



National Agromet Advisory Service Bulletin



Friday 26th February 2016

(For the period 26th February to 1st March 2016)



Issued by

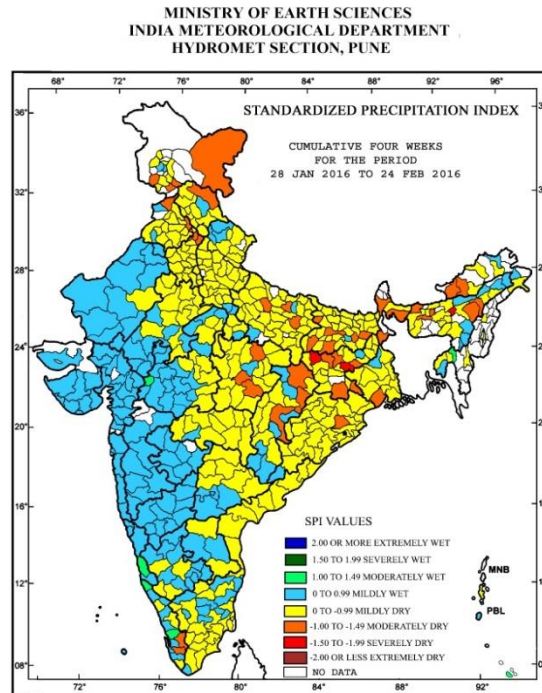
**National Agrometeorological Advisory Service Centre,
Agricultural Meteorology Division,
India Meteorological Department, Shivajinagar, Pune.**

Weblink For

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

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

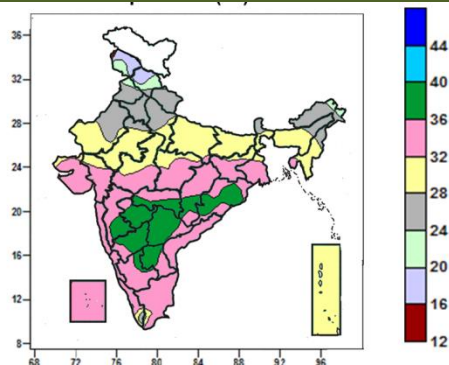
Standardised Precipitation Index Four Weekly for the Period 28th January to 24th February 2016



- Extremely/Severely dry conditions experienced in Morigaon district of Assam; Bokaro, Palamu districts of Jharkhand.
- Moderately dry conditions experienced in many districts of Delhi; few districts of Arunachal Pradesh; Assam; West Bengal; Jammu & Kashmir; Dhenkanal district of Odisha; Dhanbad, Hazaribag, East Singhum, West Singhum districts of Jharkhand; Bhagalpur, Gaya, Monghyr, Patna, Rohtas, Siwan districts of Bihar; Azamgarh, Barabanki, Basti districts of Uttar Pradesh; Ambala, Yamuna Nagar, Chandigarh districts of Haryana; Gurdaspur, Sas Nagar Mohali districts of Punjab; Lahaul & Spiti district of Himachal Pradesh; Jabalpur, Mandla, Satna districts of Madhya Pradesh; Raigarh, Raipur, Surguja districts of Chhattisgarh; Idukki, Pathanamthitta districts of Kerala.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

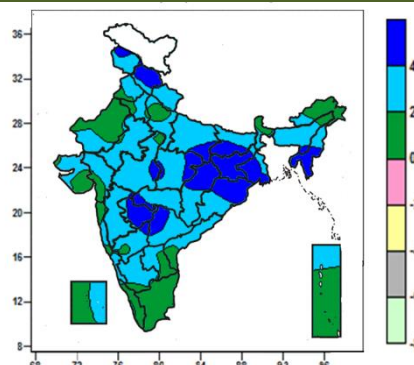
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 24.02.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 24.02.2016



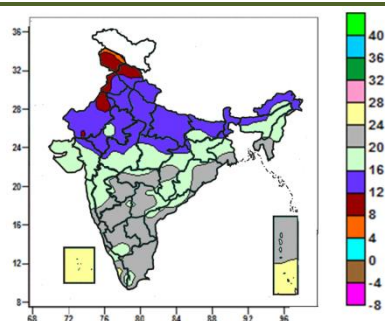
- Mean maximum temperature was between 36 to 40°C over many parts of Odisha, Marathwada, North Interior Karnataka, Telangana, Rayalaseema, some parts of Madhya Maharashtra, Vidarbha, Chhattisgarh and isolated pockets of South Interior Karnataka.
- Mean maximum temperature was between 28 to 36°C over rest of the country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Sikkim, Arunachal Pradesh, Nagaland, many parts of West Uttar Pradesh, West Rajasthan, some parts of East Rajasthan, Sub-Himalayan West Bengal and Assam, where it was between 16 and 28°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 24.02.2016



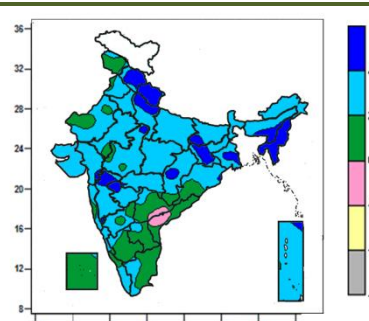
- Mean maximum temperature was above normal by 4 to 6°C over Mizoram, many parts of Jharkhand, Himachal Pradesh, Gangetic West Bengal, Tripura, Odisha, Chhattisgarh, Marathwada, some parts of East Uttar Pradesh, Bihar, Manipur, Telangana and isolated pockets of Jammu & Kashmir, Assam, Madhya Pradesh, Vidarbha and North Interior Karnataka.
- Mean maximum temperature was above normal by 2 to 4°C over rest of the country except Sikkim, many parts of Tamil Nadu, Kerala, Arunachal Pradesh, West Rajasthan, Lakshadweep, Andaman & Nicobar islands, some parts of West Uttar Pradesh, Andhra Pradesh, Gujarat and isolated pockets of East Rajasthan, Punjab, Haryana, Sub-Himalayan West Bengal, Assam, Nagaland, Konkan & Goa, Interior Karnataka, where it was normal to near normal.

Actual Mean Minimum Temperature (°C) in India for the week ending 24.02.2016



- Mean minimum temperature was between 4 to 8°C over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was between 8 to 12°C over many parts of Jammu & Kashmir, some parts of Himachal Pradesh, Punjab and West Rajasthan.
- Mean minimum temperature was between 12 to 20°C over rest of country except Coastal Karnataka, Rayalaseema, Lakshadweep, Andaman & Nicobar Islands, Mizoram, Tripura, many parts of Odisha, Vidarbha, Marathwada, Telangana, Coastal Andhra Pradesh, Interior Karnataka, Tamil Nadu, Kerala,

Mean Minimum Temperature (°C) Anomaly in India for the week ending 24.02.2016



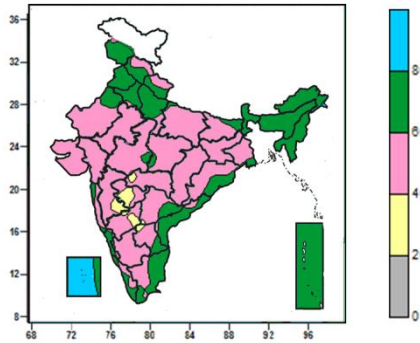
- Mean minimum temperature was above normal by 4 to 6°C over Nagaland, Manipur, Mizoram, Tripura, many parts of Himachal Pradesh, Uttarakhand, Jharkhand, some parts of West Uttar Pradesh, Gangetic West Bengal, Assam & Meghalaya, Madhya Maharashtra and isolated pockets of Bihar, Chhattisgarh, West Madhya Pradesh, Gujarat region, North Interior Karnataka and Andaman & Nicobar Islands.
- Mean minimum temperature was above normal by 2 to 4°C over rest of the country except many parts of

some parts of Gangetic West Bengal, Chhattisgarh, Konkan & Goa and isolated pockets of Madhya Maharashtra, where it was 20 to 28°C.

Lakshadweep, Jammu & Kashmir, Telangana, Andhra Pradesh, Tamil Nadu, South Interior Karnataka, some parts of West Rajasthan, Odisha, Konkan, Kerala, North Interior Karnataka and isolated pockets of Punjab, East Rajasthan, West Madhya Pradesh, Coastal Karnataka, Chhattisgarh where it was normal to near normal.

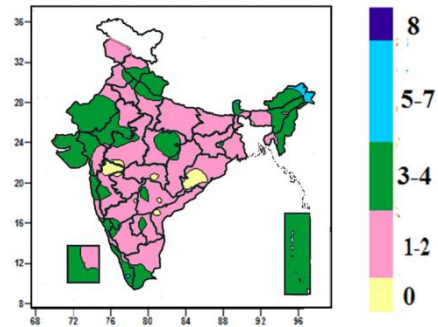
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 24.02.2016

Relative Humidity (%) over India for the week ending 24.02.2016



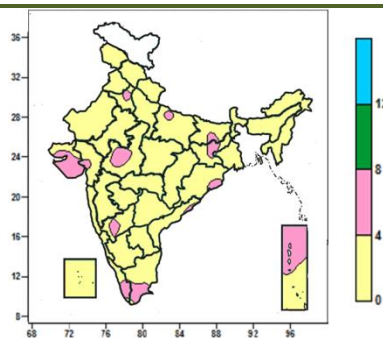
- Mean Relative humidity was above 80% over many parts of Lakshadweep.
- Mean Relative humidity was between 40 to 80% over rest of the country except some parts of Madhya Maharashtra, Marathwada and isolated pockets of Vidarbha, North Interior Karnataka, Telangana, Rayalaseema where it was between 20 to 40%.

Cloud amount (okta) over India for the week ending 24.02.2016



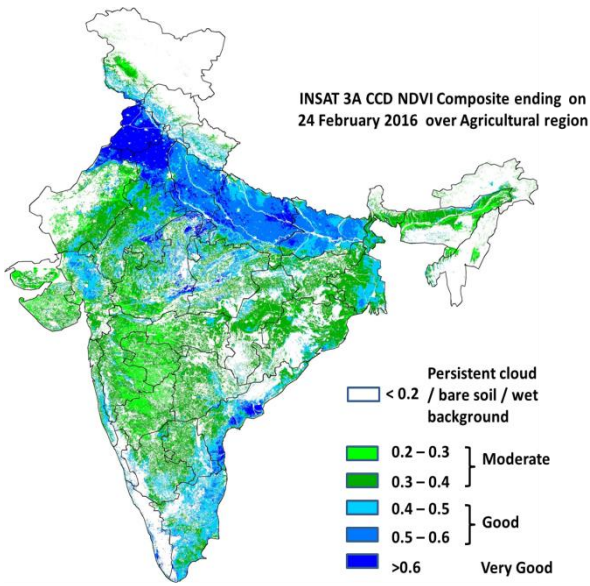
- Sky remained generally cloudy (5-7 okta) over isolated pockets of Arunachal Pradesh, Sikkim and Kerala.
- Sky remained partly cloudy (3-4 okta) over Uttarakhand, Nagaland, Manipur, Andaman & Nicobar Islands, many parts of Himachal Pradesh, Arunachal Pradesh, Assam & Meghalaya, Mizoram, Rajasthan, Gujarat, Kerala, Lakshadweep, some parts of Sikkim, Punjab, Haryana, West Uttar Pradesh, Konkan & Goa, East Madhya Pradesh, Tamil Nadu and isolated pockets of West Bengal, West Madhya Pradesh, Chhattisgarh, Karnataka, Telangana 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 24.02.2016



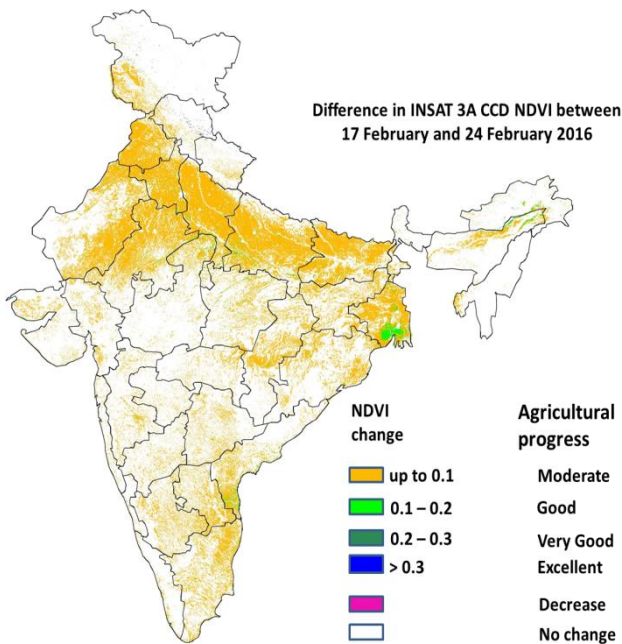
- Mean wind speed was 4 to 8 knots over many parts of Saurashtra & Kutch, Andaman & Nicobar Islands, some parts of Haryana, Jharkhand, West Madhya Pradesh, North Interior Karnataka, Tamil Nadu, Kerala and isolated pockets of East Uttar Pradesh, Bihar, Odisha, Coastal Andhra Pradesh, Gujarat region.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 24th February 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good over Punjab, Haryana and patches in northern and eastern parts of Rajasthan, patches in Madhya Pradesh, Uttar Pradesh and Coastal Andhra Pradesh where NDVI is > 0.6. NDVI is good in Uttar Pradesh, Bihar, West Bengal, Gujarat, East Rajasthan, Madhya Pradesh, Andhra Pradesh, Tamil Nadu, 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, North Interior Karnataka and Odisha.

