

National Agromet Advisory Service Bulletin

Friday 28th February 2014

(For the period 28th February to 4th March 2014)



Issued by

National Agrometeorological Advisory Service Centre,

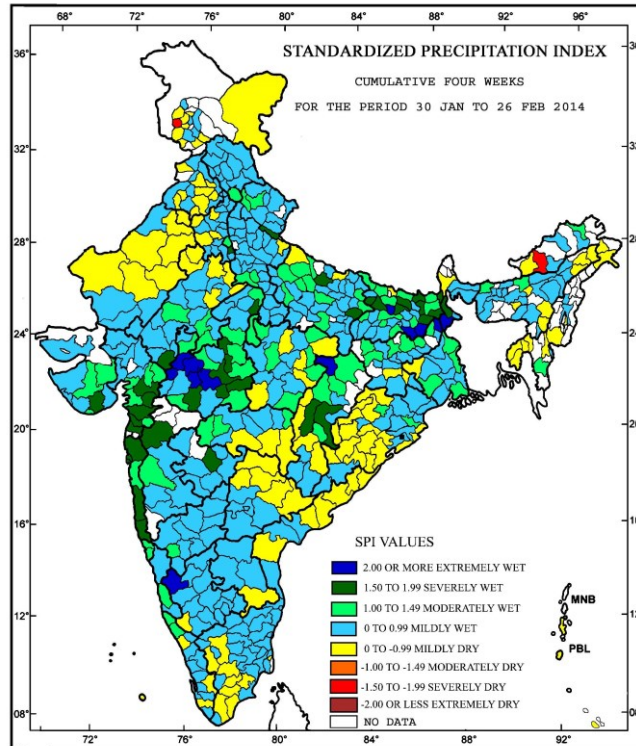
Agricultural Meteorology Division,

India Meteorological Department, Shivajinagar, Pune.



**Standardised Precipitation Index
Four Weekly
for the Period 30th January to 26th February 2014**

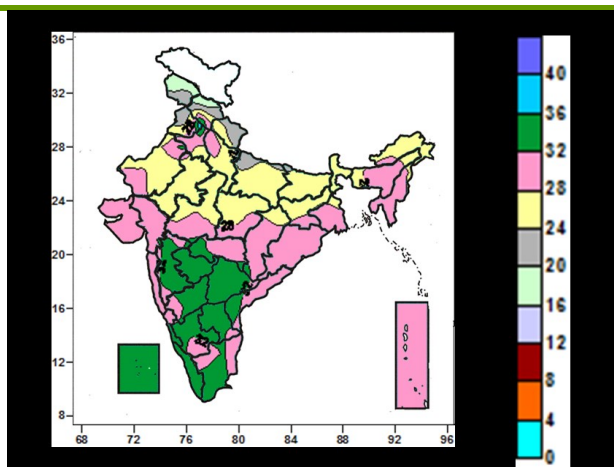
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely wet/severely wet conditions experienced over some parts of West Madhya Pradesh, Bihar, Gujarat, Mumbai, Thane, Ratnagiri, Sindhudurg, Parbhani and Nasik districts of Maharashtra, Banswara district of Rajasthan, Raipur, Koriya and Durg districts of Chhattisgarh, Malda and North Dinajpur districts of West Bengal, Sahibganj district of Jharkhand, Udham Singh Nagar district of Uttarakhand, Faridabad district of Haryana and Gonda and Ghazipur districts of Uttar Pradesh.
- Moderately dry/ severely dry conditions experienced over Poonch district of Jammu & Kashmir, East Kameng district of Arunachal Pradesh.
- Rest of the country experienced mild wet/dry conditions.

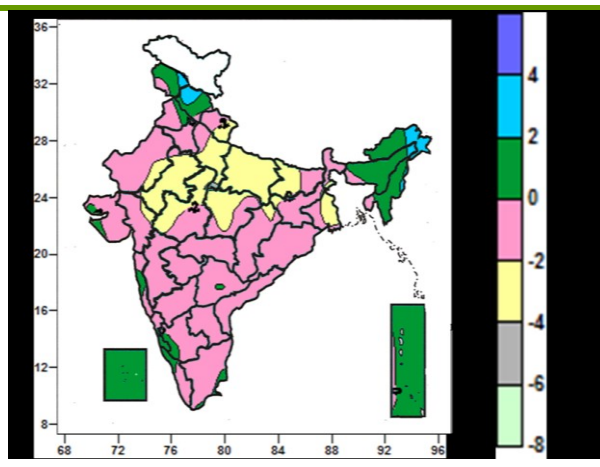
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 26.02.2014

Actual Mean Maximum Temperature ($^{\circ}\text{C}$) in India for the week ending 26.02.2013



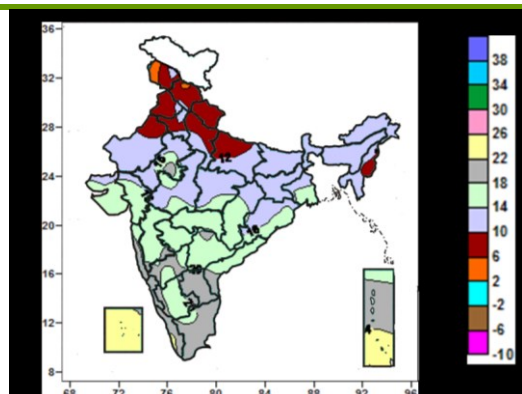
- 32 to 36 $^{\circ}\text{C}$ over many parts of Madhya Maharashtra, Marathwada, Telangana, Rayalaseema, Tamil Nadu, Kerala, Karnataka and Lakshadweep Islands, some parts of Himachal Pradesh, Punjab, Haryana, Coastal Andhra Pradesh, Vidarbha and Chhattisgarh.
- 24 to 32 $^{\circ}\text{C}$ over many parts of Haryana, Delhi, Uttar Pradesh, Rajasthan, East India, North East India, Central India, Gujarat, Saurashtra & Kutch, Konkan & Goa, Vidarbha, Coastal Andhra Pradesh, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Uttarakhand, Punjab, Madhya Maharashtra, Marathwada, Karnataka, Rayalaseema and Tamil Nadu.
- 16 to 24 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, some parts of Uttar Pradesh and Bihar.

Mean Maximum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 26.02.2013



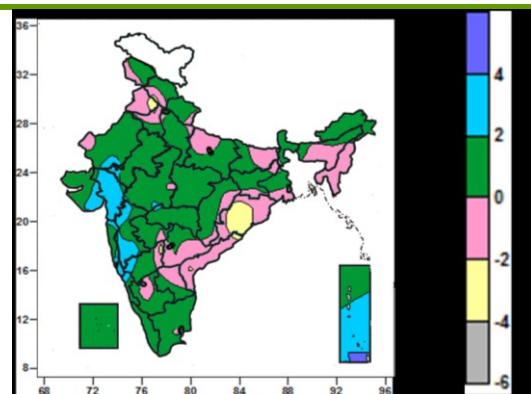
- 2 to 4 $^{\circ}\text{C}$ over some parts of Jammu & Kashmir, Himachal Pradesh, Assam and Arunachal Pradesh.
- 0 to 2 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Himachal Pradesh, North East India, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, Konkan, Saurashtra & Kutch, Kerala, Tamil Nadu, Coastal & South Interior Karnataka and Telangana.
- -4 to 0 $^{\circ}\text{C}$ over all over country except many parts of Jammu & Kashmir, Himachal Pradesh, North East India, Lakshadweep, Andaman & Nicobar Islands, some parts of Punjab, Konkan, Saurashtra & Kutch, Kerala, Tamil Nadu, Coastal & South Interior Karnataka and Telangana.

Actual Mean Minimum Temperature ($^{\circ}\text{C}$) in India for the week ending 26.02.2013



- 2 to 6 $^{\circ}\text{C}$ over some parts of Jammu & Kashmir.
- 6 to 10 $^{\circ}\text{C}$ over many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab, Delhi, Uttar Pradesh, some parts of East Rajasthan and Manipur.
- 10 to 18 $^{\circ}\text{C}$ over many parts of Rajasthan, East Uttar Pradesh, East India, North East India, West India except Konkan & Goa, Coastal Andhra Pradesh, Telangana, South

Mean Minimum Temperature ($^{\circ}\text{C}$) Anomaly in India for the week ending 26.02.2013



- -4 to -2 $^{\circ}\text{C}$ over many parts of Odisha, some parts of Himachal Pradesh and Haryana.
- -2 to 2 $^{\circ}\text{C}$ over all parts of country except many parts of Odisha, Gujarat, Madhya Maharashtra, Andaman & Nicobar Islands, some parts of Rajasthan, Saurashtra, Konkan & Goa, Coastal & North Interior Karnataka,

Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, Interior Karnataka, Tamil Nadu and Kerala.

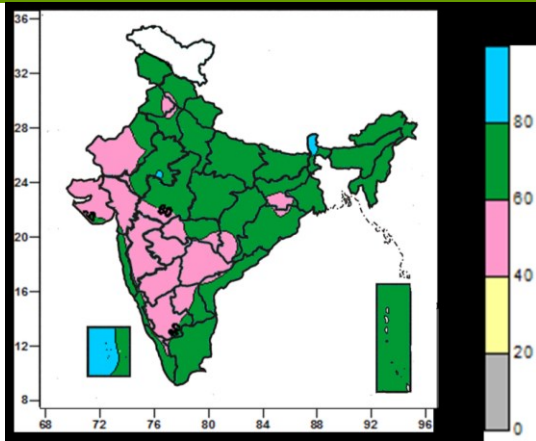
- 18 to 26°C many parts of Rayalaseema, Tamil Nadu, Kerala, Coastal Karnataka, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of Coastal Andhra Pradesh, Telanagana and Madhya Maharashtra.

West Madhya Pradesh, Vidarbha, Himachal Pradesh, Haryana.

- 2 to 4°C over many parts of Gujarat, Madhya Maharashtra, Andaman & Nicobar Islands, some parts of Rajasthan, Saurashtra, Konkan & Goa, Coastal & North Interior Karnataka, West Madhya Pradesh and Vidarbha.

