



National Agromet Advisory Service Bulletin



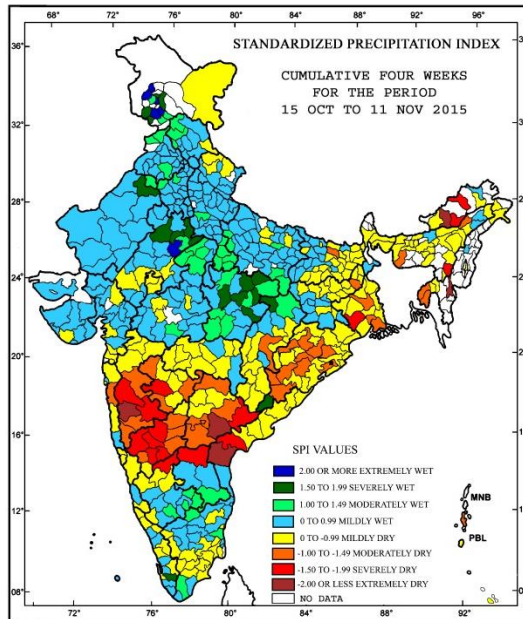
Friday 13th November 2015
(For the period 13th to 17th November 2015)



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

Standardised Precipitation Index Four Weekly for the Period 15th October to 11th November 2015

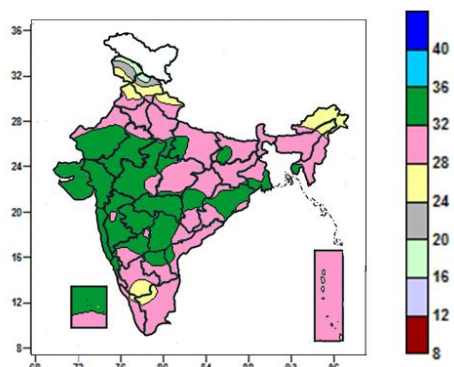
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of Jammu & Kashmir; Sawai Madhopur district of Rajasthan; Sidhi district of Madhya Pradesh.
- Extremely/Severely dry conditions experienced in Papumpara, Upper Subansiri districts of Arunachal Pradesh; West Midnapore district of West Bengal; Cachar district of Assam; Pune, Sholapur, Beed districts of Maharashtra; Khammam district of Telangana; Guntur, Kurnool districts of Andhra Pradesh; Belgam, Bijapur, Gadag, Koppal, Bellary districts of Karnataka.
- Moderately dry conditions experienced in few districts of Odisha; Maharashtra; Lakhimpur, West Garo Hills districts of Assam & Meghalaya; West & South Tripura districts of Tripura; Burdwan, Howrah, South 24 Pargana, Kolkata districts of West Bengal; Dumka district of Jharkhand; Darbhanga district of Bihar; Raipur district of Chhattisgarh; Adilabad, Hyderabad, Mahbubnagar, Warangal, Rangareddy districts of Telangana; Dharwad, Gulbarga, Raichur, Yadgir districts of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/wet conditions.

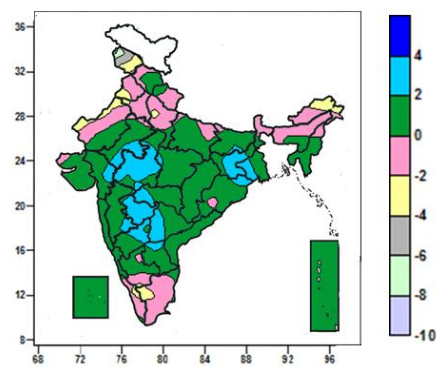
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 11.11.2015

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 11.11.2015



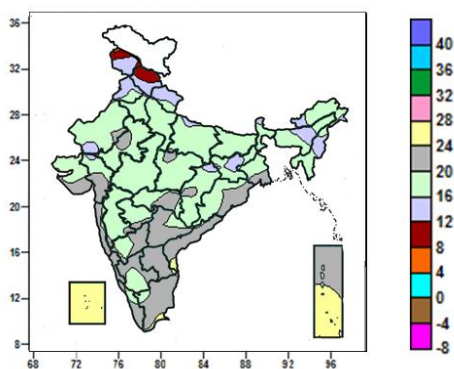
- Mean maximum temperature was between 32 to 36 $^{\circ}\text{C}$ over Gujarat, Konkan & Goa, Marathwada, Vidarbha, many parts of Rajasthan, West Madhya Pradesh, Odisha, Tripura, Madhya Maharashtra, Telangana, Coastal & North Interior Karnataka, Lakshadweep, some parts of East Uttar Pradesh, Bihar, Gangetic West Bengal, Chhattisgarh, Rayalaseema and isolated pockets of Coastal Andhra Pradesh, West Uttar Pradesh and South Interior Karnataka.
- It was between 32 $^{\circ}\text{C}$ to 16 $^{\circ}\text{C}$ over remaining parts of the country.

Mean Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 11.11.2015



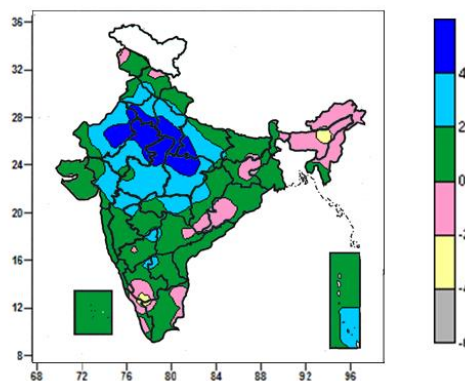
- Mean maximum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over many parts of Jharkhand, West Madhya Pradesh, Marathwada, some parts of East Rajasthan, Gujarat region, Gangetic West Bengal, Vidarbha, Telangana, North Interior Karnataka and isolated pockets of Bihar, East Madhya Pradesh, Odisha, Madhya Maharashtra and Rayalaseema.
- Mean maximum temperature were below normal by 4 to 8 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir.
- Mean maximum temperature was below normal by 2 to 4 $^{\circ}\text{C}$ over some parts of Arunachal Pradesh, Jammu & Kashmir, Punjab, Haryana, West Rajasthan, Tamil Nadu and isolated pockets of West Uttar Pradesh, South Interior Karnataka and Kerala.
- It was normal to near normal in remaining parts of the Country.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 11.11.2015



- Mean minimum temperature was between 8 to 12 $^{\circ}\text{C}$ over many parts of Himachal Pradesh, some parts of Jammu & Kashmir.
- Mean minimum temperature was between 12 to 16 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Punjab, Uttarakhand, Sikkim, Manipur, some parts of Himachal Pradesh, Jharkhand, Sub-Himalayan West Bengal, Arunachal Pradesh, Assam, Nagaland, West Rajasthan and isolated pockets of East Uttar Pradesh, Gujarat region, Chhattisgarh.
- It was between 16 to 24 $^{\circ}\text{C}$ over rest of the country

Mean Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 11.11.2015



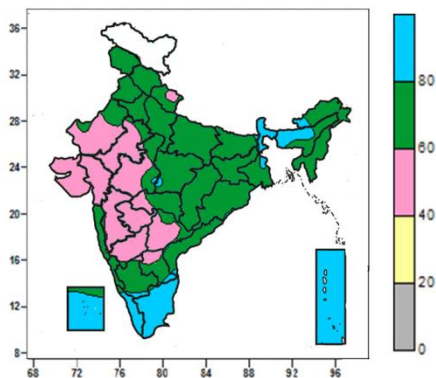
- Mean minimum temperature was above normal by 4 to 6 $^{\circ}\text{C}$ over some parts of Rajasthan, Uttar Pradesh, Madhya Pradesh and Haryana & Delhi.
- Mean minimum temperature was above normal by 2 to 4 $^{\circ}\text{C}$ over many parts of Punjab, Haryana & Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, Gujarat region, some parts of Vidarbha, Madhya Maharashtra, Chhattisgarh, Andaman & Nicobar Islands and isolated pockets of Himachal Pradesh, Uttarakhand, Bihar, Marathwada, Telangana, Rayalaseema and Interior Karnataka.

except Lakshadweep, many parts of Andaman & Nicobar Islands and isolated pockets of Coastal Andhra Pradesh and Tamil Nadu where it was between 24 and 28°C.

- Mean minimum temperature was below normal by 2 to 4°C over isolated pockets of Assam, South Interior Karnataka, Tamil Nadu and Kerala.
- It was normal to near normal in remaining parts of the country.

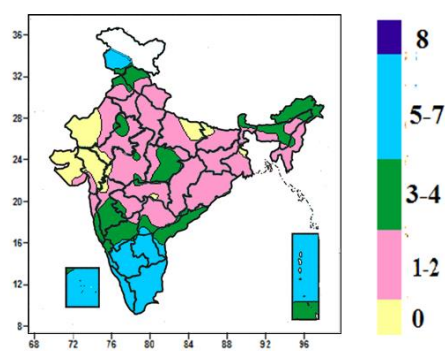
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 11.11.2015

Relative Humidity (%) over India for the week ending 11.11.2015



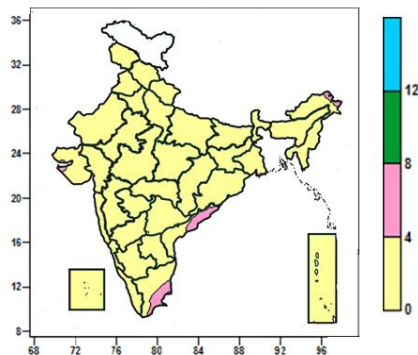
- Mean Relative humidity was above 80% over Andaman & Nicobar Islands, many parts of Sub-Himalayan West Bengal & Sikkim, Tamil Nadu, Kerala, Assam & Meghalaya, Lakshadweep, some parts of Arunachal Pradesh and isolated pockets of Gangetic West Bengal, Madhya Pradesh, Andhra Pradesh.
- Mean Relative humidity was between 60 to 80% over rest of the country except Gujarat, many parts of Rajasthan, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Telangana, North Interior Karnataka, some parts of Uttarakhand, Vidarbha and Rayalaseema where it was between 40 to 60%.

Cloud amount (okta) over India for the week ending 11.11.2015



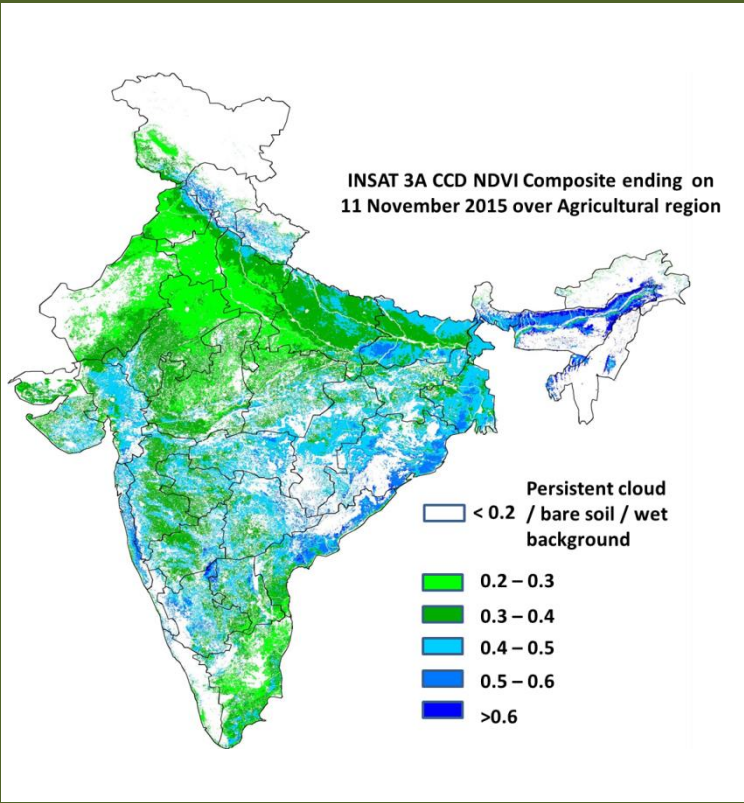
- Sky remained cloudy (5-7okta) over Tamil Nadu and Kerala, many parts of Jammu & Kashmir, South Interior Karnataka, Rayalaseema, Lakshadweep, Andaman & Nicobar Islands, some parts of Coastal Karnataka and isolated pockets of Coastal Andhra Pradesh, Telangana, North Interior Karnataka.
- Sky remained partly cloudy/mainly clear/clear sky (3 to 4/ 1 to 2/0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 11.11.2015



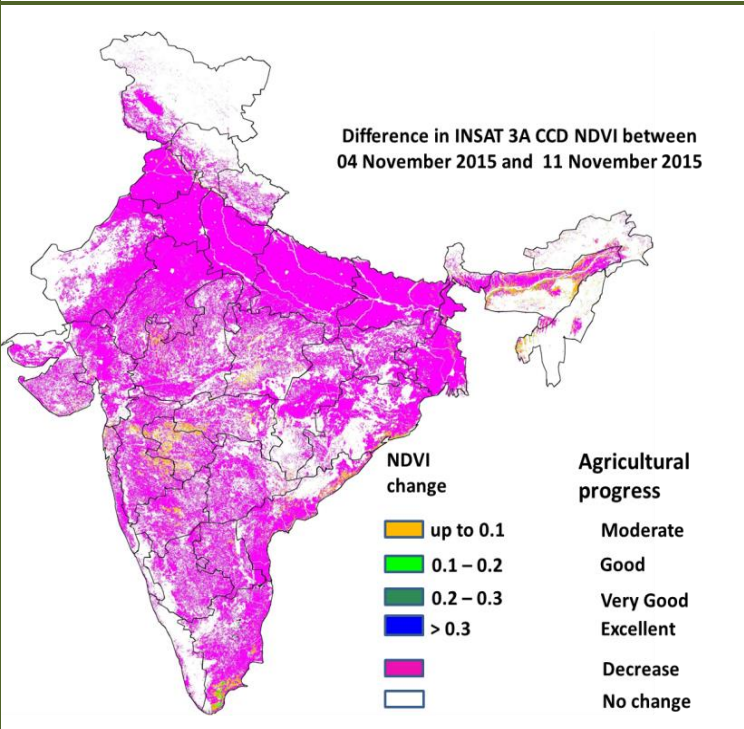
- Mean wind speed was 4 to 8 knots over some parts of Tamil Nadu, Coastal Andhra Pradesh and isolated pockets of Arunachal Pradesh and Saurashtra & Kutch.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 11th November 2015 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour was good in some patches of Bihar, Coastal Andhra Pradesh, Odisha, West Bengal, Assam, Coastal Maharashtra, East Madhya Pradesh, Gujarat, Karnataka, Jharkhand, Vidarbha, Marathwada and Telangana, where NDVI varied from 0.4 to 0.6. Agricultural growth was moderate 0.2 to 0.3 over most parts of Rajasthan, West Madhya Pradesh, Punjab, Haryana, Uttar Pradesh and Tamil Nadu.

Difference in INSAT 3A CCD NDVI between 4th and 11th November 2015



- Decrease in NDVI values was observed all over India. A moderate progress (up to 0.1) in NDVI over patches in Maharashtra, Madhya Pradesh, Coastal Tami Nadu, Coastal Andhra Pradesh and Odisha.

- INSAT 3A CCD NDVI composite maps for the week ending on 11th November 2015 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 18th November 2015

- Fog/dense fog would occur at isolated places over Meghalaya and shallow fog at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Assam and Nagaland, Manipur, Mizoram & Tripura in the morning hours during next 2-3 days.
- No significant change in temperatures over northern plains and adjoining central India during next 48 hours.

