



National Agromet Advisory Service Bulletin



Friday 12th February 2016

(For the period 12th to 16th February 2016)



Issued by

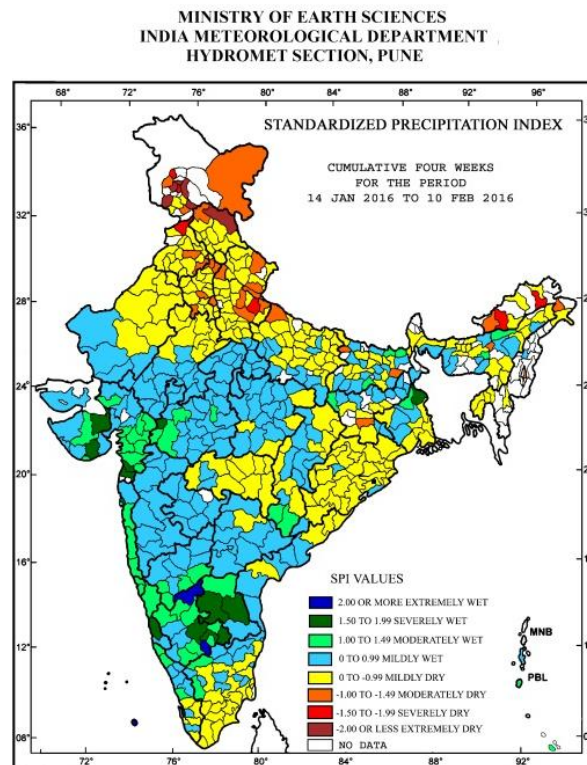
**National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.**

Weblink For

District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

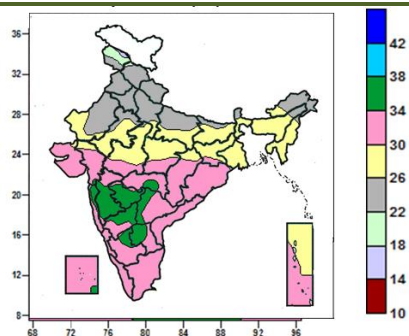
Standardised Precipitation Index
Four Weekly for the Period 14th January to 10th February 2016



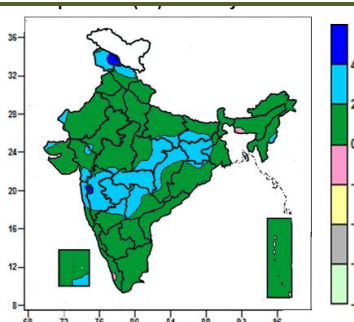
- Extremely/severely wet conditions experienced in few districts of Saurashtra, Murshidabad district of West Bengal; Jhabua district of Madhya Pradesh; Valsad, Navsari districts of Gujarat Region; Mumbai Suburban district of Konkan & Goa; Anantapur, Cuddapah districts of Andhra Pradesh; Udupi, Bangalore Rural, Bellary, Kolar, Tumkur, Ramanagara districts of Karnataka and in Lakshadweep.
- Extremely/Severely dry conditions experienced in few districts of Arunachal Pradesh; Jammu & Kashmir; Bareilly district of Uttar Pradesh; Gurdaspur district of Punjab; Lahaul & Spiti districts of Himachal Pradesh.
- Moderately dry conditions experienced in most districts of Delhi; few districts of Arunachal Pradesh, Uttarakhand; Morigaon district of Assam; Khunti district of Jharkhand; Bhagalpur, Gopalganj districts of Bihar; Kheri, Badaun, Moradabad, Pilibhit, Saharanpur districts of Uttar Pradesh; Ambala, Mahendragarh, Rohtak, Yamuna Nagar, Chandigarh districts of Haryana; Ludhiana, Patiala, Sangrur districts of Punjab; Chamba district of Himachal Pradesh; Baramula, Ladakh (Leh), Udhampur districts of Jammu & Kashmir.
- Rest of the country experienced moderately wet/ mildly dry/mildly wet conditions.

Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 10.02.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 10.02.2016



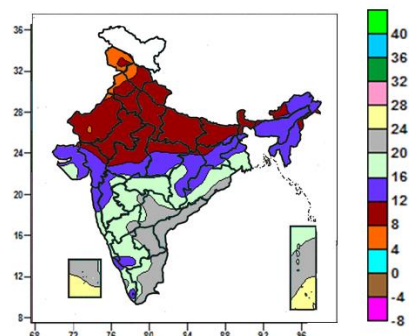
Mean Maximum Temperature (°C) Anomaly in India for the week ending 10.02.2016



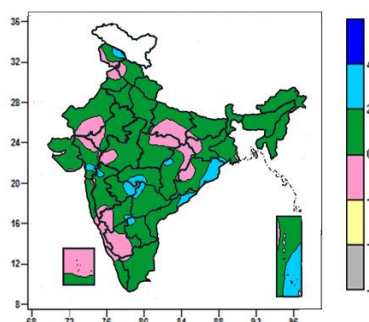
- Mean maximum temperature was between 34 to 38°C over many parts of Marathwada, Madhya Maharashtra, some parts of Interior Karnataka, Telangana, Rayalaseema, isolated pockets of Gujarat Region, Konkan, Vidarbha and Lakshadweep.
- Mean maximum temperature was between 26 to 34°C over rest of the country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Sikkim, many parts of Uttar Pradesh, West Rajasthan, Arunachal Pradesh, some parts of East Rajasthan, Bihar, Assam and isolated pockets of Madhya Pradesh and Nagaland where it was between 18 and 26°C.

- Mean maximum temperature was above normal by 4 to 6°C over some parts of Jammu & Kashmir and isolated pockets of Konkan and Madhya Maharashtra.
- Mean maximum temperature was above normal by 2 to 4°C over Marathwada, many parts of Jammu & Kashmir, Vidarbha, Jharkhand, East Madhya Pradesh, Chhattisgarh, Konkan, Madhya Maharashtra, some parts of Himachal Pradesh, Bihar, Telangana, North Interior Karnataka and isolated pockets of Rajasthan, East Uttar Pradesh, Gangetic West Bengal, Manipur, Gujarat, Lakshadweep.
- It was normal to near normal in remaining parts of the Country.

Actual Mean Minimum Temperature (°C) in India for the week ending 10.02.2016



Mean Minimum Temperature (°C) Anomaly in India for the week ending 10.02.2016



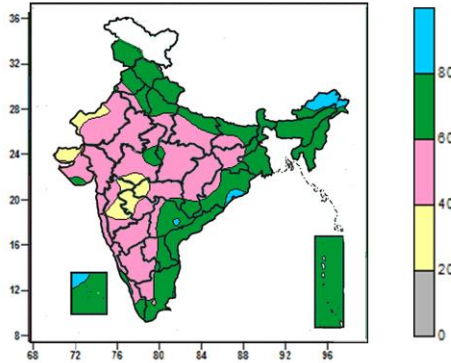
- Mean minimum temperature was between 4 to 8°C over many parts of Jammu & Kashmir, some parts of Himachal Pradesh, Punjab and isolated pockets of West Rajasthan.
- Mean minimum temperature was between 8 to 12°C over Uttarakhand, Haryana & Delhi, Uttar Pradesh, East Rajasthan, Sikkim, many parts of Himachal Pradesh, Punjab, Bihar, Sub- Himalayan West Bengal, West Rajasthan, West Madhya Pradesh, some parts of Jharkhand, Arunachal Pradesh, Nagaland, East Madhya Pradesh and isolated pockets of Gujarat region, Chhattisgarh.
- Mean minimum temperature was between 12 to 20°C over rest of country except Coastal Andhra Pradesh, many parts of Telangana, Rayalaseema, Tamil Nadu

- Mean minimum temperature was above normal by 2 to 4°C over some parts of Odisha, Vidarbha, Marathwada, Andaman & Nicobar Islands and isolated pockets of Jammu & Kashmir, Gangetic West Bengal, Chhattisgarh, Madhya Maharashtra, Gujarat region, North Interior Karnataka, Telangana and Andhra Pradesh.
- It was normal to near normal in remaining parts of the country.

Lakshadweep, Andaman & Nicobar Islands, some parts of Marathwada, North Interior Karnataka, Odisha and isolated pockets of South Interior Karnataka and Kerala, where it was 20 to 28°C.

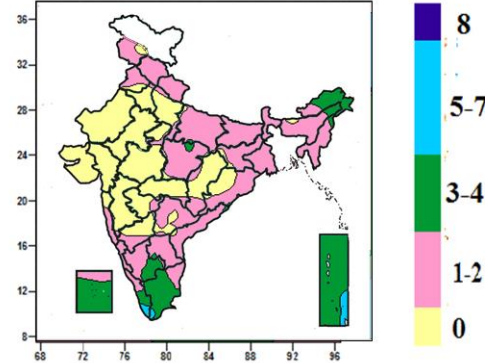
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 10.02.2016

Relative Humidity (%) over India for the week ending 10.02.2016



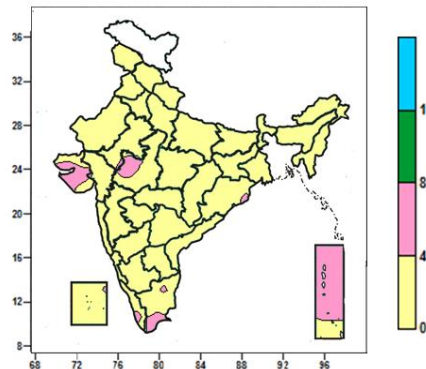
- Mean Relative humidity was above 80% over many parts Arunachal Pradesh and isolated pockets of Odisha, Telangana, Lakshadweep.
- Mean Relative humidity was between 40 to 80% over rest of the country except many parts of Marathwada, some parts of West Rajasthan, Kutch, Madhya Maharashtra, Vidarbha and isolated pockets of West Madhya Pradesh where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 10.02.2016



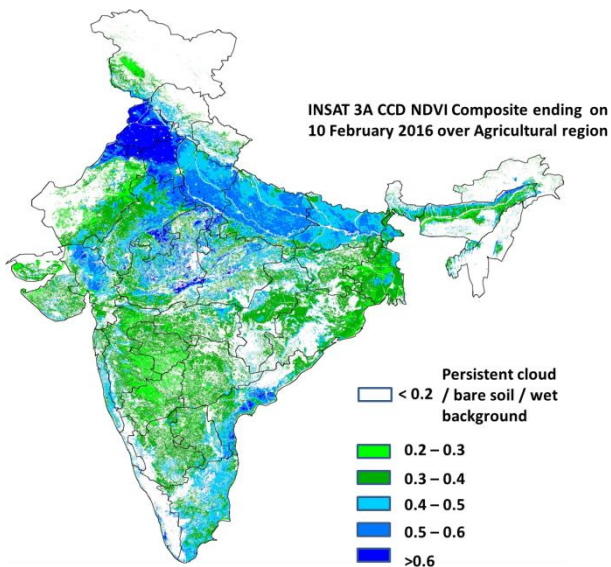
- Sky remained generally cloudy (5-7 okta) over isolated pockets of Kerala, Tamil Nadu and Andaman & Nicobar Islands.
- Sky remained partly cloudy (3-4 okta) over many parts of Arunachal Pradesh, Tamil Nadu, Kerala, Lakshadweep, Andaman & Nicobar Islands, some parts of Assam, Nagaland, South Interior Karnataka and isolated pockets of East Madhya Pradesh and Rayalaseema.
- Sky remained mainly clear/clear sky (1 to 2/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 10.02.2016



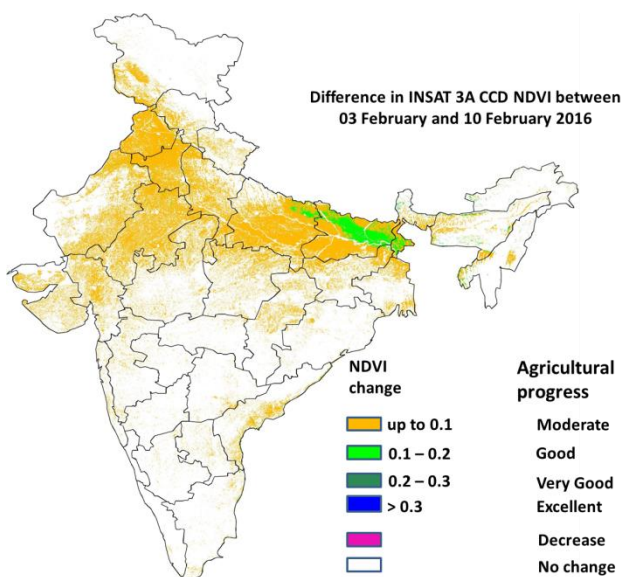
- Mean wind speed was 4 to 8 knots over many parts of Saurashtra, Andaman & Nicobar Islands, some parts of Kutch, West Madhya Pradesh, Tamil Nadu and isolated pockets of Kerala and Odisha.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 10th February 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good over Punjab, northern parts of Haryana and patches in Rajasthan, Madhya Pradesh where NDVI is > 0.6. NDVI is good in Uttar Pradesh, Bihar, Gujarat, East Rajasthan, remaining parts of Madhya Pradesh, Andhra Pradesh, Tamil Nadu, Assam, Coastal Maharashtra and South Interior Karnataka where NDVI varies from 0.4 to 0.6. Agricultural growth was moderate 0.2 to 0.4 over most parts of West Rajasthan, Saurashtra, Telangana, Maharashtra, West Bengal and Odisha.

