

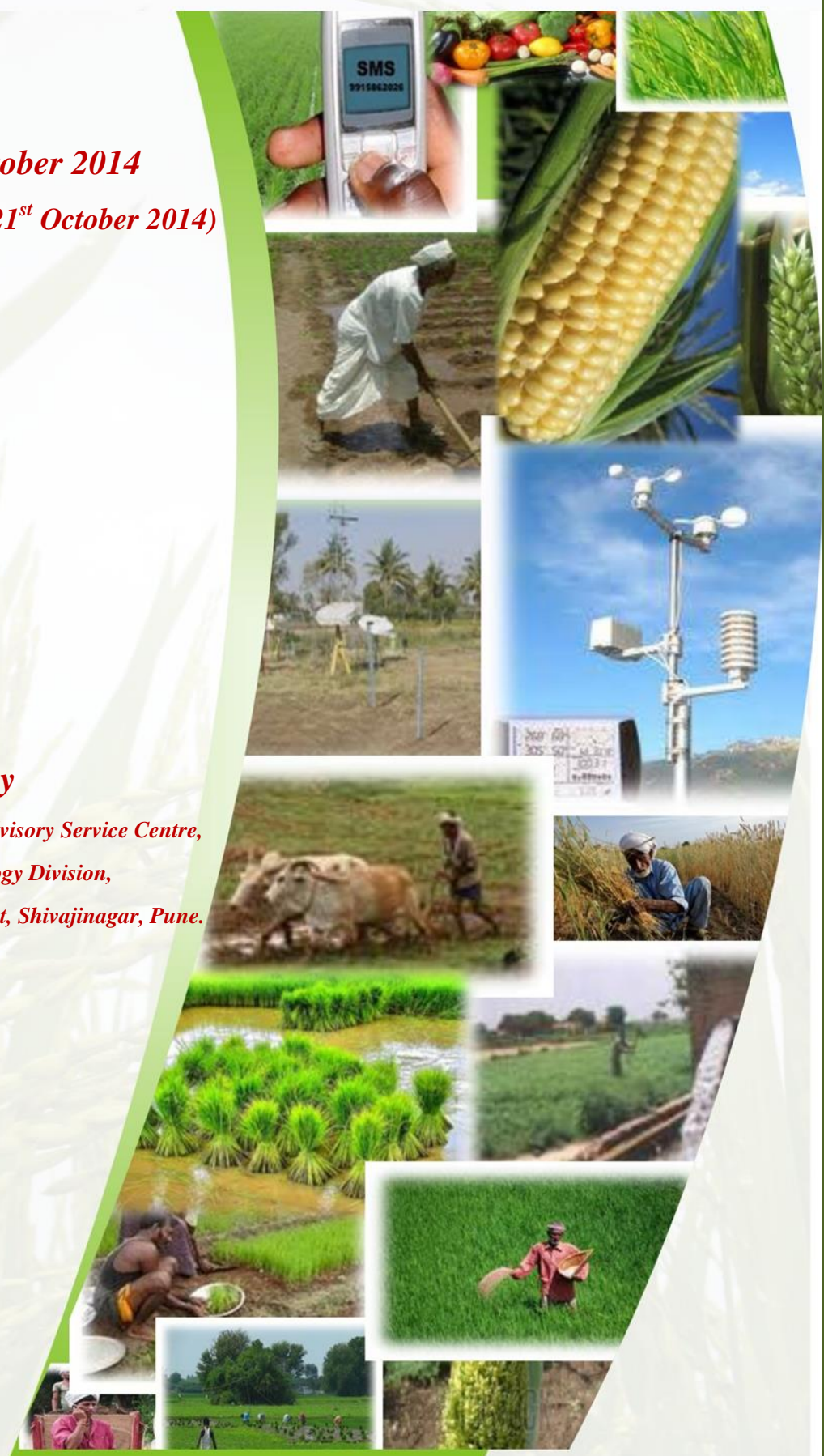
# National Agromet Advisory Service Bulletin

**Friday 17<sup>th</sup> October 2014**  
**(For the period 17<sup>th</sup> to 21<sup>st</sup> October 2014)**



**Issued by**

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



## Salient Advisories

- Contingency measures for Hudhud affected districts in **North Coastal Andhra Pradesh**
  - Rice: Drain out excess water from the field as early as possible. Undertake lifting and staking of lodged hills. Apply booster dose of urea @ 25 kg and potash @ 10-15 kg per acre or spray multi K (13-0-45) @ 10 g /litre of water and spray Strepto Cycline @ 0.1 g /litre where BLB noticed (varieties: BPT-5204, MTU-1001, MTU-075).
  - Maize: Drain out excess water from the field and lift the lodged crop and undertake earthing up wherever possible.
  - Cotton: Drain out excess water from the field. Spray with Copper oxy chloride @ 3g+ Strepto cycline @ 0.1 g /litre of water and spray 19:19:19 @ 10 g /litre of water 4 days after Fungicide spray.
  - Sugarcane: Drain out water, lift the cane and undertake propping .
- In 'Hudhud' cyclone affected areas in **East and South Eastern Coastal Plain Zone of Odisha**, harvest the early paddy at physiological maturity stage and keep at dry places.
  - Spray 1% Gibberellic acid at flowering stage to prevent pollen drop. Drain out excess water by providing drainage channel at an interval of every three feet distance in medium duration rice at flowering stage, if lodged.
  - Drain out water and apply N @ 8 kg/ac for quick recovery in late rice or spray 2% urea in the afternoon at flowering stage for better yield. Heavy rainfall may aggravate the infestation of cut worm in late rice. Go for plant protection measures by spraying Chloropyriphos @ 2 ml per liter water.
  - Undertake harvesting of early planted groundnut crops and vegetables.

Due to the cyclone 'HUDHUD', rain/thundershowers has occurred at most places over Jharkhand, Bihar, Chhattisgarh, East Uttar Pradesh and East Madhya Pradesh along with high winds. In view of the above the following agromet advisories are suggested:

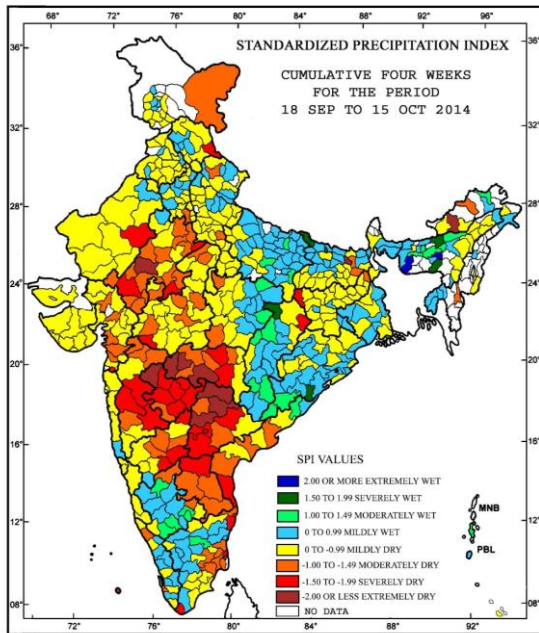
- In **Jharkhand**, drain out excess water from rice fields.
- In **Chhattisgarh**, drain out excess water from standing crop fields.
- In **Bihar**, remove excess water from standing crop fields. Provide mechanical support for affected sugarcane due to high winds in East and West Champaran districts.
- In **East Uttar Pradesh**, remove excess water from standing crop fields. Provide mechanical support for affected sugarcane due to high winds in in Deoria, Maharajganj and Gorakhpur districts.
- In **East Madhya Pradesh**, drain out excess water from fields of soyabean, green gram and black gram.

## Standardised Precipitation Index

Four Weekly

for the Period 18<sup>th</sup> September to 15<sup>th</sup> October 2014

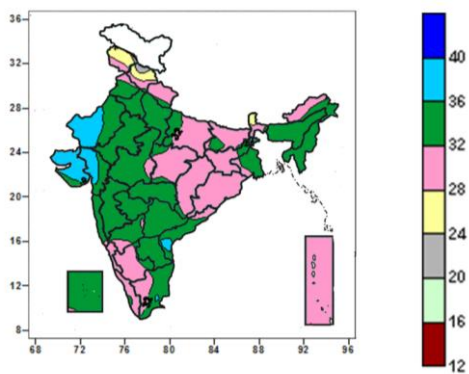
MINISTRY OF EARTH SCIENCES  
INDIA METEOROLOGICAL DEPARTMENT  
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in East Khasi hills and South Garo hills districts of Meghalaya; Kamrup Metro, Udalguri districts of Assam; Sheohar and Paschim Champaran districts of Bihar; Koriya district of Chattisgarh; Gajapati district of Odisha.
- Extremely/ moderately/ severely dry conditions experienced in most of the districts of Maharashtra, Rajasthan, Karnataka, Andhra Pradesh, Telangana; few districts of Madhya Pradesh and Tamil Nadu; Mokokchung district of Mizoram; East Kameng, Upper Subansiri districts of Arunachal Pradesh; Kinnaur district of Himachal Pradesh; Tehri Garhwal district of Uttarakhand; Madhepura, Saharsa, Bhagalpur districts of Bihar; Sahibganj and Garhwa districts of Jharkhand; Jashpur district of Chhattisgarh; Mehsana, Kheda, Braoch, Surat, Dangs and Navsari districts of Gujarat; Kannur and Alapuzha districts of Kerala.
- Rest of the country experienced moderately wet, mild wet/dry conditions.

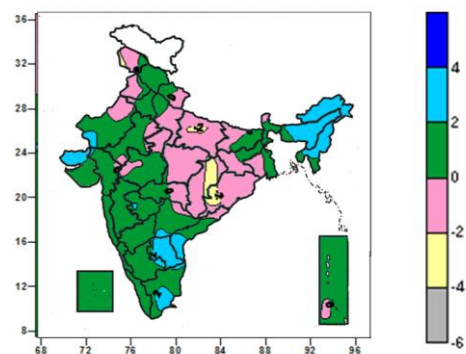
### Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 15.10.2014

**Actual Mean Maximum Temperature (°C) in India for the week ending 15.10.2014**



- 36 to 40°C over many parts of West Rajasthan, Gujarat, some parts of Coastal Andhra Pradesh.
- 32 to 36°C over entire country except many parts of Jammu & Kashmir, Sikkim, Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand. Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, Odisha, West Rajasthan, Gujarat, Coastal & South Interior Karnataka, Kerala, some parts of Himachal Pradesh, Punjab, West Bengal, Coastal Andhra Pradesh, West Madhya Pradesh, North Interior Karnataka and Tamil Nadu.
- 28 to 32°C over many parts of Uttarakhand, East Uttar Pradesh, Bihar, Jharkhand. Arunachal Pradesh, East Madhya Pradesh, Chhattisgarh, Odisha, Coastal &

**Mean Maximum Temperature (°C) Anomaly in India for the week ending 15.10.2014**



- 2 to 4°C over many parts of North East India (except Tripura), Rayalaseema, some parts of West Rajasthan, Coastal Andhra Pradesh, Telangana, Saurashtra, South Interior Karnataka and Tamil Nadu.
- 0 to 2°C over entire country except many parts of Jammu & Kashmir, Punjab, Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh, east Madhya Pradesh North East India (except Tripura), Rayalaseema, some parts of Rajasthan, West Madhya Pradesh, Vidarbha, Coastal Andhra Pradesh, Telangana, Gujarat, Saurashtra, South Interior Karnataka, Tamil Nadu and Andaman & Nicobar Islands.
- -2 to 0°C over many parts of Jammu & Kashmir, Punjab, Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh, east Madhya Pradesh, some parts of Rajasthan, West Madhya



South Interior Karnataka, Kerala, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, West Bengal, Coastal Andhra Pradesh, West Madhya Pradesh, North Interior Karnataka and Tamil Nadu.

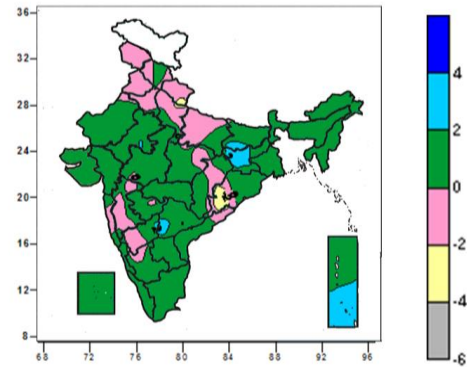
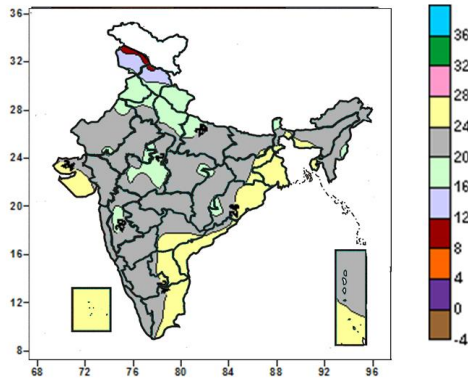
- 24 to 28<sup>0</sup>C over many parts of Jammu & Kashmir, Sikkim, some parts of Himachal Pradesh.
- 20 to 24<sup>0</sup>C over some parts of Himachal Pradesh.

Pradesh, Vidarbha, Coastal Andhra Pradesh, Telangana, Gujarat and Andaman & Nicobar Islands.

- -4 to -2<sup>0</sup>C over some parts of Chhattisgarh, Odisha.

**Actual Mean Minimum Temperature (°C) in India for the week ending 15.10.2014**

**Mean Minimum Temperature (°C) Anomaly in India for the week ending 15.10.2014**

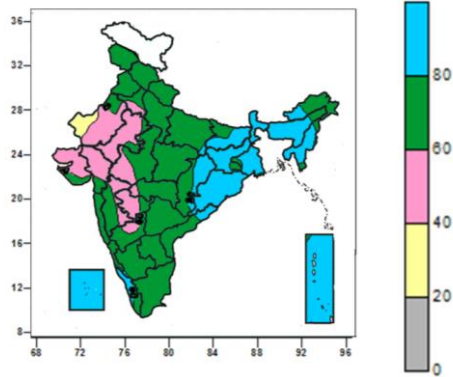


- 24 to 28<sup>0</sup>C over many parts of Gangetic West Bengal, Odisha, Saurashtra & Kutch, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Lakshadweep Islands, some parts of Jharkhand, Sub-Himalayan West Bengal, Telangana, South Interior Karnataka and Andaman & Nicobar Islands.
- 20 to 24<sup>0</sup>C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, West Uttar Pradesh, Sikkim, West Madhya Pradesh, Gangetic West Bengal, Odisha, Saurashtra & Kutch, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Lakshadweep Islands, some parts of Haryana, Delhi, Rajasthan, East Uttar Pradesh, Mizoram, Central India, Madhya Maharashtra, Interior Karnataka, Jharkhand, Sub-Himalayan West Bengal, Telangana, and Andaman & Nicobar Islands..
- 12 to 20<sup>0</sup>C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, West Uttar Pradesh, Sikkim, West Madhya Pradesh, some parts of Haryana, Delhi, Rajasthan, East Uttar Pradesh, Sub-Himalayan West Bengal, Mizoram, Central India, Madhya Maharashtra and North Interior Karnataka.

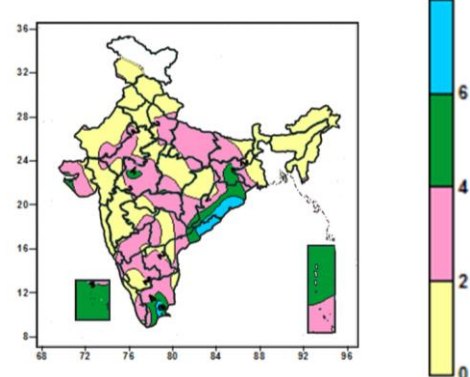
- 2 to 4<sup>0</sup>C over some parts Bihar, Jharkhand, Telangana, Marathwada and Lakshadweep Islands.
- 0 to 2<sup>0</sup>C over entire country except many parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, some parts of Himachal Pradesh, West Rajasthan, Central India, Bihar, Jharkhand, Odisha, Marathwada, Coastal Andhra Pradesh and South Interior Karnataka, Telangana and Lakshadweep Islands.
- -4 to 0<sup>0</sup>C over many parts of Jammu & Kashmir, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh, Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, some parts of Himachal Pradesh, West Rajasthan, Central India, Odisha, Marathwada, Coastal Andhra Pradesh and South Interior Karnataka.

