



National Agromet Advisory Service Bulletin



Friday 7th August 2015
(For the period 7th to 11th August 2015)

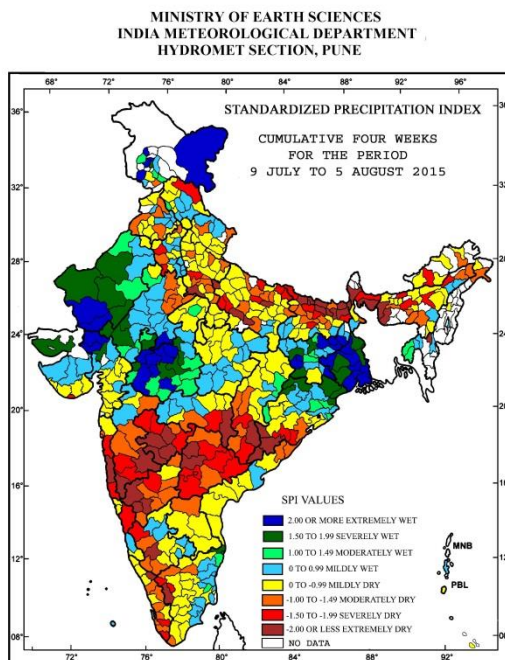


Issued by
National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.

Monsoon Watch

- The southwest monsoon was active over West Madhya Pradesh, Sub-Himalayan West Bengal & Sikkim, Marathwada, South Interior Karnataka and Andaman & Nicobar Islands during past 24 hours ending at 0830 hours IST of yesterday.

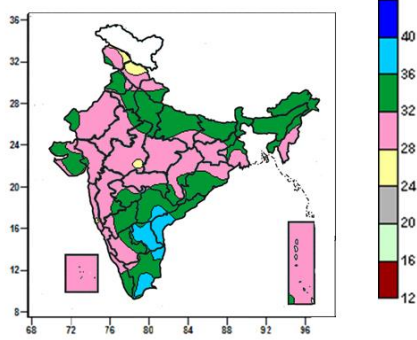
Standardised Precipitation Index Four Weekly for the Period 9th July to 5th August 2015



- Extremely/severely wet conditions experienced in few districts of West Bengal, Jammu & Kashmir and Rajasthan; Dumka, Gumla districts of Jharkhand; Chamoli district of Uttarakhand; Dhar, Indore, Jhabua, Mandasaur, Rajgarh, Ratlam, Shajapur, Ujjain districts of Madhya Pradesh; Banaskantha district of Gujarat Region; Vishakhapatnam district of Andhra Pradesh.
- Extremely/Severely dry conditions experienced in few districts of Bihar, Konkan & Goa and Telangana; East Kameng district of Arunachal Pradesh; Cachar, Nagaon, Golaghat districts of Assam; Cooch Behar, Jalpaiguri, South Dinajpur districts of West Bengal; Deoria, Fatehpur, Gorakhpur, Kaushambi, Kushi Nagar, Maharajganj, Agra districts of Uttar Pradesh; Jalandhar district of Punjab; Jalgaon, Beed, Osmanabad, Parbhani, Latur, Jalna, Buldhana districts of Maharashtra; Kurnool district of Andhra Pradesh; Uttar Kannada, Bidar, Bijapur, Gulbarga, Raichur, Yadgir districts of Karnataka; Alappuzha, Ernakulam, Kasargod, Pathanamthitta districts of Kerala.
- Moderately dry conditions experienced in many districts of Meghalaya; few districts of Assam and Maharashtra; Changlang district of Arunachal Pradesh; Darjeeling, North Dinajpur districts of West Bengal; Khurda, Nayagarh, Kandhamal districts of Odisha; Bhojpur, Kishanganj, Supaul districts of Bihar; Ballia, Faizabad, Gonda, Kanpur City, Kanpur Dehat, Rai Bareilly, Siddharth Nagar, Lalitpur, Pilibhit districts of Uttar Pradesh; Hoshiarpur district of Punjab; Udhampur district of Jammu & Kashmir; Betul, Burhanpur, Balaghat, Seoni, Anuppur districts of Madhya Pradesh; Navsari district of Gujarat Region; Koriya, Rajnandgaon districts of Chhattisgarh; Hyderabad districts of Telangana; Dakshin Kannada, Bagalkote, Belgam, Koppal, Hassan districts of Karnataka; Kottayam, Malappuram, Palakkad, Kollam, Thrissur, Wynad districts of Kerala.
- Rest of the country experienced moderately wet/mildly dry/wet conditions.

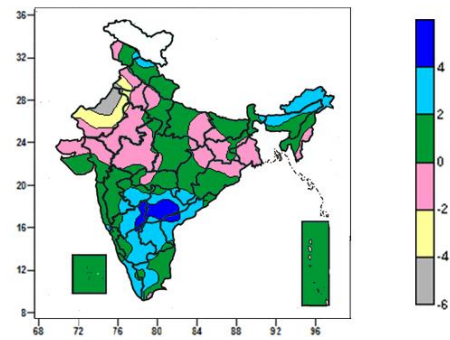
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 05.08.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 05.08.2015



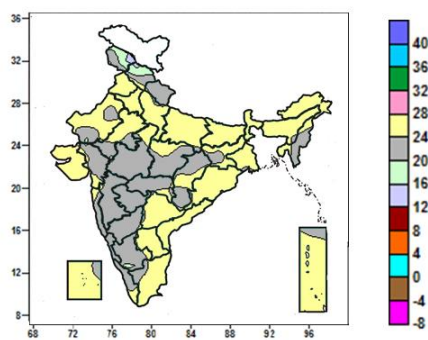
- Mean maximum temperature were between 36 to 40°C over many parts of Rayalaseema, Coastal Andhra Pradesh, some parts of Tamil Nadu and isolated pockets of Telangana.
- It was below 36°C over remaining parts of the country.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 05.08.2015



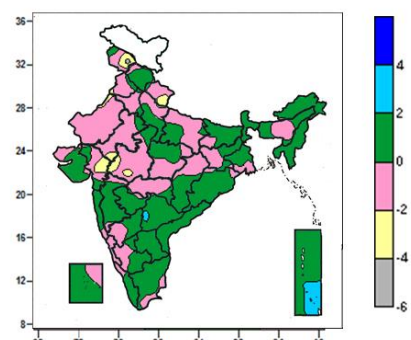
- Mean maximum temperature were above normal by 4°C over many parts of Telangana, some parts of North Interior Karnataka and isolated pockets of Coastal Andhra Pradesh, North Interior Karnataka and Rayalaseema.
- Mean maximum temperature were above normal by 2 to 4°C over Arunachal Pradesh, many parts of Marathwada, Coastal Andhra Pradesh, Rayalaseema Interior Karnataka, Kerala, some parts of Assam, Chhattisgarh, Telangana, Madhya Maharashtra, Tamil Nadu and isolated pockets of Jammu & Kashmir, Himachal Pradesh, Sub-Himalayan West Bengal and Vidarbha.
- Mean maximum temperature were below normal by 2 to 6°C over many parts of West Rajasthan, some parts of Punjab and isolated pockets of Haryana.
- It was normal to near normal in remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 05.08.2015



- Mean minimum temperature was 12 to 16°C over isolated pockets of Jammu & Kashmir and Himachal Pradesh.
- Mean minimum temperature was 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh and isolated pockets of South Interior Karnataka.
- It was above 20°C over rest of the country.

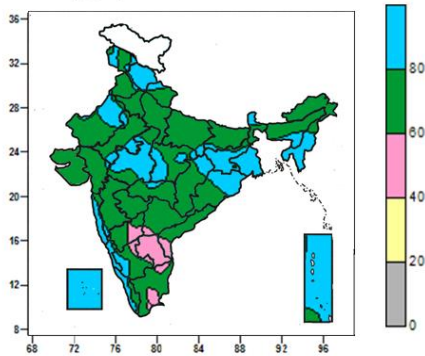
Mean Minimum Temperature (°C) Anomaly in India for the week ending 05.08.2015



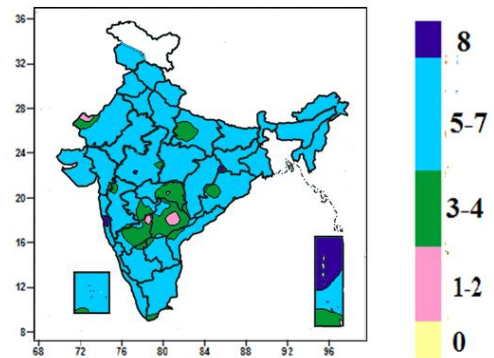
- Mean minimum temperature was above normal by 2 to 4°C over some parts of Andaman & Nicobar Islands and isolated pockets of Telangana.
- Mean minimum temperature was below normal by 4 to 6°C over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was below normal by 2 to 4°C over some parts of Jammu & Kashmir, Gujarat Region and isolated pockets of Uttarakhand, Punjab, West Madhya Pradesh and Rajasthan.
- It was normal to near normal in remaining parts of the country.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 05.08.2015

Relative Humidity (%) over India for the week ending 05.08.2015



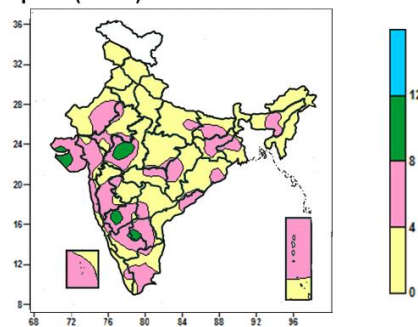
Cloud amount (okta) over India for the week ending 05.08.2015



- Mean Relative humidity was above 80% over Himachal Pradesh, Sikkim, Gangetic West Bengal, Manipur, Mizoram, Tripura, Coastal Karnataka and Lakshadweep, many parts of Jharkhand, West Madhya Pradesh, Konkan & Goa, Kerala, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Assam & Meghalaya, East Madhya Pradesh, Rajasthan, Odisha, Chhattisgarh and isolated pockets of Uttarakhand, Punjab, East Uttar Pradesh, Bihar, Gujarat Region, Madhya Maharashtra, Vidarbha, South Interior Karnataka.
- Mean Relative humidity was 60 to 80% over rest of the country except Rayalaseema, some parts of Coastal Andhra Pradesh, Interior Karnataka, Tamil Nadu and isolated pockets of Telangana where it was 40 to 60 %.

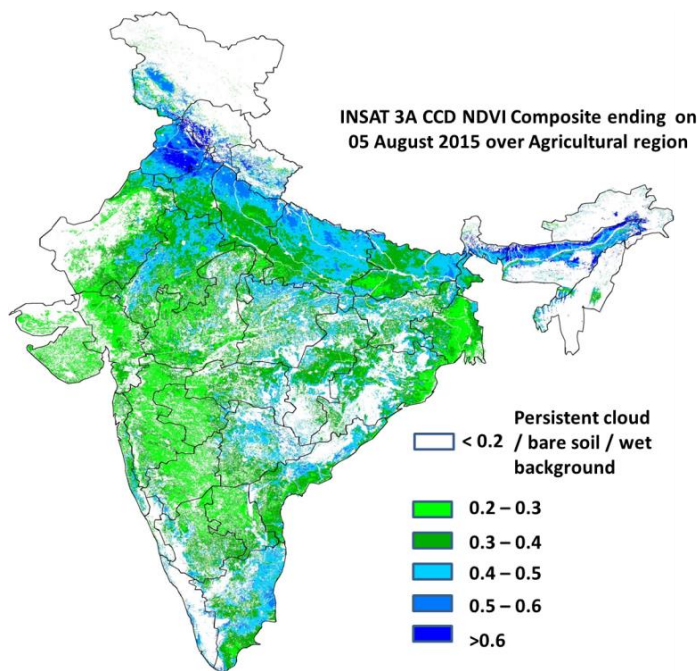
- Sky remained generally cloudy (8 okta) over many parts of Andaman & Nicobar Islands and isolated pockets of Konkan, West Madhya Pradesh and Chhattisgarh.
- Sky remained generally cloudy (5-7 okta) over rest of the country except many parts of Telangana, Vidarbha, North Interior Karnataka, some parts of Marathwada, Bihar, isolated pockets of West Rajasthan, West Madhya Pradesh, Odisha, Madhya Maharashtra, South Interior Karnataka, Rayalaseema, Coastal Andhra Pradesh, Lakshadweep and Andaman & Nicobar Islands where it was partly cloudy/mainly clear (3 to 4/ 1 to 2 okta).

Wind speed (knots) over India for the week ending 05.08.2015



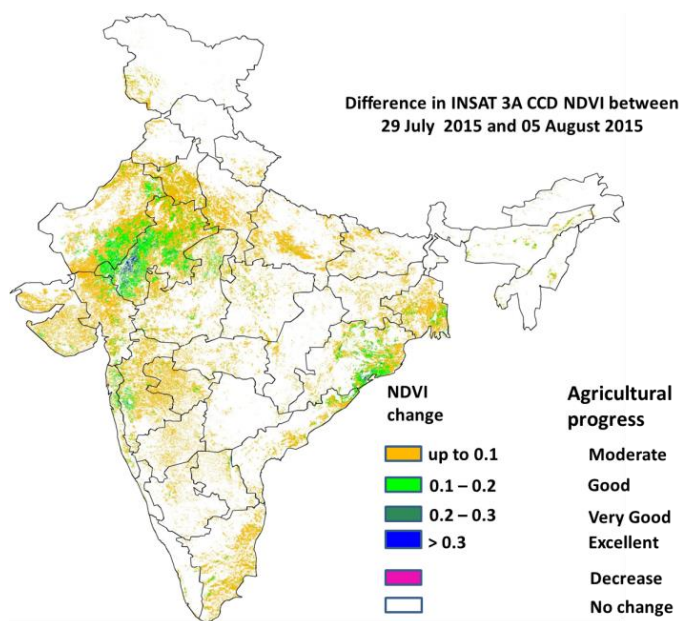
- Mean wind speed was 8 to 12 knots over some parts of Saurashtra & Kutch, West Madhya Pradesh and isolated pockets of Interior Karnataka and Rayalaseema.
- It was less than 8 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 5th August 2015 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good in most parts of Punjab, some pockets of East Bihar, Haryana and Coastal Kerala, Northern parts of West and East Uttar Pradesh, East Rajasthan, East Madhya Pradesh, Telangana, Coastal Andhra Pradesh, Jharkhand where NDVI varies from 0.4 to 0.6. Agricultural growth was good over most parts of Uttar Pradesh and Bihar and some parts of Punjab and Haryana, Vidarbha, Coastal Odisha (NDVI: 0.3-0.4). NDVI remains within the range of 0.2 to 0.3 over most parts of rest of India.

Difference in INSAT 3A CCD NDVI between 29th July and 5th August 2015



- Good change in NDVI (0.1 - 0.2) was observed in Rajasthan, Coastal Odisha and patches of West Bengal. Moderate progress (up to 0.1) in NDVI was observed over some patches of Haryana, in some patches of East Madhya Pradesh, Madhya Maharashtra, East Uttar Pradesh, West Rajasthan and Coastal Tamil Nadu.

- INSAT 3A CCD NDVI composite maps for the week ending on 5th August 2015 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 12th August 2015

5 Day Rainfall Forecast (MORNING) 7th August 2015

| Met Sub-divisions | 07 Aug | 08 Aug | 09 Aug | 10 Aug | 11Aug |
|------------------------------|--------|--------|--------|--------|-------|
| 1. Andaman & Nicobar Islands | FWS | FWS | FWS | FWS | FWS |
| 2. Arunachal Pradesh | FWS | FWS | SCT | SCT | SCT |
| 3. Assam & Meghalaya | FWS | FWS | FWS | SCT | SCT |
| 4. N. M. M. & T. | FWS | FWS | FWS | FWS | FWS |
| 5. S.H. West Bengal & Sikkim | WS | FWS | FWS | FWS | FWS |
| 6. Gangetic West Bengal | SCT | ISOL | ISOL | SCT | WS |
| 7. Orissa | ISOL | SCT | FWS | FWS | FWS |
| 8. Jharkhand | ISOL | ISOL | SCT | FWS | FWS |
| 9. Bihar | SCT | SCT | FWS | WS | WS |
| 10. East Uttar Pradesh | ISOL | SCT | SCT | FWS | FWS |
| 11. West Uttar Pradesh | SCT | SCT | SCT | FWS | FWS |
| 12. Uttarakhand | FWS | WS | WS | FWS | FWS |
| 13. Haryana, Chd & Delhi | SCT | ISOL | ISOL | ISOL | SCT |
| 14. Punjab | ISOL | ISOL | ISOL | ISOL | ISOL |
| 15. Himachal Pradesh | FWS | WS | WS | FWS | FWS |
| 16. Jammu & Kashmir | SCT | SCT | SCT | SCT | ISOL |
| 17. West Rajasthan | ISOL | DRY | DRY | DRY | ISOL |
| 18. East Rajasthan | ISOL | ISOL | ISOL | ISOL | ISOL |
| 19. West Madhya Pradesh | SCT | SCT | ISOL | ISOL | ISOL |
| 20. East Madhya Pradesh | SCT | SCT | FWS | FWS | SCT |
| 21. Gujrat Region | ISOL | ISOL | ISOL | ISOL | ISOL |
| 22. Saurashtra & Kutch | ISOL | DRY | DRY | DRY | DRY |
| 23. Konkan & Goa | FWS | FWS | FWS | FWS | FWS |
| 24. Madhya Maharashtra | ISOL | ISOL | ISOL | ISOL | ISOL |
| 25. Marathawada | ISOL | ISOL | ISOL | ISOL | ISOL |
| 26. Vidharbha | SCT | SCT | SCT | ISOL | ISOL |
| 27. Chhattisgarh | SCT | SCT | FWS | FWS | FWS |
| 28. Coastal Andhra Pradesh | SCT | SCT | SCT | ISOL | ISOL |
| 29. Telangana | ISOL | ISOL | ISOL | ISOL | ISOL |
| 30. Rayalaseema | ISOL | ISOL | ISOL | ISOL | ISOL |
| 31. Tamilnadu & Puducherry | ISOL | ISOL | ISOL | ISOL | ISOL |
| 32. Coastal Karnataka | WS | WS | WS | FWS | FWS |
| 33. North Interior Karnataka | ISOL | ISOL | ISOL | ISOL | ISOL |
| 34. South Interior Karnataka | SCT | SCT | SCT | SCT | SCT |
| 35. Kerala | WS | WS | WS | WS | FWS |
| 36. Lakshadweep | FWS | FWS | FWS | FWS | FWS |

% Station Reporting Rainfall

| % Stations | Category | % Stations | Category |
|------------|--------------------------------------|------------|-------------------------------|
| 76-100 | Widespread (WS/ Most Places) | 26-50 | Scattered (SCT/ A Few Places) |
| 51-75 | Fairly Widespread (FWS/ Many Places) | 1-25 | Isolated (ISOL) |
| No Rain | Dry | | |