Difference in INSAT 3A CCD NDVI between 3rd and 10th February 2016



- Good Progress in NDVI is observed in Bihar and patches of East Uttar Pradesh. Moderate progress in NDVI was observed in states of Uttar Pradesh, Bihar, Punjab, Haryana and patches in Madhya Pradesh, Rajasthan and Coastal Andhra Pradesh. No change in NDVI was observed in Maharashtra, Karnataka, Kerala, Tamil Nadu, Telangana and Odisha.

- INSAT 3A CCD NDVI composite maps for the week ending on 10th February 2016 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 17th February 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No large change in minimum temperature over plains of northwest and adjoining central India during next 48 hours.
- Shallow to moderate fog very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Rajasthan, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura during next 48 hours.

5 Day Rainfall Forecast (MID DAY) 12th February 2016

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

% 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		

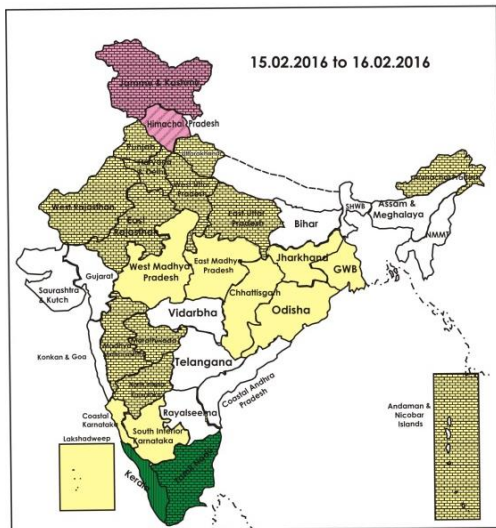
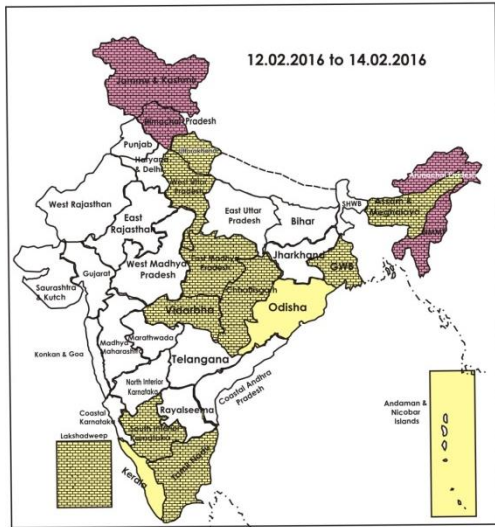
Weather Warning during next 5 days

- **12 February (Day 1):** No weather warning.
- **13 February (Day 2):** No weather warning.
- **14 February (Day 3):** No weather warning.
- **15 February (Day 4):** Heavy rain likely at isolated places over south Tamilnadu.
- **16 February (Day 5):** Heavy rain likely at isolated places over south Tamilnadu and Kerala.

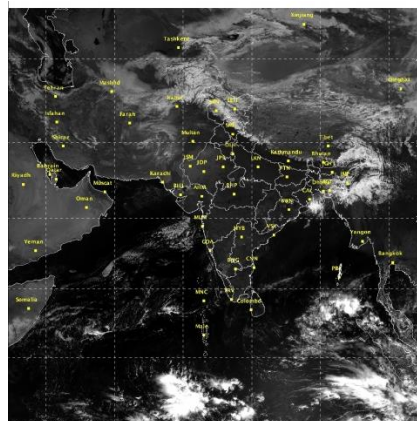
Weather Outlook for subsequent 2 days from 17th to 19th February 2016

- Interaction between easterly wave trough and trough in the mid latitude westerlies likely to cause rain/thundershower at a few places over west and adjoining central India.
- Rain/thundershower is likely to occur at a few places over south peninsular India.

Weather Forecast Map (Valid upto 0830 hours of 17th February, 2016)



Satellite image dated 12.02.2016 0600 UTC



Salient Advisories

- In **Himachal Pradesh**, due to variation in temperature and humid weather conditions, monitor wheat crop for incidences of yellow rust. If symptoms are noticed; spray Tilt @ 1 ml per litre of water on a non rainy day.
- In Upper Brahmaputra Valley Zone of **Assam** (Jorhat, Golaghat, Sibsagar and Dibrugarh districts), due to foggy weather and low temperature, severe attack of late blight is noticed on potato. Spray Indofil M-45 @ 2.5 ml/litre of water for control.
- As rain/thundershowers is likely at many places over **Tamil Nadu** and **Kerala** on 16th February along with heavy rain at isolated places over South Tamil Nadu and Kerala, postpone irrigation and application of fertilizers and plant protection measures in standing crops.
- In the Western Zone of **Tamil Nadu**, undertake sowing of summer irrigated sesame and in the South Zone, undertake land preparation for sowing of summer irrigated sorghum, maize and cotton.
- In Jharkhand, as normal sown wheat is at flowering/grain filling stage, in view of the prevailing above normal maximum temperature and expected dry weather conditions, apply irrigation in the wheat fields to keep optimum soil moisture conditions.
- In Western Plain Zone and Central Plain Zone of **Uttar Pradesh**, due to prevailing dry weather conditions, apply irrigation in wheat crop at ear head/flowering stage.
- As shallow to moderate fog is very likely at isolated places over **Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Rajasthan, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura** during next 48 hours, there is chance of incidence of early/late blight disease in potato, tomato and onion crops and other standing crops for incidence of pest and diseases. Monitor the crops and if symptoms are noticed, undertake plant protection measures.
- In **Madhya Maharashtra**, as no significant rainfall is likely to occur, apply irrigation wheat at ear head/flowering stage. Apply irrigation to vegetables and orchard crops. Also apply mulch of crop residue to orchards. Continue sowing of irrigated summer groundnut, sunflower and summer pearl millet. In **Marathwada**, continue sowing of irrigated summer groundnut and sunflower.
- In Central Brahmaputra Valley Zone of **Assam**, drench the soil with Bavistin @ 1ml/litre of water to protect linseed from wilt and apply Chlrophyriphos @ 3 ml per litre of water during evening hours to control cutworm in linseed.
- In Central and Undulating Plain Zone of **Punjab**, there may be chances of aphids in mustard crop; to control spray 40g Actara 25 WG or 400 ml Rogor 30EC in 80-125 litre of water per acre. Also in Undulating Plain Zone of Punjab, there may be chances of *alternaria* blight in mustard, spray Indofil M 45 @ 25 gm/acre in 100 litres of water.

Detailed Zonewise Agromet Advisories

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



Banana



Groundnut



Sugarcane



Cotton

- **Realised Rainfall:** Rainfall occurred in Kollam district of Kerala. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers is likely at many places over Tamil Nadu and Kerala on 16th February along with heavy rain at isolated places over South Tamil Nadu and Kerala, postpone irrigation and application of fertilisers and plant protection measures in standing crops.
 - **Tamil Nadu:**
 - In the Western Zone, undertake sowing of summer irrigated sesame.

- In the South Zone, undertake land preparation for sowing of summer irrigated sorghum, maize and cotton.
- Continue sowing of green gram (ADT 3) @ 25 kg/ha in Karaikal.
- In the High Rainfall Zone, maintain 5 cm water in rice fields and undertake staking of banana plants with bamboo poles to protect from strong wind.
- In the Cauvery Delta Zone, leaf caterpillar damage is noticed in rice fallow black gram. To control this, spray Cholorphyriphos @ 400ml/acre after current spells of rain.
- In Karaikal and Puducherry, prevailing cloudy conditions are congenial for incidence of semilooper in blackgram. Apply Monocrotophos @ 500 ml/ha to manage the incidence after current spells of rain.
- **Andhra Pradesh:**
- In the North Coastal Zone, continue planting of sugarcane after sett treatment with Propiconazol @ 1ml/litre of water for 15 minutes before planting.
- In the Scarce Rainfall Zone, continue transplanting of rice.
- In the Krishna Godavari Zone, due to prevailing dry weather condition, light irrigation may be provided to rabi black gram and green gram.
- In the Southern Zone, due to prevailing dry weather, continue giving light and frequent irrigations to get synchronized flowering in mango crop.
- In the Krishna Godavari Zone, prevailing dry weather conditions are congenial for leaf drying and leaf rust in maize and mites in jowar. Spray Mancozeb @ 500 grams/200 litres of water per acre to control leaf rust and Carbaryl @ 8 kg per acre to control mites.
- In the North Coastal Zone, prevailing dry weather conditions are congenial for incidences of spodoptera in groundnut. To control, apply Gypsum @ 200 kg/ac and spray Thiodecarb @ 1.0 g /litre of water or Neem oil @ 5 ml/litre of water.
- In the Scarce Rainfall Zone, prevailing dry weather conditions are congenial for incidences of aphids and thrips in rabi groundnut. For control of thrips, spray Monochrotophos 320 ml + 1 litre NSKE+1 Kg soap and for control of aphids spray Dimethoate 200 ml or Methyl Dematon 400 ml in 200 litres of water.
- **Telangana:**
- In the Southern Telangana Zone, continue sowing of fodder crops like sorghum, bajra and maize where irrigation facilities are available, fodder sorghum, bajra, maize, sunhemp and horsegram in rice fallows and sesamum.
- In the Northern Telangana Zone, undertake sowing of green gram and black gram and continue harvesting of Bengal gram and tomato.
- In the Northern Telangana Zone, sigarrot incidence was noticed in bananas. To control, spray Carbendizim 1 g/litre of water.
- In the Southern Telangana Zone, incidence of shoot and capsule borer is noticed in castor and powdery mildew in gourds. To control shoot and capsule borer, spray Tridemorph @ 1 ml or Dinocap @ 1 ml per litre of water and to control powdery mildew, spray Indoxacarb @ 1 ml or Acephate @ 1.5 g per litre of water.
- **Karnataka:**
- In North Dry Zone, apply irrigation in late sown wheat crop (soft dough stage). Continue ploughing the field which will facilitate conservation of rainwater during pre-monsoon showers. Adopt drip irrigation for sugarcane to save water.
- In North East Dry Zone, undertake transplanting of rice under irrigation. Undertake last picking of cotton. Provide irrigation to mango orchards. As dry weather is prevailing, complete harvesting of wheat, Bengal gram sorghum and safflower.
- In North Transition Zone, in view of the prevailing dry weather, undertake harvesting of wheat crop sown in October; complete harvesting of chickpea, chilli; apply irrigation to early sown sorghum (grain filling) and chickpea (pod formation) crop sown in November. Continue planting of Co-8014 and Co-740 varieties of sugarcane during February. Incorporate crop residues @ 5t/ha to improve the soil physical property, infiltration rate and soil water holding capacity.
- In Southern Transition Zone, complete transplanting of rice seedlings, harvesting of matured arecanut, coconut, matured ginger and turmeric.
- In Southern Dry Zone, as dry weather is prevailing, provide irrigation to dry land horticulture crops and other field crops depending on soil and crop condition.
- In Hill Zone, continue deep ploughing in rice fields. Continue harvesting of completely ripened bunches of black pepper and arecanut. Apply irrigation to coconut gardens either in furrows or by drip irrigation. Each coconut tree requires 60-70 litres of water per day.
- There is chance of incidence of button dropping, inflorescence dieback in arecanut in Hill Zone. For control, spray Carbendizim @ 1 g/litre or Mancozeb @ 2 g/litre of water.
- In North Dry Zone, infestation of bacterial blight is observed in pomegranate; to manage the disease, spray the crop with Streptomycin Sulphate 0.5 g + Copper-oxy-Chloride 2 g + 2 g Blitox dissolved in one litre of water. Then take up spraying of micro nutrients viz., 1 g Zinc Sulphate + 1 g Magnesium Sulphate + 1 g Borax + 1 g Calcium dissolved in one litre of water.
- Severe incidence of shoot and fruit borer is observed in brinjal in North East Dry Zone; spray Malathion @ 2 ml or Rynaxpir @ 0.3 ml/litre of water.
- Due to cloudy weather condition, there is a possibility of occurrence of powdery mildew and hoppers in mango in

Southern Dry Zone; spray Wettable Sulphur @ 3g/litre and Rogar @ 1.5 ml/litre respectively for control.