Difference in INSAT 3A CCD NDVI between 17th and 24th February 2016



- Good Progress in NDVI is observed in southern parts of Gangetic West Bengal. Moderate progress in NDVI was observed in states of Uttar Pradesh, Bihar, Punjab, Haryana, Rajasthan, Telangana, West Bengal, coastal Odisha, South Interior Karnataka and patches in Madhya Pradesh. No change in NDVI was observed in Kerala, West Madhya Pradesh and Maharashtra.

- INSAT 3A CCD NDVI composite maps for the week ending on 24th February 2016 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 2nd March 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- Night temperatures very likely to rise by 1-2°C over plains of northwest India during next 2 days.

5 Day Rainfall Forecast (MID DAY) 26th February 2016

Met Sub-divisions	26 Feb	27 Feb	28 Feb	29 Feb	01 Mar
1. Andaman & Nicobar Islands	DRY	ISOL	ISOL	ISOL	DRY
2. Arunachal Pradesh	DRY	DRY	DRY	DRY	DRY
3. Assam & Meghalaya	ISOL	DRY	DRY	DRY	DRY
4. N. M. M. & T.	ISOL	ISOL	DRY	DRY	ISOL
5. S.H. West Bengal & Sikkim	ISOL	ISOL	ISOL	DRY	DRY
6. Gangetic West Bengal	SCT	SCT	ISOL	ISOL	DRY
7. Orissa	SCT	SCT	ISOL	ISOL	DRY
8. Jharkhand	SCT	SCT	ISOL	ISOL	DRY
9. Bihar	ISOL	ISOL	DRY	DRY	DRY
10. East Uttar Pradesh	ISOL	ISOL	DRY	DRY	DRY
11. West Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
12. Uttarakhand	DRY	DRY	DRY	DRY	DRY
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	DRY
15. Himachal Pradesh	DRY	DRY	DRY	DRY	DRY
16. Jammu & Kashmir	DRY	DRY	ISOL	ISOL	ISOL
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	DRY	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	DRY
21. Gujrat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	DRY	DRY	DRY
23. Konkan & Goa	DRY	DRY	ISOL	ISOL	ISOL
24. Madhya Maharashtra	DRY	DRY	ISOL	ISOL	ISOL
25. Marathwada	DRY	ISOL	ISOL	ISOL	ISOL
26. Vidharbha	ISOL	ISOL	ISOL	ISOL	ISOL
27. Chhattisgarh	ISOL	ISOL	ISOL	ISOL	ISOL
28. Coastal Andhra Pradesh	DRY	DRY	ISOL	ISOL	DRY
29. Telangana	DRY	DRY	ISOL	ISOL	ISOL
30. Rayalaseema	DRY	DRY	DRY	DRY	DRY
31. Tamilnadu & Puducherry	ISOL	ISOL	ISOL	ISOL	ISOL
32. Coastal Karnataka	DRY	DRY	DRY	DRY	ISOL
33. North Interior Karnataka	DRY	DRY	DRY	ISOL	ISOL
34. South Interior Karnataka	ISOL	DRY	DRY	DRY	DRY
35. Kerala	ISOL	ISOL	ISOL	ISOL	ISOL
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

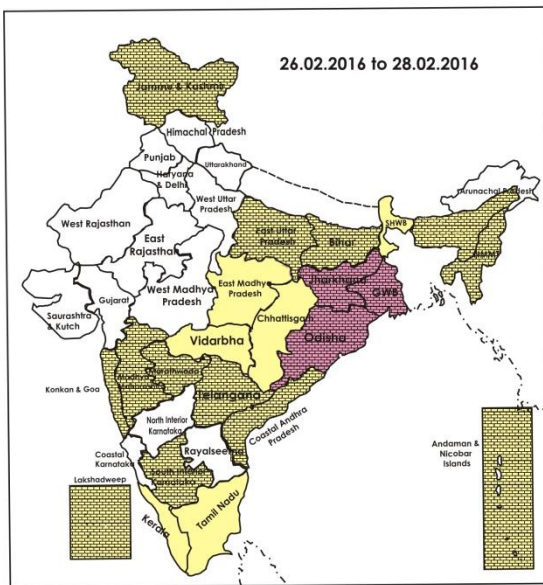
- **26 February (Day 1):** Thundersquall very likely at isolated places over Odisha, Gangetic West Bengal and Jharkhand.
- **27 February (Day 2):** Thundersquall very likely at isolated places over Odisha, Gangetic West Bengal and Jharkhand. Thunderstorm accompanied with thundersquall likely at isolated places over Vidarbha.
- **28 February (Day 3):** No weather warning.
- **29 February (Day 4):** No weather warning.
- **01 March (Day 5):** No weather warning.

Weather Outlook for subsequent 2 days from 2nd to 4th March 2016

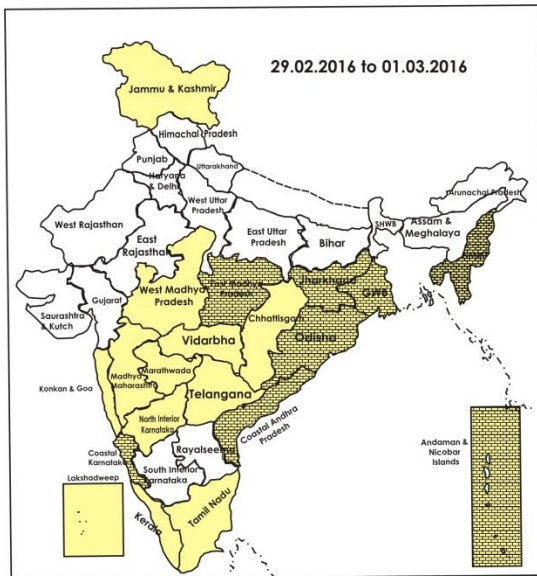
- Rain/snow very likely to occur at many places over Jammu & Kashmir and at a few places over Himachal Pradesh & Uttarakhand and rain/thundershowers likely at isolated places over plains of northwest India.

- Rain/thundershower likely to occur at isolated places over Madhya Pradesh, Chhattisgarh and Maharashtra.

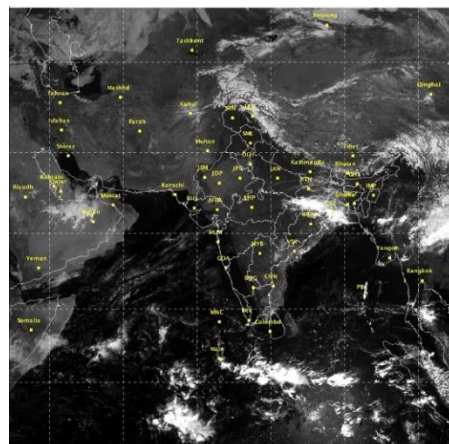
Weather Forecast Map (Valid upto 0830 hours of 2nd March, 2016)



- Most places
- Most places/few places
- Most / Many places
- Most/many places/ isolated places
- Most / Isolated places
- Most / Many/ Few places
- Most / Few places/ isolated places
- Most / Few
- Most/Many/ Dry
- Most/isolated/ Dry
- Many places
- Many / Few places
- Many / Isolated places
- Many / Few/ Isolated places
- Many / few/ Mainly dry
- Many / Isolated/ Mainly dry
- Many/ Dry
- Few places
- Few / Isolated places
- Few / Isolated places/dry
- Few/Mainly Dry/Dry
- Isolated places
- Isolated / Mainly Dry / Dry
- Mainly Dry/Dry
- Dry



Satellite image dated 26.02.2016 0600 UTC



Salient Advisories

- As thundersquall very likely to occur at isolated places over **Odisha, Jharkhand** and **Gangetic West Bengal** on 26th & 27th February, farmers are advised to provide mechanical support to young fruit plants and staking in vegetables to prevent the crops from lodging due to strong winds. Also undertake propping up in sugarcane crop in Odisha and Jharkhand.
- In **Vidarbha**, as thunderstorm accompanied with thundersquall is expected at isolated places on 27th February 2016, provide mechanical support to the newly planted fruit crops and vegetable crops. Complete harvesting of safflower at the earliest and keep the harvested produce in safe place. Maintain water level of 5 cm in summer rice fields in East Vidarbha.
- In **Madhya Pradesh**, in view of prevailing dry weather and above normal maximum temperature, apply irrigation in wheat at milk/dough stage as per requirement.
- Undertake land preparation/sowing of the following summer crops:
 - In **Assam**, undertake land preparation for sowing of summer green gram & black gram.
 - In **Arunachal Pradesh**, undertake sowing of summer early maize & cowpea.
 - In **West Bengal**, in Hill Zone, undertake field preparation for sowing of maize, ginger and turmeric and in New Alluvial Zone, prepare land for sowing of sesame.
 - In **Odisha**, in North Eastern Ghat Zone, undertake sowing summer sunflower and groundnut. In North Eastern Plateau Zone, undertake sowing of green gram & black gram.
 - In **Bihar**, continue sowing of summer maize and in **Jharkhand**, undertake sowing of green gram/black gram, maize and vegetables.
 - In **Tamil Nadu**, in Western Zone, undertake sowing of irrigated sesame and in South Zone, undertake sowing cotton under irrigated conditions.
 - In Southern Zone of **Kerala**, continue direct sowing of *Puncha* rice and cucurbits.
- In Sub Tropical Zone and Intermediate Zone of **Jammu & Kashmir**, prevailing weather is congenial for incidence of yellow rust in wheat crops. Monitor the crops, if observed, apply Propiconazole (Tilt) @ 0.1%, repeat 2-3 sprays at 15 days interval if the disease persists.
- As mainly dry weather would prevail, continue harvesting of matured *Thaladi* rice in Cauvery Delta Zone of **Tamil Nadu** and continue harvesting of *Mundakan* rice in Northern Zone of **Kerala**. Complete harvesting of Bengal gram sorghum and safflower in North East Dry Zone and Southern Dry Zone of **Karnataka**.

