



National Agromet Advisory Service Bulletin

Friday 20th April 2018
(For the period 20th to 25th April 2018)



Issued by
India Meteorological Department

Weblink For

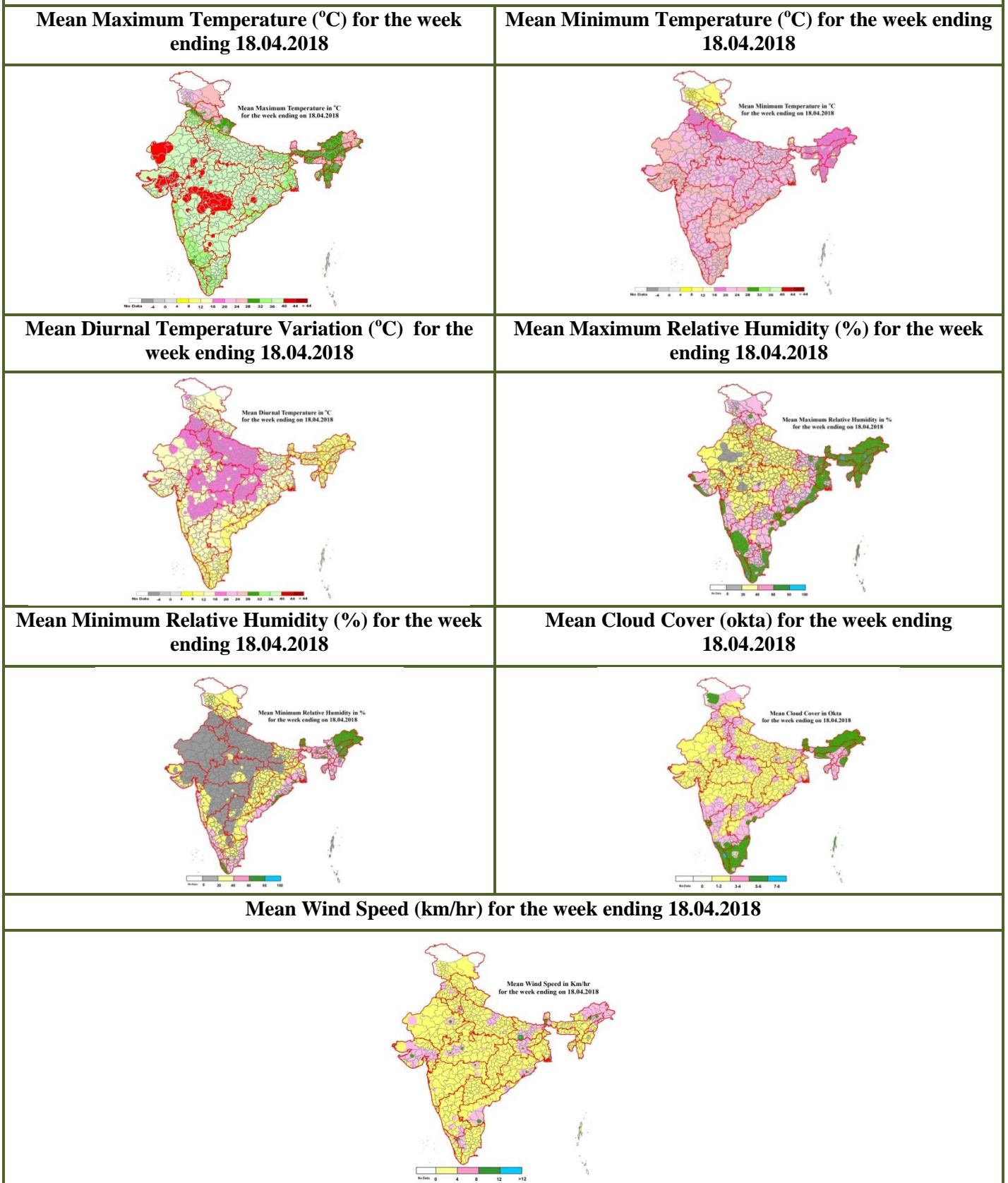
District AAS Bulletin: <http://www.imdagrimet.gov.in/node/3545>

State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

Long Range Forecast for 2018 Southwest Monsoon Seasonal (June-September) Rainfall

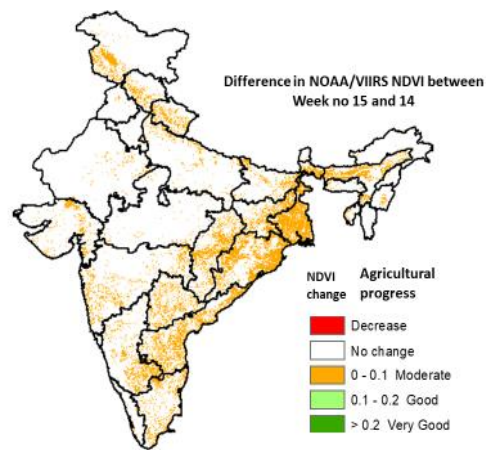
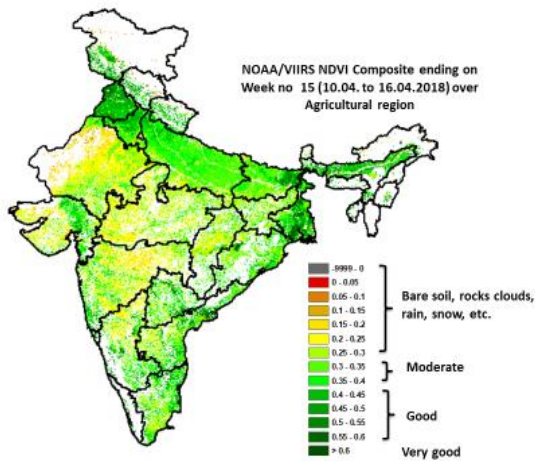
- Quantitatively, the monsoon seasonal rainfall is likely to be 97% of the Long Period Average (LPA) with a model error of $\pm 5\%$. The LPA of the season rainfall over the country as a whole for the period 1951-2000 is 89 cm.
- Forecast also suggests maximum probability for normal monsoon rainfall (96-104% of LPA) and low probability for deficient rainfall during the season.

Spatial distribution of weather parameters for the week ending 18.04.2018



NOAA/VIIRS NDVI composite ending on 16th April 2018 over Agricultural regions of India

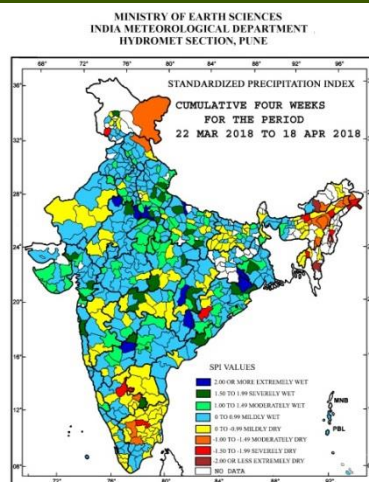
Difference in NOAA/VIIRS NDVI between 9th April and 16th April 2018



- Agriculture vigour is good to moderate over Indo-gangetic plains, East coast and western coast of Maharashtra, some parts of Gujarat, interior parts of Tamil Nadu, Coastal Andhra Pradesh and Telangana.

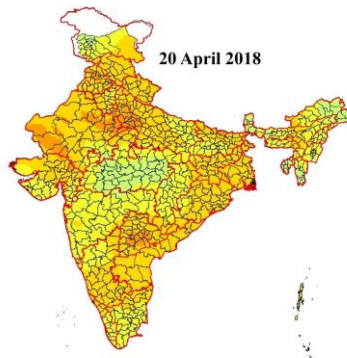
- Moderate progress of agricultural vigour was observed over many parts of the country.

