

All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 07 September 2020

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- A Low Pressure Area lies over Eastcentral Arabian Sea off Karnataka coast with the associated cyclonic circulation extending upto 3.1 km above mean sea level. It is very likely to weaken over the same region during next 24 hours. An east-west shear zone runs roughly along 13°N across the cyclonic circulation associated with the above low pressure area at 3.1 km above mean sea level. It is very likely to persist during next 3-4 days. Under its influence: i) Fairly widespread to widespread rainfall and thunderstorm & lightning very likely over Peninsular India during next 4-5 days. Heavy rainfall at isolated places also very likely over Karnataka and Kerala & Mahe till 11 September; over Tamil Nadu, Puducherry & Karaikal till 9 September, 2020. Isolated heavy to very heavy falls also very likely over Coastal Karnataka on 7, 9 & 10 September and over Kerala & Mahe on 7 & 8 September, 2020.
- The western end of monsoon trough at mean sea level lies near normal position and its eastern end lies north of its normal position. The eastern end of monsoon trough is likely to be north of its normal position or along the foothills of Himalayas during next 5 days. Fairly widespread to widespread rainfall with thunderstorm & lightning and heavy rainfall at isolated places over Sub-Himalayan West Bengal & Sikkim and northeastern states till 11 September, 2020. Isolated heavy to very heavy falls also very likely over Sub-Himalayan West Bengal & Sikkim and Assam & Meghalaya on today, the 7 September, 2020.
- Moderate to severe thunderstorm with lightning very likely at isolated places over Bihar, Chhattisgarh, Jharkhand, Odisha, Maharashtra, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Rajasthan, Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi, Madhya Pradesh, Karnataka, Kerala & Mahe and Tamil Nadu, Puducherry & Karaikal during next 12 hours.
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rain/Thundershowers observed (from 0830 hrs IST of yesterday to 0830 hrs IST of today): at most places over Arunachal Pradesh, Assam & Meghalaya, Sub-Himalayan West Bengal & Sikkim, Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Konkan & Goa and Coastal & North Interior Karnataka; at many places over Andaman & Nicobar Islands, Uttarakhand, Madhya Maharashtra, Marathwada, Vidarbha and South Interior Karnataka; at a few places over Nagaland, Manipur, Mizoram & Tripura, Jharkhand, Bihar, Himachal Pradesh, Rajasthan and Tamil Nadu, Puducherry & Karaikal and at isolated places over Gangetic West Bengal, Odisha, Uttar Pradesh, Haryana, Chandigarh & Delhi, Punjab, Madhya Pradesh, Gujarat State, Chhattisgarh, Coastal Andhra Pradesh & Yanam and Telangana.
- Heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places observed over Coastal Karnataka; heavy to very heavy rainfall at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, West Rajasthan, Madhya Maharashtra, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe; heavy rainfall at isolated places over Odisha, Bihar, East Rajasthan, Madhya Pradesh, Konkan & Goa, Marathwada and Karnataka.
- Thunderstorm observed (from 0830 hrs IST of yesterday to 0830 hrs IST of today): at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, Uttar Pradesh, West Rajasthan, Saurashtra & Kutch, East Madhya Pradesh, Bihar, Jharkhand, Assam & Meghalaya, West Bengal & Sikkim, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal & North Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe.
- Maximum Temperature Departures as on 06-09-2020: Maximum temperatures were markedly above normal (5.0°C or more) at many places over Madhya Maharashtra; at isolated places over West Madhya Pradesh; appreciably above normal (3.1°C to 5.0°C) at many places over Konkan & Goa, Marathawada and Vidharbha; at many places over Jharkhand, Gangetic West Bengal and Odisha, Chhattisgarh, Saurashtra & Kutch, East Madhya Pradesh, Telangana and North Interior Karnataka; at a few places over East Uttar Pradesh; at isolated places over Bihar and Gujarat Region; above normal (1.6°C to 3.0°C) at most places over Uttarakhand, Nagaland, Manipur, Mizoram & Tripura, Coastal & South Interior Karnataka; at many places over West Uttar Pradesh; at a few places over Coastal Andhra Pradesh & Yanam and Rayalaseema; at isolated places over Himachal Pradesh. They were appreciably below normal (- 3.1°C to -5.0°C) at a few places

over Arunachal Pradesh and Assam & Meghalaya; at isolated places over Sub-Himalayan West Bengal & Sikkim and Kerala & Mahe; below normal (-1.6°C to -3.0°C) at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad and Andaman & Nicobar Islands; at isolated places over West Rajasthan, Tamil Nadu, Puducherry & Karaikal and Lakshadweep and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 37.2°C was reported at Sholapur (Madhya Maharashtra).

