

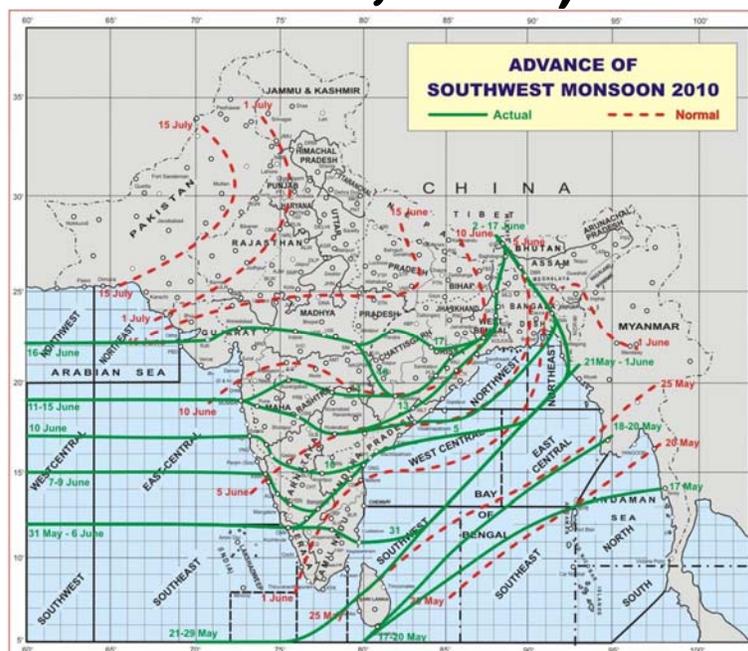
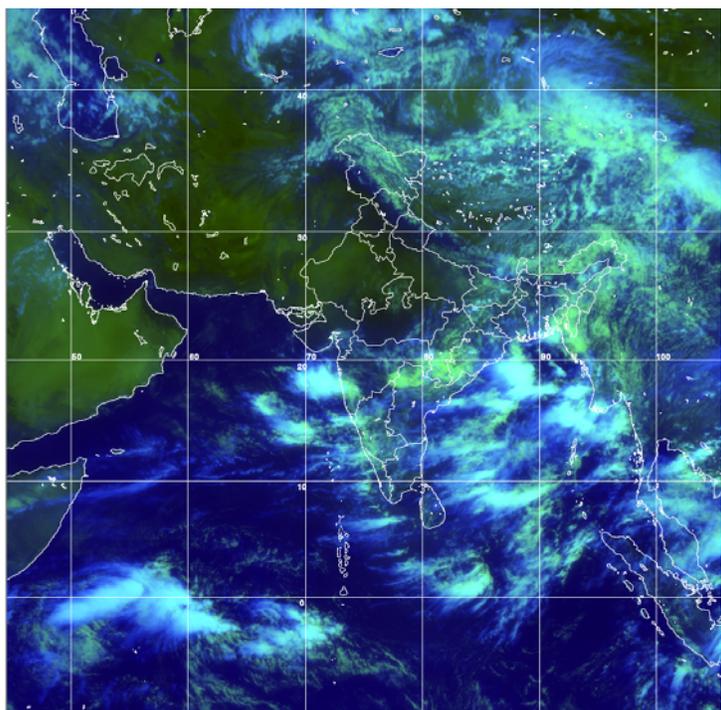


National Agromet Advisory Bulletin

Thursday, 17th June, 2010

(For the period 17th to 21st June, 2010)

Satellite image 6 UTC Dated
18th 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 further advanced into some more parts of east Madhya Pradesh, Chhattisgarh and Orissa.
- The Northern Limit of Monsoon (NLM) passes through Lat.22.0°N/Long.60.0°E, Lat.22.0°N/Long.69.0°E, Rajkot, Ahmedabad, Indore, Seoni, Pendra, Jharsuguda, Burdwan, Malda and Gangtok.
- Conditions are favourable for further advance of southwest monsoon into remaining parts of Orissa, Chhattisgarh, West Bengal & Sikkim and some parts of Jharkhand and Bihar during next 2-3 days.

Numerical Weather Prediction (NWP) Guidance

- Active monsoon conditions along west coast and northeastern states.