**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 15.10.2014**

**Relative Humidity (%) over India for the week ending 15.10.2014**



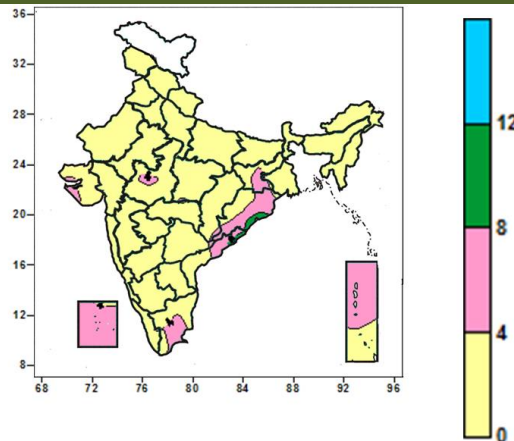
**Cloud amount (okta) over India for the week ending 15.10.2014**



- 80 to 100% over many parts of Bihar, Jharkhand, West Bengal & Sikkim, Assam & Meghalaya, Manipur, Mizoram, Tripura, Odisha, Lakshadweep, Andaman & Nicobar Islands, some parts of Chhattisgarh, Arunachal Pradesh, Coastal Andhra Pradesh and Kerala.
- 40 to 60% over entire country except many parts of Rajasthan, Gujarat, Bihar, Jharkhand, West Bengal & Sikkim, Assam & Meghalaya, Manipur, Mizoram, Tripura, Odisha, Lakshadweep, Andaman & Nicobar Islands, some parts of Haryana, Vidarbha, Madhya Maharashtra, North Interior Karnataka, Chhattisgarh, Arunachal Pradesh, Coastal Andhra Pradesh and Kerala.
- 20 to 40% over many parts of Rajasthan, Gujarat, some parts of Haryana, Vidarbha, Madhya Maharashtra and North Interior Karnataka.

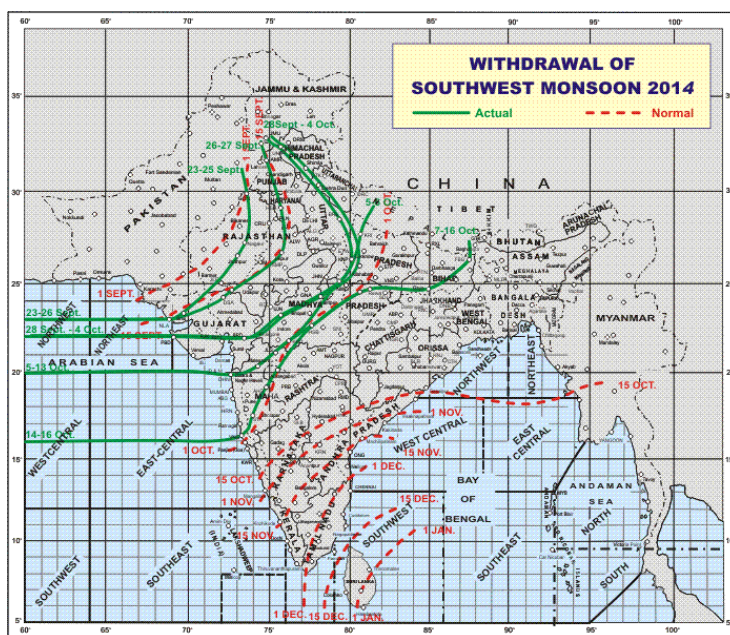
- 6 to 8 okta over some parts of Coastal Odisha, Coastal Andhra Pradesh.
- 4 to 6 okta over many parts of Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, Odisha, Coastal Andhra Pradesh and Tamil Nadu.
- 0 to 4 okta over entire country except many parts of Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, Odisha, Coastal Andhra Pradesh and Tamil Nadu.

**Wind speed (knots) over India for the week ending 15.10.2014**



- 8 to Knots over some parts of Coastal Odisha.
- 4 to 8 knots over many parts of Odisha, Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, Coastal Andhra Pradesh, West Madhya Pradesh, Saurashtra and Tamil Nadu.
- 0 to 4 knots over entire country except many parts of Odisha, Lakshadweep, Andaman & Nicobar Islands, some parts of Jharkhand, Coastal Andhra Pradesh, West Madhya Pradesh, Saurashtra and Tamil Nadu.

## Monsoon Watch



- Conditions are favourable for further withdrawal of southwest monsoon from some more parts of Central & East India during next 1-2 days.
- The withdrawal line of southwest monsoon continues to pass through Lat.27.0°N/Long.87.0°E, Forbesganj, Gaya, Rewa, Hoshangabad, Ahmadnagar, Satara, Vengurla, Lat.16.0°N/Long.70.0°E and Lat.16.0°N/Long.60.0°E.

## Weather Forecast

### Weather Forecast for next 3 days (upto 0830 hours IST of 20<sup>th</sup> October, 2014)

- Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry and Kerala during the period.
- Rain/thundershowers would occur at a few places over Coastal Karnataka and Lakshadweep during next 48 hours and increase thereafter.
- Rain/thundershowers would occur at a few places over Nagaland, Manipur, Mizoram, Tripura, Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka and Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at isolated places over North Interior Karnataka during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Assam & Meghalaya, Odisha, Konkan & Goa, Madhya Maharashtra, Marathwada and Telangana during the period.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir, Himachal Pradesh, West Bengal & Sikkim, East Rajasthan, West Madhya Pradesh and Gujarat Region during next 24 hours; over Chhattisgarh and Vidarbha during next 48 hours and dry thereafter.

### Weather Warning during next 3 days

- **17 October (Day 1):** Heavy rainfall would occur at isolated places over coastal Tamilnadu and Kerala.
- **18 October (Day 2):** Heavy rainfall would occur at isolated places over coastal Tamilnadu and Kerala.
- **19 October (Day 3):** Heavy rainfall would occur at isolated places over coastal Tamilnadu.

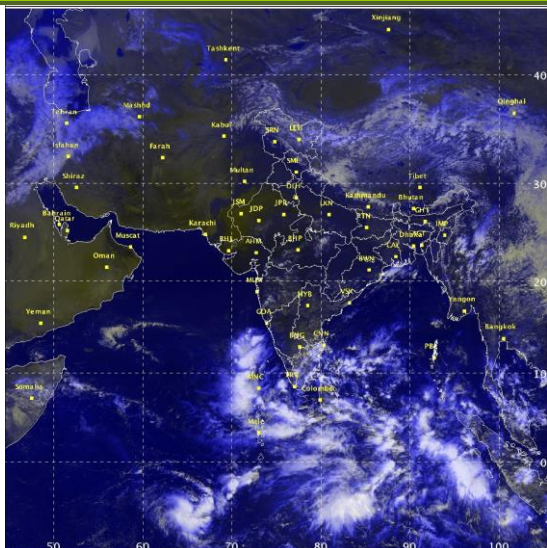
### Weather Outlook for subsequent 4 days from 20<sup>th</sup> to 24<sup>th</sup> October 2014.

- Rain/thundershower would occur at many places over south Peninsular India.
- Rain/thundershower would occur at isolated places over east and northeast India.
- The fresh feeble western disturbance would affect western Himalayan region from 19<sup>th</sup> onwards.
- Weather would be dry over rest of the country.

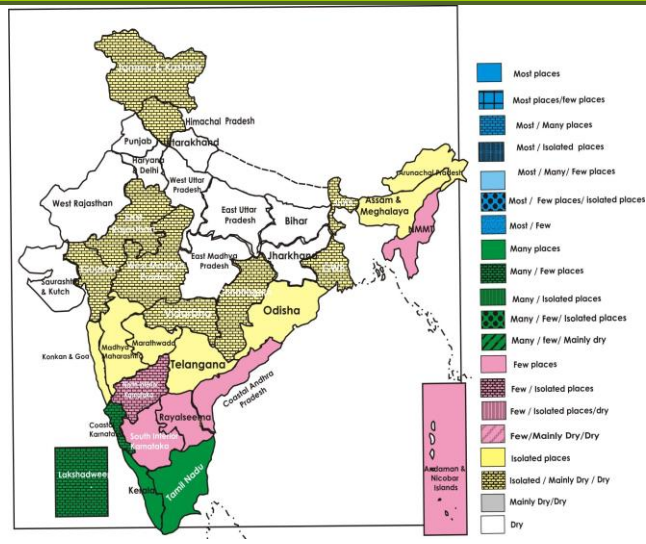


- Dry weather would prevail over Uttarakhand, Uttar Pradesh, Punjab, Haryana & Delhi, Bihar, Jharkhand, East Madhya Pradesh, West Rajasthan and Saurashtra & Kutch during the period.
- No Significant change in minimum temperatures over northwest India during next 2-3 days.

Satellite image dated, 17.10.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 20<sup>th</sup> October 2014)



### Detailed Zonewise Agromet Advisories

SOUTH INDIA [TAMIL NADU, TELANGANA, ANDHRA PRADESH, KARNATAKA, KERALA]



Rice



Sugarcane



Cotton



Soybean

- **Realised Rainfall:** Rainfall occurred in East Godavari, Srikakulam, Vishakapatnam and Vizianagaram districts of Andhra Pradesh; all districts of Kerala; all districts of Coastal Karnataka; Haveri district of North Interior Karnataka; all districts of South Interior Karnataka except Bellary, Chickaballapur, Chickmagalur, Kodagu, Kolar, Shimoga and Tumkur; all districts of Tamilnadu except Chennai, Cuddalore, Kanchepuram, Karaikal, Karur, Namakkal, Perambalur, Tiruvallur, Tiruvannamalai, Toothukudi, Trichy, Vellore, Villupuram and Virudhunagar. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Tamil Nadu & Puducherry and Kerala; at a few places over Coastal Andhra Pradesh, Rayalaseema and South Interior Karnataka and at isolated places over Telangana during the period. Rain/thundershowers would occur at a few places over Coastal Karnataka during next 48 hours and at many places thereafter. Rain/thundershowers would occur at isolated places over North Interior Karnataka during next 48 hours and at a few places thereafter.
- **Weather Warning:** Heavy rainfall would occur over coastal Tamil Nadu during the period and over Kerala on 17<sup>th</sup> and 18<sup>th</sup> October.
- **Weather Outlook:** Rain/thundershower would occur at many places over south Peninsular India. Weather would be mainly dry over rest of the region.
- **Advisories:**

## ▪ **Andhra Pradesh**

### ➤ Contingency measures for Hudhud affected districts in North Coastal Andhra Pradesh-

- Rice: Drain out excess water from the field as early as possible. Undertake lifting and staking of lodged hills. Apply booster dose of urea @ 25 kg and potash @ 10-15 kg per acre or spray multi K (13-0-45) @ 10 g /litre of water and spray Strepto Cycline @ 0.1 g /litre where BLB noticed (varieties: BPT-5204, MTU-1001, MTU-075).
- Maize: Drain out excess water from the field and lift the lodged crop and undertake earthing up wherever possible.
- Cotton: Drain out excess water from the field. Spray with Copper oxy chloride @ 3g+ Strepto cycline @ 0.1 g /litre of water and spray 19:19:19 @ 10 g /litre of water 4 days after fungicide spray.
- Sugarcane: Drain out water, lift the cane and undertake propping .

### ➤ Due to prevailing humid weather, sucking pest incidence is observed in some parts of Anantapuram district in Scarce Rainfall Zone of Rayalaseema which is likely to increase. For control, spray Monochrotophos /Methyl Dematon+ water @ 1:4 ratio on a non rainy day.

### ➤ Present hot weather is congenial for leaf spot attack on groundnut in Southern Zone of Rayalaseema. Spray Hexaconazole @ 2 ml per litre of water on a non rainy day.

## ▪ **Telangana:**

### ➤ Prevailing hot and humid weather conditions are congenial for incidence of leaf spot disease on cotton and stem borer on rice in Southern Zone of Telangana. For control, spray Copper oxy chloride @ 30g + Plantamycin @ 2g in 10 litres of water for leaf spot diseases and Cartap Hydrochloride @ 2 g or Chlorantraniliprole @ 0.4 ml per litre of water for stem borer.

### ➤ Present hot and partly cloudy weather conditions are congenial for incidence of stem borer in rice in Northern Telangana Zone. Apply Cartap Hydrochloride 4G @ 8 kg/acre when the adult moths/egg masses @ one/ sq. m are noticed in the fields.

## ▪ **Karnataka:**

### ➤ Continue land preparation for sowing of wheat and undertake sowing of *rabi* crops like sunflower, safflower, horse gram (PHG-9), sesame, cowpea, chickpea, and maize in the North Dry Zone of Karnataka.

### ➤ Continue land preparation and sowing of *rabi* sunflower in Central Dry Zone; maize, sorghum, Bengal gram and sunflower in North East Dry Zone and wheat, sorghum and Bengal gram in North East Transition Zone of Karnataka utilizing the realized rainfall.

### ➤ Undertake harvesting of soybean in North Transition Zone in clear weather.

### ➤ In the Southern Dry Zone of Karnataka, in the prevailing temperature and humidity, blast and leaf roller is noticed on rice and likely to spread. To control leaf roller spray Chloropyriphos 20 EC @ 2 ml / litre of water and to control blast spray carbendazim @ 1 g / litre of water or Tricyclozole @ 0.6 g / litre of water on a non rainy day.

## ▪ **Kerala:**

### ➤ As rain/thundershowers would occur at many places in Kerala along with isolated heavy falls on 17<sup>th</sup> & 18<sup>th</sup> October, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water.

### ➤ Continue nursery sowing of rice in the Northern and in Southern Zones of Kerala. Continue planting of Nendran banana in the Southern Zone of Kerala.

### ➤ In the prevailing humid weather conditions, there is chance of occurrence of false smut on rice and grain discolouration of rice in the Problem Area Zone of Kerala; to control spray Mancozeb @ 2 kg / ha after current spells of rain.

## ▪ **Tamil Nadu:**

### ➤ As rain/thundershowers would occur at many places over Tamilnadu along with isolated heavy falls over Coastal Tamilnadu during the period, postpone irrigation, intercultural operations and application of fertilizers and plant protection measures in standing crops. Provide adequate drainage in standing crop fields to remove excess water in Coastal Tamilnadu.

### ➤ Continue transplanting of *samba* rice and *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu.

### ➤ In the Western Zone of Tamil Nadu, continue sowing of dry land crops like sorghum and ragi and sowing of small onion in the North Western Zone of Tamil Nadu.

### ➤ Continue sowing of cotton, maize, pulses and sorghum under dry land conditions in the Southern Zone of Tamil Nadu.

### ➤ Due to high humidity, leaf folder incidence is noticed in rice in North Eastern Zone of Tamilnadu which is likely to spread. To control, spray Profenophos @ 2 ml in one liter of water after current spells of rain.

