

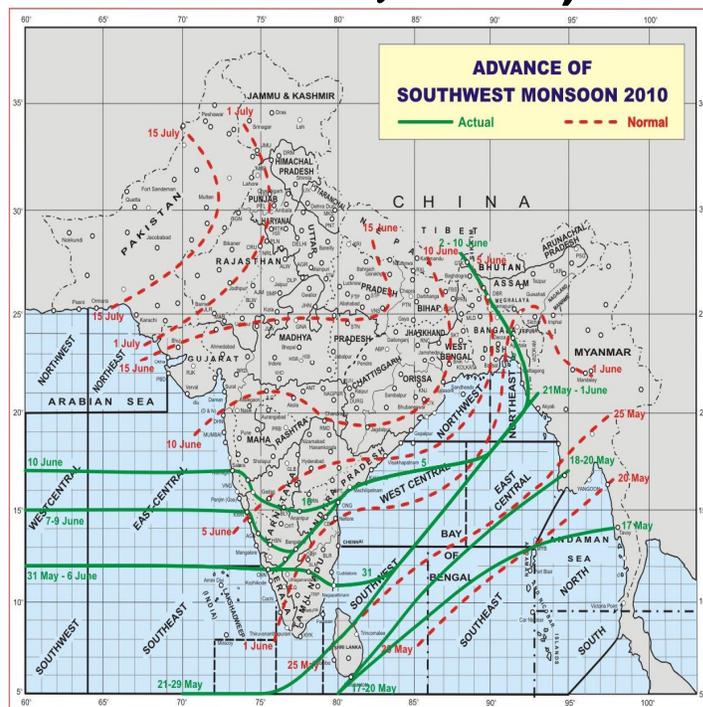
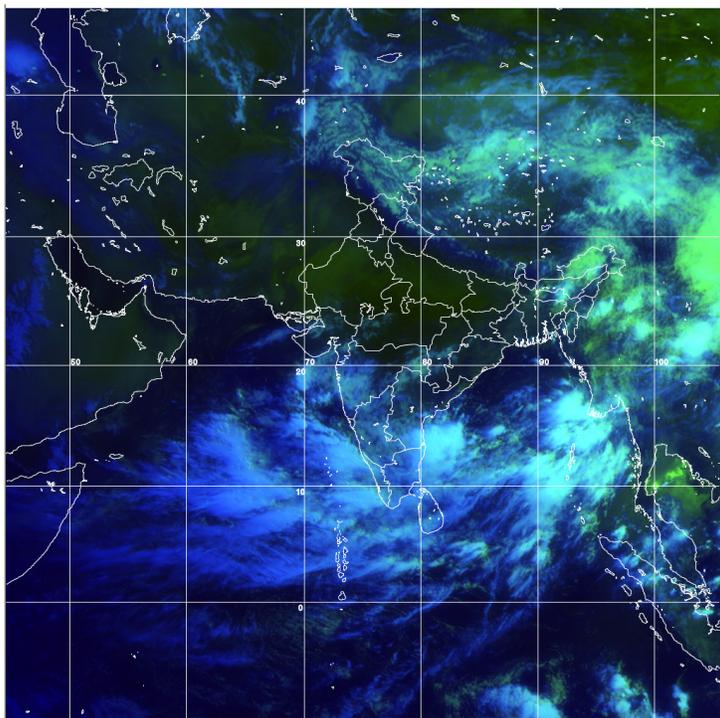


National Agromet Advisory Bulletin

Thursday, 10th June, 2010

(For the period 10th to 14th June, 2010)

Satellite image 3 UTC Dated
11th June, 2010



Progress of Monsoon



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

The bulletin is also displayed in the website (<http://www.imdagrimet.gov.in>) of the Division

Executive Summary

Status of Progress of Monsoon:

- Southwest monsoon has advanced into some parts of Konkan & Goa, south Madhya Maharashtra and north interior Karnataka, remaining parts of coastal and south interior Karnataka, some more parts of Rayalaseema and coastal Andhra Pradesh.
- The Northern Limit of Monsoon (NLM) passes through Lat.17.0°N/ Long.60.0°E, Lat.17.0°N/Long.70.0°E, Ratnagiri, Sangli, Bijapur, Gadag, Anantpur, Bapatla, Lat. 17.0°N/Long. 85.0°E, Lat. 20.0° N/Long. 92.0°E, Agartala, Dhubri and Gangtok.
- Conditions are favourable for further advance of southwest monsoon into some more parts of Maharashtra, north interior Karnataka and Andhra Pradesh during next 48 hours.

Numerical Weather Prediction (NWP) Guidance

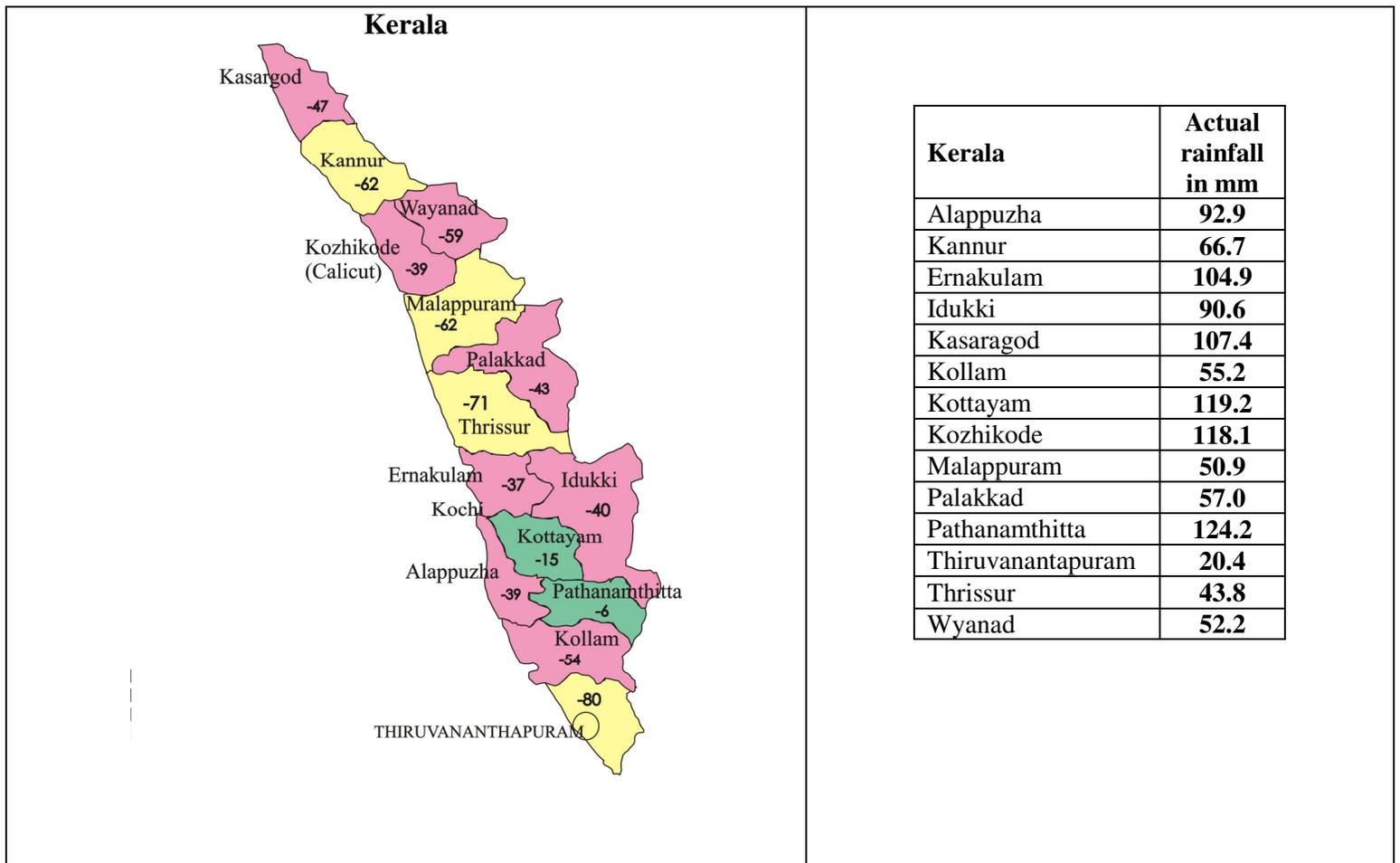
- Monsoon flow over Arabian Sea is likely to intensify during next 2-3 days.