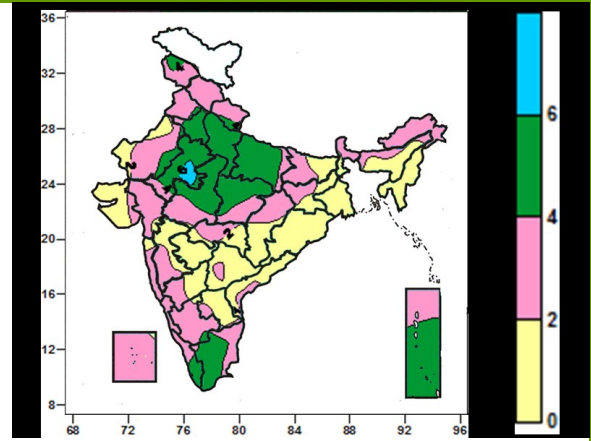
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 26.02.2014

Relative Humidity (%) over India for the week ending 26.02.2013



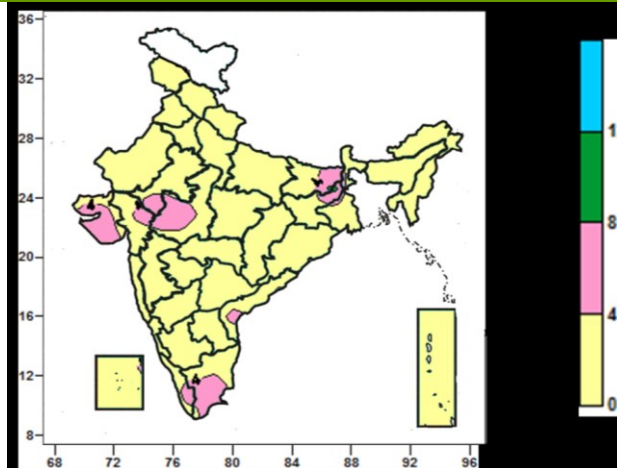
- 80 to 100% over many parts of Sikkim, Lakshadweep Islands, some parts of East Rajasthan, Sub-Himalayan West Bengal.
- 40 to 80% over entire country except many parts of Sikkim, Lakshadweep Islands, some parts of East Rajasthan and Sub-Himalayan West Bengal.

Cloud amount (okta) over India for the week ending 26.02.2013



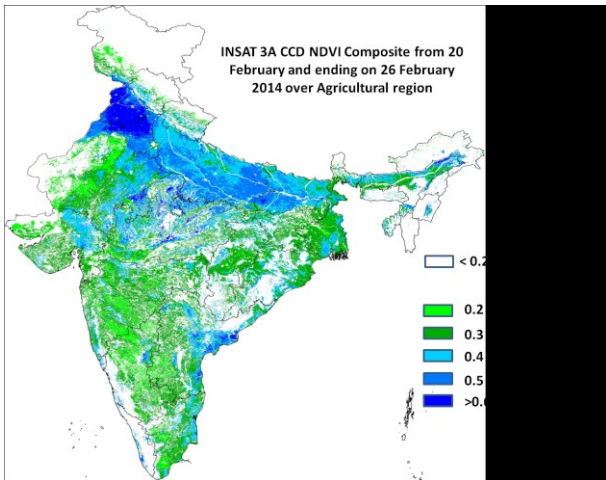
- 6 to 8 okta over some parts of East Rajasthan.
- 4 to 6 okta over many parts of Kerala, Tamil Nadu, Uttar Pradesh, Punjab, East Rajasthan, Madhya Pradesh, some parts of Jammu & Kashmir, Uttarakhand, Haryana, West Rajasthan and South Interior Karnataka.
- 0 to 4 okta over entire country except many parts of Kerala, Tamil Nadu, Uttar Pradesh, Punjab, East Rajasthan, Madhya Pradesh, some parts of Jammu & Kashmir, Uttarakhand, Haryana, West Rajasthan and South Interior Karnataka.

Wind speed (knots) over India for the week ending 26.02.2013



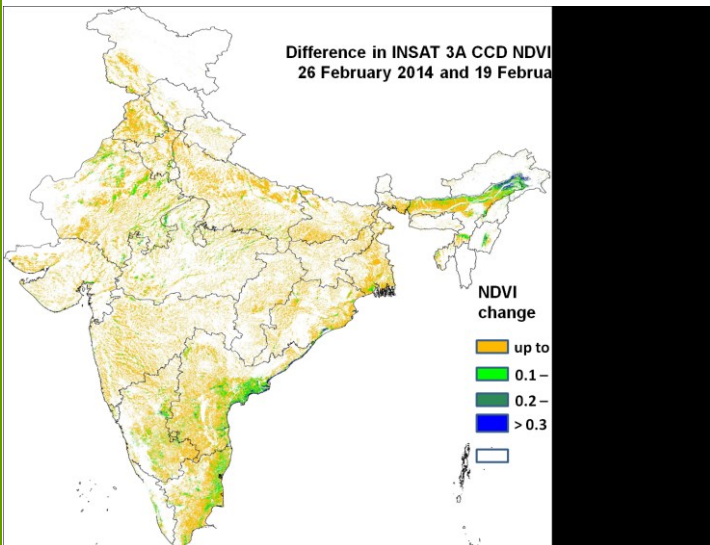
- 4 to 8 knots over many parts of Saurashtra & Kutch, West Madhya Pradesh, Tamil Nadu, some parts of East Rajasthan, Bihar, Jharkhand, West Bengal, Coastal Andhra Pradesh and Kerala.
- 0 to 4 knots over entire country except many parts of Saurashtra & Kutch, West Madhya Pradesh and Tamil Nadu, some parts of East Rajasthan, Bihar, Jharkhand, West Bengal, Coastal Andhra Pradesh and Kerala.

**INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION
20th February 2014 – 26th February 2014**



Source: SAC, Ahmedabad

Agricultural vigour is in generally very good over whole Punjab and Haryana few pockets of eastern Rajasthan, pockets of eastern Bihar, major part of UP, pockets of major part of western Rajasthan, central and north MP and Central Gujarat, Coastal parts of Andhra Pradesh, few pockets in eastern Karnataka as NDVI exceeds 0.5. Agricultural vigour is moderate in few part of UP and few pockets of MP, central West Bengal, pockets of eastern Maharashtra, parts of eastern Andhra Pradesh and Odisha, coastal belt of Tamil Nadu where NDVI is in the range of 0.4 to 0.5 upto 26th February 2014. The NDVI remains within the range of 0.2 to 0.4 over rest of India.



Source: SAC, Ahmedabad

Agricultural progress was found to be good over central parts of coastal Andhra Pradesh and Tamil Nadu, north Punjab, north and eastern Rajasthan, pockets of central West Bengal, pockets in northern and western MP, where NDVI showed positive change from previous week of the order of 0.1 to 0.2. Rest of India shows moderate progress.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 3rd March, 2014)

- Rain/snow would occur at many places over western Himalayan region during next 24 hours and at a few places thereafter.
- Rain/thundershowers would occur at few places over Punjab and Haryana during next 48 hours and at isolated places thereafter; at isolated places over west Rajasthan during next 24 hours and mainly dry thereafter; at a few places over east Rajasthan during next 24 hours and at isolated places thereafter; at many places over Uttar Pradesh during next 48 hours and decrease thereafter.
- Rain/thundershowers would occur at many places over east Madhya Pradesh & Chhattisgarh during next 24 hours and at a few places thereafter; at a few places over Vidarbha during next 48 hours; at isolated places over west Madhya Pradesh during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at a few places over Marathwada during next 24 hours; at isolated places over Madhya Maharashtra during next 24 hours and decrease thereafter.
- Rain/thundershowers would occur at many places over Bihar & Jharkhand during next 48 hours and at a few places thereafter; at a few places over Gangetic West Bengal during next 48 hours and at isolated places thereafter; at isolated places over Sub-Himalayan West Bengal and Odisha during next 48 hours and mainly dry thereafter.
- Rain/thundershowers would occur at few places over Arunachal Pradesh during next 48 hours and decrease thereafter and at isolated places over rest northeastern states.
- Rain/thundershowers would occur at isolated places over Lakshadweep during 24 hours; over coastal Karnataka during next 48 hours; over south interior Karnataka and Kerala during next 72 hours; at isolated places over Telangana during next 24 hours and increase thereafter; over Rayalaseema from today and over coastal Andhra Pradesh on 1st March; at isolated places over north interior Karnataka during next 24 hours and decrease thereafter.
- Mainly dry/dry weather would prevail over rest of the country.
- No significant change in minimum temperatures over plains of northwest India, central and east India during next 2 days.

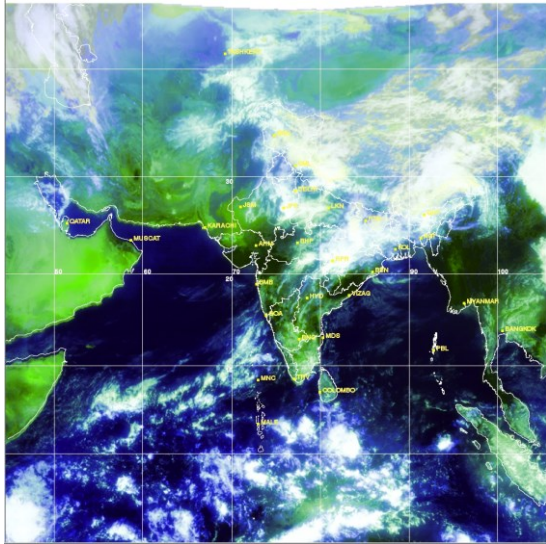
Weather Warning during next 3 days

- **28 February (Day 1):** Isolated hail storm would occur over Himachal Pradesh, Uttar Pradesh, Bihar, Jharkhand, east Madhya Pradesh, Chhattisgarh, Vidarbha and Telangana.
- **01 March (Day 2):** Isolated hail storm would occur over Himachal Pradesh, Uttar Pradesh, Bihar, Jharkhand, east Madhya Pradesh, Chhattisgarh, Vidarbha and Telangana.
- **02 March (Day 3):** No weather warning.

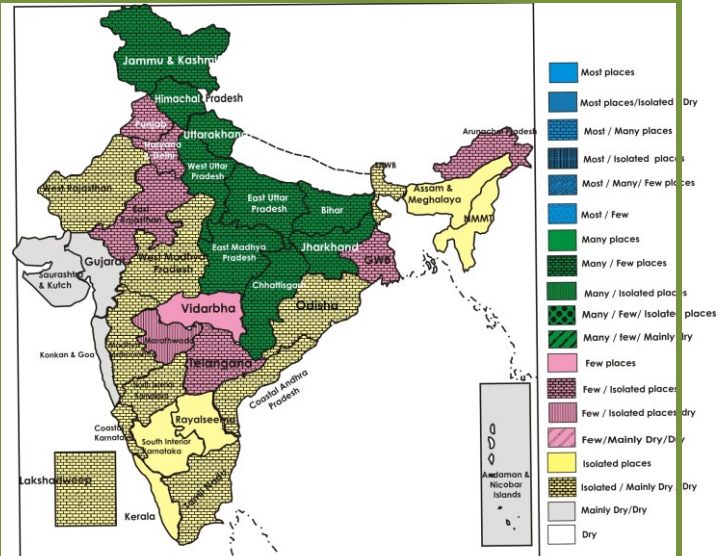
Weather Outlook for subsequent 4 days from 03rd to 07th March, 2014

- A fresh western disturbance would affect western Himalayan region from 2nd March.
- Rain/thundershowers would occur at few places over parts of east and central India.
- Rain/thundershowers would occur at isolated places over Kerala and Lakshadweep.
- Generally dry/mainly dry weather would prevail over rest parts of the country.