5 Day Rainfall Forecast (MID DAY) 13th November 2015

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

% Station Reporting Rainfall

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

Weather Warning during next 5 days

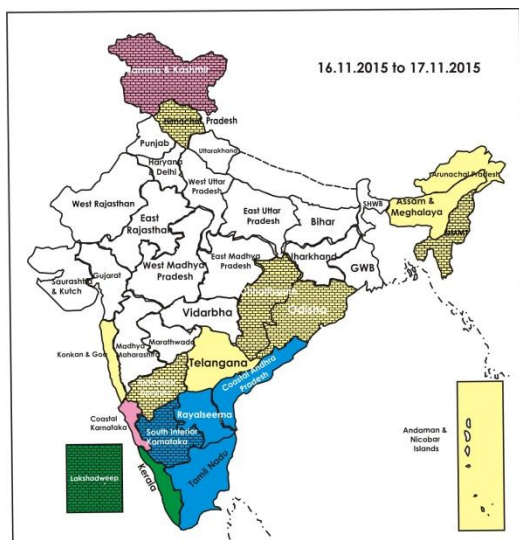
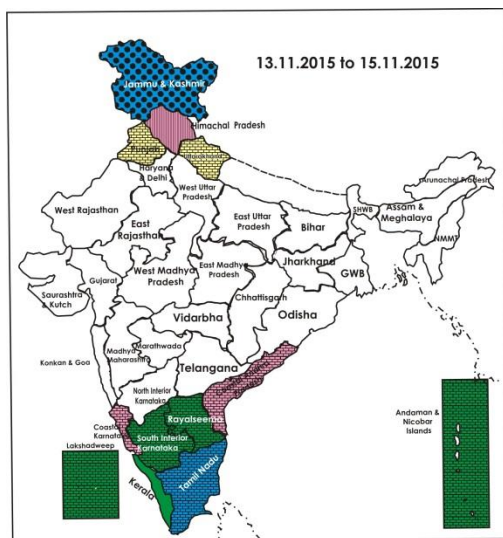
- **13 November (Day 1):** Heavy rain would occur at isolated places over south Coastal Andhra Pradesh, Rayalaseema, Tamilnadu & Pudducherry and Kerala.
- **14 November (Day 2):** Heavy rain would occur at isolated places over south Coastal Andhra Pradesh and Tamilnadu & Pondicherry.
- **15 November (Day 3):** Heavy to very heavy rain would occur at a few places over Tamilnadu & Puducherry and heavy at isolated places over Coastal Andhra Pradesh & Kerala.

- **16 November (Day 4):** Heavy to very heavy rain would occur at a few places with extremely heavy falls at isolated places over Tamilnadu & Puducherry. Heavy to very heavy rain at isolated places over Coastal Andhra Pradesh and heavy over Rayalaseema, South Interior Karnataka and Kerala.
- **17 November (Day 5):** Heavy to very heavy rain would occur at a few places with extremely heavy falls at isolated places over Tamilnadu & Puducherry and Coastal Andhra Pradesh. Heavy to very heavy rain at isolated places over Rayalaseema and heavy over South Interior Karnataka & Kerala.

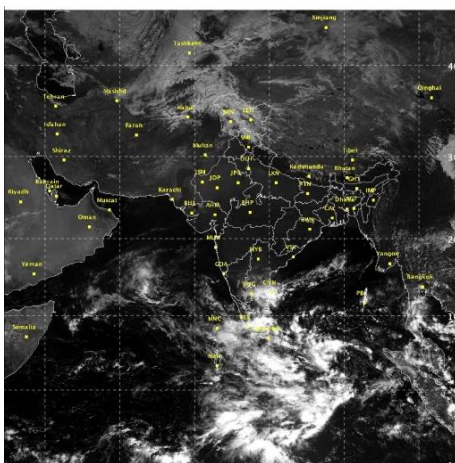
Weather Outlook for subsequent 2 days from 18th to 20th November 2015

- Rain /thundershowers would occur at many places over Tamilnadu, Rayalaseema and Coastal Andhra Pradesh and at a few places over rest south peninsular India.
- Rain/thundershower would occur at isolated places over northeastern states.
- Minimum temperatures would fall by 2-3°C over northwest and adjoining central India.

Weather Forecast Map (Valid upto 0830 hours of 18th November, 2015)



Satellite image dated, 13.11.2015 0600 UTC



Salient Advisories

- As rain/thundershowers would occur at most/ many places over **Tamil Nadu & Puducherry** and over **Kerala** during the period alongwith heavy/ heavy to very heavy rain at a few places isolated with extremely heavy falls at isolated places over Tamil Nadu & Puducherry and heavy/ heavy to very heavy rain at isolated places over Kerala, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crops and keep already harvested produces at safer places. Provide adequate drainage in standing crop fields.
- Due to heavy rain during past few days, water logging is observed in standing crop fields in North eastern Zone of **Tamil Nadu**. Drain out excess water from standing crop fields. In the Cauvery Delta Zone, continue transplanting of *thaladi* rice after current spells of heavy rain. Drain out excess water from already transplanted rice fields and *Samba* rice fields.
- In the Southern Zone of **Kerala**, continue nursery sowing of rice in Kollam district and continue sowing of *Mundakan* rice and cultivation of cool season vegetables in the Central Zone after current spells of heavy rain.
- As rain/thundershowers would occur at most/ many places over **Coastal Andhra Pradesh** on 16th & 17th and over **Royalaseema** and **South Interior Karnataka** from 15th to 17th November alongwith heavy/ heavy to very heavy rain at isolated places, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest matured crops immediately and keep harvested produce at safer places. Undertake sowing of *rabi* crops after current spells of heavy rain.
- In **North Interior Karnataka**, continue sowing of jowar, Bengal gram (JG-11, Annegiri-1, ICCV-10) and safflower in the North East Dry Zone. In North Transition Zone, continue sowing of sorghum, safflower, chickpea and wheat. In **South Interior Karnataka**, continue sowing of medium to short duration varieties of finger millet, maize, sunflower, Bengal gram, field bean, horse gram, niger and black gram in Eastern Dry Zone after current spells of heavy rain.
- As Fog/dense fog would occur at isolated places over **Meghalaya** and shallow fog at isolated places over **Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Assam and Nagaland, Manipur, Mizoram & Tripura** in the morning hours during next 2-3 days, monitor potato, tomato and onion crops for early blight disease. If symptoms are noticed contact the nearest Agricultural University/College/KVK.
- In **Madhya Maharashtra**, as dry weather would prevail during the period, continue planting of pre-seasonal sugarcane with assured irrigation. Continue sowing of irrigated wheat and green pea. In **Central Vidarbha region**, apply irrigation to vegetable crops and orchards like orange and sweet lime. Continue sowing of *rabi* safflower.
- Continue sowing of Bengal gram in **Gujarat, Madhya Pradesh, Chhattisgarh, Rajasthan, Punjab and Uttar Pradesh** and continue sowing of mustard/rapeseed in **Assam & Meghalaya, Bihar, Jharkhand, Odisha, Rajasthan, Madhya Pradesh, Chhattisgarh, Uttar Pradesh** and **Uttarakhand** with irrigation facilities. Undertake land preparation and sowing of wheat in **Punjab, Haryana, Rajasthan, Madhya Pradesh, Gujarat, Bihar, Jharkhand, Uttar Pradesh** and **Himachal Pradesh** under assured irrigation.
- As dry weather would prevail, apply irrigation in already sown toria in **Bihar and Uttar Pradesh**.
- Taking advantage of prevailing dry weather, continue harvesting of matured *Aman* rice in Laterite and Red Soil

Zone and New Alluvial Zone of **Gangetic West Bengal** and continue harvesting of rice in **Bihar, Jharkhand, Uttar Pradesh, Chhattisgarh** and **Coastal Karnataka**.

Detailed Zonewise Agromet Advisories

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



Maize



Groundnut



Land preparation



Rice

- **Realised Rainfall:** Rainfall occurred in Nellore district of Coastal Andhra Pradesh; all districts of Rayalaseema except Kurnool; all districts of Kerala except Kasargod; all districts of Tamil Nadu & Puducherry; all districts of Karnataka except Ballari, Chikkamagaluru, Chitradurga, Davengere and Shivamogga. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers would occur at many places over Tamil Nadu and over Kerala during the period alongwith heavy/heavy to very heavy rain at isolated places over Tamil Nadu and heavy rain at isolated places over Kerala, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crops and keep already harvested produces at safer places. Provide adequate drainage in standing crop fields.
 - **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue transplanting of *thaladi* rice after current spells of heavy rain. Drain out excess water from already transplanted rice fields and *Samba* rice fields.
 - Due to heavy rain during past few days, water logging is observed in standing crop fields in North eastern Zone of Tamil Nadu. Drain out excess water from standing crop fields.
 - Undertake land preparation for medium duration rice in Karaikal and Puducherry after current spells of heavy rain.
 - Continue cultivation of groundnut crop (TMV-13 and Co-7) in the North Western Zone after current spells of heavy rain.
 - In the Western Zone, undertake harvesting of matured sugarcane in clear weather. With cloudy weather and continuous rainfall, micro nutrient deficiency may appear in irrigated turmeric. Dissolve 15 kg super phosphate in 25 litres of water, store it overnight and the supernatant solution may be made into 250 litres. In that, mix 375g each of Feso₄, Znso₄, Borax and Urea and spray twice at 25 days interval after current spells of rain.
 - **Andhra Pradesh:**
 - As rain/thundershowers would occur at most/ many places over **Coastal Andhra Pradesh** on 16th & 17th and over **Rayalaseema** from 15th to 17th November alongwith heavy/ heavy to very heavy rain at isolated places, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest matured crops immediately and keep harvested produce at safer places. Undertake sowing of *rabi* crops after current spells of heavy rain.
 - In the Scarce Rainfall Zone, continue land preparation for sowing of safflower and Bengal gram (desi and kabuli varieties) after current spells of heavy rain.
 - In the Southern Zone, undertake sowings of *rabi* crops like jowar, ragi, horsegram and short duration pulses like Bengal gram, green gram and blackgram. Continue nursery sowing of rice (N.L.R – 145, NLR-3041, NLR-34449, MTU-1001, BPT-5204, CR-1009, JGL-1798 and NDLR-8). Undertake sowings of *rabi* crops after current spells of heavy rain
 - Prevailing weather conditions are congenial for incidence of helicoverpa in tomato in the Southern Zone. To control, spray neem oil @ 5ml/litre of water. If the pest incidence is more, spray Thiodicarb @ 1g or Novaluron @ 1ml./litre of water on a non rainy day.
 - Prevailing weather conditions are congenial for incidence of rust, ring spot and white fly in cotton in the North Coastal Zone. To control, spray Profenophos @ 2.0 ml / litre of water on a non rainy day.
 - Prevailing weather conditions are congenial for the incidence of the stem rot on rice and also stem rot incidence noticed in few parts of Ananthpur district. Remove excess water from the fields and spray Hexaconazole @ 2ml/lit or Validamycin @ 2ml/lit or Propiconazole @ 1ml/lit or Carbendazim @ 1g/litre of water on a non rainy day.
 - Present weather condition moist followed by dry wether, there is a possibility of flowers square and early fruit drops in cotton in Krishna Godavari Zone. Spray Naphthalene acetic acid (N A A) 10 ppm by mixing with 1- 2

% DAP twice within 10-15 days interval on a non rainy day.

▪ **Telangana:**

- In the Southern Telangana Zone, continue sowing of chickpea and safflower crops under residual moisture conditions in black soils and sowing of *rabi* crops like maize, sorghum, groundnut and sunflower under irrigated conditions.
- In the Northern Telangana Zone, continue sowing of sunflower (KBSH-1,NDSH-1,DRSH-1,APSH-66) and Bengal gram(JG 11, Swetha, Annegiri, K.A.K. 2)
- In the Northern Telangana Zone, prevailing partially cloudy weather conditions are congenial for incidences of sucking pests in groundnut (Jassids, Aphids and Thrips). Undertake spraying of Monocrotophos @ 1.6 ml/litre or Dimethoate @ 2.0 ml/litre of water.
- In the Southern Telangana Zone, incidence of grey mildew disease is noticed in cotton. To control, spray Wettable Sulphur @ 3g per litre of water.

▪ **Karnataka:**

- As rain/thundershowers would occur at most/ many places **South Interior Karnataka** from 15th to 17th November,alongwith heavy/ heavy to very heavy rain at isolated places, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Harvest matured crops immediately and keep harvested produce at safer places. Undertake sowing of *rabi* crops after current spells of heavy rain.
- Continue sowing of medium to short duration varieties of finger millet - Indaf-7, Indaf-9, Indaf-15, ML-365, maize – Deccan-103, Vijaya composite, NAH-1137 and Ganga-11, sunflower: Morden, KBSH-1, KBSH-41, KBSH-42, KBSH-44 and KBSH-53, Bengal gram: JJ-11, KAK-2 and Vishal, field bean: HA-3 and HA-4, horse gram: KBH-1 and PHG-9, niger: KBN-1, black gram: Rashmi in Eastern Dry Zone.
- Continue harvesting of rice in Coastal Zone, during harvesting time, leave about 15 cm height of straw from ground surface, to decompose and add nutrients in the soil.
- In North Dry Zone, continue sowing of short duration, drought resistant *rabi* sorghum (var. Maldandi and Mugati), chickpea (var. A-1, JG-11 and Jaki-9218) and safflower (var. A-1), sunflower using the realized and expected rainfall and intercropping of *rabi* sorghum + chickpea (2: row proportion); chickpea + safflower (4:2 row proportion).
- In North Transition Zone, continue sowing of sorghum, safflower, chickpea and wheat.
- In Central Dry Zone, continue sowing of Bengalgram(Var: JG-11, Annigeri-1) after receipt of sufficient rainfall.
- In Southern Dry Zone, blast disease was noticed in paddy crop. To mangle the disease, remove the weed hosts around the fields and spray with Carbendazim @ 1gm/ litre of water or Tricyclozol @0.6 gm/litre of water after current spells of rain.
- In North East Dry Zone, brown plant hopper on rice and mealy bugs on cotton are noticed. For control, undertake spraying Chloropyriphos @ 2.0 ml or Monocrotophos @ 1.5 ml dissolved in one litre of water on rice and on cotton, undertake spraying of Monocrotophos @ 2 ml or Profenophos @ 2 ml / litre of water.

▪ **Kerala:**

- In the Southern Zone, continue nursery sowing of rice in Kollam district after current spells of heavy rain.
- Continue sowing of *Mundakan* rice and cultivation of cool season vegetables in the Central Zone after current spells of heavy rain.
- Undertake transplanting of rice in Northern Zone after current spells of heavy rain.
- Continue land preparation for second rice crop (Uma variety) and harvesting of *Virrupu* rice in the Problem Area Zone after current spells of heavy rain.
- Prevailing weather conditions are congenial for incidence of downy mildew in cucurbitaceous vegetables in the Central Zone. To control, practice crop rotation,burn the residue of previous crop and apply Mancozeb(0.3%) Dithane M45 @ 3g / litre water after current spells of rain.
- Leaf eating caterpillar attack may be severe under high humidity forecasted in the Southern Zone.Cut and burn the infested leaves and in case of severe infestation, spray the undersurface of the fronds with Quinalphos @ 0.05% or Malathion @ 0.1 % after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- Prevailing weather conditions are congenial for the occurrence of ET, sheep pox and PPR in sheep and Hemorrhagic Septicemia, foot and mouth disease in cattle and buffaloes in Southern Telangana. To prevent the diseases, vaccinate the animals.
- North western zone of Tamilnadu , due rainfall forecast day temperatures may be low which is likely to increase feed intake in poultry. Cover the sides of the poultry houses to protect from drizzling. Chick shed should be covered on the sides and provide adequate artificial heat to prevent huddling of chicks
- Prevailing weather conditions are favourable for blue tongue disease in sheep and goats in the Scarce Rainfall Zone of Andhra Pradesh.Vaccinate animals to prevent the disease.
- In the Western Zone of Tamil Nadu, because of the continuous wet spell, cattle and poultry feeds may get contaminated with fungus. During this season, keep the feeds the dry to prevent occurrence of dysentery and diarrhoea.



