# National Agromet Advisory Service Bulletin

Friday 7<sup>th</sup> February 2014
(For the period 7<sup>th</sup> to 11<sup>th</sup> February 2014)



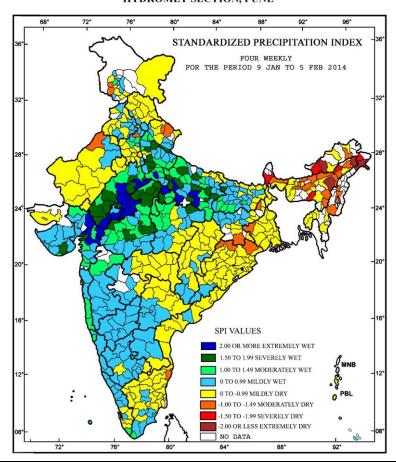
## Issued by

National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.



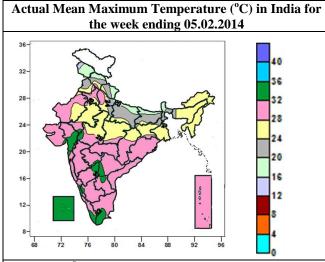
## Standardised Precipitation Index Four Weekly for the Period 9<sup>th</sup> January to 5<sup>th</sup> February 2014

MINISTRY OF EARTH SCIENCES INDIA METEOROLOGICAL DEPARTMENT HYDROMET SECTION, PUNE

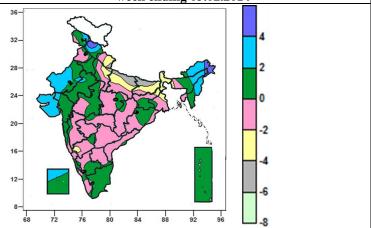


- Extremely wet/severely wet conditions experienced over many parts of West Madhya Pradesh, East Rajasthan, some parts of Uttar Pradesh and Gujarat and Siwan district of Bihar.
- Moderately dry/ severely dry conditions experienced over many districts of North East India, Baramula and Poonch districts of Jammu & Kashmir, Chamoli and Rudraprayag districts of Uttarakhand, Kurukshetra district of Haryana, Darjeeling, Jalpaiguri and Purulia districts of West Bengal, Godda and West Singbhum districts of Jharkhand, Srigangangar district of Rajasthan, Mayurbanj and Sundergarh disticts of Odisha and Kancheepuram district of Tamil Nadu.
- Rest of the country experienced mild wet/dry conditions.

## Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 05.02.2014

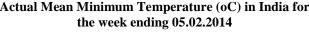


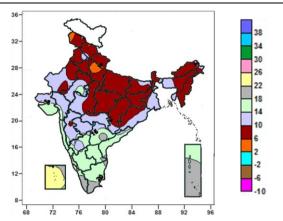
Mean Maximum Temperature (oC) Anomaly in India for the week ending 05.02.2014



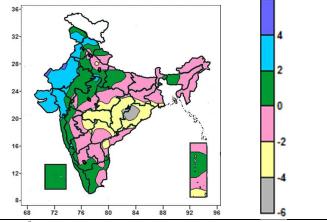
- 32 to 36°C over many parts of Gujarat, Lakshadweep Island, some parts of East Rajasthan, West Madhya Pradesh, Karnataka, Telanagana, Raylaseema, Tamil Nadu, Kerala.
- 28 to 32°C over many parts of West India, South India, Odisha, Chattisgarh, West Rajasthan, Haryana, Delhi, some parts of Uttarakhand, Punjab, West Uttar Pradesh, East Rajasthan, Madhya Pradesh, Bihar.
- 20 to 28°C over many parts of Uttar Pradesah, Madhya Pradesh, Sub-Himalayan West Bengal, Punjab, some parts of Himachal Pradesh, Uttarakhand, Assam.
- 12 to 20°C over manye parts of Jammu & Kashmir, Sikkim, some parts of Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Bihar.
- 2 to 6°C over many parts of Himachal Pradesh, Arunachal Pradesh, West Rajasthan, Gujarat, Nagaland, Manipur, East Rajasthan, some parts of Jammu & Kasmir, Assam & Meghalaya, Mizoram.
- -2 to 2<sup>0</sup>C over all over country (except many parts of Himachal Pradesh, Arunachal Pradesh, Rajasthan, Gujarat, Nagaland, Manipur, Uttarakhand, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, some parts of Jammu & Kasmir, Assam & Meghalaya, Mizoram, West Uttar Pradesh, Jharkhand, Gangetic West Bengal, North Interior Karnataka.
- -6 to -2°C over many parts of Uttarakhand, East Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, some parts of West Uttar Pradesh, Jharkhand, Gangetic West Bengal, Assam, North Interior Karnatakas.

## Actual Mean Minimum Temperature (oC) in India for





## Mean Minimum Temperature (oC) Anomaly in India for the week ending 05.02.2014

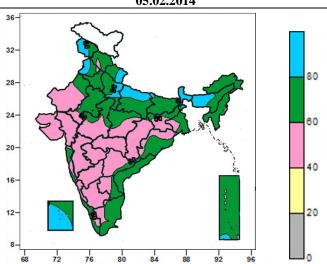


- •2 to 6°C over some parts of Jammu & Kashmir, West Uttar Pradesh.
- •6 to 10°C over many parts of North India (except Rajasthan), Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim, North East India, central India, some parts of Rajasthan, Gangetic West Bengal, Gujarat, Odisha.
- •10 to 18<sup>o</sup>C over many parts of Rajasthan, West India, south Gangetic West Bengal, South India (except Kerala), some parts of Himachal Pradesh, Punjab, Bihar, Assam, Tripura, West Madhya Pradesh, Odisha, Chattisgarh, Andaman & Nicobar Islands.
- •18 to 26°C many parts of Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Andhra Pradesh, Tamil Nadu Lakshadweep Islands.

- •-6 to -2°C over many parts of Vidarbha, Chattisgarh, Odisha, some parts of East Madhya Pradesh, Marathwada, North Telanagana, South Coastal Andhra Pradesh, Andaman & Nicobar Islands.
- •-2 to 2°C over all parts of country (except many parts of Jammu & Kashmir, Punjab, West Rajasthan, Gujarat, Saurashtra & Kutch, Vidarbha, Chattisgarh, Odisha, some parts of Madhya Pradesh, Marathwada, North Telanagana, South Coastal Andhra Pradesh, Himachal Pradesh, West Uttar Pradesh, North Interior Kartnataka Andaman & Nicobar Islands).
- •2 to 4<sup>0</sup>C over many parts of Jammu & Kashmir, Punjab, West Rajasthan, Gujarat, Saurashtra & Kutch, some parts of Himachal Pradesh, West Uttar Pradesh, West Madhya Pradesh, North Interior Karnataka.

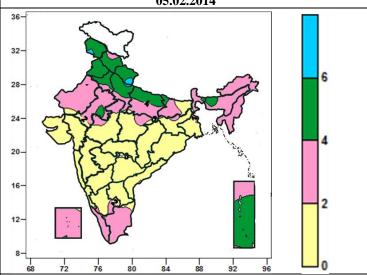
## Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 05.02.2014

## Relative Humidity (%) over India for the week ending 05.02.2014



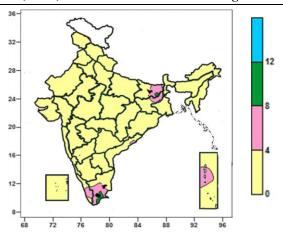
- 80 to 100% over many parts of Jammu & Kashmir, Sub-Himalayan West Bengal & Sikkim & Sikkim, Lakshadweep Islands, some parts of Uttarakhand, Uttar Pradesh, Punjab, Assam & Meghalaya, Andaman & Nicobar Islands.
- 40 to 80% over entire country (except Jammu & Kashmir, Sub-Himalayan West Bengal & Sikkim & Sikkim, Lakshadweep Islands, some parts of Uttarakhand, Uttar Pradesh, Punjab, Assam & Meghalaya, Andaman & Nicobar Islands).

## Cloud amount (okta) over India for the week ending 05.02.2014



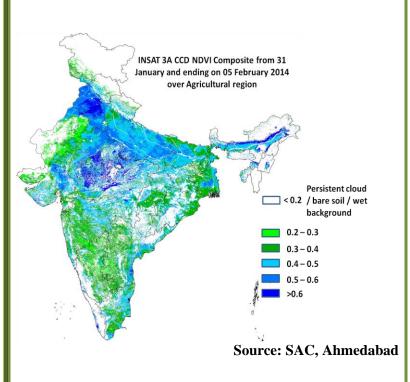
- 6 to 8 okta over some parts of, Jammu & Kashmir, Uttarakhand.
- 4 to 6 okta over many parts of Jammu & Kashmir, Himachal; Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Andaman & Nicobar Islands, some parts of East Rajasthan, Bihar, Sub-Himlayan West Bengal, Assam.
- 0 to 4 okta over entire country (except many parts of Jammu & Kashmir, Himachal; Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Andaman & Nicobar Islands, some parts of East Rajasthan, Bihar, Sub-Himlayan West Bengal, Assam).

