

National Agromet Advisory Service Bulletin

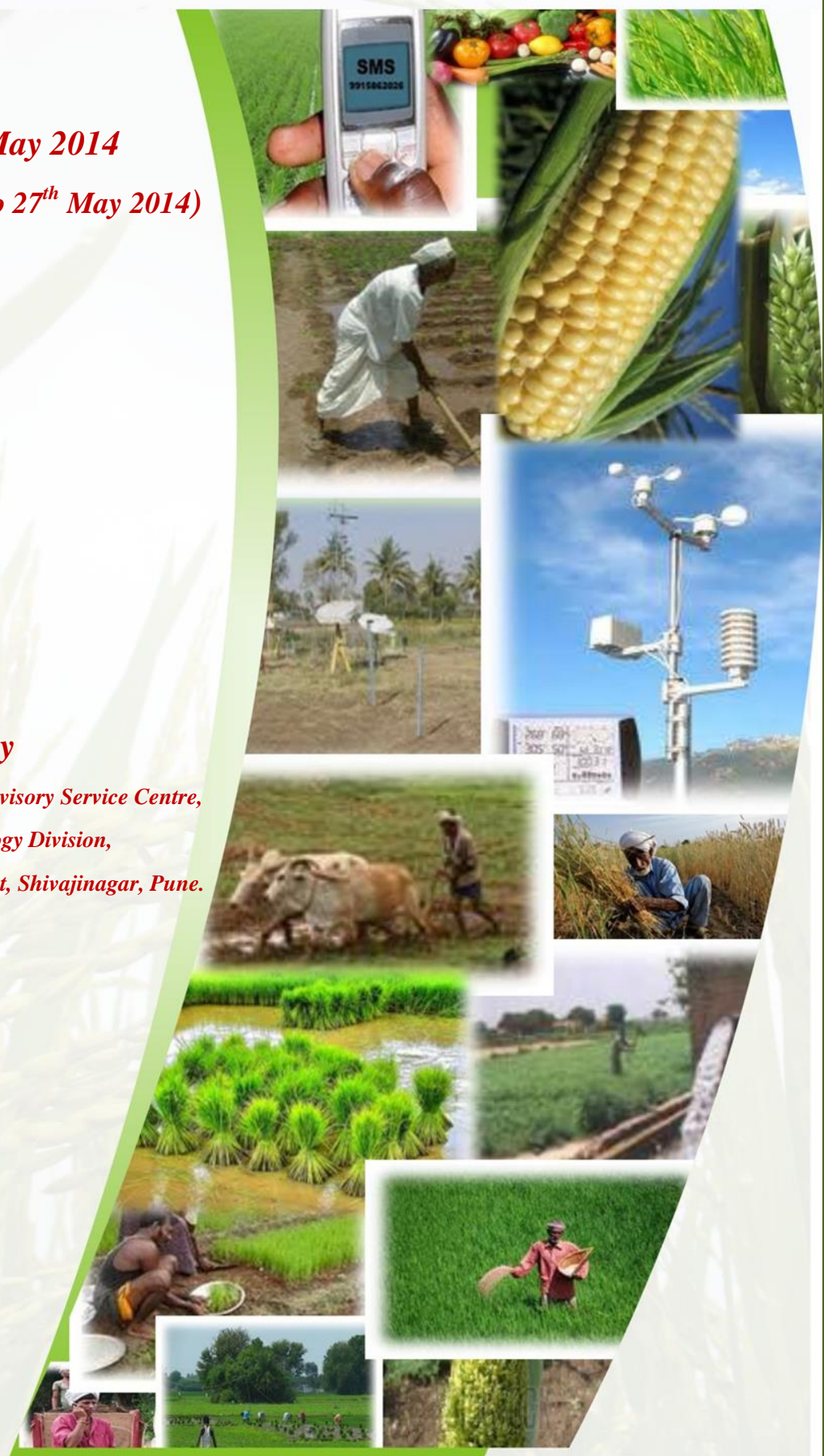
Friday 23rd May 2014

(For the period 23rd to 27th May 2014)



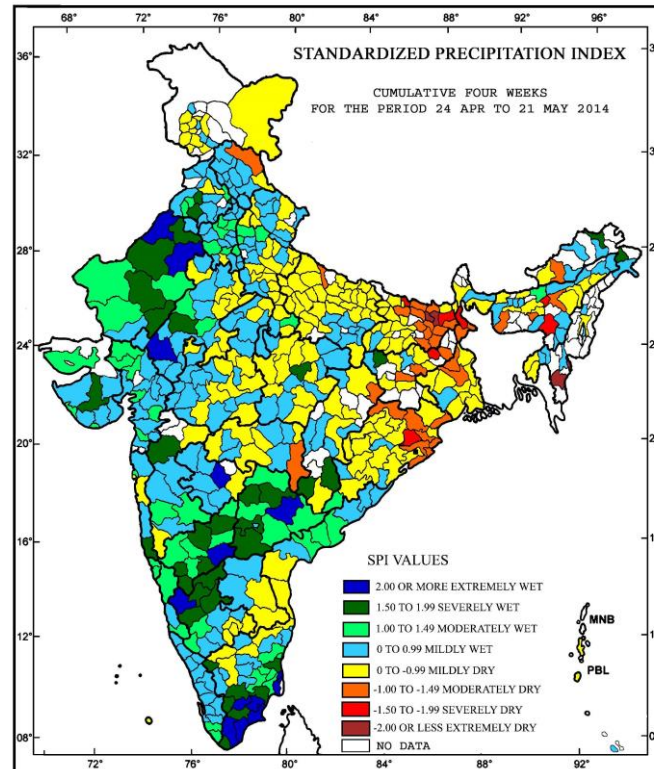
Issued by

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



**Standardised Precipitation Index
Four Weekly
for the Period 24th April to 21st May 2014**

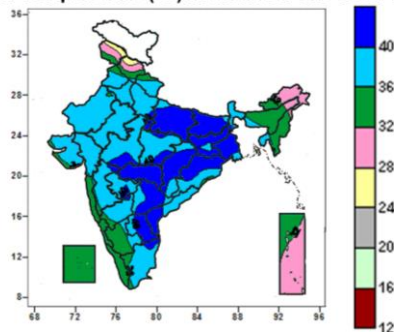
MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



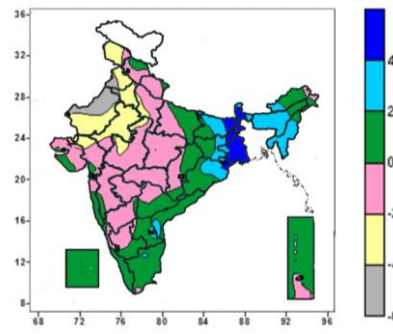
- Extremely wet/severely wet conditions experienced over Bhatinda, Moga districts of Punjab; Sri Ganganagar, Bikaner, Churu, Jodhpur, Hanumangarh, Udaipur, Bundi districts of Rajasthan; Rajkot district of Saurashtra; Katni district of Madhya Pradesh; Palamau district of Jharkhand; Upper Siang and Lohit districts of Arunachal Pradesh; Nasik, Parbhani and Sindhudurg districts of Maharashtra; Dhantewada and Bijapur districts of Chhattisgarh; Karimnagar, Nizamabad, Rangareddy, Mehbubnagar and Warangal districts of Telangana; Raichur, Bijapur, Gulbarga, Koppal, Dharwad, Haveri, Bellary, Davangere, Shimoga, Chikmangalur districts of Interior Karnataka; many districts of Tamilnadu.
- Moderately/ severely dry conditions experienced in Lahaul and Spiti district of Himachal Pradesh; Baharaich district of Utta Pradesh; East Kameng district of Arunachal Pradesh; Nagaon, Morigaon, Kamrup Metro, East Khasi Hills and Jaintia Hills district of Assam & Meghalaya; Birbhum and Burdwan districts of Gangetic West Bengal; Bokaro and Dhanbad districts of Jharkhand; Jashpur district of Chhattisgarh, Gadchiroli district of Maharashtra; few districts of Odisha and many districts of Bihar and Sub-Himalayan West Bengal.
- 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 21.05.2014

Actual Mean Maximum Temperature (°C) in India for the week ending 21.05.2014



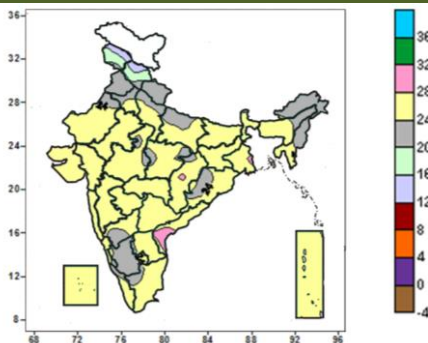
Mean Maximum Temperature (°C) Anomaly in India for the week ending 21.05.2014



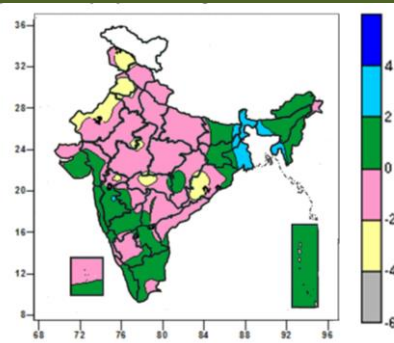
- 40 to 44°C over many parts of East Uttar Pradesh, Bihar, Jharkhand, Odisha, Chhattisgarh, Vidarbha, Andhra Pradesh, some parts of West Uttar Pradesh, Madhya Pradesh, Marathwada, Madhya Maharashtra, Saurashtra, Tamil Nadu.
- 36 to 40°C over many parts of Uttarakhand, West Uttar Pradesh, Rajasthan, Punjab, Haryana, Delhi, Sub-Himalayan West Bengal & Sikkim, Madhya Pradesh, Gujarat, Madhya Maharashtra, Marathwada, North Interior Karnataka, Tamil Nadu, some parts of Himachal Pradesh, East Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, Assam, Tripura, South Interior Karnataka, Konkan.
- 32 to 36°C over many parts of Assam & Meghalaya, Manipur, Mizoram, Tripura, Coastal & South Interior Karnataka, Kerala, Konkan & Goa, Lakshadweep, Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Nagaland, Tamil Nadu, Madhya Maharashtra, Saurashtra & Kutch, Andaman & Nicobar Islands.
- 24 to 32°C over many parts of Jammu & Kashmir, Himachal Pradesh, Nagaland, Andaman & Nicobar Islands, some parts of Arunachal Pradesh, Assam & Meghalaya.

- 4 to 6°C over many parts of West Bengal, some parts of Sikkim, Bihar, Jharkhand, Odisha.
- 2 to 4°C over many parts of Bihar, Sikkim, Assam & Meghalaya, Manipur, Mizoram, Tripura, , some parts of Jharkhand, Arunachal Pradesh, Odisha, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu.
- 0 to 2°C over many parts of East Uttar Pradesh, Arunachal Pradesh, Nagaland, Chhattisgarh, Odisha, Andhra Pradesh, Tamil Nadu, Kerala, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of Uttarakhand, Jharkhand, Assam & Meghalaya, Karnataka, Madhya Maharashtra, Gujarat.
- -4 to 0°C over many parts of Jammu & Kashmir, Punjab, Haryana, Delhi, Rajasthan, Madhya Pradesh, Gujarat, some parts of Uttar Pradesh.
- -6 to -4 over some parts of Punjab, Haryana, West Rajasthan.

Actual Mean Minimum Temperature (°C) in India for the week ending 21.05.2014



Mean Minimum Temperature (°C) Anomaly in India for the week ending 21.05.2014



- 24 to 28°C over entire country except many parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Arunachal Pradesh, Nagaland, Manipur, South Interior Karnataka, some parts of West Rajasthan, Haryana, Uttar Pradesh, Sikkim, Assam & Meghalaya, Mizoram, Odisha, Central India, Coastal Andhra Pradesh, North Interior Karnataka, Tamil Nadu.

