All India Coordinated Research Project on Agrometeorology
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Daily Crop Weather Information as on 29 June 2020

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Significant Weather Features (IMD)

- Eastern end of monsoon trough continues to run along the foothills of Himalayas with convergence of strong southerly/south-westerly winds from Bay of Bengal over northeast & adjoining east India. It is most likely to cause widespread rainfall with isolated heavy to very heavy rainfall over northeast India during next 4-5 days.
- Fairly widespread to widespread rainfall activity over East Uttar Pradesh, Bihar and Sub-Himalayan West Bengal & Sikkim during next 5 days. Isolated heavy to very heavy falls also very likely over the above areas during next 4-5 days.
- Fairly widespread rainfall very likely over central India during next 5 days. Isolated heavy falls also very likely over Madhya Pradesh during next 5 days, over Chhattisgarh & Vidarbha on 29th & 30th June, 2020.
- Fairly widespread to widespread rainfall activity with isolated heavy falls very likely along the west coast during next 5 days.
- Subdued rainfall activity over Western Himalayan Region and adjoining northwest India very likely to continue during next 3-4 days.
- 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 many places over West Bengal & Sikkim; at a few places over Arunachal Pradesh, Bihar, Odisha, Kerala & Mahe and Andaman & Nicobar Islands; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Uttarakhand, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Jharkhand, East madhya Pradesh, Chhattisgarh, Vidarbha, Marathwada, Madhya Maharashtra, Telangana, Rayalaseema, Coastal Andhra Pradesh, coastal Karnataka and Tamil Nadu, Puducherry & Karaikal.
- Yesterday, heavy rainfall observed at isolated places over Gangetic West Bengal.
- 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, Haryana , Chandigarh, Punjab, East Uttar Pradesh, Bihar, Gangetic West Bengal, Jharkhand, Odisha, Madhya Pradesh, Chhattisgarh, Odisha, Coastal Andhra Pradesh & Yanam, Konkan & Goa, Marathawada, Coastal & South Interior Karnataka, Vidarbha, Telangana, Rayalseema and Tamil Nadu, Puducherry& Karaikal.

- Maximum Temperature Departures as on 28-06-2020: Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at many places over Madhya Maharashtra; above normal (1.6°C to 3.0°C) at most places over Himachal Pradesh, Haryana, Chandigarh & Delhi, West Rajasthan, Gujarat, West Uttar Pradesh and Telangana; at many places over Uttarakhand, Punjab, Vidarbha, Konkan & Goa and Interior Karnataka; at a few places over Gangetic West Bengal, Odisha, Coastal Karnataka and Kerala & Mahe; at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, East Rajasthan, Madhya Pradesh, Chhattisgarh and Andaman & Nicobar Islands. They were appreciably below normal (-3.1°C to -5.0°C) at many places over East Uttar Pradesh; at a few places over Arunachal Pradesh and Assam & Meghalaya; at isolated places over Bihar, Sub-Himalayan west Bengal & Sikkim and Nagaland, Manipur, Mizoram & Tripura; below normal (-1.6°C to -3.0°C) at a few places over Lakshadweep; at isolated places over Coastal Andhra Pradesh and near normal over rest parts of the country. Yesterday, the highest Maximum temperature of 43.0°C was reported at Ganganagar (West Rajasthan).
- Minimum Temperature Departures as on 28-06-2020: Minimum temperatures were appreciably above normal (3.1°C to 5.0°C) at a few places over Haryana, Chandigarh & Delhi; above normal (1.6°C to 3.0°C) at most places over Punjab, Saurashtra & Kutch and Andaman & Nicobar Islands; at many places over Uttarakhand, Rajasthan; at a few places over West Uttar Pradesh, Gujarat Region and North Interior Karnataka and at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Madhya Pradesh, Vidarbha, Konkan & Goa, Madhya Maharashtra, Rayalaseema, Tamil Nadu, Puducherry & Karaikal, Odisha and Lakshadweep. They were appreciably below normal (-3.1°C to -5.0°C) at isolated places over East Uttar Pradesh; below normal (-1.6°C to -3.0°C) at a few places over Assam & Meghalaya; at isolated places over Telangana and near normal over rest parts of the country. Yesterday, the lowest minimum temperature of 20.2°C was reported at Chandrapur (Vidarbha) over the plains of the country.

