

National Agromet Advisory Service Bulletin

Friday 5th June 2015

(For the period 5th to 9th June 2015)



Issued by

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

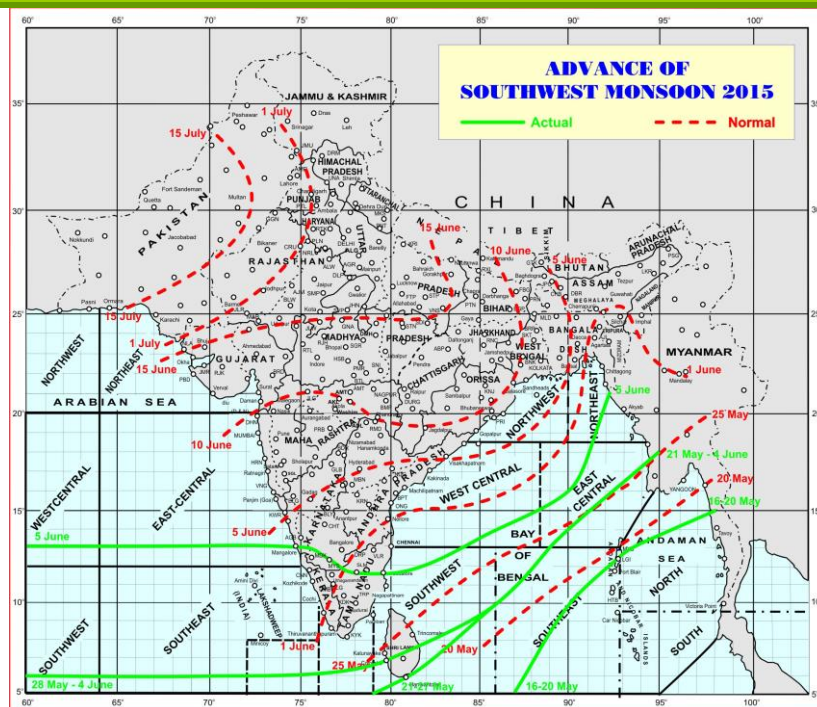


Long Range Forecast Update for Southwest Monsoon 2015

HIGHLIGHTS

- Rainfall over the country as a whole for the 2015 southwest monsoon season (June to September) is likely to be deficient (<90% of LPA).
- Quantitatively, monsoon season rainfall for the country as a whole is likely to be 88% of the long period average with a model error of $\pm 4\%$.
- Region wise, the season rainfall is likely to be 85% of LPA over North-West India, 90% of LPA over Central India, 92% of LPA over South Peninsula and 90% of LPA over North-East India all with a model error of $\pm 8\%$.
- The monthly rainfall over the country as whole is likely to be 92% of its LPA during July and 90% of LPA during August both with a model error of $\pm 9\%$.

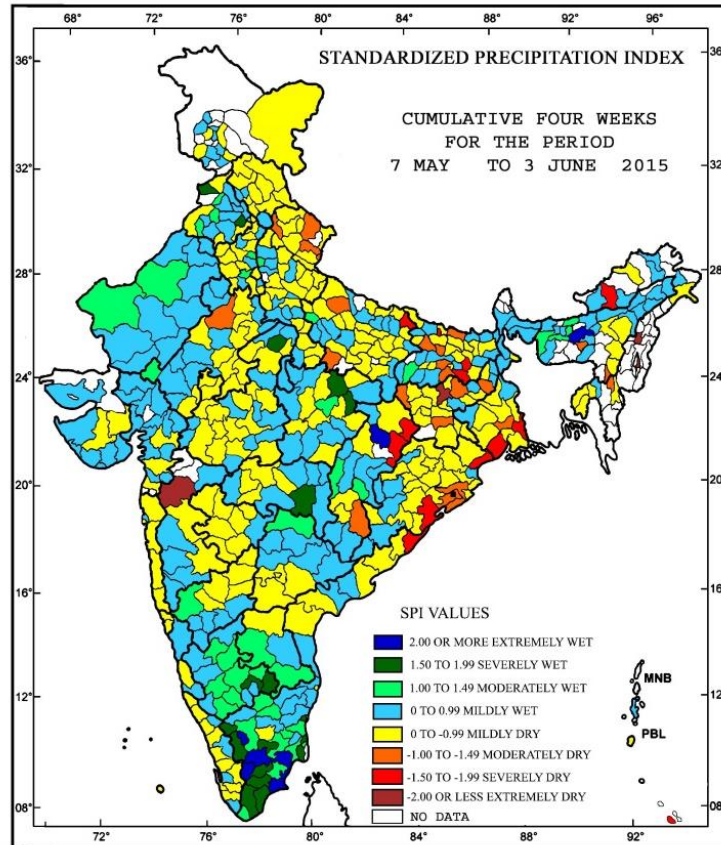
Monsoon Watch



- Southwest Monsoon has set in over Kerala, today, the 5th June 2015 against the normal date of 1st June.
- It has further advanced into entire south Arabian Sea, some more parts of Central Arabian Sea, entire Lakshadweep area and Kerala, some parts of Coastal & South Interior Karnataka and Tamilnadu, remaining parts of southeast Bay of Bengal and some parts of central & northeast Bay of Bengal.
- The Northern Limit of Monsoon (NLM) passes through Lat 13.0°N/Long. 60.0°E, Lat. 13.0°N/Long. 70.0°E, Mangaluru, Mysuru, Salem, Cuddalore, Lat. 14.0°N/Long. 86.0°E, Lat. 16.0°N/Long. 90.0°E and Lat. 21.0°N /Long. 92.0°E.
- Conditions are favourable for further advance of southwest Monsoon into some more parts of central Arabian Sea, Karnataka, remaining parts of Tamilnadu, some parts of Rayalaseema and Coastal Andhra Pradesh, some more parts of central & north Bay of Bengal and southern parts of northeastern states during next 48 hours.

Standardised Precipitation Index
Four Weekly for the Period 7th May to 3rd June 2015

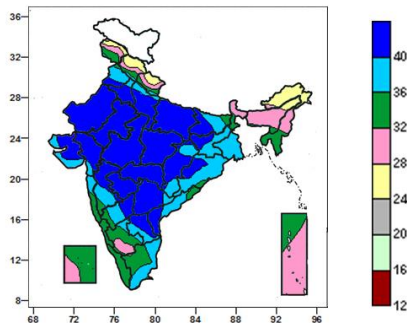
MINISTRY OF EARTH SCIENCES
 INDIA METEOROLOGICAL DEPARTMENT
 HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in few districts of Tamil Nadu; Kamrup district of Assam; Amritsar, Fatehgarh Sahib districts of Punjab; Gwalior, Satna, Shahdol districts of Madhya Pradesh; Chandrapur district of Maharashtra; Korba district of Chhattisgarh; Bangalore Rural, Kolar districts of Karnataka.
- Extremely/Severely dry conditions experienced in Nicobar district of Andaman & Nicobar Islands; East Kameng district of Arunachal Pradesh; Imphal East district of Manipur; Kohima district of Nagaland; East Midnapore, North 24 Parganas districts of West Bengal; Balasore, Ganjam districts of Odisha; Hazaribagh district of Jharkhand; Jamui, Monghyr, Sheohar districts of Bihar; Kushi Nagar district of Uttar Pradesh; Nashik district of Maharashtra; Jashpur, Raigarh districts of Chhattisgarh; Srikakulam district of Andhra Pradesh.
- Moderately dry conditions experienced in few districts of Uttarakhand; Hailakandi district of Assam; Ri-Bhoi district of Meghalaya; Kolasib district of Mizoram; Hooghly, South 24 Parganas districts of West Bengal; Cuttack, Khurda, Puri districts of Odisha; Dumka, Garhwa, Giridih, Khunti districts of Jharkhand; Madhubani, Nalanda, Nawada, Saran, Vaishali districts of Bihar; Banda, Sitapur districts of Uttar Pradesh; Jaipur district of Rajasthan; Bastar district of Chhattisgarh.
- Rest of the country experienced moderately wet/mildly dry/wet conditions.

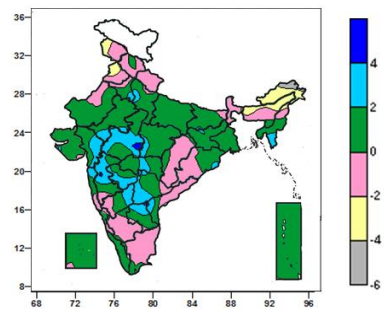
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 03.06.2015

Actual Mean Maximum Temperature (°C) in India for the week ending 03.06.2015



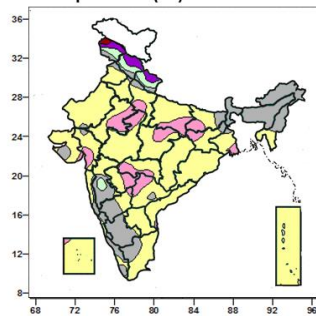
- Mean maximum temperature was above 40°C over East Uttar Pradesh, Rajasthan, Madhya Pradesh, Marathwada, Vidarbha, many parts of Haryana, Delhi, West Uttar Pradesh, Bihar, Chhattisgarh, Telangana, Rayalaseema, Gujarat, some parts of Punjab, Jharkhand, Odisha, Coastal Andhra Pradesh, Madhya Maharashtra and North Interior Karnataka.
- Mean maximum temperature ranged between 36 to 40°C over Gangetic West Bengal, many parts of Punjab, Jharkhand, Odisha, North Interior Karnataka and some parts of Bihar, Chhattisgarh, Madhya Maharashtra, Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu, Saurashtra & Kutch and isolated pockets of Uttarakhand, Gujarat region, Konkan, South Interior Karnataka and Telangana.
- It was below 36°C over remaining parts of the country.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 03.06.2015



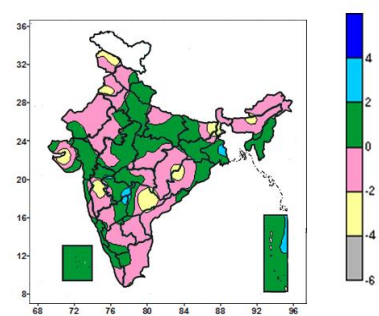
- Mean maximum temperature were above normal by more than 4°C over isolated pockets of West Madhya Pradesh.
- Mean maximum temperature were above normal by 2 to 4°C over many parts of Mizoram, some parts of Gujarat region, West Madhya Pradesh, Madhya Maharashtra, Marathwada, Telangana and North Interior Karnataka, isolated pockets of Haryana, West Uttar Pradesh, Jharkhand, Odisha, Coastal Andhra Pradesh, Rayalaseema, Konkan and Vidarbha.
- Mean maximum temperature were below normal by 2 to 6°C over many parts of Arunachal Pradesh, some parts of Jammu & Kashmir, Punjab, Assam and isolated pockets of Nagaland and Coastal Andhra Pradesh.
- It was normal to near normal in remaining parts of the country.

Actual Mean Minimum Temperature (°C) in India for the week ending 03.06.2015



- Mean minimum temperature was 12 to 16°C over some parts of Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- Mean minimum temperature was 16 to 20°C over some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, and isolated pockets of Madhya Maharashtra.
- Mean minimum temperature was 20 to 24°C over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Sub-Himalayan West Bengal & Sikkim, many parts of Goa, Madhya Maharashtra, Karnataka, Kerala, some parts of Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Bihar, Saurashtra, Tamil Nadu and isolated pockets of West Rajasthan, Jharkhand, Konkan, and Telangana.
- Mean minimum temperature was above 24°C over rest of the country.

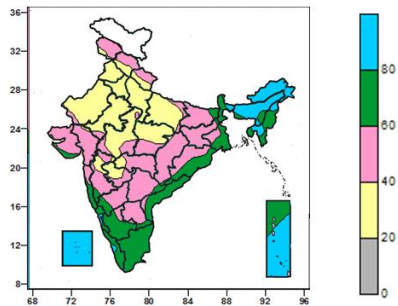
Mean Minimum Temperature (°C) Anomaly in India for the week ending 03.06.2015



- Mean minimum temperature was below normal by 2 to 4°C over some parts of Jammu & Kashmir, Punjab, Bihar, Sub-Himalayan West Bengal, Odisha, Telangana, Saurashtra, Madhya Maharashtra and isolated pockets of Assam, Jharkhand and Coastal Andhra Pradesh.
- Mean minimum temperature was above normal by 2 to 4°C over isolated pockets of Gangetic West Bengal, Marathwada, North Interior Karnataka and Telangana.
- It was normal to near normal in remaining parts of the country.

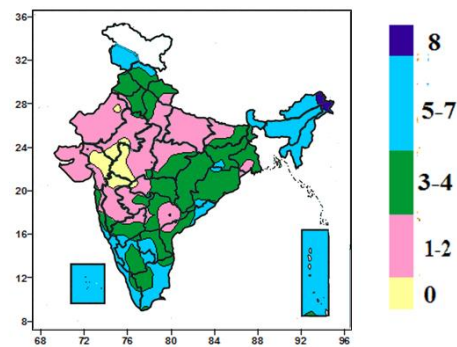
**Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on
03.06.2015**

Relative Humidity (%) over India for the week ending 03.06.2015



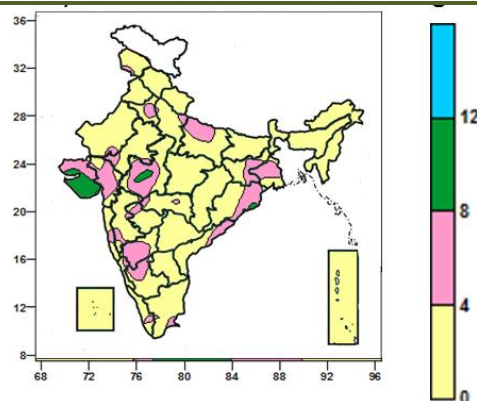
- Mean Relative humidity was above 80% over Arunachal Pradesh, Lakshadweep, many parts of Assam & Meghalaya, Nagaland, Andaman & Nicobar Islands, some parts of Tripura, Mizoram, and isolated pockets of Sub-Himalayan West Bengal, Coastal Karnataka, Kerala.
- Mean Relative humidity was 60 to 80% over Sikkim, Goa, Tamil Nadu, many parts of West Bengal, Manipur, Mizoram, Tripura, Odisha, Konkan, Coastal & South Interior Karnataka, Coastal Andhra Pradesh, Kerala, some parts Nagaland, North Interior Karnataka, Madhya Maharashtra, Andaman & Nicobar Islands and isolated pockets of Bihar, Telangana, Rayalaseema and Saurashtra & Kutch.
- Mean Relative humidity was 20 to 60% over rest of the country.