**Standardised Precipitation Index
Cumulative 4 weeks for the period 22nd March to 18th April 2018**

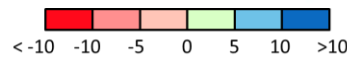
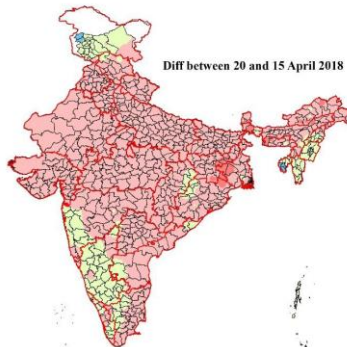
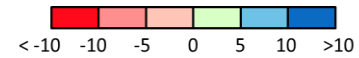
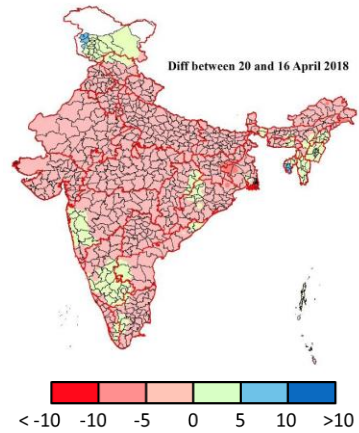
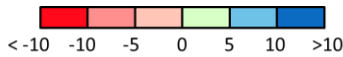
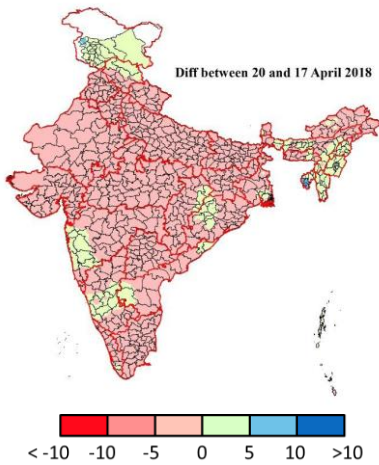
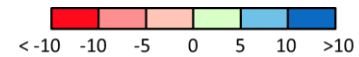
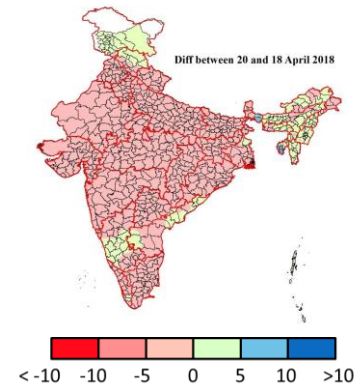
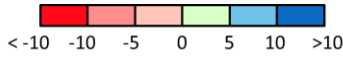
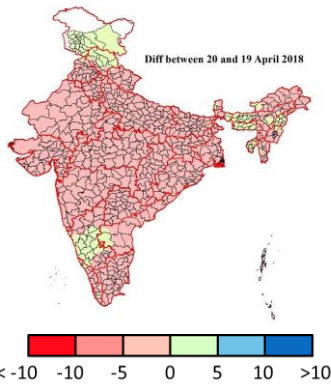


- Extremely/severely wet conditions experienced in few districts of Konkan & Goa; Bankura district of West Bengal; Balasore, Keonjhar, Mayurbhanj districts of Odisha; East Singhbhum, Seraikela-Khar districts of Jharkhand; Bhaich, Mirzapur, Pratapgarh, Sitapur, Agra, Bareilly, Etawah, Firozabad, Mahamaya Nagar, Moradabad districts of Uttar Pradesh; Nainital district of Uttarakhand; Alwar, Bharatpur, Jhunjhunu districts of Rajasthan; Chhindwara, Shahdol districts of Madhya Pradesh; Narmada, Navsari, Patan districts of Gujarat Region; Amraoti, Washim districts of Maharashtra; Bastar, Durg, Raipur districts of Chhattisgarh; Vishakhapatnam district of Andhra Pradesh; Hyderabad district of Telangana; Bidar, Gulbarga, Kolar districts of Karnataka.
- Extremely/Severely dry conditions experienced in few districts of Arunachal Pradesh; Jorhat, Udalguri districts of Assam; Dhalai district of Tripura; Kalahandi district of Odisha; Rajouri district of Jammu & Kashmir; Salem district of Tamil Nadu & Puducherry; Chitradurga district of Karnataka.
- Moderately dry conditions experienced in few districts of Arunachal Pradesh; Assam; Lahaul & Spiti district of Himachal Pradesh; Ladakh (Leh), district of Jammu & Kashmir; Dindigul, Erode districts of Tamil Nadu & Puducherry; Chickballapur district of Karnataka.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

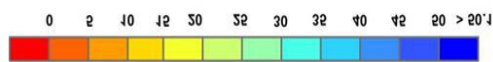
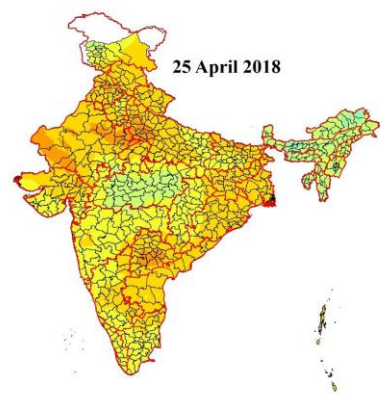
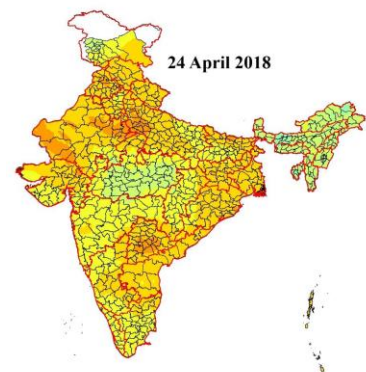
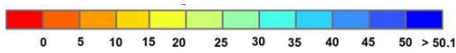
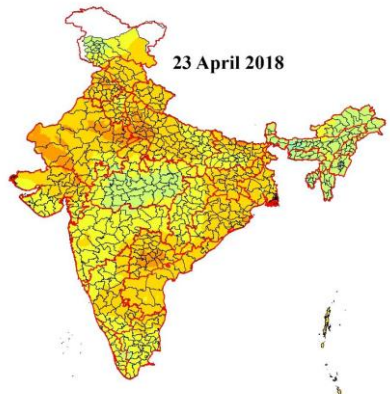
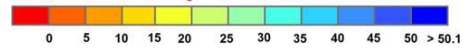
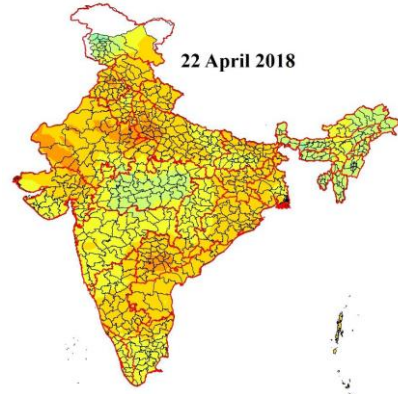
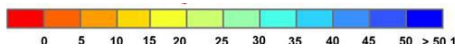
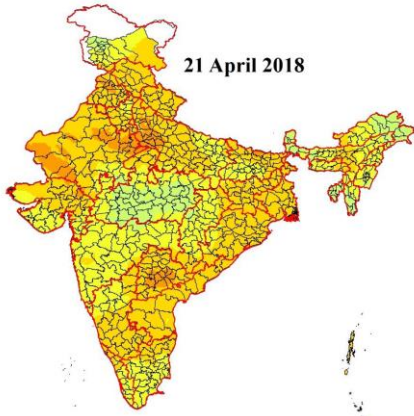
Daily Soil Moisture (mm) for 20th April 2018 (ending at 0830 IST) for 60 cm depth



Difference of Soil Moisture (mm) for 60 cm depth



**Forecasted Soil Moisture (mm) from 21st to 25th April 2018 (ending at 0830 IST)
for 60 cm depth**



Weather Forecast for next 5 days valid upto 0830 hours of 25th April 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- Day maximum temperatures are likely to remain above 40°C over central and Eastern India during next 2-3 days.
- No significant change in maximum temperatures likely over major parts of the country during next 2 days, outside northwest India & Gujarat where it is likely to fall by 2-3°C during next 24 hours.

