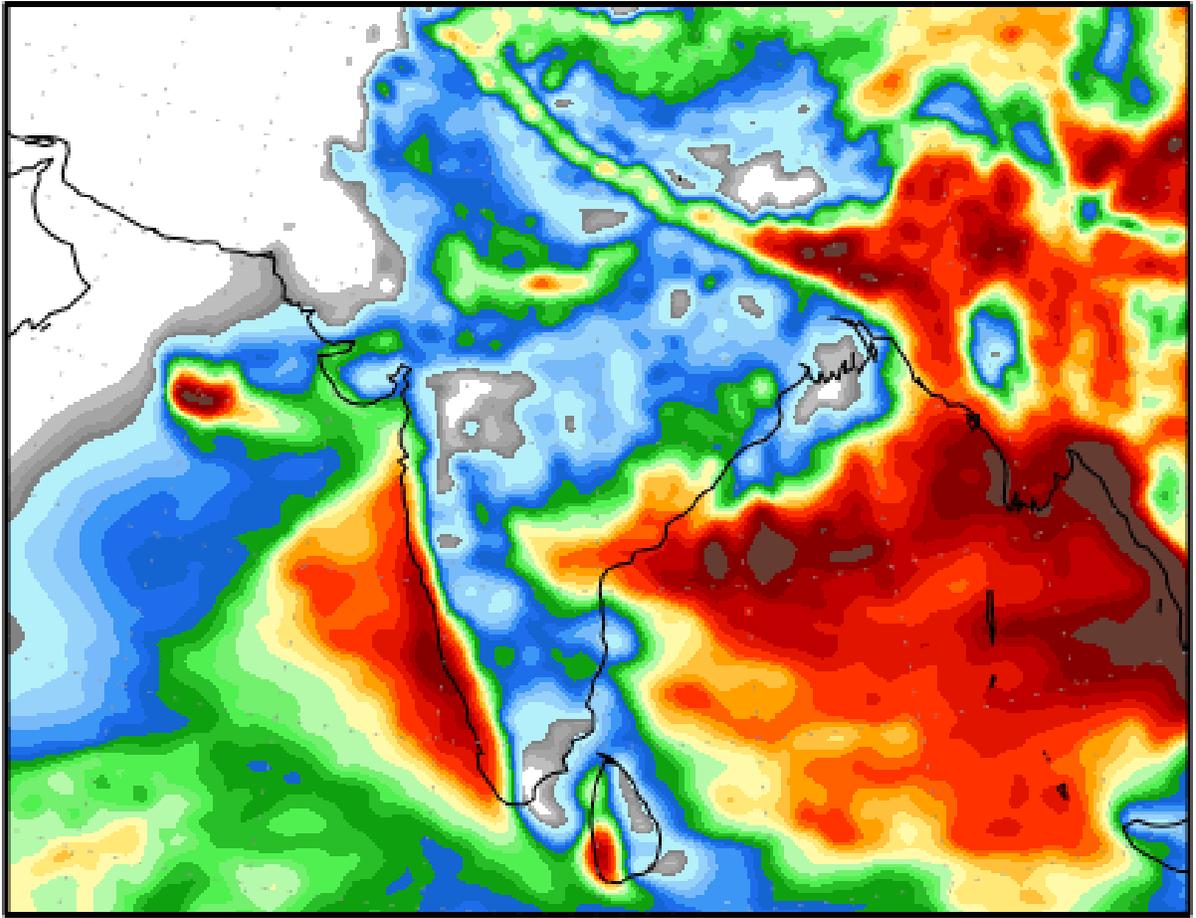


Figure: 2. Precipitation forecast for 16 to 24 June 2019 (Source: NOAA NCEP).