### Wind speed (knots) over India for the week ending 05.02.2014

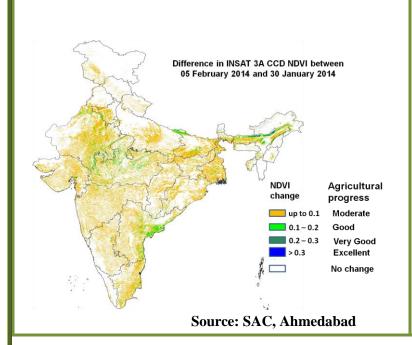


- 8 to 12 knots over some parts of Bihar, Tamil Nadu.
- 4 to 8 knots over many parts over Kerala, Tamil Nadu, some parts of Bihar, Jharkhand, Andaman & Nicobar Islands,.
- 0 to 4 knots over entire country (except Kerala, Tamil Nadu, some parts of Bihar, Jharkhand, Andaman & Nicobar Islands).

## INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION 31<sup>st</sup> January 2014 – 5<sup>th</sup> February 2014



Agricultural vigour is in general very good over whole Punjab and Haryana, central and eastern UP, pockets of eastern and west Bihar, Major Part of MP and Central Gujarat and pockets of eastern, few pockets of eastern Rajasthan as NDVI exceeds 0.5. Agricultural vigour is moderate in major part of UP and few pockets of MP, central West Bengal, eastern Maharashtra, parts of eastern West Bengal, pockets of western Chhattisgarh, coastal belt of Tamil Nadu where NDVI is in the range of 0.4 to 0.5 upto 05<sup>th</sup> February 2014. The NDVI remains low within range of 0.2 to 0.3 over rest of India.



Agricultural progress was found to be good over north and eastern Rajasthan, central and north MP, central Gujarat, pockets of western Bihar, pockets of central West Bengal, pockets of central UP and pockets of western Haryana, eastern Rajasthan, coastal AP and pockets of western Chhattisgarh where NDVI showed positive change from previous week of the order of 0.1 to 0.2. Rest of India shows moderate progress.

## **Weather Forecast**

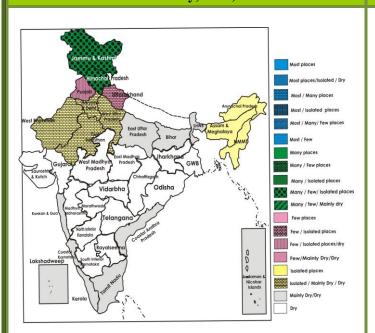
## Weather Forecast for next 3 days (upto 0830 hours IST of 10<sup>th</sup> February, 2014)

- Rain/snow would occur at most places over Jammu & Kashmir and Himachal Pradesh during next 24 hours and decrease significantly thereafter.
- Rain/snow would occur at a few places over Uttarakhand during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at a few places over Punjab during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at isolated places over Haryana & Delhi, West Uttar Pradesh & Rajasthan during next 24 hours and mainly dry weather thereafter.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland.
- Weather would be mainly dry/dry over rest parts of the country.
- Fall in minimum temperatures by 3-4°C over northwest & adjoining west and central India from 8<sup>th</sup> onwards.
- Moderate to dense fog would occur at a few places over Odisha, Sub-Himalayan West Bengal, Assam
- & Meghalaya and Tripura.

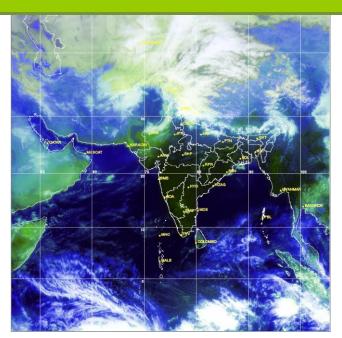
## Weather Warning during next 3 days

- **07 February (Day 1):** Heavy rain/snowfall (>3.5 cm) would occur at a few places over Himachal Pradesh and at isolated places over Jammu & Kashmir.
- **08 February (Day 2):** No weather warning.
- **09 February (Day 3):** No weather warning.
- Weather Outlook for subsequent 4 days from 10<sup>th</sup> to 14<sup>th</sup> February, 2014:
- Rain/snowfall would occur at isolated places over western Himalayan region on 10th.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh and Assam & Meghalaya on 10<sup>th</sup>.
- Generally dry weather would prevail over rest parts of the country.

## Weather Forecast Map (Valid upto 0830 hours of 10<sup>th</sup> February, 2014)



## Satellite image dated 07.02.2014, 0600 UTC



## **Salient Advisories**

## North Region

- In **Jammu & Kashmir**, suspend all agricultural activities for next 3 days as rain/snow would occur at most places along with isolated heavy rain/snowfall (>3.5 cm). Make/clean drainage channels to avoid water logging in crop fields.
- As rain/snow would occur at most places over **Himachal Pradesh** during next 24 hours along with heavy rain/snowfall (>3.5 cm) at a few places on 7th, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Also arrange for adequate drainage in the crop fields to avoid water stagnation.
- Due to prevailing low temperature conditions in some parts of **Himachal Pradesh**, young fruit trees and tomato crops should be protected from cold by covering with polythene sheets or straw thatches.
- As low temperature conditions are likely to prevail in **Uttarakhand, Punjab, Haryana, Rajasthan and Uttar Pradesh,** apply light and frequent irrigation in the standing crops to safeguard from cold injury. Also arrange for smoking around the crop fields during night hours. Young plants of fruit trees and tomato should be protected by covering with polythene sheets or straw thatches.
- In view of high humidity in **Punjab and Haryana**, it is advised to monitor wheat for incidence of yellow rust. If symptoms observed, apply Tilt or Shine or Bumper or Folicur @ 200 ml in 200 litre of water or Bayleton @ 200 gram in 200 litres of water.

## **Northeast Region:**

- As night temperature is low, the young seedlings in rice nurseries in **Assam, Meghalaya and Tripura** should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning.
- In Temperate Sub Alpine Zone of **Meghalaya**, humid weather conditions are favourable for incidence of aphids in rapeseed and mustard. Hence, monitor the crop and apply Dimethoate 30 EC or Chloropyriphos20 EC @ 2 ml / litre of water if observed.
- In Upper Bramhaputra valley Zone of **Assam**, due to low temperature and high relative humidity, there is possibility of occurrence of late blight disease in potato. Closely monitor the leaves of potato plant and if symptom appears, apply 0.25% solution of Mancozeb 75WP (2g/l).
- In Mild Tropical Plain Zone of **Tripura**, due to foggy weather conditions spread of late blight disease in potato and aphid attack in toria may become severe. Spray with Mancozeb @ 2.5 g / litre of water to protect from late blight and to manage aphids, spray Monocrotophos @ 2 ml per litre of water at an interval of 15 days. Due to prevailing foggy condition there may attack of hopper in mango plant. Malathion @ 2ml per liter of water may be sprayed to manage the attack.

## **Central Region:**

- As low temperature is expected in next three days over North **Madhya Pradesh**, apply light and frequent irrigation /sprinkler irrigation in the evening in standing crops to protect the crops from cold injury. Also arrange for smoking around the fields during night.
- In Narmada Valley Zone of **Madhya Pradesh**, present weather is congenial for attack of leaf eating caterpillar and pod borer in gram. Spray Profanophos 50 E.C. @ 1.5 litre of water or Quinolphos 25 EC @ 1 litre of water to manage the infestation.
- As low temperature is likely to prevail in **Chhattisgarh**, apply light and frequent irrigation / sprinkler irrigation in the evening in standing crops to protect the crops from cold injury. Also arrange for smoking around the fields during night.

## **East Region**

- In North West Alluvial Plain Zone of **Bihar**, due to prevailing dense foggy conditions, there is chance of occurrence of early blight in potato; spray Endophil M-45 or mixture of Synomaxi and Mancozeb @ 2.0 gm per litre of water. Due to partial cloudy sky and prevailing temperature conditions, there are chances of aphid infestation in mustard; spray Metasystox @ 1.0 ml / litre of water.
- In Central & North Eastern Plateau Zone of **Jharkhand**, cool and dry weather is favourable for powdery mildew disease in green pea; spray Karathen @ 1 ml per litre of water or Sulfex @ 3 g per litre of water.

## **West Region**

• As no significant rain occurred during last week and dry weather would prevail in **Madhya Maharashtra**, apply irrigation to late sown gram at pod development stage, wheat at flowering / milk stage, jowar at grain formation stage, sugarcane, maize and vegetable crops.