- 2 to 4°C over many parts of West Bengal & Sikkim, some parts of Bihar, Jharkhand, Assam, Tripura, Madhya Maharashtra.
- 0 to 2°C over many parts of Bihar, Jharkhand, North East India, Rayalaseema, Tamil Nadu, Kerala, North Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Gujarat, Andaman & Nicobar Island, some

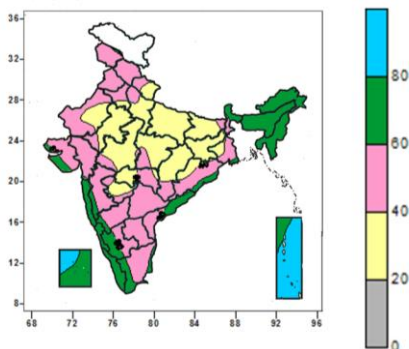
- 20 to 24⁰C over many parts of Uttarakhand, Punjab, Arunachal Pradesh, Nagaland, Manipur, South Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, West Rajasthan, Haryana, Uttar Pradesh, Sikkim, Assam & Meghalaya, Mizoram, Odisha, Central India, Coastal Andhra Pradesh, North Interior Karnataka, Tamil Nadu.
- 12 to 20⁰C over many parts of Jammu & Kashmir, Himachal Pradesh.

parts of Gangetic West Bengal, Odisha, Chhattisgarh, Vidarbha, Marathwada, Coastal Andhra Pradesh, Telangana, Coastal & South Interior Karnataka.

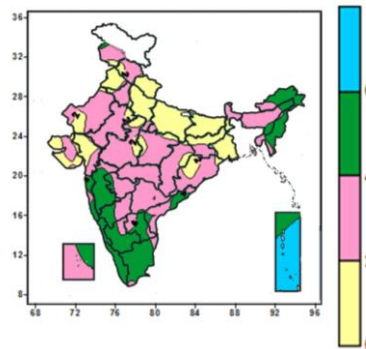
- -2 to 0⁰C over entire country except many parts of Jammu & Kashmir, Punjab, East India, North East India, Rayalaseema, Tamil Nadu, Kerala, North Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Gujarat, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Haryana, Rajasthan, Central India, Coastal Andhra Pradesh, Telangana, Coastal & South Interior Karnataka, Marathwada, Vidarbha, Lakshadweep Islands.
- -4 to -2⁰C over many parts of Jammu & Kashmir, Punjab, some parts of Himachal Pradesh, Haryana, Rajasthan, Odisha, Chhattisgarh, Madhya Pradesh, Vidarbha, Madhya Maharashtra.

Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 21.05.2014

Relative Humidity (%) over India for the week ending 21.05.2014



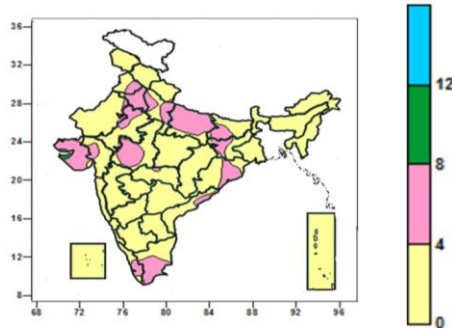
Cloud amount (okta) over India for the week ending 21.05.2014



- 80 to 100% over many parts of Andaman & Nicobar Islands, some parts of Lakshadweep Islands.
- 60 to 80% over many parts of Sub-Himalayan West Bengal & Sikkim, North East India, Kerala, Coastal & South Interior Karnataka, Konkan & Goa, Lakshadweep Islands, some parts of Gangetic West Bengal, Odisha, Coastal Andhra Pradesh, Tamil Nadu, North Interior Karnataka, Madhya Maharashtra, Saurashtra & Kutch, Andaman & Nicobar Islands.
- 40 to 60% over many parts Jammu & Kashmir, Himachal Pradesh, West Rajasthan, Punjab, Haryana, Delhi, Gangetic West Bengal, Odisha, Andhra Pradesh, Tamil Nadu, Interior Karnataka, Madhya Maharashtra, Gujarat, some parts of Uttarakhand, West Uttar Pradesh, Bihar, Sub-Himalayan West Bengal, Central India, Marathwada, Vidarbha.
- 20 to 40% over many parts of Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Central India, Marathwada, some parts of Uttarakhand, Haryana, Delhi, Gangetic West Bengal, Odisha, Vidarbha.

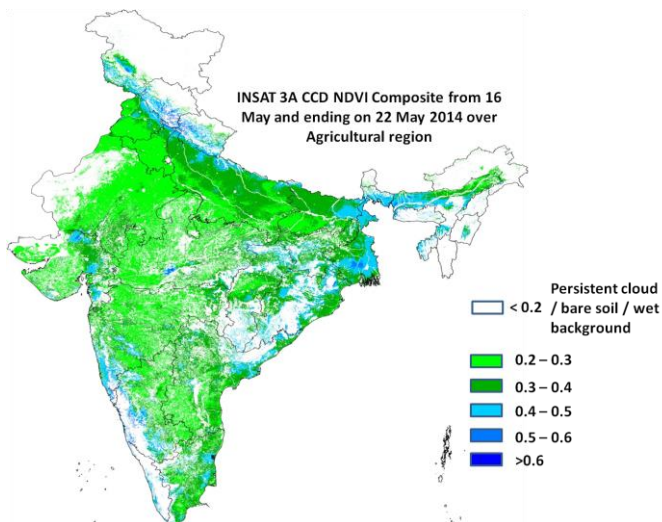
- 6 to 8 okta over many parts of Andaman & Nicobar Islands.
- 4 to 6 okta over many parts of Arunachal Pradesh, Nagaland, Manipur, Mizoram, Rayalaseema, Tamil Nadu, Kerala, Karnataka, Konkan & Goa, Madhya Maharashtra, some parts of Jammu & Kashmir, Sikkim, Assam & Meghalaya, Tripura, Coastal Andhra Pradesh, Telangana, Marathwada, Lakshadweep, Andaman & Nicobar Islands.
- 2 to 4 okta over entire country (except many parts of, Uttarakhand, Punjab, Uttar Pradesh, Bihar, Gangetic West Bengal, Gujarat region, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Rayalaseema, Tamil Nadu, Kerala, Karnataka, Konkan & Goa, Madhya Maharashtra, some parts of Jammu & Kashmir, Himachal Pradesh, Haryana, Delhi, Rajasthan, Sub-Himalayan West Bengal & Sikkim, Assam & Meghalaya, Tripura, Jharkhand, Odisha, Central India, Coastal Andhra Pradesh, Telangana, Marathwada, Saurashtra & Kutch, Lakshadweep, Andaman & Nicobar Islands).
- 0 to 2 okta over many parts of Uttarakhand, Punjab, Uttar Pradesh, Bihar, Gangetic West Bengal, Gujarat region, some parts of Jammu & Kashmir, Himachal Pradesh, Haryana, Rajasthan, Sub-Himalayan West Bengal. Odisha, Central India, Saurashtra & Kutch.

Wind speed (knots) over India for the week ending 21.05.2014



- 8 to 12 knots over some parts of Saurashtra & Kutch.
- 4 to 8 knots over many parts of Haryana, Delhi, Uttar Pradesh, West Madhya Pradesh, Saurashtra & Kutch, some parts of Punjab, Rajasthan, Gujarat region, Bihar, Jharkhand, Odisha, Coastal Andhra Pradesh, Tamil Nadu, Kerala.
- 0 to 4 knots over entire parts of country except many parts of Haryana, Delhi, Uttar Pradesh, West Madhya Pradesh, Saurashtra & Kutch, some parts of Punjab, Rajasthan, Gujarat region, Bihar, Jharkhand, Odisha, Coastal Andhra Pradesh, Tamil Nadu, Kerala).

INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION 16th – 22nd May 2014



Source: SAC, Ahmedabad

- Agricultural vigour is moderate over very few pockets of central West Bengal and central M.P where NDVI varies between 0.4 to 0.5 upto 22nd May 2014. The NDVI remains within the range of 0.2 to 0.4 over rest of India. There is no change in NDVI from last week.

Monsoon Watch

- The northern limit of monsoon (NLM) continue to pass through 05.0°N/85.0°E, 10.0°N/88.0°E, 16.0°N/92.0°E and 19.0°N/94.0°E.
- Conditions remain favourable for further advance of southwest monsoon into some more parts of eastcentral and northeast Bay of Bengal during next 48 hours.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 26th May, 2014)

- Rain/thundershowers would occur at many places over Andaman & Nicobar Islands during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at many places over Assam & Meghalaya during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at a few places over Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura and Sub-Himalayan West Bengal & Sikkim during the period.
- Rain/thundershowers would occur at many places over Jammu & Kashmir during next 24 hours and at a few places on 24th and decrease thereafter.
- Rain/thundershowers would occur at a few places over Coastal Karnataka during next 24 hours and over Himachal Pradesh and Kerala during next 48 hours and at isolated places thereafter.
- Rain/thundershowers would occur at isolated places over Coastal Andhra Pradesh, Interior Karnataka, Tamilnadu & Pudduchery and Lakshadweep during the period.
- Rain/thundershowers would occur at isolated places over Punjab, Haryana & Delhi, Rajasthan, Vidarbha, Telangana and Rayalaseema during next 24 hours and over Uttarakhand and Chhattisgarh during next 48 hours and mainly dry thereafter.
- Mainly dry/dry weather would prevail over Gangetic West Bengal and Odisha during next 48 hours and rain/thundershowers would occur at isolated places thereafter.
- Mainly dry/dry weather would prevail over rest of the country.
- Maximum temperature would rise by 2-3°C over many parts of central & adjoining northwest India and by 1-2°C over some parts of east India during next 48 hours.

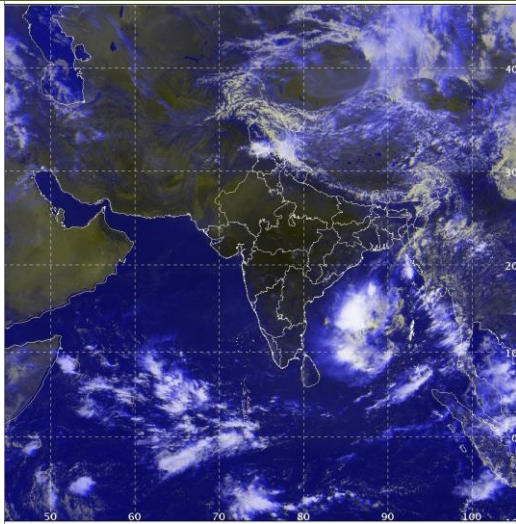
Weather Warning during next 3 days

- **23 May (Day 1):** Heat wave/ severe heat wave conditions would prevail at a few places over Gangetic West Bengal and Odisha. Heat wave conditions would also prevail at isolated places over Bihar, Jharkhand, south Gujarat region, Andhra Pradesh and Saurashtra & Kutch. Squally winds speed reaching upto 45-55 kmph gusting to 65 kmph would prevail along and off Andaman Islands.
- **24 May (Day 2):** Heat wave/ severe heat wave conditions would prevail at a few places over Gangetic West Bengal and Odisha. Heat wave conditions would also prevail at isolated places over east Uttar Pradesh, Bihar, Jharkhand, south Gujarat region, Andhra Pradesh and Saurashtra & Kutch.
- **25 May (Day 3):** Nil.