- Minimum Temperature Departures as on 07-09-2020: Minimum temperatures are above normal (1.6°C to 3.0°C) at most Places over Gujarat Region and Gangetic West Bengal; at many places over Chhattisgarh & Telangana; at a few places over Uttarakhand, Saurashtra & Kutch, Madhya Pradesh, Bihar, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Rayalaseema; at isolated places over Haryana, Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Odisha, Jharkhand, Vidarbha, Madhya Maharashtra, Lakshadweep and Andaman & Nicobar Islands. They are below normal (-1.6°C to -3.0°C) at a few places over Tamil Nadu, Puducherry & Karaikal; at isolated places over Himachal Pradesh and near normal over rest parts of the country. The lowest minimum temperature of 20.6 °C reported at Chandrapur (Vidarbha) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 07 September (Day 1): Heavy to very heavy rainfall very likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Coastal Karnataka and Kerala & Mahe and heavy rainfall at isolated places over Uttarakhand, East Rajasthan, Bihar, Arunachal Pradesh, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Lakshadweep. Thunderstorm accompanied with lightning very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Lakshadweep. Strong Wind (speed reaching 50-60 kmph) very likely over Kerala-Karnataka coasts and Lakshadweep area; (speed reaching 45-55 kmph) over Southwest Arabian Sea. Fishermen are advised not to venture into these areas.
- 08 September (Day 2): Heavy to very heavy rainfall very likely at isolated places over Kerala & Mahe and heavy rainfall at isolated places over East Uttar Pradesh,

Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Madhya Maharashtra, Rayalaseema, Karnataka, Tamilnadu, Puducherry & Karaikal and Lakshadweep. Thunderstorm accompanied with lightning very likely at isolated places over East Uttar Pradesh, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Lakshadweep. Strong Wind (speed reaching 50-60 kmph) very likely over Kerala-Karnataka coasts and Lakshadweep area; (speed reaching 45-55 kmph) over Southwest Arabian Sea. Fishermen are advised not to venture into these areas.

- 09 September (Day 3): Heavy to very heavy rainfall very likely at isolated places over Coastal Karnataka and heavy rainfall at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Nagaland & Manipur, Madhya Maharashtra, Konkan & Goa, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. Thunderstorm accompanied with lightning very likely at isolated places over East Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Odisha, Gujarat Region, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Kerala & Mahe, Tamilnadu, Puducherry & Karaikal and Lakshadweep. Strong Wind (speed reaching 45-55 kmph) very likely over Southwest, Southeast & Eastcentral Arabian Sea and along & off Karnataka-Kerala coasts & Lakshadweep area, Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.
- 10 September (Day 4): Heavy to very heavy rainfall likely at isolated places over Coastal Karnataka and heavy rainfall at isolated places over Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland & Manipur, Madhya Maharashtra, Konkan & Goa, Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Bihar, Jharkhand, Odisha and Gujarat State. Strong Wind (speed reaching 45-55 kmph) likely over Southwest, Southeast & Eastcentral Arabian Sea and along & off Karnataka-Kerala coasts & Lakshadweep area, Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.
- 11 September (Day 5): Heavy rainfall likely at isolated places over Sub-Himalayan West Bengal & Sikkim, Odisha, Arunachal Pradesh, Assam & Meghalaya,

Nagaland & Manipur, south Gujarat, Madhya Maharashtra, Marathwada, Konkan & Goa, Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Bihar, Jharkhand, Odisha and Gujarat State. Strong Wind (speed reaching 45-55 kmph) likely over Southwest Arabian Sea, Comorin area and Gulf of Mannar. Fishermen are advised not to venture into these areas.

