

National Agromet Advisory Service Bulletin

Friday 20th March 2015

(For the period 20th to 24th March 2015)

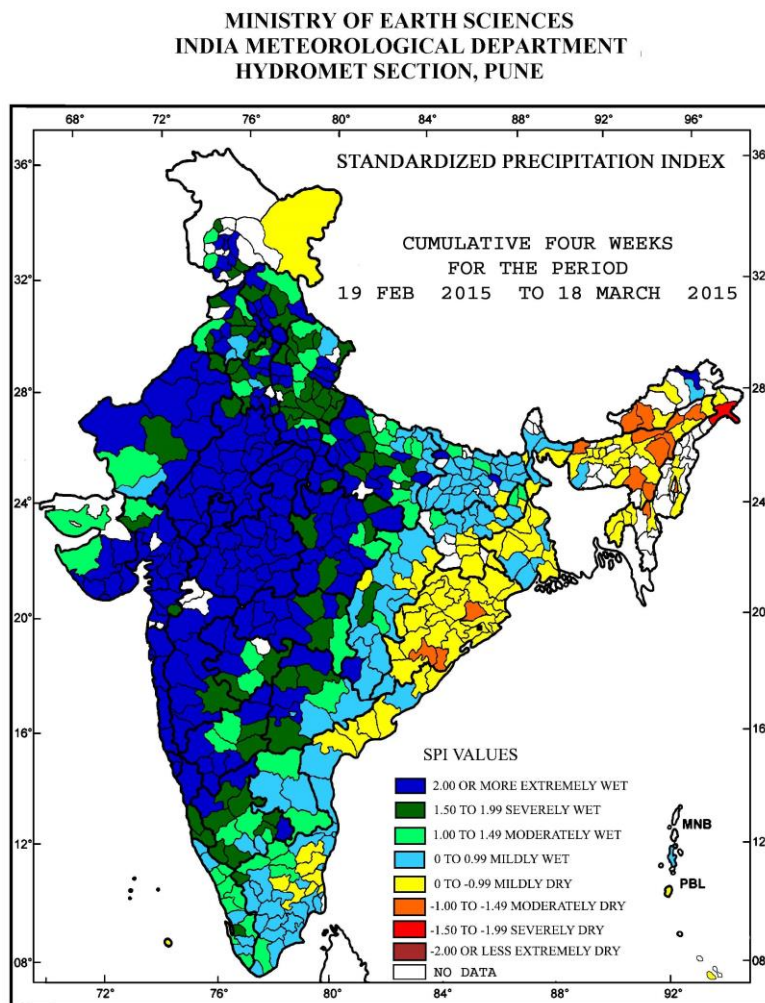


Issued by

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



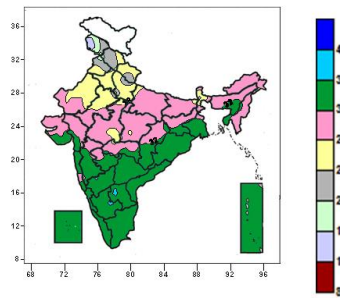
**Standardised Precipitation Index
Four Weekly
for the Period 19th February to 18th March 2015**



- Extremely/severely wet conditions experienced in most districts of Uttar Pradesh, Uttarakhand, Haryana, Punjab, Himachal Pradesh, Gujarat, Rajasthan, Madhya Pradesh, Maharashtra & Goa, Karnataka, many districts of Telangana, Jammu and Kashmir, Durg and Bijapur districts of Chhattisgarh; Upper Siang district of Arunachal Pradesh; Gopalganj and Khagaria districts of Bihar, The Nilgiris district of Tamil Nadu and Kottayam district of Kerala.
- Moderately/severely dry conditions experienced in few districts of Assam, Changlang, East Kameng and West Kameng districts of Arunachal Pradesh; Jaintia Hills district of Meghalaya, Imphal East district of Manipur, Kolasib district of Mizoram, Gajapati, Rayagada and Dhenkanal districts of Odisha.
- Rest of the country experienced moderately wet/ mild wet/dry conditions.

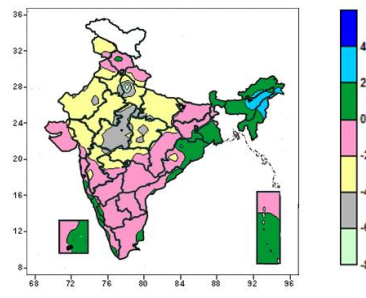
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 18.03.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 18.03.2015



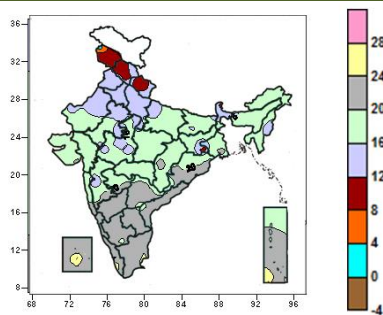
- 32 to 36°C over the country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Rajasthan Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, many parts of Uttar Pradesh, Assam & Meghalaya, Jharkhand, Vidarbha, Gujarat, few parts of Madhya Maharashtra, Marathwada, Chhattisgarh, isolated parts of Gangetic West Bengal, Konkan
- 24 to 32°C over Haryana & Delhi, Rajasthan, Madhya Pradesh, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Nagaland, Manipur, Mizoram, many parts of Uttarakhand, Uttar Pradesh Punjab, Assam & Meghalaya, Jharkhand, Vidarbha, Gujarat, few parts of Madhya Maharashtra, Marathwada, Chhattisgarh, isolated parts of Gangetic West Bengal, Konkan.
- 20 to 24°C over many parts of Himachal Pradesh, Punjab, few parts of Jammu & Kashmir, isolated parts of Uttarakhand and West Uttar Pradesh.
- 12 to 20°C over many parts of Jammu & Kashmir.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 18.03.2015



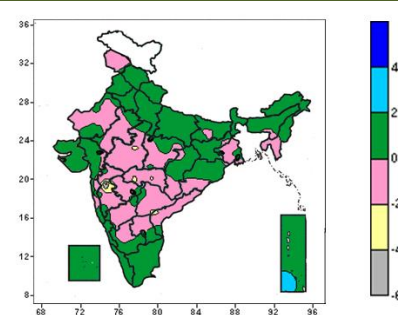
- -4 to 0°C over entire country except North East India, West Bengal & Sikkim, Coastal Karnataka, many parts of Odisha, Lakshadweep, Andaman & Nicobar Islands, few parts of Jharkhand and isolated parts of Konkan, Tamil Nadu and Kerala.
- 0 to 4°C over North East India, Sikkim, Coastal Karnataka, many parts of West Bengal, Odisha, Lakshadweep, Andaman & Nicobar Islands, few parts of Jharkhand and isolated parts of Konkan, Tamil Nadu and Kerala.

Actual Mean Minimum Temperature (°C) in India for the week ending 18.03.2015



- 0 to 4°C over isolated parts of Jammu & Kashmir.
- 4 to 8°C over isolated parts of Jammu & Kashmir.
- 8 to 12°C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand.
- 12 to 20°C over entire country except Jammu & Kashmir, Karnataka, Andhra Pradesh, Tamil Nadu, Kerala, Goa, Lakshadweep, many parts of Odisha, Andaman & Nicobar Islands and isolated parts of Chhattisgarh, Gangetic West Bengal, Madhya Maharashtra, Marathwada and Saurashtra.

Mean Minimum Temperature (°C) Anomaly in India for the week ending 18.03.2015

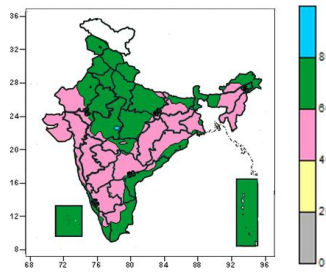


- -6 to -2°C over isolated parts of West Madhya Pradesh, Madhya Maharashtra, Vidarbha, Telangana, and Coastal Andhra Pradesh.
- -2 to 2°C over entire country except isolated parts of West Madhya Pradesh, Madhya Maharashtra, Vidarbha, Telangana, Coastal Andhra Pradesh and Andaman & Nicobar Islands.
- 2 to 4°C over isolated parts of Andaman & Nicobar Islands.

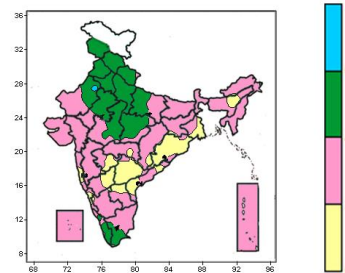
- 20 to 28⁰C over Tamil Nadu, Kerala, Goa, Lakshadweep, many parts of Odisha, Karnataka, Andhra Pradesh, Andaman & Nicobar Islands and isolated parts of Chhattisgarh, Gangetic West Bengal, Madhya Maharashtra, Marathwada and Saurashtra.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 18.03.2015

Relative Humidity (%) over India for the week ending 18.03.2015



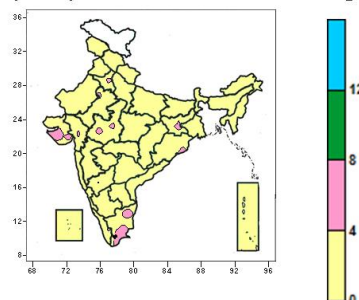
Cloud amount (okta) over India for the week ending 18.03.2015



- 60 to 80% over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Sub-Himalayan West Bengal & Sikkim, Lakshadweep, Andaman & Nicobar Islands, many parts of Uttar Pradesh, Madhya Pradesh, Rajasthan, Coastal Karnataka, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Vidarbha, Arunachal Pradesh, few parts of Assam & Meghalaya, Bihar, Coastal Odisha, Rayalaseema, isolated parts of Gangetic West Bengal, Telangana, Nagaland.
- 40 to 60% over entire country except 60 to 80% over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Sub-Himalayan West Bengal & Sikkim, Lakshadweep, Andaman & Nicobar Islands, many parts of Uttar Pradesh, Madhya Pradesh, Rajasthan, Coastal Karnataka, Coastal Andhra Pradesh, Tamil Nadu, Kerala, Vidarbha, Arunachal Pradesh, few parts of Assam & Meghalaya, Bihar, Coastal Odisha, Rayalaseema, isolated parts of Gangetic West Bengal, Telangana, Nagaland.

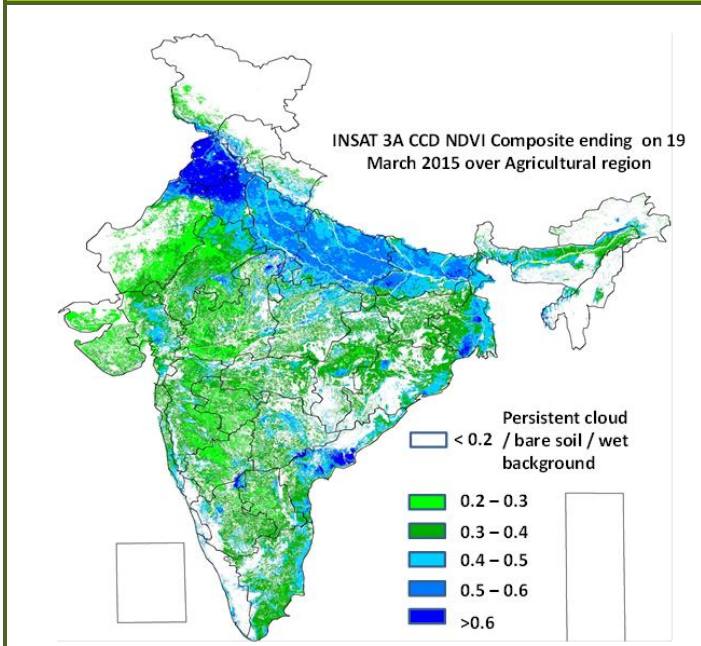
- 6 to 8 okta over isolated parts of West Rajasthan.
- 4 to 6 over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, West Uttar Pradesh, many parts of East Uttar Pradesh, Rajasthan, Madhya Pradesh, Kerala, few parts of Tamil Nadu.
- 0 to 4 okta over entire country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, West Uttar Pradesh, many parts of East Uttar Pradesh, Rajasthan, Madhya Pradesh, Kerala, few parts of Tamil Nadu.

