



National Agromet Advisory Service Bulletin



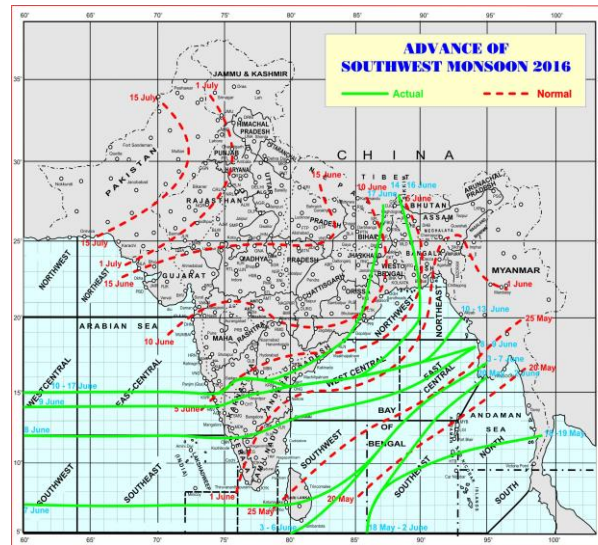
Friday 17th June 2016
(For the period 17th to 21st June 2016)



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

Weblink For
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>
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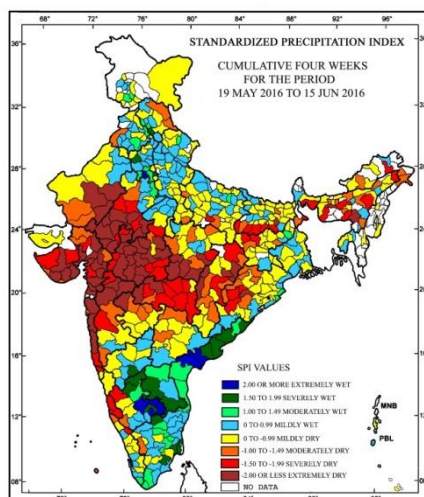
Monsoon Watch



- The southwest Monsoon has further advanced into remaining parts of Rayalaseema and Bay of Bengal, most parts of Coastal Andhra Pradesh and West Bengal & Sikkim and some parts of Odisha, Jharkhand and Bihar.
- The Northern Limit of Monsoon (NLM) passes through Lat. 15.0°N/ Long.60.0°E, Lat. 15.0°N/ Long.70.0°E, Karwar, Gadag, Kurnool, Kalingapatnam, Cuttack, Jamshedpur and Forbesganj.
- Conditions are favourable for further advance of southwest monsoon into remaining parts of central Arabian Sea and entire Konkan & Goa, some parts of Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh and East Madhya Pradesh, remaining parts of North Interior Karnataka, Coastal Andhra Pradesh, Odisha and Gangetic West Bengal, entire Telangana and some more parts of Jharkhand and Bihar during next 2-3 days.

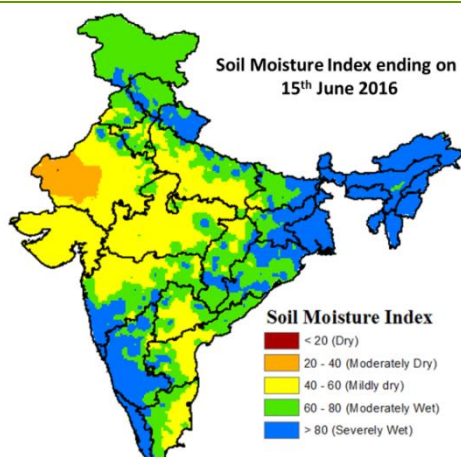
Standardised Precipitation Index Four Weekly for the Period 19th May to 15th June 2016

MINISTRY OF EARTH SCIENCES
INDIA METEOROLOGICAL DEPARTMENT
HYDROMET SECTION, PUNE



- Extremely/severely wet conditions experienced in many districts of Andhra Pradesh; few districts of Karnataka; Hisar, Faridabad, Rewari districts of Haryana; Sangrur district of Punjab; Solan district of Himachal Pradesh; Nagapattinam, Sivaganga, Thanjavur, Tiruvarur, Krishnagiri districts of Tamil Nadu.
- Extremely/Severely dry conditions experienced in most districts of Meghalaya; Gujarat Region; Konkan & Goa; many districts of Rajasthan; Madhya Pradesh; Saurashtra and Kutch; Maharashtra; few districts of Chhattisgarh; East Siang district of Arunachal Pradesh; Goalpara, Kamrup, Karbi Anglong, Tinsukia districts of Assam; Cooch Behar, South Dinajpur districts of West Bengal; Boudhgarh, Kalahandi, Sonepur districts of Odisha; Chatra, Palamu district of Jharkhand; Aurangabad, Bhabua, Gaya, Jamui, Monghyr, Nawada, Sheohar districts of Bihar; Kaushambi district of Uttar Pradesh; Udupi, Shimoga districts of Karnataka; Wynad districts of Kerala.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Assam; Saurashtra and Kutch; Chhattisgarh; Ri-Bhoi district of Meghalaya; Malda district of West Bengal; Bargarh, Deogarh, Jharsuguda, Nawapara, Kandhamal, Sundargarh districts of Odisha; Dhanbad, Latehar districts of Jharkhand; Rohtas, Saharsa districts of Bihar; Allahabad, Kannauj, Mahoba districts of Uttar Pradesh; Ferozepur district of Punjab; Kinnaur, Lahaul & Spiti districts of Himachal Pradesh; Barmer, Jalore, Jaipur districts of Rajasthan; Guna, Mandla, Panna, Rewa, Sagar districts of Madhya Pradesh; Dahod, Patan districts of Gujarat Region; Mumbai Suburban districts of Konkan & Goa; Ahmednagar, Kolhapur, Parbhani, Jalna, Hingoli, Washim districts of Maharashtra; Adilabad, Medak districts of Telangana; Coimbatore district of TamilNadu; Kodagu districts of Karnataka; Kasargod district of Kerala; Lakshadweep district of Lakshadweep.
- Rest of the country experienced moderately wet/ mildly dry/mildly wet conditions.

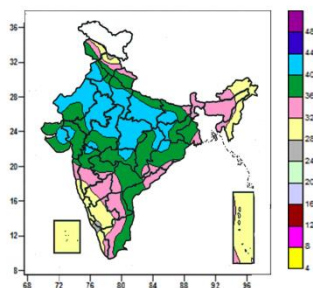
Soil Moisture Index ending on 15th June 2016



- Soil Moisture Index indicates severely wet condition in North-East Region, West Bengal, Uttarakhand, Karnataka, Kerala, few districts of Maharashtra, Odisha, patches in Bihar and Jharkhand. Moderate wet condition in Uttar Pradesh, remaining parts of Bihar, Jammu & Kashmir, Himachal Pradesh, Chhattisgarh, Andhra Pradesh and Punjab. Rest of the country shows Mild dry condition of soil moisture.

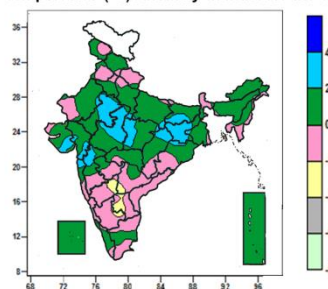
Contour maps for Mean Maximum and Minimum Temperature and their anomaly for the week ending on 15.06.2016

Actual Mean Maximum Temperature (°C) in India for the week ending 15.06.2016



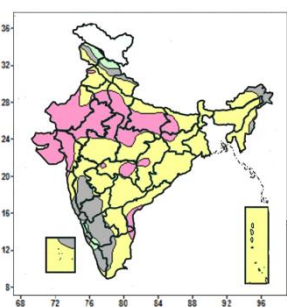
- Mean maximum temperature was between 40 to 44°C over many parts of Punjab, Haryana & Delhi, Uttar Pradesh, Rajasthan, Madhya Pradesh, some parts of Bihar, Jharkhand, Gujarat, Vidarbha, Chhattisgarh and isolated pockets of Madhya Maharashtra, Odisha.
- Mean maximum temperature was between 32 to 40°C over rest of the country except over Lakshadweep, Coastal Karnataka, many parts of Arunachal Pradesh, Nagaland, Manipur, Mizoram, Himachal Pradesh, South Interior Karnataka, Kerala, Andaman & Nicobar Islands, some parts of Jammu & Kashmir, Konkan & Goa, North Interior Karnataka and isolated pockets of Madhya Maharashtra, Tamil Nadu, where it was between 24 to 32°C.

Mean Maximum Temperature (°C) Anomaly in India for the week ending 15.06.2016



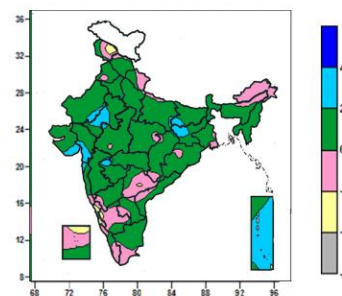
- Mean maximum temperature was above normal by 2 to 4°C over many parts of East Rajasthan, Jharkhand, some parts of Madhya Pradesh, Bihar, Chhattisgarh, Saurashtra, Madhya Maharashtra and isolated pockets of Uttar Pradesh, West Rajasthan, Gujarat Region, Konkan, Gangetic West Bengal and Odisha.
- It was normal to near normal over rest of the country except some parts of North Interior Karnataka, Rayalaseema and isolated pockets of Telangana and South Interior Karnataka, where it was below normal by 2 to 4°C.

Actual Mean Minimum Temperature (°C) in India for the week ending 15.06.2016



- Mean minimum temperature was between 12 to 16°C over isolated pockets of Jammu & Kashmir.
- Mean minimum temperature was between 16 to 24°C many parts of Jammu & Kashmir, Himachal Pradesh, Madhya Maharashtra, Karnataka, Kerala, some parts of Arunachal Pradesh, Manipur, Uttarakhand, Konkan & Goa, Tamil Nadu, Lakshadweep and isolated pockets of Rayalaseema.
- Mean minimum temperature was between 24 to 32°C over rest of the country.

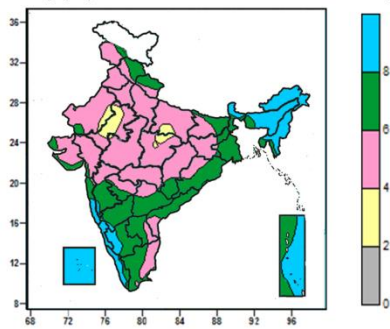
Mean Minimum Temperature (°C) Anomaly in India for the week ending 15.06.2016



- Mean minimum temperature was above normal by 2 to 4°C over many parts of Andaman & Nicobar Islands, some parts of East Rajasthan, Bihar, Jharkhand, Gujarat and isolated pockets of East Uttar Pradesh, West Rajasthan, West Madhya Pradesh, Konkan, Marathwada and Vidarbha.
- Mean minimum temperature was normal to near normal over rest of the country except some parts of Jammu & Kashmir, Coastal Karnataka, Lakshadweep and isolated pockets of South Interior Karnataka, Telangana where it was below normal by 2 to 4°C.

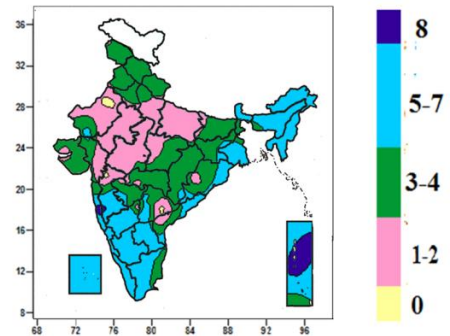
Contour maps for Relative Humidity, Cloud amount and Wind speed for the week ending on 15.06.2016

Relative Humidity (%) over India for the week ending 15.06.2016



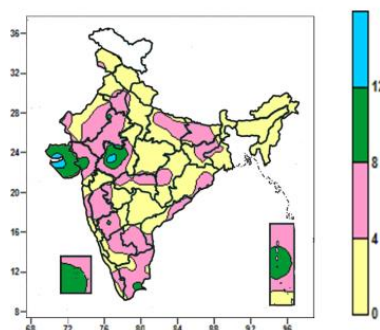
- Mean Relative humidity was above 80% over Sikkim, Arunachal Pradesh, Nagaland, Manipur, Coastal Karnataka, Lakshadweep, many parts of Assam & Meghalaya, Mizoram, Kerala, Andaman & Nicobar Islands, some parts of Sub-Himalayan West Bengal, Tripura, Konkan & Goa, South Interior Karnataka and isolated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

Cloud amount (okta) over India for the week ending 15.06.2016



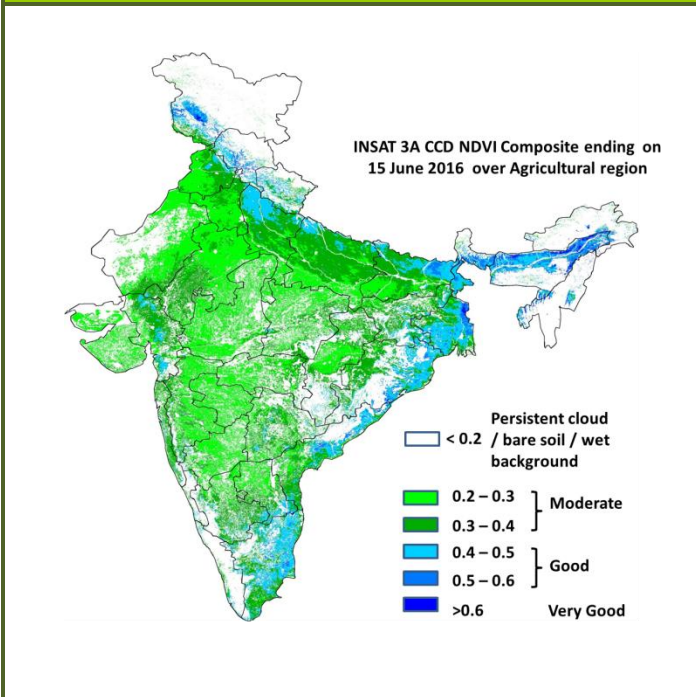
- Sky remained overcast (8 okta) over some parts of Andaman & Nicobar Islands and isolated pockets of Konkan and Madhya Maharashtra.
- Sky remained generally cloudy (5-7 okta) over Sikkim, Coastal Karnataka, South Interior Karnataka, Kerala, Lakshadweep, many parts of North East India, Gangetic West Bengal, Konkan & Goa, Madhya Maharashtra, North Interior Karnataka, Rayalaseema, Tamil Nadu, Andaman & Nicobar Islands, some parts of Odisha, Coastal Andhra Pradesh, Telangana, Marathwada and isolated pockets of West Rajasthan, Gujarat Region, Jharkhand and Chhattisgarh.
- Sky remained partly cloudy/mainly clear (3-4 okta/1 to 2) over rest of the country except isolated pockets of West Rajasthan where it was clear sky (0 okta).

Wind speed (knots) over India for the week ending 15.06.2016



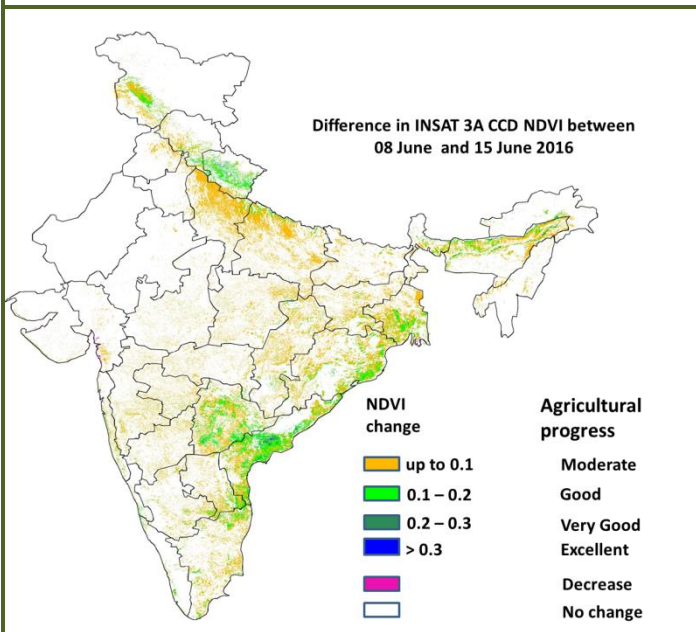
- Mean wind speed was 12 to 16 knots over some parts of Saurashtra & Kutch and isolated pockets of West Madhya Pradesh.
- Mean wind speed was 8 to 12 knots over many parts of Saurashtra & Kutch, Lakshadweep, some parts of Gujarat Region, West Madhya Pradesh, Andaman & Nicobar Islands and isolated pockets of East Rajasthan, North Interior Karnataka, Kerala and Tamil Nadu.
- Mean wind speed was 4 to 8 knots over many parts of Haryana & Delhi, East Uttar Pradesh, Bihar, Jharkhand, Rajasthan, West Madhya Pradesh, Gujarat Region, Vidarbha, Madhya Maharashtra, Interior Karnataka, Rayalaseema, Tamil Nadu, Andaman & Nicobar Islands, some parts of Chhattisgarh, Odisha, Coastal Andhra Pradesh, Konkan, Marathwada, Kerala, Lakshadweep and isolated pockets of Jammu & Kashmir, Punjab, West Uttar Pradesh, Gangetic West Bengal, East Madhya Pradesh, Saurashtra & Kutch, Coastal Karnataka.
- Mean wind speed was less than 4 knots over rest of the country.

INSAT 3A CCD NDVI COMPOSITE ENDING ON 15th June 2016 OVER AGRICULTURAL REGION OF INDIA



- Agricultural vigour is good over Tamil Nadu, coastal Andhra Pradesh, patches in east Bihar, Coastal Odisha, West Bengal, Assam, patches in west Uttar Pradesh, patches in Gujarat and Himachal Pradesh, where NDVI varies from 0.4 to 0.6. Agricultural growth was moderate 0.2 to 0.4 over patches in Punjab, Haryana, Uttar Pradesh, Bihar, east Rajasthan, Madhya Pradesh, Gujarat, Telangana, Maharashtra, Karnataka and Odisha.

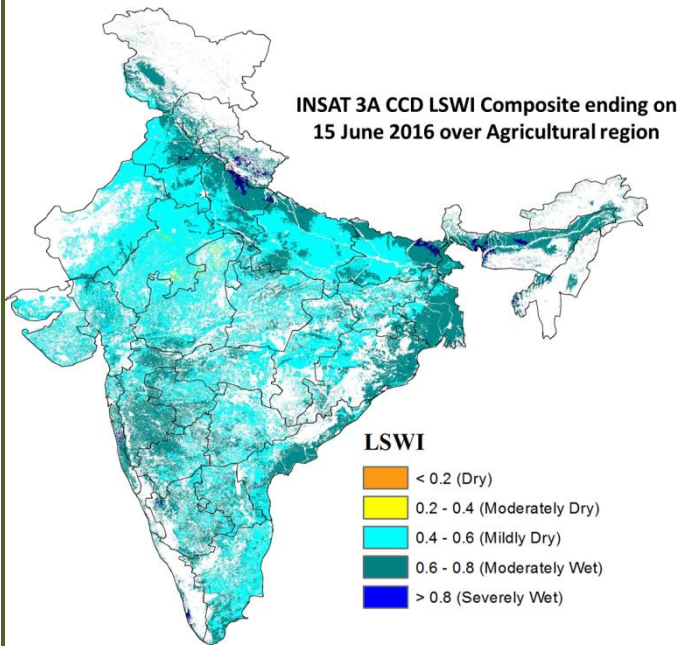
Difference in INSAT 3A CCD NDVI between 8th and 15th June 2016



- Good progress in NDVI was observed in coastal regions of Andhra Pradesh, Odisha, West Bengal, northern regions of Tamil Nadu, Telangana, North east and Uttarakhand. Moderate progress in NDVI is observed over the regions of Uttar Pradesh, few patches in Bihar, West Bengal, Odisha, Tamil Nadu, Andhra Pradesh and North East. The rest of region in India shows not much change in NDVI.

