



National Agromet Advisory Service Bulletin

Friday 1st June 2018
(For the period 1st to 6th June 2018)



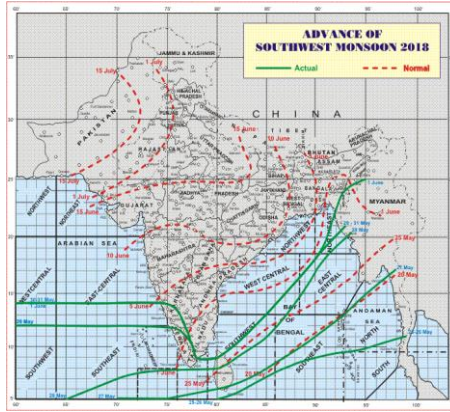
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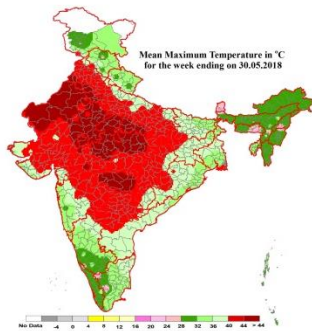
Advance of South West Monsoon



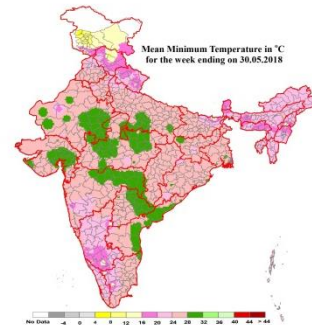
- The Southwest Monsoon has further advanced into some more parts of northeast Bay of Bengal and some parts of Mizoram & Manipur. The Northern Limit of Monsoon (NLM) passes through Lat. 14°N/ Long. 60°E, Lat. 14°N/ Long. 70°E, Shirali, Hassan, Mysuru, Kodaikanal, Tuticorin, Lat. 09°N/Long. 80°E, Lat. 13°N/ Long. 85°E, Lat. 18°N/ Long 90°E, Lat. 20°N/ Long 91°E, Aizwal, Lat. 24°N/Long 93°E(Chura Chandpur) and Lat.25°N/ Long. 95°E. Conditions are favourable for further advance of Southwest Monsoon into some more parts of northeastern states during next 48 hours. Conditions are likely to become favourable for further advance of southwest monsoon into some more parts of south Peninsula during the subsequent 3-4 days with the likely development of favourable circulation features and strengthening of cross Equatorial winds.

Spatial distribution of weather parameters for the week ending 30.05.2018

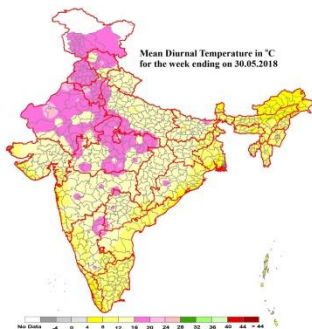
Mean Maximum Temperature (°C) for the week ending 30.05.2018



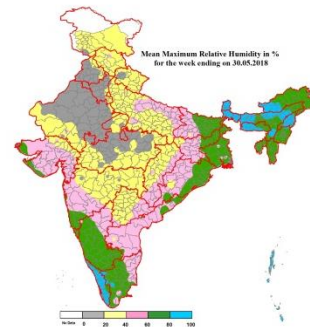
Mean Minimum Temperature (°C) for the week ending 30.05.2018