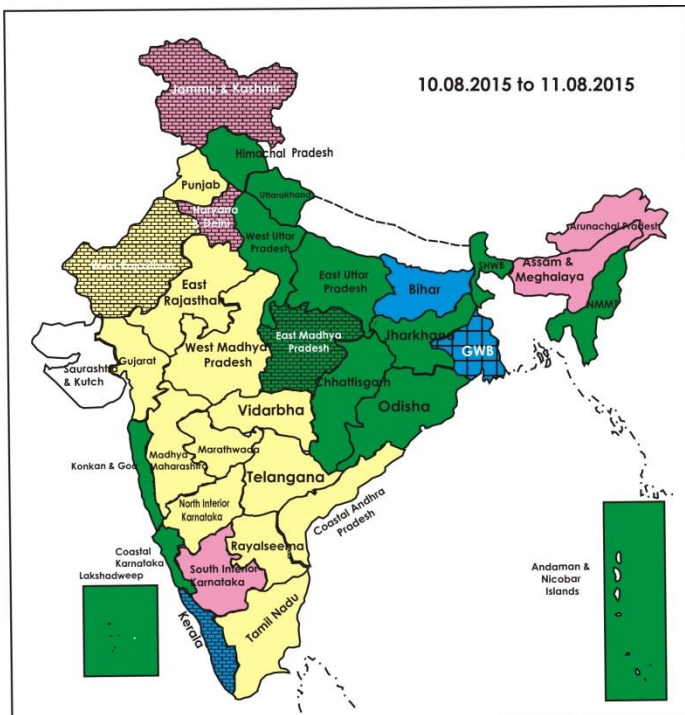
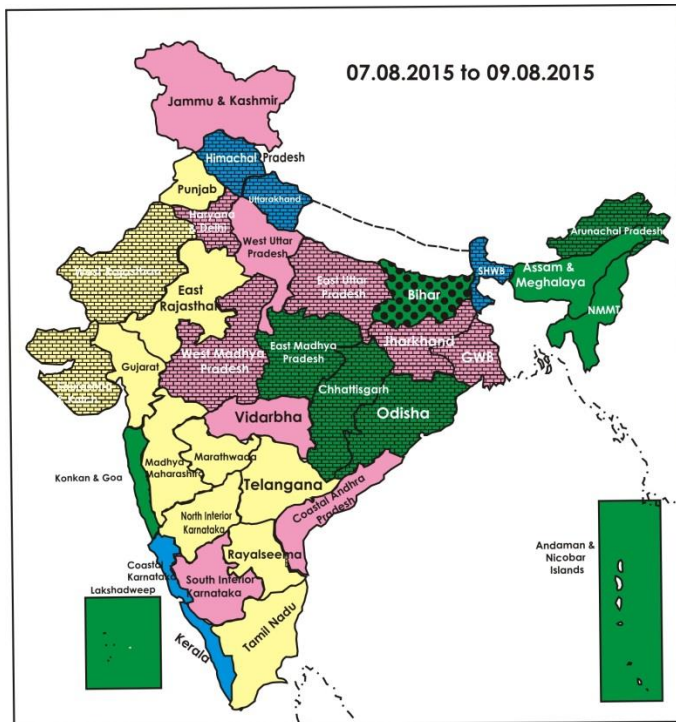
Weather Warning during next 5 days

- **07 August (Day 1):** Heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura and Coastal Karnataka.
- **08 August (Day 2):** Heavy to very heavy rainfall would occur at isolated places over Uttarakhand. Heavy rainfall would occur at isolated places over Himachal Pradesh and Coastal Karnataka.
- **09 August (Day 3):** Heavy rainfall would occur at isolated places over Uttarakhand, north Bihar, Sub-Himalayan West Bengal & Sikkim and Coastal Karnataka.
- **10 August (Day 4):** Heavy rainfall would occur at isolated places over Bihar and Sub-Himalayan West Bengal & Sikkim.
- **11 August (Day 5):** Heavy rainfall would occur at isolated places over Bihar, Sub-Himalayan West Bengal & Sikkim, Odisha and Jharkhand.

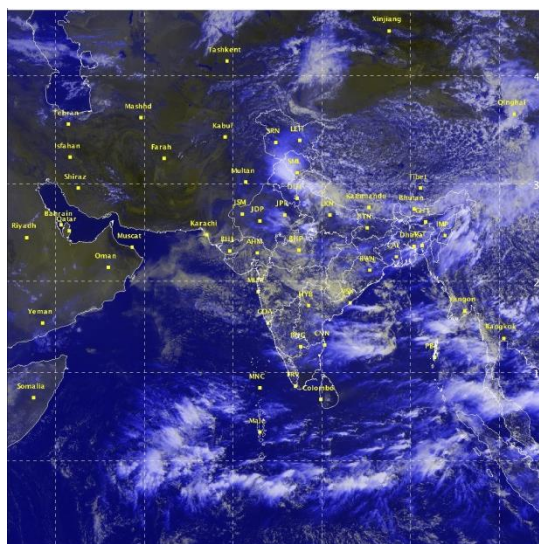
Weather Outlook for subsequent 2 days from 12th to 14th August 2015

- Rain/thundershowers would occur at many places over northeast, east & adjoining central India and along west coast.
- Rain/thundershowers would occur at a few places over western Himalayan region & adjoining plains and south peninsular India.

Weather Forecast Map (Valid upto 0830 hours of 12th August, 2015)



Satellite image dated 07.08.2015 0600 UTC



Salient Advisories

- In **Gangetic West Bengal**, crop damage is reported in transplanted *Aman* rice fields due to flooding, farmers are advised to undertake re-transplanting upto 20th August with available nurseries or undertake direct sowing with sprouted seeds if the damage is more than 50% and go for gap filling if the damage is less than 30% after recession of flood water. For nursery raising for flood affected areas, take short duration variety of rice, which will mature within 95 to 110 days (e.g. Annada, MTU-1010, Gontra, etc.). Prepare nursery bed in the premises of residence, using polythene sheet. Spread two inches thick soil with high organic matter over polythene sheet and prepare seed-bed.
- In **Manipur**, in flood affected areas, raise contingency rice nurseries with late variety RC Maniphou 7. Drain out excess water to avoid water logging to avoid soft rot in ginger/turmeric. Complete gap filling of rice seedlings immediately. Plant 4 to 5 old seedlings (40-45 days old) per hill. Continue planting of banana and nursery raising for cauliflower and tomato after recession of flood water.
- In **Odisha**, in Mayurbhanj, Keonjhar, Jajpur, Bhadrak and Balasore districts of Odisha, due to floods there are chances of damage in rice nurseries and transplanted rice; drain out excess water from rice nurseries and transplanted rice fields and after recession of flood water, undertake direct sowing of sprouted rice seeds in areas where damage is noticed with short duration varieties of rice like Khandagiri and Parijat.
- In Lower Brahmaputra Valley Zone of **Assam**, continue normal transplanting of *Sali* rice (July-August) with 2-3 seedlings per hill for all varieties. Undertake replanting of dead hills within 7-10 days of transplanting with seedlings of same age. Contingency plan for rice in flood affected area:
 - Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photoinensitive short duration variety like Luit for replanting (in case of total damage).
 - Wet seeding of sprouted seeds @ 75-80 kg/ha with short to medium duration varieties like Disang and Luit (100 days), Kapili and Kalong (120 days).
 - Late and staggered planting with the old seedlings (50-60 days old seedlings) of the varieties like Profulla and Gitesh (If the field is heavily damaged)
 - Direct seeding with the photo insensitive short duration varieties like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for flood prone areas.
 - In partially affected fields, drain out excess water and apply 1/3rd N + 50% K₂O as top dressing during the tillering stage.
- In **North Gujarat** and **Kutch region** of **Gujarat**, carry out resowing of cluster bean (GC-2) and castor (GAUCH-2, GCH-4 and GCH-7) in flood affected areas. Also undertake transplanting of fennel, brinjal, tomato, chillies and other vegetables.
- In **East Madhya Pradesh**, drain out excess water from standing crop fields like pulses, soybean and maize and vegetables.
- In **North Interior Karnataka**, continue the following contingency measures to mitigate the moisture stress conditions:

- In early sown long duration crops, thin out excess and weak seedlings by removing alternate rows where moisture stress is severe. Keep the crop fields free from weeds.
 - Apply mulch with crop residue to conserve the soil moisture.
 - Apply protective irrigation wherever moisture stress is prevailing.
 - Take up spraying of Potassium Nitrate @ 1% to already sown crops where slight soil moisture is available so as to induce drought resistance in the crops and to prevent wilting of crops.
 - In areas where sowing is yet to be done, fodder crops should be given preference and select short duration, drought resistant crops and variety.
- In Scarce Rainfall Zone of **Andhra Pradesh**, undertake sowing of contingency crops like foxtail millet, pearl millet, jowar, red gram, castor, cluster bean cowpea and cotton upto 15th August after receipt of sufficient rainfall. After 15th August, undertake sowing of horse gram, fodder jowar and bajra. To combat moisture stress in June sown groundnut, provide supplementary irrigation from farm pond with sprinklers @ 20 mm (2 hrs) and continue spraying of 2% urea solution.
- In **Telangana**, undertake sowing of contingency crops like castor, red gram and sunflower in the Southern Telangana Zone and sowing of rainfed red gram PRG-158, Asha,LRG-41 varieties up to 2nd week of August and red gram intercropped with jowar/ bajra @1:2 ratio in the Northern Telangana Zone after receipt of sufficient rainfall.
- In **Marathwada**, undertake sowing of contingent crops like sesame (varieties : AKT-64, Phule-1 and JLT-7 and Tapi), red gram (varieties : Vipula, BSMR-736, BSMR-853, AKT-8811), castor, intercropping of sunflower + red gram 2:1, fodder crops like maize (African Tall), sorghum (Phule Godhan, Phule Amruta and Ruchira) and pearl millet (Giant Bajra) in all districts except Latur and Osmanabad utilising the realised rainfall.
- Utilising the realised rainfall undertake sowing of contingent crops like sunflower+ red gram 2:1 or maize or red gram in **West Vidarbha**. Complete transplanting of rice in **East Vidarbha** utilizing the realised rainfall.

Detailed Zonewise Agromet Advisories

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



Sowing



Sugarcane



Chilli



Rice transplanting

- **Realised Rainfall:** Rainfall occurred in all districts of Coastal Karnataka; Chikkamagaluru, Kodagu and Shivamogga districts of South Interior Karnataka; Cannur, Ernakulam, Idukki, Kasargod and Kottayam districts of Kerala; East and West Godavari districts of Coastal Andhra Pradesh; Chittoor district of Rayalaseema; Chennai, Kancheepuram, Perambalur, Puducherry, Sivaganga, Tiruvallur and Tiruvannamalai districts of Tamil Nadu. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Andhra Pradesh:**
 - In North Coastal Zone, continue nursery sowing of rice (medium and short duration varieties) and finger millet. Spray 2.0% Urea solution on foliage of maize crop and Urea + MOP (2.5%) solution to ratoon sugarcane to tackle moisture stress conditions.
 - Undertake nursery sowing of short duration rice varieties immediately using the realized rainfall in the Krishna Godavari Zone and continue sowing of irrigated dry rice (MTU-1006), maize and pulses (black gram, red gram and green gram).
 - In Scarce Rainfall Zone, undertake sowing of contingency crops like foxtail millet, pearl millet, jowar, red gram, castor, cluster bean cowpea and cotton upto 15th August after receipt of sufficient rainfall. After 15th August, undertake sowing of horse gram, fodder jowar and bajra. To avoid moisture stress in June sown groundnut, provide supplementary irrigation from farm pond with sprinklers @ 20 mm (2 hrs) and continue spraying of 2% urea solution.
 - In High Altitude Tribal Zone, complete sowing of finger millet.
 - In the Southern Zone, undertake sowing of redgram or intercropping of groundnut and redgram in 7:1 or 11:1 ratio alongwith seed treatment in areas of Chittoor district where rainfall has been received. Undertake sowing of crops like red gram, castor, green gram, cowpea, sorghum, bajra and horsegram when there is enough moisture in the soil in Kadapa district.

- Incidence of leaf curl virus incidence was observed in papaya in the Scarce Rainfall Zone. To control leaf curl virus vectors like white fly, undertake spraying with Acetamiprid @ 0.2g/litre of water.
- Prevailing weather conditions are congenial for incidences of sucking pests in groundnut in the North Coastal Zone. Apply Gypsum @ 200 kg /ac. followed by hoeing and spray Dimethoate @ 2.0 ml/litre of water on a non rainy day.
- **Telangana:**
 - In the Southern Telangana Zone, undertake sowing of contingency crops like castor, red gram and sunflower after receipt of sufficient rainfall.
 - Undertake sowing of rainfed red gram PRG-158, Asha,LRG-41 varieties up to 2nd week of August and red gram intercropped with jowar/bajra @1:2 ratio in the Northern Telangana Zone after receipt of sufficient rainfall.
 - In the Southern Telangana Zone, due to prevailing weather conditions, incidence of Rhizoctonia root rot disease is observed in cotton growing on red chalka soils. To control, soil drench with Carbendazim @ 1g or Copper-Oxy-Chloride @ 3g or Carbendazim 12% +Mancozeb 63% (SAAF)/litre of water around the root zone of plant 2-3 times at 7-10 days interval to avoid further spread of the root rot.
 - Sporadic incidence of gall midge and stem borer incidence is noticed in rice in the Northern Telangana Zone. Apply Ferterra granules (0.4 WG) @ 4 kg /acre or Carbofuran 3G granules @ 10 kg/acre to control stem borer and Carbofuran 3G @ 10 kg acre at 15 DAT in 1– 2 inches of standing water or spraying of Monocrotophos @1.6 ml /litre of water to control gall midge.
- **Karnataka:**
 - Complete transplanting of rice in Coastal Karnataka and continue transplanting in Southern Transition Zone utilising the realised and expected rainfall.
 - In the Eastern Dry Zone, continue intercultural operation and thinning in long duration red gram and castor to conserve soil moisture and overcome dry spell. In areas where sowing is yet to be done, undertake sowing of Ragi (GPU-28, HR-911), Sunflower(Morden, KBSH-1, KBSH-41, KBSH-42, KBSH-44 and KBSH-53), Maize(Deccan-103, Vijaya composite and Ganga-11), Cowpea(C-152, KM-5 and PKB-4 for vegetable purpose).
 - In the North East Transition Zone, in areas where sowing is yet to be done, undertake sowing of sunflower (Morden, KBSH-1, 41, 44, RSFH-1, 130), horsegram (GPM-6), foxtail millet (HMT-100-1), cowpea (C-152) and pigeonpea(pragathi). Continue intercultural operation and thinning out of excess and weak seedlings by removing alternate rows in already sown crops like soybean, greengram and blackgram.
 - Continue nursery sowing for planting of low land rice using medium duration varieties and upland paddy using Amrut or Prasanna variety in the Hill Zone.
 - In the North East Dry Zone, continue sowing of sunflower at wider spacing of 90 x 20 cm.
 - In Dry regions of North Interior Karnataka, continue the following contingency measures to mitigate the moisture stress conditions:
 - In early sown long duration crops, thin out excess and weak seedlings by removing alternate rows where moisture stress is severe. Keep the crop fields free from weeds.
 - Apply mulch with crop residue to conserve the soil moisture.
 - Apply protective irrigation wherever moisture stress is prevailing.
 - Take up spraying of Potassium Nitrate 1 % to already sown crops where slight soil moisture is available so as to induce drought resistance in the crops and to prevent wilting of crops.
 - In areas where sowing is yet to be done, fodder crops should be given preference and select short duration, drought resistant crops and variety.
 - Take up sowing of crops in wider rows to overcome moisture stress.
 - Undertake nursery sowing of ragi, sowing of groundnut, red gram and green gram after proper seed treatment and sowing of jowar-CHS-5, jowar+red gram(2:1), groundnut+red gram(4:1 or 8:2) by using seed drill and undertake land preparation for transplanting of ragi in the Southern Dry Zone after receipt of sufficient rainfall.
 - Incidences of aphid and thrips were noticed in blackgram and green gram in the North East Transition Zone. To control, spray Methyl parathion 50 EC @ 1 ml or Dimethoate 30 EC @ 1.7 ml per liter of water on a non rainy day.
- **Kerala:**
 - Continue planting of rooted cuttings of pepper in the Problem Area Zone.
 - Since relative humidity is high, there is a chance of sheath blight, sheath rot, bacterial leaf blight in rice in the Central Zone. Apply Pseudomonas fluorescens (2.5kg per hectare) for the control of fungal and bacterial diseases.
 - Prevailing high humidity is congenial for blast disease in rice especially neck blast and bud rot in coconut in the Southern Zone. To control blast, apply Carbendazim (Bavistin) @ 1gm/litre or Iprophenphos (Kitazin EC) 1ml/ litre of water cut and remove the affected portion and apply Bordeaux paste to control bud rot in coconut.
 - Leaf fall & fruit fall in nutmeg and fungal diseases in vegetables is observed in the Problem Area Zone due to prevailing weather conditions (high humidity and rainfall). Spray Carbandazim+ Mancozeb and apply organic manures to control leaf fall & fruit fall and conserve soil moisture after current spells of rain.
- **Tamil Nadu:**
 - Continue land preparation for nursery sowing of *Samba* rice varieties (CR 1009 and ADT 50) in Cauvery Delta Zone.
 - Undertake cultivation of cucurbitaceous vegetable crops such as snake gourd, ridge gourd, bitter melon and lablab in the North Western Zone.
 - Undertake land preparation for irrigated winter Cambodia cotton and irrigated maize in the Western Zone.

- Continue cultivation of dry crops like ragi, thenai, samai, panivaragu and sesame in areas where additional irrigation facilities are available in Karaikal.
- In the Western Zone, since relative humidity and wind speed are above the threshold level (evening Rh more than 60 percent, wind speed more than 5 km/hr, there is chance of leaf spot disease in turmeric. To control, spray Carbendazim @ 500 g or Mancozeb @ 1000g or Copper Oxy Chloride @ 1250g per hectare dissolved in 500 litres of water.
- The expected weather with moderate cloud cover and humidity is congenial for the incidence of thrips and jassids in chillies in the South Zone. For control, spray Dimethoate 2 ml/litre of water.
- Moderate cloud cover and humidity are congenial for incidence of tomato spotted wilt disease in tomato in the South Zone. For controlling white fly, spray Methyl Demeton 500 ml/ha.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- Prevailing weather conditions are congenial for Enterotoxaemia in livestock in Northern Telangana and sheep pox in sheep in Southern Telangana. To prevent the diseases, vaccinate the animals.

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



Sowing

Banana

Okra

Rice transplanting

- **Realised Rainfall:** Rainfall occurred in Changlang, East Siang, Lohit, Tawang, Tirap, Upper Siang and West Siang districts of Arunachal Pradesh; Barpeta, Bongaigaon, Cachar, Chirang, Dhemaji, Dibrugarh, Golghat, Hailakandi, Jorhat, Karimganj, Kokrajhar, Lakhimpur, N.C.Hills, Sibsagar and Tinsukia districts of Assam; East Garo Hills, East Khasi Hills, Jaintia Hills and South Garo Hills districts of Meghalaya; Aizwal, Saiha and Serchhip districts of Mizoram; Imphal East and Thoubal districts of Manipur; Kohima and Mokokchung districts of Nagaland and all districts of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In North Bank Plain Zone of Assam, farmers of flood affected areas are advised to collect short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown upto 1st week of September. Transplant long duration cultivars like Monohar *Sali* and Gitesh with 60 days seedlings.
 - In Hill Zone, continue transplanting of rice. Replanting of dead hills or gap filling with seedlings of similar age of *Sali* rice should be done within 7-10 days of transplanting. Continue sowing of sesame and undertake nursery sowing of early cauliflower and broccoli after current spells of heavy rain.
 - In Lower Brahmaputra Valley Zone of Assam, continue normal transplanting of *Sali* rice (July-August) with 2-3 seedlings per hill for all varieties. Undertake replanting of dead hills within 7-10 days of transplanting with seedlings of same age. Contingency plan for rice in flood affected area:
 - Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photo insensitive short duration variety like Luit for replanting (in case of total damage).
 - Wet seeding of sprouted seeds @75-80 kg/ha of short to medium duration varieties like Disang, Luit, (100 days) Kapili, Kalong (120 days).
 - Late and staggered planting with the old seedlings (50-60 days old seedlings) of the varieties like Profulla and Gitesh (If the field is heavily damaged).
 - Direct seeding with the photo insensitive short duration variety like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for repeat flood prone areas.
 - In partially affected fields, drain out excess water and apply 1/3rd N + 50% K₂O as top dressing during the tillering stage.
 - In Barak Valley Zone of Assam, complete the transplanting of *sali* rice at the earliest. Farmers are also advised to fill up the gaps within 7 to 10 days after transplanting.
 - In Central Brahmaputra Valley Zone and North Bank Plain Zone of Assam, continue sowing of jute (for seed purpose), arhar and sesame. Continue harvesting and retting of *Capsularis* jute at pre-flowering stage (120 days after sowing). Undertake harvesting of early and timely sown *olitorius* jute.
 - In Arunachal Pradesh, continue transplanting of *kharif* rice.