Wind speed (knots) over India for the week ending 18.03.2015



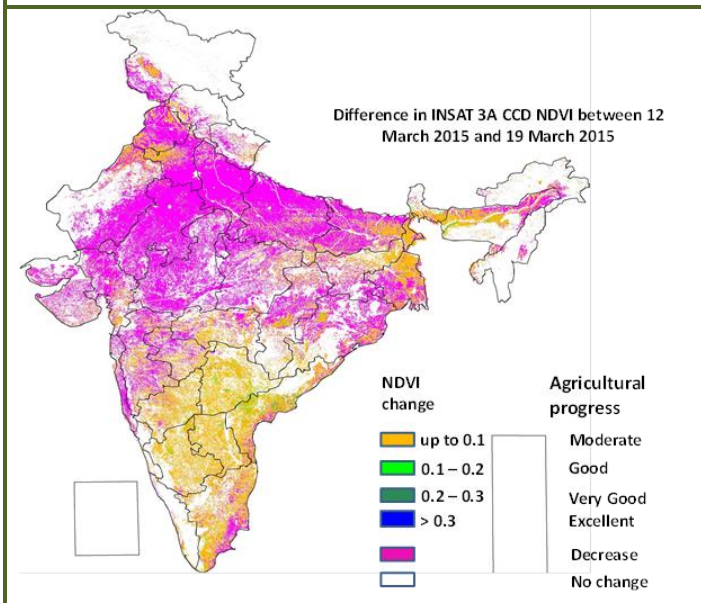
- 4 to 8 knots over few parts of Tamil Nadu and Saurashtra; isolated parts of Gujarat Region, West Madhya Pradesh, Coastal Odisha, Jharkhand, East Rajasthan, Haryana and North Interior Karnataka.
- 0 to 4 knots over entire country except few parts of Tamil Nadu and Saurashtra; isolated parts of Gujarat Region, West Madhya Pradesh, Coastal Odisha, Jharkhand, East Rajasthan, Haryana and North Interior Karnataka.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 19th MARCH 2015 OVER AGRICULTURAL REGION OF INDIA



- Very good (NDVI > 0.6) agricultural vigour is observed over Punjab, northern parts of Haryana, few patches in north Rajasthan, southern parts of Gangetic West Bengal and coastal region of Andhra Pradesh. Vegetation is good (NDVI: 0.4 - 0.6) over Uttar Pradesh, Bihar and a few pockets in East Rajasthan, central Telangana, Konkan & Goa and coastal parts of Odisha, Tamil Nadu. The NDVI remained within the range of 0.3 to 0.4 over few parts in Madhya Maharashtra, Saurashtra, and North interior of Karnataka.

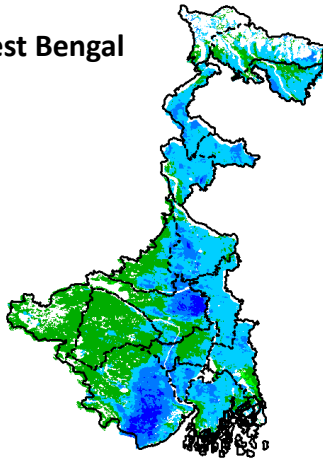
Difference in INSAT 3A CCD NDVI between 12th March 2015 and 19th March 2015



- Decrease in NDVI was observed in Uttar Pradesh, East Rajasthan, many parts of Punjab, Haryana, Bihar, some parts of Madhya Pradesh, West Rajasthan, Gujarat, a few parts of Madhya Maharashtra, Marathwada, Chhattisgarh, Odisha and coastal West Bengal and coastal Tamil Nadu. Moderate change in NDVI was observed over coastal parts of Andhra Pradesh, Telangana and Interior Karnataka, Rayalaseema and many parts of Tamil Nadu and West Bengal.

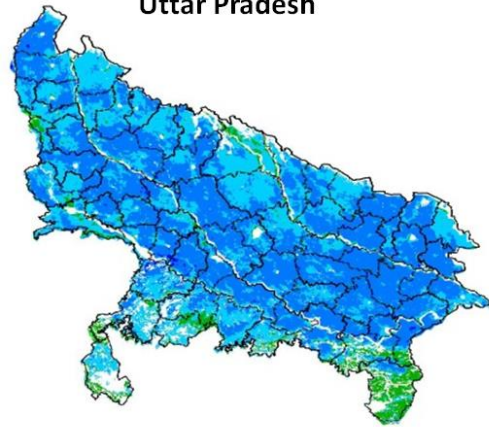
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 19th MARCH 2015 FOR DIFFERENT STATES

West Bengal



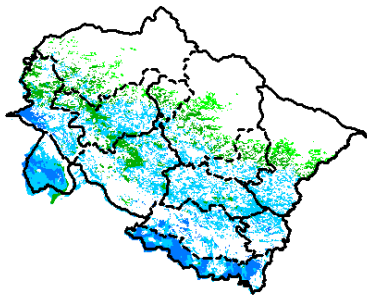
Agricultural vigour is good over most of the central parts of West Bengal, whereas southern part show higher values of NDVI varying from 0.4-0.6.

Uttar Pradesh



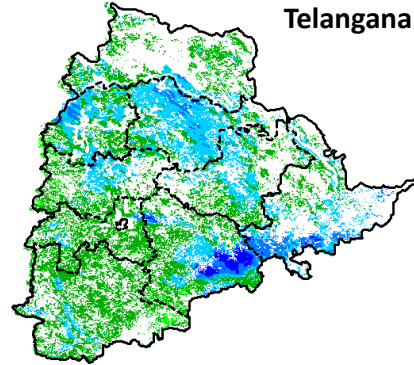
Agricultural vigour is good over the entire state of Uttar Pradesh where NDVI values varies from 0.5 -0.6.

Uttarakhand



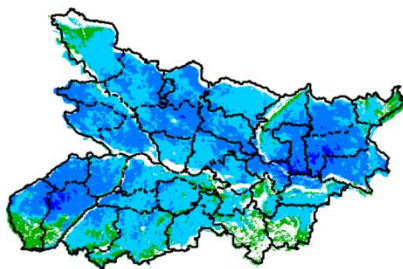
NDVI values vary from 0.2 - 0.5 over Uttarakhand. Higher values are seen in the southern part of Uttarakhand.

Telangana



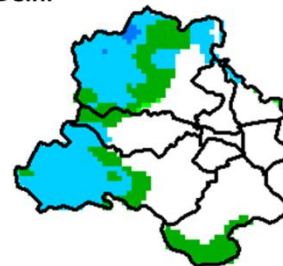
NDVI values vary from 0.2 - 0.5 over Telangana. Higher (> 0.5) values are seen in the eastern and northern part of Telangana.

Bihar



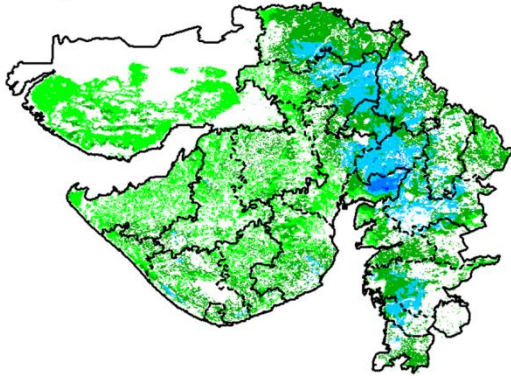
The entire state of Bihar shows comparatively a high value (0.4-0.6) of NDVI, except for few pockets in south eastern and South western Bihar region.

Delhi



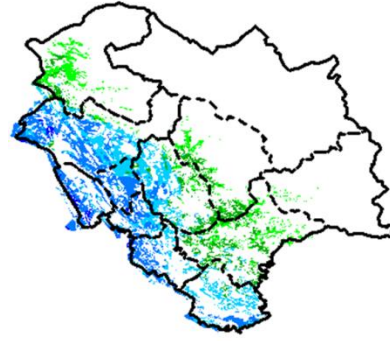
Agriculture vigour is good over western part of Delhi. NDVI values lies between 0.4-0.5. NDVI values are normal over central and western part of the state.

Gujarat



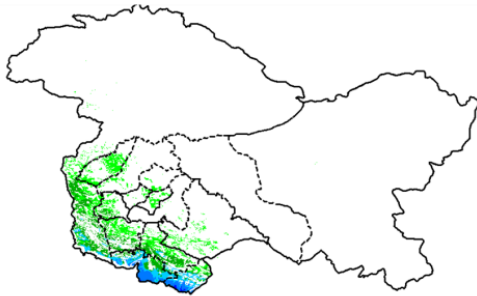
Agriculture vigour is good over northern and central part of Gujarat where NDVI values lies between 0.4-0.5. Whereas normal NDVI is observed in Kutch and Saurashtra.

Himachal Pradesh



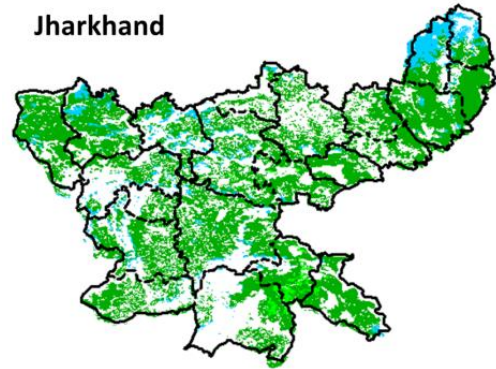
Agriculture vigour is good over southern and south western parts of Himachal Pradesh with NDVI values varying between 0.4-0.6. Whereas, isolated patches of normal NDVI are observed in the state.

Jammu - Kashmir



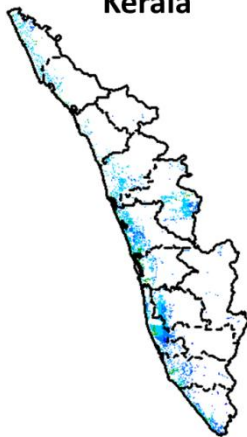
Agriculture vigour is normal all over Jammu and Kashmir. NDVI values vary in between 0.4-0.5 in south western parts.

Jharkhand



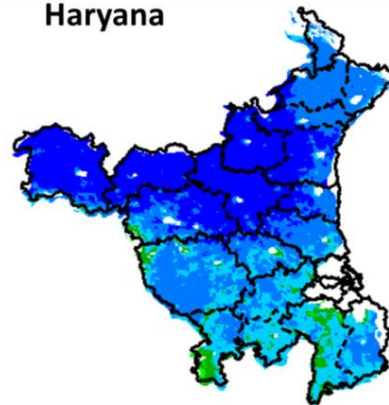
Agriculture vigour is normal 0.3-0.4 over entire state of Jharkhand. NDVI values vary in between 0.4-0.5 in North eastern parts.

Kerala



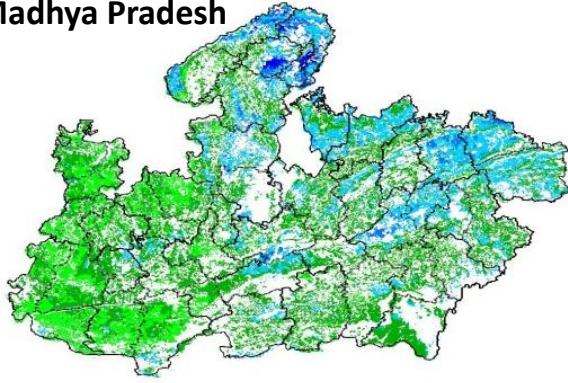
In central and south coastal parts of Kerala show NDVI values are greater than 0.5, whereas rest of agricultural vigour of Kerala shows good values of NDVI.

Haryana



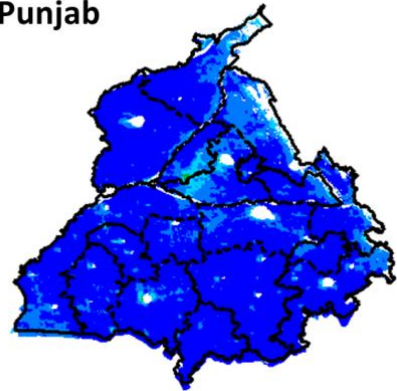
Agriculture vigour is good; NDVI values (> 0.6) entire state of Haryana. Except few patches in southern part shows normal values.

Madhya Pradesh



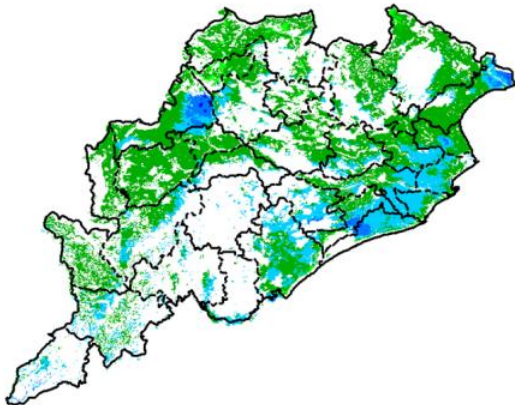
Agricultural vigour is good over eastern and northern region of Madhya Pradesh showing higher values of NDVI varies from 0.4 - 0.5. The overall Vegetation vigour is good over the entire state of Madhya Pradesh.

Punjab



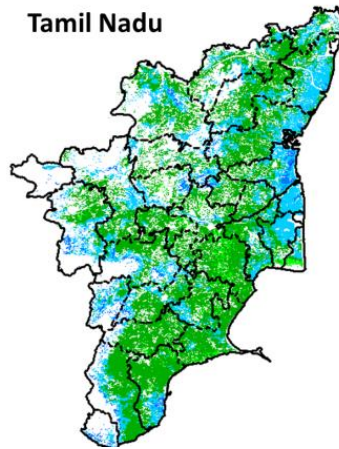
Agricultural vigour is comparatively good over entire state of Punjab with NDVI values greater than 0.6.

Odisha



Agricultural vigour is good in eastern and western parts of Odisha with NDVI values of 0.4 - 0.5. Rest of the part is with normal NDVI values.