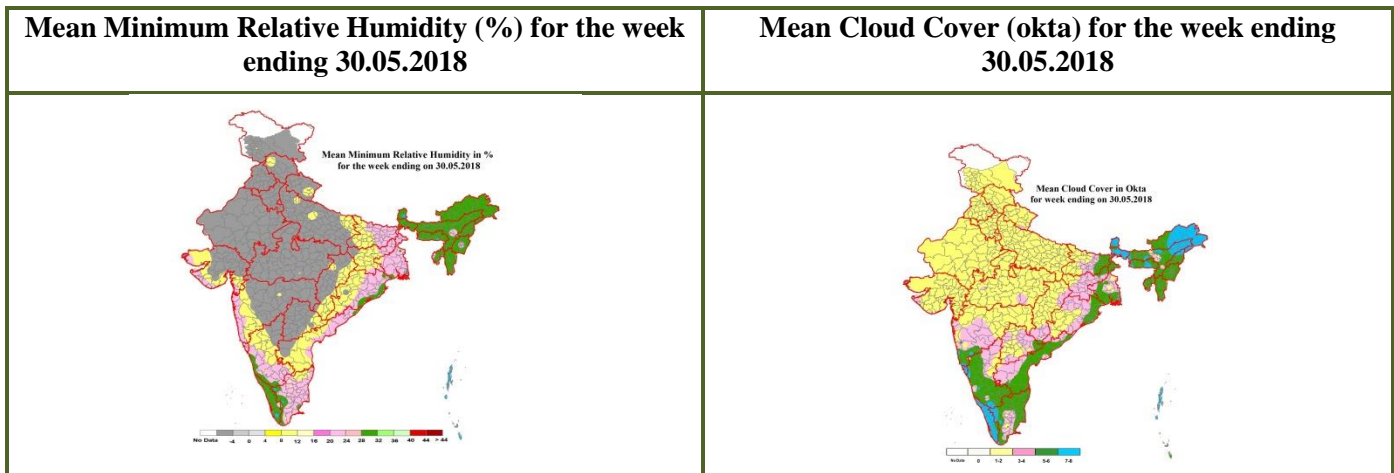


Mean Diurnal Temperature Variation (°C) for the week ending 30.05.2018

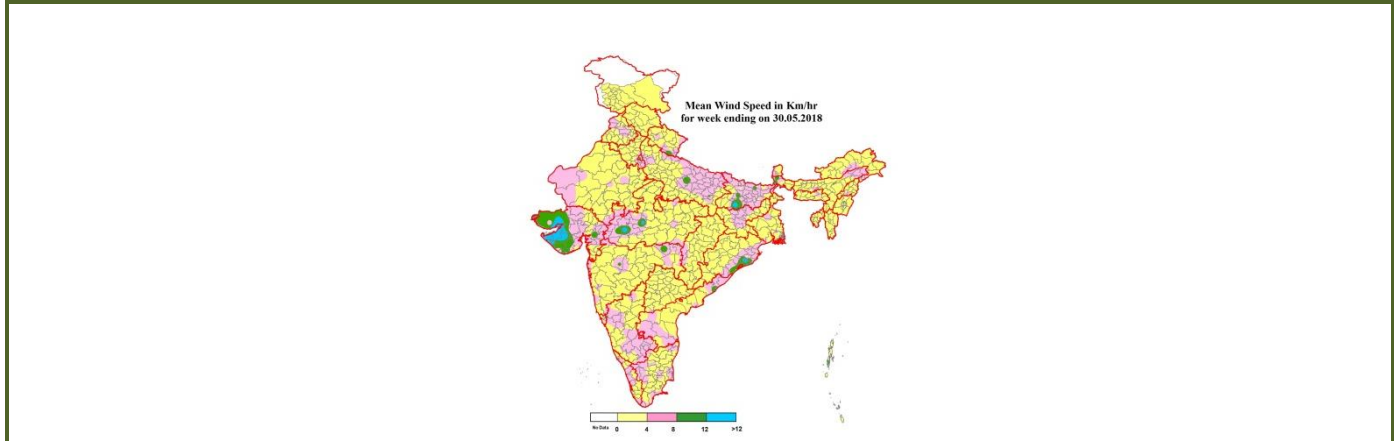


Mean Maximum Relative Humidity (%) for the week ending 30.05.2018

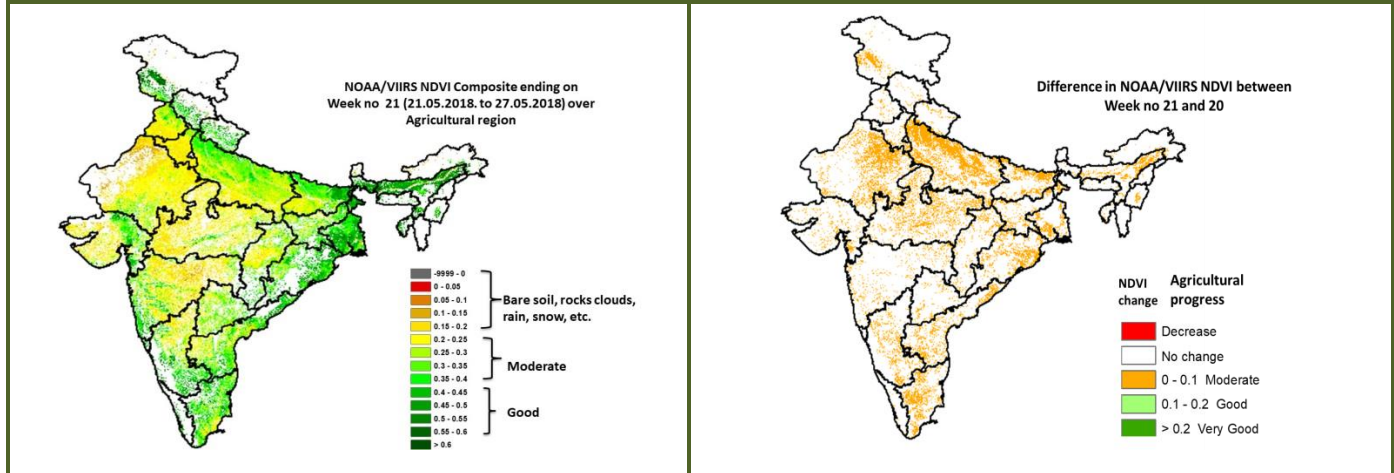




Mean Wind Speed (km/hr) for the week ending 30.05.2018

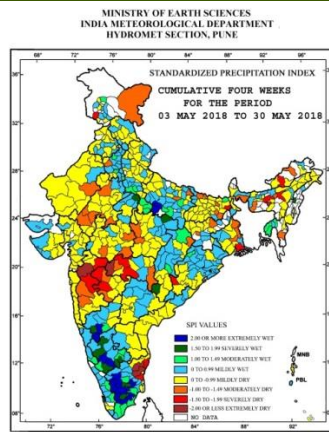


<p>NOAA/VIIRS NDVI composite ending on 27th May 2018 over Agricultural regions of India</p>	<p>Difference in NOAA/VIIRS NDVI between 20th May and 27th May 2018</p>
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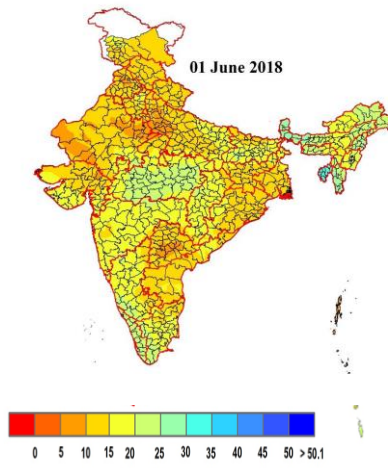
- | | |
|---|---|
| <ul style="list-style-type: none"> • Agriculture vigour is good over West Bengal and adjoining Assam and moderate over parts of Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Punjab, Uttar Pradesh, Bihar, East coast and western coast of Maharashtra, some parts of Gujarat, parts of Tamil Nadu, Coastal Andhra Pradesh, South Interior Karnataka, Coastal Odisha and Telangana. | <ul style="list-style-type: none"> • Moderate progress of agricultural vigour was observed over many parts of the country. |
|---|---|

Standardised Precipitation Index Cumulative 4 weeks for the period 3rd May to 30th May 2018

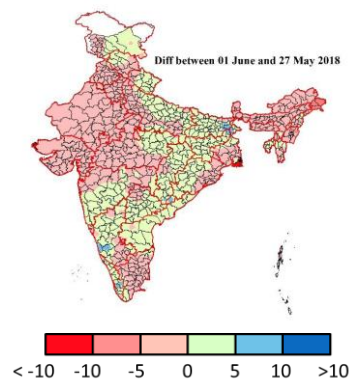
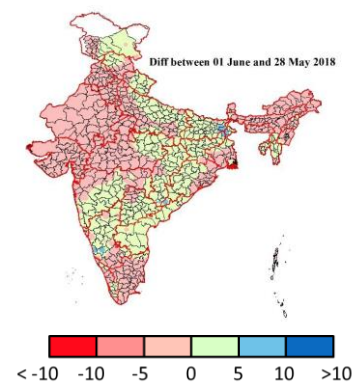
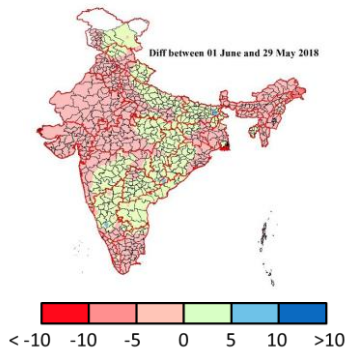
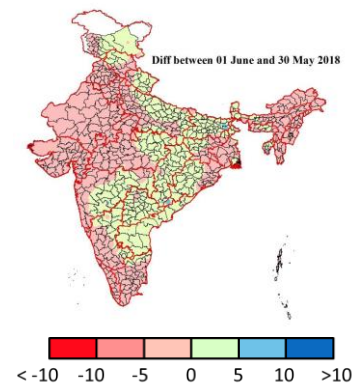
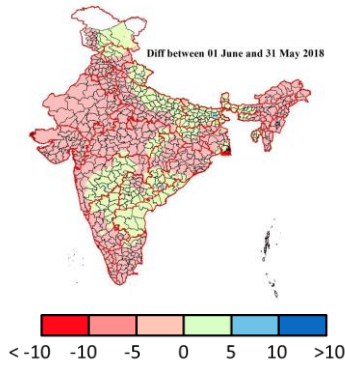


- Extremely/severely wet conditions experienced in few districts of Tamil Nadu & Puducherry; Karnataka; Kohima district of Nagaland; Banda, Fatehpur districts of Uttar Pradesh; Bhind, Rewa districts of Madhya Pradesh; Bijapur district of Chhattisgarh.
- Extremely/Severely dry conditions experienced in few districts of Maharashtra; East Kameng district of Arunachal Pradesh; Kamrup, Nagaon districts of Assam; Jaintia Hills district of Meghalaya; Howrah district of West Bengal; Nawarangpur district of Odisha; Katihar district of Bihar; Rajouri district of Jammu & Kashmir; Cuddalore, Kanchipuram, Tiruvannamalai, Viluppuram districts of Tamil Nadu & Puducherry.
- Moderately dry conditions experienced in few districts of West Bengal; Upper Subansiri district of Arunachal Pradesh; Morigaon district of Assam; West Garo Hills district of Meghalaya; Lunglei district of Mizoram; Giridih, Lohardaga districts of Jharkhand; Banka, East Champaran, Monghyr, Saharsa, Sitamarhi districts of Bihar; Kushi Nagar district of Uttar Pradesh; Hissar district of Haryana; Ladakh (Leh) district of Jammu & Kashmir; Nagaur, Chittorgarh, Jaipur, Jhalawar, Udaipur, Rajsamand districts of Rajasthan; Betul, Khargone, Raisen, Narsinghpur, Sagar districts of Madhya Pradesh; Pune, Satara, Osmanabad, Jalna, Akola, Gadchiroli districts of Maharashtra; Jashpur district of Chhattisgarh; Chennai district of Tamil Nadu & Puducherry.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