Weather Warning during the next 5 days (IMD)

- 29 June (Day 1): Heavy to very heavy rainfall very likely at isolated places over Madhya Pradesh, Bihar and Assam & Meghalaya and heavy rainfall at isolated places over East Uttar Pradesh, Vidarbha, Chhattisgarh, Jharkhand, West Bengal & Sikkim, Andaman & Nicobar Islands, Arunachal Pradesh, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Madhya Maharashtra, Marathwada, Konkan & Goa, Rayalaseema, Coastal & South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal and Kerala & Mahe. Thunderstorm accompanied with lightning very likely at isolated places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Himachal Pradesh, Uttarakhand, East Uttar Pradesh, East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha, Andaman & Nicobar Islands, Gujarat State, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh &Yanam, Telangana, Rayalaseema, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe and Lakshadweep. Strong Wind (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea. Squally Weather (wind speed reaching 40-50 kmph) over Lakshadweep-Maldives areas & adjoining Southeast & Eastcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.
- 30 June (Day 2): Heavy rainfall very likely at isolated places over East Rajasthan, Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Gujarat State, Konkan & Goa, Telangana and Karnataka. Thunderstorm accompanied with lightning very likely at isolated places over Madhya Pradesh, Vidarbha, Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha and Gujarat State. Strong Wind (wind speed reaching 50-60 kmph) very likely over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.
- 01 July (Day 3): Heavy to very heavy rainfall at isolated places likely over Assam & Meghalaya, Arunachal Pradesh and Coastal Karnataka and heavy rainfall at isolated places over Uttarakhand, Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and South Interior Karnataka. Thunderstorm accompanied with lightning likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal and Odisha. Strong Wind (wind speed reaching 50-60 kmph) likely over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.

- 02 July (Day 4): Heavy to very heavy rainfall at isolated places with extremely heavy falls at isolated places likely over Assam & Meghalaya; heavy to very heavy rainfall at isolated places over Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Coastal Karnataka and heavy rainfall at isolated places over Uttarakhand, East Uttar Pradesh, Vidarbha, Odisha, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Coastal Andhra Pradesh & Yanam, South Interior Karnataka and Kerala & Mahe. Thunderstorm accompanied with lightning likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal and Odisha. Strong Wind (wind speed reaching 50-60 kmph) likely over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.
- 03 July (Day 5): heavy to very heavy rainfall at isolated places over East Madhya Pradesh, East Uttar Pradesh, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Arunachal Pradesh, Konkan & Goa and Coastal Karnataka and heavy rainfall at isolated places over Uttarakhand, Odisha, Andaman & Nicobar Islands, Nagaland, Manipur, Mizoram & Tripura, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand and West Madhya Pradesh. Thunderstorm accompanied with lightning likely at isolated places over Bihar, Jharkhand, Gangetic West Bengal and Odisha. Strong Wind (wind speed reaching 50-60 kmph) likely over Southwest & Westcentral Arabian Sea. Fishermen are advised not to venture into sea over these areas.
- The weather outlook for seven days i.e., 29 June to 07 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)

Chhattisgarh

Weather condition:

90.4 mm rainfall has been received during this week against the normal rainfall 70.1 mm. Weekly Maximum and minimum temperature ranged from 27.2 to 33.4 and 20.4 to 24.0 . Actual weekly average maximum and minimum temperature was 30.1 and 21.9 deg C against the normal value of 32.1 and 23.4 deg C.

Contingency measure:

- Upland Rice: Take the advantage of downpour received during previous days and start land preparation and simultaneously sowing for timely (15 to 30 June) sowing of direct seeded upland rice. Icorporate well rotted FYM or compost @2 tonne per

acre. For protection from termites and stem borers, broadcast Neem or Karanj cake @ 200 kg or Methyl parathian @ 10 kg and Carbofuron 3G @ 12 kg or Phorate 10G @ 4 kg per acre. Treat the seed before placing with fungicide- Bavistin or Beam @ 2g per kg seed and there by insecticide- Chlorpyriphos 20 EC @ 3ml/per kg seed/lt. Generally, 40 kg in broadcast method and 30 kg in behind the plough method are required for an acre area. At the time of final land preparation, fertilizer viz. N: P: K :: 24 :12 : 8 kg per acre with full dose of DAP (26 kg) or (SSP- 75 kg) and Potash (MOP- 15 kg) should be incorporated. Since, loss of nitrogen is very high so, 42 kg Urea per acre should be splitted in two equal doses and top-dressed on 15 and 30 days after emergence (DOE). At the time of sowing, no need to apply nitrogen fertilizer as basal. Recommended varieties are Birsa Dhan 108, Birsa Vikash Dhan 109, 110, 111 and Vandana.