### ➤ Suitable varieties are given in Annexure II.

## • **Animal Husbandry**

### ➤ Provide clean and hygienic water to animals and vaccinate against FMD in the Problem Area Zone of Kerala.



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



**Rice**



**Okra**



**Cole Crops (Nursery)**



**Green Gram**

- **Realised Rainfall:** Rainfall occurred over East Siang and Upper Siang districts of Arunachal Pradesh; Cachar, Chirang, Hailakandi, Kamrup (Metro), Karimganj, Kokrajhar, Morigaon, Sibsagar and Tinsukia districts of Assam; East Khasi Hills, Jaintia Hills, Ribhoi and West Khasi Hills districts of Meghalaya; Aizwal, Saiha and Serchhip districts of Mizoram; Chandel, Imphal West and Thoubal districts of Manipur; Dimapur, Kohima and Phek districts of Nagaland and all districts of Tripura. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Nagaland, Manipur, Mizoram & Tripura and at isolated places over Arunachal Pradesh and Assam & Meghalaya during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over northeast India.
- **Advisories:**
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - In Lower Brahmaputra Valley Zone of Assam, continue sowing of onion and land preparation for planting of potato. Transplant the 25-30 days old seedlings of cole crops in the main field.
    - In Hill Zone of Assam, continue nursery raising of winter vegetables.
    - In North Bank Plain Zone of Assam, undertake land preparation and sowing of rapeseed and mustard. Continue planting of potato and sowing of cole crops.
    - In Barak Valley Zone, continue transplanting of early cauliflower, cabbage and knol khol.
    - In Central Brahmaputra Valley Zone of Assam, sowing and transplanting of cole crops and early radish may be continued. Continue weeding and thinning in sesame. Nursery sowing of winter brinjal (Pusa Kranti, Pusa Purple Long, Pusa Purple Cluster, Pusa Bhairav, JC-2, BWR-12) may be continued. Continue land preparation for sowing of *rabi* pulses and oilseeds.
    - In Upper Brahmaputra Valley Zone of Assam, continue nursery sowing of *rabi* vegetables.
    - In Arunachal Pradesh, continue harvesting of early transplanted *kharif* rice.
    - In Meghalaya, maintain water level of 3-5 cm in transplanted *sali* rice. Conserve water by repairing bunds. Transplanting of cabbage, cauliflower and broccoli and sowing of carrot, radish and French bean may be completed. In ginger and turmeric, undertake hand weeding followed by fertilizer application, earthing up and mulching. Land preparation and sowing of peas and planting of potato may be continued.
    - In North Bank Plain Zone of Assam, prevailing weather is conducive for gundhi bug incidence in *sali* rice at panicle initiation, milk and dough stage; apply Malathion 5% dust @ 20 kg/ha to control.
    - In the prevailing hot weather condition, attack of stem borer in *Sali* rice has been observed in Lower Brahmaputra Valley Zone of Assam which is likely to increase. Spray 0.02% Chloropyrifos 20 EC or 0.025% Quinalphos 25 EC to control the pests.
    - In Hill Zone and Upper Brahmaputra Valley Zone of Assam, there is chance of attack of rice blast, stem borer in *Sali* rice. Spray Hinosan@ 1ml /litre of water against rice blast and spray Chloropyrifos (20%) @ 2ml/litre against stem borer.
    - Due to prevailing humid weather conditions, there is chance of attack of gundhi bug, blast in normal transplanted rice in Arunachal Pradesh. Undertake foliar spray of Hexaconazole 5% EC @ 2 ml/litre of water or Carbendazim 12 % WP+Mancozeb 63% WP @ 2 g/litre of water.
    - Due to cloudy weather & high humidity, there is chance of incidence of blast in *kharif* rice in Meghalaya. Spray Mancozeb @ 2g/litre or Carbendazim @ 1g/litre. Also humid weather is congenial for development of late leaf spot in groundnut. Spray Carbendazim (0.05%) + Mancozeb (0.2%).
  - **Nagaland, Manipur, Mizoram and Tripura:**
    - In Manipur, maintain water level of 5 cm upto dough stage in *kharif* rice. As dry weather is prevailing, apply mulching in ginger/ turmeric field. Undertake harvesting of soybean and groundnut.
    - In Mizoram, continue nursery preparation for cole crops like cabbage, cauliflower, broccoli and knolkhol.
    - In Mild Tropical Plain Zone of Tripura, continue harvesting of *jhum* rice and banana and transplanting of winter vegetable particularly cauliflower, cabbage, radish, brinjal. Continue land preparation for planting of potato.
    - In Nagaland, continue nursery sowing of cabbage, cauliflower, knolkhol, broccoli, radish, tomato. Undertake

land preparation for toria and harvesting of matured *jhum* rice and soybean.

- In Mizoram, weather is congenial for attack of stem borer, gundhi bug and leaf blast in rice, spray Monocrotophos @ 20 ml/10 litres water or Imidacloprid @ 20 ml/10 litres of water against stem borer. Spray Monocrotophos 36 WSC @ 1.5 ml/litre of water against gundhi bug. Spray Triclozole (Beam) @ 0.5 g/litre against leaf blast on a non rainy day.
- In Tripura, prevailing humid weather is conducive for attack of gundhi bug in short duration *aman* rice. To manage the attack; apply Cypermethrin + Prophenophos @ 1.5 ml per litre of water or Cartap Hydrochloride (Dollar) @ 1.5 g per litre of water. Also there is chance of rice blast in long duration *aman* rice, spray Benlate or Mancozeb @ 0.25% on a non rainy day.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Tripura, the present weather condition is favourable for infestation of round worm, flukes and tapeworms. De-worming may be done under recommendation and supervision of authorized practitioner.
- In Nagaland, prevailing high humidity may cause ammonia fumes which irritate the respiratory tract and eyes of the poultry. Good ventilation provides a comfortable environment without draft. Farmers are advised to provide clean drinking water round the clock and water troughs/ feeders should be regularly cleaned. Antibiotics or other stress medications may be added to water if desired.

## EAST INDIA [JHARKHAND, BIHAR, ODISHA, WEST BENGAL & SIKKIM, ANDAMAN & NICOBAR ISLANDS]



**Sugarcane**



**Groundnut**



**Onion**



**Rice**

- **Realised Rainfall:** Rainfall occurred in all districts of Jharkhand, except Godda, Garhwa, Jamtara, Khunti, Koderma, Latehar, Lohardaga, Palamu; all districts of Bihar, except Arwal, Aurangabad, Bhagalpur, Buxar, Gaya, Jhanabad, Jamui, Khagaria, Kishanganj, Madhepura, Nalanda, Nawada, Purnea, Saharsa, Sheikhpura; all districts of Odisha except Bolangir and Sonepur; all districts of Andaman & Nicobar Islands; East Midnapore, Nadia, North 24 Parganas, Purulia, South 24 Parganas, West Midnapore districts of Gangetic West Bengal. Cooch Behar, Darjeeling, Jalpaiguri, North Sikkim, South Dinajpur, South Sikkim and West Sikkim districts of Sub Himalayan West Bengal & Sikkim.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands and at isolated places over Odisha during the period. Rain/thundershowers would occur at isolated places over Gangetic West Bengal and Sub-Himalayan West Bengal & Sikkim during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over Jharkhand and Bihar during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over east India.
- **Advisories:**
  - **West Bengal:**
    - In Laterite and Red Soil Zone, maintain 2 cm standing water in field of *aman* rice at grain filling stage. Drain out excess water.
    - In New Alluvial Zone of West Bengal, keep 3-5 cm water in *aman* rice fields at the time of panicle initiation stage.
    - In Terai Zone, continue transplanting of early cabbage, cauliflower.
    - In Laterite and Red Soil Zone, due to high temperature & humidity there is chance of attack of blast disease in *aman* rice. Apply Carbendazim + Mancozeb 2.5g / litre of water.
    - Due hot and humid weather, there is a chance of spread of sheath blight and attack of stem borer in *aman* rice in New Alluvial Zone of West Bengal. Spray Carbendazim @ 1.5 g / litre of water for control of sheath blight and in case of stem borer attack, spray Carbosulfan 25 EC @ 2 ml / litre or Profenphos 40% + Cypermethrin 4% @ 1 ml / litre of water.
  - **Odisha:**
    - In 'Hudhud' cyclone affected areas in East and South Eastern Coastal Plain Zone of Odisha, harvest the early



paddy at physiological maturity stage and keep at dry places.

- Spray 1% Gibberellic acid at flowering stage to prevent pollen drop. Drain out excess water by providing drainage channel at an interval of every three feet distance in medium duration rice at flowering stage, if lodged.
  - Drain out water and apply N @ 8 kg/ac for quick recovery in late rice or spray 2% urea in the afternoon at flowering stage for better yield. Heavy rainfall may aggravate the infestation of cut worm in late rice. Go for plant protection measures by spraying Chloropyriphos @ 2 ml per liter water.
  - Undertake harvesting of early planted groundnut crops and vegetables.
- In North Eastern Plateau Zone of Odisha, due to high humidity and cloudy weather, there is chance of infestation of aphids in maize. To manage, spray Imidacloprid 17.8 SL @ 50 ml in 200 liters of water per acre.
  - In North Eastern Plateau Zone of Odisha, due to cloudy and high humid weather, there is chance of Tikka leaf spot in groundnut. To control, spray Mancozeb @ 2.5 g per liter of water.
  - Prevailing humidity and temperature are conducive for incidence of leaf roller and case worm in rice in East and South Eastern Coastal Plain Zone of Odisha. To control, spray Triozophos or Fipronil or Hostathion @ 200 ml in 200 litres of water per acre.
- **Bihar:**
  - Remove excess water from standing crop fields. Provide mechanical support for affected sugarcane due to high winds in East and West Champaran districts.
  - In North West Alluvial Plain Zone of Bihar, continue field preparation for sowing of *rabi* crops like maize, wheat, pea, gram, sunflower and planting of potato. Continue land preparation in the upland areas for sowing of rapeseed. Undertake sowing of rai and coriander.
  - In North East Alluvial Plain Zone of Bihar, undertake field preparation for sowing of *rabi* crops. Ploughing and planking should be done properly to conserve moisture in soil.
  - In South Bihar Alluvial Zone, continue sowing of toria and sowing of fodder crop berseem
  - Due to prevailing hot weather condition, there is chance of attack of gundhi bug in rice in North West Alluvial Plain Zone and South Bihar Alluvial Zone, apply Folidol dust @ 10-15 kg per hectare in the early morning.
- **Jharkhand:**
  - Drain out excess water from rice fields.
  - In Western Plateau Zone of Jharkhand, in upland areas, continue sowing of toria. Continue planting of early potato and sowing of green peas. Continue sowing of rainfed wheat. In upland areas after harvesting of *Kharif* crops, immediately plough the land to utilize residual moisture and sow different *rabi* crops like gram, lentil, linseed etc. Also continue sowing of rapeseed and mustard.
  - In Central & North Eastern Plateau Zone of Jharkhand, continue sowing of toria, mustard, green pea and potato.
  - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
  - In East and South Eastern Coastal Plain Zone and North Eastern Coastal Plain Zone of Odisha, provide clean drinking water for animals.
- **Fishery**
  - In Coastal Saline Zone of West Bengal, cover the boundary of fish pond with mosquito net for avoiding the effect of storm and heavy rainfall.

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



*Sugarcane*



*Rice*



*Okra*



*Onion*

- **Realised Rainfall:** Rainfall occurred in Annupur, Balaghat, Dindori, Katni, Mandla, Panna, Rewa, Satna, Shahdol, Siddhi, Singrauli and Umaria districts of East Madhya Pradesh and in all districts of Chhattisgarh. Mainly dry weather prevailed over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Chhattisgarh during next 48 hours and over West Madhya Pradesh during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over East Madhya Pradesh during the period.



- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
  - **Madhya Pradesh:**
    - In East Madhya Pradesh, drain out excess water from fields of soyabean, green gram and black gram.
    - Due to cloudy weather there are chances of attack of fruit borer in urad and moong in Grid Zone of Madhya Pradesh, spray Dimethoate @ 1.5ml per litre of water.
    - Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindya Plateau Zone of Madhya Pradesh, spray Imidacloprid or Thiamethoxam @ 0.35 g per litre of water.
  - **Chhattisgarh:**
    - Drain out excess water from standing crop fields.
    - Undertake harvesting of matured rice in Chhattisgarh Plain Zone.
    - Due to cloudy weather, there are chances of leaf curling disease in chilli in Chhattisgarh Plain Zone, for control spray Methyl Dematon or Karathone @ 1ml per litre of water.
    - Suitable varieties are given in Annexure II.

## NORTH INDIA [JAMMU & KASHMIR, HIMACHAL PRADESH, UTTARAKHAND, PUNJAB, HARYANA, DELHI, UTTAR PRADESH & RAJASTHAN]



*Rice*

*Sugarcane*

*Bottle Gourd*

*Onion*

- **Realised Rainfall:** Rainfall occurred in all districts of East Uttar Pradesh except Farrukhabad, Kannauj and Kanpur Dehat, in Badaun, Hamirpur, Kanshiramnagar, Moradabad, Pilibhit, Rampur, Saharanpur and Shahjanpur ditricts of West Uttar Pradesh; in Almora, Bageshwar, Chamoli, Champawat, Nainital, Pitorgarh and Udhamasinghnagar districts of Uttarakhand and in Fatehabad and Karnal districts of Haryana. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Himachal Pradesh, Jammu & Kashmir and East Rajasthan during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over Uttar Pradesh, Uttarakhand, Haryana & Delhi, Punjab and West Rajasthan during the period. No Significant change in minimum temperatures over northwest India during next 2-3 days.
- **Weather Warning:** Nil.
- **Weather Outlook:** The fresh feeble western disturbance would affect western Himalayan region from 19<sup>th</sup> onwards. Weather would be mainly dry over the region.
- **Advisories:**
  - **Jammu & Kashmir:**
    - Continue harvesting of rice and maize in Intermediate Zone of Jammu & Kashmir. Also continue nursery sowing of cauliflower, cabbage, radish and knoll khol in Intermediate Zone of the region utilizing the realized rainfall.
    - In Sub-Tropical Zone of Jammu & Kashmir, undertake field preparation as well as nursery bed preparation for sowing of vegetables, potato and transplanting of tomato seedlings. Continue sowing of ghobi sarson with toria as mixed or intercrop and nursery raising of cole crops and onion.
    - In Intermediate Zone of Jammu & Kashmir, due to hot weather conditions, there are chances of canker in citrus fruits, for control, spray Malathion @ 10 ml or Metasystox @ 10 ml per 10 litres of water
  - **Himachal Pradesh:**
    - Continue harvesting of rice, soybean mash and cowpea in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Continue sowing of gobhi sarson and linseed utilizing the realized rainfall. Sowing of berseem, lucerne and oats may also be undertaken as fodder crops during *rabi* season. Mix seed of gobhi sarson to have nutritious production. Complete sowing of gram and lentil and continue land preparations for sowing of early wheat in lower regions.
    - Complete sowing of radish, turnip and spinach in Mid Hills Sub-Humid Zone of Himachal Pradesh. Undertake nursery preparation for sowing of late season cauliflower (Pusa-snowwall) and cabbage. Continue harvesting of onion bulbs, tomato, capsicum and cucumber.