- As no significant rain occurred during last week and dry weather would prevail in **Marathwada**, apply irrigation to gram at pod development stage, wheat at flowering / milk stage, jowar at grain formation stage, sugarcane, vegetable crops and maize and in **Vidarbha**; apply irrigation to late sown gram at pod development stage, wheat at flowering / milk stage and vegetable crops.
- As no significant rain occurred during last two weeks and dry weather is likely to prevail in South **Gujarat** Zone, apply irrigation to vegetables at an interval of 3 to 4 days.

### **South region**

- As dry weather is expected in the coming days, apply mulch with crop residues or coir pith in the inter row space in cotton to minimize loss of soil moisture in the South Zone of **Tamil Nadu**.
- In the Cauvery Delta Zone of **Tamil Nadu**, in canal dependent areas where water scarcity is prevalent, foliar application of Pink Pigmented Facultative Methylotrophs (PPFM) at 200 ml/acre is recommended to mitigate the water stress in standing *samba/thaladi* rice for 10-12 days.
- Provide irrigation to banana and undertake mulching with dried leaves to conserve soil moisture in coconut basins in the Problem Area Zone of **Kerala**. As dry weather is prevailing increase the frequency of irrigation in vegetables.

## Detailed Zonewise Agromet Advisories

NORTH INDIA [Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh & Rajasthan]







Wheat

Sugarcane

Late blight on potato

Mustard

- Realised Rainfall: Significant rainfall occurred in Baramula, Doda, Ganderwal, Kulgam, Ramban, Kupwara in Jammu & Kashmir. Weather remained mainly dry / dry over rest of the districts of region.
- Weather Forecast: Rain/snow would occur at most places over Jammu & Kashmir and Himachal Pradesh during next 24 hours and decrease significantly thereafter. Rain/snow would occur at a few places over Uttarakhand during next 24 hours and decrease thereafter. Rain/thundershowers would occur at a few places over Punjab during next 24 hours and decrease thereafter. Rain/thundershowers would occur at isolated places over Haryana & Delhi, West Uttar Pradesh & Rajasthan during next 24 hours and mainly dry weather thereafter. Fall in minimum temperatures by 3-4°C over northwest from 8<sup>th</sup> onwards.
- **Weather Warning:** Heavy rain/snowfall (>3.5 cm) would occur at a few places over Himachal Pradesh and at isolated places over Jammu & Kashmir on 7<sup>th</sup> February.
- **Weather Outlook**: Rain/snowfall would occur at isolated places over western Himalayan region on10th. Generally dry weather would prevail over rest parts of the region.

#### • Advisories :

#### Jammu & Kashmir:

In Jammu & Kashmir, suspend all agricultural activities for next 3 days as rain/snow would occur at most places along with isolated heavy rain/snowfall (>3.5 cm). Make/clean drainage channels to avoid water logging in crop fields.

#### Himachal Pradesh:

- As rain/snow would occur at most places over Himachal Pradesh during next 24 hours along with heavy rain/snowfall (>3.5 cm) at a few places on 7<sup>th</sup>, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Also arrange for adequate drainage in the crop fields to avoid water stagnation.
- > Due to prevailing low temperature conditions in some parts of Himachal Pradesh, young fruit trees and tomato crops should be protected from cold by covering with polythene sheets or straw thatches.
- ➤ In Mid Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh, aphids attack in wheat crop is expected more after rains; for control spray 30 ml Cypermethrin 10 EC per 30 litre of water. Yellow, brown and black rust in wheat is also expected in humid conditions. For control spray Dithane M-45 @ 2 g per litres of water at 15 days interval after current spells of rain.

## Uttarakhand:

- As low temperature conditions are expected in Uttarakhand, apply light and frequent irrigation in the standing crops to safeguard from cold injury.
- In Bhabar and Tarai and Hill Zone of Uttarakhand, low temperature condition is expected during next three days, use low polyethylene tunnel for growing of nursery of tomato, brinjal & capsicum and apply light and frequent irrigation in onion and other vegetable crops like coriander, spinach, radish, methi by sprinkler method to protect from cold injury. Undertake top dressing Urea @ 25 kg/acre and give light irrigation in wheat crop in order to boost ear head emergence.

## Punjab, Haryana and Delhi:

- Due to prevailing low temperature conditions in some parts of Punjab and Haryana, apply light and frequent irrigation in the standing crops to safeguard from cold injury. Young plants of fruit trees and tomato should be protected by covering with polythene sheets or straw thatches. In view of high humidity in Punjab and Haryana, it is advised to monitor wheat for incidence of yellow rust; apply Tilt or Shine or Bumper or Folicur @ 200 ml in 200 litres of water or Bayleton @ 200 gram in 200 litres of water.
- In Western Zone of Haryana, due to high humidity, there is a possibility of white rust in the mustard crop; spray 0.2% Redomil M Z or Mancozeb.
- In Delhi, in view of prevailing dry weather condition, undertake intercultural operations in carrot, radish, turnip, sweet potato and cole crops.

#### Uttar Pradesh:

- In view of prevailing and expected cold weather condition in west Uttar Pradesh, apply light and frequent irrigation in the standing crops to safeguard from cold injury. Also arrange for smoking around the crop fields.
- In Central Plain Zone of Uttar Pradesh, due to foggy and cloudy conditions, there is possibility of white rust in

mustard; spray Redomil MZ-72 @ 2.5 kg/ha dissolved in 800-1000 liters of water.

#### Rajasthan:

- As low temperature is expected in some parts of Rajasthan, apply light and frequent irrigation in the standing crops to safeguard from cold injury.
- ➤ Due to continuous cool and humid weather in Western Plain Zone and Flood Prone Eastern Plain Zone of Rajasthan, Alternaria blight (black spot) disease may attack mustard crop in some pockets; destroy the infested plants spray Iprodione or Mencozeb @ 2 kg/800 litre of water. Repeat the spray in 15 days interval.
- In Arid Western Plain Zone and Semi-arid Eastern Plain Zone of Rajasthan termite attack is observed in wheat and barley due to dry conditions, which is likely to continue. For control, apply Chloropyriphos (20 EC) @ 2400 ml/ha along with irrigation water.
- In West Rajasthan, as dry weather is prevailing apply irrigation in wheat crops at milk stage.

## • Animal Husbandry

- In Sub-Tropical Zone of Jammu & Kashmir, protect the pregnant and milch animal from cold and feed them with mineral mixture regularly. Keep the animals inside the sheds/ shelters during night hours and take them out during sunshine hours in the day time. Cover the poultry shed with gunny bags in order to protect the birds from cold weather.
- ➤ In Himachal Pradesh, protect the newly born calves and animals from cold. Keep the animals inside the sheds/ shelters during night hours and take them out during sunshine hours in the day time.

## **CENTRAL INDIA [M.P., CHHATTISGARH]**









Wheat Sugarcane

Chilli Mustard

- **Realised Rainfall:** Dry weather prevailed over the region.
- **Weather forecast:** Weather would be mainly dry/dry over the region. Fall in minimum temperatures by 3-4°C over central India from 8<sup>th</sup> onwards.
- Weather Warning during next three days: Nil
- Weather Outlook: Dry weather would prevail over the region.
- Advisories:

## Madhya Pradesh:

- As low temperature is expected in next three days over North Madhya Pradesh, apply light and frequent irrigation /sprinkler irrigation in the evening in standing crops to protect the crops from cold injury. Also arrange for smoking around the fields during night.
- In Satpura Plateau Zone of Madhya Pradesh due to prevailing dry weather, apply irrigation in wheat and cotton. Carry out picking of matured cotton boll. In Narmada Valley Zone, apply irrigation to wheat, sugarcane and maize crop.
- In Bundelkhand Zone of Madhya Pradesh, continue weeding and hoeing in onion and garlic crops taking advantage of prevailing dry weather.
- ➤ In Kymore Plateau Zone of Madhya Pradesh, as dry weather is prevailing, apply irrigation in wheat and vegetables. Also harvest matured tomato, brinjal and chilies.
- In Narmada Valley Zone of Madhya Pradesh, present weather is congenial for attack of leaf eating caterpillar and pod borer in gram. Spray Profanophos 50 E.C. @ 1.5 litre of water or Quinolphos 25 EC @ 1 litre of water to manage the infestation.
- ➤ In Bundelkhand Zone of Madhya Pradesh activity of stem borer is being observed in wheat and likely to continue because of increase in day temperature. Monitor the crop and spray Trizophos 40 EC @ 2.0 ml/liter of water for the effective control.