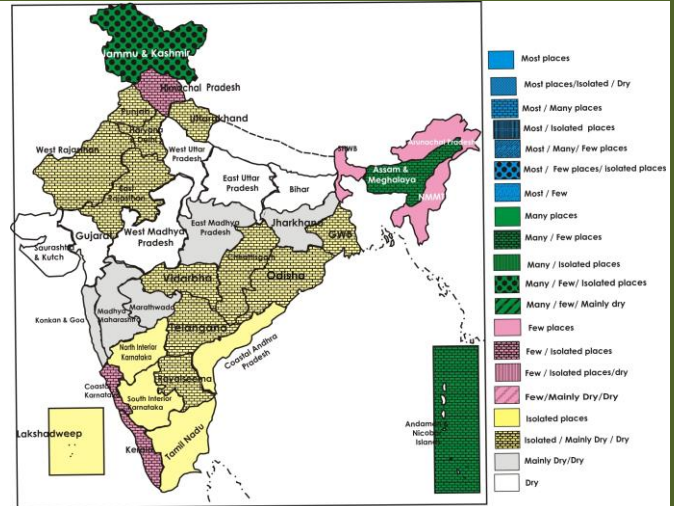
Weather Outlook for subsequent 4 days from 26th to 30th May 2014

- Rain/thundershowers would occur at isolated places over western Himalayan region and adjoining plains of northwest India on 26th May.
- Rain/thundershowers would occur at many places over northeastern states and at isolated places over adjoining east India, Chhattisgarh, Vidarbha and Andhra Pradesh.
- Rain/thundershowers would occur at a few places over Andaman & Nicobar Island.
- Rain/thundershowers would occur at isolated places over extreme south peninsular India.
- Weather would be mainly dry over rest of the country.

Satellite image dated 23.05.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 26th May, 2014)



Salient Advisories

- As squally /gusty winds would prevail along and off in **Andaman and Nicobar Islands**, provide mechanical support to banana to prevent the crop from lodging. Remove excess water from vegetable fields to avoid water stagnation. Squally winds speed reaching upto 45-55 kmph gusting to 65 kmph would prevail along and off Andaman Islands. Fisherman along and off Andaman Islands are advised not to venture into sea on 23rd May.
- As rain/thundershowers would occur at many places over **Jammu & Kashmir** on 23rd May, over **Assam & Meghalaya** on 23rd and 24th May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting and store the already harvested products at safe places.
- As heat wave / severe heat wave conditions would prevail at a few places over **Gangetic West Bengal** and **Odisha** and heat wave conditions at isolated places over **Bihar, Jharkhand, Andhra Pradesh, south Gujarat region** and **Saurashtra & Kutch** on 23rd and 24th May, over **east Uttar Pradesh** on 24th May, it is advised to apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.
- Undertake nursery preparation for sowing of *sali* rice in Central and Lower Bramhaputra Valley Zone of **Assam**.
- The **depression** over east central Bay of Bengal has moved southwestwards and lay centered at 0530 hours IST of today, near lat.17.0°N and long. 91.0E, about 620 km north-northwest of Port Blair. It would move southwestwards during next 24 hours. Impact of the system is being monitored and appropriate advisories will be issued accordingly.

Detailed Zonewise Agromet Advisories

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



Sugarcane



Bottle Gourd



Onion



Mango

- **Realised Rainfall:** Rainfall occurred in Anantnag, Baramula, Doda, Ganderbal, Kulgam, Pulwama, Ramban, Shopian and Srinagar districts of Jammu & Kashmir. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Jammu & Kashmir during next 24 hours and at a few places on 24th and decrease thereafter. Rain/thundershowers would occur at a few places over Himachal

Pradesh during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Punjab, Haryana & Delhi, Rajasthan during next 24 hours and over Uttarakhand during next 48 hours and mainly dry thereafter. Dry weather would prevail over rest of the region.

Maximum temperature would rise by 2-3°C over many parts of northwest India adjoining to central India during next 48 hours.

- **Weather Warning:** Heat wave conditions would prevail at isolated places over east Uttar Pradesh on 24th May.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over western Himalayan region and adjoining plains of northwest India on 26th May.
- **Advisories:**
 - **Jammu & Kashmir:**
 - As rain/thundershowers would occur at many places over Jammu & Kashmir on 23rd May, postpone irrigation, application of fertilizers and plant protection measures in standing crops.
 - As rain would occur at many places, undertake nursery preparation for sowing of rice in Sub Tropical Zone of Jammu & Kashmir.
 - In Valley Temperate Zone of Jammu and Kashmir, continue sowing of maize, kale, knol khol, beans and bhindi and transplanting of seedlings of solanaceous vegetables utilizing the realized and expected rainfall.
 - Partly cloudy and humid weather conditions are congenial for development of bacterial wilt in tomato in Sub Tropical Zone of Jammu & Kashmir; to manage, apply Streptomycin Sulphate @ 2g per 10 litres of water after current spells of rain.
 - **Himachal Pradesh:**
 - Continue sowing of cucurbits viz. cucumber, bitter gourd, bottle gourd and summer squash and transplanting of *capsicum*, tomato, chilli and brinjal in main fields utilizing the available soil moisture in Mid Hill Sub-Humid Zone of Himachal Pradesh. Also undertake nursery preparation for sowing of *kharif* rice and maize.
 - Due to hot and humid weather conditions, there is chance of attack red beetle in pumpkin in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. For control, spray Malathion 50EC @ 1ml per litre of water on a non rainy day.
 - Due to humid weather condition, there is chance of *alternaria* leaf spot disease in apple at fruit development stage in Mild Hills Sub-Humid Zone of Himachal Pradesh. For control, apply Entracol @ 600 g in 200 litres of water on a non rainy day.
 - **Uttarakhand:**
 - As there was no significant rainfall during last week and no significant rain is likely to occur, apply irrigation in standing crops like sugarcane, maize and in early sown rice nurseries or undertake mulching to conserve soil moisture in Bhabar and Tarai Zone of Uttarakhand.
 - Under prevailing mainly dry weather conditions, undertake harvesting of vegetables like spinach, fenugreek, radish, and coriander in Hill Zone of Uttarakhand.
 - Due to increase in temperature, army bug is likely to damage sugarcane crop in Bhabar and Tarai Zone of Uttarakhand. If incidence is more than 10 percent, then fill up the sugarcane field with 4 inch irrigation water or spray Nuvacran @ 1 ml per litre of water.
 - In Bhabar and Tarai Zone of Uttarakhand due to increase in temperature, there may be attack of fruit borer in tomato and capsicum, spray 50 EC Prophenophos @ 1 ml per liter of water for control.
 - **Punjab, Haryana and Delhi:**
 - In view of prevailing hot weather conditions in Central Plain Zone of Punjab, it is advised to apply light and frequent irrigation in tomato, chilli, *capsicum* and cucurbit crops to encourage maximum fruit setting and development of fruits. Save the orchard crops from rising temperature by applying light and frequent irrigation.
 - Due to prevailing dry and hot weather conditions in Western Plain Zone of Punjab, irrigate the sugarcane crop at 7-12 days interval for better growth. Apply paddy straw or rice husk or sugarcane trash between the rows of sugarcane to reduce soil temperature and moisture loss.
 - As dry weather would prevail, apply irrigation in spring maize, moong and sunflower in Sub Montane Undulating Zone of Punjab.
 - As dry weather is likely to prevail, apply light and frequent irrigation in all vegetable crops and new horticultural plantations in Eastern Zone of Haryana. Irrigation should be done in the morning or evening hours.
 - Prevailing hot weather conditions are favourable for appearance of downy mildew in cucurbits in Central plain Zone of Punjab. To control, spray Indofil M-45 or Kavach @ 300-600 g in 100-200 litres of water. Repeat the spray at weekly intervals.
 - In Delhi, in view of increasing temperature, apply light and frequent irrigation in all vegetable crops in the morning or evening hours. Optimum moisture level should be maintained in cucurbitaceous crops by applying light and frequent irrigation, as dry conditions may lead to poor pollination and thus drop in yield. Protect banana, citrus, mango and kinnow orchards against hot winds by erecting physical barriers and also by applying frequent irrigation.

■ Uttar Pradesh

- As heat wave conditions would prevail at isolated places over east Uttar Pradesh on 24th May, it is advised to apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.
- As dry weather would prevail, apply irrigation in sugarcane, vegetables and fruit crops and continue inter-cultural operations in sugarcane in West Uttar Pradesh.
- As dry weather is prevailing, continue harvesting of sorghum, cucurbitaceous crops like bitter melon, bottle gourd, khira, etc. in Central Plain Zone of Uttar Pradesh. Also undertake nursery preparation for sowing of *kharif* rice.
- Due to hot weather conditions, there is chance of attack of red beetle in papaya in Central Plain Zone of Uttar Pradesh. To control, spray Malathion @ 0.2 ml per litre of water.
- Due to hot weather conditions, there is chance of attack of white grub in sugarcane in Western Plain Zone of Uttar Pradesh. For control, apply Buaria Basiana @ 2 kg + cow dung @ 50 kg per hectare or Metarizam @ 1kg + cow dung @ 28 kg per hectare.

■ Rajasthan:

- As mainly dry weather is prevailing, apply light and frequent irrigation in sorghum, bajra and all vegetable crops and fruit crops in Rajasthan.
- Due to prevailing hot weather, there is possibility of attack of stem and fruit borer in okra in Southern Humid Plain Zone of Rajasthan; to control, spray Malathion @ 2 ml or Thioron 1 ml in one litre of water.
- Due to rise in temperature, chilli crop is affected by leaf curl and mosaic disease which is likely to spread in Semi Arid Eastern Plain Zone of Rajasthan. To manage, uproot and burn the affected plants and spray Dimethoate 30 EC @ 1.0 ml per litre of water.
- Due to rise in temperature, there may be attack of aphids and jassids in pulses in Sub-Humid Southern Plain and Aravali Hill Plain Zone of Rajasthan. For control, spray Imidacloprid @ 5ml per 15 litres of water.
- Due to rise in temperature there may be attack of thrips, jassids and white fly in zaid moong in Flood Prone Eastern Plain Zone of Rajasthan. For control, spray 30EC Dimethoate @ 800 ml in 800 litres of water.

● Animal Husbandry

- Due to prevailing high temperature in the region, grazing /feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade or in sheds during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule.
- Due to hot weather conditions Ecto and endo parasites may attack on livestock in Arid Western plain Zone of Rajasthan. To control ecto parasites like lice, mite, joke etc. apply Butox/Tickle @ 1 ml per litre of water on the body of animal.
- Due to rise in temperature there may be attack of ticks and mites in animals in Mid Hills Sub-Humid Zone of Himachal Pradesh. For control spray Butox @ 2 ml per litre of water.

● Poultry

- Due to prevailing hot weather conditions, give balanced feed to the poultry birds in Central Plain Zone of Uttar Pradesh, Mid-Hills Sub-Humid Zone of Himachal Pradesh and Rajasthan. Make proper ventilation in poultry sheds and keep the sheds clean. White wash the poultry shed from outside especially the roof. This will help to reflect the sun rays.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane



Chilli



Okra



Green Gram

- **Realised Rainfall:** Rainfall occurred in Bastar and Bijapur districts of Chhattisgarh. Weather was mainly dry over rest of the region.
- **Weather forecast:** Rain/thundershowers would occur at isolated places over Chhattisgarh during next 48 hours and mainly dry thereafter. Mainly dry/dry weather would prevail over rest of the region. Maximum temperature would rise by 2-3°C over many parts of central India during next 48 hours.
- **Weather Warning:** Nil.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over Chhattisgarh. Mainly dry weather

would prevail over rest of the region.

