

All India Coordinated Research Project on Agrometeorology

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Daily Crop Weather Information as on 04 July 2020

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Significant Weather Features (IMD)

- A cyclonic circulation lies over south Gujarat & neighbourhood in lower & mid tropospheric levels and another cyclonic circulation lies over East Uttar Pradesh & neighbourhood in lower tropospheric levels. High convergence of strong moist westerly/southwesterly winds at lower tropospheric levels from the Arabian sea very likely along west coast till 06th July and over plains of northwest India & central India from 03rd July, 2020. Under its influence, fairly widespread to widespread rainfall activity with: i) Isolated heavy to very heavy rainfall with isolated extremely heavy falls is very likely over north Konkan on 03rd & 04th July; Gujarat region on 04th & 05th July and over Madhya Maharashtra on 04th July. ii) Isolated heavy to very heavy falls is also very likely over Coastal Karnataka during 03rd-04th July and over Saurashtra & Kutch during 04th-06th July.
- Scattered to fairly widespread rainfall with isolated heavy falls most likely over Madhya Pradesh, Chhattisgarh and East Uttar Pradesh during next 5 days.
- Northeast India and East India very likely to continue to receive fairly widespread to widespread rainfall activity with isolated heavy falls during next 5 days. Isolated extremely heavy falls are very likely over Sub-Himalayan West Bengal & Sikkim during next 24 hours.
- Subdued rainfall activity over Western Himalayan Region and adjoining northwest India very likely to continue during next 24 hours and its distribution & intensity very likely to increase thereafter.
- 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 most places over Coastal Karnataka, Kerala & Mahe and Lakshadweep; at a few places over Arunachal Pradesh, Assam & Meghalaya, Bihar, East Madhya Pradesh, Vidarbha and Konkan & Goa; at isolated places over Himachal Pradesh, East Uttar Pradesh, Gangetic West Bengal, Nagaland,

Manipur, Mizoram & Tripura, Odisha, East Rajasthan, West Madhya Pradesh, Marathwada, Gujarat region, Telangana, Rayalaseema, Coastal Andhra Pradesh & Yanam, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Andaman & Nicobar Islands.

- Heavy rainfall observed at isolated places over Coastal Karnataka.
- Thunderstorm observed (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Uttarakhand, East Uttar Pradesh, Bihar, Assam & Meghalaya, West Bengal & Sikkim, Madhya Pradesh, Odisha, Chhattisgarh, Vidharbha, Coastal & North interior Karnataka, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.
- Yesterday, heat wave conditions observed in some parts over West Rajasthan and at isolated pockets over East Rajasthan.
- Maximum Temperature Departures as on 02-07-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at most places over Rajasthan; at many places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Haryana, Chandigarh & Delhi; at a few places over Himachal Pradesh and Odisha; at isolated places over Uttarakhand; above normal (1.6°C to 3.0°C) at most places over Punjab, Gangetic West Bengal, Gujarat region, Vidarbhha and North Interior Karnataka; at many places over Bihar, Jharkhand, Saurashtra & Kutch, West Madhya Pradesh and Chhattisgarh; at a few places over Uttar Pradesh, East Madhya Pradesh, Telangana, Madhya Maharashtra, Konkan & Goa and Kerala & Mahe; at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, South Interior Karnataka and Tamilnadu, Puducherry & Karaikal. They were appreciably below normal (-3.1°C to -5.0°C) at a few places over Arunachal Pradesh; at isolated places over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands; below normal (-1.6°C to -3.0°C) at a few places over Coastal Andhra Pradesh & Yanam; at isolated places over Coastal Karnataka and Rayalaseema and near normal over rest parts of the country. Yesterday, the highest Maximum temperature of 44.8°C was reported at Bikaner & Phalodi (West Rajasthan).
- Minimum Temperature Departures as on 02-07-2020: Minimum temperatures were appreciably above normal (3.1°C to 5.0°C) at many places over East Rajasthan; at a few places over West Rajasthan; at isolated places over Himachal Pradesh, Punjab, Bihar and Sub-Himalayan West Bengal & Sikkim; above normal (1.6°C to 3.0°C) at most places over Gujarat Region and Gangetic West Bengal; at many places over Haryana, Chandigarh & Delhi and West Uttar Pradesh; at a few