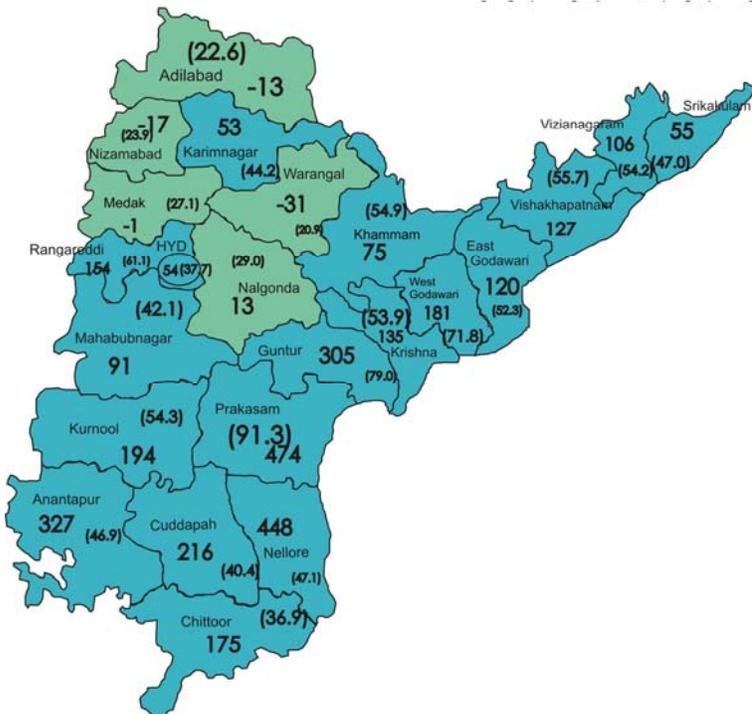
Weather Outlook (upto 1430 hours IST of 22nd June, 2010)

- Fairly widespread rainfall activity would occur along west coast and over northeastern states.

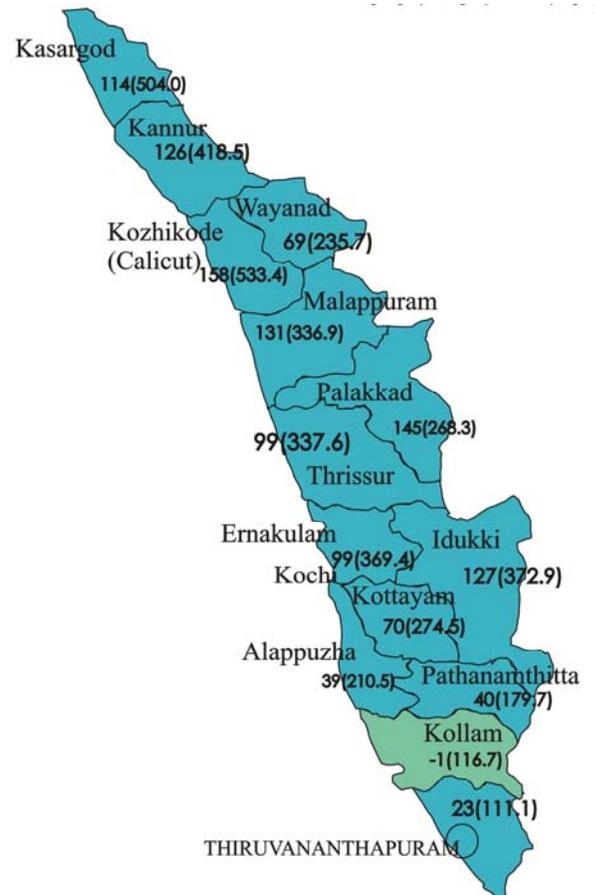
Rainfall situation in some of the States in the country for the week ending 16.06.2010