5 Day Rainfall Forecast (Mid day) 20th April 2018

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

% 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

- **20 April (Day 1):** Thunderstorm accompanied with squall and hail very likely at isolated places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand. Thunderstorm accompanied with gusty winds very likely at isolated places over Uttar Pradesh, north Rajasthan, West Bengal & Sikkim, Jharkhand, Odisha, Assam & Meghalaya, Manipur, Mizoram & Tripura, Telangana, Karnataka, north Coastal Andhra Pradesh, Tamilnadu and Kerala. Thunderstorm accompanied with squall very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi and Bihar. Heavy rain very likely at isolated places over Jammu & Kashmir, south Assam & Meghalaya and Mizoram & Tripura. Heat wave conditions very likely in one or two pockets over Vidharbha. Strong winds speed reaching 25-35 kmph gusting to 45 kmph with moderate to rough sea conditions are very likely along and off West Bengal Odisha coasts. Fishermen are advised to be cautious while venturing in to the sea along & off

these coasts.

- **21 April (Day 2):** Thunderstorm accompanied with squall and hail very likely at isolated places over Sub-Himalayan West Bengal & Sikkim. Thunderstorm accompanied with squall very likely at isolated places over Jharkhand and Gangetic West Bengal. Thunderstorm accompanied with gusty winds very likely at isolated places over Odisha, Assam & Meghalaya, Manipur, Mizoram, Tripura, south Chhattisgarh and Kerala. Heavy rain very likely at isolated places over south Assam & Meghalaya and Mizoram & Tripura. Strong winds speed occasionally reaching 40-50 kmph with moderate to rough sea conditions are very likely along and off West Bengal Odisha coasts. Fishermen are advised not to venture into the Sea along & off these coasts. Based on the forecast generated by INCOIS, moderate to rough sea conditions are very likely to prevail along the West coast of India and rough to very rough over southern parts of West Coast and Lakshadweep area in the morning hours. Fishermen are advised to be cautious while venturing into the Sea along & off these areas.
- **22 April (Day 3):** Thunderstorm accompanied with squall and hail very likely at isolated places over Sub-Himalayan West Bengal & Sikkim. Thunderstorm accompanied with squall likely at isolated places over Gangetic West Bengal. Thunderstorm accompanied with gusty winds likely at isolated places over Telangana, Tamilnadu, interior Karnataka and Kerala. Based on the forecast generated by INCOIS, moderate to rough sea conditions are very likely to prevail along & off the West coast of Andaman & Nicobar Islands. Fishermen are advised to be cautious while venturing into the Sea along & off these areas.
- **23 April (Day 4):** Heat wave conditions are likely to prevail in some parts of Jammu & Kashmir, Himachal Pradesh and Uttarakhand. Based on the forecast generated by INCOIS, rough to very rough sea conditions are likely to prevail along & off the West coast of Andaman & Nicobar Islands. Fishermen are advised not to venture into the Sea along & off these areas.
- **24 April (Day 5):** Thunderstorm accompanied with gusty winds likely at isolated places over Telangana. Heat wave conditions are likely to prevail in some parts of Jammu & Kashmir Himachal Pradesh and Uttarakhand.

Weather Outlook for subsequent 2 days from 25th to 27th April 2018

- A fresh western Disturbance is likely to cause scattered to fairly widespread precipitation over Western Himalayan region.
- Fairly widespread to widespread rain/thundershowers likely over northeast India.
- Isolated to Scattered rain/thundershowers likely over south peninsular India and along east coast. Dry weather likely over remaining parts of the country.
- Maximum temperatures are likely to rise by 2-3°C over Northwest and Central India, thereby leading to development of heat wave conditions over parts of Rajasthan around 26th April.

Salient Advisories

- As strong winds speed reaching 25-35kmph gusting to 45 kmph with moderate to rough sea conditions are very likely along and off **West Bengal Odisha** coasts on 20th and wind speed reaching 40-50 kmph with moderate to rough sea conditions on 21st April, fishermen are advised to be cautious while venturing in to the sea along & off these coasts. Based on the forecast generated by INCOIS, moderate to rough sea conditions are very likely to prevail along & off the **West coast of Andaman & Nicobar Islands** on 22nd & 23rd April and moderate to rough sea conditions are very likely to prevail along the **West coast of India** and rough to very rough over southern parts of West Coast and Lakshadweep area in the morning hours on 21st April, fishermen are advised to be cautious while venturing into the Sea along & off these areas.
- As rain is likely at most places over **Jammu & Kashmir, Himachal Pradesh** and **Uttarakhand** on 20th, along with heavy rain very likely at isolated places over **Jammu & Kashmir** on 20th April, rain/thundershowers would occur at many places over **Sub-Himalayan West Bengal & Sikkim** from 20th to 22nd April, over Arunachal Pradesh from 20th to 22nd, over **Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura** on 20th and 21st, along with heavy rain very likely at isolated places over south Assam & Meghalaya and Mizoram & Tripura on 20th and 21st April, avoid irrigation, intercultural operation and

application of plant protection measures and fertilizers to the standing crops. Keep harvested crops at safer places.

- As thunderstorm accompanied with squall and hail very likely at isolated places over **Jammu & Kashmir, Himachal Pradesh** and **Uttarakhand** on 20th, over **Sub Himalayan West Bengal & Sikkim** on 21st and 22nd April, it is advised to use hail net for orchard crops to protect from mechanical damage. 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.
- As thunderstorm accompanied with gusty winds likely at isolated places over **Uttar Pradesh, north Rajasthan** on 20th April, over **Assam & Meghalaya, Manipur, Mizoram & Tripura** on 20th and 21st, over **Telangana** on 20th, 22nd and 24th, over **Karnataka, north Coastal Andhra Pradesh** on 20th, over **Tamilnadu** on 20th and 22nd, over **Kerala** on 20th, 21st and 22nd, over **Interior Karnataka** on 22nd April, provide support to banana, papaya, young fruit plants and vegetables to avoid lodging. Undertake propping up in sugarcane.
- As thunderstorm accompanied with squall very likely at isolated places over **Punjab, Haryana, Chandigarh & Delhi** on 20th April, over **Bihar** on 20th, over **Jharkhand** and **Gangetic West Bengal** on 21st, thunderstorm accompanied with gusty winds very likely at isolated places over **West Bengal & Sikkim** and **Jharkhand** on 20th and over **Odisha** on 20th & 21st April, 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 safer places.
- As heat wave conditions very likely to prevail in some parts of **Jammu & Kashmir, Himachal Pradesh** and **Uttarakhand** on 23rd and 24th April, heat wave conditions very likely in one or two pockets over **Vidarbha** on 20th April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
- In **Vidarbha**, to reduce fruit drop in orange and sweet orange due to prevailing high temperature, spray Potassium Nitrate (10 g/liter of water) on pea sized fruits of mandarin orange and spray of NAA @ 2 g + Urea 1 kg per 100 liters of water in sweet orange. Spray may be repeated after 15 days. Apply frequent/adequate irrigation along with mulching in orange orchards.

