

# National Agromet Advisory Service Bulletin

**Friday 8<sup>th</sup> May 2015**

**(For the period 8<sup>th</sup> to 12<sup>th</sup> May 2015)**

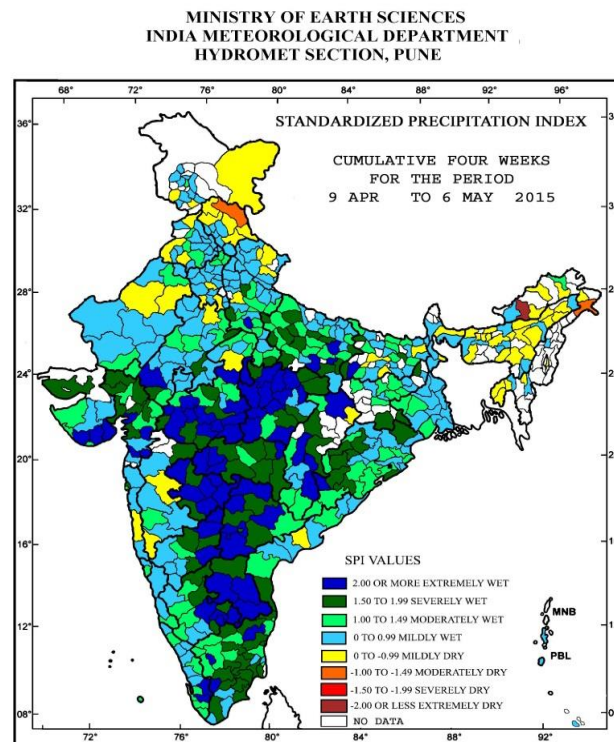


**Issued by**

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



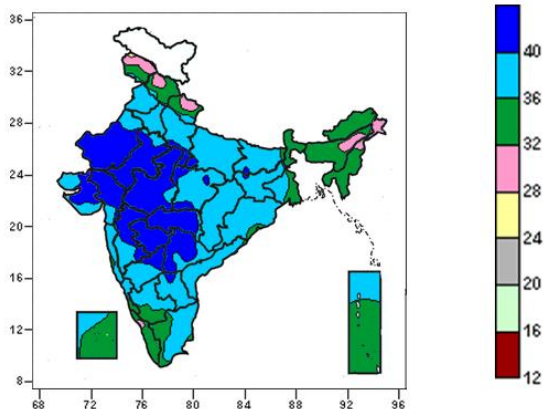
**Standardised Precipitation Index  
Four Weekly  
for the Period 9<sup>th</sup> April to 6<sup>th</sup> May 2015**



- Extremely/severely wet conditions experienced in most districts of Telangana, many districts of Tamil Nadu and Maharashtra; few districts of Odisha, Uttar Pradesh, Madhya Pradesh, Gujarat, Chhattisgarh, Andhra Pradesh, Karnataka; Godda, East Singhbhum, West Singhbhum districts of Jharkhand; Bhabua, Gopalganj, Khagaria, Rohtas districts of Bihar; Jind district of Haryana; Dungarpur, Kota, Udaipur, Dholpur districts of Rajasthan; Idukki, Pathanamthitta districts of Kerala.
- Extremely /moderately dry conditions experienced in Lahaul and Spiti district of Himachal Pradesh; Changlang, East Kameng districts of Arunachal Pradesh.
- Rest of the country experienced moderately wet/mildly dry/wet conditions.

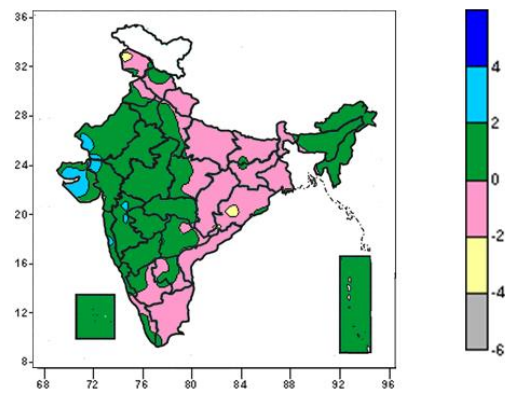
**Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 06.05.2015**

**Actual Mean Maximum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 06.05.2015**



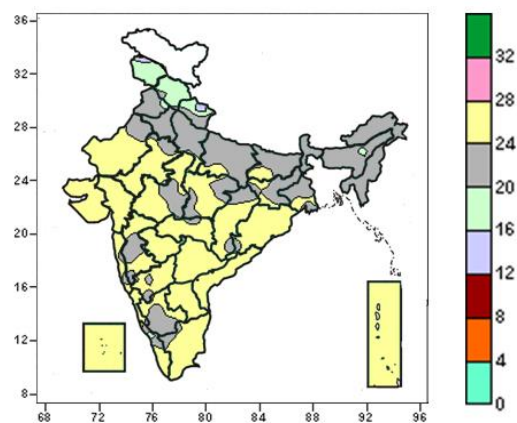
- Mean maximum temperature was above  $40^{\circ}\text{C}$  over Vidarbha, Marathwada, many parts of Rajasthan, Gujarat, West Madhya Pradesh, Madhya Maharashtra, Telangana, a few parts of North Interior Karnataka, East Madhya Pradesh, isolated parts of Uttar Pradesh, Bihar, Jharkhand, Rayalaseema.
- Mean maximum temperature ranged between  $36$  to  $40^{\circ}\text{C}$  over Punjab, Haryana & Delhi, Chhattisgarh, Coastal Andhra Pradesh, many parts of Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Gangetic West Bengal, Odisha, Konkan & Goa, Interior Karnataka, Rayalaseema and Tamil Nadu, a few parts of Saurashtra & Kutch, Madhya Maharashtra, Telangana, Coastal Karnataka, Lakshadweep and Andaman & Nicobar Islands, isolated parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Rajasthan, West Madhya Pradesh and Vidarbha.
- It was below  $36^{\circ}\text{C}$  over remaining parts of the country.

**Mean Maximum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 06.05.2015**



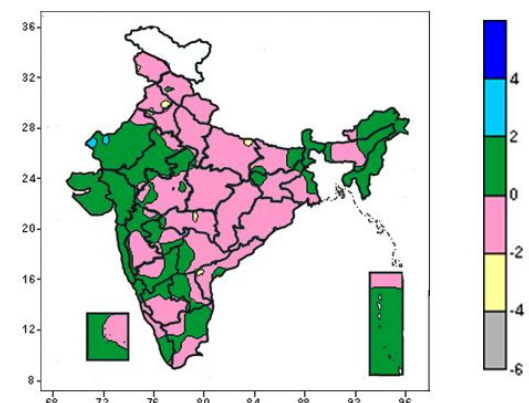
- Mean maximum temperature were above normal by 2 to  $4^{\circ}\text{C}$  over many parts of, Saurashtra & Kutch and isolated parts of West Rajasthan, Gujarat region, Konkan, Madhya Maharashtra.
- Mean maximum temperature were below normal by 2 to  $4^{\circ}\text{C}$  over isolated parts of Jammu & Kashmir, Odisha.
- It was normal to near normal in remaining parts of the country, Lakshadweep and Andaman and Nicobar islands.

**Actual Mean Minimum Temperature ( $^{\circ}\text{C}$ ) in India for the week ending 06.05.2015**



- Minimum temperature was  $16$  to  $20^{\circ}\text{C}$  over many parts of Jammu & Kashmir, Himachal Pradesh and a few parts of Uttarakhand and isolated parts of Punjab and Meghalaya.
- It was  $20$  to  $28^{\circ}\text{C}$  over rest of the country.

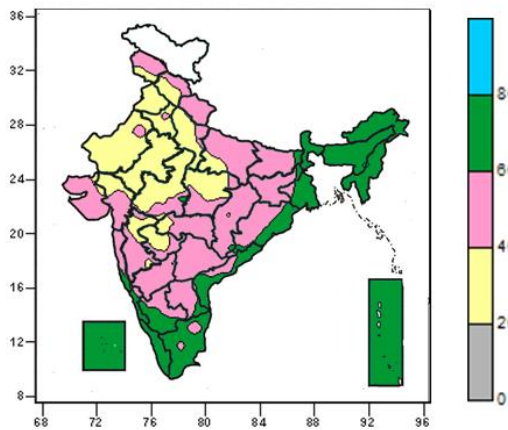
**Mean Minimum Temperature ( $^{\circ}\text{C}$ ) Anomaly in India for the week ending 06.05.2015**



- Mean minimum temperature was below normal by 2 to  $4^{\circ}\text{C}$  over isolated parts of Punjab, East Uttar Pradesh, Vidarbha and Coastal Andhra Pradesh.
- Mean minimum temperature was above normal by 2 to  $4^{\circ}\text{C}$  over isolated parts of West Rajasthan.
- It was normal to near normal in remaining parts of the country.

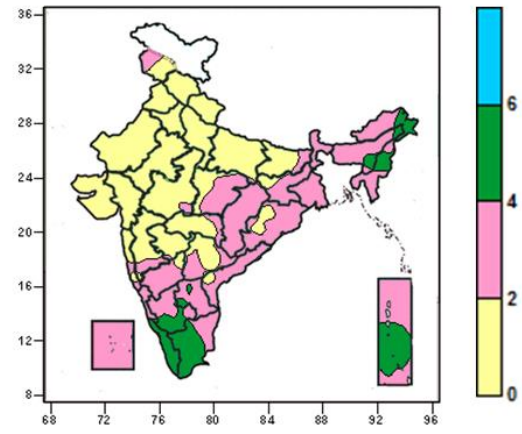
**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 06.05.2015**

**Relative Humidity (%) over India for the week ending 06.05.2015**



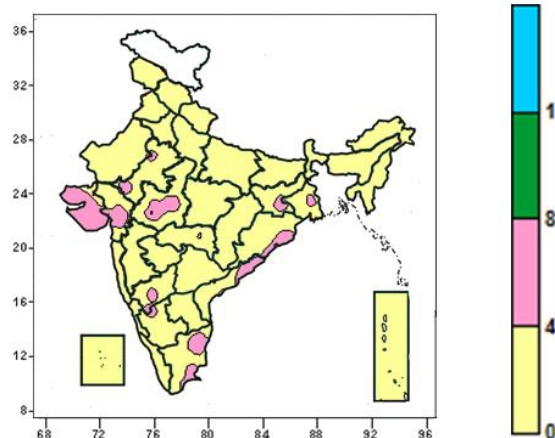
- Mean Relative humidity was 60 to 80% over North East India, Sub-Himalayan West Bengal & Sikkim, Goa, Kerala, Lakshadweep, Andaman & Nicobar Islands, many parts of Gangetic West Bengal, Tamil Nadu, Kerala, Coastal & South Interior Karnataka, Coastal Andhra Pradesh, a few parts of Coastal Odisha, and isolated parts of Bihar, Jharkhand, Konkan and Rayalaseema and West Madhya Pradesh.
- 20 to 40% over Punjab, East Rajasthan, many parts of Himachal Pradesh, West Rajasthan, West Uttar Pradesh, Madhya Pradesh, Marathwada, a few parts of Jammu & Kashmir, East Uttar Pradesh, Gujarat, Madhya Maharashtra and isolated parts of Vidarbha.
- 40 to 60% over rest of the country.

**Cloud amount (okta) over India for the week ending 06.05.2015**



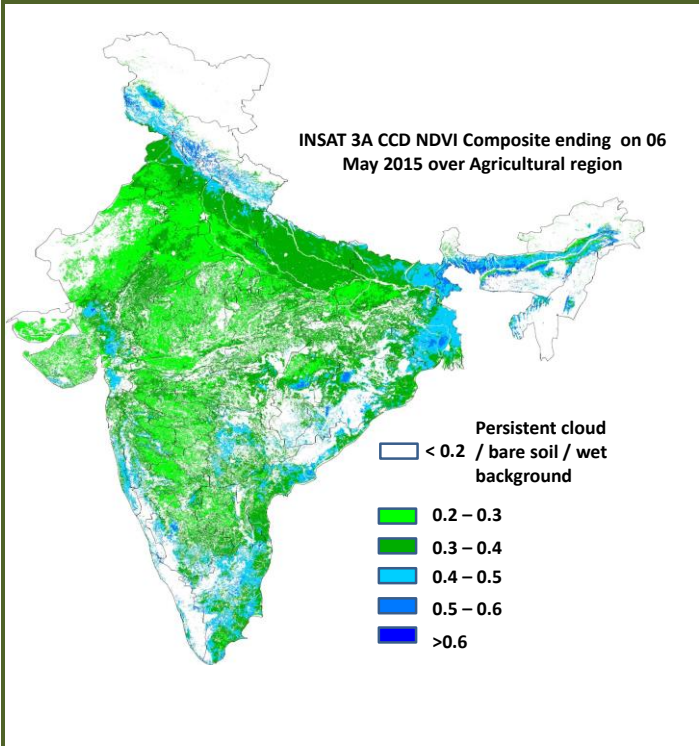
- Sky remained mainly cloudy (4 to 6 okta) over Kerala, many parts of Tamil Nadu, a few parts of Nagaland, Manipur, South Interior Karnataka, Andaman & Nicobar Islands and isolated parts of Arunachal Pradesh, Assam, Rayalaseema.
- Sky remained partly cloudy (2 to 4 okta) over West Bengal & Sikkim, Meghalaya, Mizoram, Tripura, Chhattisgarh, Coastal Karnataka, Lakshadweep, many parts of Arunachal Pradesh, Assam, Jharkhand, Odisha, East Madhya Pradesh, Rayalaseema, Telangana, Coastal Andhra Pradesh, Interior Karnataka, Andaman & Nicobar Islands, a few parts of Bihar, Nagaland, Tamil Nadu and isolated parts of Bihar, West Madhya Pradesh, Konkan & Goa, Madhya Maharashtra and Jammu & Kashmir.
- Sky remained clear over rest of the country.

**Wind speed (knots) over India for the week ending 06.05.2015**



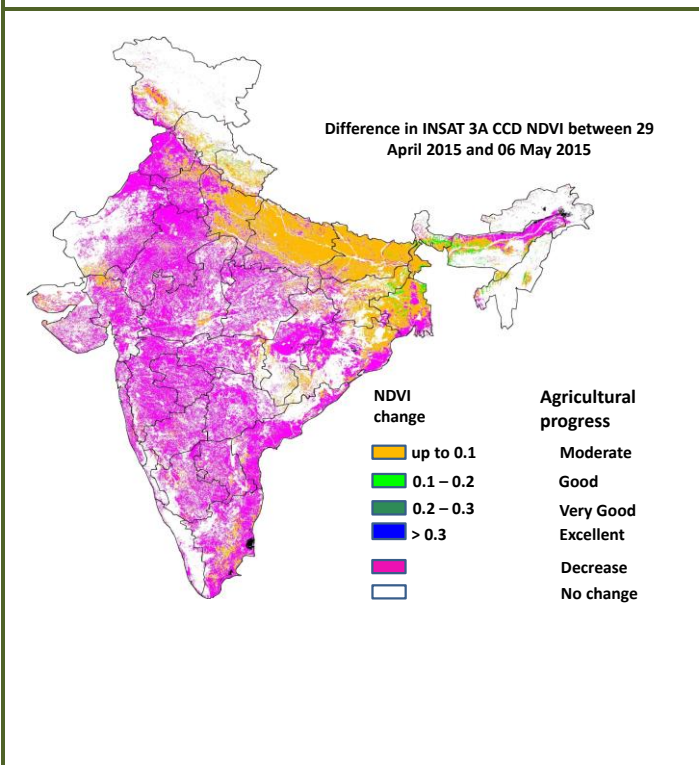
- Mean wind speed was 4 to 8 knots over many parts of Saurashtra & Kutch, a few parts of Gujarat Region, West Madhya Pradesh, Coastal Andhra Pradesh, Coastal Odisha, Tamil Nadu and isolated East Rajasthan, Jharkhand, Gangetic West Bengal, Interior Karnataka and Vidarbha.
- It was less than 4 knots over rest of the country.