Rainfall maps of some states representing (%) Departure

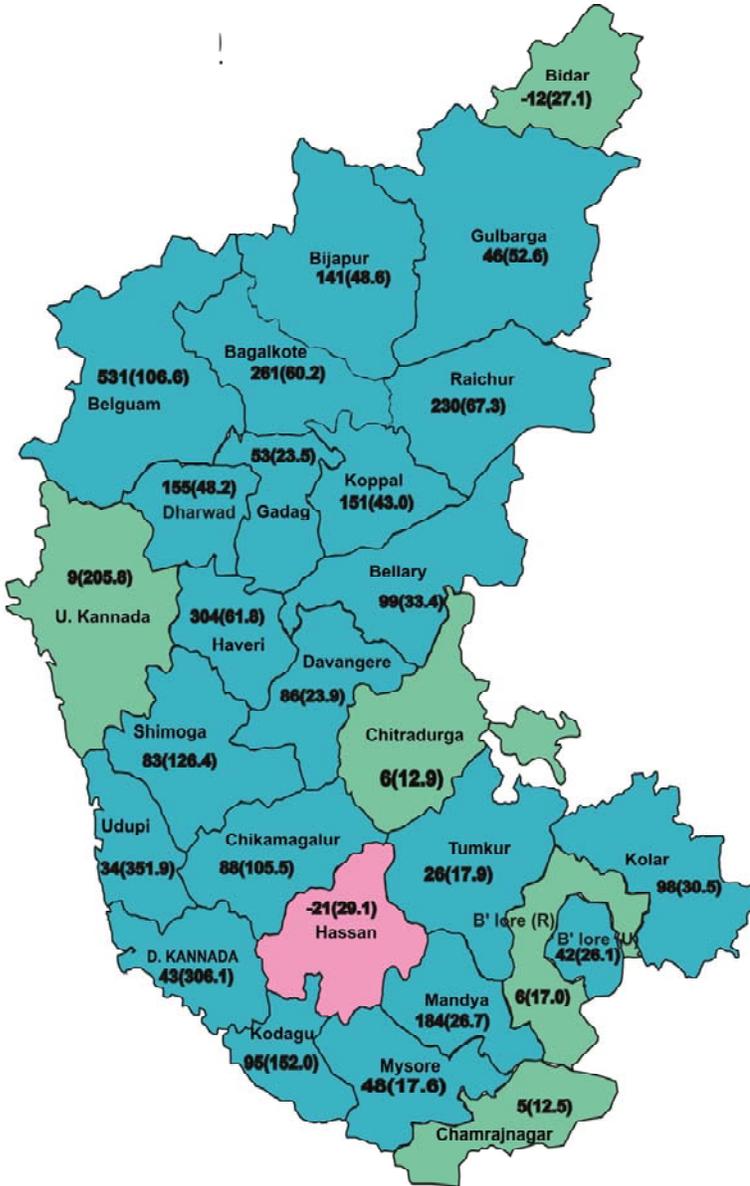
Andhra Pradesh



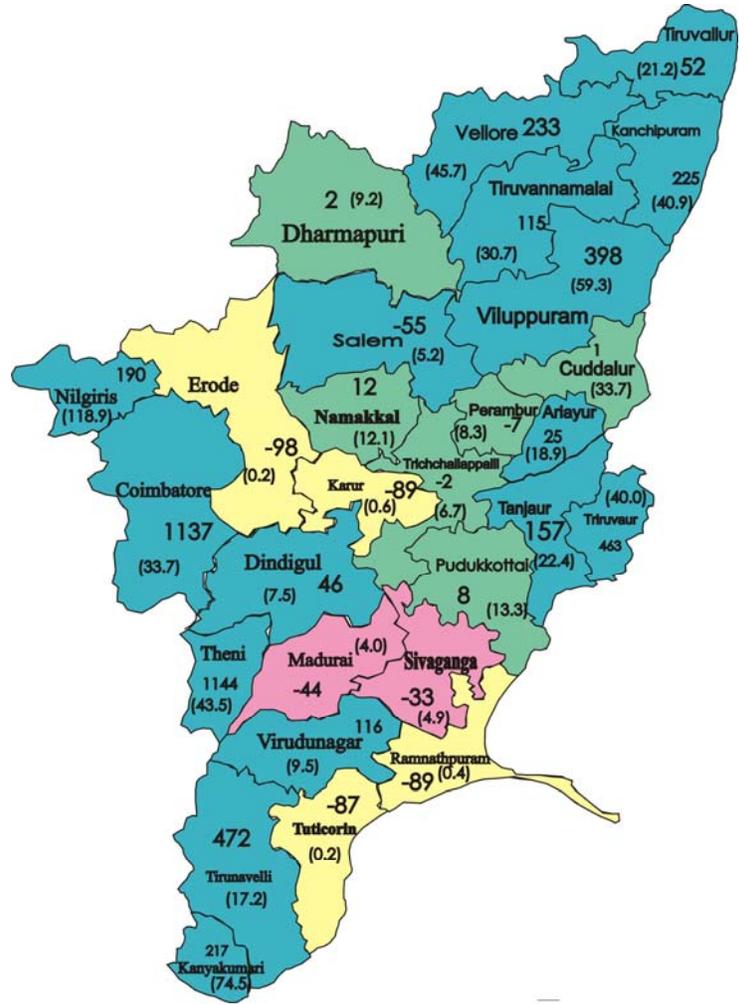
Kerala