## • Animal Husbandry

- In Malwa Plateau Zone of Madhya Pradesh, protect the cattle from cold and keep them in warm environment.
- In Bundelkhand Zone of Madhya Pradesh, fresh water for drinking use and balanced diet should be given to the buffaloes and cows so that milk production will not be affected by the fluctuating weather.
- In Nimar Valley Zone of Madhya Pradesh keep animals indoor and provide dry fodder bedding to protect from cold. Provide warm water to lactating animals. Keep young calves indoors during night time to avoid cold stress.

### Chhattisgarh:

As low temperature is expected in next three days, apply light and frequent irrigation / sprinkler irrigation in the

- evening in standing crops to protect the crops from cold injury. Also arrange for smoking around the fields during night.
- ➤ In Chhattisgarh North Hill Zone as dry weather is prevailing, apply irrigation in wheat and harvest matured arhar and potato.
- In Chhattisgarh Plain Zone due to increase in maximum temperature, summer rice nursery will be ready early for transplanting. Field preparation for transplanting may be undertaken accordingly, also SRI method which needs less quantity of water may be adopted.
- ➤ Due to rise in maximum temperature mustard aphid out break is likely in Chhattisgarh Plain Zone; spray Dimethoate 30 EC @ 1000 ml / hectare.

EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM]











Mustard

Sugarcane

Transplanting of rice

Cole crops

Onion

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Weather forecast:** Weather would be mainly dry/dry over the region. Dense to moderate fog would occur at a few places over Odisha and Sub-Himalayan West Bengal.
- Weather Warning: Nil.
- Weather Outlook: Dry weather would prevail over the region.
- Advisories:
  - Odisha:
  - As dry weather is prevailing, apply irrigation in sugarcane in Western Undulating Zone and also apply irrigation to vegetables in Eastern Ghat High Land Zone of Odisha.
  - In North Eastern Ghat High Land Zone of Odisha, temperature conditions are favourable for sowing of green gram.
  - In East and South Eastern Coastal Plain Zone of Odisha, maximum and minimum temperature conditions are congenial for occurrence of termites, thrips and aphids in groundnut. For termites, treat the soil with Sevidol granules @ 20 kg or Methyl parathion 2% D dust @ 25 kg/ha and maintain moisture in the field. For thrips, apply Imidacloprid 17.8 SL @ 125 ml in 500 litres of water per hectare. For aphids, spray Dimethoate @ 1 litre / ha in 500 litres of water.
  - ➤ In North Eastern Plateau Zone Odisha, due to dry weather prevailed during last week, there is chance of thrips in groundnut; apply Imidachloprid 17.8 SL @ 50 ml in 200 liters of water per acre.

## West Bengal:

- In New Alluvial Zone and Laterite and Red soil Zone of West Bengal, as dry weather is prevailing, apply irrigation in wheat during panicle initiation stage. Apply 1<sup>st</sup> irrigation in sunflower just after sowing and 2<sup>nd</sup> irrigation 3 days after sowing.
- In Laterite and Red soil Zone of West Bengal, harvest the matured mustard crop taking the advantage of dry weather.
- In Terai Zone of West Bengal, due to prevailing foggy conditions, there is chance of occurrence of late blight and early blight in potato; spray a mixture of Cymoxnil 8% and Mancozeb 64% @ 2.5 g / litre of water in afternoon hours.
- In Coastal Saline Zone of West Bengal, continue sowing of green gram as temperature conditions are favourable. Complete transplanting of *boro* rice in the main field.

#### Bihar:

- In North West Alluvial Plain Zone of Bihar, as dry weather is prevailing, undertake harvesting of matured tobacco crop and apply irrigation in maize crop.
- ➤ In North East Alluvial Plain Zone of Bihar, as dry weather is prevailing, apply irrigation to wheat, maize and vegetables.
- In North West Alluvial Plain Zone of Bihar, due to prevailing dense foggy conditions, there is chance of occurrence of early blight in potato; spray Endophil M-45 or mixture of Synomaxi and Mancozeb @ 2.0 gm per litre of water. Due to partial cloudy sky and prevailing temperature conditions, there are chances of aphid infestation in mustard; spray Metasystox @ 1.0 ml / litre of water.

#### • Jharkhand:

- In Jharkhand, as dry weather is prevailing during last few weeks, apply irrigation to wheat.
- In Western Plateau Zone of Jharkhand, as dry weather is prevailing undertake harvesting of rapeseed.
- In Central & North Eastern Plateau Zone of Jharkhand, cool and dry weather is favourable for powdery mildew disease in green pea; spray Karathen @ 1 ml per litre of water or Sulfex @ 3 g per litre of water.

## NORTHEAST INDIA [ARUNACHAL PRADESH, NMM&T, ASSAM, MEGHALAYA]









Chilli

Transplanting of rice

cole crops

Late blight in Potato

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- Weather Forecast: Rain/ thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya and Nagaland. Moderate to dense fog would occur at a few places over Assam & Meghalaya and Tripura.
- Weather Warning: Nil.
- **Weather Outlook:** Rain/ thundershowers would occur at isolated places over Assam & Meghalaya and Arunachal Pradesh on 10<sup>th</sup>.

### • Advisories:

- Assam & Meghalaya:
- As night temperature is low, the seedlings in rice nurseries in **Assam** and **Meghalaya** should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning.
- In Meghalaya, provide light irrigation in tomato and potato as dry weather is prevailing.
- ➤ In Temperate Sub Alpine Zone of **Meghalaya**, humid weather conditions are favourable for incidence of aphids in rapeseed and mustard. Hence, monitor the crop and apply Dimethoate 30 EC or Chloropyriphos20 EC @ 2 ml / litre of water, if observed.
- ➤ In Upper Bramhaputra valley Zone of Assam, due to low temperature and high relative humidity, there is possibility of occurrence of late blight disease in potato. Closely monitor the leaves of potato plant and if symptom appears, apply 0.25% solution of Mancozeb 75WP (2g/l).
- ➤ In Central Bramhaputra Valley Zone of Assam, prevailing temperature conditions are suitable for sowing of pointed gourd, summer green gram and black gram.
- ➤ In North Bank Plain Zone, Hill Zone and lower Bramhaputra, upper Bramhaputra and central Bramhaputra valley Zone of Assam, foggy weather conditions are favourable for incidence of aphids and saw fly in rapeseed and mustard. Hence, monitor the crop and apply Dimethoate 30 EC or Chloropyriphos @ 2 ml / litre of water with a spray volume of 500-700 litres / ha for hand sprayer & 200-250 litres / ha for power sprayer. Also cloudy and foggy weather is favourable for appearance of late blight in potato; spray Mancozeb @ 2.5 g / litre of water as protective measure.

### Arunachal Pradesh:

- In Sub Tropical Hill Zone of Arunachal Pradesh, in view of prevailing dry weather condition, apply irrigation in potato and tomato.
- Nagaland, Manipur, Mizoram and Tripura:
- ➤ In Mild Tropical Hill Zone of Nagaland, taking the advantage of dry weather, continue harvesting of matured cabbage and vegetables.
- ➤ In Sub Tropical Zone of Manipur, as dry weather is prevailing, apply irrigation in pulses and light irrigation in potato.
- ➤ In Mizoram, apply mulching in cole crops to conserve soil moisture.
- As night temperature is low, the young seedlings in rice nurseries in Tripura should be applied with irrigation water during night to protect the seedlings from low temperature and drain out the water in the next morning.
- In Mild Tropical Plain Zone of Tripura, maintain moisture in the field through irrigation at tasseling stage in maize. Provide light irrigation in tomato and brinjal after transplanting as dry weather is prevailing.
- ➤ In Mild Tropical Plain Zone of Tripura, in cloudy and foggy weather conditions spread of late blight disease in potato and aphid attack in toria may become severe. Spray with Mancozeb @ 2.5 g / litre of water to protect from late blight and to manage aphids, spray Monocrotophos @ 2 ml per litre of water at an interval of 15 days. Due to prevailing foggy condition there may be attack of hopper in mango plant. Spray Malathion @ 2ml per liter of water to manage the attack.

