

National Agromet Advisory Service Bulletin

Friday 27th June 2014

(For the period 27th to 1st July 2014)

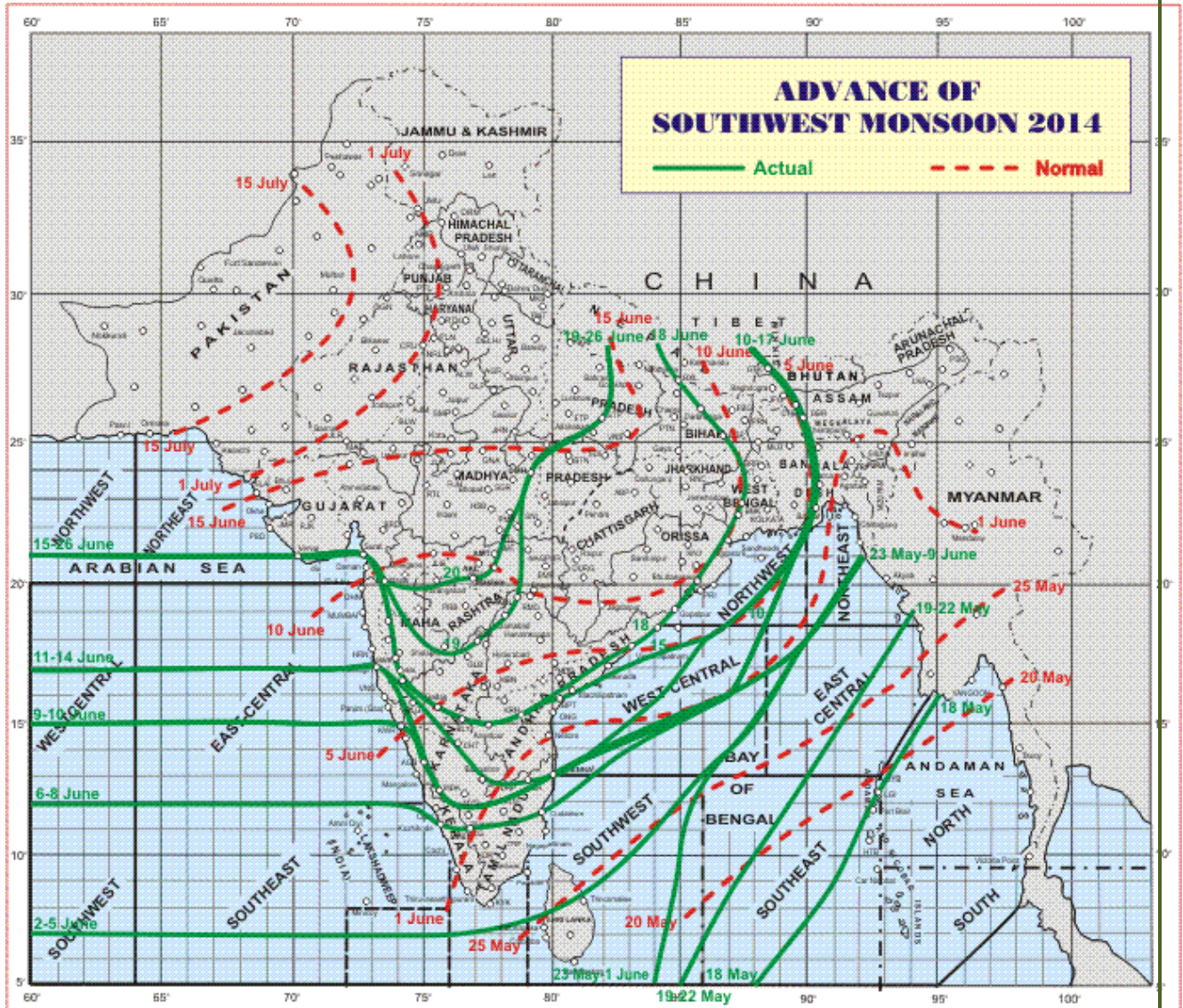


Issued by

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



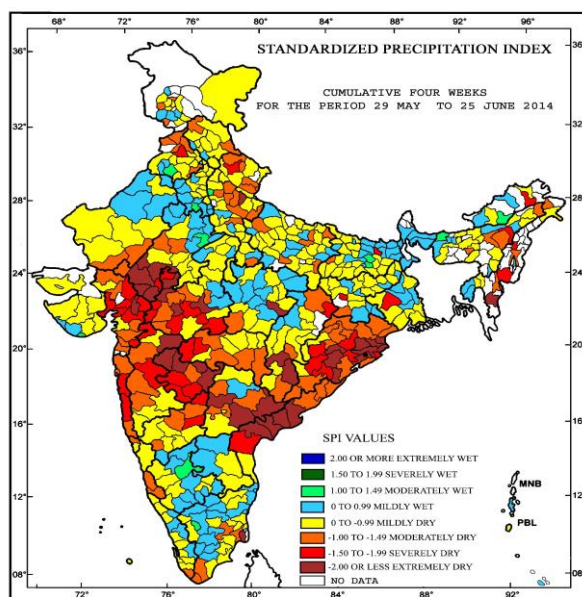
Monsoon Watch



- The Northern Limit of Monsoon (NLM) continues to pass through Lat. 21°N / Long. 60°E, Lat.21°N / Long. 65°E, Veraval, Surat, Nasik, Wasim, Damoh, Sultanpur and Lat.28°N / Long. 82°E.

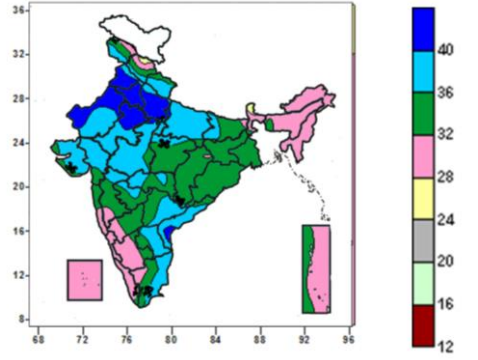
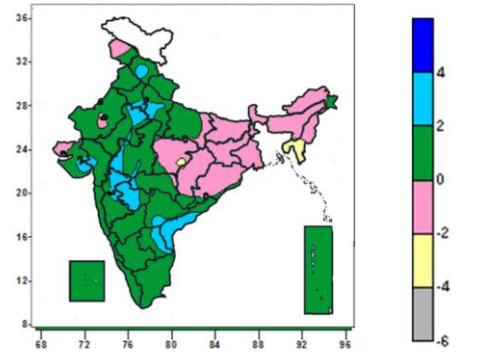
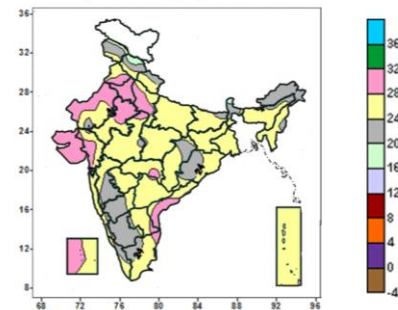
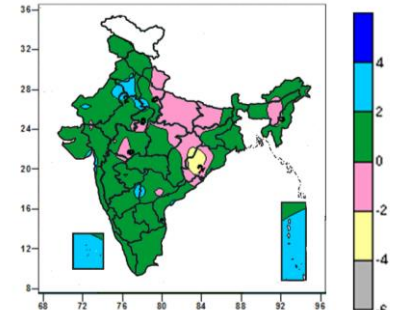
Standardised Precipitation Index
Four Weekly
for the Period 29th May to 25th June 2014

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



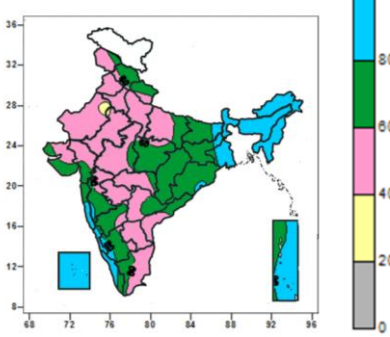
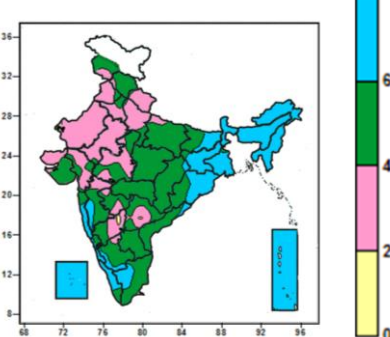
- Extremely/ moderately/ severely dry conditions experienced in most districts of Orissa; Coastal Andhra Pradesh; Telangana; Maharashtra; many districts of Gujarat; few districts of Uttarkhand, Uttar Pradesh, Punjab, North East, East Rajasthan, Madhya Pradesh, Chattisgarh, Karnataka, Jammu, Poonch and Srinagar districts of Jammu & Kashmir; Chamba and Kinnaur districts of Himachal Pradesh; Buxar and Saharsa districts of Bihar; Bankura district of West Bengal; Simdega and Lohardagga districts of Jharkhand; Pali and Jalore districts of West Rajasthan Tiruvarur, Thanjavaur, Trichy, Tirunelveli and Kanyakumari districts of Tamil Nadu and Trivandrum district of Kerela.
- 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
25.06.2014**

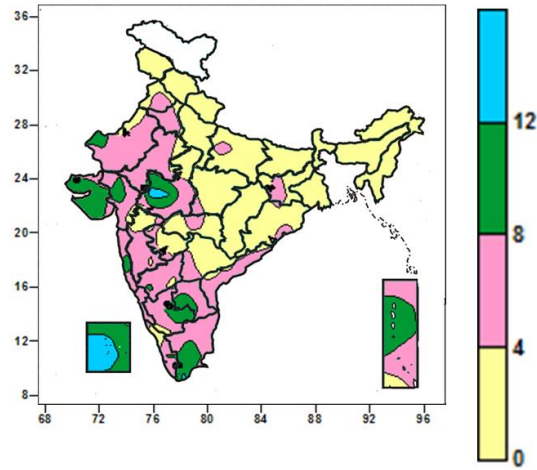
Actual Mean Maximum Temperature (°C) in India for the week ending 25.06.2014	Mean Maximum Temperature (°C) Anomaly in India for the week ending 25.06.2014
	
<ul style="list-style-type: none"> • 40 to 44⁰C over many parts of Punjab, Haryana, Delhi, West Uttar Pradesh, some parts of Rajasthan and Coastal Andhra Pradesh. • 36 to 40⁰C over many parts of Uttarakhand, East Uttar Pradesh, Rajasthan, West Madhya Pradesh, Gujarat, Andhra Pradesh, some parts of Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh, East Madhya Pradesh, Coastal Tamil Nadu, Marathwada, Vidarbha and Madhya Maharashtra. • 32 to 36⁰C over many parts of Bihar, Jharkhand, Gangetic West Bengal, Odisha, Chhattisgarh, Vidarbha, East Madhya Pradesh, Madhya Maharashtra, Marathwada, Konkan, North Interior Karnataka, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Sub-Himalayan West Bengal, Andhra Pradesh, Tamil Nadu, Kerala, South Interior Karnataka, Gujarat, West Madhya Pradesh and Andaman & Nicobar Islands. • 28 to 32⁰C over many parts of Sub_Himalayan West Bengal, North East India, Coastal & South Interior Karnataka, Kerala, Goa, Lakshadweep, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Bihar, Chhattisgarh, Tamil Nadu, North Interior Karnataka, Konkan and Madhya Maharashtra. • 24 to 28⁰C over many parts of Sikkim, some parts of Himachal Pradesh. 	<ul style="list-style-type: none"> • 2 to 4⁰C over many parts of Coastal Andhra Pradesh, Marathwada, some parts of Himachal Pradesh, Haryana, Delhi, West Uttar Pradesh, East Rajasthan, Telangana, Rayalaseema, Gujarat, West Madhya Pradesh. • 0 to 2⁰C over many parts of North India (except Jammu & Kashmir), West Madhya Pradesh, West India, South India (except Coastal Andhra Pradesh), some parts of Jammu & Kashmir, Arunachal Pradesh, Odisha, Chhattisgarh and East Madhya Pradesh. • -2 to 0⁰C over many places over Jammu & Kashmir, North East India (except Tripura), East India, West Madhya Pradesh, some parts of East Uttar Pradesh, West Rajasthan and Kutch. • -4 to -2⁰C over many parts of Tripura, some parts of Mizoram and East Madhya Pradesh.
Actual Mean Minimum Temperature (°C) in India for the week ending 25.06.2014	Mean Minimum Temperature (°C) Anomaly in India for the week ending 25.06.2014
	