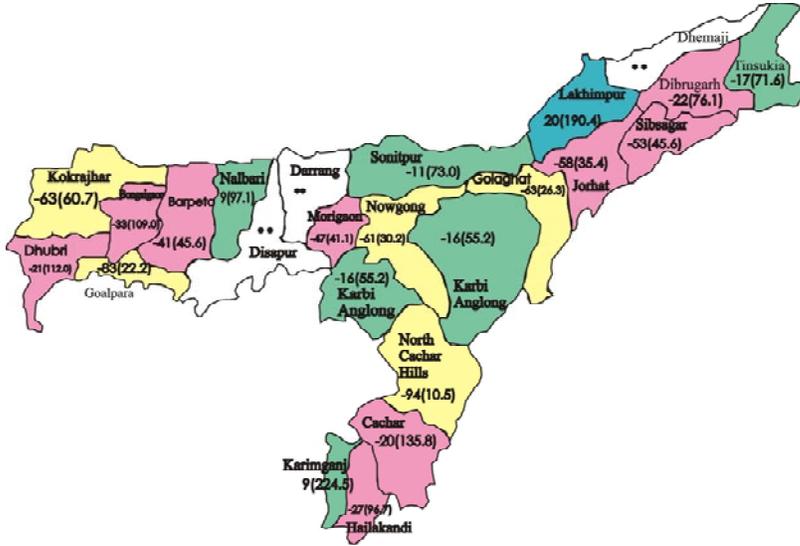
Karnataka



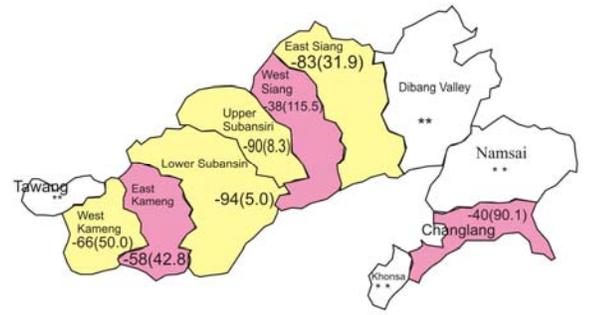
Tamil Nadu



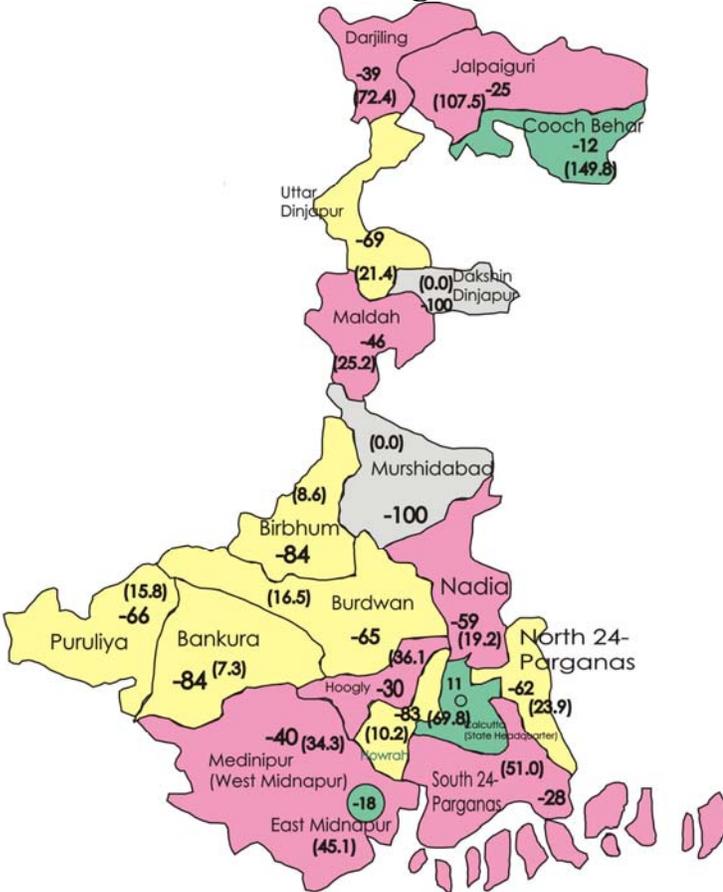
Assam