## INSAT 3A CCD NDVI COMPOSITE ENDING ON 6<sup>th</sup> May 2015 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good in West Bengal, some parts of east Bihar and some pockets of Konkan & Goa, Coastal Andhra Pradesh and Tamil Nadu where NDVI varies from 0.4 to 0.6. Agricultural growth was good over most parts of Punjab, Haryana, Uttar Pradesh, Bihar and some parts of east Rajasthan, Gujarat region (NDVI: 0.3-0.4). NDVI remains within the range of 0.2 to 0.3 over most parts of India.

### Difference in INSAT 3A CCD NDVI between 29<sup>th</sup> April 2015 and 6<sup>th</sup> May 2015



- Decrease in NDVI was observed over Punjab, Haryana, Rajasthan, Madhya Pradesh, Maharashtra, Karnataka, Tamil Nadu, Andhra Pradesh, Telangana, Rayalaseema and Gujarat and parts of West Uttar Pradesh, West Bengal, Chhattisgarh and Odisha. Moderate progress (up to 0.1) in NDVI was observed in eastern UP, Bihar and many parts of West Bengal.

- INSAT 3A CCD NDVI composite maps for the week ending on 06<sup>th</sup> May 2015 for different States are given below in Annexure II.

## Weather Forecast for next 5 days valid upto 0830 hours of 13<sup>th</sup> May 2015

- No significant change in day & night temperatures over plains of northwest and adjoining west & central India during next 2 Days.
- Duststorm/thunderstorm would occur at isolated places over Rajasthan during next 48 hours.

### 5 Day Rainfall Forecast (MORNING) 08 May 2015

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

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

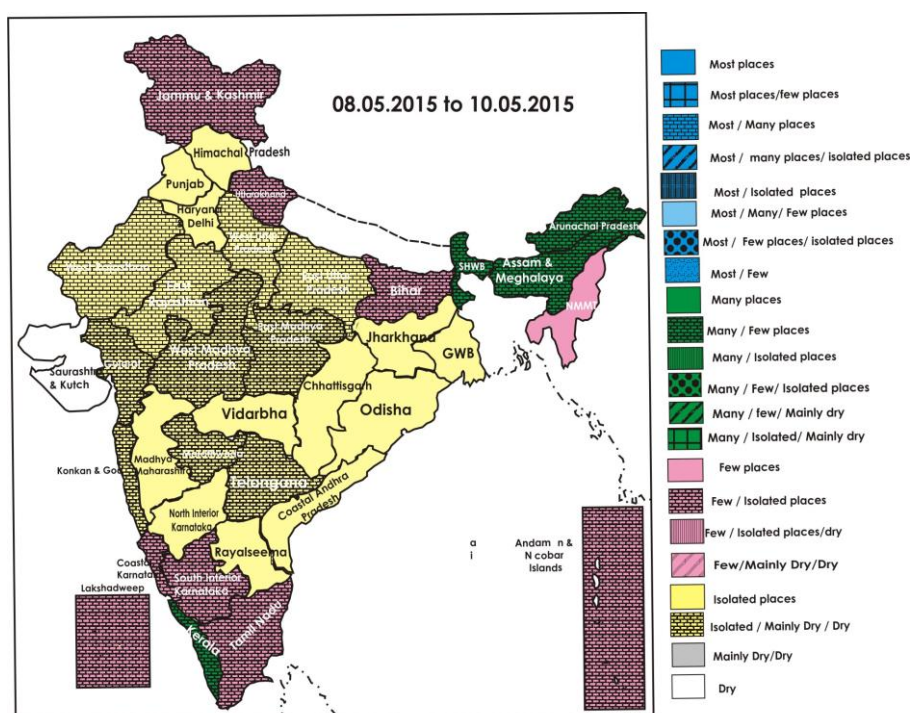
### Weather Warning during next 5 days

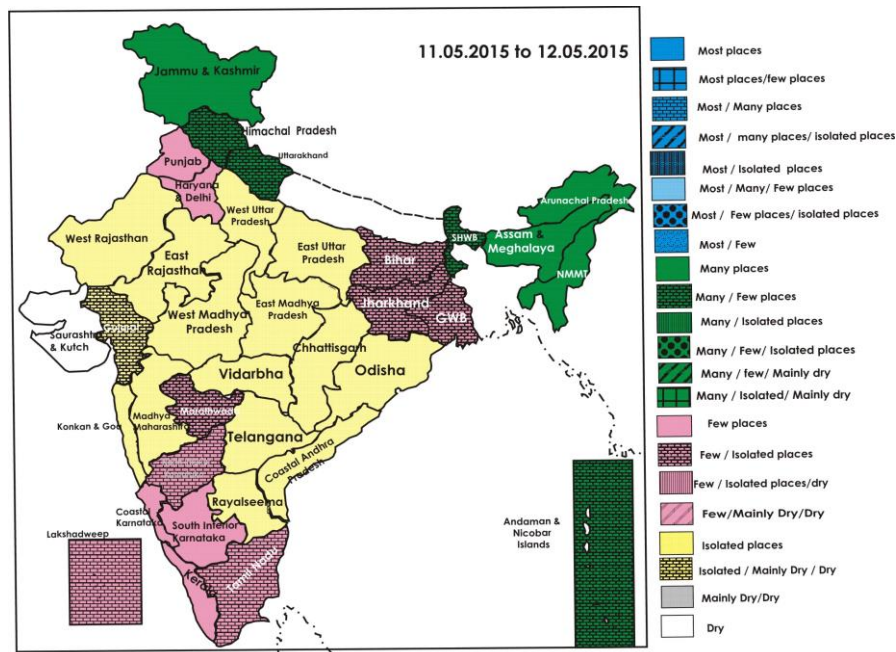
- **08 May (Day 1):** Thunderstorms accompanied with squall would occur at isolated places over Punjab and Haryana, Chandigarh & Delhi, West Bengal, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura and South Interior Karnataka.
- **09 May (Day 2):** Thunderstorms accompanied with squall would occur at isolated places over Punjab and Haryana, Chandigarh & Delhi, West Rajasthan and West Uttar Pradesh.
- **10 May (Day 3):** Thunderstorms accompanied with squall would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Rajasthan, Uttar Pradesh, Bihar, West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **11 May (Day 4):** Thunderstorms accompanied with squall would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **12 May (Day 5):** Thunderstorms accompanied with squall would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya and Nagaland, Manipur, Mizoram Tripura.

### Weather Outlook for subsequent 2 days From 13<sup>th</sup> May 2015 to 15<sup>th</sup> May 2015

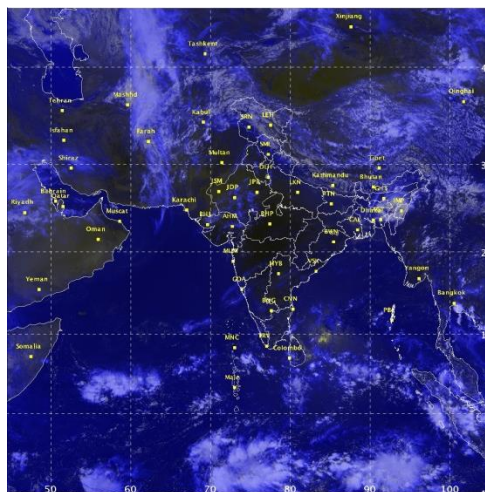
- Rain/thundershowers would occur at many places over Western Himalayan region and at a few places over adjoining plains.
- Rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- Rain/thundershowers would occur at a few places over south peninsular India.

### Weather Forecast Map (Valid upto 0830 hours of 13<sup>th</sup> May, 2015)





**Satellite image dated, 08.05.2015 0600 UTC**



### Salient Advisories

- As thunderstorms accompanied with squall would occur at isolated places over **Punjab, Haryana, Chandigarh & Delhi** from 8<sup>th</sup> to 12<sup>th</sup> May, over **west Rajasthan** and **west Uttar Pradesh** on 9<sup>th</sup> May, over Rajasthan on 10<sup>th</sup> and over **Uttar Pradesh** on 10<sup>th</sup> to 12<sup>th</sup> May, provide mechanical support to young fruit plants and vegetables and undertake propping in sugarcane to prevent the crops from lodging due to strong winds.
- As rain/thundershowers would occur at many places over **Jammu and Kashmir** on 11<sup>th</sup> and 12<sup>th</sup> over **Uttarakhand** and **Himachal Pradesh** on 12<sup>th</sup> May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As rain/thundershowers would occur at many places over **Arunachal Pradesh**, over **Assam and Meghalaya** on 8<sup>th</sup>, 11<sup>th</sup> & 12<sup>th</sup> and over **Nagaland, Manipur, Mizoram & Tripura** on 11<sup>th</sup> & 12<sup>th</sup> May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of crops in Arunachal Pradesh, Assam and Meghalaya and keep already harvested produce at safer places.
- As thunderstorms accompanied with squall would occur at isolated places over **Assam & Meghalaya**,



**Nagaland, Manipur, Mizoram & Tripura** on 8<sup>th</sup> and from 10<sup>th</sup> to 12<sup>th</sup> May, provide mechanical support to banana, vegetables and young fruit plants to prevent the crops from lodging due to strong winds.

- As thunderstorms accompanied with squall would occur at isolated places over **West Bengal** from 8<sup>th</sup> to 10<sup>th</sup>, over **Bihar** from 10<sup>th</sup> to 12<sup>th</sup> and over **Sub-Himalayan West Bengal & Sikkim** on 11<sup>th</sup> & 12<sup>th</sup> May, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds. Also undertake propping in sugarcane in Bihar.

### *Detailed Zonewise Agromet Advisories*

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



*Moong*

*Sugarcane*

*Banana*

*Cabbage*

- **Realised Rainfall:** Rainfall occurred in Doda, Ramban and Reasi districts of Jammu & Kashmir; Bageshwar district of Uttarakhand. Weather remained mainly dry/dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Jammu & Kashmir on 11<sup>th</sup> and 12<sup>th</sup>, over Uttarakhand and Himachal Pradesh on 12<sup>th</sup>; at a few places over Uttarakhand and Himachal Pradesh on 10<sup>th</sup> and 11<sup>th</sup>, over Punjab, Haryana & Delhi on 11<sup>th</sup> and 12<sup>th</sup>, over Jammu & Kashmir on 9<sup>th</sup> and 10<sup>th</sup>; at isolated places over East Uttar Pradesh and East Rajasthan from 10<sup>th</sup> to 12<sup>th</sup>, over West Uttar Pradesh and West Rajasthan from 9<sup>th</sup> to 12<sup>th</sup>, over Punjab, Haryana & Delhi from 8<sup>th</sup> to 10<sup>th</sup>, over Uttarakhand and Himachal Pradesh on 8<sup>th</sup> and 9<sup>th</sup>, over Jammu & Kashmir on 8<sup>th</sup>; dry weather would prevail over East Uttar Pradesh and East Rajasthan on 8<sup>th</sup> and 9<sup>th</sup>, over West Uttar Pradesh and West Rajasthan on 8<sup>th</sup>. No significant change in day & night temperatures over plains of northwest India during next 2 Days. Duststorm/thunderstorm would occur at isolated places over Rajasthan during next 48 hours.
- **Weather Warning:** Thunderstorms accompanied with squall would occur at isolated places over Punjab and Haryana, Chandigarh & Delhi during the period; over West Rajasthan and West Uttar Pradesh on 9<sup>th</sup> May; over Uttar Pradesh from 10<sup>th</sup> to 12<sup>th</sup> May and over Rajasthan on 10<sup>th</sup> May.
- **Weather Outlook:** Rain/thundershowers would occur at many places over Western Himalayan region and at a few places over adjoining plains.
- **Advisories:**
  - As thunderstorms accompanied with squall would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi on 8<sup>th</sup> to 12<sup>th</sup> May, over west Rajasthan and west Uttar Pradesh on 9<sup>th</sup> May, over Rajasthan on 10<sup>th</sup> and over Uttar Pradesh on 10<sup>th</sup> to 12<sup>th</sup> May, provide mechanical support to young fruit plants and vegetables and undertake propping in sugarcane to prevent the crops from lodging due to strong winds.
  - As rain/thundershowers would occur at many places over Jammu and Kashmir on 11<sup>th</sup> and 12<sup>th</sup> over Uttarakhand and Himachal Pradesh on 12<sup>th</sup> May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
    - **Jammu & Kashmir:**
      - In Intermediate Zone of Jammu & Kashmir, continue sowing of maize. In Sub Tropical Zone, undertake harvesting of normal planted onion & garlic immediately and keep harvested produce at safer places.
      - In Cold Arid Zone, continue transplanting of cruciferous crops, onion, tomato, capsicum chilli celery, parsley and leek in the lower belts and middle belts. Also continue direct sowing of cucurbits in greenhouses, trenches and low tunnels and spinach, carrot, beet root, coriander and fenugreek.
      - In Sub Tropical Zone of Jammu & Kashmir, due to cloudy weather condition, there may be possibility of attack of *heliotoisarmigera* on late planted onion and garlic. To control, spray Nuvan or Cypermethrin @ 1.5ml/litre of water on a non rainy day.
    - **Uttarakhand:**
      - Undertake nursery sowing of brinjal in Bhabar and Tarai Zone of Uttarakhand.
      - In Hill Zone of Uttarakhand, continue planting of potato and sowing of millet, lobia, French bean, vegetables like tomato, capsicum, brinjal, cucurbitaceous crops etc.

▪ **Himachal Pradesh:**

- In High hills regions of Sub-Montane and Low Hills Sub-Humid Tropical Zone, continue sowing of improved varieties of garden pea, raddish, carrot, turnip and palak and transplanting of cabbage, cauliflower, broccoli and lettuce.
- In mid hill areas of Sub-Montane and Low Hills Sub-Humid Tropical Zone, continue transplanting of tomato, brinjal, *capsicum*, chilli and sowing of cucurbits like cucumber, bitter gourd, bottle gourd and summer squash. Complete harvesting of wheat, mustard and Gobhisarson in mid and lower regions immediately.
- In low hill areas of Sub-Montane and Low Hills Sub-Humid Tropical Zone, undertake sowing of French bean and okra and top dressing of first dose of nitrogen (urea @ 75 kg per hectare) in tomato, brinjal, *capsicum*, chilli and cucurbits. Undertake sowing of moong and mash in irrigated lower areas.
- Due to humid weather condition, there is chance of incidence of late blight disease in potato in Sub-Montane and Low Hills Sub-Humid Tropical Zone. For control, spray Ridomil MZ/Matco/Metalmil 72 WP twice and Indofil M-45/Antracol/Kavach @ 2.5g per litre of water alternatively on a non-rainy day at 12-15 days interval.
- Due to partly cloudy weather condition, there is chance of incidence of scab/ core rot in apple in Mid Hills Sub-Humid Zone. For control, spray Score (Difenoconazole) @ 40ml/200 litres of water on a non-rainy day.