- The weather outlook for seven days i.e., 07 to 15 Sep 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)

Odisha

Weather condition:

Light to moderate rain or thundershower very likely to occur at many places over the districts of Odisha

Contingency measure:

- PADDY: Drain out excess water from the field if there is stagnation of water. Top dress 8 kg Urea & 5 kg potash (MOP) per acre to boost the growth if situation permits. Due to recent rainfall, paddy areas adjacent to rivers, rivulets, drainage lines and canals, there is possibility of swarming caterpillar infestation. For management of swarming caterpillar a) Clean the field and bunds b) Apply mixture of 2.5 l kerosene and 20 kg sand per acre and then move a string over the paddy crop by stretching at both the ends of the field. c) Dusting of Chloropyriphos 1.5% dust @ 10 kg/acre on the bund should be done to check the movement of pests form one field to another d) If it crosses the ETL i.e., 1 damaged tiller per hill or two larvae /m², apply (Chloropyriphos 50% + Cypermethrin 5% E.C) @ 400 ml/acre in paddy fields and bunds during evening hours. To manage stem borer in paddy at early stage of crop, apply Cartap Hydrochloride 4 % G (Caldan 4G/ Nidan) @ 8-kg/acre or spray Fipronil 5% SC @ 400 ml/acre or Chlorantraniliprole 18.5% E.C @ 60 ml/acre. For control of leaf folder and case worm, apply mixture of 1-litre of kerosene and 20-kg of sand per acre and then move a string over the paddy crop by stretching at both the ends of the field. By this method the larva of insects falls to the water and gets killed. For chemical control, spray Fipronil 5% SC (Regent SC/Agadi SC) @ 400-ml/acre or Profenophos 50% EC (Prahar/Profigan) @ 400-ml/acre or Chlorantraniliprole 18.5% SC (Coragen/Cover) @ 60-ml /acre or Chromafenozide 80%WP (Dodger) @ 50-gram /acre. For control of blast disease, apply Tricyclazole

75% WP @ 120 g/acre; for control of BLB, apply 500 g COC + 200 g Plantomycin per acre. For control of Thrips, apply Fipronil 5% SC @ 2ml/litre of water.

- MAIZE: Provide drainage. If there is infestation of Fall Army Worm, spray biopesticide Beauveria bassiana @ 1200-gram/acre by mixing in 200- litre of water. Use 10-12 bird perches per acre and remove them before tasseling stage. Dust mixture of sand, soil and wooden ash inside the leaf whorl so that the caterpillars cannot feed on the leaves. To manage the pest chemically, spray Emamectin Benzoate 5 % S.G(EM-1/Proclaim) @ 80- gram/acre or Spinetoram 11.7% S.C (Delegate/Summit) @ 100-ml/acre or Chlorantraniliprole 18.5% S.C (Coragen/Cover) @ 80-ml/acre. 200 litre of water per acre is required to spray the Insecticide.
- BLACK GRAM and GREEN GRAM: Provide adequate drainage. To manage Cercospora leaf spot disease and root rot disease in black gram and green gram crop spray Mancozeb 63%+ Carbendazim 12% WP (Saaf/Sixer/Companion) @ 400-gram/acre in 200-litre of water. There are chances of aphid infestation in black gram and green gram crop. To manage aphids during primary stage of pest infestation spray Neem Based Pesticide (Azadirachtin) 1500 PPM @ 600 ml/acre. To manage Aphids chemically, spray Thiamethoxam 25% W.G (Actara/Areva) @ 40 gram/acre or Acetamiprid 20% S.P. (Dhanpreet/Manik) @ 50 gram/acre by mixing in 200 litres of water.
- ARHAR: Provide drainage. There are chances of leaf webber infestation in Arhar crop. The leaf webber larva binds 2-3 leaves together and feeds on the chlorophyll while remaining inside the web. As the web often includes the terminal bud, further growth of that shoot is prevented. To manage leaf webber in Arhar spray Chlorpyrifos 50 % + Cypermethrin 5 % EC (Premain Super/Super 505) @ 400-ml/acre or Profenophos 50 % EC (Prahara/Profigan) @ 400-ml/acre.
- GROUNDNUT: Provide drainage. Hoeing and earthing up should be done at 20-25 DAS in groundnut crop. Complete all inter-culture operation in groundnut, before flowering starts, else it will damage the peg formation and there will be substantial reduction in yield. There may be chances of incidence of Tikka disease in groundnut. Black & nearly circular spots appear on the lower surface of the leaflets of infected plant. Lesions are rough in appearance. In extreme cases many lesions coalesce resulting in premature senescence and shedding of the leaflets. To manage this disease spray Chlorothalonil 75% WP (Ishaan/ Kavach) @ 400-gram/ acre or Mancozeb 75% WP (Indofil M-45/ Dhanuka M-45) @ 600- gram/acre or Hexaconazole 5% E.C (Contaf /Hexadhan) @ 300-ml/acre.