- **Advisories:**

- **Madhya Pradesh:**

- As prevailing temperature is high, apply light and frequent irrigation in vegetables in Madhya Pradesh.
- As mainly dry weather and high temperature conditions are prevailing, apply light and frequent irrigation in summer vegetables, mango, guava and lemon orchards in Gird Zone, Jhabua Hill Zone and Kymore Plateau Zone of Madhya Pradesh.
- As mainly dry weather would prevail, continue harvesting of matured cauliflower, tomato, brinjal, chilli, *capsicum* etc. in Satpura Plateau Zone, Kymore Plateau Zone and Nimar Valley Zone of Madhya Pradesh.
- As prevailing temperature is high, undertake soil mulching / apply mulch in young fruit plants in Jhabua Hill Zone of Madhya Pradesh.
- As mainly dry weather would prevail, harvest matured moong and urad in Jhabua Hill Zone and Grid Zone of Madhya Pradesh.
- Due to prevailing hot weather, there is possibility of attack of early shoot borer and scale insect in sugarcane in Central Narmada Valley Zone of Madhya Pradesh; apply Phorate 10 G @ 10-15 kg/ha.
- Due to prevailing hot weather, there is possibility of attack of stem borer in sugarcane in Vindhya Plateau Zone of Madhya Pradesh; apply Phorate 10 G @ 10 kg/ha.

- **Chhattisgarh:**

- As no significant rainfall is likely, apply irrigation in summer rice, maize, sugarcane and mango and litchi orchards in North Hill Zone of Chhattisgarh.
- As prevailing temperature is high, apply irrigation in summer rice and vegetables in Chhattisgarh Plain Zone. Undertake mulching by paddy straw in summer vegetables (okra, tomato and brinjal) and soil mulching in groundnut and moong.
- In view of prevailing high temperature, apply irrigation in groundnut at pod filling stage which is sensitive to moisture stress in North Hill Zone and Plain Zone of Chhattisgarh.
- Due to hot weather, there is possibility of attack of stem borer in summer maize in North Hill Zone of Chhattisgarh; apply Carbofuran @ 2-3 grain per plant.
- Due to hot weather, there is possibility of attack of yellow vein mosaic disease in cucurbitaceous vegetables in Chhattisgarh Plain Zone, spray Imidachloprid 17.8 SL @ 3 ml per sprayer.

- **Animal Husbandry**

- Vaccinate poultry birds with F-1 or Lasota strain vaccine against Ranikhet disease and cattles against FMD disease during the season. Also protect chicks against high temperature and provide cold and clean water to animals for drinking 3 times a day in Madhya Pradesh.
- In view of increasing temperature, cover the window and doors of poultry farms with gunny bags and keep wet with water in Bundelkhand Zone of Madhya Pradesh.
- Due to prevailing high temperature, special attention should be given to milch animals with regard to feed and water in North Hill Zone of Chhattisgarh. Provide plenty of clean water to the animals and keep them in sheds/ under shade.

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



Mango



Sugarcane



Green Gram



Onion

- **Realised Rainfall:** Rainfall occurred in all districts of Sikkim; Cooch Behar, Darjeeling and Jalpaiguri districts in Sub-Himalayan West Bengal; in Nayagarh district of Odisha. Weather remained mainly dry / dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Andaman & Nicobar Islands during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Sub-Himalayan West Bengal & Sikkim during the period. Mainly dry weather would prevail over Gangetic West Bengal and Odisha during next 48 hours and rain/thundershowers would occur at isolated places thereafter. Mainly dry/dry weather would prevail over rest of the region.
Maximum temperature would rise by 1-2°C over some parts of east India during next 48 hours.

- **Weather Warning:** Heat wave conditions would prevail at a few places over Gangetic West Bengal and Odisha, at isolated places over Bihar and Jharkhand on 23rd and 24th May.
Squally winds speed reaching to 45-55 kmph gusting to 65 kmph would prevail along and off Andaman Islands on 23rd May.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over adjoining east India. Rain/thundershowers would occur at a few places over Andaman & Nicobar Island.
- **Advisories:**
 - As heat wave / severe heat wave conditions would prevail at a few places over Gangetic West Bengal and Odisha and at isolated places over Bihar and Jharkhand on 23rd and 24th May, it is advised to apply light and frequent irrigation to the standing crops or undertake soil mulching/ mulching with straw/polythene to cope up with the excess evaporative demand due to high temperature.
 - **Andaman & Nicobar Islands:**
 - As squally /gusty winds would prevail along and off in Andaman and Nicobar Islands, provide mechanical support to banana to prevent the crop from lodging. Remove excess water from vegetable fields to avoid water stagnation.
 - Squally winds speed reaching to 45-55 kmph gusting to 65 kmph would prevail along and off Andaman Islands. Fisherman along and off Andaman Islands are advised not to venture into sea on 23rd May.
 - **Odisha:**
 - High diurnal variation of temperature favours incidence of blast in rice in East and South Eastern Coastal Plain Zone and North Central Plateau Zone of Odisha. For control; spray Tricyclazole @ 0.6g per litre of water. Also due to hot weather, there is chance of stem borer in rice; to manage fix 4-5 pheromone traps per acre or spray Triazophos @ 2 ml / litre of water.
 - High diurnal variation of temperature may aggravate whitefly problem in green gram at flowering to pod formation stage in North Central Plateau Zone of Odisha. Use yellow sticky traps and spray Dimethoate/Triazophos @ 2 ml / litre of water to control whitefly population.
 - **West Bengal:**
 - Taking the advantage of prevailing mainly dry weather over Gangetic West Bengal, continue harvesting of matured *boro* rice.
 - In New Alluvial Zone of West Bengal, prevailing high temperature and humidity is congenial for attack of Red-Pumpkin Beetle in summer vegetables like pumpkin, ridge-gourd, pointed gourd and cucumber. Apply Chlorpyrifos @ 2 ml/litre or Carbaryl 2 g/litre of water for control.
 - In the prevailing weather condition, attack of white fly may occur in ladies finger in Laterite and Red Soil Zone of West Bengal. To control, apply Imidachloprid 17.8 S. L. @ 4 ml per 10 litre water.
 - In Prevailing weather condition stem rot may be problem in jute in Terai Zone of West Bengal. To manage spray Carbendazim 12%+ Mancozeb 64% @ 2 g/litre of water on a non rainy day.
 - **Bihar:**
 - As high temperature is prevailing, apply light and frequent irrigation in onion, sunflower, green gram, summer vegetables, mango and litchi in North West Alluvial Plain Zone of Bihar and apply regular irrigation in sugarcane, and moong in North East Alluvial Plain Zone of Bihar. Also apply irrigation to chilli, green gram and maize in South Bihar Alluvial Zone.
 - Due to high temperature there is chance of early shoot borer in sugarcane in North East Alluvial Plain Zone of Bihar, spray Chlorpyrifos 20 EC @ 2 litre/ha or Phorate 10G @ 1kg /ha.
 - **Jharkhand:**
 - As mainly dry weather would prevail, apply irrigation in moong, vegetables, in mango and litchi orchards in Western Plateau Zone and in moong and summer rice in South Eastern Plateau Zone of Jharkhand.
 - High day and night temperature favours production of case worms, leaf folders or hispa, brown plant hopper and stem borer eggs and their infestation are also being seen in rice in South Eastern Plateau Zone of Jharkhand; spray Monocrotophos @ 1 ml per liter of water.
- **Animal Husbandry**
 - As heat wave/ severe heat wave conditions would prevail at few places over Odisha and Gangetic West Bengal, at isolated places over Bihar and Jharkhand, keep animals under shade or in sheds during noon hours and provide plenty of water mixed with minerals for drinking. Make arrangement of curtains and proper ventilation in poultry houses. Keep the poultry shed cool by wetting the curtains with water.

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



Green Gram

Rice

Okra

Sugarcane

- **Realised Rainfall:** Rainfall occurred in Changlang, Dibang Valley, East Kameng, East Siang, Lower Dibang Valley, Papumpara, Tawang, Upper Siang, West Kameng and West Siang districts of Arunachal Pradesh, Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Dhemaji, Dhubri, Hailakandi, Jorhat, Kamrup(Rural), Karimganj, Kokrajhar, Lakhimpur, N.C.Hills, Nalbari, Sonitpur, Tinsukia and Udalgiri districts of Assam, East Garo Hills, East Khasi Hills and West Garo Hills districts of Meghalaya, Saiha district of Mizoram, Bishnupur, Imphal East, Imphal West and Senapati districts of Manipur, Dhalai and North Tripura districts of Tripura.
- **Weather forecast:** Rain/thundershowers would occur at many places over Assam & Meghalaya during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura during the period.
- **Weather Warning:** Nil
- **Weather Outlook:** Rain/thundershowers would occur at many places over northeastern states.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - As rain/thundershowers would occur at many places over Assam & Meghalaya on 23rd and 24th May, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Also postpone harvesting of matured crops and store the harvested products at safe place.
 - Undertake nursery preparation for sowing of *sali* rice in Central and Lower Brahmaputra Valley Zone of Assam.
 - In Lower Brahmaputra Valley Zone of Assam, undertake planting of lemon, pepper and pineapple utilising the realised and expected rainfall.
 - Undertake planting of ginger and turmeric, land preparation and sowing of French bean and cow pea in Temperate Sub Alpine Zone of Meghalaya utilizing the realised and expected rainfall.
 - Due to cloudy weather and increase in humidity, there is chance of attack of blast disease in *ahu* rice in Hill Zone, North Bank Plain Zone and Central Brahmaputra Valley Zone of Assam and Temperate Sub Alpine Zone of Meghalaya. Spray Bavistin @ 1g/litre of water or Carbendazim @ 1g/litre of water after current spells of rain.
 - Due to cloudy weather and increase in humidity, there is chance of attack of Red pumpkin beetle and fruit fly in cucurbit crops in Hill Zone of Assam. Spray Malathion 50 EC @ 2 ml/ litre of water after current spells of rain.
 - Due cloudy and rainy weather, there may be infestation of rice bug in *boro* rice in Central Brahmaputra Valley Zone and North Bank Plain Zone of Assam. Dusting of Malathion 5% powder may be done after current spells of rain.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Sub Tropical Plain Zone of Manipur, continue sowing of soybean, groundnut and black gram and planting of turmeric in upland areas with available soil moisture.
 - Undertake sowing of maize, cucurbits and planting of ginger and turmeric in Mid Tropical Hill Zone of Mizoram with available soil moisture.
 - Warm and humid conditions may cause cercospora / sigatoka leaf spot in banana in Mid Tropical Hill Zone of Mizoram. Spray Mancozeb+ Carbendazim @ 2g/litre of water on a non rainy day.
 - Partly cloudy and humid weather is conducive for attack of fruit & shoot borer in summer brinjal and tomato in Mild Tropical Plain Zone of Tripura. To manage the attack, apply Cypermethrin @ 1.5 ml or Flubendamid @ 0.5 ml per litre of water on a non rainy day.
 - Due to cloudy and rainy weather, there is chance of infestation of Gundhi bug in *boro* rice in Mild Tropical Plain Zone of Tripura. Spray Imidacloprid @ 2 ml per litre of water on a non rainy day.
- **Animal Husbandry**
 - In Mild Tropical Hill Zone of Tripura, vaccination for the cattle may be undertaken prior to monsoon season to protect from diseases like anthrax, black quarter, Haemorrhagic Septicaemia.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Rice