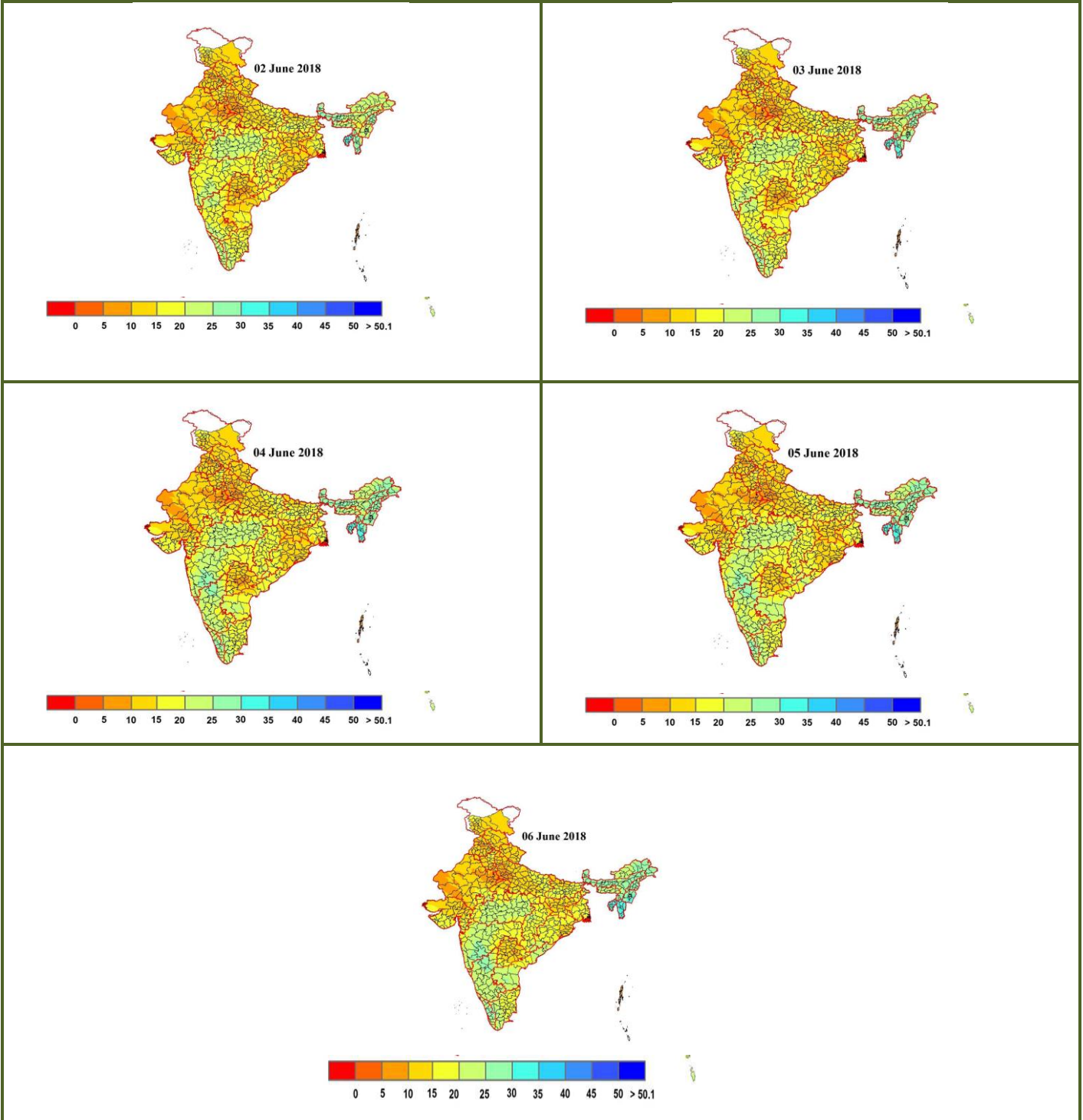
Daily Soil Moisture (mm) for 1st June 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 2nd June to 6th June 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 6th June 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Day maximum temperatures are very likely to continue in the range of 42-45°C over many parts of Rajasthan and some parts over Madhya Pradesh and Vidarbha during next 3 days.

5 Day Rainfall Forecast (Mid day) 1st June 2018

Met-Sub-Division	01-Jun Today	02Jun Sat	03Jun Sun	04Jun Mon	05Jun Tue
1. Andaman & Nicobar Islands	WS	FWS	FWS	WS	WS
2. Arunachal Pradesh	SCT	SCT	SCT	SCT	SCT
3. Assam & Meghalaya	FWS	FWS	FWS	FWS	SCT
4. N. M. M. & T.	WS	WS	WS	FWS	FWS
5. S.H. West Bengal & Sikkim	FWS	FWS	FWS	FWS	FWS
6. Gangetic West Bengal	FWS	FWS	SCT	SCT	SCT
7. Odisha	SCT	SCT	SCT	FWS	FWS
8. Jharkhand	FWS	SCT	SCT	SCT	SCT
9. Bihar	FWS	SCT	SCT	SCT	SCT
10. East Uttar Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
11. West Uttar Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
12. Uttarakhand	SCT	SCT	SCT	ISOL	SCT
13. Haryana, Chd & Delhi	DRY	DRY	DRY	DRY	DRY
14. Punjab	DRY	DRY	DRY	DRY	DRY
15. Himachal Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
16. Jammu & Kashmir	DRY	DRY	DRY	DRY	DRY
17. West Rajasthan	DRY	DRY	DRY	DRY	DRY
18. East Rajasthan	ISOL	ISOL	DRY	DRY	DRY
19. West Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
20. East Madhya Pradesh	ISOL	ISOL	ISOL	ISOL	ISOL
21. Gujarat Region	DRY	DRY	DRY	DRY	DRY
22. Saurashtra & Kutch	DRY	DRY	ISOL	ISOL	ISOL
23. Konkan & Goa	SCT	SCT	FWS	FWS	FWS
24. Madhya Maharashtra	SCT	SCT	SCT	SCT	FWS
25. Marathwada	SCT	SCT	SCT	SCT	FWS
26. Vidharbha	ISOL	SCT	ISOL	ISOL	ISOL
27. Chhattisgarh	ISOL	ISOL	ISOL	ISOL	SCT
28. Coastal Andhra Pradesh	SCT	SCT	SCT	SCT	SCT
29. Telangana	SCT	SCT	SCT	FWS	FWS
30. Rayalaseema	SCT	SCT	SCT	FWS	FWS
31. Tamilnadu & Puducherry	ISOL	ISOL	ISOL	SCT	SCT
32. Coastal Karnataka	FWS	FWS	FWS	WS	WS
33. North Interior Karnataka	FWS	FWS	FWS	FWS	WS
34. South Interior Karnataka	SCT	FWS	FWS	FWS	FWS
35. Kerala	FWS	FWS	FWS	FWS	FWS
36. Lakshadweep	DRY	FWS	FWS	FWS	WS

% 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

- **01 June (Day1):** Heat wave conditions are very likely to occur at some parts of West Rajasthan with severe heat wave at one or two pockets. Warm night conditions are very likely at one or two pockets over West Madhya Pradesh. Heavy rain very likely at isolated places over West Bengal, Odisha, Assam & Meghalaya and Manipur, Mizoram & Tripura. Thunderstorm accompanied with squall and lightning very likely at isolated places over East Uttar Pradesh, Bihar, Jharkhand and Odisha. Thunderstorm accompanied with gusty winds and lightning very

likely at isolated places over Uttarakhand, West Uttar Pradesh, East Madhya Pradesh, Vidharbha, Chhattisgarh, West Bengal, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh, Telangana, Rayalaseema, North Interior Karnataka, Tamilnadu & Puducherry and Kerala.