places over Uttarakhand, West Madhya Pradesh, Odisha and Jharkhand; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, East Madhya Pradesh, Vidarbha, Assam & Meghalaya, Saurashtra & Kutch, Coastal Andhra Pradesh & Yanam and Kerala & Mahe. They were below normal (-1.6°C to -3.0°C) at isolated places over Telangana and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 21.6°C was reported at Fatehgarh (East Uttar Pradesh) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 03 July (Day 1): Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places very likely over and Konkan & Goa; heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places very likely over Sub-Himalayan West Bengal & Sikkim; heavy to very heavy rainfall at isolated places over Bihar, Assam & Meghalaya, Madhya Maharashtra and Coastal Karnataka and heavy rainfall at isolated places over Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, East Uttar Pradesh, Coastal Andhra Pradesh & Yanam, Madhya Pradesh, Vidarbha, Chhattisgarh, Gangetic West Bengal, Jharkhand, Odisha, Uttarakhand, Marathwada, Telangana, Interior Karnataka and Kerala & Mahe. Heat wave conditions in isolated pockets very likely over West Rajasthan. Thunderstorm accompanied with lightning very likely at a few places over Bihar and at isolated places over Uttarakhand, Uttar Pradesh, East Rajasthan, Gujarat, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep. Strong Wind (speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea. Squally Weather (speed reaching 40-50 kmph) likely over Southeast & Eastcentral Arabian Sea and along & off Maharashtra-Goa- Karnataka coasts and Lakshadweep. Fishermen are advised not to venture into sea over these areas.
- 04 July (Day 2): Heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places very likely over Konkan & Goa; heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places very likely over Gujarat Region and Madhya Maharashtra; heavy to very heavy rainfall at isolated places over Uttarakhand, East Uttar Pradesh, East Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Saurashtra & Kutch and Coastal Karnataka

and heavy rainfall at isolated places over West Uttar Pradesh, West Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Marathwada, Coastal Andhra Pradesh & Yanam, Telangana, South Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, Jharkhand, Bihar, Gangetic West Bengal, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep. Thunderstorm/Duststorm accompanied with lightning very likely at isolated places over West Rajasthan. Strong Wind (speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea and (speed reaching 40-50 kmph) likely over Eastcentral Arabian Sea and along & off Gujarat-Maharashtra coasts. Fishermen are advised not to venture into sea over these areas.

- 05 July (Day 3): Heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places likely over Gujarat Region; heavy to very heavy rainfall at isolated places over Uttarakhand, East Uttar Pradesh, Saurashtra & Kutch and Konkan & Goa and heavy rainfall at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Madhya Maharashtra. Thunderstorm accompanied with lightning likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan and Jharkhand. Thunderstorm/Duststorm accompanied with lightning likely at isolated places over West Rajasthan. Strong Wind (speed reaching 50-60 kmph) likely over Southwest & Central Arabian Sea and (speed reaching 40-50 kmph) along & off Gujarat-Maharashtra coasts. Fishermen are advised not to venture into sea over these areas.
- 06 July (Day 4): Heavy to very heavy rainfall at isolated places likely over Gujarat State and heavy rainfall at isolated places over Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, Gangetic West Bengal, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra and Konkan & Goa. Thunderstorm accompanied with lightning likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh,

Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan and Jharkhand. Thunderstorm/Duststorm accompanied with lightning likely at isolated places over West Rajasthan. Strong Wind (speed reaching 50-60 kmph) likely over Southwest, Central & Northeast Arabian Sea and (speed reaching 40-50 kmph) along & off Gujarat, Maharashtra coasts. Fishermen are advised not to venture into sea over these areas.

- 07 July (Day 5): Heavy to very heavy rainfall at isolated places likely over Gujarat State and heavy rainfall at isolated places over Uttarakhand, Uttar Pradesh, Punjab, East Rajasthan, Madhya Pradesh, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Karnataka, Vidharbha and Konkan & Goa. Thunderstorm accompanied with lightning likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, Bihar and Jharkhand. Thunderstorm/Duststorm accompanied with lightning likely at isolated places over West Rajasthan. Strong Wind (speed reaching 50-60 kmph) likely over Southwest, Central & Northeast Arabian Sea and (speed reaching 40-50 kmph) along & off GujaratMaharashtra coasts. Fishermen are advised not to venture into sea over these areas.
- The weather outlook for seven days i.e., 04 to 12 July 2020 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)

North Karnataka

Weather condition:

In the Northern Dry Zone of Karnataka cloudy condition prevailed. All the districts received moderate to rather heavy rainfall except Belagavi and Dharwad districts where deficit rainfall rainfall has been received compared to normal during the previous week.