Cloud amount (okta) over India for the week ending 03.06.2015



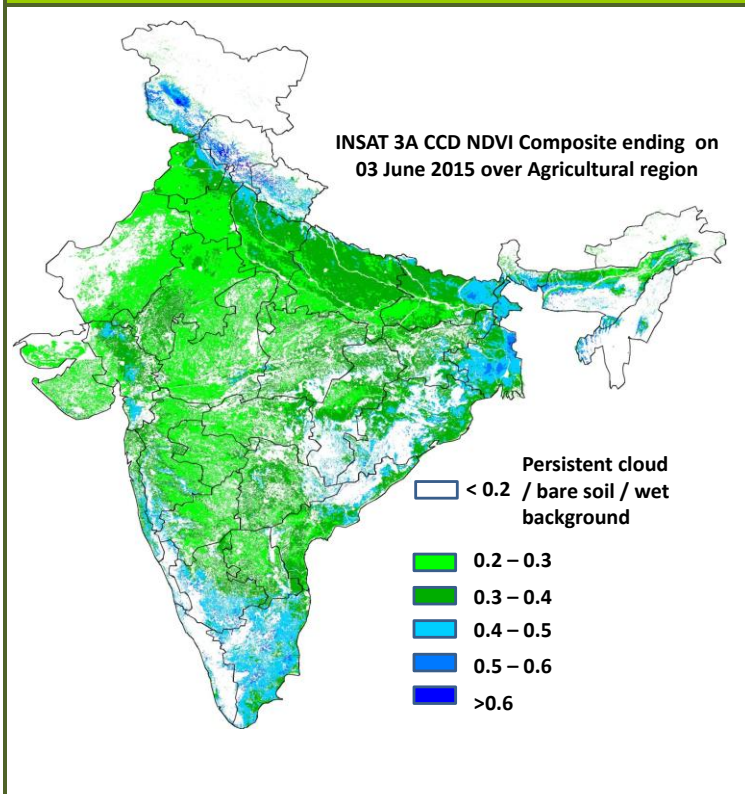
- Sky remained cloudy (8 okta) over isolated pockets of Arunachal Pradesh.
- Sky remained generally cloudy (5-7 okta) over Jammu & Kashmir, Sikkim, Goa, Coastal Karnataka, Lakshadweep, many parts of Sub-Himalayan West Bengal, North East India, Tamil Nadu, Kerala, Andaman & Nicobar Islands, some parts of Himachal Pradesh, Interior Karnataka, Rayalaseema and isolated pockets of Jharkhand, Odisha, Coastal Andhra Pradesh, Konkan.
- Sky remained partly cloudy (3 to 4 okta) over Chhattisgarh, many parts of Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, Jharkhand, Gangetic West Bengal, Odisha, East Madhya Pradesh, Konkan, Coastal Andhra Pradesh, Vidarbha, Interior Karnataka, some parts of Bihar, Sub-Himalayan West Bengal, West Uttar Pradesh, Telangana, Madhya Maharashtra, Marathwada, Rayalaseema, Tamil Nadu and isolated pockets of East Rajasthan, West Madhya Pradesh, Gujarat Region, Kerala, Andaman & Nicobar Islands.
- Sky remained mainly clear /clear sky (1 to 2/ 0 okta) over rest of the country.

Wind speed (knots) over India for the week ending 03.06.2015



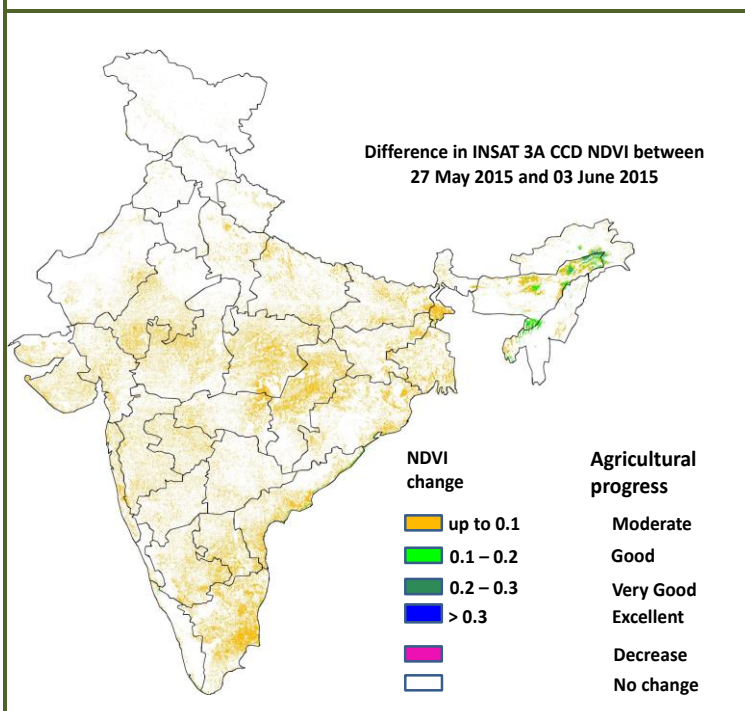
- Mean wind speed was 8 to 12 knots over many parts of Saurashtra, some parts of Kutch and isolated pockets of West Madhya Pradesh and Odisha.
- Mean wind speed was 4 to 8 knots over many parts of Gangetic West Bengal, North Interior Karnataka, West Madhya Pradesh, Gujarat region, Kutch, some parts of Haryana, Delhi, Uttar Pradesh, Jharkhand, Odisha, South Interior Karnataka, Coastal Andhra Pradesh and isolated pockets of Jammu & Kashmir, Rajasthan, Saurashtra, Maharashtra, Tamil Nadu and Kerala.
- It was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 3rd June 2015 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is very good in some parts of West Bengal, some pockets of east Bihar and South Interior Karnataka, where NDVI varies from 0.4 to 0.6. Agricultural growth was good over most parts of Uttar Pradesh and Bihar and some parts Punjab and Haryana (NDVI: 0.3-0.4). NDVI remains within the range of 0.2 to 0.3 over most parts of rest of India.

Difference in INSAT 3A CCD NDVI between 27th May 2015 and 3rd June 2015



- No change in NDVI was observed over Punjab, Haryana, west Rajasthan and west UP. Moderate progress (up to 0.1) in NDVI was observed in east Uttar Pradesh, parts of Bihar, Maharashtra, North Interior Karnataka, Andhra Pradesh, Telangana, Rayalaseema, Gujarat, West Bengal and some parts of Chhattisgarh, Odisha and South Interior Karnataka.

- INSAT 3A CCD NDVI composite maps for the week ending on 3rd June 2015 for different States are given below in Annexure II.

Weather Forecast for next 5 days valid upto 0830 hours of 10th June 2015

- Rise in day temperatures by 2-3°C over plains of northwest and adjoining west & central India during next 2-3 days.

5 Day Rainfall Forecast (MORNING)

5 June 2015

Met Sub-divisions	5 June	6 June	7 June	8 June	9 June
1. Andaman & Nicobar Islands	SCT	ISOL	SCT	FWS	FWS
2. Arunachal Pradesh	FWS	WS	WS	WS	WS
3. Assam & Meghalaya	FWS	WS	WS	WS	WS
4. N. M. M. & T.	FWS	FWS	WS	WS	WS
5. S.H. West Bengal & Sikkim	FWS	WS	WS	WS	WS
6. Gangetic West Bengal	ISOL	ISOL	ISOL	ISOL	ISOL
7. Orissa	SCT	SCT	ISOL	ISOL	ISOL
8. Jharkhand	ISOL	DRY	DRY	DRY	DRY
9. Bihar	ISOL	ISOL	ISOL	ISOL	ISOL
10. East Uttar Pradesh	ISOL	DRY	DRY	DRY	DRY
11. West Uttar Pradesh	ISOL	DRY	DRY	DRY	DRY
12. Uttarakhand	ISOL	ISOL	DRY	DRY	DRY
13. Haryana, Chd & Delhi	ISOL	DRY	DRY	DRY	DRY
14. Punjab	ISOL	DRY	DRY	DRY	DRY
15. Himachal Pradesh	SCT	ISOL	ISOL	ISOL	ISOL
16. Jammu & Kashmir	SCT	SCT	SCT	ISOL	ISOL
17. West Rajasthan	ISOL	DRY	DRY	DRY	DRY
18. East Rajasthan	ISOL	DRY	DRY	DRY	DRY
19. West Madhya Pradesh	DRY	DRY	DRY	ISOL	ISOL
20. East Madhya Pradesh	ISOL	DRY	DRY	DRY	DRY
21. Gujrat Region	ISOL	ISOL	ISOL	ISOL	ISOL
22. Saurashtra & Kutch	ISOL	ISOL	ISOL	ISOL	ISOL
23. Konkan & Goa	SCT	SCT	SCT	SCT	SCT
24. Madhya Maharashtra	ISOL	SCT	SCT	SCT	SCT
25. Marathawada	ISOL	ISOL	SCT	SCT	FWS
26. Vidharbha	ISOL	ISOL	ISOL	ISOL	SCT
27. Chhattisgarh	ISOL	ISOL	DRY	DRY	DRY
28. Coastal Andhra Pradesh	SCT	FWS	FWS	FWS	SCT
29. Telangana	SCT	FWS	SCT	SCT	FWS
30. Rayalaseema	SCT	FWS	SCT	SCT	FWS
31. Tamilnadu & Puducherry	SCT	SCT	SCT	SCT	SCT
32. Coastal Karnataka	WS	FWS	FWS	FWS	WS
33. North Interior Karnataka	SCT	SCT	SCT	FWS	FWS
34. South Interior Karnataka	FWS	FWS	FWS	FWS	WS
35. Kerala	FWS	FWS	FWS	FWS	FWS
36. Lakshadweep	FWS	FWS	FWS	FWS	FWS

% Station Reporting Rainfall

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/ A Few Places)
51-75	Fairly Widespread (FWS/ Many Places)	1-25	Isolated (ISOL)
No Rain	Dry		

Weather Warning during next 5 days

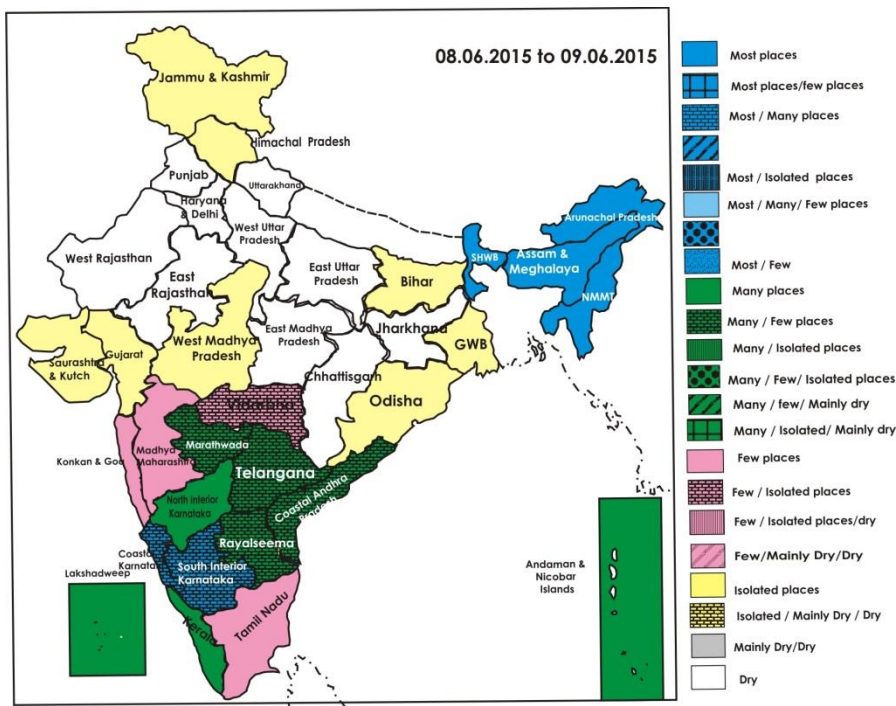
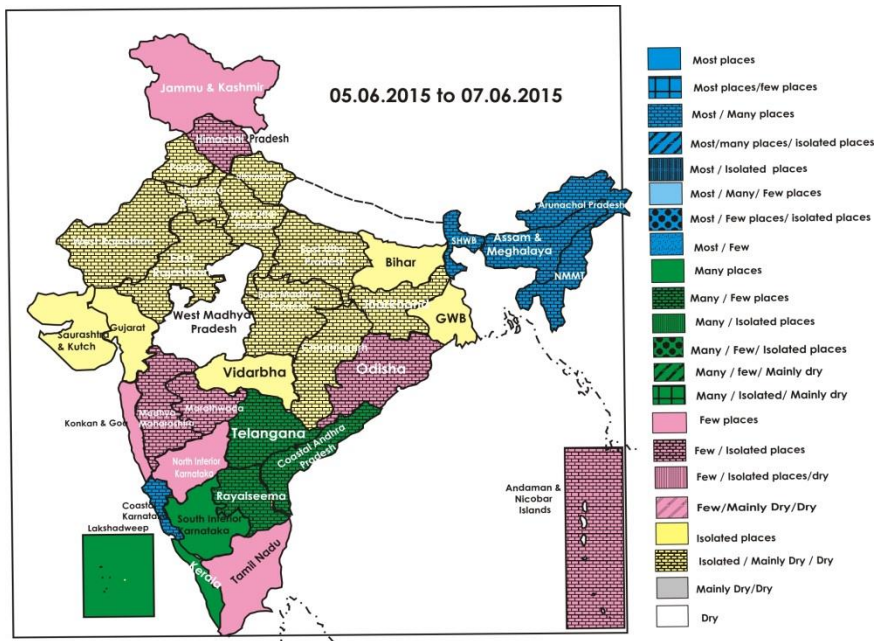
- 05 June (Day 1):** Thunderstorm accompanied with squall would occur at isolated places over East Madhya Pradesh, Jharkhand, Bihar, Odisha, Gangetic West Bengal, Coastal Andhra Pradesh and Telangana. Heavy to very heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim and heavy rainfall at isolated places over Arunachal Pradesh, Assam & Meghalaya and Lakshadweep.
- 06 June (Day 2):** Thunderstorm accompanied with squall would occur at isolated places over Bihar, Coastal Andhra Pradesh and Rayalaseema. Heavy to very heavy rainfall would occur at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya.
- 07 June (Day 3):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and heavy rainfall at isolated places over Arunachal Pradesh.

- **08 June (Day 4):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and heavy rainfall at isolated places over Arunachal Pradesh.
- **09 June (Day 5):** Heavy to very heavy rainfall would occur at isolated places over Assam & Meghalaya and heavy rainfall at isolated places over Arunachal Pradesh.

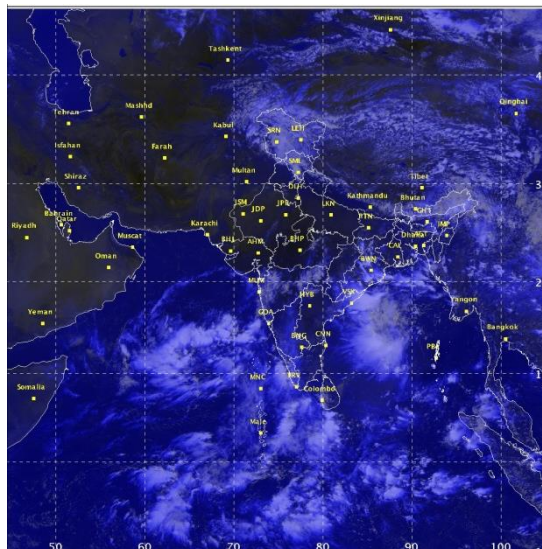
Weather Outlook for subsequent 2 days from 10th June 2015 to 12th June 2015

- Rain/thundershowers would occur at most places over northeastern states; at many places over Sub-Himalayan West Bengal & Sikkim and at a few places over East India.
- Rain/thundershowers would occur at many places over Lakshadweep, Kerala and Karnataka.
- Rain/thundershowers would occur at isolated places over Western Himalayan region.