<ul style="list-style-type: none"> • 28 to 32⁰C over many parts of Haryana, Delhi, West Uttar Pradesh, Coastal Andhra Pradesh, Saurashtra & Kutch, some parts of Punjab, Rajasthan, Gujarat region, West Madhya Pradesh, Vidarbha, Telangana, Rayalaseema, Tamil Nadu and Lakshadweep Islands. • 24 to 28⁰C over many parts of East Uttar Pradesh, Bihar, 	<ul style="list-style-type: none"> • 2 to 4⁰C over many parts of Lakshadweep, Andaman & Nicobar Islands, Haryana, Delhi, some parts of Punjab, West Uttar Pradesh, Rajasthan, Telangana, North Interior Karnataka and Gujarat. • 0 to 2⁰C over entire country except many parts of Uttarakhand, East Uttar Pradesh, Haryana, Delhi,

<p>Jharkhand, Gangetic West Bengal, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Central India, Telangana, Rayalaseema, Tamil Nadu, Marathwada, Vidarbha, Konkan & Goa, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, West Uttar Pradesh, Sub-Himalayan West Bengal, Coastal Andhra Pradesh, Kerala, Karnataka and Madhya Maharashtra.</p> <ul style="list-style-type: none"> • 20 to 24°C over many parts of Jammu & Kashmir, Sub-Himalayan West Bengal, Arunachal Pradesh, Odisha, Karnataka, Madhya Maharashtra, some parts of Himachal Pradesh, Uttarakhand, West Rajasthan, Gujarat region, Bihar, Assam & Meghalaya, Manipur, Chattisgarh, Kerala, Madhya Pradesh and Tamil Nadu. • 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh. 	<p>Bihar, Lakshadweep, Andaman & Nicobar Islands, some parts of West Uttar Pradesh, Rajasthan, Jharkhand, Assam & Meghalaya, Arunachal Pradesh, Tripura, Chhattisgarh, Odisha, Madhya Pradesh, Telangana and Gujarat.</p> <ul style="list-style-type: none"> • -2 to 0°C over many parts of Uttarakhand, East Uttar Pradesh, Bihar, some parts of West Uttar Pradesh, Rajasthan, Jharkhand, Assam & Meghalaya, Arunachal Pradesh, Tripura, central India, Odisha, Telangana and Gujarat region. • -4 to -2°C over some parts of Odisha, Chhattisgarh.
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Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 25.06.2014

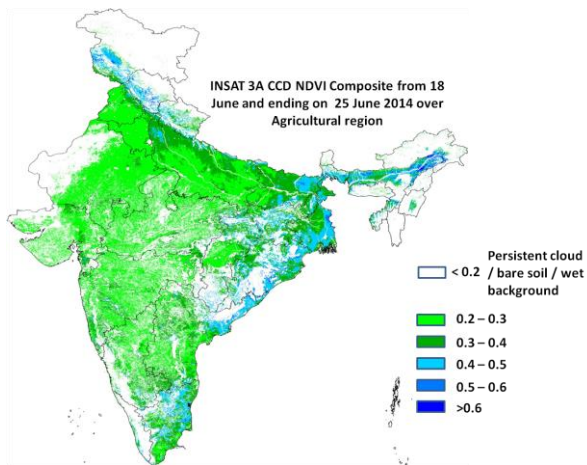
<p>Relative Humidity (%) over India for the week ending 25.06.2014</p>	<p>Cloud amount (okta) over India for the week ending 25.06.2014</p>
	
<ul style="list-style-type: none"> • 80 to 100% over many parts of North East India, West Bengal & Sikkim, Coastal Karnataka, Kerala, Konkan & Goa, Lakshadweep and Andaman & Nicobar Islands, some parts of Bihar, Jharkhand, Odisha, South Interior Karnataka and Madhya Maharashtra. • 60 to 80% over many parts of Himachal Pradesh, Uttarakhand, Bihar, Jharkhand, Odisha, Chhattisgarh, East Madhya Pradesh, Interior Karnataka, Madhya Maharashtra, some parts of Jammu & Kashmir, East Uttar Pradesh, Gangetic West Bengal, Gujarat, West Madhya Pradesh, Coastal Andhra Pradesh, Telanagana, Tamil Nadu, Kerala and Konkan. • 40 to 60% over many parts Jammu & Kashmir, Punjab, Haryana, Delhi, and Rajasthan. Uttar Pradesh, West Madhya Pradesh, Gujarat, Andhra Pradesh, Marathwada, Vidarbha, Tamil Nadu, some parts of Himachal Pradesh, Uttarakhand, East Madhya Pradesh, Madhya Maharashtra and Interior Karnataka. • 20 to 40% over some parts of Rajasthan. 	<ul style="list-style-type: none"> • 6 to 8 okta over many parts of North East India, East India, Kerala Coastal Karnataka, Konkan & Goa, Lakshadweep, Andaman & Nicobar Islands some parts of Chattisgarh, Coastal Andhra Pradesh, South Interior Karnataka and Madhya Maharashtra. • 4 to 6 okta over many parts of Jammu & Kashmir, Uttarakhand, East Uttar Pradesh, Central India, Andhra Pradesh, Tamil Nadu, Interior Karnataka, Madhya Maharashtra, Marathwada, Vidarbha, Saurashtra & Kutch, some parts of East Rajasthan, Punjab, Haryana, West Uttar Pradesh, Bihar, Jharkhand, Odisha, Kerala, Konkan, Gujarat region and East Madhya Pradesh. • 2 to 4 okta over many parts of Uttarakhand, Punjab, Haryana, Delhi, West Uttar Pradesh, Rajasthan, West Madhya Pradesh, Gujarat region, some parts of Jammu & Kashmir, Himachal Pradesh, East Uttar Pradesh, Telangana, Interior Karnataka, Saurashtra & Kutch, Madhya Maharashtra and Marathwada. • 0 to 2 okta over some parts of South Interior Karnataka.

Wind speed (knots) over India for the week ending 25.06.2014



- 12 to 16 knots over many parts of Lakshadweep Islands, some parts of West Madhya Pradesh.
- 8 to 12 knots over many parts of Saurashtra & Kutch, West Madhya Pradesh, Lakshadweep, Andaman & Nicobar Islands, some parts of Rajasthan, Gujarat region, Rayalaseema, Tamil Nadu, Kerala, South Interior Karnataka and Konkan.
- 0 to 8 knots over entire country except many parts of Saurashtra & Kutch, West Madhya Pradesh, Lakshadweep, Andaman & Nicobar Islands, some parts of Rajasthan, Gujarat, Rayalaseema, Tamil Nadu, Kerala, South Interior Karnataka and Konkan.

INSAT 3A CCD NDVI COMPOSITE OVER AGRICULTURAL REGION 20th to 26th June 2014



Source: SAC, Ahmedabad

- Agricultural vigour is moderate over few pockets of central and south West Bengal, north-east Bihar, coastal Odisha and Andhra Pradesh as NDVI varied between 0.4 to 0.5 upto 25th June 2014. The NDVI remains within the range of 0.2 to 0.3 over rest of India. There is no rise in NDVI as compared to last week in rest part of India.

Weather Forecast

Weather Forecast for next 3 days (upto 0830 hours IST of 30th June, 2014)

- Rain/thundershowers would occur at a few places over Andaman & Nicobar Islands during the period.
- Rain/thundershowers would occur at many places over Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura during the period and at many places over Assam & Meghalaya during next 24 hours and at most places thereafter.
- Rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim during the period and at a few places over Gangetic West Bengal during next 24 hours and increase thereafter.
- Rain/thundershowers would occur at many places over Odisha and at a few places over Jharkhand, Himachal Pradesh during the period. Rain/thundershowers would occur at isolated places over Bihar during next 24 hours and increase thereafter.
- Rain/thundershowers would occur at a few places over Kerala and Telangana during next 24 hours and increase thereafter.
- Rain/thundershowers would occur at many places over Coastal Andhra Pradesh during next 48 hours and at a few places thereafter.
- Rain/thundershowers would occur at isolated places over South Interior Karnataka and Lakshadweep during next 24 hours and over Chhattisgarh during next 48 hours and increase thereafter.
- Rain/thundershowers would occur at isolated places over Jammu & Kashmir, West Uttar Pradesh, Punjab, Haryana & Delhi, East Madhya Pradesh, Konkan and Goa, Vidarabha Rayalaseema, Tamilnadu & Pudducherry and North Interior Karnataka during the period.
- Rain/thundershowers would occur at isolated places over Rajasthan, West Madhya Pradesh during next 24 hours and mainly dry thereafter.
- Mainly dry weather would prevail over Gujarat State and Madhya Maharashtra during the period.
- Mainly dry weather would prevail over Marathwada during next 24 hours and rain/thundershowers would occur at isolated places thereafter.
- No significant change in maximum temperatures likely over northwest and central India. No significant change in maximum temperatures also likely over east India during next 48 hours and would fall by 2-3°C thereafter.

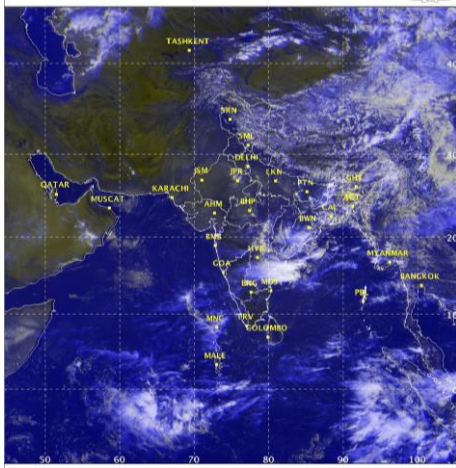
Weather Warning during next 3 days

- **27 June (Day 1):** Heat wave conditions would prevail at isolated places over east Uttar Pradesh. Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and north coastal Andhra Pradesh.
- **28 June (Day 2):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya. Heavy rainfall would occur at isolated places over Gangetic West Bengal, Odisha and north coastal Andhra Pradesh.
- **29 June (Day 3):** Heavy to very heavy rainfall would occur at isolated places over Sub- Himalayan West Bengal & Sikkim, Assam & Meghalaya. Heavy rainfall would occur at isolated places over Gangetic West Bengal, Odisha and Arunachal Pradesh.

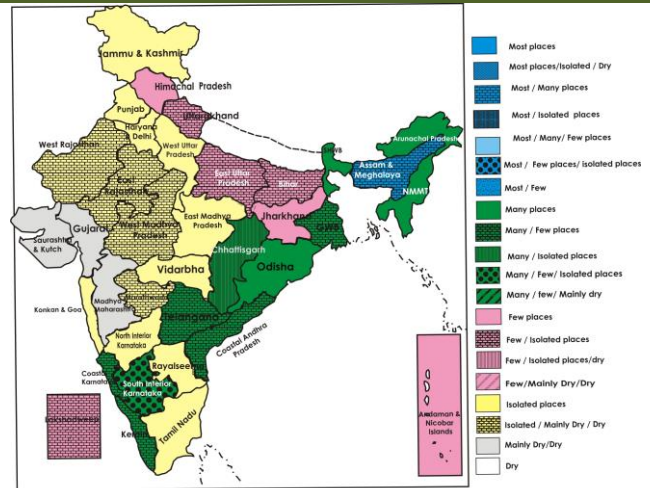
Weather Outlook for subsequent 4 days from 30th June to 4th July 2014

- Rain/thundershowers would occur at most places over northeastern state and Sub-Himalayan West Bengal & Sikkim.
- Rain/thundershowers would occur at many places along west coast and at a few places over rest east India.
- Rain/thundershowers would occur at a few places over peninsular India and Andaman & Nicobar Islands.
- Increase in rain/thundershower activity over western Himalayan region and Uttar Pradesh.
- Rain/thundershowers would occur at isolated places over rest of the country outside Rajasthan where weather may be mainly dry.

