All India Coordinated Research Project on Agrometeorology
CRIDA, Santoshnagar, Hyderabad – 500 059

Daily Crop Weather Information as on 10 January 2022

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Significant Weather Features (IMD)

- Enhanced rainfall/thunderstorms activity over East & adjoining Central India:
- The Western Disturbance as a cyclonic circulation lies over north Pakistan & adjoining Jammu division in lower & middle tropospheric levels with a trough aloft in upper tropospheric levels along Long. 75°E to the north of Lat. 26°N.
- The induced cyclonic circulation now lies over north Haryana & neighbourhood in lower tropospheric levels. A trough runs from this cyclonic circulation to southeast Madhya Pradesh at lower tropospheric levels.
- Another trough runs from North Interior Karnataka to north Madhya Maharashtra at lower tropospheric levels.
- Confluence of winds from Arabian Sea and Bay of Bengal at lower tropospheric levels is very likely over East & adjoining central India during next 4-5 days. Under the influence of above systems:

  i) Isolated to scattered light/moderate rainfall/snowfall is very likely over Western Himalayan Region till 11th and dry weather for subsequent 3-4 days.

  ii) Scattered to fairly widespread light/moderate rainfall very likely over Vidarbha, Chhattisgarh, Bihar, Jharkhand, West Bengal & Sikkim and Odisha during 10th to 14th January. Isolated to scattered rainfall very likely to continue over Uttar Pradesh and East Madhya Pradesh during next 2 days and decrease thereafter.

  iii) Isolated heavy rainfall very likely over Odisha on 11th & 13th January.

  iv) Isolated thunderstorms with lightning/Hail very likely over Vidarbha on 10th & 13th; Chhattisgarh on 10th & 11th; Marathawada on 10th; Jharkhand, Bihar & Gangetic West Bengal on 11th; Sub-Himalayan West Bengal & Sikkim & Telangana on 12th and over Odisha on 11th & 13th January, 2022.

  v) Scattered to fairly widespread rainfall/snowfall very likely over Arunachal Pradesh during 11th-13th and isolated to scattered rainfall very likely over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 12th & 13th January.

- Scattered to fairly widespread light/moderate rainfall/thundershower very likely over Coastal Andhra Pradesh & Telangana during next 4-5 days.
- Isolated thunderstorms with lightning/Hail also very likely over Telangana on 12th and heavy rainfall at isolated places over Coastal Andhra Pradesh & Telangana on 13th January.
- Under the influence of cyclonic circulation over Southwest Bay of Bengal & neighbourhood at lower & mid tropospheric levels, isolated light rainfall/thundershower over Tamilnadu, Puducherry & Karaikal and Kerala & Mahe during next 4-5 days.
- Cold wave conditions in isolated pockets very likely over Punjab, Haryana & Chandigarh during 12th-15th and over north Rajasthan during 11th-13th January, 2022.
- Cold day conditions in isolated pockets very likely over Madhya Pradesh and Gujarat state during next 2 days.
- Dense/very dense Fog in isolated pockets in night/morning hours very likely over Punjab, Haryana, Uttar Pradesh during next 4-5 days; north Rajasthan during next 3 days.
- The images showing the latest satellite picture in the figure. 1.

Main Weather Observations (IMD)

- Rainfall/thundershower observed (from 0830 of yesterday to 0830 hours IST of today): at most places over Himachal Pradesh, Uttarakhand and East Madhya Pradesh; at many places over Uttar Pradesh, Chhattisgarh; at a few places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Haryana, Chandigarh & Delhi, Vidarbha and at isolated places over Punjab, Bihar, Jharkhand, Odisha, Marathawada, Telangana, Tamilnadu. North Interior Karnataka, West Madhya Pradesh, Kerala & Mahe and Andaman & Nicobar Islands.
- Heavy Rainfall observed at isolated places over Himachal Pradesh. Fog observed (at 0830 hours IST of today): Dense to very dense fog in many pockets over Punjab; isolated pockets over northwest Rajasthan, Uttarakhand, East Uttar Pradesh, Bihar and Odisha and Moderate fog in isolated pockets over Himachal Pradesh, East Rajasthan, East Madhya Pradesh and Odisha.
- Minimum Temperature Departures (as on 10-01-2022): Minimum temperatures are markedly above normal (5.1°C or more) at many places over Bihar and Jharkhand; at a few places over East Madhya Pradesh;at isolated places over East Uttar Pradesh and Vidarbha; appreciably above normal (3.1°C to 5.0°C) at most

