

National Agromet Advisory Service Bulletin

Friday 6th February 2015

(For the period 6th to 10th February 2015)



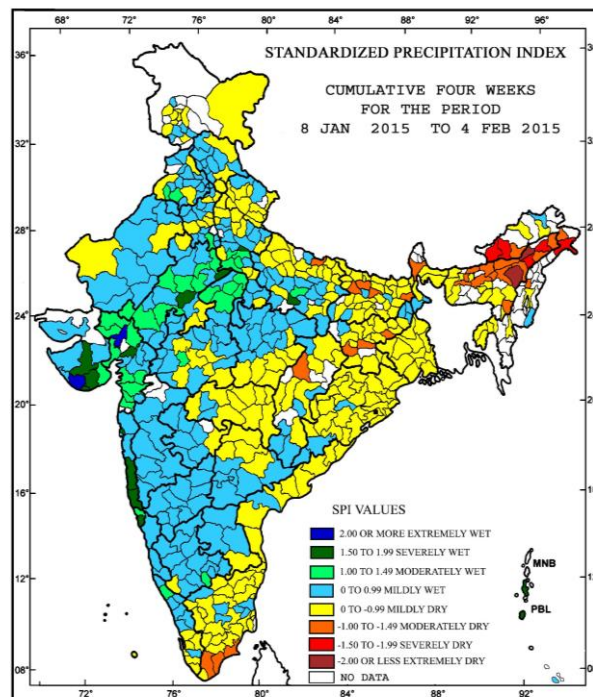
Issued by

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



Standardised Precipitation Index
Four Weekly
for the Period 8th January 2015 to 4th February 2015

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE

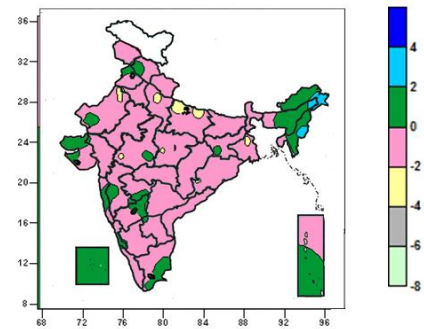
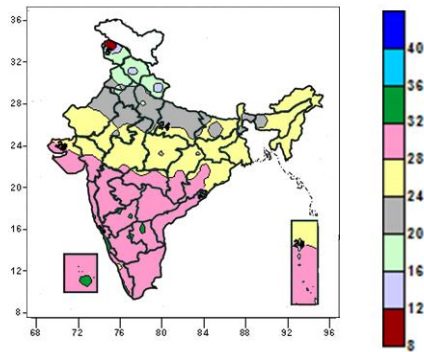


- Extremely/severely wet conditions experienced in Kaushambi, Kanshiram Nagar districts of Uttar Pradesh; Bundi, Dholpur districts of Rajasthan; Kheda, Mehsana districts of Gujarat region; Amreli, Junagarh, Rajkot, Diu districts of Saurashtra; Ratnagiri, Sindhudurg, Mumbai Suburban, South Goa districts of Konkan and Goa.
- Extremely /severely dry conditions experienced in East Kameng, West Kameng, Changlang districts of Arunachal Pradesh; Lakhimpur, Dibrugarh, Jorhat, Karbi Anglong districts of Assam.
- Moderately dry conditions experienced in many districts of Assam, Lohit, Papumpara districts of Arunachal Pradesh; Kohima district of Nagaland; Darjeeling district of Sub-Himalayan West Bengal; Dhanbad, Gumla, Ranchi districts of Jharkhand; Katihar, Muzaffarpur, Samastipur, Saran districts of Bihar; Siddharth Nagar district of Upper Pradesh; Bilaspur district of Chhattisgarh; Ramanathapuram, Tirunelveli, Toothukudi districts of Tamil Nadu.
- 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 04.02.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 04.02.2015

Mean Maximum Temperature (°C) Anomaly in India for the week ending 04.02.2015

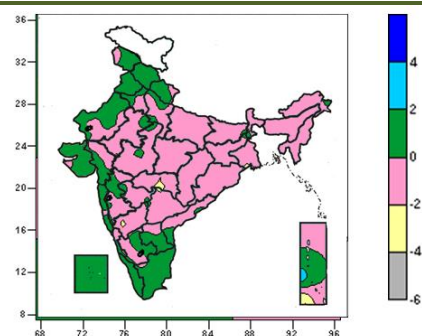
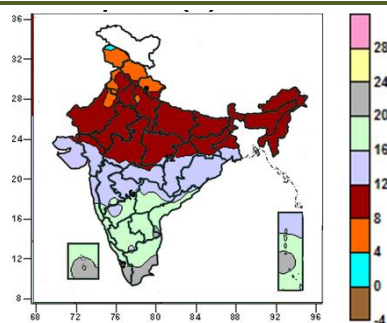


- 32 to 36⁰C over isolated parts of Rayalaseema, Karnataka and Lakshadweep.
- 28 to 32⁰C over Tamil Nadu, Coastal Andhra Pradesh, Telangana, many parts of Gujarat, Maharashtra, Rayalaseema, Karnataka, Kerala, Lakshadweep Islands, Andaman & Nicobar Islands, few parts of Chhattisgarh, Odisha, isolated parts of West Madhya Pradesh.
- 24 to 28⁰C over Sikkim, Gangetic West Bengal, Jharkhand, many parts of North East India, Bihar, Rajasthan, Madhya Pradesh, Chhattisgarh, Odisha, Gujarat region, few parts of Saurashtra & Kutch, Andaman & Nicobar Islands and isolated parts of East Uttar Pradesh, Sub-Himalayan West Bengal and Vidarbha.
- 20 to 24⁰C over many parts of Haryana, Delhi, Uttar Pradesh, Sub-Himalayan West Bengal, Assam, Rajasthan, isolated parts of Punjab, West Madhya Pradesh and Bihar.
- 12 to 20⁰C over Himachal Pradesh, Uttarakhand, many parts of Jammu & Kashmir, Punjab and isolated parts of Haryana, West Uttar Pradesh.
- 8 to 12⁰C over isolated parts of Jammu & Kashmir.

- 2 to 4⁰C over isolated parts of Arunachal Pradesh, Assam and Mizoram.
- 0 to 2⁰C over Lakshadweep, many parts of North East India, Konkan and Andaman & Nicobar Islands, few parts of North Interior Karnataka and Tamil Nadu, isolated parts of Punjab, Himachal Pradesh, Madhya Maharashtra, Marathwada, Coastal Karnataka, West Madhya Pradesh, and Kerala.
- -4 to 0⁰C over entire country except Lakshadweep, many parts of North East India, Konkan and Andaman & Nicobar Islands, few parts of North Interior Karnataka and Tamil Nadu, isolated parts of Arunachal Pradesh, Assam, Mizoram, Punjab, Himachal Pradesh, Madhya Maharashtra, Marathwada, Coastal Karnataka, West Madhya Pradesh and Kerala.

Actual Mean Minimum Temperature (°C) in India for the week ending 04.02.2015

Mean Minimum Temperature (°C) Anomaly in India for the week ending 04.02.2015

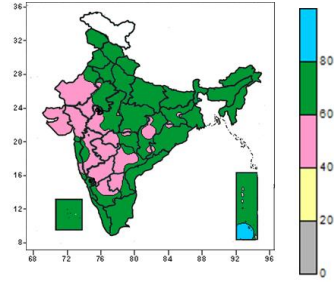
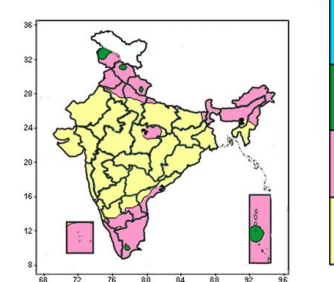


- 0 to 4⁰C over isolated parts of Jammu & Kashmir.
- 4 to 8⁰C over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, isolated parts of Punjab, Haryana & Delhi, West Uttar Pradesh and

- 2 to 4⁰C over isolated Andaman & Nicobar Islands.
- 0 to 2⁰C over Punjab, Himachal Pradesh, Kutch, Goa, Kerala, Lakshadweep Islands, many parts of Jammu & Kashmir, Uttarakhand, West Rajasthan,

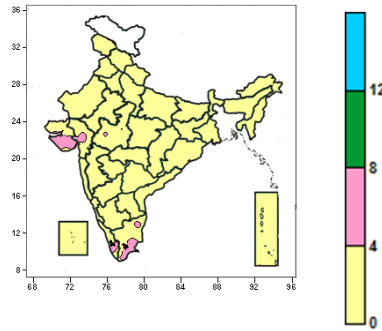
<p>West Rajasthan.</p> <ul style="list-style-type: none"> • 8 to 12^oC over Bihar, Sub-Himalayan West Bengal & Sikkim, North East India and East Rajasthan, many parts of Punjab, Haryana & Delhi, Uttar Pradesh, Madhya Pradesh, Jharkhand, few parts of Gangetic West Bengal, isolated parts of Gujarat and Chhattisgarh. • 12 to 16^oC over Odisha, Marathwada, many parts of Gujarat State, Konkan, Madhya Maharashtra, Chhattisgarh and Vidarbha, few parts of North Interior Karnataka, Telangana, Gangetic West Bengal, Andaman & Nicobar Islands, isolated parts of Coastal Andhra Pradesh, South Interior Karnataka, Madhya Pradesh and Jharkhand. • 16 to 20^oC over Coastal Karnataka, Goa, many parts of Andhra Pradesh, South Interior Karnataka, Telangana, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, few parts of Kerala, isolated parts of Konkan and Madhya Maharashtra. • 20 to 24^oC over many parts of Kerala, few parts of Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands. 	<p>Saurashtra, Konkan, Tamil Nadu, Rayalaseema, few parts of Haryana, Gujarat region, Coastal & South Interior Karnataka, Madhya Maharashtra, Andaman & Nicobar Islands, isolated parts of West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, East Rajasthan, West Madhya Pradesh and Marathwada.</p> <ul style="list-style-type: none"> • -2 to 0^oC over entire country except Punjab, Himachal Pradesh, Kutch, Goa, Kerala, Lakshadweep Islands, many parts of Jammu & Kashmir, Uttarakhand, West Rajasthan, Saurashtra, Konkan, Tamil Nadu, Rayalaseema, few parts of Haryana, Gujarat region, Coastal & South Interior Karnataka, Madhya Maharashtra, Andaman & Nicobar Islands, isolated parts of West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, East Rajasthan, West Madhya Pradesh, Marathwada, Vidarbha and North Interior Karnataka. • -4 to -2^oC over isolated parts of Vidarbha, North Interior Karnataka and Andaman & Nicobar Islands.
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Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 04.02.2015

<p align="center">Relative Humidity (%) over India for the week ending 04.02.2015</p>	<p align="center">Cloud amount (okta) over India for the week ending 04.02.2015</p>
	
<ul style="list-style-type: none"> • 80 to 100% over isolated places of Andaman & Nicobar Islands. • 60 to 80% over entire country except Marathwada, many parts of West Rajasthan, Gujarat State, Madhya Maharashtra, Telangana, few parts of East Rajasthan, Vidarbha, South Interior Karnataka, Rayalaseema and isolated parts of Madhya Pradesh, Konkan & Goa, Jharkhand, Odisha, Chhattisgarh and Andaman & Nicobar Islands. • 40 to 60% over Marathwada, many parts of West Rajasthan, Gujarat State, Madhya Maharashtra, Telangana, few parts of East Rajasthan, Vidarbha, South Interior Karnataka, Rayalaseema and isolated parts of Madhya Pradesh, Konkan & Goa, Jharkhand, Odisha and Chhattisgarh. 	<ul style="list-style-type: none"> • 4 to 6 okta over few places over Jammu & Kashmir, isolated places over Himachal Pradesh, Uttarakhand, Tamil Nadu and Andaman & Nicobar Islands. • 2 to 4 over Punjab, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Kerala, Lakshadweep Islands, many parts over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Delhi, Manipur, Tamil Nadu, Andaman & Nicobar Islands, few parts of West Uttar Pradesh, Rayalaseema, Coastal Andhra Pradesh, South Interior Karnataka isolated parts of East Uttar Pradesh, Bihar, East Madhya Pradesh and Coastal Karnataka. • 0 to 2 okta over entire country except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Kerala,

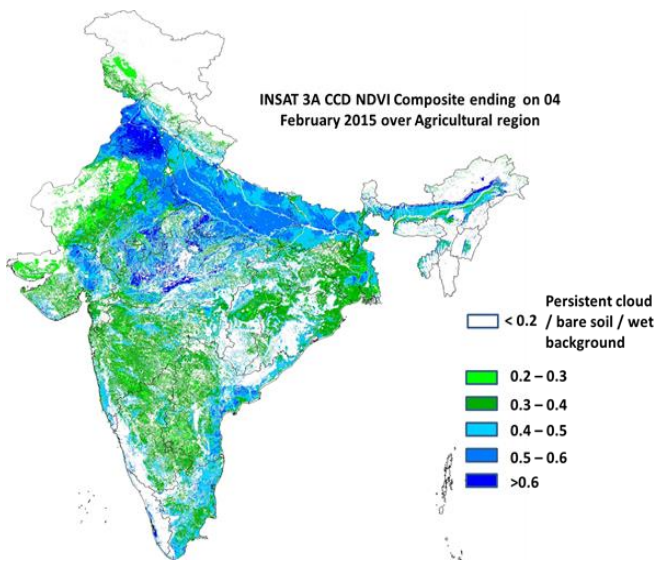
Tamil Nadu and Lakshadweep Islands, many parts over Haryana, Delhi, Manipur, Andaman & Nicobar Islands, few parts of Rayalaseema, Coastal Andhra Pradesh, South Interior Karnataka isolated parts of Uttar Pradesh, Bihar, East Madhya Pradesh and Coastal Karnataka and Andaman & Nicobar Islands.