- INSAT 3A CCD NDVI composite maps for the week ending on 15th June 2016 for different States are given in Annexure II.

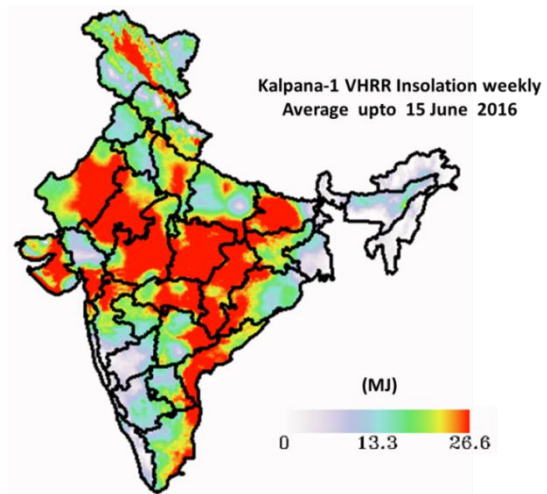
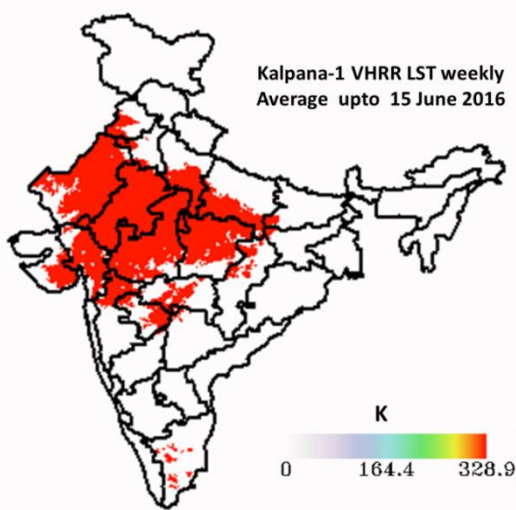
INSAT 3A CCD LSWI COMPOSITE ENDING ON 15th June 2016 OVER AGRICULTURAL REGION OF INDIA



- Moderately wet conditions are observed in Maharashtra, Karnataka, coastal Andhra Pradesh, West Bengal, coastal Odisha, west Uttar Pradesh and patches in Haryana, Punjab, Bihar and North east region. The states of Gujarat, Rajasthan, east Uttar Pradesh, Bihar and Madhya Pradesh, Tamil Nadu, Telangana, regions in Punjab and Haryana, show mild Dry conditions.

Land Surface Temperature (LST)

Weekly Insolation



- The LST is found to be high over the western region of India. LST range from 300-330 K over the States of Rajasthan, Madhya Pradesh, parts of Gujarat, Maharashtra, Uttar Pradesh and Punjab.

- The average surface insolation is found to be High (22-27 MJ) over Rajasthan, Madhya Pradesh, Bihar, Telangana, Parts of Maharashtra, coastal regions of Andhra Pradesh and Chhattisgarh. Low Insolation is observed over the western Coastal region of India and the North East region, West Bengal and east Uttar Pradesh.

Weather Forecast for next 5 days valid upto 0830 hours of 22nd June 2016

- Meteorological sub-division wise detailed 5 day rainfall forecast is given below.
- No significant change in maximum temperatures over northwest and central India during next 3 days.

5 Day Rainfall Forecast (MID DAY) 17th June 2016

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

- **17 June (Day1):** Heavy to very heavy rain very likely at isolated places over Chhattisgarh; heavy at isolated places over Vidarbha, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Coastal Andhra Pradesh, Telangana, Coastal Karnataka and Kerala.
- **18 June (Day 2):** Heavy to very heavy rain very likely at isolated places over Chhattisgarh, Vidarbha, Odisha, Telangana, Coastal Karnataka & Kerala; heavy at isolated places over East Madhya Pradesh, Arunachal Pradesh Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and Coastal Andhra Pradesh.
- **19 June (Day 3):** Heavy to very heavy rain very likely at isolated places over Vidarbha, Arunachal Pradesh, Assam & Meghalaya, Konkan & Goa, Telangana, Coastal Karnataka & Kerala; heavy at isolated places over Uttarakhand, East Madhya Pradesh, Chhattisgarh, Sub-Himalayan West Bengal & Sikkim, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathawada and North Interior Karnataka.
- **20 June (Day 4):** Heavy to very heavy rain very likely at a few places over Konkan & Goa, Coastal

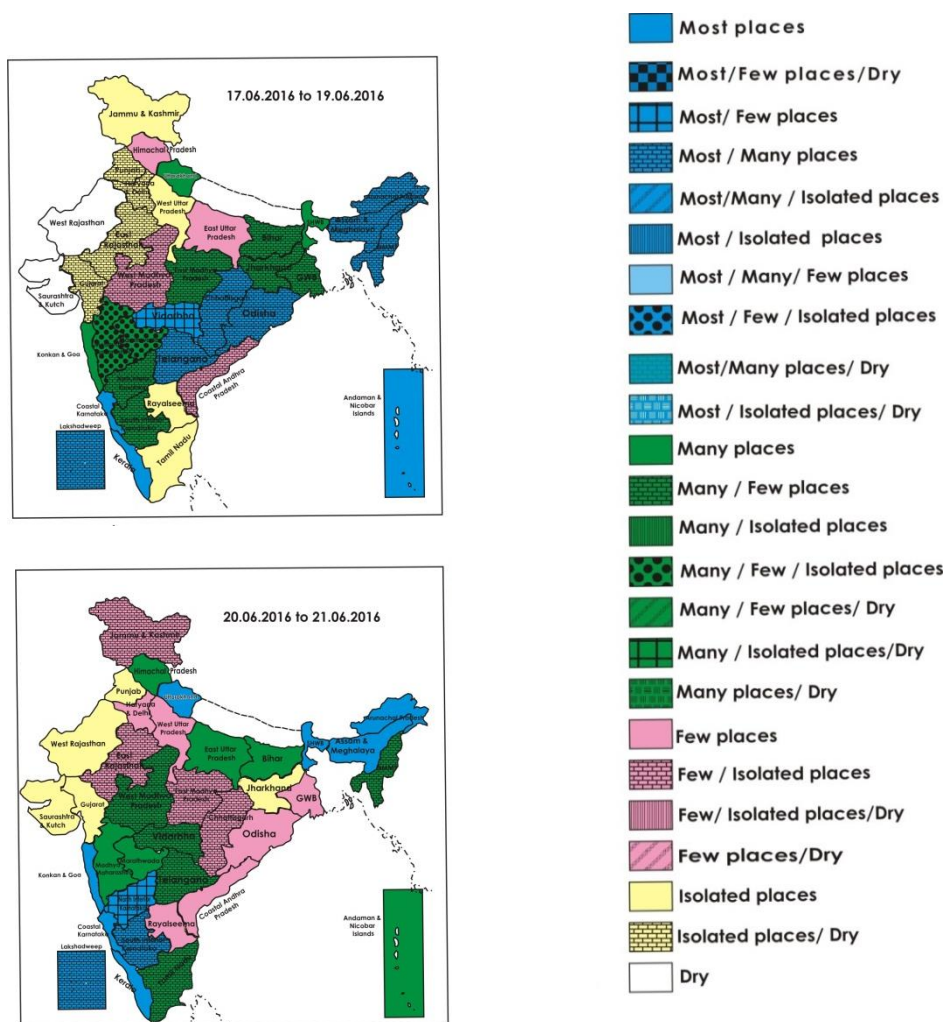
Karnataka & Kerala; at isolated places over Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh and Assam & Meghalaya; heavy at isolated places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Andaman & Nicobar Islands, Madhya Maharashtra, Marathwada and North Interior Karnataka. Thunderstorm accompanied with squall very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh East Rajasthan.

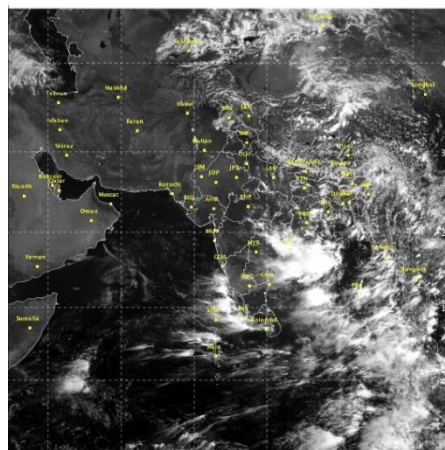
- **21 June (Day 5):** Heavy to very heavy rain very likely at a few places over Coastal Karnataka & Kerala; at isolated places over Sub-Himalayan West Bengal & Sikkim and Konkan & Goa; heavy at isolated places over Himachal Pradesh, Uttarakhand, East Uttar Pradesh, Andaman & Nicobar Islands, Assam & Meghalaya, Madhya Maharashtra and South Interior Karnataka. Thunderstorm accompanied with squall very likely at isolated places over East Rajasthan.

Weather Outlook for subsequent 2 days from 22nd to 24th June 2016

- Rainfall at most places with isolated heavy falls very likely over northeastern states, Sub-Himalayan West Bengal & Sikkim and along west coast.
- Rainfall at a few places very likely over rest peninsula, central and northwest India.

Weather Forecast Map (valid upto 0830 hours of 22nd June, 2016)





Salient Advisories

Major Advisories

- Southwest monsoon has set over Kerala and Tamilnadu on 8th June, 2016, Coastal & South Interior Karnataka on 10th June. It further advanced to some parts of North Interior Karnataka, entire northeastern states and some parts of Sub-Himalayan West Bengal & Sikkim by 15th June. It has further advanced into remaining parts of Rayalaseema and Bay of Bengal, most parts of Coastal Andhra Pradesh and West Bengal & Sikkim and some parts of Odisha, Jharkhand and Bihar on 17th June. As rainfall is continuing in these regions, undertake the following agricultural activities:
- In **Kerala**, continue transplanting of Virippu rice in Palakkad, Thrissur, Ernakulam, Thiruvananthapuram, Kollam, Kannur, Malappuram and Kozhikode districts and direct sowing of rice in Alappuzha, Kottayam districts.
 - In **Coastal Karnataka**, continue nursery sowing of rice and sowing of *kharif* maize and cotton. Continue drill sowing of rice.
 - In **South Interior Karnataka**, continue nursery sowing of rice, sowing of maize in Chickmangaluru, Hassan, Shimoga districts, continuation of sowing of red gram, maize, groundnut and ragi in Bengaluru Rural, Chikaballapura and Kolar districts and direct sowing of ragi, red gram, maize, sesame, cowpea, green gram and black gram in remaining districts.
 - In **North Interior Karnataka**, in Bidar district, continue nursery sowing of rice and undertake sowing of soybean, green gram, blackgram, sorghum, pigeon pea utilising realised rainfall and expected rainfall, continue sowing of red gram, black gram, green gram, cotton and maize in Koppal district. In Dharwad, Belagavi and Haveri districts of North Transition Zone of Karnataka, undertake sowing of green gram black gram, soybean sorghum, maize, cotton utilising realised rainfall and expected rainfall.
 - In **Andhra Pradesh**, continue land preparation and sowing of red gram, black gram, green gram and cotton. Continue nursery sowing of rice in Nellore district and land preparation for sowing of *kharif* groundnut.
 - In **Assam**, continue nursery raising of *Sali* rice and sowing of groundnut and sowing of *baorice* in Lower and Central Brahmaputra Valley Zone
 - In **Meghalaya**, continue nursery bed preparation for *Sali* rice and land preparation and sowing of groundnut, soybean, green gram, black gram and rajma
 - In **Manipur**: Nursery sowing of *kharif* rice and sowing of groundnut and black gram.
 - In **Mizoram**: Nursery sowing of *kharif* rice, sowing of *kharif* green gram, black gram and rajma

- In **Tripura**: Nursery sowing of kharif rice, sowing of groundnut and maize.
 - **West Bengal**: In Gangetic West Bengal, land preparation for nursery sowing of *Aman* rice and land preparation and direct sowing of rice in Coastal Zone. In Sub Himalayan West Bengal: Planting of ginger, turmeric and Cardamom after current spells of heavy rain.
 - In **Royalaseema**, in Anantapur and Kurnool districts, undertake land preparation for sowing of groundnut and undertake sowing of red gram, bajra, korra and castor. In Chittoor and Kadappa districts, continue transplanting of rice and sowing of groundnut and red gram. In Nellore district, continue nursery sowing of rice, groundnut and red gram.
 - In **Odisha**, undertake nursery sowing of medium duration rice varieties and undertake land preparation and sowing of cotton, groundnut, maize and arhar in uplands.
 - In **Bihar and Jharkhand**, undertake nursery sowing of rice and onion, land preparation for sowing of maize.
- As conditions are favourable for further advance of southwest monsoon into remaining parts of central Arabian Sea and entire Konkan & Goa, some parts of Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh and East Madhya Pradesh, remaining parts of North Interior Karnataka, Coastal Andhra Pradesh, Odisha and Gangetic West Bengal, entire Telangana and some more parts of Jharkhand and Bihar during next 2-3 days, undertake the following agricultural activities:
- In **Konkan**, in south Konkan region, farmers are advised to complete nursery sowing of rice and start ploughing and puddling for transplanting. Also complete nursery sowing of finger millet and continue land preparation and sowing of groundnut at *vapsa* condition.
 - In **Madhya Maharashtra**, continue sowing of soyabean in Kolhapur and Sangli district. Continue land preparation and keep inputs ready for sowing of *kharif* jowar, groundnut, cotton, redgram, greengram and black gram.
 - In **Marathwada**, undertake land preparation for sowing of cotton, pigeon pea, green gram, black gram, groundnut, and maize and soybean. Undertake sowing after receipt of monsoon rainfall.
 - In **Vidarbha**, continue nursery preparation of *kharif* rice in Bhandara, Gondia, Chandrapur, Gadchiroli districts. Continue preparatory tillage for sowing of *kharif* soybean, cotton, redgram, greengram and black gram and keep inputs ready for the *kharif* season.
 - In **Telangana**, undertake land preparation and sowing of paddy nursery, maize, soybean, green gram and black gram in North Telangana Zone. In the South Telangana Zone, undertake nursery raising of paddy. Undertake sowing of rainfed jowar, maize green gram, black gram, red gram, soybean and cotton utilising the expected rainfall.

Detailed Zonewise Agromet Advisories

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



Banana



Land preparation/Sowing



Sugarcane



Cotton

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala; all districts of Coastal Karnataka: Belagavi, Dharwad, Gadag, Haveri and Koppal districts of North Interior Karnataka; Bengaluru Rural, Chikaballapur, Chikkamagaluru, Chitradurga, Davangere, Hassan, Kodagu, Kolar, Shivamogga and Tumakuru districts of South Interior Karnataka; Coimbatore, Kanyakumari, Nilgiris and Tirunelveli districts of Tamil Nadu. Weather remained mainly dry over rest of the region.
- **Advisories:**

- As rain/thundershowers likely at most places over Kerala and Coastal Karnataka during the period, at most/many places over Telangana from 17th to 20th and over North Interior Karnataka on 19th & 20th; at many places over Coastal Andhra Pradesh on 17th & 18th, South Interior Karnataka from 19th to 21st and over Tamil Nadu on 21st June, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy to very heavy rain/heavy rain is very likely at few/isolated places over Coastal Karnataka and Kerala during the period and heavy rain very likely at isolated places over Coastal Andhra Pradesh on 17th and over Telangana from 17th to 19th June, provide adequate drainage in standing crop fields to avoid water stagnation.

▪ **Kerala:**

- In Kerala, continue transplanting of *Virippu* rice in Palakkad, Thrissur, Ernakulam, Thiruvananthapuram, Kollam, Kannur, Malappuram and Kozhikode districts and continue direct sowing of rice in Alappuzha, Kottayam districts. Provide adequate drainage in rice nurseries. Undertake planting of coconut seedlings and avoid water stagnation in the planting pits/basins.
- Continue transplanting of brinjal and chilli and planting of coconut seedlings with adequate drainage in Alappuzha, Kottayam districts. Raise nurseries for brinjal and chilli, sowing of bhindi. Provide propping for bunched nendran banana plants in Thiruvananthapuram, Kollam. Avoid water logging at the base of the plants. Intercropping may be started in coconut gardens.
- In Wayanad and Idukki districts, continue planting of coconut, areca nut, pepper and cardamom.
- In Alappuzha and Kottayam districts, prevailing weather conditions (humid conditions) are congenial for quick wilt/fungal diseases in pepper. If noticed, as a prophylactic measure, spray 1% Bordeaux mixture against fungal diseases after current spells of rain.
- In Palakkad, Thrissur, Ernakulam districts, incidence of swarming caterpillar is noticed in rice nursery and transplanted rice crop. To control, apply Carbaryl @ 3-4g/litre of water after current spells of rain. Spray Quinalphos @ 2 ml/litre of water to control incidence of epilachna beetle in vegetables after current spells of rain.
- In Kasaragod, Kannur and Kozhikode and Malappuram districts, there are chances of attack of stem borer, chisel out the grubs and swab the tree trunk with Carbaryl WDP @ 4g/litre of water after current spells of rain.

▪ **Karnataka:**

- In Dakshina Kannada and Udupi districts of Coastal Zone of Karnataka, undertake transplanting of rice utilising realised rainfall.
- In Uttar Kannada district, undertake drill sowing of rice (for low land: Intan, Abhilash and Hemavati and for upland: Amrut or Prasanna variety). To control the weeds in drill sown rice area, spray Butachlor @ 4 ml/litre of water on the day of sowing or next day. Continue transplanting of areca nut seedlings and undertake planting of ginger and turmeric.
- In South Interior Karnataka, in Chickmangaluru, Hassan, Shimoga districts of Southern Transition Zone, continue nursery preparation/sowing of rice, sowing of maize and in Chamrajnagar, Kodagu, Mandya and Mysuru districts, undertake nursery preparation/sowing of rice, sowing of jowar-CHS-5, jowar+redgram(2:1), groundnut+redgram(4:1 or 8:2) by using seed drill and continue sowing of pulses (cowpea, green gram, black gram, horse gram, field bean etc.) utilising realised and expected rainfall.
- Continue sowing of red gram, maize, ragi, groundnut, undertake sowing of cowpea, long duration crops (under monocropping) castor, short duration crops (under double cropping) sesame (Navile-1, T-7), green gram and black gram in Bengaluru Rural, Chikaballapura and Kolar districts and sowing may be undertaken in Bengaluru Urban and Ramnagara districts Chamrajnagar, Kodagu, Mandya and Mysuru districts. In Chitradurga, Davengere and Tumakuru districts, undertake land preparation and sowing of red gram, jowar, sunflower, groundnut, finger millet etc.
- In North Interior Karnataka, in Bidar district, continue nursery sowing of rice and undertake sowing of soybean, green gram, blackgram, sorghum, pigeon pea (BSMR 736, TS-3R) utilising realised rainfall and expected rainfall, continue sowing of red gram, black gram, green gram, cotton and maize in Koppal district.
- In Dharwad, Belagavi and Haveri districts of North Transition Zone of Karnataka, undertake sowing of green gram (S-4, Chainamung & Pusabaisaki), black gram (TU-1, TAU-1), soybean (JS-335, DSB-1), sorghum, maize, cotton, groundnut (bunch type varieties & spreading type varieties) utilising realised rainfall and expected rainfall.
- Undertake land preparation and sowing of green gram, sunflower, maize, Bt. cotton, red gram (TS-3R), bajra, sorghum, sesamum, navane and groundnut (bunch type) in Vijayapura and Bagalkote districts.