## • Animal Husbandry

- In Mizoram cover/ tie the animals with gunny bag during night to avoid cold. Cover poultry house with gunny bags/ polythene sheets and provide the heating during night for chicks lesser than 21 days old.
- In North Bank Plain Zone, Central Bramhaputra Valley and Upper Bramhaputra Valley Zone of Assam, protect poultry birds from cold by using electric bulbs (300 Watt for 100 sq. ft.) to prevent Coryza disease. Vaccination to control the ranikhet disease in poultry may be done during this period.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]







Transplanting of rice

Groundnut

Cotton

Grape vine

- Realised Weather: Weather remained dry over the region.
- **Weather Forecast:** Weather would be mainly dry / dry over the region. Fall in minimum temperatures by 3-4°C over West India adjoining to Northwest India from 8<sup>th</sup> onwards.
- Weather Warning: Nil.
- Weather Outlook: Generally dry weather would prevail over the region.
- Advisories:
  - Maharashtra:
  - As dry weather prevailed during last week and is likely to continue in Konkan, undertake intercultural operations like weeding and fertilizer application in groundnut at vegetative stage, in pulses and vegetables. Apply irrigation to groundnut at 10-12 days interval, orchards, vegetable crops and pulses. Mango is at fruit formation stage (pea size); considering the crop canopy, apply 150-200 litres of water per tree at 15 days interval. Maintain water level up to 5 cm in transplanted rice field at tillering stage.
  - As no significant rain occurred during last week and dry weather would prevail in Madhya Maharashtra, undertake intercultural operations like weeding and fertilizer application in sugarcane and vegetables. Apply irrigation to late sown gram at pod development stage, wheat at flowering / milk stage, jowar at grain formation stage, sugarcane, vegetable crops and maize. Under prevailing weather continue planting of *suru* sugarcane, sowing of summer bajra and groundnut. As soil temperature is rising in Pune region, undertake sowing of summer brinjal and tomato.
  - As no significant rain occurred during last week and dry weather would prevail in Marathwada, apply irrigation to gram at pod development stage, wheat at flowering / milk stage, jowar at grain formation stage, sugarcane, vegetable crops and maize. Under prevailing weather continue planting of *suru* sugarcane, sowing of summer groundnut.
  - As dry weather prevailed during last week and is likely to continue in Vidarbha; apply irrigation to late sown gram at pod development stage, wheat at flowering / milk stage and vegetable crops. Maintain 2-3 cm water level in already transplanted rice field in Gondia, Bhandara, Chandrapur and Gadchiroli districts. As prevailing temperature is favourable, undertake sowing of summer groundnut in Central Vidarbha Zone and planting of water melon and musk melon in East Vidarbha on raised beds.
  - ➤ Due to cloudy weather during last week in Kolhapur region, there may be incidence of rust in wheat; spray Dithane M-45 @ 25 g per 10 litres of water.
  - ➤ Due to partly cloudy weather in South Konkan, there may be attack of thrips on mango fruits (pea stage); spray Spinosad @ 2.5 ml per 10 litres of water on the whole tree.
  - Gujarat:
  - As no significant rain occurred during last two weeks and dry weather is likely to prevail in South Gujarat Zone, apply irrigation to vegetables at an interval of 3 to 4 days.
  - As no significant rain occurred during last two weeks and dry weather would prevail in Saurashtra Zone, apply irrigation in wheat at booting stage in South Saurashtra Zone, milk / dough stage in North Saurashtra Zone and at flowering stage in North Gujarat Zone.
  - In Middle Gujarat Zone, carry out mulching with paddy straw or plastic in groundnut to conserve soil moisture. As mainly dry weather is prevailing, apply irrigation in wheat at heading and dough stage.
  - As sky would be mainly clear in Bhal and Coastal Zone of Gujarat, carryout hand weeding and intercultural operations in *rabi* crops and apply light irrigation in wheat.
  - As there is possibility of rise in maximum temperature by 2°C, undertake sowing of vegetables (lady's finger, cluster bean, bottle gourd, sponge gourd, ridge gourd and bitter gourd) and transplanting of tomato and brinjal in North Saurashtra Zone.

➤ Due to increase in temperature, outbreak of aphid in mustard is reported in Bhal and Coastal Zone of Gujarat, which is likely to increase and there is chance of attack of aphid in potato and mustard in North Gujarat Zone. Spray Dimethoate @ 10 ml or Monocrotophos @ 10 ml adding in 10 liters of water for effective control.

OUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]









Pulses(flowering/pod formation)

Sugarcane( cane maturity)

Onion (bulb development)

Sucking pest on Groundnut

- **Realized rainfall**: Weather remained mainly dry/dry over the region.
- **Weather Forecast:** Weather would be mainly dry/dry over the region.
- Weather Warning: Nil.
- Weather Outlook: Generally dry weather would prevail over the region.
- Advisory:
  - Karnataka:
  - ➤ Undertake harvesting of chickpea, maize, safflower, *rabi* sorghum and onion in the North Dry Zone of Karnataka as dry weather is prevailing.
  - Andhra Pradesh:
  - Warm and dry weather is congenial for the incidence of leaf folder on rice in North Coastal Zone of Andhra Pradesh. As a precautionary measure spray Chloripriphos @ 2.5 ml per litre of water.
  - ➤ Due to prevailing humid conditions there is chance of incidence of sucking pest on groundnut in Southern Zone of Andhra Pradesh. Farmers are advised to spray Monochrotophos @1.6 ml per litre of water.
  - ➤ Prevailing weather conditions (increasing day temperatures) are congenial for incidence of leaf miner and tobacco cutworm in groundnut in the Scarce Rainfall Zone of Andhra Pradesh. Spray <a href="mailto:Chloroyriphos@2.0">Chloroyriphos@2.0</a> ml or Dichlorovas @1.0 ml per litre of water for controlling leaf miner, neem oil @5.0 ml or chloroyriphos@2.5 ml per litre of water to control tobacco cutworm.
  - Tamil Nadu:
  - As dry weather is expected in the coming days, undertake mulching with crop residues or coir pith in the inter row space to minimize loss of soil moisture in cotton in the South Zone of Tamil Nadu.
  - ➤ Undertake harvesting of matured *samba* paddy and sowing of rice fallow pulses in the Cauvery Delta Zone of Tamil Nadu. In canal dependent areas where water scarcity is prevalent, foliar application of Pink Pigmented Facultative Methylotrophs (PPFM) @ 200 ml/acre is recommended to mitigate the water stress in standing *samba / thaladi* rice for 10-12 days.
  - As dry weather is prevailing in the Western Zone of Tamil Nadu, there is increase in incidence of early shoot borer in sugarcane. Provide irrigation frequently to keep the field in wet condition and undertake mulching.
  - ➤ Incidence of black headed caterpillar in coconut is increasing due to rise in temperature. Braconid parasitoids may be released @ 2100 /ac in the initial stages and Monocrotophos @ 10 ml in 10ml of water and root feeding is done in the advanced stages.
  - ➤ Prevailing dry weather condition is congenial for false smut disease incidence in thaladi rice in the Cauvery Delta Zone of Tamil Nadu. Spray fungicides viz., Probiconozole (200 ml/acre) or Copper hydroxide (500 g/acre) at the time of panicle emergence and milky stage to manage the incidence.
  - Kerala:
  - ➤ Provide irrigation to banana and undertake mulching of the soils with dried leaves to conserve soil moisture in coconut basins in the Problem Area Zone of Kerala. Since dry weather is prevailing, increase frequency of irrigation in vegetables.
  - In the Southern Zone of Kerala, apply drip irrigation in coconut @50 liters/ palm or flood irrigation 300litres of water once in 5 days as dry weather conditions are prevailing. In rainfed gardens, farmers are advised to adopt mulching so as to conserve moisture and combat dryness. Give shade to young coconut palms and rubber plantations.
  - > Dry conditions are congenial for the multiplication of red palm weevil in the Southern Zone of Kerala. Apply Sevin (50%) @ 4g /litre of water to control the incidence.
  - Animal Husbandry
  - Ensure periodic vaccination of animals against FMD, Brucellosis, Haemorrahagic Septicaemia, Anthrax and small ruminants against PPR and Sheep and Goat Pox in the Scarce Rainfall Zone of Andhra Pradesh.

## Annexure I Week by week Rainfall Distribution

State/Districts  Arunachal Pradesh  Anjaw  Changlang	Actual (mm)  **  1.3	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Anjaw Changlang	**	_	(mm)	_	(mm)	_
Anjaw Changlang	1.3	**				1
Changlang	1.3		**	**	**	**
		00				
	2.0	-90 -84	0.0	-100	0.0	-100
Dibang Valley	3.0		0.0	-100	0.0	-100
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.0 **	-100 **	0.0 **	-100 **	**	-100 **
Kurung Kumey						
Lohit	0.1	-99	0.0	-100	0.0	-100
Lower Dibang Valley	0.4	-98	0.0	-100	0.0	-100
Lower Subansari	**	**	**	**	**	**
Papumpara	0.0	-100	0.0	-100	0.0	-100
Tawang	0.0	-100	12.0	35	0.0	-100
Tirap	1.1	-87	0.0	-100	0.0	-100
Upper Siang	1.8	-85	30.1	23	0.0	-100
Upper Subansari	0.0	-100	0.0	-100	0.0	-100
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	2.7	-26	0.0	-100	0.0	-100
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.0	-100	0.0	-100
Chirang	0.0	-100	0.0	-100	0.0	-100
Darrang	1.0	-69	0.0	-100	0.0	-100
Dhemaji	0.0	-100	0.0	-100	0.0	-100
Dhubri	1.3	-21	0.0	-100	0.0	-100
Dibrugarh	0.7	-91	0.0	-100	0.0	-100
Goalpara	0.0	-100	0.0	-100	0.0	-100
Golghat	3.8	-16	0.0	-100	0.0	-100
Hailakandi	0.0	-100	0.0	-100	0.0	-100
Jorhat	1.6	-76	0.0	-100	0.0	-100
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	2.9	32	0.0	-100	0.0	-100
Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	2.5	-67	0.0	-100	0.0	-100
Morigaon	1.1	-59	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nowgong	2.4	-29	0.0	-100	0.0	-100
Nalbari	2.0	-26	0.0	-100	0.0	-100
Sonitpur	0.1	-99	0.0	-100	0.0	-100