Weather Forecast Map (Valid upto 0830 hours of 10th June, 2015)



Satellite image dated, 05.06.2015 0600 UTC



Salient Advisories

Advisories for Thunderstorm/Squall

- As thunderstorms accompanied with squall would occur at isolated places over **Coastal Andhra Pradesh** on 5th & 6th June, over **Telangana** on 5th June and over **Rayalaseema** on 6th June, provide mechanical support to young fruit plants, banana and vegetables and undertake propping in sugarcane to prevent the crops from lodging due to strong winds.
- As thunderstorm accompanied with squall would occur at isolated places over **east Madhya Pradesh, Jharkhand, Odisha and Gangetic West Bengal** on 5th June and over **Bihar** on 5th and 6th June, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds. Also undertake propping in sugarcane in Jharkhand, Bihar and Odisha.

Advisories for Rainfall/Heavy rainfall

- As rain/thundershowers would occur at most/many places over **South Interior Karnataka and Coastal Karnataka** and at many places over **Kerala** during the period, at many places over **Coastal Andhra Pradesh** from 6th to 8th June, over **Telangana and Rayalaseema** on 6th and 9th June and over **North Interior Karnataka** on 8th & 9th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- As rain/thundershowers would occur at most/many places over **Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura** during the period along with heavy/heavy to very heavy rainfall at isolated places over Arunachal Pradesh, Assam & Meghalaya during the period, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of *boro* rice in Tripura and keep already harvested produce at safer places. Provide adequate drainage in standing crops to avoid water stagnation in the fields in Arunachal Pradesh, Assam & Meghalaya.
- As rain/thundershowers would occur at most/many places over **Sub-Himalayan West Bengal & Sikkim** during the period, along with heavy to very heavy rainfall at isolated places on 5th and 6th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops to avoid water stagnation in the fields.

Other Salient Advisoires

- In **Kerala**, in the Problem Area Zone, continue land preparation for wet seeding of rice (Uma variety) and undertake land preparation for transplanting of *virippu* rice in Southern Zone and continue planting of turmeric and banana in Northern Zone.
- In Central Brahmaputra Valley Zone and North Bank Plain Zone of **Assam**, continue nursery bed preparation for *sali/kharif* rice after current spells of heavy rain.

Detailed Zonewise Agromet Advisories

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



Land preparation/Sowing

Sugarcane

Chilli

Rice Nursery

- **Realised Rainfall:** Rainfall occurred in all districts of Coastal Karnataka and South Interior Karnataka; Bagalkote, Belagavi, Dharwad, Gadag, Haveri and Koppal districts of North Interior Karnataka; Alaphuza, Ernakulam, Kasaragod, Kottayam and Palakkad districts of Kerala; Ariyalur, Cuddalore, Dharmapuri, Erode, Kariakal, Karur, Krishnagiri, Madurai, Namakkal, Nilgiris, Perambalur, Puducherry, Salem, Sivaganga, Thanjavur, Tiruppur, Tiruvannamalai, Tiruchirapali, Vellore and Villupuram districts of Tamil Nadu; Vishakapatnam and Vizianagaram districts of Coastal Andhra Pradesh; Kurnool district of Rayalaseema; Adilabad, Hyderabad, Karimnagar and Nizamabad districts of Telangana. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As thunderstorms accompanied with squall would occur at isolated places over Coastal Andhra Pradesh on 5th & 6th June, over Telangana on 5th June and over Rayalaseema on 6th June, provide mechanical support to young fruit plants, banana and vegetables and undertake propping in sugarcane to prevent the crops from lodging due to strong winds.
- As rain/thundershowers would occur at most/many places over South Interior Karnataka and Coastal Karnataka and at many places over Kerala during the period, at many places over Coastal Andhra Pradesh from 6th to 8th June, over Telangana and Rayalaseema on 6th and 9th June and over North Interior Karnataka on 8th & 9th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.

- **Andhra Pradesh:**

- In North Coastal Zone, continue land preparation for sowing of sesame. Undertake land preparation for sowing of rice, maize, pulses and cotton in Krishna Godavari Zone utilising the expected rainfall.
- In High Altitude Tribal Zone, continue land preparation for sowing of maize and finger millet and land preparation for nursery sowing of rice.
- Continue sowing of *mungeri* cotton and maize in Kurnool district under assured irrigation in Scarce Rainfall Zone. Continue sowing of *kharif* groundnut and land preparation for sowing of rice and planting of sugarcane in the Southern Zone.
- Prevailing weather conditions are congenial for attack of early shoot borer in sugarcane and phyllody in late sown sesamum crop in the Southern Zone. Spray Chloripyriphos @ 2.5 ml/litre of water to control early shoot borer and spray Imidachlorprid @ 0.3 ml/litre of water to control phyllody after current spells of rain.

- **Telangana:**

- Continue summer ploughing to control weeds, hibernating pests and disease spores that may damage *kharif* crops and undertake digging of pits for planting new orchards in the Northern and Southern Telangana Zone.
- Prevailing high temperatures may lead to fruit drop in mango in Northern Telangana zone. For control spraying of 2-4-D @ 1g/ 100 litres of water in early morning is recommended. Also spraying of Multi-K (13-0-45) @ 10 g/litre is recommended to increase the fruit size.
- Incidence of fruit fly is noticed in mango in Southern Telangana and likely to continue in the prevailing weather. To trap the flies in the container, hang the plastic containers with mixture of Methyl Eugenol @ 2 ml + Carbofuran 3G @ 3g per litre of water in the orchards after current spells of rain.

- **Karnataka:**

- Continue land preparation and sowing of ragi and red gram in the Eastern Dry Zone and land preparation for sowing of sorghum in Central Dry Zone.
- Undertake land preparation for *kharif* sowing and sowing of green gram, black gram, groundnut and soybean in North Transition Zone utilising the expected rainfall.
- Undertake nursery preparation for sowing of rice in the North East Transition Zone and undertake land preparation for sowing of rice and cotton in Hill Zone.
- Undertake land preparation for sowing of *Kharif* crops like green gram, sunflower, maize, Bt. cotton, red gram, bajra, sesamum and groundnut (bunch type) in North Dry Zone.
- In the prevailing temperature and humidity, leaf spot/Sigatoka and panama wilt incidence may occur on Banana in Southern Transition Zone. As a precautionary measure, drench with Carbandizim 0.2% or Propiconazole 0.5 ml/ litre after current spells of rain and repeat once in a month.

- **Kerala:**

- In the Problem Area Zone, continue land preparation for wet seeding of rice (Uma variety). Planting of coconut

saplings and Poovan, Robusta and Kannan varieties of banana may be continued.

- Undertake land preparation for transplanting of *virippu* rice in Southern Zone and continue planting of turmeric and banana in Northern Zone.
- Prevailing temperature and humidity is congenial for incidence of Erwinia rot and Panama wilt diseases on Banana in Problem Area Zone. For control, drench the pit with Steptocycline @ 2 g with 10 litres of water for Erwinia rot and for Panama Wilt, mix Copper Oxy Chloride @ 3 g with 1 litre water and drench the pit after current spells of rain.
- With the start of rainy season, there is chance of incidence of bud rot in coconut and sheath rot disease in rice in the Southern Zone. Apply Bordeaux mixture (1%) to prevent bud rot after current spells of rain and prepare of *Pseudomonas* culture @ 20 g in 1 litre of water and dip the roots of rice seedlings for 30 minutes before transplanting to prevent sheath rot.

▪ **Tamil Nadu:**

- Continue nursery preparation for sowing of *Kuruvai* rice in the Cauvery Delta Zone and continue sowing of green manure crops like daincha, sunhemp and kolangi. Continue planting of wetland banana in the High Rainfall Zone .
- In Karaikal and Puducherry, to prevent early shedding of buds and squares in cotton, spray NAA 40 ppm (40 mg of Naphthaleic Acetic Acid in one litre of water) at 60 and 90 DAS on the crops and Nipping may be done at 15th node for local variety and 20th node for hybrid cotton to induce sympodial branches development.
- Due to cloudy and humid weather, ergot (sugary disease) and leaf rust disease may occur in *cumbu* in the Western Zone. If noticed, spray Carbendazim @ 1 g/ litre of water to control ergot and apply Mancozeb @ 2 g/ litre of water on a non rainy day to control leaf rust disease.
- Prevailing cloudy weather and light to moderate rains are congenial for incidence of thrips and other sucking pests in cotton in the Southern Zone. To control, spray Imidacloprid 200SL @ 100ml/ha on a non rainy day.
- Suitable varieties for sowing are given in Annexure III.

• **Animal Husbandry**

- Due to prevailing high day temperatures following precautions may be taken in cattle /sheds in North Transition Zone of Karnataka; for milch animals regularly follow schedule of 1 kg feed + 50 g mineral mixture per 2 litres of milk yield. Feed animals with a mixture of green grass + hay + minerals + dry feed like a khichri.

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



Land preparation/Sowing

Banana

Okra

Cabbage

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Anjaw, Dibang Valley, Kurung Kumey and Lower Subansari; all districts of Assam except Darrang; all districts of Meghalaya; Aizwal and Kolasib districts of Mizoram; all districts of Tripura. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers would occur at most/many places over Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura during the period along with heavy/heavy to very heavy rainfall at isolated places over Arunachal Pradesh, Assam & Meghalaya during the period, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Postpone harvesting of boro rice in Tripura and keep already harvested produce at safer places. Provide adequate drainage in standing crops to avoid water stagnation in the fields in Arunachal Pradesh, Assam & Meghalaya.

▪ **Assam & Meghalaya, Arunachal Pradesh:**

- In Lower Brahmaputra Valley Zone of Assam, continue nursery bed preparation of *Sali* rice and land preparation and sowing of groundnut after current spells of heavy rain.
- In Upper Brahmaputra Valley Zone, undertake nursery preparation for sowing of *kharif* rice.
- In Barak Valley Zone of Assam, continue planting of banana and lemon after current spells of heavy rain.
- In Central Brahmaputra Valley Zone, Hill Zone of Assam and North Bank Plain Zone of Assam, continue nursery bed preparation for *sali/ kharif* rice after current spells of heavy rain.
- In Arunachal Pradesh, continue land preparation and sowing of *kharif* rice after current spells of heavy rain.
- In Meghalaya, continue nursery bed preparation/ main field preparation for sowing of *sali/ kharif* rice. Continue land preparation and sowing of soybean, groundnut, black gram, green gram and red gram after current spells of heavy rain. Continue land preparation for transplanting of *kharif* rice.
- In Central Brahmaputra Valley Zone of Assam, due to humid weather, there is chance of attack of blast disease in *ahu* rice. Farmers are advised to spray Bavistin @ 1 gm/ litre of water against blast after current spells of rain.
- In Arunachal Pradesh, in the humid weather condition, there is chance of attack of aphids in ladies finger and Red pumpkin beetle in cucurbits. Spray Imidacloprid 17.5 SL @ 1ml/10 litres of water for control of aphids and spray

Deltamethrin @ 4ml/10 litre of water for management of Red pumpkin beetle after current spells of rain.

- In Meghalaya, high relative humidity is favourable for attack of white fly & aphids in okra. Spray Dimethoate 30 EC @ 2ml/litre of water combined with neem seed kernel extract 5% to manage the attack. High relative humidity with intermittent rain is favourable for development of blast in rice, Apply Mancozeb@ 2g/litre or Carbendazim @ 1g/litre of water. Apply the pesticides after current spells of rain.

▪ **Manipur, Mizoram, Nagaland and Tripura:**

- In Manipur, continue nursery raising of *kharif* rice and undertake land preparation of main fields for transplanting of *kharif* rice. Continue sowing of *kharif* maize, soybean, groundnut and black gram and nursery raising of cauliflower.
- In Nagaland, continue land preparation for sowing of maize. Undertake nursery bed preparation for lowland rice.
- In Mizoram, continue land preparation for planting of ginger and turmeric, nursery preparation for khasi mandarin and passion fruit and sowing of rice, maize okra, colocasia and transplanting of brinjal and tomato.
- In Tripura, continue sowing of groundnut and sowing of maize in upland and medium uplands.
- In Nagaland, high humidity favours attack leaf eating caterpillars in cucurbits. Apply Neem oil @ 5ml/litre of water for control after current spells of rain.
- Suitable varieties are given in Annexure III.

• **Animal Husbandry**

- In Northeastern states, keep animals indoor during heavy rainfall period. Also keep animal sheds dry and avoid dampness during rainy days. Also undertake regular immunization of cattle & buffaloes against Foot & Mouth disease, Haemorrhagic septicaemia & Black Quarter.
- In Arunachal Pradesh, vaccinate pigs against swine fever, poultry against RD and IBD.
- In Meghalaya, due to humid weather, keep the poultry house well ventilated during day time and provide clean and fresh drinking water every day.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Banana



Sugarcane



Groundnut



Land preparation/Sowing

- **Realised Rainfall:** Rainfall occurred in Kolhapur and Sangali districts of Madhya Maharashtra; Chandrapur district of Vidarbha. Weather remained mainly dry/dry over rest of the region.

• **Advisories:**

▪ **Maharashtra:**

- In Konkan, undertake nursery sowing of rice and finger millet. Continue land preparation for direct sowing of finger millet, vegetables and pulses.
- In Madhya Maharashtra, apply irrigation to orchard crops like banana, water melon, musk melon and vegetable crops like tomato and okra. Irrigate the sugarcane crop by drip irrigation or using alternate furrow method or apply mulch of sugarcane trash for conservation of soil moisture. Continue land preparation of *kharif* rice nursery in Kolhapur region and western ghat region. Continue land preparation and field may be kept ready for sowing of jowar, soyabean in Kolhapur region.
- In Marathwada, as rain/thundershowers is expected at many places on 9th June, undertake sowing of irrigated cotton. Continue preparatory tillage for the sowing of green gram, black gram, red gram utilizing the pre monsoon showers.
- In Vidarbha, in view of the prevailing high temperature, apply light and frequent irrigation to water melon, musk melon, summer vegetables, summer groundnut (pod development stage) or apply mulch with crop residue, polythene and straw. Start harvesting of already matured summer rice in East Vidarbha during morning hours.

▪ **Gujarat:**

- Continue sowing of groundnut in North Saurashtra Zone, sowing of irrigated hybrid cotton and B.T. cotton in North and South Gujarat Zone, Middle Gujarat Zone and North West Zone with assured irrigation. Continue land preparation for sowing of *kharif* groundnut and cotton in Saurashtra and undertake land preparation for sowing of *kharif* cotton in South Gujarat Zone and Bhal and Coastal Zone. Procure good quality seeds for *kharif* sowing.
- In Middle Gujarat Zone, continue harvesting of matured green gram and pearl millet.
- In Bhal and Coastal Zone, as hot and dry weather is likely to continue, apply irrigation in cluster bean, green gram (pod formation stage) and mango orchard to avoid moisture stress.
- In North Gujarat Zone and North West Zone, complete picking of matured pods of green gram, pearl millet, fodder sorghum, vegetable and matured fruits.
- In Gujarat region undertake levelling of plots to increase soil moisture holding capacity and constructing the bund in advance to reduce soil erosion in fields and plan for farm ponds to collect runoff water during monsoon season.

➤ Suitable varieties for sowing are given in Annexure III.

● **Animal Husbandry**

➤ In view of the prevailing high temperature, cross breed cattle should be bathed thrice a day, add 30-35 gm mineral mixture in daily food, cover roof with paddy straw, provide cold drinking water 4-5 times a day in Middle Gujarat Zone.