Tamil Nadu



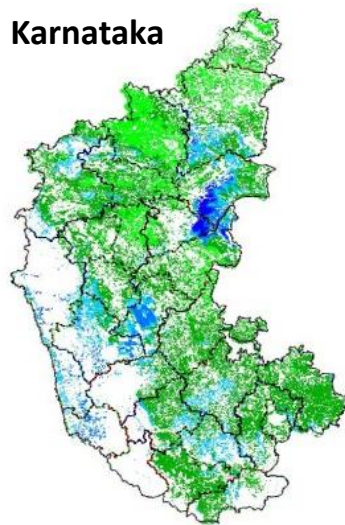
Agricultural vigour is normal over Tamil Nadu with NDVI values varying from 0.3 - 0.5. In the coastal parts NDVI values varies between 0.4-0.5.

Chhattisgarh



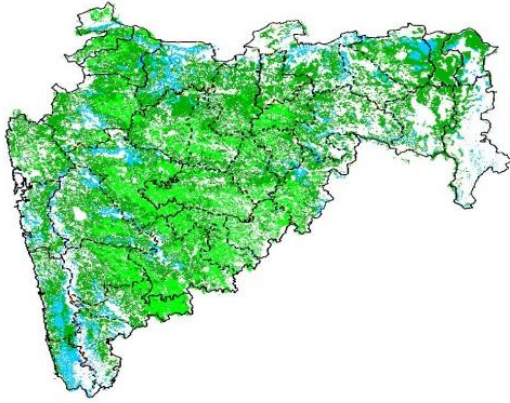
Agriculture vigour is good all over western and southern part of Chhattisgarh where NDVI values lies in between 0.4-0.5. NDVI values are normal over eastern, central and northern part of the state.

Karnataka



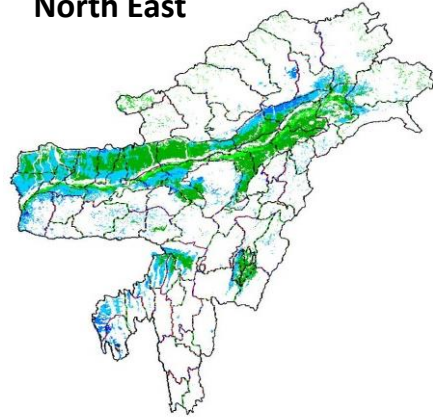
Agriculture vigour is good over some pockets in eastern and western coastal parts of Karnataka which lies in between 0.3-0.5. Rest of the part show normal condition where NDVI values vary up to 0.2-0.3

Maharashtra



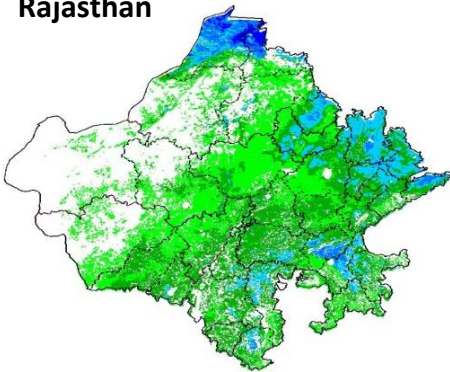
Agricultural vigour is good over Western coastal with NDVI values of 0.4 - 0.5. Whereas, NDVI is moderate over central and southern parts of Marathwada, Vidarbha and Madhya Maharashtra region.

North East



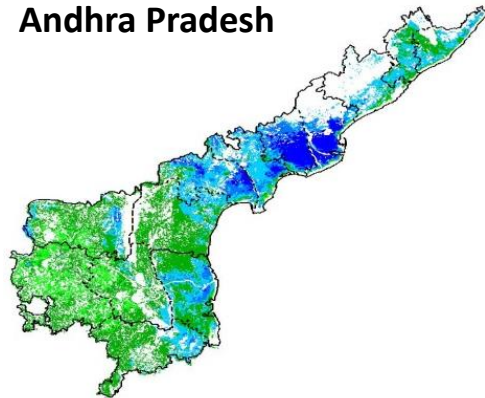
Agriculture vigour is good in valleys of northern hilly range of North-East states which covers part of Assam. NDVI values vary from 0.2-0.4 in this region. In north-east part of Assam, Normal NDVI conditions are observed all over NE region.

Rajasthan



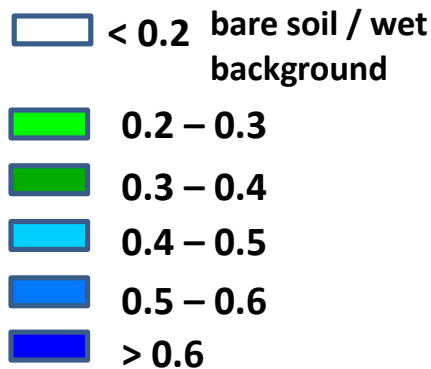
In the eastern, north eastern and north western part of Rajasthan NDVI shows higher values from 0.5-0.6. Whereas, Agricultural vigour is good (0.4-0.5) over north eastern part. Few patches in central Rajasthan show NDVI values varying from 0.2 - 0.3.

Andhra Pradesh



Agriculture vigour is very good (0.5 - 0.6) over central and coastal parts of Andhra Pradesh. The NDVI is good over rest of the part of the state.

Persistent cloud /



Weather Forecast for next 5 days valid upto 0830 hours of 25th March 2015

- Gradual rise in maximum & minimum temperatures over northwest, central and west India.

5-Day Rainfall Forecast (MORNING)

DATED: 20-03-2015

S.N	MET. SUB-DIVISION	Forecast				
		20-03-15	21-03-15	22-03-15	23-03-15	24-03-15
1	A & N Islands	DRY	DRY	DRY	ISOL	ISOL
2	Arunachal Pradesh	ISOL	DRY	DRY	DRY	ISOL
3	Assam & Meghalaya	DRY	DRY	DRY	ISOL	ISOL
4	Nag, Mani, Mizo & Tripura	DRY	DRY	DRY	ISOL	ISOL
5	SHWB & Sikkim	DRY	DRY	DRY	DRY	DRY
6	Gangetic West Bengal	DRY	DRY	DRY	DRY	DRY
7	Odisha	DRY	DRY	DRY	DRY	DRY
8	Jharkhand	DRY	DRY	DRY	DRY	DRY
9	Bihar	DRY	DRY	DRY	DRY	DRY
10	East Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
11	West Uttar Pradesh	DRY	DRY	DRY	DRY	DRY
12	Uttarakhand	DRY	ISOL	DRY	ISOL	ISOL
13	Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14	Punjab	ISOL	DRY	DRY	DRY	DRY
15	Himachal Pradesh	ISOL	ISOL	DRY	ISOL	ISOL
16	Jammu & Kashmir	ISOL	ISOL	DRY	ISOL	ISOL
17	West Rajasthan	ISOL	DRY	DRY	DRY	DRY
18	East Rajasthan	DRY	DRY	DRY	DRY	DRY
19	West Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
20	East Madhya Pradesh	DRY	DRY	DRY	DRY	DRY
21	Gujarat Region	DRY	DRY	DRY	DRY	DRY
22	Saurashtra, Kutch & Diu	DRY	DRY	DRY	DRY	DRY
23	Konkan & Goa	DRY	DRY	DRY	DRY	DRY
24	Madhya Maharashtra	DRY	DRY	DRY	DRY	DRY
25	Marathawada	DRY	DRY	DRY	DRY	DRY
26	Vidarbha	DRY	DRY	DRY	DRY	DRY
27	Chhattisgarh	DRY	DRY	DRY	DRY	DRY
28	Coastal Andhra Pradesh	DRY	DRY	DRY	DRY	DRY
29	Telangana	DRY	DRY	DRY	DRY	DRY
30	Rayalaseema	DRY	DRY	DRY	DRY	DRY
31	Tamilnadu & Pudd.	DRY	DRY	DRY	DRY	DRY
32	Coastal Karnataka	DRY	DRY	DRY	DRY	DRY
33	N I Karnataka	DRY	DRY	DRY	DRY	DRY
34	S I Karnataka	DRY	DRY	DRY	DRY	DRY
35	Kerala	ISOL	DRY	DRY	DRY	DRY
36	Lakshadweep	ISOL	DRY	DRY	DRY	DRY

% of stations reporting rainfall			
% Stations	Category	% Stations	Category
76-100	Widespread/Most Places (WS)	26-50	Scattered/ few places (SCT)
51-75	Fairly Widespread/Many Places (FWS)	1-25	Isolated (ISOL)
No Rain	Dry		

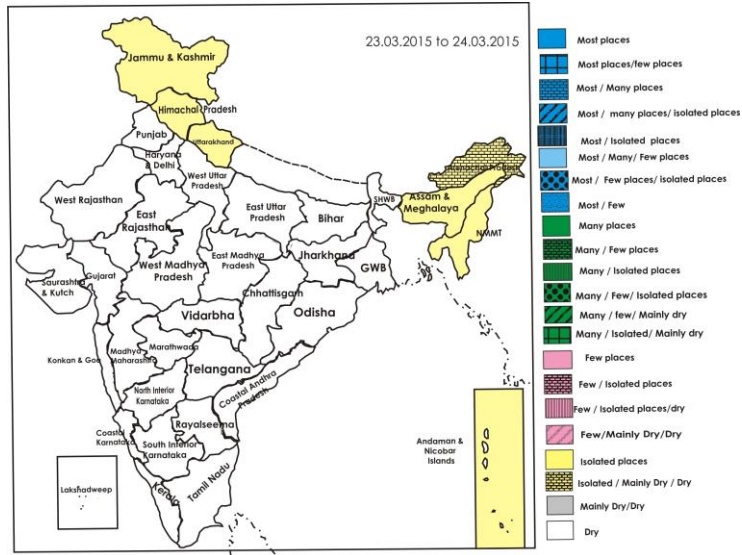
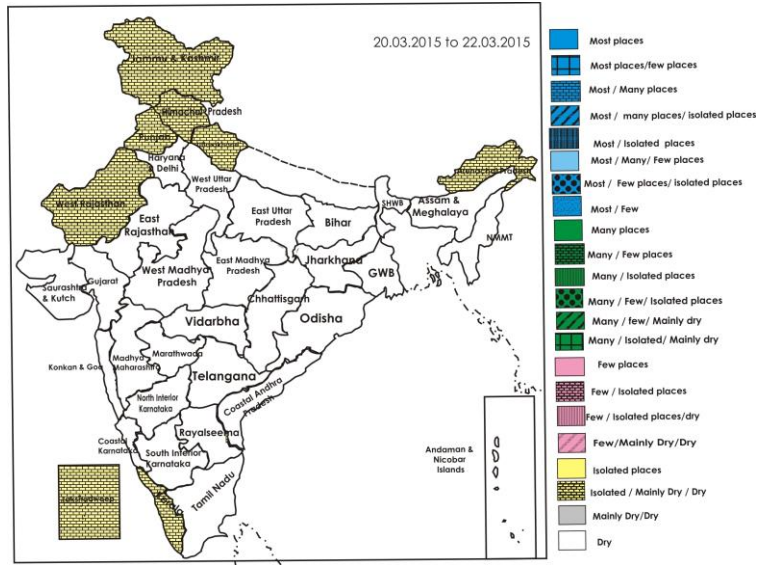
Weather Warning during next 5 days

- 20 March (Day 1):♦ No weather warning.
- 21 March (Day 2):♦ No weather warning.
- 22 March (Day 3):♦ No weather warning.
- 23 March (Day 4):♦ No weather warning.
- 24 March (Day 5):♦ No weather warning.

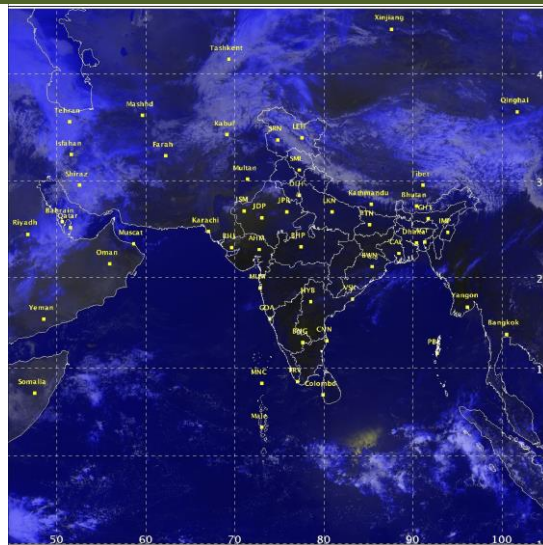
Weather Outlook for subsequent 2 days From 25th March 2015 to 27th March 2015

- Precipitation would occur at a few places over western Himalayan region and at isolated places over plains of northwest India.
- Rain/thundershower would occur at a few places over northeastern states and at isolated places over central & extreme south peninsular India.