Greengram

Land preparation

Okra

Rice

- **Realised Rainfall:** Rainfall occurred in East Siang, Lohit, Lower Dibang Valley and Upper Siang districts of Arunachal Pradesh. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As Fog/dense fog would occur at isolated places over **Meghalaya** and shallow fog at isolated places over **Assam** and **Nagaland, Manipur, Mizoram & Tripura**, monitor potato, tomato and onion crops for early blight disease. If symptoms are noticed contact the nearest Agricultural University/College/KVK.
 - **Assam, Meghalaya & Arunachal Pradesh:**
 - In Lower Brahmaputra Valley Zone, continue sowing of *rabi* maize and land preparation and sowing of rapeseed & mustard, onion and garlic and planting of potato.
 - In Barak Valley Zone, continue nursery bed preparation for cauliflower, cabbage, knol khol and land preparation for planting of potato.
 - In Central Brahmaputra Valley Zone of Assam, continue land preparation and sowing of wheat *rabi* pulses, rapeseed & mustard, planting of potato and nursery sowing of cole crops. Undertake harvesting of matured *Sali* rice.
 - In North Bank Plain Zone, continue land preparation for sowing of rapeseed & mustard and nursery sowing of cabbage, cauliflower, brinjal, tomato and knol khol and planting of potato.
 - In Upper Brahmaputra Valley Zone of Assam, continue land preparation and sowing of garden pea and toria and planting of early potato.
 - In Hill Zone of Assam, undertake nursery sowing of *boro* rice and land preparation and sowing of lentil, early variety potato, rapeseed & mustard and planting of winter vegetables.
 - In Arunachal Pradesh, continue land preparation for sowing of pea and transplanting of Cole crops (cabbage, cauliflower, broccoli, knolkhol, etc.)
 - In Meghalaya, continue sowing of rapeseed and mustard, pea, carrot and radish, nursery preparation of cabbage, cauliflower, tomato and broccoli and sowing of pea in high altitude regions and continue land preparation for sowing of mustard/rapeseed and planting of potato in mid to low altitude regions.
 - In Central Brahmaputra Valley Zone and North Bank Plain Zone, in prevailing weather condition, Gundhi bug infestation is observed in *Sali* rice at panicle emergence to milk/dough stage. For control, apply Malathion 5% dust @ 20 kg/ha if the pest population is above ETL.
 - **Manipur, Mizoram, Nagaland and Tripura:**
 - In Manipur, continue land preparation and sowing of rapeseed/mustard, field pea, garden pea and nursery sowing of onion and continue land preparation of planting of potato. Continue harvesting of *kharif* rice. Continue transplanting 25-30 days old seedling of cabbage and cauliflower.
 - In Mizoram, continue nursery sowing of brinjal and chilli. Continue sowing of pea, mustard and toria. Undertake harvesting of banana and passion fruit.
 - In Nagaland, continue harvesting of matured wetland paddy. Continue land preparation for sowing of chickpea, lentil, linseed, mustard and maize. Transplanting of mature seedlings of cauliflower, cabbage, broccoli, tomato etc may be done in raised bed.
 - In Tripura, undertake sowing of toria, sesame and lentil and land preparation for planting of potato. Continue sowing of winter vegetables. Apply mulching in between rows of early cauliflower, radish, brinjal, bitter gourd & pointed gourd to retain moisture.
 - Suitable varieties are given in Annexure III.
 - **Animal Husbandry**
 - In Tripura, the present weather condition is favourable for HS, FMD diseases in animals. Vaccinate the animals against these diseases.
 - In Lower Brahmaputra Valley Zone of Assam, poultry birds should be regularly observed and fed with antibiotics and vitamins after consulting veterinary doctors.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Cotton



Sugarcane



Rice



Land preparation

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

- **Advisories:**

- **Maharashtra:**

- In Konkan, complete harvesting of mid rice variety. Undertake sowing of short duration crops like cowpea, wal and kulthi utilizing residual moisture in soil in the harvested rice fields by following land preparation in 'vapsa' condition. Maintain water level of 8-10 cm in rice fields (late maturing variety). Apply irrigation once in two days after shifting the grafts from polyshed to open space in trenches. Undertake soft wood grafting in cashew nursery. Continue preliminary operations for vegetable nursery of chilli, brinjal, cabbage, knol-khol on raised bed nursery. Undertake planting of seasonal forage crops like cowpea, maize (African Tall), multicut sorghum.
 - In Madhya Maharashtra, continue sowing of pre-seasonal sugarcane with assured irrigation. Continue sowing of irrigated wheat, gram, sunflower and fodder crops like jowar, maize and oats. Continue sowing of green pea. Apply Captan or Carbendazim @ 3 g per kg of seed for treating the seeds. Complete harvesting of matured rice. Continue harvesting of early transplanted rice during morning hours. Continue transplanting for *rabi* onion. Continue picking of cotton in interval of 15-20 days. Dry the kapas and keep it in clean and dry place.
 - In Marathwada, as dry weather would prevail during the period, Continue picking of cotton in interval of 15-20 days. Dry the boll and keep it in clean and dry place. Undertake intercultural operations such as light hoeing and weeding in sunflower. Apply second dose of 50% nitrogen fertilizer to *rabi* jowar.
 - In Vidarbha, as dry weather is expected during next 5 days, apply irrigation to vegetable crops, sugarcane and orchards like orange and sweet lime in Central Vidarbha region. Undertake intercultural operations such as light hoeing in *rabi* crops to control evaporation losses from soil. Also to conserve moisture in orchards use farm waste as mulch. Continue harvesting of matured rice. Continue sowing of *rabi* safflower, gram, wheat with irrigation facilities. Continue picking of cotton in interval of 15-20 days. Dry the kapas and keep it in clean and dry place.
 - Due to partly cloudy weather in Konkan region, there may be attack of mango hoppers on new flush of mango; spray 25 % Cypermethrin @ 3 ml or 2.8 % Deltamethrin @ 9 ml per 10 liters of water.
 - Due to humid climatic conditions in Madhya Maharashtra, there may be incidence of downy mildew in cucumber and other vegetables; spray Copper oxychloride @ 25 g or Mancozeb 64% + metalaxil 8% combined fungicide @ 20 g or Thymoxynel 8 % + Mancozeb 64% @ 30 g per 10 litres of water at an interval of 10-12 days.

- **Gujarat:**

- Continue sowing of wheat, sowing of chickpea, onion, garlic, carrot and pea (for vegetable purpose), cumin, coriander under irrigation in North Saurashtra Zone. Carry out picking of cotton.
 - Continue land preparation for sowing of *rabi* crops like wheat, chick pea, onion, cumin, coriander, garlic in South Saurashtra Zone.
 - Continue sowing of wheat in South Gujarat Zone. In North Gujarat Zone, continue land preparation for sowing of potato. Temperature conditions are suitable for sowing of *rabi* crops; continue sowing of gram, mustard, onion, carrot, radish, fenugreek, coriander and nursery sowing/transplanting of cabbage, cauliflower and brinjal under irrigation. Continue harvesting of sorghum, matured fruits of cluster apple and picking of matured cotton bolls. Carryout hand weeding to conserve soil moisture in cotton and castor.
 - In North West Zone, temperature is most suitable for sowing of *rabi* crops; continue sowing of gram; continue land preparation for sowing of mustard; undertake sowing of lucerne and sowing/transplanting of cabbage, cauliflower, brinjal, onion, carrot and radish under irrigation. Undertake harvesting of matured fruits of custard apple and picking of matured cotton bolls.
 - In Bhal and Coastal Zone, continue sowing of wheat and mustard, chickpea, fennel and nursery sowing of cabbage, cauliflower and brinjal. Carryout intercultural operations and weeding in castor.
 - In Middle Gujarat Zone, continue land preparation for sowing of *rabi* crops; plan for *rabi* sowing according to availability of irrigation water. Sundry the harvested paddy to bring down the moisture content to the level of 12-14% and keep in safe storage.
 - In South Gujarat Heavy Rainfall Zone, continue sowing of *rabi* gram at proper soil moisture condition; continue planting of sugarcane, transplanting of cabbage and cauliflower, harvesting of rice, ragi at physiological maturity and sundry the harvested rice to bring down the moisture content to 12-14 %.
 - The weather condition is favourable for attack of pink bollworm in cotton crop in South Gujarat Zone; spray Cypermethrin 10 EC @ 10 ml or Fenvalrate 10 EC @ 5 ml or Deltamethrin 18 EC @ 5 ml in 10 litres of water

alternately for control.

➤ Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

➤ Increase the green fodder quantity for animals, arrange adequate amount of fresh drinking water for cattle in Gujarat.

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



Groundnut

Cotton

Land preparation

Rice

• **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands; East Sikkim district of Sikkim. Weather remained dry over rest of the region.

• **Advisories:**

▪ **West Bengal:**

- Taking advantage of prevailing dry weather, continue harvesting of matured *Aman* rice in Laterite and Red Soil Zone and New Alluvial Zone of Gangetic West Bengal.
- In Old Alluvial Zone, continue land preparation and sowing of lentil, potato and mustard.
- In Terai Zone and Old Alluvial Zone, continue seedbed preparation of winter vegetables. Before sowing, undertake seed treatment with *Trichoderma viridae* @ 4g/kg seed.
- In Hill Zone, continue transplanting of cole crops and undertake weeding followed by earthing up in ginger fields.
- In Coastal Saline Zone, complete sowing of early mustard within first week of November for avoiding aphid problem.
- In Laterite and Red soil Zone, undertake land preparation for sowing of wheat and potato after harvesting of *Aman* rice.
- In New Alluvial Zone, undertake land preparation for sowing of mustard in early harvested paddy fields. Also undertake land preparation for nursery sowing for late varieties of cauliflower and cabbage.
- In Coastal Saline Zone, due to hot and humid weather condition there may be chance of attack of gundhi bug in rice at milking to grain filling stage. To control, spray Quinalphos dust or Chlorpyrifos dust @ 3.3kg/bigha.
- In Laterite and Red soil Zone, in the present weather condition, there is chance of occurrence of leaf spot in chilli. Remove and destroy the affected parts and spray Mancozeb @ 0.25% twice at 10-15 days interval.
- In New Alluvial Zone, under hot and humid weather situation, there is a chance of attack of gundhi bug in rice, spray Carbosulfan 25 EC @ 2ml/litre or Profenphos 40% + Cypermethrin 4% @ 1ml/litre of water.

▪ **Andaman and Nicobar Islands:**

- In North, Middle and South Andaman and Nicobar, undertake harvesting of rice in clear weather.

▪ **Odisha:**

- In East and South Eastern Coastal Plain Zone, continue land preparation and sowing of *rabi* crops such as mustard, groundnut, Bengal gram sunflower etc., in fallow up-medium lands and nursery sowing of cole crops.
- In Western Undulating Zone, continue sowing of improved varieties of black gram vari. Sarala, Ujala, PU-30, T-9, Prasad, green gram varieties like Tarm-1, Dhauli, Durga, Kamdev Jyoti, PDM-54, PDM-11, Samrat, PM-1, PM-2 @ 6-8 kg/acre and cow pea vari. Utkala manika, Pusa Barsati and SEB- 2 @ 8kg/acre in fallow uplands.
- In North Central Plateau Zone, it is optimum time for sowing of mustard under rainfed conditions. In Eastern Ghat High Land Zone and South Eastern Ghat Zone, this is the optimum time for sowing of horse gram (Kulthi), black gram (Biri) and green gram.
- In East and South Eastern Coastal Plain Zone and South Eastern Ghat Zone, humid and cloudy weather favours infestation of blast and Bacterial Leaf blight in rice. For control of blast, spray Beam @ 1 g and Hinosan @ 1.5 g in 2 litres of water twice at 15 days interval. For Bacterial Leaf blight, spray Copper Oxychloride @ 20g along with Plantomycine @ 10 g in 20 litres of water.
- In East and South Eastern Coastal Plain Zone, red hairy caterpillar and leaf minor has been found in groundnut. Spray DDVP @ 200 ml per acre for control of hairy caterpillar and spray Chlorpyrifos @ 2 ml/litre of water to control leaf minor.
- In Western Undulating Zone, case worm and stem borer infestation is noticed in paddy crop at milking stage in some areas. Spray Triazophos or Monocrotophos or Profenphos @ 2ml/litre of water.
- In Mid Central Table Land Zone, the present weather condition of low temperature along with cloudy weather favours blast attack in rice. To control, spray Tricyclazole @ 0.5g/litre at 15 days interval.

- In North Eastern Ghat Zone, rice crop has been affected by Bacterial Leaf Blight. Undertake spraying of Plantomycin @ 200 g or Streptocyclin @ 20 g in 200 litres of water per acre for control.
- **Bihar:**
 - In South Alluvial Plain Zone, complete planting of potato, continue field preparation for sowing of chickpea and lentil, continue sowing of toria & rai, complete the sowing of fodder crops like berseem, oats and lucern, continue harvesting of matured rice crops.
 - In North East Alluvial Plain Zone, as dry weather would prevail, continue harvesting of paddy crop, dry it in the field for 2-3 days and thereafter threshing should be done. Continue transplanting of mature seedlings of cauliflower, cabbage, broccoli in raised bed, sowing of pulses, lentil, peas, rai, sunflower, maize, potato & fodder crops.
 - In North West Alluvial Plain Zone, continue land preparation for sowing of wheat and gram, continue planting of potato, continue or sowing of *rabi* crops such as maize, garlic, pea, rajma. Complete sowing of lentil crop up to 15 November for better yield and continue nursery preparation for *rabi* onion. Continue harvesting and threshing of rice crop and undertake thinning and weeding in mustard crop.
 - In North West Alluvial Plain Zone, present weather condition is *conducive* for the attack of borer/leaf cutting caterpillar in cauliflower, to control, use pheromone trap @ 3-4/acre. If insect population is above ETL, then, spraying of Spinosad @ 1 ml/4 litre of water is advised.
 - In North East Alluvial Plain Zone, present weather is conducive for attack of fruit fly infestation in Cucurbits. To control, use four Nomate cube Pheromone traps per acre or apply Monocrotophos @ 2 ml + 100g Jaggery (gur) per litre of water.
- **Jharkhand:**
 - In South Eastern Plateau Zone, continue sowing of *rabi* crops like- wheat, chickpea, mustard, lentil, linseed and sunflower. Continue nursery raising of onion & cultivation of vegetables like tomato, early cabbage, cauliflower & short duration French bean and leafy vegetables. Continue intercultural operation in horse gram, toria, pigeon pea, safflower, lobia, urad and moong bean and undertake harvesting of matured medium and low land rice crop.
 - In North Eastern Plateau Zone, continue land preparation for cultivation of improved wheat variety under irrigated condition, undertake weeding and inter cultural operation in potato and continue transplanting of tomato, cabbage, cauliflower & brinjal. Continue sowing of improved varieties of toria, mustard and gram as single crop or intercropping with linseed or mustard. Undertake harvesting of matured rice crops.
 - In Western Plateau Zone, continue harvesting of rice ,complete sowing of lentil, continue land preparation for cultivation of gram, linseed, mustard ,rapeseed, barley, pea & rainfed wheat and continue transplanting of winter vegetables like cauliflower, cabbage, chilli, tomato & brinjal, Continue sowing of radish, turnip, spinach, carrot, toria, green pea and complete planting of potato.
 - In Western Plateau Zone, present weather condition is conducive for the attack of powdery mildew disease in green pea, to control, spray Kairathen @ 1 ml per litre of water or Sulfex @ 3 gm per litre of water.
 - In North Eastern Plateau Zone, present weather is conducive for the occurrence of hairy caterpillars in urad / horsegram. To control, collect and destroy the egg and young larvae, by dusting 2% Methylparathion dust @ 25-30 kg/ha.
 - In South Eastern Plateau Zone, due to cool and clear sunny weather more attack of aphids in toria, to control, spray of Rogar (Dimethoate) @ 2ml or Monochrotophos @ 1 ml per litre of water.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry:**
 - In Sub-Himalayan West Bengal & Bihar, provide concentrate feed to milch animals mixed with dry and green fodders to ensure rich diet having protein, carbohydrate, fat and vitamins.