Detailed Zonewise Agromet Advisories

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



Banana



Groundnut



Sugarcane



Cotton

- **Realised Rainfall:** Weather remained mainly dry/dry over the region.
- **Advisories:**
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue harvesting of matured *thaladi* rice and harvesting of late *samba* rice in Ariyalur, Karur and Perambalur districts utilizing the expected mainly dry weather. Undertake cultivation of sesame in Nagapattinam, Thanjavur, Thiruvarur and Thiruchirapalli districts. Apply Gypsum @ 160 kg per acre to encourage pod formation and better pod filling 40 to 60 days after sowing depending on soil moisture on rainfed groundnut. In rice fallow pulses, give one irrigation using mobile sprinkler wherever water sources are available (farm pond) during flowering stage.
 - In the South Zone, as dry weather is expected in the coming days, irrigate the sugarcane crop and apply 8- 10 litre of water per banana plant using drip irrigation system.
 - In the High Rainfall Zone, continue staking of banana plants with bamboo poles to protect from strong wind.
 - In the Cauvery Delta Zone, leaf eating caterpillar damage is noticed in rice fallow black gram. To control, undertake spraying of Cholorphyriphos @ 400 ml/acre.
 - In the Western Zone, due to rising temperature (both maximum and minimum), sucking pest may appear in

- transplanted Navarai rice. To control, spray Phosphamidon 40SL @ 600 ml/ha.
- In the North Western Zone, incidence of gram pod borer attack was noticed in pulse crops above the economic threshold level. To control, apply Neem based bio-pesticides or spray Triazophos @ 2 ml/litre of water during evening hours.
- In the High Rainfall Zone, prevailing increase in temperature and humidity is congenial for incidence of mite in coconut. Undertake root feeding with Azadiractin 50% formulation @ 7.5 ml in 7.5 ml water, if attack of mite is noticed.
- Suitable varieties for sowing are given in Annexure III.
- **Andhra Pradesh:**
- In the Krishna Godavari Zone, undertake harvesting of red gram and black gram. Prevailing dry/hot weather condition coupled with lack of moisture during flowering to grain formation may cause grain hardening in rice fallow jowar. Give light irrigation immediately to prevent hardening. Continue providing light irrigation to *rabi* black gram and green gram at flowering or pod formation stage.
- In the Southern Zone, due to prevailing dry weather conditions, continue giving light and frequent irrigations to get synchronized flowering in mango crop. The present weather conditions are also favourable for early fruit drop in mango. If fruit drop is severe, spray Planofix @ 1 ml/litre of water.
- In the Krishna Godavari Zone, prevailing weather condition is congenial for attack of *turicum* blight or rust on *rabi* maize. If intensity is more, spray Mencozeb @ 500 g per 200 litres of water two or three times in the evening time.
- In the North Coastal Zone, prevailing dry weather and humid conditions are congenial for incidence of mango hoppers in mango. To control, spray Thionethaxam @ 0.2 g/litre of water or Imidaclotrid @ 0.4 ml./ litre of water.
- In the Scarce Rainfall Zone, leaf folder incidence was noticed in rice (tillering stage). In the initial stages move the rope across the field 2-3 times so that the insects may fall off on the ground. To control, spray Chloropyriphos @ 2.5ml/Acphate or Plubendiamide 20wg @ 0.25g/litre of water or apply Kkartophydro chloride granules 4G @ 8kg/acre.
- In the High Altitude Tribal Zone, leaf folder and hispa incidence was observed in rice. Spray Profenophos @ 2 ml or Chlorpyriphos @ 2.5 ml or Monocrotophos 36 SL @ 1.6 ml/litre of water for control.
- In the Southern Zone, prevailing dry weather and rise in temperature conditions are congenial for incidences of aphids and mites in leguminous vegetables. To control, spray Monocrotophos @ 1.6 ml. + sulphur 3 g./litre of water.
- **Telangana:**
- In the Southern Telangana Zone, continue sowing of fodder crops like sorghum, bajra and maize where irrigation facilities are available and fodder sorghum, bajra, maize, pillipesara, sunhemp and horsegram in rice fallows.
- In the Northern Telangana Zone, continue harvesting of Bengal gram and tomato. Due to the present dry weather conditions, give frequent irrigations in mango orchards to get synchronized flowering.
- In the Northern Telangana Zone, prevailing weather conditions (dry and partially cloudy) are congenial for attack of thrips/whorl maggot attack in rice. To control spray Monocrotophos @ 1.6 ml/litre of water.
- In the Southern Telangana Zone, prevailing high temperatures are congenial for incidences of sucking pests in brinjal. To control, spray Diamethoate @ 2 ml or Methyl Demeton @ 2 ml or Fipronil @ 2 ml per litre of water. Incidence of powdery mildew is noticed in chillies. To control, spray Wettable Sulphur @ 3 g or Carathane @ 1 ml per litre of water.
- **Karnataka:**
- In North East Dry Zone, as there is increase in temperatures, apply irrigation in rice, groundnut and watermelon. Complete sowing of Bt. cotton under irrigation facility. As dry weather is prevailing, complete harvesting of wheat, Bengal gram sorghum and safflower.
- In Southern Transition Zone, undertake land preparation for planting of ginger/turmeric; repeated ploughing of land is advised. Continue hand weeding in rice.
- In Southern Dry Zone, after harvesting of *rabi* crops, undertake ploughing in the fields which will facilitate conservation of rainwater due to premonsoon showers.
- 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.
- In North East Dry Zone, in some areas leaf spot was noticed in groundnut; spray Hexaconazole @ 1 ml/litre or Carbendazim 1g/litre of water for control.
- Due to high temperature, fusarium wilt diseases was noticed in banana in Souther dry Zone; to manage this disease, drench with a fungicide Bavistin @ 2g/litre of water; drench 5 litres solution per plant.
- Due to increase in temperature, powdery mildew is noticed in mango crop in North East Dry Zone; spray Difenconazole @ 1 ml/litre of water. Infestation of leaf spot was noticed in groundnut; as a control measure take up spraying of Hexaconazole 1 ml/litre or Carbendazim 1g/litre of water.
- In Southern Transition Zone, there is chance of leaf spot/sigatoka disease in banana; as a precautionary measure spray Carbendizim + Mancozeb (SAAF) @ 2.0 g/litre of water followed by (after 15 days) Chlorothalanil @ 2.0 g/litre of water.
- **Kerala:**
- In the Northern Zone, continue harvesting of matured rice. Cover the bunches of Nendran banana using thin

- polythene sheet to protect it against bird attack. Give support to Nendran banana to prevent lodging.
- In the Problem Area Zone, continue providing irrigation to nutmeg, pepper and banana crops.
- Continue direct sowing of *Puncha* rice in Southern Zone
- In the High Altitude Zone, continue land preparation for cultivation of ginger and pepper and complete harvesting of pepper, cardamom and coffee at the earliest.
- In the Southern Zone, leaf eating caterpillar attack may be severe under high humidity forecasted. Cut and burn the infested leaves. In case of severe infestation, spray the undersurface of the fronds with Quinalphos @ 0.05% or Malathion @ 0.1 %. Under irrigated condition 4th dose of fertilisers may be given during Feb- March.
- In the Problem Area Zone, present dry weather condition is congenial for sucking pest and viral attack on vegetables. For controlling sucking pests and viral attack, spray Oberon 0.6g/litre of water.
- In the Central Zone, increase in temperature is congenial for bunchy top disease on bananas. To control, cut and remove the affected banana plants. Pour soap water on the entire plant or spray verticillium @ 20 g per one litre of water to control aphids which transmit this virus disease.
- In the Northern Zone, prevailing dry weather condition is congenial for incidence of pseudo stem borers in bananas. If any incidence is noticed, swab the pseudo stem and fill the leaf axils with Asataf @ 2g per litre of water.
- **Animal Husbandry**
- 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.
- In the Western Zone of Tamil Nadu, considering the rising temperature, milch animals need mineral mixture. Hence 50grams of TANUVAS smart mineral mixture per animal per day may be mixed along with animal feed and provide enough drinking water. Administer Foot and Mouth disease vaccination to all cattle and buffaloes.
- In the North Eastern Zone of Tamil Nadu, vaccinate livestock to protect them from foot and mouth disease.
- In the North Western Zone of Tamil Nadu, day time temperature is expected to reach 37.0°C in the coming days. Hence poultry, particularly heavy broiler and layer birds are likely to experience heat stroke and mortality. Supplement stress alleviating medicines such as electrolytes through feed and add vitamin-C in drinking water to reduce heat stress and death. Ensure cool drinking water available throughout the day to avoid low intake of water and associated loss in body weight and egg production.
- In North Dry Zone of Karnataka, following measures should be adopted to take care of heat stress in livestock during summer season:
 - Leave the buffaloes in ponds during afternoon hours or sprinkle cold water 2-3 times a day on the body of the animals to overcome the heat.
 - Apply 4-6 inch thick hay thatch as a roofing material. Water can be used for spraying the floor and roof of shelter periodically during peak hot hours which lowers the temperature and consequently reduces the heat.
 - Maintain proper ventilation for free circulation of air in the sheds.
 - Animals may preferably be grazed during early morning and late evening to avoid exposure to hot conditions and during hot hours, they must be tied and fed in shaded place or under the tree. This will also help in reducing the water requirement.
 - Provided clean drinking water to animals and clean water troughs regularly.

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



Mustard



Rice



Okra



Cabbage

- **Realised Rainfall:** Rainfall occurred in Dibang Valley, East Siang, Lohit, Lower Dibang Valley, Tirap, Upper Siang and West Siang districts of Arunachal Pradesh; Cachar, Dibrugarh, Hailakandi, Karimganj, Lakhimpur and Tinsukia districts of Assam; Imphal West district of Manipur; Serchhip district of Mizoram and North Tripura district of Tripura. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Arunachal Pradesh, continue sowing of early maize and cowpea utilising the realised rainfall. Farmers in the districts Dibang valley, east and west Siang, lower and Upper Subansiri and Tirap are advised to cover the tomato crop with polythene/cloths and place 2-3 inch mulch of crop residue around base of the crop.
 - In Hill Zone of Assam, continue sowing of recommended high yielding varieties of cucurbits and early okra,

nursery sowing of early *ahu* rice and land preparation of summer black gram/green gram. Maintain 5 cm standing water level around the boro rice field up to 7-10 days before harvest.

- In Lower Bramhapurtra Valley Zone of Assam, continue sowing of early *ahu* rice (direct seeded), land preparation and sowing of *Capsularis* jute, summer black gram/green gram and ridge gourd, pointed gourd and sponge gourd.
- In Barak Valley Zone of Assam, maintain 5 cm standing water in the *boro* rice fields at tillering stage. Undertake transplanting of summer vegetables, tomato and brinjal.
- In Upper Bramhaputra Valley Zone of Assam, continue land preparation for sowing of cucurbits, ridge gourd and okra. Continue direct sowing of early *ahu* rice (varieties IR-50, Pusa 2-21, Rasi, Culture -1, Luit, Kopilee (Semi-dwarf varieties), Rongadoria, Dubaichenga, Nilajee (Tall varieties) etc. in the main field in low lying area. Undertake harvesting of toria at the earliest.
- In Central Bramhapurtra Valley Zone of Assam, continue land preparation and sowing of green gram/black gram, summer vegetables and *Capsularis* jute. Undertake nursery bed preparation for transplanted early *ahu*.
- In North Bank Plain Zone of Assam, continue land preparation and sowing of direct seeded *ahu* rice (Varieties: Banglami, Puthichapali, Nilajee, Hasakumra), green gram/black gram (varieties like T44, AAU 34, AAU 39, Pratap) and main and field preparation for transplanting of *ahu* rice.
- In Meghalaya, undertake harvesting of cabbage, cauliflower and broccoli.
- In North Bank Plain Zone of Assam, spray Chloropyriphos @ 2ml/litre of water against thrips in *boro* rice in tillering stage during morning hours if the population of thrips is above ETL.
- In Lower Bramhapurtra Valley Zone of Assam, there is chance of attack of blast and sheath blight in *boro* rice at tillering/vegetative stage. Spray Ediphenophos(0.1%)/Mancozeb(0.2%)/Cu-oxychloride(0.4%) against blast and Carbendazim(0.05%)/Hexaconazole(0.2%) against sheath blight. To control wilt disease and aphids in lentil and khesari fields at vegetative stage, farmers are advised to drench the soil with Bavistin @ 1mg/litre of water. They are also advised to apply Malathion 50EC @ 2 ml/litre of water.
- 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, there is chance of attack of aphids in mustard/rapeseed in flowering /pod formation stage. Spray Chlorpyriphos 20 EC or Dimethoate 30 EC @ 2 ml/litre of water.
- **Nagaland, Manipur, Mizoram and Tripura:**
 - In Manipur, undertake transplanting of 4-leaf seedling cucurbits.
 - In Nagaland, continue harvesting of chickpea, lentil, linseed, pea, tomato, mustard, maize and ginger on bright sunny days.
 - 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 aphids.
 - In Tripura, apply irrigation and mulching after irrigation in *rabi* maize at post silking stage. Undertake transplanting of brinjal and tomato in the main field.
 - In Tripura, there is chance of attack of stock rot in maize, spray Mancozeb @ 2ml per litre of water.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In North Bank Plain Zone of Assam, vaccinate poultry against *ranikhet* disease.
 - In Lower Bramhapurtra Valley Zone of Assam; it is time to make ready the pond for new batch of fishes. Collect all the fishes. Dry up the bottom of the pond for 15-20 days and remove the upper layer of the bottom soil, then plough it and add lime. After 7 -15days of application of lime, add cow-dung and mix it properly.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Gram



Sugarcane



Groundnut



Wheat

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

- **Advisories:**

- **Maharashtra:**

- In Vidarbha, as thunderstorm accompanied with thundersquall is expected at isolated places on 27th February 2016, provide mechanical support to the newly planted fruit crops and vegetable crops. Complete harvesting of safflower at the earliest and keep the harvested produce in safe place. Maintain water level of 5 cm in summer rice field in East Vidarbha.
- In Konkan, apply irrigation to summer groundnut (at 10–12 days interval) and vegetables. Undertake mulching with grass to avoid the water loss in mango orchards in lateritic soil. In *rabi* rice, maintain water level of 5 cm at

early tillering/tillering stage. Undertake sowing of seasonal fodder crops like cowpea, maize (African Tall), multicut sorghum, rice bean.