- Continue nursery sowing of mid-season cauliflower and cabbage in poly house, planting of onion at 30X 10 cm spacing and sowing of potato in mid hill and lower region, transplanting of ageti cauliflower and cabbage in lower region in Sub-Montane and Low Hills Sub-Humid Tropical Zone and Bilaspur district of Mid Hills Sub-Humid Zone of Himachal Pradesh utilizing the realized rainfall. Continue nursery sowing of late varieties of cauliflower, cabbage, knol khol and direct sowing of radish, carrot, turnip, palak and methi and sowing of early varieties of Pea in mid hill areas utilizing the realized rainfall. Undertake sowing of cole crops in polyhouses.
- As mainly dry weather would prevail, continue harvesting of rajmah and potato in High Hill Temperate Dry Zone of Himachal Pradesh.
- Continue intercultural operation like weeding in peas in High Hill Temperate Dry Zone of Himachal Pradesh. Spray Glycel @ 5ml per liter of water for weed control.
- Under prevailing humid weather condition, there are chances of incidence of scab and alternaria leaf spot diseases and canker and mite attack in apple in Mid Hills Sub Humid Zone of Himachal Pradesh. Spray Mancozeb or Ziram @ 700ml per 200 litres of water for control of scab and alternaria leaf spot diseases. Spray Carbendazim or Copper Oxy Chloride @ 600g per 200 litres of water against canker and apply Fenazaquin @ 50 ml or properzite @ 200 ml per 200 litres of water for mite.
- **Uttarakhand:**
- Continue land preparation for transplanting of onion and sowing of garlic. Also continue sowing of mustard, palak, methi, radish, early toria, pea in Hill Zone of Uttarakhand.
- In Bhabar and Tarai Zone of Uttarakhand, continue sowing of pea and toria and planting of potato. Continue land preparation for sowing of radish, fenugreek and spinach. Continue harvesting of matured rice and soybean and planting of potato.
- Undertake harvesting of *kharif* maize and pulses like urad /moong and field preparation for planting of winter sugarcane in Sub Humid Sub Tropical Zone of Uttarakhand.
- Under hot weather condition, there are chances of attack leaf hopper in vegetable and fruits crops in Sub Humid Sub Tropical Zone of Uttarakhand. To control spray Dichlorvas @ 1ml/liter of water.
- **Punjab, Haryana and Delhi:**
- In Western Undulating Zone of Punjab, continue nursery sowing of mid-season cauliflower, desi varieties of radish, carrot under irrigation and turnip and planting of mango, litchi and apply irrigation in rice, cotton and maize.
- In Central Plain Zone of Punjab, continue sowing of desi varieties of carrot, radish and turnip crops and undertake transplanting of tomato under irrigation. Continue sowing of potato, palak and nursery sowing of cauliflower. Continue harvesting of matured maize and groundnut in Ludhiana district. Continue planting of early maturing autumn sugarcane.
- In Undulating Plain Zone of Punjab, high humidity may lead to sheath blight in rice, spray Tilt @ 0.1% on the disease spots. Present weather condition is congenial for attack of leaf folder and stem borer in rice, spray Monocrophos 36SL @ 560ml in 100 lits of water per acre.
- In Western Zone of Haryana, continue plantation of new orchard. Prepare the field for sowing of mustard and gram and arrange the certified seeds for mustard and gram. As dry weather would prevail harvest the matured guar and bajra crop.
- Present weather is favourable for attack of top borer in sugarcane in Western Zone of Haryana, apply Carbofuran 3G @13 kg or Phorate 10G @ 8 kg in furrows and apply light irrigation.
- In Delhi, continue transplanting of onion seedlings and planting of early potato. Continue land preparation for sowing of early mustard, pea and early toria and sowing of radish, spinach and coriander. .
- **Uttar Pradesh:**
- In East Uttar Pradesh, remove excess water from standing crop fields. Provide mechanical support for affected sugarcane due to high winds in in Deoria, Maharajganj and Gorakhpur districts.
- Undertake harvesting of early sown varieties of rice in Allahabad, Fatehpur, Pratapgrah, Chitrakoot and Kaushambi districts of Central Plain Zone of Uttar Pradesh. Undertake sowing of potato, lahi and masoor crops with a planting distance of 90 cm and sowing of berseam @ 25-30 kg per hectare mixed with 1-2 kg of linseed with available soil moisture. Complete sowing of late varieties of potato between 15-25 October.
- Continue sowing of gram, matar and lentil in Raibareilly, Amethi, Sultanpur, Deoria and Ballia districts and sowing of toria in Brabanki, Faizabad, Ambedkarnagar, of Eastern Plain Zone of Uttar Pradesh with available soil moisture. Undertake sowing of rapeseed and mustard in Deoria and Ballia districts and planting of potato in Basti, Sant Kabir Nagar and Gorakhpur districts with available soil moisture.
- Undertake nursery sowing of tomato, cauliflower, *Tara-mira*, *Alsi*, transplanting of onion and planting of potato in Western Plain Zone of Uttar Pradesh with available moisture. To conserve soil moisture in groundnut, spray Malathion 50 E.C. @ 200 mm per 200 litres of water.
- Undertake sowing of mustard, rapeseed, maize, matar and gram and planting of potato in Central Plain Zone of Uttar Pradesh with available soil moisture. Complete transplanting of ageti cauliflower, cabbage, chilli, brinjal and tomato. Undertake harvesting of urd and moong.
- Continue transplanting of cauliflower, cabbage, tomato, chilli and brinjal in Jhansi district of Bundelkhand Zone of Uttar Pradesh. Undertake harvesting of matured moong, urd and sesame. Maintain 5 cm water level in rice at panicle initiation and flowering stage. Undertake land preparation for sowing of peas, lentil, mustard and

rapeseed.

- Under prevailing humid weather condition, there are chances of attack of stem borer, brown plant hopper, gall midge, leaf folder and jassids in rice in Central Plain Zone of Uttar Pradesh. Spray Quinalphos 25 EC @ 1 litre per hectare.
- Due to prevailing humid weather condition, there are chances of attack of fruit borer in early variety of Arhar in Allahabad, Fatehpur, Pratapgrah, Chitrakoot and Kaushambi districts of Central Plain Zone of Uttar Pradesh. For control, spray mixture of Monocytophos 36 EC @ 800 ml or Carbaryl 50% with 2kg of dissolved Lime in 800 litres of water at an interval of 15-20 days.
  - **Rajasthan:**
- Continue land preparation for sowing of mustard in Semi Arid Eastern Plain Zone of Rajasthan.
- Continue nursery sowing of cauliflower and radish and continue sowing of rainfed taramira, toria and mustard in Semi Arid Eastern Plain Zone of Rajasthan.
- Undertake sowing of *rabi* crops rapeseed like sarson in Arid Western Plain Zone (Jodhpur) of Rajasthan.
- Undertake land preparation for sowing of *rabi* crops viz. mustard, gram and fodder crops like lucerne, berseem, in Arid Western Plain Zone (Bikaner) of Rajasthan.
- Undertake land preparation and sowing of rapeseed, gram, linseed in irrigated North Western Plain Zone of Rajasthan.
- In Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan, undertake harvesting of maize and sorghum.
- In Southern Humid Plain Zone of Rajasthan, due to dry weather conditions there may be water stress in rainfed crops like pearl millet, guar and moth bean. To avoid stress, spray Thiourea @ 0.1%. Suitable varieties are given in Annexure II.
- **Horticulture:**
- Prevailing hot weather condition is conducive for the attack of leaf minor in new growth of citrus in Sub Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh. For control, spray Matasystox or Malathion @ 10 ml per 10 litres of water.
- **Animal Husbandry:**
- Under prevailing humid weather condition, there are chances of attack of ticks and mites on animals also in Flood Prone Eastern Plain Zone of Rajasthan, Sub Montane and Low Hills Sub-Tropical; Zone of Himachal Pradesh and Intermediate zone of Jammu & Kashmir. For control spray Butox @ 2.0 ml per litre of water. Clean the cowshed with phenyl and keep the animal sheds dry and clean.

#### WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



*Rice*

*Sugarcane*

*Cotton*

*Soybean*

- **Realised Rainfall:** Rainfall occurred in North Goa, South Goa and Sindhudurg districts of Konkan & Goa, Gadchiroli and Gondia districts of Vidarbha region of Maharashtra. Rainfall occurred in Dangs district of Gujarat State. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa, Madhya Maharashtra and Marathwada during the period. Rain/thundershowers would occur at isolated places over Vidarbha during next 48 hours and over Gujarat region during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over Saurashtra & Kutch during the period.
- **Weather Warning:** Nil.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
  - **Maharashtra:**
  - In Konkan, maintain water level upto 5-8 cm in rice fields. Undertake fertilizer application and intercultural operations in rice, finger millet, vegetable fields and mango and cashew orchards. Early maturing rice variety is at maturity stage in South Konkan, continue harvesting during morning hours.
  - In Madhya Maharashtra, maintain water level of 5-8 cm in rice field. Continue intercultural operations like weeding and fertilizer application in sugarcane, vegetables and orchards. In already harvested fields continue sowing of *rabi* jowar and safflower utilizing the available soil moisture. Undertake pruning in grapes during October for better growth of fruit bunch. Apply phosphorous ( $P_2O_5$ ) @ 250 kg/ha after pruning. Apply irrigation



- to sugarcane, vegetables and grapes, banana and pomegranate orchards and early sown *rabi* jowar.
- In Marathwada, undertake intercultural operations in cotton, red gram and vegetables. With the available soil moisture, undertake sowing of rainfed jowar. Undertake field preparation for sowing of *rabi* jowar and safflower. Apply irrigation to sugarcane, soybean and vegetables.
  - In Vidarbha, apply fertilizers and undertake intercultural operations in cotton, red gram and vegetables. Maintain water level up to 7 cm in rice field in East Vidarbha. Prepare the field for sowing of safflower in the harvested field of green gram and black gram. Apply irrigation to vegetables, soybean (at pod development stage), cotton and orange, sweet lime orchards. Early sown soybean is at maturity stage in Central Vidarbha Zone, start harvesting of matured crop and prepare harvested field for sowing of gram.
  - Light rain and humid weather in Pune region is favourable for infestation of downy mildew in grapes, spray Metalaxyl 8% +Mancozeb 64% @ 20 g per 10 litres water for 5 times at 12 days interval after pruning.
  - Due to subdued rains in South Konkan, there may be attack of ear head bug in rice; spray Monocrotophos 36 WSC @ 12 ml or Cypermethrin 25 EC @ 2.4 ml per 10 litres water or dust 2% Methyl parathion dust @ 20 kg/ha during calm wind.
  - **Gujarat:**
    - Continue land preparation for sowing of mustard and fennel in Bhal and Coastal Zone.
    - Continue land preparation and keep inputs ready for sowing of *rabi* mustard and gram in North Gujarat Zone and for sowing of mustard in North West Zone. Carry out weeding and intercultural operations in cluster bean and castor crops to conserve soil moisture. Taking advantage of mainly dry weather, complete harvesting of groundnut and sesame crops.
    - Complete harvesting of sesame, pearl millet, groundnut and pulses (green gram and cow pea) in North West Zone.
    - Complete harvesting and threshing of early varieties of paddy in South Gujarat Heavy Rainfall Zone.
    - Continue sowing of mustard, gram, peas, carrot (for vegetable purpose) and garlic in North Saurashtra Zone. Apply irrigation in vegetables, cotton and groundnut to avoid moisture stress condition.
    - Continue planting of sugarcane and carry out intercultural operation in pigeon pea in South Gujarat Zone.
    - Carry out intercultural operations and weeding in standing rice and pulse crops in Middle Gujarat Zone. As mainly dry weather is prevailing, apply irrigation in pulse crops.
    - Suitable varieties are given in Annexure II.
  - **Animal Husbandry**
    - In Gujarat, keep animal shed hygienic and clean, to avoid flies and mosquitoes.

**Districtwise realised rainfall and % departure for past three weeks is given below in Annexure I.**

**Annexure I**  
**Week by week Rainfall Distribution**

| Sub-Divisions            | 01.10.14    |        | 08.10.14    |        | 15.10.14    |        |
|--------------------------|-------------|--------|-------------|--------|-------------|--------|
|                          | Actual (mm) | % dep. | Actual (mm) | % dep. | Actual (mm) | % dep. |
| <b>Arunachal Pradesh</b> |             |        |             |        |             |        |
| Anjaw                    | **          | **     | **          | **     | **          | **     |
| Changlang                | 89.2        | 27     | 0.0         | -100   | 19.2        | -71    |
| Dibang Valley            | **          | **     | 0.0         | -100   | **          | **     |
| East Kameng              | 0.0         | -100   | 0.0         | -100   | 0.0         | -100   |
| East Siang               | 136.6       | 43     | 0.0         | -100   | 34.7        | -1     |
| Kurung Kumey             | **          | **     | 0.0         | -100   | **          | **     |
| Lohit                    | 19.2        | -63    | 0.0         | -100   | 4.1         | -87    |
| Lower Dibang Valley      | 91.9        | 37     | 0.0         | -100   | 9.3         | -78    |
| Lower Subansari          | **          | **     | **          | **     | **          | **     |
| Papumpara                | 113.9       | 9      | 0.0         | -100   | 10.3        | -85    |
| Tawang                   | 16.0        | -83    | 0.0         | -100   | 6.0         | -91    |
| Tirap                    | 175.0       | 115    | 0.0         | -100   | 4.2         | -90    |
| Upper Siang              | 258.0       | 89     | 15.0        | -79    | 23.8        | -66    |

|                            |       |     |      |      |       |      |
|----------------------------|-------|-----|------|------|-------|------|
| Upper Subansari            | 15.4  | -66 | 0.0  | -100 | 0.0   | -100 |
| West Kameng                | 143.8 | 49  | 0.0  | -100 | 0.0   | -100 |
| West Siang                 | 52.0  | 4   | **   | **   | 1.5   | -95  |
| <b>Assam&amp;Meghalaya</b> |       |     |      |      |       |      |
| <b>Assam</b>               |       |     |      |      |       |      |
| Baksa                      | 29.6  | -60 | 0.0  | -100 | 0.0   | -100 |
| Barpeta                    | 24.2  | -70 | 0.0  | -100 | 13.0  | -66  |
| Bongaigaon                 | 13.0  | -80 | 0.0  | -100 | 16.6  | -68  |
| Cachar                     | 62.0  | -10 | 0.0  | -100 | 63.9  | 38   |
| Chirang                    | 53.2  | -30 | 0.0  | -100 | 38.0  | -26  |
| Darrang                    | 43.0  | 19  | **   | **   | 0.0   | -100 |
| Dhemaji                    | 62.0  | -20 | **   | **   | 0.0   | -100 |
| Dhubri                     | 90.1  | 30  | 0.0  | -100 | 9.1   | -75  |
| Dibrugarh                  | 28.7  | -50 | 0.0  | -100 | 1.1   | -97  |
| Goalpara                   | 29.1  | -60 | 0.0  | -100 | 17.1  | -68  |
| Golghat                    | 7.8   | -70 | 0.0  | -100 | 9.4   | -70  |
| Hailakandi                 | 79.7  | 20  | 0.0  | -100 | 66.4  | 43   |
| Jorhat                     | 12.6  | -70 | 0.0  | -100 | 5.7   | -83  |
| Kamrup(Rural)              | 32.2  | -30 | 0.0  | -100 | 0.0   | -100 |
| Kamrup(Metro)              | 0.4   | -10 | 22.6 | -30  | 52.9  | 65   |
| Karbi Anglong              | 19.4  | -50 | 0.0  | -100 | 2.9   | -88  |
| Karimganj                  | 68.7  | 0   | 0.0  | -100 | 39.7  | -44  |
| Kokrajhar                  | 54.5  | -40 | 0.0  | -100 | 26.7  | -51  |
| Lakhimpur                  | 59.8  | -20 | 0.0  | -100 | 5.8   | -85  |
| Morigaon                   | 4.2   | -90 | 0.0  | -100 | 21.8  | -58  |
| N.C.Hills                  | 34.9  | -30 | 0.0  | -100 | 0.0   | -100 |
| Nowgong                    | 9.7   | -80 | 0.0  | -100 | 7.9   | -74  |
| Nalbari                    | 69.4  | 70  | 0.0  | -100 | 0.0   | -100 |
| Sonitpur                   | 47.5  | 19  | 0.0  | -100 | 0.6   | -98  |
| Sibsagar                   | 7.1   | -80 | 0.0  | -100 | 24.1  | -8   |
| Tinsukia                   | 67.8  | 30  | 0.0  | -100 | 23.7  | -10  |
| Udalgiri                   | 73.7  | 100 | 0.0  | -100 | 7.3   | -71  |
| <b>Meghalaya</b>           |       |     |      |      |       |      |
| East Garo Hills            | 95.9  | 72  | 10.4 | -87  | 10.5  | -51  |
| East Khasi Hills           | 92.8  | -17 | 0.5  | -99  | 34.9  | -53  |
| Jaintia Hills              | 74.0  | -57 | **   | **   | 38.0  | -73  |
| Ribhoi                     | 13.5  | -78 | 4.2  | -87  | 51.7  | 42   |
| South Garo Hills           | 171.0 | 202 | **   | **   | 17.0  | -54  |
| West Garo Hills            | 194.8 | 244 | 0.0  | -100 | 11.8  | -68  |
| West Khasi Hills           | **    | **  | **   | **   | 40.0  | -50  |
| <b>NMMT</b>                |       |     |      |      |       |      |
| <b>Mizoram</b>             |       |     |      |      |       |      |
| Aizwal                     | 18.0  | -77 | 4.8  | -95  | 43.5  | -25  |
| Champhai                   | **    | **  | 8.7  | -90  | **    | **   |
| Kolasib                    | **    | **  | **   | **   | **    | **   |
| Lawngtlai                  | **    | **  | **   | **   | **    | **   |
| Lunglei                    | **    | **  | 0.0  | -100 | **    | **   |
| Mamit                      | **    | **  | **   | **   | **    | **   |
| Saiha                      | 8.0   | -89 | **   | **   | 104.0 | 180  |