- **02 June (Day 2):** Heat wave conditions are very likely to occur at one or two pockets over West Rajasthan. Warm night conditions are very likely at one or two pockets over West Madhya Pradesh. Heavy rain very likely at isolated places over Sub-Himalayan West Bengal, Assam & Meghalaya, Manipur, Mizoram & Tripura, Rayalaseema and South Interior Karnataka. Thunderstorm accompanied with squall and lightning very likely at isolated places over Uttar Pradesh. Thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Uttarakhand, Vidharbha, , Bihar, Jharkhand, West Bengal, Odisha. Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal Andhra Pradesh, Telangana, Rayalaseema, North Interior Karnataka, Tamilnadu & Puducherry and Kerala.
- **03 June (Day 3):** Heat wave conditions are very likely to occur at one or two pockets over West Rajasthan. Heavy rain very likely at isolated places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Rayalaseema and South Interior Karnataka. Thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Uttarakhand, Uttar Pradesh, Bihar, Jharkhand and Odisha.
- **04 June (Day 4):** Heavy rain very likely at isolated places over Coastal & North Interior Karnataka. Thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Uttar Pradesh, Jharkhand, Gangetic West Bengal and Odisha.
- **05 June (Day 5):** Heavy rain very likely at isolated places over Odisha, Madhya Maharashtra, Marathwada, Konkan & Goa, Coastal & North Interior Karnataka and Kerala. Thunderstorm accompanied with squall and lightning likely at isolated places over Odisha. Thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Uttar Pradesh, Jharkhand, Gangetic West Bengal and Odisha.

Weather Outlook for subsequent 2 days from 6th to 8th June 2018

- Rainfall activity is likely to increase over parts of Maharashtra & Goa states from 6th June leading to probable advance of southwest monsoon over these areas during 06th to 08th June.
- Fairly widespread to widespread rainfall with isolated heavy/very heavy falls likely over Interior parts of south Peninsula and parts of the West Coast.
- Scattered to fairly widespread rainfall likely over Islands & northeastern states and isolated to scattered over parts of Central India and northern plains.
- Dry weather likely over remaining parts of the country.

Salient Advisories

- Conditions are favourable for further advance of Southwest Monsoon into some more parts of northeastern states during next 48 hours. Conditions are likely to become favourable for further advance of southwest monsoon into some more parts of south Peninsula during the subsequent 3-4 days; continue preparation of nurseries for *Viruppu* rice and undertake field preparation for transplanting of *viruppu* rice in **Kerala** and undertake nursery sowing for *Sali* rice in **Assam**. Continue land preparation and sowing of soybean, groundnut, black gram and rice bean in **Manipur**.
- Utilizing the pre monsoon showers, continue nursery bed preparation for *kharif* rice in **South Konkan**. In **Telangana**, taking advantage of the pre-monsoon rains, continue land preparation for sowing of *kharif* crops. Procure and keep the seed, fertilizers and pesticides ready for timely sowing of rain-fed crops. Take up sowing of rainfed crops like soybean, jowar, maize, redgram, greengram, cotton etc., after receiving cumulative rainfall of 50-60 mm in light soils and 60-75 mm in heavy soils or the soil should be wet up to 15-20 cm depth after onset of South-West monsoon rains. Undertake nursery preparation for rice in **Coastal Karnataka** and land preparation and sowing of cow pea, groundnut, green gram and black gram in **South Interior Karnataka**.
- As rain/thundershowers very likely at most/many places over **Coastal Karnataka** and **North Interior Karnataka** during the period, at many places over **Kerala** during the period, over **South Interior Karnataka** from 2nd to 5th, over **Royalaseema** and **Telangana** on 4th and 5th June, along with heavy rain at isolated places very likely over Royalaseema and South Interior Karnataka on 2nd and 3rd, over Coastal & North Interior Karnataka on 4th and 5th and over Kerala on 5th, rain/thundershowers very likely at many places over **Nagaland, Manipur, Mizoram & Tripura** during the period, over **Assam & Meghalaya** from 1st to 4th, along with heavy rain at isolated places over Assam & Meghalaya and Manipur, Mizoram & Tripura from 1st to 3rd, over Nagaland on 3rd June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
- As thunderstorm accompanied with squall/gusty winds and lightning very likely at isolated places over **Odisha** and **Jharkhand** during the period, over **Bihar** from 1st to 3rd, over **West Bengal** on 1st and 2nd and over **Gangetic West Bengal** on 4th & 5th June, over **Coastal Andhra Pradesh, Telangana, Royalaseema, North Interior Karnataka, Tamilnadu & Puducherry** and **Kerala, Vidarbha** on 1st and 2nd, over **Madhya Maharashtra, Marathwada** and **Konkan & Goa** on 2nd, over **East Madhya Pradesh** and **Chhattisgarh** on 1st June, over **Uttarakhand** from 1st to 3rd, over **West Uttar Pradesh** on 1st, over **Uttar Pradesh** from 3rd to 5th, thunderstorm accompanied with squall and lightning very likely at isolated places over **East Uttar Pradesh** on 1st and over **Uttar Pradesh** on 2nd June, it is advised to provide support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
- As rain/thundershowers very likely at most/many places over **Andaman & Nicobar islands** during the period, at many places over **Sub-Himalayan West Bengal & Sikkim** during the period, over **Gangetic West Bengal** on 1st and 2nd, over **Jharkhand** and **Bihar** on 1st and over **Odisha** on 4th and 5th June along with heavy rain very likely at isolated places over **West Bengal** and **Odisha** on 1st and over Sub-Himalayan West Bengal &

Sikkim on 2nd June, rain/thundershowers very likely at many places over **Konkan & Goa** from 3rd to 5th, over **Madhya Maharashtra** and **Marathwada** on 5th June, along with heavy rain at isolated places very likely over Madhya Maharashtra, Marathwada and Konkan & Goa on 5th June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in West Bengal, Odisha, Konkan & Goa to avoid water stagnation.

- In view of the heat wave conditions in **West Rajasthan**, grazing/feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. Also provide mineral mixture and fresh and clean water to poultry birds. Make arrangement of curtains and proper ventilation in poultry house. Vaccinate the poultry birds to prevent Ranikhet disease.

Detailed Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, Ariyalur, Coimbatore, Dharmapuri, Dindigul, Erode, Kanyakumari, Karur, Krishnagiri, Madurai, Namakkal, Nilgiris, Pudukottai, Ramanathapuram, Salem, Sivaganga, Thanjavur, Theni, Tirupur, Thiruvavur, Trichy and Virudhunagar districts of Tamilnadu & Puducherry, all districts of Coastal Karnataka, all districts of North Interior Karnataka except Bidar, Raichur and Yadgir, all districts of South Interior Karnataka except Chikballapur and Chitradurga during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Coastal Andhra Pradesh, Telangana, Rayalaseema, North Interior Karnataka, Tamilnadu & Puducherry and Kerala on 1st and 2nd June, provide support to banana, young fruit plants and vegetables to avoid lodging. Undertake propping in sugarcane.
 - As rain/thundershowers would occur, at most/many places over Coastal Karnataka and North Interior Karnataka during the period, at many places over Kerala during the period, over South Interior Karnataka from 2nd to 5th, over Rayalaseema and Telangana on 4th and 5th June, along with heavy rain at isolated places very likely over Rayalaseema and South Interior Karnataka on 2nd and 3rd, over Coastal & North Interior Karnataka on 4th and 5th and over Kerala on 5th June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - **Kerala:**
 - Continue preparation of nurseries for *Viruppu* rice and planting of vegetables, coconut seedlings and 3-4 months old banana suckers (varieties like Robusta, Poovan, Njalipoovan, Palayankodan, etc). Undertake field preparation for transplanting of rice. Fix rain guard for rubber trees during the month. Subsequent tappings must be done after proper drying of tapping panel in rubber plants. Cultivate ginger, Turmeric, Banana and colocasia crops as intercrops in coconut plantations. Undertake planting of pineapple and also new rooted cuttings of pepper. Provide propping to sugarcane crop. Provide adequate drainage in ginger, cardamom and banana crops. Undertake planting of coconut seedlings. Continue planting of brinjal and chilli in raised beds or on mounts having a height of 10cm.
 - Proper drainage should be ensured in banana. As a precaution, apply lime in the banana basin or bleaching powder in the irrigation channels. To improve the disease resistance, drench the basin with *Pseudomonas* @ 20g per litre of water. Affected plants can be protected by drenching the basin with 5 g bleaching powder or 3 g oxychloride or 2g copper hydroxide per one litre of water. Severely affected plants should be cut and removed to prevent the spread of disease.
 - Leaf rust disease/berry borer in coffee may become severe due to increase in relative humidity. Carry out collection of gleanings, burying the infested berries and maintaining optimum shade and providing good drainage as control measures. There is a chance of Quick wilt disease due to high relative humidity in pepper. Apply *Trichoderma* or *Pseudomonas* culture in soil or 1% Bordeaux mixture can be sprayed on the leaves and small branches. Leaf spot, drying of twigs are common in nutmeg during this month. To control, apply 1% Bordeaux mixture. As a control measure against fruit & shoot borer in brinjal, spray 5% neem seed emulsion. Undertake plant protection methods after current spells of rain.
 - **Andhra Pradesh:**
 - Continue sowing pre-kharif crops like sesamum, bajra, mesta, etc. Continue field preparation for rain-fed

sugarcane. Carry out strengthening of field bunds. Undertake land preparation for sowing of kharif crops and keep inputs ready for sowing.