Weather Forecast Map (Valid upto 0830 hours of 25th March, 2015)



Satellite image dated, 20.03.2015, 0600 UTC



Detailed Zonewise Agromet Advisories

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



Sorghum



Sugarcane



Chilli



Rice

- **Realised Rainfall:** Significant rainfall occurred in Nilgiris, Ramanathapuram, Sivaganga, Theni and Tirunelveli districts in Tamil Nadu and Alapuzha, Kottayam, Malappuram, Thiruvananthapuram and Thrissur districts in Kerala. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Kerala during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershower would occur at isolated places over extreme south peninsular India.
 - **Andhra Pradesh:**
 - In the Scarce Rainfall Zone, severe fruit dropping is noticed in mango due to water stress. Provide light and frequent irrigation to reduce incidence of fruit dropping.
 - Prevailing humid weather and temperature conditions are congenial for incidence of tikka leaf spot and rust disease in groundnut in the Southern Zone. To control tikka leaf spot, spray Mancozeb @ 2 g + Carbendizum @ 1 g or Hexaconazole @ 2 ml/litre of water two times at 15 days interval and to control rust, spray Kavach @ 2g/litre of water.
 - **Telangana:**
 - Apply irrigation in orange orchards to maintain optimum moisture in the soil for increasing fruit size in the Southern Telangana Zone.
 - Prevailing temperature conditions are congenial for hispa incidence in rice in the Northern Telangana Zone. Spray Profenophos @ 2.0 ml or Chlorpyriphos @ 2.5 ml per litre of water.
 - **Karnataka:**
 - As mainly dry weather is prevailing, apply irrigation in water melon crop to ensure optimum soil moisture in the North East Dry Zone.
 - Due to increase in temperature and humid weather, incidence of aphids is noticed in cowpea in North East Dry Zone. Undertake spraying of Dimethoate 2 ml/ litre of water for control.
 - **Kerala:**
 - Undertake nursery preparation for cultivation of cardamom and continue land preparation for planting of pepper and cultivation of turmeric and ginger in the High Altitude Zone.
 - Undertake mulching in banana basins in the Southern Zone and in nutmeg gardens in Problem Area Zone to reduce soil temperature and conserve soil moisture.
 - Prevailing cloudy weather is congenial for incidences of blast and sheath rot in rice in the High Altitude Zone. Apply Pseudomonas @ 2.5 kg mixed with cow dung 50 kg /hectare and avoid excess usage of nitrogen fertilizers.
 - Cloudy and humid weather is congenial for incidence of powdery mildew in cucurbits in Problem Area Zone. For control, apply Sulfex @ 2g/litre of water.
 - **Tamil Nadu:**
 - Since dry weather is expected in the next five days, irrigate sesame, sugarcane and summer cotton fields in the Cauvery Delta Zone. Continue harvesting matured *thaladi* rice as dry weather is expected.
 - Suitable varieties for sowing are given in Annexure II.
- **Animal Husbandry**
 - Anthrax disease is noticed in some parts of the Northern Telangana Zone and Scarce Rainfall Zone of Andhra Pradesh. Vaccinate animals at the earliest.
 - In the Western Zone of Tamil Nadu, get animals vaccinated against foot and mouth diseases.

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



Rice



Mustard



Okra



Cabbage

- **Realised Rainfall:** Rainfall occurred in Dibang Valley, Lower Dibang Valley and Upper Siang districts of Arunachal Pradesh. Mainly dry weather prevailed over rest parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh on 20th and 24th March, over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura on 23rd and 24th March; dry weather would prevail during rest of the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershower would occur at a few places over the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Assam, maintain 5cm of standing water in the field of *boro* rice.
 - In Assam & Meghalaya, continue normal sowing of summer crops and other agricultural operations under normal weather conditions.
 - In Hill Zone of Assam, undertake land preparation for transplanting of early *ahu* rice.
 - In Arunachal Pradesh, continue land preparation for *jhum* rice and okra.
 - In Meghalaya, continue land preparation and sowing of maize in High & Mid Altitude region.
 - In Meghalaya, due to humid weather, there is chance of attack of brown spot disease in *boro* rice. Spray Carbendazim @ 1 g / litre of water against brown spot.
 - **Manipur, Mizoram, Nagaland and Tripura:**
 - In Nagaland, Manipur, Mizoram and Tripura, continue normal sowing of summer crops like green gram, black gram etc. and other agricultural operations under normal weather conditions.
 - In Manipur, maintain 2-3 cm depth of water during early stage of seedlings in the rice nursery. Undertake transplanting of pre-*kharif* rice and continue planting of ginger and turmeric.
 - In Mizoram, as mainly dry weather is prevailing, apply mulch of dry leaf or paddy husk to a thickness of about 8 cm in the basin of *khasi* mandarin, banana and oil plams.
 - In Tripura, maintain 4 to 5 cm standing water in the fields of *boro* rice.
 - In Tripura, due to cloudy and humid weather, there is chance of attack of yellow stem borer in *boro* rice; apply Fipronil @ 2 g per litre of water to manage the attack.
 - In Manipur, due to cloudy weather, there is chance of attack of stem borer in maize; apply few granules of Carbofuran 3G at maize whorl.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - In Meghalaya, during summer season, keep the poultry house well ventilated during day time.
 - In Barak Valley Zone of Assam, during summer season, there is chance of attack of diseases in poultry. Mix Tetracycline powder with regular poultry feed to prevent the diseases.

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



Sugarcane



Wheat



Rice



Onion

- **Realised Rainfall:** Mainly dry / dry weather prevailed over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places on 23rd and 24th March and dry weather would prevail during rest of the period over Andaman & Nicobar Islands. Dry Weather would prevail over rest parts of the region during the period.
- **Weather Warning:** Nil
- **Advisories:**
 - **West Bengal:**
 - In Sub-Himalayan West Bengal & Sikkim, continue normal sowing of summer vegetables and land preparation for sowing of jute in Gangetic West Bengal and other agricultural operations under normal weather conditions.
 - In Hill Zone of West Bengal undertake land preparation for sowing of *kharif* maize.
 - As dry weather would prevail, apply irrigation in rice to maintain 5 cm standing water at tillering stage in New Alluvial Zone and Terai Zone. Continue harvesting of potato and wheat.
 - In prevailing humid weather condition, stem borer and blast disease attack may be noticed in rice in New Alluvial Zone of West Bengal. To control stem borer, apply Cartap 4 G @ 25 kg/ha or Phorate 10 G @ 10 kg/ha and apply Hinosan @ 2 ml or Indofil M-45 @ 4g/litre of water for blast.
 - **Andaman and Nicobar Islands:**
 - In South, North & Middle Andaman, cloudy weather is congenial for incidence of thrips and leaf hopper in vegetables. To control, spray Imidacloprid @ 2 ml/litre and Acephate @ 2 g/litre alternatively once in two weeks.
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone of Odisha, complete sowing of maize as late sowing of maize may reduce the yield due to high temperature during April and May.
 - In North Eastern Coastal Plain Zone of Odisha, due to rise in temperature coupled with humidity, attack of stem borer has been aggravated in rice. To control, spray Triazophos @ 2 ml/litre of water.
 - In East and South Eastern Coastal Plain Zone of Odisha, partly cloudy and humid weather may favour infestation of powdery mildew in pulses. Spray Copper Oxychloride @ 1 kg or Dethane-M 45 @ 800 g /acre in 200 litres of water. Current temperature may also favour the infestation of thrips in groundnut. Spray Dimethoate or Imidacloprid @ 50 ml in 200 litres of water per acre for control. Increased temperature may also favour the egg laying of stem borer in rice in the main field over this region. To manage the borer butterflies, place 4 Pheromon Traps/acre, collect the adults and destroy them by burying under soil or by burning. Spray Prophenophos @ 2 ml per litre of water.
 - In Mid Central Table Land Zone of Odisha, infestation of mango hopper is commonly observed at flowering / fruit setting stage. To control it, keep the mango orchards clean and if necessary spray Methyl Dematon @ 2 ml/litre of water.
 - **Bihar:**
 - In North West Alluvial Plain Zone of Bihar, continue sowing of summer vegetables, okra, green gram / black gram under normal weather condition. Continue harvesting of mustard under prevailing dry weather condition.
 - In North East Alluvial Zone of Bihar, maintain minimum water level (2-3cm) in the *boro* rice field. Continue land preparation and sowing of moong.
 - In South Bihar Alluvial Zone, as dry weather is prevailing, apply irrigation to onion, vegetables and maize and continue harvesting of mustard.
 - In North East Alluvial Zone of Bihar, due to fluctuation in temperature, there are chances of aphids in wheat; spray Imidacloprid 17.8 SL @ 1 ml/3 litres of water or Thiomethoxam 25WDG @ 1 g/3 litres of water.
 - **Jharkhand:**
 - In South Eastern Plateau Zone, as dry weather is prevailing, undertake harvesting of early sown wheat and apply irrigation to late sown wheat. Complete sowing of moong.
 - In Western Plateau Zone, apply irrigation to wheat and complete sowing of moong.
 - In Central & North Eastern Plateau Zone, continue sowing of summer maize with assured irrigation and okra. Undertake sowing of moong.
 - As dry weather is prevailing, there may be fruit dropping in mango and litchi in Western Plateau Zone of Jharkhand, apply irrigation at regular interval.
 - Suitable varieties for sowing are given in Annexure II.
- **Animal Husbandry**
 - In North West Alluvial Plain Zone of Bihar, as day temperature is increasing, give special attention to milch animals with regard to feed and water. Provide plenty of clean water to the animals and keep them in the shaded place.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Wheat

Okra

Onion

- **Realised Rainfall:** Rainfall occurred in all districts of Madhya Pradesh except Anuppur, Balaghat, Chhatarpur, Dindori, Rewa, Satna, Sidhi and Sigraulti districts of East Madhya Pradesh and Alirajpur, Barwani, Jhabua, Khandwa, Mandsaur, Neemuch and Ratlam districts of West Madhya Pradesh. Mainly dry weather prevailed over Chhattisgarh.
- **Weather Forecast:** Dry weather would prevail over the region during the period. Gradual rise in maximum & minimum temperatures over central India.
- **Weather Warning:** Nil
- **Advisories:**
 - **Madhya Pradesh:**
 - In Satpura Plateau Zone, continue sowing of cucurbitaceous crops, okra, green gram, black gram and cowpea under normal weather condition. As dry weather would prevail undertake harvesting of matured wheat, gram and potato.
 - In Malwa Plateau Zone, as dry weather would prevail, undertake harvesting of matured wheat and gram. Continue transplanting of summer vegetables like tomato, brinjal, chilli, cabbage and cauliflower on the prepared beds.
 - In Kymore Plateau and Satpura Hill Zone of Madhya Pradesh, undertake sowing of moong and vegetables.
 - In Jhabua Hill Zone and Grid Zone, undertake sowing of moong, cucurbitaceous vegetables and harvesting of matured wheat.
 - Due to increasing temperature and humid weather, there are chances of attack of sucking pests in vegetables in Vindhya Plateau Zone of Madhya Pradesh; spray Ethofenprox 10 EC @ 1 litre/500 litres of water.
 - **Chhattisgarh:**
 - In Chhattisgarh Plain Zone, as dry weather is prevailing, apply irrigation to wheat and vegetables.
 - In North Hill Zone of Chhattisgarh, as mainly dry weather is likely to prevail, continue harvesting of wheat, gram, pea, mustard, pigeon pea and lentil. In view of increasing temperature, apply irrigation in summer rice, sugarcane and summer vegetable crops. Continue planting of spring sugarcane.
 - Suitable varieties for sowing are given in Annexure II.

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



Wheat

Sugarcane

Banana

Cabbage

- **Realised Rainfall:** Rainfall occurred in all districts of Jammu & Kashmir except Ladakh (Leh) district, all districts of Himachal Pradesh except Kinnaur, Lahaul & Spiti, Mandi and Sirmour districts; Pithoragarh district of Uttarakhand; Bhatinda, Faridkot, Fatehgarh Sahib, Gurdaspur, Jalandhar, Kapurthala, Moga, Muktesar, Nawashahar and Tarn Taran districts of Punjab, Mahendragarh and Panchkula districts of Haryana; Ambedkar Nagar, Banda, Barabanki, Ghazipur, Kanpur City, Kanpur Dehat, Kaushambi, Lucknow, Pratapgarh, Unnao districts of East Uttar Pradesh, Agra, Auraiya, Etawah, Firozabad, Hamirpur, Jalaun, Jhansi, Lalitpur, Mathura districts of West Uttar Pradesh; Ajmer, Alwar, Baran, Bharatpur, Bhilwara, Bundi, Dausa, Dholpur, Jaipur, Karauli, Kota, Rajasamand, Sawai Madhopur, Sikar and Tonk districts of East Rajasthan; Bikaner, Hanumangarh and Pali districts of West Rajasthan. Mainly dry/dry weather prevailed over rest parts of the region.

- **Weather Forecast:** Rain/snow would occur at isolated places over Jammu & Kashmir, Himachal Pradesh on 20th, 21st, 23rd and 24th March, over Uttarakhand on 21st, 23rd and 24th March, dry weather would prevail during rest of the period. Rain/thundershowers would occur at isolated places over Punjab and West Rajasthan on 20th March, dry weather would prevail during rest of the period. Dry weather would prevail over rest parts of the region during the period.

Gradual rise in maximum & minimum temperatures over northwest India.