- In Meghalaya, complete transplanting of *kharif* rice at the earliest. Maintain a water level of 3-5 cm in the rice field. Continue sowing of red gram, black gram (urad bean), green gram (moong bean/ moong) after current spells of heavy rain. Remove excess water and maintain proper drainage facilities in the field of ginger/turmeric, groundnut/soybean.
- In Hill Zone of Assam, there is chance of attack of rice hispa in *Sali* rice due to cloudy weather. Spray Quinalphos @ 2 teaspoon/5 litre of water after current spells of rain.
- In Lower Brahmaputra Valley Zone of Assam, due to cloudy and humid weather, there is chance of attack of blast in transplanted *Sali* rice at tillering stage. For control, spray of Carbendazim or Thiophenate Methyl @ 1g/litre of water after current spells of rain.
- In North Bank Plain Zone of Assam, due to cloudy and humid weather, there is chance of attack of hispa in *Sali* rice. Spray Chlorpyrifose 20 EC or Monocrotophos 40EC @ 1.5ml per litre of water after current spells of rain.
- In Arunachal Pradesh, due to humid and cloudy weather, there is chance of attack of army worm in maize and stink bug in soybean. Spray Quinalphos 25 EC 2ml/litre of water against army worm and spray Deltamethrin @ 4ml/10 litre against stink bug infestation after current spells of rain.
- **Manipur, Mizoram, Nagaland and Tripura:**
- In Manipur, in flood affected areas, raise contingency rice nurseries with late variety RC Maniphou 7. Drain out excess water to avoid water logging to avoid soft rot in ginger/turmeric. Complete gap filling of rice seedlings immediately. Plant 4 to 5 old seedlings (40-45days old) per hill. Continue planting of banana and nursery raising for cauliflower and tomato after recession of flood water.
- In Mizoram, if sowing of rice is delayed, continue sowing of short duration varieties of rice.
- In Nagaland, maintain good drainage in the fields of ginger to avoid rhizome rot. Carry out weeding in groundnut after current spells of rain.
- In Tripura, avoid flooding or excess moisture in SRI fields of *Aman* rice. Continue direct sowing of rice where seedling has not yet been raised.
- In Manipur, due to humid and cloudy weather, there is chance of attack of stem borer in *kharif* rice and tikka disease in groundnut. Spray Chlorantraliniprol 23.5% @ 40 ml/ha for stem borer. And spray Carbendazim @ 0.5g / litre of water to control tikka disease in groundnut after current spells of rain.
- In Tripura, cloudy and humid weather is favourable for attack of yellow stem borer in *Aman* rice and Gandhi Bug in *Aus* rice. To manage the attack, spray Imidachloprid @ 2.0 ml per litre of water against yellow stem borer and Cypermethrin @ 1ml per litre of water against Gandhi Bug after current spells of rain.
- Suitable varieties are given in Annexure III.
- **Animal Husbandry**
- In Assam, carried out vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Rice transplanting

Sowing

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa; Dhule, Jalgaon, Kolhapur, Nashik and Pune districts of Madhya Maharashtra; Aurangabad, Hingoli and Jalna districts of Marathwada; all districts of Vidarbha except Gadchiroli; Banaskantha, Dangs, Mehsana, Patan and Sabarkantha districts of Gujarat region; Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, complete transplanting of *kharif* rice in the main field. Maintain water level upto 5 cm in transplanted rice fields at vegetative stage. Complete transplanting of ragi. Continue sowing of vegetable crops like okra, cucumber, snake gourd and ridge gourd with improved varieties on raised beds.
 - In Madhya Maharashtra, apply protective irrigation during morning/evening hours for the crops/orchards under moisture stress in rainfall deficit districts like Sangli and Solapur or undertake light hoeing to create soil mulch to conserve soil moisture. Complete transplanting of rice by utilizing the realized rainfall. Maintain 2-3 cm water level in rice field in Western ghats of Nasik, Pune and Kolhapur region. Undertake intercultural operations in late sown jowar, groundnut and soybean crops. Undertake sowing of fodder crops like sorghum (Ruchira, Phule Amruta, Phule Godhan), maize (African Tall, Karveer, Rajshree) and pearl millet (Nutrifeed). Utilizing the realized rainfall, undertake planting of adsali sugarcane (varieties: CO-86032 or CO-M-265).

- In Marathwada, undertake sowing of contingent crops like sesame (varieties : AKT-64, Phule-1 and JLT-7 Tapi), red gram (varieties : Vipula, BSMR-736, BSMR-853, AKT-8811), castor, intercropping of sunflower + red gram 2:1, fodder crops like maize (African Tall), sorghum (Phule Godhan, Phule Amruta and Ruchira) and pearl millet (Giant Bajra) in all districts except Latur and Osmanabad utilising the realised rainfall. Undertake compartmental bunding to conserve soil moisture in fallow fields. Continue weeding in cotton, soybean and red gram.
- In Vidarbha, utilising the realised rainfall, undertake sowing of contingent crops like sunflower+ red gram 2:1 or maize or red gram in west Vidarbha. Complete transplanting of rice in East Vidarbha utilizing the realised rainfall.
- Cloudy weather in Western Maharashtra Scarcity zone last week was congenial for attack of mites in cotton; spray Acetamiprid @ 4 g + sticker per 10 litres of water.
- Due to continuous cloudy weather there may be attack of leaf eating caterpillar in soybean in Western Maharashtra Scarcity Zone; spray Chlorpyrifos @ 20 ml per 10 litres of water.
- Due to cloudy and high humid weather there may be attack of leaf eating caterpillar in soybean in Central Vidarbha region; spray Prophenofos 50 % @ 20 ml per 10 litres of water.
- **Gujarat:**
- In North Gujarat Zone and Kutch region, carry out resowing of cluster bean (GC-2) and castor (GAUCH-2, GCH-4 and GCH-7) in flood affected areas and in areas where sowing is not undertaken earlier, continue sowing of these crops. Also undertake transplanting of fennel, brinjal, tomato, chillies and other vegetables. Undertake land preparation for sowing of fodder sorghum (S-1049, GFS-4 and GFS-5) and maize (African tall); carry out hand weeding and intercultural operations in standing crops cotton, groundnut, maize, pearl millet and pulses in North Gujarat Zone. Undertake plantation of sapling of different fruit crops in North Gujarat Zone and North West Zone.
- In North and South Saurashtra Zone, carry out intercultural operations and weeding operation in groundnut, cotton, and pulses to conserve soil moisture at vapsa condition.
- In Middle Gujarat Zone, maintain 5 cm water level in transplanted rice field. Carry out gap filling in rice.
- Due to cloudy weather there is chance of infestation of red spider mite in okra and brinjal in South Gujarat Heavy Rainfall Zone; spray Propargite 57 EC @ 15 ml/10 litres of water for control.
- In South Gujarat Heavy Rainfall Zone, carry out gap filling in transplanted rice; maintain 2-3 cm water level in already transplanted rice field. Carry out gap filling, hand weeding and intercultural operations at vapsa condition in pulses. Undertake sowing of sorghum in South Gujarat Zone.
- Due to continuous wet condition during 22 to 29 July -15 in North Saurashtra Zone, infestation of alternaria leaf spot is observed in cotton; spray Mencozeb 25 g or Hexaconazole 15 ml in 10 litres of water for control.
- Due to humid weather in North Saurashtra Zone, heavy infestation of *heliathis* is observed in groundnut and pulses; spray Beauveria Bassiana @ 40 g in 10 litres of water or 250 larval unit of NPV solution per acre or Renaxypyr @ 3 ml in 10 litres of water. Heavy infestation of semilooper was also observed in castor; spray Quinalphos 20 ml in 10 litres of water in clear sky for control.
- **Animal Husbandry**
- In South Gujarat Heavy Rainfall Zone and Middle Gujarat Zone, in view of cloudy weather forecast, make arrangement for artificial light in poultry house to maintain egg production.

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



Groundnut

Cotton

Sowing

Onion

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands except Nicobar; all districts of West Bengal & Sikkim except South Dinajpur; Aurangabad, Banka, Bhabua, Bhagalpur, Bhojpur, Buxar, Gaya, Gopalganj, Jahanabad, Jamui, Lakhisarai, Nalanda, Nawada, Rohtas, Saran and Sheikhpura districts of Bihar; all districts of Jharkhand; all districts of Odisha except Bolangir, Gajapati, Ganjam, Kalahandi, Koraput, Malkangiri, Nawapara, Nawarangpur, Puri and Rayagada. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **West Bengal:**
 - In Gangetic West Bengal, crop damage is reported in transplanted *Aman* rice fields due to flooding, farmers are advised to undertake re-transplanting upto 20th August with available nurseries or undertake direct sowing with sprouted seeds if the damage is more than 50% and go for gap filling if the damage is less than 30% after recession of flood water. For nursery raising for flood affected areas, take short duration variety of rice, which will mature within 95 to 110 days (e.g. Annada, MTU-1010, Gontra, etc.). Prepare nursery bed in the premises of own house, using

- polythene sheet. Spread two inches thick soil with high organic matter over polythene bed and prepare seed-bed.
- In Coastal Saline Zone, undertake nursery sowing of short duration rice in upland areas for early transplanting.
 - In Old Alluvial Zone and Terai Zone, continue transplanting of *kharif* rice after current spells of heavy rain. Continue harvesting and retting of jute.
 - In Hill Zone, continue transplanting of *Aman* rice and apply top dressing of Nitrogen fertilizer at the rate of 20 kg/ha at 21 days after transplanting. Undertake gap filling in soybean. Provide adequate drainage in early sown crop fields in view of likely occurrence of heavy rainfall.
 - In New Alluvial Zone, due to cloudy weather condition and high temperature fungal and bacterial diseases are prevalent in maize. For fungal attack, spray Mancozeb @ 2.5 gm/litre of water and in case of bacterial rot, spray Streptocycline @ 0.1 gm/litre of water on a non rainy day.
- **Andaman and Nicobar Islands:**
- In Nicobar, undertake sowing seeds of pumpkin, snake gourd and bottle gourd after applying 4 to 5 kg of compost.
 - In North and Middle and South Andaman, continue transplanting of rice.
- **Odisha:**
- In Mayurbhanj, Keonjhar, Jajpur, Bhadrak and Balasore districts of Odisha, due to floods there are chances of damage in rice nurseries and transplanted rice; drain out excess water from rice nurseries and transplanted rice fields and after recession of flood water, undertake direct sowing of sprouted rice seeds in areas where damage is noticed with short duration varieties of rice like Khandagiri and Parijat.
 - In East and South Eastern Coastal Plain Zone, continue direct seeding of rice in medium and deep low lands and undertake transplanting of rice in medium land after recession of flood water. In uplands, complete sowing of green gram, black gram, ragi and sesame.
 - In Western Undulating Zone, continue line sowing of rice, sowing of maize, cotton and arhar and sowing of *kharif* pulses in upland areas.
 - In North Eastern Plateau Zone, continue nursery sowing of rice, direct sowing of rice in medium and uplands and continue sowing of groundnut, maize and arhar in uplands.
 - In North Eastern Ghat Zone, continue sowing of groundnut, sesame and ragi.
 - In North Eastern Coastal Plain Zone, due heavy rain occurred last week, if the rice nursery is completely damaged, resowing should be done with germinated seeds with varieties having less than 15 to 20 days duration than the recommended one.
 - In North Central Plateau Zone, undertake sowing of green gram, black gram and cowpea.
 - In North Eastern Coastal Plain Zone, due to excess rain with high humidity, swarming caterpillar is noticed in rice nurseries. To control, spray Choloropyriphos+Cypermethrin @ 2ml/litre of water after current spells of rain.
 - In North Central Plateau Zone, undertake sowing of green gram black gram and cowpea.
 - In North Eastern Coastal Plain Zone due to cloudy weather, excess rain with higher humidity, swarming caterpillar is noticed in rice nurseries. To control it, spray Choloropyriphos+Cypermethrin @ 2ml/litre of water after current spells of rain.
- **Bihar:**
- In North West Alluvial Plain Zone, continue transplanting of 22-25 days old paddy seedling, continue nursery sowing of brinjal, tomato, chilli and onion, sowing of cluster bean, bitter guord and radish. Continue sowing of sesame, sunflower, pigeon pea in the upland areas.
 - In North East Alluvial Plain Zone, continue plantation of horticulture crops like mango, lichi, guava & papaya and continue transplanting of chilli, tomato and cauliflower in raised bed.
 - In South Bihar Alluvial Zone, continue transplanting of *kharif* onion and long/medium duration rice varieties which are 21-25 days old. Complete nursery sowing of early brinjal, chilli, and cauliflower, continue planting of mango, litchi, guava and papaya plants in already made pits and continue sowing of para grass in low land and hybrid napier grass in upper land.
 - In North East Alluvial Plain Zone, present weather condition is favourable for attack of fruit & shoot borer in brinjal and fruit borer in tomato, for control, apply Emamectin Benzoate @ 1g/3 litres of water after current spells of rain.
- **Jharkhand:**
- In South Eastern Plateau Zone, continue transplanting of medium (120-125) duration of rice varieties. Continue transplanting of finger millet and complete sowing of maize, arhar green gram, black gram, urad, groundnut, soybean, sesame and rainy season vegetables. Preserve some rice nursery for future transplanting if crop damage occurs in transplanted fields.
 - In North Eastern Plateau Zone, continue transplanting of medium and low land rice, sowing of urad, til & sweet potato and nursery raising of tomato, cabbage and cauliflower.
 - In Western Plateau Zone, continue nursery raising of upland rice, transplanting of rice of medium duration, sowing of arhar, urad and mung and complete transplanting of finger millet.
 - In South Eastern Plateau Zone, present weather is conducive for the attack of fruit and shoot borer in brinjal and okra and fruit fly in cucurbitaceous vegetables. For control, spray Malathion @ 2 ml per litre of water after current spells of rain.
 - In Western Plateau Zone, prevailing weather is conducive for the attack of leaf spot/Tikka disease in groundnut crops, to control, spray Endofil M-45 (5 gm) + Bavistin (1 gm) in 4 litre of water after current spells of rain.
 - Suitable varieties for sowing are given in Annexure III.

- **Animal Husbandry**

- In West Bengal, keep animal sheds dry and clean and avoid water stagnation in and around the cattle sheds.

CENTRAL INDIA [M.P., CHHATTISGARH]



Rice transplanting

Sowing

Okra

Soybean

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Tikamgarh; all districts of West Madhya Pradesh except Alirajpur, Bhind, Datia, Gwalior, Jhabua, Mandasaur, Morena, Neemuch and Sheopur; all districts of Chhattisgarh except Bastar, Dantewada, Dhamtari, Kanker, Kowarda and Narayanpur.

- **Advisories:**

- **Madhya Pradesh:**

- Continue sowing of cucurbitaceous crops at optimum soil moisture conditions and undertake transplanting of chilli, brinjal and tomato in Satpura Plateau Zone.
- In Kymore Plateau and Satpura Hill Zone, complete transplanting of rice. Drain out excess water from standing crop fields like soybean, pulses, oilseed and vegetables to avoid water stagnation.
- In Malwa Plateau Zone, drain out excess water from soybean and maize crop fields and vegetable nurseries.
- As rain/thundershowers would occur at many places over East Madhya Pradesh during the period, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- Due to cloudy weather there are chances of attack of sucking pest in vegetables in Vindhya Plateau Zone, Spray Thiamethoxam @ 0.35 gram per litre of water on a non rainy day.
- Due to cloudy weather there are chances of incidence of yellow mosaic in urad and soybean in Bundelkhand Zone, spray Methyl Demeton @ 2 ml per litre of water on a non rainy day.

- **Chhattisgarh:**

- Continue planting horticultural crops like papaya, mango, guava etc. in North Hill Zone and Plain Zone.
- In Plain Zone of Chhattisgarh, complete transplanting of rice and maintain water level upto 5cm in transplanted rice fields.
- As rain/thundershowers would occur at many places over Chhattisgarh from 9th to 11th August, postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops
- Suitable varieties are given in Annexure III.

- **Animal Husbandry**

- Provide balanced food and fresh water two times in a day to milch animals in Madhya Pradesh.
- Keep animal sheds clean and dry in Chhattisgarh.

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



Cotton

Rice transplanting

Sowing

Cabbage

- **Realised Rainfall:** Rainfall occurred in East Delhi district of Delhi; all districts of Himachal Pradesh except Bilaspur, Kinnaur, Kullu and Lahaul & Spiti; Doda, Kathua, Kupwara, Reasi, Samba, Srinagar and Udhampur districts of Jammu & Kashmir; Faridabad, Panchkula and Yamunanagar districts of Haryana; Bhatinda, Gurdaspur and Muktsar districts of Punjab; Banswara, Dungarpur, Jhalawar, Pratapgarh, Rajasmand, Sikar, Sirohi and Udhampur districts of East Rajasthan; all districts of West Rajasthan; all districts of East Uttar Pradesh except Ambedkar Nagar, Ballia, Banda, Farrukhabad, Fatehpur, Hardoi, Kannauj, Kanpur City, Kanpur Dehat, Kaushambi, Kushi Nagar, Lucknow, Maharajganj, Mau, Rai Bareilly, Sahuji Maharaj Nagar, Sant Kabir Nagar and Unnao; Bareilly, Bijnor, Lalitpur, Moradabad, Pilibhit and Shahjahanpur districts of West Uttar Pradesh; all districts of Uttarakhand except Garhwal Tehri. Weather remained mainly

dry over rest of the region.

• **Advisories:**

▪ **Jammu & Kashmir:**

- In Sub-tropical Zone, undertake applications of 2nd dose of nitrogenous fertilizer as top dressing in normal transplanted rice crop if the crop is 25-30 days old.
- In Intermediate Zone and Valley temperate Zone, undertake weed control at 30-35 days after transplanting of rice. Apply Bispyrebac @ 1.5gm/kanal in 25 litre of water as post emergence herbicide on a non rainy day.
- In Cold Arid Zone of Jammu & Kashmir, complete sowing of fodder crops viz. legumes, pea intercropping with maize and millets. Also undertake hoeing and weeding in vegetables crops on a non rainy day.
- In Intermediate Zone and Valley temperate Zone, due to cloudy and humid weather condition, there may be attack of blight in rice, to control spray Tricyclazole (beam) @ 0.06 % on a non rainy day.