places over Sub-Himalayan West Bengal & Sikkim and Chhattisgarh; at many places over West Uttar Pradesh, Gangetic West Bengal and Telangana; at a few places Rayalaseema; at isolated places over East Madhya Pradesh;above normal (1.6°C to 3.0°C) at most places over Jammu & Kashmir, Ladakh, Gilgit-Baltistan & Muzaffarabad, Punjab and Assam & Meghalaya;at many places Uttarakhand, Arunachal Pradesh; at a few places over Haryana, Chandigarh & Delhi; at isolated places over Madhya Maharshtra, Tamil Nadu, Puducherry & Karaikal.They are appreciably below normal (-3.1°C to -5.0°C) at many places over Gujarat State and at isolated places over Himachal Pradesh and Konkan & Goa; below normal (-1.6°C to -3.0°C) at a few places over East Rajasthan and West Madhya Pradesh and near normal over rest parts of the country. Today, the Lowest minimum temperature of 4.0°C is reported at Sikar and Bhilwara (East Rajasthan) over the plains of the country.

- Maximum Temperature Departures (as on 09-01-2022): Maximum temperatures were appreciably above normal (3.1°C to 5.0°C) at many places over Nagaland, Manipur, Mizoram & Tripura; at a few places over Assam & Meghalaya; at isolated places over Gangetic West Bengal; above normal (1.6°C to 3.0°C) at many places over Odisha, Sub-Himalayan West Bengal & Sikkim, Jharkhand, Chhattisgarh and Kerala & Mahe; at a few places over Uttarakhand and at isolated places over Coastal Andhra Pradesh & Yanam, Arunachal Pradesh and Tamilnadu, Puducherry & Karaikal.They were markedly below normal (- 5.0°C or less) at most places over Himachal Pradesh; at many places over Madhya Pradesh; at isolated places over Haryana, Chandigarh & Delhi, Rajasthan, Gujarat Region; appreciably below normal (-3.1°C to -5.0°C) at many places over Saurashtra & Kutch, Konkan & Goa and Vidharbha; at isolated places over Punjab and Madhya Maharashtra; below normal (-1.6°C to -3.0°C) at many places over Uttar Pradesh, West Madhya Pradesh, and Andaman & Nicobar Islands and near normal at rest parts of the country. Yesterday, the highest maximum temperature of 35.0°C was reported at Kottayam (Kerala).

Weather Warning during the next 5 days (IMD)

- 10 January (Day 1): Thunderstorm accompanied with lightning & hail at isolated places very likely over Vidarbha, Chhattisgarh, Marathwada and with lightning at isolated places over Odisha, Jharkhand, East Madhya Pradesh and Telangana. Cold wave conditions in isolated pockets very likely over northeast Rajasthan. Cold day conditions in isolated pockets very likely over Madhya Pradesh and Gujarat state. Dense to very dense fog in isolated pockets very likely over Punjab, Haryana, Chandigarh, north Rajasthan and dense fog in isolated pockets over

Uttar Pradesh and northwest Madhya Pradesh. Squally weather (wind speed reaching 40-50 kmph gusting to 60 kmph) very likely over central parts of south Bay of Bengal & adjoining Southwest Bay of Bengal. Fishermen are advised not to venture into this area.