Wind speed (knots) over India for the week ending 04.02.2015



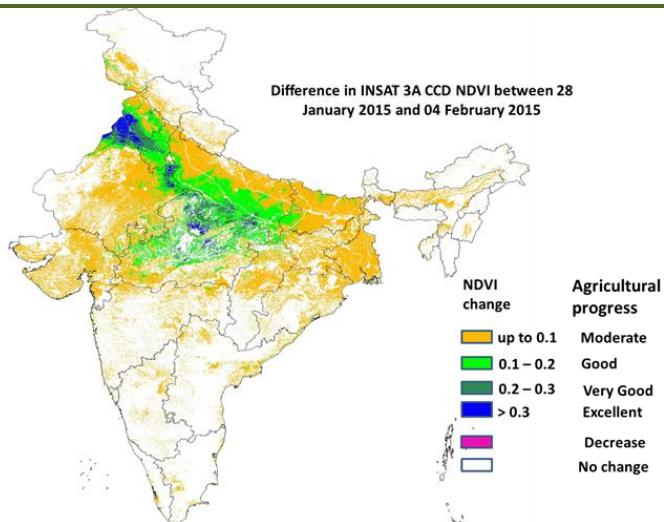
- 4 to 8 knots over many parts of Saurashtra, isolated parts of West Madhya Pradesh, Gujarat region, Tamil Nadu and Kerala.
- 0 to 4 knots over entire country except many parts of Saurashtra, isolated parts of West Madhya Pradesh, Gujarat region, Tamil Nadu and Kerala.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 4th FEBRUARY 2015 OVER AGRICULTURAL REGION OF INDIA



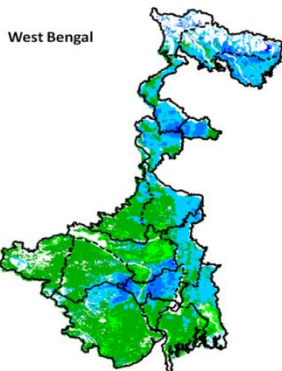
- Very good (> 0.6) agricultural vigour is noticed over central and south eastern parts of Punjab, North western part of Haryana and few patches in Madhya Pradesh. Vegetation also showed good (0.4 - 0.6) NDVI values over entire Uttar Pradesh, many parts of Haryana and Bihar, northern and eastern parts of West Bengal, East Rajasthan, north Gujarat, western parts of Saurashtra, coastal Andhra Pradesh and Tamil Nadu, eastern and coastal parts of Odisha. Some parts of central Bihar, few pockets in northwest Rajasthan, southern parts of Punjab, central Madhya Pradesh showed a considerable increase in the NDVI value. The NDVI remained within the range of 0.3 to 0.4 over few parts in Maharashtra, parts of Karnataka, Telangana and central Rajasthan.

Difference in INSAT 3A CCD NDVI between 28th January 2015 and 4th February 2015

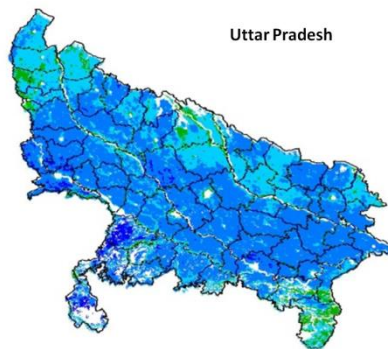


- Excellent to very good progress (> 0.3) in NDVI was observed over south western parts of Punjab, North western parts of Rajasthan, north western part of Haryana, some patches in eastern Rajasthan, Northern Madhya Pradesh and Southern parts of Uttar Pradesh. Agricultural progress was also good (NDVI : 0.1-0.2) over entire Haryana, eastern and central parts of Madhya Pradesh and southern parts of Gangetic plains in Uttar Pradesh. Moderate change was observed in rest parts of Uttar Pradesh, Bihar, Rajasthan, Gujarat, West Bengal, Odisha, Jharkhand and Chhattisgarh. Not much change was observed in Maharashtra and the southern peninsular region of India.

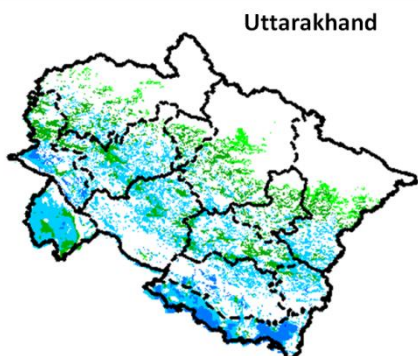
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 4th FEBRUARY 2015 FOR DIFFERENT STATES



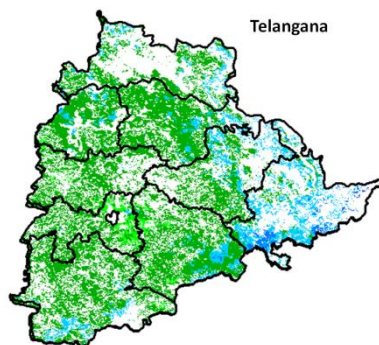
Agricultural vigour is good over most of the southern parts of West Bengal, whereas rest of the northern and central parts show higher values of NDVI in patches varying from 0.4-0.6 till 4th Feb 2015.



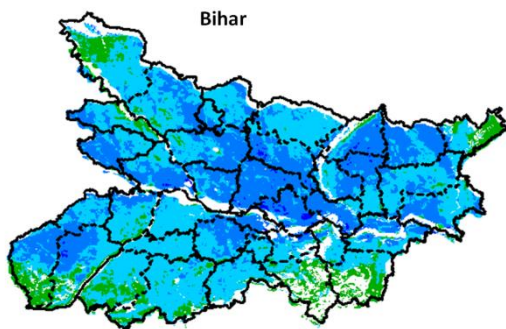
Agricultural vigour is good for the entire state of Uttar Pradesh where NDVI values varies from 0.4 -0.6 till 4th Feb 2015.



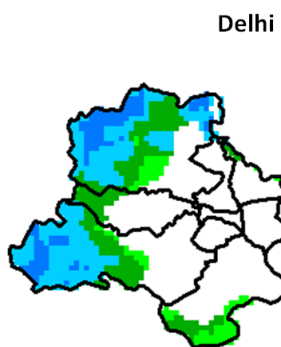
NDVI values vary from 0.2 - 0.5 over Uttarakhand till the 4th Feb 2015.



Agricultural vigour is good in pockets of north east Telangana where NDVI values vary from 0.4 - 0.5. In the southern and western parts of the Telangana values of NDVI varies from 0.2- 0.3 till 4th Feb 2015.

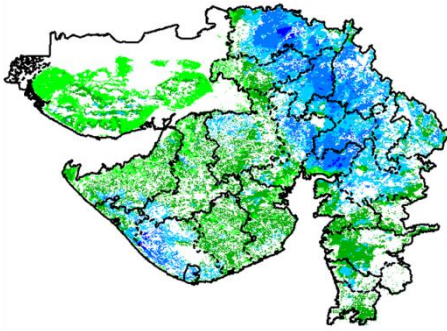


North and central districts of Bihar show comparatively a high value (0.4-0.6) of NDVI till 4th Feb 2015.



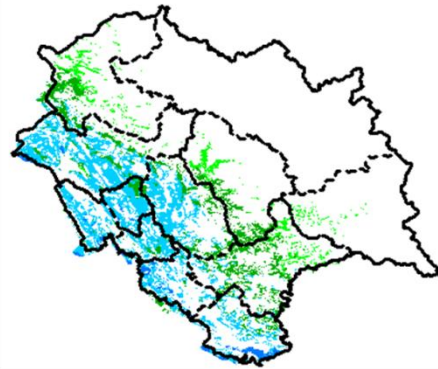
Agriculture vigour is good over western part of Delhi. NDVI values lies between 0.4-0.5. NDVI values are normal over central and western part of the state.

Gujarat



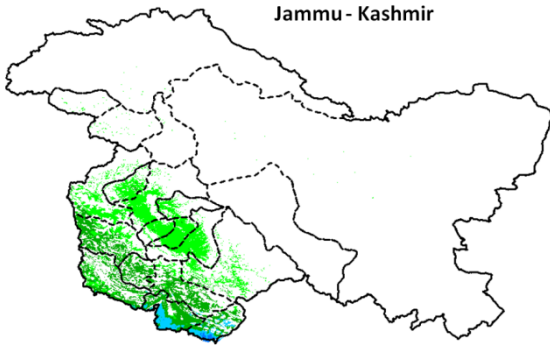
Agriculture vigour is good over part of Eastern, northern Gujarat and Saurashtra where NDVI values lies between 0.4-0.5. Whereas normal NDVI is observed in Kutch area till 4th Feb 2015.

Himachal Pradesh



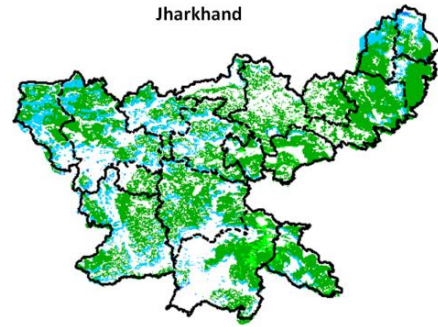
Agriculture vigour is good over south western parts of Himachal Pradesh with NDVI values varying between 0.4-0.5. Whereas, isolated patches of normal NDVI are observed in the state till 4th Feb 2015.

Jammu - Kashmir



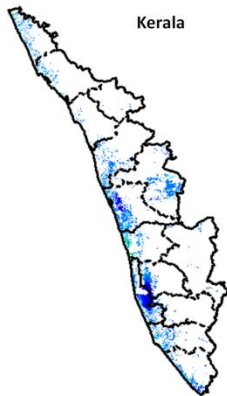
Agriculture vigour is normal all over Jammu. NDVI values vary in between 0.2-0.3 in south western parts till 4th Feb 2015.

Jharkhand



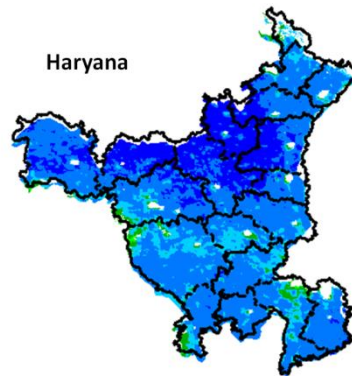
Agriculture vigour is good in patches over central to western part of the Jharkhand which lies in between 0.3-0.4. Rest of the parts shows normal NDVI values till 4th Feb 2015.

Kerala

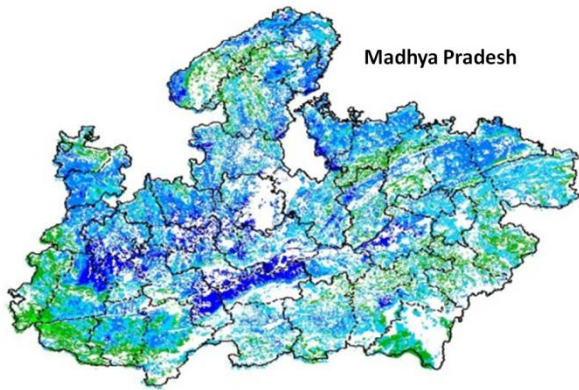


Some pockets in south coastal parts of Kerala show NDVI values varying from 0.5 - 0.6, whereas rest of agricultural vigour of Kerala shows normal values of NDVI till 4th Feb 2015.