Satellite image dated 27.06.2014, 0600 UTC



Weather Forecast Map (Valid upto 0830 hours of 30th June, 2014)



Salient Advisories

- Continue transplanting of *Virippu* rice in the Southern, Central and Northern Zones of **Kerala**.
- Continue nursery sowing of *kharif* rice in **Coastal Zone of Karnataka**, sowing of maize, groundnut and red gram and undertake nursery preparation for sowing of rice in Shimoga, Hassan and Chikmagalur districts of **South Interior Karnataka** utilizing the realized and expected rainfall.
- Continue land preparation for nursery sowing and direct sowing of rice and planting of rainfed sugarcane in the North Coastal Zone of **Andhra Pradesh**.
- In Assam and Meghalaya, continue nursery sowing of *sali* rice and in **Arunachal Pradesh** continue sowing of *kharif* rice utilizing the realized and expected rainfall. Also provide adequate drainage in crop fields to remove excess water.
- Continue nursery sowing of main *kharif* rice and early cauliflower, sowing of black gram and rice bean in **Manipur** and undertake sowing of soybean in **Nagaland**.
- In **West Bengal**, continue land preparation and nursery sowing of aman rice utilizing the realized and expected rainfall.
- In North Eastern Coastal Plain Zone of **Odisha**, continue land preparation and direct sowing of *kharif* rice continue sowing of maize, arhar and cotton in upland areas in Western Undulating Zone utilizing the realized rainfall.
- Undertake nursery sowing of rice and sowing of maize in **Bihar** and sowing of maize, pigeon pea, urad, moong, groundnut, soybean and sesame in **Jharkhand**.

Detailed Zonewise Agromet Advisories

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



Land preparation/ Sowing



Rice Nursery



Sugarcane



Okra

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala; all districts of Coastal Karnataka; Chikmagalur, Kodagu and Shimoga districts of South Interior Karnataka; Coimbatore and Nilgiris districts of Tamil Nadu; Karimnagar district of Telangana. Mainly dry weather prevailed over remaining parts of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Coastal Andhra Pradesh during next 48 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Kerala and Telangana

during next 24 hours and increase thereafter. Rain/thundershowers would occur at isolated places over South Interior Karnataka and Lakshadweep during next 24 hours and increase thereafter. Rain/thundershowers would occur at isolated places over Rayalaseema, Tamilnadu & Pudducherry and North Interior Karnataka during the period.

- **Weather Warning:** Heavy rainfall would occur at isolated places over North Coastal Andhra Pradesh on 27th & 28th June.
- **Weather Outlook:** Rain/thundershowers would also occur at few places over south peninsular India
- **Advisories:**
 - **Kerala:**
 - Continue transplanting of *Virippu* rice in the Southern, Central and Northern Zones of Kerala.
 - Continue direct sowing of rice (Uma variety) and planting of coconut seedlings in the Problem Area Zone of Kerala. Also undertake mat nursery preparation in places where mechanized transplanting can be done, planting of Nendran bananas and land preparation for transplanting of brinjal and chilli.
 - High relative humidity is congenial for the occurrence of sheath blight, sheath rot and leaf spot diseases in nursery rice in the Central Zone of Kerala. Dip the roots of seedling in pseudomonas solution by mixing 20 g *Pseudomonas* culture in one litre of water for 30 minutes while transplanting and apply trichoderma or pseudomonas culture to manage the disease in the nursery after current spells of rain.
 - In the Southern Zone of Kerala, in banana fields where *Sigatoka* leaf spot incidence is acute, apply Propiconazole (Tilt) @ 1ml/ litre, on the lower side of leaves after cutting and removing the badly affected leaves after current spells of rain.
 - **Karnataka:**
 - Continue nursery sowing of *kharif* rice in Coastal Zone of Karnataka. Also undertake transplanting of rice in the main field with proper age of seedlings.
 - Undertake land preparation for transplanting of rice, sowing of maize, cotton and planting of ginger and turmeric in the Hill Zone of Karnataka using the realized rainfall.
 - Continue sowing of maize, groundnut and red gram and undertake nursery preparation for sowing of rice in Shimoga, Hassan and Chikmagalur districts of South Interior Karnataka utilizing the realized and expected rainfall.
 - Undertake land preparation and sowing of *kharif* crops like sorghum, pulses viz., cowpea, green gram, black gram and oilseed crops like sesamum in the Southern Dry Zone with expected rainfall.
 - Undertake land preparation and sowing of *kharif* crops after receipt of sufficient rainfall in North Interior Karnataka.
 - **Andhra Pradesh:**
 - Continue land preparation for nursery sowing and direct seeding of rice and planting of rainfed sugarcane in the North Coastal Zone of Andhra Pradesh.
 - As rain/thundershowers would occur at many places over Coastal Andhra Pradesh along with isolated heavy spells on 27th and 28th June, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops. As isolated heavy spells is likely to occur over north Coastal Andhra Pradesh on 28th, provide adequate drainage in crop fields to remove excess water.
 - In Southern Telangana Zone of Andhra Pradesh, undertake nursery sowing of tomato, brinjal and chillies and direct sowing of gourds, beans and bhendi utilizing the expected rainfall.
 - **Tamil Nadu:**
 - Undertake nursery preparation of *kuruvai* rice and transplanting under SRI cultivation in the Cauvery Delta Zone of Tamil Nadu with irrigation.
 - Undertake application of fertilizers in coconut fields in areas where rainfall was received in the Western Zone of Tamil Nadu. By utilizing realised rainfall, apply nitrogen fertilizers to the rainfed sorghum.
 - As mainly dry weather is prevailing, apply irrigation to cotton crop and adopt drip irrigation in banana @ 10-15 litres/ plant/ day in the Southern Zone of Tamil Nadu.
- **Animal Husbandry**
 - Vaccinate animals (cow, buffalo, bullock) against Foot and Mouth Disease (FMD vaccination) and Haemorrhagic Septicaemia and sheep and goats against Enterotoxemia in the Southern Transition Zone and North Dry Zone of Karnataka.

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



Rice Nursery



Land preparation/Sowing



Okra



Jute

- **Realised Rainfall:** Rainfall occurred in all districts except Dibang Valley district of Arunachal Pradesh; all districts of Assam; all districts of Meghalaya; Aizwal, Saiha and Serchhip districts of Mizoram; Chandel, Imphal East, Imphal West and Senapati districts of Manipur; Dimapur district of Nagaland and all districts of Tripura. Mainly dry weather prevailed over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at many places over Arunachal Pradesh, Nagaland, Manipur, Mizoram and Tripura during the period and at many places over Assam & Meghalaya during next 24 hours and at most places thereafter.
- **Weather Warning:** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya during the period and heavy rainfall would occur at isolated places over Arunachal Pradesh on 29th June.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over rest of the region.
- **Advisories:**
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Assam and Meghalaya, continue nursery sowing of sali rice and in Arunachal Pradesh continue sowing of kharif rice utilizing the realized and expected rainfall.
 - In Central Brahmaputra Valley Zone of Assam, continue sowing of arhar.
 - In Lower Brahmaputra Valley Zone of Assam, undertake land preparation for sowing of groundnut.
 - Continue sowing of groundnut and soybean in Meghalaya utilizing the realized and expected rainfall.
 - As rain/thundershowers would occur at many/most places over Assam and Meghalaya along with heavy to very heavy spells at isolated places during the period, postpone intercultural operations, application of plant protection measures and fertilizers in the standing crops. Provide adequate drainage in crop fields to remove excess water.
 - Due to prevailing humid weather conditions, there is chance of attack of stem borer on maize in Arunachal Pradesh. Spray Quinalphos 25 EC @2ml/litre of water after current spells of rain. Also there is chance of collar rot/wilting/damping off in green gram, for control, spray Carbandazim @1g per litre of water or Endofil M45 @ 2.5 g per litre of water after current spells of rain.
 - Due to humid weather and increase in humidity, there is chance of attack of blast, Gundhi bug and stem borer in ahu rice in Temperate Sub Alpine Zone of Meghalaya. Spray Mancozeb @ 2g/litre of water or Carbendazim @ 1 g/litre of water against blast, spray Malathion 5% dust @ 6.25kg/ha against rice Gandhi bug and Chloropyriphos @ 0.02% or Monocrotophos @ 0.04% for stem borer after current spells of rain.
 - **Nagaland, Manipur, Mizoram and Tripura:**
 - In Mizoram, continue sowing of cucurbits, okra, brinjal and planting of ginger and turmeric utilizing the realized and expected rainfall.
 - In Nagaland, undertake sowing of soybean utilizing the realized and expected rainfall .
 - Continue nursery sowing of main *kharif* rice and early cauliflower, sowing of black gram and rice bean in Manipur.
 - In Mild Tropical Plain Zone of Tripura, continue nursery sowing of *aman* rice and planting of banana utilizing the realized and expected rainfall.
 - As rain/thundershowers would occur at many places during the period over Nagaland, Manipur, Mizoram and Tripura, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - Warm and humid conditions may cause canker, aphids and Psyllid attack in young and new shoots of khasi mandarin in Mid Tropical Hill Zone of Mizoram. It can be controlled by pruning and burning the infected shoots and then smearing the cut portions with 1 % Bordeaux paste and spray Streptomycin 2g/ 10 litre of water against canker and spray Imadaclopid @ 1.5 ml/litre of water against aphids and psyllid after current spells of rain.
 - Due to cloudy weather and increase in humidity, there is chance of attack of blast disease in *jhum* rice in Mild Tropical Hill Zone of Nagaland. Spray Carbendazim @ 1 g/litre of water after current spells of rain.
- **Animal Husbandry**
 - In the Northeastern States, immunizations against FMD, HS and BQ in cattle & buffaloes and swine fever in pigs may be carried out during monsoon season. Vaccination (RDF1) against Ranikhet disease in one week old chicks and against Gamboro disease in two weeks old chicks may be carried out.
 - Monsoon weather could lead to gastrointestinal parasites infection in pigs in Tripura. Farmers are advised to keep

good sanitary conditions in pig sheds.