- In Madhya Maharashtra, undertake cultivation of summer vegetable crops like bitter gourd, cucumber, ridge gourd, bottle gourd, water melon, musk melon with assured irrigation. Apply irrigation to onion crop at an interval of 6-8 days. Complete sowing of irrigated summer groundnut and sunflower using Broad Bed Furrow (BBF) method. Apply irrigation to sugarcane by drip irrigation or alternate furrow method. Farmers are advised to erect temporary shed to protect new graft of mango from bright sunshine. Apply mulch of field leaves trash to orchards like sweetlime and pomegranate to control the evapotranspiration losses.
- In Marathwada, apply irrigation to timely sown wheat at milking/dough stage. Complete harvesting of matured *rabi* jowar and safflower and keep the produce in safer place. Apply drip irrigation to banana orchards. Complete sowing of irrigated summer groundnut and sunflower using Broad Bed Furrow (BBF) method. Continue sowing of fodder crops like maize, jowar and bajra with assured irrigation.
- Due to partially cloudy weather conditions in Konkan region, there may be incidence of anthracnose in mango fruits; spray Carbendazim @ 10 g per 10 litres of water on the whole tree.
- Due to rise in maximum as well as minimum temperature in Marathwada region, there may be incidence of mealybug on fruit crops like pomegranate; spray *Verticillium lecanii* @ 40 g mixed with 100 ml of milk and 10 litres of water.
- **Gujarat:**
 - In Middle Gujarat Zone, undertake land preparation for sowing of sesame. Procure good quality seeds of recommended varieties and fertilizers for summer crops.
 - In South Saurashtra Zone, undertake land preparation/sowing of green gram, black gram, groundnut and sesame. Apply irrigation to standing crops as per requirement.
 - In North Gujarat Zone, undertake land preparation for sowing of pearl millet. Complete sowing of groundnut and transplanting of brinjal seedling, sowing of okra, cluster bean and cowpea, continue sowing of summer fodder crops like sorghum and maize. Undertake harvesting of mustard, potato and picking of cotton.
 - In South Gujarat Zone, undertake mulching in mango orchard.
 - In view of dry weather and increase in temperature, apply irrigation to vegetable crops at an interval of 3 to 4 days in South Gujarat Zone, to gram, cumin and fennel in Bhal and Coastal Zone, to wheat in North Gujarat Zone and South Saurashtra Zone.
 - In Bhal and Coastal Zone, continue sowing of summer vegetable crops like okra, cluster bean and cowpea and transplanting of brinjal.
 - In North Saurashtra Zone, apply irrigation in already sown crops and vegetables, complete sowing of maize for fodder purpose.
 - In South Gujarat Heavy Rainfall Zone, undertake sowing of groundnut and green gram, continue sowing of vegetable cowpea, cluster bean, summer pigeon pea, okra, cucurbits (bottle gourd, ridge gourd, sponge gourd, bitter gourd, cucumber, watermelon and muskmelon) and amaranth. Apply light irrigation after sowing of crops.
 - The present weather is favorable for mango hopper, leaf minor and powdery mildew in mango orchard in South Gujarat Zone; spray Quinalphos 25% EC 400 ml + Carbendazim 50% 100 g or Thiophenate Methyl 70% 100 g in 200 litres of water.
 - Due to present weather condition there is chance of attack of thrips in garlic in South Saurashtra Zone; spray Phosphamidon @ 3.0 ml or Dimethoate @10 ml or Methay-O-Demeton @10 ml in 10 litres of water at 10-12 days interval.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In Gujarat, for prevention of New castle disease/Ranikhet disease, undertake vaccination in poultry.

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



Rice



Wheat



Maize



Mustard

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

- **Advisories:**

- As thundersquall very likely to occur at isolated places over Odisha, Jharkhand and Gangetic West Bengal on 26th & 27th February, farmers are advised to provide mechanical support to young fruit plants and staking in vegetables

to prevent the crops from lodging due to strong winds. Also undertake propping up in sugarcane crop in Odisha and Jharkhand.

▪ **West Bengal:**

- In Old Alluvial Zone and Terai Zone, keep 5 cm water in the transplanted rice fields.
- In Hill Zone, continue land preparation for sowing of maize, okra and planting of ginger and turmeric. Undertake harvesting of matured mustard and potato in clear weather conditions.
- In New Alluvial Zone, undertake land preparation for sowing of sesame. Collect improved sesame varieties like Tilotamma, Rama etc.
- In Coastal Saline Zone due to humid weather conditions, there is chance of attack of brown spot and blast in *boro* rice. Spray Triazophos @ 1.2ml/litre of water or Propenophos @ 1.5ml/litre of water of water as preventive measures on a non rainy day.
- In New Alluvial Zone, increasing temperature & humidity may cause late blight in potato. Spray Blitox or Mancozeb @ 2.5g/litre of water.
- In Terai and Old Alluvial Zone, weather is congenial for attack of fruit and shoot borer in brinjal. Use 6-8 pheromone traps/bigha or apply Acephate + Fenvelarate mixture @ 1ml/litre water with 2g of detergent powder as sticker on a non rainy day.
- In Terai Zone, there may be attack of aphids in lentil, spray Acetamiprid @ 0.2g/litre of water on a non rainy day to control aphid.

▪ **Andaman and Nicobar Islands:**

- In South, North and Middle Andaman, apply mulching with crop residue/paddy straw in between 2 rows of vegetable like chilli, tomato and bhendi to reduce the evaporation after irrigation.
- In Nicobar, apply mulch at coconut tree basin with crop residue/coconut husk for moisture conservation.
- In South, North and Middle Andaman, spray Dimethoate or Regent @ 2 ml/litre of water to control sucking pests in brinjal during flowering stage.

▪ **Odisha:**

- In East and South Eastern Coastal Plain Zone, as temperature conditions are favourable, continue sowing of sunflower, groundnut and summer maize. Continue harvesting of matured early sown mustard on a non rainy day.
- In Western Undulating Zone, complete transplanting of summer rice. Undertake planting of sugarcane.
- In North Eastern Ghat Zone and West Central Table Land Zone, prevailing temperature is favourable for sowing of sunflower and maize. Complete sowing of sunflower and maize.
- In North Central Plateau Zone, now the temperature is favourable for sowing of summer sunflower and sesame.
- In East and South Eastern Coastal Plain Zone, increased temperature may favour the egg laying of stem borer in rice in the main field. To attract the butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burning them under soil or by burying.
- In West Central Table Land Zone, the prevailing cloudy weather may aggravate the infestation of aphid and powdery mildew in pulses. Spray 5 ml Imidachloprid or 20 ml Metacystox per 10 litre water to control aphid. For controlling powdery mildew, spray 50 g Sulfex per 10 litre water. To control pod borer, spray 2 ml Chloropyriphos per litre water on a non rainy day.
- In Western Undulating Zone, present weather is favourable for attack of thrips in onion at 6-8 week stage. Spray Thiomethaxome @ 0.40g/litre of water or Acetamiprid @ 0.2 g/litre of water on a non rainy day.
- In North Central Plateau Zone, leafwebber and mustard saw fly may attack at pod formation stage of mustard crops. Spray Triazophos or Profenophos @ 2ml/litre of water on a non rainy day.
- In North Eastern Plateau Zone and Western Undulating Zone, due to increase in day temperature, there is chance of stem borer attack on transplanted paddy. Apply Triazophos @ 2ml/litre of water on a non rainy day.

▪ **Bihar:**

- In North West Alluvial Plain Zone, continue harvesting of matured mustard and potato and sowing of spring maize, summer vegetables and sunflower seeds. Apply light irrigation in onion, vegetables, maize and late sown wheat crop which is at panicle initiation stage. Undertake land preparation for mung and urad crop.
- In South Bihar Alluvial zone, continue harvesting of matured potato and transplanting of sweet potato. Prepare the field for sowing of spring season maize crop and complete the sowing of spring season sugarcane.
- In North East Alluvial Zone, start sowing of Cucumber, bottle gourd, musk melon, water melon, bitter gourd, ridge gourd and ladies finger and apply light irrigation to already sown onion crop. Start transplanting of *boro* rice.
- In North West Alluvial Plain Zone, in the present weather condition, to protect onion from thrips, spray Emidacloprid @ 1 ml/litre of water.
- In South Bihar Alluvial Zone, there is chance of attack of aphids in wheat crop, for control, spray Emidacloprid @ 1 ml per litre of water.
- In North East Alluvial Zone weather conditions are favourable for attack of aphid in mustard crop. If it is observed, spray Dimethoate @ 2.5ml per litre of water in evening time.

▪ **Jharkhand:**

- In Western Plateau Zone, continue sowing of vegetables like sponge gourd, bottle gourd, pumpkin, water melon, musk melon etc.
- In South Eastern Plateau Zone, continue sowing of summer Moong.

- 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 on a non rainy day.
- 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 on a non rainy day to control the attack.
- In South Eastern Plateau Zone, if dead tillers are observed on wheat crop, spray Imidachloprid @ 2 ml per litre of water or Acetamiprid @ 0.5 g per 8 litres of water. If termites are noticed in the fields, then broadcast mixture of 20 kg sand with Chlorpyrifos 20 EC @ 2.0 litre per acre during evening time. If small oval shaped yellowish-brown spots are seen on the leaves, spray Captafal or Mancozeb @ 2 g per litre of water on a non rainy day.
- In South Eastern Plateau Zone, to control hoppers in Mango, Litchi and Jack fruit, spray Metasystox @ 1ml or Kung-fu or Karate or Matador (Lambda Cyhalothrin) @ 2 g along with 0.5 g Carbendazim per litre of water on a non rainy day before or just after flowering in to minimize the attack.
- In South Eastern Plateau Zone, humid weather during morning and later on clear and sunny weather favours in infestation of white rust in late sown mustard (at flowering stage) crop and attack of aphids in timely sown crop at pod development stage. Monitoring the crop frequently. In early stage, farmers are advised to remove and destroy the infected parts of the plants.
- Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
- In South, North and Middle Andaman, newly born piglets should be kept under brooding providing artificial light in the form of electric bulbs (40 watt) as required.

CENTRAL INDIA [M.P., CHHATTISGARH]



Cauliflower



Gram



Okra



Wheat

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

- **Advisories:**

- **Madhya Pradesh:**

- In Malwa Plateau Zone, in view of prevailing dry weather and above normal maximum temperature, apply irrigation in wheat at milk/dough stage. Continue nursery sowing of tomato, brinjal and chilli. Continue harvesting of matured cauliflower and cabbage. Keep inputs ready for sowing of summer cucurbits and okra. Undertake harvesting of matured potato and gram.
- In Central Narmada Valley Zone, apply irrigation in wheat at grain filling stage and undertake harvesting of matured pea.
- In Nimar Valley Zone, continue sowing of green gram and cucurbits.
- In Jhabua Hill Zone, continue harvesting of early sown mustard and gram. Undertake transplanting of summer vegetables.
- In Vindya Plateau Zone, continue nursery preparation of summer vegetables and sowing of cucurbits, okra, cowpea and cluster bean. Apply irrigation in wheat at flowering/milking stage.
- In Satpura Plateau Zone, continue sowing of groundnut, maize and cucurbits. Undertake transplanting of vegetables like chilli, tomato and brinjal and land preparation for sowing of okra. Continue nursery sowing of summer vegetables and harvesting of matured mustard in Grid Zone. Continue land preparation for sowing of okra.
- In Bundelkhand Zone, continue sowing of vegetables like pumpkin, bitter gourd, okra etc. Continue harvesting of matured potato.
- In Central Narmada Valley Zone, due to humid weather, there are chances of downy mildew disease in cabbage, spray (Metalaxyl + Mancozeb) @ 2 g/litre of water for control.
- In Jhabua Hill Zone, to control termite attack in wheat use Chlorpyrifos 20 EC @ 3.5 litre/ha with irrigation.
- Due to humid weather, there are chances of attack of stem borer in wheat in Bundelkhand Zone, spray Quinalphos 40 E.C. @ 2.0 ml. per litre of water.
- Suitable varieties for sowing are given in Annexure III.

