



# *National Agromet Advisory Service Bulletin*

*Friday 13<sup>th</sup> July 2018*  
*(For the period 13<sup>th</sup> to 18<sup>th</sup> July 2018)*



*Issued by*  
*India Meteorological Department*

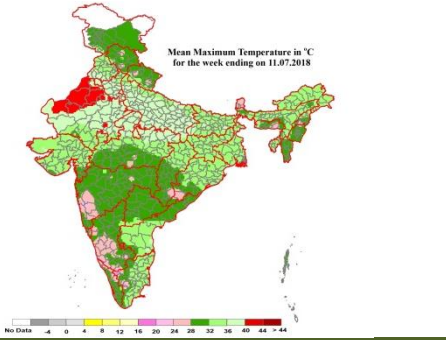
**Weblink For**

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

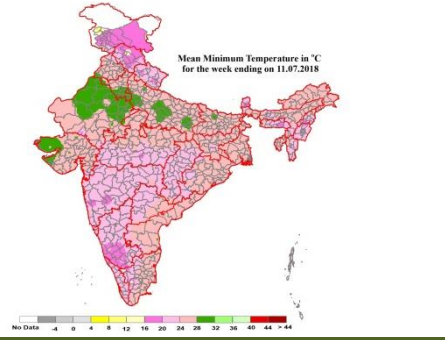
State Composite AAS Bulletin: <http://www.imdagrimet.gov.in/node/3544>

**Spatial distribution of weather parameters for the week ending on 11.07.2018**

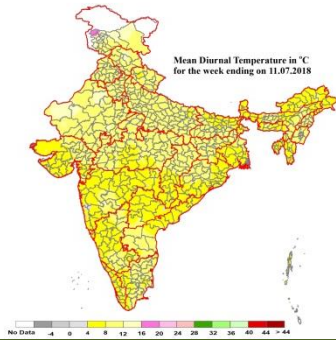
**Mean Maximum Temperature (°C) for the week ending on 11.07.2018**



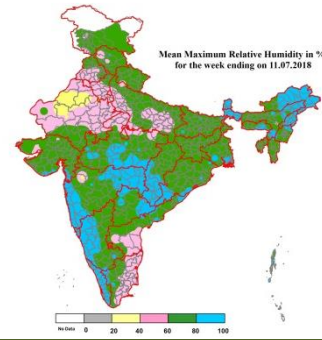
**Mean Minimum Temperature (°C) for the week ending on 11.07.2018**



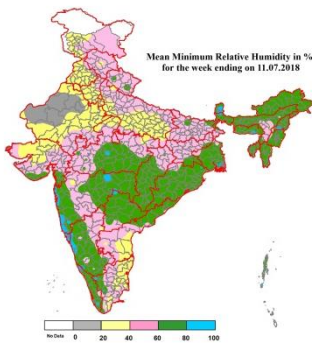
**Mean Diurnal Temperature Variation (°C) for the week ending on 11.07.2018**



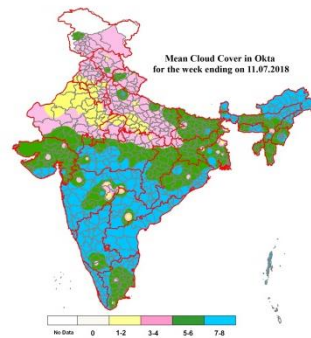
**Mean Maximum Relative Humidity (%) for the week ending on 11.07.2018**



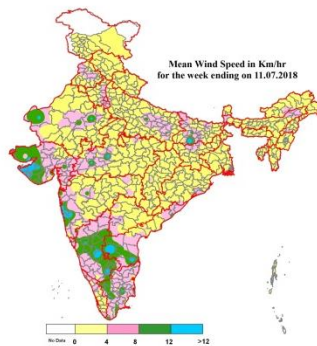
**Mean Minimum Relative Humidity (%) for the week ending on 11.07.2018**