Weather Outlook (upto 0530 hours IST of 15th June, 2010)

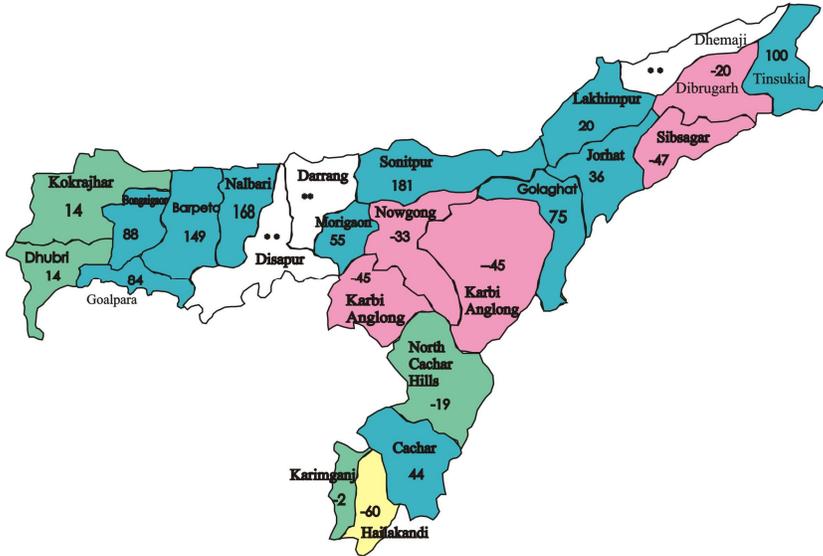
- Increase in rainfall activity along west coast and over northeastern states

Rainfall situation in some of the States in the country for the week ending 09.06.2010

Rainfall maps of some states representing (%) Departure

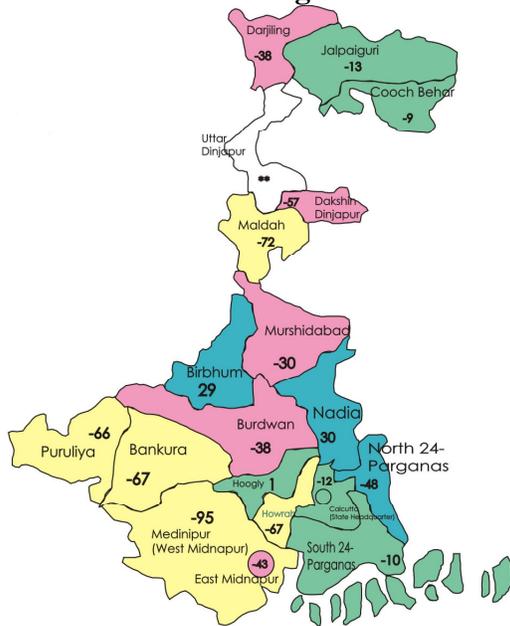


Assam



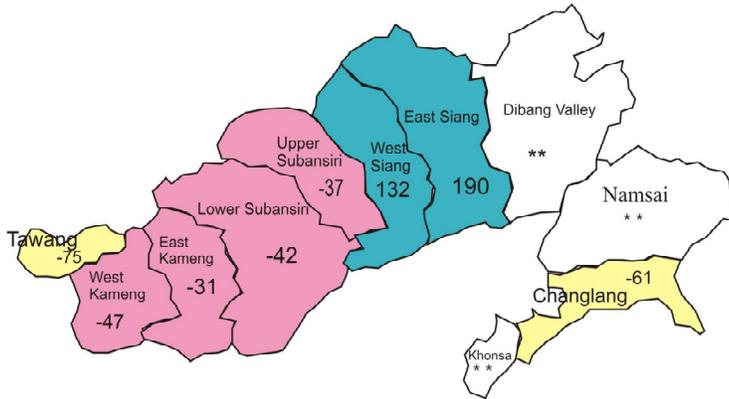
Assam	Actual rainfall in mm
Barpeta	214.0
Bongaigaon	250.8
Cachar	213.5
Dhubri	168.6
Dibrugarh	59.7
East Garo Hills	119.5
East Khasi Hills	529.9
Goalpara	271.0
Golghat	94.5
Hailakandi	51.4
Jorhat	96.0
Kamrup	192.7
Karbi Analog	30.8
Karimganj	157.2
Kokrajhar	151.6
Lakhimpur	170.6
Morigaon	116.4
N.C.Hills	115.6
Nalbari	226.3
Nowgong	50.2
Sibsagar	41.0
Sonitpur	229.2
Tinsukia	83.3

West Bengal



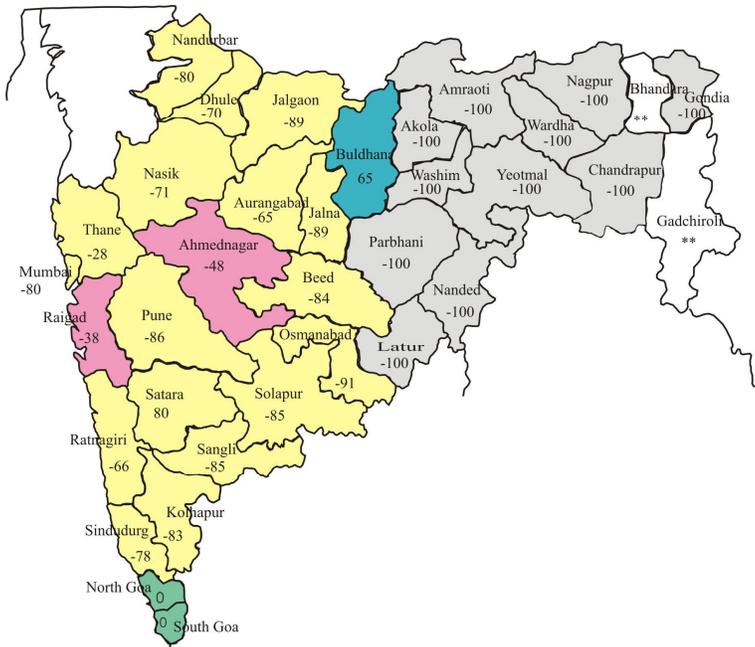
West Bengal	Actual Rainfall in mm
GWB	
Birbhum	39.5
Burdwan	24.3
Hooghly	47.3
East Midnapore	29.5
Murshidabad	30.0
Nadia	46.0
24 Pargana (N)	29.7
24 Pargana (S)	46.6
SHWB	
Coochbehar	123.2
Darjeeling	49.2
Jalpaiguri	102.8
Dinajpur (S)	25.2
North Sikkim	178.7
South Sikkim	117.9

Arunachal Pradesh



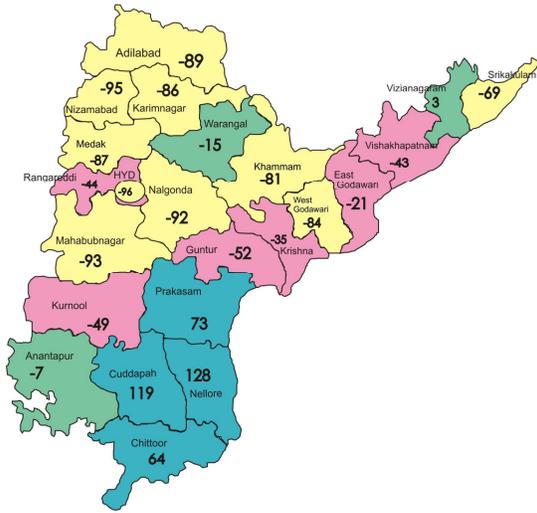
State	Actual Rainfall in mm
Arunachal Pradesh	
Changlang	45.9
East Kameng	48.8
East Siang	419.8
Lohit	177.4
Lower Subansiri	29.8
Papumpara	155.2
Tirap	98.9
Upper Siang	83.0
Upper Subansiri	32.2
West Kameng	42.8
West Siang	229.0