- Pigeonpea: Prepare land after receiving light rain by one deep ploughing followed by country ploughing across 2-3 times making the soil uniformly brittle and at the time of final land preparation spread and mix well rotten FYM or compost @ 5 tons per acre in the soil. Ridge and furrow method should be followed for sowing so, that no excess water should be logged. Seed rate @ 8 kg and row to row distance of 75 cm for medium duration and 90 cm for long duration varieties as well as 20 cm for plant to plant distance should be maintained by applying urea @ 18 kg (12 kg) + SSP 100 kg (DAP 45 kg) + MOP 15 kg and 20 kg of Phosphogypsum during sowing time. To decrease the acidity effect, apply 120 ? 140 kg burnt lime in furrow at the time of sowing. Before sowing treat the seed with fungiside viz. Thiram @ 2.5 g or Bavistin @ 2 g per kg of seed followed by Rizobium culture and PSB, respectively. Inter or mixed cropping of Arhar with Maize/Groundnut/Gora Rice/Soyabean/Urdbean/Okra can also be followed.
- Maize: Start land preparation by deep ploughing with the help of country plough two to three times should be done by incorporating 5 tonne well rotted FYM or Compost at the time of final land preparation. To decrease the acidity affect, ameliorate the soil by incorporating 1 to 1.5 quintal of burnt lime during seed sowing time. Before Sowing it should be treated firstly with Fungicide viz. Bavistin 50 WP @ 2g followed by Insecticide viz., Chlorpyriphos 20 EC @ 5 ml or Thiomethexam 25 EC @ 6g per per liter of water for whole seed quantity for controlling diseases and protectionfrom termites and borer pests. For acre land, Fertilizer viz. N : P : K :: 30-50 : 15-25 : 15 kg based on the maturity length of the maize varieties , full dose of Phosphorous @15-25 kg, Potash @15 kg and 30 percent Nitrogen should be applied in rows at a depth of 5-7 cm as basal. Rest amount of Nitrogen viz. 40 per cent and 30 percent should be side dressed by 20-25 days after

sowing and 55-60 days after tasseling emergence. To mitigate the deficiency of Boron, apply Borax @ 7 kg per acre. To make ease in drainage of excess water it is recommended to follow Ridge and Furrow method of sowing by maintaining row to row 75 cm and plant to plant 20 cm with placement of two seeds at a depth of 5 cm per hill. Use weedicide as pre- emergence viz. Atrazin or Atrataf @ 800g in 500 liter of water for acre land.

- Urdbean/Moong bean: Congenial weather for sowing hence, Plough the land 2-3 times after receiving light rain and level the land with the help of leveler after each ploughing and finally spread 2 ton of well rotten FYM or compost uniformly and thoroughly mixed. Also, mix Malathion 10 % dust @ 10 kg per acre for the control of termites during final land preparation. Treat the seed in the sequence of Fungicide(Bavistin @ 2g per kg seed), Insecticide(Imidachloprid @ 3 ml or Rogar @ 5 ml and Chlorpyriphos @ 6 ml in 50 ml of water), Bio-agent (5 g per kg of seed), Rhizobium culture and PSB @ 40 g per kg of seed each. No water logging is allowed so be careful for this. Chemical fertilizer like urea can be curtailed upto 25 per cent if FYM or compost is used. Recommended varieties are: Urd bean- T 9, Pant U 19, 30, 35 and Birsa urd 1; Moong bean- Pusa Vishal, S M L 668, K 885, P S 16, Pant Moong 2 and P D M 11.
- Groundnut: Prepare land by spreading uniformly and mixing thoroughly 3 ton well rotten FYM or compost at the time of final land preparation and before incorporation try to plough the land across at least two to three times and level it. Depending on the type of physiology, the quantity of seed rate differ accordingly viz. for spreading type- 30 kg, for bushy type- 35 kg and bold type- 45 kg per acre are needed. Whole quantity of fertilizers viz. Urea 54 kg + SSP 312 kg+ MOP 34 kg + Borex 5 kg should be applied as basal for one acre land. To minimize the acidity effect apply 1-1.5 q per acre burnt lime in furrow before sowing of seeds. It is prerequisite to treat the seed before sowing first with fungicide- Bavistin @ 2 g per kg seed followed by insecticide viz. Chlorpyriphos 20 EC @ 6 ml per kg seed and bioagent like trichroderma @ 5 g per kg of seed and finally with Rhizobium culture and PSB @ 40 g kg of seed. Also to control the population of Termites, generally apply lindane dust @ 10 kg per acre during final preparation of land. Since, it is an upland crop so, avoid water logging and try to maintain moisture in the field. Recommend varieties are AK 12-24, Birsa moongfali 1, 2, 3 and bold type ? Birsa bold (BAU 13).
- Fingermillet: Seedling should be raised to match the suitable transplanting period and environment. Land should be plough 3-4 times in such a way that no excess water should be logged and at the time of final land preparation uniformly spread and thoroughly mix 2 ton of well rotten FYM or compost in the soil. Generally, 8-10