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



Sugarcane

Jute

Onion

Land Preparation/Sowing

- **Realised Rainfall:** Significant rainfall occurred in all districts except Bankura of Gangetic West Bengal and in all districts of Sub-Himalayan West Bengal & Sikkim; in all districts of Bihar except Arwal, Buxar, Bhabua, Jahanabad Monghyr, and Saharsa districts; in all districts of Jharkhand; in all districts of Odisha except Angul, Bhadrak, Boudhgarh, Cuttack, Deogarh, Dhenkanal, Gajapari, Ganjam, Jagatsinghpur, Jajpur, Kalahandi, Kandhamahal, Kendrapara, Khurda, Malkangiri Nayagarh and Puri districts and in north and middle Andaman districts of Andaman and Nicobar islands.
- **Weather Forecast:** Rain/thundershowers would occur at a few places over Gangetic West Bengal during next 24 hours and at many places thereafter. Rain/thundershowers would occur at many places over Sub Himalayan West Bengal & Sikkim and Odisha during the period. Rain/thundershowers would occur at a few places over Jharkhand and Andaman & Nicobar Islands during the period. Rain/thundershowers would occur at isolated places over Bihar during next 24 hours and at a few thereafter.
No significant change in maximum temperatures also likely over east India during next 48 hours and would fall by 2-3°C thereafter.
- **Weather Warning:** Heavy rainfall would occur at isolated places over Gangetic West Bengal and Odisha on 28th and 29th June and heavy to very heavy rainfall would occur over Sub-Himalayan West Bengal & Sikkim on 29th June.
- **Weather Outlook:** Rain/thundershowers would occur at most places over Sub-Himalayan West Bengal & Sikkim. Rain/thundershowers would occur at a few places Andaman & Nicobar Islands. Rain/thundershowers would occur at a few places over rest region.
- **Advisories:**
 - **West Bengal:**
 - Continue land preparation and nursery sowing of aman rice utilizing the realised and expected rainfall.
 - Continue land preparation for sowing of direct seeded aman rice in Coastal Saline Zone and undertake preparation of pit for plantation of coconut, guava and mango utilising the realised and expected rainfall.
 - As rain/ thundershowers would occur at many places along with heavy to very heavy rainfall at isolated places over Sub - Himalayan West Bengal & Sikkim on 29th June, postpone intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to remove excess water.
 - Due to humid weather Betel vine plants may be attacked by chital disease in Coastal Saline Zone of West Bengal. Apply 0.5% Bordeaux mixture at 15-20 days interval after current spells of rain.
 - Prevailing high temperature and humidity is congenial for attack of stem rot in betel vine in New Alluvial Zone of West Bengal. For control, spray a mixture of Carboxin 37.5% WP and Thiram 37.5% @ 2g/litre of water after current spells of rain. Also there is chance of attack of caterpillar and mite in jute. To control mite, apply Monocrotophos @ 1.5 ml per litre of water after current spells of rain.
 - **Andaman & Nicobar Islands:**
 - In North, Middle and South Andaman, continue nursery sowing of rice.
 - **Odisha:**
 - In North Eastern Coastal Plain Zone of Odisha, continue land preparation and direct sowing of kharif rice utilizing the realised and expected rainfall.
 - In Western Undulating Zone of Odisha, continue sowing of maize, arhar and cotton in upland areas taking the advantage of the realised and expected rainfall.
 - In North Eastern Plateau Zone of Odisha, continue sowing of maize, groundnut, green gram and blackgram and continue sowing of arhar, groundnut and ragi in North Central Plateau Zone of Odisha.
 - As rain/thundershowers would occur at many places over Odisha along with heavy spells at isolated places on 28th and 29th June, postpone intercultural operations, application of plant protection measures and fertilizers in the standing crops. Provide adequate drainage in crop fields to remove excess water.

- Due to humid weather there is chance of occurrence of fruit & shoot borer in brinjal and tomato in East and South Eastern Coastal Plain Zone and Mid Central Table Land Zone of Odisha. Install Pheromone trap and spray Sevin WP @4g or Malathion @ 2 ml in 1 litre of water after current spells of rain.
- **Bihar:**
- In North West Alluvial Plain Zone of Bihar, continue land preparation and nursery sowing of long duration rice varieties with realised rainfall. Continue sowing of *kharif* maize, undertake transplanting of tomato and brinjal and complete planting of turmeric and ginger.
- Continue nursery sowing of *kharif* onion and prepare nursery for sowing of medium duration hybrid rice varieties in South Bihar Alluvial Zone. Undertake sowing of *kharif* maize. In upland areas, prepare nursery for sowing of short duration rice varieties and also prepare nursery for sowing of scented rice varieties till 10th July. Undertake transplanting of *kharif* finger millet.
- In North East Alluvial Plain Zone of Bihar, continue sowing of *kharif* maize. Prepare the nursery for sowing of long duration rice varieties. In upland areas, prepare nursery for rice till 10th July.
- Due to cloudy weather and humid conditions, there may be incidence of powdery mildew in the cucurbits in North West Alluvial Plain Zone of Bihar; spray Sulfex @ 2 g per litre of water on a non rainy day.
- **Jharkhand:**
- In South Eastern Plateau Zone of Jharkhand, continue sowing of direct seeded upland rice and prepare the nursery for sowing of long duration rice varieties and undertake sowing of maize and pigeon pea, urad, moong, groundnut, soybean, sesame and also rainy season vegetables.
- Undertake nursery bed preparation for *kharif* rice in Western Plateau Zone of Jharkhand. Prepare land for sowing/nursery sowing of rainy season vegetables like bhindi, bean, French bean, tomato, cauliflower and cabbage. In upland areas undertake sowing of urad, groundnut and arhar and direct seeded rice (short duration varieties). Undertake nursery sowing of finger millet and sowing of maize.
- In Central & North Eastern Plateau Zone of Jharkhand, undertake land preparation for sowing of maize and pigeon pea with realised rainfall.
- **Animal Husbandry**
- Keep the cattle in the sheds during heavy rainfall periods in Sub - Himalayan West Bengal.
- In South Bihar Alluvial Zone, to carry out vaccination of animals against Galgotu disease to protect them during rainy season.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Land Preparation/Sowing

Okra

Green Gram

- **Realised Rainfall:** Rainfall occurred in Annupur, Balaghat, Damoh, Katni, Mandla, Panna, Rewa, Sagar, Seoni, Shahdol, Siddhi, Singrauli and Tikamgarh districts of east Madhya Pradesh and Sheopur and Vidisha districts of west Madhya Pradesh; in all districts of Chhattisgarh except Bastar, Dhamtari, Jashpur and Kanker. Weather remained mainly dry over rest of the region.
- **Weather Forecast:** Rain/Thundershowers would occur at isolated places over east Madhya Pradesh during period and isolated over West Madhya Pradesh during next 24 hours and mainly dry thereafter . Rain/Thundershowers would occur at isolated places over Chhattisgarh during next 48 hours and at many places thereafter. No significant change in maximum temperatures likely over central India.
- **Weather Warning:** No weather warning.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - Undertake nursery sowing of rice, maize, soybean and jowar in Kymore Plateau Zone of east Madhya Pradesh utilizing the realized rainfall.
 - Undertake nursery sowing of rice in Bundelkhand Zone of Madhya Pradesh utilizing the realized rainfall.
 - Continue land preparation for nursery sowing of rice in Malwa Plateau Zone and for sowing of *kharif* crops and nursery sowing of vegetables in Vindya Plateau and Grid Zone of west Madhya Pradesh.
 - Undertake land preparation for sowing of *kharif* crops and nursery sowing of vegetables in Central Narmada Valley

Zone and Satpura Plateau Zone of Madhya Pradesh.

- Due to partly cloudy weather, there is possibility of attack of fruit and stem borer in vegetables in Bundelkhand Zone of Madhya Pradesh. For control, spray Malathion 50 E.C. @ 1.0 ml per litre of water.
- Due to cloudy weather, there is possibility of attack of sucking insect and leaf curl disease in vegetables in Central Narmada Valley Zone of Madhya Pradesh, spray Imidachlorpid @ 0.03% solution at 15 days interval
- **Chhattisgarh:**
- In Chhattisgarh Plain Zone, undertake nursery sowing of rice, maize, soybean, moong and urad utilizing the realized and expected rainfall.
- In North Hill Zone of Chhattisgarh, continue land preparation and sowing/nursery sowing of rainy season vegetables.

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



Land Preparation

Sugarcane

Bottle Gourd

Onion

- **Realised Rainfall:** Rainfall occurred in Hamirpur and Solan districts of Himachal Pradesh; Champawat, Pithorgarh and Udhamasinghnagar districts of Uttarakhand; Bharatpur and Karauli districts of east Rajasthan; Bhatinda and Muktesar district of Punjab; in Azamgarh, Balia, Balrampur, Basti, Deoria, Ghazipur, Gondia, Maharajganj, Mirzapur, Shravasti, Siddharthnagar and Sultanpur districts of East U.P. Mainly dry weather prevailed over rest of the region.
- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Uttarakhand during next 24 hours and at a few places thereafter. Rain/thundershowers would occur at a few places over Himachal Pradesh during next 24 hours and mainly dry thereafter. Rain/thundershowers would occur at isolated places over east Uttar Pradesh on 27th, 28th and at a few places on 29th. Rain/thundershowers would occur at isolated places over Jammu & Kashmir, west Uttar Pradesh, Punjab, Haryana & Delhi during the period and at a few places over Himachal Pradesh during the period. Rain/thundershowers would occur at isolated places over Rajasthan during next 24 hours and mainly dry thereafter. No significant change in maximum temperatures is likely over northwest India during next 2-3 days. No significant change in maximum temperatures likely over northwest India.
- **Weather Warning:** Heat wave condition may prevail at isolated places over East Uttar Pradesh on 27th.
- **Weather Outlook:** Rain/thundershowers would occur at isolated places over rest of the region outside Rajasthan
- **Advisories:**
 - **Jammu & Kashmir:**
 - Continue land preparation for transplanting of rice and sowing of maize in Intermediate Zone of Jammu & Kashmir and continue sowing of moong, sunflower and vegetables in Valley Temperate Zone of Jammu & Kashmir.
 - Due to cloudy and humid condition, there are chances of collar rot in cucurbits in Sub Tropical Zone of Jammu & Kashmir. For control, spray Indofil M-45 @ 300-600 g/ 100 litres of water / acre.
 - **Himachal Pradesh:**
 - Continue nursery sowing of rice; undertake direct sowing of rice, maize and cucurbits like cucumber, bitter gourd, bottle guard and summer squash; planting of ginger, turmeric, colocasia and elephant foot and transplanting of tomato, chilli, *capsicum* and brinjal in Mid-Hills Sub-Humid Zone and Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh utilizing the realised rainfall.
 - Undertake transplanting of tomato and cabbage in High Hill Temperate Dry Zone of Himachal Pradesh.
 - Due to prevailing humid weather conditions, there are chances of attack of white grubs in maize in Sub-Montane & Low Hills Sub-Tropical Zone of Himachal Pradesh. Apply Chloropyriphos 20 EC @ 2 litres mixed with 25 kg of sand per hectare on a non rainy day.
 - Due to hot and humid weather conditions there are chances of incidence of *alternaria* leaf spot disease in apple in Mild Hills Sub-Humid Zone of Himachal Pradesh, Spray Entracol @ 600g in 200 litres of water on a non rainy day.
 - **Uttarakhand:**
 - Continue transplanting of rice and undertake sowing of sorghum, millets, groundnut and pigeon pea in Bhabar & Tarai Zone of Uttarakhand.
 - Continue sowing of palak, methi, coriander, okra and French bean in Hill Zone of Uttarakhand.
 - Due to variation in temperature, there is chance of black tip disease infestation in mango in Sub Humid Sub Tropical

Zone of Uttarakhand. To control, spray Borax (1 per cent) or washing soda (0.5 per cent) regularly at 10 days interval on a non rainy day.

▪ **Punjab, Haryana and Delhi:**

- In Western Plain Zone of Punjab, it is advised to complete transplanting of rice with irrigation. Give first dose of Nitrogen to counteract the high temperature and to minimize the burning of cotton seedlings. Save the young fruit trees from high temperature by erecting thatches of sarkanda or rice straw. If rain is not sufficient, apply irrigation at regular basis and increase the frequency of irrigation at critical growth stages of crops.
- In Western Zone of Punjab complete transplanting of rice with 25 to 30 days old seedlings utilizing realised rainfall during last week. Undertake nursery sowing of basmati rice.
- In Undulating Plain Zone of Punjab, continue transplanting of paddy and sowing of maize with irrigation.
- In Central Plain Zone and in Western Plain Zone of Punjab, complete transplanting of rice with irrigation and undertake sowing of okra.
- In Sub-Montane Undulating Zone of Punjab, undertake transplanting of rice and sowing of maize and okra with irrigation. To avoid fruit drop in Kinnow orchards, apply irrigation at 3-4 days interval (with Basin irrigation system) or 6-7 hours/day in drip irrigation system.
- In Eastern Zone of Haryana, transplant one month old rice seedlings with irrigation.
- In Western Zone of Haryana it is advised to do intercultural operations and give frequent irrigation in vegetable and fruit crops. Undertake sowing of guar, bajra and pulses and transplanting of rice with irrigation.
- In Delhi, continue nursery preparation of rice, early cauliflower and brinjal with irrigation facilities. Undertake transplanting of brinjal, chilli and early cauliflower if the seedlings are ready. Undertake sowing of pigeon pea, maize, guar, bajra, cluster bean, spinach, amaranths, okra and cucurbits during the week with irrigation facilities. Where irrigation facility is limited, it is advised to cultivate crops such as arhar, pearl millet, guar, pulses etc. which require less water.

