All India Coordinated Research Project on Agrometeorology

CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 27 July 2020

Attention: Rajiv Maheshwari, OSD, ICAR

Significant Weather Features (IMD)

- Eastern end of the Monsoon trough likely to shift to the foothills of Himalayas during next 24-hours while western end likely to remain weak with absence of easterly winds support from Bay of Bengal at lower levels during 2 days. Under such scenario, monsoon rainfall likely to remain subdued over plains of Northwest and Central India during next 2 days. However, rainfall is likely to increase over northeastern parts of India with isolated heavy to very heavy rainfall during 28th-30th July.
- Under the influence of likely gradual southward shifting of the Monsoon trough zone and establishment of easterly/southeasterly wind from Bay of Bengal from 29th July, plains and hills of North India are likely to experience fairly widespread to widespread rainfall with isolated heavy to very heavy falls over Bihar, Sub-Himalayan West Bengal & Sikkim, Punjab, Haryana & Chandigarh, Uttar Pradesh, Himachal Pradesh and Uttarakhand during 29th-30th July.
- Also, a shear zone is likely to develop along 10°N from 28th July which is likely to move northwards during subsequent 2 days. Under its influence, peninsular India is likely to experience fairly widespread to widespread rainfall with isolated heavy falls over Coastal Andhra Pradesh, Telangana, Rayalaseema, Coastal & South Interior Karnataka, Tamil Nadu and Kerala during 28th to 30th July.
- Moderate to intense thunderstorm accompanied with lightning very likely at isolated places over Uttarakhand, East Uttar Pradesh and Bihar during next 12 hours.
- 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 Konkan & Goa and Coastal Karnataka; at many places over Arunachal Pradesh; at a few places over Uttarakhand, Saurashtra & Kutch, West Madhya Pradesh, Jharkhand, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya

Maharashtra and Kerala & Mahe; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Punjab, Rajasthan, West Uttar Pradesh, East Madhya Pradesh, Odisha, Andaman & Nicobar Islands, Vidarbha, Rayalaseema, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal.

- Thunderstorm observed (from 0830 hours IST of yesterday to 0530 hours IST of today): at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Chandigarh, Rajasthan, Konkan & Goa, Saurashtra & Kutch, West Madhya Pradesh, Jharkhand, Odisha, Coastal Andhra Pradesh & Yanam, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal and Rayalaseema.
- Maximum Temperature Departures as on 26-07-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at many places over East Uttar Pradesh, Madhya Pradesh, Odisha, Gangetic West Bengal and Chhattisgarh; at a few places over Bihar, Vidarbha and Saurashtra & Kutch; at isolated places over West Uttar Pradesh, Coastal Andhra Pradesh & Yanam and Kerala & Mahe; above normal (1.6°C to 3.0°C) at most places over East Rajasthan and Gujarat region; at many places over Himachal Pradesh, Uttarakhand, Konkan & Goa, Sub-Himalayan West Bengal & Sikkim and Madhya Maharashtra; at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Punjab, West Rajasthan and Telangana; at isolated places over Haryana, Chandigarh & Delhi, Nagaland, Manipur, Mizoram & Tripura and Andaman & Nicobar Islands. They were below normal (-1.6°C to -3.0°C) at isolated places over Tamil Nadu, Puducherry & Karaikal and Assam & Meghalaya and near normal over rest parts of the country. Yesterday, the highest maximum temperature of 38.0°C was reported at Narsinghpur (East Madhya Pradesh).
- Minimum Temperature Departures as on 26-07-2020: Minimum temperatures were appreciably above normal (3.1°C to 5.0°C) at a few places over Bihar; above normal (1.6°C to 3.0°C) at most places over Punjab and Sub-Himalayan West Bengal & Sikkim; at many places over Gangetic West Bengal; at a few places over Nagaland, Manipur, Mizoram & Tripura and Odisha; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Haryana, Chandigarh & Delhi, East Uttar Pradesh, East Rajasthan, Madhya Pradesh and Assam & Meghalaya. They were below normal (-1.6°C to -3.0°C)at a few places over Tamil Nadu, Puducherry & Karaikal near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 20.0°C was reported at Khargone (West Madhya Pradesh) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 27 July (Day 1): Heavy rainfall at isolated places likely over Himachal Pradesh, Uttarakhand, East Rajasthan, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya. Moderate to intense thunderstorm accompanied with lightning very likely at isolated places over Bihar, Uttarakhand and East Uttar Pradesh. Thunderstorm accompanied with lightning at isolated places over Jharkhand, Odisha, East Madhya Pradesh, Chhattisgarh, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam and Tamil Nadu, Puducherry & Karaikal. Strong Wind (speed reaching 50-60 kmph) very likely over Southwest Arabian Sea. Squally weather (wind speed reaching 40-50 kmph) over Southwest Bay of Bengal & adjoining Equatorial Indian Ocean. Fishermen are advised not to venture into Sea over these areas.
- 28 July (Day 2): Heavy to very heavy rainfall at isolated places likely over Uttarakhand, Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya and heavy rainfall at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Haryana, Chandigarh, Bihar, Jharkhand, Odisha, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. Moderate to intense thunderstorm accompanied with lightning very likely at isolated places over Bihar. Thunderstorm accompanied with lightning at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Odisha, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal. Strong Wind (speed reaching 50-60 kmph) very likely over Southwest Arabian Sea. Squally weather (wind speed reaching 40-50 kmph) over Southeast Bay of Bengal & adjoining Andaman Sea. Fishermen are advised not to venture into Sea over these areas.
- 29 July (Day 3): Heavy to very heavy rainfall at isolated places likely over Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya and heavy rainfall at isolated places over Jammu & Kashmir, Ladakh,