▪ **Andhra Pradesh:**

- In the North Coastal Zone, continue planting of rainfed sugarcane after receipt of rainfall. Undertake land preparation for rainfed crops viz., bajra, pulses, ragi etc., and green manure crops. Remove water from these areas as the crop is sensitive to excess moisture.
- In the Krishna Godavari Zone, continue seed sowing of green manure crops, rice, maize and continue land preparation and sowing of red gram, black gram, green gram and cotton.
- In Rayalaseema, in Anantapur and Kurnool districts, undertake land preparation for sowing of groundnut and undertake sowing of redgram, bajra, korra and castor. In Chittoor and Kadappa districts, continue transplanting of rice, clip the tips of the leaves before transplanting to avoid attack of stem borer and leave 20cm and sowing of kharif groundnut and red gram. In Nellore district, continue nursery sowing of rice and kharif groundnut and red gram of recommended varieties.

- In the High Altitude Tribal Zone, continue nursery raising of rice, ragi and groundnut.
- **Telangana:**
- In the North Telangana Zone, undertake land preparation for sowing of paddy nursery, maize, soybean, green gram and black gram.
- In the South Telangana Zone, undertake nursery raising of paddy (except variety *Telangana Sona* (RNR15048). Undertake sowing of rainfed jowar, maize green gram, black gram, red gram, soybean, cotton and sun hemp and dhaincha as green manure after onset of monsoon.
- In the Northern Telangana Zone, the present weather conditions are favourable for incidence of thrips on chilli, to control, spray Acephate @ 1.5 g or Fipronyl @ 2 ml. or dimethoate @ 2 ml/litre of water after current spells of rain.
- **Tamil Nadu:**
- In the Cauvery Delta Zone, continue land preparation for nursery sowing of *kuruvai* rice and SRI cultivation after appropriate seed treatment.
- In the North Eastern Zone, continue summer ploughing to increase soil fertility and cover the root zone of horticulture crops with coir pith to conserve moisture.
- In the Western Zone, considering the rainfall with high wind speed, provide adequate propping to banana aged more than 5 months and early season sugarcane. Undertake sowing of small millets in the foothills of western ghats areas. Considering the anticipated rainfall, nursery preparation may be initiated for short duration rice, less than 110 days.
- In the North Western Zone, continue cultivation of small onion utilizing the realized rainfall and bulb treatment @ *Trichoderma viride* – 4g/kg of Bulb and *Pseudomonas*-10g/kg of Bulb for control of bulb rot before sowing.
- In the North Western Zone, small onion crops at sprouting stage (20 days after sowing) are found have thrips attack. Affected crops have small white silvery patches all over the leaves and drying of leaves from tip to downward. Hence, farmers are advised to do border cropping of hybrid maize in two rows at 15 cm spacing in the onion fields to control this pest attack. Further, place blue sticky traps @ 20/acre.
- In the High Altitude Hilly Zone due to continuous rain, there is increase of incidence of carrot wilt disease at maturity stage of the crop. To control, drench the soil with Copper Oxy Chloride @ 1 g per litre of water on a rainy day.
- Due to increase in the prevailing temperature in the Cauvery Delta Zone, there may be incidence of thrips in *Kuruvai* paddy nursery, to control spray Chlorpyrifos @ 2.5ml/litre in water. Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
- Maintain optimum room temperature in silkworm and poultry rearing houses Chamrajnagar, Kodagu, Mandya and Mysuru districts in SIK.
- In the Scarce Rainfall Zone of Andhra Pradesh, vaccinate 2-3 years lambs to prevent Enterotoxemia disease during the season.
- In the South Telangana Zone, prevailing weather conditions are favourable for Ranikhet disease in poultry, ET, Sheep Pox and PPR in sheeps, Hemorrhagic Septicemia, Foot and Mouth disease in cattle and buffaloes, to prevent the disease vaccinate the animals and birds.
- In the North Eastern Zone of Tamilnadu, due to increase in day temperature, farmers are advised to cover the animal shed roof with paddy straw or white washing of the roof to reduce the temperature inside the animal house.
- In the North Eastern Zone of Tamil Nadu, sprinkle water to high yielding dairy cows 2 or 3 times to reduce heat stress during day time.
- In North Dry Zone, vaccinate livestock against foot and mouth disease (FMD vaccination), Black Quarter disease (BC vaccination) and Haemorrhagic Septicemia, vaccinate (ET vaccine) sheep and goats against Enterotoxemia and against foot and mouth disease (FMD vaccination) in North East Transition Zone.

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



Banana



Rice



Land preparation/Sowing



Jute

- **Realised Rainfall:** Rainfall occurred in Changlang, East Kameng, East Siang, Lohit, Lower Dibang Valley, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh; Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Dhubri, Goalpara, Golghat, Hailakandi, Jorhat, Kamrup(Rural), Kamrup(Metro), Karimganj, Kokrajhar, Lakhimpur, Morigaon, N.C.Hills, Nowgaon, Nalbari, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts of Assam; East Garo Hills, East Khasi Hills, Ri-Bhoi and West Garo Hills districts of Meghalaya; Aizwal and

Saiha districts of Mizoram; Imphal West and Imphal East districts of Manipur; Kohima and Phek districts of Nagaland and all districts of Tripura except Dhalai. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at most/many places over Arunachal Pradesh and Assam & Meghalaya during the period, over Nagaland, Manipur, Mizoram & Tripura from 17th to 20th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy to very heavy/heavy rain is very likely at isolated places over Assam & Meghalaya during the period, over Arunachal Pradesh from 17th to 20th and heavy rain very likely at isolated places over Nagaland, Manipur, Mizoram & Tripura from 17th to 19th June, provide adequate drainage in standing crop fields to avoid water stagnation.

Assam, Meghalaya & Arunachal Pradesh:

- In Assam, continue nursery raising of *Sali* rice with adequate drainage facilities in Baksa, Barpeta, Bongaigaon, Cachar, Chirang, Darrang, Dhemaji, Dhubri, Dibrugarh, Goalpara, Golghat, Hailakandi, Jorhat, Kamrup(Rural), Kamrup(Metro), Karbi Anglong, Karimganj, Kokrajhar, Lakhimpur, Morigaon, Karbi Anglong, Nowgaon, Nalbari, Sonitpur, Sibsagar, Tinsukia and Udalgiri districts. Farmers should select suitable long duration high yielding varieties of Sali rice like Ranjit, Bahadur, Peoli, Moniram, Pankaj, Kushal etc. for growing in typical lowland paddy area and in medium lowland areas, select medium duration paddy varieties like Satya and Basundhara. Continue sowing of pigeon pea (variety of T-21) and undertake planting of black pepper of variety like- Panniyur-1, and 2, Kalluvali, Karimunda, kottandam, Balankotta.
- In flood prone areas Karimganj, Hailakhand and Cachar districts, farmers are advised to collect the submerge tolerance rice variety like Swarna Sub 1 which can withstand upto 15 days in submerged condition.
- In Karbi Anglong, Karbi Anglong districts of Hill Zone and Baksa, Barpeta, Bongaigaon, Chirang, Dhubri, Goalpara, Kamrup(Rural), Kamrup(Metro), Kokrajhar and Nalbari districts of Lower Bramhapurtra Valley Zone of Assam, undertake sowing of arhar and planting of banana.
- In Central Bramhaputra Valley Zone of Assam, continue planting of ginger and turmeric and papaya seedlings with adequate drainage facilities.
- In Dhemaji, Lakhimpur and Sonitpur districts of Assam, planting of black pepper cuttings.
- In East Garo Hills, East Khasi Hills, Jaintia Hills, Ri-Bhoi, South Garo Hills, West Garo Hills and West Khasi Hills districts of Meghalaya, continue nursery bed preparation for *Sali/kharif* rice and sowing of groundnut and soybean.
- In Anjaw, Changlang, Dibang Valley, East Kameng, East Siang, Kurung Kumey, Lohit, Lower Dibang Valley, Lower Subansari, Papumpara, Tawang, Tirap, Upper Siang, Upper Subansari, West Kameng and West Siang districts of Arunachal Pradesh, complete nursery raising of lowland rice, continue sowing of pulses, vegetables like cucumber, sponge gourd, bottle gourd and ladies finger, planting of ginger. Continue half moon terraces in fruit crops (orange/banana/apple/peach) grown in steep slopes to prevent nutrient loss during heavy downpour. Remove excess sucker from banana in mother plant and give support in banana bunches to protect falling due to heavy weight or storm.
- In Arunachal Pradesh, there is chance of attack of *Cercospora* leaf spot in pulses/ ground. Spray Triazophos @ 2ml/litre water in young seedlings of pulses & oilseeds crop like soybean, Groundnut etc. Undertake plant protection measures after current spells of rain.
- In Hill Zone and Lower Bramhapurtra Valley Zone of Assam, there is chance of attack of blast and yellowing of leaves in Sali rice in nursery due to the prevailing weather conditions. Spray Carbendazim @ 1gm/litre of water or Ediphenphos @ 1 ml/litre of water to control of this disease in seedling stage. Also spray Phosphamidon @ 400-500ml/ha in 800 litre of water against stem borer in sugarcane (spring). Undertake plant protection measures after current spells of rain.
- In Upper Bramhaputra Valley Zone of Assam, present weather is favourable for early shoot borer infestation in sugarcane. Make frequent visits and collect the egg masses from leaves and destroy them. Shoot borer infestation may be checked by burying or burning the infested canes. Proper earthing up will reduce the early shoot borer infestation. Also proper sanitation will reduce the fruit fly infestation in cucurbitaceous crops. Spray 10 ml Malathion 50 EC, 50 gm molasses dissolved in 5 litre of water after current spells of rain.
- In Barak Valley Zone of Assam, present weather is favourable for attack of blast disease in *ahu* rice. To control, spray of Carbendazim @ 1 ml/litre of water at tillering stage after current spells of rain.
- In Dhemaji, Lakhimpur and Sonitpur districts of North Bank Plain Zone of Assam, to control red pumpkin beetle and fruit fly in cucurbits, spray Malathion 50 EC @ 2ml/litre of water. Also to avoid stem borer attacks in citrus plants, apply a paste made by mixing lime, water and 5% Malathion dust on the stems of the plants up to a height of about 1 m from the ground. Apply plant protection measures after current spells of rain.
- In Meghalaya, high humidity with intermittent rain is favourable for development of blast in *jhum* rice. Spray Mancozeb @ 2g/litre of water or Carbendazime @ 1g/litre of water after current spells of rain.
- **Nagaland, Manipur, Mizoram and Tripura:**
- In Dimapur, Kephire, Kohima, Longleng, Mokokchung, Mon, Paren, Phek, Tuensang, Wokha and Zunheboto districts of Nagaland, continue nursery preparation of lowland rice. Short to medium duration HYV rice varieties like CAU R1, CAU R3, RCM-9 and RCM-11 should be taken up for timely harvesting. Gitesh, short duration variety can also be incorporated as it can be transplanted with 40 – 60 days old seedlings. Rain water harvesting ponds should be dug at low land to collect the rain water. Avoid water stagnation in the fields of ginger.

- In Bishnupur, Chandel, Churachandpur, Imphal East, Imphal West, Senapati, Tamenglong, Thoubal and Ukhru districts of Manipur, continue sowing of cow pea, soybean, groundnut, black gram and land preparation for sowing of *kharif* rice. Undertake harvesting of matured cobs of maize. Avoid water logging in and around the ginger and turmeric field.
- In Aizwal, Champhai, Chhimtuipui, Kolasib, Lawngtlai, Lunglei, Mamit, Saiha and Serchhip districts of Mizoram, continue sowing of khasi mandarin/acid lime. Continue transplanting of rice and sowing of *kharif* pulses like green gram, black gram and rajma.
- In Dhalai, North Tripura, South Tripura and West Tripura districts of Tripura, continue land preparation and sowing maize, nursery bed preparation of *Aman* rice. Undertake land preparation and planting of banana.
- In Nagaland, spray neem oil 5ml/litre of water to control leaf eating caterpillars in cucurbits. For fruit fly in cucurbits, poison bait can be prepared with 250gm jaggery with Fenthion/ Dimethoate(Rogor) 20ml + 1 litre water can be kept in plastic bowls in bottle gourd/cucumber/curcurbit fields to check the fruit fly after current spells of rain.
- In Mizoram, apply 60 to 100 g of neem seed powder or neem cake against Comb weevil and stem weevil in banana after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.
- ❖ **Animal Husbandry**
- In Northeastern states, farmers are advised to keep animals in sheds during heavy rain fall period.
- In Arunachal Pradesh, for poultry, provide adequate clean drinking water+ electrolyte and multi-vitamins, vaccination as per the schedule with proper consultation with vet., provide anti-coccidial drugs, inclusion of turmeric powder @ 10g/kg feed for prevention of coccidiosis. Vaccination against Ranikhet disease under vet official supervision is advised.
- In Tripura, to protect the poultry from Coccidiosis disease, litter should be kept dry and hygienic, clean water, balanced diet with sufficient minerals should be provided to the birds,. The disease is contagious; hence the infected birds may kept in isolation. Poultry shed must be cleaned periodically if possible with phenyl solution.
- ❖ **Fishery**
- In Assam, prepare the fingerling rearing tanks and nurseries by cleaning them and applying agricultural lime for raising fingerlings. Apply cow dung at the rate of 500 gm per sq m. at least 15 days ahead of releasing fingerlings into the tanks. Farmers may release fish prawn in their ponds during this period.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]



Green gram



Sugarcane



Land preparation/Sowing



Banana

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa except Mumbai City and Thane; Jalgaon, Sangli and Satara districts of Madhya Maharashtra; Latur district of Marathwada. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers likely at most/many places over Konkan & Goa during the period, over Vidarbha from 18th to 20th; at many places over Madhya Maharashtra and Marathwada on 19th to 21st June along with heavy to very heavy/heavy rain likely at a few/isolated places over Konkan & Goa from 18th to 21st, heavy to very heavy/heavy rain likely at isolated places over Vidarbha from 17th to 19th; heavy rain likely at isolated places over Madhya Maharashtra from 19th to 21st and over Marathwada on 19th and 20th June, farmers are advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in rice, ragi and vegetable nurseries.
 - In Konkan, in south Konkan region, farmers are advised to complete nursery sowing of rice and start ploughing and puddling for transplanting. Also complete nursery sowing of finger millet. In south Konkan region, continue land preparation and sowing of groundnut at *vapsa* condition. Use varieties like Konkan Gaurav and Trombay Konkan (Tapura) as well as high yielding varieties like TG-26, TAG-24 and TPG-41. Continue sowing of *kharif* vegetables like okra, cucumber, bittergourd, snakegourd and ridgegourd. Undertake new planting of fruit crops like mango. Also give mechanical support to newly planted grafts/plants. In view of expected good rains, apply manures and fertilizers to cashew, coconut, arecanut and sapota.
 - In Madhya Maharashtra, continue sowing of soyabean in Kolhapur and Sangli district. Continue land preparation and keep inputs ready for sowing of *kharif* jowar, groundnut, cotton, redgram, greengram and black gram. Continue nursery preparation for *kharif* onion in Nasik district.
 - In Marathwada, continue land preparation and keep inputs ready for sowing of Bt cotton, pigeon pea, black gram,

green gram and groundnut in southern parts of the region. Continue nursery cultivation of *kharif* vegetable crops like brinjal, chilli and tomato in raised bed.

- In Vidarbha, continue nursery preparation of *kharif* rice in Bhandara, Gondia, Chandrapur, Gadchiroli districts. Continue preparatory tillage for sowing of *kharif* soybean, cotton, redgram, greengram and black gram and keep inputs ready for the *kharif* season.

▪ Gujarat:

- In Junagadh and Porbandar districts of South Saurashtra Zone, undertake pre-sowing of groundnut wherever irrigation facility is available, continue land preparation for sowing of *kharif* cotton (Bg-II GCH-8, 12 Jay Bt, Solar-66, 76, Sarju, Bg- II GCH-6, Mallika), groundnut (GG-20 & 22, GUG-10, GG-2, 11, 13, TAG - 24 & 37, TPG-41), sesame (Guj.Til-1, 2, 3,10), pigeon pea(BDN-2, Vaishali, GTH-1), soybean (Guj. Soya. 1, 2, 3), castor (GAUCH-1, GCH-4, 5, 6, 7, GC-2, 3) and undertake sowing after receipt of sufficient rainfall. Apply irrigation in vegetable crops.
- In Navasari, Dangs and Valsad districts of South Gujarat Heavy Rainfall Zone, continue land preparation for *kharif* rice (NAUR-1, GNR-2 (Costal area), GNR-3 (N/V), GNR-4 (long duration), Jaya, Ghujari, GR-5, 7, 8, 9 (Oran) IR-28 and GAR-13). Undertake nursery sowing of rice and ragi wherever irrigation facility is available.
- In Bharuch, Surat Maktampur and Tapi districts of South Gujarat Zone, continue land preparation for sowing of *kharif* crops like cotton, pigeon pea, sorghum etc. Provide support to banana and papaya to counteract the effect of high wind speed.
- In Anand, Dahod, Kheda, Panchmahals and Vadodara districts of Middle Gujarat Zone, continue land preparation for sowing of ground nut and rainfed cotton. Continue sowing of irrigated hybrid cotton (G. cot. 6, 8, 10) and approved varieties of B.T. cotton with irrigation. Undertake preparation of pits for new plantation of orchard crops.
- In Ahmedabad and Bhavnagar districts of Bhal and Coastal Zone, continue land preparation for sowing of *kharif* crops like cotton, pearl millet and green gram.
- In Banaskantha, Sabarkantha, Mehsana, Patan and Gandhinagar districts of North Gujarat Zone and Kutch district of North West Zone of Gujarat, continue land preparation for pre-sowing of irrigated *kharif* groundnut (semi-spread GG.20 or erect GG.2, GG.5, GG.7 and TG-26 varieties) under assured irrigation facilities. Continue land preparation for sowing of *kharif* crops like pearl millet, groundnut, green gram, black gram, maize etc. Keep the seeds and other inputs ready for sowing. Apply light and frequent irrigation in early sown cotton; continue gap filling to maintain soil moisture for better plant stand. Undertake mulching with straw/polythene to conserve soil moisture.. Continue preparing pits for plantation of horticultural crops (mango, sapota, lemon, pomegranate, ber, guava). Continue picking of matured fruits of vegetable and fruit crops.
- In Amreli, Jamnagar, Surendranagar and Rajkot districts of North Saurashtra Zone, continue pre-sowing of groundnut with irrigation. Continue land preparation for sowing of pearl millet, groundnut (semi spreading, GG-20 Bunch, GG-2, GG-5, TAG-24, TG-37 A, TPG-41, TLG-45), green gram (GM-4, K-85), black gram (T-9, GU-1), cow pea (Gujarat Cowpea-1,2,4, Pusa Falguni), pigeon pea (BDN-2, GT-100, GTH-1), sesame (GT-2 or GT-3) and cotton (early: Bg-II GCH-8, Agritop-333, 777, 444, Jay, Beejghan-2, Sarju, Atom, Bhakti; medium late: Bg-II GCH-6, Agritop-444, Solar-76, Swapna, Mallika). Keep the seeds and other inputs ready for sowing of *kharif* crops.
- Decrease in temperature, high cloud cover and humidity is congenial for infestation of Sigatoga leaf spot in banana in South Gujarat Zone; spray Carbendazim @ 1 g/l litre of water. To manage powdery mildew disease in creeper vegetables, spray the crop with 1g Bavistin dissolved in one litre of water.