▪ **Uttar Pradesh:**

- Undertake sowing of jowar, planting of turmeric and ginger in Central Plain Zone of Uttar Pradesh utilizing available moisture. Undertake land preparation for sowing of rice, maize and arhar.
- Undertake land preparation for sowing of arhar and groundnut in Western Plain Zone of Uttar Pradesh.
- Under prevailing hot weather conditions, there are chances of attack of leaf eating caterpillar in vegetables in Western Plain Zone of Uttar Pradesh. Spray Diclovas @ 1 ml per litre of water for control.

▪ **Rajasthan:**

- Undertake land preparation for sowing of *kharif* crops like pearl millet, cowpea, green gram, moth bean and urad etc. in Semi Arid Eastern Plain Zone of Rajasthan.
- Undertake land preparation for sowing of maize, jowar, soybean, moong, urda, til, groundnut and arhar in southern humid Plain Zone and Sub Humid Southern Plain and Aravali Hill Zone of Rajasthan.
- High temperature may cause damage to horticultural crops in Flood Prone Eastern Plain Zone of Rajasthan. Apply light and frequent irrigation or apply mulch to reduce the damage.

• **Animal Husbandry**

- Due to prevailing high temperature in Arid Western plain Zone of Rajasthan, Ecto and endo parasites may attack on livestock. To control ecto parasites like lice, mite, jock etc. apply Butox/Tickle @ 1 ml per litre on the body of animal.

• **Poultry**

- Due to prevailing hot weather conditions, give balanced feed to the poultry birds in 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.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Land Preparation/ Sowing



Sugarcane



Rice Nursery



Okra

- **Realised Rainfall:** Rainfall occurred in Raigad, Ratnagiri & Sindhudurg districts of Konkan, Kolhapur district in

Madhya maharashtra and Gondia district in Marathwada. Weather remained mainly dry over rest of the region.

- **Weather Forecast:** Rain/thundershowers would occur at isolated places over Konkan & Goa and Vidarbha during the period. Over marathwada mainly dry weather would prevail on 27th June and rainfall may occur at isolated places thereafter. Mainly dry weather would prevail over Gujarat & Madhya Maharashtra State during the period.
- **Weather Warning:** Heat wave conditions would prevail at isolated places over Madhya Maharashtra, Marathawada and Vidarbha during next 48 hours.
- **Weather Outlook:** Rain/thundershowers would occur at many places along west coast. Rain/thundershowers would occur at isolated places over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - As no significant rain is expected in Konkan, apply irrigation in rice and finger millet nurseries.
 - As mainly dry weather is expected in Vidarbha, apply irrigation to rice nursery, early sown *kharif* cotton, summer vegetables and orchards. Complete preparatory tillage with the help of recent monsoon showers and keep the fields ready for sowing of *kharif* crops like cotton, soybean, red gram, jowar, green gram, sunflower, black gram.
 - As mainly dry weather is expected in Madhya Maharashtra, continue intercultural operations and fertilizer application in sugarcane and vegetables. Complete preparatory tillage and keep the fields ready for sowing of *kharif* crops like cotton, soybean, red gram, jowar, bajra, groundnut, green gram, sunflower and black gram. Apply irrigation to the rice nursery. Also apply irrigation to sugarcane by alternate furrow method.
 - As mainly dry weather is expected in Marathwada, complete preparatory tillage utilizing recent rain and keep the fields ready for sowing of *kharif* crops like cotton, soybean, red gram, jowar, green gram, sunflower, black gram. Apply irrigation to summer sugarcane, orchard crops like banana, pomegranate, fig (drip irrigation) and vegetable crops in morning or evening hours. Apply mulch of crop residues and other plant waste products in the orchards and sugarcane trash in sugarcane. Apply irrigation in banana orchards through drip, apply mulch to preserve the soil moisture.
 - Due to humid weather in Pune region, there may be infestation of downy mildew in cucumber; spray Metalaxyl 8 % + Mancozeb 64 % @ 20 ml per 10 litres of water.
 - **Gujarat:**
 - **Gujarat region:** Continue land preparation for nursery sowing of mid / late maturing varieties of rice, sowing of pearl millet and pigeon pea in Bhal and Coastal Zone and Middle Gujarat Zone, for sowing of cotton crop in South Gujarat Zone utilising the available soil moisture; keep farm inputs ready and wait for sowing till sufficient rain occurs. As dry weather would prevail, apply irrigation in hybrid / B.T. cotton in alternate row at short intervals, in vegetable crops and in nurseries of fruit crops; carryout weeding, intercultural operation and mulching to conserve soil moisture in North Gujarat Zone. Carry out sowing of *kharif* groundnut if assured irrigation facilities are available.
 - In South Gujarat Heavy Rainfall Zone, in areas that received sufficient rainfall, carry out sowing of pearl millet, sesamum, hybrid cotton and black gram; carry out gap filling in cotton and intercultural operations in maize.
 - **Saurashtra & Kutch:** Continue sowing of groundnut, cotton, soybean, castor, maize and vegetable crops in South Saurashtra Zone utilising the available soil moisture. Continue land preparation for sowing of *kharif* groundnut, pulses, sesame, pearl millet and rainfed cotton utilising the realised rainfall and keep farm inputs ready, continue the work of digging out pits of proper size at proper distance for new cultivation of orchard crops and continue bunding in order to harvest rainwater in North Saurashtra Zone. In North West Zone, continue land preparation for sowing of pearl millet crop. Continue intercultural operation and gap filling in earlier sown groundnut crop to conserve soil moisture. Make necessary arrangement to recharge rainwater into wells and tube wells. Make farm pond in lower region of field for harvesting rainwater. Continue land levelling and bunding to increase water holding capacity of the soil.
- **Animal Husbandry**
 - In Gujarat, ensure vaccination of animals for different diseases before onset of rainy season. Spray phenyl in the animal shed to avoid flies, mosquitoes.
 - Considering the prevailing high temperature in North Madhya Maharashtra and Marathwada, hang gunny bags from outside the poultry shed and sprinkle it with water. Cover the roof with grass or gunny bags.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	11.06.14		18.06.14		25.06.14	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	58.5	-59	25.5	-78	79.7	-49
Dibang Valley	0.0	-100	0.0	-100	4.0	-96
East Kameng	22.1	-70	4.6	-95	196.6	149
East Siang	178.7	16	32.4	-84	78.6	-60
Kurung Kumey	**	**	**	**	**	**
Lohit	28.7	-68	11.7	-88	86.0	-24
Lower Dibang Valley	89.8	-4	10.7	-87	103.7	13
Lower Subansari	**	**	**	**	**	**
Papumpara	198.6	45	40.2	-68	350.4	116
Tawang	9.0	-94	35.0	-78	138.0	-23
Tirap	123.0	12	116.0	-27	52.4	-70
Upper Siang	144.6	-38	53.2	-72	143.0	-33
Upper Subansari	135.4	217	7.6	-74	137.6	174
West Kameng	262.6	75	53.0	-66	212.8	18
West Siang	116.0	20	51.5	-53	130.3	57
Assam&Meghalaya						
Assam						
Baksa	121.9	-23	18.3	-89	116.0	-29
Barpeta	258.0	62	50.8	-70	264.7	62
Bongaigaon	361.2	130	86.8	-43	256.7	101
Cachar	138.4	-2	105.2	-4	149.5	15
Chirang	556.7	255	92.8	-39	521.3	309
Darrang	117.0	30	35.0	-70	155.0	33
Dhemaji	80.0	-31	19.0	-85	96.0	-28
Dhubri	371.0	196	48.8	-67	193.0	23
Dibrugarh	45.6	-44	74.5	-18	130.1	18
Goalpara	63.5	-46	39.3	-74	238.5	71
Golghat	18.1	-69	7.2	-89	81.7	38
Hailakandi	132.5	-1	109.2	5	178.4	76
Jorhat	45.1	-36	28.5	-61	181.4	186
Kamrup(Rural)	124.4	56	15.4	-82	188.8	81
Kamrup(Metro)	17.8	-78	55.2	-36	185.1	77
Karbi Anglong	25.9	-50	17.2	-74	37.0	-36
Karimganj	256.0	70	73.9	-56	237.3	50
Kokrajhar	504.5	220	84.9	-62	252.4	39
Lakhimpur	89.9	-22	14.7	-88	141.7	7
Morigaon	26.6	-53	2.6	-97	82.6	-11
N.C.Hills	71.0	-28	22.8	-70	83.6	3
Nowgong	23.5	-65	21.3	-69	61.3	-23

Nalbari	106.6	-26	65.8	-54	157.3	3
Sonitpur	97.5	9	45.8	-46	96.4	12
Sibsagar	7.0	-86	11.6	-81	144.7	114
Tinsukia	37.5	-59	43.2	-52	91.8	-7
Udalgiri	104.6	16	13.6	-88	134.6	16
Meghalaya						
East Garo Hills	529.2	280	63.5	-62	228.1	100
East Khasi Hills	246.1	-26	37.9	-89	753.4	83
Jaintia Hills	0.0	-100	**	**	**	**
Ribhoi	58.3	1	51.2	-41	83.3	-18
South Garo Hills	166.0	33	90.0	-28	204.0	87
West Garo Hills	259.3	107	35.4	-72	167.0	53
West Khasi Hills	1.0	-99	**	**	**	**
NMMT						
Mizoram						
Aizwal	17.0	-84	64.2	-44	100.2	-9
Champhai	0.0	-100	0.0	-100	1.0	-99
Kolasib	1.0	-99	1.0	-99	1.0	-99
Lawngtlai	**	**	**	**	**	**
Lunglei	0.0	-100	0.0	-100	1.0	-99
Mamit	5.0	-95	**	**	**	**
Saiha	91.0	-1	131.0	36	162.0	79
Serchhip	30.0	-66	32.0	-70	86.0	-18
Manipur						
Bishnupur	0.0	-100	**	**	**	**
Chandel	50.0	-65	82.0	-59	49.0	-70
Churachandpur	11.0	-89	65.0	-37	2.0	-98
Imphal east	29.4	-67	189.1	97	74.2	-10
Imphal west	187.3	122	101.7	8	95.7	27
Senapati	11.0	-87	57.0	-37	57.0	-38
Tamenglong	**	**	**	**	**	**
Thoubal	0.0	-100	20.0	-81	10.0	-79
Ukhrul	0.0	-100	10.0	-88	**	**
Nagaland						
Dimapur	11.0	-88	44.8	-3	32.7	2
Kephire	**	**	**	**	**	**
Kohima	25.6	-68	20.9	-75	29.7	-54
Longleng	**	**	**	**	**	**
Mokokchung	11.0	-94	19.0	-89	22.0	-72
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	10	-88	56	-32	22	-66
Tuensang	**	**	**	**	**	**
Wokha	1.0	-99	**	**	0.0	-100
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	12.8	-90	89.3	-33	204.6	116
North tripura	28.1	-78	75.1	-39	150.5	63
South tripura	49.7	-56	109.6	-13	269.5	160