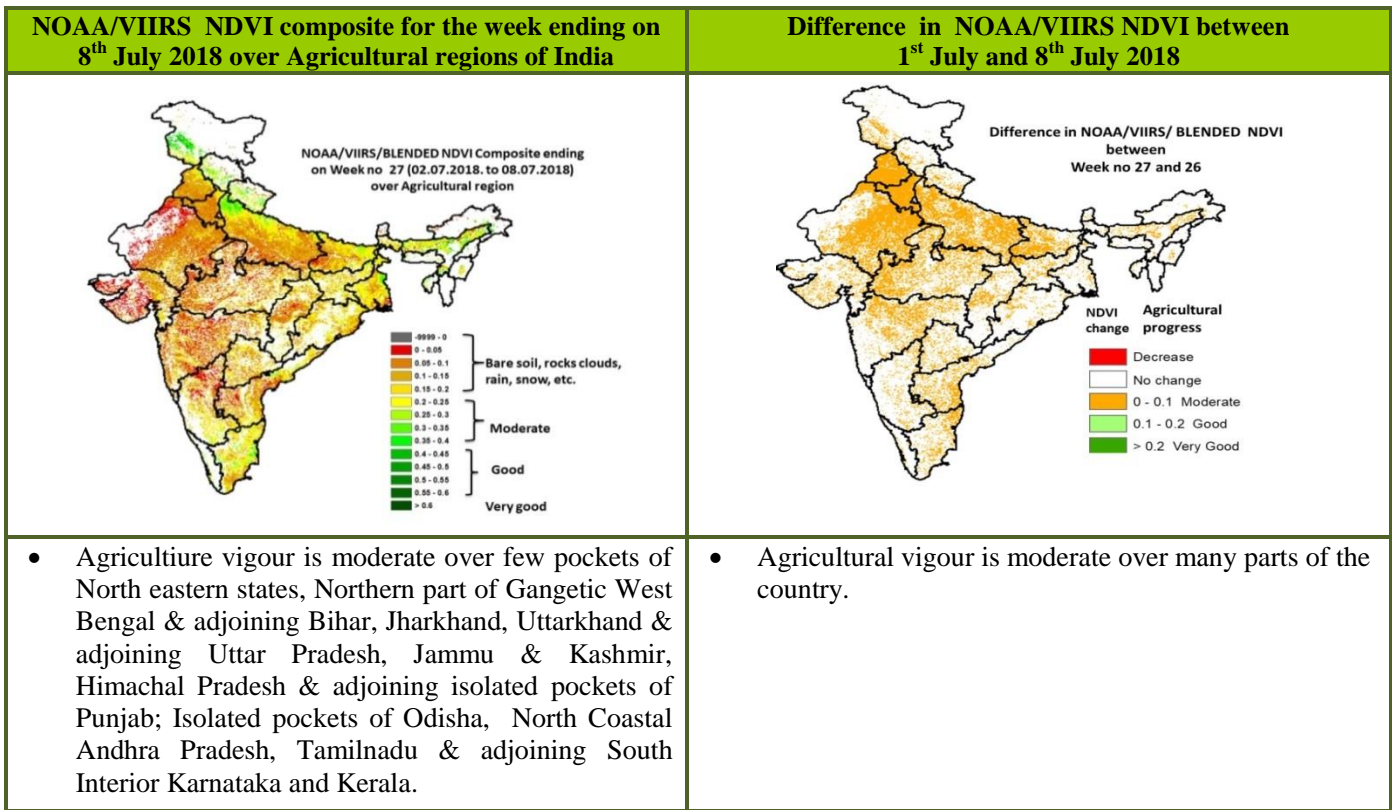


**Mean Cloud Cover (okta) for the week ending on 11.07.2018**

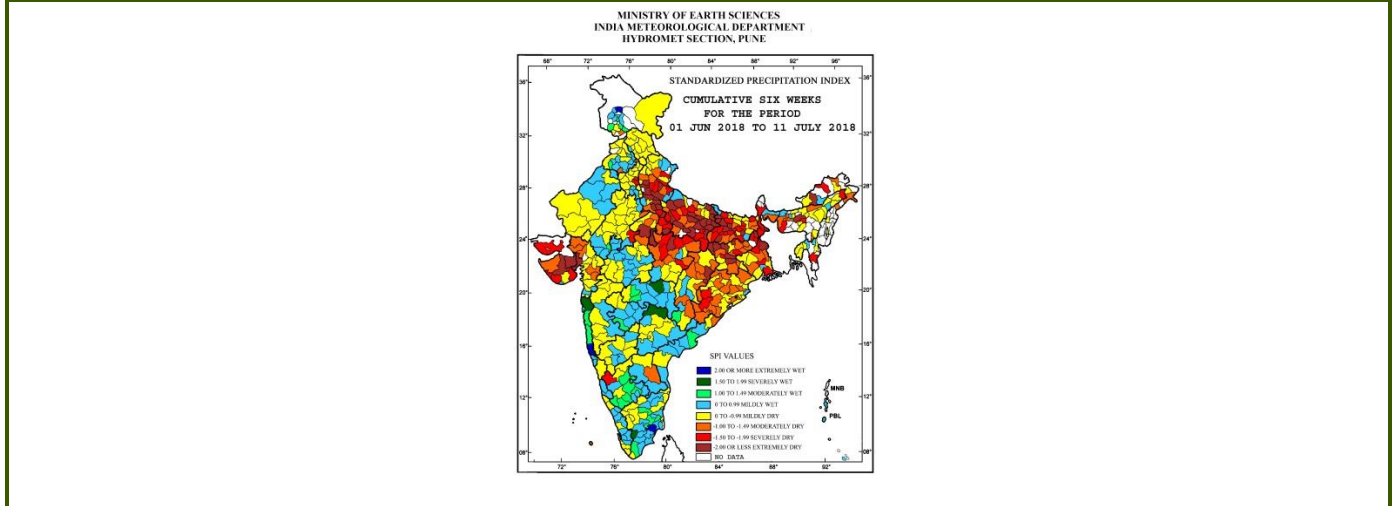


**Mean Wind Speed (km/hr) for the week ending on 11.07.2018**



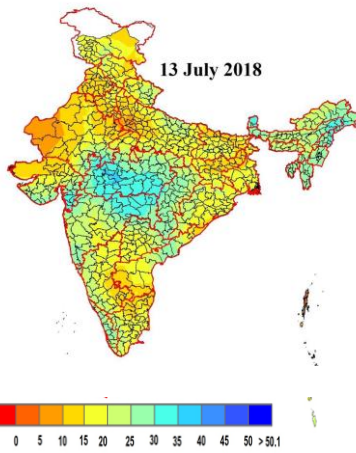


**Standardised Precipitation Index  
Cumulative 6 weeks for the period 1<sup>st</sup> June to 11<sup>th</sup> July 2018**

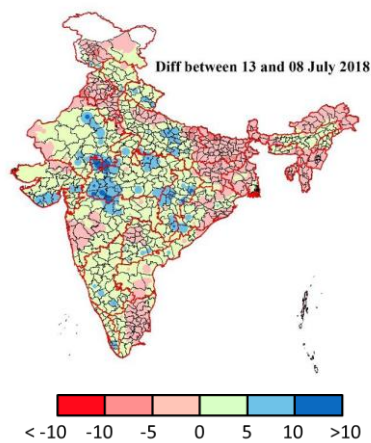
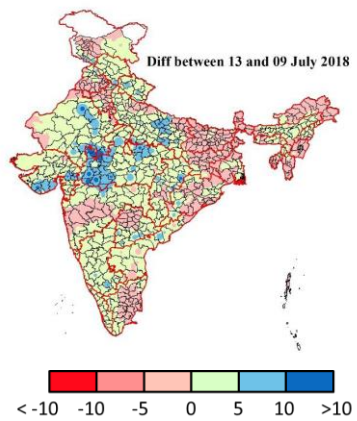
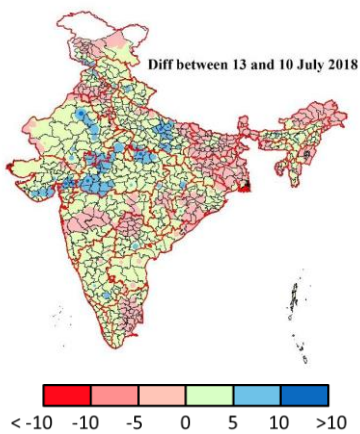
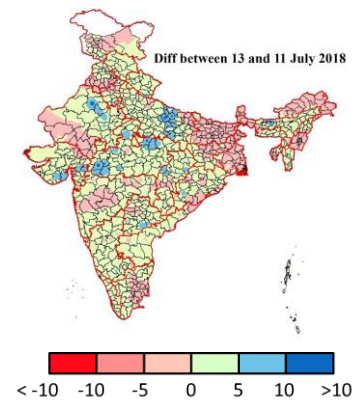
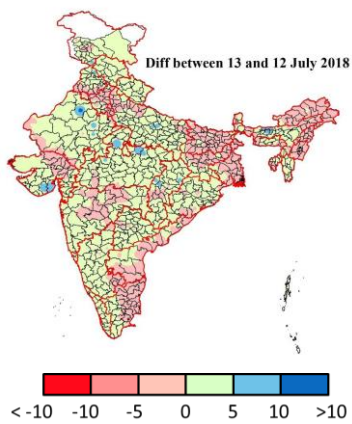


- Extremely/severely wet conditions experienced in few districts of Konkan & Goa; Bandipore district of Jammu & Kashmir; Nagpur district of Maharashtra; Adilabad district of Telangana; Pudukkottai, Theni districts of Tamil Nadu & Puducherry.
- Extremely/Severely dry conditions experienced in many districts of Bihar; Uttar Pradesh; Saurashtra, Kutch & Diu; few districts of Arunachal Pradesh; West Bengal; Jharkhand; Kamrup, Tinsukia, Kamrup Metro districts of Assam; West Garo Hills district of Meghalaya; Lunglei district of Mizoram; Bolangir, Kalahandi districts of Odisha; Almora, Udham Singh Nagar districts of Uttarakhand; Sonapat, Panipat districts of Haryana; Baran district of Rajasthan; Shivpuri, Chhatarpur, Damoh, Dindori, Panna, Rewa, Satna districts of Madhya Pradesh; Ahmedabad district of Gujarat Region; Raigarh district of Chhattisgarh; Shimoga district of Karnataka.
- Moderately dry conditions experienced in many districts of Delhi; few districts of Arunachal Pradesh; Assam; West Bengal; Odisha; Jharkhand; Gujarat Region; Chhattisgarh; Mon district of Nagaland; Bhabua, Gaya, Katihar, Nawada, Purnea, Samastipur districts of Bihar; Balrampur, Banda, Basti, Kannauj, Lucknow, Pratapgarh, Rae Bareilly, Agra, Bareilly, Bijnor, Jhansi, Muzaffarnagar districts of Uttar Pradesh; Panchkula district of Haryana; Garhwal Pauri district of Uttarakhand; Mansa district of Punjab; Udhampur district of Jammu & Kashmir; Dholpur district of Rajasthan; Bhind, Gwalior, Ashoknagar, Jabalpur, Katni, Narsinghpur, Sagar, Tikamgarh, Anuppur, Singrauli districts of Madhya Pradesh; Jamnagar district of Saurashtra, Kutch & Diu; Srikakulam, Cuddapah districts of Andhra Pradesh; Lakshadweep district of Lakshadweep.
- Rest of the country experienced moderately wet/mildly dry/mildly wet conditions.