Sibsagar	0.9	-79	0.0	-100	0.0	-100
Tinsukia	0.3	-97	0.0	-100	0.0	-100
Udalgiri	0.0	-100	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	0.0	-100	0.0	-100	0.0	-100
Jaintia Hills	0.0	-100	0.0	-100	0.0	-100
Ribhoi	0.0	-100	0.0	-100	0.0	-100
South Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Garo Hills	0.0	-100	0.0	-100	0.0	-100
West Khasi Hills	0.0	-100	0.0	-100	0.0	-100
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.0	-100
Champhai	0.0	-100	0.0	-100	0.0	-100
Kolasib	0.0	-100	0.0	-100	0.0	-100
Lawngtlai	0.0	-100	0.0	-100	0.0	-100
Lunglei	**	**	0.0	-100	0.0	-100
Mamit	0.0	-100	0.0	-100	0.0	-100
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	0.0	-100	0.0	-100
Manipur						
Bishnupur	0.0	-100	0.0	-100	0.0	-100
Chandel	0.0	-100	0.0	-100	0.0	-100
Churachandpur	0.0	-100	0.0	-100	0.0	-100
Imphal east	0.0	-100	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	0.0	-100	0.0	-100
Ukhrul	0.0	-100	0.0	-100	0.0	-100
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.0	-100
Kephire	4.0	-51	0.0	-100	0.0	-100
Kohima	0.0	-100	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	23.0	115	0.0	-100	0.0	-100
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	18.0	150	0.0	-100	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	0.0	-100
North tripura	0.0	-100	0.0	-100	0.0	-100
South tripura	0.0	-100	0.0	-100	0.0	-100
West tripura	0.0	-100	0.0	-100	0.0	-100
Himachal Pradesh						
Bilaspur	7.8	-22	40.9	94	0.4	-98

Chamba	2.6	-91	24.5	-29	19.9	-45
Hamirpur	2.3	-79	35.3	60	0.5	-98
Kangra	1.4	-91	47.8	123	3.7	-82
Kinnaur	1.0	-95	31.0	10	8.1	-74
Kullu	1.6	-91	19.2	-29	15.3	-24
Lahaul and Spiti	1.3	-95	19.0	-52	19.2	-42
Mandi	9.0	-36	31.6	38	2.4	-87
Shimla	19.3	31	25.2	30	4.5	-74
Sirmaur	45.6	274	36.9	143	0.7	-96
Solan	27.6	114	36.8	55	1.3	-94
Una	1.1	-87	73.9	487	0.2	-99
Punjab						
Amritsar	14.1	176	3.8	-55	0.1	-99
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	11.0	168	0.0	-100
Faridkot	2.0	-29	4.0	-34	1.0	-67
Fatehgarh Saheb	1.0	-74	33.0	197	0.0	-100
Ferozpur	0.5	-84	0.5	-88	1.0	-71
Gurdaspur	18.9	66	40.8	149	1.0	-94
Hoshiarpur	3.4	-50	28.9	154	0.3	-97
Jalandhar	4.0	1	0.0	-100	0.3	-96
Kapurthala	23.3	531	20.3	83	0.4	-95
Ludhiana	12.2	213	18.3	123	0.2	-98
Mansa	0.5	-74	16.0	233	0.0	-100
Moga	2.8	-45	8.4	45	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	11.6	97	40.1	188	0.0	-100
Patiala	16.3	319	17.3	66	0.7	-92
Ropar	8.3	4	32.3	147	0.0	-100
Sangrur	6.8	105	7.3	14	0.5	-92
Mohali	26.0	420	29.5	154	0.0	-100
TarnTaran	7.0	133	5.6	-24	0.0	-100
Haryana						
Ambala	32.2	258	22.2	178	1.0	-93
Bhiwani	0.8	-38	1.8	-69	0.0	-100
Chandigarh	35.0	221	24.2	67	0.2	-99
Faridabad	11.0	279	1.5	-72	0.0	-100
Fatehabad	0.0	-100	4.0	-40	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.9	-53	0.6	-75	0.1	-97
Jhajar	0.5	-76	0.0	-100	0.0	-100
Jind	4.2	81	0.0	-100	0.0	-100
Katihal	14.5	325	20.8	230	0.0	-100
Karnal	40.8	538	22.6	148	0.0	-100
Kurukshetra	0.0	-100	0.3	-97	0.0	-100
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	9.0	329	1.0	-67	0.0	-100
Panchkkula	9.8	20	27.5	105	0.5	-97

Panipat	30.5	662	5.6	-16	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	1.0	-75	1.0	-84	0.0	-100
Sirsa	0.0	-100	0.0	-100	0.0	-100
Sonepat	11.8	194	3.7	-35	0.3	-95
Yamunanagar	28.0	189	30.2	136	0.1	-99
Delhi	7.8	71	6.1	-11	0.1	-96
Jammu & Kashmir						
Anantnag	40.5	144	41.7	43	13.4	-47
Badgam	11.3	19	83.7	253	6.1	-51
Bandipore	0.0	-100	**	**	**	**
Baramula	13.5	-62	14.5	-72	29.3	-15
Doda	19.4	-30	58.6	37	31.4	-18
Ganderwal	6.3	-54	18.4	-14	25.8	50
Jammu	22.3	64	22.8	17	6.0	-56
Kargil	0.0	-100	0.0	-100	0.0	-100
Kathua	12.9	-26	62.2	231	5.8	-70
Kistwar	**	**	**	**	0.0	-100
Kulgam	5.8	-65	18.5	-37	20.5	-18
Kupwara	9.2	-54	6.4	-75	74.5	185
Ladakh(Leh)	0.0	-100	0.2	-88	0.0	-100
Poonch	0.0	-100	0.0	-100	0.0	-100
Pulwama	7.7	-36	29.3	138	4.2	-61
Rajouri	8.6	-40	3.2	-74	12.6	-44
Ramban	38.7	39	38.6	-10	37.7	-2
Reasi	42.8	113	28.6	-25	8.8	-71
Samba	33.6	147	6.0	-69	2.9	-79
Shopian	0.0	-100	22.0	79	12.0	10
Srinagar	12.9	-6	39.1	82	6.1	-64
Udhampur	13.5	-33	26.0	-32	6.5	-78
East Madhya Pradesh						
Anuppur	5.3	-9	0.0	-100	0.0	-100
Balaghat	0.8	-81	0.0	-100	0.0	-100
Chhatarpur	36.4	787	15.2	121	0.0	-100
Chindwara	13.3	456	12.4	235	0.0	-100
Damoh	43.6	665	9.1	28	0.0	-100
Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	5.1	12	1.7	-65	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	6.0	7	0.0	-100	0.0	-100
Narsingpur	7.0	250	3.1	-23	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	39.4	497	0.0	-100	0.0	-100
Sagar	38.9	783	16.1	275	0.0	-100
Satna	10.7	64	1.2	-83	0.0	-100
Seoni	22.9	893	0.0	-100	0.0	-100
Shahdol	13.0	73	0.0	-100	0.0	-100
Sidhi	47.2	638	0.0	-100	0.0	-100