▪ **Rajasthan:**

- Under prevailing high temperature conditions, provide light and frequent irrigation in summer vegetables, *zaid* fodder crops and small fruit plants in Semi Arid Eastern Plain Zone, South Eastern Humid Plain Zone and Sub Humid Southern Plain and Aravali Hill Zone.
- In South Eastern Humid Plain Zone, continue harvesting and threshing of wheat, followed by planting of late varieties of sugarcane with assured irrigation. In view of increase in temperature, apply light and frequent irrigation to horticultural crops in Flood Prone Eastern Plain Zone.
- Continue sowing of desi cotton in Irrigated Northwestern Plain Zone. Also undertake land preparation for sowing of irrigated cotton in Semi Arid Eastern Plain Zone and Arid Western Plain Zone.
- Apply irrigation in *kinnow* orchards and in sugarcane in Irrigated Northwestern Plain Zone at 15-20 days interval. To prevent dropping of fruits, spray 2,4-D (horticultural grade) @ 2g/100 litres of water or Propineb 70 WP @ 2 g /litre + 20 mg Gibbralic acid /litre of water.
- In Sub Humid Southern Plain and Aravali Hill Zone, due to rise in temperature, there may be attack of stem and fruit borer in okra. To control, spray Malathion @2ml/litre water.
- In Transitional Plain Zone and in Semi Arid Eastern Plain Zone, due to rise in temperature, there is chance of fruit dropping in citrus fruits, spray Planofix @ 1ml/4.5 litres of water.
- In Semi Arid Eastern Plain Zone, chilli and papaya crops are affected by leaf curl and mosaic disease and likely to spread in the present weather. Spray Dimethoate 30EC @ 1.0 ml per litre water to control.

▪ **Punjab, Haryana and Delhi:**

- In Western Semi-Arid Zone of Delhi, continue sowing of ladies finger, cucurbitaceous crops and nursery sowing of vegetables like chilli, tomato and brinjal.
- Due to increase in temperature, apply light and frequent irrigation to all vegetables and fodder crops in Western Semi-Arid Zone of Delhi.
- In Western Zone of Punjab, continue transplanting of summer vegetables viz.chilli, tomato and bell pepper and sowing of cucumber, bottle gourd, pumpkin, muskmelon, watermelon, bitter gourd. Undertake sowing of cotton.
- In Western Plain Zone of Punjab, continue transplanting of chilli and continue sowing of cotton. Undertake planting of turmeric.
- In Central Plain Zone and Western Plain Zone of Punjab, undertake field preparation for nursery sowing of rice. Apply light and frequent irrigation to vegetable crops.
- In Western Zone of Haryana, continue transplanting of tomato and chilli. Undertake sowing of desi cotton.
- Undertake sowing / planting of crops in this region with assured irrigation.
- As the temperature is rising, protect the orchards of young fruit plants and nursery from high temperature with the help of sarkande leaves around the plants in Undulating Plain Zone of Punjab.
- In Central Plain Zone of Punjab, summer moong is severely attacked by the thrips, spray the crop Rogor 30 EC @ 100 ml or Malathion 50 EC @ 120 ml in 80-100 litres of water per acre at flower bud initiation stage.
- In the prevailing temperature, there is possibility of attack of mite in okra in Western Semi-Arid Zone of Delhi. Monitor the crop and spray Ethion @ 1.5-2 ml/litre of water.

▪ **Uttar Pradesh:**

- Continue harvesting of mustard, linseed, rapeseed, safflower and wheat in Bundelkhand Zone and wheat, pea, gram, mustard in North Eastern Plain Zone. Continue sowing of jowar, lobia, maize and harvesting of wheat in Western Plain Zone.
- In Eastern Plain Zone, continue planting of sugarcane and complete sowing of urad, moong and vegetables. Complete harvesting of rapeseed, gram, pigeon pea and wheat.
- In the prevailing temperature condition, there are chances of attack of red beetle or fruit fly on cucurbits in Central Plain Zone, to control, spray Imidachloropid @ 1 ml per litre of water.
- Suitable varieties for sowing are given in Annexure III.

• **Horticulture**

- Due to humid and partly cloudy weather condition, there is chance of attack of mango hopper in mango at

flowering stage in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. For control, spray Imidacloprid or Carbaryl @ 0.036% on a non-rainy day and repeat after 15 days interval.

- Due to humid and partly cloudy weather condition peach leaf curl disease has been observed in orchards of stone fruits in Mild Hills Sub Humid Zone of Himachal Pradesh. Spray Hexaconazole @ 0.05% or Contaf/Hexole @ 100 ml/200 litres of water on a non-rainy day and repeat at 10 days interval.

- **Floriculture**

- Due to humid and partly cloudy weather condition, there is chance of attack of mites in carnation in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. For control, spray Omite @ 1ml/litre of water or Diclofol@2ml/litre on a non-rainy day and repeat spray after 15 days interval.
- In Sub Tropical Zone of Jammu & Kashmir, due to cloudy weather condition there may be attack of *helicoverpa* in marigold. To control spray Cypermethrin @ 1ml/litre during morning hours on a non rainy day.

- **Animal Husbandry**

- As thunderstorms accompanied with squall would occur at isolated places over Punjab and Haryana, Chandigarh & Delhi on 8<sup>th</sup> to 11<sup>th</sup>May, keep cattle/goats indoor during thunderstorm period.
- In Rajasthan, in view of prevailing high temperature, provide plenty of clean water and balanced nutrient rich feed to the milch animals and keep animals under shade during noon hours. Tie curtains on north-west side of poultry house to reduce the effect of hot winds.

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



*Sugarcane*

*Moong*

*Okra*

*Onion*

- **Realised Rainfall:** Rainfall occurred in Bastar district of Chhattisgarh. Weather remained mainly dry/dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Chhattisgarh during the period, over West Madhya Pradesh from 9<sup>th</sup> to 12<sup>th</sup> and over East Madhya Pradesh from 10<sup>th</sup> to 12<sup>th</sup>; dry weather would prevail over West Madhya Pradesh on 8<sup>th</sup> and over East Madhya Pradesh on 8<sup>th</sup> and 9<sup>th</sup>. No significant change in day & night temperatures over central India adjoining to northwest India during next 2 Days.
- **Weather Warning:** Nil.
- **Advisories:**
  - **Madhya Pradesh:**
    - Continue sowing of cucurbitaceous crops with assured irrigation in Vindya Plateau Zone and apply irrigation to summer moong in Bundelkhand Zone.
    - In Nimar valley Zone, as mainly dry weather would prevail, apply irrigation to summer moong and groundnut and undertake intercultural operations in mango and jackfruit orchards.
    - In the prevailing high temperature condition, there are chances of fruit dropping in mango in Grid Zone and Malwa Plateau Zone. Apply irrigation to the mango tree by ring method or through drip irrigation method, also apply irrigation in vegetables.
    - Undertake field preparation for planting of ginger and turmeric in Jhabua Hill zone.
    - Due to prevailing temperature condition, there are chances of attack of sucking pests, shoot and fruit borer in vegetables in Satpura Plateau Zone of Madhya Pradesh. For control of sucking pests, spray Imidacloprid @ 0.5ml/litre of water and for control of shoot & fruit borer, spray Trizophos @ 800 ml/ha in 500 litres of water.
    - In the prevailing temperature, there are chances of attack of red pumpkin beetle in cucurbits in Malwa Plateau Zone, spray Quinalphos 25 EC @ 1 litre/ha or Propenophos 50 EC @ 800-1000 ml/ha.
  - **Chhattisgarh:**
    - In Chhattisgarh Plain Zone, in view of prevailing dry weather and high temperature, apply irrigation at regular intervals to standing crops and in mango orchards.
    - In North Hill Zone of Chhattisgarh, continue sowing of okra, cow pea, bitter gourd, transplanting of tomato, chilli and brinjal and complete sowing of summer moong, sesame and groundnut with assured irrigation. Complete harvesting of onion and garlic.
    - Due to partly cloudy weather, there are chances of attack of fruit borer in tomato and brinjal in Chhattisgarh Plain Zone; spray Quinalphos 25 EC @ 800 ml in 500 litres of water / ha.
- **Animal Husbandry**
  - In view of prevailing high temperature, provide plenty of clean water and balanced nutrient rich feed to the milch

animals and keep animals under shade during noon hours in Madhya Pradesh and Chhattisgarh.

## WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



*Banana*

*Sugarcane*

*Groundnut*

*Mango*

- **Realised Rainfall:** Rainfall occurred in South Goa district of Konkan & Goa. Weather remained mainly dry over rest parts of Maharashtra and dry over Gujarat.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Marathwada on 12<sup>th</sup>; at isolated places over Madhya Maharashtra and Vidarbha during the period, over Marathwada from 9<sup>th</sup> to 11<sup>th</sup>, over Konkan & Goa from 10<sup>th</sup> to 12<sup>th</sup>, over Gujarat Region on 10<sup>th</sup> and 11<sup>th</sup>. Dry weather would prevail over Saurashtra and Kutch during the period, over Gujarat region on 8<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup>, over Konkan & Goa on 8<sup>th</sup> and 9<sup>th</sup> and over Marathwada on 8<sup>th</sup>. No significant change in day & night temperatures over west India adjoining to northwest India during next 2 Days.
- **Weather Warning:** Nil.
- **Advisories:**
  - **Maharashtra:**
    - In Konkan, undertake harvesting of summer rice and finger millet in clear weather. Keep the harvested produce in safer place. Considering high prevailing temperature (36<sup>o</sup>C-38<sup>o</sup>C) undertake plucking of matured mango in early morning hours or late evening hours. Transport the harvested produce during night time. Apply irrigation to vegetable crops, mango, cashew and coconut. Start land preparation of kharif rice & finger millet nursery in the harvested field of vegetables and pulses. In view of prevailing temperature, apply black polythene mulch 25 micron in between two trenches or beds of fruit crops nursery for control of weeds, increase soil temperature and improving soil water conservation.
    - In Madhya Maharashtra, apply irrigation to summer groundnut (at pod development stage), maize, banana and vegetable crops. Also apply irrigation to sugarcane by alternate furrow method under water stress condition. Reduce the duration between two irrigations or mulch sugarcane with trash to preserve soil moisture in the field. In view of prevailing high temperature (above 42<sup>o</sup>C) in North Madhya Maharashtra, apply light and frequent irrigation to banana, summer groundnut and vegetables. Undertake harvesting of matured summer groundnut in Pune region.
    - In Marathwada, continue harvesting of matured vegetable crops like chilli, cabbage and cauliflower during morning hours. Continue sowing of fodder crops like maize (African Tall), jowar (Maldandi), bajra (Samruddhi). Spray mixture of 2% Murate of Potash + 2% Urea at 21 days interval in sugarcane under water stress condition.
    - In Vidarbha, in view of prevailing high temperatures (above 43<sup>o</sup>C) in many parts of Vidarbha, apply light & frequent irrigation to water melon, musk melon, summer vegetables, summer groundnut and summer green gram. Maintain upto 8 cm water level in summer rice fields at grain filling stage in east Vidarbha.
    - Due to prevailing high temperature and dry weather in Marathwada region, there may be wilting in summer chilli; remove the infested shoots and destroy them. Also spray Mancozeb or Copper Oxochloride @ 25g per 10 litres of water 3 to 4 times at an interval of 10-15 days.
  - **Gujarat:**
    - In North Saurashtra Zone, undertake harvesting of sesame and green gram to prevent shattering of capsules and pods. In present temperature conditions (max. temp.40-43<sup>o</sup>C), apply irrigation in groundnut (pod formation stage), vegetable crops and mango orchards. Undertake soil mulching or mulching with straw/polythene to conserve moisture. Apply irrigation in groundnut and sesame in South Saurashtra Zone.
    - There is chance of increase in temperature in South Gujarat Heavy Rainfall Zone; apply irrigation in groundnut crop at regular intervals; to control water evaporation from sugarcane field spread dry leaves of sugarcane in between two rows of sugarcane. After harvesting of *rabi* crops, undertake summer ploughing for solarization to destroy pupa and fungus.
    - As high temperatures are likely to continue in Middle Gujarat Zone, cover banana fruits with polythene cover to protect from direct sunlight; apply irrigation in green gram (flowering stage).
    - In South Gujarat Zone, in view of high temperatures, apply irrigation at regular intervals in fruit crops; keep orchards weed free and undertake mulching for conservation of soil moisture and protect banana bunch with plastic sheet.
    - Under present high temperature conditions in Bhal and Coastal Zone of Gujarat, apply light and frequent irrigation in pearl millet (vegetative stage), green gram at pod development stage and orchard (pomegranate, sapota, lemon and papaya) crops; cover papaya fruits using gunny bags. Undertake harvesting of rice, continue harvesting of

matured onion and plucking of matured vegetable crops.

- In North Gujarat Zone and North West Zone, under dry weather and prevailing high temperature conditions, apply irrigation in green gram (flower initiation stage) at 11 to 12 days interval, groundnut (pegging stage) at 5 to 7 days interval, vegetable and cucurbit crops at regular intervals to avoid water stress; carry out deep ploughing in harvested field for destruction of soil pest and fungal spores.
- Due to partly cloudy condition prevailed during last week in South Gujarat Heavy Rainfall Zone there are chances of sucking pest infestation in vegetable crops; spray Dimethoate 30 EC @ 10 ml/10 litres of water to manage the pest.
- **Animal Husbandry**
- In Gujarat, as high temperature conditions are prevailing, take special care of animals during noon time. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking at least thrice a day. Also provide balanced feed & adopt vaccination schedule. Cover the roof of shed with paddy straw. Put curtains on west side of poultry house and sprinkle water on curtains during noon time.