Groundnut

Green Gram

Mango

- **Realised Rainfall:** Rainfall occurred in North Goa, South Goa districts of Goa, in Nashik and Parbhani districts of Maharashtra. Weather remained mainly dry / dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Vidarbha during next 24 hours and mainly dry weather is likely thereafter. Mainly dry weather would prevail over Konkan and Goa, Marathwada and Madhya Maharashtra. Dry weather would prevail over Gujarat State.
- **Weather Warning:** Heat wave conditions would prevail at isolated places over south Gujarat region and Saurashtra & Kutch on 23rd and 24th May.
- **Weather Outlook:** Weather would be mainly dry over the region.
- **Advisories:**
 - **Maharashtra:**
 - In Konkan, as mainly dry weather is expected, apply irrigation in coconut and cashew orchards and vegetables. Undertake preparatory tillage for rice nursery in Sindhudurg district utilizing available moisture.
 - As day temperature is prevailing around 40-42°C in north Madhya Maharashtra, apply mulch of crop residues and other plant waste product in the orchards and sugarcane trash in sugarcane. Apply irrigation in sugarcane by alternate furrow method in water stress condition. Apply 20 litres of water to each banana plant/day
 - As mainly dry weather is likely in Marathwada in Maharashtra, apply irrigation to summer groundnut, sugarcane, orchard crops like banana, pomegranate, fig (drip irrigation) and vegetable crops in morning and evening hours. As prevailing day temperature is around 40-42°C, apply mulch of crop residues and other plant waste products in the orchards and sugarcane trash in sugarcane.
 - In Vidarbha, considering the prevailing high temperature (42-44°C), reduce the duration between two irrigations as well as apply mulch of plant waste products in orange and sweet lime orchards. Newly planted fruit crops may be protected from sun burn by erecting temporary shed. As dry weather would prevail, apply irrigation to water melon, muskmelon, summer vegetables, summer groundnut and summer green gram. Continue harvesting of matured summer rice in Gondia, Bhandara, Chandrapur and Gadchiroli districts.
 - Prevailing cloudy weather in Marathwada is favourable for attack of thrips in summer chilli; spray Fipronil 5 % @20 ml /10 litres water.
 - **Gujarat:**
 - As heat wave conditions would prevail at isolated places over south Gujarat region and Saurashtra & Kutch during next 2 days, apply light and frequent irrigation in standing crops to cope up with the excessive evaporative demand due to high temperature. Do soil mulching / mulching with crop residues and other plant waste products / polythene to conserve soil moisture.
 - As hot and dry weather is prevailing, irrigate green gram crop (pod development stage) at regular intervals and increase the frequency of irrigation in North West Zone. Pluck matured vegetables regularly.
 - As heat wave conditions would prevail at isolated places over south Gujarat region, spread dry leaves of sugarcane in between two rows of sugarcane to control evaporation from crop fields.
 - As dry and hot weather would prevail, apply light and frequent irrigation in groundnut at pod development stage, in mango orchards and in lemon orchards at regular intervals, to prevent fruit cracking and fast development of fruits in North Saurashtra Zone. As heat wave conditions would prevail at isolated places over Saurashtra & Kutch, apply mulch of crop residues and other plant waste products in orchards to conserve soil moisture. Harvest matured sesamum.
 - In view of prevailing high temperature conditions in Bhal and Coastal Zone, apply light irrigation at short interval in pearl millet during grain filling stage and in sorghum crop at ear head formation stage in evening time.
 - In Bhal and Coastal Zone, carry out land levelling and bunding to increase water holding capacity of the soil. Plough field against the slope to avoid soil erosion and increasing soil moisture retention capacity. Make farm pond in lower region of field to harvest excess rain water during monsoon. Make necessary arrangement to recharge rainwater into wells and tube wells by adopting appropriate techniques.
 - As dry and hot weather is prevailing and no rainfall is forecasted in North Gujarat Zone, irrigate cluster bean crop, vegetable crops regularly in morning or evening time and mango trees at fruit development stage. Apply last irrigation in groundnut (pod development stage).
 - Due to prevailing high temperature, there are chances of sucking pest infestation in vegetables and marigold

plants in Bhal and Coastal Zone of Gujarat and in vegetables in North Gujarat Zone; spray 0.1% solution of Dimethoate 35 EC to manage the pest.

- **Animal Husbandry**

- As heat wave conditions would prevail at isolated places over south Gujarat region and Saurashtra & Kutch during next 2 days, avoid grazing /feeding of cattle/goats during noon hours. Keep animals under shade or in sheds during noon hours and provide plenty of cool water mixed with minerals for drinking. Also provide balanced feed with ample concentrates and adopt necessary vaccination schedule. Make arrangement of curtains and proper ventilation in poultry houses. Put curtains on south-west side of poultry house and sprinkle water on the curtains during noon time. Also cover the roof of the poultry house with grass or gunny bags.
- Considering the prevailing high temperature, hang gunny bags from outside the poultry shed and sprinkle it with water in Maharashtra. Cover the roof with grass or gunny bags. To reduce the effect of prevailing high temperature in animal shed, cover the roof with grass or dried jowar fodder and keep proper aeration in the shed.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP]



Rice



Sugarcane



Onion



Okra

- **Realised Rainfall:** Rainfall occurred in Anantapur district in Rayalaseema; Nizamabad and Warangal districts in Telangana; Udupi district in Coastal Karnataka; Belgaum and Dharwad districts in North Interior Karnataka; Bangalore Rural & Urban, Chickballapur, Chitradurga, Kolar, Ramanagara and Tumkur districts in South Interior Karnataka; Krishnagiri and Villupuram districts in Tamil Nadu and Kollam and Pathanamthitta districts in Kerala. Weather remained mainly dry / dry over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Coastal Karnataka during next 24 hours and over Kerala during next 48 hours and at isolated places thereafter. Rain/thundershowers would occur at isolated places over Coastal Andhra Pradesh, Interior Karnataka, Tamilnadu & Pudduchery and Lakshadweep during the period. Rain/thundershowers would occur at isolated places over Telangana and Rayalaseema during next 24 hours mainly dry thereafter.
- **Weather Warning:** Heat wave conditions would also prevail at isolated places over Andhra Pradesh on 23rd and 24th May.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over extreme south peninsular India. Weather would be mainly dry over rest of the region.
- **Advisories:**
 - The depression over east central Bay of Bengal has moved southwestwards and lay centered at 0530 hours IST of today, near lat.17.0°N and long. 91.0E, about 620 km north-northwest of Port Blair. It would move southwestwards during next 24 hours. Impact of the system is being monitored and appropriate advisories will be issued accordingly.
 - **Karnataka:**
 - Deep ploughing is recommended in the rice field before onset of monsoon to bring out weed seeds and insect eggs in the Coastal Zone of Karnataka.
 - Undertake land preparation for *kharif* sowing in the Eastern Dry Zone and North Transition Zone of Karnataka with available soil moisture.
 - Planting of black pepper may be continued utilizing realised rainfall in the Hill Zone of Karnataka.
 - **Andhra Pradesh:**
 - As heat wave conditions would prevail at isolated places over Andhra Pradesh during next 2 days, apply light and frequent irrigation in standing crops to cope up with the excessive evaporative demand due to high temperature. Do soil mulching / mulching with crop residues and other plant waste products / polythene to conserve soil moisture.
 - Undertake summer ploughing utilizing the rainfall received last week in the Scarce Rainfall Zone and Southern Telangana Zone of Andhra Pradesh in order to reduce the soil born pests, diseases and weed formation and to increase the rate of water intake into the soil.
 - Prevailing high temperatures are congenial for the occurrence of sucking pests and mites in vegetables and fruit fly in mango in the Southern Telangana Zone of Andhra Pradesh. To control, spray Acephate @ 1.5 g or Fipronil

@ 2 ml per litre of water for sucking pests, spray Propargite @ 2 ml per litre of water to control mites and hang the plastic containers with mixture of Methyl Eugenol @ 2 ml + Carbofuran 3G @ 3 g per litre of water to manage fruit fly.

- Prevailing high temperature conditions are suitable for incidence of sucking pests in Bt.cotton and fruit fly incidence in mango in the Scarce Rainfall Zone of Andhra Pradesh. Undertake stem application of Imidachloprid @1: 20 of chemical and water made into a paste at 20,40,60 DAS to manage sucking pests and spray Malathion @ 2ml/litre of water to manage fruit fly.
- **Tamil Nadu:**
- Due to prevailing hot and humid weather condition leaf mite and blast incidence in summer rice are noticed in Thanjavur and Thiruvarur districts in the Cauvery Delta Zone of Tamil Nadu. Spray Dicofol @ 500 ml/ acre or wettable Sulphur @ 600 g/ acre to manage leaf mite incidence and Carbendazim @200 g/acre or Tricylazole @ 200 ml/acre in 200 litre of water to manage blast incidence.
- Prevailing high temperature is congenial for sucking pest incidence in cotton crop in the Western Zone of Tamil Nadu. Spray Imidachloprid @ 2ml/litre of water for control.
- **Kerala:**
- Undertake land preparation for sowing of rice (Uma variety), planting of banana and coconut seedlings in the Problem Area Zone of Kerala utilizing realised rainfall.
- Continue land preparation for nursery sowing of *virippu* rice, undertake intercropping of ginger, turmeric, banana, mulberry and tuber crops with coconut, sowing of vegetables and planting of banana in the Southern Zone of Kerala utilizing realised rainfall.
- Undertake prophylactic spraying of 1% Bordeaux mixture against bud rot disease in coconut before the onset of monsoon in the Problem Area Zone of Kerala.
- **Animal Husbandry**
- As heat wave conditions would prevail at isolated places over Andhra Pradesh during next 2 days, avoid grazing /feeding of cattle/goats during noon hours. Keep animals under shade or in sheds during noon hours and provide plenty of cool water mixed with minerals for drinking. Also provide balanced feed with ample concentrates and adopt necessary vaccination schedule. Make arrangement of curtains and proper ventilation in poultry houses. Put curtains on south-west side of poultry house and sprinkle water on the curtains during noon time. Also cover the roof of the poultry house with grass or gunny bags.
- Vaccinate animals against haemorrhagic septicaemia before the onset of monsoon in the Problem Area Zone of Kerala.
- Vaccinate animals (cow, buffalow, bullock) against Foot and mouth disease (FMD vaccination) and Haemorrhagic Septcaemia and sheep and goats against Enterotoximia before the onset of monsoon in the Southern Dry of Karnataka.

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

Annexure I
Week by week Rainfall Distribution

State/Districts	07.05.14		14.05.14		21.05.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	54.0	-28	156.0	129	40.5	-52
Dibang Valley	5.0	-88	2.0	-96	40.0	-38
East Kameng	4.2	-89	30.1	-46	20.2	-64
East Siang	43.7	-38	322.7	465	79.6	0
Kurung Kumey	**	**	**	**	**	**
Lohit	40.4	-47	502.0	758	16.7	-77
Lower Dibang Valley	76.4	82	621.1	1216	79.1	24
Lower Subansari	**	**			**	**
Papumpara	68.2	-21	272.4	116	87.8	44
Tawang	52.0	-17	98.0	45	73.0	2
Tirap	41.2	-41	57.9	7	8.8	-88
Upper Siang	19.1	-71	252.8	303	267.8	156
Upper Subansari	54.0	107	133.2	489	19.4	-42
West Kameng	58.6	-6	80.6	19	24.4	-66
West Siang	32.3	-34	72.5	131	24.5	-66
Assam						
Baksa	58.0	-26	164.5	113	37.3	-56
Barpeta	96.6	23	248.2	221	81.8	-3
Bongaigaon	110.0	2	257.8	199	61.8	-23
Cachar	96.5	11	365.7	337	24.5	-73
Chirang	97.1	-10	440.7	411	193.2	141
Darrang	106.0	27	138.0	101	19.0	-70
Dhemaji	21.0	-69	106.0	61	161.0	107
Dhubri	89.5	19	132.8	61	61.2	-30
Dibrugarh	45.8	-37	236.3	276	19.0	-68
Goalpara	151.3	70	108.5	54	15.6	-83
Golghat	57.8	-16	55.9	8	3.3	-94
Hailakandi	84.8	-20	233.8	214	21.0	-78
Jorhat	67.3	4	63.2	4	20.5	-67
Kamrup(Rural)	67.4	-2	156.0	160	20.6	-69
Kamrup(Metro)	96.7	41	37.8	-37	2.0	-97
Karbi Anglong	57.8	82	16.3	-19	5.2	-85
Karimganj	74.4	-43	389.7	175	73.0	-48
Kokrajhar	64.8	-36	154.9	114	99.8	22
Lakhimpur	44.2	-35	185.1	182	95.0	22
Morigaon	52.5	18	27.4	-11	3.0	-92
N.C.Hills	68.7	25	166.2	132	91.7	10
Nowgong	27.2	-39	30.1	-24	2.7	-91
Nalbari	83.2	-24	186.4	132	33.2	-58
Sonitpur	50.2	-24	150.5	161	34.3	-42
Sibsagar	24.9	-64	66.4	16	6.2	-88
Tinsukia	53.1	-14	215.5	228	22.9	-59