▪ **Kerala:**

- In the Northern Zone, as rain is expected at many places on 16th February, complete harvesting of matured rice at the earliest.
- In the High Altitude Zone, undertake land preparation for cultivation of ginger and pepper and complete harvesting of pepper, cardamom and coffee at the earliest.
- In the Southern Zone, prevailing humid weather conditions are congenial for incidence of bacterial wilt in cucurbitaceous vegetables. To control, apply lime in the field before planting. If bacterial wilt is seen during the time of fruiting plough well and apply a mixture of 400 g Lime and 40 g Urea in the nearby fields to control the spread of diseases.
- In the Central Zone, due to high temperature, there is a chance of sigatoka disease in banana and aphids in vegetables. To control sigatoka disease, cut and burn all severely affected leaves and apply *Pseudomonas* @10-15 gm soon after the appearance of the initial symptoms of the disease. For severe attack, spray SAAF @ 2 g in one litre of water. Apply Quinalphos @ 2 ml or Neem oil-garlic-soap emulsion @ 2% for control of aphids after current spells of rain.
- In the Northern Zone, prevailing dry weather condition is congenial for the spread of leaf eating caterpillars in coconut palms in coastal areas. This can be effectively controlled by releasing *Trichospilus Pupivora* Parasites. If stem bleeding is found, drench the basin with Calyxin @ 25ml in 25L of water per palm. Repeat the application in every 30 days interval till the symptom disappears after current spells of rain.
- **Animal Husbandry**
- In the Western Zone of Tamil Nadu, provide plenty of clean drinking water to animals and poultry enough to meet the hot dry weather.
- In the Northern Telangana Zone, vaccinate animals to prevent pneumonia, blue tongue disease in sheep and goats, birds to prevent kokkera disease, provide clean and fresh water daily & undertake deworming at regular intervals.

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



Mustard



rice



Okra



Cabbage

- **Realised Rainfall:** Rainfall occurred in Tirap district of Arunachal Pradesh. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As shallow to moderate fog is very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, during next 48 hours, there is chance of incidence of early blight disease in potato, tomato and onion crops and other standing crops for incidence of pest and diseases. Monitor the crops and if symptoms are noticed, undertake plant protection measures.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Assam, maintain 3 cm depth standing water after 2-3 days of transplanting of *boro* rice. Also farmers are advised to filling the gaps as early as possible.
 - In Hill Zone of Assam, continue sowing of recommended high yielding varieties of cucurbits and early okra. Undertake nursery sowing of early *ahu* rice.
 - In Lower Bramhapurtra Valley Zone of Assam, continue sowing of early *ahu* rice (direct seeded). Undertake land preparation and sowing of summer black gram/green gram and ridge gourd, pointed gourd and sponge gourd.
 - In Upper Bramhapurtra Valley Zone of Assam, continue land preparation for sowing of ridge gourd and okra.
 - In Central Bramhapurtra Valley Zone of Assam, continue land preparation and sowing of green gram and black gram.
 - In North Bank Plain Zone of Assam, continue land preparation for sowing of summer vegetables like ridge gourd, cucumber, bitter gourd, okra etc. Undertake land preparation and sowing of direct seeded *ahu* rice and green gram/black gram. Undertake main field preparation for transplanting of *ahu* rice.
 - In Meghalaya, complete replanting of dead hills or gap filling with seedlings of similar age of *boro* rice within 7-10 days of transplanting.
 - In Arunachal Pradesh, cover the tomato crops with polyethene/cloth during night time to avoid cold/frost injury and place 2-3 inch crop residue mulch around the base of the plant. Undertake sowing of local/early maize and cowpea.
 - In Hill Zone, North Bank Plain Zone and Central Bramhapurtra Valley Zone of Assam, foggy and humid weather is favourable for attack of aphids and sawfly in rapeseed & mustard. Spray Malathion 50 EC @ 2ml/litre or

- Dimethoate 30 EC or Chloropyriphos 20 EC @ 1ml per litre of water in toria field during afternoon hours.
- In Upper Bramhaputra Valley Zone of Assam (Jorhat, Golaghat, Sibsagar and Dibrugarh districts), due to foggy weather and low temperature, severe attack of late blight is noticed on potato. Spray Indofil M-45 @ 2.5 ml/litre of water for control.
- In Central Bramhaputra Valley Zone of Assam, drench the soil with Bavistin @ 1ml/litre of water to protect linseed from wilt and apply Chloropyriphos @ 3 ml per litre of water during evening hours to control cutworm in linseed.
- In Barak Valley Zone and Hill Zone of Assam, due to cloudy weather, there is chance of late blight in tomato. To manage the blight in tomato, apply Redomil or Indofil @ 2 g per litre of water.
- In Lower Bramhaputra Valley Zone of Assam, there is chance of attack of whorl maggot, hispa, stem borer etc. in transplanted *boro* rice. For all the cases, farmers may apply Chloropyriphos 20 EC at the concentration of 0.02% solution or Carbofuran 3G @ 4kg/bigha.
- In Arunachal Pradesh, there is chance of attack of leaf eating insects in cabbage/cauliflower, pea & other vegetables, spray Azadirachtin 0.15% EC @ 6ml/litre of water for control.
- In Meghalaya, in the prevailing weather, attack of aphids is observed in mustard and rapeseed, spray Chloropyriphos 20 EC or Dimethoate 30 EC @ 2 ml/litre of water for control. Prevailing weather is also congenial for incidence of attack of blast/brown spot diseases in *boro* rice at vegetative stage. Spray Carbendazim @ 1g/litre of water to control the attack.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Manipur, apply light irrigation to *rabi* maize. Undertake field preparation for sowing of cucurbits.
- In Mizoram, continue transplanting of brinjal and chilli. Continue sowing of pea, mustard and toria and harvesting of banana, French bean, cowpea, ginger, turmeric and khasi mandarin.
- In Nagaland, undertake harvesting of chickpea, lentil and linseed. Continue harvesting of pea, tomato, mustard, maize and ginger.
- In Tripura, continue transplanting of brinjal and tomato. Weeding may be done in SRI field of *boro* rice at 10 to 15 days after transplanting. Maintain 2 to 3cm standing water in the fields.
- In Manipur, due to humid weather condition there is chance of attack of aphids in lentil. Spray Cypermethrin @ 2ml/litre of water or Nuvan @ 0.5ml/litre of water against aphid.
- In Tripura, due to foggy weather, there is chance of attack of late blight in potato, aphids in mustard and lentil. Spray Metalexyle 8% with Mancozeb 64% or Cymoxinyle 8%+ Mancozeb 64% @ 2.5 g per litre of water against late blight in potato. Spray Monocrotophos or Imidachloprid @ 2ml per litre of water against aphids in mustard and lentil. At flowering stage there may be attack of mango hopper and mealy bug in mango plant. Spray Malathion @ 2ml per litre of water to manage the attack.
- Suitable varieties are given in Annexure III.
- **Animal Husbandry**
- In North Bank Plain Zone of Assam, pigs at the age of 2-4 weeks should be vaccinated against swine fever.
- In Lower Bramhaputra Valley Zone and North Bank Plain Zone of Assam, vaccinate poultry birds against Ranikhet disease during this period. Poultry birds in general should be regularly observed and fed with antibiotics and vitamins after consulting veterinary doctors.
- In Tripura, Goat Pox disease may affect goats of any age group. Blister may be seen in the facial/nasal area. Wash with Potassium per Manganate and consult nearby veterinary dispensary for anti-biotic cream and further treatment.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Cotton



Sugarcane



Groundnut



Wheat

- **Realised Rainfall:** Weather remained dry over the region.

- **Advisories:**

- **Maharashtra:**

- In Konkan, in *rabi* rice, maintain water level of 3-5 cm at vegetative stage/early tillering stage. Undertake intercultural operations like weeding and apply second dose of fertilizers @ 40 kg N (87 kg Urea) in *rabi* rice. Apply irrigation to summer groundnut and sunflower.
- In Madhya Maharashtra, as no significant rainfall is likely to occur, apply irrigation to timely sown wheat, vegetables and orchard crops. Also apply mulch of crop residue to orchards. Apply irrigation to onion crop at an interval of 6-8 days. Continue sowing of irrigated summer groundnut, sunflower and summer pearl millet. Provide shade arrangement to protect the mango grafts from bright sunshine (maximum temperature above 32°C).

- In Marathwada, continue sowing of irrigated summer groundnut. Apply irrigation to timely sown wheat at ear head emergence/flowering stage. Apply Nitrogen @ 50 kg 1 ha in onion crop. Continue harvesting of timely sown gram crop. Continue harvesting of matured *rabi* jowar and sunflower.
- In Vidarbha, continue sowing of summer sesame with assured irrigation. Continue sowing of fodder crops like maize and jowar. Apply irrigation to summer groundnut. Apply irrigation to wheat crop at ear head emergence/flowering stage. Maintain water level of 3-5 cm in summer rice field in East Vidarbha. As dry weather is prevailing, apply irrigation to vegetable crops and orchard crops like orange and sweet lime in Central Vidarbha region. Also apply mulch of crop residue to the orchards.
- Due to rise in temperature in Madhya Maharashtra region, there are chances of attack of aphids in wheat; spray bio pesticide *Metarhizium anisopliae* or *Verticillium lacunae* 1.15% WP @ 2 Kg in 500 litres of water per hectare.
- Due to rise in temperature in Konkan region, there are chances of attack of aphids in pulses; spray Dimethoate @ 10 ml per 10 litres of water.
- **Gujarat:**
 - In North Saurashtra Zone, complete sowing of irrigated summer groundnut, sesame, vegetable crops (ridge gourd, bottle gourd, sponge gourd, bitter gourd, lady's finger, cluster bean and water melon. Complete sowing of maize for fodder purpose.
 - In North Gujarat Zone and North West Zone, continue land preparation for sowing of sesame and groundnut; procure good quality seeds of summer crops. Complete harvesting of matured spikes of castor and undertake picking of matured bolls of cotton in North Gujarat Zone, North West Zone and Bhal and Coastal Zone.
 - In South Gujarat Rainfall Zone, undertake sowing of vegetable cowpea, cluster bean, summer pigeon pea, okra, cucurbits (bottle gourd, ridge gourd, sponge gourd, bitter gourd, cucumber, watermelon and muskmelon) and transplanting of rice. As an off seasonal crop, sowing of coriander, fenugreek, spinach, garlic in the medium cost Green house is advised as it is not possible to grow it in open field during hot summer month.
 - In Gujarat, apply light irrigation in mustard (pod development stage) and castor in North Gujarat Zone, North West Zone and in mustard in Bhal and Coastal Zone, apply irrigation to wheat in North West Zone, North Gujarat Zone, Bhal and Coastal Zone, North and South Saurashtra Zone, to Indian rapeseed and mustard in Middle Gujarat Zone, to sweet corn (as per need) in South Gujarat Heavy Rainfall Zone.
 - In South Gujarat Zone, spray 0.5 % Zinc Sulphate or 0.2% Ferrous Sulphate in banana crop for higher yield and good quality of banana.
 - Due to rise in temperature attack of thrips is expected in banana crops in Middle Gujarat Zone; to control spray Malathion 50 EC @ 20 ml or Quinalphos 25 EC @ 20 ml in 10 litres of water. Protect banana bunches by polythene cover.
 - In present weather conditions attack of thrips in onion and infestation of powdery mildew in mango has been reported in North Gujarat Zone and North Saurashtra Zone; alternative sprays of Imidacloprid 30.5 SC @ 3 ml and Profenofos @ 20 ml in 10 litres of water at 10 days interval are advised to control thrips in onion; spray Hexaconazole @ 15 ml in 10 litres of water to control powdery mildew in mango.
 - Due to prevailing weather conditions there is chance of blight in cumin in Bhal and Coastal Zone; for control of blight, spray Mencozeb (0.25%) @ 30 g plus 20 ml desi soap solution adding in 10 litres of water. Avoid irrigation for few days.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In Gujarat, keep young calves indoor at night time, protect from cold wind, give dry fodder twice a day and provide warm water for drinking.

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



rice



Wheat



Gram



Mustard

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.

- **Advisories:**

- **West Bengal:**

- In Laterite and Red Soil Zone, maintain 2-3 cm stagnant water in transplanted *boro* rice fields. As mainly dry weather would prevail, undertake harvesting of matured mustard.
- In New Alluvial Zone, complete transplanting of *boro* rice at the earliest. Keep 3-5 cm stagnant water in the

transplanted rice fields. Continue the gap filling operation.