Satellite image dated 28.02.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 3rd March, 2014)



Salient Advisories

- As rain/snow would occur at many places over **Jammu & Kashmir, Uttarakhand and Himachal Pradesh** during next 24 hours, it is advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
- As hailstorm would occur at isolated places over **Himachal Pradesh** on 28th February and 1st March, use hail net for orchard crops to protect from mechanical damage.
- As rain/thundershowers would occur at many places in **Uttar Pradesh, Bihar and Jharkhand** during next 48 hours, over **east Madhya Pradesh and Chhattisgarh** during next 24 hours, it is advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of the matured crop and keep already harvested produce at safe place. Also as hailstorm would occur at isolated places over these States on 28th February and 1st March, use hail net for orchard crops to protect from mechanical damage.
- As hail storm would occur at isolated places over **Vidarbha** in Maharashtra and over **Telangana** on 28th February and 1st March, it is advised to use hail net for orchard crops to protect from mechanical damage. Also provide mechanical support to the brinjal, tomato etc. and orchard plants.
- In Western Plain Zone of **Punjab**, due to intermittent rain and high humidity, aphid infestation on wheat may reach above ETL (i.e. 5 aphids/ear head); to control the population, spray the crop with 40 ml Imidacloprid 200 SL or 20 g Thiamethoxam 25 WG or 12 g Dantop 50 WDG or 150 ml Rogor 30 EC / Metasystox 25 EC in 80-100 litres of water per acre on a non rainy day.

Detailed Zonewise Agromet Advisories

NORTH INDIA [Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, Uttar Pradesh & Rajasthan]



Wheat

Sugarcane

Late blight on potato

Mustard

- **Realised Rainfall:** Significant rainfall occurred in East Delhi in Delhi, Anantnag, Kathua, Kulgam, Ramban and Udampur districts in Jammu & Kashmir. Weather remained mainly dry/ dry over rest of the region.
- **Weather Forecast:** Rain/snow would occur at many places over western Himalayan region during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at few places over Punjab and Haryana during next 48 hours and at isolated places thereafter; at isolated places over west Rajasthan during next 24 hours and mainly dry thereafter; at a few places over east Rajasthan during next 24 hours and at isolated places thereafter; at many places over Uttar Pradesh during next 48 hours and decrease thereafter. Mainly dry/dry weather would prevail over rest of the region.
No significant change in minimum temperatures over plains of northwest India during next 2 days.
- **Weather Warning:** Isolated hail storm would occur over Himachal Pradesh, Uttar Pradesh on 28th February and 1st March.
- **Weather Outlook:** A fresh western disturbance would affect western Himalayan region from 2nd March.
- **Advisories:**
 - **Jammu & Kashmir:**
 - As rain/snow would occur at many places over Jammu & Kashmir during next 24 hours, it is advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
 - In Valley Temperate Zone of Jammu & Kashmir, apply light and frequent irrigation in standing crops to protect from cold injury.
 - In Intermediate Zone of Jammu & Kashmir, do not allow water stagnation in wheat fields, as high humidity favours infestation of yellow rust. For control, apply Propaconazole @ 25 ml in 25 liters of water/kanal after current spells of rain.
 - In Sub Tropical Zone of Jammu & Kashmir, undertake land preparation for sowing of okra, utilizing the expected rains and undertake planting of cucurbitaceous seedlings, transplanting of summer vegetables.
 - **Himachal Pradesh:**
 - As rain/snow would occur at many places over Himachal Pradesh during next 24 hours, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
 - As hailstorm would occur at isolated places on 28th February and 1st March, use hail net for orchard crops to protect from mechanical damage.
 - In Hill Zone of Himachal Pradesh, apply light and frequent irrigation in standing crops to protect from cold injury.
 - In Mid-Hills Sub-Humid Zone and & Low Hills Sub-Tropical Zone of Himachal Pradesh, due to increase in humidity, there are chances of occurrence of yellow rust in wheat. For control, spray Tilt @ 1 ml per liter of water after current spells of rain.
 - **Uttarakhand:**
 - As rain/snow would occur at many places over Uttarakhand during next 24 hours, it is advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
 - In Sub-Humid Sub-Tropic Zone of Uttarakhand, due to high relative humidity there is chance of rust infestation in wheat. If brown or yellow strip/patches appear on leaf surface, spray Propiconazole 25% EC with 500-600 liter water for effective control after current spells of rain.
 - In Bhabar and Tarai Zone of Uttarakhand, apply light and frequent irrigation in standing crops to protect from cold injury. Continue sowing of sunflower, planting of potato, sugarcane and transplanting of brinjal & capsicum utilizing the recent rainfall. Present temperature conditions are also favourable for sowing of summer

moong.

▪ **Punjab, Haryana and Delhi:**

- In Central Plain Zone of Punjab, undertake transplanting of onion and in Western Zone of Haryana, undertake transplanting of tomato, chilli and cole crop utilizing the expected rainfall.
- In Delhi, undertake sowing of French bean, cluster bean, summer radish as present temperature is suitable for germination of seeds. Utilizing the expected rainfall undertake transplanting of tomato, chilli and cole.
- In Western Plain Zone of Punjab, due to intermittent rain and high humidity, aphid infestation on wheat may reach above ETL (i.e. 5 aphids/ear head); to control the population, spray the crop with 40 ml Imidacloprid 200 SL or 20 g Thiamethoxam 25 WG or 12 g Dantop 50 WDG or 150 ml Rogor 30 EC / Metasystox 25 EC in 80-100 liters of water per acre on a non rainy day.
- In Western Zone of Haryana, due to high humidity, there is a possibility of white rust in the mustard crop; spray 0.2% Redomil M Z or Mancozeb on a non rainy day.

▪ **Uttar Pradesh:**

- As rain/thundershowers would occur at many places during next 48 hours, it is advised to postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
- As hailstorm would occur at isolated places on 28th February and 1st March, use hail net for orchard crops to protect from mechanical damage.
- In Central Plain Zone of Uttar Pradesh, due to high humidity, there is chance of attack of powdery mildew in mango. For control, spray Sulphex 0.2% @ 2 g per litre of water after current spells of rain and Carothin or Calixin 1 ml per litre of water after a fortnight.
- In Western Plain Zone of Uttar Pradesh, due to high humidity, there is chance of attack of yellow rust in wheat. For control, spray Propiconazole 25 EC @ 1 mm per litre of water after current spells of rain.

▪ **Rajasthan:**

- As dry weather is prevailing, apply 3rd irrigation at jointing stage in late sown and 4th irrigation at flowering stage in timely sown wheat in West Rajasthan. Also apply irrigation to the early sown summer cucurbits like bottle gourd, ridge gourd, pumpkin, bitter gourd, tinda etc.
- In Arid Western Plain Zone of Rajasthan, due to increase in temperature and humidity, there is chance of aphid infestation in mustard, cumin, coriander, fennel etc.; to protect the crops, spray Malathion 50 EC @ 1200 ml/ha or Dimithoate 30 EC @1200 ml/ha along with water.
- In Semi Arid Eastern Plain Zone, under high humid condition, tomato and brinjal crops are likely to be affected with fruit borer; to control, remove affected fruits and stems and spray Carbaryl 50 WP @ 4 gm or Acephate 75 SP @ 0.5 gm per litre water on a non rainy day.

• **Animal Husbandry**

- In Himachal Pradesh, keep cattle / goats indoor during hailstorm period. As prevailing weather is conducive for white scour, naval ill and pneumonia, undertake preventive measures for their control.
- In Western Plain Zone of Punjab, new born calves need special care in cold weather. Keep them warm by providing clean and dry bedding. Give them vitamin A concentrate @ 1 ml daily in milk for three days to be repeated after a month.

CENTRAL INDIA [M.P., CHHATTISGARH]



Wheat



Sugarcane



Chilli



Mustard

- **Realised Rainfall:** Significant rainfall occurred in Annupur, Balaghat, Damoh, Jabalpur, Mandla, Seoni and Shahdol districts of east Madhya Pradesh, in Betul, Bhind, Bhopal, Datia, Dewas, Guna, Harda, Hoshangabad, Indore, Khandwa, Raisen, Sehore, Ujjain and Vidisha districts of west Madhya Pradesh and in Bilaspur, Korba, Koriya and Surguja district of Chhattisgarh. Weather remained mainly dry/dry over remaining parts of the region.
- **Weather forecast:** Rain/thundershowers would occur at many places over east Madhya Pradesh & Chhattisgarh during next 24 hours and at a few places thereafter; at isolated places over west Madhya Pradesh during next 24 hours and decrease thereafter.
No significant change in minimum temperatures over central India during next 2 days.

- **Weather Warning:** Isolated hail storm would occur over east Madhya Pradesh and Chhattisgarh on 28th February and on 1st March.
- **Weather Outlook:** Rain/thundershowers would occur at a few places over parts of central India.
- **Advisories:**
 - **Madhya Pradesh:**
 - As rain / thundershowers would occur at many places in east Madhya Pradesh, postpone irrigation, intercropping operation and application of plant protection measures and fertilizers to the standing crops fields. Also postpone harvesting of matured crops and keep the harvested produce at safe place.
 - As hail storm may occur at isolated places over east Madhya Pradesh on 28th February and 1st March, it is advised to use hail net for orchard crops to protect from mechanical damage.
 - In Nimar Valley Zone of Madhya Pradesh due to the prevailing humid weather, there is possibility of attack of stem borer in maize. Apply Methyl- o-Demeton 25 EC 10 ml or Carbaryl 50% W.P. 40 g in 10 lit. of water .
 - In Jhabua Hill Zone of Madhya Pradesh due to cloudy weather in past week there is possibility of attack of pod borer in gram, spray Profenofos 40EC + Cyper Methrin 4 EC @ 1.5 lit/ha.
 - **Chhattisgarh:**
 - In Chhattisgarh as rain / thundershowers would occur at many places during next 24 hours, postpone irrigation, intercropping operation and application of plant protection measures and fertilizers to the standing crops. Also postpone harvesting of matured crops and keep the harvested products at safe place.
 - As hail storm may occur at isolated places over Chhattisgarh on 28th, it is advised to use hail net for orchard crops to protect from mechanical damage.
 - In North Hill Zone of Chhattisgarh, undertake sowing of maize crop utilizing expected rainfall.
 - In North Hill Zone of Chhattisgarh, due to cloudy weather there is possibility of attack of white rust in mustard spray Dhanoxyl @ 3-4 g per liter of water after current spells of rain.
- **Animal Husbandry**
 - As hail storm may occur at isolated places over east Madhya Pradesh and Chhattisgarh on 28th, keep cattle/goats indoor during hail storm.