Udalgiri	50.1	-40	231.8	237	27.6	-57
Meghalaya						
East Garo Hills	24.8	-69	225.7	135	76.4	2
East Khasi Hills	105.3	-33	438.8	172	87.0	-45
Jaintia Hills	2.0	-99	65.0	-28	1.0	-99
Ribhoi	41.6	-28	17.3	-72	4.4	-93
South Garo Hills	51.0	-30	3.0	-96	4.0	-95
West Garo Hills	48.8	-33	55.2	-30	20.4	-76
West Khasi Hills	0.0	-100	2.0	-97	1.0	-99
Mizoram						
Aizwal	57.1	-21	262.4	315	17.9	-79
Champhai	1.0	-98	2.0	-95	0.0	-100
Kolasib	1.0	-99	1.0	-98	0.0	-100
Lawngtlai	**	**	**	**	**	**
Lunglei	12.0	-77	1.0	-98	1.0	-99
Mamit	7.0	-91	37.0	-41	11.0	-87
Saiha	21.0	-59	67.0	3	40.0	-61
Serchhip	8.0	-85	19.0	-61	6.0	-92
Manipur						
Bishnupur	6.0	-77	63.0	59	27.0	-31
Chandel	14.0	-64	59.0	92	17.0	-26
Churachandpur	20.0	-67	**	**	15.0	-71
Imphal east	60.6	41	109.1	123	27.4	-45
Imphal west	122.6	198	72.0	126	31.7	19
Senapati	18.0	-57	15.0	-68	44.0	1
Tamenglong	**	**	**	**	**	**
Thoubal	12.0	-50	6.0	-87	2.0	-93
Ukhrul	0.0	-100	5.0	-81	0.0	-100
Nagaland						
Dimapur	62.0	61	10.5	-69	1.0	-97
Kephire	4.0	-93	**	**	**	**
Kohima	101.6	211	33.4	6	8.3	-80
Longleng	**	**	**	**	**	**
Mokokchung	3.0	-92	37.0	-53	0.0	-100
Mon	**	**	**	**	**	**
Paran	**	**	**	**	**	**
Phek	50.0	53	1.0	-97	4.0	-90
Tuensang	**	**	**	**	**	**
Wokha	0.0	-100	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	98.0	-3	333.0	228	26.0	-73
North tripura	70.8	-29	244.6	146	58.1	-39
South tripura	9.6	-87	128.8	62	3.5	-96
West tripura	20.8	-73	122.2	44	9.7	-88
Himachal Pradesh						
Bilaspur	7.5	103	29.7	129	0.0	-100
Chamba	3.1	-51	56.3	155	12.4	2
Hamirpur	16.8	148	32.7	175	0.3	-97

Kangra	8.1	-18	32.0	160	4.1	-59
Kinnaur	0.0	-100	27.3	29	1.3	-91
Kullu	11.7	-23	51.8	154	6.5	-60
Lahaul and Spiti	0.0	-100	14.5	-49	5.7	-71
Mandi	35.8	302	37.3	93	7.8	-50
Shimla	23.7	99	32.9	64	0.0	-100
Sirmaur	4.1	-32	19.1	130	0.0	-100
Solan	20.1	183	47.2	197	0.0	-100
Una	6.7	-5	22.7	229	3.9	-27
Punjab						
Amritsar	0.0	-99	9.9	59	0.1	-98
Barnala	0.0	-100	9.3	363	0.0	-100
Bhatinda	6.5	364	24.5	745	4.0	122
Faridkot	2.0	-23	36.0	929	0.0	-100
Fatehgarh Sahib	0.0	-100	0.0	-100	**	**
Ferozpur	0.2	-94	8.0	29	0.7	-77
Gurdaspur	1.3	-73	32.9	399	0.6	-85
Hoshiarpur	5.9	38	8.6	23	0.0	-100
Jalandhar	0.8	-83	1.3	-83	0.0	-100
Kapurthala	2.0	-43	8.7	77	0.0	-100
Ludhiana	1.3	-68	24.5	401	0.0	-100
Mansa	3.7	131	6.3	184	0.5	-78
Moga	2.0	-38	47.9	771	0.0	-100
Muktesar	1.2	-8	22.0	948	10.0	108
Nawashahar	0.3	-91	5.8	-18	1.2	-76
Patiala	1.6	-51	17.8	270	0.0	-100
Ropar	2.3	-31	25.9	194	0.0	-100
Sangrur	0.0	-100	25.9	325	0.0	-100
Mohali	19.0	459	23.5	164	0.0	-100
TarnTaran	4.0	186	8.6	28	0.0	-100
Haryana						
Ambala	3.2	-1	16.2	153	0.0	-100
Bhiwani	1.4	-4	25.5	411	0.1	-97
Chandigarh	33.5	1576	23.5	133	0.0	-100
Faridabad	0.0	-100	14.6	108	0.0	-100
Fatehabad	0.8	-50	5.8	-4	2.0	0
Gurgaon	0.0	-100	24.6	447	19.0	660
Hissar	0.2	-88	20.4	271	3.9	11
Jhajar	3.0	0	12.0	251	0.0	-100
Jind	0.0	-100	26.5	357	0.0	-100
Katihah	5.3	425	11.2	229	0.7	40
Karnal	17.3	518	12.4	188	0.0	-100
Kurukshetra	0.4	-71	3.8	12	0.0	-100
Mahendragarh	0.0	-100	12.8	73	0.0	-100
Mewat	0.0	-100	7.3	172	0.0	-100
Palwal	0.0	-100	7.5	188	0.0	-100
Panchkkula	10.8	108	10.3	23	0.0	-100
Panipat	0.7	-62	15.4	241	0.1	-88
Rewari	0.0	-100	2.4	-29	0.0	-100

Rohtak	0.0	-100	8.8	22	2.1	-33
Sirsa	1.0	-44	8.7	97	3.0	58
Sonepat	3.0	1	10.5	62	0.0	-100
Yamunanagar	7.3	-12	14.8	125	0.0	-100
Delhi						
Central Delhi	11.0	182	24.0	229	0.0	-100
East Delhi	0.0	-100	2.0	-73	0.0	-100
New Delhi	10.9	179	19.8	171	0.0	-100
North Delhi	3.2	-18	25.4	247	0.0	-100
North East Delhi	**	**	9.0	23	0.0	-100
North West Delhi	0.0	-100	0.0	-100	0.0	-100
South Delhi	2.1	-46	25.1	243	0.0	-100
South West Delhi	0.5	-87	25.5	249	0.0	-100
West Delhi	0.0	-100	16.0	119	0.0	-100
Jammu & Kashmir						
Anantnag	7.0	-60	32.1	3	46.3	116
Badgam	2.7	-74	26.3	25	13.4	-31
Bandipore	**	**	**	**	**	**
Baramula	6.0	-77	57.8	49	33.5	45
Doda	11.2	-39	49.0	91	22.2	30
Ganderbal	14.4	7	45.4	138	46.8	198
Jammu	8.2	163	2.8	-66	0.1	-99
Kargil	0.0	-100	0.0	-100	0.0	-100
Kathua	0.0	-100	35.2	780	0.0	-100
Kistwar	**	**	**	**	**	**
Kulgam	1.4	-92	22.9	-26	27.3	28
Kupwara	3.6	-81	100.2	263	19.6	-12
Ladakh(Leh)	0.0	-100	0.3	-81	0.0	-100
Poonch	9.5	-24	18.3	34	10.8	-54
Pulwama	2.2	-83	23.2	2	23.7	14
Rajouri	10.2	50	31.7	264	5.6	19
Ramban	4.8	-74	34.6	35	27.5	61
Reasi	6.2	-32	12.4	-39	2.2	-71
Samba	26.6	758	1.6	-81	10.6	126
Shopian	9.0	-32	24.0	6	27.0	29
Srinagar	1.5	-89	33.1	73	21.4	36
Udhampur	2.7	-70	20.7	1	6.0	-21
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	0.0	-100
Balaghat	0.0	-100	0.5	-68	0.0	-100
Chhatarpur	0.0	-100	0.0	-100	0.0	-100
Chindwara	0.3	-83	0.0	-100	2.5	174
Damoh	0.0	-100	0.0	-100	0.0	-100
Dindori	0.0	-100	0.0	-100	0.0	-100
Jabalpur	2.9	7	1.8	800	1.0	19
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	0.3	-78	1.1	-13	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100

Rewa	0.0	-100	4.2	223	0.0	-100
Sagar	0.2	-28	0.2	-71	0.0	-100
Satna	0.2	-50	0.1	-93	0.0	-100
Seoni	2.2	-6	7.5	400	1.2	-50
Shahdol	0.0	-100	0.0	-100	0.0	-100
Sidhi	0.0	-100	4.4	57	0.0	-100
Singrauli	0.0	-100	0.0	-100	0.0	-100
Tikamgarh	0.0	-100	0.0	-100	0.0	-100
Umaria	0.0	-100	0.0	-100	0.0	-100
West Madhya Pradesh						
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.2	-66	1.0	67	0.4	-73
Bhind	0.0	-100	0.0	-100	0.0	-100
Bhopal	0.0	-100	3.2	113	1.4	-22
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	6.7	850	0.0	-100	0.0	-100
Dewas	0.0	-100	0.0	-100	0.0	-100
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	0.0	-100	1.0	-17	0.0	-100
Gwalior	0.0	-100	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.2	-50	0.0	-100	2.7	108
Indore	0.2	-60	0.0	-100	1.5	114
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	4.5	650	0.0	-100	0.0	-100
Morena	2.5	250	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	0.0	-100
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	2.5	722	0.0	-100	0.0	-100
Sehore	0.0	-100	0.0	-100	0.0	-100
Shajapur	0.0	-100	0.0	-100	3.3	150
Sheopur Kalani	0.0	-100	7.0	775	0.0	-100
Shivpuri	1.3	79	0.0	-100	0.5	-74
Ujjain	1.8	483	0.0	-100	0.4	-33
Vidisha	0.0	-100	0.0	-100	0.0	-100
Chhattisgarh						
Bastar	4.7	-45	25.8	166	57.2	557
Bijapur	0.0	-100	11.0	197	49.2	1487
Bilaspur	2.3	-51	3.7	-11	0.0	-100
Dantewara	7.0	79	0.0	-100	0.0	-100
Dhamtari	0.0	-100	3.4	48	0.0	-100
Durg	9.8	277	0.0	-100	0.0	-100
Janjgir	0.0	-100	0.0	-100	0.0	-100
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100