Maharashtra



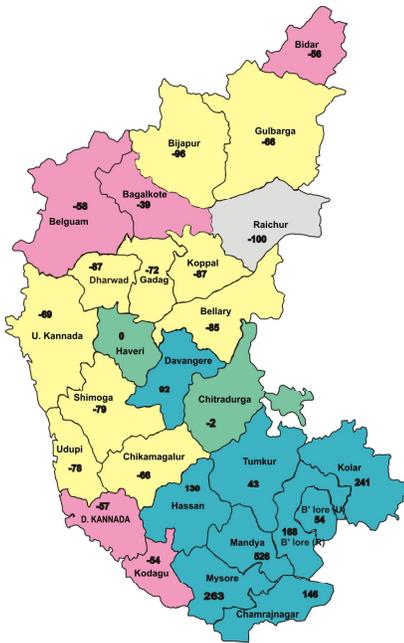
Maharashtra	Actual Rainfall in mm
Konkan & Goa	
Raigad	37.1
Ratnagiri	32.8
Sindhudurg	27.6
Thane	31.1

Andhra Pradesh



Andhra Pradesh	Actual Rainfall in mm
Coastal Andhra Pradesh	
Nellore	21.4
Prakasam	22.9
Vizianagram	27.0
Rayalaseema	
Chittoor	23.1
Cuddapah	35.1

Karnataka



Karnataka	Actual Rainfall in mm
Coastal Karnataka	
Dakshin Kannada	73.8
Udupi	44.9
Uttar Kannada	43.0
North Interior Karnataka	
Haveri	23.2
South Interior Karnataka	
Bangalore Rural	51.2
Bangalore Urban	34.8
Chamarajnagar	36.6
Davangere	32.3
Hassan	72.1
Kodagu	32.1
Kolar	58.0
Mandya	88.8
Mysore	64.7
Tumkur	25.9

LEGEND

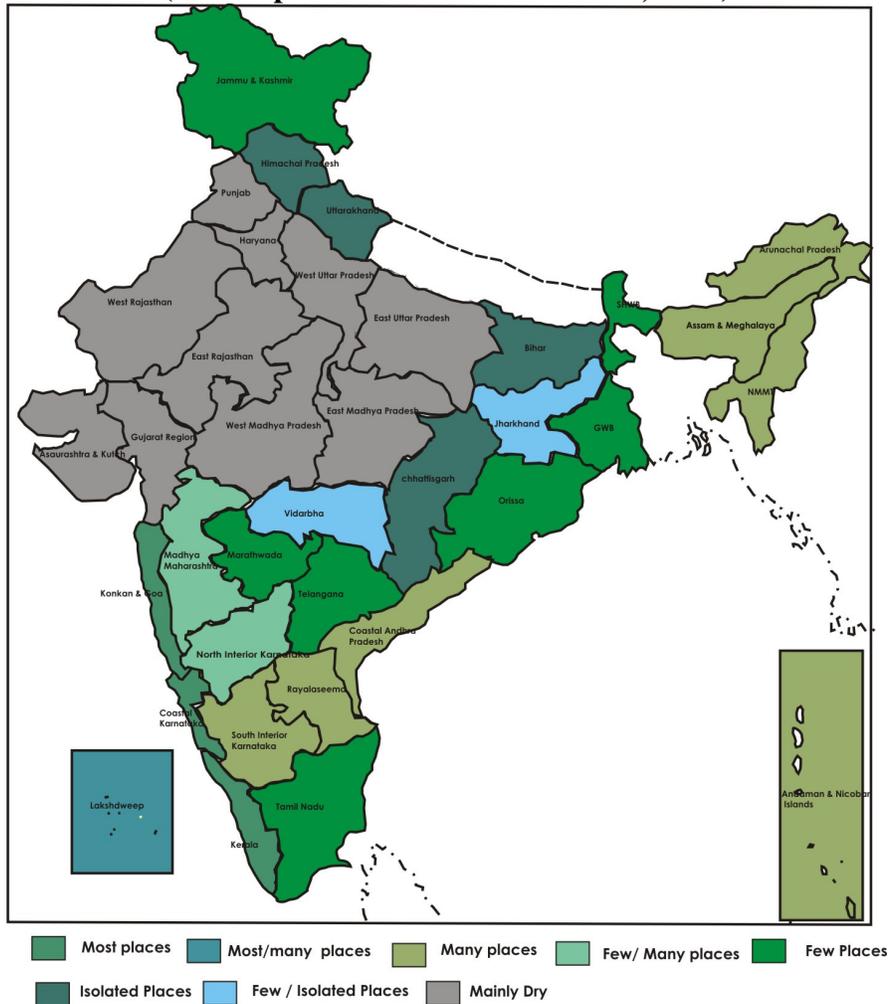
- EXCESS 20% OR MORE
- NORMAL +19% TO - 19%
- DEFICIENT - 20% TO - 59%
- SCANTY - 60% TO - 99%
- NO RAIN - 100%
- DATA NOT AVAILABLE

State	Actual rainfall in (mm)	(9.6.10) % Departure
Himachal Pradesh		
Bilaspur	98.9	860
Hamirpur	84.4	592
Kangra	33.7	148
Kinnaur	47.9	1068
Kullu	154.2	1060
Lahaul and Spiti	103.5	755
Mandi	111.5	472
Shimla	106.3	511
Sirmaur	44.8	273
Solan	131.3	634
Una	51.5	360
Punjab		
Hoshiarpur	21.0	134
Nawashahar	45.9	664
Patiala	105.4	1170
Ropar	94.1	1091
Haryana		
Ambala	55.8	407
Chandigarh	141.7	1034
Hissar	34.7	442
Katihah	34.0	240
Kurukshetra	20.2	132
Panchkkula	41.3	397
Sirsa	35.0	662
Jammu & Kashmir		
Anantnag	35.4	128
Badgam	35.2	369
Doda	35.6	271
Kupwara	29.9	132
Chattisgarh		
Bastar	29.4	9
West Uttar Pradesh		
Mathura	23.0	389
UttaraKhand		
Chamoli	40.0	222
Dehradun	31.3	56
Garhwal Tehri	32.6	65
Rudraprayag	36.1	52
Uttarkashi	64.1	190

State	Actual rainfall in (mm)	(9.6.10) % Departure
East Rajasthan		
Alwar	29.2	386
Jhunjhunu	37.8	344
Sikar	24.1	240
West Rajasthan		
Bikaner	78.7	2712
Churu	59.6	763
Hanumangarh	30.6	628
Jaisalmer	84.8	5203
Jodhpur	22.1	614
Nagaur	35.7	839
Gujarat Region		
Ahmedabad	26.5	155
Anand	28.5	116
Banaskantha	21.5	284
Gandhinagar	43.0	696
Mehsana	36.5	422
Navsari	32.8	12
Patan	28.3	687
Surat	31.5	16
Saurashtra, Kutch & Diu region		
Amreli	26.8	86
Diu	59.8	504
Jamnagar	77.8	1218
Junagarh	41.4	198
Kutch	50.6	2432
Porbandara	25.2	833
Rajkot	32.9	239
Orissa		
Keonjhar	148.8	415
Malkangiri	40.0	115

Weather Forecast

(Valid upto 1430 hours of 13th June, 2010)



Rainfall is likely to occur at most/many places over Konkan & Goa, coastal Karnataka, Kerala, Lakshdweep Island, many places over North East India, Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Andaman & Nicobar Islands, at a few places over Madhya Maharashtra for next 24 hours and many places thereafter, at a few places over North Interior Karnataka for next 48 hours and many places thereafter, at a few places over West Bengal & Sikkim, Orissa, Jammu & Kashmir, Marathwada, Telangana, TamilNadu & Pondicherry, at a few places over Jharkhand for next 48 hours and isolated rainfall thereafter, at isolated places over Bihar, Uttarakhand, Himachal Pradesh, Chattisgarh, at isolated places over Vidarbha for next 48 hours and at a few places thereafter, mainly dry weather is likely to prevail over remaining parts of the country.