- **Chhattisgarh:**

- In North Hill Zone, continue sowing of maize, sunflower and cucurbits. Continue harvesting of matured mustard and potato. Apply irrigation in wheat at heading stage.

- In Bastar Plateau Zone, undertake intercultural operations in vegetables. Continue sowing of summer moong and urad.
- In Chhattisgarh Plain Zone, continue sowing of maize and sunflower and preparation of seedlings of cucurbitaceous vegetables in polythene bags. Apply irrigation in wheat at flowering stage. Undertake sowing of green gram.
- Due to humid weather, there may be chances of attack of stem borer in maize in Bastar Plateau Zone, spray Carbofuron 3G @ 30 kg/hectare.
- Due to partly cloudy weather, there is chance of yellow mosaic disease in pulses in Chhattisgarh Plain Zone, spray Metasystox or Rogar @ 1ml/litre of water.
- **Animal Husbandry**
- In Madhya Pradesh and Chhattisgarh vaccinate animals to prevent foot and mouth disease.

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



Wheat



Sugarcane



Cauliflower



Mustard

- **Realised Rainfall:** Rainfall occurred in Chamba, Kinnaur and Kullu districts of Himachal Pradesh; Anantnag, Badgam, Baramula, Kulgam, Kupwara, Pulwama, Rajouri, Ramban, Reasi and Srinagar districts of Jammu & Kashmir. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Valley Temperate Zone, complete mulching in Knol-khol, cabbage & root crops in view of the low temperature conditions. Maintain drainage channels in garlic/onion to avoid water logging.
 - In Sub Tropical Zone, complete transplanting of onion and sowing of cucurbits.
 - In Intermediate Zone, continue nursery sowing of tomato, brinjal and chilli. Also advised to apply 2nd top dressing of urea, where the wheat crop is approaching towards booting stage.
 - In Sub Tropical Zone, weather is congenial for incidence for yellow rust, leaf spot, aphids and loose smut in wheat crops, if observed apply Propiconazole (Tilt) @ 0.1%, repeat 2-3 sprays at 15 days interval if the disease persists. Also rouge out loose smut affected plants in order to avoid further spreading. To control aphids, spray Rogor 30 EC @ 750 ml in 750 litre of water.
 - In Intermediate Zone, keep strict vigil on yellow rust infestation in the wheat crop. If observed, spray Propiconazole @ 10ml in 20 litre of water, repeat the spray after 10-15 days interval if the disease persists. Also if *alternaria* blight is observed in the mustard crops. apply Mancozeb @ 2.5 g/litre of water and Ridomil MZ @ 2.5 g/litre of water alternately as a curative measure.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone, due to increase in temperature and prevailing dry weather, apply irrigation in lentil, pea, chickpea crops and continue planting of potato with varieties like Kufri Jyoti, Kufri Ashok & Kufri Anand etc. Also temperature conditions are favourable for planting of sugarcane crop. Continue nursery sowing of brinjal and tomato.
 - In Hill Zone, continue land preparation for nursery sowing of tomato, brinjal and capsicum and undertake field preparation for sowing of okra, French bean, lady finger and also for planting of potato in mid hill region.
 - In Hill Zone, in the present weather, there may be incidence of thrips in garlic and onion, spray Imidacloprid @ 6-8 ml in 10 litres of water in garlic and onion.
 - In Bhabar and Tarai Zone, due to increase in temperature, 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.
 - In Hill Zone, keep strict vigil in the wheat crop on yellow rust infestation. If observed, spray Propiconazole @ 10ml in 20 litre of water, repeat the spray after 10-15 days interval if the disease persists.
 - **Himachal Pradesh:**
 - In Sub-Montane and Low Hills Sub-Tropical Zone, undertake sowing of sunflower, continue sowing of fodder crops such as chari and bajra, Continue sowing of cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash. Continue nursery sowing of tomato, brinjal, chilli and capsicum.
 - In Mid Hills sub-Humid Zone, continue nursery preparation of tomato, brinjal and capsicum.
 - In High Hill Temperate Dry zone, maintain desired moisture in nursery beds of poly houses of seedlings of

- Chinese cabbage, spinach and coriander and vegetable crops in lower region to protect from cold.
- In Sub-Montane and Low Hills Sub-Tropical Zone, under prevailing weather conditions, there are chances of attack of downy mildew in cruciferous vegetables, powdery mildew in peas and black rot in cauliflower at curding stage, 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 and spray Streptomycin@ 0.01% in cauliflower. 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 and spray Mancozeb or Redomil 2.5 g per litre of water to control purple blotch in garlic and onion.
- In Mid Hills sub-Humid Zone, weather is conducive for attack of aphids and cabbage butterfly 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 in Southern Humid Plain Zone. Continue sowing of Zaid green gram, Zaid groundnut, Okra, Zaid sorghum (fodder), Zaid pearl millet (fodder) and early summer cucurbits like bottle gourd, round gourd, bitter gourd, water melon and musk melon in Semi-Arid Eastern Plain Zone.
- In Sub Humid Southern Plain and Aravali Hill Zone, apply irrigation in wheat and barley at ear emergence stage, continue sowing of summer okra, continue field preparation for sowing of summer groundnut.
- In West Rajasthan, in Arid Western Zone, due to increased temperature apply fifth irrigation in timely sown wheat, fourth irrigation in late sown wheat, third irrigation in barley. Continue harvesting of matured mustard in morning time and undertake field preparation for sowing of guar crop, in Barmer, Churu, Jalore, Jodhpur and Pali districts.
- In Transitional Plain Zone of Inland drainage, apply irrigation (70 days after sowing; ear head emergence and jointing stage) in wheat and (milking stage) in barley, continue weeding manually. Continue sowing of zaid moong.
- 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). Continue field preparation for sugarcane and complete fruit plucking in kinnow orchards and continue intercultural operations.
- In Irrigated North Western Plain Zone, in the prevailing temperature, there is a chances of infestation of yellow rust in wheat; aphids and white rust in mustard; attack of termite in barley and gram; attack of pod borer in gram, spray Propiconazole 25 EC @ 1 ml/litre of water.repeat the spray after 15 days if required in wheat; spray Methyl Dimeton 25 EC @ 1 litre per hectare for aphids and Metalexil (Redomil M.Z.) @ 2 g per litre of water for white rust in mustard; apply Chlorpyrifos 20 EC @ 4.0 litre per hectare with irrigation water in barley and gram also apply Quinalphos @ 1.5 per cent dust 24 kg/ha in gram.
- In Transitional Plain Zone of Inland drainage, due to change in temperature there is a chance of infestation of aphids on mustard and cumin, rust in wheat and barley also there is a chance of attack of pod borer in gram, spray Dimethoate 30 EC or Methyl Demeton 25 EC @1 litre/ha dissolved in water to control aphids,dust Sulphur powder @ 25 kg per ha to control rust in wheat and barley and spray Azadiractin @ 5 ml per litre water at the time of flowering and pod formation or Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 litre/ha dissolved in 500 litre of water.
- In Sub Humid Southern Plain and Aravali Hill Zone and in Flood Prone Eastern Plain Zone, in the prevailing temperature condition, there is a chance of attack of aphids in mustard, spray Dimethoate 30 EC @ 875 ml/litre/ha water and to control termites in wheat and other crops, spray of solution of Chloropyrifos 20 EC @ 2 litre/ha with irrigation water.
- In Semi Arid Eastern Plain Zone, prevailing weather is conducive for attack of cilla in citrus fruits, spray Formethion 25 EC or Malathion 50 EC @ 1 ml per litre water.
- In Barmer, Churu, Jalore, Jodhpur and Pali districts of in Arid Western Zone, due to prevailing weather there is a chance of attack of stem and fruit borer in tomato and brinjal, spray Acephate 75 SP @ 0.5 gm per litre of water.
- In Flood Prone Eastern Plain Zone, due to increase in temperature, there is a chance of attack of aphids and thrips in chilli, tomato and brinjal, spray 0.1% Malathion solution at 10 day interval.
- **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. Continue intercultural operations in vegetable crops and complete the sowing of onion.
- In Western Plain Zone of Punjab, continue sowing of okra, spring maize and planting of sugarcane.
- In Central and Undulating Plain Zone of Punjab, undertake planting of sugarcane.
- In Central, Western and Undulating Plain Zone of Punjab, continue planting of peach, plum, pear, pomegranate and ber plants.
- In Western Zone of Punjab, prepare the field for transplanting summer vegetables of chilli, tomato and bell pepper.
- 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 Eastern Zone of Haryana, undertake planting of sugarcane.
- In Central 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, Western, Sub-Montane 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.
- In Western Plain Zone of Punjab, in the present weather, army worms may attack wheat and barley, spray Nuvan 85 SL (dichlorvos) or 400 ml Ekalux 25 EC (quinalphos) in 80-100 litres of water per acre.
- **Uttar Pradesh:**
- As mainly dry weather is prevailing, apply irrigation in wheat at ear head emergence/ flowering stage and in mustard at flowering/silique formation stage and all vegetables as per requirement in Uttar Pradesh.
- In Central Plain Zone, continue harvesting of matured mustard, oats and digging of matured potato crop. Continue planting of autumn sugarcane, land preparation and sowing of cowpea, maize, urad, mung. Continue transplanting of onion and continue nursery sowing and land preparation for planting of tomato, chili. Continue sowing of bhindi, tinda, cucurbits, water melon and bottle guard. Continue 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 and transplanting of onion.
- 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 North Eastern Plain Zone, undertake harvesting of matured potato crop.
- In Bundelkhand Zone, due to prevailing temperature conditions, there may be chances of attack of pod borer in gram, for control spray 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 sucking pest/aphids in mustard, for control spray Dimethoate 30 EC @ 1 litre or Monocrotophos 36 SL @ 1 litre or Chlorpyrifos 20 EC @ 1 litre in 700 to 800 litres of water per hectare.
- In Central Plain Zone, due to prevailing weather condition, there may be chances of attack of pod borer/semi looper in gram, for control spray Fenvalerate 0.4% D.P. @ 20 to 25 gm. or Quinalphos 25% EC @ 2 litres or Malathion 50 EC @ 2 litres in 500 to 600 litres of water per hectare.
- In North Eastern Plain Zone, due to prevailing weather condition, there may be chances of attack of blight/aphids in toria, for control spray 0.2 % Redomil MZ + 0.2 % Monocrotophos @ 200 ml in 200 litres of water per acre.
- Suitable varieties for sowing are given in Annexure III.
- **Horticulture**
- 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.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of incidence of leaf spot and rot in banana, for control, spray Bavestin or Carbendazim @ 1 g per litre of water.
- In Central Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of maggot in mango, for control, spray 17.8 % Emidacloprid S.L. @ 1 ml in 3 litres of water or 25 % Quinalphos E.C. @ 2 ml per litre of water.
- In Eastern Plain Zone of Uttar Pradesh, there may be chances of fruit drop in mango, for control, spray Soluble Sulphur @ 2 gm. per litre of water.
- 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 planting of new varieties of apple, pear, walnut, pecanut and stone fruits in Mid Hills sub-Humid Zone.
- 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.
- **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 newly born calves from cold.
- **Floriculture**
- In Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh, as there is a chance of attack of aphids in winter flower plants, spray Malathion @ 0.05% for the control.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	10.02.06		17.02.16		24.02.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	11.0	-74	12.3	-36	19.8	-68
Dibang Valley	19.0	-45	16.0	7	62.0	-3
East Kameng	0.0	-100	0.0	-100	0.2	-99
East Siang	8.0	-66	13.4	-4	38.8	91
Kurung Kumey	**	**	**	**	**	**
Lohit	11.9	-24	9.7	-41	92.2	217
Lower Dibang Valley	11.9	-66	16.1	8	107.0	67
Lower Subansari	**	**	**	**	**	**
Papumpare	8.3	25	4.2	-85	15.2	-14
Tawang	0.0	-100	**	**	12.0	-2
Tirap	24.0	158	6.4	-63	21.0	-24
Upper Siang	17.8	-61	47.4	142	83.4	42
Upper Subansari	11.2	58	18.6	30	18.6	17
West Kameng	2.2	-83	1.6	-81	0.0	-100
West Siang	11.0	-41	18.0	165	42.0	103
Assam&Meghalaya						
Assam						
Baksa	2.5	-19	0.0	-100	0.0	-100
Barpeta	0.5	-83	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	13.9	143	9.1	1	21.4	2
Chirang	10.4	160	0.8	-91	8.2	-39
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	**	**
Dhubri	0.0	-100	0.0	-100	0.3	-89
Dibrugarh	16.5	61	13.3	-1	23.9	77
Goalpara	0.5	-89	0.0	-100	0.0	-100
Golghat	0.6	-90	1.0	-91	0.0	-100
Hailakandi	0.5	-87	5.6	24	28.1	25
Jorhat	11.0	34	0.0	-100	0.7	-93
Kamrup(Rural)	5.9	51	0.0	-100	0.0	-100
Kamrup(Metro)	4.5	15	0.0	-100	0.0	-100
Karbi Anglong	5.9	102	0.3	-95	0.0	-100
Karimganj	5.1	-23	8.9	22	30.9	239
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	11.6	3	5.8	-50	32.0	205
Morigaon	0.0	-100	0.0	-100	0.0	-100
N.C.Hills	10.0	25	3.1	-55	19.5	17