Contingency measure:

- Weather Based advisories Plant Protection: As per the forecast given by the India Meteorological Department, moderate rainfall is expected at many places in the district during the next five days. Plant protection measures may be taken up carefully in the morning hours, mixing adhesive gum in the spray mixture.
- *Kharif* sowing: Moderate rainfall has been received at many places during the previous week. As per the forecast moderate rainfall is expected at many places

during the next five days. Wherever, sufficient rainfall has been received take up sowing of the following crops, immediately.

- Shallow black soil and red soils: Sowing of Greengram, redgram, Bajra, Sesamum, Niger, Navane and groundnut (bunch type), Horsegram, Castor, may be taken up in preference. To make efficient use of available soil and water resources and to get higher returns, intercropping systems of Bajra + Groundnut (bunch); Bajra + Redgram; Bajra + Castor; Groundnut (bunch) + Redgram, Bajra + Groundnut (bunch type) may be taken up.
- Medium deep and deep black soils : Sowing of Greengram, redgram, Bajra , Navane and groundnut (bunch type), Castor, Onion, Chilli may be taken up in preference. To make efficient use of available soil and water resources and to get higher returns, intercropping systems of Bajra + Groundnut (bunch) in 2:4 row proportion; Bajra + Redgram; Bajra + Castor; Bajra + Groundnut (bunch type) may be taken up. Use short duration varieties of redgram for sowing. Use wilt resistant variety TS-3R. Grow two thick rows of bajra or maize as catch crops, in the borders of the Onion and groundnut field which helps in managing insect pests in the later stages. Mix some quantity of tall sorghum seeds with redgram seeds which facilitate in the management of pod borer in the later stages. Purchase certified seeds from registered dealer and get receipt for the same.
- Soil and moisture conservation: Sow the crop in rows across the slope. This will facilitate better conservation of moisture in the soil. Repair of bunds, water retention structures should be taken up. Plough the land across the slope which is to be spared for sowing of Rabi crops so as facilitate better conservation of Soil and soil moisture.
- Live stock management: Vaccinate livestock against Foot and Mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicaemia. Care should be taken that excess moisture is not there in the Vermin-compost pits. Vaccinate (ET vaccine) sheep and goats against Enterotoxemia. Maintain sufficient moisture in the vermicompost pits.
- Agro- advisories FIELD CROPS: Seed treatment Bajra, Greengram and Pigeonpea To induce drought resistance in crops, it is advised to follow special cultivation practices as suggested below before sowing.
- Bajra: Soak the seeds in water for 10 hrs and dry under shade. Take up sowing in wider row spacing up to 135 cm.
- Greengram and Pigeonpea: Soak seeds in CaCl₂ solution (2%) for 1 hour and dry under shade for 7 hours and then go for recommended seed treatment Seed treatment Treat the seeds of groundnut, redgram, greengram with Rhizobium and that of sorghum and bajra with Azetobactor + PSB before sowing. Treat the seeds of

all the crops with Capton or Thiram or Carbandizeme at the rate of 2 gram per Kg of seeds or Trichoderma at the rate of 4 gram per Kg of seed before sowing.

- Sugarcane: Since monsoon rains have started, to facilitate good vegetative growth, top dress the crop with Nitrogen and Potash fertilizers. To manage striga weed, irrigate the crop, spread sugarcane trash in between the rows and take up spraying of 1 kg of 2,4 D dissolved in 500 liter on the weed.
- HORTICULTURAL CROPS: Citrus: To manage Bacterial blight disease, spray the crop with 3 gram Copper Oxy-chloride or 1 per cent Bordo mixture dissolved in one liter of water or 300 ppm Streptomycin (3 gram in 10 liters of water).
- Grapes: To manage Anthracnose disease, take up spraying of 1 ml Thiophenate Methyl dissolved in one liter of water.
- Pomegranate: To manage sucking pests, take up spraying of 0.3 ml Imidacloprid or 0.25 ml Thiamethaxam dissolved in one liter of water. To manage Bacterial blight disease, spray the crop with streptomycin sulphate 0.5 g. + copper oxychloride 2 g. dissolved in one liter water. Then take up spraying of micro nutrients viz., 1 g. Zinc Sulphate + 1 g. Magnesium Sulphate + 1 g. Barax + 1 g. Calcium dissolved in one liter of water.
- Watermillon, Bhendi and tomato: To manage sucking pests in watermillon, Bhendi and tomato, take up spraying of 1.7 ml Dimethoate or 2 ml Melathion and 1 per Joggery syrup dissolved in one liter of water.
- Brinjal: To manage branch cutting and fruit borer in Brinjal, remove the infested branch along with the larva and burn. After this spray the crop with Carbaryl 4 g. or Melathion 2 ml or Quinolphos 2 ml dissolved in one liter of water. Repeat the same spray at 15 days interval.