Warning

Isolated heavy rainfall would occur over northeastern states, Konkan & Goa, Coastal Karnataka, Kerala and Lakshadweep, South Coastal Andhra Pradesh and Andaman & Nicobar Islands during next 48 hours.

Major crops in different States

- Rice is at sowing/ transplanting for first crop in Kerala, Rice (*kuruvai*) is also at sowing / transplanting in Tamil Nadu.
- *Sali* rice is at nursery sowing and arhar and sesamum at sowing in Assam.
- *Jhum* / WRC rice and pulses is at sowing and maize is at sowing / vegetative in Arunachal Pradesh.
- Summer rice is harvesting in East Vidarbha.
- *Boro* rice is at maturity / harvesting stage in Chhattisgarh.
- *Ahu* rice is at tillering / panicle initiation stage in Assam.
- Potato (Seed / Summer) is at tuberization stage and *rabi* potato is at maturity / harvesting in Sikkim.
- Summer green gram and black gram is at pod formation stage in Uttarakhand, Punjab, Haryana, Delhi, Rajasthan and at early maturity / maturity/ harvesting stage in Jharkhand, Orissa, West Bengal.
- Jute is at vegetative stage in Assam.
- Maize is at early vegetative in Uttarakhand and at vegetative stage in Assam.

Salient advisories

Advisories for sowing

- Withhold sowing in Assam, Arunachal Pradesh and Kerala during next 48 hours in view of likely occurrence of isolated heavy rainfall and continue after that.
- Utilizing the monsoon rainfall, farmers in Kerala are advised to raise nursery for rice and *kharif* vegetable crops. Start land preparation and transplanting of rice seedlings from early sown nurseries in the main field.
- Farmers in Hill zone of Karnataka are advised to take up sowing of cowpea, green gram, sesamum and ragi crops due to receipt of monsoon rainfall.
- Farmers in Southern Dry and Southern Transition zones of Karnataka are advised to start land preparation and sowing of jowar + red gram and groundnut + red gram and also cotton, respectively, utilizing the monsoon rainfall.
- Farmers in North Interior Karnataka are advised to start land preparation and arrange for inputs for undertaking sowing of *kharif* crops like cowpea, green gram, black gram, sesamum, sorghum and cotton as soon as onset of monsoon will take place.
- Farmers in Scarce Rainfall zone of Andhra Pradesh are advised to start land preparation and undertake sowing of groundnut utilizing the monsoon rainfall.
- Farmers in Hill zone, Lower and Upper Brahmaputra valley zone of Assam are advised to undertake sowing of *sali* rice nursery and transplanting of *ahu* rice utilizing the recent rainfall. Farmers are also advised to sow red gram in Hill zone and Lower Brahmaputra Valley zone and also sesamum in North Bank Plain zone utilizing the recent rainfall.
- Due to receipt of good rainfall in Subtropical Hill zone of Arunachal Pradesh, farmers are advised to undertake sowing of *jhum* / WRC rice, maize, vegetable crops like ridge gourd, bitter gourd, bottle gourd, pumpkin, okra, etc. and pulses like black gram, green gram, French bean etc. and sesame.

Advisories based on pre-monsoon showers

- Farmers in southern Telangana zone of Andhra Pradesh are advised to start land preparation and arrange for inputs for sowing of groundnut as onset of monsoon may take place shortly.
- In West Bengal, farmers are advised to prepare dry seed-bed nursery for *kharif* rice in Coastal Saline Zone and Laterite and Red Soil Zone and nursery bed for *aman* rice in New Alluvial Zone and also to plant ginger and turmeric in Coastal Saline Zone of West Bengal utilizing pre-monsoon rainfall.
- Farmers in Orissa are advised to undertake field preparation for nursery sowing / direct sowing of rice and maize utilizing recent pre-monsoon rainfall.

- As monsoon is likely to advance over some more parts of Konkan & Goa and Madhya Maharashtra during next 2-3 days, farmers are advised to keep the lands ready utilizing recent pre-monsoon rainfall and procure improved & high yield varieties for sowing of *kharif* rice, jowar, bajra, groundnut, soyabean, sunflower, *kharif* cotton, red gram, moong etc.
- Utilising the recent pre-monsoon rainfall, farmers in Marathwada & Vidarbha are advised to complete the preparatory tillage and keep the inputs ready for sowing of *kharif* crops.
- Utilising the recent pre-monsoon rainfall, farmers in Gujarat are advised to complete the preparatory tillage and keep the inputs ready for sowing of *kharif* crops like rice, groundnut, castor, bajra, sesamum, green gram, black gram, cow pea and pigeon pea.
- Farmers in sub-tropical zone of Jammu & Kashmir are advised to start land preparation for sowing of maize in rainfed condition in Kathua district utilizing pre-monsoon rainfall and undertake sowing of early maize crop in irrigated areas.

Zonewise Agromet Advisories

NORTH WEST INDIA [J & K, H. P., UTTARAKHAND, PUNJAB, HARYANA, DELHI, UP, RAJASTHAN]

- **Realised Rainfall:** Rain occurred in most of the districts in Himachal Pradesh, Anantnag, Badgam, Doda and Kupwara districts in Jammu & Kashmir, Mathura district in Uttar Pradesh, Chamoli, Dehradun, Garhwal Tehri, Rudraprayag and Uttarkashi in Uttarakhand, Hoshiarpur, Nawashahar, Patiala and Ropar district in Punjab, Ambala, Bhiwani, Chandigarh, Hisar, Katihal, Kurukshetra, Panchkkula and Sirsa districts in Haryana, Alwar, Jhunjhuhu, Sikar, Bikaner, Churu, Jaisalmer, Jodhpur and Nagaur districts in Rajasthan. No significant rainfall occurred in the remaining parts of the region during last week.
- **Rainfall Forecast:** Rainfall is likely at a few places in Jammu & Kashmir. Either isolated rain will occur or mainly dry weather will prevail over remaining States of the region during the period.
- **Major Crops:**
 - Vegetables (sowing / nursery sowing / vegetative) in Himachal Pradesh.
 - Vegetable crops (flowering / fruiting / harvesting) in Jammu & Kashmir.
 - Maize (early vegetative), black gram and green gram (pod formation) in Uttarakhand.
 - Sugarcane (vegetative), cotton, maize (early vegetative), black gram and green gram (pod formation), sunflower (vegetative) in Punjab.
 - Sugarcane (vegetative), black gram and green gram (pod formation), cotton(early vegetative) in Haryana.
 - Green gram and black gram (pod formation) and vegetable crops (fruiting / harvesting) in Delhi.
 - Sugarcane (vegetative), sunflower (head formation), black gram and green gram (pod formation), vegetable crops (sowing) in Uttar Pradesh.
 - Green gram (pod formation), vegetable crops (flowering / fruiting / harvesting) in Rajasthan.
- **Advisory:**
 - As rain occurred in most of the districts in Himachal Pradesh, Anantnag, Badgam, Doda and Kupwara districts in Jammu & Kashmir, Mathura district in Uttar Pradesh, Chamoli, Dehradun, Garhwal Tehri, Rudraprayag and Uttarkashi in Uttarakhand, Hoshiarpur, Nawashahar, Patiala and Ropar district in Punjab, Ambala, Bhiwani, Chandigarh, Hisar, Katihal, Kurukshetra, Panchkkula and Sirsa districts in Haryana, Alwar, Jhunjhuhu, Sikar, Bikaner, Churu, Jaisalmer, Jodhpur and Nagaur districts in Rajasthan, postpone irrigation to the crops in these districts. In view of no significant rainfall in remaining districts of the States in the region, farmers are advised to apply irrigation to the standing crops.
 - Farmers are advised to start nursery sowing of rice in Delhi with the following varieties. Hybrid varieties: K. R. H 2, PH B 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10, High yielding varieties: Puss 44, Pant Dhan 10, Pant Dhan 4, Narendra Dhan 359 and Pusa 834
 - Farmers in Delhi are advised to start preparation for sowing of guar, bajra, maize, cluster bean, spinach, *amaranthus* and ladyfinger.
 - Farmers in Himachal Pradesh are advised to undertake sowing of ginger, turmeric, ladyfinger and beans utilizing the rainfall during last week.