West tripura	37.8	-64	81.9	-29	265.8	208
Himachal Pradesh						
Bilaspur	0.0	-100	16.9	-27	22.1	-26
Chamba	2.5	-84	4.3	-83	9.8	-78
Hamirpur	0.0	-100	13.0	-46	31.1	-32
Kangra	0.0	-100	21.4	-19	21.0	-51
Kinnaur	0.0	-100	1.0	-88	0.0	-100
Kullu	0.0	-100	9.6	-47	15.4	-43
Lahaul and Spiti	0.0	-100	0.0	-100	0.0	-100
Mandi	0.0	-100	53.2	83	29.9	-33
Shimla	0.0	-100	24.4	11	26.4	-8
Sirmaur	0.0	-100	19.0	-14	15.5	-67
Solan	0.0	-100	60.0	127	35.5	-6
Una	0.0	-100	12.3	5	24.7	44
Punjab						
Amritsar	0.0	-100	0.0	-100	1.6	-88
Barnala	0.0	-100	0.0	-100	5.1	-25
Bhatinda	0.0	-100	5.0	-26	38.0	313
Faridkot	0.0	-100	0.0	-100	27.0	103
Fatehgarh Saheb	0.0	-100	0.0	-100	3.0	-71
Ferozpur	0.0	-100	0.0	-100	8.8	-26
Gurdaspur	0.0	-100	2.9	-73	6.1	-64
Hoshiarpur	0.0	-100	0.7	-95	0.3	-98
Jalandhar	0.0	-100	0.0	-100	1.6	-90
Kapurthala	0.0	-100	0.0	-100	1.5	-88
Ludhiana	0.0	-100	2.9	-69	4.9	-68
Mansa	0.0	-100	4.9	-34	6.4	-43
Moga	0.0	-100	0.0	-100	13.1	-17
Muktesar	0.0	-100	0.0	-100	35.3	224
Nawashahar	0.0	-100	9.5	-41	0.0	-100
Patiala	0.0	-100	8.0	-26	0.0	-100
Ropar	0.0	-100	4.7	-57	4.6	-75
Sangrur	0.0	-100	1.9	-78	3.1	-67
Mohali	0.0	-100	17.5	48	0.7	-97
TarnTaran	0.0	-100	0.0	-100	4.4	-50
Haryana,Chd,Delhi						
Haryana						
Ambala	0.0	-100	20.8	-6	0.0	-100
Bhiwani	0.0	-100	16.0	166	5.9	-32
Chandigarh	0.0	-100	41.4	44	2.3	-93
Faridabad	0.0	-100	25.7	209	4.1	-76
Fatehabad	0.0	-100	6.0	22	12.8	44
Gurgaon	0.0	-100	6.6	12	2.4	-82
Hissar	0.0	-100	16.9	168	5.3	-50
Jhajar	0.0	-100	14.4	106	2.3	-69
Jind	0.0	-100	0.7	-92	9.2	-7
Katihai	0.0	-100	11.0	49	9.5	-34
Karnal	0.0	-100	23.1	67	0.7	-96
Kurukshetra	0.0	-100	28.8	130	0.0	-100

Mahendragarh	0.0	-100	10.5	61	16.8	35
Mewat	0.0	-100	10.0	108	6.4	-62
Palwal	0.0	-100	7.9	24	9.3	17
Panchkkula	0.0	-100	17.3	-5	0.3	-99
Panipat	0.0	-100	7.9	-23	0.4	-98
Rewari	0.0	-100	32.0	527	16.8	66
Rohtak	0.0	-100	5.3	-40	1.2	-88
Sirsa	0.0	-100	8.4	45	0.4	-94
Sonepat	0.0	-100	3.4	-74	0.4	-97
Yamunanagar	0.0	-100	27.2	37	2.2	-95
Delhi						
Central Delhi	0.0	-100	5.0	-64	3.0	-81
East Delhi	0.0	-100	26.0	87	1.0	-94
New Delhi	0.0	-100	8.0	-43	4.7	-71
North Delhi	0.0	-100	23.5	69	0.0	-100
North East Delhi	0.0	-100	9.0	-35	1.0	-94
North West Delhi	0.0	-100	17.0	22	0.0	-100
South Delhi	0.0	-100	12.8	-8	1.0	-94
South West Delhi	0.0	-100	15.5	12	6.5	-59
West Delhi	0.0	-100	14.0	1	5.0	-68
Jammu & Kashmir						
Anantnag	0.1	-99	0.9	-93	5.4	-44
Badgam	0.0	-100	0.1	-99	5.9	4
Bandipore	**	**	**	**	**	**
Baramula	1.4	-91	8.8	-58	18.4	48
Doda	0.0	-100	3.6	-78	8.6	-4
Ganderbal	0.0	-100	0.0	-100	5.9	13
Jammu	0.0	-100	1.6	-87	5.1	-70
Kargil	0.0	-100	0.0	-100	0.0	-100
Kathua	0.0	-100	0.0	-100	2.6	-82
Kistwar	**	**	**	**	**	**
Kulgam	0.0	-100	1.2	-92	8.0	-17
Kupwara	1.6	-85	0.7	-95	5.4	-25
Ladakh(Leh)	0.0	-100	0.0	-100	0.2	-75
Poonch	0.0	-100	3.3	-86	4.5	-71
Pulwama	0.0	-100	0.0	-100	0.3	-91
Rajouri	0.0	-100	36.9	227	15.6	126
Ramban	0.5	-96	4.8	-71	10.2	14
Reasi	0.0	-100	32.2	94	10.7	-58
Samba	0.0	-100	3.6	-70	1.2	-93
Shopian	0.0	-100	2.0	-84	4.0	3
Srinagar	0.0	-100	0.2	-99	0.7	-87
Udhampur	0.0	-100	0.0	-100	14.7	-43
East Madhya Pradesh						
Anuppur	0.0	-100	17.9	-50	88.2	43
Balaghat	0.2	-99	27.2	-7	71.7	-3
Chhatarpur	0.0	-100	29.9	125	13.4	-57
Chindwara	0.0	-100	38.7	30	20.6	-57
Damoh	0.0	-100	59.7	198	57.7	45

Dindori	0.0	-100	0.0	-100	11.0	-84
Jabalpur	1.7	-89	80.4	233	23.2	-43
Katni	0.0	-100	18.2	10	35.0	-11
Mandla	0.0	-100	50.3	90	94.8	68
Narsingpur	0.0	-100	21.7	-6	27.0	-33
Panna	0.0	-100	0.0	-100	45.4	23
Rewa	0.0	-100	20.5	33	47.6	25
Sagar	2.3	-84	41.8	90	34.9	-24
Satna	0.0	-100	29.5	80	3.1	-93
Seoni	0.0	-100	36.4	-2	32.4	-47
Shahdol	0.0	-100	5.0	-72	59.0	26
Sidhi	0.0	-100	56.8	217	55.8	38
Singrauli	0.0	-100	38.0	77	30.5	-22
Tikamgarh	0.0	-100	24.0	62	52.0	142
Umaria	0.0	-100	33.4	137	14.7	-69
West Madhya Pradesh						
Alirajpur	5.4	-71	0.7	-98	0.0	-100
Asoknagar	0.0	-100	5.5	-60	19.5	-4
Badwani	0.0	-100	19.2	-36	3.1	-88
Betul	0.0	-100	25.0	-17	2.6	-95
Bhind	0.0	-100	6.2	-30	3.3	-79
Bhopal	0.0	-100	18.0	-27	5.2	-85
Burhanpur	0.0	-100	48.7	48	0.0	-100
Datia	0.0	-100	18.6	107	20.0	-5
Dewas	0.0	-100	14.8	-47	0.0	-100
Dhar	0.0	-100	17.7	-47	0.8	-98
Guna	0.0	-100	25.7	79	3.0	-87
Gwalior	0.0	-100	5.8	-59	0.1	-99
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	24.1	0	18.9	-60
Indore	0.2	-99	8.4	-73	0.0	-100
Jhabua	0.5	-96	0.0	-100	0.4	-99
Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	0.7	-97	16.3	-47	0.0	-100
Mandsaur	0.0	-100	1.3	-94	0.0	-100
Morena	0.0	-100	1.3	-84	13.5	-9
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	1.0	-94	66.4	198	16.6	-63
Rajgarh	0.0	-100	35.6	79	2.6	-91
Ratlam	0.0	-100	0.4	-98	0.0	-100
Sehore	0.0	-100	5.1	-79	7.3	-82
Shajapur	0.0	-100	15.8	-27	0.8	-98
Sheopur Kalani	0.0	-100	8.0	-26	45.5	172
Shivpuri	0.0	-100	13.8	7	9.5	-54
Ujjain	3.6	-75	22.6	-14	0.0	-100
Vidisha	0.0	-100	29.9	52	42.7	12
Chhattisgarh						
Bastar	1.0	-96	5.7	-86	7.3	-90
Bijapur	0.0	-100	17.7	-68	65.3	-6

Bilaspur	0.0	-100	13.5	-58	115.0	86
Dantewara	0.0	-100	27.1	-36	31.2	-51
Dhamtari	0.0	-100	20.4	-29	2.8	-95
Durg	0.0	-100	25.0	-22	38.2	-39
Janjgir	12.0	-29	6.8	-83	41.0	-22
Jashpurnagar	4.0	-89	0.6	-99	23.4	-67
Kanker	0.0	-100	6.3	-83	10.8	-85
Korba	0.0	-100	2.7	-94	46.4	-20
Koriya	0.0	-100	41.3	56	116.6	123
Kawardha	0.0	-100	45.1	48	63.2	14
Mahasumund	0.0	-100	15.9	-56	41.3	-30
Narayanpur	6.0	-77	46.0	17	33.0	-49
Raigarh	**	**	**	**	66.8	11
Raipur	1.1	-95	31.4	-7	37.5	-37
Rajandgaon	0.0	-100	16.5	-54	46.4	-27
Surguja	0.6	-97	7.0	-82	35.4	-49
East Uttar Pradesh						
Allahabad	0.0	-100	11.0	-21	26.4	36
Ambedkar Nagar	0.0	-100	0.0	-100	4.3	-86
Azamgarh	0.0	-100	0.0	-100	30.4	19
Bahraich	0.0	-100	23.9	-22	13.8	-66
Ballia	2.0	-86	17.4	-38	38.9	39
Balrampur	1.6	-91	6.4	-79	60.1	36
Banda	0.0	-100	28.4	173	18.6	-30
Barabanki	0.0	-100	13.1	-51	13.2	-38
Basti	0.0	-100	5.2	-76	72.3	105
Chandauli	0.0	-100	0.0	-100	0.0	-100
Deoria	0.0	-100	18.3	-24	49.5	46
Faizabad	0.0	-100	1.6	-92	9.7	-74
Farrukhabad	0.0	-100	11.5	-12	5.1	-77
Fatehpur	0.0	-100	8.8	-25	15.0	-31
Gazipur	1.3	-91	0.5	-98	62.1	136
Gonda	0.0	-100	32.0	38	37.4	-23
Gorakhpur	2.5	-92	12.8	-58	93.0	81
Hardoi	0.0	-100	1.6	-88	3.2	-86
Jaunpur	0.0	-100	0.0	-100	11.6	-43
Kannauj	0.0	-100	50.1	332	2.7	-80
Kanpur City	0.0	-100	18.8	55	6.4	-55
Kanpur Dehat	0.0	-100	7.2	-38	5.0	-80
Kaushambi	0.0	-100	0.0	-100	6.9	-61
Kheri	0.0	-100	61.6	127	22.4	-46
Kushi nagar	2.5	-93	6.0	-84	29.0	-43
Lucknow	0.2	-98	7.4	-40	7.6	-65
Maharajganj	27.5	-38	28.0	-30	46.5	-7
Mau	4.5	-81	3.5	-84	45.0	45
Mirzapur	0.0	-100	1.0	-93	46.1	83
Pratapgarh	0.0	-100	15.0	9	18.7	-1
RaiBareilly	0.0	-100	7.0	-49	17.7	8
Sahuji Maharajnagar	0.0	-100	0.0	-100	14.5	-40