- In Hill Zone, undertake land preparation for sowing of maize, okra and planting of ginger and turmeric.
- In Laterite and Red Soil Zone, present weather conditions are favourable for attack of rust and blight diseases in wheat and late blight infestation in potato. For control of rust and blight diseases in wheat crop, spray Spray Mancozeb @ 2.5-3 g/litre and spray Dimethomorf @ 2g + Mancozeb @ 1g per litre of water against late blight in potato.
- In Coastal Saline Zone, due to low temperature, there is chance of attack of brown spot and blast in *boro* rice. Spray Trycyclozole 5-6g/10 litre of water as preventive measures.
- In Hill Zone, present weather conditions are favourable for attack of late blight disease in potato. Undertake 1st spray with Copper Oxchloride 50% WP @ 4g/litre of water and 2nd spray 10 days after 1st spray with Mancozeb 75% WP @ 2.5g/litre of water.
- In Old Alluvial Zone, weather is congenial for leaf blight in lentil, spray Mancozeb @ 2.5g/litre or Chlorothalonil @ 1.5g/litre or Carbendazim @ 1g/litre of water against leaf blight in lentil.
- In Terai Zone, due to low temperature and humid weather conditions, there is chance of attack of aphids and leaf blight in mustard. Spray Thiamethoxam @ 1 g in 3 litres of water against aphids and apply Mancozeb @ 2.5g/litre of water against leaf blight.
- **Andaman and Nicobar Islands:**
- In North and Middle Andaman, apply irrigation at regular intervals in brinjal and cauliflower in upland areas.
- **Odisha:**
- In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, continue sowing of sunflower. Undertake harvesting of matured early sown mustard. As wheat crop is at flowering to milking stage, which are critical stages, apply irrigation depending upon the soil moisture status.
- In Eastern Ghat High Land Zone, continue sowing of pea and lentil under zero tillage in rice field.
- In Western Undulating Zone, complete transplanting of summer rice. Provide irrigation at tillering stage. Alternate wetting and drying is advisable until hair line crack is seen in fields. Undertake field preparation for planting of sugarcane.
- In North Eastern Coastal Plain Zone, continue transplanting of summer rice. As temperature has been increased considerably and it is expected to continue with sunny weather, irrigation should be given at this critical flowering to pod formation stage of rapeseed and mustard.
- In Western Undulating Zone, stem borer may attack the summer paddy crop at tillering stage. Spray Triazophos/Profenophos/Monocrotophos @ 2ml/litre of water for control.
- In East and South Eastern Coastal Plain Zone, current weather is favourable for leaf eating caterpillar infestation in groundnut . Apply 10 kg of 2 % Methyl Parathion dust around the bund. Thrips infestation may be found due to current weather. Spray 400 ml Dimethoate or 50 ml Imidachloprid in 200 litre wate per acre.
- In East and South Eastern Coastal Plain Zone, stem borer attack is found on wheat crop. Spray Triazophos or Prophenophos @ 400 ml in 200 litres of water/acre. Also bacterial wilt has been noticed in brinjal and tomato. To control them, spray Streptocyclin @ 1 g in 10 litres of water.
- In North Eastern Coastal Plain Zone, rising temperature is favourable for attack of aphids on rapeseed and mustard. Spray Ethofenprox @ 1.5ml or Methyl demeton @ 2ml/litre of water.
- **Bihar:**
- In North West Alluvial Plain Zone, undertake harvesting of matured mustard and potato. Undertake land preparation for sowing of summer vegetables. Apply light irrigation in *rabi* onion, maize and late sown wheat crop which is at panicle initiation stage. Continue land preparation for sowing of summer vegetables.
- In South Bihar Alluvial zone, continue harvesting of matured potato. Apply need based irrigation in wheat crop. Undertake planting of sweet potato and complete planting spring season arvi crop.
- In North West Alluvial Plain Zone, weather is congenial for attack of aphids in mustard and pod borer in pigeon pea in flowering/pod formation stages. Spray Rogar or Quinalphos @ 2.0 ml/litre of water against aphids in mustard and spray Cartap hydrochloride @ 1.5 ml/litre of water against pod borer in pigeon pea.
- In South Bihar Alluvial zone, in the present weather condition, there is chance of incidence of aphids in mustard/toria. Spray Cartap hydrochloride or Metasystox or Rogor @ 1.5ml/litre of water against aphid in mustard/toria. Also to protect onion from thrips, spray Imidaclorprid @ 1 ml/litre of water.
- **Jharkhand:**
- In Jharkhand, as normal sown wheat is at flowering/grain filling stage, in view of the prevailing above normal maximum temperature and expected dry weather conditions, apply irrigation in the wheat fields to keep optimum soil moisture conditions.
- In Western Plateau Zone, continue sowing of vegetables like sponge gourd, bottle gourd, pumpkin, water melon, musk melon etc.
- In South Eastern Plateau Zone, because of foggy weather during morning hours and later on clear and sunny weather favours attack of aphids on mustard hence frequent monitoring is necessary. In early stages of attack, farmers are advised to separate and destroy the infected part of the plants.
- In Central, North Eastern Plateau and South Eastern Plateau Zone, due to variation in temperature and dew, spreading of powdery mildew disease is likely to be more prominent in pea. Hence, spraying of Karathen @ 1.5 ml

- or Sulfex @ 2.5 g per litre of water should be done to prevent it from further spreading.
- In South Eastern Plateau Zone, those areas remain dry with cool and lower temperature, there is chance of attack of various leaf eating and sucking pests on pigeon pea crop, spray Monochrotophos @ 1 ml per litre of water at flowering stage and Indoxacarb @ 0.5 – 1 ml per litre of water at pod formation stage.
- In South Eastern Plateau Zone, because of cool and humid weather, potato crop is seen with the infestation of early and late blight. Undertake spraying of Krilaksil or Ridomil MZ @ 1.5 g per litre of water to check it from further spreading.
- In South Eastern Plateau Zone, decreased sunshine hours with fluctuation in humidity is congenial for attack of Diamond back moth, aphids and thrips in cole crops and tomato. Spray Dimethoate (30%) @ 1 ml per litres of water to control the attack.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In Coastal Saline Zone of West Bengal undertake vaccination against pox disease in cattle.
- In South Bihar Alluvial zone of Bihar, keep the animals in sheds during night to protect them from cold.

CENTRAL INDIA [M.P., CHHATTISGARH]



Cauliflower



Gram



Okra



Wheat

- **Realised Rainfall:** Weather remained dry over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Malwa Plateau Zone, continue nursery sowing of tomato, brinjal and chilli. In view of prevailing dry weather, apply irrigation in potato and wheat and in gram at pod filling stage. Continue harvesting of matured cauliflower and cabbage.
 - In Jhabua Hill Zone, continue harvesting of matured vegetables, turmeric and ginger. Apply irrigation in gram and mustard at pod formation/pod filling stage and in wheat at flowering and milking stage.
 - In Satpura Plateau Zone, undertake sowing of groundnut and maize. Continue nursery sowing of vegetables like chill, tomato and brinjal and sowing of spinach and fenugreek. Continue nursery sowing of summer vegetables in Grid Zone.
 - In Central Narmada Valley Zone, undertake planting of sugarcane.
 - In Bundelkhand Zone, continue sowing of vegetables like pumpkin, bitter gourd, okra etc. and continue transplanting of vegetables like tomato, onion, brinjal, chilli and cauliflower in main fields.
 - In Kymore Plateau and Satpura Hill Zone due to variation in temperature conditions, there are chances of attack of aphids in mustard, apply Imidacloprid @ 100 ml/ha by mixing in 500-600 litre of water.
 - Due to humid weather, there are chances of attack of fruit borer in brinjal, tomato and okra in Central Narmada Valley Zone, apply Imidacloprid @ 0.5 ml per litre of water.
 - Due to humid weather, there is possibility of leaf blight disease in tomato and chilli, spray Mencozeb @ 2.5g per litre of water.
 - Suitable varieties for sowing are given in Annexure III.
 - **Chhattisgarh:**
 - In North Hill Zone, continue sowing of maize and sunflower, land preparation for sowing of summer vegetables and planting of sugarcane. Undertake harvesting of matured mustard.
 - In Bastar Plateau Zone, apply sprinkler irrigation in pulse crops like chickpea and garden pea etc. at flowering stage. Continue planting of sugarcane and sowing of summer legume crops like mung and urad.
 - In Chhattisgarh Plain Zone, continue sowing of maize and sunflower and preparation of seedlings of cucurbitaceous vegetables in polythene bags.
 - Due to humid weather, there may be infestation powdery mildew in mustard crop in Bastar Plateau Zone, spray Sulfex @ 3 g/litre of water.
 - Due to partly cloudy weather, there is chance of attack of aphids in mustard in Chhattisgarh Plain Zone, apply Imidacloprid @ 80 ml/acre dissolved in 200 litres of water.
- **Animal Husbandry**
- In Madhya Pradesh, provide fodder/feed mixed with minerals etc. and fresh water to milch animals. Keep animals in sheds during night time.

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



Wheat



Sugarcane



Cauliflower



Mustard

- **Realised Rainfall:** Rainfall occurred in Doda district of Jammu & Kashmir; Chamba, Kangra, Kullu, Mandi, Shimla and Sirmaur districts of Himachal Pradesh; Garhwal Tehri and Uttarkashi districts of Uttarakhand; Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As shallow to moderate fog is very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and north Rajasthan during next 48 hours, there is chance of incidence of early blight disease in potato, tomato and onion crops and other standing crops for incidence of pest and diseases. Monitor the crops and if symptoms are noticed, undertake plant protection measures.
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone, continue mulching in Knol-khol, cabbage & root crops in view of the low temperature conditions. Maintain drainage channels in the fields.
 - In Sub Tropical Zone, continue transplanting of *rabi* onion utilising the realised rainfall.
 - In Intermediate Zone, undertake nursery sowing of tomato, brinjal and chilli and continue sowing of cucurbits (cucumber, bottle gourd and bitter gourd).
 - In Cold Arid Zone, in view of the prevailing low temperatures, cover greenhouses with black polythene in the night for proper growth of crops or maintain 2 layers of polythene over greenhouse (at least 150 gsm each). Apply light irrigation at 10 to 15 day's interval to garlic crops germinated in the low tunnel during day time.
 - In Intermediate Zone, due to humid weather, there may be incidence of early and late blight in potato and *Alternaria* blight in mustard crops. To control, apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litre of water alternately as curative measure on a non rainy day.
 - In Sub Tropical Zone, weather is congenial for incidence of white rust in mustard crops, to control, apply Mancozeb @ 0.25% on a non rainy day.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone, temperature conditions are favourable for planting of sugarcane crop. Continue nursery sowing of brinjal and tomato, under optimum soil moisture. Also continue nursery sowing of capsicum with varieties California Vander, Pus Dipti, Anupam, Heera, Indira, Supriya & Bharat etc. Undertake mulching in vegetables to conserve moisture and to protect crops from frost.
 - In Hill Zone, continue transplanting of cabbage and round radish for seed production. Also continue land preparation for nursery sowing of tomato, brinjal and capsicum.
 - In Hill Zone, in the present weather, there may be incidence of mahu/thrips in garlic and onion, spray Metacystacus/Roger @ 2ml per litre of water in toria and spray Imidacloprid @ 6 -8 ml in 10 litres of water in garlic and onion.
 - In Bhabar and Tarai Zone, due to prevailing weather conditions, there are chances of aphids incidence in lentil crop at flowering stage. If aphids population is 10 aphids per plant, then spray 200 ml of Diamethoate 30 % dissolved in 250 ml of water/acre.
 - **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, Continue sowing of cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash and nursery sowing of tomato, brinjal, chilli and capsicum in poly house.
 - In Mid Hills sub-Humid Zone, continue nursery preparation of tomato, brinjal and capsicum.
 - In High Hill Temperate Dry zone, maintain desired temperature inside poly houses of seedlings of Chinese cabbage, spinach and coriander and vegetable crops in lower region to protect from frost.
 - In Himachal Pradesh, due to variation in temperature and humid weather conditions, monitor wheat crop for incidences of yellow rust. If symptoms are noticed; spray Tilt @ 1 ml per litre of water on a non rainy day.
 - In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there are chances of attack of downy mildew in cruciferous vegetables and powdery mildew in peas, spray Redomil M-Z @ 2.5 g per litre of water at 15 days interval downy mildew and spray Celfex @ 25 g per 10 litres of water for powdery mildew. Also, there may be chances of attack of yellow rust and aphids in wheat and mustard crop respectively. For control of yellow rust, spray Tilt @ 1ml per litre of water and spray Cypermethrin @ 750 ml per 750 litre of water per hectare for aphids. Undertake plant protection measures on a non rainy day.
 - In Mid Hills sub-Humid Zone, weather is conducive for attack of aphids in cole crops, apply Malathion @ 15ml per

15 litre of water.