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



Sugarcane

Jute

Land preparation/Sowing

Onion

● **Realised Rainfall:** Rainfall occurred in all districts of Andaman & Nicobar Islands; all districts of Sikkim; Cooch Behar, Darjeeling, Jalpaiguri, Malda, South Dinajpur, Birbhum and Murshidabad districts of West Bengal; Araria, Katihar, Kishanganj, Patna, and Purnia districts of Bihar; East Singhbhum, Pakur and West Singhbhum districts of Jharkhand; Bolangir, Jharsuguda, Kalahandi, Keonjhar, Koraput, Mayurbhanj, Nawarangpur and Sambalpur districts of Odisha. Weather remained mainly dry over rest of the region.

● **Advisories:**

➤ As thunderstorm accompanied with squall would occur at isolated places over Jharkhand, Odisha and Gangetic West Bengal on 5th June and over Bihar on 5th and 6th June, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds. Also undertake propping in sugarcane in Jharkhand, Bihar and Odisha.

■ **West Bengal:**

➤ As rain/thundershowers would occur at most/many places over Sub-Himalayan West Bengal & Sikkim during the period, along with heavy to very heavy rainfall at isolated places on 5th and 6th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crops to avoid water stagnation in the fields.

➤ In Coastal Saline Zone of West Bengal, continue sowing of dry seeded rice and continue land preparation for sowing of upland rice in Laterite and Red soil Zone.

➤ In Old Alluvial Zone, undertake nursery bed preparation for *kharif* rice and continue land preparation for sowing of soybean in Hill Zone after current spells of heavy rain.

➤ In Terai Zone, high humidity may cause stem rot in jute and root rot in vegetables. Apply Carbendazim @ 1 gm/litre of water after current spells of rain.

➤ In New Alluvial Zone of West Bengal, due to high temperature and humid weather, there is chance of attack of stem weevil in jute. Spray Dimethoate 2 ml/litre or Carbaryl @ 2 g/litre of water. Also there is chance of attack of fruit borer in mango. To control these insects, spray Dichlorovos @ 1.5 – 2.0 ml per litre of water.

■ **Andaman and Nicobar Islands:**

➤ As rain/thundershowers would occur at many places over Andaman and Nicobar Islands on 8th & 9th June, postpone irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.

➤ In South, North & Middle Andaman, continue land preparation for sowing of cowpea and nursery sowing of rice.

■ **Odisha:**

➤ In East and South Eastern Coastal Plain Zone, undertake sowing of maize and continue planting of turmeric. Continue planting of ginger and turmeric in North Eastern Plateau Zone.

➤ In Western Undulating Zone, undertake land preparation for sowing of *kharif* pulses.

➤ In East and South Eastern Coastal Plain Zone, fruit and shoot borer in brinjal has been noticed and likely to increase in the present weather. To control, install Pheromone traps and spray Sevin WP @ 4 g or Malathion @ 2 ml /litre of water on a non rainy day.

➤ In the prevailing temperature condition, early stem borer infestation may become severe in sugarcane. If it crosses the ETL level (5% dead heart). Undertake hoeing, weeding and apply Phorate @ 2.4 kg or Carbofuran @ 12 kg on a non rainy day followed by earthing up .

■ **Bihar:**

➤ In North East Alluvial Zone and North West Alluvial Plain Zone, continue nursery preparation for *kharif* onion and rice and planting of foot yam and turmeric.. Continue the harvesting of matured summer maize & boro rice.

➤ In North West Alluvial Plain Zone, continue harvesting of matured green gram and apply irrigation in maize.

➤ In South Bihar Alluvial Zone, due to high temperature, apply irrigation at regular intervals in sugarcane, summer maize, green gram and summer vegetables. Continue summer ploughing in the fallow fields to control weeds, pests and diseases.

- In North East Alluvial Zone of Bihar, due to strong winds, farmers are advised to provide mechanical support to young fruit plants and vegetable crops to prevent from lodging.
- In North East Alluvial Zone of Bihar, present weather is congenial for infestation of sucking pests in moong, to control spray Imidacloprid 17.8 SL or Thiomethoxam 25WDG @ 1ml/3L of water.
- In North West Alluvial Plain Zone, present weather is congenial for infestation of pod borer/leaf feeder in mung/urd, to control, spray Trizophos @ 1ml/litre of water.
- In South Bihar Alluvial Zone, present weather is congenial for infestation of thrips and white fly in chilli; for control, spray Malathion 50 E.C. @ 400 ml with 250 litres of water per acre.
- **Jharkhand:**
 - In South Eastern Plateau Zone, as no significant rainfall is expected, apply irrigation in summer okra which is at fruit developing stage. Continue land preparation for direct seeded upland rice.
 - In North Eastern plateau Zone, continue harvesting of matured summer mung & summer rice in clear weather. Continue planting of ginger, turmeric & elephant foot yam.
 - In North Eastern plateau Zone, continue the cultivation of high yielding varieties of maize.
 - In Western Plateau and South Eastern Plateau Zone, continue sowing of ginger and turmeric and undertake mulching with straw / leaves etc. to control weeds and to conserve soil moisture.
 - In Western Plateau Zone, present weather is congenial for infestation of mites on cucurbitaceous crops, bean, okra and brinjal. To control the mites, spray Dycofol (@3 ml per litre of water on a non rainy day.
 - In North Eastern plateau and South Eastern Plateau Zone, present weather is congenial for infestation of fruit borer in summer okra, tomato and chilli, to control, spray Trizophos or Prophenphos @ 1ml per litre of water on a non rainy day.
 - Suitable varieties for sowing are given in Annexure III.
- **Animal Husbandry**
 - In Gangetic West Bengal, Bihar, Jharkhand and Odisha, keep cattle/goats indoor during thunderstorm / squall period. Give lots of clean water to the animals and keep them in the shaded place during noon hours. Special attention should be given to milch animals with regard to feed and provide the poultry animals, water mixed with electrolyte powder.

CENTRAL INDIA [M.P., CHHATTISGARH]



Sugarcane

Moong

Okra

Onion

- **Realised Rainfall:** Rainfall occurred in Janjgir and Korba districts of Chhattisgarh. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - **Madhya Pradesh:**
 - As thunderstorm accompanied with squall would occur at isolated places over east Madhya Pradesh on 5th June, provide mechanical support to vegetables and young fruit plants to prevent the crops from lodging due to strong winds.
 - Undertake harvesting of matured moong and urad in Vindhya Plateau Zone and Kymore Plateau and Satpura Hill Zone.
 - Undertake harvesting of matured moong. Continue nursery sowing of *kharif* onion and nursery preparation for sowing of *kharif* vegetables and picking of matured vegetables in Malwa Plateau Zone.
 - Keep inputs ready for sowing of *kharif* crops in Kymore Plateau and Satpura Hill Zone and Nimar Valley Zone.
 - Due to rise in temperature, there are chances of mosaic disease in summer moong and urad in Malwa Plateau Zone, spray Imidacloprid @ 0.5 ml/litre of water.
 - **Chhattisgarh:**
 - Continue nursery sowing of rice with irrigation in Plain Zone of Chhattisgarh and undertake land preparation for sowing of *kharif* crops in North Hill Zone.
 - Continue planting of tuber crops and top dressing of urea in sugarcane in Bastar Plateau Zone under irrigation.
 - In the prevailing weather, there are chances of attack of sucking pests in vegetables in Bastar Plateau Zone, spray Dimethoate 40 EC @ 1.5ml/litre of water.
 - Suitable varieties are given in Annexure III.
 - **Animal Husbandry**
 - Due to prevailing high temperature, keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking in Madhya Pradesh and Chhattisgarh.

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



Moong

Sugarcane

Chilli

Cabbage

- **Realised Rainfall:** Rainfall occurred in Fatehgarh Sahib district of Punjab; Doda district of Jammu & Kashmir; Bikaner district of West Rajasthan; Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Jammu & Kashmir:**
 - In Sub Tropical Zone, Valley Temperate Zone and Intermediate Zone, continue nursery raising of rice. In Intermediate Zone, undertake sowing of maize, pulses and mash.
 - In Cold Arid Zone, continue direct sowing of spinach, carrot, beet root, coriander and fenugreek in middle and high belts. Also continue sowing of bhindi and pole type beans.
 - In Intermediate Zone of Jammu & Kashmir, due to cloudy condition, there may be attack of red pumpkin beetle in vegetables. To control, apply Imidachloprid @0.3 ml/ litre of water or Quinolphos @1ml/litre of water on a non rainy day.
 - **Uttarakhand:**
 - Continue nursery sowing of rice, sowing of maize and finger millets in Bhabar and Tarai Zone of Uttarakhand utilising the pre-monsoon showers.
 - In Hill Zone of Uttarakhand, complete planting of turmeric, ginger, sowing of millet, lobia, French bean, and transplanting of vegetables like tomato, capsicum and brinjal.
 - In Sub-humid Sub-tropic Zone, apply irrigation in green gram, cowpea, bitter guard, ridge guard, water melon, musk melon, cucumber and bhindi,
 - In Hill Zone, due to increase in temperature, there may be attack of stem and fruit borer in brijal & tomato, to control spray Imidacloprid @1ml / 2 litres of water.
 - **Himachal Pradesh:**
 - Continue nursery sowing of rice, sowing of maize and nursery sowing of early cauliflower in Sub-Montane and Low Hills Sub-Humid Tropical Zone utilizing the expected rainfall. In High hill regions, continue sowing of improved varieties of garden pea, radish, carrot, turnip and palak and transplanting of cabbage, cauliflower, broccoli and lettuce. Continue sowing of red and white clover, peas, fodder maize and fodder maize + legume.
 - In mid hill areas of Sub-Montane and Low Hills Sub-Humid Tropical Zone, continue transplanting of tomato, brinjal, capsicum, chilli and sowing of cucurbits like cucumber, bitter gourd, bottle gourd and summer squash. Also continue sowing of radish on flat beds. In low hill areas continue sowing of French bean, okra, moong and mash in irrigated lower areas. Continue sowing of peas in High Hill Temperate Dry Zone.
 - Due to cloudy condition, there are chances of attack of white flies in vegetables like brinjal, capsicum and tomato in Mid Hills and Sub-Humid Zone. For control, apply Imidacloprid @ 7.5ml or Metasystox @ 15ml in 15 litres of water.
 - In the present temperature condition, there is chance of attack of red pumpkin beetle in cucurbitaceous vegetables in Sub-Montane and Low Hills Sub-Humid Tropical Zone. For control, spray Malathion 50 EC@1 ml per litre of water or Sevin@2g/litre of water.
 - **Rajasthan:**
 - Undertake nursery preparation for *kharif* onion in Transitional Plain Zone of Inland drainage and Semi Arid Eastern Plain Zone and undertake land preparation for sowing guar in Irrigated Northwestern Plain Zone.
 - In South Eastern Humid Plain Zone, irrigate sugarcane at intervals of 8-10 days and undertake nursery preparation for rice.
 - In Flood Prone Eastern Plain Zone, cover the fruit saplings with thatching material to protect against heat wave. Apply light and frequent irrigations in vegetables also.
 - In Arid Western Plain Zone, continue sowing of green fodder Jowar/Bajra mixed with guar.
 - In Semi Arid Eastern Plain Zone, continue field preparation for sowing of groundnut and nursery raising of chilli. Continue land preparation for sowing of hybrid cotton and Bt cotton in Sub Humid Southern Plain and Aravali Hill Zone. Continue sowing of groundnut under irrigation in Semi Arid Eastern Plain Zone of Rajasthan.
 - Apply drip irrigation in *kinnow* orchards in Irrigated Northwestern Plain Zone. To prevent dropping of *kinnow* fruits, spray 2,4-D (horticultural grade) @ 2g/100 litres of water or Propineb 70 WP @ 2 g /litre + Gibbralic acid @ 20 mg /litre of water.
 - Due to rise in temperature, there is chance of attack of fruit borer in summer okra, spray Malathion 50 EC @ 1.0 ml per litre of water.

▪ **Punjab, Haryana and Delhi:**

- Continue nursery preparation for sowing of long duration rice and early cauliflower in Western Semi-Arid Zone of Delhi. Continue sowing of ladies finger, pigeon-pea and cotton and nursery sowing of vegetables like chilli, tomato and brinjal. In view of less than normal monsoon rainfall forecast, in those areas where irrigation facilities are limited farmers should cultivate crops such as arhar, pearl millet, guar, pulses etc. which require less water.
- Continue nursery preparation for sowing of rice in Undulating Plain Zone and complete nursery sowing of rice in Central Plain Zones of Punjab.
- In Western Semi arid Zone of Haryana, continue transplanting of tomato and chilli, continue sowing of desi cotton and pigeon pea. Undertake sowing/ transplanting of crops under irrigation in this region.
- Under hot weather condition, there is chance of attack of spider mite in brinjal in Western Zone of Punjab. Spray Omite 57 EC @ 300ml or Kelthane 18.5 EC @ 300ml or Fosmite 50 EC @ 450 ml in 150 litres of water.
- Due to prevailing hot weather condition, there is chance of attack of black bug in sugarcane in Central Plain Zone of Punjab, spray of Dursban/Lethal/Massban 20 EC @ 350 ml in 400 litres of water per acre.

▪ **Uttar Pradesh:**

- In Central Plain Zone, undertake sowing of arhar and continue land preparation for sowing of maize and nursery of rice. Undertake planting of banana, transplanting of brinjal, chilli and cauliflower. Under prevailing high temperature condition, apply light and frequent irrigation in urad, moong (grain formation stage), maize (silking stage), cucurbitaceous crops, bitter gourd, radish, water melon and in mango, citrus, papaya, ber and litchi orchard.
- In Eastern Plain Zone, continue nursery sowing of rice and continue planting of sugarcane and kharif onion.
- In North Eastern Plain Zone, there are chances of attack of top borer in sugarcane at grand growth stage and in maize due to prevailing temperature condition. For control, spray Corazine @ 150 g in 200 litre of water per acre on sugarcane and spray Imidachlorepid @ 1.0 % on maize.
- In Bundelkhand Zone, there are chances of attack of hopper in mango due to prevailing temperature condition. For control, spray Phenitrothion @ 1ml or Dimethoate @ 1.5 ml per litre of water. For control of bacterial rot in mango in Central Plain Zone, spray Borax @ 8 g per litre of water.
- Suitable varieties for sowing are given in Annexure III.

• **Horticulture**

- In Sub-Montane and Low Hills Sub Humid Zone of Himachal Pradesh, attack of fruit borer is observed in litchi fruit. For control, spray Cypermethrin 10 EC @ 1 ml/litre of water at 15 days interval.

• **Animal Husbandry**

- Undertake vaccination against Foot and mouth disease in cattles in Sub-Montane and Low Hills Sub Humid Zone of Himachal Pradesh. Spray Butox @ 2-3ml/litre of water to protect the animals against ecto-parasites.