Kanker	0.0	-100	0.0	-100	**	**
Korba	0.0	-100	6.0	161	0.0	-100
Koriya	0.0	-100	0.0	-100	0.0	-100
Kawardha	**	**	**	**	0.0	-100
Mahasumund	0.0	-100	0.0	-100	0.0	-100
Narayanpur	0.0	-100	0.0	-100	**	**
Raigarh	**	**	**	**	**	**
Raipur	3.5	-13	0.0	-100	2.0	-44
Rajandgaon	4.6	70	2.2	-37	0.0	-100
Surguja	0.5	-88	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	2.9	190	0.0	-100	0.0	-100
Ambedkar Nagar	1.0	-76	0.0	-100	0.0	-100
Azamgarh	0.0	-100	0.0	-100	0.0	-100
Bahraich	0.0	-100	0.0	-100	0.0	-100
Ballia	4.4	56	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	0.4	-91
Barabanki	0.2	-93	0.0	-100	0.0	-100
Basti	1.0	-67	0.0	-100	0.0	-100
Chandauli	11.1	327	0.0	-100	0.0	-100
Deoria	8.3	112	0.0	-100	0.0	-100
Faizabad	0.0	-100	0.0	-100	0.0	-100
Farrukhabad	0.0	-100	1.9	-49	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	10.4	271	2.0	-47	0.0	-100
Gonda	0.0	-100	0.0	-100	0.0	-100
Gorakhpur	10.6	140	0.0	-100	0.0	-100
Hardoi	0.0	-100	0.9	-81	0.0	-100
Jaunpur	5.1	113	0.0	-100	0.0	-100
Kannauj	2.6	-7	0.0	-100	0.0	-100
Kanpur City	1.8	23	0.0	-100	0.0	-100
Kanpur Dehat	0.7	-39	0.0	-100	0.0	-100
Kaushambi	0.9	-54	0.0	-100	0.0	-100
Kheri	5.3	9	0.0	-100	0.0	-100
Kushi nagar	2.0	-69	0.0	-100	0.0	-100
Lucknow	1.3	-32	0.0	-100	0.0	-100
Maharajganj	19.0	164	0.0	-100	0.0	-100
Mau	4.0	25	0.0	-100	0.0	-100
Mirzapur	9.5	692	0.0	-100	2.5	-17
Pratapgarh	2.0	43	0.0	-100	0.0	-100
RaiBareilly	1.4	35	0.1	-96	0.0	-100
Sahuji Maharajnagar	5.1	467	0.0	-100	0.0	-100
Sant Kabirnnagar	3.0	-33	0.0	-100	0.0	-100
Sant Ravidas Nagar	1.5	-42	0.0	-100	0.0	-100
Shrawasti	**	**	**	**	**	**
Sidharthnagar	11.0	182	0.0	-100	0.0	-100
Sitapur	0.0	-100	0.0	-100	0.0	-100
Sonbhadra	0.0	-100	0.3	-90	2.0	-17

Sultanpur	0.2	-93	0.0	-100	0.0	-100
Unnao	0.0	-100	0.0	-100	0.0	-100
Varanasi	9.7	186	0.0	-100	2.1	17
West Uttar Pradesh						
Agra	6.0	330	0.0	-100	0.0	-100
Aligarh	0.0	-100	2.1	-76	0.0	-100
Auraiya	0.0	-100	0.0	-100	0.0	-100
Badaun	1.0	-44	2.2	-54	0.0	-100
Baghpat	4.0	74	27.0	630	0.0	-100
Bareilly	6.1	175	2.7	-50	0.0	-100
Bijnor	25.7	1412	15.0	213	0.0	-100
Bulandsahar	0.2	-93	5.3	29	0.0	-100
Etah	0.7	-71	0.0	-100	0.0	-100
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	2.6	86	0.0	-100	0.0	-100
GBNagar	5.0	200	18.0	329	0.0	-100
Ghaziabad	0.3	-88	5.1	31	0.0	-100
Hamirpur	7.0	775	0.0	-100	0.5	-64
Jalaun	2.8	175	0.0	-100	0.0	-100
Jhansi	0.7	-52	1.4	-42	0.4	-76
Jotiba Phule Nagar	0.0	-100	4.3	-2	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	2.5	127	0.0	-100	0.0	-100
Mahamaya Nagar	0.0	-100	0.0	-100	0.0	-100
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	0.0	-100	0.0	-100	0.0	-100
Mathura	10.0	426	0.0	-100	0.0	-100
Meerut	2.5	-19	7.2	67	0.0	-100
Moradabad	0.8	-53	5.0	2	0.0	-100
Muzaffarnagar	11.0	511	15.0	329	0.0	-100
Pilibhit	1.7	-31	0.0	-100	0.0	-100
Rampur	1.1	-50	2.1	-62	0.0	-100
Saharanpur	0.0	-100	8.3	46	0.0	-100
Shahjahanpur	3.3	-19	0.3	-93	0.0	-100
Uttarakhand						
Almora	22.9	186	5.4	-55	0.0	-100
Bageshwar	35.0	338	8.6	-28	0.0	-100
Chamoli	13.4	16	26.3	14	0.0	-100
Champawat	24.0	233	3.0	-78	0.0	-100
Dehradun	4.5	-22	7.8	-37	0.0	-100
Garhwal Pauri	14.0	204	9.3	-22	0.0	-100
Garhwal Tehri	37.5	681	30.1	92	0.0	-100
Haridwar	1.0	-79	9.8	48	0.0	-100
Nainital	20.5	205	6.3	-58	0.0	-100
Pithoragarh	36.1	201	21.2	-16	0.0	-100
Rudraprayag	42.0	120	19.2	-27	0.0	-100
Udham Sing Nagar	11.9	310	3.1	-57	0.0	-100
Uttarkashi	24.7	126	35.6	24	1.9	-92
Bihar						

Araria	16.6	-2	0.0	-100	0.0	-100
Arwal	0.0	-100	**	**	0.0	-100
Aurangabad	0.0	-100	0.0	-100	0.0	-100
Banka	3.5	-54	0.0	-100	0.0	-100
Begusarai	0.0	-100	0.0	-100	0.0	-100
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	0.7	-94	5.0	-64	0.0	-100
Bhojpur	0.0	-100	0.0	-100	0.0	-100
Buxar	0.2	-94	0.0	-100	0.0	-100
Darbhanga	7.3	-35	0.0	-100	0.0	-100
East Champaran	13.9	53	2.4	-77	0.0	-100
Gaya	1.1	-63	0.1	-97	0.0	-100
Gopalganj	2.0	-38	0.0	-100	0.0	-100
Jahanabad	0.0	-100	0.0	-100	0.0	-100
Jamui	0.5	-92	0.0	-100	0.0	-100
Kathihar	9.8	-42	0.0	-100	0.0	-100
Khagadia	0.0	-100	0.0	-100	0.0	-100
Kishanganj	14.5	-51	5.8	-79	15.1	-49
Lakhisarai	0.0	-100	**	**	0.0	-100
Madhepura	5.3	-62	0.0	-100	0.0	-100
Madhubani	10.4	-2	0.0	-100	0.0	-100
Monghyar	0.0	-100	0.2	-98	0.0	-100
Muzaffarpur	2.2	-75	0.0	-100	0.0	-100
Nalanda	0.0	-100	0.3	-94	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	1.9	-58	0.0	-100	0.0	-100
Purnea	6.6	-67	0.0	-100	0.0	-100
Rohtas	0.0	-100	7.3	78	0.0	-100
Saharsha	0.0	-100	0.0	-100	0.0	-100
Samstipur	0.0	-100	**	**	0.0	-100
Saran	4.8	8	0.0	-100	0.0	-100
Sheikpura	0.0	-100	**	**	0.0	-100
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	2.9	-74	0.0	-100	0.0	-100
Siwan	3.5	58	0.0	-100	0.0	-100
Supaul	16.1	42	0.0	-100	0.0	-100
Vaishali	4.6	-2	2.1	-63	0.0	-100
West Champaran	**	**	0.0	-100	0.0	-100
Jharkhand						
Bokaro	5.1	-45	0.0	-100	0.0	-100
Chatra	1.2	-14	0.0	-100	0.0	-100
Deoghar	0.0	-100	0.0	-100	0.0	-100
Dhanbad	10.4	3	0.0	-100	0.0	-100
Dumka	7.3	-54	0.0	-100	0.0	-100
East Singbhum	42.6	298	0.1	-99	0.0	-100
Garhwa	3.5	169	0.5	-90	0.0	-100
Giridih	10.3	69	0.0	-100	0.0	-100
Godda	**	**	0.0	-100	0.0	-100
Gumla	10.4	-5	0.0	-100	0.0	-100

Hazaribagh	21.0	275	0.0	-100	0.0	-100
Jamtara	19.9	75	**	**	0.0	-100
Khunti	29.0	559	0.0	-100	0.0	-100
Koderrna	1.5	-66	0.0	-100	0.0	-100
Latehar	**	**	0.0	-100	0.0	-100
Lohardagga	**	**	0.0	-100	0.0	-100
Pakur	**	**	0.0	-100	0.0	-100
Palamau	47.9	1611	0.0	-100	0.0	-100
Ramgarh	29.4	425	**	**	0.0	-100
Ranchi	7.3	30	0.0	-100	0.0	-100
Sahebganj	**	**	25.4	53	0.0	-100
Saraikela	**	**	0.0	-100	0.0	-100
Simdega	**	**	0.0	-100	0.0	-100
West Singbhum	**	**	0.0	-100	0.0	-100
East Rajasthan						
Ajmer	0.2	-73	14.1	1075	0.0	-100
Alwar	1.9	-1	4.6	-20	0.2	-93
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	1.6	14	0.0	-100	0.0	-100
Bhilwara	0.0	-100	13.8	964	0.0	-100
Bundi	0.0	-100	9.7	1281	0.0	-100
Chittorgarh	0.0	-94	1.5	0	1.2	-10
Dausa	0.0	-100	0.8	-79	0.0	-100
Dholpur	0.0	-100	0.0	-100	0.0	-100
Dungarpur	0.0	-100	3.0	67	0.0	-100
Jaipur	0.0	-98	8.6	121	0.5	-85
Jhalawar	0.0	-100	0.0	-100	0.5	-59
Jhunjhunu	0.6	-69	20.3	198	0.3	-95
Karauli	0.0	-100	0.0	-100	0.0	-100
Kota	0.3	-34	3.2	250	1.5	35
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	2.3	-2	3.6	225
Sawai Madhopur	0.0	-100	0.3	-92	0.0	-100
Sikar	0.0	-100	1.0	-84	0.0	-100
Sirohi	0.0	-100	3.3	83	0.0	-100
Tonk	0.9	24	4.5	59	0.0	-100
Udaipur	4.4	452	1.8	14	14.9	1395
West Rajasthan						
Barmer	0.3	-75	2.3	187	11.0	686
Bikaner	0.3	-79	31.2	845	3.4	22
Churu	2.5	55	48.0	860	3.4	-12
Hanumangarh	0.3	-68	10.7	110	16.6	563
Jaisalmer	1.3	329	3.1	244	7.1	374
Jalore	0.0	-100	2.0	147	3.4	1594
Jodhpur	1.9	26	9.7	469	9.9	516
Nagaur	0.0	-100	17.1	350	1.1	-67
Pali	0.0	-100	14.4	929	1.8	157
Sri Ganganagar	0.0	-100	22.6	584	11.1	311

Gujarat Region						
Ahmedabad	0.0	-92	1.2	-39	0.2	-67
Anand	0.0	-100	2.1	112	0.0	-100
Banaskantha	0.0	-100	1.8	200	3.9	1200
Baroda	0.0	-100	0.1	-57	0.0	-67
Broach	0.0	-100	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	**	**	**	**	**	**
Dangs	5.0	317	0.0	-100	0.5	-89
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.1	-89	0.0	-100
Mehsana	0.0	-100	0.0	-100	2.1	200
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.4	-38	0.3	-64	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.7	238
Surat	0.0	-100	0.4	315	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	2.5	213
Bhavnagar	0.0	-100	0.2	-74	1.7	753
Diu	0.0	-100	0.0	-100	0.0	-100
Jamnagar	0.0	-100	0.0	-100	0.0	-100
Junagarh	0.0	-100	0.0	-100	0.0	-100
Kutch	0.0	-100	2.1	590	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.6	50	8.1	3932
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Goa	0.5	-96	38.6	962	50.1	156
Mumbai	0.0	-100	0.0	-100	0.0	-100
Raigad	0.0	-100	0.3	-58	0.0	-100
Ratnagiri	0.9	-48	3.8	245	1.5	-74
Sindhudurg	0.0	-100	66.0	2438	19.7	80
Thane	0.0	-100	0.5	0	0.0	-100
Madhya Maharashtra						
Ahmednagar	7.3	152	2.6	30	3.8	-19
Dhule	**	**	**	**	0.0	-100
Jalgaon	0.0	-100	0.0	-100	0.0	-100
Kolhapur	1.7	-83	2.0	-72	3.3	-79
Nandurbar	**	**	**	**	0.0	-100
Nasik	0.0	-100	3.8	241	25.7	1017
Pune	4.7	-3	2.3	-27	6.4	7
Sangli	11.7	2	13.3	105	1.3	-87
Satara	15.6	151	12.4	175	10.1	44