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



*Rice*



*Banana*



*Okra*



*Cabbage*

- **Realised Rainfall:** Rainfall occurred in Changlang, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh; all districts except Darrang, Jorhat, Karbi Anglong, N.C.Hills and Nagaon districts of Assam; all districts except South Garo Hills and West Garo Hills districts of Meghalaya; Aizwal, Kolasib and Serchhip districts of Mizoram; Imphal West district of Manipur; Kohima district of Nagaland; all districts districts of Tripura. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Arunachal Pradesh and Assam & Meghalaya on 8<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>, over Nagaland, Manipur, Mizoram & Tripura on 11<sup>th</sup> and 12<sup>th</sup>; at a few places over Arunachal Pradesh and Assam & Meghalaya on 9<sup>th</sup> and 10<sup>th</sup>, over Nagaland, Manipur, Mizoram & Tripura from 8<sup>th</sup> to 10<sup>th</sup>.
- **Weather Warning:** Thunderstorms accompanied with squall would occur at isolated places over Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura on 8<sup>th</sup>, 10<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup> May.
- **Weather Outlook:** Rain/thundershowers would occur at many places over Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- **Advisories:**
  - As rain/thundershowers would occur at many places over Arunachal Pradesh, over Assam and Meghalaya on 8<sup>th</sup>, 11<sup>th</sup> & 12<sup>th</sup> and over Nagaland, Manipur, Mizoram & Tripura on 11<sup>th</sup> & 12<sup>th</sup> May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of crops in Arunachal Pradesh, Assam and Meghalaya and keep already harvested produce at safer places.
  - As thunderstorms accompanied with squall would occur at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 8<sup>th</sup> and from 10<sup>th</sup> to 12<sup>th</sup> May, provide mechanical support to banana, vegetables and young fruit plants to prevent the crops from lodging due to strong winds.
  - **Assam & Meghalaya, Arunachal Pradesh:**
    - In Hill Zone of Assam, continue transplanting of normal *ahu* rice, planting of banana, turmeric and sowing of maize. Replanting of dead hills should be done within 7-10 days of transplanting with seedlings of same age of transplanted normal *ahu* rice.
    - In Lower Brahmaputra Valley Zone of Assam, continue sowing *baou* rice and continue sowing of *kharif* maize, mesta, planting of banana, ginger & turmeric.
    - In North Bank Plain Zone of Assam, continue sowing of cow pea and planting of papaya, banana, sugarcane, ginger and turmeric. Complete sowing of *baou* rice at the earliest.
    - In Upper Brahmaputra Valley Zone of Assam, continue planting of banana, ginger and turmeric.
    - In Central Brahmaputra Valley Zone of Assam, complete sowing of normal direct seeded *ahu* rice, *baou* rice and transplanting of early *ahu* rice. Continue planting of papaya and sugarcane. Continue sowing of *oiltorius* jute after current spells of rain.
    - In Arunachal Pradesh, complete sowing of early sown WRC rice.

- In Meghalaya, continue sowing of *jhum* rice and planting of ginger/turmeric. Complete transplanting of brinjal, tomato and sowing of okra.
- In Hill Zone of Assam, due to cloudy weather, there is chance of blast disease in transplanted early *ahu* rice. Spray Carbendazim @ 1g/ litre of water. In khasi mandarin, there is chance of shoot borer and trunk borer attack, paint the main trunk upto one metre from the base with Sevin/ Monocrotophos with lime and water (1:1:25). If infestation is above ETL, plug the hole with cotton soaked in Nuvan (0.07%) or Dimecron (0.05%) and plaster it with wet clay. Apply pesticides after current spells of rain.
- In Barak Valley Zone of Assam, due to humid weather there is chance of attack of rice bug and stem borer in boro rice. Apply Malathion @1.5 ml/ litre of water after current spells of rain.
- In North Bank Plain Zone of Assam, due to humid weather there is chance of attack of blast in *boro* rice. Spray Mancozeb (Dithene M-45) @ 2g/litre or Thiophenate Methyl @ 1g/litre of water.
- In Central Bramhaputra Valley Zone of Assam, due to humid weather, there is chance of attack of pod borer and pod bug infestation in summer black gram and green gram. Farmers are advised to spray Quinalphos @ 2.5 ml/litre against pod borer and Dimethoate @ 2ml/litre of water against pod bug.
- Undertake plant protection measures after current spells of rain.
- **Manipur, Mizoram, Nagaland and Tripura:**
  - In Manipur, continue nursery bed preparation for *kharif* rice and land preparation and sowing of maize, soybean, groundnut and okra. Undertake land preparation and sowing of black gram and rice bean.
  - In Mizoram, continue land preparation for planting of ginger and turmeric and nursery preparation for khasi mandarin. In banana, mulching of dry leaves or paddy husk to a thickness of about 8 cm in the basin keeps down the weed growth and decreases the number of irrigations and also improves fruit quality. Undertake intercropping of colocassia, yam, chilies, cabbage, cauliflower, sweet potato, pigeon pea, green gram, black gram, sesame, etc. with pine apple.
  - In Tripura, maintain 5 cm water level in the fields of *boro* rice during panicle initiation / flowering stage. Occasional high wind may break the fruit bearing branches of mango trees; provide support to the branches to prevent breakage and wastage of fruit.
  - In Tripura, due to cloudy and humid weather, there is chance of attack of fruit & shoot borer in summer brinjal and tomato. To manage the attack, spray Cypermethrin @ 1.5ml or Flubendamid 0.5 ml per litre of water after current spells of rain. Also due to cloudy and humid weather, shoot borer may become severe in mango at fruit development stage. Find the hole and put kerosene in the hole and plug the hole with mud after current spells of rain.
  - In Mizoram, to control, insect pests like blackfly (kolshi), citrus psylla, leaf miner, bark eating caterpillar, fruit sucking moth and mites in khasi mandarin and in lime, spray fCarbendazim 0.1% or 1000 ppm after current spells of rain.
  - Suitable varieties are given in Annexure III.
- **Animal Husbandry:**
  - In Northeastern States, keep animals indoors during thunder storm/squall period. Also keep animal sheds dry and avoid dampness during rainy days.
  - In Meghalaya, due to humid weather, keep the poultry house well ventilated during day time and provide clean and fresh drinking water every day. Rainy and cloudy weather is congenial for development of diseases like *Coccidiosis* in poultry. As a preventive measures give Amprolium @ 25-65 mg/kg of feed once a day.
- **Fisheries**
  - In Assam, new fish ponds may be made or old ones may be renovated/ cleaned before start of monsoon rain for large scale fish culture. Care must be taken for new ponds by liming for stocking fish fries/ fingerlings or yearlings.

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



**Sugarcane**



**Jute**



**Rice**



**Onion**

- **Realised Rainfall:** Rainfall occurred in all districts of Sikkim; Bankura, East Midnapore, Kolkata and Purulia districts of Gangetic West Bengal; Jalpaiguri, Darjeeling and Cooch Bihar districts of Sub-Himalayan West Bengal; Nicobar district of Andaman & Nicobar Islands; East Singhbhum and Pakur districts of Jharkhand; Gajapati, Koraput,

Mayurbhanj, Nawarangpur and Rayagada districts of Odisha. Weather remained mainly dry over rest of the region.

- **Weather Forecast:** Rain/thundershowers would occur at many places over Andaman & Nicobar Islands on 12<sup>th</sup>, over Sub-Himalayan West Bengal & Sikkim from 9<sup>th</sup> to 11<sup>th</sup>; at a few places over Andaman & Nicobar Islands and Bihar on 10<sup>th</sup> and 11<sup>th</sup>, over Sub-Himalayan West Bengal & Sikkim on 8<sup>th</sup> and 12<sup>th</sup>, over Gangetic West Bengal and Jharkhand on 11<sup>th</sup>; at isolated places over Andaman & Nicobar Islands on 8<sup>th</sup> and 9<sup>th</sup>, over Odisha during the period, over Gangetic West Bengal and Jharkhand from 8<sup>th</sup> to 10<sup>th</sup> and 12<sup>th</sup>, over Bihar on 8<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup>.
- **Weather Warning:** Thunderstorms accompanied with squall would occur at isolated places over West Bengal & Sikkim on 10<sup>th</sup> May and over Sub-Himalayan West Bengal & Sikkim on 11<sup>th</sup> and 12<sup>th</sup> May.
- **Weather Outlook:** Rain / thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim.
- **Advisories:**
  - As Thunderstorms accompanied with squall would occur at isolated places over West Bengal from 8<sup>th</sup> to 10<sup>th</sup>, over Bihar from 10<sup>th</sup> to 12<sup>th</sup> and over Sub-Himalayan West Bengal & Sikkim on 11<sup>th</sup> & 12<sup>th</sup> May, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds. Also undertake propping in sugarcane in Bihar.
  - **West Bengal:**
    - As rain/thundershowers would occur at many places over Sub Himalayan West Bengal & Sikkim from 9<sup>th</sup> to 11<sup>th</sup> May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Undertake harvesting of matured crops immediately and keep harvested produce at safer places.
    - In Old Alluvial Zone of West Bengal, complete planting of ginger and turmeric. In Coastal Saline Zone of West Bengal, continue land preparation for planting of improved variety of elephant foot yam.
    - In Coastal Saline Zone and Laterite and Red soil Zone, undertake harvesting of matured rice on bright sunny days and deep summer ploughing may be done in harvested *boro* rice fields to destroy eggs and pupa of insects.
    - In Hill Zone, undertake transplanting of mandarin orange. Weeding in the orchard should be done to prevent attack of trunk borer.
    - In Old Alluvial Zone of West Bengal, in the prevailing weather condition, brown spot/ blast disease may appear in rice at flowering stage. To control, spray Tricyclazole 75% W.P. @ 1ml/litre water after current spells of rain.
    - In Terai Zone of West Bengal, due to hail storm and rainfall during last week, there is possibility of stem rot in jute. For control, spray Carbendazim @ 0.1% after current spell of rain.
  - **Andaman and Nicobar Islands:**
    - In South, North & Middle Andaman, undertake land preparation for planting of tapioca as intercrop in coconut plantations at the spacing of 90 X 90 cm across the slope. Apply Farmyard manure @ 10 kg/plant in coconut.
  - **Odisha:**
    - In East and South Eastern Coastal Plain Zone, continue sowing of jute and planting of okra. Early planted rice is at maturity stage. Undertake harvesting when 85% of panicles are ripe.
    - In Mid Central Table Land Zone, continue harvesting of maize.
    - In Western Undulating Zone of Odisha, continue harvesting of green gram, black gram and sunflower. The early transplanted onion crop is at bulb maturity stage. Stop irrigating the crop 15 days before harvest.
    - In North Eastern Coastal Plain Zone of Odisha, the early varieties of summer rice are at harvesting stage and medium varieties at grain filling stage. Continue harvesting of maize. Taking advantage of recent rain, continue sowing of jute.
    - In North Central Plateau Zone, continue planting of ginger with realised rainfall. Undertake harvesting of green gram and groundnut.
    - In Mid Central Table Land Zone and North Eastern Coastal Plain Zone of Odisha, rising temperature is favourable for attack of fruit and shoot borer in Brinjal. To control it, spray Spinosad @ 6 ml/ 15 litres of water. Moderate humidity and high temperature may favour stem borer attack in rice. Farmers are advised alternate spraying of Fipronil @ 2 ml/litre of water and Indoxacarb @ 1.5 ml/litre of water at 15 days interval.
    - In North Central Plateau Zone, rising temperature is favourable for attack of fruit and shoot borer in brinjal, spray Thiodicarb @ 22 g or Spinosad @ 6 ml/ 15 litres of water.
  - **Bihar:**
    - In North West Alluvial Plain Zone, continue sowing of fodder crops such as maize, sorghum and cowpea.
    - In North West Alluvial Plain Zone, undertake sowing of dhaicha crop for green manure and maintain the soil moisture for better germination.
    - In North West Alluvial Plain Zone, continue intercultural operations in onion and summer vegetables and apply irrigation at regular intervals.
    - In South Bihar Alluvial Zone, due to high temperature, farmers are advised to give irrigation to summer moong, vegetables & maize crops.
    - In South Bihar Alluvial Zone continue summer ploughing in the fallow fields on a non rainy day to control weeds, pest and diseases. Complete the transplanting of chilli.
    - In North East Alluvial Zone of Bihar, continue sowing of jute up to 15<sup>th</sup> May.
    - In North West Alluvial Zone of Bihar, present weather is congenial for infestation of shoot and fruit borer in brinjal crop, for control, destroy the infested fruits and shoots. If pest population is high, spraying of Spinosad 48 EC @ 1 ml./4 litres of water on a non rainy day is advised.
    - In North East Alluvial Zone of Bihar, present weather is congenial for infestation of yellow stem borer in the *boro*

rice field, early shoot borer in sugarcane & maize, control by applying Fipronil 0.3% GR @ 33 Kg/ha on a non rainy day.

▪ **Jharkhand:**

- In North Eastern Plateau Zone, continue weeding and earthing up in summer maize and mung and continue planting of improved varieties of ginger and turmeric.
- In South Eastern Plateau Zone, continue harvesting of matured spring moong.
- In South Eastern Plateau, as no significant rainfall is expected, apply irrigation in summer okra which is at fruit developing stage.
- In South Eastern Plateau Zone & Western Plateau Zone, maintain 5-7cm water level in transplanted rice fields.
- In Western Plateau Zone, undertake planting of ginger and turmeric and undertake mulching with straw / leaves etc. to control weeds and to conserve soil moisture.
- In South Eastern and North Eastern Plateau Zone, prevailing temperature and humidity is congenial for incidence of shoot borer in summer rice, for control, apply Carbofuran-3G @ 12kg or Forate -10G @4 kg/acre on a non rainy day.

➤ Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- In West Bengal & Sikkim and Bihar, keep cattle/goats indoor during thunderstorm / squall period. Give lot of clean water to the animals and keep them in the shaded place during noon hours.
- In Jharkhand and Odisha, in view of prevailing high temperature, keep the domestic animals indoor or under shade during noon hours. Provide plenty of clean drinking water and rice bran water.

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



*Sorghum*



*Sugarcane*



*Chilli*



*Rice*

- **Realised Rainfall:** Rainfall occurred in Dharmapuri, Krishnagiri, Nilgiris and Theni districts of Tamil Nadu; Vizianagaram district of Coastal Andhra Pradesh; Chittoor district of Rayalaseema; Dakshina Kannada district of Coastal Karnataka; Haveri district of North Interior Karnataka; all districts of South Interior Karnataka except Ballari, Chikaballapura, Kolar and Tumakuru; Cannur, Ernakulam, Idukki, Kottayam, Malappuram, Pathanamthitta and Wynad districts of Kerala; Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Kerala on 8<sup>th</sup>; at a few places over Kerala from 9<sup>th</sup> to 12<sup>th</sup>, over Tamil Nadu & Puducherry on 10<sup>th</sup> and 11<sup>th</sup>, over Coastal Karnataka on 8<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>, over North Interior Karnataka on 12<sup>th</sup>, over South Interior Karnataka on 8<sup>th</sup>, 9<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>; at isolated places over Coastal Andhra Pradesh and Rayalaseema during the period, over Telangana on 8<sup>th</sup>, 11<sup>th</sup> and 12<sup>th</sup>, over Tamil Nadu & Puducherry on 8<sup>th</sup>, 9<sup>th</sup> and 12<sup>th</sup>, over Coastal Karnataka on 9<sup>th</sup> and 10<sup>th</sup>, over North Interior Karnataka from 8<sup>th</sup> to 11<sup>th</sup> and over South Interior Karnataka on 10<sup>th</sup>. Dry weather would prevail over Telangana on 9<sup>th</sup> and 10<sup>th</sup>.
- **Weather Warning:** Thunderstorms accompanied with squall would occur at isolated places over South Interior Karnataka on 8<sup>th</sup> May.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over south peninsular India.
- **Advisories:**
  - **Andhra Pradesh:**
    - Continue summer ploughings for planting sugarcane and land preparation for sowing of pre-*kharif* sesame and harvesting of sesame and rice in the North Coastal Zone. Continue summer ploughings in areas which have received sufficient rainfall in the Scarce Rainfall Zone.
    - Undertake summer ploughing and sowing of green manure crops like sunhemp and daincha to improve soil fertility to reduce insect pests in the *kharif* season in the High Altitude Tribal Zone.
    - In the Krishna Godavari Zone of Andhra Pradesh, provide irrigations in banana on alternate days in light soil and four days a week in heavy soils to reduce the moisture stress and temperatures influences on early bunching and bunches of banana crop. Spray Potassium Nitrate @ 5% to safeguard the crops from moisture stress conditions.
    - In the Southern Zone, undertake nursery preparation for rice after seed treatment with Carbendizum @ 3g/kilo in Nellore district.
    - Prevailing increase in temperatures are highly congenial for thrips and mite attack in chillies in the Southern Zone. To control thrips, spray Fepronil @ 2 ml or Spinosad @ 0.25 ml or Dimethioate @ 2 m/litre of water and to control mite, spray Dicopal @ 5 ml or Omite @ 1 ml/litre of water.