- The present weather conditions are favourable for leaf folder attack in paddy. To control, spray Chlorpyrifos @ 2.5 ml or Cartap Hydrochloride @ 2g /litre of water. To control incidence of thrips in groundnut crop, spray Monocrotophos @ 1.6 ml/L of water. The present weather conditions are favourable for pinworm in tomato. To control, set up 8 pheromone traps/acre and spray Quinalphos @ 2 ml or Emamectin Benzoate 0.2 g or Novaluran 1 ml/litre of water.
- **Telangana:**
 - Taking advantage of the pre-monsoon rains, continue land preparation for sowing of kharif crops. Procure and keep the seed, fertilizers and pesticides ready for timely sowing of rain-fed crops. Take up sowing of rainfed crops like Soybean, Jowar, Maize, Redgram, Greengram, Cotton etc., only after receiving cumulative rainfall of 50-60 mm in light soils and 60-75 mm in heavy soils or the soil should be wet up to 15-20 cm depth after onset of South-West monsoon rains. Take-up sowing of Sunhemp and Dhaincha as in-situ green manure crop preceding rice. Sow Greengram as catch crop preceding rice depending on the availability of water.
 - For incidence of sucking pests, spray Dimethoate @ 2 ml or Acephate @ 1.5 g per litre of water. The present weather conditions are favourable for thrips in chilli, to control spray acephate @ 1.5 g or fipronyl @ 2 ml. or dimethoate 2 ml./lit of water is recommended. For leaf hopper incidence in bhindi crop at flowering to harvesting stage, spray Imidacloprid @ 1 ml/litre of water. If leaf blight incidence is noticed in tomato crop at flowering to harvesting stage, spray COC @ 3 g/litre of water. To control fruit flies in mango, erect pheromon traps or IIHR traps @ 8-10/acre at 3-6 feet from ground level.
- **Tamil Nadu:**
 - This is the suitable time for sowing rice in nursery for kuruvai season. Use rice varieties, viz., ADT 36, ADT 43, ADT 45 and ADT 47 suitable for kuruvai season. Provide staking to 5 months old banana and sugarcane crops. Provide drainage to sugarcane, maize, groundnut and turmeric to avoid sett rot. To increase the fruit set of lemon, spray 2- 4 D @ 20 ppm during the flowering stage. For fruit retention in lemon, spray NAA @ 30 ppm after fruit set (marble size). Undertake planting of rooted cuttings of pepper and one year seedlings of cinnamon.
 - To control shoot and fruit borer in Brinjal, apply Emamectin benzoate 5 SG @ 200 g/ha. To control the incidence of sucking pest in the vegetable crops farmer are advised to spray neem seed kernel extract 5 percent. Prevailing weather is favorable pod borer incidence in black gram. To control, spray Indoxacarb 15.8% SC 333 ml/ha or Chlorantraniliprole 18.5 SC 150ml/ha. Prevailing weather condition is favorable for Bacterial leaf blight incidence in rice at tillering and panicle initiating stage. To control, spray Neem oil 3% (or) Neem Seed Kernel Extract 5%.
- **Karnataka:**
 - In South Interior Karnataka, continue sowing of cowpea (TVX-944, KBC-1, TVC-152), green gram (PS-16, PDM-84,178, KKM-3), black gram (Karagao-3, T-9, Rashmi (LBG-625), horse gram, field bean (HA 1, 2, 3 & 4) and groundnut (TMV-2, JL-24, KCG-6) utilizing the realized rainfall.
 - In Coastal Karnataka, continue nursery raising of rice and multiplication of seedlings of black pepper. Transfer strong and better arecanut seedlings from primary seed bed to secondary seed bed. Clean all drainage channels.
 - In North Interior Karnataka, continue land preparation for sowing of *kharif* crops; keep inputs ready for sowing of soybean (JS-335), green gram (BGS-9), black gram (DU-1) and red gram (TS-3R) crops. Continue the repairing of bunds and check dam so as to reduce the run-off to check the soil erosion.
 - In South Karnataka, due to heavy downpour of rain/thunderstorm, fruit dropping have been observed in mango and consequently fruit fly damage is noticed; spray Carbaryl @4 g/litre of water after current spells of rain.
- **Animal Husbandry**
 - In Tamil Nadu, feed the dairy cattle early in the morning and late in the evening along with mineral mixture to avoid heat stress. For every 100 poultry birds, add 10-20 ml of B-complex or liver tonic to the drinking water to reduce heat stress. Feed the calves with 30 gms of mineral mixture per day. Also, de-worm calves as per regular schedule with the support of nearby veterinarian.
 - In Telangana, prevailing weather conditions are congenial for the occurrence of sheep pox disease in sheep and goat and Foot and mouth disease in cattle and Buffaloes. To prevent the diseases, vaccinate the animals. To protect the poultry birds from high temperature, arrange fans and foggers in sheds, cover the sheds with paddy straw and arrange sprinklers. Feed with wet mash to increase the feed intake and provide cool water for drinking. Vaccinate birds against Ranikhet disease.
 - In Karnataka, provide protein rich feed by giving oil seed cake, Azolla, green fodder and mineral supplements such as Vitamin C and B –complex based on the deficiency. Silage, hay and crop residues may be used for cattle feed when there is shortage of green fodder. Maintain proper ventilation for free circulation of air in the sheds. Allow animals for grazing early in morning or later in evening. Maintain optimum temperature by