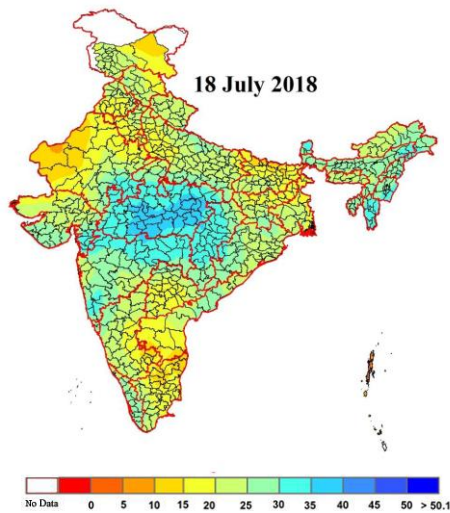
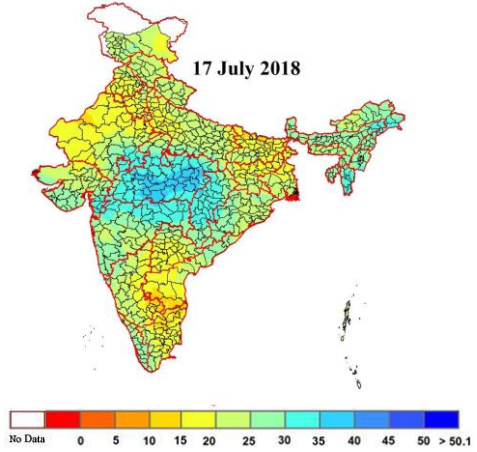
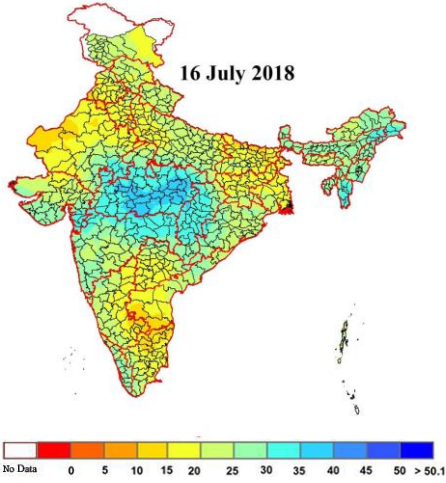
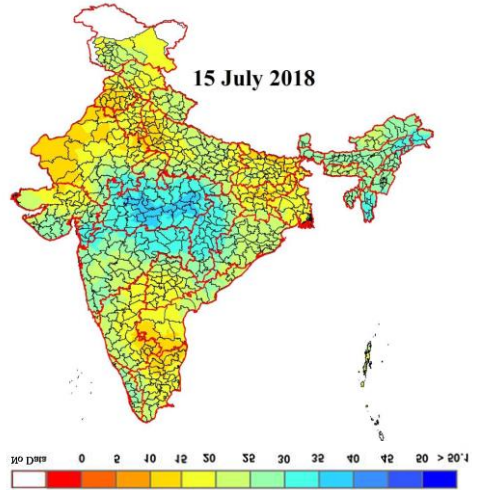
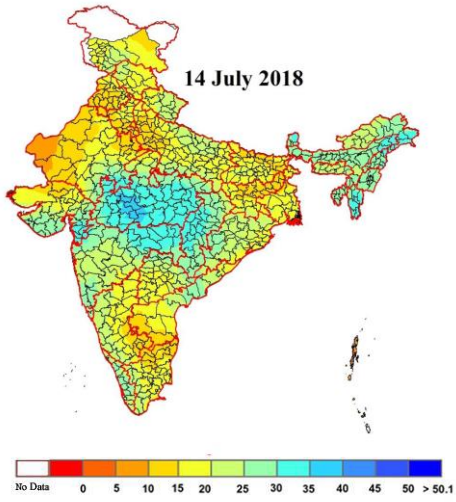
**Daily Soil Moisture (mm) for 13<sup>th</sup> July 2018 (ending at 0830 IST) for 60 cm depth**



**Difference of Soil Moisture (mm) for 60 cm depth**



**Forecasted Soil Moisture (mm) from 14<sup>th</sup> July to 18<sup>th</sup> July 2018 (ending at 0830 IST)  
for 60 cm depth**



## Weather Forecast for next 5 days valid upto 0830 hours of 18<sup>th</sup> July 2018

- Meteorological subdivision wise detailed 5 days rainfall forecast is given in Table below.
- No significant change in maximum temperatures over the country during next 3-4 days.

### 5 Day Rainfall Forecast (Mid day) 13<sup>th</sup> July 2018

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

- **13 July (Day1):** Heavy to very heavy rain with extremely heavy falls at isolated places very likely over Gujarat region; Heavy rain at a few places with very heavy rain at isolated places very likely over Konkan & Goa; heavy to very heavy rain at isolated places over Uttarakhand, East Rajasthan, East Madhya Pradesh, Chhattisgarh, Saurashtra, Madhya Maharashtra, Telangana, Coastal Karnataka, South Interior Karnataka and Kerala and heavy rain at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh, West Madhya Pradesh, Vidharbha, Odisha, Andaman & Nicobar Islands, Assam & Meghalaya, Coastal Andhra Pradesh,

North Interior Karnataka and Tamilnadu.

- **14 July (Day 2):** Heavy to very heavy rain with extremely heavy falls at isolated places very likely over Gujarat region; Heavy rain at a few places with very heavy rain at isolated places very likely over Konkan & Goa; heavy to very heavy rain at isolated places over East Madhya Pradesh, Chhattisgarh, Odisha, Saurashtra, Madhya Maharashtra, Telangana, Coastal Karnataka, South Interior Karnataka and Kerala and heavy rain at isolated places over Uttarakhand, West Madhya Pradesh, Vidarbha, Coastal Andhra Pradesh, North Interior Karnataka and Tamilnadu.
- **15 July (Day 3):** Heavy to very heavy rain at a few places with extremely heavy falls at isolated places very likely over Konkan & Goa; Heavy to very heavy rain with extremely heavy falls at isolated places very likely over Gujarat region; heavy to very heavy rain at isolated places over East Madhya Pradesh, Chhattisgarh, Saurashtra & Kutch, Madhya Maharashtra, Coastal Karnataka, South Interior Karnataka and Kerala and heavy rain at isolated places over Uttarakhand, West Madhya Pradesh, Vidarbha, Odisha and Telangana.
- **16 July (Day 4):** Heavy to very heavy rain at a few places with extremely heavy falls at isolated places likely over Konkan & Goa and Gujarat region; heavy rain at a few places with very heavy at isolated places over Saurashtra & Kutch and Madhya Maharashtra; heavy to very heavy rain at isolated places over East Madhya Pradesh, Vidarbha, Coastal & South Interior Karnataka and heavy rain at isolated places over East Rajasthan, West Madhya Pradesh, Chhattisgarh, Marathwada and Kerala.
- **17 July (Day 5):** Heavy to very heavy rain at a few places with extremely heavy falls at isolated places likely over Konkan & Goa; Heavy to very heavy rain with extremely heavy falls at isolated places very likely over Gujarat region; heavy rain at a few places with very heavy at isolated places over Saurashtra & Kutch and Madhya Maharashtra; heavy to very heavy rain at isolated places over East Rajasthan, East Madhya Pradesh, Vidarbha, Coastal & South Interior Karnataka and heavy rain at isolated places over West Madhya Pradesh, Chhattisgarh, Marathwada and Kerala.

#### Weather Outlook for subsequent 2 days from 18<sup>th</sup> to 20<sup>th</sup> July 2018

- Another low pressure area is likely to form over north Bay of Bengal & neighbourhood around 19th July.
- Widespread rainfall with heavy/ very heavy falls likely to continue along west coast and western parts of central India.
- Scattered to fairly widespread rainfall likely over remaining parts of the country outside northern plains and southeast peninsular India where isolated to scattered rainfall is likely.