Gilgit-Baltistan & Muzaffarabad, East Rajasthan, East Madhya Pradesh, Vidarbha, Chhattisgarh, Jharkhand, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. Thunderstorm accompanied with lightning at isolated places likely over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Jharkhand, West Bengal & Sikkim, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema and Tamil Nadu, Puducherry & Karaikal. Strong Wind (speed reaching 50-60 kmph) likely over Southwest Arabian Sea. Squally weather (wind speed reaching 40-50 kmph) over Southeast Bay of Bengal & adjoining Andaman Sea. Fishermen are advised not to venture into Sea over these areas.

- 30 July (Day 4): Heavy to very heavy rainfall at isolated places likely over Himachal Pradesh, Uttarakhand, Haryana, Chandigarh, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Coastal Karnataka and heavy rainfall at isolated places over Punjab, West Uttar Pradesh, East Rajasthan, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, South Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning at isolated places likely over Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema. Strong Wind (speed reaching 50-60 kmph) likely over Southwest Arabian Sea. Squally weather (wind speed reaching 40-50 kmph) over Southeast Bay of Bengal & adjoining Andaman Sea. Fishermen are advised not to venture into Sea over these areas.
- 31 July (Day 5): Heavy to very heavy rainfall at isolated places likely over Uttarakhand, East Rajasthan, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya and heavy rainfall at isolated places over Haryana, Chandigarh, Uttar Pradesh, East Madhya Pradesh, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Chhattisgarh and Kerala & Mahe. Thunderstorm accompanied with lightning at isolated places likely over Jharkhand, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh & Yanam, Telangana and Rayalaseema. Strong Wind (speed reaching 50-60 kmph)

likely over Southwest Arabian Sea. Squally weather (wind speed reaching 40-50 kmph) over Southeast Bay of Bengal & adjoining Andaman Sea. Fishermen are advised not to venture into Sea over these areas.

- The weather outlook for seven days i.e., 27 July to 04 Aug 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)

Chhattisgarh

Weather condition:

A total of 67.4 mm of rainfall was recorded during the week as against the normal of 80.0 mm at Agromet observatory of IGKV, Raipur. District wise average rainfall as on 15 July, 2020 received from IMD is as follows Balod 398.5 (348.2, +14 % Normal), Baloda Bazar 409.9 (314.4, +30% Excess), Balrampur 384.5 (363.9, +6% Normal), Bastar 452.9 (404.5, +12% Normal), Bemetara 379.5 (332.1, +14% Normal), Bijapur 503.1 (387.5, +30% Excess), Bilaspur 430.8 (350.9, +23% Excess), Dantewada 501.6 (398.7, +26% Excess), Dhamtari 436.6 (331.3, +32% Excess), Durg 497.3 (341.0, +46 % Excess), Gariyaband 458.8 (345.7, +33% Excess), Janjgir 325.1 (357.1, -9% Normal), Jashpur 499.3 (481.1, +4% Normal), Kabirdham 250.1 (260.8 , -4% Normal), Kanker 356.6 (389.2, -8% Normal), Kondagaon 596.3 (369.4, +61% Large Excess), Korba 556.4 (409.8, +36% Excess), Koriya 419.9 (381.9, +10% Normal), Mahasamund 587.5(343.2, +71% Large Excess), Mungeli 324.3 (322.7, 0 % Normal), Narayanpur 475.2 (369.5, +29% Excess), Raigarh 413.9 (400.1, +3% Normal), Raipur 412.1 (343.1, +20 % Excess), Rajnandgaon 345.5 (314.9, +10% Normal), Sukma 435.8 (347.3, +25% Excess), Surajpur 617.2 (374.4,+65% Large Excess), Surguja 279.9 (438.0,-36% Deficit), Chhattisgarh State 436.9 (368.4, +19% Normal) *Figures out side the parenthesis indicates average district-wise rainfall revived during current year as on reporting date and figures within the parenthesis indicates normal rainfall, its percentage and rainfall situation in respective districts.

Contingency measure:

- Weather Based Agro-advisories: The SW monsoon is activated over entire Chhattisgarh state. The disease and pest resistant varieties are available in Chhattisgarh Rajya Beej avam Vikas Nigam limited and also in IGKV farm. These are the varieties which are less infested by plant diseases and insects. Therefore, farmers should select the appropriate resistant varieties for their farms. Farmers must apply the fertilizers as per soil health and soil testing. Due to unnecessary use of fertilizers, fertility of soil and soil health is affected adversely.

- Farmers are advised to register for meghdoot apps at http://play.google.com/store/apps/details?id=com.ass.meghdoot and get crop and weather information through this.
- General: Sufficient monsoonal rainfall has been received in maximum portion of Chhattisgarh State. Therefore framers must complete the sowing operations of kharif crops like rice, Soybean, arhar, sesamum, maize, urad, moong and groundnut etc. The sowing should be done in lines. Seed treatment should be done before sowing. Granular fertilizers should be applied in line sowing. There has been ample amount of rainfall, therefore farming operations at present should be completed on priority biasi. The production technique for major kharif crops is as follows: S. No. Crop name Stage/ method Spacings Remarks.
- Rice Lehi method Field should be prepared like transplanting method and germinated seeds should be sown through drum seeder in lines In case of continuous rainfall situation and to avoid sowing delays in direct seeding and nursery sowing, lehi method should be adopted. There should not be excess rainfall in the fields otherwise germinated seeds will get rotten/ destroyed Nursery. Nursey should be prepared (mat type) so thatr later it can be planted through Automatic planter Raised Bed should be prepared for Mat type nursery and water drainage measures should be adopted Broadcast method/ line sowing Weed control should be done in the rice crop whice has been sown by dry sowing (khurra boni) method and achieved 18-20 days age. Weed control can be done by Bispyribac sodium (10%) @ 250 ml /ha. or Phenoxyprop-p- ethyl 9.3% @ 625 ml per ha The farmers are advised that they should go for spray of herbicides only in clear weather and when there is no forecasting of rains. Transplanting method At the time of transplanting, 2-3 seedlings should be transplanted per hill. Seedlings should be straight and planted at a depth of 2-3 cms. The spacings should be maintained 15 cms x10 cms (early vars) and should be 20 cms x 10 cms (for medium to late duration vars) If green manuring crop has been taken, then mixing of that crop should be done 4-6 das before transplanting.
- Farmers are advised that they should not go for transplanting operation in case of continuous rains and proper water drainage measures should be adopted. . SRI method The row to row and plant to plant distance is maintained 25 cms x 25 cms. Distance can be increased or decreased as per soil and plant types. Water management: In this method continuous submerged condition is not maintained. In the vegetative stage, only some water is provided to keep the roots wet so that some cracks are developed in the fields. These cracks provide oxygen to the roots and

spread of roots and growth is good. These roots absorb nutrients from the soil and supply to the plants.