CENTRAL INDIA [M.P., CHHATTISGARH]



Cauliflower



Land preparation



Okra



Rice

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

- **Advisories:**

- **Madhya Pradesh:**

- In Satpura Plateau Zone, continue land preparation for cultivation of chickpea (JG-11, JG-16, JG-130, JG-218, JAKI-92-18) and transplanting of mature seedlings of cauliflower, cabbage, broccoli and continue field preparation and sowing of wheat, mustard and planting of sugarcane and planting of potato and garlic.
- In Malwa Plateau Zone, continue land preparation for sowing of wheat, transplanting of winter vegetables like,

cauliflower, cabbage, tomato, chilli and brinjal, nursery preparation of improved varieties of onion crop, field preparation and sowing of potato, pea, garlic and gram.

- In Kymore Plateau and Satpura Hill Zone, continue nursery preparation for cabbage and cauliflower and sowing of lentil, linseed, chickpea and green pea.
- Continue field preparation and sowing of pea, chickpea, lentil, transplanting of vegetables like brinjal, tomato, chilli, cauliflower and cabbage on raised bed and field preparation for sowing of wheat in areas where irrigation facilities are available in Bundelkhand Zone.
- Continue nursery preparation for onion and garlic and vegetables like tomato, chilli, brinjal, cabbage and cauliflower, sowing of green peas and planting of potato in Vindhya Plateau Zone. Undertake land preparation and keep inputs ready for sowing of wheat.
- Continue field preparation and sowing of wheat, gram and mustard, transplanting of vegetables like cauliflower, cabbage, tomato, chilli and brinjal, sowing of vegetable pea in Jhabua Hill Zone.
- Continue field preparation and planting of potato, sowing of mustard, gram and green pea in Grid Zone. Undertake sowing of wheat by 15th November.
- In Jhabua Hill Zone, present weather is congenial for incidence of shoot borer in ginger and turmeric. To control of shoot borer, spray Triazophos @ 2 ml/litre of water.
- **Chhattisgarh:**
 - In North Hill Zone, continue raising seedlings of onion and land preparation and sowing of gram, lentil, linseed, toria, mustard, pea, garlic and planting of potato and also complete harvesting of rice. Continue transplanting of winter vegetables.
 - In Plain Zone of Chhattisgarh, complete harvesting of rice and planting of onion and winter sugarcane. Continue land preparation and sowing of gram, lentil, linseed and safflower. Undertake sowing of French bean, round guard and *rabi* vegetables.
 - Continue harvesting of rice in midland and lowland areas and sowing of gram, pulses, pea and safflower and nursery preparation for vegetables like cabbage, cauliflower, chilli, planting of potato and sowing of sweet potato in Bastar Plateau Zone. Undertake sowing of wheat by 15th November under irrigated conditions.
 - Suitable varieties are given in Annexure III.
- **Animal Husbandry**
 - Vaccinate the goats for control of PPR Disease, keep goats in dry and shaded place, provide green fodder, fresh and clean water and undertake control measures for ecto parasite in Madhya Pradesh.
 - Provide concentrate feed to milch animals by mixing dry and green fodder enriched with protein, carbohydrate, fat, vitamins etc. in Chhattisgarh.

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



Cotton



Land preparation



Maize



Cabbage

- **Realised Rainfall:** Rainfall occurred in Chamba district of Himachal Pradesh; Anantnag, Baramula, Ganderbal, Kulgam, Kupwara, Pulwama, Rajouri, Ramban and Srinagar districts of Jammu & Kashmir. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As shallow fog would occur at isolated places over **Punjab, Haryana, Chandigarh & Delhi** and **Uttar Pradesh** in the morning hours during next 2-3 days, monitor potato, tomato and onion crops for early blight disease. If symptoms are noticed contact the nearest Agricultural University/College/KVK.
 - **Jammu & Kashmir:**
 - As rain/snow would occur at most places over Jammu & Kashmir on 13th November along with heavy rain/snow at isolated places, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields.
 - In Valley Temperate Zone, provide drainage channels in the brown sarson crop fields wherever there is probability of water accumulation.
 - In Sub Tropical Zone, continue sowing of mustard after seed treatment with Captan or Thiram @ 3g/kg seed before sowing and land preparation for sowing of *rabi* pulses viz. pea, chickpea, lentil and early sowing of wheat, nursery raising of onion and planting of potato after current spells of heavy rain/snow.
 - In Valley Temperate Zone of Jammu & Kashmir, continue land preparation for sowing of leafy vegetables and

planting of bulb crops. Continue sowing of wheat and oat, brown sarson, peas, pulses, lentil and berseem as fodder crops.

- In Intermediate Zone, continue sowing of wheat, oat higher Zones after current spells of heavy rain/snow and treat the seeds with Carboxin (Vitavax), Carbendazim (2g/kg seed) or Tebuconazole (1.25g/kg seed) for managing the seed borne disease like loose smut, flag smut and Karnal bunt before sowing.
- In Cold Arid Zone, undertake transplanting of cabbage, cauliflower, KnolKhol, Kale, broccoli and lettuce in green houses. Continue sowing of garlic (var. Parvati) in trenches, low tunnels. Cover the trenches and low tunnels with polythene in the night to avoid loss due to sudden temperature dip below -5°C.
- In Sub Tropical Zone, due to congenial weather condition, there may be attack of saw fly in toria. To control, spray Cypermethrin @ 1ml/litre of water after current spells of rain/snow.

▪ **Uttarakhand:**

- In Bhabar and Tarai Zone, continue sowing of wheat, barley, oats, mustard and planting of potato and onion under optimum soil moisture and planting of Autumn sugarcane, garlic & vegetable pea. Temperature conditions are favourable for top dressing (1/2 kg Urea per Nali) in toria of 30 days duration after weeding & thinning operations.
- In Hill Zone, continue sowing of vegetable pea, radish, palak, methi, carriander, cabbage, cauliflower, garlic, and toria. Also continue nursery sowing of onion, planting of potato.
- In Sub humid Sub tropic Zone, continue harvesting of matured rice crops and undertake land preparation and sowing of wheat, mustard, pea and lentil crops.

▪ **Himachal Pradesh:**

- In Sub-Montane and Low Hills Sub-Tropical Zone and Mid Hills sub-Humid Zone, continue sowing of wheat, barley, gobhisarson and peas and transplanting of tomato in raised bed and cauliflower (early group & late group), cabbage, Knol Khol, Broccoli and Chinese cabbage and also continue direct sowing of radish, carrot, turnip, palak and methi in mid hill areas, planting of potato in lower and mid hills regions. Continue sowing of garlic in Sub-Montane and Low Hills Sub-tropical Zone.
- In High Hill Temperate zone, continue harvesting of peas and potato in clear weather.
- Under prevailing weather condition, there are chances of attack of cutworms in vegetables in Sub-Montane and Low Hills Sub-Tropical Zone. For control, spray Chlorpyrifos 20 EC @ 2.5 ml/litre of water. For the control of damping off disease in vegetable crops mix thoroughly Dithane M 45 dust @ 10-15 g in 1X 3metre beds.

▪ **Rajasthan:**

- In West Rajasthan, continue field preparation for sowing of wheat, continue sowing of gram, garlic, fenugreek, mustard, barley and fennel, onion, carrot, lucern, taramira. Undertake sowing of cumin and isabgol, undertake weeding and hoeing operations in mustard crop in Arid Western Plain Zone. Continue harvesting of guar and bajra crops and continue sowing of lucern, taramira in Transitional Plain Zone of Inland Drainage. Continue harvesting of sugarcane sown in February/March in Irrigated Northwestern Plain Zone.
- In East Rajasthan, continue sowing of gram, mustard, and lentil and field preparation for planting of potato in Flood Prone Eastern Plain Zone and sowing of chickpea, rabi maize in Southern Humid Plain Zone. Undertake sowing of barley and fenugreek and continue field preparation for sowing of wheat in Semi-Arid Eastern Plain Zone.
- Continue harvesting of urad, soybean and maize and apply irrigation in rice, sugarcane and vegetable crops in South-eastern Humid Plain Zone. Continue field preparation for sowing of wheat, early pea, complete sowing of garlic in Sub Humid Southern Plain and Aravali Hill Zone.
- In Southern Humid Plain Zone, in the present weather, there are chances of attack of mealy bug on horticulture crops, spray Profenophos @ 1.25 litre/ha (add 1 spoon washing powder as sticker).
- In Irrigated Northwestern Plain Zone, to prevent dropping of *kinnow* fruits due to rise in temperature in *kinnow* orchards, spray Propineb 70 WP @ 2 g /litre of water.
- In Flood Prone Eastern Plain Zone, the weather conditions are conducive for cutworm and painted bug in mustard seedlings, for control dust 1.5% Quinalphos.
- In view of rise in temperature, leaf curl and mosaic diseases may affect papaya crop in Semi-Arid Eastern Plain Zone, spray Dimethoate 30 EC or Methyl Demeton 25 EC @ 1 ml per litre.

▪ **Punjab, Haryana and Delhi:**

- In Western Plain Zone of Punjab, continue sowing of wheat, gram, kabuli gram, mustard, radish, carrot, turnip, planting of sugarcane under assured irrigation and sowing of toria, gobhisarson, pea, potato, cabbage, radish, garlic as intercrops in sugarcane.
- In Western Zone of Punjab, continue harvesting of matured rice, picking of cotton and nursery sowing of *rabi* onion, tomato and sowing of radish, turnip and carrot, land preparation for sowing of potato and transplanting of cauliflower and cabbage.
- In Undulating Plain Zone of Punjab, continue sowing of wheat, raya, planting of fruit plants viz citrus, mango, litchi, guava, loquat, ber, amla and papaya. Complete planting of autumn sugarcane.
- In Central Plain Zone of Punjab, continue sowing of wheat, lentil, raya, gram, onion, pea, fodder crops lucerne, oats and senji.
- In Sub-Montane Undulating Zone of Punjab, continue sowing of raya, gobi sarson and taramira.
- In Western Zone of Haryana, continue field preparation for sowing of wheat, Bengal gram kabuli chana and

vegetables like pea, potato carrot and sowing of mustard and berseem and oat as fodder crops. Continue harvesting of matured early sown basmati rice. Complete picking of cotton after sunrise when dew is completely evaporated.

- In Eastern zone of Haryana, continue land preparation for sowing of wheat, Bengal gram(chick pea/kabuli chana) after harvesting of rice.
- In Western Semi-Arid Zone of Delhi, continue sowing of *rabi* onion, before sowing seeds should be treated with Captan @ 2.5 g/kg of seed, continue harvesting of paddy, sowing of gram, early mustard, sarson sag, spinach, coriander, fenugreek, turnip, radish, carrot, pea and wheat, transplanting of tomato, cabbage, broccoli and early cauliflower on ridges, planting of early potato, winter sugarcane. Also continue sowing of garlic-G-1,41,50,282 in raised bed.

▪ **Uttar Pradesh:**

- In Central Plain Zone, continue land preparation / sowing of wheat. Continue sowing of autumn sugarcane, vegetable pea, garlic, barley, linseed, lentil, kabuli gram, toria, gram, pea, mustard, pointed gourd, parval gourd, radish and planting of potato and turmeric, fenugreek, coriander, carrot, spinach, root beat. Continue planting of cabbage, capsicum, chilli, brinjal, tomato and cauliflower. Continue sowing of *rabi* onion. Undertake sowing/transplanting of crops under assured irrigation. Apply irrigation to winter maize.
- In Eastern Plain Zone, continue harvesting of matured rice and undertake land preparation and sowing of wheat. Continue sowing of gram, lentil and mustard, fodder crop berseem and barley. Continue sowing of vegetable pea and toria and sowing of winter vegetables, fenugreek, coriander, garlic, carrot, radish, spinach and planting of potato.
- In Western Plain Zone, continue harvesting of matured rice. Continue sowing of linseed, gram, mustard, barseem and nursery sowing of tomato, cauliflower, onion, planting of autumn sugarcane and potato. Continue sowing of toria and transplanting of brinjal and tomato.
- In Bundelkhand Zone, continue harvesting of matured urad, moong, soybean, paddy and groundnut. Continue sowing of linseed, flaxseed, mustard, pea, gram, lentil, jou and land preparation for sowing of wheat. Continue sowing of vegetable pea, palak, coriander, carrot, and planting/transplanting of cauliflower, cabbage, tomato, chilli and brinjal.
- In North Eastern Plain Zone, continue sowing of wheat, toria, mustard, pea, gram, *rabi* maize, potato, linseed and lentil under assured irrigation.
- In Central Plain Zone, under prevailing weather condition, there may be chances of attack of saw fly in toria, for control, spray Malathion 50 EC @ 1.5 litre in 500 to 600 litres of water per ha.
- Suitable varieties for sowing are given in Annexure III.

• **Horticulture**

- In Mild Hills Sub Humid Zone of Himachal Pradesh, weather is conducive for infestation of root borer in the apple trees. To control, apply 0.05% Chlorpyrifos @ 5ml/litre of water on the infested trees.

• **Floriculture**

- Blue beetle attack is seen in roses and balsam in Sub Montane and Low Hills Sub Humid Zone of Himachal Pradesh. For control spray Cypermethrin @ 0.05 ml per litre of water.