- Humid weather during morning hours may enhance the incidence of fungal growth in chilli at harvesting in the Krishna Godavari Zone of Andhra Pradesh. Proper drying on polythene sheets upto required moisture level may be undertaken.
- **Telangana:**
  - Prevailing moderate humid weather conditions are congenial for the incidence of leaf spot in leafy vegetables in the Southern Telangana Zone. To control, spray Carbendazim 12% + Mancozeb 63% WP @ 2g/ litre of water.
  - Prevailing temperature conditions (increase in maximum and minimum temperatures) are congenial for incidence of grain mould disease in sorghum in the Northern Telangana Zone. To control, undertake spraying with Propiconazole @ 0.5 ml/litre of water.
- **Karnataka:**
  - As Thunderstorms accompanied with squall would occur at isolated places over South Interior Karnataka on 8<sup>th</sup> May, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds. Also undertake propping in sugarcane.
  - Undertake nursery preparation for sowing of ragi in the Eastern Dry Zone. Continue summer ploughings to control of weeds, soil borne pest and disease and land preparation for the next sowing season in the Eastern Dry Zone and Coastal Zone.
  - Taking advantage of the realized rainfall, continue sowing of crops like green gram, sesamum, cotton, red gram and cowpea may be completed as early as possible in the Central Dry Zone.
  - Prevailing weather conditions (cloudy and light to medium rain) are congenial for nut weevil and anthracnose incidence in mango in the Eastern Dry Zone. Spray Carbaryl WP@ 4 g/ litre of water to control nut weevil and Carbendazim @ 1 g/litre of water or Confidor @ 0.5 ml/ litre of water to control anthracnose on a non rainy day.
- **Kerala:**
  - Undertake land preparation for upland rice, dry seeding of *virippu* rice and planting of coconut seedlings in the Problem Area Zone.
  - Continue nursery preparation for *Viruppu* rice, planting of poovan, njalippoovan, robusta, and palayankodan varieties of bananas, vegetables, planting of coconut seedlings and cultivation of tuber crops, ginger, turmeric, banana and mulberry as intercrop with coconut to increase yield in the Southern Zone.
- **Tamil Nadu:**
  - In the Cauvery Delta Zone and Karaikal & Puducherry, continue summer ploughing utilizing the recent rainfall to control weeds and insects larva in the soil.
  - Undertake field preparation for sowing of rainfed groundnut in Coimbatore district in the Western Zone and undertake nursery preparation for sowing of short duration rice and planting of turmeric.
  - Undertake land preparation for transplanting rice under SRI system in the Southern Zone.
  - Undertake land preparation for groundnut cultivation making use of prevailing rainfall in the North Western Zone.
  - In rice fallow cotton, occurrence of aphid, thrips, mite, hoppers and white flies are noticed due to the prevailing hot weather in the Cauvery Delta Zone. To control, spray Azadirachtin 0.03% (3 ml / litre of water) along with sticking agent in the morning or evening using hand sprayer on a non rainy day and if damage is severe spray Imidacloprid 200 SL @ 40 ml / 200 litres / acre of water
  - Due to rainy days, purple blotch disease is noticed in garlic crop in the High Altitude Hilly Zone. Spray Chlorothalonil @ 2.5 ml / litre of water to control the purple blotch disease in garlic on a non rainy day.
  - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
  - Vaccinate the sheep and goats against enterotoxaemia in the North Western Zone.
  - Prevailing high temperatures may cause sun stroke in livestock in the Scarce Rainfall Zone of Andhra Pradesh. Keep the animals under shade during noon hours and provide more water to livestock to protect them from high temperatures.

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

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

Sub-Divisions	22.04.15		29.04.15		06.05.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
<b>Arunachal Pradesh</b>						
Anjaw	**	**	**	**	**	**
Changlang	53.4	-45	47.0	-65	28.8	-72
Dibang Valley	114.0	115	13.0	-88	1.0	-98
East Kameng	0.0	-100	10.6	-72	6.6	-83

East Siang	60.0	26	85.5	24	33.8	-51
Kurung Kumey	**	**	**	**	**	**
Lohit	57.7	-19	71.6	-5	63.4	-23
Lower Dibang Valley	106.9	102	222.6	98	49.6	-14
Lower Subansari	**	**	**	**	**	**
Papumpara	34.1	-45	61.0	-2	69.7	-22
Tawang	57.0	26	69.0	74	52.0	-16
Tirap	41.0	-28	54.0	-27	34.4	-56
Upper Siang	191.6	101	106.0	16	95.6	12
Upper Subansari	13.0	-27	71.2	106	22.0	-31
West Kameng	28.0	-38	51.2	29	62.8	1
West Siang	20.5	-71	78.0	98	46.0	-25
<b>Assam&amp;Meghalaya</b>						
<b>Assam</b>						
Baksa	61.7	50	46.0	-27	40.0	-48
Barpeta	26.4	-36	61.3	-3	76.4	-2
Bongaigaon	27.4	-43	61.2	-1	37.4	-63
Cachar	147.3	139	72.7	15	102.4	21
Chirang	94.0	96	157.4	155	149.0	48
Darrang	**	**	**	**	**	**
Dhemaji	21.0	-41	80.0	59	73.0	8
Dhubri	53.2	18	99.2	117	82.7	3
Dibrugarh	55.4	7	51.4	-20	56.6	-20
Goalpara	43.3	-12	75.4	12	111.3	25
Golghat	138.4	305	38.7	15	25.7	-61
Hailakandi	162.6	219	57.0	-30	146.2	60
Jorhat	109.7	140	62.9	16	17.9	-73
Kamrup(Rural)	63.5	55	32.0	-32	66.8	-4
Kamrup(Metro)	111.2	171	51.8	10	63.0	-10
Karbi Anglong	50.1	63	17.8	-43	12.7	-59
Karimganj	165.0	132	46.4	-46	110.4	-14
Kokrajhar	41.4	-9	38.3	-53	72.3	-26
Lakhimpur	47.5	33	31.2	-38	37.0	-45
Morigaon	64.6	138	16.0	-56	34.4	-23
N.C.Hills	57.0	8	90.5	100	11.5	-80
Nowgong	46.0	38	15.6	-58	16.7	-64
Nalbari	50.3	63	31.7	-53	62.4	-45
Sonitpur	58.1	79	33.9	-23	58.7	-12
Sibsagar	42.5	13	48.0	69	64.2	-4
Tinsukia	83.5	65	63.5	16	27.1	-57
Udalgiri	55.5	47	32.6	-31	65.4	-22
<b>Meghalaya</b>						
East Garo Hills	138.1	264	149.9	46	85.9	-6
East Khasi Hills	111.1	42	110.2	21	108.2	-31
Jaintia Hills	81.0	32	107.0	20	25.0	-83
Ribhoi	53.5	125	56.0	6	67.0	26
South Garo Hills	**	**	**	**	**	**
West Garo Hills	74.6	56	75.6	15	19.4	-74
West Khasi Hills	118.0	210	93.0	36	31.0	-59

<b>NMMT</b>						
<b>Mizoram</b>						
Aizwal	127.4	202	45.5	-36	58.1	76
Champhai	1.0	-95	2.0	-96	**	**
Kolasib	27.0	-39	115.0	115	20.0	72
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	34.0	-19	16.0	-77	2.0	-97
Saiha	13.0	-46	84.0	110	17.0	-62
Serchhip	0.0	-100	28.2	-40	39.8	-12
<b>Manipur</b>						
Bishnupur	**	**	**	**	**	**
Chandel	3.0	-83	1.0	-92	**	**
Churachandpur	**	**	**	**	**	**
Imphal east	34.0	6	46.0	62	6.9	-85
Imphal west	202.4	547	161.1	752	50.5	26
Senapati	1.0	-97	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	37.0	49	27.0	99	6.0	-72
Ukhrul	**	**	**	**	**	**
<b>Nagaland</b>						
Dimapur	64.2	817	28.8	89	18.9	-51
Kephire	**	**	**	**	**	**
Kohima	40.0	125	42.6	53	21.1	-41
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	**	**
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	**	**	**	**
Zunheboto	**	**	**	**	**	**
<b>Tripura</b>						
Dhalai	34.0	-51	52.5	-22	124.7	32
North Tripura	166.6	125	19.4	-69	110.9	18
South Tripura	17.4	-62	43.8	-17	61.4	-13
West Tripura	68.3	23	64.5	13	26.0	-66
<b>Himachal Pradesh</b>						
Bilaspur	20.9	336	0.3	-97	4.8	12
Chamba	20.2	38	2.7	-77	8.2	4
Hamirpur	19.3	251	0.2	-97	5.1	-18
Kangra	13.3	77	1.6	-81	4.0	-60
Kinnaur	2.3	-87	0.2	-98	16.1	-13
Kullu	21.8	21	1.1	-93	7.0	-56
Lahaul and Spiti	9.0	-63	2.0	-91	13.0	-41
Mandi	37.4	286	1.6	-85	7.4	-12
Shimla	24.1	124	3.5	-64	5.0	-57
Sirmaur	19.3	188	1.1	-73	3.6	-37
Solan	20.6	174	0.0	-100	3.3	-50

Una	6.3	142	0.0	-100	6.9	-8
<b>Punjab</b>						
Amritsar	15.9	194	0.0	-100	0.6	-86
Barnala	18.4	458	1.8	250	0.0	-100
Bhatinda	0.3	-82	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	0.0	-100
Fatehgarh Saheb	9.3	137	0.0	-100	2.5	32
Ferozpur	0.8	-49	0.0	-100	0.0	-100
Gurdaspur	11.0	90	0.0	-100	0.0	-100
Hoshiarpur	9.9	191	0.0	-100	0.0	-100
Jalandhar	21.6	596	1.0	-55	0.0	-100
Kapurthala	26.9	1395	2.7	50	0.3	-92
Ludhiana	17.3	423	0.7	-58	0.0	-100
Mansa	6.9	360	2.9	263	0.5	-67
Moga	35.5	1379	2.1	-5	0.0	-100
Muktesar	0.0	-100	0.0	-100	0.0	-100
Nawashahar	12.5	443	0.0	-100	0.3	-91
Patiala	10.5	398	5.0	162	3.5	5
Ropar	14.9	203	0.3	-87	3.8	6
Sangrur	12.6	306	3.1	91	0.0	-100
Mohali	9.1	184	0.0	-100	3.7	-22
TarnTaran	21.7	486	0.0	-100	0.0	-100
<b>Haryana,Chd,Delhi</b>						
<b>Haryana</b>						
Ambala	20.5	1608	5.5	173	12.4	312
Bhiwani	1.0	-36	0.0	-100	0.6	-57
Chandigarh	14.3	210	0.0	-100	2.6	19
Faridabad	0.0	-100	0.0	-100	3.8	14
Fatehabad	7.3	245	0.0	-100	0.0	-100
Gurgaon	0.0	-100	0.3	-80	1.7	-17
Hissar	5.2	333	0.2	-83	0.0	-100
Jhajar	1.1	-47	1.3	-30	0.6	-71
Jind	17.5	994	0.0	-100	0.0	-100
Katihah	12.8	814	1.2	71	0.0	-100
Karnal	10.1	319	2.8	250	0.2	-90
Kurukshetra	24.0	549	1.0	-9	2.0	82
Mahendragarh	0.0	-100	0.0	-100	0.0	-100
Mewat	0.0	-100	0.0	-100	0.0	-100
Palwal	0.0	-100	0.5	67	0.0	-100
Panchkkula	7.3	182	0.0	-100	0.8	-81
Panipat	2.2	-27	0.0	-100	2.3	67
Rewari	0.0	-100	0.0	-100	1.6	60
Rohtak	1.2	-33	0.0	-100	1.6	-45
Sirsa	0.0	-100	0.0	-100	0.3	-83
Sonepat	0.6	-73	0.0	-100	2.6	-6
Yamunanagar	7.6	161	13.9	223	12.8	104
<b>Delhi</b>						
Central Delhi	0.0	-100	0.0	-100	0.0	-100
East Delhi	0.0	-100	0.0	-100	0.0	-100

New Delhi	0.0	-100	0.0	-100	0.1	-97
North Delhi	0.0	-100	0.0	-100	1.4	-62
North East Delhi	0.0	-100	0.0	-100	0.0	-100
North West Delhi	0.0	-100	1.0	-50	0.0	-100
South Delhi	0.0	-100	0.2	-90	13.0	251
South West Delhi	0.0	-100	0.0	-100	3.4	-8
West Delhi	0.0	-100	0.0	-100	2.0	-46
<b>Jammu &amp; Kashmir</b>						
Anantnag	66.4	159	27.5	-2	15.8	-13
Badgam	50.5	155	35.1	36	6.4	-44
Bandipore	**	**	**	**	**	**
Baramula	72.1	63	53.0	32	7.5	-72
Doda	33.0	58	0.6	-97	50.8	144
Ganderbal	36.4	91	30.0	26	8.6	-43
Jammu	17.8	224	0.0	-100	13.8	274
Kargil	**	**	**	**	**	**
Kathua	6.2	148	0.0	-100	2.4	-4
Kistwar	**	**	**	**	**	**
Kulgam	80.2	212	15.8	-44	12.0	-34
Kupwara	75.4	136	42.8	6	15.7	-31
Ladakh(Leh)	5.3	194	0.1	-91	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	48.6	110	22.7	-3	6.9	-52
Rajouri	29.0	282	14.0	268	7.4	1
Ramban	48.1	130	9.6	-59	23.4	12
Reasi	31.4	220	0.0	-100	21.2	123
Samba	11.9	116	0.0	-100	8.3	124
Shopian	**	**	**	**	**	**
Srinagar	48.9	156	38.6	62	8.1	-46
Udhampur	6.7	-32	0.0	-100	18.7	97
<b>East Madhya Pradesh</b>						
Anuppur	0.0	-100	11.0	198	0.0	-100
Balaghat	0.0	-100	0.1	-89	1.1	-36
Chhatarpur	0.0	-100	0.0	-100	0.0	-100
Chindwara	0.0	-100	0.0	-100	1.1	-44
Damoh	0.0	-100	0.0	-100	0.0	-100
Dindori	0.0	-100	7.2	800	0.0	-100
Jabalpur	0.0	-100	0.0	-100	0.0	-100
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.0	-100	0.0	-100	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	0.0	-100	0.0	-100
Sagar	0.0	-100	0.0	-100	0.0	-100
Satna	0.0	-100	0.0	-100	0.0	-100
Seoni	0.0	-100	1.1	31	0.0	-100
Shahdol	0.0	-100	13.2	1550	0.0	-100
Sidhi	0.0	-100	0.0	-100	0.0	-100
Singrauli	0.0	-100	0.0	-100	0.0	-100

Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umariya	0.0	-100	0.0	-100	0.0	-100
<b>West Madhya Pradesh</b>						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	0.0	-100	0.0	-100
Bhind	0.0	-100	0.0	-100	0.0	-100
Bhopal	0.0	-100	0.0	-100	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	0.0	-100	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	0.0	-100	2.0	300
Indore	0.0	-100	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.0	-100	0.0	-100	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	0.0	-100
Shajapur	0.0	-100	0.0	-100	0.0	-100
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.0	-100	0.0	-100	0.0	-100
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	0.0	-100
<b>Chhattisgarh</b>						
Bastar	2.1	-78	25.6	197	43.2	374
Bijapur	0.7	-89	0.0	-100	0.0	-100
Bilaspur	7.9	174	5.4	69	0.6	-88
Dantewara	0.0	-100	24.1	502	0.0	-100
Dhamtari	1.9	16	12.0	823	17.4	270
Durg	2.4	63	13.8	1155	2.1	-21
Janjgir	**	**	**	**	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	4.9	7	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	**	**	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100

Raigarh	**	**	**	**	0.0	-100
Raipur	1.7	-18	5.3	210	2.2	-48
Rajandgaon	0.0	-100	2.4	140	0.6	-79
Surguja	6.8	208	19.9	1223	3.2	0
<b>East Uttar Pradesh</b>						
Allahabad	1.1	-21	1.1	59	0.0	-100
Ambedkar Nagar	0.0	-100	0.0	-100	0.0	-100
Azamgarh	2.5	4	18.4	1740	0.0	-100
Bahraich	0.0	-100	19.3	672	0.0	-100
Ballia	0.0	-100	22.4	1143	0.0	-100
Balrampur	0.0	-100	11.5	259	0.0	-100
Banda	0.0	-100	0.0	-100	0.6	-50
Barabanki	5.8	224	6.1	282	0.0	-100
Basti	0.0	-100	0.0	-100	0.0	-100
Chandauli	5.1	240	0.0	-100	0.0	-100
Deoria	0.5	-84	25.0	733	0.0	-100
Faizabad	3.0	30	14.7	1530	0.0	-100
Farrukhabad	0.0	-100	13.9	5	2.5	39
Fatehpur	0.0	-100	0.4	-61	0.0	-100
Gazipur	0.0	-100	2.8	53	0.0	-100
Gonda	0.0	-100	2.3	159	0.0	-100
Gorakhpur	3.5	-38	26.0	767	0.0	-100
Hardoi	4.1	97	1.6	76	0.0	-100
Jaunpur	0.0	-100	0.8	-25	0.0	-100
Kannauj	0.0	-100	5.5	1275	0.0	-100
Kanpur City	0.0	-100	2.5	400	0.0	-100
Kanpur Dehat	0.0	-100	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	7.5	240	20.2	818	2.4	-50
Kushi nagar	0.0	-100	17.0	262	0.0	-100
Lucknow	0.0	-100	8.1	1244	0.0	-100
Maharajganj	0.3	-93	20.5	230	0.0	-100
Mau	0.0	-100	13.0	1344	0.0	-100
Mirzapur	2.5	127	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.5	-29	0.0	-100
RaiBareilly	0.1	-75	4.1	275	0.0	-100
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnagar	1.0	-33	3.0	36	0.0	-100
Sant Ravidas Nagar	10.0	567	0.0	-100	0.0	-100
Shrawasti	0.0	-100	0.0	-100	0.0	-100
Sidharthnagar	0.0	-100	11.0	197	0.0	-100
Sitapur	4.8	120	5.7	340	0.0	-100
Sonbhadra	3.7	69	0.0	-100	0.0	-100
Sultanpur	0.0	-100	7.8	875	0.0	-100
Unnao	1.2	33	1.4	250	0.0	-100
Varanasi	25.1	1831	0.8	33	0.0	-100
<b>West Uttar Pradesh</b>						
Agra	0.5	-70	0.0	-100	0.0	-100
Aligarh	0.0	-100	0.0	-100	0.5	-81

Auraiya	0.0	-100	1.0	400	0.0	-100
Badaun	0.0	-100	9.0	650	0.1	-92
Baghpat	0.5	-55	0.0	-100	4.4	83
Bareilly	0.0	-100	6.7	293	0.3	-84
Bijnor	0.8	-53	2.2	100	3.2	47
Bulandsahar	0.0	-100	0.0	-100	0.7	-73
Etah	0.0	-100	1.3	56	1.0	-50
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	0.0	-100	0.0	-100	0.0	-100
GBNagar	0.0	-100	0.0	-100	0.0	-100
Ghaziabad	0.0	-100	0.0	-100	0.7	-69
Hamirpur	0.0	-100	0.0	-100	0.0	-100
Jalaun	0.0	-100	0.0	-100	0.0	-100
Jhansi	5.5	323	0.0	-100	0.0	-100
Jotiba Phule Nagar	0.0	-100	8.3	733	1.0	-58
Kanshiramnagar	0.0	-100	11.0	1471	0.0	-100
Lalitpur	0.0	-100	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.3	67	0.0	-100
Mathura	0.0	-100	0.0	-100	0.0	-100
Meerut	0.0	-100	2.0	18	6.8	258
Moradabad	0.0	-100	11.4	847	0.6	-69
Muzzaffarnagar	0.0	-100	2.5	67	0.0	-100
Pilibhit	0.0	-100	5.1	542	0.0	-100
Rampur	0.0	-100	2.8	40	0.0	-100
Saharanpur	1.3	56	1.0	-9	0.0	-100
Shahjahanpur	4.0	88	17.4	2382	0.0	-100
<b>Uttarakhand</b>						
Almora	3.2	-44	2.6	-57	4.8	-40
Bageshwar	36.0	532	22.5	275	20.3	153
Chamoli	5.2	-47	18.1	123	7.3	-37
Champawat	12.0	41	3.0	-59	15.5	128
Dehradun	13.2	175	1.3	-69	10.1	60
Garhwal Pauri	6.5	23	0.3	-92	11.7	113
Garhwal Tehri	10.6	36	1.3	-78	12.8	129
Haridwar	1.1	-68	3.5	46	11.9	240
Nainital	11.9	116	4.6	-6	14.8	125
Pithorgarh	5.6	-51	21.0	42	17.8	40
Rudraprayag	5.2	-56	1.3	-92	16.8	-8
Udham Sing Nagar	0.4	-89	0.7	-59	11.9	222
Uttarkashi	6.6	-41	42.2	302	7.4	-33
<b>Bihar</b>						
Araria	27.1	191	42.1	157	15.0	-22
Arwal	**	**	**	**	0.0	-100
Aurangabad	5.3	154	3.0	89	0.0	-100
Banka	0.0	-100	27.7	222	0.0	-100
Begusarai	0.0	-100	25.4	144	0.0	-100
Bhabua	4.3	71	0.0	-100	0.0	-100



Bhagalpur	8.3	-18	17.5	114	0.0	-100
Bhojpur	1.6	-50	0.0	-100	0.0	-100
Buxar	**	**	**	**	0.0	-100
Darbhanga	12.5	140	24.7	149	0.4	-97
East Champaran	0.0	-100	23.3	323	2.9	-68
Gaya	7.2	167	0.0	-100	0.0	-100
Gopalganj	0.7	-80	45.9	692	3.1	-12
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	4.0	11	14.2	373	0.0	-100
Kathihar	1.1	-90	28.5	243	5.3	-67
Khagadia	8.3	89	14.6	64	0.8	-87
Kishanganj	57.6	260	43.3	103	3.2	-90
Lakhisarai	0.0	-100	14.7	149	0.0	-100
Madhepura	11.0	-13	20.2	87	0.0	-100
Madhubani	12.9	20	33.0	150	1.1	-91
Monghyar	**	**	13.9	136	2.6	-66
Muzaffarpur	5.1	21	24.7	312	4.6	-48
Nalanda	0.0	-100	6.4	100	0.0	-100
Nawada	0.0	-100	0.9	-59	0.0	-100
Patna	0.1	-98	3.5	23	0.0	-100
Purnea	19.2	60	6.9	-44	4.2	-80
Rohtas	34.0	1519	0.0	-100	0.0	-100
Saharsha	**	**	**	**	0.0	-100
Samstipur	0.3	-90	24.9	236	0.0	-100
Saran	0.0	-100	27.0	801	0.0	-100
Sheikpura	**	**	3.0	-23	0.0	-100
Sheohar	**	**	**	**	0.0	-100
Sitamarhi	0.0	-100	17.2	61	**	**
Siwan	**	**	**	**	**	**
Supaul	22.1	146	31.6	339	0.0	-100
Vaishali	**	**	10.2	59	0.0	-100
West Champaran	7.2	18	46.7	532	9.8	7
<b>Jharkhand</b>						
Bokaro	1.6	-70	31.1	289	12.7	35
Chatra	2.1	62	2.0	-29	0.0	-100
Deoghar	5.4	46	27.2	346	0.0	-100
Dhanbad	7.9	57	33.1	319	6.1	-28
Dumka	**	**	30.7	172	**	**
East Singbhum	15.8	68	49.3	356	36.8	254
Garhwa	**	**	0.0	-100	0.0	-100
Giridih	14.3	131	18.2	237	4.6	-34
Godda	0.0	-100	4.7	-49	7.2	-31
Gumla	**	**	**	**	**	**
Hazaribagh	3.2	-33	11.9	272	2.2	-58
Jamtara	1.8	-50	21.9	346	11.7	16
Khunti	14.0	130	**	**	**	**
Koderrna	**	**	1.1	-74	0.0	-100
Latehar	**	**	**	**	0.0	-100
Lohardagga	**	**	19.1	497	1.6	-75

Pakur	0.0	-100	23.8	90	39.2	184
Palamau	15.5	546	0.0	-100	0.0	-100
Ramgarh	5.8	12	27.6	294	6.8	19
Ranchi	6.2	-8	19.5	191	1.7	-72
Sahebganj	2.2	-48	**	**	**	**
Saraikela	**	**	50.2	561	**	**
Simdega	**	**	**	**	**	**
West Singbhum	8.7	7	29.4	262	0.0	-100
<b>East Rajasthan</b>						
Ajmer	0.0	-100	0.0	-100	0.0	-100
Alwar	0.0	-100	0.0	-100	0.7	-63
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	0.0	-100	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	0.0	-100	0.0	-100	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	0.0	-100	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	0.0	-100	0.0	-100
Karauli	0.0	-100	0.0	-100	0.0	-100
Kota	0.0	-100	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.0	-100	0.0	-100
Sikar	0.0	-100	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
<b>West Rajasthan</b>						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.0	-100	0.0	-100	0.0	-100
Hanumangarh	0.0	-100	0.0	-100	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.0	-100	0.0	-100	0.0	-100
<b>Gujarat Region</b>						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	0.0	-100
Broach	0.0	-100	0.0	-100	0.0	-100

DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	0.0	-100	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.3	200	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
<b>S K &amp; Diu region</b>						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
<b>Maharashtra &amp; Goa</b>						
<b>Konkan &amp; Goa</b>						
Mumbai City	0.0	-100	0.0	-100	2.4	500
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	0.0	-100	0.4	-84	16.0	14
Raigad	0.0	-100	0.0	-100	3.0	67
Ratnagiri	0.0	-96	0.0	-100	0.0	-100
Sindhudurg	3.7	212	0.1	-91	0.0	-100
South Goa	0.0	-100	17.2	913	25.7	112
Thane	0.0	-100	0.0	-100	0.0	-100
<b>Madhya Maharashtra</b>						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	**	**	**	**	**	**
Jalgaon	0.7	133	0.0	-100	0.0	-100
Kolhapur	0.5	-92	5.6	-37	10.8	7
Nandurbar	**	**	**	**	**	**
Nasik	0.5	-62	0.0	-100	0.0	-100
Pune	6.2	342	2.2	-23	2.1	-58
Sangli	2.4	-57	3.2	-57	8.4	-26
Satara	6.1	127	0.0	-100	10.8	64
Solapur	1.4	6	0.7	-60	6.8	61
<b>Marathwada</b>						
Aurangabad	0.7	-11	0.0	-100	0.0	-100
Beed	1.1	-22	0.0	-100	1.4	-38

Hingoli	9.2	510	0.0	-100	1.5	-27
Jalna	2.0	119	0.0	-100	0.0	-99
Latur	2.8	1	0.3	-90	7.3	159
Nanded	10.4	394	0.6	-20	9.7	343
Usmanabad	2.8	151	0.2	-88	8.3	167
Parbhani	20.6	986	0.0	-100	6.5	172
<b>Vidarbha</b>						
Akola	0.1	-91	0.0	-100	0.0	-100
Amraoti	2.1	95	0.0	-100	0.8	-6
Bhandara	0.5	-80	2.3	77	8.4	250
Buldhana	1.5	53	0.0	-100	0.0	-100
Chandrapur	0.2	-95	1.3	-47	12.5	466
Gadchiroli	1.7	-58	7.4	310	6.0	72
Gondia	0.6	-75	0.8	16	3.8	168
Nagpur	1.5	-48	0.9	-34	4.2	100
Wardha	6.9	228	0.0	-100	4.0	54
Washim	4.6	553	0.0	-100	0.0	-100
Yeotmal	5.7	338	0.5	-58	5.2	224
<b>Odisha</b>						
Angul	0.8	-93	19.0	131	14.2	69
Balasore	2.9	-84	64.8	264	11.5	-46
Bargarh	0.0	-100	24.3	540	0.0	-100
Bhadrak	0.0	-100	79.8	301	7.1	-63
Bolangir	0.4	-93	23.0	447	0.6	-89
Boudh	0.0	-100	27.3	131	0.0	-100
Cuttack	0.0	-100	29.0	79	0.7	-96
Deogarh	0.0	-100	25.1	513	13.2	83
Dhenkanal	0.6	-94	53.2	363	8.9	-51
Gajapati	18.7	-18	35.4	6	25.3	-3
Ganjam	11.2	15	47.9	231	5.5	-50
Jagatsingpur	0.0	-99	33.6	110	2.4	-85
Jajpur	0.0	-100	68.0	251	13.0	-28
Jharsuguda	2.3	-65	17.7	247	0.3	-96
Kalahandi	7.8	23	30.5	301	8.9	20
Kandhamal	12.9	54	39.1	231	4.7	-61
Kendrapara	0.0	-100	53.1	556	7.8	-60
Keonjhar	1.6	-83	35.8	69	19.7	-2
Khurda	0.6	-90	49.2	387	6.5	-31
Koraput	18.3	30	42.2	193	20.8	5
Malkangiri	0.0	-100	53.2	549	2.2	-81
Mayurbhanj	14.0	-16	77.4	269	24.5	37
Nawapara	0.0	-100	15.1	165	5.0	-43
Nawarangpur	8.6	-71	61.0	784	27.6	46
Nayagarh	4.7	-33	35.4	176	17.2	60
Puri	0.0	-99	65.9	745	0.1	-99
Rayagada	12.8	-19	34.4	228	24.9	45
Sambalpur	0.0	-99	34.7	746	1.6	-77
Sonepur	0.3	-92	37.3	1283	0.0	-100
Sundargarh	0.0	-100	9.7	184	9.5	40