❖ Animal Husbandry

- In Gujarat, in view of prevailing temperature conditions, keep the animals under shade, cover roof with paddy straw and provide cool drinking water 4-5 times a day. Provide cool drinking water to animals. Do vaccination in animal for the prevention of FMD and other diseases.

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



Rice



Okra



Maize



Land preparation/Sowing

- **Realised Rainfall:** Rainfall occurred in all districts of Gangetic West Bengal; all districts of Sub-Himalayan West Bengal & Sikkim except Malda; Nicobar and North & Middle Andaman districts of Andaman & Nicobar Islands; Araria, Banka, Buxar, Kishanganj, Madhubani, Purnea, Sitamarhi, Supaul and West Champaran districts of Bihar; Angul, Deogarh, Nawarangpur and Sundargarh districts of Odisha; Bokaro, Deoghar, Dhanbad, Dumka, Giridih, Hazaribagh, Jamtara, Koderma, Pakur, Simdega and West Singhum districts of Jharkhand. Weather remained mainly dry over rest of the

region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over Sub-Himalayan West Bengal & Sikkim and Andaman & Nicobar Islands during the period and over Odisha from 17th to 19th; at many places over Bihar from 19th to 21st, over Jharkhand on 17th & 18th and over Gangetic West Bengal on 17th June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops. As heavy to very heavy/heavy rain very likely at isolated places over Odisha on 17th and 18th and over Sub-Himalayan West Bengal & Sikkim from 19th to 21st and heavy rain likely at isolated places over Andaman & Nicobar Islands on 20th and 21st June, provide adequate drainage in standing crop fields.

- **Odisha:**

- In Odisha, undertake nursery sowing of medium duration rice varieties in medium land and medium late duration varieties in low land in Naupara and Kalahandi districts and undertake land preparation for sowing of cotton, maize and arhar utilizing the expected rainfall.
- In East and South Eastern Coastal Plain Zone, undertake nursery sowing of *kharif* rice in low lands and continue sowing of green manure crops and land preparation and sowing of pigeon pea. In uplands, continue land preparation planting of ginger and turmeric, sowing of maize, groundnut, sunflower, cotton etc. For green cob purpose, grow high yielding varieties of maize like Navjot, Shakti, Decan-107, Decan-109.
- In Koraput and Nawarangpur districts, undertake land preparation for sowing of maize and other non paddy crops in upland condition and take up sowing as soon as monsoon rain occurs.
- In Mayurbhanj and Keonjhar districts, undertake land preparation in uplands for sowing maize, groundnut, sunflower, cotton etc.
- In East and South Eastern Coastal Plain Zone, fruit and shoot borer has been found in brinjal. To control it install Pheromone traps and spray Sevin WP @ 4 g or Malathion @ 2 ml in 1 litre water alternatively. Also to control fruit fly in bitter gourd, spray Sevin WP @ 3 ml in 1 litre of water after current spells of rain.
- In Western Undulating Zone, there may be attack of early shoot borer in sugarcane crop at tillering stage. Spray Triazophos/ Profenophos @ 2ml/litre of water after current spells of rain.

- **West Bengal:**

- In South 24 Pargnas and East Midnapore districts in Coastal Saline Zone, undertake sowing of dry seeded long duration paddy after proper tillage operation like ploughing, weeding etc. and start to collect seed of wet seeded rice of variety like Sabita Foundation, Swarna sub-1 certified, IR-64, Hira T.L etc. from SSC, NSC etc. Prepare pit for plantation of saplings of mango, guava and coconut.
- In West Midnapore and Bankura districts, undertake land preparation for upland area rice and nursery preparation in low land area.
- In Darjeeling district, continue land preparation for new plantation of large cardamom. Proper drainage system should be maintained in the fields to prevent water stagnation during rain.
- In Sub-Himalayan West Bengal, continue nursery preparation for *kharif* rice and continue land preparation and planting of ginger and turmeric.
- In Hill Zone, avoid water stagnation at the base of Mandarin orange to avoid foot rot. Plug the freshly bored hole with Dichlorvos 76% EC (0.5%) for management of trunk borer. Spray Dimethoate 30% EC @ 1ml/litre of water for management of black citrus aphid after current spells of rain.
- In Gangetic West Bengal, weather is congenial for attack of shoot and fruit borer in brinjal and fruit rot in chilli. Spray Neem Seed Kernel Extract solution @ 50ml/litre of water for shoot and fruit borer. To control fruit rot, spray Carbendazim (Bavistin) @ 1g/litre of water at clear weather condition. Undertake plant protection measures after current spells of rain.
- In South Dinajpur and Malda district in Old Alluvial Zone, in the prevailing weather condition, there is chance of stem rot in jute at vegetative stage. To control stem rot of jute, drench the soil at the base of the stem with Copper Oxchloride @ 4g/litre of water after current spells of rain.

- **Andaman and Nicobar Islands:**

- In North, Middle and South Andaman, continue land preparation and sowing of vegetables in Broad Bed and Furrow system. Undertake intercropping of spices like clove, cinnamon, pepper and nutmeg in coconut plantations.

- **Bihar:**

- In South Bihar, undertake nursery preparation for paddy crop. Before sowing seeds in nursery, seed treatment by Captan 2g /kg of seed should be done. Undertake nursery preparation for *kharif* onion.
- In Saharsa, Purnia, Supaul and Araria districts in North East Alluvial Zone, continue nursery preparation should be started for *kharif* onion, chilli, brinjal and early cauliflower and continue planting of ginger and turmeric as sole crop and also intercrop with Mango, Litchi, Banana and Guava orchards. Undertake sowing of dhaincha, moong (green gram), senai crop for green manuring purpose.
- In North West Alluvial Plain Zone, complete nursery preparation of *kharif* paddy at the earliest. Continue planting of ginger, turmeric, elephant foot yam and green manuring crops like dhaincha, moong (green gram), senai and land preparation for sowing of maize and bajra. Undertake nursery preparation for *kharif* onion.
- In South Bihar Alluvial Zone, in present weather conditions, there is chance of viral infection in chilli. Infected crop should be uprooted and buried in the soil. Spray Imidacloprid @ 0.3 ml per litre of water to control the vector after

current spells of rain.

- In North East Alluvial Zone, prevailing weather is congenial for attack of Bihar hairy caterpillar in jute crop. To control, spray DDVP @ 2 ml/litre of water after current spells of rain.

▪ **Jharkhand:**

- In Central and North Eastern parts of Jharkhand, continue land preparation for sowing of upland rice, arhar and maize and undertake sowing after receipt sufficient rains. Cultivate high yielding varieties of maize like Birsa Makka-1, Birsa Makka-2, Suwan-1(Hybrid) and HQPM (Hybrid).
- In Saraikela, East & West Singhbhum districts in South Eastern Plateau, undertake land preparation for timely sowing (upto 30 June) of direct seeded upland rice, maize and pigeon pea. Complete sowing of French bean, lady finger, bottle gourd, cucumber, ridge gourd and radish.
- In Western Plateau Zone, there is possibility of onset of South-West monsoon during next 2-3 days, farmers are advised to keep fields ready for sowing preferably the upland, so that various crops may be sown immediately after onset of monsoon. Also complete the planting of turmeric or ginger.
- In South Eastern Plateau Zone, in cucurbitaceous crops, if attack of red pumpkin beetle is found, spraying of Diclorvos 76 EC (DDVP) @ 1 ml/litre of water is advised after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.

❖ **Animal Husbandry**

- In Old Alluvial Zone of West Bengal, undertake de-worming in proper dose to all live stock & poultry birds to control parasite load. Animals should be given nutritious feed containing vitamins and essential minerals.
- In North, Middle and South Andaman, provide light to chicks preferably 40 watt bulb to keep warm up to 3 weeks of age to avoid mortality during this period.
- In North West Alluvial Plain Zone of Bihar, vaccinate cattle against Anthrax, Black Quarter etc.
- In South Bihar Alluvial Zone, provide vaccination against Galghontu disease to animals, which will protect them in rainy season from this disease.

CENTRAL INDIA [M.P., CHHATTISGARH]



Land preparation

Green gram

Okra

Sugarcane

- **Realised Rainfall:** Rainfall occurred in Katni and Umaria districts of East Madhya Pradesh. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/ thundershowers likely at most/many places over Chhattisgarh from 17th to 19th; at many places over east Madhya Pradesh on 18th and 19th and over West Madhya Pradesh on 20th June, along with heavy to very heavy/heavy rain very likely at isolated places over Chhattisgarh from 17th to 19th and heavy rain very likely at isolated places over East Madhya Pradesh on 18th and 19th June, it is advised to postpone irrigation, inter-cultural operations and application of plant protection measures and fertilizers to the standing crops.

▪ **Madhya Pradesh:**

- In Betul and Chhindwara districts, continue land preparation for sowing of maize, soybean, red gram and cotton with expected rainfall.
- In West Madhya Pradesh, continue nursery preparation for *kharif* vegetables. Continue harvesting of matured moong and urad.
- In East Madhya Pradesh, continue harvesting of matured moong and urad. Continue land preparation for sowing of *kharif* crops.
- In Narsingpur and Hoshangabad districts, undertake land preparation for rice nursery and for sowing of *kharif* crops like, red gram, maize, soybean, sesame, groundnut etc.
- In Bhopal, Vidisha, Raisen, Sehore, Sagar and Damoh districts, continue nursery preparation of rice and harvesting of matured moong and urad. Continue land preparation for sowing of red gram and soybean.
- In Chhatarpur, Tikamgarh and Datia districts, continue seed bed preparation for sowing of *kharif* onion. Continue nursery preparation for rice with irrigation facility. Undertake planting of ginger.
- In Jhabua, Alirajpur and Dhar districts, continue planting of turmeric and ginger and harvesting of matured moong. Continue land preparation for rice nursery. Continue nursery preparation for *kharif* onion and cauliflower.
- In Bundelkhand Zone, due to humid weather, there are chances of attack of fruit borer in brinjal and tomato, spray Malathion 50 E.C. @ 1ml/litre of water after current spells of rain.
- In Jhabua Hill Zone due to humid weather there may be chances of attack of shoot and fruit borer in vegetables,

- spray Triazophos @ 2ml/litre of water after current spells of rain.
- Suitable varieties for sowing are given in Annexure III.
- **Chhattisgarh:**
- In North Chhattisgarh, continue nursery preparation for sowing of long duration varieties of rice. Continue land preparation for sowing of *kharif* vegetables with expected rainfall.
- In Central Chhattisgarh, continue line sowing of rice.
- ❖ **Animal Husbandry**
- In Madhya Pradesh, provide adequate water and green fodder to animals. Vaccinate the cattle for control of FMD and HS disease.

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



Land preparation

Sugarcane

Maize

Okra

- **Realised Rainfall:** Rainfall occurred in Bilaspur, Hamirpur, Una, Solan districts of Himachal Pradesh; Ramban district of Jammu & Kashmir; Bageshwar, Pithorgarh and Nainital districts of Uttarakhand; Basti, Kheri, Sant Kabirnagar, Shrawasti districts of East Uttar Pradesh; Faridabad, Hissar, Rewari, districts of Haryana; Ropar and Sangrur districts of Punjab; Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/snow likely at most/many places over Uttarakhand during the period and rain/thundershowers likely at many places over east Uttar Pradesh and Himachal Pradesh on 20th & 21st June, along with heavy rain very likely at isolated places over Uttarakhand from 19th to 21st, over Himachal Pradesh and East Uttar Pradesh on 20th and 21st June, it is advised to postpone irrigation, intercultural operations and application of plant protection measures and fertilizers to the standing crops.
 - As thunderstorm accompanied with squall very likely at isolated places over Punjab, Haryana, Chandigarh, Delhi and West Uttar Pradesh on 20th and over East Rajasthan on 20th and 21st June, it is advised to provide support to young fruit plants, staking in vegetables and propping in sugarcane to prevent the crops from lodging due to strong winds. Keep already harvested produce at safer places.
 - **Jammu & Kashmir:**
 - In Jammu, Kathua and Raisi districts, complete nursery raising for early transplanted rice. Undertake land preparation for transplanting of the seedlings in the main field. Continue sowing of maize.
 - In Rajouri, Poonch and Udhampur districts, continue nursery sowing of paddy for timely transplanting of seedlings. Undertake land preparation for transplanting of the seedlings in the field. Transplant paddy seedlings at 4-6 leaf stage. Undertake land preparation for sowing of maize and undertake sowing after receipt of the rain.
 - In Srinagar, Badgam, Kupwara and Baramulla districts in Valley Temperate Zone, continue transplanting of paddy in the main fields. Undertake sowing of pole type beans.
 - In Cold Arid Zone of Jammu and Kashmir, continue transplanting of onion in the main field in middle belts. Undertake transplanting of rare vegetables like celery, parsley and leek in the main field. Undertake transplanting of tomato, capsicum and chilli in the lower belts of the district under open field and preferably under open protected structures in the middle belts. Undertake direct sowing of cucurbits under greenhouses and trenches and radish, carrot, beet root, coriander and fenugreek. Give irrigation at 4 to 6 days intervals as per moisture conditions of the soil.
 - In Jammu, Kathua and Raisi districts in Sub tropical Zone, there may be attack of fruit borer to tomato crop at flowering and fruiting stage, to control install pheromone traps @ 2/kanal along with spray of neem oil@3ml/litre during clear weather.
 - **Uttarakhand:**
 - In Nainital district of Bhabar and Tarai Zone, undertake transplanting of irrigated rice and sowing of urad and green gram. Undertake nursery sowing of short duration varieties of cabbage, cauliflower, knol-Khol and broccoli during this month.
 - In Udhampur district of Bhabar and Tarai Zone, raise the nursery for early maturing dwarfs variety of paddy upto 20th June. Undertake sowing of ground nut in the second fortnight of June. Undertake sowing of rainy season Okra and prepare the nursery for rainy season crop of chilli.
 - In Dehradun, Pauri and Haridwar districts of Uttarakhand, undertake nursery raising of long duration varieties of rice.

- In Hill Zone, continue nursery raising of paddy after proper seed treatment. Undertake transplanting of irrigated paddy, if nursery plants have two three leaves. Complete transplanting of tomato, capsicum, chilli and brinjal and land preparation for nursery sowing of cauliflower, cabbage, knol-khol, broccoli. Undertake sowing of raddish and cabbage.
- In Udham Singh Nagar district of Bhabar and Tarai Zone, prevailing weather is favourable for occurrence of black bug in Sugarcane, if noticed, spray Chlorpyrifos 20 EC @ 750 ml/ha or Quinalphos 25 EC 2 litre/ha in 500-800 liters of water after current spells of rain.
- **Himachal Pradesh:**
- In Una, Hamirpur, Kangra and Chamba districts, continue nursery sowing of rice and sowing of maize and baby corn. Undertake sowing of *kharif* pulses. Continue sowing of cluster bean, daincha, senai, lobia for green manuring.. In high hilly regions, continue harvesting of matured onion and garlic, Complete sowing of French bean. In mid hill areas continue transplanting of tomato, brinjal, chilli and capsicum. Continue sowing of cucurbits such as cucumber, bitter gourd, bottle gourd and summer squash, ageti okra, French bean and radish..Continue planting of ginger, turmeric.
- In Solan, Shimla and Sirmaur districts, complete sowing of bhindi, cucurbits, French bean, moong and mash and nursery raising and transplanting of tomato, chilli, capsicum and brinjal. Continue sowing of fodder crops like maize, cowpea and soybean.
- In Kinnaur and Lahaul Spiti, continue sowing of potato. Prepare the basin in apple orchards. Continue nursery sowing of vegetables. Continue sowing of peas after seed treatment with Bavistin 2.5g/kg of seed carefully to avoid yellowing of the plants which occur at lower stage.
- In Una, Hamirpur, Kangra and Chamba districts, weather is conducive for attack of shoot and fruit borer in brinjal and tomato crops, for control spray Spinosad 48 EC @ 1 ml per 4 litres of water after current spells of rain.
- In Sub-Montane and Low Hills Sub-Tropical Zone, weather is conducive for attack of red pumpkin beetle in cucurbitaceous crops, for control spray Dichlorvos 76 EC (DDVP) @ 1 ml per litre of water after current spells of rain.
- In Mild Hills Sub-Humid Zone of Himachal Pradesh, weather is conducive for attack of alternaria leaf spot in apple, for control spray Hexaconazole (contaf) in 200 litres of water after current spells of rain.
- In Mid Hills Sub-Humid Zone, weather is conducive for attack of leaf spot in strawberry, for control, spray Hexaconazole or Carbendazim @ 100 g in 200 litres of water after current spells of rain.
- **Rajasthan:**
- In Dungarpur and Banswara districts, apply irrigation in ziad moong, fodder crops and vegetable as per requirement. Undertake sowing of cotton in irrigated areas.
- In East Rajasthan, apply irrigation in vegetables. Undertake nursery sowing of brinjal, tomato, rainy onion, cauliflower and chilli. In Flood Prone Eastern Plain Zone, undertake land preparation for sowing of *kharif* crops. Undertake picking of matured pods in moong crop.
- In Jaipur, Ajmer, Tonk and Dausa districts, continue land preparation for sowing of irrigated groundnut and land preparation for sowing of peal millet, sorghum, maize & cluster bean etc. Undertake nursery preparation of *kharif* onion.
- In Jaisalmer and Bikaner districts of Arid Western Plain Zone, undertake land preparation for sowing of bajra, groundnut, American cotton, jeera, bhindi and green fodder crops. Apply irrigation in cucurbits, tomato, chilli, brinjal, fruit plants and fodder crops as per requirement.
- In Sriganganagar and Hanumangarh in Irrigated North Western Plain Zone, continue sowing of groundnut, cotton and nursery sowing of rice under irrigation. Undertake sowing of guar.
- In Flood Prone Eastern Plain Zone, due to rise in temperature, there may be chances of attack of fruit fly in cucurbits, for control spray Malathion 50 EC @ 15 ml per 10 litres of water at 15 days interval.
- In Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of leaf curl & mosaic virus in chilli at flowering stage, for control uproot & burn affected plants and spray Dimethoate 30 EC @ 1 ml per litre water.
- In Semi-Arid Eastern Plain Zone, prevailing weather condition is congenial for attack of blight in tomato, for control spray Mencozeb @ 2 g or Copper Oxychloride @ 3 g per litre water.
- In Irrigated North Western Plain Zone, prevailing weather condition is congenial for attack of sap sucking pest in kinnow fruits, for control spray Methyl Demeton @ 25 ml per litre of water.
- **Punjab, Haryana and Delhi:**
- In Punjab, undertake nursery sowing of rice and in Ferozepur and Faridkot districts complete sowing of cotton. Continue sowing of okra, maize and planting of sugarcane. Continue transplanting of chilli and cucurbits on the ridges.
- In Moga, Bhatinda and Mansa districts, continue transplanting of chilli, tomato, bell pepper. Continue sowing of cucurbits, round gourd, sponge gourd, okra, and cluster bean. Complete sowing of cotton.
- In Western Zone of Haryana, continue sowing of green gram and black gram. Complete the direct sowing with certified seeds of leafy vegetables, bottle gourd, cucumber, ridge gourd summer radish. Undertake intercultural operations and apply irrigation as per the requirement in vegetables crops. Complete the sowing of cotton. Continue transplanting of young seedlings of brinjal and chilli. Irrigation should be done after transplantation. Undertake sowing of arhar and complete the sowing of fodder crops such as bajra, guar, lobia, sudan and napiargrass. As per