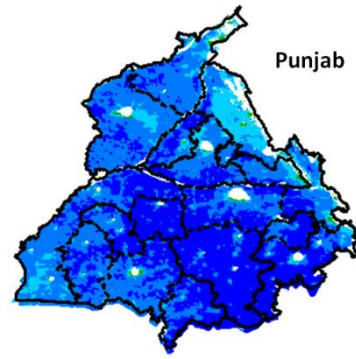
Haryana



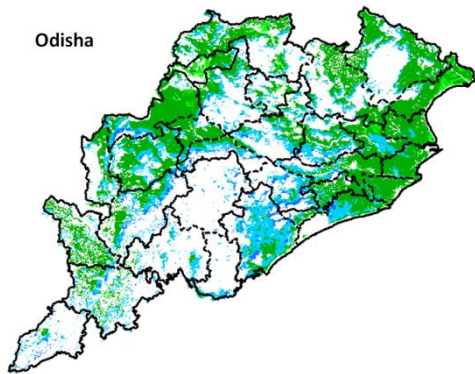
Agriculture vigour is good; NDVI values were 0.5-0.6 over most of the parts of Haryana till 4th Feb 2015.



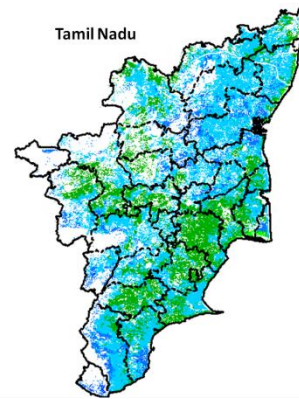
Agricultural vigour is good for central, western region of Madhya Pradesh showing higher values of NDVI varies from 0.5 - 0.6 till 4th Feb 2015.



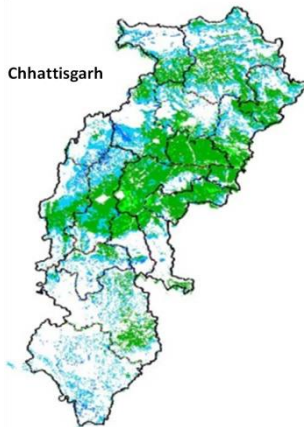
Agricultural vigour is comparatively good for all over Punjab with NDVI values varying from 0.5-0.6. South - East districts of Punjab showing dominantly higher NDVI values more than 0.6 till 4th Feb 2015.



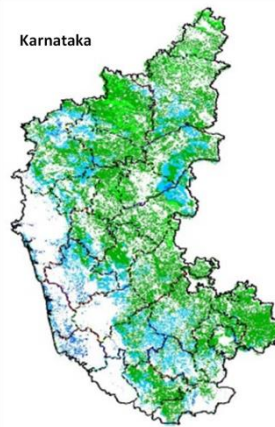
Agricultural vigour is good for east coast and south west part of Odisha with NDVI values of 0.3 - 0.5 whereas central and south coast show normal values of NDVI till 4th Feb 2015.



Agricultural vigour is good over Tamil Nadu with NDVI values varying from 0.4 - 0.6 till 4th Feb 2015.

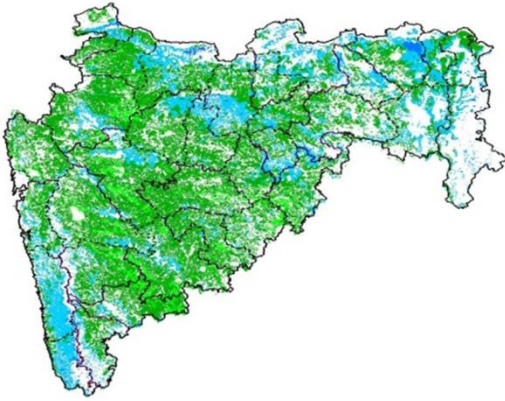


Agriculture vigour is good all over western and southern part of Chhattisgarh where NDVI values lies in between 0.3-0.5. NDVI values are normal over eastern, central and northern part of the state till 4th Feb 2015.



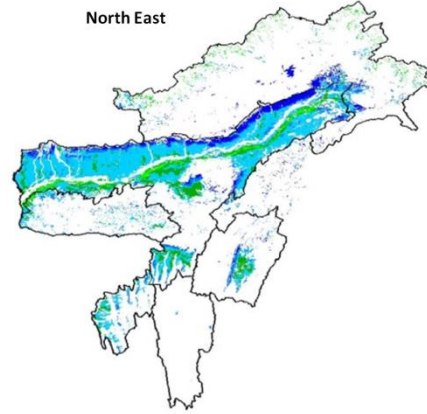
Agriculture vigour is good over South-Central parts of Karnataka which lies in between 0.3-0.5. Rest of the part show normal condition where NDVI values vary up to 0.2-0.3 till 4th Feb 2015.

Maharashtra



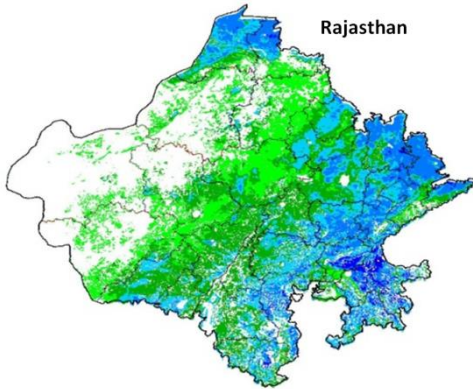
Agricultural vigour is good for central, Western and Marathwada region of Maharashtra with NDVI values of 0.3 - 0.5. Whereas Vidarbha, Northern and Konkan regions showing comparatively high value of 0.5 till 4th Feb 2015.

North East



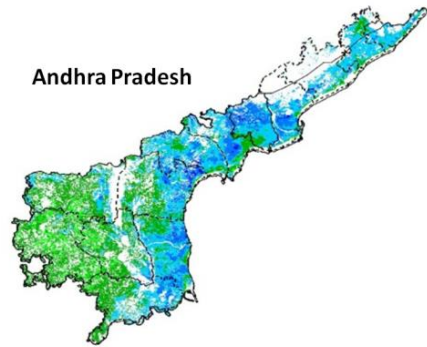
Agriculture vigour is good in valleys of northern hilly range of North-East states which covers most of the part of Assam. NDVI values vary from 0.4-0.5 in this region. In north-east part of Assam, NDVI values are more than 0.6. Isolated patches of normal NDVI conditions are observed all over NE region till 4th Feb 2015.

Rajasthan




In the eastern part of Rajasthan NDVI shows high values from 0.5-0.6 till 4th Feb 2015. Whereas, Agricultural vigour is moderate over the central Rajasthan with NDVI values varying from 0.2 - 0.3.

Andhra Pradesh



Agriculture vigour is good over middle part of Andhra Pradesh, as it also good over northern coast. NDVI values are normal over rest part of the state till 4th Feb 2015.

Persistent cloud /

 **< 0.2 bare soil / wet background**

 **0.2 – 0.3**

 **0.3 – 0.4**

 **0.4 – 0.5**

 **0.5 – 0.6**

 **> 0.6**

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 9th February, 2015).

- Rain/thundershowers would occur at isolated places over Kerala, Lakshadweep and Andaman & Nicobar Islands during the period.
- Dry weather would prevail over Jammu & Kashmir during next 24 hours and rain/snow would occur at isolated places on 7th and at a few places thereafter.
- Dry weather would prevail over Himachal Pradesh during next 48 hours and rain/snow would occur at isolated places thereafter.
- Dry weather would prevail over Madhya Pradesh during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- Rain/thundershowers would occur at isolated places over Arunachal Pradesh, Tamil Nadu & Puducherry during next 24 hours and dry weather would prevail thereafter.
- Dry weather would prevail over rest parts of the country during the period.
- Fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh, north Madhya Pradesh, Bihar and Sub-Himalayan West Bengal & Sikkim.
- No large change in day & night temperatures over northwest & adjoining central India, Gujarat and Madhya Maharashtra during next 48 hours.

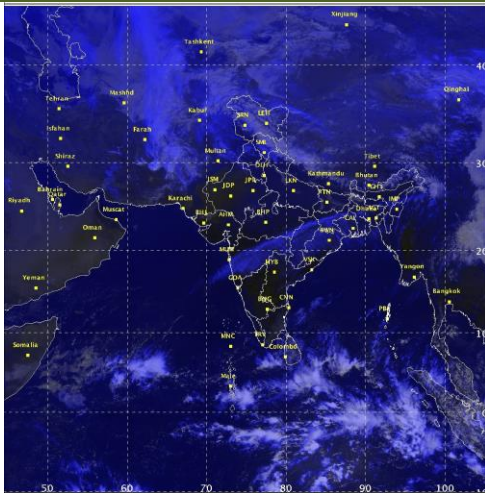
Weather Warning during next 3 days

- **06 February (Day 1):** Dense fog (Visibility less than 200 m) would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and north Madhya Pradesh.
- **07 February (Day 2):** Dense fog (Visibility less than 200 m) would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi and Uttar Pradesh.
- **08 February (Day 3):** No Weather Warning.

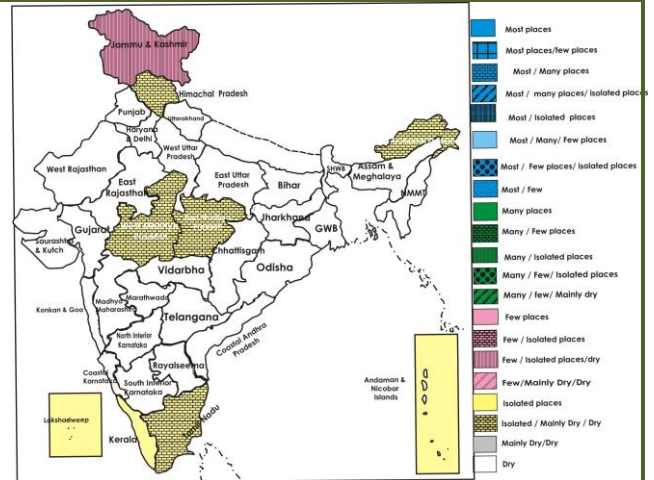
Weather Outlook for subsequent 4 days from 9th to 13th February, 2015

- Rain/thundershower would occur at isolated places over central India and adjoining areas.
- Rain/snow would occur at isolated places over western Himalayan region on 9th and dry weather thereafter.
- Rain/thundershowers would occur at isolated places over extreme south peninsular India.

Satellite image dated, 06.02.2015, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 9th February, 2015)



Detailed Zonewise Agromet Advisories

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



Sorghum



Sugarcane



Chilli



Rice Transplanting

- **Realised Rainfall:** Weather remained mainly dry over the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Kerala during the period. Rain/thundershowers would occur at isolated places over Tamil Nadu & Puducherry during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over rest of the region during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over extreme south peninsular India.
- **Advisories:**
 - **Andhra Pradesh:**
 - Complete harvesting of red gram and Bengal gram in Anantapur district of Scarce Rainfall Zone.
 - As dry weather prevailing, apply light and frequent irrigation to mango crop to get synchronised flowering in the Southern Zone.
 - In the Scarce Rainfall Zone, prevailing dry weather conditions are congenial for incidence of powdery mildew in mustard. For control, apply Sulphur @ 3 g/litre of water.
 - Prevailing dry weather is congenial for incidence of leaf hoppers on mango crop which is in early flowering stage in the Southern Zone. Undertake spraying of Imidachlopride @ 0.3 ml/litre of water or Dimethioate @ 2 ml/litre of water.
 - **Telangana:**
 - In Telangana, as dry weather is prevailing, apply irrigation in rice nurseries.
 - Prevailing dry weather condition is congenial for incidence of jassid, leaf miner and tikka leaf spot in groundnut in the Southern Telangana Zone. Spray Dimethoate @ 2 ml or Monocrotophos @ 1.6 ml per litre of water to manage jassid, Quinolphos @ 2 ml per litre of water to manage leaf miner and Mancozeb @ 2 g + Carbendazim @ 1g per litre of water to manage tikka leaf spot.
 - Due to prevailing low temperature conditions, *helicoverpa* incidence is noticed in tomato which is likely to increase in the Northern Telangana Zone. Undertake spraying of Larvain @ 1.5g/litre of water to manage the incidence.
 - **Karnataka:**
 - Continue planting of sugarcane in North Transition and North East Transition Zone after proper set treatment.
 - Continue harvesting of wheat, Bengal gram, *rabi* sorghum and safflower in the North East Transition Zone and North East Dry Zone.
 - As dry weather is prevailing, apply irrigation in ragi crop which is at ear head emergence stage and undertake harvesting of Bengal gram in the Eastern Dry Zone.
 - As dry weather is prevailing, apply irrigation to wheat and summer groundnut in the North East Transition Zone.
 - As dry weather is prevailing, continue harvesting of red gram and continue sowing of maize with assured irrigation in the Southern Transition Zone.
 - In view of prevailing dry weather, provide irrigation to mango and summer groundnut in the North East Dry Zone.
 - Incidence of shoot weevil has been observed in 30-45 days old cotton crop in few districts of North Transition Zone. Undertake spraying of Profenophos 50 EC @ 2 ml/litre + Dichlorovos 100 EC @ 2.0 ml/litre of water to manage the incidence.
 - **Kerala:**
 - In the Problem Area Zone, continue mulching with crop residue and dried leaves in coconut, banana and nutmeg fields to reduce evapotranspiration and provide irrigation to nutmeg according to increase in temperature.
 - Prevailing dry and humid weather is congenial for incidences of brown spot and sheath blight in rice in the Problem Area Zone. Spray Mancozeb @ 2 kg/ha to manage brown spot and Propiconazole @ 500 ml/ha to manage sheath blight.