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

03-07-2020/(0830 to 0857) GMT
03-07-2020/(1400 to 1427) IST

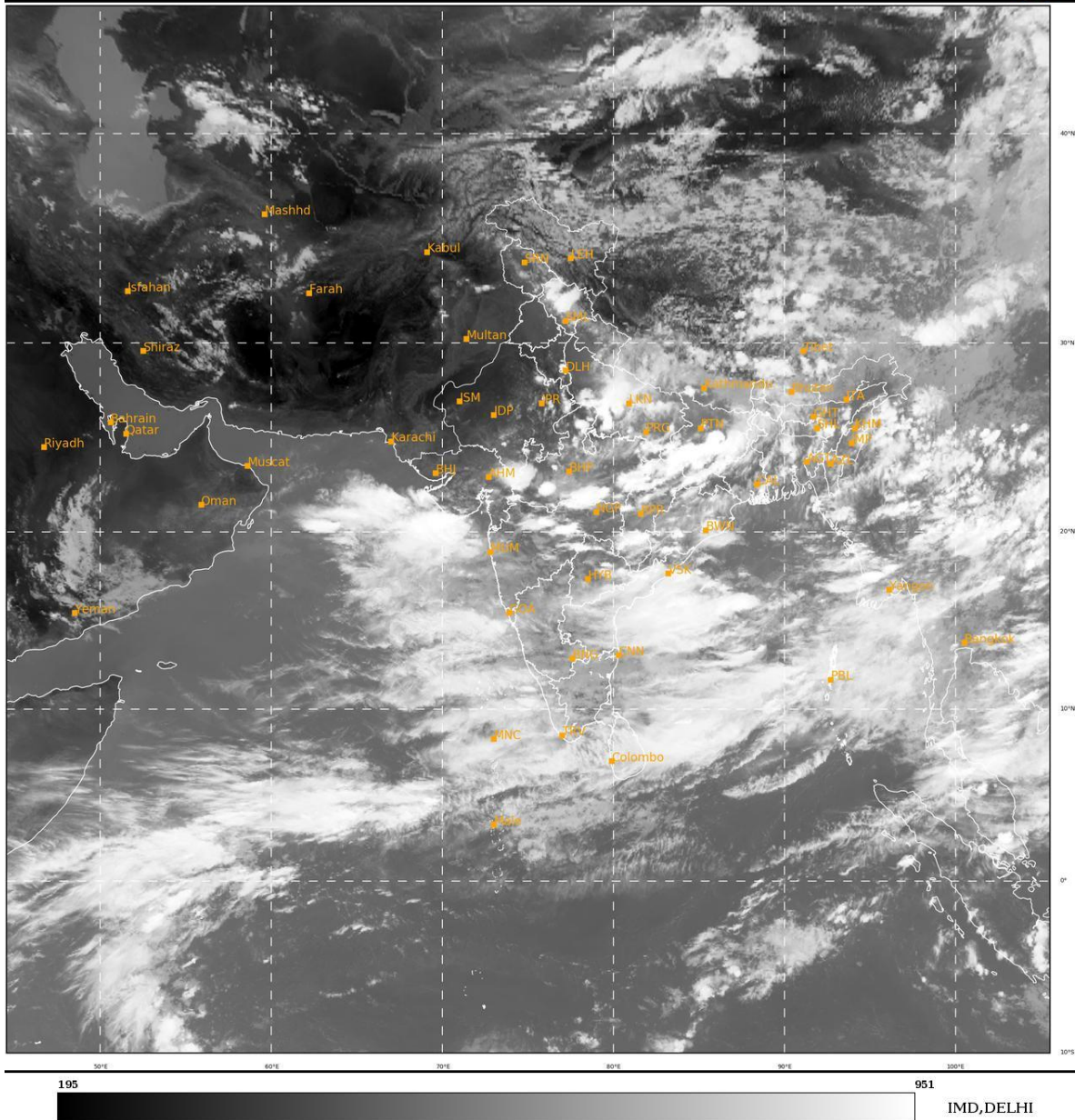


Figure: 1. Latest available satellite picture as on 04 July 2020 at 1427 Hrs (IST). (Source: IMD).