Nowgong	2.1	-72	0.0	-100	0.0	-100
Nalbari	2.8	-49	0.0	-100	0.0	-100
Sonitpur	14.8	135	0.0	-100	0.1	-99
Sibsagar	14.2	92	3.6	-51	2.1	-82
Tinsukia	18.5	71	17.9	41	37.5	148
Udalgiri	3.9	-42	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	0.0	-100
East Khasi Hills	3.4	-37	0.7	-82	0.0	-100
Jaintia Hills	1.0	-89	0.0	-100	0.0	-100
Ribhoi	0.0	-100	0.0	-100	0.0	-100
South Garo Hills	**	**	**	**	**	**
West Garo Hills	0.2	-90	0.0	-100	0.0	-100
West Khasi Hills	1.0	-57	0.0	-100	0.0	-100
NMMT						
Mizoram						
Aizwal	0.4	-92	4.7	-20	9.7	-11
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	14.0	-25
Serchhip	**	**	**	**	42.0	198
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	0.5	-93	7.0	-26	7.9	32
Imphal west	0.0	-100	9.0	210	27.8	341
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	**	**	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	1.3	333	1.7	-15	0.5	-38
Kephire	**	**	**	**	**	**
Kohima	6.4	14	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	4.0	60	2.0	-86	0.0	-100
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	16.0	122	8.0	10	1.0	-88
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	1.6	-81	18.3	215	7.7	-54
NorthTripura	0.0	-100	19.6	367	77.4	567

SouthTripura	0.2	-96	17.2	420	14.6	10
West Tripura	1.1	-80	0.9	-77	5.6	-54
Himachal Pradesh						
Bilaspur	12.8	28	0.0	-100	9.6	-45
Chamba	20.1	-11	17.4	-37	21.4	-5
Hamirpur	14.6	35	0.0	-100	11.5	-29
Kangra	23.2	54	0.6	-98	12.9	-31
Kinnaur	12.1	-48	3.5	-88	27.0	-3
Kullu	24.6	44	3.0	-89	40.2	73
Lahaul and Spiti	6.9	-76	5.7	-84	18.3	-44
Mandi	24.5	129	0.6	-97	19.5	12
Shimla	22.5	67	5.4	-71	16.3	-13
Sirmaur	23.6	105	0.1	-99	3.0	-74
Solan	14.2	28	1.0	-95	17.9	1
Una	9.8	40	0.0	-100	9.4	-8
Punjab						
Amritsar	0.0	-100	0.0	-100	7.2	-17
Barnala	0.0	-100	0.0	-100	13.0	251
Bhatinda	0.0	-100	0.0	-100	7.5	15
Faridkot	0.0	-100	0.0	-100	12.0	314
Fatehgarh Saheb	0.0	-100	0.0	-100	0.0	-100
Ferozpur	0.0	-100	0.0	-100	2.8	-30
Gurdaspur	0.0	-100	0.1	-99	4.9	-59
Hoshiarpur	0.0	-100	0.0	-100	4.6	-55
Jalandhar	0.0	-100	0.0	-100	8.9	4
Kapurthala	0.0	-100	0.0	-100	5.8	33
Ludhiana	0.6	-87	0.0	-100	5.2	-36
Mansa	0.0	-100	0.0	-100	4.2	5
Moga	0.0	-100	0.0	-100	2.6	-29
Muktesar	0.0	-100	0.0	-100	6.0	43
Nawashahar	7.5	27	0.0	-100	4.6	-60
Patiala	0.4	-91	0.3	-94	3.1	-62
Ropar	3.4	-53	0.0	-100	2.3	-79
Sangrur	0.0	-100	0.0	-100	6.0	6
Mohali	0.0	-100	0.0	-100	0.0	-100
TarnTaran	0.0	-100	0.0	-100	3.0	-53
Haryana,Chd,Delhi						
Haryana						
Ambala	0.8	-89	0.2	-97	1.0	-84
Bhiwani	0.0	-100	0.0	-100	0.0	-100
Chandigarh	0.2	-97	0.0	-100	1.1	-89
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	0.1	-100	1.3	-72
Jhajar	0.0	-100	0.0	-100	0.0	-100
Jind	0.0	-100	1.0	-97	0.5	-79
Katihah	0.5	-90	0.0	-100	1.8	-58
Karnal	0.0	-100	0.0	-100	0.4	-92

Kurukshetra	1.8	-74	0.0	-100	0.3	-96
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	0.6	-93	0.0	-100	2.1	-79
Panipat	0.0	-100	0.0	-100	0.8	-81
Rewari	0.0	-100	0.0	-100	0.0	-100
Rohtak	0.0	-100	0.0	-100	0.2	-97
Sirsa	0.0	-100	0.0	-100	5.0	32
Sonepat	0.0	-100	0.2	-94	1.2	-73
Yamunanagar	1.8	-82	0.0	-100	0.1	-98
Delhi						
Central Delhi	0.0	-100	0.0	-100	1.0	-74
East Delhi	0.0	-100	0.0	-100	0.0	-100
New Delhi	0.0	-100	0.0	-100	1.3	-67
North Delhi	0.0	-100	0.0	-100	1.0	-74
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	0.0	-100	1.5	-61
South Delhi	0.0	-100	0.1	-98	0.5	-87
South West Delhi	0.0	-100	0.0	-100	1.6	-58
West Delhi	0.0	-100	0.0	-100	0.0	-100
Jammu & Kashmir						
Anantnag	0.0	-100	37.9	61	27.0	-4
Badgam	0.0	-100	22.2	24	27.0	56
Bandipore	**	**	**	**	**	**
Baramula	0.0	-100	29.1	-15	23.9	-39
Doda	21.4	-34	22.6	-48	15.2	-69
Ganderbal	0.0	-100	23.0	30	9.6	-44
Jammu	0.0	-100	4.3	-74	13.2	-34
Kargil	**	**	**	**	**	**
Kathua	1.2	-90	1.2	-80	6.2	-75
Kistwar	**	**	**	**	**	**
Kulgam	0.2	-99	28.8	22	25.2	-10
Kupwara	0.0	-100	30.2	-6	24.7	-26
Ladakh(Leh)	0.0	-100	0.0	-100	1.3	-22
Poonch	**	**	**	**	**	**
Pulwama	0.0	-100	22.8	33	31.5	142
Rajouri	0.0	-100	19.2	86	34.4	69
Ramban	9.3	-71	35.2	-19	22.1	-55
Reasi	0.0	-100	7.0	-71	23.7	-24
Samba	0.0	-100	0.6	-96	7.2	-64
Shopian	**	**	**	**	**	**
Srinagar	0.0	-100	19.7	11	28.1	65
Udhampur	3.1	-86	4.6	-81	11.6	-63
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.2	-95	0.0	-100
Chhatarpur	0.0	-100	3.2	-15	0.0	-100

Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	1.0	-82	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	0.1	96	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	2.0	33	0.0	-100
Umaria	0.0	-100	0.2	-97	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	1.8	-24	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	0.6	-76
Bhopal	0.0	-100	0.4	-33	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	0.3	-87	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	1.2	-69	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	-99	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.4	-90	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.8	-56	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	2.5	-57	0.0	-100	0.7	83
Ballia	0.0	-100	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	7.9	163	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	0.0	-100	0.0	-100	0.0	-100
Faizabad	1.5	-67	0.6	-69	0.0	-100
Farrukhabad	0.0	-100	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	0.0	-100	0.9	-53	0.0	-100
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.6	-86	0.0	-100	0.0	-100
Hardoi	0.0	-100	0.0	-100	0.4	-89
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	1.0	-5	0.3	-94
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	1.9	-53
Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	0.0	-100	0.0	-100	0.2	-96
Maharajganj	0.0	-100	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	2.0	18	0.0	-100
RaiBareilly	0.3	-90	1.0	-11	0.1	-99
Sahuji Maharajnagar	0.0	-100	5.0	285	0.0	-100
Sant Kabirnagar	6.0	3	0.0	-100	0.0	-100
Sant Ravidas Nagar	0.0	-100	4.0	-2	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	1.1	-65	0.0	-100	1.9	-33
Sonbhadra	0.0	-100	0.0	-100	0.0	-100
Sultanpur	0.2	-94	2.7	90	0.0	-100
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	0.0	-100	3.7	-18	0.0	-100
West Uttar Pradesh						
Agra	0.0	-100	0.0	-100	0.0	-100
Aligarh	0.3	-91	0.0	-100	0.3	-93
Auraiya	0.0	-100	0.0	-100	2.0	-56
Badaun	0.5	-90	0.0	-100	2.8	-35
Baghpat	0.0	-100	0.0	-100	0.4	-90
Bareilly	0.0	-100	0.0	-100	3.4	-33
Bijnor	5.9	22	0.8	-91	0.0	-100
Bulandsahar	0.3	-79	1.7	-58	0.0	-100
Etah	0.0	-100	0.0	-100	0.0	-100
Etawah	0.0	-100	0.0	-100	1.5	-42
Firozabad	0.0	-100	0.0	-100	0.7	-79
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.0	-100
Hamirpur	0.0	-100	1.0	0	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	0.5	-90
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	0.0	-100	1.0	-67	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	2.2	38	0.0	-100
Mainpuri	0.0	-100	0.0	-100	1.2	-59
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.6	-87	0.3	-95	0.7	-84
Moradabad	0.0	-100	0.0	-100	3.5	-39
Muzzaffarnagar	0.4	-92	1.2	-78	2.0	-64
Pilibhit	0.0	-100	0.0	-100	3.7	-22
Rampur	0.4	-93	0.0	-100	2.1	-66
Saharanpur	2.3	-65	2.7	-66	0.0	-100
Shahjahanpur	0.0	-100	0.0	-100	4.7	-1
Uttarakhand						
Almora	8.4	-25	0.0	-100	5.8	-46
Bageshwar	6.0	-46	0.0	-100	0.0	-100
Chamoli	8.7	-42	0.5	-98	16.2	-24

Champawat	7.0	-29	0.0	-100	4.5	-57
Dehradun	14.5	35	7.6	-46	2.0	36
Garhwal Pauri	12.3	34	0.0	-100	2.7	-70
Garhwal Tehri	27.6	126	15.5	2	8.7	-24
Haridwar	6.5	-24	1.5	-86	4.8	-43
Nainital	7.5	-13	0.0	-100	9.7	-4
Pithorgarh	18.2	82	0.0	-100	13.8	-20
Rudraprayag	15.3	-2	0.0	-100	10.7	-52
Udham Sing Nagar	1.6	-66	0.0	-100	0.3	-94
Uttarkashi	41.9	157	8.5	-67	8.6	-52
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	0.0	-100
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Banka	0.0	-100	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.0	-100	0.0	-100	0.0	-100
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.0	-100	0.0	-100	0.0	-100
Darbhanga	1.8	-16	0.0	-100	0.0	-100
East Champaran	0.4	-84	0.0	-100	0.0	-100
Gaya	0.0	-100	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	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.3	-72	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	0.6	-82	0.0	-100	0.0	-100
Nalanda	0.0	-100	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	0.0	-100	0.0	-100	0.0	-100
Purnea	1.2	-8	0.0	-100	0.0	-100
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	0.5	-82	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	0.0	-100
Siwan	0.0	-100	0.0	-100	0.0	-100
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	0.0	-100	0.0	-100
West Champaran	2.1	-47	0.0	-100	0.0	-100