▪ **Tamil Nadu:**

- Continue sowing of rice fallow pulses under waxy condition in *samba* rice fields under rice fallow condition and harvesting of matured *samba* rice in the Cauvery Delta Zone.
- Undertake planting of mid-season sugarcane and harvesting of Bengal gram and rice in the Western Zone.
- As mainly dry weather would prevail, continue sowing of green gram under irrigated conditions in the South Zone.
- Cloudy weather is congenial for incidence of sucking pests in vegetables in the Southern Zone. For controlling, spray organic solutions @ 100 ml / 10 litre of water or Imidachloprid @ 10 ml / 10 litre of water.
- Moderate cloud cover and humidity is congenial for the incidence of pink boll worm in cotton in the South Zone. Spray Phosalone 35% EC @ 2 l/ ha or Triazophos 40 EC @ 2.5 l/ha to prevent the incidence.
- Suitable varieties are given in Annexure II.

• **Animal Husbandry**

- Undertake preventive measures to protect animals from Anthrax disease and vaccinate sheep and goat against pneumonia & blue tongue disease in the Scarce Rainfall Zone of Andhra Pradesh.
- Undertake de-worming of sheep and goats to control endo-parasites in the Cauvery Delta Zone and vaccinate animals against the foot and mouth disease in the Western Zone of Tamil Nadu.

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



Rice transplanting



Mustard



Potato



Cabbage

- **Realised Rainfall:** Rainfall occurred in Dibang Valley, East Siang and Upper Siang districts of Arunachal Pradesh. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Arunachal Pradesh during next 24 hours and dry weather would prevail thereafter. Dry weather would prevail over Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura during the period.
- **Weather Warning:** Nil
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Lower and Central Bramhaputra Valley Zone of Assam, continue transplanting of *boro* rice of about 45 days old (5- 6 leave stage) seedlings. Maintain 6 cm of standing water in the main fields of transplanted *boro* rice. Continue gap filling in *boro* rice after 10-15 days after transplanting.
 - In Lower Bramhaputra Valley Zone of Assam, continue sowing of sunflower and *okra*. Continue land preparation for planting of sugarcane in upland area. Apply irrigation to *rabi* maize, lentil, rapeseed and mustard.
 - In Central Bramhaputra Valley Zone of Assam, continue land preparation for sowing of summer green gram, black gram and pointed gourd.
 - In Barak Valley Zone of Assam, undertake nursery bed preparation for summer vegetables like brinjal and tomato.
 - In Hill Zone of Assam, due to humid weather, late blight and leaf eating caterpillars may be found in tomato and cole crops. Apply Ridomil MZ-72 @ 2g/ litre of water and Indofil M-45 @ 2.5g / litre at 15 days interval to protect against late blight and spray Malathion 50 EC @ 1.5 ml/litre against caterpillars.
 - In Central Bramhaputra Valley Zone and North Bank Plain Zone of Assam, humid weather is congenial for wilt in lentil, linseed and khesari crops. Drench the soil with Bavistin @ 1ml/litre of water.
 - In Meghalaya, due to humid weather, there is chance of attack of blast /brown spot disease in *boro* rice. Spray Carbendazim @ 1g/litre of water against blast/brown spot.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Mizoram, apply irrigation to mustard, toria, banana, brinjal, early cole crops, pea and tomato.
 - In Manipur, continue sowing of rice under irrigation.

- In Nagaland, apply light irrigation in pea. Apply mulching in vegetables and cole crops. Undertake land preparation and sowing for summer moong /urad and harvesting of toria.
- In Mild Tropical Plain Zone of Tripura, apply light irrigation on every alternate day in cole crops, mustard, maize and lentil. Undertake mulching after irrigation to conserve moisture. Complete transplanting of *boro* rice. Undertake transplanting of summer brinjal and tomato.
- In Tripura, due to humid weather, there is chance of attack of aphids in mustard. Spray Monocrotophos or Imidachloprid @ 2ml per litre of water to manage the attack.
- In Nagaland, humid weather is favourable for occurrence of Pseudostem Weevil in banana. Remove the dried and diseased leaves and kill the weevil.
- In Mizoram, due to humid weather condition, there is chance of infestation of aphids in pea. For control, apply Imidachloprid @ 1.5 ml/litre of water.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- In Northeastern States, provide artificial heating through lighting of electric bulb to protect poultry birds (upto 25 days old) from low temperature. Cover poultry and pig house with gunny bags/ polythene sheet to protect the animals from cold. During this period vaccinate poultry birds against *Ranikhet* disease.
- In Barak Valley Zone of Assam, prevailing cold weather is favourable for attack of pneumonia in newly born chicks. Special care must be taken against pneumonia.

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



Sugarcane

Wheat

Rice transplanting

Onion

- **Realised Rainfall:** Weather remained mainly dry over the region.
- **Weather Forecast:** Rain/thundershower would occur at isolated places over Andaman & Nicobar Island during the period. Dry weather would prevail over rest parts of the region during the period. Fog would occur at isolated places over Bihar and Sub-Himalayan West Bengal & Sikkim.
- **Weather Warning:** Nil.
- **Advisories:**
 - **West Bengal:**
 - In Old Alluvial and Terai Zone, continue transplanting of *boro* rice.
 - Due to cold weather condition, there are chances of attack of aphids and semi-lopper in vegetables during its fruiting stage in Hill Zone. To control semi lopper, apply Indoxacarb @ 1.5ml/litre of water with sticker, and Imidacloprid 2 ml/10 litres of water for aphid control.
 - In Old Alluvial Zone and Terai Zone, due to low temperature and foggy weather, there is chance of attack of late blight in potato. For control, spray Mancozeb @ 2 g /litre of water and Blitox @ 4 g/litre of water alternately at 7-10 days interval by completely wetting the leaves.
 - In New Alluvial Zone, Laterite, due to cloudy weather condition, attack of downy-mildew may be prevalent in pointed gourd and leaf blight incidence may be high in chilli. To control downy-mildew, apply Crilexyl or Ridomil@ 2 g/ litre of water during late after-noon and for leaf blight, apply Blitox @ 2.5 to 3 g /litre water at an interval of 20 days.
 - In Laterite and Red Soil Zone of West Bengal, due to low temperature aphids attack may be found in wheat and mustard. Spray Dimethoate (ROGOR) 30 EC @ 1.75 ml/litre of water to control the attack.
 - **Andaman and Nicobar Islands:**
 - In South, North and Middle Andaman districts, due to cloudy weather, there may be possibility of attack of thrips, leaf hopper and other sucking pests in vegetables. Spray Imidacloprid @ 2 ml /litre and Acephate 2 g/litre alternatively once in two weeks.
 - **Odisha:**
 - In Western Undulating Zone of Odisha, as dry weather is prevailing, apply irrigation to vegetables and onion. Undertake harvesting of matured cotton, sugarcane, arhar and niger. Complete nursery sowing for summer rice. Start field preparation for planting of sugarcane.
 - In East and South Eastern Coastal Plain Zone, continue nursery sowing of rice. Continue sowing of sunflower and groundnut. Continue nursery sowing of ragi. Continue planting of sugarcane.

- In North Eastern Plateau Zone of Odisha, as dry weather is prevailing, apply irrigation in rice nursery. Undertake land preparation for transplanting of rice.
- In North Eastern Coastal Plain Zone of Odisha, as dry weather is prevailing, apply irrigation to rapeseed and mustard which are at flowering stage.
- In North Eastern Coastal Plain Zone of Odisha, as temperature is expected to rise, the attack of stem borer will aggravate in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2 ml/litre or Cartap Hydrochloride @ 2 g/litre of water.
- In East and South Eastern Coastal Plain Zone of Odisha, cold and cloudy weather favours the infestation of powdery mildew and aphids in green gram, black gram and pea. To control powdery mildew, spray Sulfex WP @ 1 kg in 200 litres of water per acre and to control aphids, spray Imidacloprid @ 50 ml in 200 litre water per acre.
- In North Eastern Coastal Plain Zone of Odisha, rise in temperature will favour the growth of stem borer population in rice nurseries. To control it, spray Traizophos or Chloropyriphos @ 2ml/litre of water.
- In North Eastern Plateau Zone of Odisha, due to cool weather, there is chance of powdery mildew in pulses, spray wettable Sulphur @ 1 kg per acre.
- **Bihar:**
 - In South Bihar Alluvial Zone, as dry weather is prevailing, continue plucking of matured pods of pea. Continue harvesting of early sown potato, stop irrigation 15 days before harvesting.
 - In North West Alluvial Plain Zone of Bihar, as dry weather is prevailing, apply irrigation to wheat, pea, garlic and vegetables. Complete transplanting of *rabi* onion. Undertake land preparation for sowing of summer vegetables.
 - In North East Alluvial Zone of Bihar, continue planting of spring sugarcane. Continue transplanting of *boro* rice and nursery sowing of summer rice. Continue harvesting of early sown potato. Undertake sowing of cucumber, bottle gourd, muskmelon, watermelon, bitter gourd, ridge gourd and ladies finger.
 - Due to humid weather, there is a chance of white rust in mustard/rapeseed in North West Alluvial Plain Zone of Bihar, spray Chlorothalonil 75 WP @ 1 g/ litre of water.
 - In South Bihar Alluvial Zone, cool and humid weather is favourable for the attack of aphids in mustard/toria, spray Cartap Hydrochloride or Metasystox or rogor @ 1.5 ml/litre of water.
- **Jharkhand:**
 - In Western Plateau Zone, continue nursery sowing of summer rice and harvesting of potato. Continue sowing of cucurbitaceous vegetables like sponge gourd, bottle gourd, pumpkin, watermelon, muskmelon etc. Farmers, who have already raised the seedlings in polythene bag, may transplant the seedlings in the main field @ 2-3 seedlings per pit. Apply light irrigation after transplanting of seedlings. Continue harvesting of matured rapeseed.
 - In South Eastern Plateau Zone of Jharkhand, apply irrigation in wheat, mustard, field pea and potato. Continue nursery sowing of summer rice. Continue nursery sowing of vegetables like bottle gourd, khira, kakri, sponge gourd, ridge gourd, bitter gourd, okra, brinjal and Shimla mirch and undertake transplanting of matured seedlings.
 - In Central & North Eastern Plateau Zone of Jharkhand, continue land preparation for sowing of vegetables like long gourd, round gourd, bitter gourd, sponge gourd, cucumber, watermelon and muskmelon. Continue nursery sowing of summer rice and undertake transplanting of 12-15 days old rice seedlings. Continue transplanting of onion and harvesting of potato.
 - In Central & North Eastern Plateau Zone of Jharkhand, cool and dry weather is favourable for incidence of powdery mildew disease in pea. To control it, spray Kairathen @ 1 ml or Sulfex @ 3 ml per litre of water.
 - In South Eastern Plateau Zone of Jharkhand, cool and humid weather in the morning and later on clear sunny weather is favourable for the attack of aphids in mustard/toria, spray Methyl Demitone or roger (Dimethoate) @ 1ml per liter mixed with teepol @ 5 ml per liter. Also decreased sunshine hours with high humidity is congenial for the attack of diamond back moth, aphids and thrips in cole crops and tomato, spray Dimethoate (30%) @ 1 ml per litres of water to control the attack.
 - Suitable varieties are given in Annexure II.
- **Animal Husbandry**
 - In Bihar and Jharkhand it is advised to keep the animals inside the sheds and provide dry bedding and use heaters inside cattle sheds to protect them from cold. Increase protein level and minerals in the feed concentrate to cattle.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Wheat

Mustard

Onion

- **Realised Rainfall:** Rainfall occurred in Rewa district of East Madhya Pradesh. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Dry weather would prevail over Madhya Pradesh during the next 48 hours and rain/thundershowers would occur at isolated places thereafter. Dry weather would prevail over rest of the region during the period.
Fog would occur at isolated places over north Madhya Pradesh.
No large change in day & night temperatures over central India adjoining to northwest India during next 48 hours.
- **Weather Warning:** Dense fog (Visibility less than 200 m) would occur at isolated places over north Madhya Pradesh on 6th February.
- **Weather Outlook:** Rain/thundershower would occur at isolated places over central India.
- **Advisories:**
 - **Madhya Pradesh:**
 - Continue picking up of matured vegetables like pea, tomato, brinjal, chilli etc. in Vindya Plateau Zone and Nimar Valley Zone.
 - Continue transplanting of cabbage and cauliflower in the main fields in Kymore Plateau and Satpura Hill Zone.
 - Continue weeding and hoeing in onion and garlic in Bundelkhand Zone.
 - Due to humid weather, there are chances of attack of sucking pests in vegetables in Jhabua Hill Zone; spray Thiomithaxam @ 0.35 g per litre of water.
 - Due to cloudy and foggy weather there are chances of leaf blight disease in mustard in Satpura Plateau Zone and Bundelkhand Zone; spray Dimethoate 30 E.C. @ 2.0 ml. per litre of water.
 - **Chhattisgarh:**
 - Continue land preparation for sowing of cucurbitaceous crops in Bastar Plateau Zone.
 - Continue land preparation for transplanting of summer rice and sowing of cowpea and okra in North Hill Zone. Continue sowing of cucurbitaceous crops and leafy vegetables.
 - As mainly dry weather is prevailing, apply irrigation in wheat at flowering stage in Plain Zone and North Hill Zone of Chhattisgarh.
 - Due to humid weather, there are chances of attack of aphids in mustard in Chhattisgarh Plain Zone. For control spray Dimethoate 30 EC @ 1000 ml/hectare.
- **Animal Husbandry**
 - Provide green fodder along with mineral mixture and fresh water for milch animals in Madhya Pradesh. Increase light duration in poultry farms.