applying 4-6 inch thick hay thatch as a roofing material in poultry house.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh, all districts of Assam except Dhemaji, in all districts of Meghalaya except South Garo Hills, in Aizawl and Serchip districts of Mizoram, Imphal West district of Manipur, Dimapur, Kohima and Mon districts of Nagaland and in all districts of Tripura during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers would occur at most/many places over Nagaland, Manipur, Mizoram & Tripura during the period, over Assam & Meghalaya from 1st to 4th, along with heavy rain at isolated places over Assam & Meghalaya and Manipur, Mizoram & Tripura from 1st to 3rd, over Nagaland on 3rd June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Avoid water logging in ginger, turmeric, pulses and vegetable fields in Nagaland, Manipur, Mizoram & Tripura.
 - **Arunachal Pradesh:**
 - Undertake sowing of French bean and okra. Provide proper drainage facility in the fields of Jhum rice, pea, toria, mustard, ginger and turmeric crops. Undertake sowing of larger cardamom in primary nursery bed at 2cm depth & 10cm.
 - For control of stem borer in rice at tiller stage, spray Triazophos 40EC @ 4 ml/litre of water against stem borer in rice nursery as well as in the main field.
 - **Assam:**
 - Continue land preparation /nursery sowing for Sali rice and sowing of well germinated seeds of Sali rice varieties such as Ranjit, Bahadur, Kushal, Maniram, Mahsuri, Keteki Joha, etc. Continue sowing of maize after current spells of heavy rain. Continue transplanting of Ahu paddy. Continue planting of Assam lemon and banana suckers. Carry out thinning operation in jute. Undertake land preparation/sowing of groundnut. Provide proper drainage in sugarcane fields. Provide staking to vegetable crops. Continue planting of fruit crops like pineapple, papaya, banana, etc.
 - Gandhi bug attack may be seen in Boro rice at milky stage. For effective control of Gandhi bug, apply 5% Malathoin dust @ 20 kg per ha of land.
 - **Meghalaya:**
 - Continue land preparation and sowing of maize varieties Vijay Composite, DA 61A, RCM 75, 76, Vivek Hybrid 25, Vivek, QPM-1, etc. Continue sowing of okra. Provide support of bamboo structure for climbers of bottle/ash gourd. Do weeding & earthing up in these crops. Use bamboo sticks for staking in French bean after hoeing.
 - **Manipur:**
 - Continue land preparation and sowing of soybean, groundnut, black gram and rice bean. Maintain optimum water depth of 5-8cm in the pre-kharif rice field. Continue land preparation/seed collection for raising kharif rice nursery. Undertake sowing of kharif maize. Harvest mature fruits of melons, pumpkins, gourds, tomato and chilli in clear weather.
 - **Mizoram:**
 - Carry out weeding in rice and maize fields on a non rainy day. Undertake planting of ginger and turmeric crops after treating rhizomes with Thiram @ 4 g per kg seeds.
 - **Tripura:**
 - Drain out excess water that is accumulated in in cowpea and Jhum rice fields. Continue sowing of groundnut and maize.
 - **Nagaland:**
 - Undertake land preparation and sowing of kharif crops. Continue sowing of summer vegetables. Continue transplanting of brinjal. Undertake weeding and earthing up in maize after current spells of rain. Maintain proper drainage in the ginger field. Collect and destroy all the infested fruits of okra and brinjal. Monitor the plants against red pumpkin beetle in cucurbits especially bottle gourd, pumpkin, cucumber, water melon etc. Mechanically collect and destroy the pest if incidence is low..
- **Animal Husbandry**
 - Right time to de-worm cattle with anti helminthic drugs (particularly Tapeworms) viz. Fento Plus @ 1 tablet per 30 kg body weight. Provide proper bedding materials especially to new-born and lukewarm food & water. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter. Vaccinate poultry birds against coccidiosis and Ranikhet diseases. Bird flu like disease infection in poultry and duck has been observed in some districts of lower Assam. Consult immediately with veterinary doctor.

- **Fishery**

- Collect healthy fingerlings from authentic sources as there is enough water in the fish pond. Remove the unwanted fishes and predator by repeated netting before leaving the new fingerling in the fish pond. Broadcast mustard Oil Cake (MOC) @ 5kg/day over the pond twice daily to feed fish fingerlings.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman and Nicobar Islands, Jagatsingpur, Jharsuguda, Keonjhar, Khurda, Puri and Sundargarh districts of Odisha, Araria, Bhagalpur, Kishanganj, Purnea and Saupal districts of Bihar, in Deogarh, East Singbhum, Jamtara, Khunti, Pakur, Ramgarh, Ranchi and West Singbhum districts of Jharkhand, Birbhum district of Gangetic West Bengal and all districts of Sub-Himalayan West Bengal except North Dinajpur during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with squall/ gusty winds and lightning very likely at isolated places over Odisha and Jharkhand during the period, over Bihar from 1st to 3rd, over West Bengal on 1st and 2nd and over Gangetic West Bengal on 4th & 5th June, it is advised to provide support to young fruit plants, banana and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - As rain/thundershowers very likely at most/many places over Andaman & Nicobar islands during the period, at many places over Sub-Himalayan West Bengal & Sikkim during the period, over Gangetic West Bengal on 1st and 2nd, over Jharkhand and Bihar on 1st and over Odisha on 4th and 5th June along with heavy rain very likely at isolated places over West Bengal and Odisha on 1st and over Sub-Himalayan West Bengal & Sikkim on 2nd June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields in West Bengal and Odisha to avoid water stagnation.
 - **Odisha:**
 - Continue sowing of green manuring crops like Dhaincha and sunhemp utilising the realised and expected rainfall. Green manure crops are sown in medium and low land condition at 6-8 weeks before transplanting of rice. Use 10 kg seeds per acre. Sowing time should be adjusted in such a way that the crop will attain 5-week stage just at 7 days before transplanting. Keep inputs ready for kharif sowing.
 - Continue harvesting of matured pulses and groundnut in clear weather.
 - Increased temperature may favour the egg laying of stemborer in rice in the main field. To attract the butterflies, place 4 Pheromone traps/acre, collect the adults and destroy them by burning them under soil or by burying.
 - **Bihar:**
 - Farmers are advised for deep summer ploughing of vacant fields. It helps in destroying the eggs and pupating stages of insects and weed seeds. Undertake planting of turmeric, ginger and ole (Elephant foot yam) crops
 - Start land preparation for sowing of long duration paddy seeds in nursery. Use vermi compost or FYM to the field where seedling is to be grown.
 - Undertake land preparation for nursery of nursery Kharif onion, chilli and brinjal. Constant monitoring of the chilli crops against attack of thrips, white fly and mites is advised. If attack of insects are severe, apply malathion 50 E.C.@ 2ml per litre of water on a non rainy day.
 - Monitoring is advised for infestation of fruit borer in tomato crop. If infestation of fruit borer is found, installation of bird perches in tomato crop is advised. Hand picking of damaged fruit and burying are also advised. Spraying of Spinosad 48EC@1ml/4 litres of water is advised under clear sky condition, if pest population reaches ETL.
 - **Jharkhand:**
 - Utilising the expected rainfall, farmers are advised ploughing of upland to keep the field ready to sow the different kharif crops after onset of monsoon. To increase the fertility of Rice field, farmers may sow the green manure crops like Sunhemp and Dhaincha. The seed rate for both is 20-25 kg per acre.
 - Maintain optimum water level in summer rice fields at grain filling/hardening stage. Continue planting of ginger and elephant foot yam in uplands.
 - For plantation of different fruit seedlings and prepare/dig the pit and maintain the distance between pit as per requirement of fruit tree.
 - **West Bengal:**
 - In the Sub-Himalayan West Bengal, carry out sowing of Dhaincha seeds at 45 days before transplanting of Aman rice with available moisture. Provide proper drainage facility in maize, soybean, round chilli, ginger and turmeric fields.
 - In Gangetic West Bengal, complete the harvesting of groundnut and dry the pods under shade. Harvest sesamum crop as the capsules turn yellow. Prepare strong fencing for protect the betel vine from strong winds.

For better leaf development in betel vine, apply mustard cake and Tasko-5.