|                         |      |      |      |      |      |      |
|-------------------------|------|------|------|------|------|------|
| Serchhip                | 12.2 | -83  | 0.0  | -100 | 84.4 | 120  |
| <b>Manipur</b>          |      |      |      |      |      |      |
| Bishnupur               | **   | **   | **   | **   | **   | **   |
| Chandel                 | 1.0  | -99  | 0.0  | -100 | 38.0 | -26  |
| Churachandpur           | **   | **   | **   | **   | **   | **   |
| Imphal east             | 8.4  | -79  | 0.0  | -100 | 17.7 | -49  |
| Imphal west             | 79.6 | 105  | 0.0  | -100 | 32.5 | 12   |
| Senapati                | **   | **   | **   | **   | 14.0 | -65  |
| Tamenglong              | **   | **   | **   | **   | **   | **   |
| Thoubal                 | 27.0 | -40  | **   | **   | 26.0 | 33   |
| Ukhrul                  | **   | **   | **   | **   | **   | **   |
| <b>Nagaland</b>         |      |      |      |      |      |      |
| Dimapur                 | 0.5  | -92  | 0.0  | -100 | 77.3 | 89   |
| Kephire                 | **   | **   | **   | **   | **   | **   |
| Kohima                  | 28.4 | -36  | 2.8  | -94  | 39.0 | 17   |
| Longleng                | **   | **   | **   | **   | **   | **   |
| Mokokchung              | **   | **   | 0.0  | -100 | **   | **   |
| Mon                     | **   | **   | **   | **   | **   | **   |
| Paren                   | **   | **   | **   | **   | **   | **   |
| Phek                    | 75   | 68   | **   | **   | 60   | 80   |
| Tuensang                | **   | **   | **   | **   | **   | **   |
| Wokha                   | **   | **   | **   | **   | **   | **   |
| Zunheboto               | **   | **   | **   | **   | **   | **   |
| <b>Tripura</b>          |      |      |      |      |      |      |
| Dhalai                  | 88.0 | 41   | 4.9  | -92  | 56.0 | 25   |
| North tripura           | 89.6 | 43   | 0.0  | -100 | 43.0 | -14  |
| South tripura           | 18.8 | -70  | 10.4 | -81  | 49.7 | -8   |
| West tripura            | 42.2 | -24  | 7.5  | -88  | 39.7 | -22  |
| <b>Himachal Pradesh</b> |      |      |      |      |      |      |
| Bilaspur                | 9.4  | -55  | 1.9  | -82  | 1.6  | -71  |
| Chamba                  | 4.3  | -88  | 12.0 | -48  | 1.6  | -78  |
| Hamirpur                | 18.6 | -39  | 36.5 | 138  | 1.2  | -92  |
| Kangra                  | 28.5 | -9   | 24.7 | 2    | 4.3  | -63  |
| Kinnaur                 | 0.5  | -96  | 0.1  | -99  | 0.0  | -100 |
| Kullu                   | 1.4  | -90  | 11.2 | 34   | 5.9  | -12  |
| Lahaul and Spiti        | 0.0  | -100 | 8.0  | -54  | 0.0  | -100 |
| Mandi                   | 19.3 | -3   | 14.1 | 0    | 5.0  | -41  |
| Shimla                  | 2.7  | -84  | 6.1  | -42  | 9.8  | 3    |
| Sirmaur                 | 2.0  | -93  | 15.3 | -9   | 10.3 | -36  |
| Solan                   | 0.0  | -100 | 7.2  | -55  | 13.5 | -16  |
| Una                     | 60.2 | 116  | 40.6 | 103  | 7.1  | 12   |
| <b>Punjab</b>           |      |      |      |      |      |      |
| Amritsar                | 0.0  | -100 | 0.0  | -100 | 1.6  | -79  |
| Barnala                 | 0.0  | -100 | 0.0  | -100 | 6.5  | 44   |
| Bhatinda                | 0.0  | -100 | 0.0  | -100 | 1.3  | -65  |
| Faridkot                | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Fatehgarh Saheb         | 0.0  | -100 | 0.0  | -100 | 4.5  | -13  |
| Ferozpur                | 0.0  | -100 | 0.1  | -98  | 0.0  | -100 |
| Gurdaspur               | 11.4 | -61  | 16.9 | -7   | 4.5  | -53  |



|                            |      |      |      |      |      |      |
|----------------------------|------|------|------|------|------|------|
| Hoshiarpur                 | 0.0  | -100 | 0.5  | -97  | 0.7  | -92  |
| Jalandhar                  | 0.0  | -100 | 0.7  | -94  | 9.4  | 42   |
| Kapurthala                 | 8.3  | -55  | 0.0  | -100 | 16.5 | 90   |
| Ludhiana                   | 0.0  | -100 | 2.2  | -84  | 2.3  | -56  |
| Mansa                      | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Moga                       | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Muktesar                   | 0.0  | -100 | 0.0  | -100 | 1.6  | 14   |
| Nawashahar                 | 0.0  | -100 | 0.0  | -100 | 2.5  | -71  |
| Patiala                    | 0.0  | -100 | 0.4  | -96  | 7.6  | 36   |
| Ropar                      | 2.8  | -83  | 4.2  | -46  | 3.5  | -40  |
| Sangrur                    | 0.0  | -100 | 0.0  | -100 | 9.2  | 67   |
| Mohali                     | 2.3  | -89  | 0.0  | -100 | 9.3  | 20   |
| TarnTaran                  | 0.0  | -100 | 0.3  | -96  | 4.1  | -31  |
| <b>Haryana,Chd,Delhi</b>   |      |      |      |      |      |      |
| <b>Haryana</b>             |      |      |      |      |      |      |
| Ambala                     | 0.0  | -100 | 9.6  | -45  | 16.0 | 63   |
| Bhiwani                    | 0.0  | -100 | 0.0  | -100 | 13.8 | 453  |
| Chandigarh                 | 0.0  | -100 | 1.9  | -89  | 10.3 | 40   |
| Faridabad                  | 0.0  | -100 | 0.0  | -100 | 0.3  | -96  |
| Fatehabad                  | 0.0  | -100 | 0.0  | -100 | 20.7 | 1116 |
| Gurgaon                    | 0.0  | -100 | 0.0  | -100 | 4.3  | 47   |
| Hissar                     | 0.0  | -100 | 0.0  | -100 | 4.4  | 267  |
| Jhajar                     | 0.0  | -100 | 0.9  | -77  | 1.9  | -31  |
| Jind                       | 0.0  | -100 | 0.0  | -100 | 9.4  | 310  |
| Katihah                    | 0.0  | -100 | 4.8  | -25  | 16.3 | 317  |
| Karnal                     | 0.0  | -100 | 9.8  | -2   | 33.3 | 266  |
| Kurukshetra                | 0.0  | -100 | 0.0  | -100 | 8.9  | 33   |
| Mahendragarh               | 0.0  | -100 | 0.0  | -100 | 8.4  | 146  |
| Mewat                      | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Palwal                     | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Panchkkula                 | 0.0  | -100 | 4.3  | -34  | 5.5  | -2   |
| Panipat                    | 0.0  | -100 | 2.3  | -72  | 3.7  | -52  |
| Rewari                     | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Rohtak                     | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Sirsa                      | 0.0  | -100 | 0.0  | -100 | 0.8  | -60  |
| Sonepat                    | 0.1  | -99  | 0.0  | -100 | 0.1  | -98  |
| Yamunanagar                | 0.1  | -99  | 2.0  | -84  | 43.0 | 214  |
| <b>Delhi</b>               |      |      |      |      |      |      |
| Central Delhi              | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| East Delhi                 | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| New Delhi                  | 0.0  | -100 | 0.0  | -100 | 1.1  | -84  |
| North Delhi                | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| North East Delhi           | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| North West Delhi           | 0.0  | -100 | 0.0  | -100 | 0.3  | -95  |
| South Delhi                | 0.0  | -100 | 0.0  | -100 | 4.6  | -33  |
| South West Delhi           | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| West Delhi                 | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| <b>Jammu &amp; Kashmir</b> |      |      |      |      |      |      |
| Anantnag                   | 11.3 | 13   | 26.0 | 333  | 0.9  | -92  |

|                            |      |      |      |      |       |      |
|----------------------------|------|------|------|------|-------|------|
| Badgam                     | 6.7  | 12   | 22.0 | 307  | 1.0   | -86  |
| Bandipore                  | **   | **   | **   | **   | **    | **   |
| Baramula                   | 6.9  | -20  | 12.3 | 66   | 6.2   | -7   |
| Doda                       | 2.2  | -89  | 21.2 | 149  | 1.4   | -89  |
| Ganderbal                  | 0.0  | -100 | 15.0 | 163  | 9.4   | 49   |
| Jammu                      | 1.7  | -89  | 12.8 | 41   | 1.7   | -62  |
| Kargil                     | **   | **   | **   | **   | **    | **   |
| Kathua                     | 19.6 | 29   | 17.6 | 5    | 0.0   | -100 |
| Kistwar                    | **   | **   | **   | **   | **    | **   |
| Kulgam                     | 5.4  | -62  | 24.0 | 300  | 1.6   | -86  |
| Kupwara                    | 12.3 | 108  | 15.6 | 41   | 6.0   | -55  |
| Ladakh(Leh)                | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Poonch                     | 11.0 | 90   | 0.0  | -100 | 12.5  | 150  |
| Pulwama                    | 7.1  | -3   | 27.4 | 427  | 0.3   | -91  |
| Rajouri                    | 18.2 | -4   | 0.0  | -100 | 7.1   | 42   |
| Ramban                     | 2.3  | -83  | 28.8 | 238  | 2.7   | -79  |
| Reasi                      | 8.8  | -71  | 58.1 | 334  | 1.0   | -93  |
| Samba                      | 0.0  | -100 | 11.2 | 23   | 1.0   | -78  |
| Shopian                    | 4.0  | -49  | 30.0 | 477  | 1.0   | -74  |
| Srinagar                   | 5.9  | -16  | 19.7 | 245  | 4.0   | -36  |
| Udhampur                   | 25.4 | -24  | 10.2 | -24  | 0.6   | -96  |
| <b>East Madhya Pradesh</b> |      |      |      |      |       |      |
| Anuppur                    | 0.0  | -100 | 0.5  | -98  | 185.3 | 1539 |
| Balaghat                   | 0.0  | -100 | 3.9  | -83  | 34.0  | 170  |
| Chhatarpur                 | 0.0  | -100 | 0.4  | -98  | 15.6  | 55   |
| Chindwara                  | 0.0  | -100 | 0.0  | -100 | 11.3  | -9   |
| Damoh                      | 0.0  | -100 | 0.0  | -100 | 16.2  | 84   |
| Dindori                    | 0.0  | -100 | 0.0  | -100 | 97.4  | 1102 |
| Jabalpur                   | 0.0  | -100 | 9.3  | -35  | 16.5  | 79   |
| Katni                      | 0.0  | -100 | 0.0  | -100 | 50.0  | 390  |
| Mandla                     | 0.0  | -100 | 12.9 | -9   | 58.6  | 486  |
| Narsingpur                 | 0.0  | -100 | 8.2  | -51  | 5.0   | -37  |
| Panna                      | 0.0  | -100 | 0.0  | -100 | 37.7  | 550  |
| Rewa                       | 0.0  | -100 | 11.7 | -34  | 142.1 | 2582 |
| Sagar                      | 0.0  | -100 | 0.0  | -100 | 8.5   | -14  |
| Satna                      | 0.0  | -100 | 1.7  | -91  | 81.2  | 1168 |
| Seoni                      | 0.0  | -100 | 1.0  | -94  | 13.3  | 0    |
| Shahdol                    | 0.0  | -100 | 0.0  | -100 | 114.0 | 1627 |
| Sidhi                      | 0.0  | -100 | 0.0  | -100 | 191.2 | 2593 |
| Singrauli                  | 0.0  | -100 | 0.0  | -100 | 20.5  | 377  |
| Tikamgarh                  | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Umaria                     | 0.0  | -100 | 9.6  | -49  | 65.2  | 586  |
| <b>West Madhya Pradesh</b> |      |      |      |      |       |      |
| Alirajpur                  | 0.0  | -100 | 1.9  | -84  | 2.3   | -80  |
| Asoknagar                  | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Badwani                    | 0.0  | -100 | 0.0  | -100 | 2.5   | -84  |
| Betul                      | 0.0  | -100 | 13.2 | -26  | 3.5   | -81  |
| Bhind                      | 0.0  | -100 | 0.0  | -100 | 0.3   | -99  |
| Bhopal                     | 5.3  | -76  | 0.0  | -100 | 4.3   | -57  |