- **SUGARCANE:** If the crop is 4-5 months old then wrapping and propping should be done for medium and long duration varieties to keep the canes erect. Remove the borer affected tillers and late formed tillers, tie the cane shoot with two or three together with partially dried lower leaves. There are chances of top shoot borer infestation in sugarcane crop. To manage top shoot borer in Sugarcane spray Fipronil 5 % SC (Reagent / Sergeant) @ 600ml/acre or Profenophos 50% EC (Profigan / Prahar) @ 400ml/acre or Chlorantraniliprole 18.5 % SC (Coragen / Cover) @80-ml/acre by mixing it in 200 litre of water.
- **SESAME:** Provide drainage. In early sown sesamum crop, for control of weber apply Profenophos 50% EC (Profigan / Prahar) @ 400ml/acre by mixing it in 200 litre of water.
- **BANANA:** Provide drainage. Give staking to plants. For disease, spray Mancozeb 75% WP (Indofil M 45 or Dhanuka M 45) @ 400-g/litre or Zineb 75% WP (Indofil Z 78/ Zoom 78) @ 400g/litre or Carbendazim 12% + Mancozeb 63% WP (Saaf/Companion) @ 400g/litre.
- **MANGO:** Provide drainage. Provide staking to plants.
- **BRINJAL:** Provide drainage. The larvae of brinjal shoot and fruit borer burrows into the petioles and tender shoots which results in withering of terminal shoots, drooping of leaves and shedding of flower buds. To manage the pest, remove the affected terminal shoot showing bore holes and the affected fruits. To manage this insect, install 20 nos. of pheromone trap having Leucin Lure per acre. Use chemical control if there is 4% withering of terminal shoot or 14% fruits infested with borers. For chemical control spray Spinosad 45 % SC (Charge/Tracer) @ 75-ml/acre or Emamectin Benzoate 5% SG (EM-1/Proclaim) @ 80-gram/ acre or Chlorantraniliprole 18.5 % SC (Coragen / Cover) @80- ml/acre or Spinetoram 11.7 % SC (Delegate/ Largo) @ 200-ml /acre. Do not repeat the same insecticide. Use any of the above insecticides alternately at 15-days interval.
- **OKRA:** Provide drainage. There are chances of sucking pests like aphids, Jassids, and whiteflies in Okra due to present weather condition. To manage these pests at early stage of infestation spray neem-based pesticide (Azadirachtin) 1500 PPM @600-ml/acre by mixing it in 200-litre of water. To manage these sucking pests chemically spray Thiamethoxam 25 % WG (Actara/Areva) @ 40- gram/acre or Acetamiprid 20 % SP (Dhanpreet/Manik) @ 50-gram/acre or Tolfenpyrad 15 % EC (Keefun) @ 400-ml/acre by mixing it in 200-litre of water.
- **CUCURBITS:** (Cucumber, Pumpkin, Bitter gourd, Ridge gourd, Pointed gourd):- Provide drainage. There are chances of infestation of Epilachna Beetle in cucurbits. Epilachna Beetle scraps chlorophyll from the leaves causing complete

skeletonization and drying of leaves. To manage Epilachna Beetle in cucurbits spray neem-based pesticide (Azadirachtin) 1500 PPM @ 3- ml/litre of water at early stage of infestation. To manage Epilachna Beetle chemically spray Chlorpyrifos 20 % EC (Tricel/Premain) @ 2-ml/litre of water or Profenophos 50 % EC (Prahar/Profigan) @ 2-ml/litre of water.

- COWPEA: Provide drainage. Rust- Spraying of Tridemephon @ 1ml/4 ltrs water. Leaf blight Carbendazim + Mancozeb @ 0.2% spraying is very useful. Aphid- Spray Imidacloprid @ 3ml/ 10ltr water/ Acetamprid @ 1gm/ 1 ltr of water. Borer- Spraying of Emamactin benzoate @ 1gm/ltr of water.
- ANIMAL HUSBANDRY: Keep the animal sheds clean and dry. Provide sufficient foods and water to animals and keep the foods in safer place to protect from rain. Proper vaccination should be given to them.
- PISCICULTURE: Drainout excess surface water from the pond. Proper care should be taken so that fishes do not come out of the pond. Apply mahua oil cake @ 2.5t/ha with 1 m depth of water to kill the predators and weed fishes in perennial ponds.