- requirement of crops apply light irrigation in vegetable, fruits and horticultural crops.
- In Eastern zone of Haryana, continue sowing of fodder crops such as guwar, maize, bajra, cluster bean.
 - In Western Semi-Arid Zone of Delhi, continue field preparation for sowing of pigeon pea and continue sowing of cotton, green gram and black gram. Undertake nursery sowing of rice, sowing of okra, French bean, cluster bean, baby corn and fodder crops such as sorghum, bajra, cluster bean and maize. Continue harvesting of mature vegetables at morning and evening hours. Undertake nursery preparation of early cauliflower, tomato, chilli and brinjal.
 - In Western Plain Zone of Punjab, due to prevailing weather condition, there may be chances of attack of red pumpkin beetle in cucurbits, for control spray Sevin/Hexavin 50 WP, 75 to 150 g per acre in 50 to 100 litres of water. Also there may be powdery mildew in cucurbit, spray Karathane 50-80 ml/acre at the appearance of powdery patches on the leaves and avoid sprays of sulphur or copper based fungicide on cucurbits.
 - In Undulating Plain Zone of Punjab, due to prevailing weather condition, there may be chances of attack fruit and shoot borer in brinjal, spray Sumicidin 20EC 100ml or Ripcord 10EC 200 ml or Ekalux 25EC 800ml in 100-125 litres of water per acre.
 - **Uttar Pradesh:**
 - In Central parts of Uttar Pradesh, continue nursery sowing of paddy in irrigated area and land preparation for nursery sowing of paddy. Continue sowing of jowar, bajra, maize, urad, mung, sesame, planting of sugarcane. Continue land preparation and sowing of cowpea, maize, garlic, turmeric, ginger and sunhemp, lobia and dhaincha for green manuring. Continue nursery sowing of brinjal and *kharif* onion and sowing of groundnut branching varieties and soybean with expected rainfall .
 - In Eastern parts of Uttar Pradesh, continue direct sowing of rice and sowing of maize and arhar in irrigated areas. Apply irrigation to paddy nursery, urad, mung, sunflower, vegetables, sugarcane as per requirement.
 - In Western Plain Zone, continue nursery sowing of paddy and sowing of pigeon pea. Continue sowing baby corn and summer fodder crops jowar, bajra, lobia, maize. Continue sowing of sunhemp and dhaincha, sanai, jwar, lobia, mung for green manuring. Continue transplanting of tomato, chilli and sowing of bhindi, cucurbits and sowing of sunflower, urad, mung, maize.
 - In Bundelkhand Zone, undertake land preparation for sowing of *kharif* crops. Apply irrigation in moong, bhindi, torai, cucurbits, cabbage, cauliflower, tomato, brinjal and chilli as per requirement.
 - In North Eastern plain Zone, due to prevailing weather condition, there may be chances of attack of blight and aphids in tomato, for control, spray mixture of Mencozeb 0.2% @ 400 g or Carbendazim 0.2% @ 400 g and 0.2% Monocrotophos @ 200 ml in 200 litres of water per acre after current spells of rain.
 - Suitable varieties for sowing are given in Annexure III.
 - ❖ **Horticulture:**
 - In Semi-Arid Eastern Plain Zone of Rajasthan, there may be chances of attack of bark eating caterpillar in Mango, Ber & Guava, for control spray Malathion 50 EC @ 1 ml In per litre of water.
 - In Irrigated North Western Plain Zone of Rajasthan, there may be fruit drops in kinnow fruits, for control spray mixture of Propineb 70 WP @ 2 g and Gibbrellic acid @ 20 mg in 1 litre of water.
 - In Flood Prone Eastern Plain Zone of Uttar Pradesh, continue pruning operation in ber crop.
 - In Central Plain Zone of Uttar Pradesh, continue plantation of banana.
 - In North Eastern Plain Zone of Uttar Pradesh, due to prevailing weather condition, there may be chances of attack of mango hopper and mealy bug in mango trees for control spray mixture of 0.2 % Emidacloprid @ 400 ml and 0.2 % Carbendazim @ 400 g per 200 litres of water per 20 plants on a non rainy day.
 - In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1 ml per litre of water after current spells of rain and repeat at 15 days of interval.
 - ❖ **Animal Husbandry**
 - In Valley Temperate Zone of Jammu and Kashmir, farmers are advised to vaccinate sheeps and goats against Enterotoxaemia (ETV vaccine 2ml/sub cut) and FMD (FMD vaccine 1ml/Intra muscular).
 - In sub tropical Zone of Jammu Kashmir, provide clean water for drinking to the animals at frequent intervals to save animals from heat stroke. Keep all the animals under shade and if possible provide coolers to cross breed cattle during the day time If not vaccinated yet, get the animals vaccinated against foot and mouth and Gal Gotu diseases.
 - In Bhabar and Tarai Zone of Uttarakhand farmers are advised to give vaccination for Black Quarter and H S fever in animals. Before the vaccination, deworming should be given to the animals.
 - ❖ **Floriculture**
 - In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, Complete pinching and staking in carnation. Undertake transplanting of marigold seedling in fields for summer crop and earthing up operation in gladiolus and disbudding in carnation.
 - In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, weather is conducive for attack of fruit borer in litchi, for control spray Cypermethrin 10 EC @ 1ml per litres of water after current spells of rain after 15 days of intervals.
 - In Sub-Montane and Low Hills Sub-Tropical Zone of Himachal Pradesh, weather is conducive for attack of Thrips in marigolds, for control spray Malathion @ 1ml per litres of water after current spells of rain.
 - In Intermediate Zone of Jammu and Kashmir, complete transplanting of summer flowering seasonal.

- In Sub Tropical Zone of Jammu and Kashmir, complete sowing of seeds for raising nursery of rainy annuals after receipt of sufficient rain.
- In Valley Temperate Zone of Jammu & Kashmir, complete planting of liliun, gladiolus and dahlia. Complete sowing of seeds for summer annuals nursery at the earliest.
- ❖ **Agroforestry:**
- Undertake Nursery sowing of medicinal plants viz. aswagandha, tulsi, digitalis, jangli bhindi and agarkara.
- ❖ **Apiculture:**
- In Himachal To control mites attack on honeybees, dust sulphur on sealed brood in the colony and not on larvae. Also insert empty frame /combs for egg laying to the queen as the population starts builds up. Keep the colonies in shady places and sprinkle water if possible to reduce the heat as temperature rising high in the region.
- In Sub Tropical and intermediate Zone of Jammu and Kashmir, to protect the bee colonies from high temperature shift it to shady areas or migrate to cooler places or cover with wet gunny bags. Check the colonies for mite infestation and brood to avoid the mortality of honey bees.

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

Annexure I

Week by week Rainfall Distribution

Sub-Divisions	01.06.16		08.06.16		15.06.16	
	Actual (mm)	% dep.	Actual (mm)	% dep.	Actual (mm)	% dep.
Arunachal Pradesh						
Anjaw	**	**	**	**	**	**
Changlang	18.4	-77	36.1	-65	71.5	-47
Dibang Valley	**	**	**	**	**	**
East Kameng	20.5	-50	23.4	-63	30.5	-64
East Siang	52.4	-45	5.7	-95	91.3	-49
Kurung Kumey	**	**	**	**	**	**
Lohit	13.0	-82	32.1	-55	83.1	-21
Lower Dibang Valley	28.2	-73	10.8	-80	139.0	57
Lower Subansari	**	**	**	**	**	**
Papumpare	109.3	-34	29.3	-81	156.4	25
Tawang	18.0	-84	14.0	-89	94.0	-41
Tirap	38.6	-63	68.0	-39	79.8	-39
Upper Siang	84.4	-35	124.4	-27	161.0	-19
Upper Subansari	3.0	-83	132.4	185	73.0	69
West Kameng	58.6	-47	17.8	-86	190.0	20
West Siang	17.1	-77	40.0	-22	87.8	-33
Assam&Meghalaya						
Assam						
Baksa	129.2	6	57.0	-65	57.3	-66
Barpeta	81.8	-33	45.4	-72	86.7	-49
Bongaigaon	140.6	20	92.2	-36	34.8	-78
Cachar	42.4	-59	82.7	-33	63.0	-48
Chirang	247.0	110	62.6	-57	262.2	66
Darrang	0.0	-100	**	**	**	**
Dhemaji	**	**	0.0	-100	**	**
Dhubri	118.3	4	48.3	-67	173.2	30
Dibrugarh	38.0	-50	15.8	-79	75.6	-16
Goalpara	52.7	-56	30.7	-76	59.6	-51

Golaghat	33.8	-40	20.5	-55	50.6	-19
Hailakandi	59.8	-49	100.1	-16	111.0	1
Jorhat	77.4	27	51.6	0	58.7	-26
Kamrup(Rural)	42.6	-49	22.0	-71	127.3	50
Kamrup(Metro)	98.3	18	34.6	-54	39.3	-54
Karbi Anglong	10.0	-70	14.2	-66	7.1	-86
Karimganj	71.5	-55	117.1	-5	47.1	-74
Kokrajhar	159.8	0	73.5	-56	141.6	-26
Lakhimpur	57.8	-33	32.0	-73	166.1	51
Morigaon	85.2	11	25.0	-51	153.4	155
N.C.Hills	58.6	-31	51.0	-39	52.8	-44
Nagaon	40.2	-11	13.3	-77	30.5	-53
Nalbari	93.4	6	33.8	-71	62.5	-57
Sonitpur	98.0	29	13.5	-83	66.3	-24
Sibsagar	38.0	-41	13.9	-69	59.7	-5
Tinsukia	17.7	-70	9.4	-87	66.9	-27
Udalgiri	39.8	-52	13.2	-83	41.2	-61
Meghalaya						
East Garo Hills	184.2	111	41.2	-62	49.8	-63
East Khasi Hills	52.5	-75	57.6	-80	191.3	-47
Jaintia Hills	0.0	-100	5.0	-98	1.0	-99
Ribhoi	32.8	-58	65.1	31	64.8	-7
South Garo Hills	7.0	-91	0.0	-100	29.0	-74
West Garo Hills	50.0	-39	23.8	-80	121.4	10
West Khasi Hills	1.0	-99	**	**	**	**
NMMT						
Mizoram						
Aizwal	46.4	-53	125.0	22	84.6	-28
Champhai	**	**	**	**	**	**
Kolasib	**	**	**	**	**	**
Lawngtlai	**	**	**	**	**	**
Lunglei	**	**	**	**	**	**
Mamit	**	**	**	**	**	**
Saiha	79.0	14	176.0	117	192.0	120
Serchhip	**	**	**	**	20.7	-78
Manipur						
Bishnupur	**	**	**	**	**	**
Chandel	38.0	-47	15.0	-87	12.0	-92
Churachandpur	**	**	**	**	**	**
Imphal east	4.6	-92	7.4	-90	59.1	-46
Imphal west	32.8	1	58.3	-9	231.4	155
Senapati	**	**	**	**	**	**
Tamenglong	0.0	-100	**	**	**	**
Thoubal	21.0	-30	18.0	-80	18.0	-85
Ukhrul	1.0	-98	0.0	-100	**	**
Nagaland						
Dimapur	34.3	7	10.0	-81	29.7	-57
Kephire	**	**	**	**	**	**
Kohima	12.4	-71	23.8	-62	39.7	-53

Longleng	**	**	**	**	**	**
Mokokchung	**	**	**	**	**	**
Mon	**	**	**	**	**	**
Paren	**	**	**	**	**	**
Phek	17.0	-60	35.0	-44	78.0	-7
Tuensang	**	**	**	**	**	**
Wokha	5.0	-95	4.0	-93	0.0	-100
Zunheboto	0.0	-100	**	**	**	**
Tripura						
Dhalai	126.6	16	66.6	-45	1.0	-99
NorthTripura	226.4	87	58.1	-52	76.7	-41
SouthTripura	94.5	12	33.4	-64	98.9	-22
West Tripura	78.9	-11	51.3	-50	41.5	-63
Himachal Pradesh						
Bilaspur	4.8	-32	40.0	228	57.5	143
Chamba	18.4	148	17.2	70	16.6	-42
Hamirpur	5.5	-28	16.9	18	45.2	91
Kangra	11.8	31	10.8	-18	22.2	-17
Kinnaur	2.3	-77	0.1	-98	0.4	-97
Kullu	3.7	-63	5.7	-49	10.1	-49
Lahaul and Spiti	3.7	-74	2.3	-78	2.2	-84
Mandi	25.2	68	39.2	108	20.9	-33
Shimla	12.4	3	21.3	30	20.9	-7
Sirmaur	12.9	81	36.4	180	22.5	-5
Solan	10.3	19	51.4	194	103.2	309
Una	6.2	21	12.1	27	45.4	254
Punjab						
Amritsar	16.2	669	0.0	-100	9.5	-12
Barnala	36.0	1340	0.0	-100	18.0	131
Bhatinda	24.8	1207	0.0	-100	11.2	36
Faridkot	27.8	1221	0.0	-100	10.2	48
Fatehgarh Saheb	2.0	-9	2.0	-55	4.7	-48
Ferozpur	0.5	-68	0.0	-100	1.0	-81
Gurdaspur	3.0	-29	0.7	-88	8.9	-8
Hoshiarpur	3.3	3	1.2	-83	10.4	-37
Jalandhar	9.0	350	0.0	-100	6.1	-35
Kapurthala	7.5	317	0.3	-94	16.0	111
Ludhiana	4.4	143	0.8	-86	4.9	-48
Mansa	14.8	771	0.0	-100	12.0	74
Moga	4.7	292	0.0	-100	6.6	6
Muktesar	22.0	1367	0.0	-100	0.0	-100
Nawashahar	4.8	332	1.8	-64	18.6	-15
Patiala	7.9	243	4.4	-22	3.3	-67
Ropar	9.5	252	15.0	159	46.8	246
Sangrur	16.8	393	0.0	-100	41.3	262
Mohali	14.1	834	15.0	400	3.0	-80
TarnTaran	0.0	-100	0.0	-100	0.0	-100
Haryana,Chd,Delhi						
Haryana						

Ambala	14.1	313	17.4	19	6.5	-65
Bhiwani	14.5	560	0.3	-94	13.0	41
Chandigarh	21.9	164	2.8	-76	20.8	-8
Faridabad	17.5	695	0.0	-100	33.6	860
Fatehabad	6.3	76	0.0	-100	4.7	-26
Gurgaon	13.6	312	0.0	-100	9.8	96
Hissar	13.6	384	0.2	-96	47.4	559
Jhajar	10.1	287	0.0	-100	28.0	306
Jind	37.0	1221	0.0	-100	6.1	-37
Katihah	7.3	169	0.0	-100	6.0	-35
Karnal	14.3	521	0.2	-97	5.2	-48
Kurukshetra	3.0	-6	2.3	-64	2.8	-82
Mahendragarh	19.6	377	0.0	-100	23.1	146
Mewat	7.6	404	3.8	36	5.4	10
Palwal	0.5	-64	0.0	-100	1.8	-64
Panchkkula	5.3	9	3.3	-74	9.8	-42
Panipat	12.4	518	0.0	-100	8.2	8
Rewari	23.6	638	0.0	-100	31.5	443
Rohtak	14.8	236	0.0	-100	10.5	9
Sirsa	0.3	-90	3.0	11	4.0	-35
Sonepat	9.3	246	0.0	-100	8.6	-9
Yamunanagar	27.7	738	15.9	1	24.3	18
Delhi						
Central Delhi	8.0	167	0.0	-100	6.0	-44
East Delhi	4.0	33	0.0	-100	1.0	-91
New Delhi	8.3	178	0.0	-100	1.6	-85
North Delhi	10.5	250	0.0	-100	14.9	38
North East Delhi	8.0	167	1.0	-78	5.0	-54
North West Delhi	6.0	100	0.5	-89	26.7	147
South Delhi	26.9	795	0.0	-100	7.1	-35
South West Delhi	20.5	583	2.0	-56	17.1	58
West Delhi	0.0	-100	**	**	12.0	11
Jammu & Kashmir						
Anantnag	6.7	-58	6.8	-49	12.7	-34
Badgam	5.9	-39	13.8	97	2.6	-80
Bandipore	**	**	**	**	**	**
Baramula	8.8	-53	0.1	-99	12.6	-45
Doda	6.6	-53	8.9	7	1.4	-93
Ganderbal	6.7	-36	2.8	-67	8.3	-31
Jammu	0.8	-83	0.0	-100	25.5	124
Kargil	**	**	**	**	**	**
Kathua	2.3	28	1.9	-68	26.6	186
Kistwar	**	**	**	**	**	**
Kulgam	10.7	-1	0.0	-100	3.4	-82
Kupwara	0.7	-96	3.1	-76	1.0	-93
Ladakh(Leh)	0.1	-86	0.0	-100	1.8	200
Poonch	**	**	**	**	**	**
Pulwama	3.7	-21	3.2	-56	1.6	-88
Rajouri	0.0	-100	6.2	-23	23.2	121

Ramban	8.1	-18	0.9	-90	35.6	77
Reasi	41.4	475	0.0	-100	14.4	-18
Samba	2.4	-47	0.0	-100	8.1	-29
Shopian	**	**	**	**	**	**
Srinagar	3.6	-65	15.6	81	0.0	-100
Udhampur	20.2	211	0.0	-100	10.5	-40
East Madhya Pradesh						
Anuppur	1.0	-81	0.0	-100	15.4	-49
Balaghat	1.5	-42	3.7	-71	4.7	-80
Chhatarpur	11.4	373	0.1	-99	8.2	-13
Chindwara	0.0	-100	4.2	-74	14.6	-44
Damoh	23.0	597	0.0	-100	0.5	-96
Dindori	7.0	233	1.6	-87	0.0	-100
Jabalpur	50.2	1014	0.5	-96	1.6	-90
Katni	11.3	129	0.6	-94	54.0	306
Mandla	1.4	-55	16.0	40	6.0	-71
Narsingpur	3.6	-27	0.0	-100	1.8	-89
Panna	4.3	105	0.0	-100	2.7	-69
Rewa	1.3	-16	0.0	-100	2.0	-83
Sagar	17.0	270	0.0	-100	4.3	-74
Satna	1.1	-19	3.4	-49	0.0	-100
Seoni	4.5	2	1.1	-89	2.1	-92
Shahdol	6.0	186	1.0	-90	14.0	20
Sidhi	7.8	179	9.6	-47	1.0	-94
Singrauli	2.0	233	2.0	-61	9.2	-50
Tikamgarh	21.5	594	0.0	-100	13.5	44
Umaria	25.6	814	4.8	-63	38.2	134
West Madhya Pradesh						
Agar	**	**	0.0	-100	0.0	-100
Alirajpur	0.0	-100	0.0	-100	0.0	-100
Asoknagar	0.0	-100	0.0	-100	0.0	-100
Badwani	0.0	-100	0.0	-100	0.0	-100
Betul	0.0	-100	15.8	48	0.0	-100
Bhind	15.3	989	0.8	-85	1.8	-66
Bhopal	0.0	-100	21.1	109	0.0	-100
Burhanpur	0.0	-100	0.0	-100	0.0	-100
Datia	35.1	3804	0.0	-100	0.0	-100
Dewas	0.0	-100	1.3	-90	5.7	-73
Dhar	0.0	-100	0.0	-100	0.0	-100
Guna	4.2	-29	0.0	-100	1.8	-85
Gwalior	26.2	870	0.0	-100	4.0	-61
Harda	0.0	-100	0.0	-100	0.0	-100
Hosangabad	0.0	-100	10.9	-4	5.5	-71
Indore	0.0	-100	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	0.0	-100	1.4	-90	0.0	-100
Mandsaur	0.0	-100	0.0	-100	0.0	-100