▪ **Uttarakhand:**

- In Sub-humid Sub-tropic Zone, complete transplanting of rice. Provide adequate drainage in early sown crop fields in view of likely occurrence of heavy rainfall.
- In Bhabar and Tarai Zone of Uttarakhand, undertake sowing of moong (Pant moong-2, Pant moong-4, Pant moong-5 & Narendra moong-1), sesame (Type-4, Type-12, Type-13 & Type-78) & pearl millets after current spells of heavy rain.
- In Hill Zone, continue sowing of maize crops var. maize-9, Kanchan, Navin, Bhavetha, V.L. maize 16 and V.L. maize 88 after current spells of heavy rain.
- In Hill Zone of Uttarakhand, due to high humidity, there may be attack of fruit borer in brinjal and tomato crops. To control, spray Neem oil @ 20 -25ml in 5 litres of water after current spells of rain.
- In Bhabar and Tarai Zone of Uttarakhand, due to high humidity, there may be attack of blight disease in tomato and capsicum, to control spray Indophil M-45 @ 2.5 g dissolved in one litre of water after current spells of rain.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone, continue nursery sowing of mid season cauliflower and cabbage in poly house in mid hill and lower region and transplanting of ageti cauliflower and cabbage in fields. Continue transplanting of rice, tomato, brinjal, capsicum, chilli and direct sowing of okra and sowing of radish and turnip in lower rainfed areas. Provide adequate drainage standing crop fields and vegetable nurseries in view of likely occurrence of heavy rainfall.
- In Mild Hills sub-Humid Zone, undertake transplanting the cole crops in the field at a distance of 60x45cm. Undertake sowing of cruciferous vegetables. Make arrangements for effective drainage of water in apple orchards to avoid water stagnation in view of likely occurrence of heavy rainfall.
- Under humid weather condition, there are chances of incidence of blast and hispa in rice in mid hills region of Sub-Montane and Low Hills Sub-Tropical Zone. For control, spray Bavistin @ 0.01 or Beam 75 WP @ 0.06% and repeat at 10-15 days interval and for rice hispa, spray Cypermethrin 10EC @ 1ml or Chlorpyrifos 20 EC @ 2.5ml per litre of water after current spells of rain.
- Under humid weather condition, there are chances of incidence of leaf spot and fruit rot diseases in tomato, brinjal, capsicum and chilli in Sub-Montane and Low Hills Sub-Tropical Zone. Spray Ridomil MZ or Indofil M-45 @ 2.5 g per litre of water after current spells of rain.
- Under cloudy and humid weather condition, there are chances of attack of bean bug in vegetables in Mid Hills Sub Humid Zone. Spray Metasystox @ 1ml per litre of water. Spray Ridomil gold @ 25g per 10 litres of water against fruit rot and leaf spot disease in tomato and capsicum. Apply the chemicals after current spells of rain.
- Under cloudy and humid weather condition, there are chances of attack of mites on apple in Mild Hills Sub-Humid Zone. Spray Majestic @ 50ml per 200 litres of water after current spells of rain.

▪ **Rajasthan:**

- Continue sowing of guar, pearl millet, sesamum, moong, moth, castor and continue transplanting of rice in Irrigated Northwestern Plain Zone.
- In Arid Western Plain Zone, continue sowing of short duration and drought tolerant varieties of pulses, pearl millet, moth bean and cluster bean at optimum soil moisture conditions. Use improved short duration varieties of bajra, moong, moth, til and guar for sowing and pearl millet and sorghum for fodder purpose.
- In Southeastern Humid Plain Zone, continue transplanting of rice and undertake sowing of improved varieties of green gram and black gram.
- In Transitional Plain Zone of Inland Drainage, continue sowing of improved varieties of guar, green gram, cowpea, moth, sesame and pearl millet at optimum soil moisture conditions.
- In Flood Prone Eastern Plain Zone of Rajasthan, undertake weeding in standing crops and use the weeds for mulching purpose.
- In Southern Humid Plain Zone, in the prevailing cloudy and humid weather, there is chance of incidence of jassids in cotton. Spray Imidacloprid 17.8 SL @ 200ml/ha. For control of semi-looper, stem fly or girdle beetle in soybean, spray Triazophos 40EC or Profenophos 50EC @ 1.25 litre or Dimethoate 30 EC @ 1 litre per hectare.
- In Arid Western Plain Zone due to humid weather condition, there are chances of attack of white fly in cotton. Spray Dimethoate @ 1litre per ha for control.
- In Irrigated Northwestern Plain Zone, under cloudy and humid weather condition, there are chances of attack of

spotted bollworm in *desi* cotton. For control, spray Fenvalerate or Indascarb @ 1ml per litre of water.

▪ **Punjab, Haryana and Delhi:**

- In Central Plain Zone of Punjab, continue sowing of maize and planting of papaya.
- In Western Zone of Punjab, undertake transplanting of brinjal in raised nursery beds.
- In Undulating Plain Zone of Punjab, undertake transplanting of tomato, onion and chilli on ridge on a clear day.
- In Central Plain Zone and Western Plain Zone of Punjab, undertake the sowing of fodder crops maize + cowpea, sorghum + guar.
- In Central Plain, Western Plain and Undulating Plain Zone of Punjab, continue planting of fruit plants viz citrus, mango, litchi, guava, loquat, ber, amla and papaya.
- In Western Zone of Haryana, continue transplanting of tomato, onion chilli and early cauliflower on ridge and transplanting of rice utilising the realised rainfall.
- In Western Semi-Arid Zone of Delhi, undertake transplanting of *kharif* onion, chilli, brinjal, tomato and early cauliflower on ridges. Continue sowing of green gram, black gram, radish, coriander, spinach. Undertake sowing of sweet corn and baby corn in this week and short varieties of urad and moong,
- Due to cloudy weather in Western Semi-Arid Zone of Delhi monitor ladyfinger, brinjal and chilli crop against attack of mite and jassid. To control mite, spray Phosmite @ 2 ml per litre of water and Dimethoate 30 EC @ 2 ml/litre of water against jassid.
- Incidence of sheath blight is noticed in rice crop in Western Zone of Punjab, spray Folicur 25 EC (Tebuconazole) @ 200 ml or Tilt 25 EC (Propiconazole) @ 200ml in 200 litres of water/acre. Due to partly cloudy weather, white fly and jassid may occur in cotton, if reaches ETL level then spray Oberon @ 200ml/acre for white fly and 80g/acre Ulala for the management of Jassid.

▪ **Uttar Pradesh:**

- In Central Plain Zone, continue transplanting of rice, sowing of jowar, moong, urad, bajra, sesame, soybean, arhar, barley, maize, okra, ridge gourd, bitter gourd, torai, tinda, direct sowing of rice and planting of banana. Continue sowing of cowpea and sowing of bajra, jowar, maize intercropped with lobia at 2:1 ratio for fodder purpose. Undertake transplanting of brinjal, early cauliflower, onion and chillies.
- In Bundelkhand Zone, continue transplanting of rice, sowing of short duration varieties of bajra(hybrid), pigeon pea, black gram, green gram and sesame. Continue nursery sowing, early cauliflower, tomato, chilli and brinjal. Complete sowing of fodder crops like bajra, chari and guar.
- In Eastern Plain Zone, continue transplanting of scented Basmati rice, sowing of short duration varieties of urad and moong where normal sowing was not done earlier. Also continue sowing of long duration varieties of pigeon pea (planting distance of 60-75cm) and planting of banana, mango, amla, guava, ber and papaya. Complete sowing of early cauliflower, brinjal and tomato.
- In Western Plain Zone, continue transplanting of 25-30 days old seedlings of basmati rice and undertake planting of mango, amla, guava, ber, litchi and papaya. Provide drainage in standing crops like maize, sorghum, pearl millet, sugarcane, cotton and vegetables like gourd, bitter gourd, torai, brinjal, tomato and chilli.
- Due to cloudy and humid weather condition, there is chance of attack of top borer in sugarcane and maize in North Eastern Plain Zone. Spray Corazine @ 150 g in 200 litres of water per acre for sugarcane and spray Quinalphos 1.5% or 1.0 % emidochloropid for maize after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

• **Horticulture**

- In Sub-Montane and Low Hills Sub-Tropical zone of Himachal Pradesh, complete planting of Mango, litchi, guava and amla.
- In Mid Hills Sub-Humid Zone and Mild Hills Sub-Humid Zone of Himachal Pradesh, due to humid weather condition, there is chance of incidence of scab in apple orchards. Spray Myclobutanil @ 80g per 200 litres of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical zone of Himachal Pradesh, due to humid weather condition blue beetle attack is seen in balsam, zenia, cleome and rose, spray Cypermethrin 20 ml in 10 litres of water. For control of Mite in carnation, spray Omite or Pyromite @ 1ml per litre of water or Dicofol @ 2ml per litre of water. For control of blight in marigold, spray Bavistin @ 2 g per litre of water after current spells of rain.
- In Flood Prone Eastern Plain Zone of Rajasthan, undertake planting of guava, pomegranate, lime, *aonla*, ber and papaya.
- In Semi Arid Eastern Plain Zone of Rajasthan, undertake planting of mango, pomegranate and aonla.

• **Animal Husbandry**

- In Sub-Montane and Low Hills Sub Humid Zone of Himachal Pradesh, weather is conducive for the attack of pink eye disease in new born calves. For control, prepare the solution of 1% boric acid in boiled water and wash eyes at regular interval of three hours.
- Keep the cattle under shed during heavy rainfall periods in Himachal Pradesh and Uttarakhand.

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

Annexure I

Week by week Rainfall Distribution

| Sub-Divisions | 22.07.15 | | 29.07.15 | | 05.08.15 | |
|----------------------------|-------------|--------|-------------|--------|-------------|--------|
| | Actual (mm) | % dep. | Actual (mm) | % dep. | Actual (mm) | % dep. |
| Arunachal Pradesh | | | | | | |
| Anjaw | ** | ** | ** | ** | ** | ** |
| Changlang | 8.0 | -92 | 44.1 | -59 | 88.2 | 63 |
| Dibang Valley | ** | ** | ** | ** | ** | ** |
| East Kameng | 20.0 | -75 | 26.4 | -68 | 9.6 | -82 |
| East Siang | 24.6 | -88 | 127.4 | -41 | 161.4 | -16 |
| Kurung Kumey | ** | ** | ** | ** | ** | ** |
| Lohit | 20.2 | -88 | 84.7 | -50 | 87.1 | -8 |
| Lower Dibang Valley | 28.6 | -53 | 126.2 | 105 | 20.8 | -40 |
| Lower Subansari | ** | ** | ** | ** | ** | ** |
| Papumpara | 45.4 | -69 | 60.1 | -46 | 16.9 | -85 |
| Tawang | 84.0 | -47 | 41.0 | -71 | 58.0 | -55 |
| Tirap | 94.6 | -50 | 85.6 | -60 | 48.2 | -56 |
| Upper Siang | 76.2 | -45 | 0.0 | -100 | 35.6 | -60 |
| Upper Subansari | 53.2 | 11 | 25.6 | -40 | 24.4 | -6 |
| West Kameng | 46.0 | -71 | 8.4 | -94 | 11.6 | -91 |
| West Siang | 48.0 | -63 | 30.0 | -80 | 30.0 | -34 |
| Assam&Meghalaya | | | | | | |
| Assam | | | | | | |
| Baksa | 32.4 | -80 | 75.4 | -50 | 13.7 | -87 |
| Barpeta | 93.4 | -41 | 56.1 | -60 | 54.4 | -47 |
| Bongaigaon | 126.0 | -28 | 9.2 | -90 | 80.2 | -4 |
| Cachar | 159.5 | 23 | 70.2 | -40 | 46.3 | -55 |
| Chirang | 102.8 | -41 | 88.4 | -40 | 61.2 | -27 |
| Darrang | ** | ** | ** | ** | ** | ** |
| Dhemaji | 50.0 | -57 | 125.0 | 0 | 39.0 | -58 |
| Dhubri | 48.8 | -58 | 22.6 | -80 | 15.7 | -83 |
| Dibrugarh | 63.5 | -45 | 115.4 | 0 | 63.1 | -28 |
| Goalpara | 56.5 | -42 | 62.5 | -40 | 6.6 | -90 |
| Golghat | 76.5 | -1 | 80.4 | 20 | 37.9 | -15 |
| Hailakandi | 164.5 | 67 | 17.5 | -80 | 79.8 | -16 |
| Jorhat | 70.5 | -20 | 122.4 | 50 | 95.7 | 26 |
| Kamrup(Rural) | 51.9 | -35 | 78.6 | 30 | 0.4 | -99 |
| Kamrup(Metro) | 65.7 | -18 | 39.1 | -30 | 8.0 | -85 |
| Karbi Anglong | 52.4 | 21 | 22.2 | -70 | 15.5 | -73 |
| Karimganj | 123.2 | 0 | 112.4 | -30 | 74.8 | -23 |
| Kokrajhar | 23.1 | -87 | 82.7 | -50 | 88.7 | -44 |
| Lakhimpur | 55.0 | -53 | 75.1 | -40 | 34.1 | -63 |
| Morigaon | 80.0 | 17 | 78.4 | -10 | 21.8 | -70 |
| N.C.Hills | 157.3 | 199 | 46.8 | -30 | 38.9 | 43 |
| Nowgong | 31.0 | -60 | 37.3 | -50 | 8.5 | -87 |
| Nalbari | 34.9 | -61 | 102.0 | 0 | 28.0 | -63 |
| Sonitpur | 83.6 | 2 | 26.1 | -70 | 8.3 | -87 |
| Sibsagar | 83.3 | 34 | 146.2 | 60 | 92.7 | 30 |
| Tinsukia | 54.2 | -49 | 96.1 | -20 | 65.9 | -23 |

| | | | | | | |
|-------------------------|-------|-----|-------|-----|-------|-----|
| Udalgiri | 59.4 | -21 | 36.0 | -40 | 2.8 | -96 |
| Meghalaya | | | | | | |
| East Garo Hills | 106.4 | -9 | 58.0 | -51 | 62.0 | -45 |
| East Khasi Hills | 132.9 | -58 | 228.0 | -25 | 138.6 | -48 |
| Jaintia Hills | 64.0 | -75 | 56.0 | -84 | 80.0 | -68 |
| Ribhoi | 34.5 | -66 | 31.8 | 66 | 29.0 | -67 |
| South Garo Hills | 95.0 | -8 | 104.0 | -9 | 32.0 | -68 |
| West Garo Hills | 63.1 | -39 | 58.6 | -49 | 5.2 | -95 |
| West Khasi Hills | 106.0 | -37 | 70.0 | -72 | 21.0 | -86 |
| NMMT | | | | | | |
| Mizoram | | | | | | |
| Aizwal | 242.7 | 142 | 70.2 | -30 | 41.7 | -60 |
| Champhai | ** | ** | ** | ** | ** | ** |
| Kolasib | 53.0 | -53 | 41.0 | -60 | 24.0 | -77 |
| Lawngtlai | ** | ** | ** | ** | ** | ** |
| Lunglei | ** | ** | ** | ** | ** | ** |
| Mamit | ** | ** | ** | ** | ** | ** |
| Saiha | 96.0 | 3 | 69.0 | -39 | 42.0 | -53 |
| Serchhip | 84.0 | -18 | 148.2 | 20 | 105.4 | 18 |
| Manipur | | | | | | |
| Bishnupur | ** | ** | ** | ** | ** | ** |
| Chandel | ** | ** | ** | ** | ** | ** |
| Churachandpur | ** | ** | ** | ** | ** | ** |
| Imphal east | 153.2 | 129 | 53.5 | -22 | 140.1 | 182 |
| Imphal west | 194.9 | 295 | 8.4 | -84 | 21.1 | -54 |
| Senapati | ** | ** | ** | ** | ** | ** |
| Tamenglong | ** | ** | 49.0 | 13 | ** | ** |
| Thoubal | 85.0 | 119 | ** | ** | 101.0 | 123 |
| Ukhrul | ** | ** | ** | ** | ** | ** |
| Nagaland | | | | | | |
| Dimapur | 100.5 | 339 | 22.1 | -54 | 24.2 | -48 |
| Kephire | ** | ** | ** | ** | ** | ** |
| Kohima | 140.0 | 77 | 47.6 | -49 | 46.2 | -40 |
| Longleng | ** | ** | ** | ** | ** | ** |
| Mokokchung | 115.0 | 14 | 33.0 | -50 | 48.0 | -51 |
| Mon | ** | ** | ** | ** | ** | ** |
| Paran | ** | ** | ** | ** | ** | ** |
| Phek | ** | ** | ** | ** | ** | ** |
| Tuensang | ** | ** | ** | ** | ** | ** |
| Wokha | ** | ** | ** | ** | ** | ** |
| Zunheboto | ** | ** | ** | ** | ** | ** |
| Tripura | | | | | | |
| Dhalai | 252.3 | 212 | 30.4 | -62 | 94.8 | 6 |
| North Tripura | 123.4 | 37 | 45.2 | -49 | 100.6 | 38 |
| South Tripura | 170.5 | 50 | 285.2 | 192 | 97.2 | -9 |
| West Tripura | 247.2 | 175 | 104.0 | 18 | 73.5 | -4 |
| Himachal Pradesh | | | | | | |
| Bilaspur | 134.4 | 78 | 46.7 | -41 | 17.0 | -79 |
| Chamba | 92.3 | -42 | 69.0 | -56 | 51.3 | -61 |
| Hamirpur | 127.3 | 26 | 71.7 | -31 | 54.2 | -45 |
| Kangra | 179.0 | 24 | 156.4 | -3 | 158.9 | -3 |

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|--------------------------|-------|------|-------|------|------|------|
| Kinnaur | 10.8 | -49 | 1.1 | -94 | 6.7 | -59 |
| Kullu | 56.3 | 5 | 60.8 | 42 | 27.4 | -41 |
| Lahaul and Spiti | 6.9 | -83 | 3.9 | -91 | 8.5 | -75 |
| Mandi | 100.8 | -2 | 133.0 | 15 | 85.3 | -23 |
| Shimla | 81.4 | 30 | 82.1 | 50 | 40.1 | -25 |
| Sirmaur | 111.3 | -11 | 49.1 | -61 | 97.8 | -20 |
| Solan | 211.7 | 120 | 49.2 | -40 | 46.0 | -46 |
| Una | 137.1 | 67 | 115.5 | 64 | 83.7 | 6 |
| Punjab | | | | | | |
| Amritsar | 94.8 | 83 | 11.4 | -79 | 13.7 | -76 |
| Barnala | 0.0 | -100 | 1.0 | -97 | 14.5 | -47 |
| Bhatinda | 12.7 | -56 | 19.3 | -35 | 35.0 | -7 |
| Faridkot | 17.0 | -50 | 23.5 | 0 | 14.0 | -53 |
| Fatehgarh Sahib | 81.3 | 105 | 1.0 | -98 | 3.0 | -94 |
| Ferozpur | 9.1 | -73 | 4.2 | -86 | 11.1 | -70 |
| Gurdaspur | 91.0 | 14 | 83.0 | 0 | 53.0 | -37 |
| Hoshiarpur | 54.3 | -19 | 22.8 | -62 | 2.9 | -96 |
| Jalandhar | 26.8 | -37 | 12.8 | -75 | 5.1 | -89 |
| Kapurthala | 46.3 | 1 | 38.6 | 5 | 15.4 | -60 |
| Ludhiana | 48.7 | 11 | 2.5 | -94 | 3.8 | -92 |
| Mansa | 15.8 | -47 | 0.0 | -100 | 0.0 | -100 |
| Moga | 0.0 | -100 | 0.0 | -100 | 14.0 | -55 |
| Muktesar | 1.0 | -97 | 27.5 | 17 | 33.5 | 22 |
| Nawashahar | 151.6 | 169 | 3.4 | -95 | 6.4 | -91 |
| Patiala | 37.6 | -26 | 1.1 | -98 | 9.1 | -85 |
| Ropar | 105.1 | 67 | 33.0 | -52 | 17.2 | -79 |
| Sangrur | 4.6 | -86 | 0.0 | -100 | 13.4 | -66 |
| Mohali | 64.5 | 37 | 19.3 | -68 | 7.7 | -87 |
| TarnTaran | 16.5 | -51 | 28.3 | -21 | 17.3 | -52 |
| Haryana,Chd,Delhi | | | | | | |
| Haryana | | | | | | |
| Ambala | 48.8 | -27 | 9.3 | -87 | 12.1 | -84 |
| Bhiwani | 0.3 | -99 | 0.5 | -99 | 3.0 | -89 |
| Chandigarh | 78.0 | 37 | 34.0 | -48 | 8.8 | -88 |
| Faridabad | 54.0 | 14 | 1.3 | -97 | 53.0 | -12 |
| Fatehabad | 9.8 | -60 | 0.0 | -100 | 11.9 | -58 |
| Gurgaon | 33.5 | -21 | 1.0 | -97 | 2.8 | -93 |
| Hissar | 10.0 | -68 | 0.5 | -98 | 5.3 | -81 |
| Jhajar | 22.8 | -42 | 1.7 | -96 | 7.7 | -79 |
| Jind | 7.7 | -76 | 0.0 | -100 | 5.6 | -85 |
| Katihai | 17.9 | -45 | 0.4 | -99 | 2.9 | -91 |
| Karnal | 70.0 | 88 | 0.0 | -100 | 8.3 | -81 |
| Kurukshetra | 7.4 | -85 | 0.0 | -100 | 7.8 | -83 |
| Mahendragarh | 18.8 | -51 | 0.0 | -100 | 1.8 | -95 |
| Mewat | 36.0 | -13 | 0.0 | -100 | 3.0 | -93 |
| Palwal | 49.0 | 17 | 0.0 | -100 | 20.0 | -50 |
| Panchkkula | 56.1 | -28 | 15.2 | -81 | 30.0 | -66 |
| Panipat | 54.2 | 33 | 3.4 | -90 | 4.6 | -91 |
| Rewari | 15.6 | -67 | 1.3 | -96 | 16.0 | -66 |
| Rohtak | 6.4 | -88 | 0.5 | -99 | 2.0 | -95 |
| Sirsa | 20.2 | -29 | 27.0 | 9 | 10.2 | -45 |