#### Salient Advisories

- Utilising the realized and expected rainfall, continue sowing of red gram, green gram, groundnut, pearl millet, sorghum, maize & cluster bean in **East Rajasthan**. In **West Rajasthan**, continue sowing of pearl millet, cluster bean, moong and moth bean crops. Undertake transplanting of rice in **Himachal Pradesh** and **Uttarakhand**. In **East Uttar Pradesh**, continue transplanting of 20-25 old days seedling of rice. Continue sowing of maize, soybean and groundnut in **Madhya Pradesh**, undertake transplanting of rice and continue sowing of soybean, til, red gram, maize, groundnut in **Chhattisgarh**. Continue nursery sowing of rice in **Odisha**. Continue nursery sowing of *Aman* rice in **Gangetic West Bengal**. Complete sowing of maize, groundnut, soybean, pigeon pea, sesame, urad bean and moong in uplands and undertake field preparation and transplanting of rice in **Jharkhand**.
- Carry out transplanting of 21-25 days old kharif rice seedlings in **Manipur**. In **Coastal Karnataka**, continue transplanting of rice. Continue sowing of cow pea, groundnut, green gram and black gram in **South Interior Karnataka**. In **North Interior Karnataka**, continue sowing of soybean, green gram, black gram (DU-1, DBGV-5), red gram (TS-3R), groundnut (G 2-52, GPBD-4, GPBD -5 (rainfed), HD-86, TAG-24 (irrigated) and maize (Arjun, GH-0727). In **Coastal Andhra Pradesh**, undertake transplanting of rice in Srikakulam, Vizianagaram, East and West Godavari, Krishna and Guntur districts utilizing the realized and expected rainfall. Continue sowing of cotton, groundnut and red gram. Farmers of Kadapa, Kurnool, Ananthapuramu districts in **Rayalaseema** are advised to take up sowing of rainfed groundnut only after receipt of sufficient rainfall. In **Telangana**, continue sowing of rainfed crops like soybean, jowar, maize, redgram, green gram,

cotton etc. In **Tamil Nadu**, continue transplanting of *kuruvai* rice.

- In view of the heavy to very heavy rainfall at a few places with extremely heavy rain at isolated places very likely over **Konkan** and **Gujarat region** during the period, complete transplanting of rice in Konkan after the current spells of heavy rain. Undertake transplanting of rice in **South Gujarat** and sowing of cotton and groundnut in **middle Gujarat** after current spells of heavy rain. Provide adequate drainage in already sown crop fields and vegetables.
- In **Kerala**, due to continuous rain and cloudy condition, there is chance of leaf folder attack in paddy at tillering stage. Use 2CC trichogramma cards per acre. Cut the cards in to small pieces and fix in different parts of the field in plastic cups. If the attack is severe, spray Flubendiamide @ 1ml per 10 litre of water or Chlorantraniliprole @ 3ml per 10 litres of water after current spells of rain.

### *Detailed Agromet Advisories*

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

- **Realised Rainfall:** Rainfall occurred in all districts of Kerala, all districts of Coastal Karnataka, Belagavi and Bidar districts of North Interior Karnataka, Bangalore Rural, Chikamangaluru, Hassan, Kodagu, Mysuru and Shivamogga districts of South Interior Karnataka, all districts of Coastal Andhra Pradesh except Nellore, Prakasham and Vishakapatnam, all districts of Telangana except Jangaon and Y. Bhuvanagiri, Coimbatore and Nilgiris districts of Tamil Nadu and Puducherry during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most places over Kerala, South Interior Karnataka and Coastal Karnataka during the period, at most/many places over North Interior Karnataka during the period, over Telangana from 13<sup>th</sup> to 16<sup>th</sup>, at many places over Coastal Andhra Pradesh on 13<sup>th</sup> and 14<sup>th</sup>, along with heavy to very heavy rain at isolated places over Coastal Karnataka and South Interior Karnataka during the period, over Kerala from 13<sup>th</sup> to 15<sup>th</sup>, over Telangana on 13<sup>th</sup> and 14<sup>th</sup>, heavy rain at isolated places over Coastal Andhra Pradesh, North Interior Karnataka and Tamilnadu on 13<sup>th</sup> and 14<sup>th</sup>, over Telangana on 15<sup>th</sup>, over Kerala on 16<sup>th</sup> and 17<sup>th</sup> July, avoid 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 planting of brinjal, chilli, bhindi and bitter gourd during the month. Fix rain guard for the tapping panels for rubber trees. Provide proper drainage facility in coconut and arecanut. Provide support to banana plants.
    - To control downy mildew in cucurbits, spray combination fungicide Cymoxanil + Mancozeb @ 2g/ litre of water after current spells of rain. Spray clorpyrifos 2ml /litre of water against pseudostem weevil in four months old banana plants. Due to continuous rain and cloudy condition, there is a chance of leaf folder attack in paddy at tillering stage. Use 2CC trichogramma cards per acre. Cut the cards in to small pieces and fix in different parts of the field in plastic cups. If the attack is severe, spray Flubendiamide @ 1ml per 10 litre of water or Chlorantraniliprole @ 3ml per 10 litres of water after current spells of rain.
    - In Banana, if infestation of pseudostem weevil is noticed, spray 2.5 ml of Chlorpyrifos or 2 ml of Quinalphos per one litre of water in leaf axils and by inserting the nozzle through the boreholes made by the larvae. In Coffee plantation, leaf rust disease may become severe due to increase in relative humidity. Apply 0.5% Bordeaux mixture. Undertake plant protection methods after the forecasted spell of rainfall.
  - **Andhra Pradesh:**
    - In Coastal Andhra Pradesh, continue nursery sowing of paddy. Puddle and level the field properly 15 days before transplanting the seedlings. Transplanting can be undertaken in Srikakulam, Vizianagaram, East and West Godavari, Krishna and Guntur districts utilizing the realized and expected rainfall. Undertake direct sowing of rice in South Coastal Andhra Pradesh. Continue sowing of cotton, groundnut and red gram.
    - In Rayalaseema, undertake sowing of groundnut in Chittoor district. Sow redgram @ 7:1 or field bean @ 10:1 as intercrop with groundnut. Undertake sowing of redgram, castor, korra and bajra after necessary seed treatment. Farmers of Kadapa, Kurnool, Ananthapuramu districts are advised to take up sowing of rainfed groundnut only after receipt of sufficient rainfall. They are advised to treat the seed with Imidacloprid @ 2ml/kg and Tebuconazole @ 1g/kg of seed before sowing.
    - Carry out whorl application of Carbofuron 3 G granules @ 3 kg/acre for control of stem borer in maize. Present weather conditions are congenial for leaf folder and stem borer attack in paddy at nursery to tillering stage. To control, spray Cartap Hydro Chloride @ 2 g/litre of water after current spells of rain.



▪ **Telangana:**

- Complete sowing of rainfed crops like soybean, jowar, maize, black gram, green gram, cotton etc. Take-up nursery sowing of Tomato, Brinjal and Chilli. Take-up direct sowing of Gourds, Beans and Bhendi wherever irrigation facility is available. Take up rice nurseries of medium duration varieties duly treating with Carbendazim @ 1 g or Mancozeb @ 2.5 g per kg of seed. Take up the nurseries using Telangana Sona 15th July onwards.
- The prevailing weather conditions are congenial for incidence of sucking pests in vegetables. To control, spray Fipronil @ 2ml or Thiomethoxim @ 0.3g per litre of water after current spells of rain. The prevailing weather conditions may cause leaf blight in cotton crop. Spray Carbendazim + Mancozeb @ 2.5 g./litre of water after current spells of rain.