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

Annexure I
Week by week Rainfall Distribution

Sub-Divisions	20.05.15		27.05.15		03.06.15	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	34.0	-58	35.8	-27	72.5	-18
Dibang Valley	**	**	**	**	**	**
East Kameng	19.1	-66	27.4	-29	20.1	-56
East Siang	88.5	12	222.8	250	169.9	72
Kurung Kumey	**	**	**	**	**	**
Lohit	84.4	20	51.5	-12	140.5	64
Lower Dibang Valley	67.5	9	184.4	566	166.0	44
Lower Subansari	**	**			**	**
Papumpara	167.8	116	186.1	140	167.0	-2
Tawang	58.0	-24	34.0	-54	73.0	-36
Tirap	52.8	-31	41.2	-40	68.4	-41
Upper Siang	133.4	24	153.1	60	99.6	-28
Upper Subansari	16.8	-48	41.0	-12	46.6	24
West Kameng	75.8	0	163.6	119	52.6	-54
West Siang	28.0	-62	107.0	167	50.0	-37

Assam&Meghalaya						
Assam						
Baksa	93.1	9	146.5	82	233.7	50
Barpeta	68.0	-20	110.0	36	349.0	120
Bongaigaon	58.4	-31	118.2	18	315.6	130
Cachar	87.4	-3	77.1	6	95.7	-20
Chirang	328.0	286	521.8	420	425.4	210
Darrang	**	**	**	**	**	**
Dhemaji	98.0	26	84.0	7	182.0	90
Dhubri	95.6	11	209.2	130	226.4	70
Dibrugarh	102.9	77	112.0	73	114.6	60
Goalpara	130.9	45	127.7	65	341.5	170
Golghat	37.3	-35	58.2	34	72.3	30
Hailakandi	33.6	-63	55.7	-41	76.1	-40
Jorhat	96.7	54	48.2	-19	109.1	80
Kamrup(Rural)	160.3	134	102.9	88	248.4	180
Kamrup(Metro)	76.4	12	71.1	30	94.7	10
Karbi Anglong	12.2	-64	23.8	-33	32.8	-10
Karimganj	105.1	-20	99.4	-10	216.6	40
Kokrajhar	162.5	91	123.8	8	326.7	80
Lakhimpur	78.5	1	110.4	41	209.8	120
Morigaon	12.2	-66	80.6	128	52.6	10
N.C.Hills	60.5	-25	99.8	104	99.1	10
Nowgong	6.1	-79	32.5	12	39.3	-30
Nalbari	112.0	59	151.3	118	260.5	160
Sonitpur	71.9	19	129.2	110	94.1	20
Sibsagar	86.6	55	86.0	84	87.5	40
Tinsukia	73.4	25	89.8	53	129.9	90
Udalgiri	47.7	-29	90.5	67	97.5	10
Meghalaya						
East Garo Hills	73.9	1	243.6	326	242.6	172
East Khasi Hills	97.7	-41	194.6	33	597.3	167
Jaintia Hills	37.0	-70	62.0	-61	125.0	-34
Ribhoi	35.6	-43	52.9	26	30.8	-60
South Garo Hills	**	**	**	**	51.0	-46
West Garo Hills	105.0	24	148.8	104	247.8	161
West Khasi Hills	46.0	-46	105.0	28	180.0	90
NMMT						
Mizoram						
Aizwal	86.4	5	48.8	-42	63.8	-37
Champhai	**	**	**	**	**	**
Kolasib	29.0	-60	102.0	56	36.0	-60
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	21.0	-79	66.0	-30	1.0	-98
Serchhip	6.2	-92	**	**	0.0	-100
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	**	**	**	**	**	**
Churachandpur	**	**	**	**	**	**

Imphal east	12.4	-72	19.4	-50	13.8	-79
Imphal west	79.2	212	21.4	106	17.9	-58
Senapati	**	**	**	**	**	**
Tamenglong	**	**	**	**	**	**
Thoubal	14.0	-44	54.0	120	2.0	-96
Ukhrul	**	**	**	**	**	**
Nagaland						
Dimapur	8.9	-77	19.1	3	5.3	-89
Kephire	**	**	**	**	**	**
Kohima	3.4	-92	19.2	-43	13.4	-70
Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	**	**	**	**	**	**
Tuensang	**	**	**	**	**	**
Wokha	**	**	**	**	**	**
Zunheboto	**	**	**	**	**	**
Tripura						
Dhalai	75.5	-26	53.2	-35	59.1	-53
North Tripura	111.9	23	106.1	11	147.9	15
South Tripura	42.1	-46	65.6	3	63.5	-35
West Tripura	37.8	-54	60.2	-14	119.9	17
Himachal Pradesh						
Bilaspur	3.5	-49	0.9	-93	1.5	-84
Chamba	6.8	-46	3.8	-63	9.8	71
Hamirpur	3.4	-63	0.5	-96	6.7	-37
Kangra	4.8	-52	2.9	-67	4.0	-61
Kinnaur	5.9	-63	14.4	12	2.3	-72
Kullu	16.9	-2	12.1	-28	6.4	-32
Lahaul and Spiti	10.0	-58	21.0	29	4.0	-67
Mandi	12.7	-15	4.1	-72	5.0	-72
Shimla	13.9	3	3.6	-74	9.8	-27
Sirmaur	10.8	77	0.4	-96	1.2	-85
Solan	10.1	-5	0.0	-100	4.6	-56
Una	0.0	-100	1.8	-63	3.7	-37
Punjab						
Amritsar	5.4	49	0.0	-100	4.0	75
Barnala	11.0	424	0.0	-100	5.4	86
Bhatinda	8.5	286	0.0	-100	0.0	-100
Faridkot	0.0	-100	0.0	-100	12.1	653
Fatehgarh Saheb	19.0	604	0.0	-100	45.5	1200
Ferozpur	0.3	-93	0.0	-100	1.6	0
Gurdaspur	3.6	-3	0.0	-100	0.3	-93
Hoshiarpur	2.0	-37	0.0	-100	0.1	-97
Jalandhar	7.4	71	0.4	-89	0.0	-100
Kapurthala	16.3	410	0.0	-100	4.5	88
Ludhiana	9.2	208	1.3	-67	2.5	-3
Mansa	2.5	-7	0.0	-100	0.0	-100
Moga	13.7	154	0.0	-100	12.4	786
Muktesar	0.0	-100	0.0	-100	5.0	92

Nawashahar	2.8	-14	0.0	-100	2.3	-22
Patiala	7.4	186	0.0	-100	0.7	-83
Ropar	8.3	21	0.0	-100	1.9	-41
Sangrur	15.4	296	0.0	-100	3.0	-32
Mohali	5.3	24	0.0	-100	13.0	217
TarnTaran	32.7	717	0.0	-100	0.3	-52
Haryana,Chd,Delhi						
Haryana						
Ambala	2.4	-56	0.4	-90	1.0	-79
Bhiwani	1.2	-63	0.0	-100	1.7	-43
Chandigarh	5.0	-17	1.1	-88	8.3	-11
Faridabad	5.0	56	0.0	-100	0.8	-77
Fatehabad	2.3	56	0.0	-100	0.6	-87
Gurgaon	5.0	72	0.0	-100	3.0	-6
Hissar	1.8	-42	0.0	-100	0.3	-92
Jhajar	14.3	1333	0.0	-100	5.1	77
Jind	6.4	138	0.0	-100	1.1	-73
Katihah	5.8	625	0.0	-100	1.3	-52
Karnal	4.5	150	0.0	-100	0.1	-96
Kurukshetra	3.3	117	0.0	-100	2.5	-39
Mahendragarh	0.3	-94	0.0	-100	3.5	-35
Mewat	3.0	25	0.0	-100	0.0	-100
Palwal	1.3	-4	0.0	-100	0.0	-100
Panchkkula	2.2	-58	0.3	-95	0.7	-88
Panipat	23.8	2544	0.0	-100	0.6	-81
Rewari	2.8	-7	0.0	-100	4.0	8
Rohtak	4.4	83	0.0	-100	1.5	-72
Sirsa	10.0	335	0.0	-100	1.5	-44
Sonepat	18.7	790	0.0	-100	3.8	21
Yamunanagar	1.4	-68	0.0	-100	1.1	-70
Delhi						
Central Delhi	0.0	-100	0.0	-100	6.0	71
East Delhi	2.0	-37	0.0	-100	3.0	-14
New Delhi	4.6	42	0.0	-100	3.1	-11
North Delhi	1.5	-53	0.0	-100	11.1	216
North East Delhi	**	**	**	**	3.0	-14
North West Delhi	4.0	25	0.0	-100	6.8	95
South Delhi	9.9	208	0.0	-100	12.2	249
South West Delhi	8.6	169	0.0	-100	11.1	217
West Delhi	29.0	806	0.0	-100	7.0	100
Jammu & Kashmir						
Anantnag	24.5	11	29.6	17	8.9	-34
Badgam	25.3	21	16.5	-13	3.9	-51
Bandipore	**	**	**	**	**	**
Baramula	25.6	17	21.6	-19	14.3	-20
Doda	8.7	-47	10.0	-55	22.4	56
Ganderbal	12.8	-24	34.4	118	7.8	-10
Jammu	10.9	147	0.1	-99	2.9	-38
Kargil	**	**	**	**	**	**
Kathua	3.9	-13	0.0	-100	6.4	144
Kistwar	**	**	**	**	**	**

Kulgam	11.2	-50	18.6	-26	1.1	-88
Kupwara	41.3	80	23.5	-5	2.9	-86
Ladakh(Leh)	0.0	-100	0.0	-100	1.0	100
Poonch	**	**	**	**	**	**
Pulwama	22.3	3	22.8	24	5.4	46
Rajouri	16.6	141	0.0	-100	3.2	-60
Ramban	21.9	35	11.7	-47	16.0	75
Reasi	7.9	5	2.6	-69	11.4	171
Samba	19.1	333	0.1	-99	6.8	48
Shopian	**	**	**	**	**	**
Srinagar	22.0	31	17.6	12	3.2	-63
Udhampur	9.8	30	0.0	-100	11.5	42
East Madhya Pradesh						
Anuppur	0.0	-100	0.0	-100	5.1	-44
Balaghat	0.1	-94	0.0	-100	0.0	-100
Chhatarpur	1.0	-25	0.1	-92	9.6	167
Chindwara	5.7	617	0.0	-100	4.5	-44
Damoh	0.5	-44	0.0	-100	0.0	-100
Dindori	8.2	382	1.0	-74	8.2	86
Jabalpur	0.2	-71	1.5	15	0.3	-95
Katni	0.0	-100	0.0	-100	0.0	-100
Mandla	3.6	71	1.9	-3	0.0	-100
Narsingpur	0.0	-100	0.0	-100	0.0	-100
Panna	0.0	-100	0.0	-100	0.0	-100
Rewa	1.7	24	0.0	-100	0.0	-100
Sagar	0.9	-32	2.0	5	2.9	-56
Satna	22.5	1152	0.0	-100	0.4	-84
Seoni	12.9	378	2.0	18	8.7	70
Shahdol	40.0	1233	0.0	-100	0.0	-100
Sidhi	1.4	-30	0.0	-100	0.0	-100
Singrauli	3.0	58	0.0	-100	1.8	500
Tikamgarh	0.0	-100	0.0	-100	12.0	208
Umaria	0.8	-50	0.0	-100	0.0	-100
West Madhya Pradesh						
Agar	0.0	-100	0.0	-100	**	**
Alirajpur	6.4	156	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	2.0	40	0.0	-100	0.0	-100
Bhind	3.0	58	0.0	-100	0.0	-100
Bhopal	0.7	-63	0.0	-100	8.4	-3
Burhanpur	5.3	778	0.0	-100	0.0	-100
Datia	0.0	-100	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	1.7	21	0.0	-100	0.0	-100
Gwalior	8.8	386	0.0	-100	0.0	-100
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	1.8	64	0.0	-100	1.7	-80
Indore	0.2	-67	0.0	-100	0.0	-100
Jhabua	0.0	-100	0.0	-100	0.0	-100

Khandwa	0.0	-100	0.0	-100	0.0	-100
Khargone	1.2	-12	0.0	-100	0.2	-97
Mandsaur	0.0	-100	0.0	-100	0.0	-100
Morena	0.0	-100	0.0	-100	0.0	-100
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	2.8	77	0.0	-100	2.4	-53
Rajgarh	0.0	-100	0.0	-100	0.8	-83
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.2	-80	0.0	-100	0.0	-100
Shajapur	1.0	-9	0.0	-100	6.0	0
Sheopur Kalani	0.0	-100	0.0	-100	0.0	-100
Shivpuri	0.4	-78	0.0	-100	0.0	-100
Ujjain	1.4	133	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	0.9	-79
Chhattisgarh						
Bastar	3.6	-67	0.2	-97	0.1	-99
Bijapur	15.9	413	0.0	-100	0.0	-100
Bilaspur	0.8	-84	0.0	-100	2.7	-61
Dantewara	16.7	188	0.0	-100	2.0	-77
Dhamtari	7.6	29	9.0	233	10.0	56
Durg	3.6	100	1.0	-41	9.3	47
Janjgir	0.0	-100	0.0	-100	34.4	549
Jashpurnagar	0.0	-100	0.0	-100	0.0	-100
Kanker	7.1	39	0.0	-100	0.0	-100
Korba	0.0	-100	0.0	-100	61.1	1148
Koriya	0.9	-42	0.0	-100	0.0	-100
Kawardha	19.0	304	0.0	-100	0.0	-100
Mahasumund	11.2	229	0.0	-100	2.1	-78
Narayanpur	0.0	-100	0.0	-100	0.0	-100
Raigarh	0.0	-100	0.0	-100	0.0	-100
Raipur	14.5	254	0.0	-100	6.0	-6
Rajandgaon	37.0	900	0.0	-100	4.4	-22
Surguja	1.7	-44	0.0	-100	0.0	-100
East Uttar Pradesh						
Allahabad	0.0	-100	0.0	-100	0.1	-97
Ambedkar Nagar	0.0	-100	0.0	-100	0.0	-100
Azamgarh	0.0	-100	0.0	-100	0.0	-100
Bahraich	0.7	-89	0.0	-100	0.0	-100
Ballia	35.1	737	0.0	-100	0.0	-100
Balrampur	0.0	-100	0.0	-100	0.0	-100
Banda	0.0	-100	0.0	-100	0.0	-100
Barabanki	1.5	-62	0.0	-100	0.0	-100
Basti	5.6	56	0.8	-84	0.0	-100
Chandauli	0.0	-100	0.0	-100	0.0	-100
Deoria	11.0	124	0.0	-100	0.0	-100
Faizabad	0.3	-91	0.0	-100	0.0	-100
Farrukhabad	1.3	-71	0.0	-100	0.0	-100
Fatehpur	0.0	-100	0.0	-100	0.0	-100
Gazipur	1.3	-42	0.0	-100	0.0	-100
Gonda	8.3	103	0.9	-87	0.0	-100
Gorakhpur	10.8	89	0.0	-100	0.0	-100