| | | | | | | |
|----------------------------|-------|-----|-------|------|-------|------|
| Sonepat | 26.9 | -43 | 0.8 | -98 | 5.1 | -90 |
| Yamunanagar | 41.8 | -41 | 12.1 | -85 | 41.4 | -48 |
| Delhi | | | | | | |
| Central Delhi | 8.0 | -85 | 7.0 | -87 | 5.0 | -92 |
| East Delhi | 31.0 | -42 | 0.0 | -100 | 76.0 | 17 |
| New Delhi | 9.6 | -82 | 12.1 | -77 | 4.0 | -94 |
| North Delhi | 21.3 | -60 | 0.0 | -100 | 26.2 | -60 |
| North East Delhi | 6.0 | -89 | 4.0 | -92 | 23.0 | -65 |
| North West Delhi | 23.0 | -57 | 12.5 | -76 | 11.5 | -82 |
| South Delhi | 11.0 | -79 | 22.5 | -57 | 1.7 | -97 |
| South West Delhi | 62.4 | 17 | 3.3 | -94 | 14.8 | -77 |
| West Delhi | 23.0 | -57 | 4.0 | -92 | 11.0 | -83 |
| Jammu & Kashmir | | | | | | |
| Anantnag | 24.8 | 10 | 15.5 | -33 | 18.6 | -4 |
| Badgam | 46.6 | 230 | 51.7 | 153 | 21.5 | 56 |
| Bandipore | ** | ** | ** | ** | ** | ** |
| Baramula | 38.7 | 88 | 41.1 | 104 | 24.6 | 11 |
| Doda | 58.8 | 56 | 45.2 | 47 | 32.2 | 1 |
| Ganderbal | 31.1 | 109 | 18.9 | 15 | 27.1 | 58 |
| Jammu | 102.3 | 35 | 119.3 | 24 | 17.8 | -81 |
| Kargil | ** | ** | ** | ** | ** | ** |
| Kathua | 101.3 | 8 | 141.7 | 22 | 42.8 | -63 |
| Kistwar | ** | ** | ** | ** | ** | ** |
| Kulgam | 2.5 | -89 | 8.8 | -62 | 6.3 | -68 |
| Kupwara | 14.3 | -12 | 54.6 | 144 | 39.6 | 148 |
| Ladakh(Leh) | 10.7 | 198 | 4.5 | 97 | 26.7 | 1237 |
| Poonch | ** | ** | ** | ** | ** | ** |
| Pulwama | 42.1 | 106 | 32.8 | 75 | 17.0 | -8 |
| Rajouri | 36.4 | -48 | 154.6 | 122 | 14.0 | -81 |
| Ramban | 20.8 | -45 | 45.3 | 47 | 22.6 | -29 |
| Reasi | 61.7 | -51 | 75.7 | -48 | 102.9 | -39 |
| Samba | 48.5 | -36 | 103.8 | 7 | 30.7 | -67 |
| Shopian | ** | ** | ** | ** | ** | ** |
| Srinagar | 72.5 | 386 | 35.5 | 116 | 80.7 | 372 |
| Udhampur | 35.2 | -72 | 26.8 | -82 | 73.2 | -57 |
| East Madhya Pradesh | | | | | | |
| Anuppur | 39.0 | -58 | 44.2 | -45 | 67.3 | -25 |
| Balaghat | 38.6 | -67 | 34.9 | -68 | 102.6 | -1 |
| Chhatarpur | 64.5 | -18 | 25.2 | -66 | 31.4 | -66 |
| Chindwara | 62.6 | -5 | 67.7 | 17 | 155.5 | 103 |
| Damoh | 61.5 | -31 | 22.5 | -73 | 79.5 | -33 |
| Dindori | 44.7 | -55 | 79.5 | -2 | 124.4 | 27 |
| Jabalpur | 40.2 | -48 | 80.2 | 1 | 139.9 | 27 |
| Katni | 53.1 | -32 | 8.7 | -88 | 50.9 | -57 |
| Mandla | 78.1 | -18 | 47.5 | -53 | 156.9 | 52 |
| Narsingpur | 40.0 | -50 | 56.7 | -32 | 117.2 | 21 |
| Panna | 87.8 | -8 | 25.5 | -66 | 45.7 | -53 |
| Rewa | 85.5 | 11 | 19.2 | -75 | 52.7 | -36 |
| Sagar | 93.1 | 12 | 63.4 | -14 | 65.4 | -45 |
| Satna | 46.6 | -39 | 34.6 | -52 | 81.1 | -8 |
| Seoni | 54.5 | -33 | 49.3 | -40 | 130.4 | 54 |

| | | | | | | |
|----------------------------|-------|-----|-------|-----|-------|-----|
| Shahdol | 49.0 | -37 | 48.8 | -23 | 90.6 | 7 |
| Sidhi | 16.3 | -77 | 46.2 | -37 | 65.8 | -10 |
| Singrauli | 61.2 | 17 | 22.8 | -69 | 134.0 | 96 |
| Tikamgarh | 87.0 | 18 | 43.0 | -32 | 21.0 | -71 |
| Umaria | 132.8 | 44 | 23.6 | -64 | 131.4 | 34 |
| West Madhya Pradesh | | | | | | |
| Agar | 239.9 | 107 | 550.0 | 250 | 49.6 | -57 |
| Alirajpur | 93.8 | 38 | 343.0 | 417 | 18.5 | -73 |
| Asoknagar | 180.0 | 99 | 75.3 | 4 | 53.5 | -30 |
| Badwani | 75.1 | 51 | 75.1 | 62 | 71.5 | 51 |
| Betul | 126.4 | 91 | 79.7 | 13 | 232.8 | 171 |
| Bhind | 64.6 | 16 | 11.3 | -79 | 8.0 | -84 |
| Bhopal | 207.4 | 192 | 193.1 | 101 | 97.1 | 11 |
| Burhanpur | 89.3 | 86 | 60.3 | -6 | 140.3 | 122 |
| Datia | 92.8 | 41 | 25.4 | -54 | 1.3 | -98 |
| Dewas | 267.7 | 294 | 198.8 | 132 | 127.1 | 44 |
| Dhar | 271.7 | 323 | 228.3 | 226 | 98.5 | 33 |
| Guna | 206.6 | 146 | 121.6 | 43 | 50.9 | -41 |
| Gwalior | 111.1 | 67 | 42.6 | -33 | 1.8 | -97 |
| Harda | 127.0 | 58 | 133.6 | 51 | 256.1 | 166 |
| Hosangabad | 224.7 | 153 | 121.9 | 27 | 176.0 | 40 |
| Indore | 377.2 | 555 | 213.8 | 187 | 206.0 | 193 |
| Jhabua | 117.0 | 89 | 335.5 | 495 | 25.4 | -62 |
| Khandwa | 243.6 | 316 | 92.8 | 45 | 219.2 | 169 |
| Khargone | 97.9 | 92 | 81.2 | 39 | 135.7 | 100 |
| Mandsaur | 152.1 | 144 | 338.7 | 335 | 15.8 | -81 |
| Morena | 19.5 | -69 | 10.1 | -85 | 2.0 | -97 |
| Neemuch | 154.5 | 166 | 299.1 | 286 | 19.8 | -71 |
| Raisen | 147.8 | 72 | 159.7 | 60 | 63.5 | -35 |
| Rajgarh | 354.4 | 468 | 365.5 | 349 | 68.9 | -26 |
| Ratlam | 176.2 | 169 | 614.4 | 605 | 61.5 | -32 |
| Sehore | 388.0 | 404 | 147.7 | 56 | 82.3 | -23 |
| Shajapur | 328.5 | 427 | 299.0 | 240 | 95.0 | -3 |
| Sheopur Kalani | 46.0 | -28 | 88.5 | 22 | 12.5 | -77 |
| Shivpuri | 72.1 | -1 | 48.1 | -29 | 53.8 | -23 |
| Ujjain | 454.5 | 756 | 410.1 | 411 | 94.2 | 19 |
| Vidisha | 152.2 | 83 | 161.4 | 79 | 34.3 | -64 |
| Chhattisgarh | | | | | | |
| Bastar | 33.5 | -61 | 16.1 | -80 | 4.0 | -96 |
| Bijapur | 43.8 | -59 | 140.2 | 14 | 52.9 | -59 |
| Bilaspur | 29.6 | -65 | 67.7 | -14 | 91.7 | 15 |
| Dantewara | 80.5 | -27 | 32.2 | -64 | 13.7 | -86 |
| Dhamtari | 33.2 | -60 | 25.7 | -69 | 13.8 | -84 |
| Durg | 30.7 | -57 | 28.2 | -59 | 50.9 | -36 |
| Janjgir | 54.9 | -39 | 86.0 | 2 | 106.1 | 8 |
| Jashpurnagar | 46.3 | -55 | 92.3 | -12 | 95.7 | 4 |
| Kanker | 32.9 | -64 | 29.5 | -69 | 21.5 | -83 |
| Korba | 63.9 | -35 | 80.1 | 0 | 150.5 | 28 |
| Koriya | 26.0 | -71 | 27.6 | -66 | 51.1 | -41 |
| Kawardha | 20.8 | -66 | 20.7 | -69 | 19.7 | -71 |
| Mahasumund | 47.7 | -34 | 48.8 | -41 | 103.2 | 14 |

| | | | | | | |
|---------------------------|-------|-----|------|-----|-------|------|
| Narayanpur | 49.3 | -54 | 22.2 | -77 | 6.4 | -94 |
| Raigarh | 45.3 | -50 | 63.1 | -18 | 189.6 | 109 |
| Raipur | 27.8 | -66 | 58.9 | -21 | 50.4 | -35 |
| Rajandgaon | 42.4 | -44 | 34.7 | -60 | 33.7 | -61 |
| Surguja | 72.1 | -25 | 31.1 | -66 | 69.2 | -23 |
| East Uttar Pradesh | | | | | | |
| Allahabad | 24.2 | -62 | 19.8 | -67 | 33.5 | -42 |
| Ambedkar Nagar | 2.0 | -98 | 4.0 | -95 | 0.0 | -100 |
| Azamgarh | 112.1 | 20 | 11.4 | -83 | 69.1 | 2 |
| Bahraich | 35.6 | -64 | 27.6 | -64 | 35.8 | -47 |
| Ballia | 60.3 | -22 | 10.2 | -83 | 27.4 | -53 |
| Balrampur | 24.0 | -79 | 0.6 | -99 | 38.5 | -46 |
| Banda | 66.4 | 12 | 28.8 | -51 | 3.0 | -96 |
| Barabanki | 11.7 | -86 | 14.0 | -79 | 68.0 | -2 |
| Basti | 31.4 | -68 | 2.8 | -96 | 44.1 | -36 |
| Chandauli | 159.2 | 103 | 1.4 | -98 | 33.2 | -39 |
| Deoria | 113.3 | 52 | 11.5 | -85 | 42.5 | -36 |
| Faizabad | 25.7 | -74 | 3.0 | -96 | 32.3 | -60 |
| Farrukhabad | 3.3 | -94 | 2.5 | -96 | 3.9 | -92 |
| Fatehpur | 12.1 | -78 | 5.9 | -90 | 0.0 | -100 |
| Gazipur | 85.7 | 30 | 17.8 | -70 | 30.8 | -58 |
| Gonda | 33.0 | -67 | 4.8 | -94 | 54.4 | -35 |
| Gorakhpur | 45.1 | -51 | 7.1 | -92 | 119.4 | 35 |
| Hardoi | 26.2 | -58 | 19.8 | -67 | 24.0 | -55 |
| Jaunpur | 64.4 | -18 | 15.5 | -73 | 52.6 | 4 |
| Kannauj | 0.5 | -99 | 18.9 | -70 | 3.5 | -94 |
| Kanpur City | 18.9 | -66 | 4.9 | -92 | 10.5 | -79 |
| Kanpur Dehat | 3.2 | -95 | 5.8 | -92 | 1.6 | -97 |
| Kaushambi | 8.4 | -84 | 15.6 | -72 | 0.0 | -100 |
| Kheri | 59.6 | -12 | 11.1 | -84 | 39.0 | -44 |
| Kushi nagar | 58.0 | -26 | 1.0 | -99 | 14.5 | -82 |
| Lucknow | 12.9 | -78 | 16.4 | -74 | 13.9 | -76 |
| Maharajganj | 58.3 | -43 | 29.0 | -69 | 21.5 | -74 |
| Mau | 44.9 | -54 | 1.0 | -99 | 26.5 | -60 |
| Mirzapur | 133.5 | 84 | 21.0 | -67 | 73.7 | 17 |
| Pratapgarh | 71.3 | -3 | 33.7 | -47 | 41.7 | -28 |
| RaiBareilly | 32.3 | -45 | 6.6 | -88 | 4.0 | -92 |
| Sahuji Maharajnagar | 62.8 | -7 | 12.0 | -78 | 0.0 | -100 |
| Sant Kabirnnagar | 39.0 | -61 | 3.0 | -96 | 17.0 | -77 |
| Sant Ravidas Nagar | 82.0 | 5 | 5.0 | -93 | 63.0 | 15 |
| Shrawasti | 79.0 | -20 | 0.3 | -99 | 32.8 | -52 |
| Sidharthnagar | 41.7 | -54 | 36.3 | -57 | 117.6 | 62 |
| Sitapur | 18.6 | -72 | 15.5 | -77 | 45.9 | -5 |
| Sonbhadra | 47.4 | -33 | 32.8 | -47 | 76.1 | 8 |
| Sultanpur | 67.5 | -8 | 19.3 | -69 | 43.3 | -25 |
| Unnao | 12.7 | -80 | 21.3 | -63 | 2.5 | -96 |
| Varanasi | 113.9 | 29 | 64.3 | 2 | 67.9 | 18 |
| West Uttar Pradesh | | | | | | |
| Agra | 4.4 | -93 | 2.6 | -95 | 5.9 | -90 |
| Aligarh | 29.9 | -41 | 5.9 | -89 | 3.0 | -96 |
| Auraiya | 28.1 | -45 | 15.9 | -74 | 0.0 | -100 |

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|--------------------|-------|-----|-------|------|-------|------|
| Badaun | 20.2 | -59 | 2.2 | -97 | 7.4 | -90 |
| Baghpat | 11.0 | -75 | 0.0 | -100 | 12.1 | -78 |
| Bareilly | 10.3 | -83 | 5.6 | -93 | 38.3 | -49 |
| Bijnor | 42.9 | -43 | 1.7 | -98 | 88.1 | 6 |
| Bulandsahar | 23.5 | -55 | 5.6 | -89 | 1.8 | -97 |
| Etah | 9.5 | -79 | 22.7 | -52 | 0.0 | -100 |
| Etawah | 19.6 | -62 | 8.7 | -85 | 0.0 | -100 |
| Firozabad | 82.6 | 36 | 23.1 | -47 | 0.0 | -100 |
| GBNagar | 11.0 | -77 | 0.0 | -100 | 6.0 | -89 |
| Ghaziabad | 32.5 | -33 | 0.0 | -100 | 5.2 | -92 |
| Hamirpur | 46.5 | -25 | 31.5 | -53 | 6.7 | -90 |
| Jalaun | 59.9 | -1 | 17.1 | -70 | 0.0 | -100 |
| Jhansi | 66.9 | 16 | 22.7 | -66 | 4.0 | -94 |
| Jotiba Phule Nagar | 46.6 | -12 | 3.5 | -95 | 0.5 | -99 |
| Kanshiramnagar | 5.0 | -91 | 1.0 | -98 | 0.0 | -100 |
| Lalitpur | 30.0 | -62 | 34.0 | -61 | 35.5 | -50 |
| Mahamaya Nagar | 5.0 | -90 | 17.0 | -69 | 0.0 | -100 |
| Mahoba | 35.4 | -46 | 81.4 | 41 | 5.6 | -92 |
| Mainpuri | 31.7 | -34 | 6.5 | -88 | 0.0 | -100 |
| Mathura | 9.3 | -82 | 1.0 | -98 | 6.6 | -87 |
| Meerut | 9.2 | -83 | 0.2 | -99 | 4.1 | -95 |
| Moradabad | 22.6 | -62 | 0.7 | -99 | 33.6 | -56 |
| Muzzaffarnagar | 44.3 | -6 | 0.0 | -100 | 7.1 | -90 |
| Pilibhit | 6.7 | -90 | 7.2 | -92 | 36.8 | -57 |
| Rampur | 38.4 | -44 | 0.7 | -99 | 25.3 | -66 |
| Saharanpur | 44.2 | -14 | 0.0 | -100 | 26.2 | -64 |
| Shahjahanpur | 1.7 | -97 | 3.7 | -95 | 34.2 | -48 |
| Uttarakhand | | | | | | |
| Almora | 48.2 | -23 | 17.6 | -79 | 50.6 | -26 |
| Bageshwar | 55.8 | -11 | 81.6 | -2 | 59.6 | -13 |
| Chamoli | 115.2 | 54 | 66.0 | -4 | 42.4 | -51 |
| Champawat | 47.0 | -58 | 58.5 | -48 | 89.0 | -9 |
| Dehradun | 98.7 | -44 | 101.3 | -40 | 124.9 | -29 |
| Garhwal Pauri | 46.5 | -52 | 21.0 | -81 | 100.4 | -20 |
| Garhwal Tehri | 18.0 | -80 | 53.2 | -41 | 23.5 | -78 |
| Haridwar | 29.2 | -52 | 23.8 | -72 | 134.0 | 48 |
| Nainital | 56.7 | -52 | 37.3 | -69 | 130.1 | 8 |
| Pithorgarh | 50.3 | -60 | 50.0 | -66 | 68.8 | -50 |
| Rudraprayag | 105.2 | -27 | 136.6 | -12 | 59.0 | -63 |
| Udham Sing Nagar | 47.6 | -41 | 10.3 | -90 | 70.4 | -17 |
| Uttarkashi | 115.7 | 19 | 124.4 | 38 | 57.3 | -43 |
| Bihar | | | | | | |
| Araria | 25.7 | -78 | 26.5 | -74 | 7.4 | -92 |
| Arwal | 81.5 | 64 | 33.7 | -39 | 8.7 | -82 |
| Aurangabad | 102.0 | 43 | 52.6 | -22 | 58.4 | 14 |
| Banka | 59.9 | 2 | 59.8 | 13 | 82.3 | 29 |
| Begusarai | 45.2 | -18 | 5.3 | -90 | 7.1 | -91 |
| Bhabua | 175.2 | 121 | 34.9 | -51 | 54.0 | -19 |
| Bhagalpur | 95.8 | 60 | 38.0 | -35 | 32.0 | -55 |
| Bhojpur | 29.3 | -61 | 65.4 | -12 | 35.8 | -46 |
| Buxar | 107.2 | 58 | 52.6 | -7 | 129.8 | 138 |