Morena	10.6	382	0.0	-100	20.5	205
Neemuch	0.0	-100	0.0	-100	0.0	-100
Raisen	0.0	-100	0.0	-100	6.8	-64
Rajgarh	0.0	-100	0.0	-100	0.0	-100
Ratlam	0.0	-100	0.0	-100	0.0	-100
Sehore	0.0	-100	6.8	-44	0.0	-100
Shajapur	0.0	-100	0.0	-100	0.5	-97
Sheopur Kalani	18.0	445	0.0	-100	26.2	232
Shivpuri	8.3	143	0.0	-100	5.8	-33
Ujjain	0.0	-100	0.0	-100	0.0	-100
Vidisha	0.0	-100	0.0	-100	1.8	-88
Chhattisgarh						
Bastar	1.6	-83	31.5	51	26.5	-18
Bijapur	0.0	-100	60.8	508	0.0	-100
Bilaspur	17.7	269	0.6	-95	24.4	-9
Dantewara	0.0	-100	61.3	323	21.8	-28
Dhamtari	0.0	-100	14.0	63	20.4	-22
Durg	1.1	-62	13.9	-9	7.4	-74
Janjgir	1.3	-52	0.0	-100	0.1	-99
Jashpurnagar	0.0	-100	26.8	-17	13.5	-70
Kanker	0.0	-100	2.3	-81	21.7	-11
Korba	8.7	200	14.0	30	6.5	-80
Koriya	**	**	0.0	-100	3.1	-85
Kawardha	0.0	-100	2.4	-74	2.0	-91
Mahasumund	1.2	-56	2.7	-85	18.1	-33
Narayanpur	0.0	-100	55.4	204	28.0	-4
Raigarh	0.0	-100	6.9	-55	0.1	-99
Raipur	6.7	60	7.1	-46	16.1	-47
Rajnandgaon	0.5	-89	1.6	-85	9.3	-60
Surguja	5.6	35	3.8	-78	1.0	-97
East Uttar Pradesh						
Allahabad	0.4	-75	0.0	-100	0.4	-97
Ambedkar Nagar	2.0	-60	0.0	-100	0.0	-100
Azamgarh	16.7	209	40.9	205	0.0	-100
Bahraich	55.2	406	10.4	-36	17.2	-30
Ballia	5.7	-12	4.5	-60	6.2	-73
Balrampur	19.2	25	3.4	-82	3.7	-77
Banda	4.7	96	9.1	-9	1.2	-85
Barabanki	13.9	246	6.3	-44	6.6	-72
Basti	26.3	324	28.4	39	32.3	102
Chandauli	0.0	-100	8.0	18	0.0	-100
Deoria	29.9	340	0.0	-100	5.5	-76
Faizabad	0.0	-100	23.1	53	19.9	21
Farrukhabad	4.7	26	0.0	-100	4.5	-37
Fatehpur	0.0	-100	1.4	-84	0.0	-100
Gazipur	0.5	-91	21.6	122	0.0	-100
Gonda	42.0	445	27.2	59	22.6	
Gorakhpur	55.8	597	10.2	-62	19.4	-27
Hardoi	11.1	147	3.1	-66	6.2	-37

Jaunpur	5.6	17	6.1	-49	0.3	-98
Kannauj	0.0	-100	0.0	-100	1.0	-80
Kanpur City	5.0	138	2.3	-63	0.5	-89
Kanpur Dehat	3.4	79	0.0	-100	0.3	-90
Kaushambi	0.0	-100	0.0	-100	0.0	-100
Kheri	28.6	281	16.1	12	30.0	34
Kushi nagar	47.5	260	44.5	67	11.0	-73
Lucknow	7.1	47	0.0	-100	7.5	-14
Maharajganj	51.5	485	6.3	-82	28.0	-30
Mau	6.5	23	13.5	-2	0.0	-100
Mirzapur	1.0	-60	24.5	198	1.0	-92
Pratapgarh	4.7	41	2.7	-67	0.0	-100
RaiBareilly	7.4	290	1.6	-80	1.3	-84
Sahuji Maharajnagar	0.0	-100	0.0	-100	0.0	-100
Sant Kabirnmagar	63.0	1365	87.0	307	31.0	73
Sant Ravidas Nagar	0.0	-100	6.0	-12	0.0	-100
Shrawasti	**	**	49.0	201	43.6	78
Sidharthnagar	18.1	178	10.3	-48	14.8	-33
Sitapur	24.7	418	1.6	-86	11.0	-41
Sonbhadra	7.7	164	4.1	-60	3.4	-85
Sultanpur	21.4	262	7.3	-5	1.5	-88
Unnao	2.5	-24	0.5	-94	0.5	-94
Varanasi	4.5	53	16.0	116	0.0	-100
West Uttar Pradesh						
Agra	7.3	127	1.1	-74	8.0	47
Aligarh	15.9	342	0.0	-100	1.6	-71
Auraiya	4.0	-5	0.0	-100	2.1	-78
Badaun	21.4	355	0.0	-100	4.6	-34
Baghpat	9.0	543	0.0	-100	5.2	13
Bareilly	5.2	5	11.4	-19	10.0	-18
Bijnor	22.3	265	28.0	126	3.5	-77
Bulandsahar	6.8	144	0.0	-100	9.4	51
Etah	2.2	-47	0.0	-100	2.7	-44
Etawah	5.1	42	0.0	-100	0.3	-96
Firozabad	2.0	-44	0.0	-100	0.0	-100
GBNagar	3.0	173	0.0	-100	1.0	-63
Ghaziabad	0.0	-100	0.0	-100	0.8	-88
Hamirpur	7.7	107	0.0	-100	2.3	-46
Jalaun	6.0	101	2.4	-53	4.4	-21
Jhansi	9.1	192	0.0	-100	1.5	-80
Jotiba Phule Nagar	19.0	363	0.0	-100	0.0	-100
Kanshiramnagar	11.0	150	0.0	-100	0.0	-100
Lalitpur	9.0	246	0.0	-100	8.5	-23
Mahamaya Nagar	1.5	-44	0.0	-100	7.5	88
Mahoba	0.8	-67	0.0	-100	0.0	-100
Mainpuri	0.6	-78	0.0	-100	0.0	-100
Mathura	0.0	-100	0.0	-100	2.5	-36
Meerut	18.2	726	0.0	-100	0.9	-86

Moradabad	10.6	212	6.3	-57	11.1	8
Muzaffarnagar	15.4	492	0.5	-95	0.0	-100
Pilibhit	8.6	10	7.7	-63	1.7	-87
Rampur	17.6	232	9.2	-51	11.4	-36
Saharanpur	21.0	250	7.3	-43	0.0	-100
Shahjahanpur	12.6	120	0.0	-100	0.0	-100
Uttarakhand						
Almora	27.2	79	10.3	-51	11.0	-55
Bageshwar	77.5	410	25.8	22	37.3	54
Chamoli	26.9	119	16.9	6	22.0	14
Champawat	52.5	286	10.7	-65	19.7	-35
Dehradun	17.9	11	24.3	26	25.9	-12
Garhwal Pauri	30.8	135	7.3	-58	22.0	55
Garhwal Tehri	15.8	-8	4.0	-78	22.5	-12
Haridwar	17.7	190	44.0	267	15.1	-23
Nainital	60.0	200	19.5	-30	74.9	141
Pithorgarh	56.4	127	21.0	-48	42.3	-35
Rudraprayag	38.0	79	75.7	228	28.1	-32
Udham Sing Nagar	25.1	95	32.1	114	23.3	-12
Uttarkashi	24.9	-5	11.1	-42	21.7	-25
Bihar						
Araria	33.8	-7	17.3	-64	48.5	-11
Arwal	2.5	-37	0.0	-100	3.1	-83
Aurangabad	6.6	36	0.0	-100	0.2	-99
Banka	40.6	162	25.2	51	80.3	179
Begusarai	42.9	254	0.0	-100	12.2	-55
Bhabua	0.0	-100	0.0	-100	0.0	-100
Bhagalpur	52.7	168	0.0	-100	27.0	-23
Bhojpur	29.4	444	3.1	-69	9.1	-64
Buxar	**	**	3.8	-71	45.0	84
Darbhanga	28.0	49	15.5	-34	16.2	-42
East Champaran	75.4	416	21.5	-18	22.3	-27
Gaya	2.6	-54	0.0	-100	4.8	-83
Gopalganj	43.2	275	19.1	-6	23.1	-32
Jahanabad	5.3	-18	0.0	-100	11.8	-52
Jamui	2.0	-79	0.0	-100	9.6	-69
Kathihar	21.6	-30	0.0	-100	20.7	-50
Khagadia	57.2	415	0.0	-100	4.9	-87
Kishanganj	116.7	117	41.0	-17	74.6	-1
Lakhisarai	28.2	159	0.0	-100	17.8	-38
Madhepura	0.0	-100	29.4	-22	20.1	-55
Madhubani	30.0	45	42.8	38	31.8	-23
Monghyar	0.0	-100	0.0	-100	0.0	-100
Muzaffarpur	19.1	63	6.5	-75	9.6	-61
Nalanda	18.6	133	0.0	-100	27.9	27
Nawada	2.4	-78	0.0	-100	4.9	-73
Patna	37.0	387	0.5	-96	16.8	-39
Purnea	13.1	-66	2.1	-95	36.3	-31
Rohtas	3.6	24	0.0	-100	0.0	-100

Saharsha	0.0	-100	12.7	-70	14.2	-71
Samstipur	32.1	157	4.2	-75	17.3	-33
Saran	18.2	98	0.0	-100	0.0	-100
Sheikpura	15.3	37	0.0	-100	25.1	-5
Sheohar	0.0	-100	0.0	-100	0.0	-100
Sitamarhi	34.4	44	21.2	-34	35.5	-8
Siwan	64.4	570	4.4	-72	4.8	-83
Supaul	13.1	-32	18.7	-63	55.8	32
Vaishali	34.6	276	0.0	-100	10.7	-63
West Champaran	66.8	291	24.1	-20	52.8	22
Jharkhand						
Bokaro	21.3	142	4.8	-84	54.6	61
Chatra	4.2	-32	0.0	-100	3.2	-88
Deoghar	7.8	-55	1.1	-95	65.4	89
Dhanbad	9.0	-38	7.9	-70	44.0	7
Dumka	66.4	259	11.3	-58	141.8	275
East Singbhum	46.7	142	17.4	-46	25.4	-41
Garhwa	18.0	429	4.0	-65	0.0	-100
Giridih	12.8	17	18.5	-14	60.0	36
Godda	32.2	101	4.3	-81	19.9	-40
Gumla	17.9	47	1.1	-96	22.1	-55
Hazaribagh	23.7	216	9.7	-48	44.0	4
Jamtara	43.0	71	2.1	-91	130.5	216
Khunti	0.0	-100	**	**	**	**
Koderrna	22.0	45	1.6	-92	33.4	-7
Latehar	0.0	-100	0.0	-100	13.7	-59
Lohardagga	9.0	-32	21.0	58	12.9	-69
Pakur	45.1	58	1.7	-95	50.8	2
Palamau	4.1	13	0.5	-97	5.7	-80
Ramgarh	19.8	82	6.6	-68	34.0	-24
Ranchi	26.8	93	9.6	-59	8.2	-81
Sahebganj	18.6	-34	0.0	-100		
Saraikela	20.6	48	20.9	-15	15.0	-75
Simdega	17.3	144	0.0	-100	42.0	-9
West Singbhum	14.5	-3	13.2	-48	85.5	74
East Rajasthan						
Ajmer	0.0	-100	0.0	-100	1.9	-70
Alwar	15.3	350	6.2	34	11.4	70
Banswara	0.0	-100	0.0	-100	0.0	-100
Baran	0.0	-100	0.0	-100	0.0	-100
Bharatpur	6.8	143	11.0	233	17.8	264
Bhilwara	3.5	-39	0.0	-100	0.0	-100
Bundi	0.0	-100	0.0	-100	0.0	-100
Chittorgarh	0.0	-100	0.0	-100	0.0	-100
Dausa	8.8	83	1.0	-81	9.6	26
Dholpur	9.3	233	3.7	-27	0.7	-90
Dungarpur	0.0	-100	0.0	-100	0.0	-100
Jaipur	0.9	-83	0.6	-88	2.3	-73
Jhalawar	0.0	-100	0.0	-100	0.0	-100

Jhunjhunu	14.8	209	1.4	-81	18.1	65
Karauli	2.0	-43	0.4	-89	9.4	52
Kota	0.6	-86	0.0	-100	0.0	-100
Pratapgarh	0.0	-100	0.0	-100	0.0	-100
Rajsamand	0.0	-100	0.0	-100	0.0	-100
Sawai Madhopur	6.8	84	0.0	-100	16.3	83
Sikar	1.0	-79	0.3	-96	5.1	-43
Sirohi	0.0	-100	0.0	-100	0.0	-100
Tonk	0.3	-90	0.0	-100	0.0	-100
Udaipur	0.0	-100	0.0	-100	0.0	-100
West Rajasthan						
Barmer	0.0	-100	0.0	-100	0.0	-100
Bikaner	0.0	-100	0.0	-100	10.8	64
Churu	19.5	414	3.4	-39	16.9	134
Hanumangarh	0.6	-82	0.0	-100	28.0	278
Jaisalmer	0.0	-100	0.0	-100	0.7	-79
Jalore	0.0	-100	0.0	-100	0.0	-100
Jodhpur	0.0	-100	0.0	-100	0.0	-100
Nagaur	0.0	-100	0.0	-100	0.0	-100
Pali	0.0	-100	0.0	-100	0.0	-100
Sri Ganganagar	0.5	-81	0.2	-96	4.2	-17
Gujarat Region						
Ahmedabad	0.0	-100	0.0	-100	0.0	-100
Anand	0.0	-100	0.0	-100	0.0	-100
Banaskantha	0.0	-100	0.0	-100	0.0	-100
Baroda	0.0	-100	0.0	-100	0.0	-100
Broach	0.5	-90	0.0	-100	0.0	-100
DNH	**	**	**	**	**	**
Dahod	0.0	-100	0.0	-100	0.0	-100
Daman	0.0	-100	0.0	-100	0.0	-100
Dangs	0.0	-100	0.0	-100	0.0	-100
Gandhinagar	0.0	-100	0.0	-100	0.0	-100
Kheda	0.0	-100	0.0	-100	0.0	-100
Mehsana	0.0	-100	0.0	-100	0.0	-100
Narmada	0.0	-100	0.0	-100	0.0	-100
Navsari	0.0	-100	0.0	-100	0.0	-100
Panchmahal	0.0	-100	0.0	-100	0.0	-100
Patan	0.0	-100	0.0	-100	0.0	-100
Sabarkantha	0.0	-100	0.0	-100	0.0	-100
Surat	0.0	-100	0.0	-100	0.0	-100
Tapi	0.0	-100	0.2	-100	0.2	-100
Valsad	0.0	-100	0.0	-99	0.0	-98
S K & Diu region						
Amreli	0.0	-100	0.0	-100	0.0	-100
Bhavnagar	0.0	-100	0.0	-100	0.0	-100
Diu	0.0	-100	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	0.1	-98	0.0	-100	0.0	-100
Rajkot	0.0	-100	0.0	-100	0.0	-100
Surendranagar	0.0	-100	0.0	-100	0.0	-100
Maharashtra						
Konkan & Goa						
Mumbai City	1.3	-90	0.2	-99	14.5	-86
Mumbai Suburban	0.0	-100	0.0	-100	43.2	-59
North Goa	6.2	-86	98.9	-18	200.4	-10
Raigad	0.1	-99	19.4	-66	48.3	-58
Ratnagiri	0.5	-98	46.5	-46	145	-14
Sindhudurg	1.0	-97	88.2	-28	230.6	13
South Goa	2.0	-95	116.4	-2	328.5	56
Thane	0.3	-97	0.0	-100	5.8	-91
Madhya Maharashtra						
Ahmednagar	3.6	-59	27.6	18	5.8	-76
Dhule	0.0	-100	0.0	-100	0.0	-100
Jalgaon	0.0	-100	0.5	-97	0.0	-100
Kolhapur	0.9	-95	39.9	-9	51.7	-9
Nandurbar	0.0	-100	0.0	-100	0.0	-100
Nasik	0.0	-100	0.0	-100	0.3	-99
Pune	0.0	-100	28.3	-3	6.2	-78
Sangli	1.8	-89	54.1	70	38.6	70
Satara	2.8	-79	73.8	134	51.6	99
Solapur	4.5	-66	46.3	66	26.5	3
Marathwada						
Aurangabad	0.0	-100	6.2	-72	0.0	-100
Beed	1.9	-80	41.6	70	11.2	-67
Hingoli	0.0	-100	25.8	45	3.0	-91
Jalna	0.0	-100	24.8	42	10.7	-70
Latur	0.5	-95	35.1	56	45.0	46
Nanded	0.0	-100	32.6	64	26.3	-14
Osmanabad	8.1	-36	42.6	41	26.1	-22
Parbhani	0.4	-95	29.0	51	10.5	-68
Vidarbha						
Akola	0.0	-100	12.2	-7	2.4	-92
Amraoti	0.0	-100	10.9	-24	5.1	-79
Bhandara	4.9	48	0.6	-95	6.3	-77
Buldhana	2.1	-60	8.5	-38	2.5	-91
Chandrapur	0.5	-86	14.6	24	13.1	-48
Gadchiroli	0.0	-100	20.5	32	9.7	-67
Gondia	3.9	86	18.3	62	9.8	-60
Nagpur	0.3	-94	2.1	-85	16.7	-38
Wardha	0.0	-100	13.5	-20	6.3	-78
Washim	0.0	-100	14.8	12	12.9	-60
Yeotmal	0.0	-100	26.5	55	8.5	-71
Odisha						
Angul	21.5	39	27.5	-11	37.6	-14
Balasore	16.2	-59	18.9	-62	28.8	-50