|                           |      |      |      |      |       |      |
|---------------------------|------|------|------|------|-------|------|
| Burhanpur                 | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Datia                     | 0.0  | -100 | 0.0  | -100 | 12.9  | -23  |
| Dewas                     | 4.0  | -82  | 7.2  | -47  | 1.2   | -90  |
| Dhar                      | 6.9  | -78  | 4.2  | -72  | 0.0   | -100 |
| Guna                      | 0.0  | -100 | 1.0  | -91  | 13.6  | 46   |
| Gwalior                   | 0.0  | -100 | 0.0  | -100 | 0.1   | -99  |
| Harda                     | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Hosangabad                | 0.0  | -100 | 16.7 | 3    | 8.3   | -32  |
| Indore                    | 2.0  | -93  | 3.8  | -79  | 11.0  | 3    |
| Jhabua                    | 13.2 | -51  | 12.9 | 13   | 1.0   | -92  |
| Khandwa                   | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Khargone                  | 0.0  | -100 | 1.7  | -89  | 0.0   | -100 |
| Mandsaur                  | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Morena                    | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Neemuch                   | 0.0  | -100 | 2.0  | -87  | 1.7   | -80  |
| Raisen                    | 0.0  | -100 | 3.2  | -79  | 4.2   | -59  |
| Rajgarh                   | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Ratlam                    | 2.6  | -90  | 5.8  | -66  | 4.3   | -71  |
| Sehore                    | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Shajapur                  | 2.4  | -87  | 3.0  | -76  | 1.3   | -90  |
| Sheopur Kalani            | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Shivpuri                  | 0.0  | -100 | 0.0  | -100 | 0.5   | -96  |
| Ujjain                    | 2.6  | -90  | 3.9  | -74  | 0.1   | -99  |
| Vidisha                   | 0.0  | -100 | 0.6  | -94  | 0.4   | -94  |
| <b>Chhattisgarh</b>       |      |      |      |      |       |      |
| Bastar                    | 0.0  | -100 | 0.0  | -100 | 90.0  | 397  |
| Bijapur                   | 0.0  | -100 | 0.6  | -98  | 66.9  | 170  |
| Bilaspur                  | 0.0  | -100 | 7.3  | -65  | 126.7 | 1356 |
| Dantewara                 | 0.0  | -100 | 3.8  | -89  | 80.3  | 265  |
| Dhamtari                  | 0.0  | -100 | 0.0  | -100 | 69.8  | 540  |
| Durg                      | 0.0  | -100 | 2.0  | -91  | 89.9  | 696  |
| Janjgir                   | 0.0  | -100 | 0.0  | -100 | 60.8  | 641  |
| Jashpurnagar              | 1.1  | -97  | 0.1  | -99  | 20.6  | 30   |
| Kanker                    | 0.0  | -100 | 0.0  | -100 | 70.3  | 323  |
| Korba                     | 0.0  | -100 | 3.3  | -83  | 115.8 | 1295 |
| Koriya                    | 0.0  | -100 | 2.0  | -83  | 120.8 | 1676 |
| Kawardha                  | 0.0  | -100 | 7.2  | -71  | 140.8 | 1083 |
| Mahasumund                | 0.0  | -100 | 1.1  | -94  | 43.4  | 221  |
| Narayanpur                | 0.0  | -100 | 2.1  | -93  | 124.3 | 401  |
| Raigarh                   | 0.0  | -100 | 0.0  | -100 | 36.9  | 167  |
| Raipur                    | 2.5  | -90  | 0.8  | -96  | 44.7  | 252  |
| Rajandgaon                | 0.0  | -100 | 5.4  | -77  | 35.1  | 160  |
| Surguja                   | 0.0  | -100 | 0.3  | -98  | 22.0  | 110  |
| <b>East Uttar Pradesh</b> |      |      |      |      |       |      |
| Allahabad                 | 1.2  | -93  | 4.3  | -77  | 110.2 | 1212 |
| Ambedkar Nagar            | 5.0  | -81  | 0.0  | -100 | 105.0 | 881  |
| Azamgarh                  | 0.0  | -100 | 0.0  | -100 | 95.7  | 1176 |
| Bahraich                  | 16.1 | -50  | 0.0  | -100 | 48.5  | 199  |
| Ballia                    | 28.3 | 45   | 0.0  | -100 | 47.6  | 376  |



|                           |      |      |      |      |       |      |
|---------------------------|------|------|------|------|-------|------|
| Balrampur                 | 14.5 | -63  | 0.0  | -100 | 80.1  | 445  |
| Banda                     | 0.0  | -100 | 0.0  | -100 | 57.8  | 345  |
| Barabanki                 | 4.0  | -86  | 0.1  | -99  | 64.9  | 247  |
| Basti                     | 3.6  | -88  | 0.0  | -100 | 130.4 | 793  |
| Chandauli                 | 11.0 | -52  | 0.0  | -100 | 107.2 | 2002 |
| Deoria                    | 4.0  | -87  | 1.0  | -97  | 99.3  | 720  |
| Faizabad                  | 2.3  | -92  | 0.0  | -100 | 100.4 | 865  |
| Farrukhabad               | 0.0  | -100 | 5.5  | -78  | 8.2   | -49  |
| Fatehpur                  | 0.4  | -98  | 0.0  | -100 | 43.7  | 172  |
| Gazipur                   | 0.0  | -100 | 0.0  | -100 | 71.4  | 651  |
| Gonda                     | 3.7  | -90  | 0.0  | -100 | 81.7  | 417  |
| Gorakhpur                 | 39.6 | 10   | 0.0  | -100 | 122.5 | 498  |
| Hardoi                    | 12.8 | -39  | 0.0  | -100 | 22.7  | -3   |
| Jaunpur                   | 0.6  | -97  | 0.0  | -100 | 69.3  | 653  |
| Kannauj                   | 3.1  | -83  | 17.1 | -45  | 15.2  | -29  |
| Kanpur City               | 0.0  | -100 | 0.0  | -100 | 54.7  | 132  |
| Kanpur Dehat              | 1.0  | -96  | 0.4  | -98  | 3.2   | -78  |
| Kaushambi                 | 0.0  | -100 | 0.0  | -100 | 40.5  | 232  |
| Kheri                     | 12.0 | -56  | 1.9  | -95  | 68.1  | 224  |
| Kushi nagar               | 9.5  | -80  | 0.0  | -100 | 73.0  | 284  |
| Lucknow                   | 7.0  | -72  | 0.7  | -97  | 53.1  | 184  |
| Maharajganj               | 29.3 | -13  | 0.0  | -100 | 165.0 | 682  |
| Mau                       | 31.0 | 9    | 0.0  | -100 | 92.7  | 679  |
| Mirzapur                  | 1.0  | -95  | 0.0  | -100 | 58.3  | 611  |
| Pratapgarh                | 0.0  | -100 | 1.3  | -91  | 133.3 | 1002 |
| RaiBareilly               | 2.3  | -90  | 0.0  | -100 | 40.6  | 89   |
| Sahuji Maharajnagar       | 0.0  | -100 | 0.0  | -100 | 75.5  | 655  |
| Sant Kabirnagar           | 33.0 | 10   | 0.0  | -100 | 133.0 | 857  |
| Sant Ravidas Nagar        | 0.0  | -100 | 0.0  | -100 | 117.0 | 2194 |
| Shrawasti                 | 29.2 | -9   | 0.0  | -100 | 64.3  | 297  |
| Sidharthnagar             | 38.1 | 25   | 0.0  | -100 | 135.9 | 794  |
| Sitapur                   | 12.3 | -51  | 1.3  | -96  | 54.2  | 175  |
| Sonbhadra                 | 0.0  | -100 | 0.0  | -100 | 39.8  | 398  |
| Sultanpur                 | 3.9  | -82  | 1.8  | -91  | 66.1  | 301  |
| Unnao                     | 12.7 | -53  | 0.0  | -100 | 57.5  | 129  |
| Varanasi                  | 2.3  | -91  | 11.3 | -44  | 83.5  | 971  |
| <b>West Uttar Pradesh</b> |      |      |      |      |       |      |
| Agra                      | 0.0  | -100 | 0.0  | -100 | 4.3   | -44  |
| Aligarh                   | 0.0  | -100 | 0.0  | -100 | 11.7  | 7    |
| Auraiya                   | 0.0  | -100 | 5.0  | -79  | 0.5   | -97  |
| Badaun                    | 0.0  | -100 | 4.4  | -85  | 26.0  | 29   |
| Baghpat                   | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Bareilly                  | 0.0  | -100 | 0.2  | -99  | 16.3  | -18  |
| Bijnor                    | 0.0  | -100 | 0.0  | -100 | 19.0  | 43   |
| Bulandsahar               | 0.0  | -100 | 0.0  | -100 | 11.0  | 20   |
| Etah                      | 0.0  | -100 | 0.0  | -100 | 8.1   | -49  |
| Etawah                    | 0.0  | -100 | 0.0  | -100 | 0.3   | -98  |
| Firozabad                 | 0.0  | -100 | 0.0  | -100 | 17.8  | 52   |
| GBNagar                   | 0.0  | -100 | 0.0  | -100 | 9.0   | -41  |

|                    |      |      |      |      |      |      |
|--------------------|------|------|------|------|------|------|
| Ghaziabad          | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Hamirpur           | 0.0  | -100 | 0.0  | -100 | 23.0 | 180  |
| Jalaun             | 0.0  | -100 | 0.0  | -100 | 7.0  | -51  |
| Jhansi             | 0.0  | -100 | 0.0  | -100 | 15.0 | 22   |
| Jotiba Phule Nagar | 0.0  | -100 | 0.0  | -100 | 18.0 | 28   |
| Kanshiramnagar     | 0.0  | -100 | 0.0  | -100 | 30.0 | 36   |
| Lalitpur           | 0.0  | -100 | 0.0  | -100 | 0.5  | -95  |
| Mahamaya Nagar     | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Mahoba             | 0.0  | -100 | 0.0  | -100 | 7.6  | 0    |
| Mainpuri           | 0.0  | -100 | 0.0  | -100 | 0.5  | -97  |
| Mathura            | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Meerut             | 0.0  | -100 | 0.0  | -100 | 1.4  | -87  |
| Moradabad          | 0.5  | -97  | 3.4  | -84  | 27.1 | 91   |
| Muzzaffarnagar     | 0.0  | -100 | 5.2  | -64  | 7.0  | -38  |
| Pilibhit           | 0.0  | -100 | 0.0  | -100 | 20.5 | 27   |
| Rampur             | 0.0  | -100 | 0.0  | -100 | 32.6 | 189  |
| Saharanpur         | 0.0  | -100 | 0.0  | -100 | 32.7 | 175  |
| Shahjahanpur       | 0.5  | -98  | 0.0  | -100 | 25.1 | 27   |
| <b>Uttarakhand</b> |      |      |      |      |      |      |
| Almora             | 0.4  | -98  | 1.9  | -92  | 27.5 | 37   |
| Bageshwar          | 21.3 | -13  | 3.0  | -87  | 29.0 | 44   |
| Chamoli            | 33.7 | 115  | 3.3  | -71  | 24.4 | 50   |
| Champawat          | 13.0 | -60  | 0.0  | -100 | 56.0 | 54   |
| Dehradun           | 66.8 | 118  | 9.5  | -64  | 7.7  | -64  |
| Garhwal Pauri      | 7.7  | -68  | 0.3  | -99  | 5.7  | -75  |
| Garhwal Tehri      | 2.6  | -85  | 1.2  | -93  | 3.9  | -78  |
| Haridwar           | 2.9  | -87  | 5.9  | -44  | 6.1  | -53  |
| Nainital           | 18.8 | -36  | 3.6  | -89  | 52.8 | 48   |
| Pithorgarh         | 22.6 | -37  | 9.9  | -56  | 28.8 | 22   |
| Rudraprayag        | 40.7 | 64   | 7.8  | -64  | 15.2 | -14  |
| Udham Sing Nagar   | 1.0  | -97  | 11.2 | -66  | 42.3 | 66   |
| Uttarkashi         | 37.9 | 30   | 5.9  | -71  | 2.2  | -89  |
| <b>Bihar</b>       |      |      |      |      |      |      |
| Araria             | 56.7 | -3   | 0.0  | -100 | 30.6 | 101  |
| Arwal              | 11.1 | -59  | 0.0  | -100 | 10.8 | 28   |
| Aurangabad         | 8.2  | -62  | 7.3  | -59  | 18.6 | 95   |
| Banka              | 6.4  | -89  | 0.0  | -100 | 30.4 | 81   |
| Begusarai          | 4.2  | -88  | 0.0  | -100 | 38.7 | 249  |
| Bhabua             | 0.0  | -100 | 0.0  | -100 | 36.1 | 335  |
| Bhagalpur          | 18.0 | -67  | 0.6  | -99  | 8.4  | -57  |
| Bhojpur            | 6.2  | -76  | 0.0  | -100 | 34.1 | 337  |
| Buxar              | 5.6  | -64  | 0.0  | -100 | 8.2  | -4   |
| Darbhanga          | 26.6 | -35  | 3.9  | -90  | 94.3 | 872  |
| East Champaran     | 83.3 | 129  | 0.0  | -100 | 94.4 | 565  |
| Gaya               | 1.6  | -95  | 1.1  | -96  | 7.7  | 0    |
| Gopalganj          | 39.5 | 31   | 0.0  | -100 | 83.0 | 669  |
| Jahanabad          | 9.8  | -65  | 0.0  | -100 | 14.4 | 41   |
| Jamui              | 0.0  | -100 | 8.6  | -75  | 16.2 | 16   |
| Kathihar           | 35.2 | -54  | 4.5  | -89  | 25.9 | 109  |

|                       |      |      |      |      |       |      |
|-----------------------|------|------|------|------|-------|------|
| Khagadia              | 6.7  | -88  | 3.8  | -91  | 14.1  | 11   |
| Kishanganj            | 79.6 | 13   | 0.0  | -100 | 13.1  | -41  |
| Lakhisarai            | 12.7 | -76  | 0.0  | -100 | 26.1  | 80   |
| Madhepura             | 10.8 | -81  | 6.7  | -82  | 10.7  | -31  |
| Madhubani             | 75.4 | 120  | 0.0  | -100 | 78.4  | 485  |
| Monghyar              | 34.0 | -35  | 0.0  | -100 | 38.0  | 162  |
| Muzaffarpur           | 17.0 | -54  | 0.2  | -99  | 34.3  | 129  |
| Nalanda               | 18.6 | -42  | 2.0  | -92  | 2.4   | -75  |
| Nawada                | 4.1  | -88  | 1.8  | -94  | 2.8   | -70  |
| Patna                 | 21.8 | -46  | 3.1  | -90  | 21.4  | 87   |
| Purnea                | 1.9  | -97  | 11.0 | -75  | 10.4  | -32  |
| Rohtas                | 0.0  | -100 | 3.7  | -84  | 24.7  | 184  |
| Saharsha              | 4.0  | -94  | 0.0  | -100 | 6.0   | -57  |
| Samstipur             | 21.8 | -56  | 3.4  | -92  | 38.8  | 234  |
| Saran                 | 35.1 | -9   | 4.2  | -86  | 52.4  | 394  |
| Sheikpura             | 39.9 | 23   | 0.0  | -100 | 14.8  | 37   |
| Sheohar               | 73.0 | 110  | 0.0  | -100 | 180.2 | 1308 |
| Sitamarhi             | 32.9 | -5   | 0.0  | -100 | 119.0 | 829  |
| Siwan                 | 21.2 | -41  | 0.0  | -100 | 66.4  | 672  |
| Supaul                | 24.6 | -46  | 0.0  | -100 | 45.2  | 270  |
| Vaishali              | 45.7 | -2   | 0.3  | -99  | 23.3  | 60   |
| West Champaran        | 76.6 | 92   | 0.0  | -100 | 167.2 | 883  |
| <b>Jharkhand</b>      |      |      |      |      |       |      |
| Bokaro                | 0.0  | -100 | 2.2  | -93  | 28.6  | 46   |
| Chatra                | 0.0  | -100 | 0.0  | -100 | 28.5  | 138  |
| Deoghar               | 2.6  | -96  | 3.2  | -90  | 27.9  | 126  |
| Dhanbad               | 5.6  | -91  | 0.8  | -98  | 25.9  | 34   |
| Dumka                 | 9.7  | -86  | 0.0  | -100 | 49.9  | 101  |
| East Singbhum         | 0.0  | -100 | 37.2 | 52   | 123.9 | 674  |
| Garhwa                | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |
| Giridih               | 3.6  | -94  | 4.2  | -89  | 34.5  | 114  |
| Godda                 | 7.1  | -88  | 0.0  | -100 | 18.7  | 9    |
| Gumla                 | 6.6  | -84  | 25.1 | -4   | 31.9  | 89   |
| Hazaribagh            | 4.3  | -89  | 1.7  | -95  | 67.7  | 450  |
| Jamtara               | 5.4  | -93  | 0.3  | -99  | 10.3  | -44  |
| Khunti                | 0.0  | -100 | 0.0  | -100 | 14.0  | -33  |
| Koderrna              | 1.8  | -96  | 0.0  | -100 | 10.9  | -19  |
| Latehar               | 0.0  | -100 | 0.0  | -100 | 13.0  | 5    |
| Lohardagga            | 0.0  | -100 | 0.0  | -100 | 15.8  | 39   |
| Pakur                 | 1.0  | -99  | 4.7  | -92  | 38.8  | 6    |
| Palamau               | 4.0  | -86  | 4.1  | -77  | 11.5  | -19  |
| Ramgarh               | 0.0  | -100 | 1.8  | -94  | 90.0  | 582  |
| Ranchi                | 0.6  | -99  | 0.0  | -100 | 37.7  | 131  |
| Sahebganj             | 0.0  | -100 | 0.0  | -100 | 27.0  | 18   |
| Saraikelela           | 1.6  | -96  | 0.5  | -98  | 77.0  | 378  |
| Simdega               | 0.3  | -99  | 13.1 | -43  | 26.6  | 84   |
| West Singbhum         | 6.2  | -84  | 19.4 | -15  | 20.2  | 20   |
| <b>East Rajasthan</b> |      |      |      |      |       |      |
| Ajmer                 | 0.0  | -100 | 0.0  | -100 | 0.0   | -100 |