• **Animal Husbandry**

- In Sub-Montane and Low Hills Sub-tropical Zone and Mid Hills Sub- Humid Zone of Himachal Pradesh, humid weather is conducive for ticks and mites attack on animals. For control, spray Butox @ 2ml per litre of water.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	28.10.15		04.11.15		11.11.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	20.8	-36	0.4	-97	11.4	-40
Dibang Valley	**	**	**	**	**	**
East Kameng	3.4	-84	0.0	-100	0.0	-100
East Siang	4.3	-87	9.6	28	24.8	134
Kurung Kumey	**	**	**	**	**	**
Lohit	12.7	-4	0.0	-100	20.4	168

Lower Dibang Valley	3.9	-80	1.8	-80	116.7	443
Lower Subansari	**	**	**	**	**	**
Papumpara	2.2	-35	4.2	-79	1.3	-80
Tawang	0.0	-100	**	**	5.0	-63
Tirap	0.0	-100	1.4	-88	2.4	-77
Upper Siang	17.2	-58	28.8	138	40.4	0
Upper Subansari	0.0	-100	0.0	-100	2.6	-51
West Kameng	9.0	-58	4.2	-49	2.2	-84
West Siang	**	**	**	**	**	**
Assam&Meghalaya						
Assam						
Baksa	10.2	-16	1.6	-62	0.0	-100
Barpeta	0.0	-100	14.9	254	6.6	-35
Bongaigaon	0.0	-100	16.4	178	10.2	32
Cachar	0.0	-100	6.2	-63	0.0	-100
Chirang	0.0	-100	8.2	39	4.0	-48
Darrang	**	**	**	**	**	**
Dhemaji	**	**	**	**	0.0	-100
Dhubri	7.1	-45	4.3	-53	9.6	129
Dibrugarh	12.7	-8	15.5	39	10.6	49
Goalpara	18.5	106	0.0	-100	0.0	-100
Golghat	11.5	-25	9.0	-34	4.9	-29
Hailakandi	0.0	-100	14.9	10	0.0	-100
Jorhat	17.1	20	13.5	11	0.5	-95
Kamrup(Rural)	7.3	-22	14.4	55	0.0	-100
Kamrup(Metro)	0.0	-100	2.6	-72	0.0	-100
Karbi Anglong	0.1	-99	3.3	-26	12.4	58
Karimganj	0.0	-100	20.0	-11	0.0	-100
Kokrajhar	2.3	-58	4.4	-44	0.0	-100
Lakhimpur	0.1	-99	12.7	31	3.1	-55
Morigaon	0.0	-100	13.2	67	0.0	-100
N.C.Hills	0.0	-100	24.7	-59	0.0	-100
Nowgong	3.3	-83	1.9	-72	4.9	-50
Nalbari	4.8	-34	7.3	-25	1.5	-81
Sonitpur	15.2	12	13.3	64	11.3	94
Sibsagar	30.1	246	4.7	-73	1.7	-56
Tinsukia	14.5	29	3.9	-67	12.0	107
Udalgiri	41.7	192	19.0	192	1.9	-56
Meghalaya						
East Garo Hills	0.0	-100	13.4	26	0.0	-100
East Khasi Hills	0.2	-99	7.8	-62	1.1	-93
Jaintia Hills	0.0	-100	**	**	0.0	-100
Ribhoi	12.1	-21	41.0	719	6.3	5
South Garo Hills	**	**	**	**	**	**
West Garo Hills	0.2	-99	3.0	-41	0.0	-100
West Khasi Hills	1.0	-93	**	**	0.0	-100
NMMT						
Mizoram					**	**
Aizwal	0.0	-100	4.8	-85	0.0	-100

Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	**	**	**	**	**	**
Serchhip	**	**	3.0	-81	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	11.8	-54	0.0	-100
Imphal west	0.0	-100	2.6	-91	0.0	-100
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	**	**	**	**
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.2	-99	19.8	50	0.9	-97
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	2.4	-85	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	0.0	-100	**	**	0.0	-100
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	**	**	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	3.2	-87	0.0	-100
NorthTripura	11.4	-44	11.4	-48	0.0	-100
SouthTripura	0.8	-96	4.5	-80	0.0	-100
West Tripura	2.4	-89	0.2	-99	0.0	-100
Himachal Pradesh						
Bilaspur	10.3	280	0.2	-94	0.0	-100
Chamba	9.6	33	0.0	-100	21.9	811
Hamirpur	8.1	213	0.0	-100	1.7	43
Kangra	11.4	179	0.0	-100	6.8	258
Kinnaur	0.0	-100	0.0	-100	2.9	7
Kullu	4.0	-2	0.0	-100	18.4	319
Lahaul and Spiti	7.5	27	0.0	-100	14.0	164
Mandi	8.8	203	0.1	-97	3.0	13
Shimla	4.6	15	1.2	-68	1.8	-43
Sirmaur	4.8	83	0.0	-100	0.5	-75
Solan	12.3	324	0.0	-100	0.9	-57
Una	11.9	323	0.0	-100	0.0	-100
Punjab						
Amritsar	7.6	655	0.0	-100	4.7	325

Barnala	3.0	114	0.0	-100	0.0	-100
Bhatinda	4.0	3900	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	6.7	852	0.0	-100	2.7	1233
Ferozpur	1.0	233	0.0	-100	0.0	-100
Gurdaspur	9.4	249	0.0	-100	2.2	96
Hoshiarpur	8.7	691	0.0	-100	0.1	-63
Jalandhar	0.0	-100	0.0	-100	7.0	438
Kapurthala	0.0	-100	0.0	-100	9.7	1290
Ludhiana	5.0	729	0.0	-100	6.7	509
Mansa	2.2	1000	0.0	-100	1.8	192
Moga	0.0	-100	0.0	-100	0.0	-100
Muktesar	3.0	233	0.0	-100	0.0	-100
Nawashahar	6.2	464	0.0	-100	0.0	-100
Patiala	5.3	485	0.0	-98	0.0	-100
Ropar	9.7	785	0.0	-100	4.1	153
Sangrur	4.3	760	0.0	-100	0.0	-100
Mohali	5.0	2400	0.0	-100	1.2	140
TarnTaran	5.0	900	0.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						
Ambala	3.2	144	0.0	-100	0.6	-73
Bhiwani	0.3	-63	1.0	11	0.0	-100
Chandigarh	13.6	467	0.0	-100	0.0	-100
Faridabad	0.0	-100	0.0	-100	0.0	-100
Fatehabad	1.7	1567	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.0	-100	0.0	-100
Hissar	4.1	312	0.0	-100	5.0	115
Jhajar	0.0	-100	2.8	133	0.0	-100
Jind	0.3	-84	1.5	-12	0.0	-100
Katihah	1.7	1567	0.0	-100	0.0	-100
Karnal	2.1	9	1.8	-27	0.5	67
Kurukshetra	0.0	-100	0.0	-100	0.0	-100
Mahendragarh	0.0	-100	7.2	552	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.0	-100	0.0	-100
Panchkkula	2.0	150	0.0	-100	0.9	125
Panipat	0.0	-100	0.8	-46	0.0	-100
Rewari	0.8	14	4.6	411	1.1	163
Rohtak	0.0	-100	3.3	63	0.0	-100
Sirsa	8.3	8150	0.0	-100	5.0	317
Sonepat	0.0	-100	0.0	-100	0.6	-73
Yamunanagar	1.8	8	0.0	-100	0.0	-100
Delhi						
Central Delhi	0.0	-100	**	**	1.0	67
East Delhi	0.0	-100	**	**	0.0	-100
New Delhi	0.0	-100	0.0	-100	1.2	103
North Delhi	0.0	-100	0.0	-100	2.6	333
North East Delhi	0.0	-100	**	**	1.0	67

North West Delhi	0.0	-100	**	**	1.0	67
South Delhi	0.0	-100	0.0	-100	0.0	-100
South West Delhi	0.0	-100	0.0	-100	3.2	433
West Delhi	0.0	-100	**	**	1.0	67
Jammu & Kashmir						
Anantnag	34.6	339	2.6	-70	21.7	164
Badgam	37.7	259	8.2	-23	9.6	91
Bandipore	**	**	**	**	**	**
Baramula	85.0	804	10.9	-26	33.2	463
Doda	51.2	783	0.0	-100	17.6	171
Ganderbal	42.0	432	11.8	79	33.0	408
Jammu	14.6	329	2.9	21	8.2	641
Kargil	**	**	**	**	**	**
Kathua	10.0	194	0.0	-100	1.2	-8
Kistwar	**	**	**	**	**	**
Kulgam	25.5	223	5.6	-35	31.6	285
Kupwara	91.2	624	23.3	108	47.5	296
Ladakh(Leh)	0.0	-100	0.0	-100	0.0	-100
Poonch	**	**	**	**	0.0	-100
Pulwama	25.6	197	5.9	11	23.7	541
Rajouri	38.8	1517	0.0	-100	23.2	200
Ramban	58.4	907	7.9	21	31.5	384
Reasi	28.6	767	5.6	51	12.3	356
Samba	9.0	165	0.0	-100	2.4	118
Shopian	**	**	**	**	**	**
Srinagar	29.9	278	12.4	87	55.8	758
Udhampur	16.0	385	1.6	-57	14.6	441
East Madhya Pradesh						
Anuppur	2.1	-72	27.0	1826	0.0	-100
Balaghat	0.0	-100	7.0	340	0.0	-100
Chhatarpur	4.7	124	14.6	713	9.3	322
Chindwara	15.0	200	25.6	574	0.7	-80
Damoh	4.1	116	36.5	836	0.0	-100
Dindori	1.5	-81	96.7	2586	0.0	-100
Jabalpur	0.0	-100	23.5	804	0.0	-100
Katni	3.2	45	38.2	1058	0.0	-100
Mandla	8.6	21	17.7	609	0.0	-100
Narsingpur	0.0	-100	31.2	767	0.0	-100
Panna	3.9	225	14.8	573	3.5	150
Rewa	3.9	1189	54.4	2265	0.0	-100
Sagar	1.4	-49	15.4	451	0.0	-100
Satna	6.7	733	34.4	2763	4.9	88
Seoni	20.1	214	23.9	647	0.0	-100
Shahdol	0.0	-100	48.0	2724	0.0	-100
Sidhi	11.8	462	84.2	5163	0.0	-100
Singrauli	0.0	-100	52.0	25900	0.0	-100
Tikamgarh	1.0	-55	4.5	650	0.0	-100
Umaria	2.1	-30	46.4	2478	0.0	-100

West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	3.0	36	0.0	-100	0.0	-100
Asoknagar	5.5	244	14.5	200	0.0	-100
Badwani	20.3	821	0.0	-100	0.0	-100
Betul	6.4	25	9.5	187	0.0	-100
Bhind	6.6	2083	4.5	305	0.0	-100
Bhopal	3.2	45	0.0	-100	0.0	-100
Burhanpur	0.0	-100	3.0	-38	1.0	-76
Datia	2.9	139	7.1	607	0.0	-100
Dewas	0.0	-100	**	**	0.0	-100
Dhar	16.4	582	0.0	-100	0.0	-100
Guna	0.1	-97	0.7	-36	0.0	-100
Gwalior	19.2	2033	15.4	923	0.0	-100
Harda	0.0	-100	3.7	367	0.0	-100
Hosangabad	0.9	-59	24.6	748	0.0	-100
Indore	2.3	44	0.7	-83	0.0	-100
Jhabua	10.5	274	0.0	-100	0.0	-100
Khandwa	3.0	3	15.0	369	0.0	-100
Khargone	1.0	-47	7.1	342	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	1.3	79	13.6	3287	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.4	-88	3.5	169	0.0	-100
Rajgarh	0.0	-100	1.6	-13	0.0	-100
Ratlam	3.4	240	0.0	-100	0.0	-100
Sehore	4.2	56	0.6	-63	0.0	-100
Shajapur	2.6	44	0.0	-100	0.0	-100
Sheopur Kalani	4.0	567	15.0	2900	0.0	-100
Shivpuri	22.5	1945	8.3	725	0.0	-100
Ujjain	0.2	-91	0.0	-100	0.0	-100
Vidisha	3.9	87	6.4	436	1.6	-55
Chhattisgarh						
Bastar	2.3	-84	9.9	60	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	2.5	-74	6.4	64	0.0	-100
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	8.6	514	0.0	-100
Durg	0.3	-97	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	22.1	401	0.0	-100
Kanker	0.0	-100	1.3	-70	0.0	-100
Korba	0.0	-100	9.0	190	0.0	-100
Koriya	0.0	-100	53.2	3225	0.0	-100
Kawardha	0.0	-100	1.2	-65	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	3.6	-45	0.0	-100
Raigarh	0.0	-100	5.7	112	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100

Rajandgaon	0.2	-98	0.0	-100	0.0	-100
Surguja	0.1	-99	31.7	1074	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	19.9	284	0.0	-100
Ambedkar Nagar	2.0	82	18.0	718	0.0	-100
Azamgarh	0.0	-100	3.9	17	0.0	-100
Bahraich	0.0	-100	0.5	-48	0.0	-100
Ballia	0.0	-100	6.8	94	0.0	-100
Balrampur	0.0	-100	0.3	-73	0.0	-100
Banda	0.0	-100	9.0	1020	0.0	-100
Barabanki	0.0	-100	1.3	-11	0.0	-100
Basti	0.0	-100	1.1	13	0.0	-100
Chandauli	0.0	-100	8.2	156	0.0	-100
Deoria	0.0	-100	21.5	877	0.0	-100
Faizabad	0.0	-100	0.3	-63	0.0	-100
Farrukhabad	1.2	20	8.5	611	0.0	-100
Fatehpur	0.0	-100	4.8	269	2.7	281
Gazipur	0.0	-100	22.4	523	1.3	-63
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	0.0	-100	1.1	-68	0.0	-100
Hardoi	0.0	-100	11.5	1053	0.0	-100
Jaunpur	0.0	-100	3.9	19	0.0	-100
Kannauj	4.0	400	10.5	1212	0.0	-100
Kanpur City	5.4	350	5.8	429	0.0	-100
Kanpur Dehat	3.8	283	11.2	1772	0.0	-100
Kaushambi	0.0	-100	6.1	144	0.0	-100
Kheri	0.0	-100	4.7	567	0.0	-100
Kushi nagar	0.0	-100	1.0	-71	0.0	-100
Lucknow	0.0	-100	0.8	-41	0.0	-100
Maharajganj	0.0	-100	13.5	650	0.0	-100
Mau	0.0	-100	5.0	47	0.0	-100
Mirzapur	0.0	-100	35.5	1084	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
RaiBareilly	0.0	-100	4.7	847	0.0	-100
Sahuji Maharajnagar	0.0	-100	11.6	263	0.0	-100
Sant Kabirnmagar	0.0	-100	0.0	-100	0.0	-100
Sant Ravidas Nagar	0.0	-100	2.0	-37	0.0	-100
Shrawasti	0.0	-100	0.0	-100	0.0	-100
Sidharthnagar	0.0	-100	5.5	447	0.0	-100
Sitapur	0.0	-100	0.0	-100	0.0	-100
Sonbhadra	0.0	-100	25.4	1850	0.8	-64
Sultanpur	0.0	-100	1.2	23	1.3	33
Unnao	0.5	25	0.8	-25	0.0	-100
Varanasi	0.0	-100	22.4	505	0.0	-100
West Uttar Pradesh						
Agra	1.3	213	12.3	1950	0.0	-100
Aligarh	0.0	-100	9.9	2383	0.0	-100
Auraiya	14.5	3525	3.7	23	0.0	-100