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



Mustard



Sugarcane



Cole crops



Onion

- **Realised Rainfall:** Significant rain occurred in Palamu district of Jharkhand. Weather remained mainly dry / dry over rest parts of the region.
- **Weather forecast:** Rain/thundershowers would occur at many places over Bihar & Jharkhand during next 48 hours and at a few places thereafter; at a few places over Gangetic West Bengal during next 48 hours and at isolated places thereafter; at isolated places over Sub-Himalayan West Bengal and Odisha during next 48 hours and mainly dry thereafter. Mainly dry/dry weather would prevail over rest of the region.
No significant change in minimum temperatures over plains of east India during next 2 days.
- **Weather Warning:** Isolated hail storm would occur over Bihar and Jharkhand on 28th February and 1st March.
- **Weather Outlook:** Rain/thundershowers would occur at few places over parts of east India.
- **Advisories:**
 - **Odisha:**
 - In East and South Eastern Coastal Plain Zone of Odisha, increasing day temperature may aggravate the infestation of stem borer on rice crop. To control it, spray Tryozophos @ 1.5 ml / litre water.
 - In East and South Eastern Coastal Plain Zone of Odisha, increased difference between daily maximum and minimum temperature favours infestation of blast in rice in the main fields. Spray 1 g Beam / litre water.
 - In North Eastern Plateau Zone, as the temperature is increasing, it is the right time for sowing sesamum after harvesting of potato.
 - In North Eastern Coastal Plain Zone of Odisha, severe attack of *Spodoptera litura* has been widely noticed in mustard crop due to abrupt rise and fall in temperature and likely to continue; prepare poison bait with 1 kg rice bran+200g jaggery / gur+10g Methomyl+Water and keep the bait at 20-25 different places in the affected fields.

Spray Methomyl in bunds @ 1.5 g / litre of water or apply Chloropyriphos dust @ 10 kg / acre in bunds. Spray Emamethrin benzoate @ 3 g / 10 litres of water in mustard crops those are in flowering stage. It is also advised not to undertake sowing of any crop until the *Spodoptera litura* population reaches below ETL.

▪ **West Bengal:**

- In New Alluvial Zone and Laterite and Red soil Zone of West Bengal, wet and humid weather is conducive for outbreak of late blight in late planted potato. To protect the crop, apply Cymoxanil 8% + Mancozeb 64% @ 3.0 g per litre of water on a non rainy day.
- In Laterite and Red Soil Zone of West Bengal, hot weather may cause the attack or red mite in chilli and leaves become curl. Apply Dichophal 18.5% @ 1.5 ml / litre of water per acre area on a non rainy day.
- In New Alluvial Zone of West Bengal, humid weather is conducive for root rot and powdery disease in sunflower; for control root rot, apply Brassicol @ 1 g per litre of water and for powdery disease, apply sulphur-containing pesticide like sulphex @ 2 g or Krilaxyl @ 2 g per litre of water on a non rainy day.
- In Terai Zone of West Bengal, as temperature is increasing, there is a possibility of aphid attack in mustard. To control aphids, spray Imidacloprid 17.8 SL @ 1 ml / 4 litres of water or Dimethoate @ 2 ml / litre of water.

▪ **Bihar:**

- As rain/thundershowers would occur at many places over Bihar during next 48 hours, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
- As isolated hail storm may occur over Bihar on 28th February and 1st March it is advised to use hail net for orchard crops to protect from mechanical damage.
- In North West Alluvial Plain Zone of Bihar, as present temperature condition is favourable, undertake planting of spring sugarcane and sowing of sweet potato, summer vegetables and summer maize crop.
- In South Bihar Alluvial Zone, As present temperature condition is favourable, undertake sowing of sweet potato, summer vegetables, summer maize and green gram crop.
- In North East Alluvial Plain Zone of Bihar, complete planting of spring sugarcane, transplanting of *boro* rice and nursery sowing of *garma* rice and continue transplanting of onion utilizing the expected rainfall.

▪ **Jharkhand:**

- As Rain/thundershowers would occur at many places over Jharkhand during next 48 hour, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of matured crop and keep already harvested produce at safe place.
- As isolated hail storm may occur over Jharkhand on 28th February and 1st March, it is advised to use hail net for orchard crops to protect from mechanical damage.
- In South Eastern Plateau Zone of Jharkhand, as present temperature condition is favourable, undertake sowing of summer vegetables summer moong.
- In South Eastern Plateau Zone of Jharkhand, in late sown mustard (at flowering stage) crop, because of favourable weather condition (cloudyness, high night temperature), there are chances of more infestation of white rust; spray Bordeaux mixture or Copper Oxychloride @ 0.25 per cent or Blitox 50 @ 0.30 percent solution after current spells of rain.

• **Animal Husbandry**

- In Bihar and Jharkhand, keep cattle/goats indoor during hailstorm period.

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



Chilli



Rice



cole crops



Late blight in Potato

- **Realised Rainfall:** Mainly dry/dry weather prevailed over the states of the region.
- **Weather Forecast:** Rain/thundershowers would occur at few places over Arunachal Pradesh during next 48 hours and decrease thereafter and at isolated places over rest northeastern states.
- **Weather Warning:** Nil.
- **Weather Outlook:** Generally dry / mainly dry weather would prevail over the region.
- **Advisories:**
 - **Assam & Meghalaya:**

- In Upper Bramhaputra Valley Zone and Central Bramhaputra Valley Zone of Assam, harvest the matured potato, toria, rapeseed & mustard crop in clear weather.
- In Hill Zone and North Bank Plain Zone of Assam, cloudy and high humid weather conditions are congenial for appearance of blast disease in *boro* rice. If blast spots are noticed, spray Mancozeb 0.2% @ 2 g / litre or Ediphenphos 0.1% @ 1 g / litre of water for control.
- In North Bank Plain Zone of Assam, as mainly dry weather is prevailing, irrigate the transplanted *boro* rice to maintain 3-7 cm of standing water.
- In Hill Zone of Assam, prevailing temperature conditions are suitable for sowing of cucurbits and bhindi.
- In Central Bramhaputra Valley Zone of Assam, incidence of wilt disease and aphids has been observed and likely to persist in lentil and khesari at vegetative stages due to prevailing favourable temperature conditions (maximum temperature 28 to 30°C). It is advised to drench the soil with Bavistin @ 1 ml / litre of water for control of wilt and apply Malathion 50 EC @ 2 ml / litre of water for control of aphids.
- In Temperate Sub-alpine Zone of Meghalaya, prevailing temperature conditions are suitable for sowing of maize, cucurbits, bhindi and direct seeded *ahu* rice.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Mild Tropical Hill Zone of Nagaland, as dry weather is likely to prevail, undertake harvesting of tomato, broccoli, bottlegourd, carrot, knolkhol.
- In Sub Tropical Plain Zone of Manipur, undertake harvesting of matured pea, lentil, rapeseed and mustard taking advantage of dry weather conditions .
- In Mild Tropical Plain Zone of Tripura, as mainly dry weather is prevailing, apply irrigation in banana and remove extra suckers in upland condition.
- In Mild Tropical Hill Zone of Mizoram, humid weather conditions are congenial for incidence of painted bug in cole crops. To control, spray Malathion 50 EC @ 1.25 litre / ha or Dimecron 100 EC @ 0.250 litre/ha. Apply irrigation in cole crops during morning or evening as mainly dry weather is prevailing.
- In Mild Tropical Plain Zone of Tripura, due to humid weather conditions, there may be attack of hopper in mango and yellow stem borer in rice. Spray Malathion @ 2 ml per litre of water to control the hopper attack and apply Fipronil @ 2g per liter of water to manage the yellow stem borer attack.
- **Animal Husbandry**
- In North Bank Plain Zone, Central Bramhaputra Valley and Upper Bramhaputra Valley Zone of Assam, protect poultry birds from cold by using electric bulbs (300 Watt for 100 sq. ft.) to prevent Coryza disease.
- In Assam, Manipur and Tripura, undertake vaccination to control ranikhet disease in poultry during this period.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice



Groundnut



Cotton



Grape vine

- **Realised Rainfall:** Significant rainfall occurred in Jalgaon district in Madhya Maharashtra and Gondia district in Vidarbha. Weather remained mainly dry / dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Marathawada during next 24 hours; at isolated places over Madhya Maharashtra during next 24 hours and decrease thereafter, at a few places over Vidarbha during next 48 hours and decrease thereafter. Mainly dry/dry weather would prevail over rest of the region.
- **Weather Warning:** Isolated hail storm would occur over Vidarbha on 28th February and 1st March.
- **Weather Outlook:** Generally dry / mainly dry weather would prevail over the region.
- **Advisories:**
 - **Maharashtra:**
 - As hail storm would occur at isolated places over Vidarbha on 28th February and 1st March, it is advised to use hail net for orchard crops (orange and sweet lime) to protect from mechanical damage. Also provide mechanical support to the brinjal, tomato etc. and orchard plants.
 - As dry weather prevailed during last few weeks in Konkan and mainly dry weather is expected; complete the intercultural operations like weeding and fertilizer application in groundnut at vegetative stage. Also undertake intercultural operations like weeding and fertilizer application in pulses, vegetables, rice, finger millet and

orchards. Apply irrigation to groundnut, orchards, vegetable crops and pulses. Mango is at fruit formation stage (pea size); considering the crop canopy, apply 150-200 litres of water per tree at 15 days interval to avoid fruit dropping. Apply grass mulch in mango orchards to preserve soil moisture. Apply irrigation to maintain up to 5 cm water level in transplanted rice field at tillering stage.