|                       |      |      |     |      |      |      |
|-----------------------|------|------|-----|------|------|------|
| Alwar                 | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Banswara              | 0.0  | -100 | 0.8 | -91  | 0.0  | -100 |
| Baran                 | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Bharatpur             | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Bhilwara              | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Bundi                 | 0.0  | -100 | 0.0 | -100 | 7.5  | 9    |
| Chittorgarh           | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Dausa                 | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Dholpur               | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Dungarpur             | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Jaipur                | 0.0  | -100 | 0.0 | -100 | 4.8  | 45   |
| Jhalawar              | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Jhunjhunu             | 0.0  | -100 | 0.0 | -100 | 16.2 | 603  |
| Karauli               | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Kota                  | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Pratapgarh            | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Rajsamand             | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Sawai Madhopur        | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Sikar                 | 0.0  | -100 | 0.0 | -100 | 4.4  | 142  |
| Sirohi                | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Tonk                  | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Udaipur               | 0.0  | -100 | 0.0 | -100 | 0.1  | -98  |
| <b>West Rajasthan</b> |      |      |     |      |      |      |
| Barmer                | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Bikaner               | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Churu                 | 0.0  | -100 | 0.0 | -100 | 0.9  | -5   |
| Hanumangarh           | 0.0  | -100 | 0.0 | -100 | 6.9  | 1271 |
| 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                | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Pali                  | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Sri Ganganagar        | 0.0  | -100 | 0.0 | -100 | 2.2  | 80   |
| <b>Gujarat Region</b> |      |      |     |      |      |      |
| Ahmedabad             | 1.0  | -92  | 0.0 | -100 | 0.0  | -100 |
| Anand                 | 5.0  | -65  | 0.0 | -100 | 0.0  | -100 |
| Banaskantha           | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Baroda                | 2.5  | -89  | 0.0 | -100 | 1.2  | -88  |
| Broach                | 2.2  | -93  | 0.0 | -100 | 0.0  | -100 |
| DNH                   | 0.6  | -99  | 0.7 | -91  | 0.9  | -93  |
| Dahod                 | 2.4  | -88  | 1.6 | -85  | 1.4  | -85  |
| Daman                 | 0.6  | -99  | 2.0 | -75  | 0.0  | -100 |
| Dangs                 | 60.5 | -17  | 0.5 | -98  | 40.0 | 113  |
| Gandhinagar           | 0.7  | -95  | 0.0 | -100 | 0.0  | -100 |
| Kheda                 | 0.0  | -100 | 0.0 | -100 | 0.0  | -100 |
| Mehsana               | 0.0  | -100 | 0.0 | -100 | 0.2  | -97  |
| Narmada               | 2.7  | -92  | 0.0 | -100 | 2.1  | -82  |
| Navsari               | 0.8  | -99  | 0.0 | -100 | 4.1  | -73  |
| Panchmahal            | 1.7  | -89  | 0.6 | -92  | 0.4  | -96  |



|                              |      |      |      |      |      |      |
|------------------------------|------|------|------|------|------|------|
| Patan                        | 0.3  | -96  | 0.7  | -80  | 0.0  | -100 |
| Sabarkantha                  | 0.0  | -100 | 0.2  | -97  | 2.0  | -73  |
| Surat                        | 1.9  | -96  | 0.0  | -100 | 3.0  | -69  |
| Tapi                         | 1.0  | -98  | 0.0  | -100 | 6.2  | -10  |
| Valsad                       | 1.4  | -98  | 0.5  | -97  | 6.2  | -60  |
| <b>S K &amp; Diu region</b>  |      |      |      |      |      |      |
| Amreli                       | 6.5  | -71  | 4.6  | -36  | 1.1  | -82  |
| Bhavnagar                    | 6.3  | -64  | 4.1  | -43  | 0.0  | -100 |
| Diu                          | 0.0  | -100 | 0.0  | -100 | 0.0  | -100 |
| Jamnagar                     | 0.2  | -98  | 2.6  | -46  | 1.1  | -65  |
| Junagarh                     | 7.8  | -58  | 15.2 | 105  | 0.0  | -100 |
| Kutch                        | 0.0  | -100 | 1.0  | -67  | 0.0  | -99  |
| Porbandar                    | 0.0  | -100 | 2.0  | -66  | 10.6 | 171  |
| Rajkot                       | 3.5  | -76  | 10.1 | 30   | 0.0  | -100 |
| Surendranagar                | 1.8  | -83  | 0.2  | -98  | 0.0  | -100 |
| <b>Maharashtra &amp; Goa</b> |      |      |      |      |      |      |
| <b>Konkan &amp; Goa</b>      |      |      |      |      |      |      |
| Mumbai City                  | 44.0 | -35  | 2.2  | -94  | 0.0  | -100 |
| Mumbai Suburban              | 20.4 | -70  | 4.6  | -87  | 0.0  | -100 |
| North Goa                    | **   | **   | 12.2 | -81  | 40.2 | 34   |
| Raigad                       | 39.0 | -55  | 35.7 | -25  | 11.6 | -64  |
| Ratnagiri                    | 52.0 | -38  | 22.1 | -63  | 13.3 | -61  |
| Sindhudurg                   | 90.6 | 25   | 37.6 | -33  | 45.8 | 42   |
| South Goa                    | **   | **   | 17.8 | -65  | 34.3 | 21   |
| Thane                        | 15.3 | -78  | 19.1 | -40  | 12.6 | -52  |
| <b>Madhya Maharashtra</b>    |      |      |      |      |      |      |
| Ahmednagar                   | 0.6  | -99  | 8.5  | -65  | 7.5  | -66  |
| Dhule                        | 0.0  | -100 | 0.8  | -95  | 1.0  | -93  |
| Jalgaon                      | 0.0  | -100 | 0.1  | -99  | 0.3  | -98  |
| Kolhapur                     | 43.8 | -11  | 28.7 | -38  | 11.7 | -56  |
| Nandurbar                    | 4.7  | -85  | 0.6  | -95  | 5.5  | -65  |
| Nasik                        | 25.0 | -42  | 7.3  | -71  | 15.3 | -23  |
| Pune                         | 10.6 | -79  | 18.0 | -41  | 4.5  | -78  |
| Sangli                       | 45.3 | 8    | 20.3 | -50  | 9.0  | -63  |
| Satara                       | 18.7 | -59  | 21.9 | -38  | 16.1 | -18  |
| Solapur                      | 2.8  | -94  | 4.7  | -85  | 7.4  | -69  |
| <b>Marathwada</b>            |      |      |      |      |      |      |
| Aurangabad                   | 0.3  | -99  | 0.9  | -95  | 3.4  | -84  |
| Beed                         | 0.0  | -100 | 4.0  | -83  | 3.1  | -84  |
| Hingoli                      | 0.6  | -98  | 0.6  | -98  | 2.7  | -87  |
| Jalna                        | 0.5  | -98  | 1.0  | -95  | 6.8  | -69  |
| Latur                        | 0.0  | -100 | 3.3  | -89  | 12.8 | -30  |
| Nanded                       | 0.0  | -100 | 0.6  | -98  | 4.5  | -72  |
| Usmanabad                    | 3.4  | -92  | 5.3  | -82  | 4.3  | -80  |
| Parbhani                     | 0.0  | -100 | 0.5  | -98  | 1.1  | -95  |
| <b>Vidarbha</b>              |      |      |      |      |      |      |
| Akola                        | 0.0  | -100 | 1.0  | -95  | 0.0  | -100 |
| Amraoti                      | 0.0  | -100 | 6.9  | -66  | 1.6  | -91  |
| Bhandara                     | 0.0  | -100 | 0.0  | -100 | 5.9  | -60  |

|  |      |      |       |      |       |     |
|--|------|------|-------|------|-------|-----|
| Buldhana   | 0.0  | -100 | 0.0   | -100 | 0.3   | -98 |
| Chandrapur                                       | 0.0  | -100 | 1.0   | -96  | 3.3   | -73 |
| Gadchiroli                                       | 0.0  | -100 | 0.1   | -99  | 27.7  | 76  |
| Gondia   | 0.0  | -100 | 0.0   | -100 | 43.3  | 290 |
| Nagpur   | 0.0  | -100 | 3.4   | -84  | 2.2   | -84 |
| Wardha   | 0.0  | -100 | 1.6   | -93  | 9.1   | -1  |
| Washim   | 0.0  | -100 | 1.1   | -95  | 6.2   | -70 |
| Yeotmal  | 0.0  | -100 | 0.0   | -99  | 0.4   | -97 |
| <b>Odisha</b>                                    |      |      |       |      |       |     |
| Angul  | 4.6  | -86  | 11.3  | -60  | 86.8  | 254 |
| Balasore   | 0.6  | -99  | 10.1  | -81  | 101.1 | 126 |
| Bargarh  | 0.0  | -100 | 1.7   | -91  | 27.5  | 127 |
| Bhadrak  | 0.0  | -100 | 3.7   | -90  | 115.0 | 149 |
| Bolangir   | 0.0  | -100 | 1.3   | -94  | 16.2  | 12  |
| Boudh  | 0.0  | -100 | 1.3   | -97  | 33.1  | 1   |
| Cuttack  | 18.2 | -55  | 3.8   | -91  | 131.0 | 322 |
| Deogarh  | 1.7  | -94  | 0.0   | -100 | 52.4  | 322 |
| Dhenkanal  | 7.3  | -83  | 10.1  | -72  | 74.5  | 135 |
| Gajapati   | 31.1 | -24  | 21.4  | -48  | 322.7 | 730 |
| Ganjam   | 10.0 | -79  | 9.4   | -84  | 149.6 | 270 |
| Jagatsingpur                                     | 4.3  | -90  | 9.0   | -79  | 104.5 | 209 |
| Jajpur   | 0.0  | -100 | 5.6   | -87  | 113.3 | 217 |
| Jharsuguda                                       | 1.4  | -95  | 9.5   | -55  | 27.4  | 37  |
| Kalahandi  | 0.0  | -100 | 4.8   | -84  | 21.8  | 82  |
| Kandhamal  | 5.4  | -87  | 4.3   | -90  | 148.3 | 351 |
| Kendrapara                                       | 0.0  | -100 | 10.0  | -85  | 106.0 | 160 |
| Keonjhar   | 0.0  | -100 | 11.4  | -65  | 82.8  | 185 |
| Khurda   | 6.1  | -87  | 1.7   | -97  | 116.7 | 207 |
| Koraput  | 1.3  | -97  | 3.3   | -93  | 177.4 | 423 |
| Malkangiri                                       | 6.4  | -77  | 0.0   | -100 | 188.4 | 588 |
| Mayurbhanj                                       | 0.0  | -100 | 13.0  | -65  | 87.3  | 213 |
| Nawapara   | 0.0  | -100 | 0.0   | -100 | 43.5  | 285 |
| Nawarangpur                                      | 0.0  | -100 | 3.7   | -91  | 87.5  | 233 |
| Nayagarh   | 3.9  | -9   | 9.8   | -81  | 132.6 | 233 |
| Puri   | 0.9  | -99  | 20.9  | -63  | 60.2  | 51  |
| Rayagada   | 0.2  | -99  | 11.9  | -67  | 97.2  | 231 |
| Sambalpur  | 0.0  | -100 | 6.0   | -70  | 40.0  | 223 |
| Sonepur  | 0.0  | -100 | 4.7   | -76  | 18.4  | 84  |
| Sundargarh                                       | 0.6  | -98  | 6.4   | -59  | 27.3  | 75  |
| <b>West Bengal &amp; Andaman Nicobar Islands</b> |      |      |       |      |       |     |
| <b>A &amp; N ISLAND</b>                          |      |      |       |      |       |     |
| Nicobar  | 26.5 | -75  | 155.1 | 72   | 72.9  | -11 |
| North & Middle Andaman                           | 26.7 | -76  | 349.4 | 311  | 78.7  | 32  |
| South Andaman                                    | 45.1 | -65  | 306.8 | 249  | 71.1  | 0   |
| <b>GWB</b>                                       |      |      |       |      |       |     |
| Bankura  | 0.6  | -99  | 49.7  | 23   | 19.0  | -7  |
| Birbhum  | 12.1 | -83  | 1.0   | -97  | 7.5   | -67 |
| Burdwan  | 5.0  | -92  | 2.6   | -93  | 15.1  | -30 |
| East Midnapore                                   | 18.0 | -83  | 7.4   | -87  | 86.0  | 94  |

|                          |       |      |      |      |      |     |
|--------------------------|-------|------|------|------|------|-----|
| Hooghly                  | 29.1  | -51  | 27.6 | -23  | 19.6 | -5  |
| Howrah                   | 10.3  | -90  | 0.0  | -100 | 16.8 | -41 |
| Kolkata                  | 43.6  | -53  | 39.5 | -21  | 17.1 | -50 |
| Murshidabad              | 16.9  | -78  | 1.0  | -98  | 10.2 | -67 |
| Nadia                    | 45.0  | -19  | 14.3 | -52  | 37.3 | 27  |
| 24 Pargana (N)           | 30.2  | -61  | 17.0 | -55  | 23.7 | -14 |
| Purulia                  | 5.7   | -90  | 10.0 | -70  | 41.4 | 107 |
| 24 Pargana (S)           | 33.1  | -65  | 25.8 | -60  | 78.9 | 54  |
| West Midnapore           | 0.4   | -99  | 3.0  | -92  | 52.8 | 153 |
| <b>SHWB &amp; Sikkim</b> |       |      |      |      |      |     |
| Cooch Behar              | 116.0 | 26   | 0.0  | -100 | 21.5 | -38 |
| Darjeeling               | 71.0  | -30  | 5.7  | -89  | 39.3 | 41  |
| East Sikkim              | 61.8  | -6   | 0.0  | -100 | 14.8 | -75 |
| Jalpaiguri               | 104.6 | 12   | 0.0  | -100 | 29.4 | -29 |
| Malda                    | 37.8  | -55  | 0.2  | -99  | 12.2 | -48 |
| North Dinajpur           | 8.5   | -93  | **   | **   | 2.2  | -95 |
| North Sikkim             | 31.0  | -56  | 1.0  | -99  | 25.2 | -68 |
| South Dinajpur           | 38.5  | -40  | 0.0  | -100 | 28.5 | 3   |
| South Sikkim             | 85.7  | 30   | 0.0  | -100 | 28.6 | -52 |
| West Sikkim              | 0.0   | -100 | 4.5  | -95  | 47.0 | -40 |
| <b>Karnataka</b>         |       |      |      |      |      |     |
| <b>Coastal Karnataka</b> |       |      |      |      |      |     |
| Dakshin Kannada          | 53.0  | -30  | 59.7 | -15  | 33.5 | -36 |
| Udupi                    | 46.8  | -52  | 62.9 | -14  | 35.7 | -20 |
| Uttar Kannada            | 53.4  | -9   | 24.7 | -54  | 28.7 | -17 |
| <b>N I Karnataka</b>     |       |      |      |      |      |     |
| Bagalkote                | 10.1  | -76  | 8.8  | -78  | 16.6 | -31 |
| Belgaum                  | 28.8  | -29  | 28.9 | -29  | 13.3 | -43 |
| Bidar                    | 0.0   | -100 | 0.3  | -99  | 12.1 | -38 |
| Bijapur                  | 0.2   | -99  | 14.4 | -65  | 3.5  | -85 |
| Dharwad                  | 46.4  | 20   | 20.7 | -45  | 18.7 | -33 |
| Gadag                    | 45.0  | 3    | 32.8 | -20  | 12.3 | -55 |
| Gulbarga                 | 1.7   | -96  | 16.9 | -61  | 4.0  | -79 |
| Haveri                   | 47.8  | 30   | 39.2 | 16   | 24.7 | -21 |
| Koppal                   | 24.1  | -42  | 8.2  | -77  | 3.2  | -87 |
| Raichur                  | 2.0   | -95  | 22.9 | -41  | 0.4  | -98 |
| Yadgir                   | 1.4   | -97  | 23.7 | -45  | 3.2  | -87 |
| <b>S I Karnataka</b>     |       |      |      |      |      |     |
| Bangalore Rural          | 100.8 | 120  | 84.0 | 50   | 53.2 | 35  |
| Bangalore Urban          | 104.0 | 105  | 62.7 | 24   | 74.2 | 117 |
| Bellary                  | 42.9  | 6    | 0.0  | -100 | 12.3 | -50 |
| Chamarajnagar            | 37.3  | 2    | 39.1 | -8   | 21.2 | -36 |
| Chichballapur            | 29.6  | -30  | 20.3 | -60  | 6.4  | -83 |
| Chickmagalur             | 121.9 | 146  | 34.5 | -27  | 15.8 | -57 |
| Chitradurga              | 82.9  | 111  | 18.3 | -52  | 22.8 | -16 |
| Davangere                | 79.9  | 109  | 35.0 | -12  | 48.5 | 61  |
| Hassan                   | 142.8 | 265  | 24.0 | -45  | 25.3 | -27 |
| Kodagu                   | 57.9  | 11   | 43.2 | -20  | 16.0 | -67 |
| Kolar                    | 53.0  | 25   | 35.9 | -20  | 19.7 | -44 |