▪ **Rajasthan:**

- In East Rajasthan, apply irrigation in maize with top dressing of nitrogen at tasseling stage and third irrigation in wheat at jointing stage. Also apply irrigation in gram and mustard at pod formation stage in Southern Humid Plain Zone.
- In Sub Humid Southern Plain and Aravali Hill Zone, continue field preparation for sowing of summer groundnut and nursery preparation for brinjal and chilli. Apply irrigation in wheat (booting and ear emergence stage).
- In West Rajasthan, in Arid Western Zone, apply fourth irrigation in timely sown wheat, third irrigation in late sown wheat, second irrigation in barley alongwith top dressing of remaining dose of urea in barley. Apply irrigation in fodder crops and vegetables, wheat at flowering stage, last irrigation in mustard, cumin at seed formation stage in Barmer, Churu, Jalore, Jodhpur and Pali districts.
- In Irrigated North western Plain Zone, apply second irrigation in late sown wheat (tillering stage); third irrigation in timely sown wheat (at jointing stage), third irrigation in mustard at pod formation stage and third irrigation in barley (100-110 days after sowing) and second irrigation in gram at pod formation stage (90-100 days after sowing). Apply irrigation in sugarcane for better sprouting of ratoon crop and complete fruit plucking in kinnow orchards and undertake intercultural operations.
- In Arid Western Zone, in Bikaner and Jaisalmer districts due to variation in temperature, there is chance of infestation of aphids and sucking pests in gram and mustard, heliothis in gram, blight in cumin and infestation of anthracnose disease in chilli crop, spray Dimethoate 30 EC @ 1200 ml per hectare for aphids and sucking pests, spray Quinolphos 25 EC @ 1200 ml/ha along with water at the time of flowering and repeat the spray if required for heliothis, spray Dithane M-45 @ 2-3g/litre at the time of flowering and repeat the spray at 10-15 days interval for blight and foliar application of Dithane M-45 @ 2g/litre for anthracnose disease. In Barmer, Churu, Jalore, Jodhpur and Pali districts, due to rise in temperature, there is a chance of attack of thrips in cumin, garlic and onion, spray Dimethoate 30 EC @ 1.0 ml per litre water in cumin and spray Malathion 50 EC @ 1.0 ml per liter water in garlic and onion.
- In Irrigated North Western Plain Zone, due to change in temperature, there is a chances of infestation of aphids and white rust in mustard; attack of termite in wheat and barley; attack of pod borer in gram, spray Methyl Dimeton 25 E.C. @ 1 litre per hectare in mustard; apply Chlorpyrifos 20 EC @ 1.0 litre per hectare with irrigation water in wheat; apply Chlorpyrifos 20 EC @ 4.0 litre per hectare with irrigation water in barley and apply Quinalphos @ 1.5 per cent dust 24 kg/ha in gram.

▪ **Punjab, Haryana and Delhi:**

- In Undulating Plain Zone of Punjab, protect newly planted fruit plants from decreasing night temperature for their proper growth and cover the nursery/young fruit plants with rice straw, thatches, plastic sheet etc. Undertake intercultural operations in vegetable crops and complete the sowing of onion in this month.
- In Western Plain Zone of Punjab, continue sowing of spring maize and planting of sugarcane.
- In Central and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
- In Undulating Plain Zone of Punjab, in Sub-Montane and Central Plain Zone of Punjab, continue harvesting of sugarcane.
- In Western Zone of Haryana, apply light irrigation in mustard and apply light irrigation in wheat crop as per requirement. Apply light irrigation to vegetable and young fruit plants.
- In Western Semi-Arid Zone of Delhi, continue transplanting of *rabi* onion, tomato, cabbage, broccoli and early cauliflower on raised bed, sowing of garlic in raised bed, spinach, coriander and fenugreek.
- In Western Zone, Central and Undulating Plain Zone of Punjab, due to foggy weather condition, there may be chances of attack of late blight in potato crop and in Central and Undulating Plain Zone of Punjab rust in pea may appear for control, spray Indofil-M-45 @ 500 gm per acre at weekly interval.
- In Central, Western and Undulating Plain Zone of Punjab, there is chance for occurrence of yellow rust in wheat fields in the present weather condition. Monitor the crop and spray with Tilt/Shine/Bumper/Compass/Markzole @ 200 ml in 200 litres of water/acre if symptoms are noticed.
- In Central and Undulating Plain Zone of Punjab, there may be chances of aphids in mustard crop; to control spray 40g Actara 25 WG or 400 ml Rogor 30EC in 80-125 litre of water per acre. Also in Undulating Plain Zone of Punjab, there may be chances of *alternaria* blight in mustard, spray Indofil M 45 @ 25 g/acre in 100 litres of water.

▪ **Uttar Pradesh:**

- As dry weather is prevailing over East Uttar Pradesh, apply irrigation in wheat at ear head emergence/flowering stage and in mustard at flowering/silique formation stage in East Uttar Pradesh.
- In Central Pain Zone, undertake planting of autumn sugarcane, land preparation for sowing of cowpea. Continue transplanting of onion and nursery sowing of chili. Continue sowing of bhindi and cucurbits. Undertake sowing of water melon and bottle guard. Undertake sowing of urad, mung, lobia, bhindi as inter crop in sugarcane.
- In Eastern Plain Zone, continue planting of autumn sugarcane. Continue sowing of urad, mung and cucurbits.
- In Western Plain Zone, continue planting of autumn sugarcane and sowing of sunflower.
- In Bundelkhand Zone, continue sowing of cucurbits, transplanting of cabbage, cauliflower, tomato, brinjal and chilli.
- In Bundelkhand Zone, due to prevailing temperature conditions, there may be chances of attack of aphid in

- mustard, lentil. For control, spray Monocrotophos or Dimethoate @ 1.5 litres in 600 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of rust in potato and tomato, for control spray Mancozeb 0.2% @ 2 g per litre of water.
 - In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of early blight in potato, for control spray Dithane M-45 @ 2.5 gm. per litre of water or Mancozeb 0.2% @ 2 g per litre of water.
 - In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of mosaic leaf curl in brinjal, chilli and tomato for control spray Methyl-O-Demeton 25 E.C. @ 2 litres per 700 to 800 litres of water per hectare.
 - In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of powdery mildew in pea and aphids in mustard, for control, powdery mildew in pea, spray Tridemorph 80 % EC @ 500 ml in 500 to 600 litres of water per hectare and for control of aphids, spray Methyl-O-Demeton 25 % E.C. @ 1 litre per 600 to 750 litres of water per hectare.
 - In North Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of blight in linseed, for control spray 0.2 % Redomil MZ @ 200 gm. + 0.1 % Coperoxycloride @ 100 g in 200 litres of water per acre.
 - Suitable varieties for sowing are given in Annexure III.
- **Horticulture**
 - In Eastern Plain Zone, in Faizabad, undertake planting of grape vines.
 - In North Eastern Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of mango hopper and mealy bug in mango trees for control spray mixture of 0.2 % Emidacloprid @ 400 ml and 0.2 % Carbendazim @ 400 gm. per 200 litres of water per 20 plants.
 - Complete pruning operations in apple orchards in High Hill Temperate Dry zone of Himachal Pradesh, Continue preparation of tree basins in Mild Hills Sub Humid Zone of Himachal Pradesh for apple, stone fruits and pomegranate and also continue preparation of tree basins and pruning and in Mid Hills sub-Humid Zone, for apple, pear and stone fruits.
 - In Mid Hills sub-Humid Zone of Himachal Pradesh, continue mulching of tree basins to protect from frost. Continue planting of new varieties of apple, pear, stone fruits, walnut and pecanut.
 - In Mid Hills sub-Humid Zone of Himachal Pradesh, under prevailing weather conditions, there are chances of attack of powdery mildew in mango, for control, apply Contaf (100ml)/Bavistin (100gms)/Kerathene (100ml) in 200 litres of water.
- **Floriculture**
 - In Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh, apply light irrigation in the winter flowers. As there is a chance of attack of aphids, spray Malathion @ 0.05% for the control.
- **Animal Husbandry**
 - In High Hill Temperate Dry Zone and in Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, give daily 40-50g Minerals mixture per cow and protect animals from cold.
 - In Valley temperate zone and in Intermediate Zone of Kashmir, protect the animals from low temperatures by covering the windows and doors of animal sheds with gunny bags particularly during night hours to avoid stress to the animals.
 - In Bundelkhand Zone of Uttar Pradesh, protect animals from low night temperature during night time.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	27.01.16		03.02.16		10.02.06	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	1.6	-87	0.6	-98	11.0	-74
Dibang Valley	8.0	-52.0	3.0	-92	19.0	-45
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.9	-83	0.0	-100	8.0	-66
Kurung Kumey	**	**	**	**	**	**
Lohit	3.2	-60	0.0	-100	11.9	-24
Lower Dibang Valley	2.2	-87	0.3	-99	11.9	-66
Lower Subansari	**	**	**	**	**	**
Papumpare	1.2	-72	1.6	85	8.3	25
Tawang	13.0	67	3.0	70	0.0	-100
Tirap	17.6	117	0.8	-96	24.0	158
Upper Siang	12.6	-33	0.0	-100	17.8	-61
Upper Subansari	11.6	383	0.0	-100	11.2	58
West Kameng	0.0	-100	0.4	-96	2.2	-83
West Siang	13.0	282	0.0	-100	11.0	-41
Assam&Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	2.5	-19
Barpeta	0.0	-100	0.2	-94	0.5	-83
Bongaigaon	5.8	383	0.0	-100	0.0	-100
Cachar	0.5	-76	0.3	-96	13.9	143
Chirang	0.0	-100	0.0	-100	10.4	160
Darrang	**	**	**	**	**	**
Dhemaji	0.0	-100	0.0	-100	**	**
Dhubri	0.0	-100	2.8	-18	0.0	-100
Dibrugarh	11.8	128	0.2	-98	16.5	61
Goalpara	0.0	-100	0.0	-100	0.5	-89
Golghat	2.4	2	0.5	-91	0.6	-90
Hailakandi	5.0	117	0.0	-100	0.5	-87
Jorhat	2.9	-19	0.0	-100	11.0	34
Kamrup(Rural)	0.4	-76	0.0	-100	5.9	51
Kamrup(Metro)	14.2	735	1.7	-64	4.5	15
Karbi Anglong	11.3	1313	0.0	-100	5.9	102
Karimganj	0.1	-92	0.0	-100	5.1	-23
Kokrajhar	4.1	307	0.0	-100	0.0	-100
Lakhimpur	1.9	-62	4.4	-66	11.6	3
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	0.0	-100	0.0	-100	10.0	25
Nowgong	11.2	602	1.7	-51	2.1	-72
Nalbari	1.6	60	0.0	-100	2.8	-49
Sonitpur	17.6	1256	0.0	-100	14.8	135

Sibsagar	8.1	161	0.0	-100	14.2	92
Tinsukia	2.5	-49	0.4	-98	18.5	71
Udalgiri	2.2	-12	0.6	-88	3.9	-42
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	8.1	145	0.6	-87	3.4	-37
Jaintia Hills	12.0	118	0.0	-100	1.0	-89
Ribhoi	3.2	-45	3.6	-8	0.0	-100
South Garo Hills	8.0	344	0.0	-100	**	**
West Garo Hills	0.0	-100	0.0	-100	0.2	-90
West Khasi Hills	12.0	900	1.0	-83	1.0	-57
NMMT						
Mizoram						
Aizwal	0.4	-94	0.0	-100	0.4	-92
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	**	**	0.0	-100	0.0	-100
Serchhip	**	**	**	**	**	**
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	0.1	-96	0.0	-100	0.5	-93
Imphal west	0.2	-85	0.0	-100	0.0	-100
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	10.7	0	2.0	-38	1.3	333
Kephire	**	**	**	**	**	**
Kohima	12.9	486	0.0	-100	6.4	14
Longleng	**	**	**	**	**	**
Mokokchung	7.0	67	0.0	-100	4.0	60
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	18.0	134	0.0	-100	16.0	122
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	1.5	-67	0.0	-100	1.6	-81
NorthTripura	3.4	-3	0.0	-100	0.0	-100
SouthTripura	0.0	-98	0.0	-100	0.2	-96
West Tripura	1.6	-44	0.0	-100	1.1	-80
Himachal Pradesh						

Bilaspur	0.0	-100	11.1	-58	12.8	28
Chamba	0.0	-100	10.3	-71	20.1	-11
Hamirpur	0.0	-100	11.2	-56	14.6	35
Kangra	0.0	-100	6.6	-71	23.2	54
Kinnaur	0.0	-100	9.5	-71	12.1	-48
Kullu	0.0	-100	32.8	31	24.6	44
Lahaul and Spiti	2.0	-95	6.2	-83	6.9	-76
Mandi	0.0	-100	12.2	-47	24.5	129
Shimla	0.0	-100	17.8	-13	22.5	67
Sirmaur	0.0	-100	1.2	-93	23.6	105
Solan	0.0	-100	6.4	-74	14.2	28
Una	0.0	-100	10.2	-43	9.8	40
Punjab						
Amritsar	0.0	-100	12.3	39	0.0	-100
Barnala	0.0	-100	0.0	-100	0.0	-100
Bhatinda	0.0	-100	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	1.6	-67	0.0	-100
Gurdaspur	0.0	-100	2.3	-88	0.0	-100
Hoshiarpur	0.0	-100	4.9	-60	0.0	-100
Jalandhar	0.0	-100	4.3	-52	0.0	-100
Kapurthala	0.0	-100	3.4	-62	0.0	-100
Ludhiana	0.0	-100	1.1	-88	0.6	-87
Mansa	0.0	-100	0.0	-100	0.0	-100
Moga	0.0	-100	1.0	-86	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	0.0	-100	2.8	-82	7.5	27
Patiala	0.0	-100	0.0	-100	0.4	-91
Ropar	0.0	-100	6.7	-33	3.4	-53
Sangrur	0.0	-100	0.0	-100	0.0	-100
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	15.0	134	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	0.0	-100	0.0	-100	0.8	-89
Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.0	-100	0.0	-100	0.2	-97
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	0.0	-100	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	0.0	-100	0.0	-100	0.0	-100
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.0	-100	0.0	-100	0.0	-100
Katihah	0.0	-100	0.0	-100	0.5	-90
Karnal	0.0	-100	0.0	-100	0.0	-100
Kurukshetra	0.0	-100	0.0	-100	1.8	-74
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100

Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	0.0	-100	0.0	-100	0.6	-93
Panipat	0.0	-100	0.0	-100	0.0	-100
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.0	-100
Sirsa	0.0	-100	0.0	-100	0.0	-100
Sonepat	0.0	-100	0.0	-100	0.0	-100
Yamunanagar	0.0	-100	0.0	-100	1.8	-82
Delhi						
Central Delhi	0.0	-100	0.0	-100	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	0.0	-100	0.0	-100	0.0	-100
North Delhi	0.0	-100	0.0	-100	0.0	-100
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	0.0	-100	0.0	-100
South Delhi	0.0	-100	0.0	-100	0.0	-100
South West Delhi	0.0	-100	0.0	-100	0.0	-100
West Delhi	0.0	-100	0.0	-100	0.0	-100
Jammu & Kashmir						
Anantnag	1.0	-97	9.6	-59	0.0	-100
Badgam	0.1	-99	7.4	-54	0.0	-100
Bandipore	**	**	**	**	**	**
Baramula	1.4	-97	37.8	-20	0.0	-100
Doda	2.0	-95	9.6	-75	21.4	-34
Ganderbal	4.4	-77	22.2	21	0.0	-100
Jammu	0.0	-100	10.8	-39	0.0	-100
Kargil	**	**	**	**	**	**
Kathua	0.0	-100	5.4	-72	1.2	-90
Kistwar	**	**	**	**	**	**
Kulgam	0.0	-100	15.6	-34	0.2	-99
Kupwara	3.0	-89	32.4	36	0.0	-100
Ladakh(Leh)	1.4	13	0.6	-68	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	0.3	-98	3.5	-72	0.0	-100
Rajouri	0.0	-100	18.2	*	0.0	-100
Ramban	1.5	-96	22.5	-42	9.3	-71
Reasi	0.0	-100	13.3	-58	0.0	-100
Samba	0.0	-100	10.6	-40	0.0	-100
Shopian	**	**	**	**	**	**
Srinagar	0.0	-100	7.0	-62	0.0	-100
Udhampur	0.0	-100	8.4	-73	3.1	-86
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.0	-100	0.0	-100
Chhatarpur	0.0	-100	0.0	-100	0.0	-100
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	0.0	-100	0.0	-100
Dindori	0.0	-100	0.0	-100	0.0	-100

Jabalpur	0.0	-100	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.0	-100	0.0	-100	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	0.0	-100	0.0	-100
Sagar	0.0	-100	0.0	-100	0.0	-100
Satna	0.0	-100	0.0	-100	0.0	-100
Seoni	0.0	-100	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umaria	0.0	-100	0.0	-100	0.0	-100
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	0.0	-100
Bhind	0.0	-100	0.0	-100	0.0	-100
Bhopal	0.0	-100	0.0	-100	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	0.0	-100	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	0.0	-100	0.0	-100
Indore	0.0	-100	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	0.0	-100
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	0.0	-100	0.0	-100
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	0.0	-100	0.0	-100

Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	0.0	-100
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	0.0	-100
Ambedkar Nagar	0.0	-100	0.0	-100	0.0	-100
Azamgarh	0.0	-100	0.0	-100	0.0	-100
Bahraich	0.0	-100	0.0	-100	2.5	-57
Ballia	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	0.0	-100
Barabanki	0.0	-100	0.0	-100	0.0	-100
Basti	0.0	-100	0.0	-100	0.0	-100
Chandauli	0.0	-100	0.0	-100	0.0	-100
Deoria	1.0	-73	0.0	-100	0.0	-100
Faizabad	1.0	-86	0.0	-100	1.5	-67
Farrukhabad	0.0	-100	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	0.0	-100	0.0	-100	0.0	-100
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.0	-100	0.0	-100	0.6	-86
Hardoi	0.0	-100	0.0	-100	0.0	-100
Jaunpur	0.0	-100	0.0	-100	0.0	-100
Kannauj	0.0	-100	0.0	-100	0.0	-100
Kanpur City	0.0	-100	0.0	-100	0.0	-100
Kanpur Dehat	0.0	-100	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	0.0	-100	0.0	-100	0.0	-100
Kushi nagar	1.5	-65	0.0	-100	0.0	-100
Lucknow	0.0	-100	0.0	-100	0.0	-100
Maharajganj	0.5	-89	0.0	-100	0.0	-100
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
RaiBareilly	0.0	-100	0.0	-100	0.3	-90

Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnagar	0.0	-100	0.0	-100	6.0	3
Sant Ravidas Nagar	0.0	-100	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.3	-94	0.0	-100	1.1	-65
Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	0.0	-100	0.0	-100	0.2	-94
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	0.0	-100	0.0	-100	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.0	-100	0.3	-91
Auraiya	0.0	-100	0.0	-100	0.0	-100
Badaun	0.0	-100	0.0	-100	0.5	-90
Baghpat	0.0	-100	0.0	-100	0.0	-100
Bareilly	0.0	-100	0.0	-100	0.0	-100
Bijnor	0.0	-100	0.0	-100	5.9	22
Bulandsahar	0.0	-100	0.0	-100	0.3	-79
Etah	0.0	-100	0.0	-100	0.0	-100
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	0.0	-100	0.0	-100	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	0.0	-100	0.0	-100
Jalaun	0.0	-100	0.0	-100	0.0	-100
Jhansi	0.0	-100	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	0.0	-100	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	0.0	-100	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	0.0	-100	0.6	-87
Moradabad	0.0	-100	0.2	-96	0.0	-100
Muzzaffarnagar	0.0	-100	1.0	-80	0.4	-92
Pilibhit	0.0	-100	0.7	-85	0.0	-100
Rampur	0.0	-100	0.8	-78	0.4	-93
Saharanpur	0.0	-100	0.0	-100	2.3	-65
Shahjahanpur	0.0	-100	0.0	-100	0.0	-100
Uttarakhand						
Almora	0.0	-100	0.0	-100	8.4	-25
Bageshwar	0.0	-100	0.0	-100	6.0	-46
Chamoli	0.0	-100	4.8	-74	8.7	-42
Champawat	0.0	-100	0.0	-100	7.0	-29
Dehradun	0.0	-100	0.5	-97	14.5	35
Garhwal Pauri	0.0	-100	0.0	-100	12.3	34

Garhwal Tehri	0.0	-100	0.4	-97	27.6	126
Haridwar	0.0	-100	0.0	-100	6.5	-24
Nainital	0.1	-99	0.7	-95	7.5	-13
Pithorgarh	0.3	-98	5.1	-68	18.2	82
Rudraprayag	0.0	-100	0.5	-98	15.3	-2
Udham Sing Nagar	0.0	-100	0.1	-99	1.6	-66
Uttarkashi	0.0	-100	6.6	-54	41.9	157
Bihar						
Araria	27.8	718	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	2.3	-45	0.0	-100
Banka	0.0	-100	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.1	-99	0.0	-100	0.0	-100
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	**	**	0.0	-100	0.0	-100
Darbhanga	0.0	-100	0.0	-100	1.8	-16
East Champaran	8.0	218	0.0	-100	0.4	-84
Gaya	0.2	-97	0.0	-100	0.0	-100
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.0	-100	0.0	-100	0.0	-100
Kathihar	**	**	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.3	-72
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	7.1	238	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	0.0	-100	0.0	-100	0.6	-82
Nalanda	0.0	-100	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	1.1	-59	0.0	-100	0.0	-100
Purnea	0.0	-100	0.0	-100	1.2	-8
Rohtas	0.0	-100	0.0	-100	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	1.5	-47	0.0	-100	0.5	-82
Sheikpura	**	**	0.0	-100	0.0	-100
Sheohar	**	**	0.0	-100	0.0	-100
Sitamarhi	**	**	0.0	-100	0.0	-100
Siwan	**	**	0.0	-100	0.0	-100
Supaul	16.2	1250	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	0.0	-100
West Champaran	0.0	-100	0.0	-100	2.1	-47
Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100

Deoghar	0.0	-100	0.0	-100	10.3	114
Dhanbad	0.0	-100	0.0	-100	0.0	-99
Dumka	0.0	-100	0.0	-100	5.2	-22
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.0	-100	0.0	-100	0.3	-90
Godda	0.0	-100	0.0	-100	3.4	31
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	**	**	0.0	-100	0.0	-100
Jamtara	0.0	-100	**	**	0.0	-100
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderrna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	0.0	-100	0.0	-100
Lohardagga	**	**	0.0	-100	0.0	-100
Pakur	0.0	-100	0.0	-100	0.0	-100
Palamau	0.0	-100	0.0	-100	0.0	-100
Ramgarh	0.0	-100	**	**	0.0	-100
Ranchi	0.0	-100	0.0	-100	0.0	-100
Sahebganj	6.4	100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	0.0	-100	0.0	-100	0.0	-100
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	0.0	-100	0.0	-100	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	0.0	-100	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	0.0	-100
Karauli	0.0	-100	0.0	-100	0.0	-100
Kota	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	0.0	-100
Sikar	0.0	-100	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100

Churu	0.0	-100	0.0	-100	0.0	-100
Hanumangarh	0.0	-100	0.0	-100	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.0	-100	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	**	-100	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100
South Goa	0.0	-100	0.0	-100	0.0	-100

Thane	0.0	-100	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	0.0	-100	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
Marathwada						
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Beed	0.0	-100	0.0	-100	0.0	-100
Hingoli	**	**	**	**	**	**
Jalna	0.0	-100	0.0	-100	0.0	-100
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Usmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
Vidarbha						
Akola	0.0	-100	0.0	-100	0.0	-100
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.0	-100	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	5.7	61	0.0	-100	0.5	-95
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.1	-92	0.0	-100	0.9	-89
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.1	-95	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	1.2	517	0.0	-100	0.0	-100
Ganjam	3.2	86	0.0	-100	0.1	-98
Jagatsingpur	2.1	58	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	1.9	-71
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100






Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	2.1	138	0.0	-100	0.0	-100
Keonjhar	0.3	-93	0.0	-100	0.1	-99
Khurda	1.1	8	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	3.2	46	0.0	-100	0.4	-94
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.4	-38	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	22.9	1046	0.0	-100	0.0	-100
Rayagada	0.2	-75	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	38.1	76	72.9	228	15.0	-16
North & Middle Andaman	26.0	313	1.2	-59	0.0	-100
South Andaman	47.2	626	16.7	70	0.0	-100
GWB						
Bankura	0.1	95	0.0	-100	6.8	34
Birbhum	0.1	-96	0.0	-100	10.9	60
Burdwan	0.6	-81	0.0	-100	4.6	-45
East Midnapore	4.6	53	0.0	-100	0.2	-95
Hooghly	1.0	-68	0.0	-100	0.0	-100
Howrah	0.4	-95	0.0	-100	2.7	-60
Kolkata	0.0	-100	0.0	-100	3.0	-56
Murshidabad	8.0	196	0.0	-100	7.5	79
Nadia	0.8	-77	0.0	-100	4.6	-43
24 Pargana (N)	0.5	-91	0.0	-100	9.8	112
Purulia	0.0	-100	0.0	-100	6.2	5
24 Pargana (S)	3.5	-17	3.5	-4	2.9	-60
West Midnapore	2.2	-28	0.0	-100	7.0	29
SHWB & Sikkim						
Cooch Behar	3.7	185	0.0	-100	0.1	-97
Darjeeling	1.9	-86	0.9	-94	1.9	-70
East Sikkim	1.0	-91	1.9	-87	4.6	-71
Jalpaiguri	1.4	-13	0.0	-100	2.0	-66
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	**	**	**	**	**	**
North Sikkim	11.2	-16	0.0	-100	13.2	-48
South Dinajpur	0.0	-100	0.0	-100	**	**
South Sikkim	0.5	-95	3.3	-77	0.0	-100
West Sikkim	3.0	-78	1.2	-95	2.5	-90
Karnataka						
Coastal Karnataka						
Dakshina Kannada	0.0	-100	0.0	-100	0.0	-100