▪ **Tamil Nadu:**

- For kuruvai season transplanting of rice, apply 35 kg urea, 125 kg single super phosphate, 8.5 kg muriate of potash and 200 kg gypsum per acre as basal to the main field. Use rice seedlings at 18 to 22 days after sowing for transplanting in the main field. Before transplanting dip the root portion of the seedlings in biofertilizer slurry @ 1 kg each of Azospirillum and phosphobacteria or 2 kg of Azophos for 15 to 30 minutes. Adopt a spacing of 15 x 10 cm in conventional transplanting. In SRI, transplant 14 days old seedlings at 25 x 25 cm spacing using SRI marker. Provide support to banana plants and sugarcane. Provide proper drainage in turmeric field. Carry out planting of wind breaks such as Agathi/Castor around the small onion fields at a spacing of 6-8 feet to prevent drying of soil moisture content due to high wind speed.
- Occurrence of thrips is noticed in the kuruvai paddy nursery. To control, spray thiomethoxam @ 2 g/ 10 litre of water. To control the incidence of sucking pest in the vegetable crops, spray neem seed kernal extract 5%. Incidence of shoot and fruit borer is noticed in brinjal. To control this pest, remove the infested fruits and shoots and place pheromone traps in brinjal field followed by release of Trichogramma chilonis @ 2 cc/acre 3 times at 7 days interval

▪ **Karnataka:**

- In Coastal Karnataka, drain out excess water from standing crop fields. Continue transplanting of rice. Continue sowing of maize, cotton, turmeric and ginger after current spells of heavy rain.
- In South Interior Karnataka, undertake earthing up in red gram and castor to enable better availability of soil moisture to the crops and carry out intercultural operations in maize, red gram after current spells of rain. Continue nursery preparation for rice and ragi. Continue sowing of groundnut, red gram, ragi (direct sowing), castor, cotton, onion, maize, cowpea, green gram, black gram, horse gram, field bean, sesamum, jowar crops. Intercropping of groundnut + red gram and groundnut + castor in 8:2 proportion is suggested for good income.
- In North Interior Karnataka, in shallow black and red soils undertake sowing of bajra, sorghum, groundnut (spreading), sunflower, maize, chilli + desi cotton, desi cotton, pigeonpea, niger, sesamum, bajra + pigeonpea (2:1 rows) Navane/Savi + pigeonpea (2:1 rows) and in medium deep black soils (both kharif and rabi cropping areas) sowing of spreading groundnut, chilli+onion+ desi cotton. Sow the crops in rows across the slope to facilitate better conservation of moisture in the soil. To make efficient use of available soil and water resources and to get higher returns, in light and medium black soils, intercropping of bajra + groundnut (bunch) in 2:4 row proportion; bajra + red gram in 2:1 row proportion; groundnut (bunch) + red gram in 3:1 or 4:2 row proportion, red gram + sesamum in 1:2 or 2:4 row proportion is advised.
- In South Interior Karnataka, infestation of yellow mosaic virus disease is noticed in cowpea, black gram and green gram; spray Dimethoate 30EC @ 1.7 ml / Imidocloprid 0.50 ml / litre of water to control disease vector aphids.
- In North Interior Karnataka, in 10-15 days old black gram, green gram and soybean crops, there is chance of infestation of Agromyzid fly; to manage it, application of 0.3 ml Imidacloprid 17.8 SL or 0.2 g Thiamethoxam 25WG insecticide dissolved in 1 litre of water is suggested.

• **Animal Husbandry**

- In Kerala, avoid grazing of the animals in waterlogged areas to prevent leptospirosis. Contact nearest veterinary hospital for HS and FMD vaccination.
- In Tamil Nadu, protect cattle against Hemorrhagic Septicaemia disease in the rainy season. Protect chicks from Ranikhet disease.
- In South Interior Karnataka, maintain optimum room temperature in silkworm and poultry rearing houses.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Arunachal Pradesh except East Kameng, Tirap and Upper Subansari, in all districts of Assam except Baksa, Dhemaji, Dhubri, Golpara, Golaghat, Kamrup (Rural), Kamrup (Metro), Karbi Anglong and Nalbari, in all districts of Meghalaya, Kolasib, Lunglei and Serchip districts of Mizoram, Imphal East, Imphal West and Senapati districts of Manipur, Kohima, Mon and Wokha districts of Nagaland and West Tripura district of Tripura during the week. Weather remained mainly dry over rest of the region.

• **Advisories:**

- As rain/thundershowers likely at many places over Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura on 13<sup>th</sup> and 14<sup>th</sup>, over Arunachal Pradesh on 13<sup>th</sup>, along with heavy rain at isolated places likely over Assam & Meghalaya on 13<sup>th</sup> July, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops.
- **Arunachal Pradesh:**
  - Continue transplanting of kharif rice and maintain adequate water level in the field. Cut the tips of leaves before transplanting to reduce stem borer population. Harvest mature tomato, brinjal, okra and chilli.
  - Spray Imidacloprid 17.8 SL (0.003%) to chilli, tomato and brinjal crops inside net/green house or grown in shade for leaf curl at vegetative/flowering stage after current spells of rain.
- **Assam:**
  - Weather is favourable for land preparation and sowing of the sesamum crop. Take up sowing of recommended high yielding sesamum varieties such as SP 1181 (Madhavi), Gauri, Vinayak, ST-1683, Punjab Til No. 1 etc. Continue main field preparation/puddling for transplanting of Sali rice seedlings at 3-4 leaves stage. Complete the sowing of groundnut during this month. Complete the planting of recommended papaya cultivars such as Co.1, Co.2, Washington, Ranchi, Halflong (Dioecious Type) and Solo papayas, Coorg Honey Dew (Hermaphrodite type), etc. Provide proper drainage and carry out thinning operation in the Olitorius jute field. Undertake sowing of pigeon pea (variety: T-21) after current spells of heavy rain.
  - In areas affected by floods, grow flood tolerant Sali rice variety *viz.* Swarna Sub-1, Ranjit Sub-1 and Bahadur Sub-1; OR sow Gitesh and Manohar Sali as even 60 days old seedlings of these varieties can be transplanted or sow short duration rice variety like Luit and Dishang in the nursery beds.
  - Spray Carbendazim @ 1gm per litre of water to control blast disease in Sali paddy seedlings. Powdery mildew attack may be seen in bitter gourd, ash gourd and bottle gourd crops. Spray Bavistin @ 0.1% to control the disease. Undertake plant protection measures after current spells of rain. To control stem borer in sugarcane, spray Phosphamidon @ 60-70ml/ 30 litres of water per bigha with the help of power sprayer at fortnightly interval after current spells of rain.
- **Meghalaya:**
  - Prepare raised nursery bed of size 10m (length) × 1.25m (width) × 10cm (height) with 20-30cm wide channel between the two seed beds for lowland Sali/kharif rice HYVs like Shahsarang -1, Lampnah, IR 64, Ranjit, RCPL 1-412, RCPL 1-410, RCPL 1- 411 & local varieties like Mendri, Manipuri, etc. Continue field preparation for upland kharif rice. Continue sowing of okra seeds on raised bed at spacing 45x30cm. Use bamboo sticks for staking in French bean, cow pea and cucurbit crops. Provide drainage in ginger turmeric and other vegetable crops.
  - Spray Rogor @ 1ml/litre of water to control pest in cucurbits after current spells of rain.
- **Manipur:**
  - Carry out harvesting of pre-kharif rice on non-rainy days. Rice can be harvested when 80% of panicles turn hard & golden yellow. Over maturity should be avoided to reduce shattering losses. Carry out hand weeding in soybean, groundnut, black gram and rice bean on a non rainy day. Carry out transplanting of 21-25 days old kharif rice seedlings to the main field. Prepare nursery bed for early cauliflower.
  - For grown up turmeric plants, spray Dithan M45 @ 2 to 2.5 ml/litre of water as prophylactic measures after current spells of rain.
- **Mizoram:**
  - Undertake raising seedlings of Khasi Mandarin, acid lime, star fruit, plum and peach. Transplant seedlings in secondary bed or polythene bags at 4-6 leaves stage. Carry out land preparation for sowing kharif pulses like green gram, black gram and rajma. Carry out earthing up in Jhum rice, chilli, cowpea, okra and maize fields on a non rainy day and provide proper drainage. Undertake planting of ginger and turmeric crops after treating rhizomes with Thiram @ 4 g per kg seeds. Apply irrigation to coffee plants every alternate day upto 6 weeks before harvesting as it will help improve fruit retention, fruit development and the fruit quality. Undertake planting of rubber at newly established place.
  - In chilli and cucurbitous crops, apply Carbaryl 0.2 per cent or Malathion 0.15 per cent suspension containing sugar or jaggery at 10 g/litre of water at fortnightly intervals at flowering and fruit initiation against fruit fly/pumpkin beetle after current spells of rain.
- **Tripura:**
  - Complete the sowing of maize by the second week of July. Aman paddy in lowland condition is going to suffer from water logging condition. Submersible Aman paddy variety may be chosen for such fields. The seedlings just after transplanting may also suffer under water logging condition. Keep seedling in seedbed for longer period and transplant them after they grow up. Go for community nursery raising and also keep alternative nursery ready for use in case of crop failure.
  - To manage fungal diseases like brown spot and rice blast in Aman paddy, apply Carbendazim+ Mancozeb @ 2.5gm per litre of water in the seedbed after current spells of rain.