|                    |       |      |       |      |       |     |
|--------------------|-------|------|-------|------|-------|-----|
| Mandya             | 116.7 | 201  | 52.8  | 21   | 40.6  | 12  |
| Mysore             | 64.3  | 97   | 28.9  | -27  | 45.0  | 20  |
| Ramnagara          | 113.5 | 117  | 52.1  | 1    | 43.2  | 5   |
| Shimoga            | 101.6 | 156  | 28.0  | -36  | 17.4  | -46 |
| Tumkur             | 85.5  | 96   | 40.3  | -20  | 17.4  | -45 |
| <b>Kerala</b>      |       |      |       |      |       |     |
| Alappuzha          | 43.4  | -43  | 70.3  | -9   | 38.6  | -49 |
| Kannur             | 6.3   | -91  | 19.2  | -66  | 35.7  | -33 |
| Ernakulam          | 100.1 | 18   | 79.3  | 18   | 51.8  | -26 |
| Idukki             | 151.4 | 58   | 65.4  | -18  | 65.2  | -20 |
| Kasaragod          | 1.0   | -98  | 24.1  | -64  | 80.0  | 39  |
| Kollam             | 91.9  | 38   | 134.6 | 78   | 46.4  | -47 |
| Kottayam           | 116.0 | 45   | 92.6  | 24   | 70.5  | -7  |
| Kozhikode          | 36.2  | -58  | 22.2  | -62  | 106.1 | 73  |
| Malappuram         | 100.3 | 39   | 99.4  | 62   | 65.3  | -10 |
| Palakkad           | 79.2  | 29   | 53.2  | -3   | 69.0  | 14  |
| Pathanamthitta     | 95.6  | 12   | 93.5  | 29   | 55.8  | -32 |
| Thiruvananthapuram | 66.8  | 21   | 70.4  | 39   | 29.2  | -53 |
| Thrissur           | 91.3  | 6    | 66.1  | -8   | 106.8 | 60  |
| Wynad              | 83.8  | 41   | 49.5  | 3    | 40.4  | -14 |
| <b>Tamil Nadu</b>  |       |      |       |      |       |     |
| Ariyalur           | 11.8  | -68  | 11.3  | -76  | 30.5  | -5  |
| Chennai            | 15.0  | -63  | 3.0   | -93  | 4.9   | -84 |
| Coimbatore         | 52.4  | 133  | 25.6  | 4    | 29.4  | -9  |
| Cuddalore          | 25.9  | -30  | 3.8   | -90  | 12.3  | -69 |
| Dharmapuri         | 53.9  | 21   | 103.0 | 120  | 24.3  | -40 |
| Dindigul           | 58.5  | 65   | 15.5  | -57  | 25.5  | -38 |
| Erode              | 70.0  | 133  | 35.4  | 2    | 25.3  | -21 |
| Kanchipuram        | 15.4  | -68  | 9.8   | -72  | 2.2   | -93 |
| Kanyakumari        | 5.8   | -84  | 8.0   | -80  | 27.8  | -39 |
| Karikal            | **    | **   | 0.0   | -100 | 6.6   | -84 |
| Karur              | 27.3  | 1    | 7.2   | -78  | 6.2   | -81 |
| Krishnagiri        | 48.9  | -8   | 56.1  | 15   | 23.5  | -38 |
| Madurai            | 30.8  | -17  | 39.0  | -4   | 27.7  | -37 |
| Nagapattinam       | 0.5   | -98  | 7.4   | -80  | 29.0  | -13 |
| Namakkal           | 52.7  | 55   | 60.7  | 69   | 6.6   | -82 |
| Nilgiris           | 26.5  | -34  | 29.3  | -31  | 50.5  | 12  |
| Perambalur         | 17.0  | -39  | 48.3  | 18   | 19.7  | -57 |
| Puducherry         | **    | **   | 11.2  | -70  | 21.4  | -44 |
| Pudukottai         | 0.0   | -100 | 13.2  | -61  | 42.9  | 29  |
| Ramanathapuram     | 1.5   | -92  | 20.0  | -14  | 21.8  | -38 |
| Salem              | 99.3  | 145  | 70.7  | 57   | 27.1  | -38 |
| Sivaganga          | 20.1  | -29  | 40.6  | 22   | 34.2  | -21 |
| Thanjavur          | 1.2   | -96  | 16.7  | -55  | 38.2  | 22  |
| Theni              | 24.7  | 2    | 32.3  | 38   | 32.7  | -13 |
| Tirunelveli        | 4.1   | -74  | 33.5  | 90   | 25.4  | -15 |
| Tirupur            | 56.7  | 123  | 14.7  | -48  | 24.5  | -22 |
| Tiruvallur         | 26.5  | -40  | 10.0  | -74  | 2.5   | -92 |
| Tiruvannamalai     | 67.6  | 57   | 34.5  | -21  | 9.7   | -76 |



|                               |      |      |      |      |       |     |
|-------------------------------|------|------|------|------|-------|-----|
| Tiruvarur                     | 1.4  | -95  | 23.2 | -33  | 24.5  | -25 |
| Toothukudi                    | 5.0  | -56  | 22.9 | 36   | 17.5  | -43 |
| Trichy                        | 22.6 | -29  | 12.3 | -71  | 7.7   | -80 |
| Vellore                       | 43.3 | -2   | 15.0 | -64  | 15.7  | -55 |
| Villupuram                    | 58.4 | 54   | 37.4 | -9   | 5.2   | -84 |
| Virudhunagar                  | 13.4 | -51  | 37.0 | 25   | 4.6   | -88 |
| <b>Andhra Pradesh</b>         |      |      |      |      |       |     |
| <b>Coastal Andhra Pradesh</b> |      |      |      |      |       |     |
| East Godavari                 | 1.2  | -98  | 22.3 | -63  | 46.0  | 9   |
| Guntur                        | 6.5  | -85  | 12.3 | -68  | 2.2   | -91 |
| Krishna                       | 8.2  | -83  | 26.7 | -41  | 3.1   | -91 |
| Nellore                       | 8.4  | -77  | 2.2  | -94  | 8.6   | -74 |
| Prakasam                      | 13.7 | -67  | 10.7 | -75  | 2.6   | -91 |
| Sirkakulam                    | 6.3  | -87  | 23.7 | -61  | 185.6 | 363 |
| Visakhapatnam                 | 2.7  | -94  | 23.7 | -64  | 147.3 | 261 |
| Vizianagram                   | 3.9  | -92  | 14.3 | -74  | 224.7 | 484 |
| West Godavari                 | 34.2 | -30  | 21.1 | -64  | 19.2  | -57 |
| <b>Rayalaseema</b>            |      |      |      |      |       |     |
| Anantapur                     | 14.3 | -60  | 18.7 | -53  | 11.2  | -54 |
| Chittoor                      | 23.4 | -43  | 12.7 | -69  | 14.3  | -53 |
| Cuddapah                      | 4.7  | -86  | 15.2 | -62  | 2.8   | -88 |
| Kurnool                       | 4.9  | -87  | 10.6 | -70  | 1.0   | -95 |
| <b>Telangana</b>              |      |      |      |      |       |     |
| Adilabad                      | 2.4  | -92  | 2.2  | -92  | 3.0   | -80 |
| Hyderabad                     | 10.6 | -72  | 4.8  | -85  | 3.5   | -80 |
| Karimnagar                    | 0.0  | -100 | 1.1  | -97  | 4.0   | -71 |
| Khammam                       | 7.7  | -78  | 7.1  | -82  | 15.1  | -39 |
| Mehabubnagar                  | 0.7  | -98  | 8.8  | -73  | 2.2   | -87 |
| Medak                         | 0.2  | -99  | 0.0  | -100 | 9.2   | -37 |
| Nalgonda                      | 3.3  | -91  | 18.3 | -51  | 1.2   | -95 |
| Nizamabad                     | 0.0  | -100 | 1.9  | -94  | 3.9   | -68 |
| Rangareddy                    | 1.8  | -95  | 3.6  | -90  | 8.9   | -52 |
| Warangal                      | 6.2  | -79  | 2.5  | -92  | 4.8   | -71 |

### Legends

|  |                                  |    |                                |
|--|----------------------------------|----|--------------------------------|
|  | (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             |

## **Annexure II**

### **List of varieties**

#### **Tamil Nadu**

**Late Samba/ Thaladi rice:** ADT 38, ADT 46, ADT 49, Improved white Ponni, IR 20, ASD 19, Paiyur1, TRY 1, TRY 3, CO 48, CO 49, BPT 5204 and CO 50

**Direct seeded rice:** (White Ponni or ADT 39)

#### **Assam**

**Green gram:** T-44, Kopergaon, K-851, ML-56, ML-131 etc.

**Black gram :** T-9, T-27, Pant U-19, T-122.

**Radish :** Pusa Deshi, Pusa Chetki, Pusa Himani

**Cauliflower :** Improved Japanese, Pusa Synthetic, Pusa Snowhall and Main Crop Patna.

Early maturity Cabbage varieties : Golden Acre, Pride of India, Pusa Mukht (Sel – 8).

**Early maturity Knol Khol :** White Vienna.

**Winter brinjal :** Pusa Kranti, Pusa Purple Long, Pusa Purple Round, Pusa Vairab, Pant Samrat

#### **Meghalaya**

**Pigeon pea:** short duration : UPAS-120, ICPL 87. long duration WB 20, Pusa 9 & Sarita.

**Cabbage:** H-139, Pride of India

**Cauliflower:** Meghalaya Local

**Carrot:** New Karoda, Nantesh

**Radish:** Local genotype

**Broccoli:** Puspa, Aiswarya

**French bean:** Naga Local

**Pea:** Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

**Potato:** Kufri Joyti, Kufri Megha, Kufri Giriraj, Kufri Girdhari, Kufri Himsona, Kufri Himalini.

**Pea:** Arkel (for vegetables), TRC P8, TRC P9, Prakash, Rachna.

#### **Tripura**

**Tomato:** Trishul, Allrounder, T- 1408, T- 1458, Anup.

**Cauliflower:** CFL- 4048, Pusa early synthetic, Kamaya, Suhasihi.

**Cabbage:** BC- 76, Pusa Drum Head, Pusa Synthetic.

**Broccoli:** Everest, Ayeshwaria.

#### **Odisha**

**Sesame:** Kanak, Kalika, Uma, Usha, Tilotama, Nilima, Prachi

**Greengram:** K-851, PDM-11, PDM-54, OUM-11-5

**Blackgram:** T-9, Pant U-11, Pant U-19, Pant U-30

**Cowpea:** SEB-2, Pusa Barsati Niger: Deomali, Niger-1 and for Okra: Utkal Gourav.

#### **West Bengal**

**Banana:** Mortoman, Chapa, Kathali, Singapuri.

**Tomato:** Avinash-2, 448.

**Cabbage:** Pride of India, Pusa early, Kranti.

**Cauliflower:** Jawhar moti, Bharat Jyoti, Early banaras

#### **Bihar**

**Shakarkand:** Rajendra Shakarkand- 5, Rajendra Shakarkand-35, Rajendra Shakarkand-43, Rajendra Shakarkand-47, Kalmegh and Rajendra Shakarkand-92.

**Pigeon Pea:** arhar: Bahar, Pusa 9, Narendra Arhar 1

**Urd:** T-9, Pant U-19, Pant Urd 31, PDU-1

**Radish:** Pusa Chetki, Pusa Himani, Pusa Rashmi, Japani Saphed

**Pointed gourd:** Rajendra Parwal-1, Rajendra parwal-2, FP1 and 3

#### **Jharkhand:**

**Urd:** T 9, Pant U 19, 30, 35 and Birsa urd 1

**Moong:** Pusa Vishal, S M L 668, K 885, P S 16, Pant Moong 2 and P D M 11.

**Arhar:** Birsa Arhar (210 days), Bahar (240 Days) and ICPH 2671 (210 days),

**Maize:** short duration variety: Birsa Vikas Maize-2 and medium duration variety: Birsa Maize-1.

### **Madhya Pradesh**

**Gram:** JG-130, JG-11, JG-315, JG-16

**Wheat:** Sujata, HW-2004, HI-1500

**Winter Sugarcane:** KJN 86-572, KJN 86-141

**Green Pea:** Arkel, PSM-3

### **Jammu & Kashmir**

**Berseem:** Mescavi, Pusa Giant, BL-1 and Vardan

### **Uttarakhand**

**Pea:** VL Ageti Mater-7, Vivel Mater-10, Pant Subjee Mater-3, Azad Mater-3 and Arkel

**Potato:** Kufri- Jyoti, Ashok, Anand

**Toria :** Pant Toria-30, 303, 507 or local varieties.

### **Himachal Pradesh**

**Peas:** Palam Triloki, Arkel, VL-7 and Matar Ageta

**Late variety of Cauliflower:** broccoli

### **East Uttar Pradesh**

**Cabbage:** Imprabad Japani, Pusa chipali and Pusa kartiki

**Radish:** Japani white, Pusa chetakij, Hisar Muli No.1 and kalyanpur-1

**Toria:** T-9, T-36, Pant -30,303, B-9

**Potato:** Kuferi - Chandramukhi, Bahar

**Mustard:** Basati, Maya, Kanti, Urvashi, Narendra, Swarna-8, Narendra Ageti-4

**Ageti Matar:** Kashi - Nandini,Uday, Mukti, Arkel, Azad-3

### **West Uttar Pradesh:**

**Toria:** Sangam, TL-17, 67

**Ageti matar:** Azad P-3, Arkel

### **Maharashtra**

#### **Madhya Maharashtra**

**rabi jowar:** Selection-3, Phule Mauli, Phule Anuradha in light soil, Phule Chitra, Maldandi-35-1 in medium soil and Phule Vasudha, Phule Yashodha in black soil

**Safflower:** Bhima or Phule Kusuma

#### **Marathwada**

**Jowar:** Parbhani Moti or Parbhani Jyoti.

### **Gujarat:**

**Pea:** Pusa Pragati.

**Carrot:** Pusa Rudhira and Pusa Kesar.