- As no significant rain occurred during last week in Madhya Maharashtra and isolated rain is expected; continue inter-cultural operations like weeding and fertilizer application in sugarcane, summer groundnut and vegetables. Apply irrigation to sugarcane, vegetable crops, summer groundnut and bajra (Pune region). Complete harvesting of already matured gram and jowar on a bright sunny day. Keep the harvested produce in a safe place.
- As no significant rain occurred during last week in Marathwada and no significant rain is expected; continue inter-cultural operations like weeding and fertilizer application in orchards (banana, fig, pomegranate, sweet lime, guava), sugarcane, summer groundnut and vegetables on a non-rainy day. Apply irrigation to sugarcane, vegetable crops, orchards and summer groundnut. Complete sowing of summer groundnut as prevailing minimum temperature is above 16°C. Continue harvesting of already matured gram and jowar on a bright sunny days and keep the harvested produce in a safe place.
- As there was hailstorm accompanied with gusty winds in Vidarbha, there may have damage in orchards (orange and sweet lime), wheat, and gram; collect and destroy the infested dropped fruits and leaves in the orchards to avoid spread of pest and disease. Also provide mechanical support to the brinjal, tomato etc. and orchard plants.
- Rain/thundershowers would occur at a few places during next 48 hours, complete harvesting of already matured gram and jowar on a bright sunny day and keep the harvested produce in a safe place. As prevailing temperature is favourable (Tmin. is around 16-18°C), complete sowing of summer groundnut in Central Vidarbha Zone and planting of water melon and musk melon in East Vidarbha on raised beds.
- Due to cloudy weather in South Konkan, there may be attack of aphids and leaf miner in vegetables; spray Dimethoate @ 10 ml per 10 litres of water at 15-20 days interval.
- Due to untimely rain in Marathwada, there may be incidence of powdery mildew in pomegranate; spray Sulphur @ 30 g + Phosphomidon @ 20 ml per 10 litres of water on a non rainy day.
- Considering the cloudy weather and rain in Western Ghat region, there may be incidence of powdery mildew in mango; spray Sulphur (WP 0.1 %).
- **Gujarat:**
 - Under prevailing dry weather conditions, continue harvesting of already matured mustard, potato and castor in North Gujarat Zone.
 - In view of prevailing dry weather, apply irrigation in wheat at dough stage in Middle Gujarat Zone, at milk / dough stage in Saurashtra Zone and North Gujarat Zone, at milk stage in Bhal and Coastal Zone and North West Zone and garlic at bulb development stage in South Gujarat Heavy Rainfall Zone.
 - Severe attack of thrips and aphids in late sown cumin and very severe attack of thrips in garlic and onion have been reported in North Saurashtra Zone and likely to continue in present weather conditions (increasing temperature). Spray Imidacloprid @ 5 ml / 10 litres of water in cumin and apply alternative sprays of Spinosad 2.5 % @ 3 g and Profenofos @ 20 ml in 10 litres of water at 10 days interval in garlic and onion to manage the pest.
 - Higher temperature and cloudy weather condition during next five days are favourable for infestation of aphids in cumin and vegetables in North Gujarat Zone. Spray Dimethoate @ 10 ml or Monocrotophos @ 10 ml added in 10 liters of water to control.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]



Rice

Sugarcane(cane maturity)

Onion (bulb development)

Sucking pest on Groundnut

- **Realized Rainfall:** Significant rainfall occurred over Pathanamthitta district in Kerala and Puducherry district in Tamil Nadu. Weather remained mainly dry/dry over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Lakshadweep during 24 hours; over coastal Karnataka during next 48 hours; south interior Karnataka and Kerala during next 72 hours; at isolated places over Telangana during next 24 hours and increase thereafter; over Rayalaseema from today and over coastal Andhra Pradesh on 1st March; at isolated places over north interior Karnataka during next 24 hours and decrease thereafter. Mainly dry/dry weather would prevail over rest of the region.
- **Weather Warning:** Isolated hail storm would occur over Telangana on 28th February and 1st March.

- **Weather Outlook:** Rain/thundershowers would occur at isolated places over Kerala and Lakshadweep. Generally dry/mainly dry weather would prevail over rest parts of the region.
- **Advisory:**
 - **Karnataka:**
 - Continue harvesting of chickpea, safflower and *rabi* sorghum in the North Dry Zone and wheat and chickpea in the North Transition Zone of Karnataka in clear weather.
 - Prevailing humidity conditions(40-60%) are congenial for cob borer infestation in maize cob formation stage in the Eastern Dry Zone of Karnataka. Spray Spinosad @1.0ml/litre of water or Indoxycarb @ 1.5 ml/litre of water to manage it.
 - **Andhra Pradesh**
 - As isolated hail storm would occur over Telangana on 28th February and 1st March, use hail net for orchard crops to protect from mechanical damage.
 - Prevailing dry weather conditions are congenial for incidence of sucking pest and tikka leaf spot in groundnut in the Southern Zone of Andhra Pradesh. Spray Monochrotophos @ 1.6 ml / litre of water to manage sucking pest and Hexaconozol @ 2 ml / litre of water to manage tikka leaf spot.
 - Taking the advantage of prevailing dry weather, undertake harvesting of *rabi* pulses and picking of cotton in the Krishna Godavari Zone of Andhra Pradesh on bright sunny days.
 - **Tamil Nadu:**
 - As mainly dry weather is prevailing, continue harvesting of matured *samba* rice, undertake harvesting of matured *thaladi* rice in the Cauvery Delta Zone of Tamil Nadu. Incidence of yellow mosaic disease is noticed in black gram due to prevailing dry weather condition. To control the vectors, spray Methyl demeton or dimethoate 200ml/acre.
 - Incidences of sucking pests like leaf minor and jassids may increase in tomato in the Western Zone of Tamil Nadu due to increase in temperature. Suitable precautionary measures may be undertaken to avoid propagation of tomato leaf curl virus.
 - **Kerala:**
 - Under prevailing prevailing dry weather condition, continue harvesting of black pepper and early fruit setting varieties of cashew in the Northern Zone of Kerala. Undertake mulching of soil in banana to prevent evaporation loss due to rise in day temperatures.
 - As mainly dry weather is prevailing, apply heavy irrigation once in a fortnight to cardamom in the High Altitude Hilly Zone of Kerala. Weather conditions are favourable for planting of ginger.
 - Due to high temperature, there are chances of attack of white fly and jassids in vegetables in the Central Zone of Kerala. the insect population may be managed by hanging yellow boards painted with castor oil.
 - As dry weather is prevailing in the Southern Zone of Kerala, undertake mulching in coconut fields to retain moisture in the fields. Provide irrigation to banana and shade to small rubber plants.
- **Animal Husbandry:**
 - In Telangana, keep cattle / goats indoor during hailstorm period. Ensure periodic vaccination of animals against FMD, Brucellosis, Haemorrhagic Septicaemia, Anthrax and small ruminants against PPR and Sheep and Goat Pox during the season.

Annexure I

Week by week Rainfall Distribution

State/Districts	12.02.14		19.02.14		26.02.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	8.0	-79	22.3	-33	0.0	-100
Dibang Valley	80.0	140	108.0	350	12.0	-82
East Kameng	0.0	-100	3.2	-86	0.0	-100
East Siang	48.7	141	89.5	505	0.0	-100
Kurung Kumey	**	**	**	**	**	**
Lohit	30.8	157	32.4	32	0.0	-100
Lower Dibang Valley	19.2	-42	94.2	293	3.7	-94
Lower Subansari	**	**	**	**	**	**
Papumpara	11.6	36	56.4	111	0.0	-100
Tawang	12.0	5	27.0	155	0.0	-100
Tirap	2.5	-75	15.5	-33	0.0	-100
Upper Siang	87.1	137	66.6	69	14.5	-74
Upper Subansari	43.4	578	39.8	130	3.0	-79
West Kameng	0.0	-100	30.8	191	0.0	-100
West Siang	50.8	218	65.0	412	0.5	-98
Assam						
Baksa	0.4	-85	34.1	231	0.0	-100
Barpeta	0.1	-97	34.8	238	0.0	-100
Bongaigaon	0.0	-100	23.1	57	0.0	-100
Cachar	1.1	-79	16.4	-17	0.0	-100
Chirang	0.0	-100	40.2	173	0.0	-100
Darrang	0.0	-100	27.0	350	0.0	-100
Dhemaji	14.0	63	42.0	211	0.0	-100
Dhubri	0.0	-100	16.3	989	0.0	-100
Dibrugarh	6.9	-23	19.5	38	0.0	-100
Goalpara	0.0	-100	21.2	266	0.0	-100
Golghat	1.0	-87	30.2	211	0.0	-100
Hailakandi	9.9	219	14.7	5	0.0	-100
Jorhat	1.2	-86	30.8	202	0.0	-100
Kamrup(Rural)	0.0	-100	26.2	280	0.0	-100
Kamrup(Metro)	0.0	-100	25.4	268	0.0	-100
Karbi Anglong	0.0	-100	20.1	139	0.0	-100
Karimganj	1.0	-86	21.6	110	0.0	-100
Kokrajhar	0.0	-100	52.8	294	0.0	-100
Lakhimpur	15.0	74	35.6	164	0.0	-100
Morigaon	0.0	-100	14.8	135	0.0	-100
N.C.Hills	0.0	-100	18.2	104	0.0	-100
Nowgong	0.0	-100	31.8	623	0.0	-100
Nalbari	1.2	-73	36.5	368	0.0	-100
Sonitpur	0.1	-98	29.4	309	0.0	-100
Sibsagar	0.0	-100	18.7	143	0.0	-100