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



Wheat

Sugarcane

Mustard

Cabbage

- **Realised Rainfall:** Rainfall occurred in all districts of Jammu & Kashmir except Ladakh (Leh), Pulwama and Rajouri; Chamba, Hamirpur, Kangra, Kinnaur, Kullu, Lahaul & Spiti, Mandi, Simla and Solan districts of Himachal Pradesh; Chamoli, Rudraprayag and Uttarkashi districts in Uttarakhand; Patiala and Gurdaspur districts of Punjab; Chandigarh district of Haryana. Weather remained mainly dry over rest of the region.

- **Weather Forecast:** Dry weather would prevail over Jammu & Kashmir during next 24 hours and rain/snow would occur at isolated places on 7th and at a few places thereafter. Dry weather would prevail over Himachal Pradesh during next 48 hours and rain/snow would occur at isolated places thereafter. Dry weather would prevail over rest parts of the region during the period.
Fog would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh.
No large change in day & night temperatures over northwest India during next 48 hours.
- **Weather Warning:** Dense fog (Visibility less than 200 m) would occur at isolated places over Punjab, Haryana, Chandigarh & Delhi, Uttar Pradesh and north on 06th & 07th February.
- **Weather Outlook:** Rain/snow would occur at isolated places over western Himalayan region on 9th and dry weather thereafter.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, undertake field preparation for nursery sowing of tomato, brinjal and chilli, sowing of beans and cucumber.
 - In Sub Tropical and Intermediate Zone of Jammu & Kashmir, due to cloudy and humid weather, there may be attack of early and late blight in potato and powdery mildew in pea. To control blight, apply Mancozeb @ 0.25% or Redomil M2 @ 0.25% and to control powdery mildew, spray Karathane @ 3 g/litre of water on a non rainy day.
 - Due to cloudy weather, there may be attack of aphids in mustard in Intermediate Zone of Jammu & Kashmir. Monitor the aphids population by installing sticky yellow traps @ 2/kanal in mustard and spray Rogor (Dimethoate) 30 EC @ 1 ml/litre of water if the pest population is above ETL at fifteen days interval on a non rainy day.
 - **Uttarakhand:**
 - In Bhabar and Tarai Zone of Uttarakhand, undertake sowing of potato at high hills with irrigation facilities. Also continue nursery sowing of tomato and capsicum.
 - In Hill Zone of Uttarakhand, undertake nursery sowing of tomato, brinjal, *capsicum* utilising the realised rainfall.
 - Due to humid weather with low temperature, there is attack of leaf hopper in brinjal, and tomato in Sub humid Sub Tropic Zone of Uttarakhand. To control, apply Dichlorvas @ 1ml/litre of water.
 - In Bhabar and Tarai Zone of Uttarakhand, due to humid weather conditions, there is chance of incidence of aphids in mustard. If the population of these insects is 8 insects per plant then spray Metasystox @250 ml dissolved in 250 litre of water per acre crop area during afternoon hours.
 - **Rajasthan:**
 - Continue field preparation for sowing of summer groundnut in Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan.
 - Due to partially cloudy weather, there are chances of *heliathis* infestation in gram in Semi Arid Eastern Plain Zone of Rajasthan. To control, spray Quinolphos 25 EC @ 1200 ml/ha or Indoxicarb @ 200 ml/ha along with water at the time of flowering.
 - Due to increase in day temperature aphids may become hyper active in mustard crop in Flood Prone Eastern Plain Zone of Rajasthan. Regularly monitor the field boundaries for aphid and destroy the infested branches/twigs.
 - In Semi Arid Eastern Plain Zone of Rajasthan, blight disease may attack cumin, coriander, fenugreek & saunf crops due to continuous cloudy weather. In this disease brownish spots are formed on leaves to control spray Mencozeb @ 2 gm or copper Oxchloride @ 3 gm or Diphenconazole (score 25 E.C.) @ 0.5 ml per litre of water.
 - Due to cloudy weather condition, there is chance of attack of blight in mustard in Arid Western Plain Zone of Rajasthan. To control, spray Mancozeb @ 2 g/ litre of water.
 - **Himachal Pradesh:**
 - In Mid Hills Sub-Humid Zone, continue transplanting of late season cauliflower and cabbage and planting of onion at a distance of 15x10cm after current spells of heavy rain.
 - Under prevailing temperature and cloudy weather condition, yellow rust are appearing in the wheat crop in the form of yellow powder/stripes on the leaves, to control spray the tilt (Propiconazole) 25 EC/Folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30ml or 30 g per 30 litres of water per kanal and repeat the spray after 15 days interval in Sub-Montane and Low Hills Sub-Humid Tropical Zone.
 - Under prevailing low temperature and cloudy weather condition, there is chance of attack of aphids in mustard and Gobi sarson. To control spray 750 ml Cypermethrin or Metasyatox in 750 l water/ ha in Mid Hills Sub-Humid Zone. The downy mildew is expected in cruciferous vegetables, for control spray Redomil M-Z @ 25 g per litre of water at 15 days interval.
 - Under low temperature condition, 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 @ 15-20g/20 litres of water or Dithane-M-45 @ 90-100g/15 litres of water.

▪ **Punjab, Haryana and Delhi:**

- In Undulating Plain Zone of Punjab, as dry weather is prevailing, apply irrigation to newly planted plants and mustard.
- In Western Zone of Haryana, as dry weather is prevailing, apply irrigation to vegetables and young fruit plants.
- Due to high humidity in Western Zone of Haryana, white rust may attack in late sown mustard crop, farmers are advised to constant monitoring. Possibilities of late blight may attack on potato and tomato and attack of thrips on timely sown onion crop, farmers are advised for constant monitoring.
- Due to foggy weather, constant monitoring of aphids in mustard in Western Semi-Arid Zone of Delhi. If the attack reaches above ETL, spray Dimethoate 30 EC or Quinalphos 25 EC @ 2.0 ml\ litre of water.
- Due to foggy weather, there is chance of incidence of late blight disease on potato and tomato in Western Zone and Undulating Plain Zone of Punjab. To control, spray Indofil-M-45/Kavach/Antracol @ 500-700 g/acre or Blitox @ 750-1000 g/acre using 250-350 litres of water/acre.
- In Punjab and Western Semi-Arid Zone of Delhi, due to foggy weather, there is chance of incidence of yellow rust in wheat in the form of yellow powder/stripes on the leaves. The susceptible varieties are PBW-343, PBW-502, PBW-550, HPW-184, HPW-42, HS-240, HS-295, HS-420, UP-2328 and WL-711. Farmers are advised to monitor the crop and spray the fungicides Tilt (Propiconazole) 25 EC/folicure (Tebuconazole) 25 EC/Bayletan 25 WP @ 0.1% i.e. 30 ml or 30 g per 30 litres of water per kanal and repeat the spray after 15 days interval.
- Due to foggy weather, there is chance of aphids in mustard/rapeseed in Western plain Zone of Punjab; spray Actara 25 WG @ 40 g or Metasystox 25 EC @ 400 ml in 80-125 litres of water/acre.

▪ **Uttar Pradesh:**

- Undertake sowing of ladies finger and continue nursery sowing of tomato and chilli, sowing of summer maize, planting of sugarcane and transplanting of onion in Central plain Zone with available soil moisture. Continue harvesting of winter sugarcane and normal sown potato.
- Continue land preparation for planting summer sugarcane and transplanting of onion and sowing of urad and moong in Eastern Plain Zone.
- Undertake sowing of pea, cabbage, cauliflower, tomato, chilli, brinjal, coriander, soya, methi in Bundelkhand Zone utilizing realised rainfall.
- Under prevailing foggy weather condition, there is chance of incidence of leaf rot disease in wheat in Bundelkhand Zone. Spray Thiophanate Methyl WP 70% @ 700g or Ziram WP 80% or Mancozeb WP 75 @ 2kg/500 litres of water/ha. Under foggy weather condition, there is chance of powdery mildew in peas. For control, apply soluble Sulphur 80EC @2 kg or Tridemorph 80 EC @500ml/ha.
- Under foggy weather condition, there are chances of incidence of *Alternaria* blight in mustard and late blight in potato in North Eastern Plain Zone and Central Plain Zone. Spray Quinalphos @ 1g or Ridomil MZ @ 2 g/litre of water for control of *Alternaria* blight in mustard and for control of late blight in potato, spray Ridomil MZ @ 2g+ Coper Oxichloride @ 1g per litre of water. For control of attack of aphids in potato and mustard, spray Imidachloprid @ 1ml/litre of water.
- Under low temperature weather condition, there is chance of attack of aphids in mustard in Western Plain Zone. For control, spray Metasystax @ 250 ml/250 litres of water.
- Suitable varieties are given in Annexure II.

• **Floriculture**

- Under prevailing low temperature, red scales are observed in roses in Sub-Montane and Low Hills Sub-Humid Zone of Himachal Pradesh. For control, spray Carbofuran @ 1 teaspoon per plant.

• **Apiculture**

- In view of prevailing low temperature, give winter packing immediately to bee colonies in Sub-Montane and Low Hills Sub-Humid Tropical Zone of Himachal Pradesh. Check the colonies for nectar and give artificial food to honey bees as there is scarcity of flowers during these days. Keep colonies in sun on clear day.

• **Animal Husbandry**

- Due to prevailing low temperature in Punjab, Haryana & Delhi, East Rajasthan and Uttar Pradesh, keep cattle in cowsheds to protect them from cold. Also give 40-50g mineral mixture with the daily feed. Also make arrangements in poultry houses for protection of birds from cold. Due to light rain, there are chances of spread of H.S. (Haemorrhagic Septicemia or Gall Ghotu) in cattle. Vaccinate the animals.
- Due to prevailing low temperature in Western Zone of Haryana, cover the animal sheds and provide dry bedding during night. New born calves need special care, so provide them dry bedding and clothing (Jhull).