Jharkhand						
Bokaro	0.0	-100	0.0	-100	0.0	-100
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	10.3	114	0.0	-100	0.0	-100
Dhanbad	0.0	-99	0.0	-99	0.0	-100
Dumka	5.2	-22	0.0	-100	0.0	-100
East Singbhum	0.0	-100	0.0	-100	0.0	-100
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	0.3	-90	0.8	-73	0.0	-100
Godda	3.4	31	0.0	-100	0.0	-100
Gumla	0.0	-100	6.4	35	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	0.0	-100
Jamtara	0.0	-100	0.0	-100	0.0	-100
Khunti	0.0	-100	**	**	0.0	-100
Koderrna	0.0	-100	0.0	-100	0.0	-100
Latehar	0.0	-100	2.8	-28	0.0	-100
Lohardagga	0.0	-100	0.6	-84	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	0.0	-100
Ranchi	0.0	-100	4.4	-40	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	1.5	279
Alwar	0.0	-100	0.0	-100	1.0	-71
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	0.1	-92
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	-98	1.9	-19
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	0.4	-88
Karauli	0.0	-100	0.0	-100	0.2	-92
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	1.1	-48
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	0.1	-67
Bikaner	0.0	-100	0.0	-100	2.5	10
Churu	0.0	-100	0.0	-100	2.8	15
Hanumangarh	0.0	-100	0.0	-100	5.0	52
Jaisalmer	0.0	-100	0.0	-100	1.1	10
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	1.0	48
Nagaur	0.0	-100	0.0	-100	0.1	-92
Pali	0.0	-100	0.0	-100	0.2	-50
Sri Ganganagar	0.0	-100	0.0	-100	7.8	200
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	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
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
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	0.4	-92	0.0	-100
Balasore	0.5	-95	1.5	-85	5.9	-40
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.9	-89	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100
Ganjam	0.1	-98	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100






Jajpur	1.9	-71	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.1	-99	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.1	-99	0.6	-93	0.5	-95
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.4	-94	12.1	147	2.8	-53
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	15.0	-16	50.8	265	1.9	-83
North & Middle Andaman	0.0	-100	0.0	-100	0.0	-100
South Andaman	0.0	-100	0.0	-100	0.0	-100
GWB						
Bankura	6.8	34	0.0	-100	0.0	-100
Birbhum	10.9	60	0.0	-100	0.0	-100
Burdwan	4.6	-45	0.0	-100	0.0	-100
East Midnapore	0.2	-95	0.4	-90	0.0	-99
Hooghly	0.0	-100	0.0	-100	1.7	-84
Howrah	2.7	-60	0.0	-100	0.0	-100
Kolkata	3.0	-56	0.0	-100	0.0	-100
Murshidabad	7.5	79	0.0	-100	0.0	-100
Nadia	4.6	-43	0.0	-100	1.7	-55
24 Pargana (N)	9.8	112	0.2	-94	2.6	-52
Purulia	6.2	5	0.0	-100	0.0	-100
24 Pargana (S)	2.9	-60	0.0	-100	0.0	-100
West Midnapore	7.0	29	0.0	-100	0.2	-95
SHWB & Sikkim						
Cooch Behar	0.1	-97	0.0	-100	0.0	-100
Darjeeling	1.9	-70	0.0	-100	0.0	-100
East Sikkim	4.6	-71	0.3	-98	0.5	-95
Jalpaiguri	2.0	-66	0.0	-100	0.0	-100
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	**	**	**	**	**	**
North Sikkim	13.2	-48	5.4	-74	0.0	-100
South Dinajpur	**	**	0.0	-100	0.0	-100
South Sikkim	0.0	-100	0.0	-100	0.0	-100
West Sikkim	2.5	-90	0.0	-100	0.0	-100

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	0.0	-100	0.0	-100	0.0	-100
Bangalore Urban	0.0	-100	0.0	-100	0.0	-100
Chamarajanagar	0.0	-100	0.9	8	0.0	-100
Chikaballapur	0.0	-100	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	0.0	-100	2.5	514	0.0	-100
Kodagu	0.0	-100	0.0	-100	0.0	-100
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.0	-100	0.1	-91	0.0	-100
Mysuru	0.0	-100	0.0	-100	0.0	-100
Ramanagara	0.0	-100	0.0	-100	0.0	-100
Shivamogga	0.0	-100	0.0	-100	0.0	-100
Tumakuru	0.0	-100	0.0	-100	0.0	-100
Kerala						
Alappuzha	3.5	-60	31.2	428	5.0	-35
Kannur	0.0	-100	0.0	-100	0.0	-100
Ernakulam	0.0	-100	48.5	1177	3.1	-54
Idukki	1.3	-64	0.4	-88	0.0	-100
Kasaragod	0.0	-100	0.0	-100	0.5	-17
Kollam	22.5	208	7.4	1	14.7	45
Kottayam	1.0	-77	21.8	137	7.9	-3
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	1.8	-37
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	1.4	-86	0.0	-100	2.2	-88
Thiruvananthapuram	3.2	-44	0.4	-91	0.1	-99
Thrissur	0.0	-100	4.0	303	0.0	-100
Wayanad	0.0	-100	0.0	-100	0.0	-100

Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.0	-100
Chennai	0.0	-100	0.0	-100	0.0	-100
Coimbatore	0.0	-100	0.2	-93	0.0	-100
Cuddalore	0.0	-100	0.0	-100	0.1	-98
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.0	-100	0.2	-95
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.0	-100
Kanyakumari	0.0	-92	12.2	122	4.2	-38
Karikal	0.0	-100	0.0	-100	0.1	-99
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	0.0	-100	0.2	-98
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.0	-100	0.0	-100	0.0	-100
Perambalur	0.0	-100	0.0	-100	0.0	-100
Puducherry	0.0	-100	0.0	-100	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.0	-100	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	0.0	-100	0.0	-100	0.0	-100
Tirunelveli	0.0	-100	0.0	-100	3.1	-69
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	0.0	-100	0.0	-100
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	0.0	-100
Toothukudi	0.0	-100	0.1	-96	0.9	-89
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	0.0	-100	0.0	-100	0.0	-100
Villupuram	0.0	-100	0.0	-100	0.2	-92
Virudhunagar	0.0	-100	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	0.0	-100	0.0	-100	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.0	-100	0.0	-100	0.0	-100
West Godavari	0.0	-100	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100

Chittoor	0.0	-100	0.0	-100	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	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	0.0	-100	0.0	-100	0.0	-100

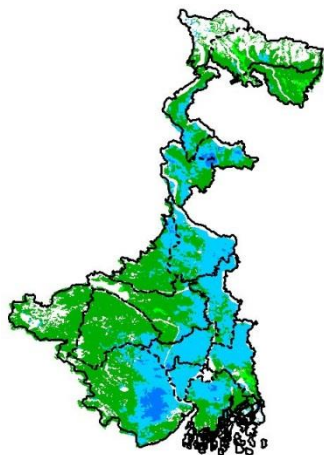
Legends

	(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

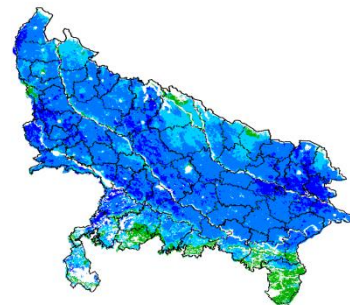
**INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
24th February 2016 FOR DIFFERENT STATES**

West Bengal



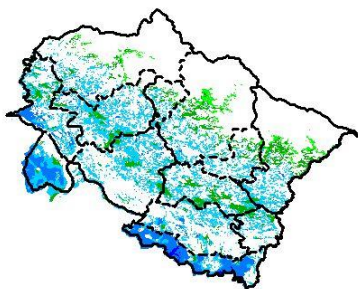
Agricultural vigour is good in central and Northern part of West Bengal, whereas rest of the state shows moderate NDVI.

Uttar Pradesh



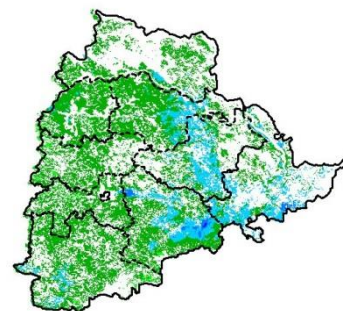
Agricultural vigour is very good in major parts of Uttar Pradesh. whereas few patches in southern part shows moderate values of NDVI.

Uttarakhand



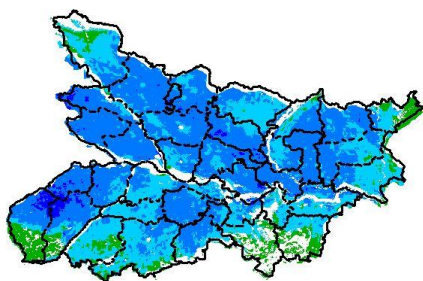
Agricultural vigour is moderate over entire state of Uttarakhand, whereas few patches in south and west part shows very good values of NDVI.

Telangana



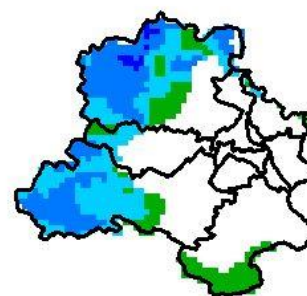
Agriculture vigour is good over Eastern parts of Telangana. Rest of the state shows moderate values of NDVI.

Bihar



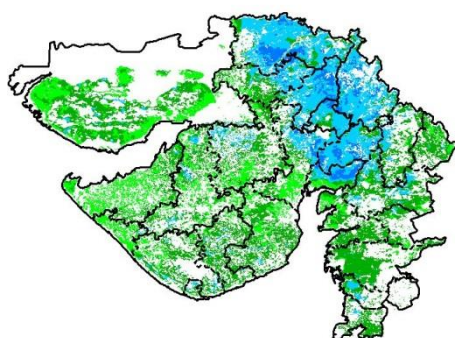
Agriculture vigour is very good over major parts of Bihar whereas south western part shows patches of moderate NDVI values.

Delhi



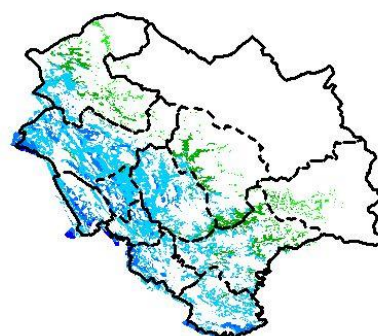
Agriculture vigour is moderate all over Delhi, whereas few patches over west show very good vigour of NDVI.

Gujarat



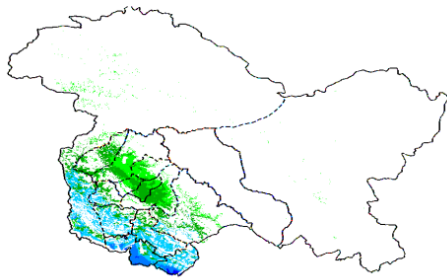
Agriculture vigour is moderate in Kutch and Saurashtra whereas, good agricultural vigour is observed over Gujarat region.

Himachal Pradesh



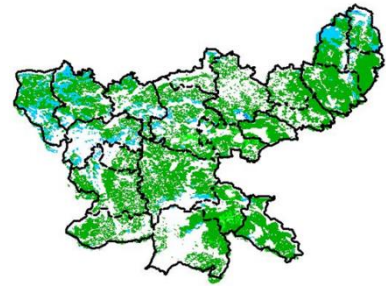
Agriculture vigour is good over western and southern parts of Himachal Pradesh, whereas rest of the state shows moderate values of NDVI.

Jammu & Kashmir



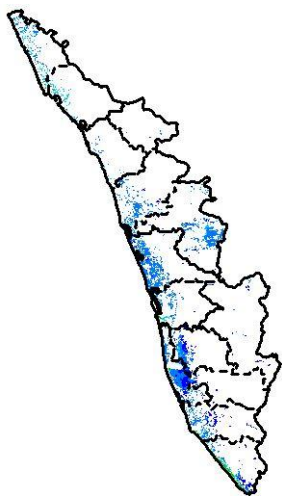
Agriculture vigour is good over entire state of Jammu & Kashmir.

Jharkhand



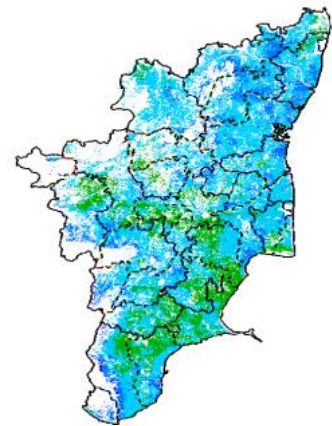
Agriculture vigour is moderate over entire state of Jharkhand.