Hardoi	1.1	-77	0.0	-100	0.0	-100
Jaunpur	0.0	-100	0.0	-100	0.0	-100
Kannauj	5.0	-18	0.0	-100	0.0	-100
Kanpur City	10.8	622	0.0	-100	0.2	-94
Kanpur Dehat	1.4	-7	0.0	-100	0.0	-100
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	4.2	-41	0.0	-100	0.7	-92
Kushi nagar	0.0	-100	0.0	-100	0.0	-100
Lucknow	1.4	-25	0.0	-100	0.0	-100
Maharajganj	0.0	-100	0.0	-100	0.0	-100
Mau	0.0	-100	0.0	-100	0.0	-100
Mirzapur	0.7	-81	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
RaiBareilly	4.2	183	0.0	-100	0.0	-100
Sahuji Maharajnagar	0.0	-100	0.0	-100	4.0	38
Sant Kabirnagar	0.0	-100	1.8	-68	0.0	-100
Sant Ravidas Nagar	0.0	-100	0.0	-100	0.0	-100
Shrawasti	0.0	-100	**	**	0.0	-100
Sidharthnagar	0.0	-100	0.0	-100	0.0	-100
Sitapur	0.0	-100	0.0	-100	0.8	-56
Sonbhadra	20.5	688	0.0	-100	0.0	-100
Sultanpur	0.0	-100	0.0	-100	0.0	-100
Unnao	6.5	400	0.0	-100	0.0	-100
Varanasi	0.0	-100	0.0	-100	0.0	-100
West Uttar Pradesh						
Agra	14.4	932	0.3	-86	0.0	-100
Aligarh	3.7	46	1.1	-61	0.0	-100
Auraiya	2.0	-23	0.0	-100	0.0	-100
Badaun	6.0	71	0.0	-100	0.0	-100
Baghpat	14.4	205	0.0	-100	6.5	141
Bareilly	0.9	-83	0.7	-82	0.0	-100
Bijnor	7.8	85	0.0	-100	0.3	-97
Bulandsahar	0.8	-75	0.0	-100	0.1	-99
Etah	2.3	18	0.0	-100	0.3	-94
Etawah	0.0	-100	0.0	-100	0.0	-100
Firozabad	11.1	383	0.0	-100	0.0	-100
GBNagar	2.0	122	0.0	-100	0.0	-100
Ghaziabad	4.9	95	0.0	-100	1.0	-62
Hamirpur	1.3	-5	0.0	-100	0.0	-100
Jalaun	1.5	-38	0.8	-56	0.0	-100
Jhansi	10.6	486	0.3	-86	1.7	-60
Jotiba Phule Nagar	6.0	71	0.0	-100	0.0	-100
Kanshiramnagar	0.0	-100	0.0	-100	0.0	-100
Lalitpur	0.0	-100	0.0	-100	8.0	48
Mahamaya Nagar	4.0	167	0.0	-100	2.5	-17
Mahoba	0.0	-100	0.0	-100	0.0	-100
Mainpuri	10.1	288	0.0	-100	0.0	-100
Mathura	1.0	0	0.0	-100	0.0	-100
Meerut	18.2	405	0.5	-77	1.2	-76
Moradabad	0.8	-82	0.0	-100	0.0	-100
Muzzaffarnagar	13.7	211	0.0	-100	2.2	-37

Pilibhit	0.0	-100	0.0	-100	0.0	-100
Rampur	0.0	-100	0.0	-100	0.0	-100
Saharanpur	3.0	-32	0.0	-100	0.0	-100
Shahjahanpur	8.3	30	0.0	-100	0.0	-100
Uttarakhand						
Almora	5.2	-45	0.0	-100	0.5	-97
Bageshwar	20.5	118	0.3	-98	3.8	-80
Chamoli	7.3	-57	5.4	-63	1.3	-90
Champawat	1.5	-91	0.0	-100	2.5	-83
Dehradun	0.5	-96	0.0	-100	3.0	-83
Garhwal Pauri	9.4	57	0.0	-100	0.0	-100
Garhwal Tehri	6.7	-45	0.7	-95	1.3	-93
Haridwar	2.4	-41	0.0	-100	0.0	-100
Nainital	13.6	16	0.0	-100	1.4	-94
Pithorgarh	35.1	42	6.1	-74	1.8	-93
Rudraprayag	23.9	4	2.6	-87	0.6	-97
Udham Sing Nagar	0.9	-85	0.0	-100	0.0	-100
Uttarkashi	26.3	17	2.9	-89	5.0	-79
Bihar						
Araria	50.9	97	72.2	133	37.3	2
Arwal	0.6	-54	0.0	-100	0.0	-100
Aurangabad	14.0	241	0.0	-100	3.7	-35
Banka	7.0	-23	0.0	-100	0.8	-95
Begusarai	7.3	-25	0.0	-100	0.0	-100
Bhabua	8.9	-12	0.0	-100	0.0	-100
Bhagalpur	2.6	-84	7.2	-55	5.8	-70
Bhojpur	16.0	176	0.0	-100	0.0	-100
Buxar	**	**	**	**	0.0	-100
Darbhanga	10.9	-1	6.7	-58	0.0	-100
East Champaran	18.2	102	6.6	-55	0.0	-100
Gaya	13.0	183	0.0	-100	0.2	-97
Gopalganj	11.8	76	0.0	-100	0.0	-100
Jahanabad	4.6	-22	0.0	-100	2.9	-42
Jamui	1.5	-76	0.0	-100	0.0	-100
Kathihar	0.0	-100	16.0	-26	41.2	36
Khagadia	0.0	-100	3.5	-73	0.0	-100
Kishanganj	85.9	203	78.6	73	49.7	-8
Lakhisarai	17.2	98	0.0	-100	0.0	-100
Madhepura	0.7	-96	20.0	-3	2.0	-92
Madhubani	0.0	-100	12.6	-43	0.0	-100
Monghyar	0.0	-100	0.0	-100	0.2	-98
Muzaffarpur	5.8	-54	2.5	-83	0.0	-100
Nalanda	2.6	-47	0.0	-100	0.0	-100
Nawada	0.0	-100	0.0	-100	0.0	-100
Patna	1.4	-74	0.0	-100	27.3	314
Purnea	0.0	-100	23.7	-20	37.8	-2
Rohtas	33.3	658	0.0	-100	0.0	-100
Saharsha	0.0	-100	25.0	-12	0.0	-100
Samstipur	12.3	71	6.1	-63	0.0	-100
Saran	1.1	-82	0.0	-100	0.0	-100
Sheikpura	0.0	-100	0.0	-100	0.0	-100

Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	12.3	-14	10.0	-49	0.0	-100
Siwan	0.0	-100	0.0	-100	0.0	-100
Supaul	24.3	16	35.0	101	8.6	-62
Vaishali	1.7	-70	0.0	-100	0.0	-100
West Champaran	36.0	210	1.7	-89	0.0	-100
Jharkhand						
Bokaro	49.5	526	0.0	-100	0.7	-95
Chatra	2.5	-29	0.0	-100	1.0	-87
Deoghar	44.6	479	1.9	-87	1.9	-83
Dhanbad	11.9	11	3.8	-61	3.4	-77
Dumka	17.0	21	0.0	-100	9.3	-47
East Singbhum	35.3	142	2.7	-82	20.4	6
Garhwa	0.0	-100	0.0	-100	0.0	-100
Giridih	12.7	50	0.0	-100	0.0	-100
Godda	1.5	-88	0.0	-100	4.7	-67
Gumla	25.2	145	0.0	-100	0.2	-99
Hazaribagh	0.1	-99	0.0	-100	0.0	-100
Jamtara	19.4	76	0.0	-100	15.6	-31
Khunti	4.9	-64	2.0	-85	0.0	-100
Koderrna	3.1	210	0.0	-100	0.0	-100
Latehar	1.0	-79	0.0	-100	4.0	-54
Lohardagga	12.1	61	0.0	-100	0.0	-100
Pakur	33.7	93	0.0	-100	20.9	-27
Palamau	3.2	52	0.0	-100	0.7	-85
Ramgarh	10.8	-20	0.0	-100	0.0	-100
Ranchi	7.9	-36	0.4	-97	2.5	-84
Sahebganj	0.0	-100	31.4	21	13.4	-47
Saraikela	8.7	-27	7.1	-31	3.8	-73
Simdega	**	**	**	**	4.4	-63
West Singbhum	0.0	-100	2.2	-82	34.4	108
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	0.5	-90
Alwar	3.5	-12	0.0	-100	1.4	-68
Banswara	0.0	-100	0.0	-100	0.3	-94
Baran	1.3	56	0.0	-100	0.0	-100
Bharatpur	11.9	376	0.0	-100	0.0	-100
Bhilwara	0.0	-100	0.0	-100	2.7	-52
Bundi	2.3	94	0.0	-100	0.3	-92
Chittorgarh	0.9	-24	2.6	-15	5.9	-8
Dausa	0.6	-78	0.0	-100	0.0	-100
Dholpur	2.0	43	0.0	-100	2.3	-10
Dungarpur	0.0	-100	0.0	-100	1.3	-69
Jaipur	0.0	-100	0.0	-99	0.0	-100
Jhalawar	0.0	-100	0.0	-100	0.4	-93
Jhunjhunu	10.9	126	0.0	-100	7.2	30
Karauli	0.0	-100	0.0	-100	0.0	-100
Kota	0.1	-96	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	1.0	-83
Rajsamand	1.6	21	0.4	-87	9.3	43
Sawai Madhopur	0.0	-100	0.4	-86	0.0	-100

Sikar	11.6	146	1.7	-61	2.9	-51
Sirohi	0.2	-57	0.0	-100	17.6	176
Tonk	1.9	-9	0.2	-92	0.1	-97
Udaipur	0.0	-100	0.0	-100	11.0	115
West Rajasthan						
Barmer	6.8	466	0.0	-100	8.4	64
Bikaner	6.5	124	1.7	-65	22.1	401
Churu	13.2	256	0.0	-100	10.8	163
Hanumangarh	5.4	81	0.0	-100	3.9	38
Jaisalmer	0.0	-100	0.0	-100	13.5	609
Jalore	0.5	400	0.0	-100	10.1	135
Jodhpur	0.0	-100	0.0	-100	5.2	-5
Nagaur	1.9	-34	4.2	-13	5.7	14
Pali	0.0	-100	0.3	-86	8.8	21
Sri Ganganagar	2.6	-6	0.0	-100	4.0	61
Gujarat Region						
Ahmedabad	2.0	309	0.0	-100	0.2	-90
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.9	-70
Baroda	0.9	782	0.0	-100	0.0	-100
Broach	1.3	63	0.0	-100	0.0	-100
DNH	**	**	**	**	0.0	-100
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	0.0	-100	**	**	0.0	-100
Dangs	2.0	-55	0.0	-100	0.0	-100
Gandhinagar	3.4	127	0.0	-100	0.3	-88
Kheda	5.4	5300	0.0	-100	0.0	-100
Mehsana	2.2	200	0.0	-100	3.4	70
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	0.1	43	0.0	-100	0.0	-100
Sabarkantha	0.8	293	0.0	-100	1.7	-73
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.0	-100	0.0	-100
Valsad	0.0	-100	0.0	-100	0.0	-100
S K & Diu region						
Amreli	3.3	271	0.0	-100	**	**
Bhavnagar	1.2	200	0.0	-100	0.0	-100
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	0.0	-100	0.0	-100
Porbandar	0.0	-100	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.2	-94
Maharashtra & Goa						
Konkan & Goa						
Mumbai City	0.0	-100	0.0	-100	0.0	-100
Mumbai Suburban	0.0	-100	0.0	-100	0.0	-100
North Goa	21.7	24	0.0	-100	**	**

Raigad	8.5	137	0.0	-100	0.0	-100
Ratnagiri	0.2	-97	0.0	-100	1.9	-95
Sindhudurg	2.9	-62	0.0	-100	10.0	-81
South Goa	19.2	43	1.3	-95	**	**
Thane	0.0	-100	0.0	-100	0.0	-100
Madhya Maharashtra						
Ahmednagar	0.1	-97	0.0	-100	7.9	-14
Dhule	**	**	**	**	0.0	-100
Jalgaon	7.1	792	0.0	-100	0.0	-100
Kolhapur	8.2	-46	0.1	-99	25.6	17
Nandurbar	**	**	**	**	0.0	-100
Nasik	0.0	-100	0.0	-100	0.0	-100
Pune	18.3	221	0.0	-100	6.9	-33
Sangli	4.1	-64	0.6	-97	35.7	111
Satara	12.8	74	0.0	-99	16.8	15
Solapur	2.8	-53	0.0	-100	13.0	2
Marathwada						
Aurangabad	3.7	70	0.0	-100	0.0	-100
Beed	3.1	-13	0.0	-100	1.0	-91
Hingoli	1.2	-59	0.0	-100	1.7	-81
Jalna	0.0	-100	0.0	-100	0.7	-93
Latur	2.4	-58	0.0	-100	1.8	-85
Nanded	6.2	123	0.0	-100	2.9	-66
Usmanabad	5.8	22	0.0	-100	3.1	-81
Parbhani	0.0	-100	0.0	-100	0.5	-95
Vidarbha						
Akola	0.0	-100	0.0	-100	0.0	-100
Amraoti	0.5	-38	0.0	-100	0.1	-98
Bhandara	1.5	-41	0.0	-100	4.7	-6
Buldhana	4.7	370	0.0	-100	0.0	-100
Chandrapur	16.3	715	0.0	-100	31.4	423
Gadchiroli	12.3	232	0.0	-100	1.3	-84
Gondia	4.2	112	0.0	-100	8.8	193
Nagpur	8.9	424	0.1	-95	5.4	-22
Wardha	1.5	-74	0.9	-68	2.0	-79
Washim	2.0	25	0.0	-100	0.0	-100
Yeotmal	4.0	54	0.0	-100	7.2	-9
Odisha						
Angul	14.4	22	0.2	-99	4.8	-76
Balasore	5.0	-79	1.5	-95	11.2	-68
Bargarh	0.0	-100	0.0	-100	9.8	0
Bhadrak	43.5	83	0.8	-96	7.1	-72
Bolangir	7.8	-20	0.0	-100	22.8	79
Boudh	15.2	-15	0.0	-100	1.5	-93
Cuttack	1.0	-92	0.1	-99	8.8	-57
Deogarh	24.7	263	0.0	-100	9.8	-32
Dhenkanal	33.1	136	0.0	-100	2.6	-87
Gajapati	13.2	-57	5.9	-72	13.2	-33
Ganjam	1.7	-91	0.3	-98	0.9	-94
Jagatsingpur	11.7	-51	0.0	-99	0.0	-100
Jajpur	45.1	169	8.9	-64	0.0	-100






Jharsuguda	7.3	-18	0.0	-100	25.4	94
Kalahandi	22.5	106	0.5	-93	40.3	118
Kandhamal	8.9	-50	0.0	-100	10.5	-50
Kendrapara	20.3	4	0.0	-100	0.0	-100
Keonjhar	19.0	-22	1.7	-93	36.2	36
Khurda	0.2	-99	0.0	-99	5.1	-68
Koraput	22.9	32	3.5	-79	24.2	22
Malkangiri	48.0	281	0.0	-100	0.0	-100
Mayurbhanj	25.4	-19	9.7	-68	25.5	9
Nawapara	12.4	77	0.0	-100	7.5	-30
Nawarangpur	9.4	-70	0.3	-99	34.0	11
Nayagarh	18.1	97	0.0	-100	0.0	-100
Puri	0.4	-98	0.0	-100	0.3	-99
Rayagada	14.1	-19	0.1	-99	13.2	-30
Sambalpur	2.5	-63	0.0	-100	26.9	87
Sonepur	3.3	-48	0.0	-100	1.3	-88
Sundargarh	13.1	48	0.0	-100	9.9	-37
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	33.2	-60	57.5	-45	21.5	-76
North & Middle Andaman	86.7	5	237.2	129	64.5	-45
South Andaman	103.4	15	145.9	41	73.9	-39
GWB						
Bankura	24.0	78	4.1	-69	7.7	-70
Birbhum	32.6	92	4.2	-74	25.1	5
Burdwan	53.9	213	4.8	-78	4.3	-81
East Midnapore	4.5	-73	8.4	-63	2.1	-95
Hooghly	35.1	35	1.1	-96	0.0	-100
Howrah	60.5	105	0.0	-100	0.0	-100
Kolkata	47.8	106	7.6	-75	0.0	-100
Murshidabad	38.0	133	5.0	-81	35.0	31
Nadia	52.9	202	1.0	-96	0.0	-100
24 Pargana (N)	26.1	50	1.0	-97	0.0	-100
Purulia	52.4	264	2.8	-80	2.1	-89
24 Pargana (S)	22.6	-30	1.8	-94	0.0	-100
West Midnapore	44.0	120	16.5	-44	0.3	-99
SHWB & Sikkim						
Cooch Behar	173.7	178	85.6	-19	126.4	5
Darjeeling	103.7	77	51.4	-21	66.8	-7
East Sikkim	92.6	31	114.4	102	167.6	86
Jalpaiguri	150.1	123	74.0	-23	153.3	38
Malda	59.4	200	2.5	-90	23.5	-26
North Dinajpur	92.5	118	30.5	46	17.5	-65
North Sikkim	76.4	4	129.7	70	354.8	225
South Dinajpur	0.0	-100	19.7	-59	30.3	-36
South Sikkim	72.8	3	100.5	78	37.8	-58
West Sikkim	56.5	-23	42.0	-45	65.0	-41
Karnataka						
Coastal Karnataka						
Dakshina Kannada	87.5	119	0.6	-99	20.6	-77