Udupi	0.0	-100	0.0	-100	0.0	-100
Uttara Kannada	0.0	-100	0.0	-100	0.0	-100
NI Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belagavi	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Kalaburgi	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Vijayapura	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
SI Karnataka						
Ballari	0.0	-100	0.0	-100	0.0	-100
Bangalore Rural	2.5	200	0.0	-100	0.0	-100
Bangalore Urban	2.3	2240	0.0	-100	0.0	-100
Chamarajanagar	5.4	2580	0.0	-100	0.0	-100
Chikaballapur	3.7	200	0.0	-100	0.0	-100
Chikkamagaluru	0.0	-100	0.0	-100	0.0	-100
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	0.2	200	0.0	-100	0.0	-100
Kodagu	0.0	-100	0.0	-100	0.0	-100
Kolar	9.1	200	0.0	-100	0.0	-100
Mandya	0.0	-100	0.0	-100	0.0	-100
Mysuru	4.4	775	0.0	-100	0.0	-100
Ramanagara	0.7	200	0.0	-100	0.0	-100
Shivamogga	0.0	-100	0.0	-100	0.0	-100
Tumakuru	0.1	200	0.0	-100	0.0	-100
Kerala						
Alappuzha	5.9	38	0.0	-100	3.5	-60
Kannur	0.0	-100	0.0	-100	0.0	-100
Ernakulam	0.4	-83	0.0	-100	0.0	-100
Idukki	0.3	-86	0.0	-100	1.3	-64
Kasaragod	2.4	380	0.0	-100	0.0	-100
Kollam	1.0	-71	0.0	-100	22.5	208
Kottayam	7.8	117	0.0	-100	1.0	-77
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	0.0	-100
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	0.0	-100	0.0	-81	1.4	-86
Thiruvananthapuram	3.2	-28	0.0	-100	3.2	-44
Thrissur	0.0	-100	0.0	-100	0.0	-100
Wayanad	3.3	177	0.0	-100	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.5	-97	0.0	-100	0.0	-100

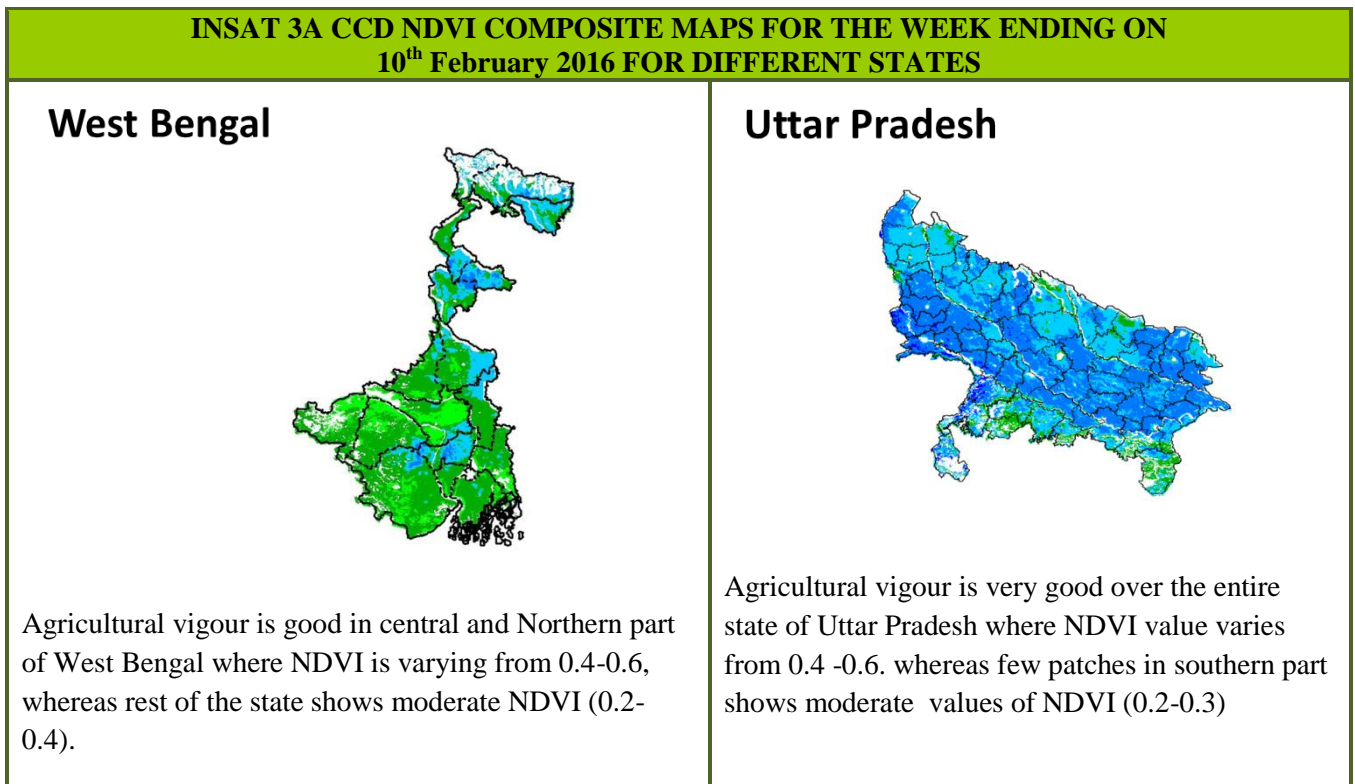
Coimbatore	22.8	199	0.0	-100	0.0	-100
Cuddalore	0.7	-97	0.0	-100	0.0	-100
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.6	-97	0.0	-100	0.0	-100
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.4	-98	0.0	-100	0.0	-100
Kanyakumari	0.0	-100	0.0	-100	0.0	-92
Karikal	0.8	-99	0.0	-100	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.2	-97	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.6	-99	0.0	-100	0.0	-100
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	12.4	-42	0.0	-100	0.0	-100
Perambalur	0.0	-100	0.0	-100	0.0	-100
Puducherry	0.6	-96	0.0	-100	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.9	-97	0.0	-100	0.0	-100
Salem	0.0	-100	0.0	-100	0.0	-100
Sivaganga	0.0	-100	0.0	-100	0.0	-100
Thanjavur	0.0	-100	0.0	-100	0.0	-100
Theni	1.6	-88	0.0	-100	0.0	-100
Tirunelveli	5.3	-84	0.0	-100	0.0	-100
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	1.2	-93	0.0	-100	0.0	-100
Tiruvannamalai	9.0	-35	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	0.0	-100
Toothukudi	0.0	-100	0.0	-100	0.0	-100
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	0.9	-88	0.0	-100	0.0	-100
Villupuram	0.0	-100	0.0	-100	0.0	-100
Virudhunagar	3.0	-82	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	1.9	525	0.0	-100	0.0	-100
Guntur	0.1	-58	0.0	-100	0.0	-100
Krishna	1.0	409	0.0	-100	0.0	-100
Nellore	6.7	860	0.0	-100	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.0	-100
Sirkakulam	1.2	16	0.0	-100	0.0	-100
Visakhapatnam	0.4	-67	0.0	-100	0.0	-100
Vizianagram	0.3	-75	0.0	-100	0.0	-100
West Godavari	1.1	442	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	4.1	200	0.0	-100	0.0	-100
Chittoor	3.0	1385	0.0	-100	0.0	-100
Cuddapah	10.9	200	0.0	-100	0.0	-100
Kurnool	0.9	200	0.0	-100	0.0	-100

Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.1	-34	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.6	200	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.3	-69	0.0	-100	0.0	-100

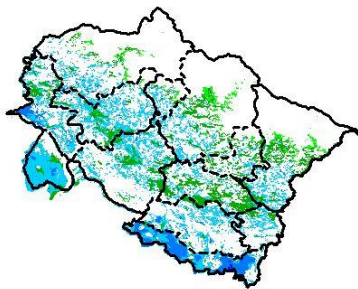
Legends

	(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

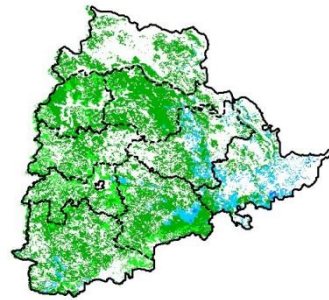


Uttarakhand



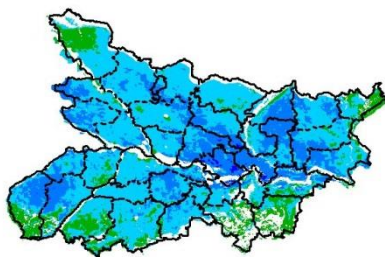
Agriculture vigour is moderate over entire state of Uttarakhand where NDVI is varying from 0.3-0.4, whereas few patches in south and west part shows good values of NDVI (0.4-0.5).

Telangana



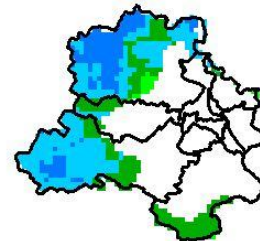
Agriculture vigour is good over Eastern parts of Telangana (NDVI 0.4-0.5). Rest of the region shows moderate values of NDVI (0.3-0.4)

Bihar



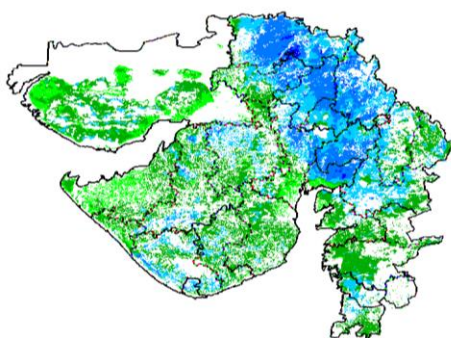
Agriculture vigour is good over central and western parts of Bihar where NDVI value lies between 0.4-0.6.

Delhi



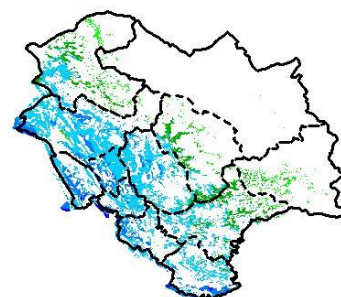
Agriculture vigour is moderate all over Delhi where NDVI value lies between 0.2-0.3, whereas few patches over west shows good values of NDVI (0.4 – 0.5).

Gujarat



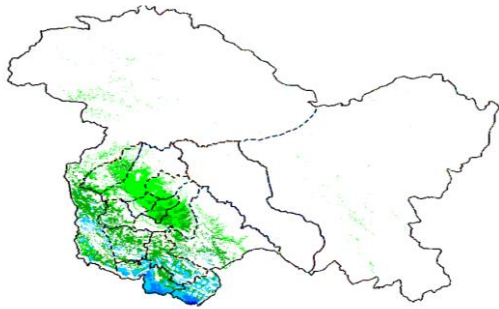
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region where NDVI values lies between 0.4-0.6.

Himachal Pradesh



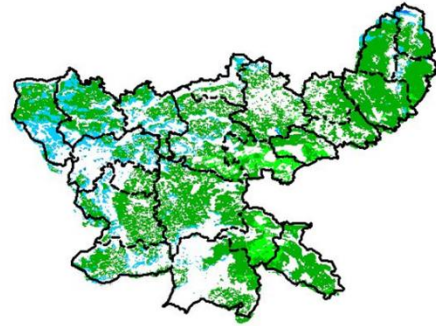
Agriculture vigour is good over western and southern part of Himachal Pradesh where NDVI values are 0.4 – 0.5, whereas rest of the state shows moderate values of NDVI.

Jammu & Kashmir



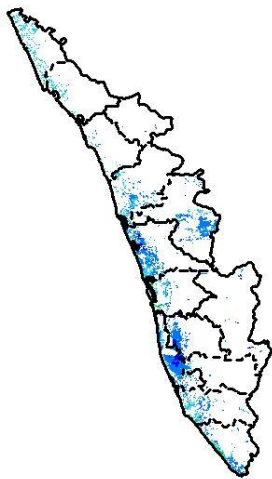
Agriculture vigour is Normal over entire state of Jammu & Kashmir where NDVI values are 0.2 – 0.4.

Jharkhand



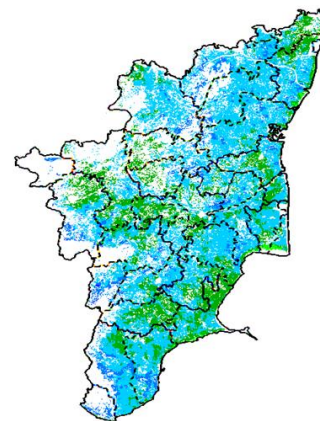
Agriculture vigour is good in patches over western part of the Jharkhand where NDVI values vary from 0.4 - 0.5., whereas rest of the state shows moderate values of NDVI (0.3-0.4).

Kerala



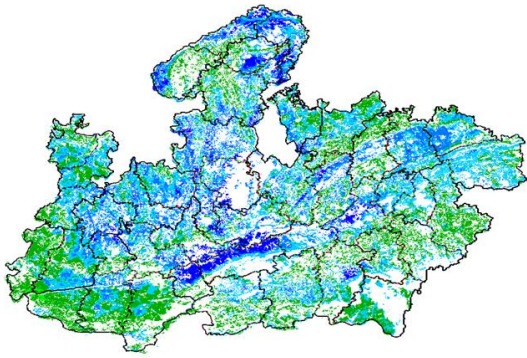
Agriculture vigour is good over entire state of Kerala where NDVI value lies between 0.5-0.6.