<b>West Bengal &amp; Andaman Nicobar Islands</b>						
<b>A &amp; N ISLAND</b>						
Nicobar	61.3	116	23.4	-46	22.5	-63
North & Middle Andaman	45.6	330	14.6	-37	15.2	-71
South Andaman	55.8	316	23.9	-46	10.1	-81
<b>GWB</b>						
Bankura	4.8	-53	61.5	299	33.5	148
Birbhum	13.5	57	29.8	137	15.2	19
Burdwan	11.6	1	34.5	156	2.6	-82
East Midnapore	1.0	-89	107.0	710	21.0	-15
Hooghly	6.9	-58	45.8	179	17.8	-11
Howrah	0.0	-100	60.9	271	7.8	-55
Kolkata	1.1	-93	59.7	266	23.5	18
Murshidabad	0.0	-100	6.0	-9	8.0	-45
Nadia	2.5	-77	37.4	143	1.2	-94
24 Pargana (N)	6.7	-54	90.1	353	5.4	-81
Purulia	9.8	-9	29.8	129	31.7	211
24 Pargana (S)	3.7	-70	33.7	180	11.6	-42
West Midnapore	22.5	48	51.7	187	8.2	-56
<b>SHWB &amp; Sikkim</b>						
Cooch Behar	45.1	30	50.6	-12	77.1	21
Darjeeling	49.4	53	45.6	-4	40.2	-17
East Sikkim	33.1	-8	119.8	147	77.4	37
Jalpaiguri	53.7	89	43.4	-9	45.6	-29
Malda	9.9	-16	36.5	226	4.0	-81
North Dinajpur	23.2	32	38.5	229	1.0	-97
North Sikkim	24.2	-54	41.3	-23	53.8	-33
South Dinajpur	15.5	-1	26.4	29	0.5	-98
South Sikkim	18.3	-49	55.7	15	37.6	-33
West Sikkim	6.0	-88	29.5	-45	31.0	-61
<b>Karnataka</b>						
<b>Coastal Karnataka</b>						
Dakshina Kannada	30.4	262	31.8	146	32.7	44
Udupi	45.1	564	5.2	-48	8.6	-58
Uttara Kannada	5.6	52	14.1	78	14.6	0
<b>N I Karnataka</b>						
Bagalkote	0.5	-91	1.0	-87	1.9	-77
Belagavi	0.2	-97	3.5	-65	8.2	-46
Bidar	6.2	17	17.8	305	16.0	196
Dharwad	0.9	-91	27.9	58	18.2	2
Gadag	0.4	-95	15.1	24	12.6	-9
Haveri	3.2	-65	15.8	-5	27.7	45
Kalaburgi	3.3	-16	10.8	92	3.0	-35
Koppal	4.6	-1	39.7	475	4.5	-22
Raichur	0.4	-91	33.1	524	5.1	41
Vijayapura	10.6	212	2.3	-68	3.5	-37
Yadgir	1.0	-77	7.4	28	4.8	19
<b>S I Karnataka</b>						
Ballari	2.9	-49	26.4	187	7.6	-14

Bangalore Rural	43.7	386	15.8	22	50.9	151
Bangalore Urban	23.6	102	55.2	309	29.9	58
Chamarajanagar	23.5	7	33.5	58	23.5	-15
Chikaballapur	3.1	-54	13.9	83	14.2	6
Chikkamagaluru	22.7	71	34.5	71	27.8	28
Chitradurga	3.5	-38	12.3	31	32.1	209
Davangere	10.6	68	6.3	-52	32.8	128
Hassan	10.3	-14	33.0	67	32.0	38
Kodagu	8.5	-57	51.5	84	42.4	38
Kolar	17.8	125	2.5	-74	16.9	74
Mandya	9.8	-12	14.4	-5	30.5	45
Mysuru	9.7	-38	34.5	71	23.8	-2
Ramanagara	23.7	98	34.7	90	34.7	34
Shivamogga	5.3	-41	27.8	117	21.4	30
Tumakuru	9.7	9	30.8	188	16.0	0
<b>Kerala</b>						
Alappuzha	104.6	301	35.2	-7	7.1	-85
Kannur	41.1	180	31.3	77	42.0	60
Ernakulam	64.6	166	42.4	27	24.4	-43
Idukki	94.8	126	61.2	53	27.7	-25
Kasaragod	17.3	57	63.8	241	3.7	-79
Kollam	132.8	268	41.1	-15	6.1	-87
Kottayam	124.8	385	52.4	56	21.9	-48
Kozhikode	22.6	18	19.1	-23	6.3	-78
Malappuram	59.7	187	31.7	30	27.9	-26
Palakkad	63.7	180	39.8	41	18.7	-43
Pathanamthitta	165.2	269	128.3	153	30.1	-49
Thiruvananthapuram	120.1	362	58.2	86	1.2	-97
Thrissur	60.6	244	38.7	84	9.1	-75
Wynad	13.2	-39	20.3	-17	48.6	101
<b>Tamil Nadu</b>						
Ariyalur	11.3	50	20.5	215	0.0	-100
Chennai	38.1	806	13.5	265	0.0	-100
Coimbatore	48.1	167	44.6	200	14.7	-33
Cuddalore	21.1	270	38.4	735	2.0	-81
Dharmapuri	29.1	129	27.5	137	22.5	30
Dindigul	63.6	236	21.5	23	8.5	-57
Erode	45.2	242	34.8	143	6.2	-65
Kanchipuram	21.1	264	24.1	266	6.5	-9
Kanyakumari	103.8	346	12.3	-50	5.8	-82
Karikal	2.9	7	3.9	-9	0.0	-100
Karur	36.2	326	27.0	86	2.1	-86
Krishnagiri	44.1	267	13.0	-3	26.6	54
Madurai	82.2	398	29.5	102	16.0	31
Nagapattinam	18.1	121	15.8	147	1.3	-86
Namakkal	43.2	235	30.4	99	6.0	-68
Nilgiris	43.9	96	19.8	0	31.3	39
Perambalur	54.3	571	45.8	301	0.0	-100
Puducherry	0.8	-62	64.4	2700	0.0	-100

Pudukottai	25.7	145	21.9	138	2.9	-72
Ramanathapuram	60.5	358	22.3	64	2.2	-75
Salem	53.6	253	56.1	260	1.2	-94
Sivaganga	69.3	445	21.6	77	5.6	-49
Thanjavur	26.9	195	45.2	357	2.6	-77
Theni	93.2	401	43.8	128	20.3	-5
Tirunelveli	65.9	322	34.5	134	14.4	-13
Tirupur	65.5	331	39.6	164	4.5	-75
Tiruvallur	6.9	69	22.3	365	10.4	79
Tiruvannamalai	21.7	214	27.8	356	0.0	-100
Tiruvallur	17.7	69	73.6	569	14.7	47
Toothukudi	10.9	-4	13.0	22	2.6	-74
Trichy	44.1	293	26.7	122	6.6	-50
Vellore	20.5	194	13.0	80	5.2	-51
Villupuram	10.1	102	44.0	763	0.0	-100
Virudhunagar	44.2	162	9.8	-41	6.3	-63
<b>Andhra Pradesh</b>						
<b>Coastal Andhra Pradesh</b>						
East Godavari	3.5	-61	18.0	144	10.6	17
Guntur	3.7	-40	7.3	109	1.0	-80
Krishna	0.0	-100	0.7	-85	1.0	-84
Nellore	6.9	23	2.3	-53	16.1	103
Prakasam	1.5	-73	4.6	6	10.4	44
Sirkakulam	6.5	11	19.3	227	12.8	19
Visakhapatnam	13.9	2	47.5	271	9.0	-48
Vizianagram	2.9	-75	13.6	89	23.6	60
West Godavari	0.9	-87	1.9	-69	1.6	-69
<b>Rayalaseema</b>						
Anantapur	1.1	-81	18.0	239	4.3	-57
Chittoor	14.1	70	15.0	93	22.4	92
Cuddapah	2.9	-46	6.0	-2	13.3	90
Kurnool	1.7	-67	15.7	148	7.2	0
<b>Telangana</b>						
Adilabad	5.1	60	6.2	121	8.8	203
Hyderabad	0.0	-100	4.9	-5	0.0	-100
Karimnagar	1.3	-68	11.1	226	1.5	-64
Khammam	5.9	-26	16.3	172	1.8	-75
Mehabubnagar	2.1	-43	9.6	57	1.1	-72
Medak	0.5	-89	6.2	19	1.5	-52
Nalgonda	0.0	-100	10.3	202	3.0	-29
Nizamabad	2.8	-11	6.0	200	1.6	-51
Rangareddy	2.2	-54	10.3	58	7.3	11
Warangal	7.5	54	25.5	921	0.3	-93

### Legends

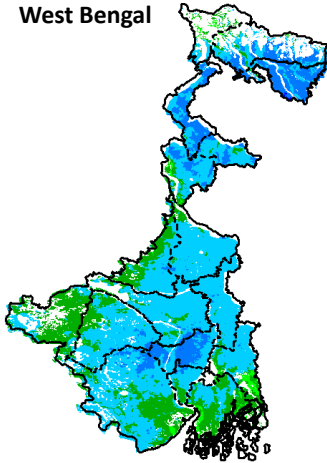
	(20% or more) excess rainfall		(-60 to -99 %) scanty rainfall
	(-19 to +19%) normal rainfall		(-100%) no rainfall

	(-20 to -59%) deficient rainfall	**	Data not available
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## Annexure II

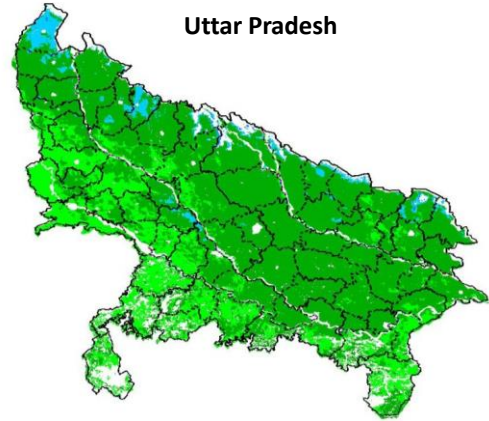
### INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 06<sup>th</sup> May 2015 FOR DIFFERENT STATES

**West Bengal**



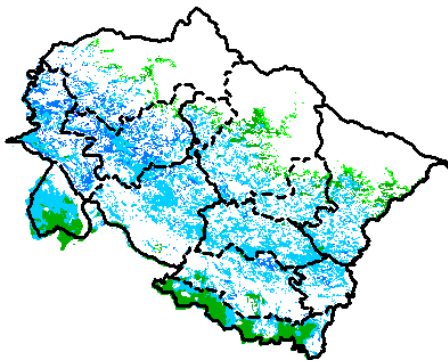
Agricultural vigour is good over the parts of West Bengal, whereas central part of West Bengal shows dominantly higher values of NDVI varying from 0.4-0.6. NDVI values are normal over south western part of state.

**Uttar Pradesh**



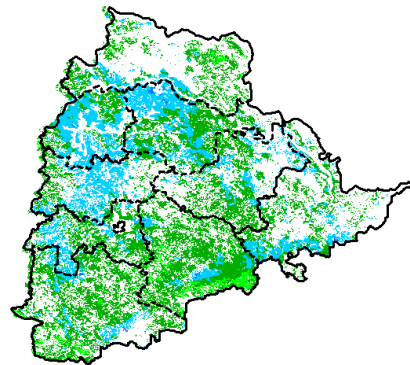
Agricultural vigour is normal over the entire state of Uttar Pradesh where NDVI values varies from 0.2 -0.4. In north western part NDVI shows higher values with 0.4-0.5.

**Uttarakhand**



Agriculture vigour is good over central parts of Uttarakhand with NDVI values varying between 0.4-0.5. Whereas, isolated patches with normal values of NDVI are observed over remaining parts of the state.

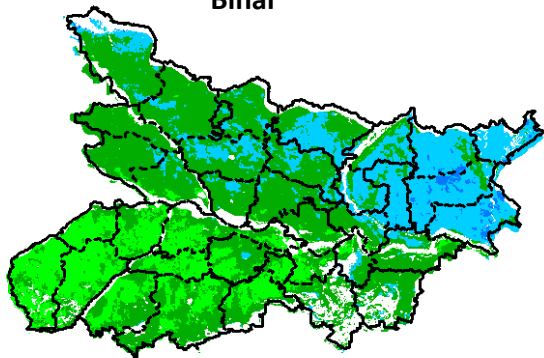
**Telangana**



NDVI values vary from 0.2 - 0.5 over Telangana. Higher (> 0.4) values are seen over central and western parts of Telangana.



### Bihar



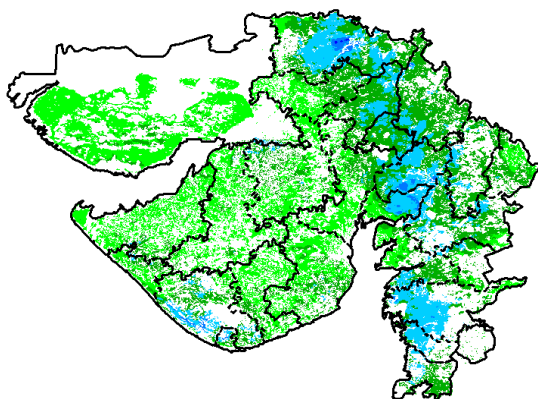
Eastern part of Bihar shows comparatively a high values (0.4-0.5) of NDVI, Whereas normal values of NDVI are observed over the remaining parts of the state.

### Delhi



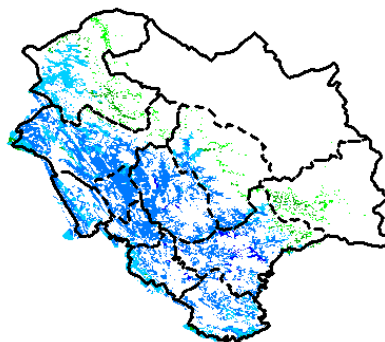
Agriculture vigour is normal all over Delhi where NDVI values lies between 0.2-0.4.

### Gujarat



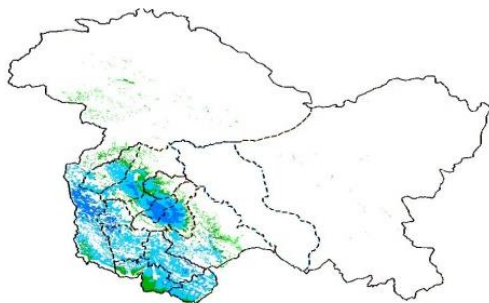
Agriculture vigour is good over central part of Gujarat where NDVI values lies between 0.4-0.6. Whereas normal NDVI is observed in Kutch and Saurashtra.

### Himachal Pradesh



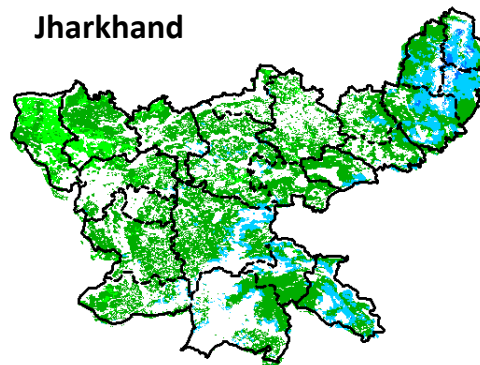
Agriculture vigour is good over southern and south western parts of Himachal Pradesh with NDVI values varying between 0.4-0.6. Whereas, isolated patches of normal NDVI are observed over remaining parts of the state.