- Farmers in Rajasthan are advised to undertake field preparation for sowing of maize utilizing the rainfall during last week. Arrange improved varieties like Him – 129, Aravali Makka, PEHM-1, PEHM- 2, Pratap Makka-1, Pratap Makka-3, Pratap and Makka-5, etc. for undertaking sowing.
- Farmers in Uttarakhand are advised to undertake sowing of lady finger with varieties like VL Bhindi-1 utilising the rainfall during last week.
- Farmers are advised to start land preparation for sowing of maize in rainfed condition in Kathua district in Jammu utilizing the realized rainfall. Undertake sowing of early maize crop (var. GS-2) in irrigated areas under sub tropical low altitude zone. Undertake nursery sowing of knoll khol varieties like white viena and purple viena in Reasi district.
- Farmers in valley temperate zone are advised to undertake sowing of like moong, cowpea, maize, sorghum, bajra and cowpea etc. utilizing the realized rainfall.
- Farmers in intermediate zone and valley temperate zone are advised to undertake transplanting of rice @ 2-3 seedlings per hill when seedlings are at 4-6 leaf stage.

EAST INDIA [JHARKHAND, BIHAR, ORISSA, WEST BENGAL & SIKKIM]

- **Realised Rainfall:** Keonjhar and Malkangiri districts in Orissa, Birbhum, Hooghly, Nadia and 24 Parganas (S) districts in Gangetic West Bengal and Coochbehar and Jalpaiguri districts of Sub-Himalayan West Bengal and also Sikkim State received good rainfall during last week. No significant rain occurred over remaining parts of the region.
- **Rainfall Forecast:** Rain is likely to occur at isolated places in Bihar and at a few places over remaining States of the region during the period.
- **Major Rabi Crops:**
 - Maize and moong (maturity / harvesting) in Bihar.
 - Green gram and black gram (early maturity / maturity / harvesting) in Jharkhand.
 - Black gram and green gram (early maturity / maturity / harvesting), groundnut (maturity / harvesting) and maize (maturity) in Orissa.
 - Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting), black gram and green gram (maturity / harvesting), sunflower (maturity / harvesting) and sesame (maturity / harvesting) in West Bengal.
 - High hills (1500- 2000 m) in Sikkim: large cardamom (primary flowering / secondary flowering), seed potato (tuberization), summer potato (Very High Hills) (tuberization), *kharif* vegetables & off season vegetables (vegetative / late vegetative), maize (vegetative / late vegetative); Medium hills (1000 - 1500 m): large cardamom (primary flowering / secondary flowering), *Rabi* potatoes (maturity / harvesting), maize (late vegetative / tasseling / silking / cob formation), *kharif* vegetable (vegetative), ginger (germination/early vegetative), rice (sowing / nursery sowing); Low Hills (Below 1000 m): large cardamom (vegetative / primary flowering / secondary flowering), *Rabi* potatoes (maturity / harvesting), wheat (harvesting), maize (early vegetative / vegetative / tasseling / silking / cob formation), *kharif* vegetable (transplanting / vegetative), ginger (sowing / germination).
- **Advisories:**
 - As Keonjhar and Malkangiri districts in Orissa, Birbhum, Hooghly, Nadia and 24 Parganas (S) districts in Gangetic West Bengal and Coochbehar and Jalpaiguri districts of Sub-Himalayan West Bengal and also Sikkim State received good rainfall during last week, postpone irrigation to the crops in these regions.
 - Undertake harvesting of maize and moong in Bihar, green gram and black gram in Jharkhand, black gram and green gram, groundnut and maize in Orissa and black gram and green gram, sunflower and sesame in West Bengal on a non-rainy day.
 - Farmers are advised to prepare dry seed-bed nursery for *kharif* rice (varieties: for upland situation (110-120 days) Rasi, Khitish, Bhupen, CST-7-1, PNR-519, Kunti, Ajaya, CSR-6, for shallow lowland (130-140 days) Manassarovar, MTU-7029(swarna masuri), MTU-1001, MTU-1010, Naveen, IET-5656, for semi-deep water (150-160 days) Jogen, Sabita, Purnendu, Bhageerathi, Amulya, CR-1009, CR-1018) in

Coastal Saline Zone and Laterite and Red Soil Zone and nursery bed for *aman* rice (varieties: IET-4094, 2233, *Ratna*, *Bikash*, *Kitish*, *Sasya-shree*, IR-42, *Swarna*, *Mashuri*, IET-8002 etc.) in New Alluvial Zone and also to plant ginger and turmeric in Coastal Saline Zone of West Bengal utilizing pre-monsoon rainfall.

- Farmers in Orissa are advised to undertake field preparation for nursery sowing / direct sowing of rice varieties like Extra early: Kaling-3, Early: Khandagiri, Bandana, Pathara, Parijat, Annada, Medium: MTU- 1001, MTU-1010, Konark, Gajapati, Surendra, Lalat, Late: CR-1009, CR-1018, *Swarna* (MTU-7029), Indravati, Mahanadi, Puja, Ramachandi, Kanchana, Sarala, Lunishree, Fine varieties: CR-1014, BPT-5204 and maize varieties like Navjot, Shakti, Decan-107 and Decan-109 utilizing recent pre-monsoon rainfall.
- Weather conditions are favourable for incidence of fruit & shoot borer in brinjal in Purba Medinipur district in West Bengal. Farmers are advised to spray Spinosad @ 2.5 ml / litre or Dimilin @ 0.75 g / litre or padan @ 1 g / litre of water on a non rainy day at 7-10 days interval.
- In the present weather situation, attack of mites may be enhanced in jute in New Alluvial Zone of West Bengal. For control of mite apply Monocrotophos @ 1.5 ml per litre of water and after one week again apply Dicofol / Kelthane @ 2 ml per litre of water.
- Due to high humidity, attack of fruit rot due to fungus may be high in pointed gourd in New Alluvial Zone of West Bengal. Remove the infected fruits from the land. Spray Blitox @ 4 gm per litre or Blue-copper oxide.

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

- **Realised Rainfall:** Rainfall occurred in most of the districts of the states in the region during last week.
- **Rainfall Forecast:** Rainfall is likely to occur at many places in the region along with the possibility of isolated heavy rainfall during next 48 hours.
- **Major Crops:**
 - Vegetables (flowering / fruiting / harvesting), sugarcane (cane development), maize, jute, mesta (vegetative), *Sali* rice (nursery sowing) and arhar and sesamum (sowing) in Assam.
 - *Jhum* / WRC rice, pulses and vegetables (sowing) and maize (sowing / vegetative) in Arunachal Pradesh.
- **Advisory:**
 - As there was rainfall during last couple of weeks in most of the districts of this region and there is also possibility of rain / thundershower at many places over the region for next three days, postpone irrigation to the standing crops. In view of isolated heavy rainfall during next 48 hours, arrange for draining out excess water from the fields to avoid water stagnation.
 - Farmers are also advised to postpone intercultural operation, application of fertilizers and plant protection measures to maize and jute.
 - Farmers in Hill zone, Lower and Upper Brahmaputra valley zones of Assam are advised to undertake sowing of *sali* rice nursery and transplanting of *ahu* rice utilizing the recent rainfall. Recommended high yielding varieties of *sali* rice are Ranjit, Bahadur, Vasundhara, Kushal, Piyoli, Moniram, Rangali, Bhogali, Ketkijaha etc. However, sowing of *sali* rice and transplanting of *ahu* rice may be withheld during next 48 hours in view of likely occurrence of isolated heavy rainfall.
 - Farmers are also advised to sow red gram in Hill zone and Lower Brahmaputra Valley zone and also sesamum in North Bank Plain zone in Assam, utilizing the recent rainfall. Recommended high yielding varieties are AST-1, Madhabi, Binayak, Punjab til -1, Gouri etc. for sesamum and T-21 for red gram. However, sowing may be withheld during next 48 hours in view of likely occurrence of isolated heavy rainfall.
 - Farmers are also advised to drain out excess water from maize fields and from the root zone of citrus and cucurbitaceous crops to avoid fungal diseases likely to occur in these prevailing rainy days.