Tamil Nadu



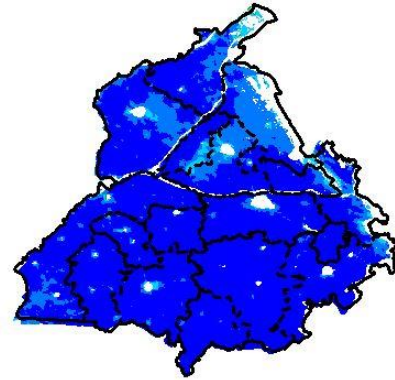
Agricultural vigour is very good over entire state of Tamilnadu where NDVI values lies between 0.5-0.6.

Madhya Pradesh



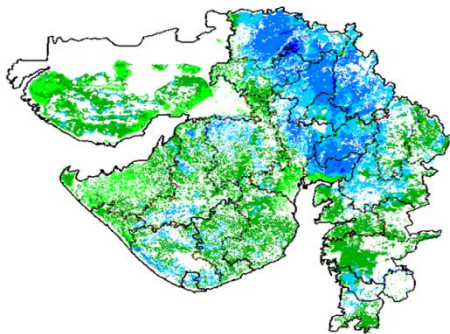
Agriculture vigour shows good values over northern and central part of Madhya Pradesh where NDVI varies from 0.4-0.6 and rest of the part shows moderate values of NDVI (0.3 – 0.4).

Punjab



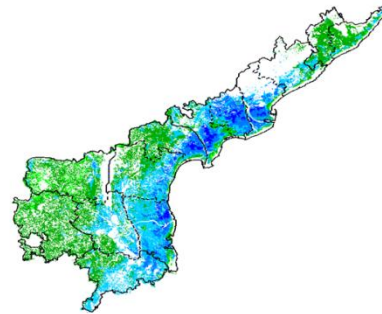
Agricultural vigour is very good over Punjab where NDVI value lies between 0.4-0.6.

Rajasthan



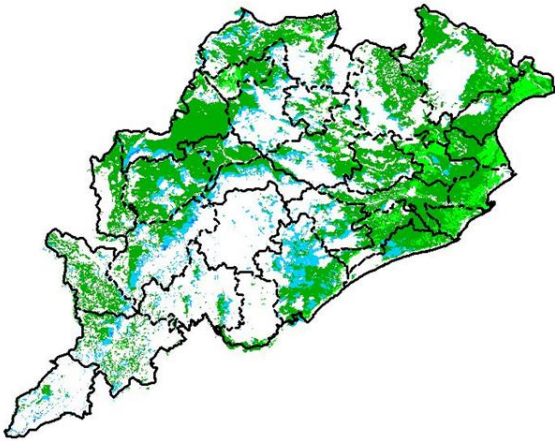
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region where NDVI values lies between 0.4-0.6.

Andhra Pradesh



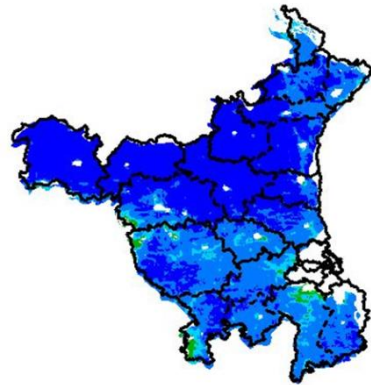
Agriculture vigour is good over entire state of Andhra Pradesh where NDVI vary between 0.4-0.6. except western parts which shows normal values of NDVI (0.2-0.3).

Odisha



Agricultural vigour is good over central of Odisha with NDVI value ranging between 0.4 – 0.6 . North eastern part shows moderate values of NDVI (0.3-0.4).

Haryana



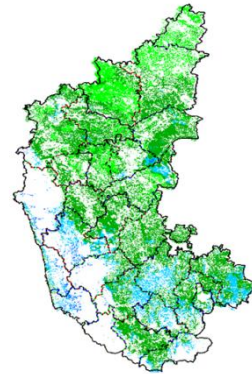
Agriculture vigour is very good over state of Haryana where NDVI value lies between 0.4 – 0.6.

Chhattisgarh



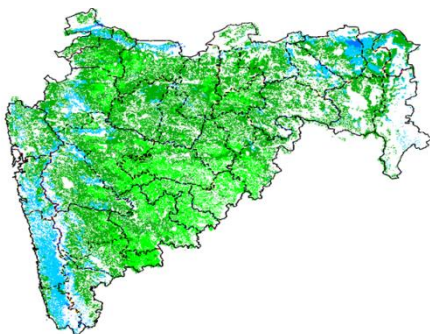
Agriculture vigour is good in northern and southern parts of Chhattisgarh where NDVI values are between 0.4-0.5 except central part which shows moderate values of NDVI.

Karnataka



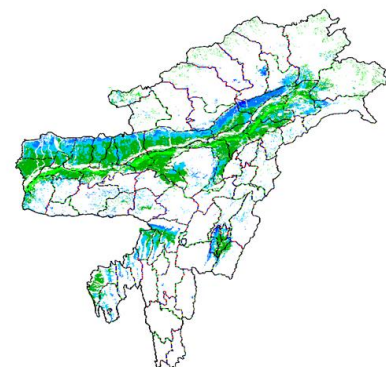
Agriculture vigour is good over southern part of Karnataka state where NDVI value lies between 0.4-0.6 Rest of the state shows moderate values of NDVI (0.3 -0.4).

Maharashtra

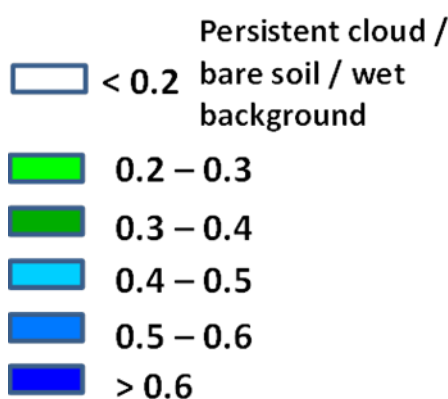


Agricultural vigour is good over Coastal Maharashtra and Vidarbha region with NDVI values from 0.4-0.5, whereas Moderate values of NDVI are observed over Madhya Maharashtra and Marathwada region (0.2-0.4).

North East Region



Agriculture vigour is good over entire states of North-East region where NDVI varies from 0.4-0.6.



Annexure III

List of varieties

Assam

Boro rice : Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanath.

Early ahu rice : semi dwarf ahu rice varieties like Luit, Kopilee, Cauvery, Culture -1, Rasi, Banglami, Puthichapali, Nilajee, Hasakumra.

Green gram : Pratap, T-44, Kopergaon, AAU-39, K-851 and ML-55.

Black gram : T-9, Pant-U-19, UG-157.

Sugarcane : Kolong, Luhit, Dhansiri, Co 1148.

Okra : Pusa Sawani, Arka Anamika, Parbhdani Kranti.

Ridge gourd : Pusa Nashdar or other local varieties like AAU-1, AAU-2, AAU-3 etc.

Sponge gourd : Pusa Chikni or other local varieties.

Odisha

Sugarcane : Nilamadhaha, Sabitri, Co 7508, Co 7704, Co 62175, Co 740, Co 7219, CoJ 8201, Co 975, Co 7706, Co 8402, Co 62175.

Groundnut : Smruti, AK 12-24 TAG

Jharkhand

Lentil : P.L.-406, P.L.-639, K.L.S -218, K-75

Barley : Jyoti, Ratna, D.L.-36, B.R.-32

Linseed : Sweta, Shubhra, T-397

Field Pea : Rachna, DDR-23, Swarnrekha

Onion : N-53, Pusa red, Arka nikan, Arka kalia

Gram : KAK-2, ICC-2, Pusa 256, Pusa-372

Jammu & Kashmir

Cabbage : Golden Acre, Pride of India and Pusa Mukta.

Cauliflower : Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.

Pea : AP-1, Bonnevillea, Rachna and Arkel);

Lentil : L-4147, L-9/12, PL-406)

Wheat(late sown) : PBW-175, PBW-396, RSP-81(Jitto)

Uttarakhand

Sugarcane : Pant 84211, Co-238, Co-241, Co Pant 3220, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148, COS-96268 etc.

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

Brinjal : (brinjal-4, ARU-1 etc) and potato (Kufri Jyoti, Kufri Ashok & Kufri Anand etc.

Tomato : Tomato-3, Pant T-3, Him Sona, Him Shikhar etc variety in nursery).

Himachal Pradesh

Cauliflower : snowball and Giant snowball.

Radish : Japanese white, Chinese pink and mino early white

Turnip : PTWG-1

Carrot : Pusakesar

Fenugreek : I.C. 74, kasoori.

Peas : Mater ageta-6 (early variety).

Cabbage : Pride of India, golden achor and hybrid

East Uttar Pradesh

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

Tomato: pusa early, pusa ruby, HS 101.

Cauliflower: pusaDipali.

Okra: PusaSawani, VarsaUphar, Azad kranti.

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

Pea: Rachna, Pantmatar-5, Aparna, Malviya Matar-2, Malviya Matar-15, Shikha and Sapna(K.P.M.R.-144-1), Ta-163, Jay(K.P.M.R.522), Hariyal, Pant P-42, Aman 2009;

Cabbage: Japani, PusaDieepali, PusaKartiki

Potato: KufriChandramukhi, KufriSadabahar, KufriAshoka, kufrijawahar, kufrilalima, kufribahar, kufribadshah, kufrisatlaj, kufrianand, kufri chipsona-1, kufri chipsona-3, kufrisinduri, kufrisurya.

Lentil: Ta-8, Pant L-406, and 234.

cowpea: Lobia-263 & Pusa phaguni

Chilli: Pant C-1, Jwala and Sadabahar etc.

Grapes: parlet, beauty seedless, pusa seedless.

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5.

Pigeon pea: T-21, UPAS 120.

Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.

Barseem: V.L.1, V.L.10, maskavi, jai, K-8027, K-9565, Mandakini.

Onion: pusa red, pusa white.

Vegetable Pea: Azad P-3, arkil, Jai, Indra, Prakash.

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89, CO118, COJ85, COJ64.

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

Onion: Punjab Naroya, Punjab White and PRO 6.

Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.

Tomato: TH-1, Punjab Ratta, Punjab NR 7, Punjab Chhuhara, Punjab Upma, Castle Rock.

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5;

Barseem: Vardan, Buland Barseem-1, Masakavi, J.B-3;

Lentil: PusaMasoor -5 (L-4594).

Radish: Japani White, Hill queen, French Radish;

Spinach: PusaBharti.

Amaranths: PusalalChaulai, PusaKiran.

Ladyfinger: Pusa A-4.

Pea: Azad Matar-1, Pant Matar-3 and Bournville.

Carrot: PusaMridula, Japanese White and PusaHimani,

Radish: Japani White, Hill queen, French Radish;

Spinach: All Green, PusaBharti;

Fenugreek: PusaKasuri;

Coriander: PantHaritama, Hybrids;

Turnip: Pusa Swati, Local Red variety

West Rajasthan

Isabgol : RI 89 & GI-2

Fenugreek : RMt 1 & RMt 305

Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose), RD2058, 2503, 103, NDB1173.

cumin: GC 4, RZ -19, RZ 223, RZ19, 209, 223 and GC4b.

Cowpea: RC-19, RC-101, RCP-27.

Oat : OS 6, OS 9

Berseem: BL 10, BL 22

Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7

Radish: (PusaRashmi).

Carrot: PusaKeshar

East Rajasthan

Radish: PusaChetki, Japanese white & hill queen.

Carrot: PusaKeshar

Cowpea: Short durC-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.

Gram: RSG-888, 895 (Anubhav), CSJD-884 (Aakash), RSG-44, Pusa-209, C-235, H-208, Pratap raj chana, RSG-888, Dahod yellow, ICCV-10 and Pratap Chana-1.

Cauliflower: Pusa snow ball K-1, Hisar-1, Dania and Selection-7

Onion: Punjab safed goal, Udaipur 102, nasik red.

Lucerne :Anand-2, LLC-3, RL-88 & Type-9

Berseem:Muskavivardan and PusaJiant

Barley : RD-2552, RD-2052, RD-2035, RD-2503, RD-2715, RD-2660 and Jyoti.

Summer groundnut:T.A.G.24, T.G.37A, G.G.2, D.H.86.

Gujarat

Summer Groundnut: GG 2, GG 4 and GG 20.

Summer Sesame: G.Til-1, G.Til-2, G.Til-3.

Brinjal: Junagadh oblong, Junagadh long, Guj. Bringle-2.

Lady's finger: Guj. Hy.-1 & 2.

Ridge gourd: Pusa nasdar, Jaipuri.

Bottle gourd: Junagadh tender long, Pusa summer prolific long.

Sponge gourd: Pusa chikni.

Bitter gourd: Priya, Pusa domosmi.

Cluster bean: Pusa sadabahar, Pusa navbahar, IC-11388.

Water melon: Sugar baby, Arka jyoti.

Madhya Pradesh

Okra: Pusa Makhamali, Pusa Sawani, A-4, Parbhani Kranti.