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|------------------|-------|-----|-------|------|-------|-----|
| Darbhanga | 18.2 | -71 | 5.0 | -93 | 9.6 | -86 |
| East Champaran | 44.7 | -50 | 3.5 | -96 | 5.2 | -93 |
| Gaya | 69.3 | 1 | 26.5 | -62 | 61.0 | -3 |
| Gopalganj | 87.8 | 29 | 7.2 | -89 | 39.5 | -39 |
| Jahanabad | 32.6 | -38 | 34.9 | -33 | 43.0 | -33 |
| Jamui | 69.6 | 10 | 38.9 | -38 | 56.2 | -5 |
| Kathihar | 66.9 | -14 | 21.8 | -69 | 17.9 | -76 |
| Khagadia | 52.6 | -15 | 18.1 | -66 | 28.9 | -65 |
| Kishanganj | 27.8 | -81 | 37.9 | -66 | 9.8 | -91 |
| Lakhisarai | 107.5 | 86 | 40.3 | -41 | 39.1 | -43 |
| Madhepura | 14.2 | -83 | 10.7 | -86 | 12.9 | -81 |
| Madhubani | 16.6 | -81 | 7.4 | -91 | 19.7 | -71 |
| Monghyar | 44.8 | -23 | 0.0 | -100 | 28.0 | -59 |
| Muzaffarpur | 60.7 | -23 | 1.2 | -98 | 7.3 | -89 |
| Nalanda | 26.5 | -57 | 7.4 | -89 | 31.2 | -45 |
| Nawada | 75.6 | 9 | 22.3 | -59 | 140.4 | 118 |
| Patna | 35.4 | -55 | 64.1 | -6 | 12.8 | -79 |
| Purnea | 9.0 | -91 | 18.8 | -77 | 3.5 | -96 |
| Rohtas | 90.1 | 52 | 59.5 | -15 | 94.2 | 47 |
| Saharsha | 27.2 | -72 | 22.1 | -79 | 13.0 | -83 |
| Samstipur | 22.2 | -70 | 10.1 | -85 | 15.4 | -76 |
| Saran | 76.4 | 10 | 23.2 | -68 | 30.8 | -52 |
| Sheikpura | 98.4 | 70 | 67.3 | 22 | 51.1 | -9 |
| Sheohar | 27.0 | -70 | 0.0 | -100 | 18.6 | -74 |
| Sitamarhi | 8.7 | -90 | 13.7 | -87 | 15.0 | -79 |
| Siwan | 55.2 | -23 | 12.9 | -84 | 24.1 | -59 |
| Supaul | 20.0 | -78 | 8.4 | -89 | 6.1 | -89 |
| Vaishali | 71.0 | -22 | 2.1 | -98 | 6.3 | -91 |
| West Champaran | 92.3 | -3 | 22.0 | -82 | 25.3 | -67 |
| Jharkhand | | | | | | |
| Bokaro | 69.2 | -15 | 95.9 | 30 | 143.6 | 79 |
| Chatra | 150.9 | 79 | 32.4 | -55 | 117.9 | 81 |
| Deoghar | 104.5 | 46 | 96.0 | 45 | 169.7 | 183 |
| Dhanbad | 69.7 | -13 | 129.3 | 60 | 135.8 | 63 |
| Dumka | 74.4 | -3 | 178.2 | 139 | 265.8 | 288 |
| East Singbhum | 76.4 | 5 | 353.9 | 458 | 81.4 | 0 |
| Garhwa | 159.0 | 104 | 30.8 | -60 | 39.6 | -50 |
| Giridih | 111.5 | 30 | 141.9 | 68 | 204.8 | 207 |
| Godda | 120.1 | 87 | 77.3 | 23 | 46.0 | -18 |
| Gumla | 145.1 | 82 | 154.0 | 65 | 147.4 | 93 |
| Hazaribagh | 152.7 | 90 | 32.0 | -58 | 210.1 | 211 |
| Jamtara | 120.6 | 58 | 159.9 | 112 | 221.8 | 188 |
| Khunti | 114.4 | 33 | 47.9 | -47 | 105.0 | 26 |
| Koderrna | 150.9 | 101 | 39.1 | -16 | 139.6 | 133 |
| Latehar | 231.3 | 174 | 45.9 | -54 | 172.2 | 149 |
| Lohardagga | 224.3 | 182 | 98.1 | 23 | 226.0 | 163 |
| Pakur | 67.4 | -17 | 93.1 | 15 | 136.8 | 90 |
| Palamau | 206.6 | 165 | 45.6 | -39 | 82.0 | 17 |
| Ramgarh | 157.0 | 82 | 82.4 | 6 | 178.4 | 132 |
| Ranchi | 98.3 | 10 | 19.7 | -75 | 168.7 | 121 |
| Sahebganj | ** | ** | 43.2 | -51 | 59.2 | -8 |

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|-----------------------|-------|-----|-------|------|-------|-----|
| Saraikela | 62.8 | -23 | 193.4 | 171 | 67.5 | -22 |
| Simdega | 85.3 | -24 | 104.8 | -6 | 131.1 | 35 |
| West Singhbhum | 66.6 | -10 | 81.4 | 18 | 37.9 | -56 |
| East Rajasthan | | | | | | |
| Ajmer | 73.4 | 42 | 100.9 | 146 | 29.1 | -17 |
| Alwar | 9.8 | -82 | 8.2 | -84 | 13.5 | -73 |
| Banswara | 78.6 | 35 | 314.6 | 322 | 31.1 | -63 |
| Baran | 104.8 | 27 | 197.3 | 147 | 20.0 | -71 |
| Bharatpur | 30.6 | -39 | 7.5 | -84 | 16.2 | -69 |
| Bhilwara | 41.1 | -24 | 202.9 | 316 | 19.3 | -63 |
| Bundi | 67.3 | 4 | 136.0 | 87 | 11.8 | -80 |
| Chittorgarh | 105.0 | 82 | 215.5 | 239 | 12.8 | -81 |
| Dausa | 28.8 | -60 | 29.0 | -47 | 13.8 | -73 |
| Dholpur | 16.5 | -69 | 10.3 | -79 | 3.0 | -95 |
| Dungarpur | 62.2 | 33 | 287.9 | 445 | 36.2 | -40 |
| Jaipur | 46.7 | -30 | 52.1 | 2 | 22.4 | -49 |
| Jhalawar | 118.5 | 72 | 368.8 | 392 | 73.5 | -16 |
| Jhunjhunu | 20.0 | -61 | 6.5 | -80 | 26.1 | -26 |
| Karauli | 22.8 | -66 | 22.6 | -64 | 14.0 | -71 |
| Kota | 80.5 | 7 | 175.1 | 131 | 10.6 | -83 |
| Pratapgarh | 55.4 | -1 | 360.0 | 403 | 32.2 | -63 |
| Rajsamand | 38.3 | -11 | 209.0 | 402 | 47.0 | 14 |
| Sawai Madhopur | 26.7 | -64 | 35.3 | -49 | 25.2 | -52 |
| Sikar | 38.3 | -30 | 55.7 | 43 | 60.7 | 95 |
| Sirohi | 38.5 | -52 | 655.0 | 650 | 87.6 | 4 |
| Tonk | 52.0 | -21 | 96.1 | 74 | 14.2 | -70 |
| Udaipur | 55.3 | 13 | 284.4 | 522 | 32.3 | -43 |
| West Rajasthan | | | | | | |
| Barmer | 11.5 | -51 | 241.5 | 1126 | 36.3 | 80 |
| Bikaner | 15.7 | -39 | 64.3 | 199 | 84.9 | 396 |
| Churu | 37.4 | -1 | 29.0 | 3 | 62.9 | 152 |
| Hanumangarh | 15.0 | -44 | 18.1 | -25 | 48.4 | 120 |
| Jaisalmer | 16.1 | 7 | 72.2 | 451 | 70.4 | 429 |
| Jalore | 18.9 | -53 | 420.3 | 935 | 59.7 | 82 |
| Jodhpur | 21.7 | -31 | 116.3 | 344 | 56.9 | 151 |
| Nagaur | 51.7 | -2 | 74.4 | 153 | 68.7 | 199 |
| Pali | 43.0 | -12 | 248.0 | 492 | 58.9 | 49 |
| Sri Ganganagar | 12.6 | -44 | 33.1 | 88 | 68.2 | 334 |
| Gujarat Region | | | | | | |
| Ahmedabad | 4.1 | -92 | 195.3 | 310 | 6.2 | -87 |
| Anand | 1.0 | -99 | 219.2 | 228 | 7.4 | -88 |
| Banaskantha | 15.1 | -69 | 649.7 | 1108 | 46.9 | -12 |
| Baroda | 20.8 | -75 | 204.3 | 157 | 2.8 | -96 |
| Broach | 4.5 | -93 | 158.3 | 135 | 1.8 | -97 |
| DNH | 325.1 | 48 | 318.4 | 66 | 35.2 | -82 |
| Dahod | 60.2 | -2 | 157.0 | 115 | 11.1 | -86 |
| Daman | 36.8 | -83 | 256.8 | 34 | 16.0 | -92 |
| Dangs | 117.0 | -23 | 280.0 | 29 | 55.5 | -67 |
| Gandhinagar | 12.0 | -83 | 447.4 | 673 | 12.6 | -80 |
| Kheda | 32.2 | -50 | 242.8 | 249 | 12.9 | -81 |
| Mehsana | 16.4 | -71 | 460.7 | 793 | 30.4 | -47 |

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|------------------------------|-------|-----|-------|-----|-------|-----|
| Narmada | 28.0 | -68 | 321.2 | 234 | 2.5 | -97 |
| Navsari | 68.1 | -59 | 267.0 | 59 | 15.0 | -89 |
| Panchmahal | 50.3 | -27 | 201.1 | 150 | 13.5 | -83 |
| Patan | 16.6 | -65 | 499.1 | 949 | 46.4 | 3 |
| Sabarkantha | 21.3 | -67 | 328.7 | 378 | 48.6 | -32 |
| Surat | 21.6 | -81 | 275.7 | 149 | 6.1 | -93 |
| Tapi | 50.2 | -57 | 381.8 | 143 | 9.8 | -92 |
| Valsad | 190.4 | 3 | 350.4 | 110 | 25.1 | -84 |
| S K & Diu region | | | | | | |
| Amreli | 2.6 | -95 | 108.3 | 178 | 0.7 | -98 |
| Bhavnagar | 5.4 | -87 | 97.0 | 132 | 0.7 | -98 |
| Diu | 23.1 | -67 | 29.0 | -39 | 0.4 | -99 |
| Jamnagar | 3.0 | -95 | 171.0 | 332 | 0.4 | -98 |
| Junagarh | 11.9 | -87 | 135.2 | 109 | 3.7 | -92 |
| Kutch | 16.2 | -60 | 360.9 | 965 | 0.6 | -98 |
| Porbandar | 2.5 | -97 | 122.9 | 164 | 2.8 | -92 |
| Rajkot | 8.2 | -86 | 192.1 | 304 | 4.4 | -88 |
| Surendranagar | 30.5 | -36 | 204.0 | 427 | 1.1 | -97 |
| Maharashtra & Goa | | | | | | |
| Konkan & Goa | | | | | | |
| Mumbai City | 67.6 | -65 | 175.7 | 15 | 35.9 | -76 |
| Mumbai Suburban | 123.6 | -36 | 188.4 | 23 | 32.7 | -78 |
| North Goa | 219.6 | -22 | 257.0 | -6 | 107.4 | -55 |
| Raigad | 175.7 | -37 | 211.3 | -21 | 132.0 | -47 |
| Ratnagiri | 84.2 | -69 | 169.0 | -39 | 174.8 | -34 |
| Sindhudurg | 94.9 | -63 | 199.6 | -25 | 110.8 | -49 |
| South Goa | 171.4 | -31 | 309.4 | 27 | 148.7 | -28 |
| Thane | 322.2 | 43 | 271.5 | 33 | 68.2 | -66 |
| Madhya Maharashtra | | | | | | |
| Ahmednagar | 16.4 | -30 | 14.9 | -38 | 7.3 | -67 |
| Dhule | 3.8 | -90 | 89.2 | 126 | 43.3 | 13 |
| Jalgaon | 12.5 | -70 | 31.4 | -31 | 66.8 | 28 |
| Kolhapur | 57.0 | -67 | 73.5 | -54 | 53.3 | -62 |
| Nandurbar | 22.0 | -69 | 254.5 | 269 | 22.8 | -67 |
| Nasik | 86.8 | 20 | 142.2 | 91 | 34.6 | -54 |
| Pune | 49.9 | -27 | 59.1 | -14 | 35.4 | -47 |
| Sangli | 7.6 | -80 | 16.5 | -49 | 11.9 | -62 |
| Satara | 26.1 | -58 | 26.4 | -51 | 25.8 | -54 |
| Solapur | 1.3 | -94 | 1.2 | -96 | 1.9 | -93 |
| Marathwada | | | | | | |
| Aurangabad | 13.9 | -61 | 7.2 | -83 | 36.7 | -7 |
| Beed | 2.8 | -91 | 2.1 | -94 | 10.8 | -63 |
| Hingoli | 19.8 | -62 | 15.5 | -74 | 52.6 | -18 |
| Jalna | 5.8 | -84 | 5.4 | -88 | 44.1 | 10 |
| Latur | 10.4 | -78 | 3.3 | -95 | 14.4 | -73 |
| Nanded | 14.6 | -73 | 28.3 | -56 | 21.7 | -66 |
| Usmanabad | 6.3 | -81 | 2.3 | -95 | 6.1 | -83 |
| Parbhani | 7.4 | -83 | 9.0 | -85 | 21.5 | -60 |
| Vidarbha | | | | | | |
| Akola | 14.8 | -76 | 49.5 | -2 | 177.0 | 236 |
| Amraoti | 33.9 | -43 | 84.9 | 52 | 180.3 | 154 |

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|--|-------|-----|-------|-----|-------|-----|
| Bhandara | 42.1 | -50 | 132.5 | 60 | 56.1 | -42 |
| Buldhana | 21.4 | -53 | 20.4 | -54 | 145.9 | 170 |
| Chandrapur | 33.9 | -56 | 89.0 | 5 | 31.4 | -69 |
| Gadchiroli | 49.3 | -52 | 53.9 | -49 | 16.5 | -86 |
| Gondia | 48.6 | -49 | 118.1 | 30 | 67.5 | -32 |
| Nagpur | 34.0 | -52 | 98.1 | 55 | 112.1 | 44 |
| Wardha | 21.6 | -63 | 131.3 | 121 | 158.1 | 111 |
| Washim | 22.7 | -63 | 12.3 | -74 | 176.7 | 163 |
| Yeotmal | 23.5 | -64 | 39.9 | -27 | 94.7 | 39 |
| Odisha | | | | | | |
| Angul | 53.1 | -40 | 150.7 | 126 | 68.6 | 0 |
| Balasore | 129.2 | 51 | 150.2 | 110 | 63.9 | -9 |
| Bargarh | 75.1 | -15 | 37.2 | -59 | 83.9 | 4 |
| Bhadrak | 82.9 | 12 | 220.4 | 301 | 47.7 | -41 |
| Bolangir | 76.7 | -19 | 33.5 | -60 | 21.9 | -74 |
| Boudh | 51.5 | -39 | 87.6 | 34 | 87.7 | 18 |
| Cuttack | 70.7 | -13 | 151.1 | 82 | 54.3 | -31 |
| Deogarh | 51.6 | -51 | 162.6 | 87 | 85.4 | -21 |
| Dhenkanal | 55.8 | -41 | 167.0 | 137 | 87.7 | 9 |
| Gajapati | 52.1 | -26 | 41.1 | -36 | 2.6 | -95 |
| Ganjam | 63.8 | 13 | 41.2 | -29 | 3.8 | -92 |
| Jagatsingpur | 45.8 | -43 | 278.2 | 307 | 71.1 | -30 |
| Jajpur | 54.8 | -28 | 263.6 | 295 | 50.8 | -39 |
| Jharsuguda | 61.2 | -42 | 127.9 | 63 | 176.2 | 77 |
| Kalahandi | 95.9 | 3 | 46.1 | -43 | 8.8 | -89 |
| Kandhamal | 36.9 | -57 | 58.6 | -10 | 54.1 | -27 |
| Kendrapara | 79.0 | 16 | 202.0 | 292 | 44.0 | -42 |
| Keonjhar | 32.5 | -58 | 180.7 | 168 | 41.9 | -43 |
| Khurda | 52.0 | -40 | 70.9 | 0 | 58.5 | -27 |
| Koraput | 31.6 | -66 | 22.0 | -76 | 13.2 | -86 |
| Malkangiri | 64.6 | -50 | 34.4 | -66 | 18.0 | -82 |
| Mayurbhanj | 117.5 | 29 | 242.4 | 226 | 56.8 | -27 |
| Nawapara | 82.4 | 5 | 230.9 | 217 | 11.8 | -82 |
| Nawarangpur | 61.0 | -49 | 22.6 | -77 | 2.2 | -97 |
| Nayagarh | 49.5 | -48 | 73.9 | 3 | 46.6 | -32 |
| Puri | 46.7 | -22 | 108.1 | 56 | 6.3 | -91 |
| Rayagada | 46.1 | -50 | 33.4 | -57 | 12.5 | -78 |
| Sambalpur | 75.6 | -28 | 143.8 | 66 | 68.4 | -37 |
| Sonepur | 38.8 | -58 | 39.2 | -53 | 50.4 | -53 |
| Sundargarh | 25.9 | -71 | 181.6 | 124 | 148.1 | 63 |
| West Bengal & Andaman Nicobar Islands | | | | | | |
| A & N ISLAND | | | | | | |
| Nicobar | 134.7 | 86 | 13.9 | -80 | 23.9 | -56 |
| North & Middle Andaman | 74.8 | -26 | 18.6 | -83 | 126.1 | 30 |
| South Andaman | 112.8 | 9 | 41.0 | -58 | 83.7 | 3 |
| GWB | | | | | | |
| Bankura | 98.1 | 44 | 134.8 | 88 | 167.0 | 157 |
| Birbhum | 128.8 | 92 | 238.4 | 255 | 183.7 | 153 |
| Burdwan | 104.6 | 41 | 140.1 | 126 | 215.6 | 188 |
| East Midnapore | 161.8 | 133 | 255.9 | 313 | 252.0 | 192 |