- Due to receipt of good rainfall in Subtropical Hill zone of Arunachal Pradesh, farmers are advised to undertake sowing of *jhum* / WRC rice, maize, vegetable crops like ridge gourd, bitter gourd, bottle gourd, pumpkin, okra, etc. and pulses like black gram, green gram, French bean, etc. and sesame. However, sowing may be withheld during next 48 hours in view of likely occurrence of isolated heavy rainfall.
- Due to heavy rainfall and higher relative humidity the citrus may be infested by 'Gummosis' disease. The affected portion should be cleaned nicely and washed with 'potash water' and also Bordeaux mixture should be used in that area. As preventive measure, draining out of excess water from the area is essential.

SOUTH INDIA [TN, AP, KERALA, KARNATAKA, LAKSHADWEEP, ANDAMAN & NICOBAR ISLANDS]

- **Realised Rainfall:** All the districts in Kerala, Coastal and South Interior Karnataka and Tamil Nadu except Cuddalore, Kanyakumari, Pudukkottai, Thanjavur, Thirunelveli, Thiruvavur, Tuticorin and Villupuram districts received rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at most/many places over Kerala, Karnataka, Coastal Andhra Pradesh and Rayalaseema. Rain is likely at a few places over the remaining region. Heavy rainfall is likely at isolated places in Coastal Karnataka and Kerala during next 48 hours
- **Major Crops:**
 - Vegetable crops (flowering / fruiting / harvesting) in Andhra Pradesh.
 - Sugarcane (cane development) and vegetables (flowering / fruiting / harvesting) in Karnataka. This is proper time for sowing of cowpea, green gram, black gram, sesamum, sorghum and cotton.
 - Rice (sowing/transplanting for first crop), Vegetables (flowering / fruiting / harvesting) and plantation crops (coconut, arecanut, pepper and cashew – various stages) in Kerala.
 - Rice (*kuruvai* – sowing/transplanting) and cotton (picking) in Tamil Nadu.
- **Advisories:**
- Due to forecast of rainfall likely at most/many places over Kerala, Karnataka, Coastal Andhra Pradesh and Rayalaseema, farmers are advised to postpone irrigation to sugarcane and vegetable crops. Arrange for drainage facilities in Coastal Karnataka and Kerala as heavy rainfall is likely at isolated places during next 48 hours.
- As there was rainfall in Tamil Nadu except in Cuddalore, Kanyakumari, Pudukkottai, Thanjavur, Thirunelveli, Thiruvavur, Tuticorin and Villupuram districts, farmers are advised to postpone irrigation to standing crops. Apply irrigation in the above districts as good amount of rainfall was received during last week.
- Utilizing the monsoon rainfall, farmers in Kerala are advised to raise nursery for rice and *kharif* vegetable crops. Start land preparation and transplanting of seedlings from early sown nurseries in the main field. Sowing may be withheld at the time of heavy rainfall.
- As monsoon is approaching, farmers are advised to procure certified seeds of cowpea, green gram, black gram, sesamum, sorghum and cotton for sowing in Coastal and South Interior Karnataka. Start land preparation and arrange for inputs for undertaking sowing of *kharif* crops in North Interior Karnataka as monsoon is fast approaching.
- Farmers in Problem Area zone in Kerala are advised to continue wet seeding of rice and planting of coconut seedlings. In homestead gardens, undertake planting of ginger, turmeric and colocasia. Sowing may be withheld at the time of heavy rainfall.
- Farmers in Hill zone of Karnataka are advised to take up sowing of cowpea, green gram, sesamum and ragi crops as good amount of rainfall (140 mm) was received during last few weeks.
- There was good amount of rainfall received in Southern Dry and Southern Transition zones of Karnataka. Farmers in the region are advised to start land preparation and sowing of jowar + red gram and groundnut + red gram and cotton, respectively, utilizing the monsoon rainfall.

- Due to forecast of high velocity winds in Scarcity Rainfall zone of Andhra Pradesh, Southern zone of Kerala and Southern and Western zone of Tamil Nadu, farmers are advised to provide staking to banana to prevent from lodging.
- As monsoon is approaching fast, farmers in Scarce Rainfall zone of Andhra Pradesh are advised to start land preparation and arrange for inputs for sowing of groundnut.
- Farmers in Cauvery Delta zone of Tamil Nadu are advised for nursery sowing of *kuruvai* rice. Select among ADT – 36, 43, 45, 47. Follow SRI system for higher yield.
- Good amount of rainfall was received during last week in High Rainfall zone of Tamil Nadu. Farmers are advised to undertake planting of rubber and coconut utilizing the rainfall.
- Due to moderate to high humidity in Southern zone of Tamil Nadu, there are chances of sucking pests in cotton and earhead bug in rice. Undertake plant protection measures on a non rainy day to control the pests.
- Weather conditions are favourable for outbreak of late blight in potato in High Altitude zone of Tamil Nadu. Undertake control measures on a non rainy day

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rain occurred in Ahmedabad, Anand, Banaskantha, Gandhinagar, Mehsana, Navsari and Patan districts of Gujarat region and most of the districts of Saurashtra, Kutch & Diu region during last week. No significant rain occurred in most of the remaining districts of the States of this region.
- **Rainfall Forecast:** Rain is likely at most places in Konkan and Goa along with isolated heavy rainfall and at a few places in Marathwada during the period. Rain is likely at a few places for next 24 hours and at many places after that in Madhya Maharashtra. Either isolated rain will occur or mainly dry weather will prevail over remaining parts of the region.
- **Major Crops:**
 - Maharashtra: Vegetables (vegetative / flowering / fruiting / harvesting), summer rice (harvesting in East Vidarbha), summer groundnut (harvesting), *kharif* rice (nursery sowing / germination in Konkan & nursery sowing / drill sowing in Kolhapur division).
 - Gujarat: Green gram (pod maturity / harvesting), summer groundnut (pod maturity), sugarcane (vegetative) and vegetables (vegetative / flowering / fruiting / harvesting).
- **Advisory:**
 - As rain occurred in Ahmedabad, Anand, Banaskantha, Gandhinagar, Mehsana, Navsari and Patan districts of Gujarat region and most of the districts of Saurashtra, Kutch & Diu region during last week, postpone irrigation to the standing crops in these districts.
 - As monsoon is likely to advance over some parts of Konkan & Goa and Madhya Maharashtra during next 2-3 days, farmers are advised to keep the lands ready utilizing recent pre-monsoon rainfall and procure seeds of improved & high yield varieties for sowing of *kharif* rice, jowar, bajra, groundnut, soyabean, sunflower, *kharif* cotton, red gram, moong etc. Select early maturing varieties from Karjat-4, 184, Ratnagiri-24, Ratna & Pawana in Konkan and medium maturing varieties like Phule Samrudhi, Indrayani & Pusa Basmati in Pune division in Maharashtra for rice, CSH-14 to 18, CSH-23, SSV-84, Phule Amruta (RSSV) for jowar, Sharda, Saburi, Shanti, ICTP-8203 and Samrudhi for bajra, Phule Pragati (JL-24), TAG-24, TG-26, Phule Vyas (JL-220), Phule Unap and TGP-41 for ground nut, ICPL-87, AKT- 8811, Vipula, and B.M.S.R. for red gram, Indian improved variety AKA-5, 7 & 8, Indian hybrid variety like PKVDH-1, American improved variety AKH - 081, PKV- Rajat & AKH-8828 for cotton and Ganga -11, Deccan-105, Trishulata, Pro -311, Bio -9681, Dhaval and African tall for maize.
 - Utilising the recent pre-monsoon rainfall, farmers in Marathwada & Vidarbha are advised to complete the preparatory tillage and keep the inputs ready for sowing of *kharif* crops.
 - As high temperatures are prevailing over parts of Vidarbha, farmers are advised to apply light & frequent irrigation to the standing crops.