- **Weather Warning:** Nil
- **Weather Outlook:** Precipitation would occur at a few places over western Himalayan region and at isolated places over plains of northwest India.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, drain out excess water from wheat, pulses and vegetable fields.
 - In Cold Arid Zone of Jammu & Kashmir, continue nursery raising of cruciferous crops viz, capsicum, chilli, paprika and onion in green houses & trenches.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone of Uttarakhand, continue sowing of moong, urad and summer vegetables utilizing the realized rainfall.
 - In Hill Zone of Uttarakhand, continue nursery sowing of tomato, brinjal, cucumber and capsicum in poly house.
 - Due to humid and cloudy weather, there is chance of mealy bug infestation in mango plant in Sub humid sub tropic Zone of Uttarakhand. To control the insect, dust Methyl Parathion 2% @ 250 g per tree in the soil around the trunk.
 - **Rajasthan:**
 - In Flood Prone Eastern Plain Zone of Rajasthan, due to partly cloudy weather condition, there is possibility of loose smut attack in wheat crop. For control, collect smut affected ears in polythene bags and destroy by burning to prevent its spread and spray solution of Mancozeb 75 WP @ 2%.
 - In Arid Western Zone of Rajasthan, prevailing weather conditions may increase the infestation of aphids and other sucking pests in gram and late sown mustard crops. To control spray Thiomethoxam (25 WG) @ 100 g or Dimethoate 30 EC @ 1200 ml per hectare.
 - **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.
 - In Western Zone of Punjab, prepare the field for transplanting of summer vegetables viz. chilli, tomato and bell pepper, undertake sowing of cucumber, bottle gourd, pumpkin, muskmelon, watermelon, bitter gourd.
 - In Western Zone of Haryana, continue transplanting of young seedlings of tomato and chilli.
 - Due to prevailing temperature (above 22^oC) and high humidity yellow rust may appear in wheat crop in Western Zone in Haryana; spray Tilt 25% EC @ 200 ml (Propiconazole 25% E.C.) in 200 liters of water per acre.
 - Prevailing humid weather is conducive for severe attack of aphids in mustard in Central Plain Zone and Western Plain Zone of Punjab; monitor the crop regularly and spray Actara 25 WG @ 40g /acre.
 - Due to cloudy weather, there is possibilities of pod borer in the gram in Western Zone of Haryana; spray Carbaril 50 W.P. @ 400 g or Monocrotophas 36 S.L @ 200 ml with 100 litres of water per acre.
 - In Central Plain Zone of Punjab aphid damages have been reported in wheat; spray Imidacloprid 200 SL @ 40 ml or Thiamethoxam 25 WG @ 20 g in 80-100 litres of water per acre using knap sack sprayer or in 30 litres of water per acre with power sprayer.
 - **Himachal Pradesh:**
 - In the prevailing weather, complete the pruning work in apple and stone fruits in Mild Hills Sub Humid Zone. Remove dead, broken and diseased wood and apply Chaubatia paste on the cut ends.
 - Continue sowing of moong, mash, chari and bajra in lower hills region and direct sowing of cucumber, summer squash, bitter gourd and bottle gourd in Sub-Montane and Low Hills Sub-Tropical Zone.
 - Due to humid weather condition, there is chance of powdery mildew in wheat in Sub-Montane and Low Hills Sub-Humid Tropical Zone. Spray Hexaconazole @1 ml per litre of water and repeat the spray after 15 days interval.
 - Due to cloudy weather, there are chances of incidence of collar rot in apple in Mild Hills Sub Humid Zone. For control, spray Ridomil @ 75 g per 20 litres of water or Bavistin @ 15-20 g / 20 litres of water or Dithane-M-45 @ 90-100 g / 15 litres of water.
 - **Uttar Pradesh:**
 - In Eastern Plain Zone, continue planting of sugarcane and complete sowing of urad, moong and vegetables.
 - As mainly dry weather would prevail, apply irrigation in wheat at grain formation stage in Western Plain Zone.
 - Complete sowing of urad, moong and lobia, planting of sugarcane and undertake harvesting of matured peas, gram and mustard in Central Plain Zone.
 - Under prevailing humid weather condition, there is chance of fruit borer in gram, lentil and peas in Western Plain Zone. Spray Monocrotophos @ 0.5 ml per litre of water.
 - Suitable varieties for sowing are given in Annexure II.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Wheat

Mango

- **Realised Rainfall:** Rainfall occurred in Ahmednagar and Jalgaon districts of Madhya Maharashtra, Aurangabad and Jalna districts of Marathwada, Akola and Buldhana districts of Vidarbha. Mainly dry weather prevailed over Konkan & Goa and Gujarat.
- **Weather Forecast:** Dry weather would prevail over the region during the period. Gradual rise in maximum & minimum temperatures over west India.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as dry weather would prevail, maintain water level upto 8-10 cm at tillering/panicle initiation of summer rice and finger millet. Apply irrigation to the groundnut at 10-12 days interval at pegging/ pod development stage. Due to rise in temperature (34°C – 36°C) there may be fruit dropping in mango, apply 80 – 100 litres of water per tree at 7 days interval, also apply mulch with grass in lateritic soil to avoid the water loss.
 - In Madhya Maharashtra, apply irrigation to summer groundnut and vegetables. Apply irrigation in sugarcane by alternate furrow method, if there is water stress condition. Also apply mulch with trash to preserve soil moisture. Due to recent rain and hail in north Madhya Maharashtra, there was fruit damage in grapes, pomegranate and banana; collect dropped fruits and infested leaves and branches and destroy it. To avoid further spread of pest and diseases, clean the orchards.
 - In Marathwada, apply irrigation to sugarcane, summer groundnut and vegetables. Harvest the matured jowar, wheat and late sown gram and matured fruits and flowers during sunny hours early in the morning to avoid grain / pod dropping. Keep the harvested produce in safer place. Due to rain along with hail there may be wilting in affected vegetable seedlings, gap filling may be done.
 - In Vidarbha, apply irrigation to summer groundnut, moong and vegetables (excluding Amravati, Nagpur, Wardha districts). Harvest the matured wheat and late sown gram and matured orange during sunny hours. Maintain upto 5 cm water level in summer rice field (tillering) in east Vidarbha.
 - Due to cloudy weather in Konkan, there is possibility for incidence of mango hopper, spray Quinalphos 25% EC @ 20 ml or Profenophos 50% EC @ 10 ml in 10 litres of water, add 5 ml Hexaconazole for control of powdery mildew.
 - **Gujarat:**
 - Carryout weeding, intercultural operations and apply first irrigation in groundnut after 18 to 20 DAS in South Gujarat Heavy Rainfall Zone as dry weather is likely to prevail. Use wheat straw and banana straw as a mulch (12.5 kg/plant) in banana orchards for conservation of soil moisture. Undertake harvesting of matured wheat crop and castor.
 - Taking advantage of prevailing dry weather, undertake harvesting of cumin and mustard in North West Zone, North Gujarat Zone and picking of cotton in North West Zone, North and South Gujarat Zone. Complete sowing of bajra, green gram, cowpea and vegetable crops in North West Zone and North Gujarat Zone.
 - Undertake sowing of okra, cowpea and green gram in Middle Gujarat Zone.
 - Complete harvesting of matured wheat, chickpea, mustard and castor in Bhal and Coastal Zone of Gujarat.
 - In North Saurashtra Zone, complete sowing of green gram and vegetable crops.
 - Suitable varieties for sowing are given in Annexure II.
- **Animal Husbandry**
 - Arrange for shade with proper ventilation to protect animals from direct sunlight and temperature in South Gujarat Heavy Rainfall Zone.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	04.03.15		11.03.15		18.03.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	17.4	-71	0.1	-99	0.0	-100
Dibang Valley	131.0	249	59.0	-14	37.0	-59
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	83.3	272	18.8	-13	11.9	-48
Kurung Kumey	**	**	**	**	**	**
Lohit	53.6	95	20.5	-23	7.6	-81
Lower Dibang Valley	105.9	182	25.8	-62	40.5	-55
Lower Subansari	**	**	**	**	**	**
Papumpara	4.4	-71	1.3	-91	0.0	-100
Tawang	23.0	290	4.0	-65	0.0	-100
Tirap	2.8	-84	0.4	-99	0.2	-99
Upper Siang	219.4	228	117.0	39	123.0	51
Upper Subansari	12.6	2	0.0	-100	7.0	-70
West Kameng	0.8	-86	0.0	-100	0.0	-100
West Siang	27.0	41	30.0	32	13.0	-30
Assam&Meghalaya						
Assam						
Baksa	14.8	164	5.2	8	0.0	-100
Barpeta	0.0	-99	3.5	-28	0.0	-100
Bongaigaon	0.5	-93	10.6	22	0.0	-100
Cachar	4.2	-79	0.6	-97	0.0	-100
Chirang	23.0	238	10.4	20	0.0	-100
Darrang	0.0	-100	0.0	-100	0.0	-100
Dhemaji	35.0	169	8.0	-34	1.0	-95
Dhubri	8.7	20	0.8	-88	0.0	-100
Dibrugarh	17.7	9	3.3	-80	0.0	-100
Goalpara	1.0	-72	11.1	22	0.0	-100
Golghat	0.6	-92	0.0	-100	0.0	-100
Hailakandi	0.0	-100	3.4	-61	0.0	-100
Jorhat	2.4	-73	2.4	-81	0.0	-100
Kamrup(Rural)	12.5	108	1.0	-86	0.0	-100
Kamrup(Metro)	17.1	185	3.2	-57	0.0	-100
Karbi Anglong	6.9	-22	0.5	-91	0.0	-100
Karimganj	5.3	-57	0.5	-98	0.0	-100
Kokrajhar	0.4	-84	0.9	-85	0.0	-100
Lakhimpur	11.7	-10	2.5	-79	0.3	-99
Morigaon	7.4	100	0.0	-100	0.0	-100
N.C.Hills	25.1	18	0.0	-100	0.0	-100
Nowgong	3.7	-27	0.0	-100	0.0	-100
Nalbari	10.3	69	7.4	40	0.0	-100

Sonitpur	3.4	-29	0.0	-100	0.0	-100
Sibsagar	7.4	-22	0.0	-100	0.0	-100
Tinsukia	36.2	84	3.7	-76	1.4	-96
Udalgiri	8.7	108	2.8	-76	0.0	-100
Meghalaya						
East Garo Hills	9.0	-55	9.5	83	0.0	-100
East Khasi Hills	11.4	7	0.4	-99	0.0	-100
Jaintia Hills	10.0	39	0.0	-100	0.0	-100
Ribhoi	6.9	123	1.4	-81	0.0	-100
South Garo Hills	10.0	-16	1.0	-82	0.0	-100
West Garo Hills	22.4	88	0.0	-100	0.4	-92
West Khasi Hills	12.0	97	4.0	-57	0.0	-100
NMMT						
Mizoram						
Aizwal	0.0	-100	22.8	188	0.0	-100
Champhai	**	**	**	**	**	**
Kolasib	0.0	-100	3.0	-74	0.0	-100
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	7.0	37	0.0	-100
Serchhip	0.0	-100	6.1	0	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	1.0	-81	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	1.8	-90	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	1.0	-89	1.0	-89	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	1.0	-92	0.0	-100	0.0	-100
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	4.0	-32	0.4	-96	0.0	-100
Kephire	**	**	**	**	**	**
Kohima	3.8	-61	0.4	-95	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	0.0	-100	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	4.0	-66	0.0	-100
North Tripura	0.0	-100	0.3	-98	0.0	-100
South Tripura	0.1	-99	4.2	-45	0.0	-100
West Tripura	1.1	-87	6.2	-9	0.0	-100

Himachal Pradesh						
Bilaspur	131.4	742	22.1	49	37.8	289
Chamba	118.0	184	60.3	98	62.9	172
Hamirpur	90.3	405	27.3	158	31.9	175
Kangra	100.4	402	31.7	87	50.9	135
Kinnaur	177.2	695	52.9	154	8.6	-68
Kullu	114.0	319	46.0	51	29.1	-20
Lahaul and Spiti	152.5	291	31.0	-16	14.5	-69
Mandi	94.4	455	28.2	60	18.9	-10
Shimla	83.2	373	40.9	139	20.4	11
Sirmaur	162.5	1364	21.5	131	17.1	84
Solan	176.2	995	33.3	130	40.7	206
Una	133.9	1213	21.1	134	42.8	328
Punjab						
Amritsar	29.8	389	1.6	-80	10.9	31
Barnala	14.8	411	0.0	-100	0.0	-100
Bhatinda	35.3	881	2.7	-24	26.0	983
Faridkot	18.8	887	3.0	0	55.9	832
Fatehgarh Saheb	51.3	927	5.3	-8	32.0	553
Ferozpur	10.3	203	2.7	-11	15.7	214
Gurdaspur	80.3	499	14.7	18	82.9	568
Hoshiarpur	48.4	437	5.0	-48	19.1	99
Jalandhar	30.1	313	7.0	11	26.0	278
Kapurthala	64.8	998	8.1	29	35.9	633
Ludhiana	51.4	772	4.3	-45	12.6	187
Mansa	19.4	385	3.0	11	2.2	0
Moga	35.1	1363	3.6	3	53.4	1383
Muktesar	24.5	717	7.0	159	26.8	483
Nawashahar	74.6	966	4.6	-53	23.9	241
Patiala	56.6	893	6.3	-7	12.5	303
Ropar	72.2	903	8.6	-50	14.6	14
Sangrur	22.4	386	13.7	327	0.5	-84
Mohali	49.3	517	9.5	23	18.4	175
TarnTaran	33.1	480	0.3	-92	26.7	550
Haryana,Chd,Delhi						
Haryana						
Ambala	86.8	1027	16.9	161	9.9	26
Bhiwani	17.1	756	8.0	232	0.4	-69
Chandigarh	74.0	825	13.2	62	18.9	293
Faridabad	66.4	1560	18.4	384	4.6	254
Fatehabad	27.2	907	13.8	759	8.8	265
Gurgaon	36.8	1128	7.3	249	2.0	67
Hissar	23.1	790	6.6	200	16.5	1272
Jhajar	64.7	1648	19.0	629	1.8	-11
Jind	43.9	399	20.0	334	4.3	65
Katihah	26.4	595	6.0	100	8.2	204
Karnal	71.6	1362	14.5	253	0.0	-100
Kurukshetra	41.2	741	15.4	157	3.4	-23
Mahendragarh	18.5	702	0.0	-100	22.0	1365