- Soybean Plant to plant distance is kept 7-10 cms and row to row ddistance should be kept 30 cms. Proper water drainage measures should be adopted and sowing should be completed at the earliest.
- Arhar: In early duration varieties, row to row distance should be maintained 60 cms and plant to plant distance should be maintained 15cms. Medium duration varieties are sown at a distance of 90 cms x 20 cms Proper water drainage measures should be adopted and sowing should be completed at the earliest.
- Maize: Row to row distance should be kept 60-75 cms and plant to plant distance should be maintained 20-25 cms. Medium and late duration varieties should be maintained at a distance of 75x25 cms. Proper water drainage measures should be adopted and sowing should be completed at the earliest.
- Horticultural crops and Vegetables 20-25 days after sowing Intercultural operations should be adopted for weed control Proper water drainage measures should be adopted looking into the continuous rainfall situation.
- Animal Husbandry: Cattle should not get wet in this rainy season The floor should be kept as dry as possible for avoiding the foot rot disease. If there is dysentery of cattle animals, wormicide should be given to animals. After that NT zole and Rumen FS Bolls should be given in morning and evening @2 balls each time.

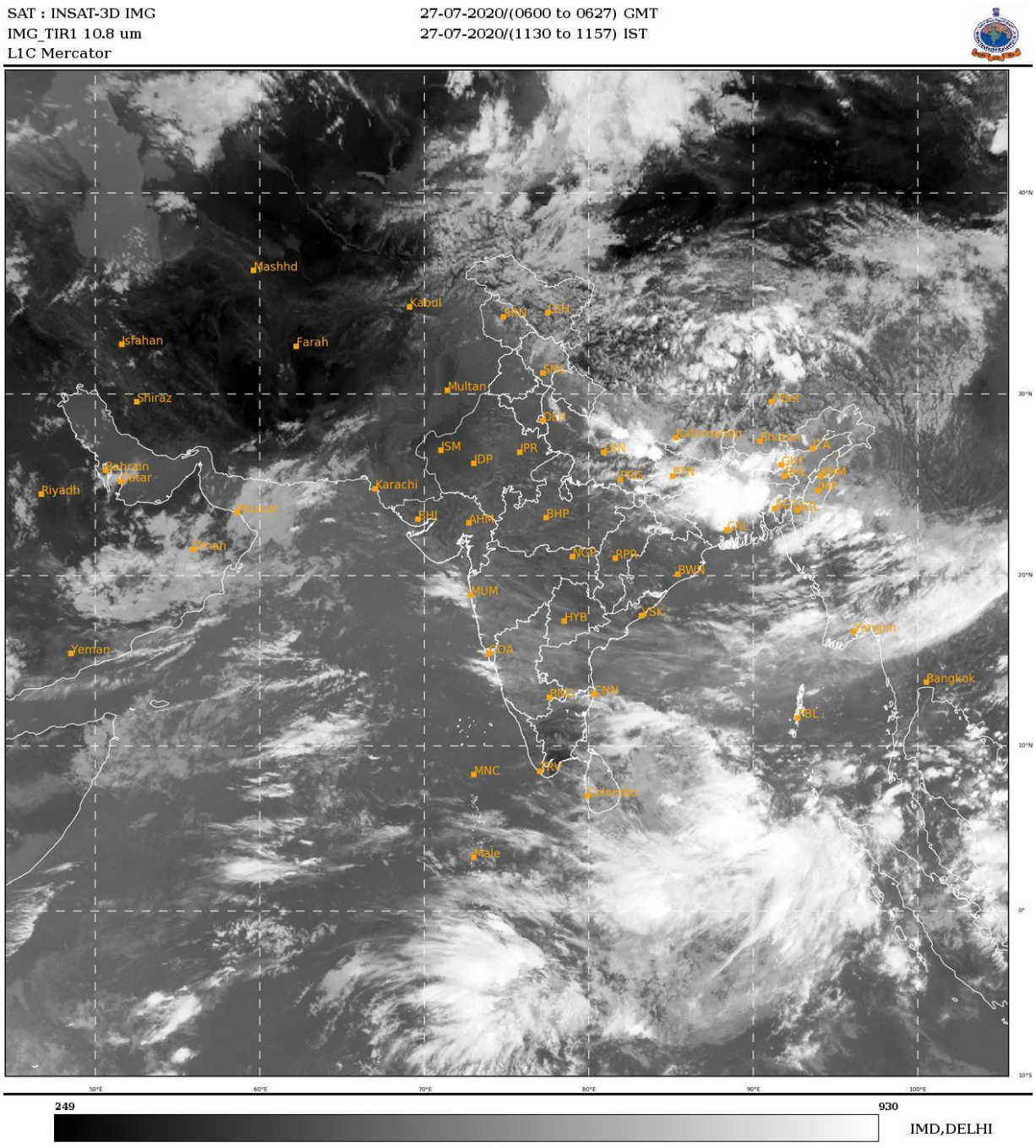

Figure: 1. Latest available satellite picture as on 27 July 2020 at 1137 Hrs (IST). (Source: IMD).