Detailed Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rainfall occurred in Anantnag, Baramulla, Doda, Ganderbal, Kulgam, Kupwara and Ramban districts of Jammu & Kashmir, Chamba and Kullu districts of Himachal Pradesh, Nainital district of Uttarakhand, Agra district of West Uttar Pradesh and Bharatpur district of East Rajasthan during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with squall and hail very likely at isolated places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand on 20th, thunderstorm accompanied with squall very likely at isolated places over Punjab, Haryana, Chandigarh & Delhi on 20th April, it is advised to use hail net for orchard crops in Jammu & Kashmir and Himachal Pradesh to protect from mechanical damage. 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.
 - As thunderstorm accompanied with gusty winds likely at isolated places over Uttar Pradesh, north Rajasthan on 20th April, provide support to banana, papaya, young fruit plants and vegetables to avoid lodging. Undertake propping up in sugarcane.
 - As rain is likely at most places over Jammu & Kashmir, Himachal Pradesh and Uttarakhand on 20th, along

with heavy rain very likely at isolated places over Jammu & Kashmir on 20th April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested crops at safer places.

- As heat wave conditions very likely to prevail in some parts of Jammu & Kashmir, Himachal Pradesh and Uttarakhand on 23rd and 24th April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.

- **Jammu & Kashmir:**

- In Sub Tropical Zone, continue land preparation for sowing of moong and mash. Continue harvesting and threshing of wheat, mustard and lentil crops after current spells of rain. Keep harvested produce at safer places.
- In Intermediate Zone, undertake sowing of maize, okra and French bean and transplanting of cucurbits and vegetables after heavy rains.
- Continue transplanting of tomato, brinjal, chilli, sweet pepper in well prepared land in clear weather in Valley Temperate Zone.
- Continue preparation of trenches and polyhouses for raising seedlings of vegetables in Cold Arid Zone. Continue sowing of cucurbit seeds in poly bags for early nursery raising inside polyhouses.

- **Uttarakhand:**

- In Sub Humid Sub Tropic Zone, continue harvesting of chilli and brinjal in clear weather. Keep harvested produce at safe place.
- In mid and high hills of Bhabar and Tarai Zone, continue sowing of barnyard millet and French bean in clear weather. Continue transplanting of brinjal, chilli and capsicum in valley.
- In Hill Zone, undertake harvesting of matured mustard and barley in clear weather and keep at safe place.

- **Himachal Pradesh:**

- In Sub-Montane and Low Hill SubTropical Zone, continue sowing of sunflower in low and mid-hill areas. Continue sowing of green gram and black gram. Continue sowing of spinach, coriander and fenugreek. Continue nursery preparation of summer vegetables, raising of seedlings of cucurbits in polythene bags in poly house in clear weather.
- In Mid Hills Sub Humid Zone, undertake transplanting of summer vegetables like tomato, capsicum, gourd, chilli etc. in the well prepared fields and sowing of bhindi, arvi etc. in clear weather.
- In High Hill Temperate Dry Zone, sowing of peas may be done by using 250 kg seed/ha. Complete the work of putting dung and chemical fertilizers and make the beds in orchard after current spells of rain.

- **Punjab, Haryana & Delhi:**

- In Western Zone of Punjab, undertake sowing of Bt. cotton and desi cotton. Complete harvesting of wheat. Apply irrigation in vegetables.
- In Western Plain Zone of Punjab, continue transplanting of chilli. Continue harvesting of matured wheat in clear weather. Complete harvesting of matured mustard. Continue land preparation for sowing of cotton (recommended varieties viz. F2228, LH 2108 & LH 2076 or Bt hybrids like RCH 650 BG II, NCS 855 BG II and Ankur 3028 BG II or non-Bt hybrids- LHH 144).
- In Undulating Plain Zone of Punjab, continue harvesting of wheat and linseed. Continue transplanting of cucurbits. Apply irrigation in sugarcane, vegetables and pulses.
- In Central Plain Zone of Punjab, complete sowing of summer moong.
- In Western Zone of Haryana, continue harvesting of wheat and barley. Undertake land preparation for sowing of cotton. Apply irrigation in sugarcane and vegetable crops. In Eastern Zone of Haryana, continue harvesting of matured wheat and harvesting of matured canes of sugarcane.
- In Delhi, in present weather condition, harvesting of timely sown wheat crop is advised. Keep harvested produce at safe place. Continue sowing of green gram (variety: Pusa Visal, Pusa Ratna, Pusa 5931, Pusa Baisakhi, PDM-11, SML-32, SML-668, Samrat). Continue direct sowing of french bean, amaranthus, vegetable lobia, lady finger, bottle gourd, cucumber, ridge gourd and summer radish.

- **Uttar Pradesh:**

- In Allahabad district of Central Plain Zone, continue harvesting of matured wheat. Apply irrigation in vegetables.
- In Eastern Plain Zone, continue harvesting of matured wheat. Apply irrigation in vegetables.
- In Varanasi district of Central Plain Zone, continue intercultural operations in cucurbit crops. Continue harvesting of matured barley and wheat. Continue sowing of okra.
- In Central Plain Zone, to control yellow mosaic in mung, lobia and urd, Spray 1 litre metasytox or Rogor dissolved in 1000 litre water.

- **Rajasthan:**

- In Sub Humid Southern Plain and Aravalli Hill Zone, complete harvesting of matured wheat and barley. Apply irrigation in summer groundnut and vegetables.

- In Irrigated North Western Plain Zone, apply irrigation in sugarcane and moong. Continue planting of cotton.
- In Bikaner district of Arid Western Plain Zone, continue harvesting of late sown wheat. In Jodhpur district undertake land preparation for sowing of cotton.
- In Flood Prone Eastern Plain Zone, continue harvesting of matured wheat. Continue deep ploughing of field to destroy soil borne pests.
- In Semi Arid Eastern Plain Zone, continue harvesting of wheat and barley. Apply irrigation in groundnut and vegetables.
- In Flood Prone Eastern Plain Zone, for leaf curl and mosaic disease affected chilli crop uproot & burn affected plants to check the spread of disease and spray Dimethoate 30 EC @ 1.0 ml per litre water.
- **Animal Husbandry**
 - In Jammu & Kashmir, add calcium supplement in the diet of dairy animals and heifers especially fed rice straw these days to prevent calcium deficiency and intestinal blockage. Sheeps and goats need to be vaccinated against Sheep and Goat pox.
 - In Western Zone of Punjab, give special care to new born calves as day temperature is rising. Deworming should be done in calves regularly. Vaccinate animals against FMD.
 - In Rajasthan, infection like TPR and Pox in sheep and goats and CRD and Ranikhet in poultry birds may occur due to present weather conditions, undertake proper vaccination of livestock and poultry.
- **Apiculture:**
 - In Jammu & Kashmir, remove winter packing of colonies. Clean the hives and dust with sulphur @ 1 g/frame.