Bargarh	9.2	73	11.8	-23	13.3	-67
Bhadrak	44.3	77	51.8	64	16.0	-71
Bolangir	4.6	-54	4.5	-74	13.3	-61
Boudh	10.4	-19	0.0	-100	15.7	-63
Cuttack	17.2	-20	30.0	-26	3.9	-90
Deogarh	2.8	-74	6.3	-68	31.9	-26
Dhenkanal	32.9	64	32.1	-3	13.0	-69
Gajapati	27.7	44	49.3	52	13.9	-78
Ganjam	10.8	-35	27.7	-4	25.6	-30
Jagatsingpur	5.5	-82	35.5	4	7.7	-87
Jajpur	17.2	-26	59.0	32	18.6	-67
Jharsuguda	6.9	-34	2.5	-87	24.2	-46
Kalahandi	2.0	-84	6.9	-75	24.1	-33
Kandhamal	1.2	-91	30.4	6	14.2	-67
Kendrapara	5.5	-79	53.2	34	6.0	-88
Keonjhar	34.5	22	16.3	-55	28.2	-53
Khurda	6.2	-60	48.0	81	6.2	-83
Koraput	6.7	-61	52.6	97	23.9	-34
Malkangiri	0.0	-100	133.4	820	14.0	-58
Mayurbhanj	29.7	12	45.6	4	25.6	-57
Nawapara	4.8	-83	8.2	-49	27.4	-20
Nawarangpur	21.1	19	39.8	34	57.0	6
Nayagarh	0.0	-100	29.9	6	4.5	-91
Puri	3.8	-78	32.3	21	17.8	-43
Rayagada	7.6	-62	49.2	146	27.1	-44
Sambalpur	12.6	20	4.4	-77	26.2	-40
Sonepur	7.8	12	0.3	-99	2.7	-92
Sundargarh	7.0	-50	4.9	-78	32.9	-29
West Bengal & Andaman Nicobar Islands						
A & N ISLAND						
Nicobar	80.8	-9	40.2	-45	53.1	-20
North & Middle Andaman	89.6	23	67.1	-54	45.6	-61
South Andaman	174.1	43	135.1	7	27.3	-76
GWB						
Bankura	42.9	91	4.2	-88	54.5	21
Birbhum	69.4	185	2.3	-93	106.6	134
Burdwan	31.0	35	15.7	-50	79.4	96
East Midnapore	14.2	-64	26.6	-44	76.0	70
Hooghly	29.1	2	24.7	-37	61.9	13
Howrah	19.2	-45	33.4	-21	40.5	-11
Kolkata	21.6	-40	43.4	-23	49.9	-19
Murshidabad	74.5	153	2.0	-95	68.0	13
Nadia	65.7	148	21.5	-42	38.1	-13
24 Pargana (N)	46.5	27	36.5	-32	88.3	57
Purulia	58.1	230	10.4	-71	49.9	12
24 Pargana (S)	15.0	-51	24.9	-52	62.4	-12
West Midnapore	18.3	-53	27.2	-28	47.9	-4
SHWB & Sikkim						

Cooch Behar	92.7	-17	74.8	-44	131.4	-10
Darjeeling	88.0	13	61.7	-22	256.5	102
East Sikkim	119.6	52	56.7	-32	98.2	-16
Jalpaiguri	116.5	-1	115.2	-4	275.5	78
Malda	29.0	-9	7.6	-78	27.9	-34
North Dinajpur	**	**	**	**	69.2	10
North Sikkim	81.1	-16	105.4	-2	72.7	-43
South Dinajpur	8.3	-84	0.0	-100	31.3	-53
South Sikkim	96.8	23	49.8	-40	128.5	10
West Sikkim	63.5	34	78.0	-27	67.0	-48
Karnataka						
Coastal Karnataka						
Dakshina Kannada	68.7	-9	70.2	-55	175.9	-19
Udupi	38.8	-52	143.1	-20	202.9	-16
Uttara Kannada	16.1	-65	94.3	-13	193.7	20
N I Karnataka						
Bagalkote	0.8	-96	39.1	63	29.8	63
Belagavi	3.2	-84	30.7	8	37.9	84
Bidar	1.6	-87	129.7	425	4.2	-87
Dharwad	4.4	-72	40.8	46	32.7	70
Gadag	0.0	-100	15.2	-43	34.6	95
Haveri	11.1	-48	56.9	98	49.2	193
Kalaburgi	2.9	-75	73.6	213	21.2	-17
Koppal	1.6	-91	55.3	181	41.5	115
Raichur	7.0	-50	40.6	146	23.8	17
Vijayapura	7.6	-35	42.8	57	9.9	-58
Yadgir	0.0	-100	26.2	32	14.9	-47
S I Karnataka						
Ballari	18.2	-4	66.6	223	8.6	-51
Bangalore Rural	15.8	-29	49.3	99	42.1	92
Bangalore Urban	15.3	-40	78.3	182	21.6	7
Chamarajanagar	41.3	73	28.9	39	4.2	-67
Chikaballapur	54.8	213	16.8	-15	57.2	190
Chikkamagaluru	28.6	6	26.2	-57	65.2	-2
Chitradurga	26.6	50	14.4	-16	30.7	167
Davangere	21.1	16	60.6	183	41.5	164
Hassan	25.9	20	28.6	15	35.5	60
Kodagu	16.2	-58	41.1	-51	119.0	21
Kolar	12.3	-37	49.6	133	42.4	103
Mandya	24.4	21	25.3	34	12.7	21
Mysuru	60.6	173	10.4	-55	16.2	0
Ramanagara	35.3	19	16.0	-40	21.4	12
Shivamogga	8.0	-62	58.7	11	90.8	50
Tumakuru	88.9	72	32.6	49	47.7	206
Kerala						
Alappuzha	102.9	15	176.7	12	161.3	9
Kannur	112.1	36	141.3	-10	119.7	-36
Ernakulam	146.0	53	178.6	8	205.1	23
Idukki	62.4	-5	115.6	-13	118.8	-15

Kasaragod	138.8	59	101.0	-48	161.5	-33
Kollam	61.6	-10	169.8	36	196.0	79
Kottayam	131.4	38	188.2	18	198.7	25
Kozhikode	193.6	103	369.3	89	174.7	-12
Malappuram	89.7	40	94.7	-28	179.5	25
Palakkad	59.8	47	75.2	-10	111.2	14
Pathanamthitta	87.3	8	122.8	-13	162.7	23
Thiruvananthapuram	19.6	-69	106.4	-1	181.9	113
Thrissur	109.6	26	189.5	19	147.4	-10
Wyand	19.1	-64	26.7	-76	78.0	-42
Tamil Nadu						
Ariyalur	6.4	-29	13.3	-10	0.0	-100
Chennai	0.0	-100	48.6	386	12.8	-36
Coimbatore	12.0	18	9.2	2	33.2	527
Cuddalore	4.4	-55	32.1	189	1.1	-93
Dharmapuri	15.0	-41	28.9	37	6.1	-53
Dindigul	26.9	82	25.8	79	1.0	-89
Erode	23.1	99	18.7	60	2.8	-56
Kanchipuram	1.6	-83	24.2	74	4.0	-82
Kanyakumari	7.5	-80	58.9	-6	129.6	217
Karikal	0.0	-100	17.9	-17	1.0	-94
Karur	15.7	51	2.0	-77	0.5	-90
Krishnagiri	29.3	44	39.7	80	8.7	-41
Madurai	10.0	-15	6.4	-49	0.3	-97
Nagapattinam	0.0	-100	38.1	249	0.8	-93
Namakkal	13.8	-22	5.2	-65	1.8	-86
Nilgiris	42.6	83	36.9	14	38.6	37
Perambalur	17.3	54	21.8	115	0.0	-100
Puducherry	48.4	612	0.4	-96	0.6	-97
Pudukottai	3.7	-64	19.0	67	0.4	-97
Ramanathapuram	2.8	-37	10.0	169	0.0	-100
Salem	48.2	120	13.2	-34	13.0	-18
Sivaganga	64.0	521	32.1	174	3.2	-72
Thanjavur	5.5	-51	28.0	157	1.8	-84
Theni	2.0	-75	7.4	2	11.0	198
Tirunelveli	1.5	-74	11.4	7	36.2	449
Tirupur	10.6	16	0.0	-100	4.4	-7
Tiruvallur	0.7	-92	42.7	231	13.5	-40
Tiruvannamalai	14.8	3	15.0	-4	5.9	-68
Tiruvarur	1.7	-75	18.1	108	3.2	-68
Toothukudi	3.9	9	0.1	-97	0.6	-50
Trichy	17.3	53	11.2	-8	0.9	-90
Vellore	13.6	-27	26.1	35	14.6	-24
Villupuram	13.8	71	4.7	-61	0.6	-95
Virudhunagar	18.9	97	2.9	-62	0.3	-95
Andhra Pradesh						
Coastal Andhra Pradesh						
East Godavari	3.4	-71	45.7	102	17.0	-22

Guntur	14.4	34	105.2	431	2.4	-88
Krishna	12.0	43	100.7	427	2.6	-89
Nellore	4.4	-39	29.2	159	1.6	-89
Prakasam	14.7	50	37.2	128	2.3	-86
Sirkakulam	7.9	-22	56.2	146	6.5	-79
Visakhapatnam	7.8	-51	59.2	154	5.5	-80
Vizianagram	15.7	0	44.7	67	10.9	-65
West Godavari	10.3	11	92.4	342	11.9	-53
Rayalaseema						
Anantapur	39.8	128	24.1	23	19.7	38
Chittoor	5.9	-55	38.9	104	24.4	16
Cuddapah	15.3	24	34.7	81	15.4	-22
Kurnool	40.2	172	52.3	174	9.2	-60
Telangana						
Adilabad	0.0	-100	43.7	133	20.8	-28
Hyderabad	6.8	-23	33.5	97	0.2	-99
Karimnagar	0.9	-82	50.7	145	8.5	-74
Khammam	13.4	25	61.4	213	19.0	-34
Mehabubnagar	9.6	32	49.0	137	10.2	-54
Medak	2.2	-74	41.6	86	3.4	-86
Nalgonda	6.8	-25	51.4	152	2.6	-89
Nizamabad	0.1	-99	41.2	68	23.3	-27
Rangareddy	2.4	-74	42.9	116	7.8	-66
Warangal	5.1	-22	59.5	196	14.9	-51

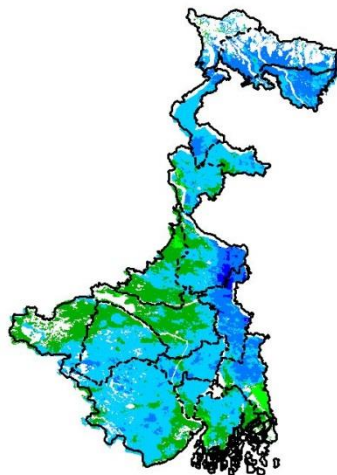
Legends

	(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

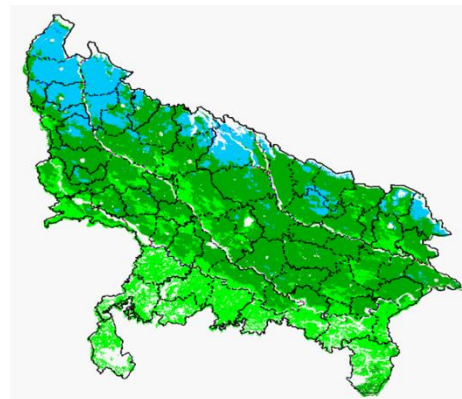
INSAT 3A CCD NDVI COMPOSITE MAPS FOR THE WEEK ENDING ON 15th June 2016 FOR DIFFERENT STATES

West Bengal



Agricultural vigour is good in West Bengal, whereas few

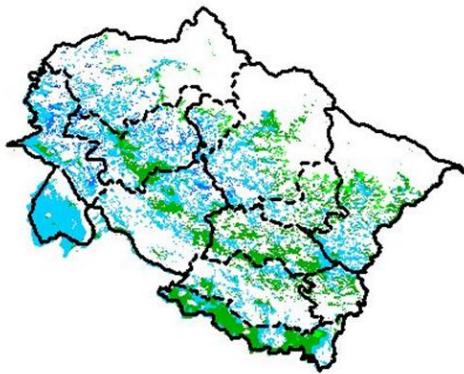
Uttar Pradesh



Agricultural vigour is moderate over entire state of Uttar Pradesh whereas, north western part shows few patches of good NDVI.

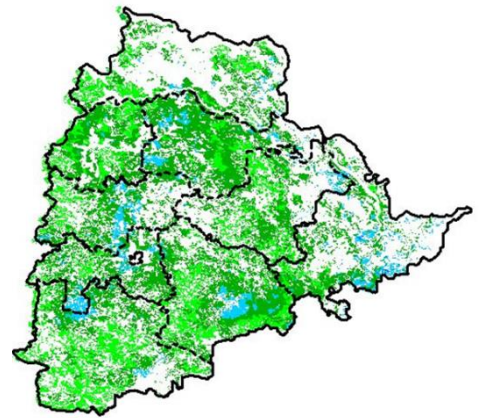
patches in western region of the state show moderate NDVI.

Uttarakhand



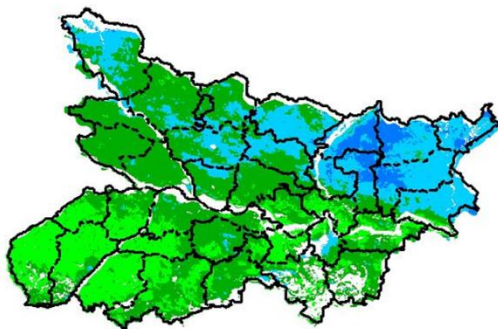
Agricultural vigour is moderate in eastern region whereas western region show good values of NDVI over state of Uttarakhand.

Telangana



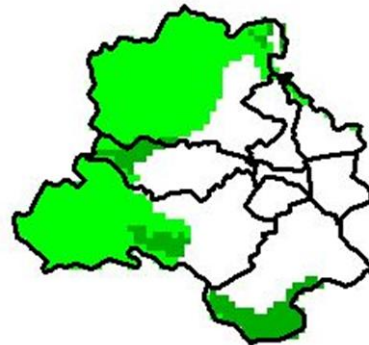
Agriculture vigour is moderate over entire state of Telangana.

Bihar



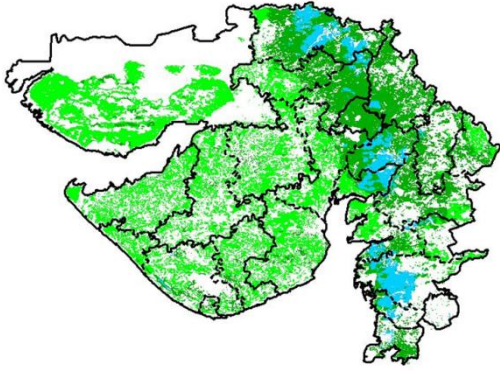
Agriculture vigour is moderate over major parts of Bihar whereas eastern part shows patches of good NDVI values.

Delhi



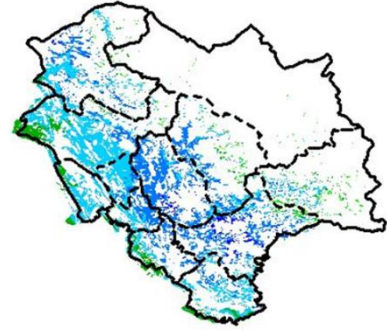
Agriculture vigour is moderate all over Delhi.

Gujarat



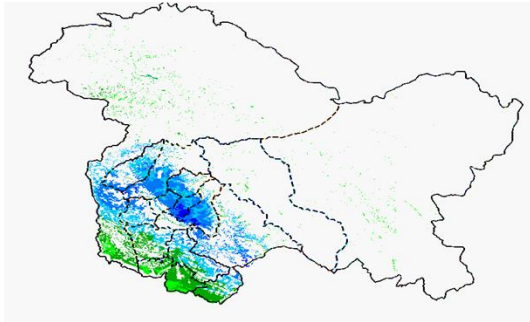
Moderate NDVI values are observed in Kutch, Saurashtra whereas patches of good NDVI observed in Gujrat region.

Himachal Pradesh



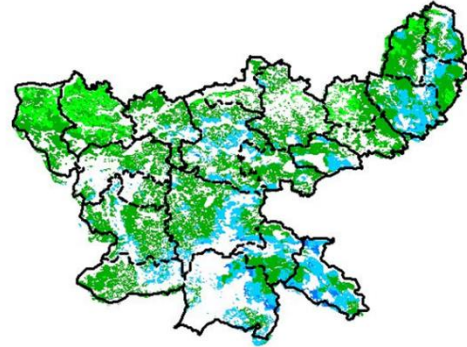
Agriculture vigour is good over entire state of Himachal Pradesh.

Jammu & Kashmir



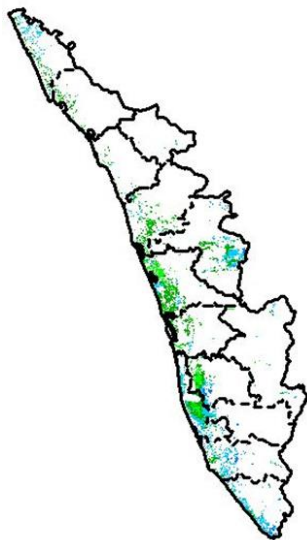
Agriculture vigour is good over central part of Jammu & Kashmir, whereas the remaining region shows moderate NDVI.

Jharkhand



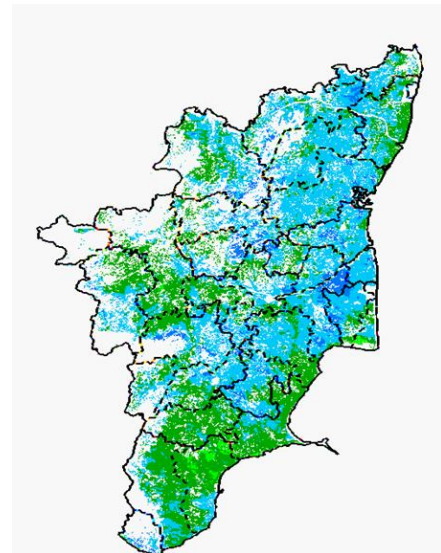
Agriculture vigour is moderate over entire state of Jharkhand whereas patches of good NDVI observed in central and eastern part of state.

Kerala



Agriculture vigour is moderate over entire state of

Tamil Nadu

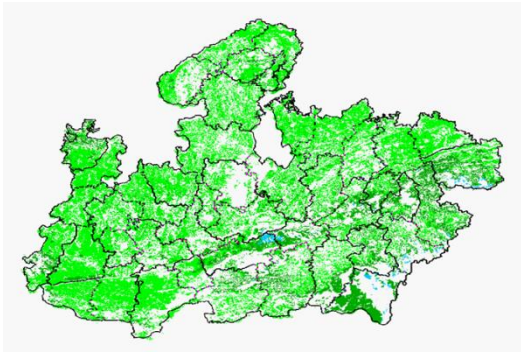


Agricultural vigour is good in northern and central

Kerala.

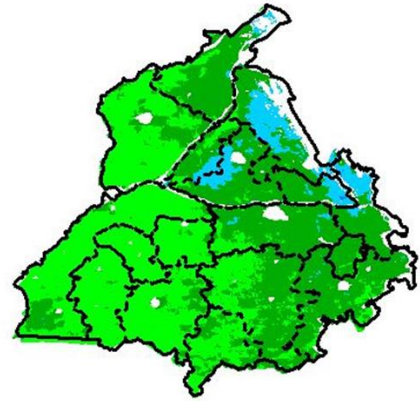
part of Tamil Nadu, whereas rest of the part shows moderate NDVI.

Madhya Pradesh



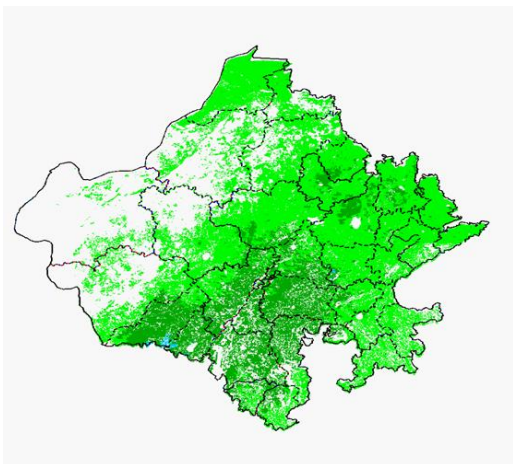
Agriculture vigour shows moderate values of NDVI over entire state of Madhya Pradesh.