- 11 January (Day 2):Heavy rainfall at isolated places very likely over Odisha. Thunderstorm accompanied with lightning & hail at isolated places very likely over Chhattisgarh, Bihar, Jharkhand, Gangetic West Bengal, Odisha and with lightning at isolated places over Vidarbha, Assam & Meghalaya and Telangana. Cold wave conditions in isolated pockets very likely over Punjab, Haryana, Chandigarh and north Rajasthan. Cold day conditions in isolated pockets very likely over Madhya Pradesh and Gujarat state. Dense to very dense fog in some parts very likely over Punjab, Haryana, Chandigarh; in isolated pockets over East Uttar Pradesh, north Rajasthan and dense fog in isolated pockets over West Uttar Pradesh and northwest Madhya Pradesh. Squally weather (wind speed reaching 40-50 kmph gusting to 60 kmph) very likely over central parts of south Bay of Bengal & adjoining Southwest Bay of Bengal. Fishermen are advised not to venture into this area.
- 12 January (Day 3): Thunderstorm accompanied with lightning & hail at isolated places very likely over SubHimalayan West Bengal & Sikkim, Telangana and with lightning at isolated places over Vidarbha, Chhattisgarh, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Coastal Andhra Pradesh. Cold wave conditions in isolated pockets very likely over Punjab, Haryana, Chandigarh and north Rajasthan. Dense to very dense fog in some parts very likely over Punjab, Haryana, Chandigarh; in isolated pockets over East Uttar Pradesh, north Rajasthan and dense fog in isolated pockets over West Uttar Pradesh.
- 13 January (Day 4): Heavy rainfall at isolated places likely over Odisha, Coastal Andhra Pradesh and Telangana. Thunderstorm accompanied with lightning & hail at isolated places likely over Vidarbha, Odisha and with lightning at isolated places likely over Chhattisgarh Coastal Andhra Pradesh, Tamilnadu, Puducherry & Karaikal and Telangana. Cold wave conditions in isolated pockets likely over Punjab, Haryana, Chandigarh & Delhi. Dense fog in isolated pockets likely over Punjab, Haryana, Chandigarh and Uttar Pradesh.
- 14 January (Day 5): Thunderstorm accompanied with lightning at isolated places likely over Chhattisgarh, Coastal Andhra Pradesh and Tamilnadu, Puducherry & Karaikal. Cold wave conditions in isolated pockets likely over Punjab, Haryana, Chandigarh & Delhi. Dense fog in isolated pockets likely over Uttar Pradesh.

- The weather outlook for seven days i.e., 10 Jan to 18 Jan 2022 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)

Konkan region

Weather condition:

Atmospheric condition was cloudy during morning hours around Dapoli during last week. Therefore 6.5 to 7.7 Bright sunshine hours was recorded during last week. During last week 0.0 mm rainfall was recorded at Agrometeorological observatory, Dr. B.S.K.K.V. Dapoli. The maximum and minimum temperature ranged from 30.0 to 32.4 and 14.2 to 15.7 ^{o}C respectively. Wind velocity ranged from 8.8 to 10.5 km and wind was blowing from south westerly Direction.

Contingency measure:

- General advisory:Use yellow sticky trap cards in vegetables crop field to attract the sucking pests and blue sticky trap cards for thrips @1 trap per guntha
- SMS advisory:Provide irrigation to vegetable crops, newly planted fruit crop orchard and sapota, coconut, arecanut and banana orchard as per requirement
- Lablab bean:If infestation of cuscuta weed is observed, then remove and destroy immediately to avoid further spred
- Sweetcorn:Apply 2nd split dose of nitrogen @ 1 kg urea/ Gunther to sweetcorn at 30 days after sowing.There is possibility of incidence of fall army worm on sweet corn, for management of pest, keep bunds weed free. Spray neem seed kernel extract 5% at 15 to 20 days interval, if incidence is severe, then spray Chlorantraniliprole 18.5%SC @ 4 ml per 10 liter of water.
- Mango:There is possibility for incidence of red mite on mango. Mites sucks sap from lower surface of leaves results into drying and leaf fall. For control of mites, spray wettable Sulphur 80% @ 20 gm per 10 liter in water.Prevailing weather conditions favors the bud burst in to inflorescence from matured shoots. Observed tree regularly for pest and disease incidence.There is possibility incidence of hoppers on flower bud stage in mango. To protect the inflorescence from pest, spray Lambda cyhalothrin 5%EC @ 6 ml per 10 liter in water.There is possibility incidence of hoppers, midge fly on mango inflorescence. For management of pest, spray of Imidacloprid 17.8% SL @ 6 ml or Buprofezin 25%SC@ 20 ml per 10 liter of water before the flower opening to avoid the