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

- **Realised Rainfall:** Rainfall occurred in East Singhbhum and Saraikela districts of Jharkhand, Balasore, Bhadrak, Gajapati, Keonjhar, Khurda, Koraput, Mayurbhanj and Nayagarh districts of Odisha, Bankura, East Midnapore, Kolkata, Murshidabad and West Midnapore districts of Gangetic West Bengal and Cooch Behar, Darjeeling, East Sikkim, Jalpaiguri, North Sikkim, South Sikkim and West Sikkim districts of Sub-Himalayan West Bengal & Sikkim during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with squall and hail very likely at isolated places over Sub Himalayan West Bengal & Sikkim on 21st and 22nd April, it is advised to use hail net for orchard crops to protect from mechanical damage. Provide support to young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - As thunderstorm accompanied with squall very likely at isolated places over Bihar on 20th, over Jharkhand and Gangetic West Bengal on 21st, thunderstorm accompanied with gusty winds very likely at isolated places over West Bengal & Sikkim and Jharkhand on 20th and over Odisha on 20th & 21st April, 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 strong winds speed reaching 25-35kmph gusting to 45 kmph with moderate to rough sea conditions are very likely along and off West Bengal Odisha coasts on 20th and wind speed reaching 40-50 kmph with moderate to rough sea conditions on 21st April, fishermen are advised to be cautious while venturing in to the sea along & off these coasts. Based on the forecast generated by INCOIS, moderate to rough sea conditions are very likely to prevail along & off the West coast of Andaman & Nicobar Islands on 21st and rough to very rough sea conditions on 23rd April, fishermen are advised to be cautious while venturing into the Sea along & off these areas.
 - **Odisha:**
 - In Eastern Ghat High Land Zone, go for summer ploughing utilising the realised rainfall. Undertake transplanting of vegetables during late afternoon hours to avoid high temperature. Undertake harvesting of ginger & turmeric.
 - In West Central Table Land Zone, due to increase in temperature, there are chances of stem borer attack in paddy, apply Friponil/Triaqzophos @ 2 ml/liter of water if pest population is beyond ETL of the pest. Prevailing temperature favours thrips infestation in groundnut. Spray 400 ml Dimethoate or 50 ml Imidachloprid in 200 litre water per acre. Spray 2 ml Chloropyriphos in 1 litre water for controlling white ant attack.
 - In Eastern Ghat High Land Zone, maintain standing water up to 5cm summer rice crop at PI stage. During fruiting stage of mango, spray Naphthalene Acetic Acid (NAA) 40 mg to decrease fruit dropping. Increased temperature may favour the egg laying of stem borer in rice in the main field. To attract the butterflies, place 4 Pheromone Traps/acre, collect the adults and destroy them by burning or by burying them under soil.
 - In Northeastern Coastal Plain Zone, in rice maintain water depth upto the base of the crop followed by weeding when the crop is around 3-4 leaf stage. Continue harvesting of late sown mustard and rapeseed. High

diurnal temperature range may favour the infestation of blast in main field. Farmers are recommended to spray tricyclazole @ 1 g/litre of water. Present weather is conducive for the infestation of alternaria blight in tomato. Farmers are advised to spray 3 g Dithane-M-45 (Mancozeb) in 1 litre water.

▪ **Bihar:**

- In South Bihar Alluvial Zone, at present most of the mango fruits are at pea stage, it is advised to apply irrigation around mango trees to prevent fruit drop and application of Acephate @ 0.5 gm mixed with Planofix @1.0 ml per 4 litres of water. In view of mainly dry weather conditions, provide irrigation in standing maize, onion and vegetables crops as per requirement.
- In North West Alluvial Plain Zone, continue sowing of summer maize varieties such as Suwan, Deoki, Ganga 11, Shaktiman-1, 2, 3, 4. Continue sowing of green gram and black gram. Undertake sowing of vegetables like lady's finger, pumpkin, cucumber, sponge gourd *etc.*
- In North East Alluvial Zone, continue sowing of summer vegetables such as okra, pumpkin, cucumber, sponge gourd ridge gourd and bitter gourd.

▪ **Jharkhand:**

- In Western Plateau Zone, complete harvesting of wheat crop and keep it at safer places. Undertake intercultural operations in summer moong. Maintain the water level in transplanted rice and broadcast urea after 25-30 days of transplanting. Irrigate the fruit bearing trees of mango and litchi at regular interval. Spray Planofix @ 5 ml per 10 litre of water to check dropping of tiny fruits in litchi plant.
- In South Eastern Plateau Zone, farmers may start sowing of summer green gram to utilize available soil moisture. Select improved variety SML- 668 at a seed rate of 12 kg per acre. Before sowing, seed must be treated with Rhizobium culture. Inter-cultural operation may be done to conserve moisture for a longer period in crop. Farmers having assured irrigation may undertake nursery sowing/transplanting of vegetables like cauliflower, cabbage, brinjal, chilli *etc.*
- In the prevailing weather, there is a chance of attack of leaf spot disease in cabbage and cauliflower in Western Plateau Zone. To control the disease, spray fungicide Blitox-50 @ 3 g per litre of water. Spray bio-insecticide like Halt, Delfin or Biolep @ 1.5 g/litre of water in brinjal and bhindi against fruit borer and in Cauliflower and Cabbage against white fly insect.

▪ **West Bengal:**

- As rain/thundershowers would occur at many places over Sub-Himalayan West Bengal & Sikkim from 20th to 22nd April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops. Keep harvested mustard and lentil crops at safer places.
- In the New Alluvial Zone, prepare seed bed for planting jute. Undertake sowing of green gram.
- In the Hill Zone, continue planting of healthy rhizomes of ginger and turmeric. Avoid irrigation to wheat crop. Ensure proper drainage in the maize field. Carry out transplanting of round chilli in the raised beds and provide proper drainage.
- In the Coastal saline Zone, continue harvesting of early transplanted Boro paddy @ 80% of maturity to avoid shattering due to Norwesters. Carry out harvesting of mature sunflower heads after current spells of rain.
- In the Terai Zone, avoid irrigating rice field as light rainfall has been forecast. Keep 3-4 cm of water level in Boro paddy field.
- In the Old Alluvial Zone, undertake planting of turmeric rhizomes.
- In Old Alluvial Zone, to control rice Stem borer at tillering stage, install pheromone traps @ 5traps/bigha for trapping adult moth of rice stem borer after current spells of rain.
- In the Coastal Saline Zone, to prevent BPH attack in late transplanted Boro paddy, stop irrigation; stir plants at every 6th row for better penetration of sunlight and spray Imidachlorpid @ 3ml/10 litres water at the base of plants. Spray Spinosad @ 1.5ml or Novaduran @ 1ml per liter of water during late afternoon hours against spodopteran pest attack in mung at pod development stage on a non rainy day.

▪ **Andaman & Nicobar Islands:**

- In Andaman Islands, irrigate vegetable crops during evening hours and do mulching to conserve soil moisture as the weather is expected to be dry. Apply bio-control agents like Trichoderma Viridi or Pseudomonas Fluorescence @ 2.5 kg/ha to control bacterial wilt in solanaceous vegetables.
- In Nicobar Islands, make basin around coconut and Arecanut and mulch with crop residue to conserve soil moisture.

• **Animal Husbandry**

- In South Bihar Alluvial Zone, farmers are advised to vaccinate the animals to protect from foot and mouth disease, bovine ephemeral fever (aadhaya). Give clean drinking water and keep them in shed and airy places. Vaccinate the poultry to protect from ranikhet, gambora (IBD) and fowl pox diseases.
- In Western Plateau Zone of Jharkhand, high day temperature favours the attack of Heat stroke in cattle. Hence, farmers are requested to provide plenty of drinking water for them and do not allow them to remain in sunlight during intense heat (during noon). If heat stroke symptoms are noticed, immediate action should be taken like bathing of the animals with cold water, ice cube may be placed on their head and nose and in

extreme case the medicine Avil must be injected (10 ml. in adult, 5 ml. in calf and 2 ml. in goat).