Mewat	48.1	1825	9.0	400	9.4	683
Palwal	41.0	1106	10.4	550	7.0	1650
Panchkkula	64.7	740	38.7	515	25.9	516
Panipat	63.1	1137	9.0	290	0.0	-100
Rewari	81.3	4415	17.0	900	8.6	682
Rohtak	32.2	475	4.0	-25	0.0	-100
Sirsa	50.5	2004	6.3	247	2.8	10
Sonepat	69.0	1253	8.4	82	0.0	-100
Yamunanagar	123.5	1336	14.9	122	9.3	-9
Delhi						
Central Delhi	82.0	1244	26.0	550	0.0	-100
East Delhi	35.0	474	8.0	100	3.0	-3
New Delhi	78.3	1184	10.6	164	3.3	5
North Delhi	99.8	1536	15.9	298	0.0	-100
North East Delhi	0.0	-100	0.0	-100	1.0	-68
North West Delhi	99.3	1528	9.3	133	0.0	-100
South Delhi	68.7	1026	10.6	165	3.9	24
South West Delhi	81.3	1233	14.2	255	1.5	-53
West Delhi	71.0	1064	6.0	50	0.0	-100
Jammu & Kashmir						
Anantnag	109.5	241	66.2	72	79.4	126
Badgam	75.1	244	94.4	302	61.5	238
Bandipore	**	**	**	**	**	**
Baramula	90.9	87	82.6	76	52.9	-24
Doda	157.2	219	94.2	78	123.6	171
Ganderbal	105.0	430	68.4	183	51.2	128
Jammu	115.2	773	30.9	94	106.5	905
Kargil	**	**	**	**	**	**
Kathua	111.0	1094	13.4	-39	136.6	883
Kistwar	**	**	**	**	**	**
Kulgam	154.3	381	84.7	119	158.4	351
Kupwara	73.4	86	59.8	5	58.0	18
Ladakh(Leh)	0.6	-60	0.6	-84	0.0	-100
Poonch	**	**	**	**	**	**
Pulwama	91.5	458	57.9	127	76.6	326
Rajouri	116.5	1139	50.4	367	81.1	1230
Ramban	154.4	213	139.6	164	149.8	229
Reasi	209.0	441	49.0	68	139.8	354
Samba	109.5	730	17.9	13	54.7	416
Shopian	**	**	**	**	**	**
Srinagar	71.2	260	83.1	243	71.3	217
Udhampur	111.3	188	41.6	42	139.9	354
East Madhya Pradesh						
Anuppur	33.4	329	2.0	-64	16.6	305
Balaghat	59.0	1374	0.8	-75	9.8	276
Chhatarpur	27.9	1369	0.0	-100	13.9	891
Chindwara	44.3	768	7.0	84	25.9	464
Damoh	35.5	1124	0.0	-100	28.1	1773
Dindori	54.4	822	11.2	133	10.2	467

Jabalpur	62.5	2132	0.0	-100	34.5	1466
Katni	47.0	1324	0.0	-100	25.9	1750
Mandla	92.3	1389	0.4	-91	27.3	468
Narsingpur	38.0	1126	0.0	-100	36.3	2925
Panna	45.6	1973	0.0	-100	32.8	1722
Rewa	24.6	811	0.0	-100	17.7	787
Sagar	17.8	410	0.0	-100	28.9	933
Satna	55.6	2678	0.0	-100	17.8	889
Seoni	54.1	817	7.3	62	36.6	510
Shahdol	40.8	750	0.5	-88	20.1	1017
Sidhi	41.8	1800	0.0	-100	8.0	150
Singrauli	54.1	3082	0.0	-100	8.9	394
Tikamgarh	32.5	2221	0.0	-100	46.5	7650
Umaria	27.5	409	0.0	-100	22.2	517
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	24.4	200
Alirajpur	5.9	1073	0.0	-100	12.3	1950
Asoknagar	12.8	1721	0.0	-100	31.8	3869
Badwani	0.0	-100	0.0	-100	10.0	4883
Betul	63.8	1723	3.8	247	50.0	2174
Bhind	39.7	1885	0.0	-100	45.8	7525
Bhopal	16.0	967	0.0	-100	29.3	2830
Burhanpur	29.0	1511	0.0	-100	42.9	3478
Datia	18.9	1248	0.0	-100	53.3	5819
Dewas	0.0	-100	0.0	-100	21.8	2322
Dhar	1.0	414	0.0	-100	21.0	6886
Guna	6.1	336	0.0	-100	32.8	3180
Gwalior	15.5	814	1.2	-23	80.3	5632
Harda	27.1	1491	0.0	-100	22.4	3100
Hosangabad	48.0	1744	0.2	-92	32.0	1352
Indore	1.5	392	0.0	-100	54.5	6716
Jhabua	18.7	18633	0.0	-100	8.9	200
Khandwa	26.7	1469	0.0	-100	10.8	1253
Khargone	6.6	1217	0.2	-33	29.3	9650
Mandsaur	22.8	2747	0.0	-100	12.1	5925
Morena	14.8	490	0.0	-100	65.9	10888
Neemuch	13.0	2067	0.0	-100	16.3	2622
Raisen	19.5	984	0.0	-100	20.7	1119
Rajgarh	2.0	100	0.0	-100	39.8	3522
Ratlam	7.6	1420	0.0	-100	11.7	1564
Sehore	18.8	1006	0.0	-100	22.9	1980
Shajapur	7.2	794	0.0	-100	39.9	4881
Sheopur Kalani	17.5	1650	0.0	-100	82.0	9011
Shivpuri	20.0	1074	0.0	-100	42.3	10475
Ujjain	9.2	922	0.0	-100	39.6	5557
Vidisha	14.6	1364	0.0	-100	35.6	1994
Chhattisgarh						
Bastar	5.9	74	0.0	-100	0.0	-100
Bijapur	30.5	3706	0.0	-100	0.0	-100

Bilaspur	20.8	278	0.2	-95	4.6	-5
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	10.7	269	0.0	-100	0.0	-100
Durg	30.5	724	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	2.9	-57	0.0	-100	0.0	-100
Kanker	12.8	220	0.0	-100	0.0	-100
Korba	11.0	80	0.0	-100	0.0	-100
Koriya	15.5	1838	0.0	-100	5.3	130
Kawardha	1.5	-65	0.0	-100	0.0	-100
Mahasumund	1.8	-42	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	12.6	231	0.0	-100	0.0	-100
Rajandgaon	19.5	427	0.0	-100	0.0	-100
Surguja	10.0	156	0.0	-100	3.3	-2
East Uttar Pradesh						
Allahabad	38.0	1708	0.0	-100	9.4	839
Ambedkar Nagar	2.1	5	0.0	-100	41.0	2178
Azamgarh	31.7	993	0.0	-100	11.0	633
Bahraich	19.5	679	0.0	-100	12.9	659
Ballia	3.9	285	0.0	-100	2.7	69
Balrampur	8.5	286	0.0	-100	3.0	150
Banda	80.0	3379	0.0	-100	21.2	1825
Barabanki	20.9	849	0.0	-98	20.0	1437
Basti	16.0	742	0.0	-100	3.1	107
Chandauli	6.0	186	0.0	-100	5.2	420
Deoria	13.5	864	0.0	-100	2.5	32
Faizabad	13.2	50	0.0	-100	2.9	378
Farrukhabad	19.6	991	0.8	-70	8.1	440
Fatehpur	19.7	884	0.0	-100	11.3	605
Gazipur	13.9	633	0.0	-100	22.1	3057
Gonda	17.5	775	0.0	-100	6.6	633
Gorakhpur	26.2	1208	0.0	-100	1.8	-18
Hardoi	32.4	1145	0.5	-84	19.3	914
Jaunpur	14.1	730	0.0	-100	4.8	435
Kannauj	19.0	660	0.0	-100	5.6	367
Kanpur City	67.3	3641	0.8	-45	50.6	3514
Kanpur Dehat	25.2	1382	0.0	-100	23.8	1489
Kaushambi	39.3	1688	0.0	-100	21.4	1426
Kheri	69.4	2674	0.0	-100	4.4	302
Kushi nagar	5.3	196	0.0	-100	0.0	-100
Lucknow	46.5	2223	1.3	-44	24.6	1657
Maharajganj	4.0	233	0.0	-100	0.8	-17
Mau	4.5	87	0.0	-100	3.7	182
Mirzapur	12.7	262	0.0	-100	5.5	817
Pratapgarh	42.1	1583	0.0	-100	21.0	2900
RaiBareilly	18.2	1196	0.0	-100	9.3	519
Sahuji Maharajnagar	62.5	3372	0.0	-100	4.7	159

Sant Kabirnagar	7.5	369	0.0	-100	8.0	344
Sant Ravidas Nagar	37.0	1662	0.0	-100	16.0	1500
Shrawasti	**	**	**	**	**	**
Sidharthnagar	5.3	253	0.0	-100	1.0	-57
Sitapur	31.8	759	0.0	-100	16.1	1359
Sonbhadra	18.7	1001	0.0	-100	8.4	225
Sultanpur	18.0	902	0.0	-100	7.4	365
Unnao	37.5	1463	0.8	-53	35.8	1886
Varanasi	12.1	348	0.0	-100	14.9	1142
West Uttar Pradesh						
Agra	27.0	1399	0.0	-99	34.1	2519
Aligarh	36.4	1483	4.0	27	8.8	629
Auraiya	36.5	1487	0.0	-100	24.0	2082
Badaun	37.0	1269	4.3	-13	3.2	111
Baghpat	92.5	2884	10.3	281	0.0	-100
Bareilly	64.3	1975	3.6	-14	1.3	4
Bijnor	47.4	691	15.6	143	0.0	-100
Bulandsahar	30.9	929	3.2	-26	6.0	94
Etah	22.1	783	4.3	6	12.1	767
Etawah	14.2	610	0.0	-100	49.7	3004
Firozabad	17.1	1038	0.0	-100	30.5	3289
GBNagar	27.5	525	3.0	11	0.0	-100
Ghaziabad	49.1	1041	5.5	62	2.6	28
Hamirpur	15.6	607	0.0	-100	40.0	3900
Jalaun	20.5	1181	0.0	-100	21.0	1809
Jhansi	11.9	645	0.0	-100	27.3	2384
Jotiba Phule Nagar	59.5	1703	1.5	-61	1.3	-42
Kanshiramnagar	10.0	567	2.4	-40	10.0	488
Lalitpur	9.0	400	0.0	-100	24.0	1900
Mahamaya Nagar	21.3	967	5.0	28	13.0	1200
Mahoba	11.8	490	0.0	-100	19.0	2614
Mainpuri	23.2	1189	0.3	-89	15.3	1294
Mathura	5.5	90	1.0	-69	20.0	1150
Meerut	81.3	1667	23.3	417	0.0	-100
Moradabad	51.6	1158	2.2	-35	1.7	-19
Muzzaffarnagar	47.6	1883	8.3	136	3.0	11
Pilibhit	47.9	2182	0.0	-100	1.3	-33
Rampur	68.9	943	5.4	5	0.0	-100
Saharanpur	86.0	2588	15.3	193	0.0	-100
Shahjahanpur	48.4	2320	1.9	-66	11.1	455
Uttarakhand						
Almora	113.7	906	3.3	-73	17.3	157
Bageshwar	56.8	402	5.0	-59	12.0	79
Chamoli	97.7	437	17.5	0	9.3	-44
Champawat	129.5	1389	0.5	-94	12.5	119
Dehradun	126.3	1369	9.0	-27	14.2	36
Garhwal Pauri	66.6	1089	11.1	15	2.3	-58
Garhwal Tehri	124.1	854	19.6	24	4.1	-56
Haridwar	96.0	832	17.4	172	5.0	-22