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana

Sugarcane

Sorghum

Mango

- **Realised Rainfall:** Weather remained dry over the region.
- **Weather Forecast:** Dry weather would prevail over the region during the period.
No large change in day & night temperatures over Gujarat and Madhya Maharashtra during next 48 hours.
- **Weather Warning:** Nil.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as dry weather is likely to prevail, apply irrigation to groundnut (at 10 – 12 days interval) and vegetables. Apply fertilizers and undertake intercultural operations in groundnut, vegetable crops and mango and cashew orchards. Considering the rise in temperature apply 150 to 200 litres of water per mango tree at 15 days interval. Apply grass mulch in lateritic soil to avoid water loss. Complete transplanting of seedlings of summer rice and finger millet. Maintain 2-3 cm transplanted rice field and finger millet for 8-10 days and maintain water level upto 5 cm at vegetative state.
 - In Madhya Maharashtra, as dry weather prevailed and dry weather is likely to continue during next three days, apply irrigation to vegetables, sugarcane, wheat, gram and pomegranate, banana orchards. Continue intercultural operations like weeding and apply fertilizers in sugarcane and vegetables. Complete preparatory tillage and continue planting of *suru* sugarcane. Continue sowing of summer groundnut and summer sunflower. Start harvesting of already matured *rabi* jowar.
 - In Marathwada, as dry weather prevailed during last week and dry weather is likely to prevail, apply irrigation in gram (pod development stage), wheat (booting stage) and vegetables. Apply irrigation to sugarcane by drip irrigation or by alternate furrow method due to water stress condition also apply mulch of crop residue or sugarcane trash to preserve moisture. Undertake intercultural operations in vegetables and sugarcane. Continue planting of *suru* sugarcane and summer okra.
 - In Vidarbha, as dry weather is prevailing, apply irrigation to vegetables, gram (pod development stage) and wheat (booting stage). Complete transplanting of 30 -35 days old summer rice seedlings. Maintain 2-3 cm water level in transplanted rice field. As temperature is rising, complete preparatory tillage and undertake sowing of summer groundnut in Central Vidarbha zone. Undertake the planting of watermelon and muskmelon. Also undertake planting of summer okra. Continue sowing of summer groundnut and summer moong.
 - Due to rise in temperature in Pune region there may be attack of aphids in tomato, wheat, guar and cucumber, spray Carbosulfan @ 10 ml per 10 litres of water.
 - Prevailing cloudy weather in south Konkan is congenial for attack of aphids and leaf miner in cowpea, *wal* and *kulthi*. Spray Dimethoate @ 15 ml per 10 litres of water.
 - Due to partly cloudy weather in Marathwada region there may be attack of pod borer in gram, spray Profenofos 45% @ 14 ml in 10 litres of water.
 - **Gujarat:**
 - Undertake sowing of groundnut and continue transplanting of summer paddy in South Gujarat Heavy Rainfall Zone. Continue land preparation for sowing of summer crops (green gram and pearl millet). Harvest the matured spikes of castor.
 - As dry weather is prevailing and there is increase in temperatures apply irrigation to vegetables at an interval of 3 to 4 days in South Gujarat Zone.
 - Undertake sowing of summer groundnut, vegetable crops (lady's finger, cluster bean, bottle gourd, sponge gourd, ridge gourd and bitter gourd), watermelon and transplanting of tomato and brinjal in North Saurashtra Zone and land preparation for sowing of sesame and green gram and keep inputs ready. Apply irrigation in wheat (grain development stage), garlic and onion (bulb development stage).
 - Undertake land preparation for sowing of groundnut and sesame in North Gujarat Zone. As dry weather would prevail, apply irrigation in wheat (milk/grain development stage), mustard (pod development stage), and cotton, continue harvesting of matured spikes of castor and continue picking of matured bolls of cotton during early morning hours in North Gujarat and North West Zone.
 - Continue land preparation for sowing of summer crops in Middle Gujarat Zone. Harvest the matured spikes of castor. As dry weather is prevailing apply irrigation in wheat crop (milk/grain formation stage).
 - Apply irrigation in mustard (pod development stage) and wheat (milk stage) in Bhal and Coastal Zone of Gujarat. Undertake harvesting of matured spikes of castor and continue picking of matured bolls of cotton

during early morning hours.

- Cloudy weather condition is favourable for outbreak of sucking pests in vegetable crops and rust in wheat crop in South Gujarat Heavy Rainfall Zone; to control sucking pests, spray Dimethoate (40 %) or Methyl-o-Dematone (25 %) @ 10 ml in 10 litres of water and to control rust in wheat, spray Mancozeb @ 25 g in 10 litres of water.
- Suitable varieties are given in Annexure II.
- **Animal Husbandry**
- Keep young calves indoors during night time in Gujarat. Cover the poultry house with cloth/plastic sheets to protect the poultry birds from cold wind.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	21.01.15		28.01.15		04.02.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	0.0	-100	0.0	-100	7.0	-78
Dibang Valley	**	**	**	**	59.0	87.0
East Kameng	0.0	-100	0.0	-100	0.0	-100
East Siang	0.0	-100	0.0	-100	25.9	16
Kurung Kumey	**	**	**	**	**	**
Lohit	0.0	-100	0.0	-100	12.0	-35
Lower Dibang Valley	0.0	-100	0.0	-100	16.4	-48
Lower Subansari	**	**	**	**	**	**
Papumpara	0.0	-100	1.0	-75	0.0	-100
Tawang	0.0	-100	0.0	-100	0.0	-100
Tirap	0.0	-100	0.0	-100	2.4	-86
Upper Siang	0.0	-100	0.0	-100	43.0	16
Upper Subansari	0.0	-100	0.0	-100	6.6	-60
West Kameng	0.0	-100	0.0	-100	0.0	-100
West Siang	0.0	-100	0.0	-100	17.5	-4
Assam & Meghalaya						
Assam						
Baksa	0.0	-100	0.0	-100	0.0	-100
Barpeta	0.0	-100	0.0	-100	0.0	-100
Bongaigaon	0.0	-100	0.0	-100	0.0	-100
Cachar	0.0	-100	0.0	-100	0.0	-100
Chirang	0.0	-100	0.0	-100	0.0	-100
Darrang	0.0	-100	0.0	-100	0.0	-100
Dhemaji	0.0	-100	0.0	-100	0.0	-100
Dhubri	0.0	-100	0.0	-100	0.5	-84
Dibrugarh	0.0	-100	0.1	-99	2.3	-85
Goalpara	0.0	-100	0.0	-100	0.0	-100
Golghat	0.0	-100	0.0	-100	1.0	-82
Hailakandi	0.0	-100	0.0	-100	0.0	-100
Jorhat	0.0	-100	0.0	-100	0.2	-98
Kamrup(Rural)	0.0	-100	0.0	-100	0.0	-100
Kamrup(Metro)	0.0	-100	0.0	-100	0.8	-83

Karbi Anglong	0.0	-100	0.0	-100	0.0	-100
Karimganj	0.0	-100	0.0	-100	0.0	-100
Kokrajhar	0.0	-100	0.0	-100	0.0	-100
Lakhimpur	0.0	-100	0.1	-98	0.8	-94
Morigaon	0.0	-100	0.0	-100	0.2	-96
N.C.Hills	0.0	-100	0.0	-100	0.0	-100
Nowgong	0.0	-100	0.0	-100	0.0	-100
Nalbari	0.0	-100	0.0	-100	0.3	-94
Sonitpur	0.0	-100	0.0	-100	0.3	-94
Sibsagar	0.0	-100	0.0	-100	1.4	-85
Tinsukia	0.0	-100	0.0	-100	4.3	-74
Udalgiri	0.0	-100	0.0	-100	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	0.0	-100	4.2	367
East Khasi Hills	0.0	-100	0.0	-100	1.8	-59
Jaintia Hills	0.0	-100	0.0	-100	5.0	-50
Ribhoi	0.0	-100	0.0	-100	0.0	-100
South Garo Hills	0.0	-100	0.0	-100	1.0	100
West Garo Hills	0.0	-100	0.0	-100	0.2	-60
West Khasi Hills	0.0	-100	0.0	-100	7.0	17
NMMT						
Mizoram						
Aizwal	0.0	-100	0.0	-100	0.0	-100
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	0.0	-100	0.0	-100	0.0	-100
Serchhip	0.0	-100	**	**	**	**
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	0.0	-100	0.0	-100	0.0	-100
Churachandpur	**	**	**	**	**	**
Imphal east	0.0	-100	0.0	-100	0.0	-100
Imphal west	0.0	-100	0.0	-100	0.0	-100
Senapati	0.0	-100	0.0	-100	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	0.0	-100	0.0	-100
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	0.0	-100	0.0	-100	0.5	-84
Kephire	**	**	**	**	**	**
Kohima	0.0	-100	0.0	-100	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	0.0	-100	0.0	-100

Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	0.0	-100	0.0	-100
North Tripura	0.0	-100	0.0	-100	0.0	-100
South Tripura	0.1	-95	0.0	-100	0.0	-100
West Tripura	0.0	-100	0.0	-100	0.0	-100
Himachal Pradesh						
Bilaspur	11.1	13	31.7	59	12.5	-47
Chamba	9.0	-68	43.5	19	67.6	96
Hamirpur	12.9	25	44.3	111	26.8	14
Kangra	12.9	-28	37.7	90	40.3	88
Kinnaur	4.0	-79	34.9	28	48.7	49
Kullu	8.3	-51	50.3	94	52.4	148
Lahaul and Spiti	1.6	-94	35.3	-7	36.4	5
Mandi	13.7	-5	41.6	97	25.2	23
Shimla	8.1	-48	24.1	31	21.9	16
Sirmaur	7.8	-43	16.3	16	17.9	-2
Solan	7.5	-45	33.8	64	28.9	26
Una	9.3	4	40.3	247	13.9	-12
Punjab						
Amritsar	0.5	-92	12.4	72	16.6	105
Barnala	0.0	-100	7.4	65	0.7	-92
Bhatinda	0.0	-100	11.2	272	10.3	130
Faridkot	1.5	-48	2.0	-58	14.0	289
Fatehgarh Saheb	4.3	6	7.3	-24	8.0	-2
Ferozpur	0.6	-84	1.6	-29	3.9	-21
Gurdaspur	4.9	-56	15.5	-2	21.3	16
Hoshiarpur	1.4	-80	7.0	-38	9.2	-18
Jalandhar	0.0	-100	16.4	122	5.7	-33
Kapurthala	0.8	-75	6.2	-40	15.0	72
Ludhiana	2.5	-44	10.7	50	5.5	-34
Mansa	1.2	-45	3.0	-30	8.2	64
Moga	0.0	-100	3.0	-29	14.7	126
Muktesar	12.0	344	6.0	33	10.8	163
Nawashahar	5.3	-18	18.9	66	6.0	-59
Patiala	4.3	3	6.8	-25	20.5	120
Ropar	4.3	-52	23.2	113	11.2	24
Sangrur	1.9	-41	18.5	248	13.0	92
Mohali	8.3	52	26.0	165	17.3	88
TarnTaran	0.3	-90	3.7	-35	8.4	62
Haryana,Chd,Delhi						
Haryana						
Ambala	1.9	-80	14.4	85	10.7	-21
Bhiwani	0.0	-98	8.0	61	0.0	-100
Chandigarh	4.5	-53	22.9	60	23.7	48
Faridabad	0.0	-100	14.8	244	0.0	-100
Fatehabad	0.0	-100	3.9	-37	11.0	279

Gurgaon	0.0	-100	5.3	154	0.0	-100
Hissar	0.5	-83	3.2	75	5.0	47
Jhajar	1.4	-43	7.7	167	0.0	-100
Jind	0.1	-95	2.8	25	7.0	30
Katihah	1.3	-68	2.7	-47	9.6	104
Karnal	1.1	-84	4.5	-41	14.9	102
Kurukshetra	0.4	-93	2.4	-68	5.6	-27
Mahendragarh	0.0	-100	8.5	166	0.0	-100
Mewat	0.0	-100	18.6	709	0.0	-100
Palwal	0.0	-100	21.8	738	0.0	-100
Panchkkula	2.5	-74	26.7	115	11.3	-25
Panipat	1.3	-71	2.1	-57	3.1	-48
Rewari	0.0	-100	10.8	671	0.0	-100
Rohtak	0.8	-82	2.6	-48	0.0	-100
Sirsa	1.5	-21	3.0	-14	4.4	2
Sonepat	1.7	-65	3.8	-7	0.6	-90
Yamunanagar	0.6	-95	4.3	-59	7.1	-32
Delhi						
Central Delhi	0.0	-100	5.0	4	0.0	-100
East Delhi	0.0	-100	4.0	-17	0.0	-100
New Delhi	0.0	-100	11.9	148	0.0	-100
North Delhi	1.3	-67	10.7	122	0.0	-100
North East Delhi	0.0	-100	2.0	-58	0.0	-100
North West Delhi	1.0	-74	2.8	-41	0.0	-100
South Delhi	0.8	-79	11.9	147	0.0	-100
South West Delhi	1.2	-69	11.3	134	0.1	-99
West Delhi	1.0	-74	5.0	4	0.0	-100
Jammu & Kashmir						
Anantnag	2.0	-86	15.9	-48	45.7	93
Badgam	0.0	-100	4.8	-79	37.9	181
Bandipore	**	**	**	**	**	**
Baramula	0.0	-100	20.9	-63	43.3	24
Doda	4.4	-82	35.4	-19	89.2	139
Ganderbal	0.0	-100	23.8	9	50.8	187
Jammu	0.8	-94	10.9	-36	60.6	279
Kargil	**	**	**	**	**	**
Kathua	0.0	-100	10.4	-33	30.8	47
Kistwar	**	**	**	**	**	**
Kulgam	0.9	-94	12.2	-60	40.7	72
Kupwara	0.0	-100	30.0	8	44.6	74
Ladakh(Leh)	0.0	-100	1.7	39	0.5	-70
Poonch	**	**	**	**	**	**
Pulwama	0.0	-100	4.3	-65	17.0	40
Rajouri	0.0	-100	28.0	87	18.5	-11
Ramban	1.2	-95	39.4	-10	87.2	134
Reasi	0.8	-96	20.4	-48	86.6	192
Samba	1.8	-86	7.8	-54	41.5	159
Shopian	0.0	-100	1.0	-92	23.0	90
Srinagar	0.0	-100	3.1	-86	29.7	68