adverse effect on pollinators.For control of powdery mildew disease, spray Hexaconazole 5% @ 5 ml or wettable Sulphur 80% @ 20 gm per 10 liter in water along with insecticides given as per blossom protection schedule.(Note: avoid spraying during flowering to fruit setting period for effective pollination. If it is not possible to postpone the spraying till fruit set due to heavy incidence of insect and pest, then avoid spraying during morning hours (09.00 am to 12.00 pm) which is active period of pollinators for pollination.To protect the mustard size fruits of mango from hoppers as per blossom protection schedule for mango crop, take a fourth spray of Thiomethoxam 25%WG @ 1 gm per 10 liter of water.Before spraying, shaking of panicles in mango where fruit setting was completed to remove dried male flowers is suggested.For increasing the production and quality improvement of mango fruits, spray 1 % Potassium nitrate at pea marble and arecanut size stage of mango fruits.To minimize the pre-mature fruit drop of mango, apply 150 to 200 liter of water per tree after fruit setting (pea to Arecanut size) at 15 days interval for 3 to 4 times also use straw mulch to reduce evaporation losses.

- Mango and Cashewnut:There is possibility of incidence of Stem Borer in Mango and Cashewnut tree. Grubs tunnels in the sapwood on the trunk and branches and results into wilting of branches or entire tree. Observe the orchard regularly for pest infestation. If the incidence is noticed, remove the grubs from the holes and apply Chloropyriphos 20% EC @ 50 ml per 10 liter of water on the stem (swabbing) or inject solution of Chloropyriphos 20% EC @ 10 ml + kerosene 50 ml into stem hole.
- Cashewnut:There is possibility of incidence of tea mosquito bug and thrips on new flush & inflorescence and nut of cashewnut. If incidence is noticed spray Profenophos 50%EC @ 10 ml at inflorescence stage and Lambda cyhalothrin 5% EC @6 ml per 10 liter at nut stage. (The insecticide is not under label claim).
- Coconut:Due to dry weather, there is possibility of incidence of rugose spiraling white fly on coconut, Nymphs and adults suck the sap from lower surface of leaves and produce honey dew sugary substance which develop growth of sooty mold fungus. If incidence is noticed three spray of Neem oil 0.5% @50 ml per 10 liters of water at 15 days interval followed by three sprays of water by pressure pump at 10 days interval.
- Arecanut:For 3-year-old arecanut palm apply 2nd split dose 160 g urea and 125 g muriate of potash per tree. by digging circular ring about 1 meter from base of tree and fill the circular ring with soil after application of fertilizer. Apply 1/3rd and 2/3rd of abovementioned fertilizers dose per tree for 1 and 2-years old

arecanut plantation, respectively.Provide irrigation to arecanut orchard at 6-8 days interval.

- Water melon:There is possibility of incidence of leaf miner in watermelon crop, if incidence is noticed, spray 4% NSKE or Azadirachtin 10000 PPM @20 ml or Cartap hydrochloride 50%SP @ 10 gms per 10 liters of water. (The insecticide is not under label claim).For fertigation, apply fertilizers in 9 splits for variety of duration of 90 days at an interval of one week, start after 15 days of sowing as follow.
- Brinjal:There is possibility of incidence of shoot and fruit borer on Brinjal crop, for management of pest install ?Lucilure?pheromone trap @ 8 nos. per acre at flowering stage of crop.
- Chilli:Apply 2nd split dose of nitrogen fertilizer @ 3 g urea per plant at the time of flowering.