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|--------------------------|-------|-----|-------|-----|-------|-----|
| Hooghly | 86.3 | 7 | 222.7 | 226 | 213.2 | 204 |
| Howrah | 172.8 | 108 | 396.3 | 426 | 184.5 | 81 |
| Kolkata | 181.3 | 116 | 125.2 | 54 | 206.1 | 116 |
| Murshidabad | 101.3 | 42 | 184.2 | 145 | 159.4 | 144 |
| Nadia | 117.3 | 78 | 124.3 | 124 | 125.7 | 141 |
| 24 Pargana (N) | 135.6 | 85 | 97.1 | 32 | 195.4 | 136 |
| Purulia | 76.9 | 9 | 235.3 | 303 | 116.6 | 68 |
| 24 Pargana (S) | 265.1 | 146 | 173.2 | 73 | 206.9 | 83 |
| West Midnapore | 131.3 | 69 | 135.2 | 70 | 173.9 | 121 |
| SHWB & Sikkim | | | | | | |
| Cooch Behar | 22.8 | -87 | 50.0 | -69 | 60.8 | -65 |
| Darjeeling | 110.2 | -43 | 53.1 | -69 | 41.3 | -73 |
| East Sikkim | 94.0 | -14 | 109.5 | -11 | 42.3 | -64 |
| Jalpaiguri | 47.8 | -77 | 48.6 | -73 | 90.6 | -39 |
| Malda | 96.1 | 47 | 108.8 | 38 | 101.9 | 56 |
| North Dinajpur | 25.9 | -65 | 27.9 | -67 | 35.0 | -22 |
| North Sikkim | 48.6 | -56 | 32.7 | -71 | 44.8 | -57 |
| South Dinajpur | 28.8 | -63 | 67.6 | -22 | 25.6 | -53 |
| South Sikkim | 121.6 | 12 | 90.8 | -26 | 54.1 | -54 |
| West Sikkim | 50.5 | -54 | 61.0 | -45 | 55.0 | -47 |
| Karnataka | | | | | | |
| Coastal Karnataka | | | | | | |
| Dakshina Kannada | 371.1 | 33 | 156.7 | -45 | 146.9 | -41 |
| Udupi | 465.5 | 45 | 222.5 | -30 | 209.4 | -16 |
| Uttara Kannada | 149.1 | -44 | 125.3 | -43 | 124.5 | -39 |
| N I Karnataka | | | | | | |
| Bagalkote | 3.0 | -82 | 2.7 | -87 | 10.1 | -46 |
| Belagavi | 17.3 | -64 | 18.2 | -55 | 10.8 | -73 |
| Bidar | 19.3 | -59 | 1.5 | -97 | 24.0 | -43 |
| Dharwad | 3.9 | -89 | 8.1 | -72 | 13.6 | -54 |
| Gadag | 2.6 | -83 | 1.8 | -90 | 6.3 | -67 |
| Haveri | 40.8 | -1 | 10.0 | -68 | 21.6 | -35 |
| Kalaburgi | 12.8 | -66 | 2.4 | -94 | 10.2 | -75 |
| Koppal | 5.2 | -72 | 0.6 | -98 | 9.1 | -49 |
| Raichur | 3.3 | -86 | 4.4 | -87 | 12.5 | -55 |
| Vijayapura | 4.2 | -79 | 0.8 | -97 | 9.1 | -63 |
| Yadgir | 1.5 | -96 | 3.0 | -94 | 8.0 | -78 |
| S I Karnataka | | | | | | |
| Ballari | 10.5 | -38 | 0.2 | -99 | 11.1 | -40 |
| Bangalore Rural | 28.4 | 12 | 19.1 | -20 | 17.0 | -36 |
| Bangalore Urban | 47.2 | 93 | 13.4 | -40 | 16.1 | -44 |
| Chamarajanagar | 9.7 | -32 | 4.4 | -76 | 2.8 | -82 |
| Chikaballapur | 29.0 | 29 | 35.7 | 50 | 18.3 | -19 |
| Chikkamagaluru | 155.5 | 9 | 42.8 | -69 | 42.7 | -67 |
| Chitradurga | 26.7 | 99 | 7.6 | -48 | 6.5 | -55 |
| Davangere | 54.2 | 105 | 17.7 | -28 | 17.2 | -25 |
| Hassan | 18.2 | -59 | 9.6 | -78 | 13.1 | -66 |
| Kodagu | 207.8 | 14 | 80.2 | -57 | 46.2 | -71 |
| Kolar | 50.6 | 184 | 4.0 | -80 | 18.7 | -7 |

| | | | | | | |
|--------------------|-------|------|-------|------|------|------|
| Mandya | 5.2 | -54 | 7.5 | -44 | 16.4 | 31 |
| Mysuru | 16.4 | -8 | 8.8 | -59 | 12.9 | -23 |
| Ramanagara | 14.2 | -38 | 10.1 | -54 | 14.1 | -42 |
| Shivamogga | 222.9 | 53 | 59.4 | -52 | 83.6 | -34 |
| Tumakuru | 23.0 | 32 | 6.9 | -61 | 18.6 | -4 |
| Kerala | | | | | | |
| Alappuzha | 90.6 | -23 | 26.7 | -74 | 19.7 | -78 |
| Kannur | 330.1 | 49 | 193.9 | -11 | 39.3 | -77 |
| Ernakulam | 163.4 | 14 | 40.3 | -72 | 34.1 | -69 |
| Idukki | 227.1 | 45 | 72.9 | -60 | 36.6 | -75 |
| Kasaragod | 335.0 | 35 | 204.7 | -13 | 67.1 | -66 |
| Kollam | 74.3 | -10 | 43.6 | -49 | 18.3 | -72 |
| Kottayam | 122.7 | -2 | 45.1 | -62 | 31.7 | -67 |
| Kozhikode | 377.1 | 92 | 187.3 | -10 | 19.5 | -88 |
| Malappuram | 194.2 | 20 | 74.1 | -57 | 15.4 | -88 |
| Palakkad | 143.5 | 18 | 50.2 | -62 | 12.8 | -86 |
| Pathanamthitta | 106.4 | -7 | 20.3 | -81 | 21.0 | -77 |
| Thiruvananthapuram | 33.0 | -33 | 8.6 | -82 | 2.3 | -94 |
| Thrissur | 221.8 | 37 | 65.2 | -60 | 21.9 | -83 |
| Wynad | 143.5 | -35 | 69.0 | -72 | 17.0 | -91 |
| Tamil Nadu | | | | | | |
| Ariyalur | 90.5 | 357 | 19.2 | -15 | 11.3 | -36 |
| Chennai | 52.8 | 140 | 74.1 | 145 | 65.9 | 165 |
| Coimbatore | 31.9 | 294 | 10.7 | -21 | 3.9 | -46 |
| Cuddalore | 15.7 | -8 | 58.6 | 147 | 21.5 | 17 |
| Dharmapuri | 4.1 | -78 | 2.4 | -89 | 5.7 | -64 |
| Dindigul | 5.6 | -56 | 11.8 | -24 | 7.0 | -44 |
| Erode | 0.6 | -93 | 3.2 | -70 | 20.6 | 157 |
| Kanchipuram | 34.6 | 26 | 48.1 | 68 | 48.7 | 101 |
| Kanyakumari | 21.7 | -13 | 6.0 | -71 | 0.6 | -96 |
| Karikal | 20.7 | 31 | 0.0 | -100 | 0.1 | -99 |
| Karur | 0.0 | -100 | 0.0 | -100 | 2.6 | -39 |
| Krishnagiri | 7.1 | -60 | 9.1 | -53 | 9.5 | -47 |
| Madurai | 5.0 | -69 | 10.5 | -42 | 10.8 | -17 |
| Nagapattinam | 8.5 | -40 | 12.9 | -29 | 24.3 | 83 |
| Namakkal | 10.8 | -29 | 11.8 | -39 | 9.3 | -45 |
| Nilgiris | 44.8 | -17 | 29.2 | -51 | 12.4 | -74 |
| Perambalur | 3.7 | -67 | 25.1 | 41 | 55.0 | 540 |
| Puducherry | 10.2 | -39 | 19.2 | -51 | 42.8 | 135 |
| Pudukottai | 10.1 | -35 | 43.9 | 114 | 11.4 | -7 |
| Ramanathapuram | 11.8 | 34 | 4.1 | -62 | 12.8 | 137 |
| Salem | 12.3 | -43 | 17.6 | -31 | 17.0 | -11 |
| Sivaganga | 30.9 | 86 | 41.4 | 83 | 40.9 | 167 |
| Thanjavur | 8.5 | -46 | 32.2 | 76 | 6.5 | -52 |
| Theni | 15.0 | 85 | 11.5 | 22 | 2.3 | -60 |
| Tirunelveli | 6.7 | -22 | 3.7 | -59 | 0.0 | -100 |
| Tirupur | 1.8 | -64 | 1.3 | -82 | 0.0 | -100 |
| Tiruvallur | 24.8 | -5 | 102.1 | 284 | 70.3 | 199 |
| Tiruvannamalai | 20.4 | -21 | 66.1 | 161 | 31.6 | 37 |

| | | | | | | |
|-------------------------------|------|-----|------|-----|------|-----|
| Tiruvarur | 36.1 | 135 | 10.7 | -46 | 14.0 | 18 |
| Toothukudi | 0.3 | -93 | 0.3 | -95 | 1.8 | -4 |
| Trichy | 0.4 | -97 | 11.9 | -16 | 8.9 | 6 |
| Vellore | 10.7 | -61 | 37.2 | 32 | 20.5 | -14 |
| Villupuram | 17.9 | -18 | 55.7 | 107 | 29.5 | 48 |
| Virudhunagar | 5.3 | -46 | 11.5 | 12 | 3.5 | -36 |
| Andhra Pradesh | | | | | | |
| Coastal Andhra Pradesh | | | | | | |
| East Godavari | 94.3 | 119 | 26.2 | -50 | 51.7 | 36 |
| Guntur | 50.6 | 41 | 5.1 | -86 | 17.2 | -49 |
| Krishna | 42.3 | -12 | 22.6 | -60 | 28.7 | -39 |
| Nellore | 8.2 | -63 | 8.5 | -66 | 28.2 | 53 |
| Prakasam | 10.4 | -61 | 8.6 | -67 | 15.0 | -26 |
| Sirkakulam | 53.2 | 14 | 34.5 | -24 | 3.0 | -93 |
| Visakhapatnam | 44.5 | 0 | 43.1 | 0 | 6.1 | -84 |
| Vizianagram | 43.3 | 2 | 22.7 | -47 | 11.4 | -71 |
| West Godavari | 82.7 | 58 | 23.1 | -62 | 43.1 | -11 |
| Rayalaseema | | | | | | |
| Anantapur | 9.8 | -41 | 2.8 | -84 | 10.7 | -25 |
| Chittoor | 16.0 | -39 | 17.0 | -32 | 32.1 | 53 |
| Cuddapah | 8.9 | -66 | 7.3 | -74 | 13.7 | -43 |
| Kurnool | 6.7 | -74 | 10.0 | -71 | 9.7 | -65 |
| Telangana | | | | | | |
| Adilabad | 57.5 | -22 | 62.6 | -18 | 11.1 | -85 |
| Hyderabad | 7.4 | -83 | 2.8 | -94 | 2.0 | -95 |
| Karimnagar | 34.2 | -36 | 40.2 | -37 | 7.0 | -88 |
| Khammam | 33.4 | -46 | 34.4 | -55 | 28.9 | -58 |
| Mehabubnagar | 4.8 | -88 | 6.5 | -85 | 6.3 | -84 |
| Medak | 14.3 | -73 | 2.4 | -96 | 10.3 | -82 |
| Nalgonda | 21.7 | -48 | 8.7 | -79 | 9.4 | -72 |
| Nizamabad | 27.6 | -57 | 16.4 | -78 | 11.0 | -86 |
| Rangareddy | 13.2 | -70 | 3.0 | -94 | 11.7 | -71 |
| Warangal | 17.1 | -73 | 43.6 | -35 | 10.7 | -82 |

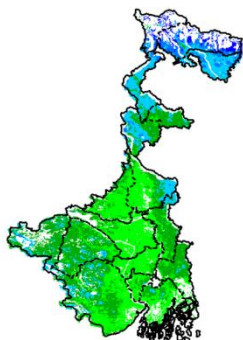
Legends

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

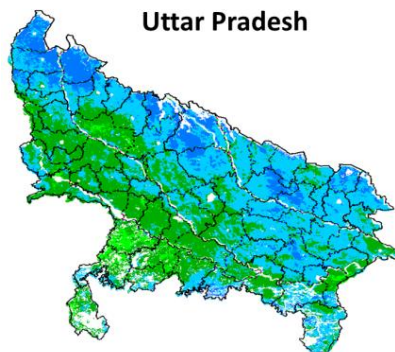
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 5th August 2015 FOR DIFFERENT STATES

West Bengal



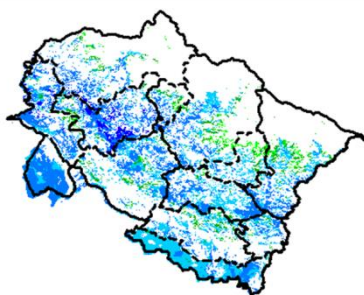
Agricultural vigour is very normal over the parts of West Bengal, whereas northern parts of West Bengal show dominantly higher values of NDVI varying from 0.4-0.6.

Uttar Pradesh



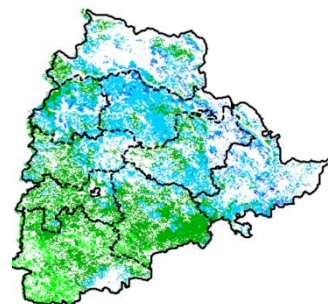
Agricultural vigour is good over the entire state of Uttar Pradesh where NDVI value varies from 0.4 - 0.5. In southern part normal NDVI values (0.2-0.4) are observed.

Uttarakhand



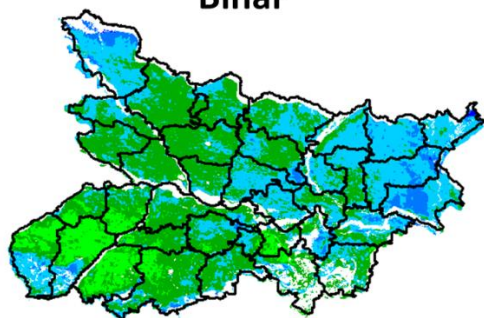
Agriculture vigour is very good over entire state of Uttarakhand with NDVI value varying between 0.4-0.6, whereas isolated patches with normal value of NDVI are observed over some parts of the state.

Telangana



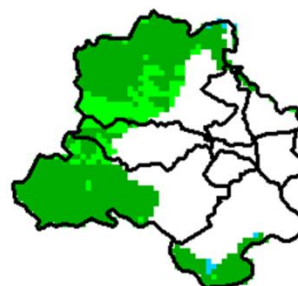
NDVI values vary from 0.2 - 0.4 over Telangana. Higher (> 0.4) values are seen in some patches over eastern and central parts of Telangana.

Bihar



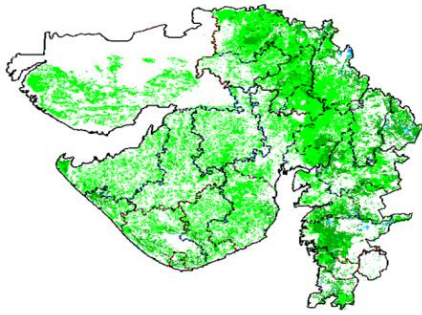
Eastern part of Bihar shows comparatively a high value (0.4 -0.5) of NDVI, whereas normal value of NDVI is observed over the remaining parts of the state.

Delhi



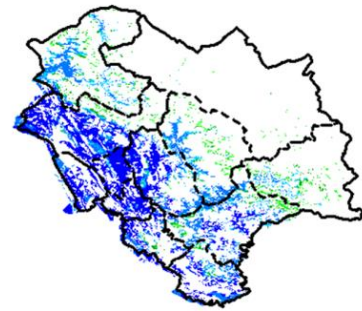
Agriculture vigour is normal all over Delhi where NDVI value lies between 0.2-0.3.

Gujarat



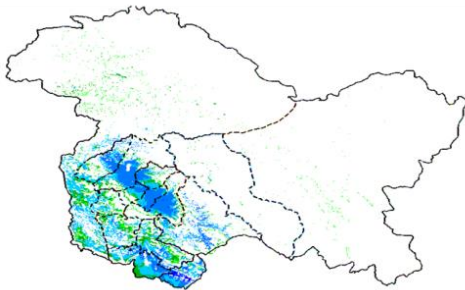
Agriculture vigour is normal over entire Gujarat where NDVI value lies between 0.2-0.3.

Himachal Pradesh



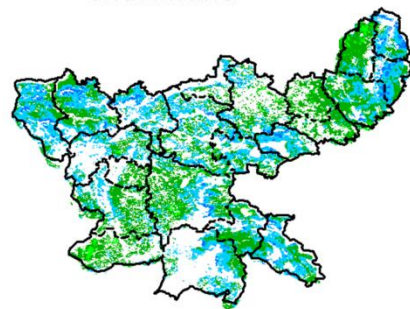
Agriculture vigour is very good over south and south western parts of Himachal Pradesh where NDVI values >0.6 , whereas isolated patches of normal NDVI are observed over remaining parts of the state.

Jammu & Kashmir



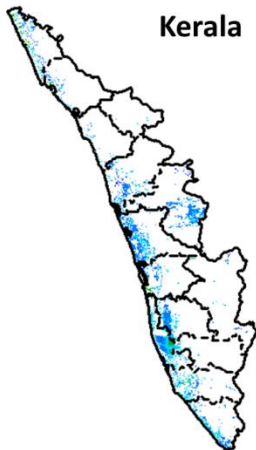
Agriculture vigour is good all over Jammu and Kashmir. NDVI values vary in between 0.4-0.5 in south western parts.

Jharkhand



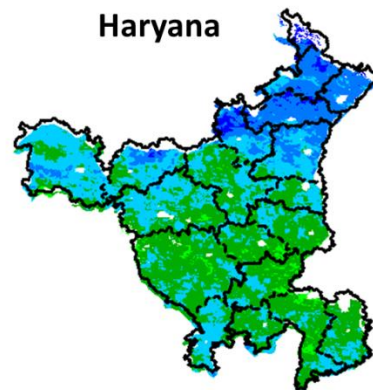
NDVI values vary from 0.4 - 0.5 over Jharkhand. Normal NDVI values are seen in some patches over eastern and southern parts of Jharkhand.

Kerala



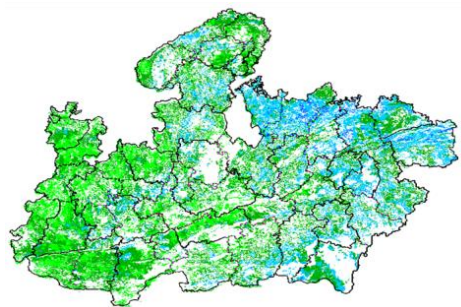
Central and coastal regions of Kerala shows increased NDVI values varying from 0.4 to 0.5, whereas rest of agricultural vigour of Kerala shows good values of NDVI.

Haryana



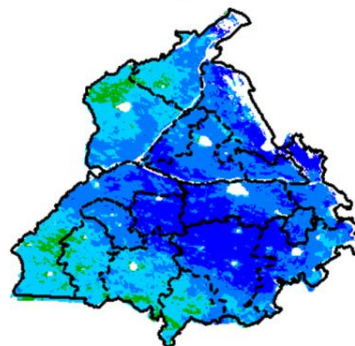
Agriculture vigour is good over the state of Haryana. NDVI values varies between 0.3- 0.5 over the state. Except few patches in northern part where NDVI values in between 0.4-0.6.

Madhya Pradesh



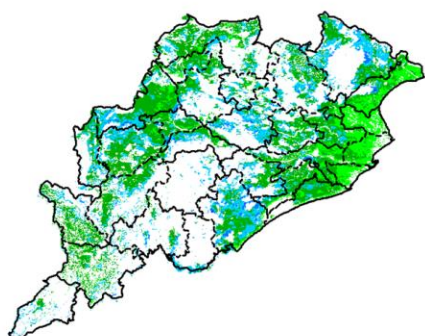
Agriculture vigour is normal (0.2-0.3) over entire state Madhya Pradesh. Higher (> 0.4) values are seen in some patches over southern and eastern part of Madhya Pradesh.