Udupi	69.0	53	0.6	-99	37.0	-61
Uttara Kannada	39.5	50	0.4	-99	26.2	-49
NI Karnataka						
Bagalkote	5.6	-58	0.6	-97	37.5	81
Belagavi	18.2	-3	0.7	-97	46.7	122
Bidar	8.3	13	0.0	-100	7.5	-46
Dharwad	18.9	-3	0.2	-99	55.8	158
Gadag	12.4	-36	1.0	-95	50.3	144
Haveri	33.5	68	0.0	-100	39.9	128
Kalaburgi	2.1	-72	0.4	-96	5.3	-57
Koppal	14.0	-9	3.6	-78	32.1	120
Raichur	14.0	32	1.0	-93	18.9	67
Vijayapura	3.1	-68	0.7	-96	19.5	16
Yadgir	7.0	-15	0.0	-100	6.2	-57
SI Karnataka						
Ballari	14.2	0	0.0	-100	42.7	133
Bangalore Rural	79.0	224	1.7	-92	79.7	227
Bangalore Urban	69.1	148	1.3	-95	40.7	42
Chamarajanagar	63.9	76	0.4	-99	49.4	98
Chikaballapur	61.2	182	0.0	-100	56.1	215
Chikkamagaluru	61.5	90	0.1	-99	42.4	41
Chitradurga	40.1	112	0.0	-100	74.1	326
Davangere	46.9	129	0.0	-100	55.1	191
Hassan	55.3	93	0.5	-98	59.9	197
Kodagu	88.6	129	0.0	-100	51.9	26
Kolar	87.3	299	3.6	-81	46.4	120
Mandya	84.6	195	1.5	-95	59.0	207
Mysuru	85.5	157	5.2	-84	51.7	136
Ramanagara	50.2	80	1.5	-95	65.2	112
Shivamogga	54.6	142	0.2	-99	26.8	14
Tumakuru	31.1	17	1.4	-93	63.1	173
Kerala						
Alappuzha	93.0	26	18.1	-77	20.0	-80
Kannur	38.5	-40	1.9	-97	12.9	-86
Ernakulam	22.7	-71	5.3	-94	71.2	-38
Idukki	66.8	21	1.2	-98	6.7	-91
Kasaragod	56.2	-8	3.8	-95	21.7	-79
Kollam	135.2	135	14.1	-76	13.5	-83
Kottayam	65.3	-3	0.7	-99	108.6	-5
Kozhikode	77.1	11	10.9	-85	4.4	-96
Malappuram	96.5	72	3.6	-94	16.5	-79
Palakkad	114.2	189	0.7	-98	32.9	-28
Pathanamthitta	81.1	22	0.4	-99	0.7	-99
Thiruvananthapuram	225.8	287	32.3	-38	15.5	-78
Thrissur	48.3	-38	2.4	-97	19.3	-80
Wynad	82.0	77	0.3	-99	19.5	-64
Tamil Nadu						
Ariyalur	27.3	62	0.0	-100	32.3	115
Chennai	5.8	-46	0.0	-100	2.6	-46

Coimbatore	119.7	425	0.0	-100	15.8	37
Cuddalore	47.1	254	0.2	-98	37.6	276
Dharmapuri	66.9	125	0.0	-100	40.4	61
Dindigul	142.2	622	0.0	-99	18.7	23
Erode	43.7	88	0.0	-100	62.9	34
Kanchipuram	37.8	247	0.1	-99	4.4	-57
Kanyakumari	181.9	410	29.9	4	16.6	-60
Karikal	57.0	438	0.0	-100	23.8	49
Karur	67.0	289	0.0	-100	21.0	119
Krishnagiri	63.6	127	0.0	-100	75.0	223
Madurai	59.6	277	0.0	-100	21.3	72
Nagapattinam	88.7	744	0.0	-100	6.7	0
Namakkal	31.8	32	0.0	-100	24.1	33
Nilgiris	100.9	211	0.6	-98	52.6	116
Perambalur	35.9	71	0.0	-100	31.0	187
Puducherry	110.6	974	0.0	-100	25.2	334
Pudukottai	64.7	453	0.0	-100	19.5	68
Ramanathapuram	56.7	430	0.0	-100	6.5	24
Salem	59.3	102	0.0	-100	34.1	59
Sivaganga	67.3	426	0.0	-100	23.5	77
Thanjavur	33.3	178	0.0	-100	22.0	109
Theni	73.3	486	0.0	-100	4.9	-44
Tirunelveli	51.4	385	0.0	-100	8.7	30
Tirupur	108.0	388	0.0	-100	38.1	250
Tiruvallur	24.2	105	0.0	-100	7.0	-30
Tiruvannamalai	42.7	105	5.3	-65	37.7	135
Tiruvarur	71.6	575	0.0	-100	0.9	-86
Toothukudi	27.4	256	0.0	-100	0.2	-96
Trichy	44.2	182	0.0	-100	43.0	252
Vellore	28.6	43	1.5	-93	63.4	214
Villupuram	42.0	149	0.0	-100	23.8	165
Virudhunagar	52.3	219	0.0	-100	1.1	-90
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	23.7	72	0.0	-100	6.5	-54
Guntur	14.6	11	1.8	-87	8.7	-25
Krishna	20.4	39	0.0	-100	16.0	29
Nellore	9.1	-15	1.8	-87	19.0	163
Prakasam	7.6	-27	1.5	-91	4.9	-51
Sirkakulam	3.0	-78	0.6	-96	2.5	-79
Visakhapatnam	15.3	-26	1.1	-94	21.2	19
Vizianagram	22.8	25	0.9	-95	23.3	15
West Godavari	21.8	54	0.4	-96	17.3	53
Rayalaseema						
Anantapur	29.7	109	0.0	-100	5.0	-55
Chittoor	27.5	49	0.7	-96	2.8	-71
Cuddapah	10.9	-6	0.0	-100	2.0	-81
Kurnool	15.3	39	0.0	-100	20.4	95
Telangana						

Adilabad	17.9	347	0.0	-100	65.4	276
Hyderabad	3.6	-55	0.0	-100	60.2	310
Karimnagar	12.8	151	0.0	-100	39.9	173
Khammam	20.3	36	0.0	-100	5.1	-64
Mehabubnagar	10.5	10	1.8	-83	0.0	-100
Medak	16.1	133	0.0	-100	1.0	-1
Nalgonda	14.8	95	0.5	-94	0.0	-100
Nizamabad	22.2	326	0.4	-94	22.9	170
Rangareddy	10.4	9	0.1	-99	2.5	-78
Warangal	14.5	63	0.0	-100	5.5	-32

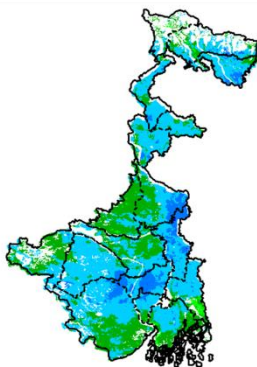
Legends

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

Annexure II

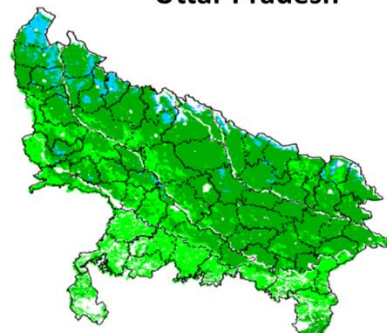
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 03rd JUNE 2015 FOR DIFFERENT STATES

West Bengal



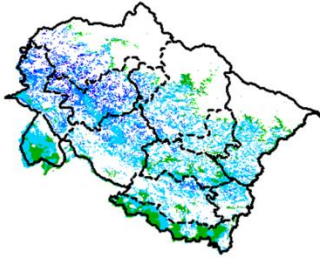
Agricultural vigour is very good over the parts of West Bengal, whereas central and northern parts of West Bengal show dominantly higher values of NDVI varying from 0.4-0.6. NDVI values are normal over remaining part of state.

Uttar Pradesh



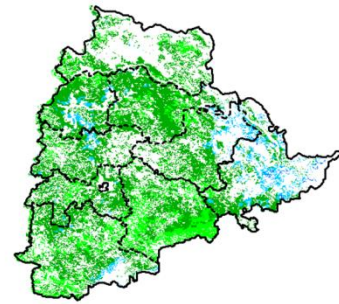
Agricultural vigour is normal over the entire state of Uttar Pradesh where NDVI value varies from 0.2 -0.4.

Uttarakhand



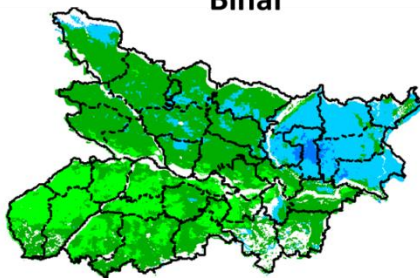
Agriculture vigour is very good over central parts of Uttarakhand with NDVI value varying between 0.4-0.6, whereas isolated patches with normal value of NDVI are observed over remaining parts of the state.

Telangana



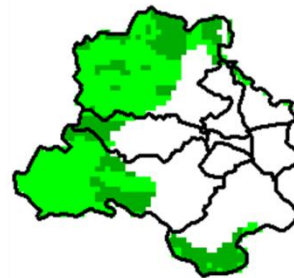
NDVI values vary from 0.2 - 0.4 over Telangana. Higher (> 0.4) values are seen over eastern parts of Telangana.

Bihar



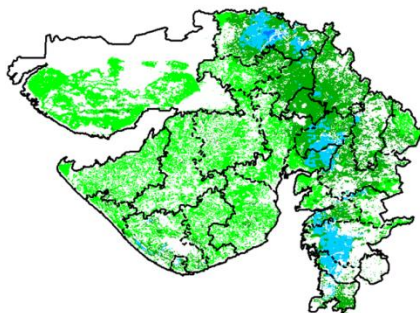
Eastern part of Bihar shows comparatively a high value (0.4-0.5) of NDVI, whereas normal value of NDVI is observed over the remaining parts of the state.

Delhi



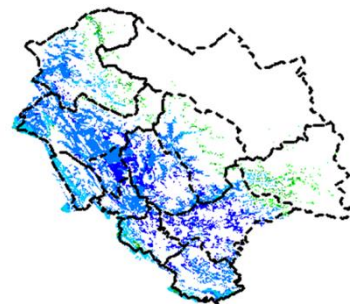
Agriculture vigour is normal all over Delhi where NDVI value lies between 0.2-0.3.

Gujarat



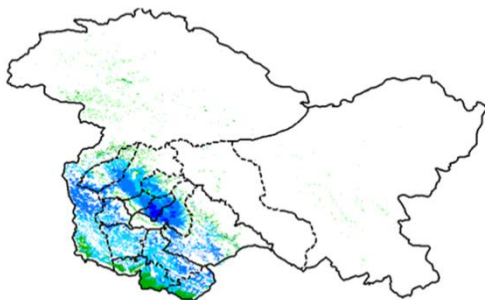
Agriculture vigour is good over central part of Gujarat where NDVI value lies between 0.4-0.5, whereas normal NDVI is observed in Kutch and Saurashtra.

Himachal Pradesh



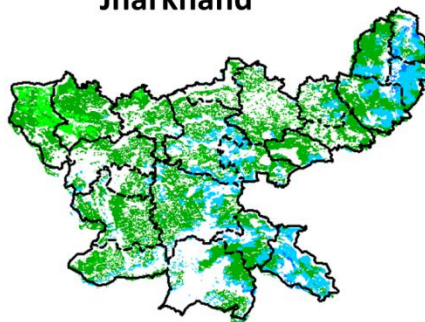
Agriculture vigour is very good over south and south western parts of Himachal Pradesh with NDVI value varying between 0.5-0.6, whereas isolated patches of normal NDVI are observed over remaining parts of the state.

Jammu & Kashmir



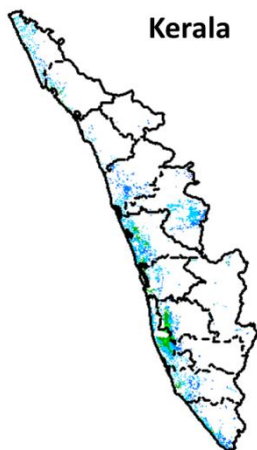
Agriculture vigour is normal all over Jammu and Kashmir. NDVI value varies in between 0.4-0.6 in south western parts.

Jharkhand



Agriculture vigour is normal (0.2-0.3) over entire state of Jharkhand except the south east and north east districts that show increased NDVI value from 0.4-0.5.

Kerala



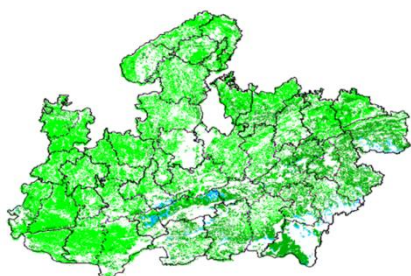
Central and coastal regions of Kerala shows increased NDVI values varying from 0.4 to 0.5, whereas rest of agricultural vigour of Kerala shows good values of NDVI.

Haryana



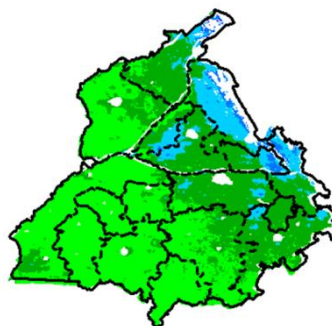
Agriculture vigour is normal over the state of Haryana. NDVI values varies between 0.2-0.3 over the state. Except in few patches in northern region with NDVI values between 0.4-0.5.

Madhya Pradesh



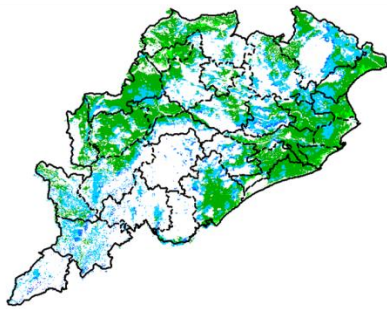
Agriculture vigour is normal (0.2-0.3) over entire state Madhya Pradesh.

Punjab



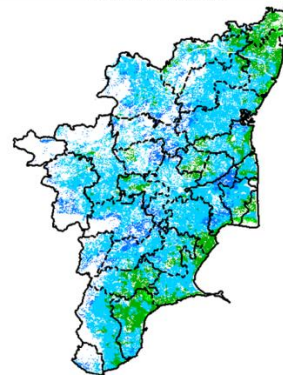
Agricultural vigour is normal over entire state of Punjab except North Eastern part, showing comparatively high NDVI value ranges from 0.4-0.6.