Nainital	161.4	1893	3.0	-68	13.5	141
Pithoragarh	108.1	738	8.6	-55	22.3	123
Rudraprayag	88.3	445	33.9	52	11.0	-41
Udham Sing Nagar	74.0	4253	0.5	-89	1.9	19
Uttarkashi	103.3	584	17.2	-17	12.7	-22
Bihar						
Araria	2.4	26	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	4.2	363
Aurangabad	3.4	19	0.0	-100	6.4	482
Banka	0.0	-100	0.0	-100	1.8	-8
Begusarai	0.0	-100	0.0	-100	8.5	215
Bhabua	7.9	139	0.0	-100	1.6	129
Bhagalpur	1.6	-35	0.0	-100	2.8	73
Bhojpur	8.3	388	0.0	-100	0.0	-100
Buxar	0.0	-100	**	**	**	**
Darbhanga	14.8	825	0.0	-100	0.0	-100
East Champaran	22.0	1732	0.0	-100	0.0	-100
Gaya	7.6	321	0.0	-100	6.3	230
Gopalganj	29.7	1647	0.0	-100	0.0	-100
Jahanabad	1.2	-25	0.0	-100	4.5	271
Jamui	0.3	-88	0.0	-100	6.4	300
Kathihar	0.0	-100	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	5.3	789
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	4.6	254
Madhepura	4.2	147	0.0	-100	0.0	-100
Madhubani	6.4	220	0.0	-100	0.0	-100
Monghyar	0.4	-87	0.0	-100	**	**
Muzaffarpur	7.8	550	0.0	-100	0.8	-48
Nalanda	2.8	-20	0.0	-100	6.2	523
Nawada	0.0	-100	0.0	-100	6.0	567
Patna	6.6	214	0.0	-100	2.1	-2
Purnea	1.2	-32	0.0	-100	0.4	-83
Rohtas	9.0	109	0.0	-100	3.0	173
Saharsha	6.0	233	0.0	-100	0.0	-100
Samstipur	12.1	707	0.0	-100	0.0	-100
Saran	7.1	255	0.0	-100	2.0	33
Sheikpura	3.0	-9	0.0	-100	7.2	694
Sheohar	15.0	1567	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	**	**	0.0	-100
Siwan	0.0	-100	**	**	1.6	-6
Supaul	5.0	231	0.0	-100	0.2	-93
Vaishali	6.0	445	0.0	-100	0.0	-100
West Champaran	10.3	503	0.0	-100	0.7	-61
Jharkhand						
Bokaro	7.9	203	0.0	-100	0.8	-85
Chatra	7.6	322	0.0	-100	3.0	36
Deoghar	1.9	27	0.0	-100	0.0	-100
Dhanbad	3.1	-33	0.0	-100	0.0	-100

Dumka	5.0	85	0.0	-100	0.0	-100
East Singhbhum	1.5	-76	0.0	-100	0.0	-100
Garhwa	12.2	771	**	**	**	**
Giridih	3.5	13	0.3	-78	2.7	-34
Godda	4.1	51	0.0	-100	6.2	589
Gumla	**	**	**	**	**	**
Hazaribagh	9.0	114	0.1	-96	2.4	9
Jamtara	2.6	30	0.0	-100	0.0	-100
Khunti	0.0	-100	0.0	-100	0.0	-100
Koderna	6.5	161	0.0	-100	0.0	-100
Latehar	4.0	-8	0.0	-100	7.8	77
Lohardagga	12.0	118	0.0	-100	**	**
Pakur	0.8	-71	0.0	-100	0.0	-100
Palamau	14.6	483	0.0	-100	19.0	897
Ramgarh	3.0	-32	0.0	-100	0.0	-100
Ranchi	4.1	-40	0.0	-100	0.0	-99
Sahebganj	1.0	25	0.0	-100	7.4	131
Saraikela	0.0	-100	0.0	-100	**	**
Simdega	**	**	0.0	-100	0.0	-100
West Singhbhum	1.1	-86	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	10.2	2459	0.0	-100	39.2	200
Alwar	59.0	2085	1.0	-41	37.5	5253
Banswara	6.1	2967	0.0	-100	0.7	257
Baran	7.0	900	0.0	-100	34.9	6875
Bharatpur	30.9	1136	0.7	-63	29.4	4100
Bhilwara	12.9	1192	0.0	-100	51.0	16900
Bundi	39.0	5468	0.0	-100	78.3	19483
Chittorgarh	23.4	5741	0.0	-100	17.5	5733
Dausa	25.2	1473	0.0	-100	47.4	6671
Dholpur	33.5	1663	0.0	-100	32.5	5317
Dungarpur	18.8	18733	0.0	-100	0.3	200
Jaipur	24.0	2079	0.0	-100	41.4	13702
Jhalawar	12.4	1274	0.0	-100	17.1	4163
Jhunjhunu	22.3	1140	0.9	-43	10.7	1090
Karauli	21.3	1230	0.0	-100	40.0	9900
Kota	22.2	2124	0.0	-100	50.3	25056
Pratapgarh	13.6	3300	0.0	-100	5.4	2600
Rajsamand	7.1	1329	0.0	-100	32.1	10614
Sawai Madhopur	23.3	1358	0.0	-100	44.9	22338
Sikar	10.9	625	0.0	-100	24.6	3410
Sirohi	5.3	963	0.0	-100	9.3	9171
Tonk	33.8	2153	0.0	-100	49.3	8119
Udaipur	13.6	4433	0.0	-100	14.1	1910
West Rajasthan						
Barmer	3.0	1410	0.0	-100	0.7	553
Bikaner	34.3	1920	5.6	457	20.1	1338
Churu	30.1	1784	0.0	-97	18.1	1105
Hanumangarh	39.8	2388	0.0	-100	22.0	2344

Jaisalmer	10.9	2614	2.3	200	1.3	221
Jalore	0.4	100	0.0	-100	0.8	200
Jodhpur	8.3	728	0.3	233	2.2	1011
Nagaur	23.2	1832	0.0	-100	16.6	5417
Pali	2.2	175	0.0	-100	22.9	200
Sri Ganganagar	32.1	1905	2.3	30	19.9	665
Gujarat Region						
Ahmedabad	3.8	200	0.0	-100	2.3	2234
Anand	16.4	200	0.0	-100	2.3	200
Banaskantha	0.1	-71	0.0	-100	2.2	2142
Baroda	4.6	200	0.0	-100	0.2	91
Broach	7.4	200	0.0	-100	1.5	200
DNH	**	**	**	**	**	**
Dahod	6.6	200	0.0	-100	0.9	200
Daman	0.0	-100	0.0	-100	**	**
Dangs	5.0	200	0.0	-100	1.0	400
Gandhinagar	5.2	1200	0.0	-100	1.4	200
Kheda	1.4	200	0.0	-100	2.2	2100
Mehsana	4.3	4233	0.0	-100	0.0	-100
Narmada	16.7	200	0.0	-100	7.8	7700
Navsari	2.5	200	0.0	-100	1.4	200
Panchmahal	1.1	200	0.0	-100	0.2	200
Patan	0.3	-38	0.0	-100	3.4	200
Sabarkantha	9.4	4577	0.0	-100	0.7	614
Surat	5.9	200	0.0	-100	3.0	200
Tapi	3.2	200	0.0	-100	2.6	200
Valsad	10.4	200	0.0	-100	0.0	-100
S K & Diu region						
Amreli	10.8	200	0.0	-100	6.7	6623
Bhavnagar	6.4	200	0.0	-100	0.5	200
Diu	3.4	200	0.0	-100	1.6	200
Jamnagar	1.7	190	0.0	-100	0.2	200
Junagarh	6.0	200	0.0	-100	2.3	200
Kutch	2.1	925	0.0	-100	0.0	-100
Porbandar	11.0	10867	0.0	-100	0.0	-100
Rajkot	5.7	200	0.0	-100	1.3	1175
Surendranagar	1.5	200	0.0	-100	1.0	200
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	13.0	4233	0.0	-100	0.6	500
Mumbai Suburban	11.3	3667	0.0	-100	1.7	1600
North Goa	40.3	200	0.0	-100	0.0	-100
Raigad	41.0	200	0.0	-100	0.7	200
Ratnagiri	36.5	200	0.0	-100	0.0	-100
Sindhudurg	45.9	45800	0.0	-100	0.0	-100
South Goa	30.8	200	0.0	-100	0.0	-100
Thane	21.9	200	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	33.3	5458	9.7	2333	21.8	5341

Dhule	0.0	-100	**	**	**	**
Jalgaon	20.0	2122	0.0	-100	28.3	3050
Kolhapur	30.0	9903	0.0	-100	0.5	-33
Nandurbar	0.0	-100	3.4	200	9.7	9600
Nasik	21.1	5175	0.0	-100	13.4	13300
Pune	40.0	39888	0.8	275	0.9	185
Sangli	24.5	12157	4.4	780	1.7	478
Satara	25.2	12496	0.1	-67	0.5	5
Solapur	13.8	1875	1.2	480	1.1	36
Marathwada						
Aurangabad	15.9	1669	1.5	191	25.8	3119
Beed	16.9	1587	10.5	1206	1.7	66
Hingoli	19.6	833	5.6	522	5.4	114
Jalna	18.5	1959	2.4	169	20.1	1154
Latur	11.9	467	5.9	270	2.2	-4
Nanded	21.4	2037	2.5	-25	8.8	532
Usmanabad	14.8	956	3.7	643	0.2	-78
Parbhani	14.4	799	4.4	129	0.4	-81
Vidarbha						
Akola	79.6	5586	4.9	132	26.1	1351
Amraoti	55.0	2797	4.8	302	16.0	565
Bhandara	59.8	1829	0.0	-100	13.3	303
Buldhana	22.3	1388	4.3	167	24.1	1910
Chandrapur	40.7	944	6.9	121	6.9	109
Gadchiroli	27.4	1043	3.6	32	0.8	-80
Gondia	49.7	1281	0.0	-100	7.4	131
Nagpur	50.8	1441	3.2	-36	9.1	153
Wardha	51.8	1227	0.1	-93	10.2	183
Washim	37.9	2128	27.3	1506	7.5	648
Yeotmal	46.0	2201	3.5	46	6.1	109
Odisha						
Angul	2.2	-75	0.0	-100	0.0	-100
Balasore	6.2	-43	0.3	-97	0.1	-98
Bargarh	6.1	3	0.0	-100	0.0	-100
Bhadrak	0.6	-92	1.6	-87	0.0	-100
Bolangir	4.3	-19	0.0	-100	0.3	-92
Boudh	0.7	-93	0.0	-100	0.0	-100
Cuttack	0.1	-99	0.5	-92	0.0	-100
Deogarh	5.6	-6	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	1.0	-87	0.1	-99	0.1	-99
Ganjam	4.1	-34	1.2	-84	3.5	-53
Jagatsingpur	1.1	-85	3.4	-50	0.0	-100
Jajpur	0.3	-98	0.0	-100	0.0	-100
Jharsuguda	3.0	-56	0.0	-100	0.0	-100
Kalahandi	1.0	-80	0.0	-100	2.5	-14
Kandhamal	1.6	-84	1.0	-88	0.2	-96
Kendrapara	3.3	-75	0.0	-100	0.0	-100
Keonjhar	5.2	-54	1.4	-88	1.7	-69

Khurda	0.0	-99	8.8	45	0.0	-100
Koraput	1.1	-71	6.7	203	0.0	-100
Malkangiri	2.0	43	6.0	54	0.0	-100
Mayurbhanj	6.5	-53	0.0	-100	0.1	-98
Nawapara	0.4	-92	0.5	-86	0.0	-100
Nawarangpur	2.8	37	0.0	-100	0.0	-100
Nayagarh	3.5	-57	0.9	-82	0.0	-100
Puri	0.0	-100	0.2	-94	0.0	-100
Rayagada	0.9	-85	0.1	-99	1.1	-84
Sambalpur	6.8	15	0.0	-100	0.0	-100
Sonepur	0.3	-94	0.0	-100	0.0	-100
Sundargarh	1.4	-78	0.0	-100	0.0	-100
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	0.0	-100	0.0	-100	0.0	-100
North & Middle Andaman	0.0	-100	0.0	-100	0.0	-100
South Andaman	0.0	-100	0.0	-100	0.0	-100
GWB						
Bankura	2.2	-53	0.0	-100	0.0	-100
Birbhum	3.5	25	0.3	-93	0.0	-100
Burdwan	2.4	-47	0.0	-100	0.0	-100
East Midnapore	11.5	62	0.0	-100	0.0	-100
Hooghly	4.3	29	0.9	-67	0.0	-100
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	8.8	26	12.3	186	0.0	-100
Murshidabad	0.5	-85	0.0	-100	0.0	-100
Nadia	3.5	35	5.1	6	0.0	-100
24 Pargana (N)	6.0	62	4.0	10	0.0	-100
Purulia	1.2	-78	0.0	-100	0.0	-100
24 Pargana (S)	5.9	-45	3.0	-54	0.0	-100
West Midnapore	9.3	10	0.0	-100	0.0	-100
SHWB & Sikkim						
Cooch Behar	0.7	-78	0.0	-100	0.0	-100
Darjeeling	16.3	133	0.0	-100	0.0	-100
East Sikkim	23.5	74	0.0	-99	0.0	-100
Jalpaiguri	9.3	93	0.0	-100	0.0	-100
Malda	0.5	-81	0.0	-100	2.0	-17
North Dinajpur	1.5	-12	0.0	-100	0.0	-100
North Sikkim	31.9	61	22.8	-44	0.0	-100
South Dinajpur	8.1	212	0.0	-100	0.0	-100
South Sikkim	7.7	-43	0.0	-100	0.0	-100
West Sikkim	5.3	-73	1.5	-96	0.0	-100
Karnataka						
Coastal Karnataka						
Dakshina Kannada	1.4	200	17.0	552	0.4	-76
Udupi	0.0	-100	12.4	854	0.5	-50
Uttara Kannada	17.4	200	5.0	1567	0.0	-100