Sant Kabirnagar	10.0	-57	0.0	-100	4.0	-92
Sant Ravidas Nagar	0.0	-100	28.0	67	15.0	-34
Shrawasti	0.0	-100	12.6	-59	44.1	7
Sidharthnagar	1.2	-95	4.4	-85	97.9	123
Sitapur	0.0	-100	36.9	54	7.8	-77
Sonbhadra	0.0	-100	19.0	-17	12.9	-67
Sultanpur	0.0	-100	4.7	-67	42.1	91
Unnao	0.0	-100	13.5	-4	13.3	-27
Varanasi	0.0	-100	2.9	-82	16.5	-17
West Uttar Pradesh						
Agra	0.0	-100	3.3	-57	9.0	-36
Aligarh	0.0	-100	24.8	249	11.8	-12
Auraiya	0.0	-100	4.8	-59	3.5	-77
Badaun	0.0	-100	1.4	-88	2.0	-90
Baghpat	0.0	-100	52.6	526	2.5	-78
Bareilly	0.0	-100	11.0	-40	2.9	-90
Bijnor	0.0	-100	6.1	-62	0.0	-100
Bulandsahar	0.0	-100	10.4	2	3.7	-73
Etah	0.0	-100	1.3	-84	2.3	-84
Etawah	0.0	-100	14.5	33	0.3	-98
Firozabad	0.0	-100	0.0	-100	23.1	23
GBNagar	0.0	-100	15.0	355	0.0	-100
Ghaziabad	0.0	-100	5.7	-33	0.0	-100
Hamirpur	0.0	-100	24.2	132	1.1	-95
Jalaun	0.0	-100	3.2	-72	5.5	-69
Jhansi	0.0	-100	2.4	-82	19.7	-16
Jotiba Phule Nagar	0.0	-100	1.5	-81	0.0	-100
Kanshiramnagar	0.0	-100	18.0	100	0.0	-100
Lalitpur	0.0	-100	20.5	39	4.0	-78
Mahamaya Nagar	0.0	-100	3.0	-62	5.5	-57
Mahoba	0.0	-100	5.2	-7	0.0	-100
Mainpuri	0.0	-100	12.2	53	3.0	-84
Mathura	0.0	-100	3.6	-55	14.3	48
Meerut	0.0	-100	6.7	-38	0.0	-100
Moradabad	0.0	-100	4.2	-71	4.0	-84
Muzzaffarnagar	0.0	-100	17.0	20	2.1	-88
Pilibhit	0.0	-100	28.8	48	22.4	-31
Rampur	0.0	-100	2.5	-91	0.8	-96
Saharanpur	0.0	-100	20.0	40	0.0	-100
Shahjahanpur	0.0	-100	14.1	-15	0.0	-100
Uttarakhand						
Almora	0.0	-100	23.0	-18	23.5	-45
Bageshwar	0.0	-100	8.3	-70	6.8	-84
Chamoli	0.7	-96	19.8	-12	12.3	-60
Champawat	0.0	-100	10.5	-69	34.5	-47
Dehradun	0.0	-100	17.5	-44	11.5	-81
Garhwal Pauri	0.0	-100	9.8	-38	0.8	-98
Garhwal Tehri	0.0	-100	10.0	-51	13.3	-67
Haridwar	0.0	-100	32.9	70	1.7	-95

Nainital	0.7	-97	13.3	-63	28.1	-58
Pithorgarh	25.0	-55	61.9	-14	47.1	-44
Rudraprayag	0.0	-100	26.3	-53	14.7	-79
Udham Sing Nagar	0.0	-100	16.5	-58	36.8	-17
Uttarkashi	0.0	-100	23.5	-2	24.6	-49
Bihar						
Araria	130.2	159	18.2	-70	46.6	-36
Arwal	0.0	-100	0.0	-100	15.1	-37
Aurangabad	0.0	-100	3.4	-89	45.3	32
Banka	0.0	-100	28.6	-23	32.0	-15
Begusarai	40.1	46	0.0	-100	138.5	148
Bhabua	0.0	-100	0.0	-100	13.5	-61
Bhagalpur	16.0	-53	9.6	-76	50.3	-21
Bhojpur	0.0	-100	0.0	-100	31.3	22
Buxar	0.0	-100	0.0	-100	13.7	-53
Darbhanga	34.3	50	37.6	11	89.4	119
East Champaran	19.5	-32	2.4	-94	71.5	71
Gaya	0.0	-100	0.4	-99	41.3	27
Gopalganj	3.9	-87	2.3	-93	63.6	55
Jahanabad	0.0	-100	0.0	-100	20.0	-35
Jamui	0.0	-100	4.4	-88	69.1	42
Kathihar	22.0	-39	33.7	-40	94.7	70
Khagadia	14.2	-54	2.6	-93	69.9	29
Kishanganj	225.5	345	45.1	-55	68.7	-25
Lakhisarai	5.0	-85	22.0	-38	152.0	220
Madhepura	29.4	-25	1.3	-98	111.8	99
Madhubani	53.6	27	46.2	15	57.1	30
Monghyar	20.2	-39	1.4	-96	15.4	-68
Muzaffarpur	12.0	-55	3.3	-89	66.8	43
Nalanda	0.0	-100	0.0	-100	60.9	60
Nawada	0.0	-100	0.0	-100	69.1	64
Patna	0.2	-99	16.0	-49	69.3	146
Purnea	41.0	-2	8.1	-88	64.0	8
Rohtas	0.0	-100	0.0	-100	46.1	82
Saharsha	12.3	-74	0.0	-100	12.5	-82
Samstipur	18.5	17	2.3	-94	136.0	109
Saran	0.0	-100	0.0	-100	40.8	33
Sheikpura	0.0	-100	0.0	-100	102.4	161
Sheohar	30.2	-20	45.8	8	57.6	13
Sitamarhi	10.9	-71	36.4	-14	79.6	56
Siwan	0.0	-100	15.2	-45	72.8	113
Supaul	75.2	37	34.4	-27	70.1	57
Vaishali	5.4	-59	0.0	-100	64.5	108
West Champaran	29.5	-28	61.0	27	43.9	-30
Jharkhand						
Bokaro	0.0	-100	15.7	-56	106.3	67
Chatra	0.0	-100	9.8	-70	101.6	153
Deoghar	0.0	-100	1.2	-97	54.0	6
Dhanbad	0.9	-98	10.1	-77	69.8	27

Dumka	29.5	-12	10.6	-77	72.5	18
East Singbhum	17.3	-53	46.6	-11	135.3	109
Garhwa	0.0	-100	0.0	-100	35.4	19
Giridih	2.1	-93	14.1	-67	78.1	20
Godda	6.0	-82	0.0	-100	59.9	8
Gumla	3.7	-89	11.5	-80	79.1	12
Hazaribagh	0.0	-100	35.7	-19	34.8	-13
Jamtara	0.3	-99	43.1	-14	94.5	59
Khunti	32.0	-3	16.0	-72	43.0	-45
Koderrna	0.0	-100	3.9	-90	76.4	54
Latehar	4.0	-81	46.4	27	38.4	-26
Lohardagga	0.0	-100	0.0	-100	29.7	-54
Pakur	23.5	-39	22.1	-59	117.5	59
Palamau	7.3	-62	5.6	-82	31.4	-19
Ramgarh	16.0	-49	27.8	-42	105.4	76
Ranchi	8.4	-73	12.7	-73	70.5	9
Sahebganj	55.0	32	3.0	-95	39.8	-50
Saraikela	8.1	-79	2.5	-96	137.7	89
Simdega	4.0	-85	17.1	-69	37.1	-56
West Singbhum	6.2	-84	51.4	8	124.4	105
East Rajasthan						
Ajmer	0.0	-100	0.4	-95	4.3	-64
Alwar	0.0	-100	5.7	-21	11.6	-14
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	15.5	6	6.6	-69
Bharatpur	0.0	-100	5.9	-23	38.5	232
Bhilwara	0.5	-92	4.3	-64	11.6	-29
Bundi	0.0	-100	14.2	19	9.0	-53
Chittorgarh	0.9	-86	1.5	-89	1.2	-95
Dausa	0.0	-100	3.2	-54	13.6	-1
Dholpur	0.0	-100	9.8	0	20.9	41
Dungarpur	0.3	-95	0.0	-100	0.0	-100
Jaipur	0.0	-100	4.4	-51	11.9	-15
Jhalawar	0.0	-100	27.4	71	1.0	-96
Jhunjhunu	0.0	-100	20.1	78	21.1	31
Karauli	0.0	-100	12.6	55	44.7	204
Kota	0.0	-100	13.8	-2	5.4	-73
Pratapgarh	2.8	-71	0.0	-100	0.0	-100
Rajsamand	0.7	-89	0.0	-100	0.4	-98
Sawai Madhopur	0.0	-100	9.9	3	24.6	82
Sikar	0.0	-100	10.6	31	11.4	-20
Sirohi	0.0	-100	1.3	-90	0.0	-100
Tonk	0.1	-99	1.6	-84	4.4	-71
Udaipur	2.0	-64	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	24.7	190
Churu	0.0	-100	4.9	-29	14.1	12
Hanumangarh	0.0	-100	10.3	21	4.9	-54

Jaisalmer	0.0	-100	0.0	-100	0.6	-89
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	6.0	-17
Nagaur	0.0	-100	0.0	-100	6.3	-54
Pali	1.2	-70	0.0	-100	6.2	-48
Sri Ganganagar	0.0	-100	0.7	-89	19.2	195
Gujarat Region						
Ahmedabad	0.0	-100	3.1	-81	0.9	-97
Anand	0.0	-100	2.8	-86	0.0	-100
Banaskantha	0.0	-100	2.8	-72	0.0	-100
Baroda	0.0	-100	5.2	-82	0.9	-98
Broach	0.0	-100	22.8	-29	0.5	-99
DNH	0.0	-100	64.7	-17	8.2	-94
Dahod	0.6	-95	0.0	-100	0.0	-100
Daman	0.0	-100	62.0	-20	0.8	-99
Dangs	0.0	-100	5.5	-92	12.5	-83
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	2.7	-87	0.0	-100
Mehsana	0.0	-100	4.7	-67	0.2	-99
Narmada	0.0	-100	14.0	-67	0.2	-99
Navsari	0.0	-100	36.3	-43	2.5	-98
Panchmahal	0.0	-100	0.8	-96	0.0	-100
Patan	0.0	-100	8.9	-20	0.0	-100
Sabarkantha	0.0	-100	0.2	-99	0.0	-100
Surat	0.0	-100	31.5	-27	4.9	-94
Tapi	0.0	-100	12.7	-78	13.3	-82
Valsad	0.0	-100	50.9	-33	13.2	-90
S K & Diu region						
Amreli	0.0	-100	12.7	-29	0.4	-99
Bhavnagar	0.2	-99	19.4	-11	0.1	-99
Diu	0.0	-100	224.2	1284	5.3	-92
Jamnagar	0.0	-100	14.2	56	0.0	-100
Junagarh	0.0	-100	118.9	344	2.8	-97
Kutch	0.0	-100	2.7	-38	0.0	-100
Porbandar	0.0	-100	65.1	294	0.0	-100
Rajkot	0.0	-100	29.7	120	1.1	-97
Surendranagar	0.0	-100	14.0	-12	3.3	-92
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	0.2	-99	54.1	-62	0.7	-99
Mumbai Suburban	0.0	-100	77.9	-45	6.9	-96
North Goa	42.3	-75	249.6	-2	132.9	-49
Raigad	2.3	-97	114.8	-24	36.5	-83
Ratnagiri	17.6	-84	193.7	-6	88.9	-65
Sindhudurg	62.9	-62	258.8	12	78.5	-71
South Goa	54.6	-66	261.3	5	184.2	-20
Thane	0.1	-99	87.4	1	23.8	-85
Madhya Maharashtra						
Ahmednagar	12.7	-51	0.4	-99	4.1	-85