Punjab



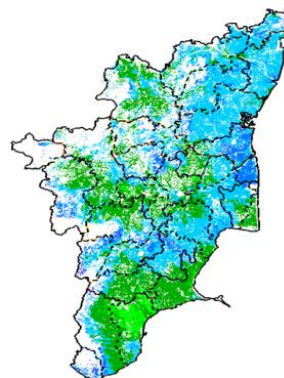
Agricultural vigour is very good over entire state of Punjab, showing NDVI value ranges from 0.4-0.6. The central part shows increase in NDVI (> 0.6).

Odisha



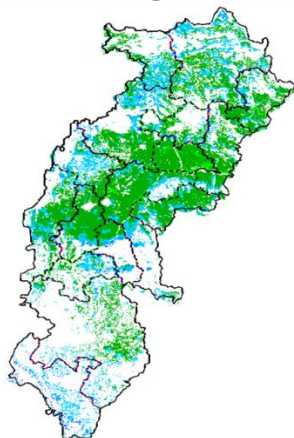
Agricultural vigour is normal over entire state of Odisha with NDVI value ranging between 0.2 - 0.4. Higher (> 0.4) values are seen in some patches over central and eastern part of the state.

Tamil Nadu



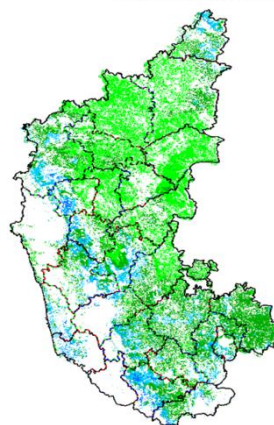
Agricultural vigour is good over Tamil Nadu with NDVI values varying from 0.4 - 0.5. Except South Eastern part, showing normal NDVI value ranges from 0.3-0.4.

Chhattisgarh



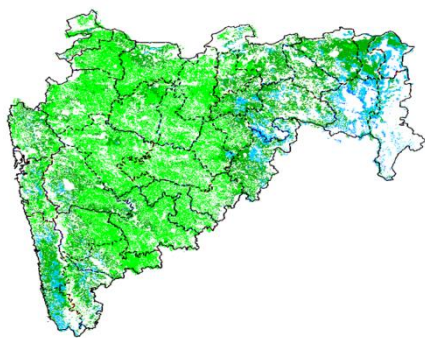
Agriculture vigour is Normal in central part of Chhattisgarh where NDVI value lies in between 0.2-0.3. South and north-eastern part of state shows increased NDVI values in some pockets.

Karnataka



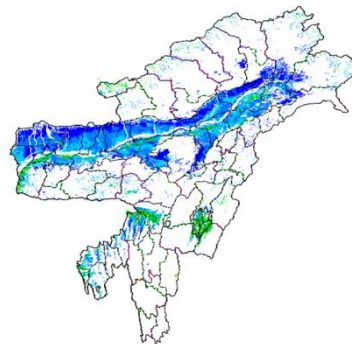
Agricultural vigour is good over south interior part of Karnataka between 0.4-0.5. Rest of the parts shows normal NDVI values from 0.2-0.3.

Maharashtra



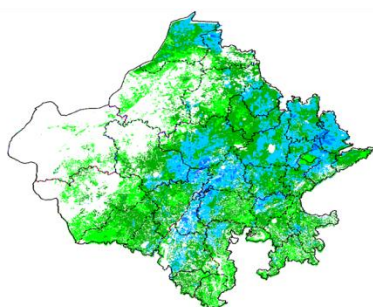
Agriculture vigour is good over Vidarbha with NDVI values from 0.4 - 0.5, whereas NDVI is normal over parts of Marathwada, Vidarbha, western Maharashtra and Madhya Maharashtra region.

North East Region



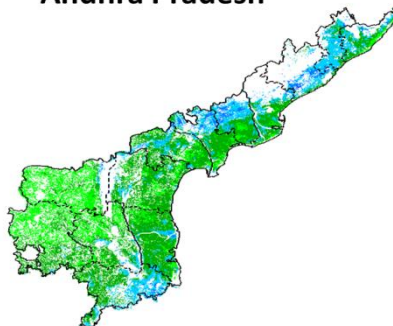
Agriculture vigour is very good in valleys of North-East states which cover parts of Assam. NDVI values vary from 0.4-0.6. Normal NDVI conditions are observed all over NE region.

Rajasthan

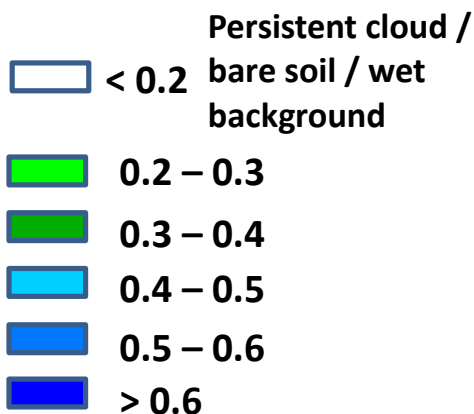


Agriculture vigour is normal (0.2-0.3) over entire state Rajasthan, except for few patches in eastern and central Rajasthan where NDVI shows slightly higher values (0.4-0.5).

Andhra Pradesh



Agriculture vigour vary from 0.3 - 0.5 over coastal and southern parts of Andhra Pradesh. The NDVI is normal over remaining parts of the state.



Annexure III

List of varieties

North Inerior Karnataka

Groundnut: Bunch type of varieties, JL-24 and TMV-2, S-230, Mardur local

Paddy: short duration varieties Amrut, MGD-101, MTU-1001 in low lands, BR-2655, Tunga.

Sesame: E8,DS1, DSH9.

Maize: Arjun, 900 M.

Pearl millet: ICTP 8203 and ICMV 221

Pigeon pea: Maruti, TS 3 R.

Red gram: BRG-1, BRG2, TTB-7

Tamil Nadu

Banana:poovan, rasthali, monthan, karpooravalli and neypoovan.

Kuruvai rice:ADT 36, ADT 43, ADT 45 and CO 51.

Andhra Pradesh

Rice: MTU-1010, Nellore masuri, Dharani, Shwetha.Sannalu, Swarna, Vasundhara, Suraksha, Vijetha.

Varieties for Early Kharif Rice Plantings - Pushkala, Rasi, IR64.

Groundnut: Kadiri-6, Kadiri-9, Narayani and dharani.

Castor: PCH-111, PCH-222, Kranti, GCH-4, Haritha.

Assam

Sali/ kharif rice: Long duration high yielding varieties: Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal , Swarna sub-1, Gitesh, Pankaj, Mashuri (for growing in typical lowland paddy area).

Medium duration paddy varieties : Satya and Basundhara (in medium lowland area).

Bau rice: Maguri, Panikekua, Amona, Negheri, Kekua, Pani Kekua, Padmapani.

Capsularis Jute: JRC 212, JRC 321(Sonali), JRC 7447 (Shyamali) and UPC 94(Reshma).

Olitorius Jute: JRO 524 (Navin), JRO 785 (Basudev), JRO 632(Baisakhtissa), Set-2 (Bahagi) and Tarun.

Papaya : Ranchi, Washington, Halflong, Coorg Honeydew.

Mesta : HC 583 and AMC 108.

Summer bottle gourd : Pusa Summer Prolofie long, Pusa Summer Profile round, Pusa Meghdoot and Pusa Manjiri.

Cowpea: Yard long bean & Pusa Barsati.

Manipur

Soybean: JS-335.

Groundnut: ICGS-76.

Meghalaya

Sali/KharifRice: High Yielding Varieties : Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1-411.

Local varieties: Mendri, Manipuri.

Groundnut: ICGS 76, JL 24.

Soybean: JS 335, Bragg, Ankur, Pusa Soubean-1, Local JS 2.

Nagaland

Lowland rice:Short to medium duration HYV rice : CAU R1, CAU R3, RCM-9 and RCM-11.

Maize : DA 61A, RCM-75, RCM-76 and HQPM-1.

Tripura

Groundnut: TAG 24, TG 37A, ICGS 76.

Maize: DMH- 849, 117, HQPM 1, BQPM 9.

West Bengal

Dry Seeded rice: Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L.

Mango: Himsagar, Mallicka, Langra.

Guava: Safeda, L-49.

Coconut: Eastcoastal, Hazari

Banana: Mortoman, Chapa, Kathali, Singapuri,.

Odisha

Sunflower: Morden, Sunrise, Surya and Hybrid varieties like KBSH-1, KBSH-3 and MSFH.

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan ,Arka Pragati.

Ragi:HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka.

Sesame:Uma, Kalika, Kanak, Nirmala, Prachi, Usha.T.

Turmeric: Roma, Surama, Rang, Rashmi.

Jute:JRO-524(Naveen).

Maize:Navjot, Shakti, Decan-107, Decan-109.

Rice:Early:Jogesh, Siddant, Hazaridhan, Mandakini, Jyotirmayee, Virendra.

Medium:Pratikshya, Manaswini, Tapaswini MAS, Konark, Surendra,Kharavela, Naveen, Abhisek

Late: Barsadhan, Ranidhan, Pooja, Mrinalini, RGL-2837, Moti, Ketakijoha, Padmini,Kanchana, Mahanadi,Jagabandhu.

Hybrid varieties: CR Dhan 701, NK 5251, JKRH 401, Ajay, Rajalaxmi, Arize 6444G.

Bihar

Moong: Pusa Vishal, Samrat, SML-668, Sona varieties are recommended for moong.

Urad: Pant U-19 and Pant U-31,Ultra and Type-9 for Urad.

Maize: Suwan, Deevki, Ganga-11, Shaktiman-1 and Shaktiman-2.

Turmeric: Improved Varieties- Rajendran,Sonia, Rajender Sonali.

Ginger: Improved varieties - Maran ,Nadia

Rice: Low land:Rajshree, Satyam, Rajendra ,Mehsooril MTU 7029(Swarna) ,Swarna sub-1

Medium land:Sita, Kanak,IR 36,Rajendra,Shweta,Santosh,Shahbhagi.

Medium duration(Hybrid): P.H.B.71,Pusa R.H.10,K.R.H 2,P.A.644,Pant Sankardhan.

Til: Krishna., Kaakee safed,Kalika,Kalika,Pragati

Jharkhand

Green gram:mung S.M.L. 668.

Sugarcane: BO 147.

Rice:Upland Rice: Birsa Dhan 108, Birsa Vikash Dhan109.110,111 & Vandana.

Medium land:Anjali,Sahbhagi,Naveen,Birsamati,Sugandha,BR-10,IR-36.

Low land:Swarna(MTU-7029),Rajshree,Sambha Mahsuri(BPT-5204), Birsa Dhan-202,Birsamati.

Finger Millet: Birsa marua 2,A-404,GPU 45,47.

Urd Bean: T9, Pant U19,30,35 & Birsa Urd 1.

Arhar:BrisaArhar-1,Narendra Arhar-1,Bahar,ICPH-2671.

Groundnut:A.K-12-24,Birsa Bold.

Sweet Potato:Birsa Sakarkandi & Shreebhadra.

Jammu & Kashmir

Onion: Agrifound Parvati, Pusa red, N-53.

Rice : IET-1410, K-39, Ratna, PC-19, Jaya, China-1039and Giza-14.

Maize: Vijay, Mansar, Him - 123, C 6 & C 8.

Uttarakhand

Tomato: VL Tomato-3, Pant T-3, Him Sona, Him Shikhar.

Capsicum:California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat.

Potato:Kufri- Jyoti, Ashok, Anand.

Moong: Pant Moong-2, Pant Moong-4, Pant Moong-5, Pant Moong-6, Narendra Moong-1.

Rice:long duration varieties like Pusa-44, Jaya, NDR-359, Sarju-52, PR-113, PR-114, Pant Dhan-18 or Pant Dhan-19.

late varieties VL-Dhan-154, Vivek Dhan-62, Vivek Dhan-65, VL Dhan-81, Vivek Dhan-82 or VL-Dhan-85.

Finger millets: VL-Mandua-124 and VL-149. However, its short duration (i.e. 95 to 100 days) varieties like VL- Mandua-204, Pant Mandua-3, PES-176, PES-110, VL- Mandua-146.

Bajra:PBN-83,YESHWANT (PBN-9), Pusa Composite 443, MP443.

Maize: Naveen, Sweta, Kanchan, Surya, Amar, Gaurav.

Lobia: Pant Lobia-1 or Pant Lobia-2, UPC-5286, UPC-622, UPC-625 etc.

Cotton: ANKUR-651,JAWAHAR TAPTI,SRUTHI,ANKUR-09 (WHH-09).

Himachal Pradesh

Cauliflower:Patna snowball and joint snowball.

Radish:Japanese white, Chinese pink and mino early white.

Capsicum: solan hyb-1,california wonder,yolo wonder ,vl shimla mirch-2.

Brinjal:plr-1,azad (hybrid), Arka Nidhi, Arka Keshav, Hisar Shaymal, PPC, F1 Chhaya, F1 Sandhya.

Tomato: solan gola, Palam Pink, Palam Pride, F1 Avtar, F1 Rakshita.

Chilli: Surajmukhi.

Sunflower:EC-68415.

Moong: Pusa Baishakhi.

Mash:UG-218.

Garden pea:PalamPriya, Azad P-1,PB-89, PalamSamool and Lincoln.

Carrot:Nantes and Chantenay.

Palak:PusaHarit, Pusa Bharti.

East Uttar Pradesh

Rice: sarayu-52, narendra-359, pant dhan-4, indrasan, NDR-9, pant dhan-12, narendra-80, ratna or pusa-35, mahsuri, swarna, mahsuri, jal lahri, type-9, type-100, narendra-359, malviy dhan-36, narendra dhan-2026, narendra dhan-2064, narendra dhan-3112, sarju-52, pant dhan-4, Swarna, Pant-10, T-3, Poosa Basmati and Haryana Basmati.

Hybrid rice varieties: eraes-6444,6201,J.K.R.H.-401,PHB-71,narendra sankar dhan-2,3, KRH-2,PRH-10,US-312, RH-312,VSR-202,RH-1531. Narendra-8002, NarendraMayank (2008) Narendra-97.

Scented rice: Type-3,pusa basmati-1,basmati-370,malviya sugandh-105, malviya sugandh-4-3, narendra sugandh,Narendra usar dhan-1,3,CLR-10, or narendra usardhan-2008.

Moong:Narendra moong-1, Pant moong-1,3,4,PDM-11, Samrat, Malveey - Jyoti, Janchetana, Jagruti, Janpriya,Jankalyani, Asha, Shweta, Neha, TM-9937, MH-215.

Urad: Narendra urd-1, Pant U-35, 31, Azad urd-2,3, Shekhar-1,2,3.

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.

Maize: pusa, agatishanker, makka-2, azad, uttam, sweta, Prakash,G-1, 5(hybrid varieties) and Tarun, Navin, Kanchan, Sweta and Jaunpuri (varieties for early sowing).

Tomato: pusa early, pusa ruby, HS 101.

Cauliflower: pusa dipali.

Pearl Millet: Raj WCC-75, ICMB-155, Pusa-322,23, ICMH-451.

Seasame: T-4,78, Shekhar, Pragati, Tarun.

Pigeon Pea:Bahar, Narendra Arhar-1, Azad, Pusa-9.

Lobia:UPL-5287, UPC-4200, Ta-5269, Ta-2.

Jute: Jute Reshma, NDC (2007), NDC-2028, NDC-9102.

Okra: PusaSawani, VarsaUphar, Azad kranti.

Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.

Guava:Sardar(Lucknow-49).

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.

Rice:PRH 10, PB1, Pusa 1509, Sugandha5.

Pigeon pea:T-21, UPAS 120.

Cotton: H777, Dhanalakshami, HD107.

For fodder Jowar: JS 120, Lobia 88.

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89.

Rice: Pusa-44, T.R-112 and T.R-113.

Delhi

Cotton: H-777, H-974, H-1098.

Pigeonpea: Pusa 2001, Pusa991, Pusa992, Paras manak, UPAS 120.

Bajra: Hybrid Bajra Pusa-605, Hybrid Bajra Pusa-415, Composite Bajra Pusa-383, HSV-67.

Maize:AH-421, AH-58 or Composites: Pusa composite-3, Pusa composite-4.

Guar: PusaNavbahar, DurgaBahar.

Radish:PusaChetki.

Cluster bean:PusaKomal.

Beans: PusaSem 2, PusaSem 3.

Spinach: PusaBharti.

Amaranths: PusalalChaulai, PusaKiran.

Ladyfinger: Pusa A-4.

East Rajasthan

Sugarcane: (late sown): COL8001.

Groundnut: RG 425, RG382, HNG10, GG20, TG37, TG39, M-13.

Kharif Onion N-53 , Agrifound Dark Red.

Okra: Ark abhay, Parbhani kranti, Pusa makhmali.

Guar: RGC-936,986,1002,1017,HG -365,563,Hg2-20. RGC-1003, RGC-1066.

Green gram RMG-62, RMG-268, K-851, G.M-4, RMG-492 & RMG-344 ML-131, IPM-02-03 (improved varieties).

Cowpea:FS-68, RC-19 and RC-101 (improved varieties).

Moth bean-R.M.O-40, R.M.O-257, R.M.O-225 and CAZRI moth-2. RMO-40 and RMO-225(Maruvardan).

Sorghum: CSH-6 (90-100 days), CSV-10 (100-110 days), CSV-15 (105-140 days).

Sesame : RT-125, RT- 127, RT- 346, RT -351.

Pearl millet : RHB-121, HHB-67.

Black gram: Krishna, T 9, Pant U-19, 31, KU-96-3, Pratap Urd-1.

Guava: Allahabad safeda, ArkaMradula and Lucknow 49

Pomegrante: Ganesh, Jhalore Seedless

Lime: Kagzi, Baramasi, Pramalini and Vikram
Aonla: Kanchan, Banarasi, Krishana, NA9, NA10 and Chakaiya
Ber: Sonor, Thornless, Katha Alwar, Gola and Umran
Papaya: Kurg Honeydew, PusaNanha, Pusa Dwarf and Pusa Delicious

West Rajasthan

Pearl millet: HHB 67, RHB 121.
Cluster bean: RGC 936, RGC 1002, RGC 1017 and RGC 1066.
Cowpea: RC-101, RC19 and RCp 27.
Moong: RMG 62, RMG 268, SML 668 and GM-4.
Moth bean: RMO-40, RMO 435, RMO 257and CZM-2.

Madhya Pradesh

Soybean: JS 95-60 (early), JS 93 -05 (Medium), JS 335 (Late).
Redgram: TJT 501, ICPL 87 (early) and JKM 189 (Medium).
Groundnut: TG 22, TG 26, JGN 3.
Rice: JR 345, JR-201, Poornima (short duration).
IR-64, IR-54, Madhuri, Kanti, Mahamaya, Pusa basmatai (medium duration).
Black gram: JU 86, JU 3, T 9.
Maize: JVM 421, JM 12, JM 216.
Green gram: TJM 3, JM 721, HUM 1.
Sugarcane: KO Jawahar-86141, 86572.
Guar: HG 365, HG 565.

Chhattisgarh

Rice: Purnima, Danteswari, Shabagi, MTU 1010, MTU 1001, Suwarna.
Brinjal: Punjab Shadabahar, KS 331, PH 5, PH 6, KS 224, ARBH 543.
Tomato: Pusa early dwarf, Sweet 72, Pusa rubi, Pusa Gurab, Mangala, Naveen, Laxmi 5005 & NS 815.
Soybean: J.S. 335, Indira Soya-9, J.S. 80-21, J.S. 93-05.
Groundnut: SB -11 (J 11), ICGS-37, ICGS-44, T.A.G- 24, T.A.G-28.
Sesame: T.K.G-21, T.K.G-22, T.K.G-55, T.K.G-8.