Punjab



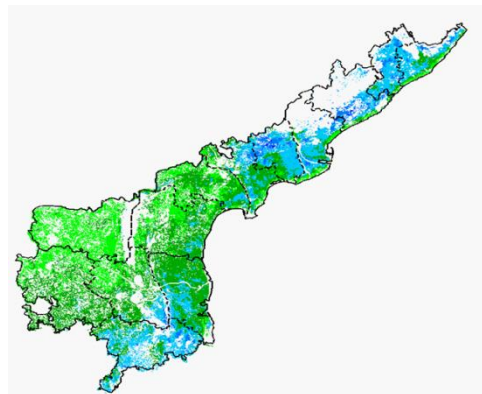
Agriculture vigour is moderate over the entire state of Punjab whereas northern region shows patches of good NDVI.

Rajasthan



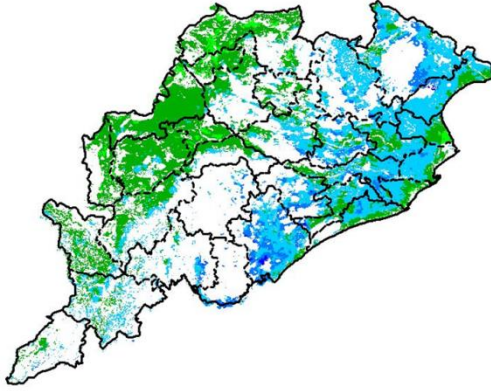
Agriculture vigour is moderate over the entire state of Rajasthan.

Andhra Pradesh



Agriculture vigour is moderate over central part whereas north eastern parts shows good NDVI in the state of Andhra Pradesh.

Odisha



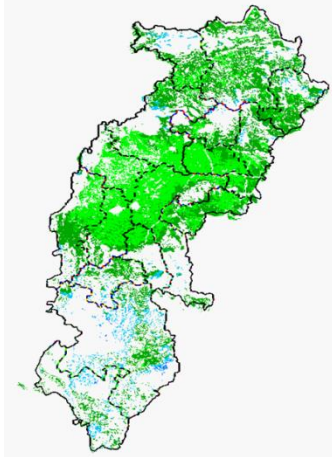
Agricultural vigour is good in coastal parts of Odisha where rest of region shows moderate NDVI.

Haryana



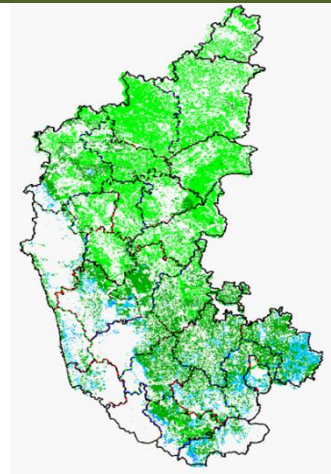
Agriculture vigour is moderate over entire state of Haryana.

Chhattisgarh



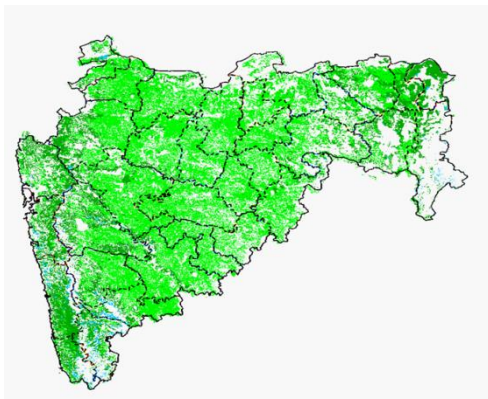
Agriculture vigour is moderate in the state of Chhattisgarh.

Karnataka



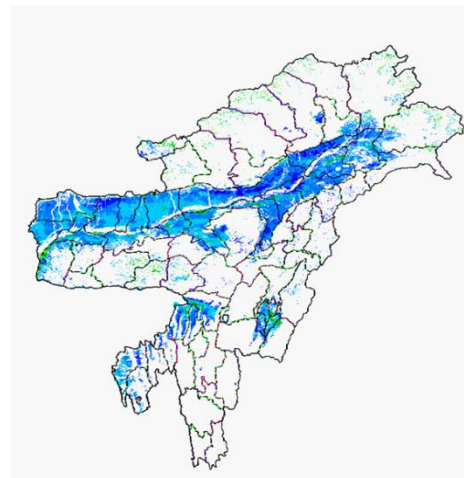
Agriculture vigour is moderate over Karnataka state except few patches of good NDVI observed in southern region of the state.

Maharashtra

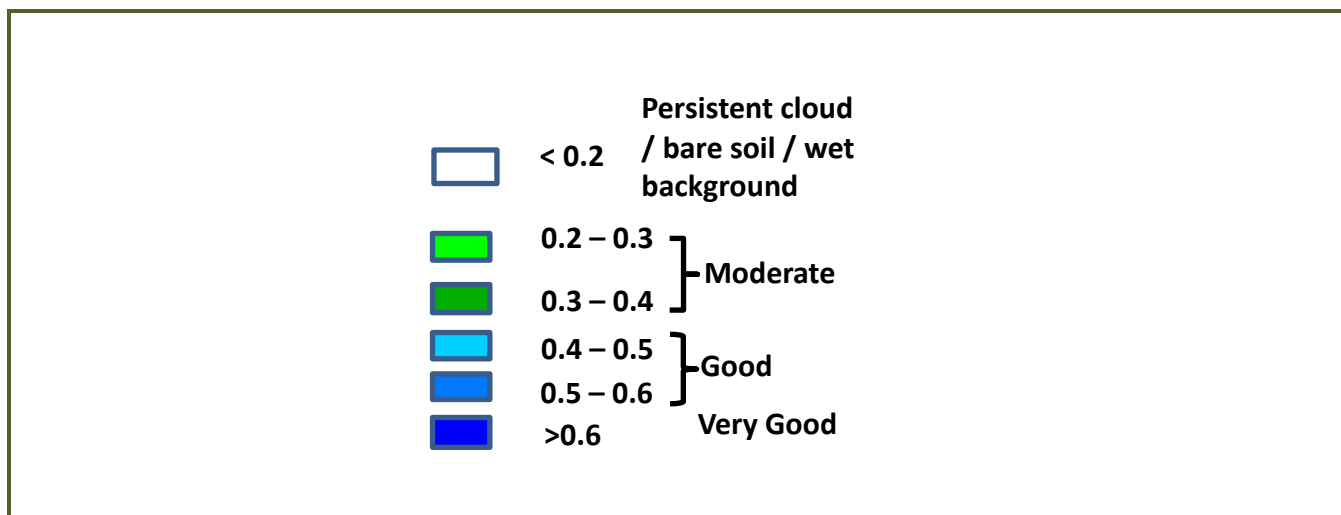


Agricultural vigour is moderate over entire state of Maharashtra

North East Region



Agriculture vigour is good over north-east states of country.



Annexure III

Assam

Sali rice: Ranjit, Bahadur, Satyaranjan, Basundhara, Kushal, Mahsuri, Bhogali, Rangilee, Ketekijoha. Satyaranjan and Basundhara (in double cropping areas having crop duration of 130-135 days). Jalashree, Jalkunwari, Plawan (for flood affected areas). Ranjit, Gitesh, Bahadur, Kushal, Piolee (long duration). Satyaranjan, Bosundhora, T.T.B.-404, Mulagabharu, Kanaklata, Joymoti, IR-36, IR-64 etc and Disang, Luit, Kapilee, Dikhow (medium duration).

Capsularis jute: JRC 321 and UPC 94.

Olitorious jute: Navin (JRO 524), Basudev(JRO 7835), Baisakhtissa(JRO 632), Bahagi (sel-2) and Tarun.

Okra: Pusa Sawani, Arka Anamika, Parbhdani Kranti.

Ridge gourd: Pusa Nashdar or other local varieties like AAU-1, AAU-2, AAU-3 etc.

Sponge gourd: Pusa Chikni or other local varieties.

Banana: Dwarf Cavendish, Jahaji (Dwarf Cultivar), Cheni Champa, Malbhog, Chenichampa, Malbhog, Barjahaji (Medium Tall cultivars).

Papaya: Washington, Haflong, Rasi, KorgHoney Dew, Co-1, Co-2, Pusa Delicious, Pusa Majesty.

Guava: Alahabad Safeda, Lucknow-49, Chittidar, Seedless.

Fodder crops: Hybrid Napier, Setaria and Guinea.

Meghalaya

Sali/ kharif rice: Shhsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri.

Groundnut: ICGS 76, JL 24.

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

Nagaland

Low land rice: CAU R1, CAU R3, RCM-9 and RCM-11 (Short to medium duration), Gitesh (short duration variety).

Tripura

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

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

Odisha

Sugarcane: Nilamadhaha, Sabitri, Co 7508, Co 7704, Co 62175, Co 740, Co 7219, CoJ 8201, Co 975, Co 7706, Co 8402, Co 62175.

Groundnut: Smruti, AK 12-24 TAG

Bihar:

Kharif onion: Agri Found Dark Red (ADR), N-53, Bhima super, Arka kalia.

Turmeric: Rajendra Sonia and Rajendra Sonali.

Ginger: Maran and Nadia.

Rice: Hybrid varieties: - KRH 2, PHB 71, PUSA RH 10.

Pant hybrid: Dhan1.

For low lying land (Long duration varieties): Rajendra mehsoori 1, MTU 7029 (Swarna) etc.

Kharif maize: Devki, Suwan, Shaktimaan-1, Shaktimaan-2, Rajendra shanker makka-3 and Ganga 11

Jharkhand

Lentil: P.L.-406, P.L.-639, K.L.S -218,K-75

Barley: Jyoti,Ratna,D.L.-36,B.R.-32

Linseed: Sweta,Shubhra, T-397

Onion: N-53,Pusa red,Arka nicketan, Arka kalian

Jammu & Kashmir

Cabbage: Golden Acre, Pride of India and PusaMukta.

Cauliflower: Giant Snow Ball, Pant Gobh 2 & 3 and Pusa Synthetic.

Uttarakhand

Sugarcane:Pant 84211, Co-238, Co-241, Co Pant 3220, COS-8436, COS-88230 etc. and medium to late sown varieties like Co Pant 90223, Co Pant-96219, COS-97222, COS-767, COS-1148, COS-96268 etc.

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

Brinjal: (brinjal-4, ARU-1 etc) and potato (Kufri Jyoti, Kufri Ashok & Kufri Anand etc.

Tomato: Tomato-3, Pant T-3, Him Sona, Him Shikhar etc variety in nursery).

Himachal Pradesh

Cauliflower: snowball and Giant snowball.

Radish:Japanese white, Chinese pink and mino early white

Turnip: PTWG-1

Carrot:Pusakesar

Fenugreek :I.C. 74, kasoori.

Peas :Mater ageta-6 (early variety).

Cabbage:Pride of India, golden achor and hybrid

East Uttar Pradesh

Sugarcane: coj-64, cos-96268, cos-98231, cos-767, cos-84, cos-32, copant-84212, Ko.Sha.-88230, 95255, Ko.Sha.-95436, 01235.

Tomato: pusa early, pusa ruby, HS 101, Pant Ta-2, Azad Ta-2, Narendra Tamatar-1,2,4,5,6

Cauliflower: pusaDipali.

Okra:PusaSawani, VarsaUphar, Azad kranti.

Brinjal: Pant Samrat, Pant Rituraj, Pusa hybrid-6.

Cabbage:Japani, PusaDieepali, PusaKartiki

cowpea: Lobia-263 & Pusa phaguni

Chilli: Pant C-1, Jwala and Sadabahar etc.

Grapes: parlet, beauty seedless, pusa seedless.

Maize: nawjyoti, kanchan, gaurav, surya, navin, shweta, Azad uttam, prakash, dikalb-7074, payridikalp-8144, dakkan-115, mmh-135, pro-4212, ganga-11, pusa, makka-2, J.H.-3459,

Urad: TA-9, narendra urad-1, Azad urad-1, Uttara, azad urad-2, shekhar-2, pant. u. 19, pant u. 30, pant u. 35, P.D.U.-1

Mung: k-851 and JM-721, Narendra mung-1,Malviya jagruti,Janpriya, Meha, H.U.M.-16, Malviya Jyoti, T.M.V.-37, Samrat, P.D.M.-139, H.U.M.-12, pusa vaishakhi, T.A.-44, Pant mung 12, pusa vishal, pusa-9531, P.D.M.-11, S.M.L.668

Onion: Agrifound light red, Nashik selection-1

Radish: pusa chetaki, pusa himani, pusa saris, pusa reshmi, japanis white radish.

West Uttar Pradesh

Ladies finger:VRO-6, VRO-5.

Sugarcane: ko.sha 88230, ko.sha 8436, ko 0238, ko.sha 07250 or U.P. 0512.

Barseem: V.L.1,V.L.10, maskavi, jai,K-8027, K-9565, Mandakini.

Onion: pusa red, pusa white.

Sugarcane:The mid and late maturing varieties of sugarcane: CO Pant 211, Co Sa 687 and Co Sa 8436.

The varieties recommended in areas with poor water drainage: B.O.54 and B.O.91.

Baby corn: M.H.-4

Punjab

Sugarcane: CoJ-85, CoJ-83, CoJ-64 (early maturing), COH-119, CoJ-88, CoS-8436 for and CoJ-89,CO118, COJ85, COJ64.

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

Onion: Punjab Naroya, Punjab White and PRO 6.

Radish: Punjab Pasand and Japanese white.

Turnip: L-1.

Carrot: Punjab Black Beauty, Punjab Carrot Red and PC-34.

Tomato:TH-1,PunjabRatta, Punjab NR 7, Punjab Chhuhara, Punjab Upma, Castle Rock.

Rice:Hybrid varieties: K. R. H 2, PHB 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10

High yielding varieties: Pusa 44, Pant Dhan-4, Pant Dhan-10, Pusa-834, Pusa basmati-1, Pusa basmati-1509, Pusa improved basmati, Pusa sugandha-5, Pusa sugandha-4 (Pusa 1121), Ranvir basmati and Taravadi basmati.

Pigeon pea: Pusa 2001, Pusa 992, Paras, Manak.

Delhi

Oat : J.H.O-822, O.L.-9, Pusa oat-5.

Barseem:Vardan, Buland Barseem-1, Masakavi, J.B-3;

Radish:Japani White, Hill queen, French Radish;

Spinach: PusaBharti.

Amaranths: PusalalChaulai, PusaKiran.

Ladyfinger: Pusa A-4.

Radish:Japani White, Hill queen, French Radish.

Spinach:All Green, PusaBharti;

Fenugreek:PusaKasuri;

Coriander:PantHaritama, Hybrids.

Turnip:Pusa Swati, Local Red variety.

West Rajasthan

Isabgol: RI 89 & GI-2.

Fenugreek:RMt 1 &RMt 305.

Barley: RD 2052, RD 2035 (suitable for saline and alkali soils) and RD 2715 (dual purpose),RD2058,2503,103,NDB1173.

cumin: GC 4, RZ -19, RZ 223, RZ19,209,223and GC4b.

Cowpea:RC-19, RC-101, RCP-27.

Oat:OS 6, OS 9.

Berseem: BL 10, BL 22.

Cauliflower:Pusa snow ball K-1, Hisar-1, Dania and.Selection-7.

Radish:PusaRashmi.

Carrot: PusaKeshar.

Zaid moong: K-851, PDM-11,SML-668 Pusa Baisakhi,RMG-62, RMG-268 etc.

Tinda: Bikaneri green, dilpasand

Cucurbit: Lakhnau ageti and Arkasital,

Muskmelon: Durgapura madhu, Punjab sunehri, Punjab hybrid and pusa madhuras

Watermelon:sugar baby, Durgapura mitha, Durgapura lal and khira

Sugarcane: CO-6617,7717;COS- 95255, 767

Desi cotton: RG-8,18,HD-123, hyb Raj- DH 9

East Rajasthan

Muskmelon: Durgapura madhu, Punjab sunheri, Punjab hybrid, arkajeet, hara madhu, pusa madhuras.

Water melon: Sugar baby, Durgapura meetha, durgapura kesar, arka jyoti(hybrid), madhu (hybrid).

Tinda: Beekaneri green, Dil pasand, arka tinda.

Kakri: Lucknow ageti and arka sheetal.

Zaid Pearl millet (fodder):raj bajra chari, rajko Zaint, L-72, L-74.

Zaid sorghum (fodder): Raj chari-3, Raj chari-1, Raj chari-2 for single cutting and SSG59-3, M.P. chari for many cutting.

Okra:Pusa Savani, Arka anamika, Arka Abhya, Aajad kranti, Prabhni kranti, Pusa-A-4,Pusa Makhmali.

Cowpea: Short durC-152, RS-9, FS-68, RC-19 and RC-101, C-152, RS-9.

Onion: Punjab safed goal, Udaipur 102, nasik red.

Lucerne :Anand-2, LLC-3, RL-88 & Type-9.

Berseem:Muskavivardan and PusaJiant.

Summer groundnut:T.A.G.24, T.G.37A, G.G.2, D.H.86.

Tamil Nadu

Cotton: Surabhi and SVPR-2

Madhya Maharashtra

Soybean:Phule kalyani, Phule agrani (K D S 344), J S 335, M A C S 11188.

Sorghum:Hybrid varieties – C S H 5, C S H 9, C S H 13, C S H 14, C S H 16, C S H 21, C S H 25,

Improved varieties – S P V 462, C S V 13, C S V 15, C S V 17, C S V 23.

Groundnut:Phule morana, Phule pragati, Phule vyas, Phule unnati, Phule R H R G 602.1.

Rice: Halava : Karjat 184, Ratnagiri 1, Karjat 4, Ratnagiri 711, Phule Radha.

Nimgarva : Jaya, Phule Maval, Phule samruddhi, Phule R G –N-6.

Garva : Ratnagiri 2, Karjat 2, Daranna, Suvarna.

Scented paddy : Basmati 370, Indrayani, Prabhavati, Sughandha.

Hybrid : Sahyadri 1, Sahyadri 2, Sahyadri 3, Sahyadri 4, Sahyadri 5, K R H 2.

Madhya Pradesh

Soybean: JS 335, JS 93-05, JS 95-60, JS 72-52, JS 90-41, JS 20-29.

Red gram: Jawahar -4, Ahsa (ICPL-87119), JKM-7,189, ICPL 88039, Pusa 2001,2002,992.

Rice: short duration (JR, 305, JR 201,Poornima,JD 201, JRH-5, JRH-8, Danteshwari).

medium duration (IR 64, IR 54,IR 36, Madhuri, Kranti, Mahamaya, Pusa Basmati).

Sugarcane: KO Jawahar-86141, 86572, 86032.

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

Maize: JM-8, JM-12, JM-216,Vivek-17, Navjot, HQPM-1,5, HM-4,10,11.

Sesame: TKG-21, TKG-22, TKG-55, TKG-306, JTS-8, RT-46.

Groundnut: AK 12-24, TG 124, TG 26, Jyoti, JL 24, UF70-103, JGN -3, GG 2, Ganga Puri .