- In Sub-Himalayan West Bengal, spray Metalaxy + Mencozeb @ 2.5 gram/liter of water to control Downey Mildew of cucurbits. If aphid or white fly infestation is observed in green gram at pre flowering stage, spray Imidaclopid @ 5ml/litre of water. To control Bhindi Yellow vein mosaic virus, spray Imidachloropid @ 2 ml/litre of water. In case of rotting of stem and spots on leaves in jute crop, apply Carbendazim 50 WP @ 1g/litre of water or Cuhydroxide 75 WP @ 2g/litre of water. If brown colour spot or blast spot appears on the leaves of Boro paddy, spray Traicyclazole @ 0.75g/litre of water. For gundhibug in Boro paddy, apply Fipronil 5 SC @ 1ml/litre of water.
- In Gangetic West Bengal, for fruit rot in chilli crop at fruit development stage, remove the affected plant parts and spray Carbendazim @ 1g/lit of water at clear weather condition. For root rot in legume vegetables, apply Carbendazim + Mancozeb @ 2.0 g/ litre of water as soil drenching. To control Bhindi Yellow vein mosaic virus, spray Imidachloropid @ 2 ml/litre of water. To prevent fruit drop in mango, apply NAA (Planofix) @ 3ml per 15 litres of water.
- **Andaman & Nicobar Islands:**
- Prepare the nursery field of paddy and strengthen the bunds to store rain water. Keep the bunds of vegetable field open to drain out excess rain water. Plant pineapple suckers in upland area by digging 25 to 30 cm depth and maintain close spacing to avoid soil erosion. Harvest the mature vegetables to avoid losses as heavy rainfall is expected during next five days.
- **Animal Husbandry**
- In Jharkhand, in view of the prevailing high temperature, avoid grazing /feeding of cattle/goats during noon hours. Keep animals under shade or in sheds during noon hours and provide plenty of fresh cool water mixed with minerals for drinking. Also, provide balanced feed with ample concentrates and adopt necessary vaccination schedule. Make arrangement of curtains and proper ventilation in poultry houses. Put curtains on south-west side of poultry house and sprinkle water on the curtains during noontime. Also, cover the roof of the poultry house with grass or gunny bags. In poultry house, control the temperature using fogger.
- In Andaman & Nicobar Islands, Keep the day old chicks inside the shelter and keep the floor dry of poultry shed.
- In West Bengal, look for signs of Mastitis in dairy cattle and treat for it immediately. Vaccinate goats against Peste des Petits Ruminants (PPR) before onset of monsoon.
- In Andaman & Nicobar Islands, Keep the day old chicks inside the shelter and keep the floor dry of poultry shed.
- **Fisheries**
- In Odisha, fish farmers, in case have stocked fingerlings in the pond for fish culture, they should monitor the quality and level of water, so also temperature. In case of water temperature goes above 30⁰ C or water level goes below 1 m. depth, farmers are advised to go for early harvest and discontinue fish seed production and culture activity.
- In West Bengal, apply lime @ 30kg/bigha in old ponds for decrease the salinity of water due to rising temperature and decreased water level.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in Nagpur district of Vidarbha during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - **Maharashtra:**
 - As thunderstorm accompanied with gusty winds and lightning very likely at isolated places Vidarbha on 1st and 2nd, over Madhya Maharashtra, Marathwada and Konkan & Goa on 2nd June, provide support to banana, young fruit plants and vegetables to avoid lodging. Undertake propping in sugarcane.
 - As rain/thundershowers would occur at many places over Konkan & Goa from 3rd to 5th, over Madhya Maharashtra and Marathwada on 5th June, along with heavy rain at isolated places very likely over Madhya Maharashtra, Marathwada and Konkan & Goa on 5th June, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in standing crop fields to avoid water stagnation.
 - In South Konkan, undertake nursery sowing of *kharif* crops like rice. Apply urea @ 1 kg and single super phosphate @ 3 kg with sufficient quantity of FYM per 1 Are area of nursery. Also undertake seed treatment of rice seed with Emisan or Thiram @ 2 g per kg seed. Undertake sowing on raised beds. Plough the field at vapasa condition and sow the seed of Dhaincha (Green manure crop) @ 40 kg seed per ha.
 - In Madhya Maharashtra, undertake nursery preparation on raised bed for *kharif* rice (varieties : Early: karjat-184, Ratnagiri-1, Karjat-4, Phule Radha Midlate: Phule Samruddhi Late: Ratnagiri-2, Karjat-2), Finger Millet (varities : Early: V.L.149, GPU-26 Midlate: Dapoli-1, Dapoli Safed, V.L.-352 Late: Phule Nachani),

soybean (varieties: J.S.-335,MACS-1188,Phule Kalyani, Phule Agrani, Phule Sangam, J.S.9305)

- In Marathwada, utilising pre-monsoon showers, undertake land preparation for *kharif* soybean (varieties : MAUS-71(Samrudhi), MAUS-81 (Shakti), MAUS-158, MAUS-162) sorghum (Hybrid varieties like CHS-14, CSH-16, CSH-25 (Parbhani Sainath) and improved varieties like PVK-400, CSV-17, PVK-801, PVK-809) , bajra (Hybrid varieties like GHB-558, Saburi, Shardha, Shanti, AHB-1666, PKV-Raj), Improved varieties (ICTP, AIMP-92901 (Samrudhi), PPC-6 (Parbhani Sampada), ABPC-4-3 and local varieties (Ambika, Terna, Prabhavati (Parbhani-1), Sugandha, Parag, Parbhani Avishkar), turmeric and *adsali* sugarcane. Undertake cultivation of *kharif* vegetables like brinjal, chilli and tomato in raised nursery beds. For planting of oat fodder crop select varieties like JHO-822, RO-19, VPO-94.
- In Vidarbha, complete harvesting of matured rice. Keep the harvested produce in safer place. Continue ploughing fields to expose soil to solar radiation. Prepare raised nursery bed for *kharif* rice.
- **Gujarat:**
 - In North Saurashtra, continue sowing of groundnut (GG-20, GG-11) with irrigation facility. Undertake land preparation and keep inputs ready for sowing of cotton (Early: Bg-II GCH-8, ATM, Jay, First Class, Beejdhan-2, Sarju, Atom, Bhakti; Medium Late: Bg-II GCH-6, RCH-659, Agritop-777, Agritop-444, Solar-76, Swapna, Mallika, Ajit-155) and other *kharif* crops. Apply light and frequent irrigation by drip system to vegetable (flowering), groundnut (pod development) crops and mango, citrus and sapota orchards in Saurashtra & kutch. Continue harvesting of matured groundnut, sesame, green gram and black gram in South Saurashtra. In Kutch, prepare the land for sowing of irrigated hybrid cotton and B.T. cotton and keep inputs ready (G. cot. 6, 8, 10 and approved varieties of B.T. cotton). Construct the bund in advance to reduce soil erosion and plan for khet Talavadi (farm ponds) to collect runoff water.
 - In South Gujarat, continue harvesting of matured groundnut and pulses crops. Plan for sowing of cotton with irrigation facility. Continue nursery sowing for rice (NAUR-1, GNR-2 (Costal area) GNR-3, GNR-4, GNR-5, GNR-6 (Long duration), Jaya, Gurjari, GR-5, 7, 8, 9, IR-28, Purna and GAR-13) under irrigation facility. Continue sowing of cluster bean and cowpea. Continue harvesting of matured mango fruits. Provide drip irrigation to fruit crops.
 - In North Gujarat, carry out harvesting of matured groundnut, pearl millet, green gram and vegetables. Undertake sowing of B.T. cotton. Undertake harvesting of matured fruits of mango, papaya, sapota, lemon, pomegranate etc.
 - In Middle Gujarat, complete harvesting and threshing of early varieties of summer rice. Apply irrigation in green gram, pomegranate, sapota, lemon and papaya orchards. Cover papaya fruits using gunny bags; decrease the interval between two irrigations in vegetable crops.
 - In North Saurashtra, due to high temperature, mites infestation in lemon orchard is observed; to control, spray Propargite 57 % EC @10ml/10 liters of water. Severe attack of thrips in chilli has been reported; spray Profenofos @ 20 ml / 10 litres of water.
- **Animal Husbandry**
 - In Gujarat, put curtains on south-west side of poultry house and sprinkle water on curtains during noon time. Keep animals under shade during noon hours and provide plenty of cold water mixed with minerals for drinking and shower the animals with cold water two to three times in a day.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in Dhamtari district of Chhattisgarh during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds and lightning very likely at isolated places over East Madhya Pradesh and Chhattisgarh on 1st June, provide support to young fruit plants and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - **Madhya Pradesh:**
 - In West Madhya Pradesh, undertake land preparation for sowing of red gram and soybean. Undertake nursery preparation for rice. Apply irrigation in vegetables, orchards, green gram, black gram, maize and groundnut. Continue intercultural operations in vegetables. Continue harvesting of matured vegetables, moong and urad. Continue sowing of cotton in Nimar Valley Zone.
 - In East Madhya Pradesh, undertake nursery preparation for rice. Continue seed bed preparation for onion. Make arrangement of improved varieties for maize (JM 216, HQPM 1,5, DHM 117) and soybean (JS 95-60, JS 335, JS 93-05, NRC 12, 37). Apply irrigation in maize, groundnut, sugarcane, summer moong, urad and cucurbits. Continue harvesting of matured vegetables, moong and urad. Continue intercultural operations in sugarcane. Due to hot and dry winds banana and papaya fruits are damaged because of sun scorching, cover the fruits by using leaves or jute bags to protect the fruits from sun scorching.
 - In West Madhya Pradesh, for control of sucking pest in moong & urad spray Thiamethoxam @ 0.3 gm/litre of water. For attack of red pumpkin, whitefly in cucurbit crops; spray Triazophos 40 E.C. @ 2.0 ml per litre of

water.