- In Andaman & Nicobar Islands, Poultry birds should be provided with di-calcium phosphate or grit with feed for continuation of egg production and growth.
- **Fisheries**
- In the Old Alluvial Zone of West Bengal, for dry pond or new pond, cultivate the bottom of the pond with Dhaincha seed @ 1-1.5 kg /bigha area for 30-45 days and remove aquatic weed from pond body.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except Dibang Valley and East Kameng, all districts of Assam except Dhemaji, Karbi Anglong, N. C. Hills and Udalgiri, all districts of Meghalaya except Jantia Hills and South Garo Hills, in Imphal East and Imphal West districts of Manipur, Dimapur, Kohima, Mon and Phek districts of Nagaland and North Tripura and West Tripura districts of Tripura during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As rain/thundershowers would occur at many places over Arunachal Pradesh from 20th to 22nd, over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 20th and 21st, along with heavy rain very likely at isolated places over south Assam & Meghalaya and Mizoram & Tripura on 20th and 21st April, avoid irrigation, intercultural operation and application of plant protection measures and fertilizers to the standing crops.
 - As thunderstorm accompanied with gusty winds very likely at isolated places over Assam & Meghalaya, Manipur, Mizoram & Tripura on 20th and 21st, provide support to banana, young fruit plants and vegetables to prevent the crops from lodging due to strong winds. Keep harvested produce at safe places.
 - **Assam & Meghalaya, Arunachal Pradesh:**
 - In Arunachal Pradesh, continue transplanting of seedlings of summer vegetables to main field from nursery. Continue sowing of leguminous crops like cowpea, French bean, soybean, etc. at 2-3 rows across the slope of Jhum field at desirable intervals or ratios with rice to prevent soil erosion and conserve moisture and fertility. Undertake sowing of large cardamom in primary nursery bed. Continue harvesting of ginger, turmeric, potato, cabbage and cauliflower in clear weather.
 - In Meghalaya, continue sowing of cucurbits like cucumber, pumpkin, bottle gourd, ash gourd, squash, French bean and cowpea. Undertake land preparation and sowing of maize varieties Vijay Composite, DA 61A, RCM 75, 76, Vivek Hybrid 25, Vivek QPM-1, etc. Undertake land preparation and sowing of French bean and cowpea. Continue transplanting of chilli and brinjal crops after. Carry out harvesting of mustard/ rapeseed and pea/chickpea/lentil at the earliest as there is a chance of rain in 3-4 days.
 - In Lower Brahmaputra Valley Zone of Assam, continue land preparation and sowing of Bao rice varieties like Kekua Bao, Negheri Bao, Maguri, Panikekua, Panindra, Padmanath, etc. Continue planting/sowing of mesta, cowpea, pumpkin, sugarcane, maize and vegetables. Avoid irrigation to Early Ahu rice crop as rain is expected.
 - In Upper Brahmaputra Valley Zone, continue planting of ginger, banana and papaya. Provide drainage to maize, green gram and black gram crops.
 - In the Hill Zone of Assam, undertake direct sowing of vegetables like French bean, amaranthus, vegetable lobia, lady finger, bottle gourd, cucumber, ridge gourd and summer radish. Continue harvesting of mature crop of onion and maize.
 - In the Barak Valley Zone, continue planting of banana suckers and lemon.
 - In the Central Brahmaputra Valley Zone, continue land preparation and sowing of Bao rice (varieties - Maguri, Kekua Bao, Negheri Bao, Tara Bao etc.). Undertake nursery raising and planting of coconut.
 - In the North Bank Plain Zone, continue land preparation/sowing of Bau rice (varieties Maguri, Panikekua, Amona, Negheri etc.). Continue land preparation/sowing of direct seeded Ahu rice (varieties Banglami, Rangadoria, Ahu joha, Rasi etc.). Continue sowing of Varieties of Ridge gourd like Pusa Nasdar, AAUJ-1, AAUJ-2, AAUC-3 and sponge gourd like Pusa Chikni. Continue planting of HYV ginger (Nadia, Karkai, Maran, Jorhat, chaina etc.), turmeric (Shillong type, CL-24, PTS-38, PCT-13, VK-145, etc.) and banana. Continue land preparation for summer pulses like green gram and black gram. Undertake sowing of maize varieties like HYV (Ganga-5; High Starch etc) or composite maize (NLD, Dhawal, Naviot etc).
 - In the Barak Valley Zone, to control the attack thrips in chilli crop, spray Rogor or Dimethoate @ 1.5 ml per litre of water. Gandhi bug attack may be seen in Boro rice at milky stage. For effective control of the pest, apply 5% Malathoin dust @ 20 kg per ha of land after current spells of rain.
 - In the Hill Zone, spraying of Carbendazim @ 1.0 gram per litre when sky remains clear for incidences of powdery mildew disease in cucurbitaceous crops and late pea after current spells of rain.
 - **Nagaland, Mizoram, Manipur and Tripura:**
 - In Manipur, continue land preparation for sowing of colocasia, soybean, groundnut, black gram and red gram.
 - In Tripura, maintain 5 cm of water in the Boro rice field. Avoid stagnation of water in jhum rice, maize,

cowpea, urad and green gram fields.

- In Nagaland, provide irrigation to brinjal crop. Continue sowing of summer vegetables, ginger and turmeric.
- In Mizoram, continue harvesting potato and harvesting of mature fruits of capsicum, brinjal and chilli in clear weather. Continue sowing of rice (Jhum), maize (Jhum), ginger, turmeric, cowpea and okra crops.
- In Manipur, spray Dichlorovos 36 EC @ 0.5 ml/litre of water or Cypermethrin @ 2ml/litre of water for thrips/leaf minor in onion crop during bulb formation stage after current spells of rain.
- In Tripura, weather is conducive for fruit & shoot borer. To manage the attack, spray Cypermethrin @ 1.5 ml or Flubendiamide @ 0.5 ml per liter of water after current spells of rain.

- **Animal Husbandry**

- In Arunachal Pradesh, vaccinate cattle, mithun and pigs against FMD.
- In the Hill Zone and Lower Brahmaputra Valley Zone of Assam, vaccinate cattle against FMD, HS and BQ.
- In the North Bank Plain Zone, vaccinate poultry birds against Ranikhet disease.
- In Nagaland and Meghalaya, vaccinate poultry birds against coccidiosis and Ranikhet diseases. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicemia, Black Quarter.
- In Tripura, undertake de-worming calves in consultation with veterinary practitioner.

- **Fishery**

- In the Hill Zone of Assam, prepare the pond for new batch of fishes. Drain the water from the pond; dry up for 15-20 days and remove the upper layer of the bottom soil, then plough it and add lime. After 7-15 days of application of lime, add cow-dung and mix it properly. Add fertilizer 7-15 days after addition of cow-dung.
- In the Barak Valley Zone, for better profitability from the fish pond it is advisable to fish rearing culture silver barb (China Puthi) @ 15 % with Silver Carp 20%, Catla 15% , Rohu 15%, Grass Carp 10%, Mrigal 20% and common Carp 5%.
- In Meghalaya, feed common carp brooders with protein rich diet for proper maturation of eggs.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rainfall occurred in Gondia and Washim districts of Vidarbha. Weather remained mainly dry/dry over rest of the region during the week.

- **Advisories:**

- **Maharashtra:**

- As heat wave conditions very likely in one or two pockets over Vidarbha on 20th April, apply light and frequent irrigation to the standing crops to cope up with the excess evaporative demand due to heat wave conditions, undertake mulching with straw/polythene to conserve soil moisture.
- In South Konkan, continue harvesting of early maturing rice varieties. Remove water from the field at least 8-10 days before harvesting. Continue harvesting of matured groundnut. Dry the harvested pods in sunshine for 3 to 4 days. Continue harvesting of 80 to 85% matured mangoes in morning and evening hours. Keep the harvested fruits in shade to prevent spongy tissue disease and to protect from heat. In North Konkan, Maintain 5 cm water level in rice field. Harvest matured mango fruits before 10 A.M. in the morning and after 4 P.M. in the evening, harvest mango at 80 to 85% maturity. Keep the harvested fruits in shade to prevent spongy tissue disease and from heat.
- In Madhya Maharashtra, continue harvesting of matured groundnut. Due to rise in temperature, immature fruit drop of mango may occur to control it give irrigation to mango trees once in interval of 10 to 15 days. Apply second dose of Nitrogen fertilizer 100 kg per ha (227 kg Urea) to sugarcane crop. Irrigate at an interval of 8-10 days. Apply light irrigation to orchards and vegetables. Apply irrigation during evening hours. Also apply mulch to preserve soil moisture.
- In Marathwada, apply irrigation to summer maize, vegetables and mango orchard. Also apply mulch to preserve soil moisture. Continue April pruning in grape orchard.
- In Vidarbha, to reduce fruit drop in orange and sweet orange due to prevailing high temperature, spray Potassium Nitrate (10 g/liter of water) on pea sized fruits of mandarin orange (ambia bahar) and spray of NAA @ 2 g + Urea 1 kg per 100 liters of water In sweet orange. Spray may be repeated after 15 days. Apply frequent/adequate irrigation along with mulching in orange orchards. Maintain optimum water level (upto 5 cm) in transplanted rice field. Apply 3rd dose of Nitrogen @ 40 kg/ha to rice crop.