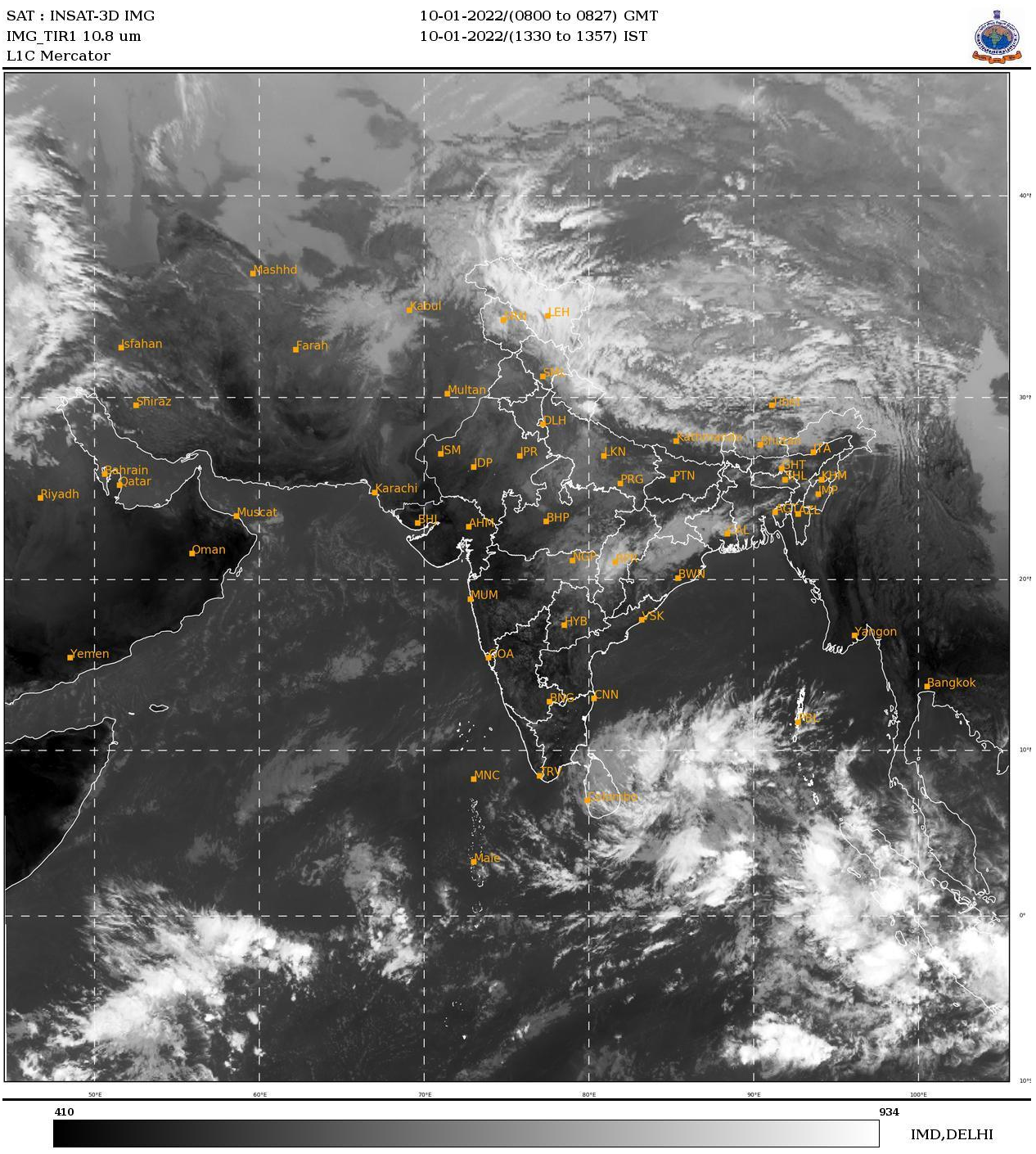

Figure: 1. Latest available satellite picture as on 10 Jan 2022 at 1357 Hrs (IST). (Source: IMD).