### Jammu & Kashmir



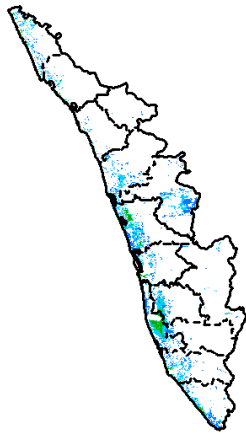
Agriculture vigour is normal all over Jammu and Kashmir. NDVI values vary in between 0.4-0.6 in south western parts.

### Jharkhand



Agriculture vigour is normal (0.2-0.3) over entire state of Jharkhand except south and North eastern district of state with NDVI values from 0.4-0.5.

### Kerala



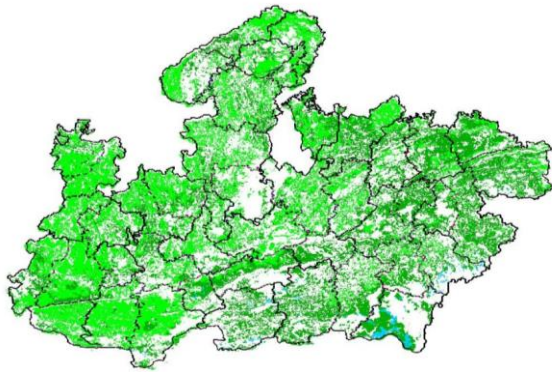
Central and coastal regions of Kerala shows NDVI values are varying from 0.3 to 0.5, whereas rest of agricultural vigour of Kerala shows good values of NDVI.

### Haryana



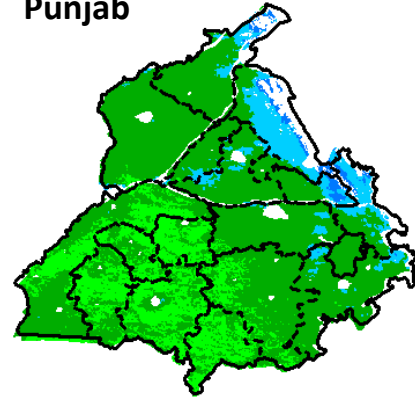
Agriculture vigour is normal over the state of Haryana. NDVI values varies between 0.2– 0.3 over the state. Except few patches in northern part shows NDVI values between 0.4-0.5.

### Madhya Pradesh



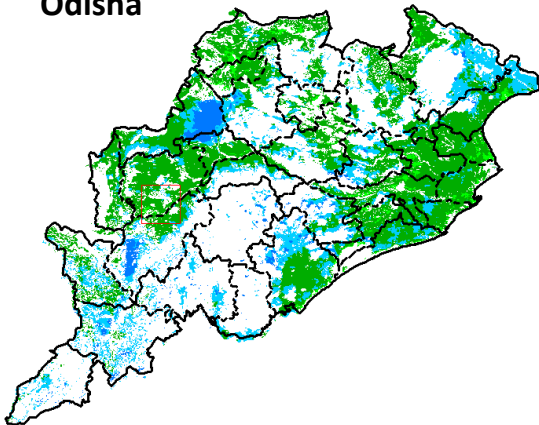
Agriculture vigour is normal (0.2-0.3) over entire state Madhya Pradesh.

### Punjab



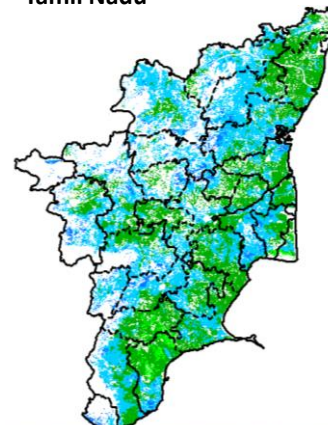
Agricultural vigour is normal over entire state of Punjab except North Eastern part shows comparatively high NDVI values ranges from 0.4-0.6.

### Odisha



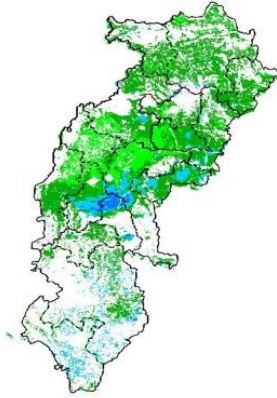
Agricultural vigour is good in eastern coastal and few pockets in western parts of Odisha with NDVI values of 0.4 - 0.6. The remaining parts shows normal NDVI values.

### Tamil Nadu



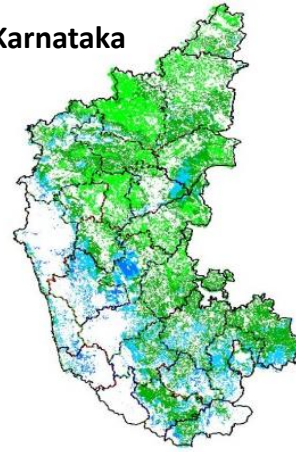
Agricultural vigour is normal over Tamil Nadu with NDVI values varying from 0.3 - 0.5. Western parts of Tamil Nadu shows comparatively high NDVI values vary between 0.4-0.5 in patches.

### Chhattisgarh



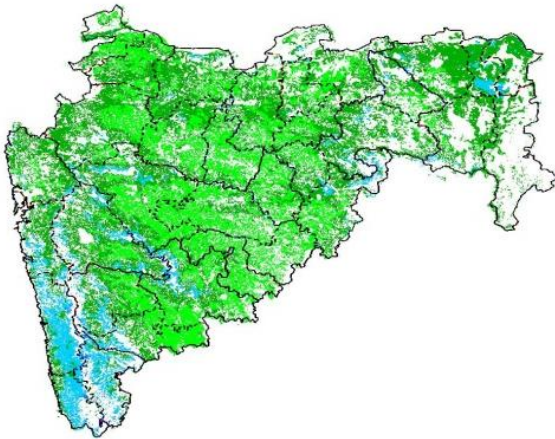
Agriculture vigour is good in central part of Chhattisgarh where NDVI values lies in between 0.4-0.5. NDVI values are normal over rest of the state.

### Karnataka



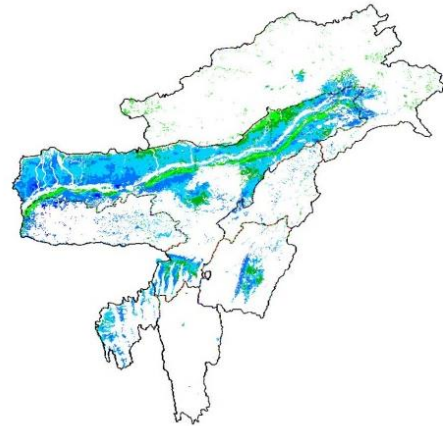
Agriculture vigour is good over some pockets of west coast of Karnataka between 0.4-0.6. Rest of the parts shows normal NDVI values up to 0.2-0.3

### Maharashtra



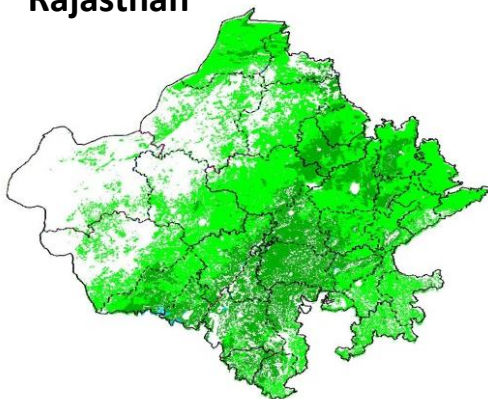
Agricultural vigour is good over south west part with NDVI values of 0.4 - 0.5. Whereas, NDVI is moderate over parts of Marathwada, Vidarbha and Madhya Maharashtra region.

### North East Region



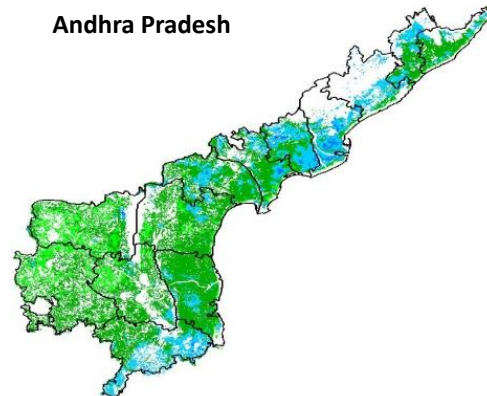
Agriculture vigour is good in valleys of hilly range of North-East states which covers part of Assam. NDVI values vary from 0.4-0.5. Normal NDVI conditions are observed all over NE region.

### Rajasthan

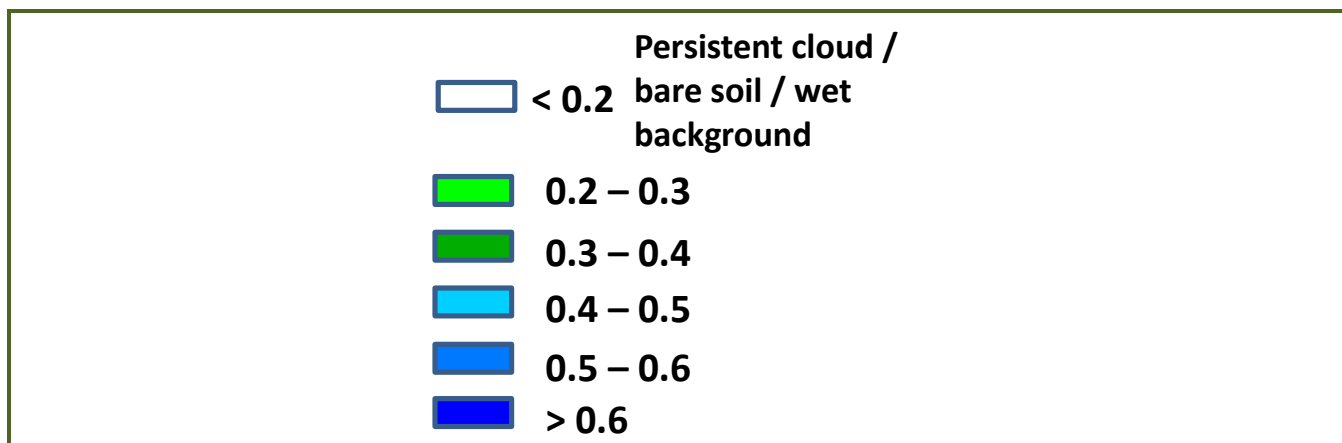


Agriculture vigour is normal (0.2-0.3) over entire state of Rajasthan.

### Andhra Pradesh



Agriculture vigour is vary from 0.3 - 0.4 over central and coastal parts of Andhra Pradesh. The NDVI is normal over rest of the part of the state.



### Annexure III List of varieties

#### Karnataka

**Ragi:** GPU- 28,MR -01, 02 and 06, KMR-301.

**Redgram:** TTB -7, BRG -01, BRG- 02,HYD -3C.

#### Tamil Nadu:

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

#### Andhra Pradesh:

**Rice:** MTU-1010, Nellore masuri, Dharani, Shwetha.

#### Assam

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

**Summer green gram:** T-44, AAU-34, AAU-39, Pratap, Kopergaon, K-85, ML-55.

**Summer black gram :** T-9, Pant U-19, JU-78.

**Okra :** Pusa Sawani, Arka Anamika, Parbhdani Kranti.

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

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

**Kharif Maize :** Hybrid variety : Ganga 5, Hi starch.

Composite variety like NLD, Dhawal, Naviot, Diara.

Normal hybrids : Ganga 11, Deccan 107, Deccan 109, Vivek 9.

Quality Protein Hybrid : HQPM-1.

Normal Composite variety : NLD, Parbhat, Novjot, Pusa Comp 1 & 2.

Quality Protein composite : Shakti-1.

**Cucumber:** Pusa Sanyog, Chinese Green etc.

**Ridge Gourd :** Pusa Nasdar and selected local varieties.

**Sugarcane :** Kolong, Luhit, Dhansiri, Co 1148, Co 6315, Co 997, 80/77 (Co BLN 9104), 43/83 (Co BLN 9605).

**Summer sesame :** TC 25, Vinayak.

**Ginger :** Rio-de-Generio, Nadia, Moran, Jorhat, Karkai, Chaina.

**Summer sesame :** TC 25 and Vinayak.

**Turmeric :** Shillong Type, Tall clone, CL-24, PTS-38, PCT-13, PCT-13, VK-145.

**Banana :** Dwarf Cavendish (Dwarf Cultivar), Cheni Champa, Malbhog (Medium Tall cultivars).

Sword sucker of dwarf variety : Jahaji.

Medium tall variety : Chenichampa, Malbhog, Barjahaji.

**Papaya :** Ranchi, Washington, Halflong, Coorg Honeydew.

Mesta : HC 583 and AMC 108.

#### Arunachal Pradesh

**Jhum rice:** Bhalum1,2,3 & 4.

#### Manipur

**Okra:** Pusa Sawani, Arka Anamika.

**Turmeric:** Megha turmeric.

**Ginger:** Nadia.

**Soybean:** JS-335.

**Groundnut:** ICGS-76.

### **Tripura:**

**Urad:** T-9, PanthUrd 35.

**Green Gram:** PDM 139 (Samrat), TMV 37.

**Cowpea:** Maharaja, Kasi Kanchan .

**Jhum rice :** Garo Malati, Binnietc.

### **Meghalaya**

**Jhum rice :** Bhalum 1, 2, 3; IRAT 109, IR 50.

**Ginger :**Nadia, Poona, Riodegenerio.

**Turmeric :** Lakadong, RCT-1.

### **Odisha**

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

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

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

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

### **Bihar**

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

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

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

### **Jharkhand:**

**Summer rice:** IR-36, IR-64, Naveen, lalat, Parijat (80-85 days).

**Summer maize:** Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid), HQPM (Hybrid).

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

**Sugarcane:** BO 147.

### **Jammu & Kashmir**

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

### **Uttarakhand**

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

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

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

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

### **Himachal Pradesh**

**Late variety of Cauliflower:** broccoli.

**Cauliflower:** Pusa-snowwall.

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

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

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

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

**Chilli:** Surajmukhi.

**Sunflower:** EC-68415.

**Moong:** Pusa Baishakhi.

**Mash:**UG-218.

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

**Carrot:**Nantes and Chantenay.

**Palak:**PusaHarit, Pusa Bharti.

### **East Uttar Pradesh**

**Moong:** samrat,hum-2, hum-12, malviyajanchetana, malviyajoyti, neredra moong-1.

**Urad:** T-9, azad urd-1, azadurd-2, shekher-2.

**Sugar cane:** coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212 ,etc.

**Maize:** pusa, agatishanker, makka-2, azad, uttam, sweta, Prakash.

### **Punjab**

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

### **Rajasthan**

**Sugarcane** (late sown): COL8001.