- **Gujarat:**

- In Middle Gujarat Zone, decrease the interval between two irrigations in pearl millet and vegetable crops. Continue harvesting of matured fruits of papaya.
- In Bhal and Coastal Zone, carryout harvesting of matured onion bolls and keep bolls at well aerated place. Cover papaya fruits using gunny bags and provide support to heavy fruiting plants. Apply irrigation in pomegranate, sapota, lemon and papaya orchards; pluck matured fruits regularly.
- In South Gujarat Heavy Rainfall Zone, maintain water level of 2-3 cm in transplanted rice field. Continue weeding in groundnut, rice, sugarcane and pulse crops. Continue planting of Elephant foot yam and Greater

Yam.

- In North Gujarat Zone, carry out intercultural operations in groundnut, pearl millet, green gram, cowpea and vegetable crops. Apply irrigation in standing crops at regular intervals. Regularly pluck matured vegetables viz. bhindi, tomato, cucumber, water melon and muskmelon.
- In South Saurashtra Zone, apply irrigation in sesame, green gram, black gram, groundnut at regular intervals. Apply regular irrigation to vegetable crops at flowering and fruiting stage. Undertake harvesting of matured onion bulbs and keep bulbs at well aerated place.
- In North Saurashtra Zone, apply irrigation in mango orchard. Apply light irrigation in groundnut at flowering stage.
- In North Gujarat Zone of Gujarat, forecasted weather condition is favorable for transition of leaf curl disease and sucking pest like mites and thrips; leaf curl disease is transmitted through the whitefly; to control it, spray Emidachloprid 17.8% S.L. @ 2.8 ml or Methylo-Dematone 25% E.C. @ 10 ml/10 litre of water. For control of mites and thrips, spray Carbofuran 3% granular @ 30 kg/ha.
- In North Saurashtra Zone, under present weather condition infestation of thrips and whiteflies is observed in green gram and black gram; to control, spray Acetamiprid 20 % SP@ 5.0 gm and 500 ml of 5 % neem seed extract or neem seed oil 50 ml with Profenofos @20 ml or Lemda Cyhelothrin @10 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 clean drinking water.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** Rainfall occurred in Anuppur district of East Madhya Pradesh and Bastar, Bemetara, Durg, Kabirdham, Kondagaon and Narayanpur districts of Chhattisgarh during the week. Weather remained mainly dry/dry over rest of the region during the week.
- **Advisories:**
 - **Madhya Pradesh:**
 - In Jhabua Hill Zone, apply irrigation in green gram, black gram and summer vegetables. Stop irrigation in mature crop of garlic crop and timely dig out the bulbs. Continue picking of matured okra, brinjal, green chilli, fenugreek, spinach and cucurbitaceous crops.
 - In Grid Zone, continue sowing of green gram. Undertake harvesting of matured wheat.
 - In Vindhya Plateau Zone, apply irrigation in green gram and black gram.
 - In Satpura Plateau Zone, maintain optimum moisture level in cucurbitaceous crops by applying light and frequent irrigation. Undertake mulching (plastic) to reduce evapotranspiration rate. Apply irrigation in vegetables and orchards. Continue harvesting of wheat. Food grains should be sundried well before storage.
 - Continue harvesting of wheat crop. Continue intercultural operations in vegetables in Central Narmada Valley Zone. Continue sowing of green gram and black gram.
 - Continue harvesting of matured wheat in Kymore Plateau and Satpura Hill Zone. Continue sowing of cucurbits, summer moong and urad.
 - Apply irrigation vegetables and orchards in Bundelkhand Zone. Undertake digging of pit for plantation of new orchards.
 - In Malwa Plateau Zone, complete harvesting of matured wheat and clean and dry the grains properly to recommended level of moisture content. Continue sowing of cucurbits, chilli, tomato and brinjal crops in the nursery. Complete sowing of green gram and black gram. Continue transplanting of young seedlings of tomato, chilli and cole crops.
 - In Nimar Valley Zone, spray Neem oil @ 5ml/litre of water for controlling of sucking pest in vegetable crops.
 - **Chhattisgarh:**
 - As thunderstorm accompanied with gusty wind very likely at isolated places over South Chhattisgarh on 21st April, provide support to banana, papaya, young fruit plants and vegetables to avoid lodging. Undertake propping up in sugarcane.
 - In North Hill Zone, apply irrigation in summer moong, rice, sugarcane and fruit (mango, Litchi) crops as per soil moisture condition. Dig out the tubers of onion and garlic from the fields. Apply need based irrigation and carry out intercultural operation in tomato, brinjal, chilli, okra and other vegetable crops.
 - In Bastar Plateau Zone, complete harvesting of matured *rabi* crops. Continue sowing of sweet corn (NS- 680 or Suger-75) crop. Continue planting of summer arvi and bunda.
 - In Chhattisgarh Plain Zone, apply irrigation in vegetable crops. Continue sowing of lady's finger, ridge gourd, sponge gourd, watermelon etc. Prepare basin around the trees of mango, pomegranate and lemon and provide irrigation regularly at 4-5 days interval.
- **Animal Husbandry**
- In Madhya Pradesh, provide mineral mixture and fresh and clean water to birds. Vaccinate the poultry birds to

- prevent Ranikhet disease. Cattle should be kept in shade and provide clean and fresh water two times a day.
- In Chhattisgarh, there is a chance of attack of heat stroke in cattle due to present weather condition; provide plenty of drinking water.