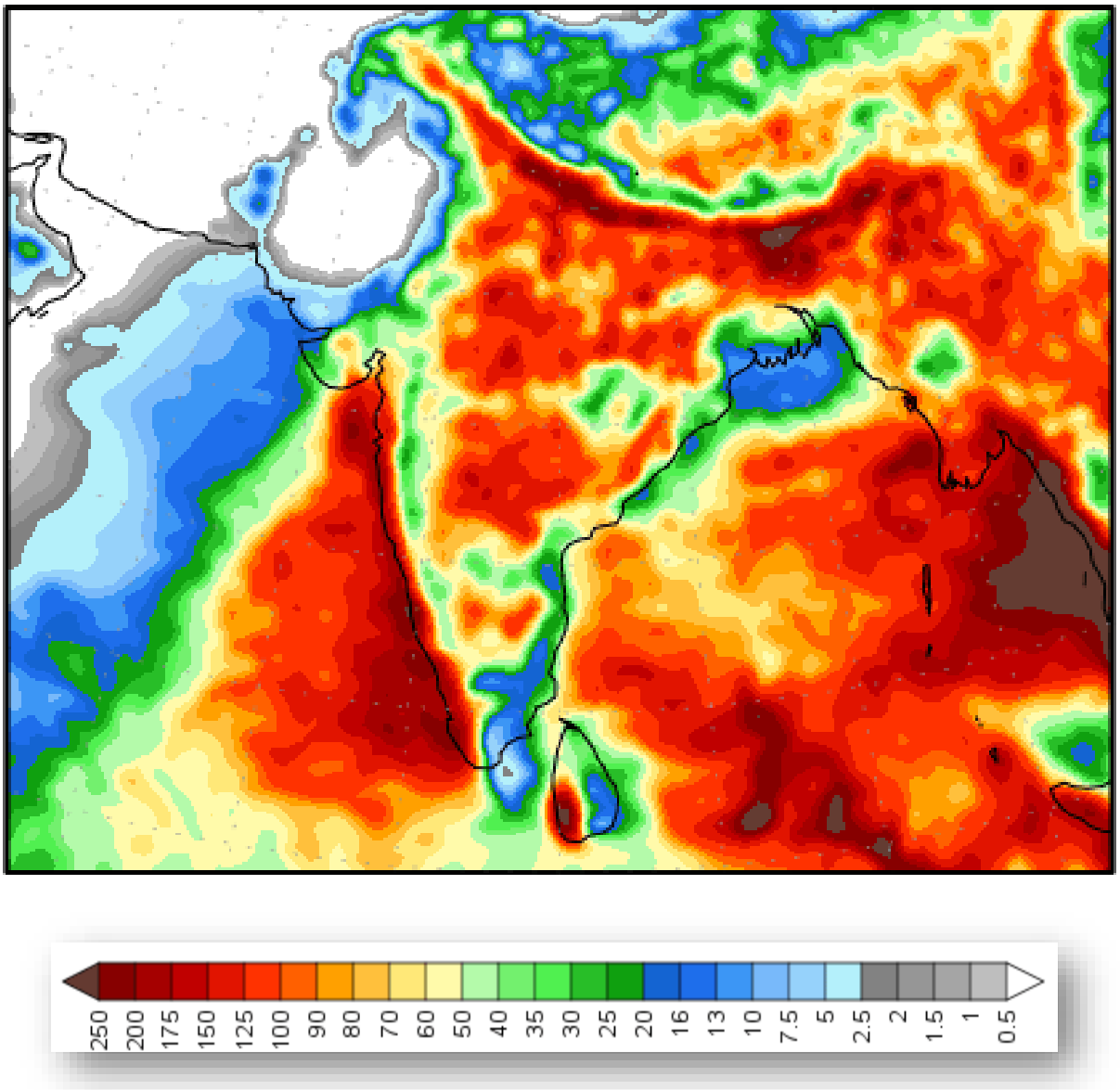

Figure:2. Precipitation forecast for 27 July to 04 Aug 2020 (Source: NOAA NCEP).

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