Badaun	0.0	-100	0.2	-86	0.0	-100
Baghpat	0.0	-100	0.0	-100	2.8	300
Bareilly	0.0	-100	5.1	237	1.4	356
Bijnor	0.0	-100	1.0	-63	4.5	543
Bulandsahar	0.0	-100	4.9	308	0.0	-100
Etah	0.3	-63	8.3	1289	0.0	-100
Etawah	3.9	200	2.8	29	0.0	-100
Firozabad	0.7	40	1.1	1000	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	1.9	131
Hamirpur	0.8	275	9.8	3150	0.0	-100
Jalaun	0.8	275	18.3	1937	0.0	-100
Jhansi	2.0	900	9.5	960	6.2	129
Jotiba Phule Nagar	0.0	-100	0.0	-100	2.5	108
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	2.0	33	1.0	100	0.0	-100
Mahamaya Nagar	0.0	-100	11.0	109900	0.0	-100
Mahoba	0.0	-100	12.6	4100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	0.0	-100
Mathura	1.0	67	0.0	-100	0.0	-100
Meerut	0.0	-100	0.3	-92	4.6	561
Moradabad	0.0	-100	8.0	283	5.2	478
Muzzaffarnagar	0.0	-100	0.0	-100	10.1	1343
Pilibhit	0.0	-100	7.8	169	1.1	-21
Rampur	0.0	-100	5.0	66	5.9	2867
Saharanpur	0.0	-100	7.3	47	10.0	1329
Shahjahanpur	0.0	-100	6.9	200	0.0	-100
Uttarakhand						
Almora	0.0	-100	0.8	-78	0.0	-100
Bageshwar	0.0	-100	0.0	-100	0.0	-100
Chamoli	0.0	-100	1.7	-57	0.0	-100
Champawat	0.0	-100	8.8	82	3.5	150
Dehradun	1.7	-63	0.0	-100	1.1	-52
Garhwal Pauri	0.0	-100	0.0	-100	0.1	-95
Garhwal Tehri	0.0	-100	0.0	-100	0.0	-100
Haridwar	0.7	17	3.2	23	3.7	640
Nainital	0.0	-100	3.0	-9	5.3	194
Pithoragarh	0.0	-100	0.0	-100	0.0	-100
Rudraprayag	0.0	-100	0.9	-79	0.0	-100
Udham Sing Nagar	0.0	-100	2.5	32	1.3	-7
Uttarkashi	0.0	-100	0.0	-100	0.0	-100
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	2.9	-1	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	3.7	83	0.0	-100
Bhagalpur	0.0	-100	0.5	-90	0.0	-100

Bhojpur	0.0	-100	2.5	19	0.0	-100
Buxar	0.0	-100	6.3	117	0.0	-100
Darbhanga	0.0	-100	0.0	-100	0.0	-100
East Champaran	0.0	-100	9.8	389	0.0	-100
Gaya	0.0	-100	0.8	-65	0.0	-100
Gopalganj	0.0	-100	22.7	809	0.0	-100
Jahanabad	0.0	-100	0.7	-12	**	**
Jamui	0.0	-100	0.0	-100	0.0	-100
Katihar	0.0	-100	0.8	-79	**	**
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	0.0	-100
Madhepura	0.0	-100	0.0	-100	0.0	-100
Madhubani	0.0	-100	0.0	-100	**	**
Monghyar	0.0	-100	0.4	-88	0.0	-100
Muzaffarpur	0.0	-100	9.6	199	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	8.3	263	0.0	-100
Purnea	0.0	-100	0.5	-76	0.0	-100
Rohtas	0.0	-100	9.3	415	0.0	-100
Saharsha	0.0	-100	0.0	-100	**	**
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	3.6	30	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100
Sheohar	0.0	-100	0.0	-100	**	**
Sitamarhi	0.0	-100	12.4	359	0.0	-100
Siwan	0.0	-100	1.1	-57	0.0	-100
Supaul	0.0	-100	0.0	-100	0.0	-100
Vaishali	0.0	-100	10.8	315	0.0	-100
West Champaran	0.0	-100	10.9	241	0.0	-100
Jharkhand						
Bokaro	0.0	-100	8.6	87	0.0	-100
Chatra	0.0	-100	1.3	-30	0.0	-100
Deoghar	0.0	-100	1.2	-82	0.0	-100
Dhanbad	0.0	-100	4.6	-30	0.0	-100
Dumka	0.0	-100	0.0	-100	0.0	-100
East Singbhum	0.0	-100	24.1	372	0.0	-100
Garhwa	0.3	-84	9.5	252	0.0	-100
Giridih	0.0	-100	4.0	0	0.0	-100
Godda	0.0	-100	1.7	-44	0.0	-100
Gumla	0.0	-100	35.6	401	0.0	-100
Hazaribagh	0.0	-100	12.5	399	0.0	-100
Jamtara	0.0	-100	2.3	-80	0.0	-100
Khunti	0.0	-100	12.0	107	0.0	-100
Koderrna	0.0	-100	0.7	-85	0.0	-100
Latehar	0.0	-100	19.8	631	0.0	-100
Lohardagga	0.0	-100	20.1	457	0.0	-100
Pakur	0.0	-100	8.9	20	0.0	-100

Palamau	1.0	-76	7.0	190	0.0	-100
Ramgarh	0.0	-100	13.6	325	0.0	-100
Ranchi	0.0	-100	27.3	284	0.0	-100
Sahebganj	0.0	-100	0.0	-100	0.0	-100
Saraikela	0.0	-100	9.4	203	0.0	-100
Simdega	0.0	-100	25.3	449	0.0	-100
West Singhbhum	0.0	-100	37.0	1132	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	0.8	-36	4.5	353	0.0	-100
Banswara	0.7	-35	0.0	-100	0.0	-100
Baran	0.5	-50	0.0	-100	0.0	-100
Bharatpur	3.0	500	13.1	3175	0.0	-100
Bhilwara	0.0	-100	0.0	-100	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	1.4	1300	13.3	2122	0.0	-100
Dholpur	0.0	-100	15.3	15186	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	4.6	475	12.2	1431	0.1	-89
Jhalawar	1.4	14	0.0	-100	0.0	-100
Jhunjhunu	0.9	-26	4.1	195	4.8	1496
Karauli	1.3	48	10.6	2557	0.0	-100
Kota	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	1.1	41	21.0	20900	0.0	-100
Sikar	0.3	-82	5.9	318	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.7	260	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	1.9	219	0.0	-100	0.0	-100
Churu	1.7	145	0.0	-100	0.1	-71
Hanumangarh	12.4	200	0.0	-100	1.0	900
Jaisalmer	0.1	-88	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	1.1	250	0.0	-100	0.0	-100
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.5	-68	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	1.5	-50	0.0	-100	**	**

Dahod	1.1	-40	0.0	-100	0.0	-100
Daman	0.0	-100	0.0	-100	**	**
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	1.2	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	1.0	-63	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	0.3	-94	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.8	-36	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	0.7	-84	0.0	-100	0.0	-100
North Goa	0.0	-100	5.3	-60	4.5	-62
Raigad	2.1	-81	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.1	-98	5.0	-35
Sindhudurg	0.0	-100	42.2	314	6.1	-36
South Goa	0.0	-100	1.9	-85	13.7	41
Thane	1.2	-78	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.5	-95	0.0	-100	0.0	-100
Dhule	3.2	-14	0.0	-100	0.0	-100
Jalgaon	0.7	-86	1.9	-42	0.0	-100
Kolhapur	0.0	-100	0.0	-100	2.5	-71
Nandurbar	2.5	-16	0.0	-100	0.0	-100
Nasik	7.8	8	0.0	-100	0.0	-100
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	4.2	-42	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.1	-99	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	0.0	-100	0.0	-100	0.0	-100
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	0.1	-99	0.9	-58	0.0	-100
Bhandara	0.0	-100	1.4	-54	0.0	-100
Buldhana	0.0	-100	1.6	-53	0.0	-100
Chandrapur	0.0	-100	6.8	197	0.0	-100
Gadchiroli	0.0	-100	17.7	321	0.0	-100
Gondia	0.0	-100	2.8	0	0.0	-100
Nagpur	0.2	-98	12.9	329	0.0	-100
Wardha	0.0	-100	7.8	100	0.0	-100
Washim	0.4	-95	0.0	-100	0.0	-100
Yeotmal	0.0	-100	1.9	-54	0.0	-100
Odisha						
Angul	0.0	-100	0.2	-98	0.0	-100
Balasore	1.0	-96	0.9	-97	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	11.3	-66	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	5.9	-78	0.0	-100
Deogarh	0.0	-100	5.0	-15	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	15.2	-53	0.0	-100
Ganjam	0.7	-98	28.3	-34	0.0	-99
Jagatsingpur	0.0	-100	22.8	-53	0.0	-100
Jajpur	0.0	-100	3.4	-85	0.0	-100
Jharsuguda	0.0	-100	2.9	-41	0.0	-100
Kalahandi	0.0	-100	0.6	-89	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	24.7	-34	0.0	-100
Keonjhar	0.0	-100	0.4	-97	0.0	-100
Khurda	0.0	-100	5.4	-83	0.0	-100
Koraput	0.0	-100	4.4	-74	0.0	-100
Malkangiri	0.0	-100	109.0	1085	1.0	-71
Mayurbhanj	0.0	-100	2.5	-85	0.0	-100
Nawapara	0.0	-100	0.6	-89	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	7.3	-78	0.0	-100
Puri	0.3	-99	43.6	49	0.0	-100
Rayagada	0.0	-99	5.3	-70	0.0	-100
Sambalpur	0.0	-100	1.0	-84	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	5.5	98	0.0	-100

West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	67.4	13	46.6	-38	125.0	72
North & Middle Andaman	22.5	-52	14.8	-72	27.0	-56
South Andaman	45.3	-20	76.1	24	47.4	-31
GWB						
Bankura	0.0	-100	4.5	-29	0.0	-100
Birbhum	0.0	-100	1.9	-86	2.3	-61
Burdwan	0.0	-100	0.4	-95	0.0	-100
East Midnapore	0.0	-100	11.4	-57	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.1	-99
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	7.8	-40	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	4.1	-70	0.0	-100
Purulia	0.0	-100	8.6	3	0.4	-94
24 Pargana (S)	0.0	-100	4.2	-88	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	6.7	15	11.6	111	2.2	-72
Darjeeling	8.6	6	3.6	-62	1.6	-56
East Sikkim	18.0	26	15.7	84	24.4	481
Jalpaiguri	10.8	24	10.7	95	10.2	64
Malda	0.0	-100	0.0	-100	0.0	-100
North Dinajpur	**	**	0.0	-100	**	**
North Sikkim	42.5	24	43.4	193	14.4	7
South Dinajpur	0.5	-95	17.3	104	0.0	-100
South Sikkim	16.4	15	3.0	-65	2.4	-43
West Sikkim	7.0	-80	**	**	0.0	-100
Karnataka						
Coastal Karnataka					7.8	-73
Dakshina Kannada	16.5	-63	124.5	289	14.2	-45
Udupi	0.9	-98	88.9	184	13.9	2
Uttara Kannada	0.0	-100	37.8	159		
N I Karnataka						
Bagalkote	0.0	-100	0.4	-96	0.0	-100
Belagavi	0.0	-100	2.3	-80	1.4	-84
Bidar	0.0	-100	24.1	198	0.0	-100
Dharwad	0.0	-100	6.5	-42	3.3	-73
Gadag	0.0	-100	3.3	-66	0.0	-100
Haveri	0.0	-100	15.3	35	10.3	-24
Kalaburgi	0.0	-100	0.1	-99	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.2	-98	0.2	-96
Vijayapura	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
S I Karnataka						

Ballari	0.0	-100	0.3	-97	0.0	-100
Bangalore Rural	0.0	-100	74.7	199	64.3	318
Bangalore Urban	4.5	-83	76.6	230	94.8	496
Chamarajanagar	0.0	-100	40.3	56	110.5	507
Chikaballapur	0.0	-100	79.0	206	75.0	436
Chikkamagaluru	0.0	-100	98.9	371	12.6	-35
Chitradurga	0.0	-100	30.1	114	1.6	-84
Davangere	0.0	-100	42.7	181	7.1	-43
Hassan	0.0	-100	85.3	308	43.6	119
Kodagu	4.1	-89	59.8	121	20.0	-19
Kolar	2.8	-89	64.9	153	86.7	470
Mandya	0.7	-98	88.5	299	86.0	473
Mysuru	0.0	-100	54.1	179	59.1	305
Ramanagara	1.0	-97	66.7	171	75.1	384
Shivamogga	0.0	-100	65.6	433	10.6	-21
Tumakuru	1.0	-97	82.5	323	28.3	105
Kerala						
Alappuzha	107.0	38	61.9	-18	59.1	8
Kannur	23.8	-53	73.2	66	28.0	10
Ernakulam	45.4	-33	71.3	15	153.7	256
Idukki	26.7	-64	74.1	7	88.5	66
Kasaragod	21.9	-56	50.3	22	17.4	-36
Kollam	30.3	-63	147.2	58	103.7	55
Kottayam	103.1	36	83.5	14	102.7	78
Kozhikode	29.9	-52	42.3	-26	106.2	179
Malappuram	26.0	-55	71.6	21	113.7	209
Palakkad	5.6	-90	51.1	-21	121.0	191
Pathanamthitta	179.0	91	78.1	-2	187.4	202
Thiruvananthapuram	50.2	-21	148.0	94	102.9	87
Thrissur	19.1	-70	36.6	-41	104.0	143
Wayanad	4.5	-92	69.1	134	13.4	-60
Tamil Nadu						
Ariyalur	30.2	-35	27.6	-41	106.9	72
Chennai	19.9	-77	133.6	56	239.0	170
Coimbatore	17.1	-61	72.2	73	62.7	55
Cuddalore	7.9	-87	37.7	-44	378.2	355
Dharmapuri	2.5	-93	32.9	-4	168.6	494
Dindigul	0.7	-99	59.4	27	64.4	32
Erode	8.5	-77	52.3	43	130.5	261
Kanchipuram	23.3	-68	97.3	38	249.1	233
Kanyakumari	42.1	-28	178.0	168	65.8	0
Karikal	8.9	-91	82.0	-25	305.3	84
Karur	1.4	-95	62.5	82	85.3	135
Krishnagiri	6.8	-80	30.8	0	167.7	695
Madurai	2.4	-95	59.0	8	52.0	8
Nagapattinam	4.0	-95	93.4	12	334.8	188
Namakkal	10.9	-64	26.2	-18	82.6	168
Nilgiris	14.8	-75	78.0	51	89.6	53
Perambalur	0.0	-100	15.1	-65	142.2	269

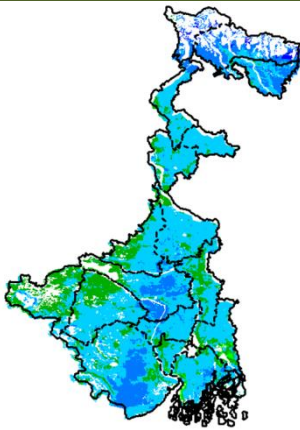
Puducherry	19.5	-82	46.7	-52	231.3	141
Pudukottai	4.4	-87	58.4	58	51.2	29
Ramanathapuram	26.9	-49	80.0	35	59.8	3
Salem	4.8	-88	19.5	-48	174.4	411
Sivaganga	5.5	-89	68.9	47	55.6	16
Thanjavur	16.4	-66	53.0	-3	95.5	54
Theni	4.2	-91	64.0	31	40.3	-5
Tirunelveli	52.8	5	154.5	156	118.6	89
Tirupur	0.7	-98	48.5	35	84.1	124
Tiruvallur	10.2	-83	91.1	25	225.3	236
Tiruvannamalai	1.0	-98	20.6	-54	92.6	105
Tiruvarur	5.8	-89	68.7	10	138.7	70
Toothukudi	27.0	-38	99.6	92	85.4	54
Trichy	10.2	-71	32.4	-14	66.0	61
Vellore	0.3	-99	52.7	48	161.5	361
Villupuram	4.8	-90	38.2	-20	203.0	284
Virudhunagar	6.3	-87	64.5	16	27.6	-44
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	13.4	-64	19.2	-32	7.1	-57
Guntur	2.4	-92	0.4	-99	7.7	-66
Krishna	21.2	-30	2.9	-90	12.4	-39
Nellore	7.0	-91	39.6	-56	247.0	239
Prakasam	0.3	-99	11.1	-76	10.5	-66
Sirkakulam	1.1	-97	53.4	41	0.0	-100
Visakhapatnam	1.7	-96	77.3	264	2.5	-83
Vizianagram	1.1	-97	24.5	20	2.0	-85
West Godavari	11.8	-68	8.7	-67	13.2	-30
Rayalaseema						
Anantapur	0.0	-100	28.9	84	28.2	156
Chittoor	0.2	-99	78.3	77	188.2	450
Cuddapah	1.0	-96	21.5	-27	123.0	478
Kurnool	0.0	-100	1.8	-85	0.5	-93
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	5.5	-44	0.0	-100
Khammam	0.0	-99	0.2	-98	0.0	-100
Mehabubnagar	0.0	-100	3.9	-56	0.0	-100
Medak	0.0	-100	23.2	172	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	12.8	49	0.0	-100
Rangareddy	0.0	-100	1.2	-86	0.0	-100
Warangal	0.5	-97	0.3	-97	0.0	-100