- **Chhattisgarh:**
- Keep inputs ready for sowing of *kharif* crops. Apply irrigation in summer moong, sugarcane, vegetables as per soil moisture condition. Continue harvesting of matured vegetables. Continue nursery preparation for rice. Treat seed with Carbendazim (2 gm/kg of seed) fungicide before sowing in nursery. Continue nursery preparation for vegetables.
- **Animal Husbandry**
- In West Madhya Pradesh, grazing /feeding of cattle/goats may be done during morning/ evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking . Also provide mineral mixture and fresh and clean water to poultry birds. Vaccinate the poultry birds to prevent Ranikhet disease.
- In Chhattisgarh, poultry farmers are advised to cover their poultry house with mat and keep it wet so that inner temperature may be kept normal. Provide plenty of drinking water to cattle. Buffaloes should be kept in water-filled pond for at least half an hour every day.

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

- **Realised Rainfall:** Rainfall occurred in Bahraich and Maharajganj districts of East Uttar Pradesh during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds and lightning very likely at isolated places over Uttarakhand from 1st to 3rd, over West Uttar Pradesh on 1st, over Uttar Pradesh from 3rd to 5th, thunderstorm accompanied with squall and lightning very likely at isolated places over East Uttar Pradesh on 1st and over Uttar Pradesh on 2nd June, provide support to young fruit plants and vegetables and propping up in sugarcane to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - **Jammu & Kashmir:**
 - Due to prevailing dry weather and high evaporation rate irrigate summer pulses and vegetable crops. Weeding and hoeing may be done to conserve soil moisture.
 - Due to rise in temperature it is advised to protect young fruit plants from heat by providing thatches/cover and ensure free circulation of air.
 - Continue nursery raising of early transplanted rice (var. IET-1410, K-39, Ratna, PC-19, Jaya).
 - Undertake seed sowing of vegetables in trenches/polyhouses of high altitude region of Ladakh.
 - Due to prevailing dry spell, farmers are advised to apply light & frequent irrigation in vegetable crops for proper establishment and growth.
 - There may be chance of bacterial wilt in tomato, brinjal, chilli and cucurbits. If observed, apply Streptocyclin Sulphate @ 1.0 gm/10 litre of water on clear sunny day and repeat the spray at the time of flowering.
 - **Uttarakhand:**
 - Continue nursery raising of rice. Undertake harvesting of matured rai, radish, turnip, cauliflower in clear weather.
 - Continue transplanting of capsicum and brinjal in the polyhouse in mid and high hills and planting of turmeric, ginger and arbi.
 - To control the leaf hopper (jassids), mixture of 1 litre Methyl-o-Demeton 25 EC dissolved in 600-800 litres of water should be sprayed in clear weather.
 - **Himachal Pradesh:**
 - Continue preparation of rice nursery.
 - Undertake sowing of tomato, brinjal, capsicum and cucurbits crops in middle and high altitude region. In lower regions, continue sowing of cucurbits crops. Undertake sowing of spinach, coriander, fenugreek in present weather conditions.
 - Continue transplanting of vegetables like tomato, capsicum, gourd, chilli etc. in the well prepared fields. Optimum moisture level should be maintained in cucurbitaceous crops by light and frequent irrigation as dry conditions may lead to poor pollination and thus drop in yield of the crop.
 - In Himachal Pradesh to minimise the effect of hails on fruit and plants where hailstorms has occurred, immediately spray Carbendazim 100g or Mencozeb 60g @ 100 litres of water and another spray within 3-4 days of Boric acid 200g+ ZnSo₄ 500 g+ CaO 250 g @ 200 litres of water.
 - In case of severe problem of cutworms in vegetable crops, apply Chlorpyrifos 20 EC @ 2 litres of water mixed with 25 kg sand per hectare.
 - Spray Mancozeb @ 00g/200 litres of water in apple orchards to control the apple scab diseases.
 - **Punjab, Haryana & Delhi:**
 - In Punjab, continue harvesting of matured vegetables. Continue nursery sowing of rice (varieties i.e. PR 126, PR 124, PR 123, PR 122, PR 121, PR 116, PR 114, PR 115, PR 113). Undertake sowing of rainy season

vegetables like okra, cucurbits and cowpea. Apply irrigation in sugarcane, maize, moong, mash, vegetables and orchards.

- In Haryana, continue sowing of cotton. Continue sowing of green gram, Lobia, moth and Pigeon pea. Continue nursery sowing of rice. Apply irrigation in vegetables and orchards.
- In Delhi, keeping in view of increase in temperature, apply frequent irrigation in vegetables, nurseries of vegetables, fodder crops and orchards. Protect vegetable nurseries and orchards against hot winds by physical barrier. Undertake nursery preparation for chilli, brinjal and cauliflower. Continue sowing of cotton. Undertake field preparation for sowing of red gram.

- **Uttar Pradesh:**

- Apply irrigation in vegetables and standing crops. Undertake nursery preparation for rice. Undertake sowing of pigeon pea under irrigated condition. Continue intercultural operations in cucurbit crops and sugarcane. Continue sowing of ginger and turmeric.
- Continue harvesting of matured vegetables. Continue digging up of matured tubers of onion. Continue sowing of *kharif* maize. Undertake sowing of jowar.

- **Rajasthan:**

- Apply irrigation in summer groundnut, vegetables, orchards, sugarcane and moong. Continue sowing of cotton. Continue picking up of matured vegetables and cucurbits. Undertake nursery preparation of early cauliflower, chilli and brinjal. Undertake sowing of groundnut. Continue nursery sowing of rice in irrigated Northwestern Plain Zone.
- Chilli crop is affected by leaf curl & mosaic disease. To check the spread of disease uproot & burn affected plants & spray Dimethoate 30 EC @ 1.0 ml per litre of water.

- **Animal Husbandry**

- In Jammu & Kashmir, add calcium supplement in the diet of dairy animals and heifers especially feed rice straw these days to prevent calcium deficiency and intestinal blockage. Sheeps and goats need to be vaccinated against Sheep and Goat pox.
- In Punjab, keep the animals under sheds during noon time and provide fresh drinking water to save the animals from summer heat and stress.
- In West Rajasthan, grazing/feeding of cattle/goats may be done during morning/evening hours. Keep animals under shade/shed during noon hours and provide plenty of water mixed with minerals for drinking. Also provide balanced feed & adopt vaccination schedule. Also provide mineral mixture and fresh and clean water to poultry birds. Make arrangement of curtains and proper ventilation in poultry house. Vaccinate the poultry birds to prevent Ranikhet disease.

- **Apiculture:**

- In Jammu & Kashmir, keep colonies in shade or cover with wet gunny bags. Provide adequate space to the colonies for brood rearing and storage of nectar. To control mite, dust sulphur on top bars @ 1g/frame /oxalic acid treatment @ 3.5% / litre water.

In Himachal Pradesh keep the colonies in shady places and sprinkle water if possible to reduce the heat as temperature rising high in their region. Insert the brood chamber without frame for ensuring aeration. Dust sulphur on sealed brood in the colony and not on larvae to control mites attack on honeybees. Also insert empty frame /combs for egg laying to the queen as the population starts building up.