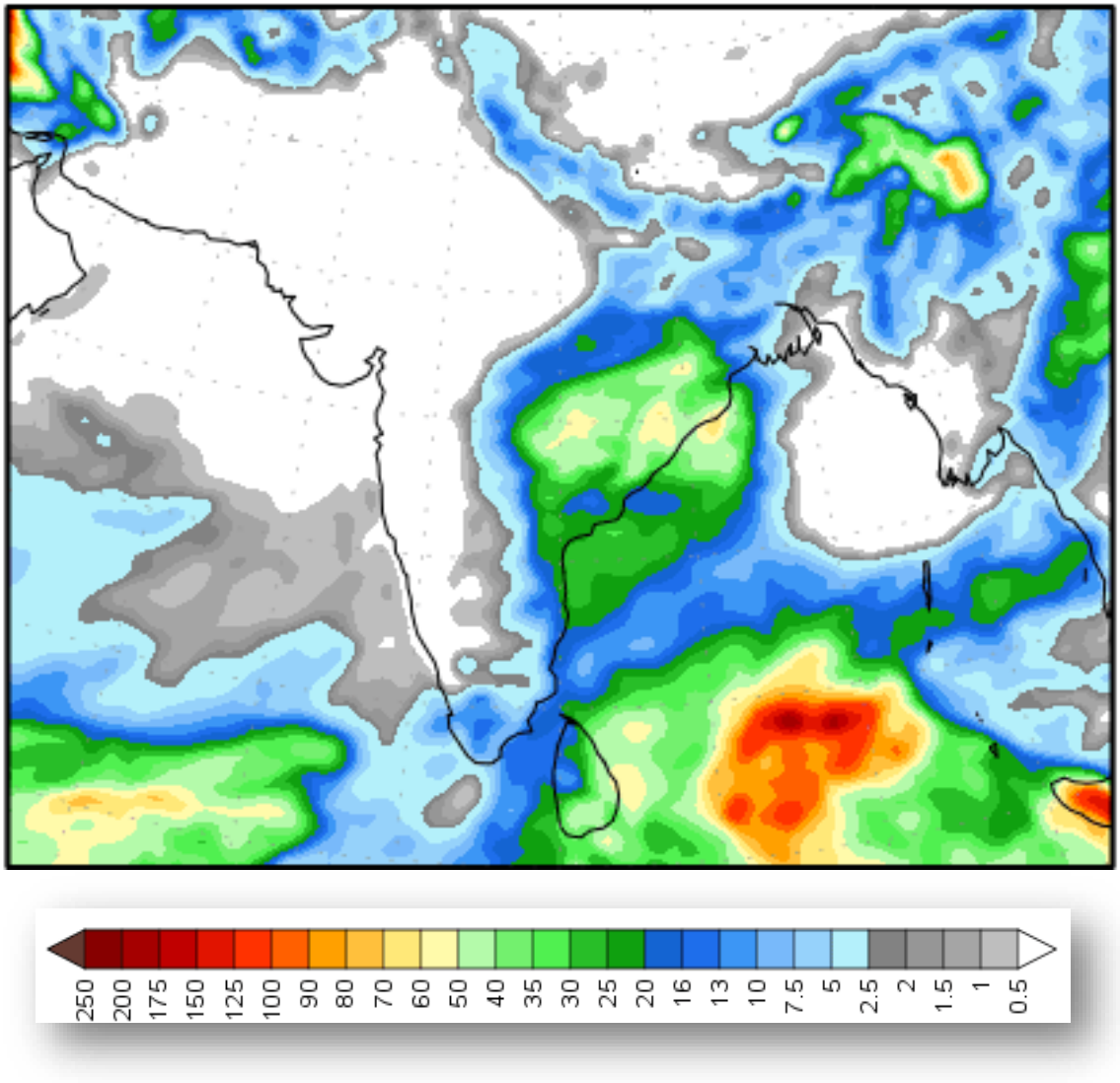

Figure:2. Precipitation forecast for 10 Jan to 18 Jan 2022 (Source: NOAA NCEP).

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