Tinsukia	13.0	30	22.0	32	0.0	-100
Udalgiri	4.6	-23	42.8	613	0.0	-100
Meghalaya						
East Garo Hills	0.0	-100	16.3	288	0.0	-100
East Khasi Hills	0.0	-100	49.9	668	0.0	-100
Jaintia Hills	0.0	-100	33.0	120	0.0	-100
Ribhoi	0.0	-100	9.8	343	0.0	-100
South Garo Hills	0.0	-100	11.0	340	0.0	-100
West Garo Hills	0.0	-100	22.8	812	0.0	-100
West Khasi Hills	0.0	-100	29.0	140	0.0	-100
Mizoram						
Aizwal	3.5	86	13.5	57	0.0	-100
Champhai	0.0	-100	33.0	469	0.0	-100
Kolasib	4.0	82	3.0	-77	1.0	-94
Lawngtlai	0.0	-100	52.0	175	0.0	-100
Lunglei	0.0	-100	46.0	265	0.0	-100
Mamit	6.0	216	10.0	16	0.0	-100
Saiha	0.0	-100	53.0	539	0.0	-100
Serchhip	0.0	-100	3.0	-66	0.0	-100
Manipur						
Bishnupur	2.0	-89	19.0	476	0.0	-100
Chandel	0.0	-100	**	**	0.0	-100
Churachandpur	0.0	-100	21.0	304	0.0	-100
Imphal east	1.0	-88	22.0	165	0.0	-100
Imphal west	0.0	-100	9.4	327	0.0	-100
Senapati	0.0	-100	25.0	762	0.0	-100
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	14.0	338	0.0	-100
Ukhrul	0.0	-100	0.0	-100	0.0	-100
Nagaland						
Dimapur	2.0	150	18.6	1333	1.0	25
Kephire	0.0	-100	29.0	241	0.0	-100
Kohima	0.3	-93	23.0	304	0.0	-100
Longleng	**	**	**	**	**	**
Mokokchung	5.0	25	29.0	179	0.0	-100
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	0.0	-100	28.0	391	0.0	-100
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	24.0	208	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	0.0	-100	9.0	2	0.0	-100
North tripura	3.5	-53	8.4	33	0.0	-100
South tripura	0.0	-100	9.3	32	0.0	-100
West tripura	0.0	-100	7.9	-2	0.0	-100
Himachal Pradesh						
Bilaspur	30.5	194	40.1	86	4.8	-73
Chamba	49.1	126	61.8	150	18.2	-31

Hamirpur	45.3	254	40.0	95	4.9	-59
Kangra	37.5	123	61.6	185	18.6	-16
Kinnaur	36.3	48	69.2	133	10.5	-55
Kullu	61.7	226	61.5	124	7.1	-73
Lahaul and Spiti	55.9	83	18.0	-48	12.0	-67
Mandi	53.2	329	52.8	125	2.5	-83
Shimla	35.0	138	62.3	200	5.6	-68
Sirmaur	25.5	114	75.9	430	13.6	22
Solan	27.0	179	60.3	182	1.7	-89
Una	34.4	377	27.7	101	8.0	-32
Punjab						
Amritsar	3.5	-40	1.1	-88	1.5	-82
Barnala	0.0	-100	0.0	-100	1.0	-84
Bhatinda	2.0	-17	0.0	-100	10.0	100
Faridkot	5.0	43	0.0	-100	2.0	-35
Fatehgarh Sahib	**	**	6.0	-19	0.0	-100
Ferozpur	7.0	192	0.0	-100	1.0	-72
Gurdaspur	21.2	143	34.3	156	14.0	-1
Hoshiarpur	16.0	107	20.9	79	7.1	-33
Jalandhar	2.5	-52	5.6	-39	10.0	16
Kapurthala	13.8	159	16.0	125	11.0	224
Ludhiana	2.5	-29	6.5	-27	5.8	-14
Mansa	2.4	-17	0.0	-100	1.0	-80
Moga	9.0	500	9.1	122	2.0	-53
Muktesar	6.2	210	0.0	-100	0.0	-100
Nawashahar	7.5	14	14.4	9	3.8	-61
Patiala	6.0	40	18.4	152	0.3	-96
Ropar	9.1	23	19.8	22	5.0	-41
Sangrur	1.7	-48	1.4	-74	0.2	-96
Mohali	9.5	48	31.0	343	0.5	-92
TarnTaran	5.4	126	0.0	-100	1.0	-86
Haryana						
Ambala	7.9	27	31.4	355	1.6	-77
Bhiwani	0.7	-39	1.8	-43	0.0	-100
Chandigarh	6.8	58	22.8	58	1.4	-81
Faridabad	0.0	-100	40.0	1150	0.0	-100
Fatehabad	0.2	-92	0.5	-84	2.0	-41
Gurgaon	0.0	-100	9.0	120	0.0	-100
Hissar	1.6	23	0.4	-91	7.7	114
Jhajar	0.0	-100	11.6	213	0.0	-100
Jind	0.0	-100	0.3	-92	0.2	-94
Katihah	0.0	-100	1.4	-63	0.4	-91
Karnal	4.4	7	20.6	228	7.8	29
Kurukshetra	0.0	-100	9.8	77	6.0	25
Mahendragarh	0.0	-100	10.5	139	0.0	-100
Mewat	0.0	-100	9.4	223	0.0	-100
Palwal	0.0	-100	21.8	988	0.0	-100
Panchkkula	7.7	28	25.7	135	1.7	-82
Panipat	0.7	-78	18.8	595	0.0	-100

Rewari	0.0	-100	9.2	300	0.0	-100
Rohtak	1.0	-50	2.8	-26	0.0	-100
Sirsa	0.0	-100	0.0	-100	0.0	-100
Sonepat	0.8	-67	13.0	210	0.0	-100
Yamunanagar	8.5	-11	21.3	160	16.0	82
Delhi	0.3	-86	21.8	226	1.4	-70
Jammu & Kashmir						
Anantnag	35.6	141	7.0	-73	22.7	-26
Badgam	16.0	5	4.3	-77	4.5	-79
Bandipore	**	**	**	**	**	**
Baramula	45.7	-19	0.7	-98	5.0	-92
Doda	35.6	34	41.4	-17	17.1	-66
Ganderwal	21.0	64	15.8	-19	6.4	-63
Jammu	4.4	-39	6.5	-67	1.4	-93
Kargil	0.0	-100	0.0	-100	0.0	-100
Kathua	23.6	195	52.6	295	26.8	40
Kistwar	0.0	-100	0.0	-100	**	**
Kulgam	23.8	61	4.3	-83	22.8	-26
Kupwara	52.0	141	0.0	-100	2.6	-92
Ladakh(Leh)	1.1	-49	0.9	-61	0.0	-100
Poonch	3.0	-92	0.0	-100	0.0	-100
Pulwama	22.1	108	4.4	-73	7.5	-49
Rajouri	44.1	549	6.9	-58	6.4	-61
Ramban	63.9	140	15.2	-70	28.6	-44
Reasi	48.4	159	23.1	-16	7.8	-77
Samba	10.2	40	7.2	-63	1.8	-91
Shopian	13.0	23	1.5	-91	10.0	-32
Srinagar	21.8	70	9.1	-53	3.9	-77
Udhampur	12.5	-33	15.3	-44	32.0	-7
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	48.0	2298
Balaghat	0.0	-100	0.4	-89	20.8	992
Chhatarpur	0.0	-100	7.6	110	7.6	281
Chindwara	0.0	-100	0.0	-100	0.0	-100
Damoh	0.0	-100	3.4	-33	25.6	1319
Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	0.0	-100	6.2	138	22.2	1377
Katni	0.0	-100	0.0	-100	14.7	674
Mandla	0.0	-100	5.1	-30	33.1	1476
Narsingpur	0.0	-100	1.0	-44	10.3	832
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	0.0	-100	24.0	300	16.4	993
Sagar	0.0	-100	1.3	-49	18.5	610
Satna	0.0	-100	6.7	39	3.2	37
Seoni	0.0	-100	0.0	-100	28.0	804
Shahdol	0.0	-100	5.6	-34	48.0	2724
Sidhi	0.0	-100	11.6	164	16.4	720
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	1.5	-38	19.0	1627

Umaria	0.0	-100	6.2	-22	4.4	110
West Madhya Pradesh						
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	18.8	1467
Badwani	0.0	-100	0.0	-100	4.5	1017
Betul	0.0	-100	0.0	-100	36.3	1350
Bhind	0.0	-100	0.0	-100	21.6	1247
Bhopal	0.0	-100	0.7	-50	39.6	2375
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	0.0	-100	6.9	93	33.7	2708
Dewas	0.0	-100	0.0	-100	46.3	9167
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	1.4	-26	22.2	1750
Gwalior	0.0	-100	4.7	74	2.9	38
Harda	0.0	-100	0.0	-100	28.2	13975
Hosangabad	0.0	-100	1.1	-37	44.6	3613
Indore	0.0	-100	0.6	200	40.4	40300
Jhabua	0.0	-100	0.0	-100	15.0	14900
Khandwa	0.0	-100	0.0	-100	34.0	4757
Khargone	0.0	-100	0.0	-100	18.2	4438
Mandsaur	0.0	-100	0.0	-100	4.1	1250
Morena	0.0	-100	0.3	-85	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.7	-56	33.0	4025
Rajgarh	0.0	-100	0.4	-64	7.0	900
Ratlam	0.0	-100	1.1	278	16.3	3160
Sehore	0.0	-100	0.0	-100	48.0	4700
Shajapur	0.0	-100	0.0	-100	11.0	3567
Sheopur Kalani	0.0	-100	0.0	-100	2.5	317
Shivpuri	0.0	-100	0.0	-100	8.5	673
Ujjain	0.0	-100	0.0	-100	22.6	22500
Vidisha	0.0	-100	2.8	84	25.5	1721
Chattisgarh						
Bastar	0.0	-100	0.0	-100	0.0	-100
Bijapur	0.0	-100	0.0	-100	0.0	-100
Bilaspur	0.0	-100	8.2	111	20.8	844
Dantewara	0.0	-100	0.0	-100	0.0	-100
Dhamtari	0.0	-100	12.2	542	10.4	593
Durg	0.0	-100	17.1	2348	18.0	1700
Janjgir	0.0	-100	3.2	146	6.7	158
Jashpurnagar	0.0	-100	0.0	-100	**	**
Kanker	0.0	-100	0.0	-100	0.0	-100
Korba	0.0	-100	3.0	-27	24.0	1400
Koriya	0.0	-100	34.9	2079	48.3	2741
Kawardha	0.0	-100	0.0	-100	0.0	-100
Mahasumund	0.0	-100	3.5	133	7.0	141
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	**	**	**	**
Raipur	0.0	-100	13.4	856	16.4	761