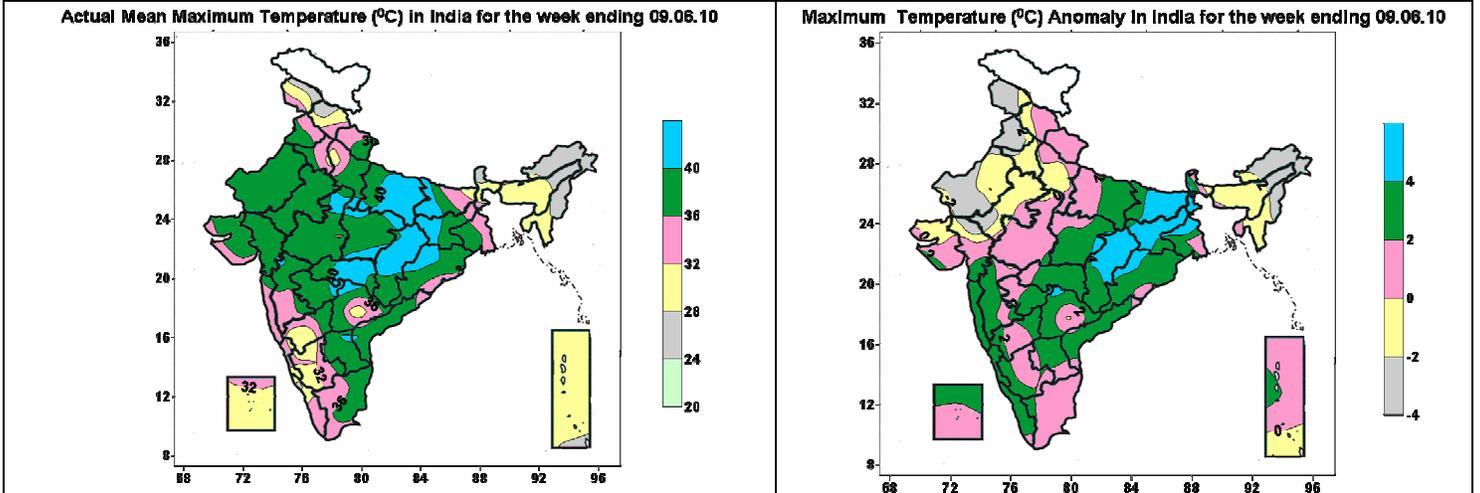
- Farmers in Maharashtra are advised to undertake the sowing of Bt cotton upto 15th June.
- Utilising the recent pre-monsoon rainfall, farmers in Gujarat State are advised to complete the preparatory tillage and keep the inputs ready for sowing of *kharif* crops like rice, groundnut, castor, bajra, sesamum, green gram, black gram, cow pea and pigeon pea. Select varieties from GR-11,GR-4 GR-101,GR-102,GR-103 for rice (transplanted), GR-3, Ambika, Ratna, IR-28 rice (drill), GAUG-10, GG-11, GG-12, GG-13 for groundnut (spreading), GAUG-1, GG-2, GG-4, GG-5 for groundnut (bunch), GAUCH-1,GCH-2, GCH-4, GCH-5 for castor, GHB-558, 577, 538 for bajra, GM-3, GM-4 and K-851 for green gram, T-9 and GU-1 for black gram, Gujarat cowpea-1, 2, 4 and Pusa Falguni for cowpea , BDN-2, GT-100 and GTH-1 for pigeon pea.
- Due to cloudy weather conditions, there may be attack of fruit fly in mango in Konkan, farmers are advised to use Rakshak fruit fly trap @ 4 traps per hectare on mature mango trees.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred over the States during the period.
- **Rainfall Forecast:** Either isolated rain will occur or dry weather will prevail over the region.
- **Major Crops:**
 - Sugarcane (cane development) and vegetable crops (flowering / fruiting) in Madhya Pradesh.
 - *Boro* rice (maturity / harvesting); this is proper time for sowing of rice nursery in Chhattisgarh.
 - **Advisory:**
 - As conditions are favourable for normal arrival of monsoon, farmers in Madhya Pradesh and Chhattisgarh are advised to arrange for inputs to undertake sowing of *kharif* crops like rice, maize, jowar, red gram, etc, Farmers in Jhabua Hills zone in Madhya Pradesh are advised to undertake nursery sowing of *kharif* vegetable crops like onion, chilli, tomato and brinjal for transplanting during monsoon.
 - As dry weather conditions prevail for the last few weeks and there are chances of no rainfall in the next three days over Madhya Pradesh, farmers are advised to apply light and frequent irrigation to sugarcane to meet the excess evaporative demands.
 - Evaporation rates are higher over Chhattisgarh to the tune of 15 mm/day, which has increased the water requirements of summer vegetables crops. Hence, it is advised to irrigate the crops as per requirement for proper water management.
 - Due to forecast of high wind speed over Chhattisgarh, farmers are advised to undertake propping of sugarcane, which is now at six feet height, to prevent from lodging.

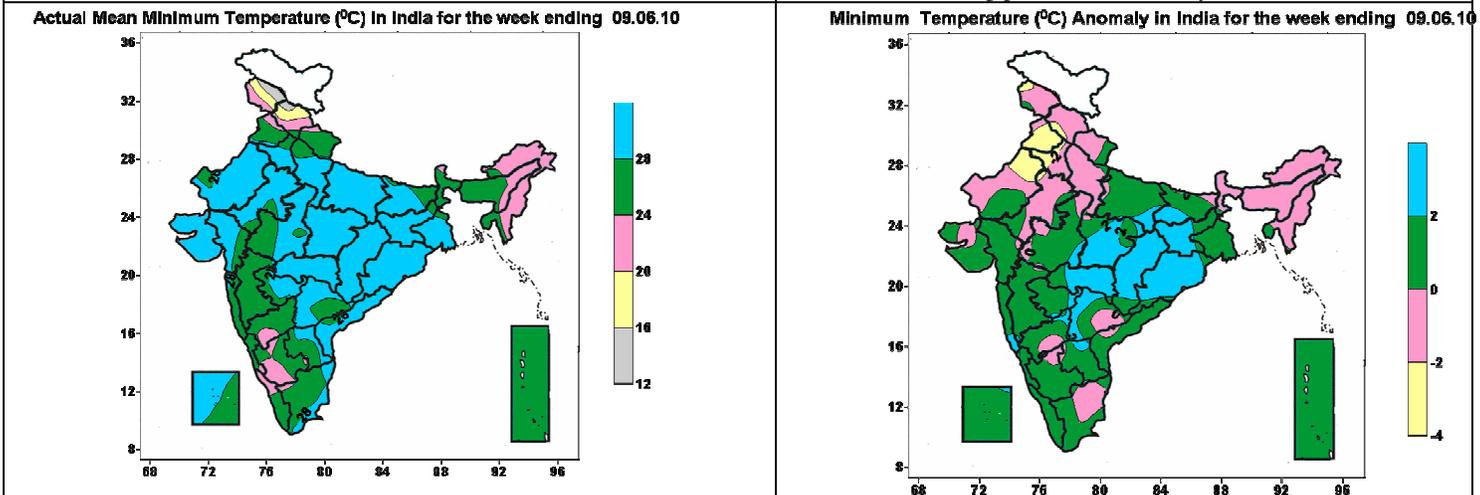
Annexure I

Contour maps for the week ending 09.06.10



Actual Mean Maximum temperature ranged between 40⁰C and above over most parts of East Uttar Pradesh, Chhattisgarh, Vidarbha, some parts of West Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Orissa, Marathwada and Andhra Pradesh, 36 to 40⁰C over most parts of the country (except Jammu & Kashmir, Northeast India, Sub-Himalaya West Bengal, Sikkim, most parts of (East Uttar Pradesh, Chhattisgarh, Konkan & Goa, Karnataka), Kerala, Lakshadweep, Andaman & Nicobar Islands), 20 to 36⁰C over remaining parts of the country.