Odisha



Agricultural vigour is good in eastern coastal and few pockets in western and central parts of Odisha with NDVI value ranging between 0.4 - 0.6. The remaining parts show normal NDVI values.

Tamil Nadu



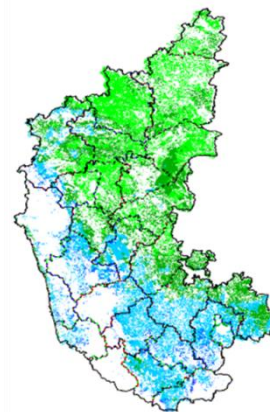
Agricultural vigour is good over Tamil Nadu with NDVI values varying from 0.4 - 0.6. Except North Eastern and South Eastern part, showing normal NDVI value ranges from 0.3-0.4.

Chhattisgarh



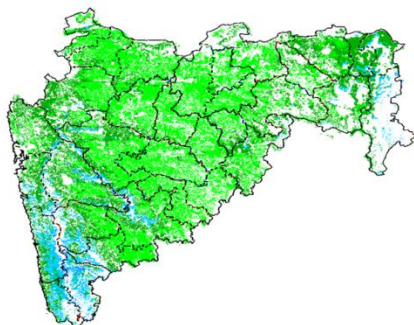
Agriculture vigour is Normal in central part of Chhattisgarh where NDVI value lies in between 0.2-0.3. South of state shows increased NDVI values in some pockets.

Karnataka



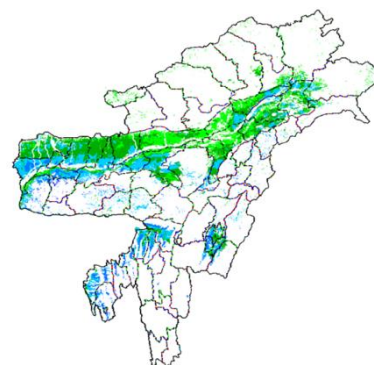
Agricultural vigour is good over some pockets of south west part of Karnataka between 0.4-0.6. Rest of the parts shows normal NDVI values from 0.2-0.3

Maharashtra

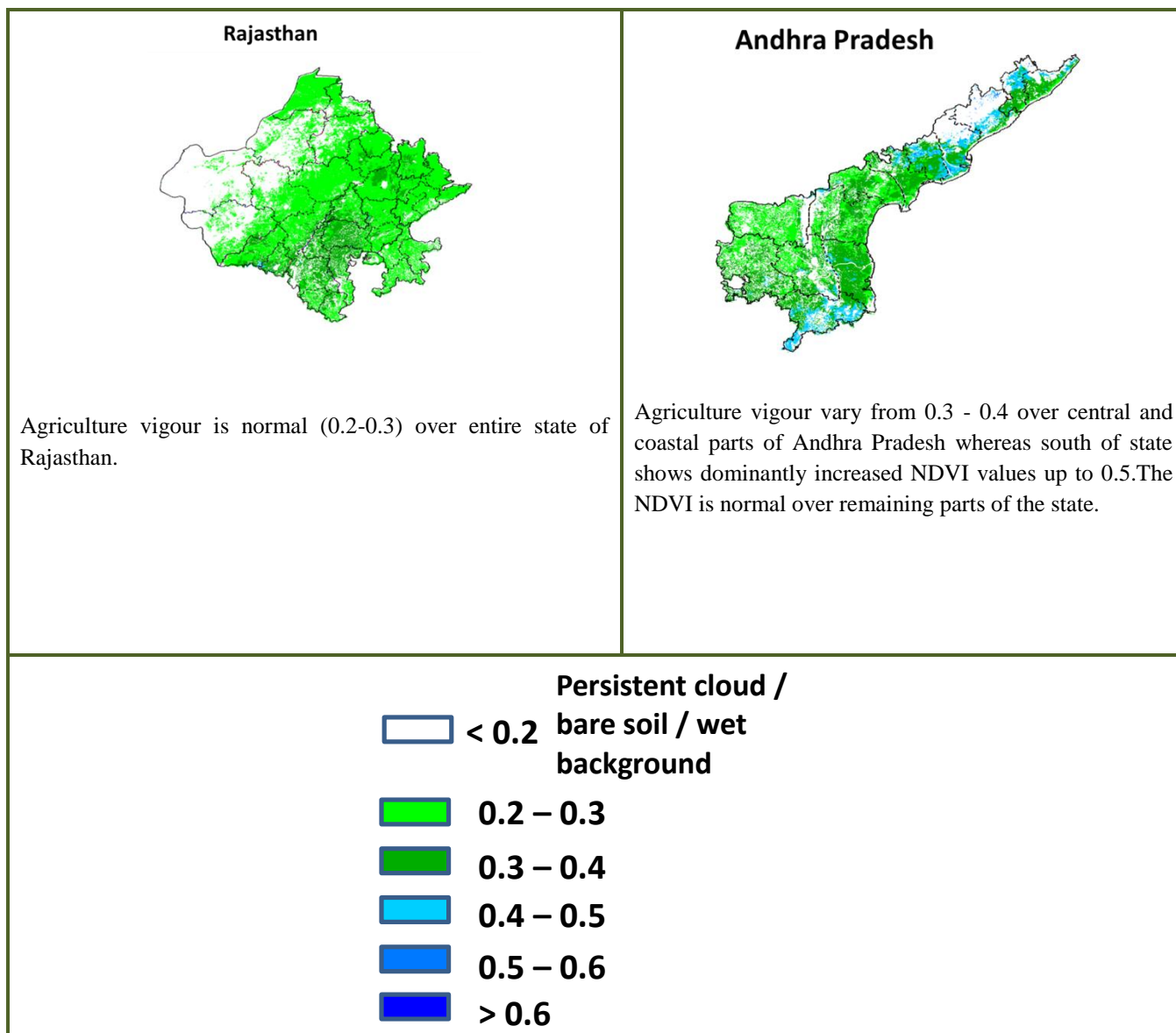


Agricultural vigour is good over south west part with NDVI values from 0.4 - 0.5, whereas NDVI is moderate over parts of Marathwada, Vidarbha and Madhya Maharashtra region.

North East Region



Agriculture vigour is good in valleys of North-East states which cover parts of Assam. NDVI values vary from 0.3-0.5. Normal NDVI conditions are observed all over NE region.



Annexure III List of varieties

Karnataka

Ragi: GPU- 28, MR -01, 02 and 06, KMR-301.

Redgram: TTB -7, BRG -01, BRG- 02, HYD -3C.

Rice: Jaya, Rasi, BPT-5204

Tamil Nadu:

Banana: poovan, rasthali, monthan, karpooravalli and neypoovan.

Kuruvai rice: ADT 36, ADT 43, ADT 45 and CO 51

Andhra Pradesh:

Rice: MTU-1010, Nellore masuri, Dharani, Shwetha. Sannalu, Swarna, Vasundhara, Suraksha, Vijetha.

Varieties for Early Kharif Rice Plantings - Pushkala, Rasi, IR64.

Assam

Sali/ kharif rice: Long duration high yielding varieties: Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal, Swarna sub-1, Gitesh, Pankaj, Mashuri (for growing in typical lowland paddy area).

Medium duration paddy varieties : Satya and Basundhara (in medium lowland area).

Bau rice: Maguri, Panikekua, Amona, Negheri, Kekua, Pani Kekua, Padmapani.

Capsularis Jute: JRC 212, JRC 321 (Sonali), JRC 7447 (Shyamali) and UPC 94 (Reshma).

Olitorius Jute: JRO 524 (Navin), JRO 785 (Basudev), JRO 632 (Baisakhtissa), Set-2 (Bahagi) and Tarun.

Papaya : Ranchi, Washington, Halflong, Coorg Honeydew.

Mesta : HC 583 and AMC 108.

Summer bottle gourd : Pusa Summer Prolofie long, Pusa Summer Profile round, Pusa Meghdoot and Pusa Manjiri.

Manipur

Soybean: JS-335.

Groundnut: ICGS-76.

Meghalaya

Sali/Kharif Rice: High Yielding Varieties : Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1-411.

Local varieties: Mendri, Manipuri.

Groundnut: ICGS 76, JL 24.

Soybean: JS 335, Bragg, Ankur, Pusa Soubean-1, Local JS 2.

Nagaland:

Lowland rice: Short to medium duration HYV rice : CAU R1, CAU R3, RCM-9 and RCM-11.

Maize : DA 61A, RCM-75, RCM-76 and HQPM-1.

Tripura:

Groundnut: TAG 24, TG 37A, ICGS 76.

Maize: DMH- 849, 117, HQPM 1, BQPM 9.

West Bengal

Dry Seeded rice: Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L.

Odisha

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

Onion: Nasik Red, Patna Red, Pune Red, Bellary Red, Pusa Ratnar, Pusa Madhavi, Arka Niketan ,Arka Pragati.

Ragi: HYVs. like Subhra, Vairabi, Dibyasingh, Nilachala, Subhra, Godavari and Chilka..

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

Turmeric: Roma, Surama, Rang, Rashmi

Jute:JRO-524(Naveen).

Maize: Navjot, Shakti, Decan-107, Decan-109.

Bihar

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

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

Maize: Suwan, Deevki, Ganga-11, Shaktiman-1 and Shaktiman-2.

Turmeric: Improved Varieties- Rajendran,Sonia, Rajender Sonali

Ginger: Improved varieties - Maran ,Nadia

Jharkhand:

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

Summer maize: Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid), HQPM (Hybrid).

Green gram: mung S.M.L.- 668.

Sugarcane: BO 147.

Upland Rice: Birsa Dhan 108, Birsa Vikash Dhan109.110,111 & Vandana

Jammu & Kashmir

Onion: Agrifound Parvati, Pusa red, N-53.

Rice : IET-1410, K-39, Ratna, PC-19, Jaya, China-1039and Giza-14.

Maize: Vijay, Mansar, Him - 123, C 6 & C 8.

Uttarakhand

Tomato: VL Tomato-3, Pant T-3, Him Sona, Him Shikhar.

Capsicum: California Vander, Pus Dipti, Anupam. Heera, Indira, Supriya & Bharat.

Potato: Kufri- Jyoti, Ashok, Anand.

Moong: Pant Moong-2, Pant Moong-4, Pant Moong-5, Pant Moong-6, Narendra Moong-1.

Rice:long duration varieties like Pusa-44, Jaya, NDR-359, Sarju-52, PR-113, PR-114, Pant Dhan-18 or Pant Dhan-19.late varieties VL-Dhan-154, Vivek Dhan-62, Vivek Dhan-65, VL Dhan-81, Vivek Dhan-82 or VL-Dhan-85.

Finger millets: VL-Mandua-124 and VL-149. However, its short duration (i.e. 95 to 100 days) varieties like VL- Mandua-204, Pant Mandua-3, PES-176, PES-110, VL- Mandua-146

Bajra: PBN-83,YESHWANT (PBN-9), Pusa Composite 443, MP443.

Maize: Naveen, Sweta, Kanchan, Surya, Amar, Gaurav

Lobia: Pant Lobia-1 or Pant Lobia-2, UPC-5286, UPC-622, UPC-625 etc

Himachal Pradesh

Late variety of Cauliflower: broccoli.

Cauliflower: Pusa-snowball.

Radish: Japanese white, Chinese pink and mino early white.

Capsicum: solan hyb-1, california wonder, yolo wonder, vl shimla mirch-2.

Brinjal: plr-1, azad (hybrid), Arka Nidhi, Arka Keshav, Hisar Shaymal, PPC, F1 Chhaya, F1 Sandhya.

Tomato: solan gola, Palam Pink, Palam Pride, F1 Avtar, F1 Rakshita.

Chilli: Surajmukhi.

Sunflower: EC-68415.

Moong: Pusa Baishakhi.

Mash: UG-218.

Garden pea: PalamPriya, Azad P-1, PB-89, PalamSamool and Lincoln.

Carrot: Nantes and Chantenay.

Palak: PusaHarit, Pusa Bharti.

East Uttar Pradesh

Rice: sarayu-52, narendra-359, pant dhan-4, indrasan, NDR-97, pant dhan-12, narendra-80, ratna or pusa-35, mahsuri, swarna mahsuri, jal lahri, type-9, type-100, narendra-359, malviy dhan-36, narendra dhan-2026, narendra dhan-2064, narendra dhan-3112, sarju-52, pant dhan-4, Swarna, Pant-10, T-3, Poosa Basmati and Haryana Basmati.

Moong: samrat, hum-2, hum-12, malviyajanchetana, malviyajoyti, neredra moong-1.

Urad: T-9, azad urd-1, azadurd-2, shekher-2.

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, etc.

Maize: pusa, agatishanker, makka-2, azad, uttam, sweta, Prakash, G-1, 5 (hybrid varieties) and Tarun, Navin, Kanchan, Sweta and Jaunpuri (varieties for early sowing).

West Uttar Pradesh

Ladies finger: VRO-6, VRO-5

Rice: PRH 10, PB1, Pusa 1509, Sugandha5

Pigeon pea: T-21, UPAS 120

Cotton: H777, Dhanalakshami, HD107

For fodder Jowar: JS 120, Lobia 88

Punjab

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

Rice: Pusa-44, T.R-112 and T.R-113.

Delhi

Cotton: H-777, H-974, H-1098.

Pigeonpea: Pusa 2001, Pusa991, Pusa992, Paras manak, UPAS 120.

Rajasthan

Sugarcane: (late sown): COL8001.

Groundnut: RG 425, RG382, HNG10, GG20, TG37, TG39, M-13.

Kharif Onion N-53, Agrifound Dark Red

Okra: Ark abhay, Parbhani kranti, Pusa makhmali

Guar: RGC-936, 986, 1002, 1017, HG -365, 563, Hg2-20

Gujarat

Irrigated Hybrid cotton: G. cot. 6, 8, 10.

Irrigated B.T. Cotton : Gujarat Talod Hirsutam Hybrid -49 (Bolegaurd-2) or Govt. approved varieties.

Rainfed cotton: (North Saurashtra Zone) Early: Bg-II GCH-8, Agritop-333, Jay, Beejdhan-2, Sarju Atom, Bhakti, Medium Late: Bg-II GCH-6, , Agritop-444, Solar-76, Swapna, Mallika Late: Bg-II Ajit-155, , RCH-II, Vikram-5, Uttam, Mangla; ANKUR-651 (Middle Gujarat Zone).

Groundnut (irrigated): GG-20, GG-11, GG-7.

Kharif groundnut (North Saurashtra Zone): Semi spreading, GG-20, Bunch: GG-2, GG-5, TAG-24, TG-37 A, TPG-41, TLG-45.

Sweet corn: American Hybrid-1.

Madhya Pradesh:

Soybean: JS 95-60 (early), JS 93 -05 (Medium), JS 335 (Late).

Redgram: TJT 501, ICPL 87 (early) and JKM 189 (Medium).

Groundnut: TG 22, TG 26, JGN 3.

Chhattisgarh:

Rice: Purnima, Danteswari, Shabagi, MTU 1010, MTU 1001, Suwarna.

Brinjal: Punjab Shadabahr, KS 331, PH 5, PH 6, KS 224, ARBH 543.

Tomato: Pusa early dwarf, Sweet 72, Pusa rubi, Pusa Gurab, Mangala, Naveen, Laxmi 5005 & NS 815.