Kerala



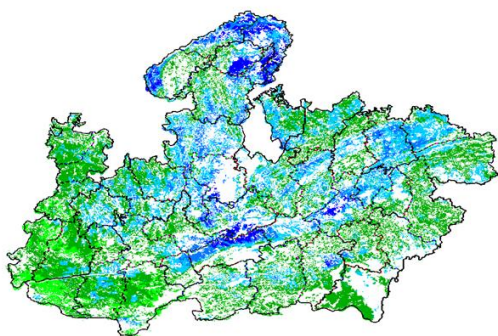
Agriculture vigour is good over entire state of Kerala.

Tamil Nadu



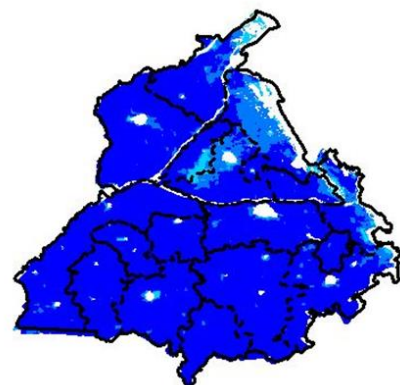
Agricultural vigour is good over major part of Tamilnadu.

Madhya Pradesh



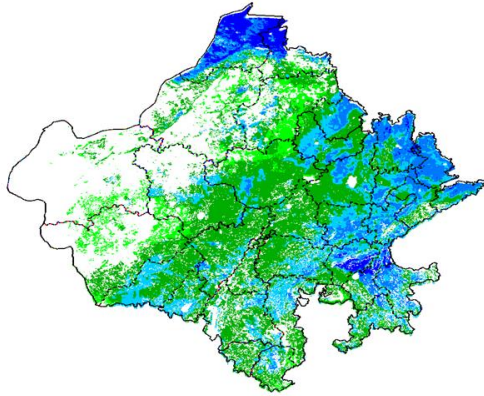
Agriculture vigour shows very good values over northern and central part of Madhya Pradesh in patches and rest of the state shows moderate values of NDVI.

Punjab



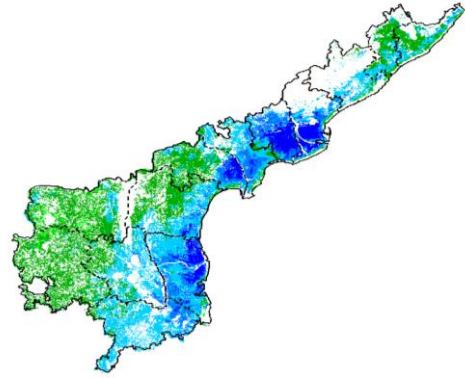
Agricultural vigour is very good over entire state of Punjab.

Rajasthan



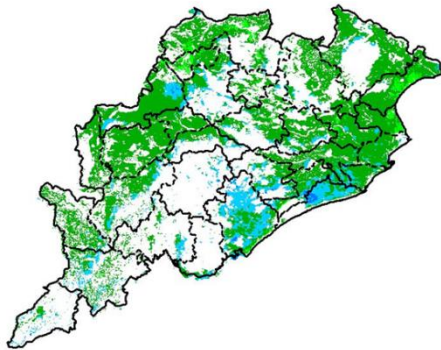
Agriculture vigour is moderate in central part , good agricultural vigour is observed over eastern region and very good in northern parts of Rajasthan.

Andhra Pradesh



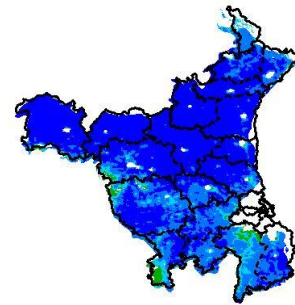
Agriculture vigour is very good over north-eastern part of Andhra Pradesh whereas western parts shows moderate values.

Odisha



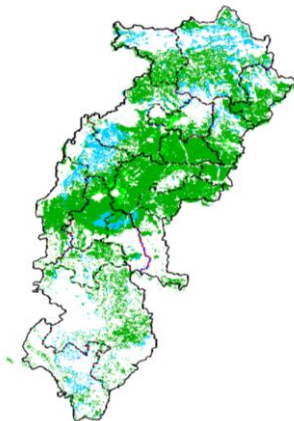
Agricultural vigour is good in central parts of Odisha where North eastern part shows moderate values of NDVI.

Haryana



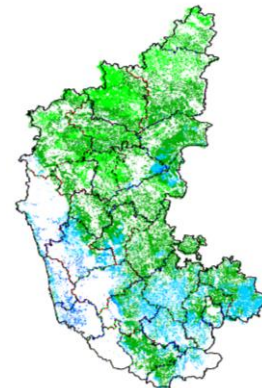
Agriculture vigour is very good over northern parts of Haryana and good values are observed in southern parts of state.

Chhattisgarh

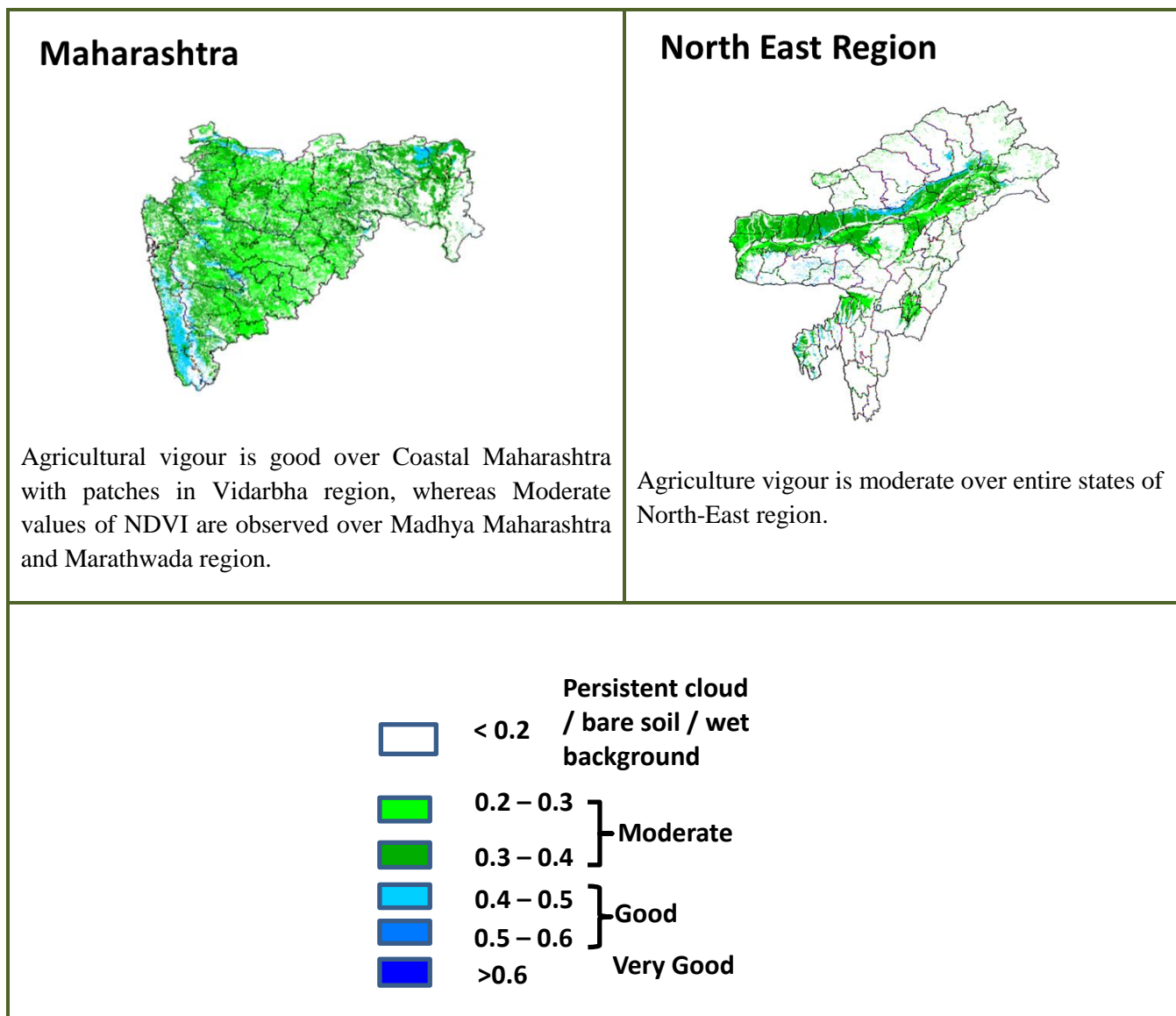


Agriculture vigour is good in patches of southern parts of state whereas agriculture vigour is moderate in major parts of Chhattisgarh.

Karnataka



Agriculture vigour is good over southern part of Karnataka state. Rest of the state shows moderate values of NDVI.



Annexure III

Tamil Nadu

Sesame: TMV 4, TMV 7 and VRI 1

Assam

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

Early *ahu* rice (for low lying area) : IR-50, Pusa 2-21, Rasi, Culture -1, Luit, Kopilee (Semi-dwarf varieties); Rongadoria, Dubaichenga, Nilajee (Tall varieties)

Capsularis jute: JRC 321 and UPC 94.

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

Black gra : 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.

Bihar:

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

Green gram: Pusa Vishal, Samrat, SML-668, Sona.

Black gram: Pant U-19 and Pant Urd-31, Uttra and Navin.

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 nicketan, Arka kalian

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

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India and PusaMukta.

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, Pant Ta-2, Azad Ta-2, Narendra Tamatar-1,2,4,5,6

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, kufirilalima, 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.

Maize: nawjyoti, kanchan, gaurav, surya, navin, shweta, Azad uttam, prakash, dikalb-7074, payridikalp-8144, dakkan-115, mmh-135, pro-4212, ganga-11, pusa, makka-2, J.H.-3459,

Urad: TA-9, narendra urad-1, Azad urad-1, Uttara, azad urad-2, shekhar-2

Mung: k-851 and JM-721.

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.

Sugarcane:The mid and late maturing varieties of sugarcane: CO Pant 211, Co Sa 687 and Co Sa 8436.

The varieties recommended in areas with poor water drainage: B.O.54 and B.O.91.

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: Pusa Masoor -5 (L-4594).
Radish: Japani White, Hill queen, French Radish;
Spinach: Pusa Bharti.
Amaranths: Pusalal Chaulai, Pusa Kiran.
Ladyfinger: Pusa A-4.
Pea: Azad Matar-1, Pant Matar-3 and Bournville.
Carrot: Pusa Mridula, Japanese White and Pusa Himani.
Radish: Japani White, Hill queen, French Radish.
Spinach: All Green, Pusa Bharti;
Fenugreek: Pusa Kasuri;
Coriander: Pant Haritama, Hybrids.
Turnip: Pusa Swati, Local Red variety.

West Rajasthan

Isabgol: RI 89 & GI-2.
Fenugreek: R Mt 1 & R Mt 305.
Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose), RD 2058, 2503, 103, NDB 1173.
cumin: GC 4, RZ -19, RZ 223, RZ 19, 209, 223 and GC 4b.
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: Pusa Rashmi.
Carrot: Pusa Keshar.
Zaid moong: K-851, PDM-11, SML-668 Pusa Baisakhi, RMG-62, RMG-268 etc.

East Rajasthan

Muskmelon Sugar baby: Durgapura madhu, Punjab sunheri, Punjab hybrid, arkajeet, hara madhu, pusa madhuras.
Water melon: Durgapura meetha, durgapura kesar, arka jyoti (hybrid), madhu (hybrid).
Tinda: Beekneri green, Dil pasand, arka tinda.
Kakri: Lucknow ageti and arka sheetal.
Zaid Pearl millet (fodder): raj bajra chari, rajko Zaint, L-72, L-74.
Zaid sorghum (fodder): Raj chari-3, Raj chari-1, Raj chari-2 for single cutting and SSG59-3, M.P. chari for many cutting.
Okra: Pusa Savani, Arka anamika, Arka Abhya, Aajad kranti, Prabhni kranti, Pusa-A-4.
Radish: Pusa Chetki, Japanese white & hill queen.
Carrot: Pusa Keshar
Cowpea: Short dur C-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 Pusa Jiant.
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.
Pearl millet: GHB-526 and GHB-558.
Green gram: GM-2, 3, GM-4.
Black gram: Guj-1, T-9.

Madhya Pradesh

Okra: Pusa Makhamali, Pusa Sawani, A-4, Parbhani Kranti.
Moong: HUM -1, PDM -139