Dhule	26.3	27	18.9	-33	0.6	-98
Jalgaon	3.0	-85	15.3	-47	2.4	-94
Kolhapur	21.0	-57	37.3	-50	54.5	-48
Nandurbar	3.3	-86	5.3	-85	0.0	-100
Nasik	6.0	-79	11.8	-67	5.9	-87
Pune	11.8	-64	8.2	-74	15.1	-65
Sangli	39.6	39	4.9	-82	8.1	-70
Satara	15.9	-49	8.2	-73	9.8	-75
Solapur	32.0	19	0.7	-98	10.3	-53
Marathwada						
Aurangabad	10.3	-66	4.5	-86	2.9	-92
Beed	13.9	-55	2.1	-94	12.3	-62
Hingoli	1.1	-95	14.7	-67	2.2	-97
Jalna	2.9	-89	1.4	-96	10.7	-73
Latur	10.6	-62	15.0	-49	14.8	-68
Nanded	3.2	-87	14.3	-62	8.6	-81
Usmanabad	30.7	-3	0.2	-99	6.3	-80
Parbhani	6.6	-75	11.1	-72	16.8	-62
Vidarbha						
Akola	1.5	-92	15.2	-61	0.0	-100
Amraoti	1.2	-93	47.3	39	0.4	-99
Bhandara	5.3	-74	27.1	-17	24.6	-60
Buldhana	1.2	-94	14.4	-59	2.8	-94
Chandrapur	7.4	-56	41.4	8	0.0	-100
Gadchiroli	0.0	-100	55.9	19	7.0	-90
Gondia	1.1	-94	39.0	19	45.0	-25
Nagpur	4.5	-76	51.9	54	14.3	-74
Wardha	3.3	-84	65.6	63	0.6	-99
Washim	14.1	-36	28.4	-27	15.4	-74
Yeotmal	0.8	-96	51.2	16	0.7	-99
Odisha						
Angul	13.9	-58	5.7	-90	19.2	-68
Balasore	20.7	-65	12.5	-80	41.1	-35
Bargarh	0.0	-100	3.0	-94	56.8	-2
Bhadrak	6.5	-85	19.6	-65	8.1	-86
Bolangir	0.0	-100	3.6	-92	32.1	-57
Boudh	5.4	-79	0.0	-100	21.7	-60
Cuttack	4.4	-88	17.7	-66	7.0	-90
Deogarh	2.5	-92	17.4	-62	28.1	-66
Dhenkanal	4.5	-88	12.6	-74	12.2	-84
Gajapati	1.6	-96	13.7	-83	23.1	-44
Ganjam	11.8	-59	4.1	-92	6.0	-85
Jagatsingpur	9.1	-75	6.0	-91	17.0	-75
Jajpur	8.5	-83	1.6	-98	1.5	-98
Jharsuguda	3.9	-89	7.4	-84	30.0	-65
Kalahandi	0.0	-100	14.9	-71	26.0	-71
Kandhamal	3.6	-86	13.8	-75	10.2	-81
Kendrapara	0.8	-97	18.8	-66	0.0	-100
Keonjhar	16.6	-62	31.2	-49	41.2	-35

Khurda	7.7	-68	5.9	-89	10.4	-83
Koraput	2.3	-92	23.6	-54	37.7	-34
Malkangiri	5.8	-73	11.2	-78	16.2	-75
Mayurbhanj	13.5	-77	39.8	-38	45.9	-40
Nawapara	0.0	-100	38.4	-11	36.4	-42
Nawarangpur	20.1	-42	59.1	-8	42.5	-33
Nayagarh	15.1	-52	4.8	-92	5.2	-92
Puri	2.1	-91	19.8	-59	16.9	-67
Rayagada	5.1	-81	12.3	-79	31.7	-30
Sambalpur	0.8	-97	2.2	-95	39.3	-53
Sonepur	0.0	-100	7.3	-84	36.3	-33
Sundargarh	2.2	-93	21.1	-57	44.0	-42
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	98.4	56	60.4	-3	8.5	-88
North & Middle Andaman	170.1	20	242.3	128	77.6	-32
South Andaman	148.3	21	177.5	84	14.1	-87
GWB						
Bankura	9.7	-78	4.6	-89	28.3	-53
Birbhum	9.9	-74	19.6	-59	124.7	91
Burdwan	18.8	-52	31.0	-30	116.5	113
East Midnapore	2.2	-96	6.8	-87	81.0	19
Hooghly	2.1	-96	52.9	14	99.4	42
Howrah	3.4	-93	51.9	1	36.7	-40
Kolkata	0.0	-100	72.1	15	59.7	-9
Murshidabad	10.0	-84	12.9	-72	82.0	35
Nadia	0.0	-100	56.4	5	128.2	97
24 Pargana (N)	0.0	-100	60.0	0	94.6	43
Purulia	10.7	-76	34.5	-22	85.1	45
24 Pargana (S)	1.5	-98	28.3	-62	108.7	23
West Midnapore	11.1	-77	18.3	-63	63.3	-10
SHWB & Sikkim						
Cooch Behar	345.3	183	45.0	-76	163.4	5
Darjeeling	101.1	-4	72.9	-44	197.1	40
East Sikkim	164.5	115	90.5	-27	162.4	25
Jalpaiguri	264.8	121	70.0	-62	210.6	31
Malda	29.8	-25	12.3	-77	93.6	40
North Dinajpur	**	**	**	**	91.1	-16
North Sikkim	210.9	84	139.9	13	182.7	37
South Dinajpur	112.4	100	40.4	-57	142.4	137
South Sikkim	50.6	-34	22.2	-82	150.4	15
West Sikkim	138.0	21	53.7	-57	302.3	127
Karnataka						
Coastal Karnataka						
Dakshin Kannada	70.5	-63	266.4	9	140.2	-47
Udupi	84.6	-62	320.8	18	187.9	-37
Uttar Kannada	42.4	-69	188.0	-3	210.9	5
N I Karnataka						

Bagalkote	19.3	1	6.2	-70	9.5	-36
Belgaum	31.0	26	8.5	-66	17.5	-46
Bidar	10.3	-63	13.8	-61	8.6	-75
Bijapur	21.3	-11	1.6	-94	4.5	-75
Dharwad	19.6	-22	7.4	-71	12.4	-47
Gadag	34.8	42	5.2	-73	5.0	-65
Gulbarga	17.2	-23	8.5	-74	8.4	-68
Haveri	1.2	-95	7.7	-67	29.3	14
Koppal	23.3	26	12.3	-34	10.9	-18
Raichur	2.8	-82	18.1	-15	7.7	-64
Yadgir	8.2	-62	5.8	-81	3.4	-90
S I Karnataka						
Bangalore Rural	21.0	-10	2.1	-87	5.2	-51
Bangalore Urban	35.8	58	1.9	-89	1.5	-86
Bellary	25.8	43	5.5	-68	7.4	-46
Chamarajnapur	1.1	-91	0.3	-98	2.6	-74
Chichballapur	3.6	-78	3.0	-82	3.5	-66
Chickmagalur	15.2	-79	45.8	-46	92.4	-14
Chitradurga	3.4	-77	2.9	-78	4.1	-43
Davangere	0.3	-98	8.7	-48	11.5	-25
Hassan	8.8	-64	11.0	-61	28.4	-10
Kodagu	17.7	-82	60.8	-51	189.8	29
Kolar	23.6	39	0.1	-99	1.4	-85
Mandya	2.0	-85	0.0	-100	0.6	-93
Mysore	2.3	-87	1.3	-93	12.2	-28
Ramnagara	22.9	7	0.0	-100	0.0	-100
Shimoga	10.9	-83	84.0	11	190.4	95
Tumkur	16.1	-4	8.5	-45	1.2	-87
Kerala						
Alappuzha	183.6	5	85.1	-36	52.6	-55
Kannur	162.4	-7	221.8	7	206.2	-2
Ernakulam	201.7	17	161.3	-7	147.1	2
Idukki	84.9	-43	72.7	-51	256.2	63
Kasaragod	99.6	-55	308.0	23	127.8	-50
Kollam	115.0	-15	36.2	-63	92.4	-6
Kottayam	183.5	9	113.3	-26	93.1	-33
Kozhikode	175.1	-17	187.3	-12	78.9	-61
Malappuram	134.6	-7	84.6	-47	294.5	95
Palakkad	51.6	-44	46.2	-60	193.1	71
Pathanamthitta	157.9	2	93.0	-28	128.4	8
Thiruvananthapuram	65.5	-42	14.0	-80	34.7	-42
Thrissur	150.0	-12	141.9	-14	107.7	-31
Wayanad	96.0	-30	82.7	-45	324.1	78
Tamil Nadu						
Ariyalur	2.3	-84	0.0	-100	0.0	-100
Chennai	35.3	176	0.0	-100	12.3	-41
Coimbatore	19.2	205	12.3	59	67.5	923
Cuddalore	2.1	-83	1.0	-94	5.4	-38
Dharmapuri	21.9	46	0.0	-100	0.0	-100

Dindigul	1.8	-85	0.0	-100	0.1	-99
Erode	11.6	38	0.0	-100	0.0	-100
Kanchipuram	38.7	161	1.1	-95	5.9	-71
Kanyakumari	22.5	-61	1.7	-96	20.5	-45
Karikal	0.0	-100	6.2	-59	0.0	-100
Karur	0.0	-100	0.0	-100	0.0	-100
Krishnagiri	22.6	46	0.9	-93	0.2	-98
Madurai	0.9	-93	1.2	-90	0.0	-100
Nagapattinam	0.7	-92	4.3	-64	0.0	-100
Namakkal	6.6	-45	0.0	-100	1.0	-88
Nilgiris	27.6	-15	7.8	-79	46.1	3
Perambalur	2.0	-78	0.0	-100	0.0	-100
Puducherry	2.2	-83	1.6	-90	8.1	-7
Pudukottai	2.2	-78	0.0	-100	1.7	-79
Ramanathapuram	0.0	-100	0.0	-100	0.0	-100
Salem	11.9	-25	0.1	-99	13.9	9
Sivaganga	0.0	-100	0.3	-98	1.1	-88
Thanjavur	1.8	-83	0.1	-99	0.0	-99
Theni	7.1	39	1.6	-61	11.2	221
Tirunelveli	1.1	-89	2.1	-72	4.4	-49
Tirupur	0.0	-100	0.0	-100	0.5	-85
Tiruvallur	40.3	225	3.6	-84	3.2	-83
Tiruvannamalai	11.4	-25	0.8	-95	0.0	-100
Tiruvarur	0.8	-90	0.6	-95	0.0	-100
Toothukudi	0.1	-96	0.0	-100	0.0	-100
Trichy	0.0	-100	0.0	-100	0.0	-100
Vellore	31.6	94	1.4	-92	0.9	-93
Villupuram	15.7	33	3.5	-72	1.0	-91
Virudhunagar	1.6	-66	0.0	-100	0.0	-100
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	2.8	-86	0.6	-98	0.6	-98
Guntur	0.0	-100	6.8	-69	0.0	-100
Krishna	0.0	-99	2.7	-91	1.9	-93
Nellore	12.0	0	4.4	-69	1.2	-92
Prakasam	2.5	-83	0.0	-100	0.5	-96
Sirkakulam	4.7	-81	4.8	-89	14.7	-61
Visakhapatnam	21.1	-10	5.1	-87	3.6	-88
Vizianagram	4.3	-84	1.2	-97	12.7	-61
West Godavari	1.2	-94	1.4	-96	1.4	-95
Telangana						
Adilabad	9.7	-58	62.5	42	4.0	-93
Hyderabad	0.0	-100	5.9	-79	0.0	-99
Karimnagar	12.4	-42	49.1	14	48.4	20
Khammam	0.2	-99	6.8	-83	5.8	-87
Mehabubnagar	0.0	-100	10.2	-54	4.0	-82
Medak	1.2	-94	7.7	-77	1.1	-97
Nalgonda	0.0	-100	1.1	-96	1.5	-93

Nizamabad	10.0	-64	19.9	-54	20.1	-51
Rangareddy	0.0	-100	8.1	-72	1.3	-95
Warangal	1.7	-93	24.4	-35	12.3	-69
Rayalaseema						
Anantapur	8.1	-47	1.4	-90	1.5	-83
Chittoor	33.0	86	0.0	-100	0.9	-93
Cuddapah	19.6	10	2.0	-90	0.1	-99
Kurnool	16.3	-17	6.9	-67	3.2	-81

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