Solapur	4.0	-4	25.6	630	6.4	12
Marathwada						
Aurangabad	0.0	-100	7.4	576	0.0	-100
Beed	3.6	90	0.3	-88	0.0	-100
Hingoli	0.0	-100	0.0	-100	0.0	-100
Jalna	0.9	-22	0.0	-100	0.0	-100
Latur	3.3	31	1.3	-53	2.2	-52
Nanded	4.1	117	0.1	-98	0.3	-87
Usmanabad	6.6	152	6.5	55	1.7	-67
Parbhani	3.8	82	0.5	-68	22.2	1135
Vidarbha						
Akola	1.8	157	1.4	60	0.2	-85
Amraoti	0.0	-100	0.0	-100	0.0	-100
Bhandara	14.8	490	0.0	-100	0.0	-100
Buldhana	0.0	-100	0.0	-100	0.2	-85
Chandrapur	3.2	52	6.4	64	0.0	-100
Gadchiroli	0.4	-88	0.3	-94	0.0	-100
Gondia	2.2	54	0.0	-100	0.0	-100
Nagpur	9.7	343	0.0	-100	1.6	-19
Wardha	0.7	-73	0.0	-100	2.9	-33
Washim	2.5	127	2.3	56	0.0	-100
Yeotmal	0.4	-79	0.1	-96	0.1	-94
Odisha						
Angul	7.5	1	4.1	-75	2.6	-78
Balasore	4.8	-78	1.7	-94	1.0	-95
Bargarh	0.0	-100	5.2	36	0.0	-100
Bhadrak	11.6	-39	6.1	-81	4.6	-80
Bolangir	0.2	-96	5.3	-51	0.0	-100
Boudh	0.0	-100	27.7	24	8.3	-56
Cuttack	0.5	-96	4.6	-79	0.8	-94
Deogarh	13.2	140	6.2	-16	0.5	-92
Dhenkanal	0.0	-100	11.6	-30	0.4	-97
Gajapati	44.0	51	28.6	-43	10.8	-59
Ganjam	2.7	-78	5.7	-84	0.9	-94
Jagatsingpur	0.0	-100	0.8	-98	0.0	-100
Jajpur	0.0	-100	7.9	-72	1.6	-91
Jharsuguda	1.4	-83	3.6	-54	0.0	-100
Kalahandi	3.9	-47	4.0	-72	0.6	-92
Kandhamal	25.5	122	6.5	-71	1.8	-90
Kendrapara	0.0	-100	0.8	-96	8.5	-48
Keonjhar	11.4	-38	1.9	-93	0.0	-99
Khurda	0.0	-100	3.0	-86	7.5	-58
Koraput	28.9	25	19.9	-22	2.0	-88
Malkangiri	20.8	106	50.4	198	3.2	-74
Mayurbhanj	28.2	66	6.8	-75	0.0	-100
Nawapara	2.6	-66	13.7	56	0.0	-100
Nawarangpur	14.2	-32	18.3	17	0.1	-99
Nayagarh	5.6	-34	8.7	-18	22.5	120
Puri	0.0	-100	0.8	-97	0.0	-100

Rayagada	12.9	-23	18.9	-49	15.8	4
Sambalpur	4.4	-20	5.3	-28	0.0	-100
Sonepur	0.8	-84	0.7	-90	0.0	-100
Sundargarh	0.9	-85	0.8	-88	0.0	-100
West Bengal						
GWB						
Bankura	33.4	135	0.1	-99	0.0	-100
Birbhum	13.1	1	9.3	-51	0.0	-100
Burdwan	14.1	-6	0.0	-100	0.0	-100
East Midnapore	32.5	30	0.6	-97	0.0	-100
Hooghly	42.3	113	5.0	-75	0.0	-100
Howrah	33.9	119	0.5	-98	0.5	-98
Kolkata	24.2	18	0.1	-99	0.0	-100
Murshidabad	24.0	70	16.0	14	0.0	-100
Nadia	30.7	56	6.2	-68	0.0	-100
24 Pargana (N)	46.8	79	1.2	-94	0.0	-100
Purulia	32.0	227	0.0	-100	0.0	-100
24 Pargana (S)	69.0	230	0.0	-100	0.0	-100
West Midnapore	70.4	269	1.4	-94	0.0	-100
SHWB & Sikkim						
Cooch Behar	70.9	24	45.1	-34	38.2	-40
Darjeeling	67.3	38	57.2	13	32.5	-48
East Sikkim	132.0	137	66.6	-6	88.7	22
Jalpaiguri	69.7	21	128.3	88	54.4	-13
Malda	12.4	-38	6.0	-75	0.0	-100
North Dinajpur	8.0	-73	0.0	-100	0.0	-100
North Sikkim	119.3	58	79.7	12	72.2	-12
South Dinajpur	12.6	-57	0.0	-100	0.0	-100
South Sikkim	49.9	-10	11.7	-84	23.8	-67
West Sikkim	41.0	-46	26.7	-62	20.8	-75
Karnataka						
Coastal Karnataka						
Dakshin Kannada	83.0	266	91.0	382	13.7	46.3
Udupi	44.3	109	67.5	304	20.8	53.5
Uttar Kannada	33.2	129	66.1	626	13.6	32.7
N I Karnataka						
Bagalkote	7.0	-15	38.2	416	18.5	12.9
Belgaum	17.7	14	42.0	296	24.4	19.2
Bidar	13.0	170	10.5	59	12.1	6.1
Bijapur	13.4	144	38.0	556	8.1	11.1
Dharwad	53.8	232	62.0	340	29.4	20.8
Gadag	9.6	-20	51.3	354	14.4	18.7
Gulbarga	23.9	388	28.8	306	7.7	7.2
Haveri	21.9	23	67.8	430	9.4	20.1
Koppal	16.4	209	62.9	640	2.9	15.5
Raichur	7.7	108	60.9	592	7.5	10.4
Yadgir	7.6	138	43.2	409	5.3	7.3
S I Karnataka						
Bangalore Rural	1.2	-94	14.1	-17	30.2	24.1

Bangalore Urban	2.5	-87	14.9	-34	28.8	26
Bellary	15.6	85	55.6	504	19.1	16.2
Chamarajnagar	22.4	-20	35.9	31	16.8	34.2
Chichballapur	1.8	-86	11.9	-2	41.0	20.8
Chickmagalur	44.2	117	84.0	439	17.2	33.7
Chitradurga	19.7	112	42.5	251	33.1	18.8
Davangere	13.0	0	74.7	401	19.7	21.7
Hassan	49.1	117	62.6	192	16.3	26.8
Kodagu	90.8	208	94.6	233	11.4	39.5
Kolar	3.8	-65	8.9	-42	23.9	22
Mandya	31.0	51	34.6	63	19.4	26.8
Mysore	44.8	83	44.6	54	16.2	31.6
Ramnagara	14.3	-47	16.9	-28	41.3	26.6
Shimoga	52.5	245	68.8	488	11.1	23
Tumkur	26.9	68	14.5	-14	40.5	24.6
Kerala						
Alappuzha	106.5	121	115.9	128	4.9	-94
Kannur	56.9	128	171.5	383	7.5	-89
Ernakulam	47.3	20	183.3	286	12.3	-85
Idukki	91.7	156	117.6	175	3.5	-94
Kasaragod	129.7	700	79.9	185	14.0	-78
Kollam	195.7	326	68.1	30	23.7	-61
Kottayam	148.3	236	97.2	111	12.6	-82
Kozhikode	35.7	18	175.7	384	12.1	-84
Malappuram	25.4	-32	161.9	269	8.1	-87
Palakkad	26.6	-15	115.3	343	5.6	-87
Pathanamthitta	168.7	167	86.1	49	22.2	-68
Thiruvananthapuram	200.4	460	60.1	67	0.0	-100
Thrissur	35.1	-5	175.1	255	0.6	-99
Wayanad	37.1	53	100.7	286	19.6	-63
Tamil Nadu						
Ariyalur	57.5	342	41.8	166	1.5	-91
Chennai	22.2	131	4.7	-34	0.0	-100
Coimbatore	38.6	68	38.7	153	4.7	-80
Cuddalore	98.7	709	42.9	324	1.9	-87
Dharmapuri	15.8	-20	27.0	44	15.0	-45
Dindigul	56.6	176	76.6	295	13.8	-32
Erode	20.3	9	21.1	18	1.9	-92
Kanchipuram	19.7	78	10.3	10	0.6	-95
Kanyakumari	179.2	499	95.2	254	0.2	-99
Karikal	119.0	844	39.2	1533	0.8	-93
Karur	28.0	88	31.6	161	2.4	-87
Krishnagiri	26.8	39	18.7	-7	25.2	-5
Madurai	79.1	465	60.2	220	1.2	-92
Nagapattinam	104.9	1149	38.7	372	0.0	-99
Namakkal	45.6	137	22.7	12	1.4	-94
Nilgiris	61.6	169	145.0	520	8.5	-75
Perambalur	35.7	190	62.7	393	7.0	-69
Puducherry	61.1	275	36.1	276	14.9	59

Pudukottai	57.1	434	43.8	334	3.5	-73
Ramanathapuram	109.2	1169	61.8	387	0.0	-100
Salem	40.6	104	29.7	45	11.7	-58
Sivaganga	86.5	560	66.4	312	0.0	-100
Thanjavur	58.5	388	39.4	218	0.1	-99
Theni	85.0	329	55.6	312	0.0	-100
Tirunelveli	171.4	952	43.7	206	1.1	-88
Tirupur	48.6	166	22.8	61	2.7	-88
Tiruvallur	7.3	-20	14.1	38	0.1	-99
Tiruvannamalai	14.9	26	22.3	70	12.2	-41
Tiruvarur	65.6	507	89.7	694	0.0	-100
Toothukudi	87.8	770	43.3	342	5.5	-9
Trichy	34.5	155	58.0	368	9.0	-45
Vellore	13.2	3	17.9	29	6.7	-68
Villupuram	29.8	186	34.8	223	23.4	34
Virudhunagar	84.9	364	32.4	91	6.3	-58
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	8.8	-10	87.5	180	10.0	-39
Guntur	11.1	114	33.8	49	0.7	-95
Krishna	11.0	104	76.4	453	0.6	-96
Nellore	3.3	-66	6.1	-56	0.2	-98
Prakasam	7.4	-5	7.5	-49	2.7	-77
Sirkakulam	29.4	141	25.5	13	0.0	-100
Visakhapatnam	17.6	-9	48.1	40	10.9	-43
Vizianagram	15.3	-12	38.2	23	10.0	-43
West Godavari	19.4	252	95.6	314	8.3	-38
Telangana						
Adilabad	7.5	169	22.1	343	6.0	57
Hyderabad	0.3	-95	34.4	304	5.1	-20
Karimnagar	19.7	432	30.6	293	1.8	-59
Khammam	12.4	72	56.6	267	6.2	-58
Mehabubnagar	5.2	44	52.3	385	2.5	-65
Medak	6.4	95	38.3	373	4.2	-17
Nalgonda	2.5	-40	35.3	605	0.6	-92
Nizamabad	3.7	-5	25.6	204	20.0	456
Rangareddy	20.4	234	37.1	290	7.3	13
Warangal	21.5	437	55.0	547	20.1	182
Royalaseema						
Anantapur	4.0	-57	19.7	97	28.5	108
Chittoor	7.1	-43	18.0	36	9.8	-49
Cuddapah	0.7	-90	8.4	-13	3.5	-72
Kurnool	4.3	-44	18.7	54	14.0	33

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