Rajandgaon	0.0	-100	0.8	-61	5.1	143
Surguja	0.0	-100	11.4	244	21.0	709
East Uttar Pradesh						
Allahabad	0.0	-100	21.5	642	7.8	334
Ambedkar Nagar	0.0	-100	4.5	32	12.3	310
Azamgarh	0.0	-100	13.1	525	3.2	19
Bahraich	1.8	-70	21.1	454	10.4	225
Ballia	0.0	-100	23.7	810	3.1	107
Balrampur	0.0	-100	12.3	308	7.6	12
Banda	0.0	-100	6.0	68	4.9	75
Barabanki	0.8	-82	14.3	233	17.6	487
Basti	0.0	-100	5.8	49	6.7	319
Chandauli	0.0	-100	14.0	186	4.4	193
Deoria	0.0	-100	12.7	242	14.0	43
Faizabad	0.0	-100	1.8	-51	9.5	313
Farrukhabad	4.7	52	4.1	45	4.3	88
Fatehpur	0.0	-100	3.2	-4	19.0	492
Gazipur	0.0	-100	26.8	1118	9.5	459
Gonda	0.0	-100	20.3	682	19.5	926
Gorakhpur	0.0	-100	9.9	241	10.4	395
Hardoi	6.4	83	6.5	116	13.2	324
Jaunpur	0.0	-100	7.5	108	4.0	100
Kannauj	4.0	8	7.7	185	11.0	244
Kanpur City	0.2	-88	8.4	147	19.0	442
Kanpur Dehat	0.0	-100	8.8	215	8.0	176
Kaushambi	0.0	-100	6.0	139	5.5	62
Kheri	1.5	-71	2.9	-18	4.3	29
Kushi nagar	0.0	-100	5.7	127	1.9	73
Lucknow	0.5	-79	12.6	232	18.4	458
Maharajganj	0.0	-100	5.3	56	2.4	74
Mau	0.0	-100	8.0	281	10.5	250
Mirzapur	0.0	-100	8.7	128	8.5	347
Pratapgarh	0.0	-100	12.5	381	1.0	-58
RaiBareilly	0.0	-100	2.4	-3	8.6	310
Sahuji Maharajnagar	0.0	-100	9.1	194	7.3	127
Sant Kabirnnagar	0.0	-100	12.0	167	2.5	47
Sant Ravidas Nagar	0.0	-100	14.2	190	14.0	833
Shrawasti	**	**	0.0	-100	**	**
Sidharthnagar	0.0	-100	5.0	85	0.3	-84
Sitapur	9.5	197	6.9	121	13.5	365
Sonbhadra	0.0	-100	7.4	75	7.2	156
Sultanpur	0.0	-100	8.0	261	13.9	829
Unnao	0.0	-100	10.8	163	10.0	122
Varanasi	0.0	-100	11.5	101	12.0	362
West Uttar Pradesh						
Agra	0.1	-98	6.1	119	15.2	531
Aligarh	1.2	-25	9.4	135	0.1	-98
Auraiya	0.0	-100	3.5	-49	8.0	135
Badaun	5.6	65	16.5	267	1.2	-59

Baghpat	0.0	-100	17.1	223	0.0	-100
Bareilly	2.8	-50	17.4	229	0.5	-84
Bijnor	5.4	4	26.5	254	0.0	-100
Bulandsahar	0.0	-100	13.5	141	0.0	-100
Etah	1.8	-27	2.1	-29	2.3	-27
Etawah	0.0	-100	2.0	-52	13.0	491
Firozabad	8.7	293	2.7	-26	9.1	435
GBNagar	0.0	-100	16.5	871	0.0	-100
Ghaziabad	14.7	819	13.4	173	0.0	-100
Hamirpur	0.0	-100	3.2	43	9.0	190
Jalaun	0.0	-100	7.8	99	10.3	158
Jhansi	0.0	-100	4.7	14	12.5	524
Jotiba Phule Nagar	1.5	-35	11.3	92	1.0	-71
Kanshiramnagar	4.0	208	5.5	77	0.0	-100
Lalitpur	0.0	-100	0.0	-100	19.0	1483
Mahamaya Nagar	1.5	36	4.7	26	0.0	-100
Mahoba	0.0	-100	1.0	-58	0.0	-100
Mainpuri	1.5	-32	1.3	-47	7.8	255
Mathura	9.0	592	4.5	50	0.0	-100
Meerut	0.0	-100	22.7	394	0.0	-100
Moradabad	4.5	-34	23.5	319	0.4	-91
Muzaffarnagar	6.7	109	33.0	500	0.0	-100
Pilibhit	1.3	-71	7.2	63	1.3	-66
Rampur	4.5	-12	22.1	157	0.0	-100
Saharanpur	13.0	103	23.4	230	0.0	-100
Shahjahanpur	3.1	-27	12.2	148	3.0	-3
Uttarakhand						
Almora	10.8	24	43.5	182	0.0	-100
Bageshwar	13.9	60	49.0	218	0.0	-100
Chamoli	37.1	165	42.4	80	0.6	-97
Champawat	7.5	-15	24.5	102	0.0	-100
Dehradun	32.6	279	78.8	405	5.6	-51
Garhwal Pauri	15.5	168	40.8	359	0.0	-100
Garhwal Tehri	39.5	299	79.7	375	0.2	-98
Haridwar	3.0	-68	57.8	564	0.0	-100
Nainital	13.8	97	41.5	219	0.0	-100
Pithorgarh	30.2	259	50.2	179	2.5	-84
Rudraprayag	48.4	204	54.9	148	0.0	-100
Udham Sing Nagar	1.1	-79	91.8	1483	0.0	-100
Uttarkashi	41.3	187	57.3	106	0.0	-100
Bihar						
Araria	0.0	-100	25.2	1996	0.0	-100
Arwal	0.0	-100	16.2	1700	2.8	20
Aurangabad	0.0	-100	5.7	53	9.8	600
Banka	0.0	-100	102.8	7243	3.5	46
Begusarai	0.0	-100	11.1	553	3.0	-17
Bhabua	0.0	-100	10.0	27	10.5	425
Bhagalpur	0.0	-100	31.5	1160	2.1	-18
Bhojpur	0.0	-100	16.0	208	3.1	-9

Buxar	0.0	-100	10.6	361	6.2	933
Darbhanga	0.0	-100	36.3	807	1.3	-21
East Champaran	0.0	-100	30.9	1243	5.2	108
Gaya	0.0	-100	6.4	94	8.1	287
Gopalganj	0.0	-100	16.6	515	1.5	-17
Jahanabad	0.0	-100	4.0	344	5.9	103
Jamui	0.0	-100	76.9	3560	7.8	187
Kathihar	0.0	-100	26.8	3729	0.8	-68
Khagadia	0.0	-100	7.9	772	0.9	0
Kishanganj	0.0	-100	23.0	1050	0.0	-100
Lakhisarai	0.0	-100	5.0	178	6.0	150
Madhepura	0.0	-100	22.1	688	1.9	-12
Madhubani	0.0	-100	22.7	1317	0.1	-98
Monghyar	0.0	-100	14.6	711	4.2	75
Muzaffarpur	0.0	-100	25.4	957	0.7	-64
Nalanda	0.0	-100	2.3	-27	7.3	506
Nawada	0.0	-100	17.4	727	6.8	260
Patna	0.0	-100	15.3	408	7.2	140
Purnea	0.0	-100	25.6	1406	0.4	-88
Rohtas	0.0	-100	18.6	377	10.0	270
Saharsha	0.0	-100	7.4	722	0.0	-100
Samstipur	0.0	-100	18.0	847	13.0	348
Saran	0.0	-100	38.2	1094	4.2	91
Sheikpura	0.0	-100	5.4	143	2.9	7
Sheohar	0.0	-100	**	**	**	**
Sitamarhi	0.0	-100	4.0	46	1.2	-48
Siwan	0.0	-100	40.1	1440	4.2	83
Supaul	0.0	-100	37.0	2367	0.3	-89
Vaishali	0.0	-100	40.8	1411	2.2	16
West Champaran	0.0	-100	20.4	1175	9.0	200
Jharkhand						
Bokaro	0.0	-100	12.3	484	2.7	-35
Chatra	0.0	-100	12.8	237	5.7	59
Deoghar	0.0	-100	34.8	1413	0.0	-100
Dhanbad	0.0	-100	18.6	388	0.7	-80
Dumka	**	**	**	**	**	**
East Singbhum	0.0	-100	27.1	833	0.0	-100
Garhwa	0.0	-100	**	**	15.5	1007
Giridih	0.0	-100	25.9	826	1.2	-44
Godda	0.0	-100	22.6	1313	3.2	-1
Gumla	**	**	**	**	**	**
Hazaribagh	0.0	-100	31.6	953	10.0	233
Jamtara	0.0	-100	23.2	544	0.8	-64
Khunti	0.0	-100	2.5	-52	2.5	-56
Koderma	0.0	-100	**	**	6.2	19
Latehar	0.0	-100	34.5	808	16.1	324
Lohardagga	0.0	-100	20.0	545	15.0	369
Pakur	0.0	-100	11.8	1870	0.0	-100
Palamau	0.0	-100	24.4	597	20.7	697

Ramgarh	0.0	-100	9.6	357	7.8	169
Ranchi	0.0	-100	10.6	44	7.0	18
Sahebganj	0.0	-100	57.4	11380	0.0	-100
Saraikela	0.0	-100	8.2	105	0.0	-100
Simdega	0.0	-100	18.4	411	3.5	-46
West Singhbhum	0.0	-100	25.2	394	0.0	-100
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.8	41
Alwar	0.1	-87	0.0	-100	0.0	-100
Banswara	0.0	-100	0.0	-100	4.1	200
Baran	0.0	-100	0.0	-100	3.6	418
Bharatpur	1.4	17	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	8.3	931
Bundi	0.0	-100	0.0	-100	4.8	2317
Chittorgarh	0.0	-100	0.0	-92	0.5	52
Dausa	2.2	267	0.0	-100	5.4	200
Dholpur	0.0	-100	0.0	-100	1.2	-47
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.3	-31	0.0	-100	2.6	31
Jhalawar	0.0	-100	0.0	-100	11.3	2718
Jhunjhunu	0.0	-96	0.7	-84	0.0	-100
Karauli	0.0	-100	0.0	-100	1.2	-35
Kota	0.0	-100	0.1	-85	8.3	1283
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	0.0	-100	0.4	-77	0.1	-90
Sikar	0.3	-74	0.0	-100	0.0	-100
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.0	-100	0.0	-100	2.0	125
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	0.0	-100
Churu	0.2	-74	0.1	-98	0.0	-100
Hanumangarh	2.0	54	0.0	-100	0.0	-100
Jaisalmer	0.0	-100	0.0	-100	0.0	-100
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	1.5	-7	0.0	-100	1.8	-6
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	1.9	200
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.4	200

Daman	**	**	**	**	**	**
Dangs	0.0	-100	0.0	-100	0.5	-38
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.4	200
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.1	200	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	2.0	567	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.4	260	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Goa	0.0	-100	0.0	-100	0.0	-100
Mumbai	0.0	-100	7.8	7700	0.0	-100
Raigad	0.0	-100	0.6	200	0.0	-100
Ratnagiri	0.0	-100	0.0	-100	0.0	-100
Sindhudurg	0.0	-100	0.0	-100	0.0	-100
Thane	0.0	-100	2.8	200	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.0	-100	0.0	-100	0.0	-100
Dhule	**	**	0.0	-100	6.5	2067
Jalgaon	0.0	-100	**	**	24.2	2320
Kolhapur	0.0	-100	0.0	-100	0.0	-100
Nandurbar	**	**	1.0	200	1.6	200
Nasik	0.0	-100	0.6	450	5.2	1194
Pune	0.0	-100	0.0	-100	1.0	200
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	**	**	3.9	177
Jalna	**	**	**	**	**	**
Latur	0.0	-100	0.0	-100	2.7	21
Nanded	0.0	-100	0.0	-100	0.9	-56