N I Karnataka						
Bagalkote	3.0	333	4.3	512	0.7	-34
Belagavi	20.4	4993	9.6	1272	1.7	40
Bidar	21.7	2607	32.2	1190	1.5	-36
Dharwad	1.2	31	61.4	15250	0.1	-95
Gadag	6.4	959	35.8	8860	0.0	-100
Haveri	0.2	-43	18.1	3529	0.8	-6
Kalaburgi	5.7	1314	29.0	2800	0.5	-39
Koppal	1.0	156	12.4	1666	0.9	80
Raichur	0.6	-31	17.1	1329	0.0	-100
Vijayapura	1.0	-26	10.2	1178	0.5	-50
Yadgir	3.0	273	22.0	3571	0.1	-91
S I Karnataka						
Ballari	21.4	919	0.3	-82	0.7	2
Bangalore Rural	0.2	0	17.8	1880	0.0	-100
Bangalore Urban	21.5	794	6.9	431	0.4	-75
Chamarajanagar	18.2	856	11.6	274	0.0	-100
Chikaballapur	35.2	1752	4.4	130	0.0	-100
Chikkamagaluru	0.0	-96	25.4	520	6.8	171
Chitradurga	4.1	929	12.2	774	2.1	613
Davangere	0.0	-100	7.5	732	0.3	-59
Hassan	0.0	-100	25.4	551	2.9	68
Kodagu	0.1	-90	21.1	358	13.6	354
Kolar	32.9	2252	15.1	482	0.0	-100
Mandya	5.2	418	8.6	246	0.0	-100
Mysuru	4.9	714	19.6	600	9.0	372
Ramanagara	5.3	250	11.9	396	0.0	-100
Shivamogga	0.4	19	16.4	1070	9.7	712
Tumakuru	2.1	63	9.2	253	0.1	-88
Kerala						
Alappuzha	27.4	335	33.3	389	31.0	154
Kannur	1.3	567	7.9	231	3.0	87
Ernakulam	9.7	185	16.0	171	12.0	90
Idukki	48.6	465	16.4	131	6.9	-18
Kasaragod	6.0	200	0.0	-100	0.0	-100
Kollam	20.0	104	8.2	-34	7.7	-47
Kottayam	25.9	685	25.9	142	63.3	636
Kozhikode	11.3	1510	10.1	236	13.7	205
Malappuram	3.0	900	10.1	407	24.1	864
Palakkad	7.9	393	8.3	136	12.9	194
Pathanamthitta	25.8	165	27.6	101	14.2	1
Thiruvananthapuram	6.8	61	17.6	226	24.3	228
Thrissur	0.1	-94	8.2	214	30.1	786
Wynad	0.5	-67	32.4	1309	13.0	218
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	0.5	-81
Chennai	0.0	-100	0.0	-100	0.0	-100
Coimbatore	7.5	200	10.0	42	9.5	144
Cuddalore	0.4	-93	0.0	-100	0.0	-100

Dharmapuri	15.6	499	19.8	360	0.0	-100
Dindigul	9.7	150	4.2	-25	15.4	202
Erode	3.7	74	16.1	222	0.0	-100
Kanchipuram	0.0	-100	0.0	-100	0.0	-100
Kanyakumari	22.0	261	8.9	58	12.6	-2
Karikal	0.0	-100	0.0	-100	0.0	-100
Karur	1.8	9	6.6	64	1.1	125
Krishnagiri	2.2	55	18.9	425	0.0	-100
Madurai	0.0	-100	0.2	-96	17.7	269
Nagapattinam	0.0	-100	0.0	-100	0.0	-100
Namakkal	1.5	3	2.3	-12	0.0	-100
Nilgiris	3.8	-28	75.8	434	58.0	706
Perambalur	1.0	-33	0.0	-100	0.0	-100
Puducherry	0.2	-95	0.0	-100	0.0	-100
Pudukottai	3.2	18	0.0	-100	6.1	78
Ramanathapuram	0.5	-91	0.0	-100	22.6	253
Salem	7.8	223	23.4	550	3.4	128
Sivaganga	3.1	-10	0.0	-100	27.8	491
Thanjavur	0.4	-91	0.0	-100	6.5	111
Theni	16.5	162	18.7	89	20.5	189
Tirunelveli	21.7	96	7.7	-31	50.4	297
Tirupur	12.6	742	15.0	234	0.3	-89
Tiruvallur	0.1	-97	1.2	-7	0.0	-100
Tiruvannamalai	1.5	-23	0.3	-93	0.0	-100
Tiruvarur	0.0	-100	0.0	-100	11.3	176
Toothukudi	7.8	6	0.5	-92	16.4	91
Trichy	2.0	-5	0.0	-100	0.4	-79
Vellore	5.5	403	5.6	117	0.0	-100
Villupuram	0.0	-100	0.0	-100	0.0	-100
Virudhunagar	10.0	133	5.7	-30	14.9	122
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.4	-91	0.0	-100
Guntur	0.7	-33	0.0	-100	0.0	-100
Krishna	0.1	-92	2.2	-30	0.0	-100
Nellore	133.6	8808	9.0	460	0.0	-100
Prakasam	2.7	28	0.4	-87	0.0	-100
Sirkakulam	0.0	-100	1.4	-62	0.0	-100
Visakhapatnam	0.0	-99	7.4	100	0.0	-100
Vizianagram	1.0	-75	2.6	-29	0.0	-100
West Godavari	0.9	-64	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	3.7	149	2.4	13	0.0	-100
Chittoor	56.4	4598	8.2	193	0.0	-100
Cuddapah	8.2	1274	0.0	-100	0.0	-100
Kurnool	45.5	4453	1.9	-9	0.0	-100
Telangana						
Adilabad	27.2	777	21.3	913	4.9	145
Hyderabad	14.4	749	2.5	-36	0.0	-100

Karimnagar	17.1	755	18.5	516	0.0	-100
Khammam	2.8	39	3.8	52	0.0	-100
Mehabubnagar	13.7	1417	10.4	697	0.0	-100
Medak	14.5	1012	31.9	999	0.0	-100
Nalgonda	1.5	32	1.5	-59	0.0	-100
Nizamabad	22.7	1789	14.0	382	2.6	35
Rangareddy	13.9	3370	24.0	1312	0.0	-100
Warangal	6.3	426	23.2	604	0.0	-100

Legends

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

Annexure II List of varieties

Karnataka

Sunflower: Mordern, K.B.S.H-1, 41, 42 and 44

Maize: Ganga-11, Deccan-103, N.A.C-6002 & 6004, Nityashree

Groundnut: ICGS-11, K-134, Chintamani-2(KCH-2)

Ragi: Indaf-5, GPU-26 and 48

Sugar-cane: Co-86032, Co-94012

Tamil Nadu:

Irrigated sesame: TMV 4, TMV 6 and SVPR 1

Cotton: MCU-5, Surabhi and SVPR-2

Assam

Direct seeded ahu rice: Banglami, Rangadoria, Ahu joha, Rasi, Banglami, Rangadoria, Ahu joha, Rasi.

- Early sowing semi dwarf variety of ahu rice: Luit, Kopilee, Cauvery, Culture -1, Rasi, IR-36.
- Tall variety of ahu rice: Panjasail, Koijapori, Laujuli and Hasakumra.

Bau rice: Maguri, Panikekua, Amona, Negheri.

ahu rice: Govind, IR-50, IR-36, Rashi, Lachit, Gopinath.

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.

Sunflower: Jwalamukhi.

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.

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.

Arunachal Pradesh

Jhum rice: Bhalum1,2,3 & 4.

Manipur

Pre-kharif Rice: RC Maniphou 4, 5 and 12.

Okra: Pusa Sawani, Arka Anamika.

Tripura:

Urd: T-9, PanthUrd 35.

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

Cowpea: Maharaja, Kasi Kanchan

Meghalaya

Maize (High & Mid altitude region): Vijay Composite, DA 61A, RCM 75, 76, Vivek Hybrid 25, Vivek QPM-1.

Okra: Pusa A-4, VRO-6, Pusa Sawani, Arka Anamika, Parbhani Kranti.

Brinjal: Local Umroi, Muta Kesh, Narrow

Odisha

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

Groundnut: Smruti, TAG-27, TAG – 24 and JL-24

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.

Okra: Utkal Gourav, Arka Anamika, Varsha Uphar, Parvani kranti and all available hybrid varieties

Bitter gourd: Pusa Domousumi, Coimbatore long green, and Arka Harit,

Ridge gourd: Pusa Najdar, Jaypur long, and any local variety

Cluster bean: Pusa Naubahar

Cow pea: Arka Garima, Utkal Manika, Selection-2-6-3 and pusa Kamal.

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

Bihar

Sweet Potato: Cross 4 and Rajendra shakarkand 35

Okra: Parvani kranti, Arka abhay, Arka anamika, Barsha Uphar, KS 312, Okra 4, Punjab 7, Pant Bhindi 1

Pumpkin: Rajendra Chamatkar, Pusa samar prolific long and pusa samer prolific

Sponge gourd: Rajendra nanua-1, Pusa chikni, Pusa priya, Kalyanpur chikni, DL-11

Bitter gourd: Pusa Do mausmi, Pusa Vivesh, Arka Harit, Koyambatoor long, Kalyanpur Barahmasi, Pant kerila

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

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

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

Okra: Improved varieties – Pusa A - 4, Prabhani Kranti, Arka Anamika, Versha Uphar & Hybrid varieties –Sonal and Sarika

Chhattisgarh

Sweet Corn: NS- 680 or Suger-75

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

Wheat: HPW-155, HPW-89, HPW-147, HPW-236, HPW-211 in low and mid hill and HPW-155, HPW-236, HPW-42 in high hill

Late variety of Cauliflower: broccoli

Cauliflower: Pusa-snowwall

Radish: Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot: Pusa kesar

Fenugreek: I.C. 74, Kasoori

East Uttar Pradesh

Wheat: Narendra-1012, HD-2824, 2733, HP-1731, UP-2382, PWD-343, CVW-38, DBW-39, UO-2382, HUW-510

Wheat (Late varieties): Malaveey-234, HP-1633, H-1744, Narendra-1014, UP-2425

Onion: Pusa red, Kalynpur red, light red

Lentil: T-8, Pant L-406, 234

Chilli: Patasi-1, Jwala, Sadabahar

Lobia: lobia 263, Pusa Phaguni

Tomato: Pant T-2, Azad T-2, Narendra-1,2,4,5,6

Maize: Navjyoti, Kanchan, Gaurav, Surya, Navin, Shweta, Azad Uttam,Prakash, Deccan-115, MMH-135, Ganga-11, Pusa, Maize-2, JH-3459

Urd: T-9, Narendra-1, Azad-1, Uttar Azad-2, Shekhar-2

Okra: VRO-6, VRO-5.

West Uttar Pradesh:

Wheat (non-irrigated): K-9644, Maghar (K-8027), Mandakini (K-9351), Indra (K-8962), Gomati (K-9465), HDR-77, HD-2888

Wheat (Irrigated): K-307, DBW-17, PBW-343,502,550, GW-366, K-1006, 607,402, DVW-39
KRL-210, 213, 19, K-8434(Prasad), NW-1067

Lentil: Narendra-1, DPL-62, Pant-5, L-4076, K-75, HUL-57, Shekhar-3, 2, IPL-81

Sunflower: No.1, PAC- 302, SH-322

Ladies finger: VRO-6, VRO-5

Punjab

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

Rajasthan

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

Maharashtra

Madhya Maharashtra

Groundnut: SB-11, JL-286, Phule Unati, TPG-41, TG-26 or JL-501.

Sunflower: SS-56, Modern, EC-68414 or bhanu and hybrid varieties like KBSH-1 or phule Raviraj or MSFH-17.

Marathwada

Jowar: Parbhani Moti or Parbhani Jyoti.

suru Sugarcane: CO-86032, COM- 7125, CO-8014 or CO-740

Okra: Parbhani Kranti

Vidarbha

Groundnut: TAG-24, TG-26 or SB-11.

Water Melon: Sugar baby, Arka Jyoti or Arka Manik.

Okra: Arka Anamika, Parbhani Kranti, Akola Bahar or Phule Utkarsha.

Sesamum: AKT-101 or NT-11-99.

Gujarat

Green gram: Guj. Mung-3, 4.

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

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

Ridge gourd: Pusa nasdar, Jaipuri.

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

Sponge Gourd: Pusa chikni.

Bitter Gourd: Priya, Pusa domosmi.

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

Cowpea: Guj. Cowpea-4, 5 and Pusa Falguni.