Legends

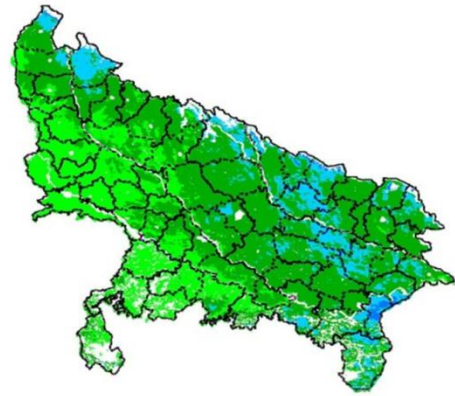
	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall
	(-20 to -59%) deficient rainfall	**	Data not available

Annexure II

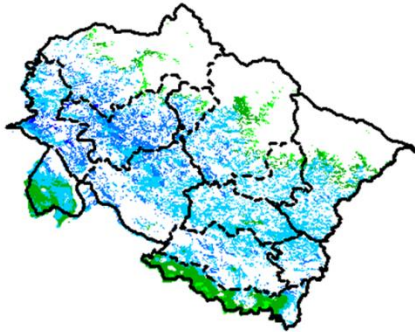
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON
11th November 2015 FOR DIFFERENT STATES



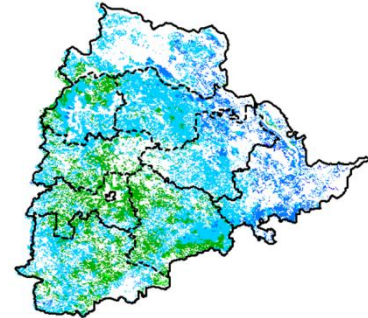
Agricultural vigour is good in all parts of West Bengal where NDVI varying from 0.4-0.6, whereas few patches in North west show moderate values of NDVI (0.2-0.4).



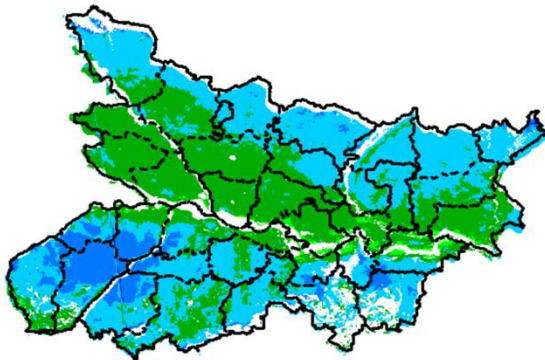
Agricultural vigour is moderate over the entire state of Uttar Pradesh where NDVI value varies from 0.2 -0.4. whereas few patches in north-eastern part shows higher values of NDVI (0.4-0.6)



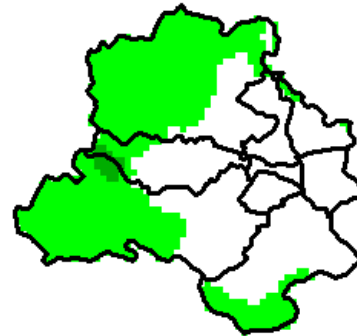
Agriculture vigour is good over entire state of Uttarakhand with NDVI value varies from 0.4-0.6. whereas few patches in south-east part shows moderate values of NDVI (0.3 - 0.4).



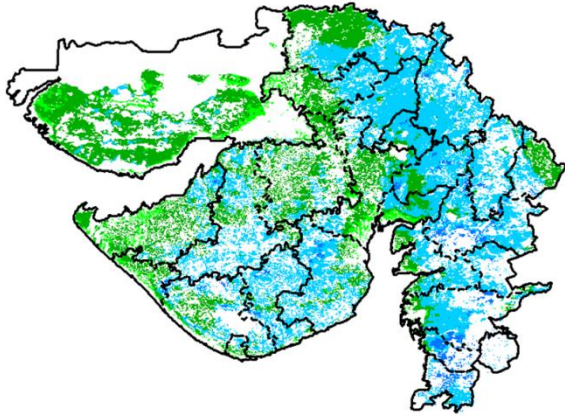
Agriculture vigour is good over many parts of Telangana (NDVI 0.4-0.6). Except in few patches in the southern part where, NDVI vary from 0.2-0.4.



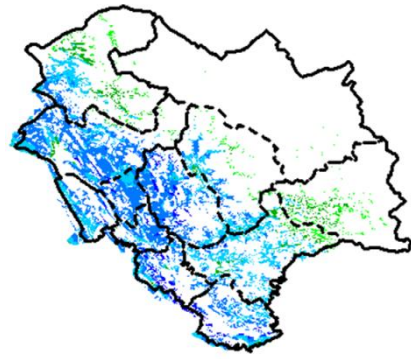
Southern and Northern part of Bihar shows comparatively a high value 0.4-0.6 of NDVI, whereas NDVI varies from 0.3-0.4 over the central parts of the state.



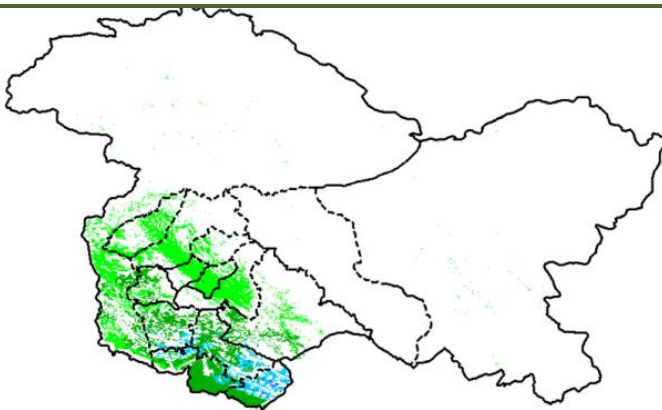
Agriculture vigour is moderate all over Delhi where NDVI value lies between 0.2-0.3.



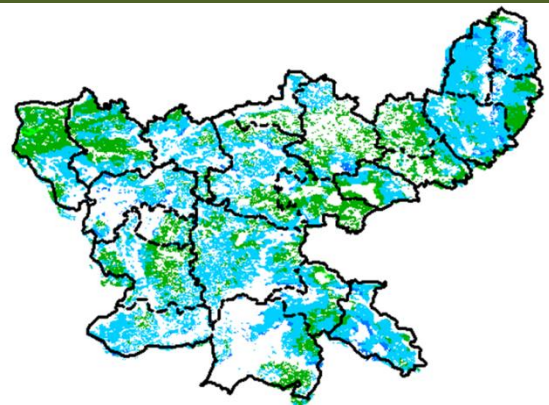
Agriculture vigour is normal in some patches Kutch region whereas, good agricultural vigour is observed over Gujarat and Saurashtra region where NDVI value lies between 0.4-0.5.



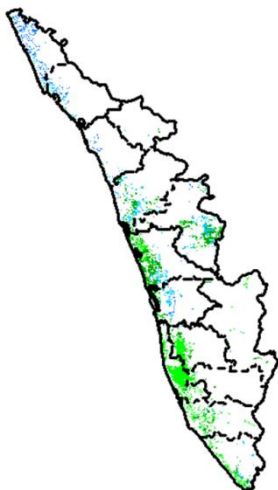
Agriculture vigour is very good over Himachal Pradesh where NDVI values are 0.4-0.6, except few patches in east shows normal values of NDVI (0.2 - 0.3)



Agriculture vigour is good over patches in south-western part Jammu and Kashmir where NDVI value vary in between 0.4-0.6 whereas rest of the part shows normal values of NDVI (0.2 - 0.4).



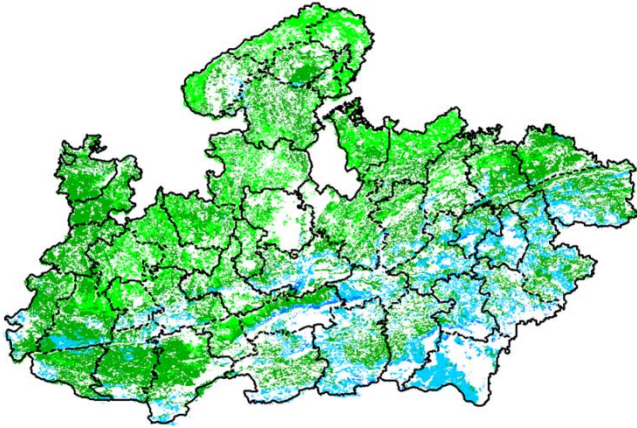
Agriculture vigour is good over entire state of Jharkhand, NDVI value varies from 0.4 - 0.5. Except for few patches in north western and eastern region.



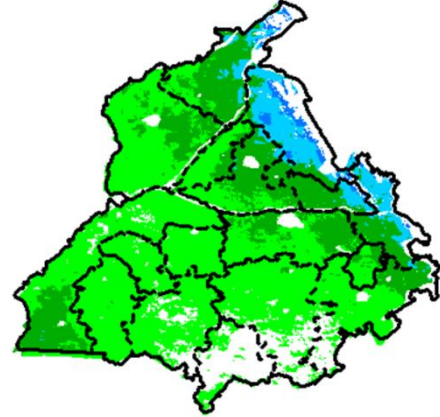
Agriculture vigour is moderate over central and southern Kerala where NDVI value lies between 0.2 - 0.4 whereas northern coast showing higher values of NDVI (0.4 - 0.5).



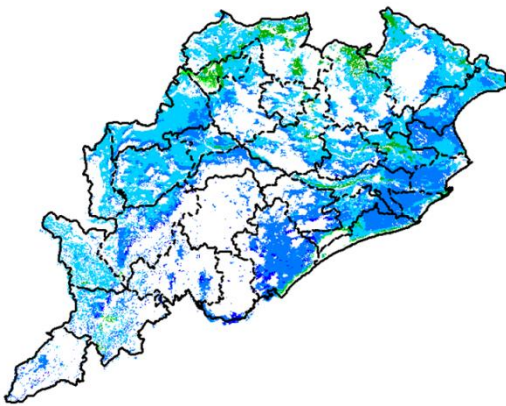
Agriculture vigour is moderate over the state of Haryana. NDVI values vary between 0.2-0.4. North eastern part of state showing NDVI values between 0.4 - 0.5.



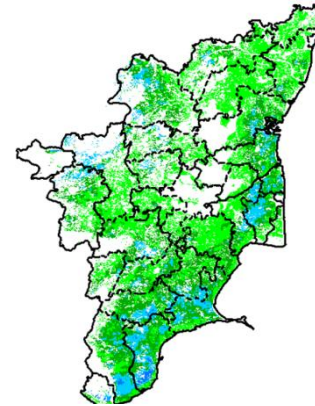
Agriculture vigour is good over southern and eastern part of Madhya Pradesh. NDVI varies from 0.4-0.5 and rest of the part shows moderate values of NDVI (0.2 – 0.4).



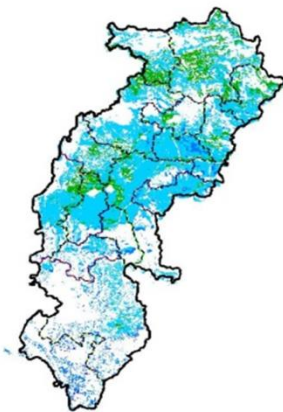
Agricultural vigour is good over north eastern part of Punjab, showing NDVI values between 0.4 - 0.6, whereas moderate values of are NDVI observed in remaining parts of the state.



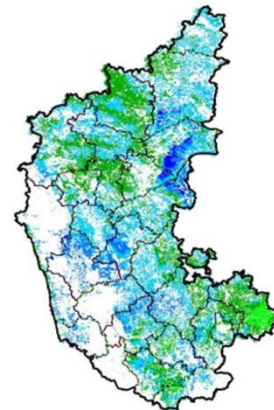
Agricultural vigour is good over entire state of Odisha with NDVI value ranging between 0.4 – 0.6.



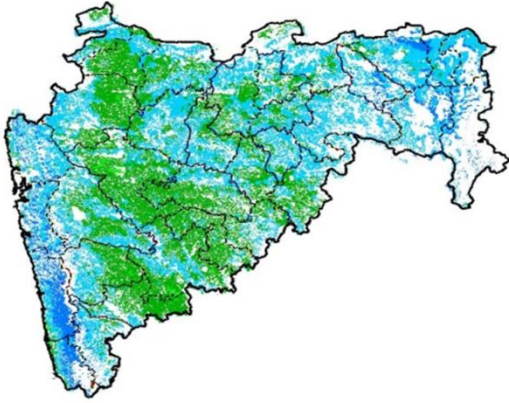
Agricultural vigour is moderate over Tamil Nadu with NDVI values varying from 0.2 - 0.4 whereas good values of NDVI (0.4 – 0.5) are observed in patches in southern and western part of the state.



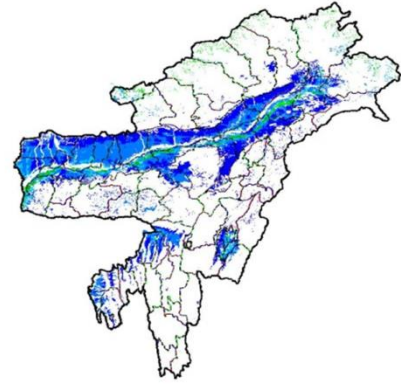
Agriculture vigour is good over entire state of Chhattisgarh where NDVI values are between 0.4-0.5.



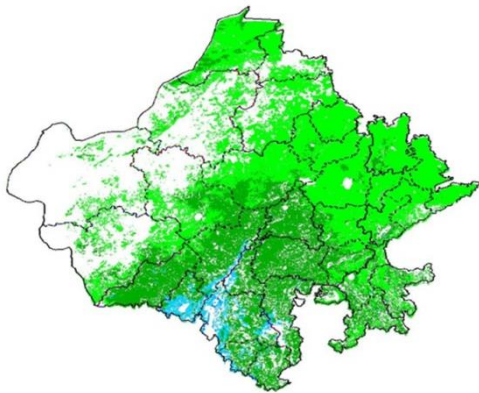
The agriculture vigor is good over the entire state. Higher values of NDVI are observed in interior, southern and eastern part of the State (NDVI 0.4-0.6) whereas few patches in north and south east show moderate NDVI.