kg of seed is required for a acre land and half the dose of urea, 17 kg (10 kg) and full dose of SSP, 75 kg or 26 kg DAP and 15 kg MOP should be applied as basal during transplanting time as well as rest 17 kg urea top-dressed after 25-30 DAS. Maintain 20 cm distance between row to row. Recommended variety Birsa marua 2, A 404 and G P U 45, 47.

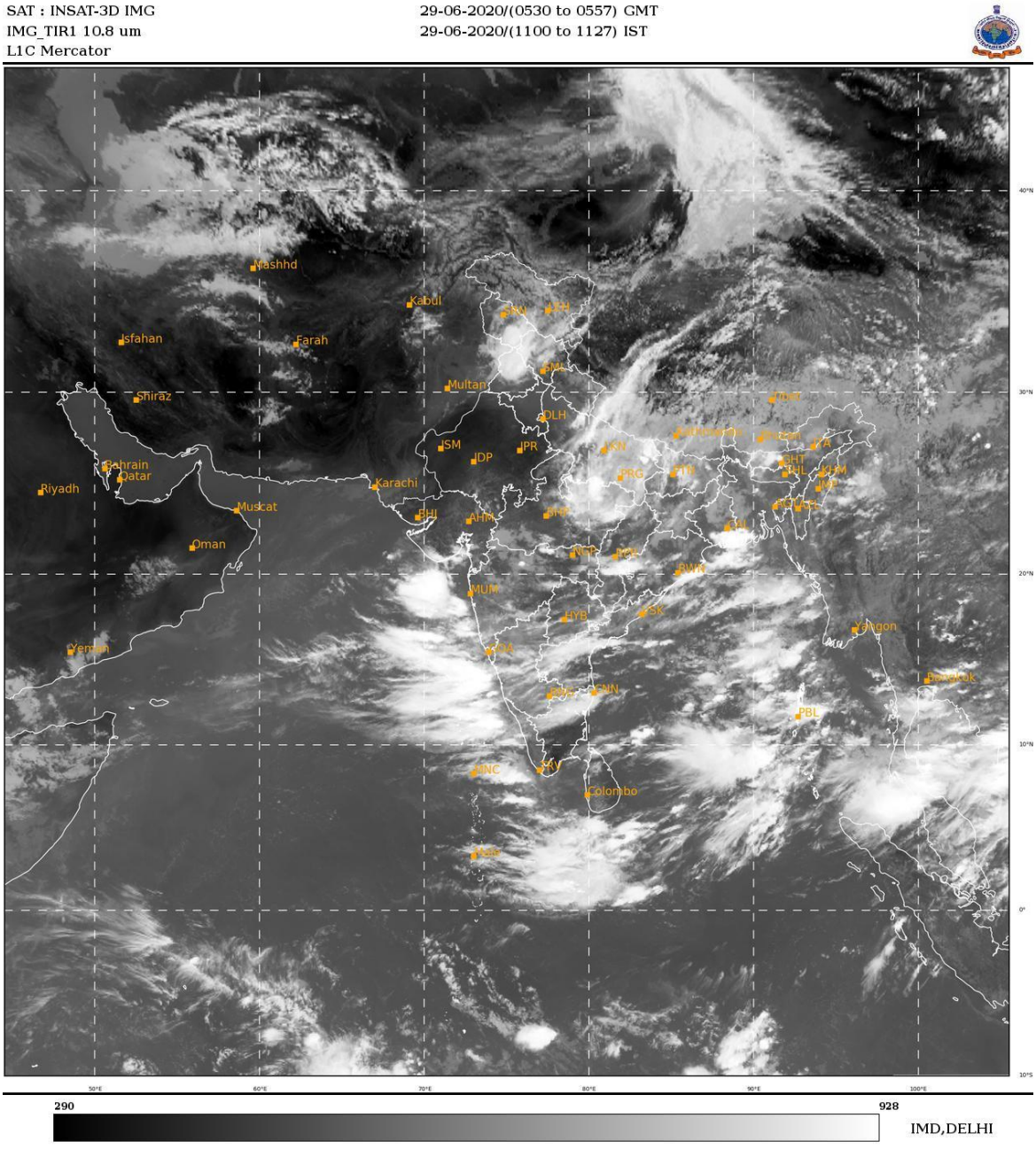

Figure: 1. Latest available satellite picture as on 29 June 2020 at 1127 Hrs (IST). (Source: IMD).