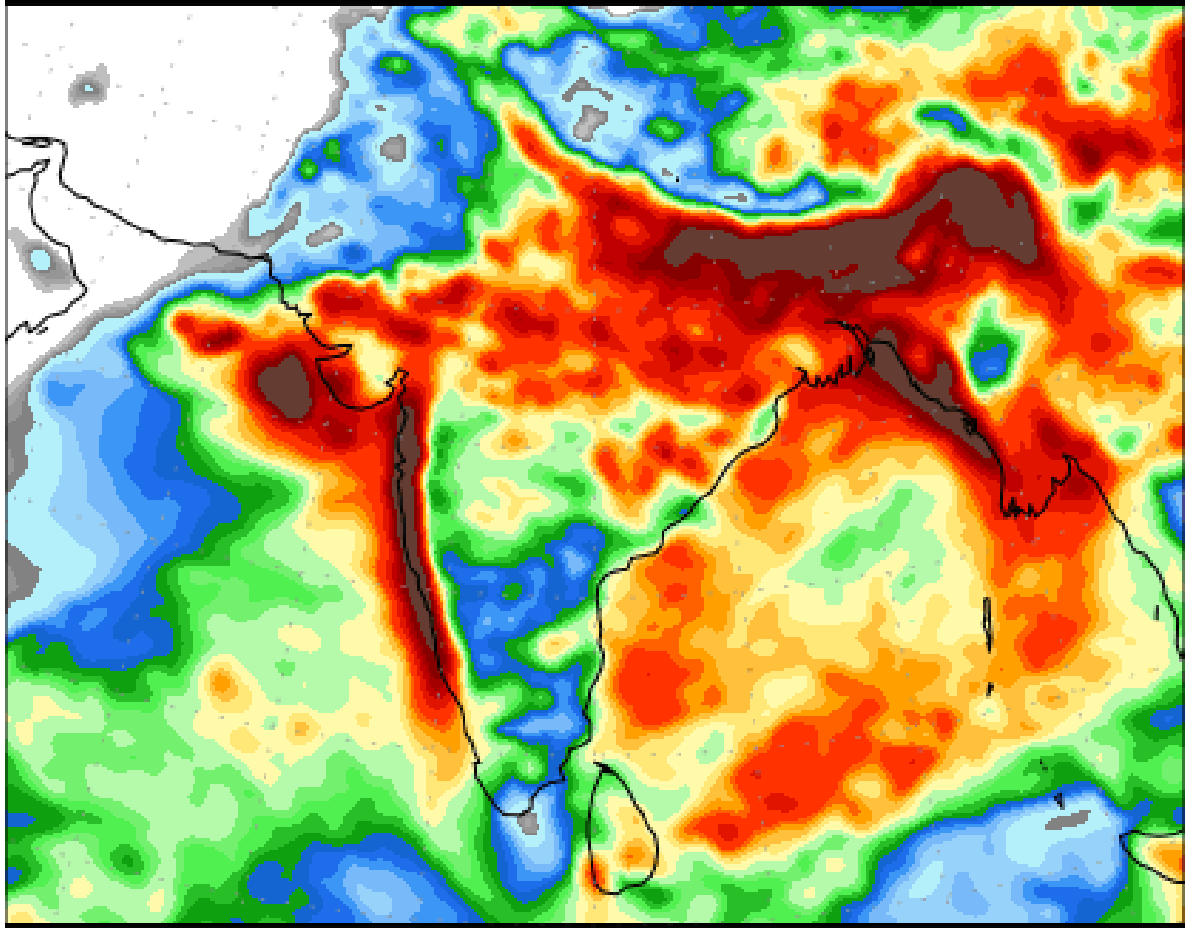


Figure:2. Precipitation forecast for 04 to 12 July 2020 (Source: NOAA NCEP).

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