Udhampur	1.4	-92	14.0	-64	34.9	18
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.4	-93
Balaghat	0.0	-100	0.0	-100	0.0	-100
Chhatarpur	0.0	-100	29.5	367	0.0	-100
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	19.5	160	1.5	-25
Dindori	0.0	-100	5.0	39	1.0	-82
Jabalpur	0.0	-100	6.6	16	13.5	364
Katni	0.0	-100	6.1	-16	1.8	6
Mandla	0.0	-100	0.1	-97	0.0	-100
Narsingpur	0.0	-100	8.8	159	1.2	-52
Panna	0.0	-100	16.5	157	0.0	-100
Rewa	0.0	-100	3.1	-54	21.5	496
Sagar	0.0	-100	10.7	138	0.0	-99
Satna	0.0	-100	10.8	50	10.0	170
Seoni	0.0	-100	0.0	-100	0.0	-100
Shahdol	0.0	-100	0.0	-100	4.0	8
Sidhi	0.0	-100	7.4	6	7.4	95
Singrauli	0.0	-100	5.1	143	10.7	296
Tikamgarh	0.0	-100	8.0	86	0.0	-100
Umaria	0.0	-100	0.5	-95	12.3	200
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	15.3	1171	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	2.1	13	0.0	-100
Bhind	1.5	-57	23.9	1225	0.0	-100
Bhopal	0.0	-100	14.4	454	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	21.3	913	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	1.5	275	0.0	-100
Guna	0.0	-100	10.1	259	0.0	-100
Gwalior	0.7	-86	33.0	1273	0.0	-100
Harda	0.0	-100	0.4	-71	0.0	-100
Hosangabad	0.0	-100	5.9	95	1.9	-3
Indore	0.0	-100	15.9	1345	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	17.1	966	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	11.0	547	2.4	41
Rajgarh	0.0	-100	8.0	323	0.0	-100
Ratlam	0.0	-100	0.3	-33	0.0	-100
Sehore	0.0	-100	3.4	70	0.0	-100

Shajapur	0.0	-100	4.1	130	0.0	-100
Sheopur Kalani	0.0	-100	19.0	1627	0.0	-100
Shivpuri	0.0	-100	24.4	1063	0.0	-100
Ujjain	0.0	-100	0.2	-80	0.0	-100
Vidisha	0.0	-100	23.3	870	0.0	-100
Chhattisgarh						
Bastar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	0.0	-100	0.1	-98
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	0.0	-100	0.0	-100
Durg	0.0	-100	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	1.0	-74
Kanker	**	**	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	0.0	-100
Koriya	0.0	-100	0.0	-100	2.5	-28
Kawardha	**	**	0.0	-100	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	**	**	0.0	-100	0.0	-100
Raipur	0.0	-100	0.0	-100	0.0	-100
Rajandgaon	0.0	-100	0.0	-100	0.0	-100
Surguja	0.0	-100	0.0	-100	1.5	-68
East Uttar Pradesh						
Allahabad	0.0	-100	22.4	376	0.6	-87
Ambedkar Nagar	0.0	-100	16.0	290	0.0	-100
Azamgarh	0.0	-100	16.0	416	1.0	-74
Bahraich	0.0	-100	2.7	-40	4.0	0
Ballia	0.0	-100	11.3	278	0.0	-100
Balrampur	0.0	-100	0.0	-100	12.0	186
Banda	0.0	-100	26.7	404	0.0	-100
Barabanki	0.0	-100	4.1	14	3.1	-24
Basti	0.0	-100	4.0	14	2.5	-24
Chandauli	0.0	-100	2.6	-54	3.3	-46
Deoria	0.0	-100	2.0	-38	0.0	-100
Faizabad	0.0	-100	5.2	-10	1.1	-69
Farrukhabad	0.0	-100	12.2	306	0.0	-100
Fatehpur	0.0	-100	10.8	82	0.0	-100
Gazipur	0.0	-100	7.5	78	0.1	-97
Gonda	0.0	-100	0.5	-90	2.0	-55
Gorakhpur	0.0	-100	2.4	-35	0.2	-96
Hardoi	0.0	-100	8.9	97	0.0	-100
Jaunpur	0.0	-100	19.4	471	0.4	-87
Kannauj	0.0	-100	18.2	379	0.0	-100
Kanpur City	0.0	-100	11.9	261	0.0	-100
Kanpur Dehat	0.0	-100	12.2	352	0.0	-100
Kaushambi	0.0	-100	58.1	1163	0.0	-100
Kheri	0.0	-100	7.5	71	2.4	-58

Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	0.0	-100	9.0	115	1.0	-76
Maharajganj	0.0	-100	0.0	-100	2.0	-64
Mau	0.0	-100	4.7	51	0.0	-100
Mirzapur	0.0	-100	0.5	-91	0.0	-100
Pratapgarh	0.0	-100	35.0	821	0.0	-100
RaiBareilly	0.0	-100	8.4	141	0.4	-91
Sahuji Maharajnagar	0.0	-100	33.3	552	0.0	-100
Sant Kabirnagar	0.0	-100	4.0	43	1.0	-74
Sant Ravidas Nagar	0.0	-100	23.5	320	0.0	-100
Shrawasti	0.0	-100	0.0	-100	0.0	-100
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	4.7	10	0.8	-78
Sonbhadra	0.0	-100	2.7	-61	11.6	157
Sultanpur	0.0	-100	9.1	184	1.5	-60
Unnao	0.0	-100	9.0	137	1.0	-79
Varanasi	0.0	-100	15.5	259	1.5	-72
West Uttar Pradesh						
Agra	0.4	-89	27.3	521	0.0	-100
Aligarh	2.5	-35	17.3	456	0.0	-100
Auraiya	0.0	-100	6.5	171	0.0	-100
Badaun	1.2	-67	22.5	971	0.0	-100
Baghpat	0.5	-91	2.8	-33	1.0	-80
Bareilly	2.3	-38	19.3	285	0.3	-94
Bijnor	2.5	-62	8.4	-9	1.8	-70
Bulandsahar	1.0	-74	8.7	93	0.0	-100
Etah	1.0	-69	24.7	816	0.0	-100
Etawah	0.0	-100	4.3	55	0.0	-100
Firozabad	2.7	-34	24.9	728	0.0	-100
GBNagar	1.5	-70	15.5	223	0.0	-100
Ghaziabad	1.7	-60	14.8	168	0.3	-93
Hamirpur	0.0	-100	10.8	144	0.0	-100
Jalaun	0.0	-100	14.0	509	0.0	-100
Jhansi	0.0	-100	17.1	469	0.0	-100
Jotiba Phule Nagar	4.0	-35	5.7	13	0.0	-100
Kanshiramnagar	2.5	-53	55.0	1386	0.0	-100
Lalitpur	0.0	-100	9.7	93	0.0	-100
Mahamaya Nagar	0.7	-78	29.0	1015	0.0	-100
Mahoba	0.0	-100	8.9	123	0.0	-100
Mainpuri	0.0	-100	9.7	306	0.0	-100
Mathura	0.0	-100	3.5	46	0.0	-100
Meerut	2.7	-56	13.5	105	0.0	-100
Moradabad	2.7	-51	11.2	114	1.2	-73
Muzzaffarnagar	3.1	-44	3.5	-57	0.4	-92
Pilibhit	0.9	-81	15.1	258	0.0	-100
Rampur	2.7	-32	11.4	81	0.0	-100
Saharanpur	1.7	-73	4.3	-48	6.3	-14
Shahjahanpur	0.0	-100	8.5	215	0.0	-100
Uttarakhand						

Almora	0.0	-100	9.7	-22	5.4	-64
Bageshwar	0.0	-100	7.5	-39	6.5	-57
Chamoli	3.1	-76	16.6	7	39.3	112
Champawat	1.0	-85	12.5	3	0.8	-93
Dehradun	3.4	-68	7.4	-48	7.0	-51
Garhwal Pauri	1.7	-83	2.8	-74	6.7	-47
Garhwal Tehri	1.5	-84	11.1	-39	13.4	-11
Haridwar	6.3	-9	6.9	-24	7.9	-17
Nainital	0.9	-89	14.9	24	3.5	-74
Pithoragarh	0.7	-92	11.0	-27	15.6	5
Rudraprayag	2.6	-72	6.4	-65	27.7	21
Udham Sing Nagar	0.4	-92	11.8	30	0.1	-98
Uttarkashi	7.8	-55	15.1	-18	34.6	131
Bihar						
Araria	0.0	-100	0.0	-100	0.0	-100
Arwal	0.0	-100	0.0	-100	3.4	17
Aurangabad	0.0	-100	3.7	-13	10.0	155
Banka	0.0	-100	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	7.4	-11	7.9	83
Bhagalpur	0.0	-100	0.8	-84	4.0	-5
Bhojpur	0.0	-100	1.0	-70	2.1	-36
Buxar	**	**	**	**	1.2	-57
Darbhanga	0.0	-100	0.0	-100	1.6	-58
East Champaran	0.0	-100	1.7	-38	0.0	-100
Gaya	0.1	-99	1.4	-68	5.4	32
Gopalganj	0.0	-100	0.0	-100	0.0	-100
Jahanabad	0.0	-100	1.4	-48	1.2	-52
Jamui	0.0	-100	0.0	-100	4.3	54
Kathihar	0.0	-100	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	5.1	36
Kishanganj	0.0	-100	0.0	-100	0.0	-100
Lakhisarai	0.0	-100	0.0	-100	**	**
Madhepura	0.0	-100	0.0	-100	2.1	-25
Madhubani	0.0	-100	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.0	-100	4.6	109
Muzaffarpur	0.0	-100	0.1	-96	0.3	-90
Nalanda	0.0	-100	0.7	-73	2.7	14
Nawada	0.0	-100	0.0	-100	2.0	-50
Patna	0.0	-100	1.6	-36	5.3	66
Purnea	0.0	-100	0.0	-100	0.8	-69
Rohtas	0.0	-100	3.3	19	3.3	-19
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	0.0	-100	0.0	-100
Saran	0.0	-100	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	0.0	-100	0.0	-100	0.0	-100
Siwan	0.0	-100	3.3	-24	0.0	-100

Supaul	0.0	-100	0.0	-100	0.9	-69
Vaishali	0.0	-100	7.1	146	2.3	-52
West Champaran	0.0	-100	0.0	-100	0.0	-100
Jharkhand						
Bokaro	0.0	-100	0.0	-100	2.6	-32
Chatra	0.0	-100	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	2.8	-34
Dhanbad	0.0	-100	0.0	-100	0.4	-90
Dumka	0.0	-100	0.0	-100	1.0	-80
East Singbhum	0.0	-100	0.0	-100	0.1	-99
Garhwa	0.0	-100	0.0	-100	**	**
Giridih	0.0	-100	0.0	-100	1.4	-39
Godda	0.0	-100	0.0	-100	13.5	399
Gumla	0.0	-100	0.0	-100	0.0	-100
Hazaribagh	0.0	-100	0.0	-100	2.0	-63
Jamtara	0.0	-100	0.0	-100	1.1	-85
Khunti	0.0	-100	**	**	**	**
Koderrna	0.0	-100	0.0	-100	10.2	82
Latehar	0.0	-100	2.1	-52	1.1	-86
Lohardagga	0.0	-100	0.0	-100	3.8	-59
Pakur	0.0	-100	0.0	-100	8.2	95
Palamau	0.0	-100	0.2	-96	19.6	244
Ramgarh	0.0	-100	0.0	-100	2.6	-61
Ranchi	0.0	-100	0.0	-100	2.0	-71
Sahebganj	0.0	-100	0.0	-100	10.4	148
Saraikela	0.0	-100	0.0	-100	0.0	-100
Simdega	0.0	-100	0.0	-100	0.0	-100
West Singbhum	0.0	-100	0.0	-100	1.2	-77
East Rajasthan						
Ajmer	0.0	-100	12.4	2379	0.0	-100
Alwar	0.0	-100	9.8	446	0.0	-100
Banswara	0.0	-100	0.1	-56	0.0	-100
Baran	0.0	-100	1.9	275	0.0	-100
Bharatpur	0.0	-100	23.4	1070	0.0	-100
Bhilwara	0.0	-100	3.7	817	0.0	-100
Bundi	0.0	-100	21.3	2948	0.0	-100
Chittorgarh	0.0	-100	10.9	2627	0.0	-100
Dausa	0.0	-100	19.0	1362	0.0	-100
Dholpur	0.0	-100	25.7	2039	0.0	-100
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.0	-100	9.3	1064	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.0	-100
Jhunjhunu	0.0	-100	2.5	106	0.0	-100
Karauli	0.0	-100	9.8	446	0.0	-100
Kota	0.0	-100	8.1	1055	0.0	-100
Pratapgarh	0.0	-100	3.4	1600	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	20.1	1730	0.0	-100
Sikar	0.0	-100	12.3	924	0.0	-100