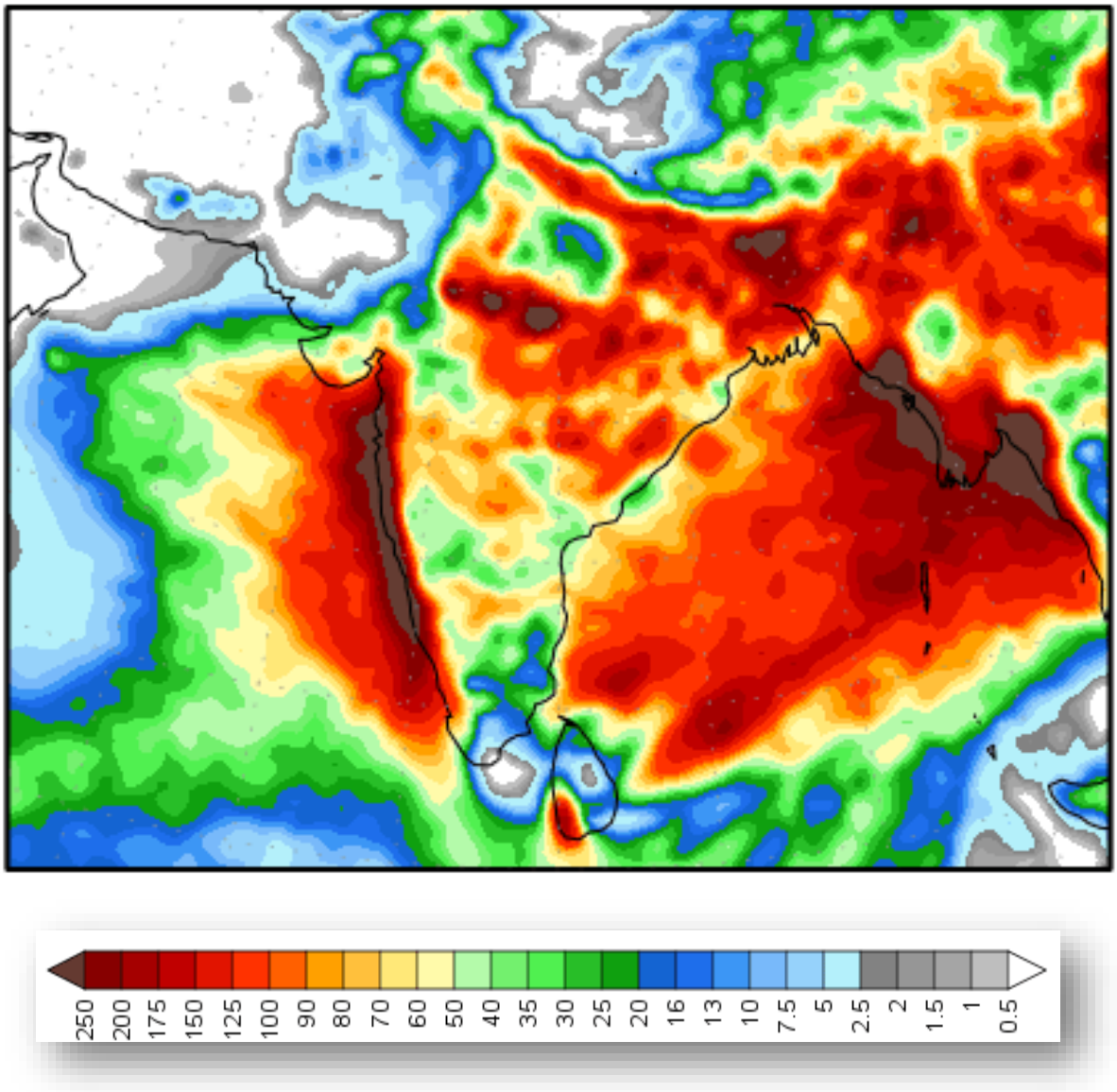

Figure:2. Precipitation forecast for 29 June to 07 July 2020 (Source: NOAA NCEP).

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