Singrauli	14.0	324	1.0	-70	0.0	-100
Tikamgarh	13.0	91	33.5	468	0.0	-100
Umaria	46.4	661	1.4	-85	0.0	-100
West Madhya						
Pradesh						
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.1	-95	23.5	1708	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	5.6	229	0.0	-100	0.0	-100
Bhind	14.6	461	10.8	315	0.0	-100
Bhopal	3.6	71	43.1	1290	0.0	-100
Burhanpur	0.0	-100	2.3	483	0.0	-100
Datia	17.3	1344	13.0	398	0.0	-100
Dewas	0.0	-100	33.9	3662	0.0	-100
Dhar	5.0	1150	2.1	436	0.0	-100
Guna	5.2	44	13.7	356	0.0	-100
Gwalior	35.1	964	12.9	289	0.0	-100
Harda	8.5	750	1.0	-38	0.0	-100
Hosangabad	3.9	44	4.4	40	0.0	-100
Indore	0.4	-50	18.8	1463	0.0	-100
Jhabua	4.0	200	2.3	200	0.0	-100
Khandwa	0.0	-100	6.7	852	0.0	-100
Khargone	0.2	-73	11.2	2692	0.0	-100
Mandsaur	33.4	4671	1.7	83	0.0	-100
Morena	27.8	1750	3.0	3	0.0	-100
Neemuch	0.0	-100	1.0	100	0.0	-100
Raisen	22.2	823	34.9	1952	0.0	-100
Rajgarh	3.0	100	1.8	-22	0.0	-100
Ratlam	19.5	200	3.8	650	0.0	-100
Sehore	0.3	-83	33.0	1471	0.0	-100
Shajapur	4.0	208	17.0	844	0.0	-100
Sheopur Kalani	34.0	2515	9.0	291	0.0	-100
Shivpuri	40.3	815	12.5	213	0.0	-100
Ujjain	4.0	567	11.6	1193	0.0	-100
Vidisha	5.1	155	31.6	1115	0.0	-100
Chattisgarh						
Bastar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	2.5	-18	0.0	-100	0.0	-100
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100

Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	8.7	129	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	56.7	1188	0.1	-99	0.0	-100
Ambedkar Nagar	38.0	709	0.0	-100	0.0	-100
Azamgarh	42.4	1185	0.0	-100	0.0	-100
Bahraich	15.2	217	0.5	-91	0.0	-100
Ballia	6.0	173	0.0	-100	0.0	-100
Balrampur	12.0	150	0.0	-100	0.0	-100
Banda	45.3	930	5.6	-11	0.0	-100
Barabanki	28.7	452	0.2	-96	0.0	-100
Basti	35.0	614	0.0	-100	0.0	-100
Chandauli	18.0	253	0.0	-100	0.0	-100
Deoria	16.3	502	0.0	-100	0.0	-100
Faizabad	29.1	348	0.0	-100	0.0	-100
Farrukhabad	32.2	1050	7.3	74	0.0	-100
Fatehpur	18.8	337	4.5	-33	0.0	-100
Gazipur	22.8	660	0.0	-100	0.0	-100
Gonda	39.0	539	0.0	-100	0.0	-100
Gorakhpur	17.3	284	0.0	-100	0.0	-100
Hardoi	31.1	763	7.5	32	0.0	-100
Jaunpur	25.1	579	0.0	-100	0.0	-100
Kannauj	59.0	1744	9.0	73	0.0	-100
Kanpur City	50.8	917	10.8	126	0.0	-100
Kanpur Dehat	35.2	700	13.0	261	0.0	-100
Kaushambi	43.0	949	1.0	-84	0.0	-100
Kheri	35.7	749	3.2	-46	0.0	-100
Kushi nagar	3.0	-30	0.0	-100	0.0	-100
Lucknow	30.8	542	2.9	-44	0.0	-100
Maharajganj	5.6	30	0.0	-100	0.0	-100
Mau	14.0	300	0.0	-100	0.0	-100
Mirzapur	20.0	292	0.0	-100	0.0	-100
Pratapgarh	41.7	1057	0.7	-87	0.0	-100
RaiBarelly	20.3	421	0.4	-91	0.0	-100
Sahuji Maharajnagar	64.8	1195	0.0	-100	0.0	-100
Sant Kabirnnagar	26.0	550	0.0	-100	0.0	-100
Sant Ravidas Nagar	54.0	959	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	0.0	-100
Sidharthnagar	2.5	-47	0.0	-100	0.0	-100
Sitapur	38.7	780	9.3	73	0.0	-100
Sonbhadra	14.5	163	0.0	-100	0.0	-100
Sultanpur	51.5	1370	0.7	-83	0.0	-100
Unnao	48.5	1113	4.0	-25	0.0	-100
Varanasi	28.4	530	0.0	-100	0.0	-100
West Uttar Pradesh						

Agra	29.4	1298	9.9	86	0.0	-100
Aligarh	48.2	1136	8.0	86	0.0	-100
Auraiya	16.0	310	0.0	-100	0.0	-100
Badaun	28.0	803	8.6	169	0.0	-100
Baghpat	29.4	526	12.8	137	0.0	-100
Bareilly	31.6	690	4.6	-24	0.0	-100
Bijnor	81.3	1150	3.5	-67	0.0	-100
Bulandsahar	52.3	1314	3.7	-35	0.0	-100
Etah	33.3	1233	5.7	53	0.0	-100
Etawah	16.0	627	7.0	56	0.0	-100
Firozabad	66.6	2120	16.6	349	0.0	-100
GBNagar	29.0	504	3.0	-46	0.0	-100
Ghaziabad	9.1	145	3.6	-51	0.0	-100
Hamirpur	26.1	692	8.3	65	0.0	-100
Jalaun	61.3	1205	22.1	532	0.0	-100
Jhansi	26.9	571	16.0	290	0.0	-100
Jotirba Phule Nagar	41.0	1071	2.5	-57	0.0	-100
Kanshiramnagar	42.0	1255	8.0	54	0.0	-100
Lalitpur	18.0	186	33.0	432	0.0	-100
Mahamaya Nagar	43.5	1640	7.5	88	0.0	-100
Mahoba	30.0	538	4.0	-25	0.0	-100
Mainpuri	27.5	1347	9.8	180	0.0	-100
Mathura	10.5	425	0.0	-100	0.0	-100
Meerut	57.6	929	11.7	55	0.0	-100
Moradabad	25.5	410	7.7	26	0.0	-100
Muzzaffarnagar	35.3	651	10.5	18	0.0	-100
Pilibhit	12.5	166	1.7	-66	0.0	-100
Rampur	17.1	289	11.5	83	0.0	-100
Saharanpur	42.0	589	23.0	153	0.0	-100
Shahjahanpur	30.1	760	5.1	38	0.0	-100
Uttarakhand						
Almora	52.9	587	4.4	-65	0.0	-100
Bageshwar	39.8	417	2.1	-83	0.0	-100
Chamoli	9.6	-35	0.7	-95	1.0	-95
Champawat	71.0	799	0.0	-100	0.0	-100
Dehradun	34.7	218	14.5	-3	0.2	-99
Garhwal Pauri	23.4	139	4.5	-62	0.0	-100
Garhwal Tehri	20.7	100	7.6	-59	0.0	-100
Haridwar	53.0	691	36.5	217	0.0	-100
Nainital	64.2	655	2.2	-83	0.0	-100
Pithorgarh	35.0	297	3.5	-78	1.8	-88
Rudraprayag	5.6	-61	3.1	-81	0.0	-100
Udham Sing Nagar	91.4	1658	0.7	-93	0.0	-100
Uttarkashi	12.8	-32	16.3	-6	0.5	-97
Bihar						
Araria	1.1	-66	0.0	-100	0.0	-100
Arwal	7.6	203	0.0	-100	0.0	-100
Aurangabad	16.8	291	0.0	-100	0.0	-100
Banka	0.0	-100	0.0	-100	0.0	-100

Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	3.0	-76	0.0	-100	0.0	-100
Bhagalpur	1.0	-85	0.0	-100	0.0	-100
Bhojpur	4.3	5	0.0	-100	0.0	-100
Buxar	6.8	42	0.0	-100	0.0	-100
Darbhanga	3.1	-35	0.0	-100	0.0	-100
East Champaran	9.4	135	0.0	-100	0.0	-100
Gaya	10.9	160	0.0	-100	0.0	-100
Gopalganj	9.6	146	0.0	-100	0.0	-100
Jahanabad	7.1	194	0.0	-100	0.0	-100
Jamui	4.5	5	0.0	-100	0.0	-100
Kathihar	1.7	-47	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	1.8	-53	0.0	-100	0.0	-100
Madhubani	1.4	-56	0.0	-100	0.0	-100
Monghyar	1.3	-69	0.0	-100	0.0	-100
Muzaffarpur	12.7	153	0.0	-100	0.0	-100
Nalanda	10.1	196	0.0	-100	0.0	-100
Nawada	11.2	251	0.0	-100	0.0	-100
Patna	5.6	33	0.0	-100	0.0	-100
Purnea	0.6	-82	0.0	-100	0.0	-100
Rohtas	9.2	109	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	5.0	39	0.0	-100	0.0	-100
Saran	20.1	293	0.0	-100	0.0	-100
Sheikpura	8.1	83	0.0	-100	0.0	-100
Sheohar	9.6	200	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	0.0	-100
Siwan	13.9	209	0.0	-100	0.0	-100
Supaul	1.1	-45	0.0	-100	0.0	-100
Vaishali	13.3	183	0.0	-100	0.0	-100
West Champaran	8.4	9	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	0.0	-100	0.0	-100	0.0	-100
Dumka	**	**	**	**	**	**
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	10.0	127	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	0.0	-100
Godda	0.0	-100	0.0	-100	0.0	-100
Gumla	**	**	**	**	**	**
Hazaribagh	1.7	-61	0.0	-100	0.0	-100
Jamtara	0.0	-100	0.0	-100	0.0	-100
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderrna	6.2	29	0.0	-100	0.0	-100