Sirohi	0.0	-100	9.1	1711	0.0	-100
Tonk	0.0	-100	13.8	1873	0.0	-100
Udaipur	0.0	-100	8.4	2688	0.0	-100
West Rajasthan						
Barmer	0.3	233	0.8	200	0.0	-100
Bikaner	0.0	-100	0.2	-81	2.5	79
Churu	0.8	-47	1.6	47	0.0	-100
Hanumangarh	2.1	4	2.4	35	5.3	140
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.1	-67	0.5	80	0.0	-100
Nagaur	0.0	-100	2.7	286	0.0	-100
Pali	0.0	-100	1.1	83	0.0	-100
Sri Ganganagar	0.9	15	1.7	-4	0.1	-93
Gujarat Region						
Ahmedabad	0.0	-100	1.6	200	0.0	-100
Anand	0.0	-100	0.1	200	0.0	-100
Banaskantha	0.0	-100	2.1	314	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	2.0	900	0.0	-100
Kheda	0.0	-100	2.7	200	0.0	-100
Mehsana	0.0	-100	5.1	5011	0.0	-100
Narmada	0.0	-100	0.6	200	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	2.0	900	0.0	-100
Sabarkantha	0.0	-100	3.7	3614	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	0.0	-100	2.2	982	0.0	-100
Bhavnagar	0.0	-100	1.4	200	0.0	-100
Diu	0.6	200	0.0	-100	0.0	-100
Jamnagar	0.4	200	0.7	627	0.0	-100
Junagarh	0.1	-100	3.3	200	0.0	-100
Kutch	0.8	746	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	1.1	200	0.0	-100
Surendranagar	0.0	-100	0.2	200	0.0	-100
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100

North Goa	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.0	-100	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100
South Goa	0.0	-100	0.0	-100	0.0	-100
Thane	0.0	-100	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	**	**	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.4	-30	0.0	-100
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	**	**	0.0	-100	**	**
Nasik	0.0	-100	2.4	1075	0.0	-100
Pune	0.0	-100	0.0	-100	0.0	-100
Sangli	0.0	-100	0.0	-100	0.0	-100
Satara	0.0	-100	0.0	-100	0.0	-100
Solapur	0.0	-100	0.0	-100	0.0	-100
Marathwada						
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Beed	0.0	-100	0.0	-100	0.0	-100
Hingoli	0.0	-100	**	**	**	**
Jalna	0.0	-100	0.0	-100	0.0	-100
Latur	0.0	-100	0.0	-100	0.0	-100
Nanded	0.0	-100	0.0	-100	0.0	-100
Usmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	0.0	-100
Vidarbha						
Akola	0.0	-100	0.1	-95	0.0	-100
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	0.0	-100	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.0	-100
Chandrapur	0.0	-100	0.0	-100	0.0	-100
Gadchiroli	0.0	-100	0.0	-100	0.0	-100
Gondia	0.0	-100	0.0	-100	0.0	-100
Nagpur	0.0	-100	0.0	-100	0.0	-100
Wardha	0.0	-100	0.0	-100	0.0	-100
Washim	0.0	-100	0.0	-100	0.0	-100
Yeotmal	0.0	-100	0.0	-100	0.0	-100
Odisha						
Angul	0.0	-100	0.0	-100	0.0	-100
Balasore	0.0	-100	0.0	-100	0.0	-100
Bargarh	0.0	-100	0.0	-100	0.0	-100
Bhadrak	0.0	-100	0.0	-100	0.0	-100
Bolangir	0.0	-100	0.0	-100	0.0	-100
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	0.0	-100	0.0	-100
Deogarh	0.0	-100	0.0	-100	0.0	-100
Dhenkanal	0.0	-100	0.0	-100	0.0	-100
Gajapati	0.0	-100	0.0	-100	0.0	-100

Ganjam	0.0	-100	0.0	-100	0.0	-100
Jagatsingpur	0.0	-100	0.0	-100	0.0	-100
Jajpur	0.0	-100	0.0	-100	0.0	-100
Jharsuguda	0.0	-100	0.0	-100	0.0	-100
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.0	-100	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.0	-100	0.0	-100	0.3	-95
Khurda	0.0	-100	0.0	-100	0.0	-100
Koraput	0.0	-100	0.0	-100	0.0	-100
Malkangiri	0.0	-100	0.0	-100	0.0	-100
Mayurbhanj	0.0	-100	0.0	-100	0.2	-96
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	0.0	-100	0.0	-100
Puri	0.0	-100	0.0	-100	0.0	-100
Rayagada	0.0	-100	0.0	-100	0.0	-100
Sambalpur	0.0	-100	0.0	-100	0.0	-100
Sonepur	0.0	-100	0.0	-100	0.0	-100
Sundargarh	0.0	-100	0.0	-100	0.1	-99
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	16.1	15	1.1	-95	3.1	-86
North & Middle Andaman	83.6	2222	0.0	-100	3.9	34
South Andaman	59.4	1551	0.0	-100	3.2	-59
GWB						
Bankura	0.0	-100	0.0	-100	0.8	-90
Birbhum	0.0	-100	0.0	-100	0.2	-94
Burdwan	0.0	-100	0.0	-100	0.0	-100
East Midnapore	0.0	-100	0.0	-100	0.0	-100
Hooghly	0.0	-100	0.0	-100	0.5	-91
Howrah	0.0	-100	0.0	-100	0.0	-100
Kolkata	0.0	-100	0.0	-100	0.0	-100
Murshidabad	0.0	-100	0.0	-100	0.0	-100
Nadia	0.0	-100	0.0	-100	0.0	-100
24 Pargana (N)	0.0	-100	0.0	-100	0.1	-98
Purulia	0.0	-100	0.0	-100	1.0	-94
24 Pargana (S)	0.0	-100	0.0	-100	0.0	-100
West Midnapore	0.0	-100	0.0	-100	0.4	-93
SHWB & Sikkim						
Cooch Behar	0.0	-100	0.0	-100	0.1	-96
Darjeeling	0.0	-100	0.0	-100	0.0	-100
East Sikkim	0.0	-100	0.0	-100	0.0	-100
Jalpaiguri	0.0	-100	0.0	-100	0.0	-100
Malda	0.0	-100	0.0	-100	13.4	332
North Dinajpur	0.0	-100	0.0	-100	0.0	-100
North Sikkim	0.0	-100	0.0	-100	0.0	-100
South Dinajpur	0.0	-100	0.0	-100	7.6	204
South Sikkim	0.0	-100	0.0	-100	0.0	-100

West Sikkim	0.0	-100	0.0	-100	0.0	-100
Karnataka						
Coastal Karnataka						
Dakshin Kannada	0.0	-100	0.0	-100	0.0	-100
Udupi	0.0	-100	0.0	-100	0.0	-100
Uttar Kannada	0.0	-100	0.0	-100	0.0	-100
N I Karnataka						
Bagalkote	0.0	-100	0.0	-100	0.0	-100
Belgaum	0.0	-100	0.0	-100	0.0	-100
Bidar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Dharwad	0.0	-100	0.0	-100	0.0	-100
Gadag	0.0	-100	0.0	-100	0.0	-100
Gulbarga	0.0	-100	0.0	-100	0.0	-100
Haveri	0.0	-100	0.0	-100	0.0	-100
Koppal	0.0	-100	0.0	-100	0.0	-100
Raichur	0.0	-100	0.0	-100	0.0	-100
Yadgir	0.0	-100	0.0	-100	0.0	-100
S I Karnataka						
Bangalore Rural	0.0	-100	0.0	-100	0.0	-100
Bangalore Urban	0.0	-100	0.0	-100	0.0	-100
Bellary	0.0	-100	0.0	-100	0.0	-100
Chamarajnagar	0.0	-100	0.0	-100	0.0	-100
Chichballapur	0.0	-100	0.0	-100	0.0	-100
Chickmagalur	0.0	-100	0.0	-100	0.0	-100
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	1.1	118	0.0	-100	0.0	-100
Kodagu	0.0	-100	0.0	-100	0.0	-100
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.0	-100	0.0	-100	0.0	-100
Mysore	2.4	120	0.0	-100	0.0	-100
Ramnagara	0.0	-100	0.0	-100	0.0	-100
Shimoga	0.0	-100	0.0	-100	0.0	-100
Tumkur	0.0	-100	0.0	-100	0.0	-100
Kerala						
Alappuzha	0.1	-96	1.0	-77	0.0	-100
Kannur	5.0	736	0.0	-100	0.0	-100
Ernakulam	0.0	-100	0.0	-100	0.0	-100
Idukki	0.0	-100	0.0	-100	0.0	-100
Kasaragod	0.0	-100	0.0	-100	0.0	-100
Kollam	0.3	-90	1.0	-76	3.1	-37
Kottayam	0.0	-100	0.0	-100	0.9	-56
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	0.0	-100
Palakkad	0.0	-100	0.0	-100	0.0	-100
Pathanamthitta	0.0	-100	0.0	-100	2.5	-17
Thiruvananthapuram	0.0	-100	0.6	-90	0.0	-100
Thrissur	0.0	-100	0.0	-100	0.0	-100

Wynad	0.1	-93	0.0	-100	0.0	-100
Tamil Nadu						
Ariyalur	0.0	-100	4.0	700	0.0	-100
Chennai	0.0	-100	3.2	540	0.0	-100
Coimbatore	0.0	-100	0.0	-100	0.0	-100
Cuddalore	0.0	-100	7.9	424	0.0	-100
Dharmapuri	0.0	-100	0.0	-100	0.0	-100
Dindigul	0.0	-100	0.0	-100	0.0	-100
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	0.9	-16	0.0	-100
Kanyakumari	0.0	-100	0.6	-84	1.0	-74
Karikal	9.7	-19	0.4	-81	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	0.0	-100
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	9.6	58	0.0	-100
Namakkal	0.0	-100	0.0	-100	0.0	-100
Nilgiris	0.0	-100	1.2	-52	0.0	-100
Perambalur	0.0	-100	2.0	300	0.0	-100
Puducherry	0.0	-100	0.1	-93	0.0	-100
Pudukottai	0.0	-100	0.0	-100	0.0	-100
Ramanathapuram	0.0	-99	0.3	-87	0.0	-100
Salem	0.0	-100	0.0	-100	0.0	-100
Sivaganga	0.0	-100	0.0	-100	0.0	-100
Thanjavur	0.0	-100	0.9	18	0.0	-100
Theni	0.0	-100	1.8	66	0.0	-100
Tirunelveli	0.0	-100	0.4	-88	0.3	-96
Tirupur	0.0	-100	0.0	-100	0.0	-100
Tiruvallur	0.0	-100	0.2	-84	0.0	-100
Tiruvannamalai	0.0	-100	0.0	-100	0.0	-100
Tiruvarur	0.0	-100	3.5	76	0.0	-100
Toothukudi	0.0	-100	0.0	-100	0.0	-100
Trichy	0.0	-100	1.2	133	0.0	-100
Vellore	0.0	-100	0.0	-100	0.0	-100
Villupuram	0.0	-100	1.2	70	0.0	-100
Virudhunagar	0.0	-100	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	0.0	-100	0.0	-100
Krishna	0.0	-100	0.0	-100	0.0	-100
Nellore	0.3	-93	0.0	-100	0.0	-100
Prakasam	0.0	-100	0.0	-100	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	1.3	-3
Vizianagram	0.0	-100	0.0	-100	0.0	-100
West Godavari	0.0	-100	0.0	-100	0.0	-100
Royalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100

Chittoor	0.0	-98	0.0	-100	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	0.0	-100	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.0	-100
Hyderabad	0.0	-100	0.0	-100	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-96	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.0	-100	0.0	-100
Warangal	0.0	-100	0.0	-100	0.0	-100

Legends

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

Annexure I 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

Assam

Boro rice: Mahsuri, IR-50, Dinanath, Bishnuprasad, Jyotiprasad, Kanaklata and Dinanat, Boro-1, -2, -3, Kalinga-3, Joymati, Dinanath, Swarnav.

Sunflower: Jwalamukhi.

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

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

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.

Bihar

Boro rice: Gutum, Prabhat, Richaria, Dhanlaxmi, Saroj Rajendra Bhagvati, and R.A.U

Jharkhand:

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

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

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

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

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.

Gujarat

Groundnut: GG-2, 5 and 7, TAG-24, TG-37-A, TPG-41, GG-2, GJG-3.

Sesamum: G.Til-2, G.Til-3.