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

- **Realised Rainfall:** Rainfall occurred in Dakshin Kannada, Bagalkote, Bidar, Gadag, Haveri, Kalburgi, Vijayapura, Chikkamagaluru, Davangere, Kodagu, Mandya, Mysuru and Shivmogga districts of Karnataka, all districts of Kerala except Thrissur, in Coimbatore, Kanniyakumari, Madurai, Nilgiris, Tamanathpuram, Shivganga, Theni, Tirunelveli, Toothukodi and Virudhunagar districts of Tamilnadu and Vishakhapattanam district of Andhra Pradesh during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
 - As thunderstorm accompanied with gusty winds very likely at isolated places over Telangana on 20th, 22nd and 24th, over Karnataka, north Coastal Andhra Pradesh on 20th, over Tamilnadu on 20th and 22nd, over Kerala on 20th, 21st and 22nd, over Interior Karnataka on 22nd April, provide support to banana, young fruit plants and vegetables to avoid lodging. Undertake propping in sugarcane.
 - Based on the forecast generated by INCOIS, moderate to rough sea conditions are very likely to prevail along the West coast of India and rough to very rough over southern parts of West Coast and Lakshadweep area in the morning hours. Fishermen are advised to be cautious while venturing into the Sea along & off these areas.
 - **Kerala:**
 - In the Problem Area Zone, provide shade to pepper, nutmeg and vegetable crops. Continue planting of coconut seedlings. There is a chance of quick wilt disease due to high relative humidity in pepper. Farmers are advised to apply Trichoderma or pseudomonas culture in soil or 1% Bordeaux mixture can be sprayed on the leaves and small branches on a non rainy day.
 - In the High Altitude Zone, undertake planting of vegetables like Bhindi, Bitter gourd, Amaranthus, etc. if irrigation facility is available.
 - In the Northern Zone, harvest mangoes before ripening. Protect black pepper plants from direct sunlight.
 - In the Southern Zone, provide shade to young rubber plants Do not start tapping before the young leaves get mature. Apply lime on the trunks in young rubber trees.
 - In the Southern Zone, spray Pseudomonas Fluorescens @ 2.5 kg/ha to eliminate rice bugs from rice fields at grain filling stage. For aphid attack in bhindi, cowpea, brinjal etc. spray Beauveria bassiana. Apply Indofil M.45 @ 2g per litre of water against downy mildew in cucurbits on a non rainy day.
 - In the Problem Area Zone, for sucking pests, apply Neem oil emulsion @ 65 ml/litre of water in cow pea and @ 25ml/ litre of water in cucurbits on a non rainy day. Spray Sulfex 2 g or Trichoderma 2 g per litre of water against powdery mildew in cucurbitaceous vegetables on a non rainy day.
 - In the Central Zone, for rice bug at milky stage in the paddy crop, apply neem based pesticides @ 3 ml per one liter of water either before 9 am or after 3 pm on a non rainy day.
 - In the High Altitude Zone, spray 2.0 g Pseudomonas in one litre of water at weekly intervals as a prophylactic measure to control blast and sheath rot diseases in rice at panicle in initiation stage on a non rainy day.
 - **Andhra Pradesh:**
 - In the Southern Zone, undertake sowing of groundnut crop after seed treatment with Imidachloprid 600 F.S. @ 2 ml + 4 ml water per kg of seeds.
 - In the Krishna Godavari Zone, maintain 5cm water from PI to grain hardening stage in paddy crop. Crop should not face water stress at panicle initiation, flowering and milk stages. Continue harvesting sorghum and rice-fallow maize crops.
 - In the North Coastal Zone, Spray Propiconazole @ 1.0 ml/litre for whip smut and Chloropyriphos @ 2.5 ml/litre for early shoot borer in sugarcane crop at formative stage.
 - In the Scarce Rainfall Zone, for the control of leaf folder/stem borer in paddy, spray Chloropyriphos @ 2.5 ml/litre. For the control of fruit fly in mango orchards, farmers are advised to hang plastic plates containing 2ml/litre of Methyl Uginol mixed with 3.0g of Carbofuran granules.
 - In the Krishna Godavari Zone, spray Monocrotophos @ 320 ml or Dimethoate @ 400 ml/acre for sucking pests in green gram, black gram, groundnut and sesame crops.
 - In the Southern Zone, spray azadirachtin @ 2-3 ml per litre of water for fruit borer in mango.
 - **Telangana:**
 - In North Telangana Zone, give irrigation to maize crop at before flowering, flowering & milk stages and to sesamum crop immediately after sowing and during flowering stage. Carry out harvesting of groundnut when 70-80% leaves and stems turn yellow.
 - In South Telangana Zone, prevailing dry weather conditions are favorable for the incidence of fruit fly in mango. To trap the flies in the container, hang the plastic containers with mixture of Methyl Eugenol @ 2 ml + Carbofuran 3G @ 3g per litre of water in the orchard. To control sucking pests in vegetables, spray Imidachloprid @ 0.3 ml or Thiomethaxam @ 0.3 g per litre of water.

- In North Telangana Zone, to control white fly in green gram and black gram, spray Monocrotophos @ 1.6 ml or Triazophos @ 1.5 ml or Acetamiprid @ 0.2 g per litre of water.
- **Tamil Nadu:**
 - In the Cauvery Delta Zone, continue harvesting of rice fallow black gram. Carry out sowing of black gram in chitrai pattam under summer irrigated conditions. Provide irrigation to sesame, sugarcane and rice fallow cotton crops.
 - In the North Western Zone, provide irrigation to agricultural and horticultural crop once in 5 days.
 - In the Western Zone, provide staking to five months or older banana plants. Irrigate coconut and banana plantations according to the soil moisture.
 - In the high rainfall zone, provide mulching to clove and cardamom fields.
 - In the Western Zone, prevailing dry weather is favorable for spiraling white fly in tapioca. Monitor the crop carefully and keep yellow sticky trap in 5 to 6 places / ac or spray Profenophos @ 2ml or Acephate @ 2g per liter of water.
 - In the North Eastern Zone, spray 2 g Carbendazim + Thiram + Mancozeb (1:1:1) mixture in one litre of water or spray NSKE 5% at 50% flowering stage to prevent grain discolouration in rice.
 - In the Southern Zone, due to the prevailing weather conditions, there is incidence of Wilt disease in Pepper. To control and prevent this disease, farmers are advised to soil drench each vine with 10gm of Trichoderma Viride, 10gm of Pseudomonas and 10gm of Bacillus per litre of water.
 - In the South Zone, prevailing weather condition is favourable for leaf folder incidence in paddy at milking stage. Spray Phosalon 35 EC 1500 ml / ha or Phosphamidon 40 SL 1250 ml/ha.
 - In the High Rainfall Zone, apply of Indoxacarb @ 1 ml per litre of water for the management of pod borer in pulses.
- **Karnataka:**
 - In North Dry Zone, undertake pruning in grapes. Land should be ploughed and the crop residue should be incorporated in the soil. This facilitates in situ conservation of water during the pre-monsoon rains.
 - In Eastern Dry Zone, procure seeds of cowpea, sesamum, field bean, green gram and black gram for pre-monsoon season sowing. For soil moisture conservation in mango orchard, weeding and crop residue mulching is recommended.
 - In North Transition Zone, continue ploughing in harvested field to reduce the pest and weed incidence in next season. Continue harvesting of fully matured fruits of sapota, chikku and matured chilli.
 - In North East Transition Zone, continue earthing-up in sugarcane crop in order to protect the crop from early shoot borer infestation.
 - In Southern Transition Zone, continue deep ploughing in the fields where rain is received. Continue land preparation for sowing of ginger and turmeric.
 - In Southern Dry Zone, undertake land preparation for sowing of pre monsoon crops and keep inputs ready.
 - In Central Dry Zone, apply irrigation in horticulture crops as per need.
 - In Hill Zone, continue deep ploughing in harvested rice field, so that the soil pathogens will die and in turn it will help to reduce pest incidence for the next rice crop.
 - In Southern Dry Zone, to manage blast disease in rice, spray Carbendazim @ 1gm/ litre of water or Tricyclozoal @ 0.6 gm/litre of water on a non-rainy day; about 250-300 litre of spraying solution is required for one acre.
 - In Coastal Zone, install 12 Pheromone traps/hha in brinajl and okra crop fields to monitor shoot and fruit borer pests.
 - In North East Transition Zone, to manage tomato serpentine leaf miner infestation use neem based insecticide such as NSKE 5% @50 ml dissolved in 1 litre of water or spray Dimethoate @1.7 ml per liter of water on a non-rainy day.
 - In Hill Zone, for control of powdery mildew in mango, spray Carbendazim @1gm /litre of water or Hexaconazole @1g/litre of water on a non rainy day.
- **Animal Husbandry**
 - In the South Telangana Zone, prevailing weather conditions are congenial for the occurrence of Sheep pox in sheep and goat, Foot and mouth disease in cattle and Buffaloes. To prevent the diseases, vaccinate the animals. In poultry, prevailing weather conditions are congenial for the occurrence of Ranikhet disease in poultry. To prevent the diseases, vaccinate the birds. 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.
 - In the Northern Zone of Kerala, keep hygiene in cattle shed and surroundings to control summer mastitis in cattle. Boost the immunity of cattle by supplementing feeds with vitamins and minerals containing health tonics. Provide medication under the supervision of a Veterinary doctor.
 - In Karnataka, apply 4-6 inch thick hay thatch as a roofing material. Spray water on the floor and roof of shelter periodically during peak hot hours to reduce the heat load on animals. Maintain proper ventilation for

free circulation of air in the sheds. Provide clean drinking water to animals. Prepare silage and use silage during summer season when there is shortage of green fodder. Take up the cultivation of green fodder crops (maize, bajra and jowar).

The Agromet Products in this Bulletin are generated by Agrimet Division, weather forecast issued by NWFC, New Delhi and Agromet Advisories are prepared based on the DAAS Bulletins issued by different Agrometeorological Field Units.