- **Nagaland:**

- Undertake nursery preparation for sowing of TRC/WRC paddy. Undertake timely harvesting in maize and green gram crops in clear weather. Maintain proper drainage in ginger/turmeric field.

- Remove infested okra and brinjal fruits and shoots regularly and destroy them.

- **Animal Husbandry**

- Keep the poultry houses clean and provide balanced feed and clean drinking water to birds. Vaccinate poultry birds against Coccidiosis, Ranikhet and Gamboro diseases.

- Carry out periodic cleaning of cowsheds along with the feeding pans during the rainy season to prevent fungal and bacterial infections. Vaccinate pigs against FMD & swine fever and cattle/sheep/goat against FMD, Hemorrhagic Septicaemia, Black Quarter, etc.

- Vaccinate all newly born piglets against swine fever at the age of 3 months followed by annual booster dose. Vaccinate 6-9 months old calves with Brucella Abortus cotton strain-19 @ 5ml subcutaneous on the neck. De-worm pigs and cattle with anti helmentic drugs such as Fento Plus @ 1 tablet per 30 kg body weight.

- **Fishery**

As sufficient water has already accumulated in the ponds and there is possibility of getting moderate rainfall in the coming 5 days, raise the nylon nets around the ponds to prevent the fishes from escaping.

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

- **Realised Rainfall:** Rainfall occurred in all districts of Andaman and Nicobar Islands, Araria, Banka, Darbhanga, Jamaui, Kishanganj, Madubani, West Champaran, Samastipur and Sitamarhi districts of Bihar, Bokaro, Deogarh, Dhanbad, Gumla, Hazaribagh, Latehar, Lohardaga, West Singhbhum, East Singhbhum and Saraikela districts of Jharkhand, all districts of Odisha except Bolangir, Bhadrak and Naupara, all districts of Sub-Himalayan West Bengal & Sikkim except North Dinajpur and South Dinajpur, all district of Gangetic West Bengal except Bankura and Murshidabad during the week. Weather remained mainly dry over rest of the region.

- **Advisories:**

- As rain/thundershowers likely at most/many places over Andaman & Nicobar islands and Odisha, at many places over Sub-Himalayan West Bengal & Sikkim and Gangetic West Bengal during the period and at many places over Jharkhand from 14<sup>th</sup> to 17<sup>th</sup> July, along with heavy rain very likely at isolated places over Andaman & Nicobar islands on 13<sup>th</sup> and heavy/ heavy to very heavy rainfall at isolated places over Odisha from 13<sup>th</sup> to 15<sup>th</sup> July, avoid intercultural operation and application of plant protection measures and fertilizers to the standing crops. Provide adequate drainage in vegetable fields, maize and groundnut fields in Odisha to avoid water stagnation.

- **Odisha:**

- Undertake nursery sowing of medium duration varieties of *kharif* rice of 130-135 days and wet seed bed nursery raising of *kharif* rice in North Eastern Coastal Plain Zone after current spells of heavy rain.

- Continue planting of new fruit trees and medicinal plants. Weed infestation is noticed in direct seeded rice at tillering stage. To control all categories of weeds at two to three leaf stage, spray Bispyribac sodium 10%SC or Penoxsulam 21.7%SC @ 20g a.i. ha-1 in 500 litres of water after current spells of rain.

- Wrapping and propping should be done in 4-5 months old in medium and late duration varieties of sugarcane. To control early shoot borer, spray Chloropyriphos or Quinalphos @ 400 ml/ac in 200 litres of water after cessation of rain.

- **Bihar:**

- The present weather conditions is favourable for preparation of rice nursery for short duration varieties like., Sabour deep, Susk samrat, Prabhat, Sita, Abhishek, Shabhagidhan, and Sabour Ardjal and Scented rice var. Sabour surbhit, Sugandha, Kamini, Rajendra suwasini, Rajendra kasturi and Katarni should be sown in nursery preferably upto 10 July. Before sowing seeds should be treated with captan or Bavistin @ 2g /kg of seed. Seed rate should be applied 25 kg/ha for short duration and 20 kg for scented rice. Weeding is advised in long duration paddy nursery if weed infestation is noticed. If long duration seedlings are ready for transplanting farmers are advised to start rice transplanting in low land areas.

- Farmers are advised hand weeding in early sown kharif maize on non rainy days and also apply Topramizon @ 40 g ai/ha or Atrazine @ 1.5 kg ai/ha as early control of weeds.

- Undertake nursery sowing of early cauliflower, tomato, chilli and brinjal on raised bed of the field. Seed should be treated with captan @ 2.0 gram/kg of seed. Farmers are advised to apply 10-15 tonnes of cow dung and also apply 60 kg N, 50 kg Phosphorus and 40 kg potassium per hectare before final preparation of beds.

- **Jharkhand:**

- Complete sowing of maize, groundnut, soybean, pigeon pea, sesame, urad bean and moong in uplands.

- Undertake field preparation and transplanting of rice. 15 days old seedling should be uprooted and wash the mud from root thoroughly and dip the root for 12 hr in Chloropyriphos insecticide @ 1ml/litre of water before transplanting. 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, provide proper drainage facility in soybean, round chilli, ginger and turmeric fields. Complete the planting of new plants of large cardamom by 15th July and carry out weeding in large cardamom field. Start seedbed preparation for kharif paddy @ 5kg/bigha seeds. Treat seeds with Thiram or Carbendazim @ 2,5 to 3 g per kg seeds. Continue harvesting of mature cobs of maize in clear weather.
- In Gangetic West Bengal, continue land preparation and nursery sowing of Aman paddy varieties like MTU 1010, PD 12, Pratiksha, Bidhan 1 etc. (short duration); MTU-7029, MTU1001, Pratiksha etc. (medium duration) and CR1017, CR1018, CR1019, Sabita etc. (long duration). Continue sowing of Sweta, Churni, Jagriti, Probhat varieties of arhar during next week after seed treatment with Mancozeb, Thairam or Captan. Continue sowing of bhindi and brinjal varieties like Muktokeshi, Bhangar, etc. Carry out land preparation/sowing of early winter vegetables crops like cabbage and cauliflower. Make raised seed bed of length 10ft, width 3ft and height 6 inch with proper drainage channel on the upland area. Drain out excess water from Aman paddy, betel vine, ginger and turmeric fields.
- In Sub-Himalayan West Bengal, for the management of cucurbitaceous fruit fly population, use pheromone traps along with bait spray of Molasses 200 ml + 20 ml Malathion 50% EC mixture as spot spray after current spell of rain. For management of brinjal fruit & shoot borer, spray Coragen 18.5% E.C @ 0.5 ml/litre of water after clipping off all the infested twigs, flowers, buds, fruits etc. after current spell of rain.
- In Gangetic West Bengal, in case of rotting of stem and spots on leaves in jute crop, apply Carbendazim 50 WP @ 1g/litre of water or Copper-Hydroxide 75 WP @ 2g/litre of water. Apply Bavistin/Carbendazim @ 1g/litre of water for rhizome rot in ginger and turmeric after current spells of rain.