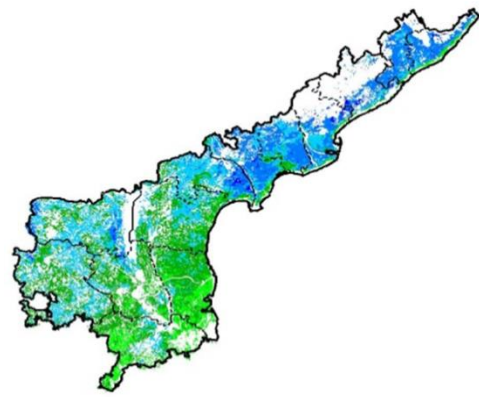
Agricultural vigour is very good over Coastal Maharashtra region with NDVI values from 0.4-0.6, whereas NDVI is good over other parts of Maharashtra, (0.4–0.5). Whereas, patches in Marathwada and Madhya Maharashtra show moderate values of NDVI (0.2-0.4).



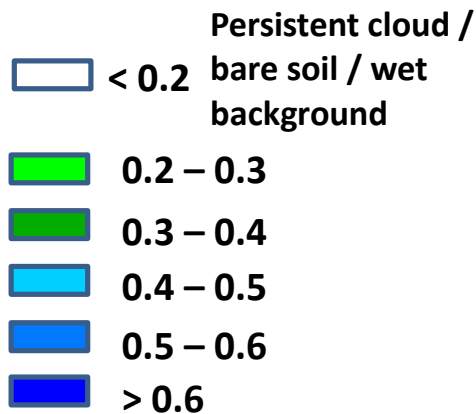
Agriculture vigour is very good in North-East states where NDVI varies from 0.4-0.6.



Agriculture vigour is good (0.4-0.6) in some patches over southern part of Rajasthan whereas moderate values of NDVI are observed over the entire state (0.2-0.4).



Agriculture vigour is good in northern and western Andhra Pradesh where NDVI vary between 0.4-0.6. Whereas, southern part shows normal values of NDVI (0.2-0.3).



Annexure III

List of varieties

North Interior Karnataka

Pearl millet: ICTP 8203 and ICMV 221

Horse gram :KBH-1, PHG-9

Rabi sorghum :Maldandi and Mugati

Chickpea: A-1, JG-11, Jaki-9218

Safflower: A-1

Ragi: Indaf-7, 9 and 15

Sunflower: Morden, KBSH-1, KBSH-41, KBSH-42, KBSH-44 and KBSH-53.

Maize: Deccan-103, Vijaya composite and Ganga-11

Cowpea: TVX-944, KBC-1 , KM-8 and PKB-4 (vegetable purpose)

Field bean : HA-1,3 and 4

Horse gram :KBH-1, PHG-9

Tamil Nadu

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

Kerala

Rice: Mundakan

Banana:Nendran

Telangana

Rabi red gram:(LRG 41, ICPL 87119, MRG 66, ICPL 85063, WRG 27,

MRG 1004, WRG 53, WRG-65)

Greengram:(MGG-295, MGG-348, MGG-347 WGG-2, WGG-37, LGG-460, TM-96-2)

Black gram:(LBG-20 (Teja), , LBG-623, WBG-26 (Usha), PBG-1, LBG-752, MBG-207,PU 31)

Assam

Early cauliflower: Pusa Katki, Pusa Deepali and Early Kunwari.

Mid cauliflower :Pusa Snowball.

Brinjal : Pusa Kranti, Pusa Purple Long, Pusa Purple Cluster, Pusa Bhairav, JC-2, BWR-12.

Califlower :Japanese, Pusa synthetic, Pusa snowball and Main Crop Patna.

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

Tomato : Punjab Chhuhara, S-12, Punjab Kesri, Pusa Early Dwarf, Sioux,Pusa Ruby, VC- 48-1, Arka Abha (BWR-1), Arka Alok (BWR-5), BT-1, Bilahi-1, Bilahi-2.

Potato :Kufri Chandramukhi, Kufri Jyoti, Kufri Megha, Kufri Badshah, Kufri Sindhuri.

Broccoli : Early Danish Giant, De Cicco Green Bud, Sparton Early, Coastal and Atlantic.

Black gram : KU 301, USJD 113, PU 19, T-9, T-27, Pant U-19, T-122, Saonia mah.

Green gram : Pratap, SG 21-5, T-44, Kopergaon, K-851, ML-56, ML-131,SG-1 (Pratap).

Kharifsesame : Gauri, Madhabi, ST-1683, Punjab Til No.1.

Radish :Pusa Desi, Pusa Chetki, Pusa Himani.

Knolkhol: White Vienna, Purple Vienna.

Carrot :Nantes, Pusa Kesar.

Onion :Pusa Red, Pusa Ratnar, Pusa white (Round), Pusa white (Flat), N-53, Agrifound Light Red, Punjab Red Round, Pusa Madhuri, Arka Niketan.

Meghalaya

Cauliflower: Meghalaya Local.

Cabbage : Meghalaya: H-139, Pride of India.

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

French bean : Naga Local.

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

Broccoli : Puspa, Aiswarya.

Carrot : New Karoda, Nantesh.

Radish : Local genotype.

Mustard : Varuna, Krishna, TM 4; Rapeseed- M 27, TS 38, TR 48, TR 67.

Manipur

Cauliflower: White shot, adopt White flash.

Cabbage: Rareball.

French bean : Pant Anupam, Anupam, Tangkhul Hawaii (local).

Pea: Arkel or Azad.

Onion : Nasik Red.

West Bengal:

Mango: Himsagar, Mallicka, Langra

Guava: Safeda, L-49

Coconut: Eastcoastal, Hazari

Banana :- Mortoman, Chapa, Kathali, Singapuri,

Mustard:- Agrani(B-54), Panchali (T.W.C.-3), B-9, Rai-5 and Bhagirothi (R.W.-351).

Bihar

Potato: KufriJyoti.Kufri Ashoka,Pukharaj

Toria: R.A.U.T.S.17, Panchali,P.T.303

Rapeseed: RAUTS-17, Panchali,PT-303 ,Bhawani

Pulses: K-75,PL77,KLS-218

Lentil: BR-25,Pant L 406,Malika,Arun

Rai: Varuna pusa,Kranti

Maize: Dhml17,Shaktiman-1,Dewki&Lakshmi

Kidney Pea: PDR-14,IIDR 96-4,IIPR 98-5

Rai: Varuna,Pusabold,Kranti

Sarson: RajendraSarson,Swarna

Peas: Ratna,Apnahrabajan Malbai mater15

Garlic: Jamuna Safed-2(G-50),Jamuna safed-3(G-282) Jamuna-4(G-323)

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

Mustard: Panchali, Bhavani, Pusa Jaikisan, Sivani, Varuna& Kranti

Toria: BR-23,T.-9,P.T.-303

Chick Pea: Birsa chana-3,B.G.-372,256,K WR-108

Field Pea: Rachna,DDR-23, Swarnrekha

Onion: N-53,Pusa red,Arka niketan, Arka kalian

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

Odisha:

Mango: Baiganpalli, Totapuri, Bombay green, Suvarnarekha, Neelam, Himsagar,, Langra, Dusheri, Amrapalli, Mallika, Ratna, Ramkella, Alphonso and Keshar, etc.

Cashewnut: Vengrulla-1.4, BPP-4, Bhubaneswar-1, VRI-2, Hybrid 2-17

Green gram:K 851, PDM 11, PDM 54, OUM 115.

Black gram:T 9, PU 11, PU 19 and PU 30.

Horse gram: Urmi.

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);

Chickpea : K-468, Gourav);

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

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

Mustard : Pusa Bold, RSPR-01, RSPR-03, Kranti.

Uttarakhand

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

Barley : Jyoti, Vijaya, or Jagrati

Oat : UPO-50, UPO-212, JHO-822, Kent

Himachal Pradesh

Wheat:Hs-277, HPW-251 and VL-616

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

Sorghum: Pusa chari-23, SSG-98-8MFSH-3, Pant-5 and MP chari
Lobia: Russian Joint , UPC-5286, UPC-5287, NP-3, Bundhel lobia-2, UPC-9202 and UPC-4200
Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.
Tomato: pusa early, pusa ruby, HS 101.
Cauliflower: pusa Dipali.
Pearl Millet: Raj WCC-75, ICMB-155, Pusa-322,23, ICMH-451.
Seasame: T-4,78, Shekhar, Pragati, Tarun.
Pigeon Pea:Bahar, Narendra Arhar-1, Azad, Pusa-9.
Jute: Jute Reshma, NDC (2007), NDC-2028, NDC-9102.
Okra: PusaSawani, VarsaUphar, Azad kranti.
Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.
Guava:Sardar(Lucknow-49).
Kabuli gram: chamatkar, Puse-1003, Subhra
Pea: Rachna, Pantmatar-5, Aparna, Malviya Matar-2, Malviya Matar-15, Shikha and Sapna.
Cabbage: Japani, Pusa Dieepali, Pusa Kartiki
Toria: TA-9, Bhawani, PT-30 and PT-507
Potato: Kufri Chandramukhi, Kufri Sadabahar, Kufri Ashoka

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.
Pigeon pea:T-21, UPAS 120.
Cotton: H777, Dhanalakshami, HD107.
For fodder Jowar: JS 120, Lobia 88.
gram: P.D.G.-3, G.P.F.-2, C-235, Gourav, KGD-1168, JG-16, Avrodhi
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.
onion:pusa red, pusa white.
Mustard: Varuna, Narendra-Rai 8501, Rohoni (timely sowing), Aashirwaad and Vardan (late sowing), Vaibhav, Maya.
Jou:Manjula, Jagruti, Gitanjali.
Pea: Azad P-3, Jai, Indra, Prakash.
Lentil: KLB-320, K-75, DPL-62.
Linseed:Padmini, Sharda, Laxmi.

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.
Pea: Punjab 89 and MithiPhali, Matar Ageta-7, Arkel and Matar Ageta-6.
Gram : PDG-4, PDG-3, GPF-2, PBG 5 and PBG-1, PBG-7.
Kabuli gram (L 552, L 550 & BG-1053)
Mustard: PBR 357, RLC-1, PBR-210, RLM-619, PBR-91, PBR-97, RLC-1, PBR 210 and PBR 91,
Gobhi sarson GSC-7, GSC-6, GSL-1, GSL-2, Hyola (PAC-401), African sarson PC-5.
Radish: Punjab Pasand and Japanese white.
Turnip: L-1.
Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.

Delhi

Mustard: Pusa Sarson-25, Pusa Sarson-26, PusaAgrni, PusaTaraka and PusaMahak, Pusa Jai Kisan, Pusa Jagannath, Pusa Sarson-25,
Pusa Sarson-26, Pusa Agrni, Pusa Taraka, Pusa Mahak. Pusa Saag-1; Bathua- Pusa Bathua-1
Radish: PusaChetki.
Spinach: PusaBharti.
Amaranths: PusalalChaulai, PusaKiran.
Ladyfinger: Pusa A-4.
early potato: Kufri Badshah, Kufri Surya.
Pea: Pusa Pragati, Arkel
Carrot: Pusa Rudhira-;
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

East Rajasthan

Radish: PusaChetki,Japanese white & hill queen.
Carrot: PusaKeshar

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

Mustard: Pusa Jai Kisan (Bio-902), PR-15 (Kranti), T-59 (Varuna), Giriraj, RGN-73, Bio-902 (PusaJaikisan), RH-9304 (Vasundhara), RH-9802 (SwarnJyoti), RH-8812 (Laxmi), RB-50.

Gram: RSG-888 (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.

West Rajasthan

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

Mustard: Pusa Jai Kisan, RH-30, RH-8812, Pusa Gold and PR-15, RGN-13, 73, 268226, 48, Laxmi, Bio-902, T-59, Pusa bold, Arawali and RGN-48 and late sown RGN145, 236.

Gram: GNG-469, 466, GNG-663, RSG-888, RSG-44, RSG-945, RSG-807, GNG-1581 and C-235, GNG-1466, 236.

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

Madhya Maharashtra

Rabi jowar: Selection-3, Phule Mauli, Phule Chitra, Phule Mauli, Maldandi- 35-1, Phule Vasudha, Phule Yashoda, C.S.V.-22, Phule Yashoda, Phule Vasudha, C.S.V. 22.

Gram Vijay, Vishal, Digvijay

Safflower Bhima, Phule Kusuma, Sharada, Girna or D.S.H. 129

Wheat: NIAW-301 (Trimbak), NIAW-917 (Tapowan), NIDW-295 (Godavari), Late sowing- NIDW-15 (Panchavati), Irrigated- NIAW-34.

Marathwada

Rabi jowar: Selection 3, Phule Malauli, Phule Anuradhada, Phule Vasudha, Phule Yeshodha, Parbhani Moti, CSV-22, PKV-Kranti, CSH-15, CSH-19.

Safflower: Shardha, Parbhani-12, Parbhani-40, Nari-6, Annegiri-1, Phule Kusum.

Gram: BDN-9-3, BDNG-979, Vishwas, Phule G-12, Vijay, Vishal, Digvijay.

Fodder jowar: Ruchira R-4-11, Nilva, MP chari, Pusa Chari, IS 4776, SG-14, MKV Chari.

Vidarbha

Gram: Saki 9516, Hirva chafa, Vijay, ICCV-10.

Wheat: N 59, NI 5439, AKDW 299716, MACS 1967

Gujarat

Wheat: GW 496, GW 273, GW 173, GW 1 (unirrigated), Lok-1, GW-366, GW- 190.

Chickpea: Gujarat chana-2 (unirrigated), Gujarat Gram-1, Gujarat Gram-3 (irrigated), Dahod Pila, ICC-4.

Mustard: Varuna, Gujarat Mustard 1, 2, 3 (in high temperature), 4.

Garlic: Gujarat Garlic-3, 4 or Local.

Pea (vegetable): Pusa Pragati, Pusa Rudhira.

Onion: Junagadh local (pili patti), Talaja red, Agri found dark red, Pusa White flat, Pusa Red, Nashik Lal, N 53 & H 48.

Cumin: Guj. Cumin- 2 and 4.

Coriander: Guj. Cor. -1 & 2.

Carrot: Patan Local, Pusa Kesar and Pusa Chamdagni.

Raddish: Pusa Hemadri, White ICL, Japanees White, Pusa Rashmi, Pusa Chetaki.

Cabbage: Kranti, Golden Acaire Pride of India, Coppen Market.

Cauliflower: Pusa Early, Pusa Dipali, Pusa Kartiki, Early Kuvari for early maturity and for medium duration select the Pusa synthetic, Early Snowball, Snowball.

Brinjal: Guj. Brinjal 6, P.L.R. 1, Junagadh Lambagoal, Mahicco-11, 16.

Fennel: Gujarat fennel-2, 11 and 12.

Madhya Pradesh

Wheat: JW 1203, JW1215, HI 1544 (Irrigated).

JW 3288, JW 3211, JW 3020, HI 1531(1 or 2 irrigation).

JW 3288, JW 3173 (non irrigated).

Gram: JG 130, JG 11, JG 315, JG 16, JG 218, JG 6, KAK 2, JGK 1, JG-12, JG-63.

Lentil: RVL 31, JL 2.

Garlic: G 282 and G 223.

Green pea: Arkil, Jawahar Matar 3 & 4.

Mustard: RVM -2, RGN-73 and Pusa Jay Kisan.

Chhattisgarh

Wheat:Lok-1, W.H. 147, Kanchan & Raj(irrigated).

C 308, Sujata, H.W. 2004, Ratan, H.I.-8627 & H.I. 1531 (Partially irrigated).

Linseed:R.L.C. 92 (Indira Alsi), Dipika (R.L.C.-78), Indira Alsi (R.L.C.-81), Kartika (R.L.C.-76), Jawahar552 (R.L.C.-552), Kiran (R.L.C.-6).

Safflower: J.S.F.-1, J.S.I-7, J.S.H.-129.