Actual Mean Maximum temperature anomaly ranged between 4⁰C and above over most parts of Bihar, Jharkhand, North Chhattisgarh, some parts of West Bengal, East Madhya Pradesh, Orissa, Telengana, 2 to 4⁰C over most parts of East Uttar Pradesh, East Madhya Pradesh, Orissa, Maharashtra, Andhra Pradesh, Coastal Karnataka, Kerala, some parts of Bihar, Jharkhand, West Bengal, Sikkim, East Madhya Pradesh, Chhattisgarh, Gujarat, Kutch, Interior Karnataka, Tamil Nadu, Lakshadweep, Andaman & Nicobar Islands, -4 to 2⁰C over remaining parts of the country.

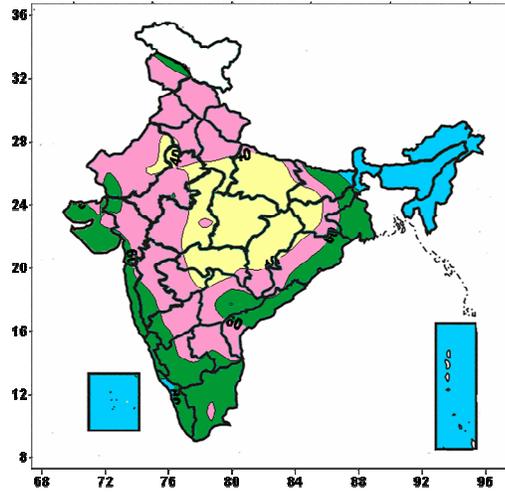


Actual Mean Minimum Temperature ranged between 28⁰C and above over most parts of Northwest India except (Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab), East India except (Sub-Himalayan West Bengal, Sikkim), Central India, Gujarat, Saurashtra & Kutch, Andhra Pradesh, Lakshadweep Island, some parts of Marathwada, Tamil Nadu, 24 to 28⁰C over most parts of Uttarakhand, Punjab, Sub-Himalayan West Bengal, Sikkim, Meghalaya, Tripura, Konkan & Goa, Madhya Maharashtra, Karnataka, south Kerala, Tamil Nadu, Rayalaseema, Andaman &

Minimum Temperature anomaly ranged 2⁰C and above over most parts of Jharkhand, Orissa, Central India except (West Madhya Pradesh), some parts of East Uttar Pradesh, Bihar, Marathwada, Konkan & Goa, Telengana, Rayalaseema, 0 to 2⁰C over most parts of the country (except Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab. Haryana, West Uttar Pradesh, Rajasthan, most part of Northeast India, East Madhya Pradesh, Chattisgarh, Orissa, Vidarbha, most pat of Jharkhand), -4 to 0⁰ C over remaining parts of the country.

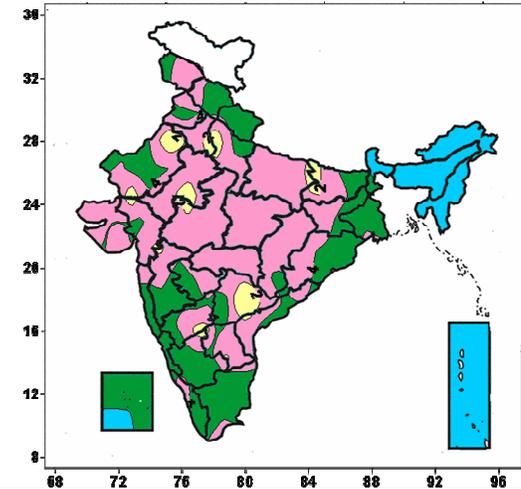
Nicobar Islands, some parts of Haryana, Rajasthan, Bihar, Jharkhand, Gangetic West Bengal, Arunachal Pradesh, Mizoram, West Madhya Pradesh, Gujarat, Marathwada, Coastal Andhra Pradesh, Telengana, Lakshadweep Island, 12 to 24°C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 09.06.10



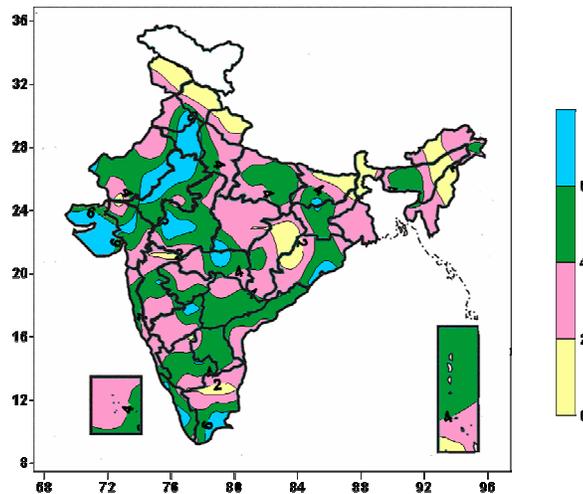
Relative humidity between 80% and above over most parts of North East India, Sub-Himalayan West Bengal & Sikkim, Andaman & Nicobar and Lakshadweep Island, some parts of Bihar, Kerala, 60 to 80% over most parts of Gangetic west Bengal, Coastal Orissa, Saurashtra & Kutch, Konkan & Goa, Coastal Andhra Pradesh, Coastal Karnataka, South Interior Karnataka, Tamil Nadu, Kerala, some parts of Jammu & Kashmir, West Rajasthan, Bihar, Jharkhand, Gujarat, Madhya Maharashtra, North Interior Karnataka, Telengana, Rayalaseema, 20 to 60% over remaining parts of the country.

Cloud amount (okta) over India for the week ending 09.06.10



Cloud amount 6 okta and above over most parts of Northeast India, Sikkim, Andaman & Nicobar Islands, some parts of Sub-Himalayan West Bengal and Lakshadweep Islands, 4 to 6 okta over most parts Himachal Pradesh, Uttarakhand, West Bengal, Orissa, Maharashtra except Vidarbha, Karnataka, Kerala, Tamil Nadu and Lakshadweep Islands, some parts of Jammu & Kashmir, Punjab, West Uttar Pradesh, Rajasthan, Bihar, Jharkhand, Chhattisgarh, Gujarat, Kutch, Andhra Pradesh, 0 to 4 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 09.06.10



Wind speed ranged between 6 knots and above over most parts of Haryana, Saurashtra, Kutch, some parts of Punjab, Rajasthan, Bihar, Orissa, Madhya Pradesh, Vidarbha, North Interior Karnataka, Kerala, Tamil Nadu, 4 to 6 knots over most parts of Rajasthan, Uttar Pradesh, Jharkhand, Gujarat, West Madhya Pradesh, Andhra Pradesh, South Interior Karnataka, Kerala, Andaman & Nicobar Islands, some parts of Punjab, Haryana, Bihar, Assam & Meghalaya, Orissa, East Madhya Pradesh, Chattisgarh, Saurashtra, Maharashtra, North Interior Karnataka, Coastal Karnataka, Tamil Nadu and Lakshadweep Islands, 0 to 4 knots over remaining parts of the country.