▪ **Andaman & Nicobar Islands:**

- Undertake land preparation for transplanting of paddy. Carry out levelling and cleaning of bunds and maintain bund height at 25 to 30 cm. Avoid fertilizers application in vegetable field as good amount of rainfall is expected. Clean the crown of coconut tree and the garden and cut the organic waste into pieces before going for composting.

• **Animal Husbandry**

- In West Bengal, vaccinate/treat cattle against HS and black quarter. Avoid grazing animals during mid noon and after noon hours. Vaccinate goats against Peste des Petits Ruminants (PPR) before onset of monsoon. Vaccinate poultry birds against Ranikhet disease. Keep cattle shed clean during rainy season by using bleaching powder or calcium carbonate.
- In Andaman & Nicobar Islands, vaccinate all the pigs and piglets after consultation with local veterinary doctors.
- In Odisha, vaccinate the calves above 6 months against Bajabajia and Sahana diseases.

• **Fisheries**

- In West Bengal, carry out putting the fingerling of carp in the pond. Farmers cultivating tiger prawn can supply food during night. If there is oxygen deficiency then stir the pond water by wheel. Apply lime for cleaning the water.
- In Odisha, clean the fish ponds from all types of aquatic weeds, predator fish and weed fish. □ Then apply lime @ 80 kg/acre of pond.

**WEST INDIA [GOA, MAHARASHTRA, GUJARAT]**

- **Realised Rainfall:** Rainfall occurred in all districts of Konkan & Goa, all districts of Madhya Maharashtra except Ahmadnagar, Dhule, Sangli and Solapur, all districts of Marathwada except Aurangabad and Latur, all districts of Vidarbha, all district of Gujarat Region except Ahmedabad, Banaskantha, Gandhinagar, Mahesana and Patan, in Amreili, Gir Somnath and Junagarh districts of Saurashtra Kutch & Diu Region during the week. Weather remained mainly dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most places over Konkan & Goa, Madhya Maharashtra and Vidarbha during the period, at most/many places over Marathwada, Gujarat Region and Saurashtra & Kutch during the period, along with heavy rain at a few places with very heavy rain at isolated places very likely over Konkan & Goa on 13<sup>th</sup> and 14<sup>th</sup>, heavy to very heavy rain at a few places with extremely heavy falls at isolated places very likely over Konkan & Goa from 15<sup>th</sup> to 17<sup>th</sup>, over Gujarat Region on 16<sup>th</sup>, heavy to very heavy rain with extremely heavy falls at isolated places very likely over Gujarat Region on 13<sup>th</sup>, 14<sup>th</sup>, 15<sup>th</sup> and 17<sup>th</sup>, heavy rain at a few places with very heavy at isolated places over Saurashtra & Kutch and Madhya Maharashtra on 17<sup>th</sup>, heavy to very heavy rain at isolated places over Saurashtra on 13<sup>th</sup> and 14<sup>th</sup>, over Saurashtra & Kutch on 15<sup>th</sup>, over Madhya Maharashtra from 13<sup>th</sup> to 15<sup>th</sup>, over Vidarbha on 17<sup>th</sup>, heavy rain at isolated places over Vidarbha from 13<sup>th</sup> to 15<sup>th</sup>, over Marathwada on 16<sup>th</sup> and 17<sup>th</sup> July, avoid 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.

▪ **Maharashtra:**

- In South Konkan, complete transplanting of rice seedling after current spell of heavy rain. Drain out excess water from rice field wherever necessary. Undertake transplanting of *nagli*. Transplanting should be done by dibbling method at a distance of 20 cm X 15 cm. In North Konkan, continue sowing of groundnut crop and transplanting of 22-25 days old rice seedling after current spell of heavy rain. Drain out excess water from rice field wherever necessary. Drain out excess water from orchards and vegetable fields.
- In Madhya Maharashtra, continue sowing of *kharif* crops like groundnut, red gram, soybean and maize. Undertake transplanting of 20 to 25 days rice seedlings. Undertake transplanting of *nagli* seedlings. Sowing should be done after receipt of sufficient rain in some pockets of Pune district (Shirur, Daund and Indapur taluka), Solapur district (Jeur and Malshiras taluka).
- In Marathwada, continue sowing of *kharif* crops like rainfed Bt cotton, pigeonpea, black gram/green gram, groundnut, maize and also undertake seed treatment before sowing of crops. Farmers are advised to adopt change in crop in the areas where sufficient rainfall is not yet received (Aurangabad district: Paithan, Beed district: Gevarai, Majlgaon, Jalna district: Partur, Osmanabad district: Lohara, Parbhani district: Sonpeth). Continue intercultural operation like thinning and gap filling in cotton, pigeon pea, groundnut and maize crop. Undertake intercultural operation like weeding in sugarcane fields.
- In West Vidarbha, continue sowing of *kharif* crops like cotton, tur, maize and soybean. Drain out excess water wherever necessary. Undertake intercropping of maize crop with maize + black gram/green gram/soybean/groundnut. In East Vidarbha, continue transplanting of 22 to 25 days old rice seedling (12 to 15 cm tall). Transplanting of rice may be carried out with a spacing of 20 x 15 cm with placement of seedling 2.5 to 3.5 cm. deep and transplant 3 plants per hill and for hybrid rice 1 plant per hill. Drain out excess water wherever necessary. Continue sowing of *kharif* crops like pigeon pea, cotton, soybean. Drain out excess water wherever necessary. Undertake intercultural operations like weeding and hoeing in 30 days old cotton crop after current spells of rain.

▪ **Gujarat:**

- In South Gujarat, as rain is likely at mos/many places during next five days, postpone intercultural operation, irrigation, application of fertilizer and plant protection measures to the crops. Drain out excess water from sugarcane fields. Continue sowing of pigeon pea, green gram, black gram, cowpea and castor crops after current spells of heavy rain. Undertake transplanting of rice. Drain out excess water from crop fields.
  - In North Gujarat, undertake sowing of groundnut, pearl millet, sesame, maize, green gram, cotton, cluster bean, cowpea and transplanting of vegetable crops after current spells of heavy rain. Avoid water logging condition in cotton and groundnut.
  - In Middle Gujarat, continue sowing of pearl millet and groundnut after current spells of heavy rain. Undertake gap filling in cotton crop on a non rainy day. Continue main land preparation for transplanting of rice.
  - In Saurashtra & Kutch, undertake sowing of groundnut, sesame, pearl millet, green gram, black gram, cowpea, pigeon pea, maize, sorghum under sufficient moisture condition. Adopt cotton-sesame, cotton-groundnut and cotton-maize inter cropping system as risk management. Carry out planking or harrowing after sowing to conserve moisture for better germination, where sowing is over.. Continue transplanting of tomato, chili, brinjal and early cauliflower.
- **Animal Husbandry**
- In Gujarat, protect animals from rain and wind. Take care of cattle and stored dry fodder during rainy days.

**CENTRAL INDIA [M.P., CHHATTISGARH]**

- **Realised Rainfall:** Rainfall occurred in all districts of East Madhya Pradesh except Anupur, Chhatarpur, Dindori, Panna, Rewa and Satna, all districts of West Madhya Pradesh except Barwani, Bhind, Dhar, Gwailor, Morena, Sheopur and Shivpuri, all districts of Chhattisgarh except Balrampur, Bilaspur, Janjgir, Korea and Mahasmund during the week.