Latehar	7.0	71	0.0	-100	0.0	-100
Lohardagga	0.0	-100	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	11.1	226	0.0	-100	0.0	-100
Ramgarh	0.6	-85	0.0	-100	0.0	-100
Ranchi	0.2	-97	0.0	-100	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	8.7	4235	1.4	170	0.0	-100
Alwar	10.2	436	2.6	0	0.0	-100
Banswara	61.8	61687	0.8	171	0.0	-100
Baran	25.6	1014	30.4	2070	0.0	-100
Bharatpur	17.7	1080	5.6	107	0.0	-100
Bhilwara	28.2	28067	1.1	81	0.0	-100
Bundi	39.0	5471	0.7	-33	0.0	-100
Chittorgarh	32.3	10658	0.0	-100	0.0	-100
Dausa	32.2	2583	3.4	127	0.0	-100
Dholpur	42.0	2700	10.2	498	0.0	-100
Dungarpur	15.4	7608	0.0	-100	0.0	-100
Jaipur	17.0	1601	0.6	-43	0.0	-100
Jhalawar	36.6	2188	18.3	1310	0.0	-100
Jhunjhunu	0.6	-48	0.0	-100	0.0	-100
Karauli	50.3	3256	3.0	36	0.0	-100
Kota	28.3	1248	4.3	326	0.0	-100
Pratapgarh	69.2	69100	0.0	-100	0.0	-100
Rajsamand	10.0	200	0.0	-100	0.0	-100
Sawai Madhopur	37.5	6146	0.4	-77	0.0	-100
Sikar	0.0	-100	1.6	12	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	34.0	16889	0.0	-100	0.0	-100
Udaipur	19.1	18980	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.0	-100	6.5	444	0.1	-92
Hanumangarh	1.9	-7	2.6	12	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.4	0	0.6	-33	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.0	-99	0.0	-100
Gujarat Region						
Ahmedabad	1.5	200	0.0	-100	0.0	-100
Anand	9.1	9020	0.0	-100	0.0	-100
Banaskantha	3.4	200	0.0	-100	0.0	-100

Baroda	18.6	9208	0.1	200	0.0	-100
Broach	0.8	200	0.3	200	0.0	-100
DNH	**	**	**	**	**	**
Dahod	18.6	200	0.1	-38	0.0	-100
Daman	**	**	**	**	**	**
Dangs	0.0	-100	0.5	-44	0.0	-100
Gandhinagar	0.8	200	0.0	-100	0.0	-100
Kheda	22.7	22600	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.2	200	0.0	-100	0.0	-100
Navsari	0.2	200	0.3	200	0.0	-100
Panchmahal	5.7	5567	0.0	-100	0.0	-100
Patan	0.3	200	0.0	-100	0.0	-100
Sabarkantha	23.0	200	0.0	-100	0.0	-100
Surat	7.2	200	3.2	200	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	1.2	200	0.0	-100
S K & Diu region						
Amreli	3.8	200	0.0	-100	0.0	-100
Bhavnagar	0.8	200	0.0	-100	0.0	-100
Diu	1.8	1700	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Goa	0.0	-100	0.0	-100	0.0	-100
Mumbai	0.9	800	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100
Thane	0.3	200	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.1	200	0.0	-100
Dhule	0.0	-100	9.2	1050	0.0	-100
Jalgaon	0.0	-100	10.9	1713	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	**	**	6.0	1400	0.0	-100
Nasik	0.5	146	5.2	2485	0.0	-100
Pune	0.0	-100	1.2	200	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
Marathwada						
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Beed	**	**	0.0	-100	0.0	-100
Hingoli	**	**	0.0	-100	0.0	-100
Jalna	**	**	5.2	1622	**	**
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Usmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
Vidarbha						
Akola	1.1	7	0.0	-100	0.0	-100
Amraoti	0.9	-49	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	8.9	712	0.0	-100
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.3	-90	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.9	-38	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.0	-100	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100
Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.0	-100	0.0	-100	0.0	-100
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.0	-100	0.0	-100	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100

Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal						
GWB						
Bankura	0.0	-100	0.0	-100	0.0	-100
Birbhum	0.0	-100	0.0	-100	0.0	-100
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.0	-100
Purulia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (S)	0.0	-100	0.0	-100	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB						
Cooch Behar	0.0	-100	0.0	-100	0.0	-100
Darjeeling	0.0	-100	0.0	-100	0.0	-100
East Sikkim	0.0	-100	0.0	-100	0.0	-100
Jalpaiguri	0.0	-100	0.0	-100	0.0	-100
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	0.0	-100	0.0	-100	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	0.0	-100
South Sikkim	0.0	-100	0.0	-100	0.0	-100
West Sikkim	0.0	-100	0.0	-100	0.0	-100
Karnataka						
Coastal Karnataka						
Dakshin Kannada	0.0	-100	0.0	-100	0.0	-100
Udupi	0.0	-100	0.0	-100	0.0	-100
Uttar Kannada	0.0	-100	0.0	-100	0.0	-100
N I Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belgaum	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Gulbarga	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
S I Karnataka						
Bangalore Rural	0.0	-100	0.0	-100	0.0	-100
Bangalore Urban	0.0	-100	0.0	-100	0.0	-100
Bellary	0.0	-100	0.0	-100	0.0	-100
Chamarajnagar	0.0	-100	0.0	-100	0.0	-100

Chichballapur	0.0	-100	0.0	-100	0.0	-100
Chickmagalur	0.8	62	0.0	-100	0.0	-100
Chitradurga	0.3	-37	0.0	-100	0.0	-100
Davangere	0.1	-78	0.0	-100	0.0	-100
Hassan	0.0	-100	0.0	-100	0.0	-100
Kodagu	3.6	354	0.0	-100	0.0	-100
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.0	-100	0.0	-100	0.0	-100
Mysore	0.4	-58	0.0	-100	0.0	-100
Ramnagara	0.0	-100	0.0	-100	0.0	-100
Shimoga	0.0	-100	0.0	-100	0.0	-100
Tumkur	0.0	-100	0.0	-100	0.0	-100
Kerala						
Alappuzha	0.2	-94	0.0	-100	0.0	-100
Kannur	2.3	-	0.0	-100	0.0	-100
Ernakulam	0.0	-100	0.0	-100	0.0	-100
Idukki	6.6	175	0.0	-100	0.0	-100
Kasaragod	0.0	-100	0.0	-100	0.0	-100
Kollam	0.2	-92	0.0	-100	0.0	-100
Kottayam	11.1	429	0.0	-100	0.0	-100
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	1.1	267	0.0	-100	0.0	-100
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	0.4	-85	0.0	-100	0.0	-100
Thiruvanantapuram	13.3	432	6.6	16	0.0	-100
Thrissur	0.0	-100	0.0	-100	0.0	-100
Wyanad	0.0	-100	0.0	-100	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.0	-100	0.0	-100	0.0	-100
Coimbatore	1.2	71	0.0	-100	0.0	-100
Cuddalore	1.9	-42	0.0	-100	0.0	-100
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.0	-100	0.0	-100
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.0	-100
Kanyakumari	0.0	-100	0.0	-100	0.0	-100
Karikal	**	**	0.0	-100	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.5	-97	0.3	-94	0.0	-100
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.9	-81	0.0	-100	0.0	-100
Perambalur	0.0	-100	0.0	-100	0.0	-100
Puducherry	**	**	0.0	-100	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.1	-99	0.2	-92	3.7	1
Salem	0.0	-100	0.0	-100	0.0	-100

Sivaganga	0.0	-100	0.0	-100	0.0	-100
Thanjavur	0.3	-92	0.0	-100	0.0	-100
Theni	0.0	-100	0.0	-100	0.0	-100
Tirunelveli	0.0	-100	0.0	-100	0.0	-100
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.7	-77	0.0	-100	0.0	-100
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	0.0	-100
Toothukudi	0.0	-100	0.0	-100	0.0	-100
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	0.1	-89	0.0	-100	0.0	-100
Villupuram	0.0	-100	0.0	-100	0.0	-100
Virudhunagar	0.0	-100	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	0.2	-93	0.0	-100	0.0	-100
Prakasam	0.3	-85	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.0	-100	0.0	-100	0.0	-100
West Godavari	2.2	16	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.7	79	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.5	-69	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100
Chittoor	0.5	-64	0.0	-100	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	0.0	-100	0.0	-100

(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
(-19 to +19%) normal rainfall		(-100%) no rainfall
(-20 to -59%) deficient rainfall	**	Data not available