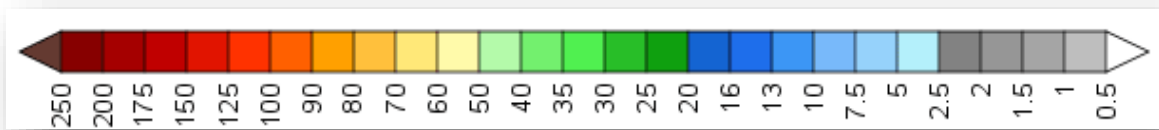
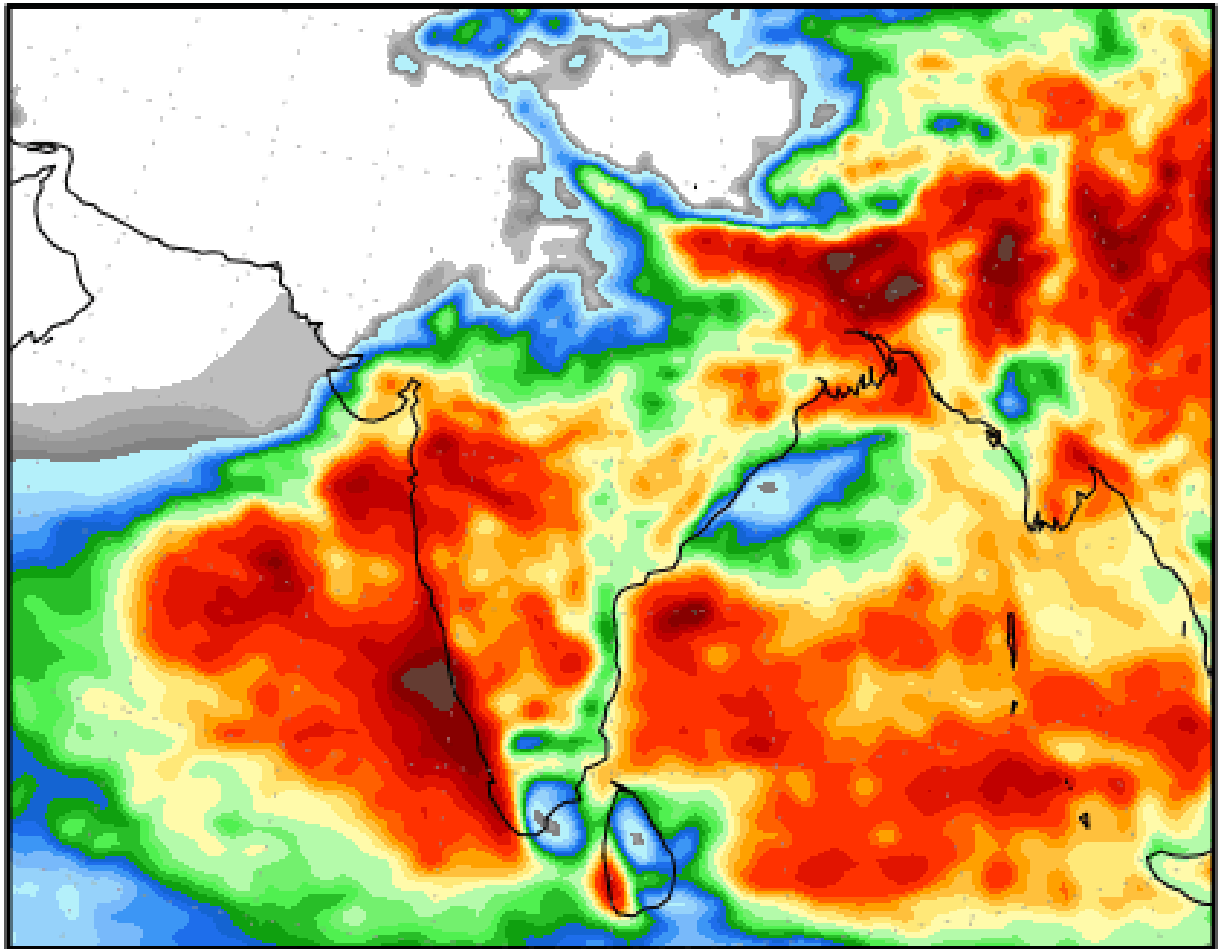


Figure:2. Precipitation forecast for 07 to 15 Sep 2020 (Source: NOAA NCEP).

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