Usmanabad	0.0	-100	0.0	-100	0.0	-100
Parbhani	0.0	-100	0.0	-100	14.7	2350
Vidarbha						
Akola	0.0	-100	0.0	-100	13.6	491
Amraoti	0.0	-100	0.0	-100	6.9	284
Bhandara	0.0	-100	0.0	-100	18.8	549
Buldhana	0.0	-100	0.0	-100	11.7	960
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	29.9	1257
Nagpur	0.0	-100	0.0	-100	14.2	470
Wardha	0.0	-100	0.0	-100	5.7	149
Washim	0.0	-100	0.0	-100	1.7	-25
Yeotmal	0.0	-100	0.0	-100	0.0	-99
Odisha						
Angul	0.0	-100	13.7	185	2.2	-50
Balasore	0.0	-100	33.9	171	0.3	-95
Bargarh	0.0	-100	2.6	-30	0.0	-100
Bhadrak	0.0	-100	34.1	216	0.0	-100
Bolangir	0.0	-100	3.3	-29	0.5	-76
Boudh	0.0	-100	0.0	-100	0.0	-100
Cuttack	0.0	-100	23.7	130	0.0	-100
Deogarh	0.0	-100	35.5	726	4.2	14
Dhenkanal	0.5	-69	16.0	108	0.0	-100
Gajapati	0.0	-100	10.7	-44	0.0	-100
Ganjam	0.0	-100	3.5	-59	0.0	-100
Jagatsingpur	0.1	-98	4.0	-61	0.0	-100
Jajpur	1.0	-84	48.4	420	0.0	-100
Jharsuguda	0.0	-100	1.5	-43	6.5	28
Kalahandi	0.0	-100	0.0	-100	0.0	-100
Kandhamal	0.0	-100	0.7	-92	0.0	-100
Kendrapara	0.0	-100	0.0	-100	0.0	-100
Keonjhar	0.3	-94	19.2	91	0.3	-97
Khurda	0.0	-100	24.4	168	0.0	-100
Koraput	0.0	-100	6.1	91	0.0	-100
Malkangiri	0.0	-100	2.6	-10	0.0	-100
Mayurbhanj	0.0	-100	38.2	470	0.0	-100
Nawapara	0.0	-100	0.0	-100	0.0	-100
Nawarangpur	0.0	-100	0.0	-100	0.0	-100
Nayagarh	0.0	-100	8.6	21	0.0	-100
Puri	0.0	-100	1.2	-89	0.0	-100
Rayagada	0.0	-100	5.4	-46	0.0	-100
Sambalpur	0.0	-100	3.3	-23	6.7	82
Sonepur	0.0	-100	20.8	408	1.1	-43
Sundargarh	0.0	-100	3.9	64	1.4	-69
West Bengal						
GWB						
Bankura	0.0	-100	16.8	408	0.0	-100
Birbhum	0.0	-100	25.5	963	0.3	-92

Burdwan	0.0	-100	21.4	613	0.0	-100
East Midnapore	0.0	-100	40.3	795	0.0	-100
Hooghly	0.0	-100	52.8	914	0.0	-100
Howrah	0.0	-100	53.7	701	0.0	-100
Kolkata	0.0	-100	41.5	592	0.0	-100
Murshidabad	0.0	-100	32.0	1900	0.0	-100
Nadia	0.0	-100	43.8	2091	0.0	-100
24 Pargana (N)	0.0	-100	27.5	685	0.0	-100
Purulia	0.0	-100	16.6	326	0.0	-100
24 Pargana (S)	0.0	-100	53.6	496	0.0	-100
West Midnapore	0.0	-100	53.5	736	0.0	-100
SHWB						
Cooch Behar	0.0	-100	18.7	247	0.0	-100
Darjeeling	0.0	-100	7.9	-42	0.0	-100
East Sikkim	0.2	-99	4.1	-71	0.0	-99
Jalpaiguri	0.0	-100	26.6	392	0.0	-100
Malda	0.0	-100	46.4	3763	0.1	-99
North Dinajpur	0.0	-100	40.0	200	0.0	-100
North Sikkim	9.4	-60	6.3	-72	7.0	-76
South Dinajpur	0.0	-100	12.7	115	0.0	-100
South Sikkim	0.0	-100	5.6	-61	0.0	-100
West Sikkim	0.0	-100	1.3	-94	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	2.1	95
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	0.1	-95
Bangalore Urban	0.0	-100	0.0	-100	0.2	-95
Bellary	0.0	-100	0.0	-100	0.0	-100
Chamarajnagar	0.0	-100	0.0	-100	1.9	-48
Chichballapur	0.0	-100	0.0	-100	0.0	-100
Chickmagalur	0.0	-100	0.0	-100	2.0	67
Chitradurga	0.0	-100	0.0	-100	0.0	-100
Davangere	0.0	-100	0.0	-100	0.0	-100
Hassan	0.0	-100	0.0	-100	0.3	-83

Kodagu	0.1	-93	0.0	-100	0.0	-100
Kolar	0.0	-100	0.0	-100	0.0	-100
Mandya	0.0	-100	0.0	-100	0.1	-93
Mysore	0.0	-100	0.0	-100	2.3	44
Ramnagara	0.0	-100	0.2	-67	0.2	-95
Shimoga	0.0	-100	0.0	-100	6.7	2121
Tumkur	0.0	-100	0.1	-88	0.5	-58
Kerala						
Alappuzha	0.0	-100	5.4	0	17.9	88
Kannur	3.5	100	4.9	4800	0.0	-100
Ernakulam	0.0	-100	0.7	-77	10.4	27
Idukki	0.0	-100	0.0	-100	13.5	36
Kasaragod	0.0	-100	0.0	-100	0.0	-100
Kollam	0.0	-100	0.0	-100	15.7	32
Kottayam	0.4	-93	2.1	-76	16.3	120
Kozhikode	0.0	-100	0.0	-100	0.0	-100
Malappuram	0.0	-100	0.0	-100	0.5	-83
Palakkad	0.0	-100	0.0	-100	2.7	-34
Pathanamthitta	0.0	-100	0.0	-100	35.8	70
Thiruvananthapuram	0.0	-100	2.3	-39	10.8	48
Thrissur	0.0	-100	1.9	58	4.4	-6
Wayanad	0.0	-100	0.0	-100	4.2	-11
Tamil Nadu						
Ariyalur	0.0	-100	0.0	-100	1.0	-69
Chennai	0.0	-100	7.0	-27	0.1	-98
Coimbatore	0.0	-100	3.7	-7	0.2	-96
Cuddalore	0.0	-100	1.2	-75	12.5	178
Dharmapuri	0.0	-100	0.0	-100	5.2	8
Dindigul	0.0	-100	0.0	-100	4.1	-23
Erode	0.0	-100	0.0	-100	0.0	-100
Kanchipuram	0.0	-100	3.4	-41	0.1	-98
Kanyakumari	0.0	-100	8.0	41	8.1	11
Karikal	0.0	-100	0.0	-100	1.0	-91
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	0.0	-100	0.0	-100	1.7	-37
Madurai	0.0	-100	0.0	-100	0.0	-100
Nagapattinam	0.0	-100	0.0	-100	8.0	10
Namakkal	0.0	-100	0.0	-100	0.6	-85
Nilgiris	0.0	-100	27.0	429	12.8	-13
Perambalur	0.0	-100	0.3	-89	0.0	-100
Puducherry	0.0	-100	1.9	-83	25.6	200
Pudukottai	0.0	-100	0.0	-100	4.6	31
Ramanathapuram	0.0	-100	0.0	-99	9.8	76
Salem	0.0	-100	0.0	-100	1.1	-64
Sivaganga	0.0	-100	0.0	-100	2.3	-46
Thanjavur	0.0	-100	0.0	-100	10.5	155
Theni	0.0	-100	3.6	-7	4.8	-52
Tirunelveli	0.0	-100	0.5	-95	6.8	-21
Tirupur	0.0	-100	0.0	-100	0.0	-100

Tiruvallur	0.0	-100	0.8	-89	0.0	-100
Tiruvannamalai	0.0	-100	3.5	-10	6.5	97
Tiruvallur	0.0	-100	0.0	-100	13.2	175
Toothukudi	0.0	-100	0.1	-95	3.9	-45
Trichy	0.0	-100	0.4	-80	3.5	41
Vellore	0.0	-100	4.4	53	0.2	-85
Villupuram	0.0	-100	0.5	-83	13.5	611
Virudhunagar	0.0	-100	0.5	-89	1.2	-90
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	0.0	-100	0.0	-100	0.0	-100
Guntur	0.0	-100	2.4	5	0.0	-100
Krishna	0.0	-100	3.0	37	0.0	-100
Nellore	0.1	-95	2.3	-59	0.0	-100
Prakasam	0.0	-100	0.9	-55	0.0	-100
Sirkakulam	0.0	-100	0.0	-100	0.0	-100
Visakhapatnam	0.0	-100	0.0	-100	0.0	-100
Vizianagram	0.0	-100	1.2	-68	0.0	-100
West Godavari	0.0	-100	0.7	-69	0.0	-100
Telangana						
Adilabad	0.0	-100	0.0	-100	0.3	-86
Hyderabad	0.0	-100	0.6	-55	0.0	-100
Karimnagar	0.0	-100	0.0	-100	0.0	-100
Khammam	0.0	-100	0.0	-100	0.0	-100
Mehabubnagar	0.0	-100	0.0	-100	0.0	-100
Medak	0.0	-100	0.0	-100	0.0	-100
Nalgonda	0.0	-100	0.0	-100	0.0	-100
Nizamabad	0.0	-100	0.0	-100	0.0	-100
Rangareddy	0.0	-100	0.1	-78	0.0	-100
Warangal	0.0	-100	0.0	-100	0.0	-100
Rayalaseema						
Anantapur	0.0	-100	0.0	-100	0.0	-100
Chittoor	0.0	-100	1.0	-71	0.0	-100
Cuddapah	0.0	-100	0.0	-100	0.0	-100
Kurnool	0.0	-100	1.1	450	0.0	-100

	(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