• **Advisories:**

- As rain/thundershowers likely at most places over Madhya Pradesh and Chhattisgarh during the period, along with heavy to very heavy rain at isolated places over East Madhya Pradesh during the period, over Chhattisgarh from 13<sup>th</sup> to 15<sup>th</sup>, heavy rain at isolated places over West Madhya Pradesh during the period, over Chhattisgarh on 15<sup>th</sup> and 16<sup>th</sup> July, avoid 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.
- **Madhya Pradesh:**
- In West Madhya Pradesh, continue sowing of red gram, maize, green gram, black gram, pearl millet and soybean. Continue transplanting of brinjal, chilli, tomato, early cauliflower and *kharif* onion. Continue nursery preparation for rice.
  - In Malwa Plateau Zone, undertake transplanting of new saplings of fruit plants. In Central Narmada Valley

- Zone, critically examine the germination of seed in soybean, if germination is poor gap filling should be done.
- In East Madhya Pradesh, continue sowing of *kharif* crops like maize, soybean and groundnut. Continue sowing of okra and cucurbits. Undertake transplanting of brinjal, chilli and tomato. Undertake transplanting of rice. Continue seed bed preparation for onion. In Kymore Plateau and Satpura Hill Zone, continue direct sowing of rice.
  - In West Madhya Pradesh, there are chances of attack of blast and brown spot in rice nursery. Spray Carbendazim @ 2.0 g per litre of water after current spells of rain.
  - **Chhattisgarh:**
  - Continue sowing of *kharif* crops like soybean, til, red gram, maize, groundnut. Continue sowing of okra, cucurbits and transplanting of vegetables. Continue line sowing of rice. Undertake transplanting of rice. Continue planting of banana.
  - **Animal Husbandry**
  - In Madhya Pradesh, dairy farmers are advised to vaccinate the animals against mouth and jahari fever disease and to develop the immunity power.
  - In Chhattisgarh, carry out vaccination of animals against Black Quarter, Anthrax and other disease.

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

- **Realised Rainfall:** Rainfall occurred in Bilaspur, Kangra, Sirmour and Una districts of Himachal Pradesh, Gurdaspur district of Punjab, in New Delhi district of Delhi, Bandipore, Jammu, Kathua, Rajouri, Ramban, Reasi and Udhampur districts of Jammu & Kashmir, Jhansi and Shahjahanpur districts of West Uttar Pradesh, Bageshwar, Chamoli, Champawat, Dehradun, Pithoragarh and Tehri Garwal districts of Uttarakhand, Banswara, Bhilwara, Chhitorgarh, Dungarpur, Jhalwar, Pratapgarh, Rajasmund and Udaipur districts of East Rajasthan during the week. Weather remained mainly dry/dry over rest of the region.
- **Advisories:**
  - As rain/thundershowers likely at most/many places over Uttarakhand and East Rajasthan during the period, over Himachal Pradesh from 13<sup>th</sup> to 16<sup>th</sup>, at many places over West Uttar Pradesh and Haryana, Chandigarh & Delhi on 13<sup>th</sup> and 14<sup>th</sup>, over Punjab and Jammu & Kashmir on 13<sup>th</sup>, along with heavy to very heavy rain at isolated places over Uttarakhand on 13<sup>th</sup>, over East Rajasthan on 13<sup>th</sup> and 17<sup>th</sup>, heavy rain at isolated places over Himachal Pradesh, Punjab, Haryana, Chandigarh & Delhi, West Uttar Pradesh on 13<sup>th</sup>, over Uttarakhand on 14<sup>th</sup> and 15<sup>th</sup>, over East Rajasthan on 16<sup>th</sup> July, avoid 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.
  - **Jammu & Kashmir:**
  - Continue transplanting of rice seedlings which have attained 4-6 leaves (varieties: China-1039, IET-1410, Ratna, PC-19, SJR-5 & Jaya). Drain out excess water from transplanted fields. Do not allow water to stagnate in maize field as maize is highly susceptible to stagnant water. Continue sowing of *kharif* moong, mash, okra, rainy seasonal annuals and mixed fodder crops. Continue intercultural operations and spraying of insecticides and pesticides in clear weather.
  - **Uttarakhand:**
  - Continue transplanting of ready paddy seedlings having 4-5 leaves. In hilly regions, undertake sowing of radish, mustard, coriander, turnip and spinach (Pusa Harit). Proper drainage should be maintained in the tomato, brinjal and capsicum crop field. Evergreen fruit plants like mango, guava, lemon, papaya, litchi etc should be planted during the month. Continue transplanting of seedlings of cabbage and broccoli. Continue sowing of finger millet, amaranth, black gram, soybean etc. Continue intercultural operations and spraying of insecticides and pesticides in clear weather.
  - **Himachal Pradesh:**
  - Continue transplanting of 20-25 days old paddy seedling in prepared fields. Make bunds for conservation of rain water in the field. Bund should be higher and wider so that more rain water can be conserved in the field. Continue sowing of *kharif pulses* moong, mash and Kulthi. Continue sowing of peas, turnip, carrot, spinach etc in high hilly regions. Continue intercultural operations and spraying of insecticides and pesticides in clear weather.
  - **Punjab, Haryana & Delhi:**
  - In Punjab, complete transplanting of rice. Continue sowing of rainy season vegetables like okra, cucurbits and cowpea. Continue sowing of maize. Continue transplanting of early cauliflower. Undertake intercultural operations in sugarcane, soybean and red gram. Undertake planting of fruit plants like citrus, litchi, mango, guava, loquat, ber, amla and papaya.
  - In Haryana, continue sowing of Lobia, moth and pigeon pea. Continue transplanting of rice. Drain out excess water from cotton fields. Continue sowing of guar and bajra. Continue transplanting of vegetables.
  - In Delhi, provide proper drainage in vegetables, pulse crops, maize and nurseries. Continue transplanting of

rice. Continue transplanting of chilli, brinjal and cauliflower. Continue sowing of cucurbits. Continue sowing of red gram, soybean, maize, guar, bajra, cluster bean, spinach, amaranths and lady finger.

▪ **Uttar Pradesh:**

- In East Uttar Pradesh, continue nursery preparation for onion, cauliflower, brinjal, chilli and tomato. Continue transplanting of 20-25 old days seedling of rice. Continue sowing of cucurbits. Continue sowing of *kharif* maize, jowar, bajra, red gram, soybean, green gram, black gram and groundnut. Continue planting of banana.
- In West Uttar Pradesh, continue transplanting of rice in Western Plain Zone.

▪ **Rajasthan:**

- In East Rajasthan, continue sowing of crops like red gram, green gram, cowpea, moth, pearl millet, sesame, sorghum, maize & cluster bean. Continue preparation of nursery of *kharif* fennel. Continue sowing of rainy season cucurbits like khira, bottle gourd, ridge gourd, bitter gourd & cucumber and nursery preparation of early cauliflower, chilli and brinjal. Continue sowing of groundnut. Continue transplanting of 3 week old seedlings of rice in Southeastern Humid Eastern Plain Zone.
- In West Rajasthan, continue sowing of sesame, guar, pearl millet, cluster bean, mung bean, moth crops. Undertake field preparation for sowing of castor and transplanting of chilli.

• **Animal Husbandry**

- In Jammu & Kashmir, mineral mixture should be supplemented in diet. Give vaccination against FMD. Provide adequate amount of fresh cool and clean drinking water. Increase protein content in animal ration by 2%.
- In Himachal Pradesh consult veterinary doctor for FMD Vaccination. Give mixture of hay & green fodder. Weather is conducive for ticks and mites attack on animals. For control spray Butox @ 2.0 ml per litres of water.

• **Apiculture:**

- In Jammu & Kashmir, protect bee colonies from rains. Give need based sugar feeding. Inspect colonies on a clear sunny day for infestation of wax moth or other disease. Protect bee hive from ants.

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.