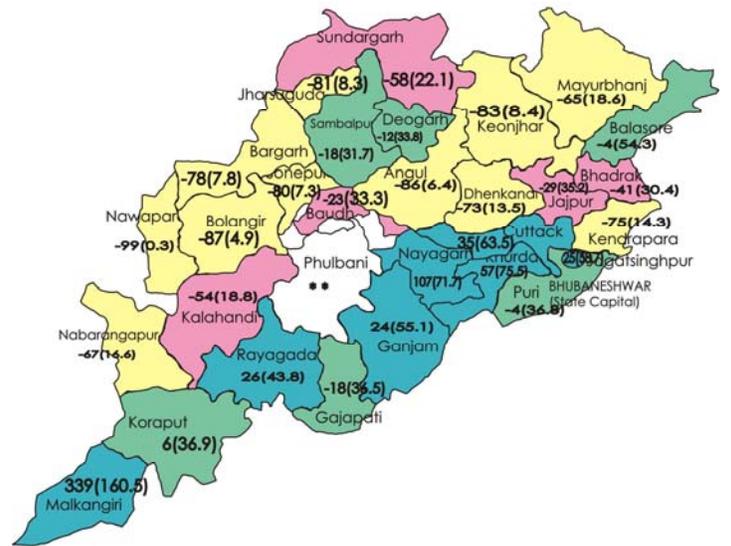
Arunachal Pradesh



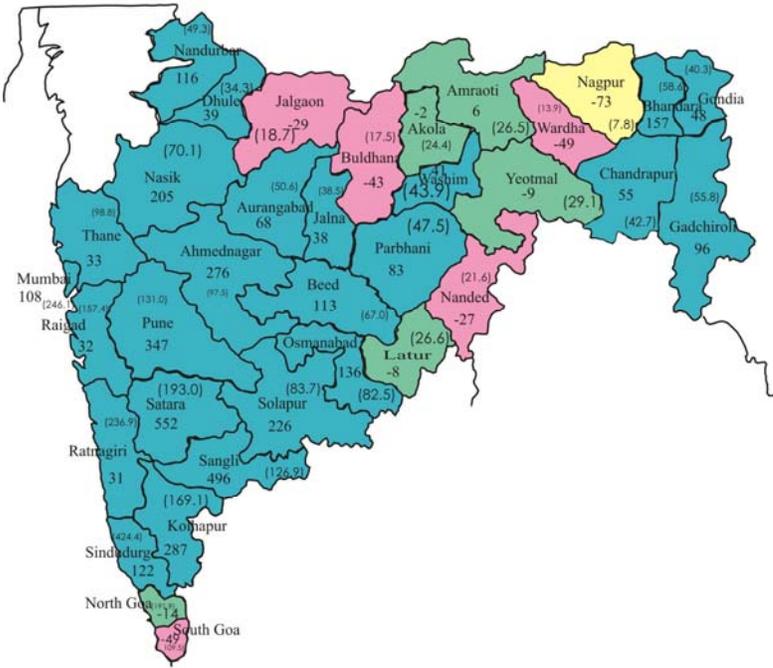
West Bengal



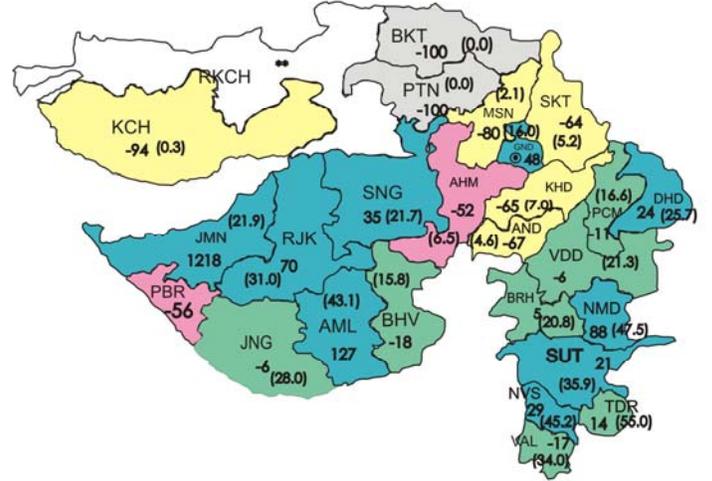
Orissa



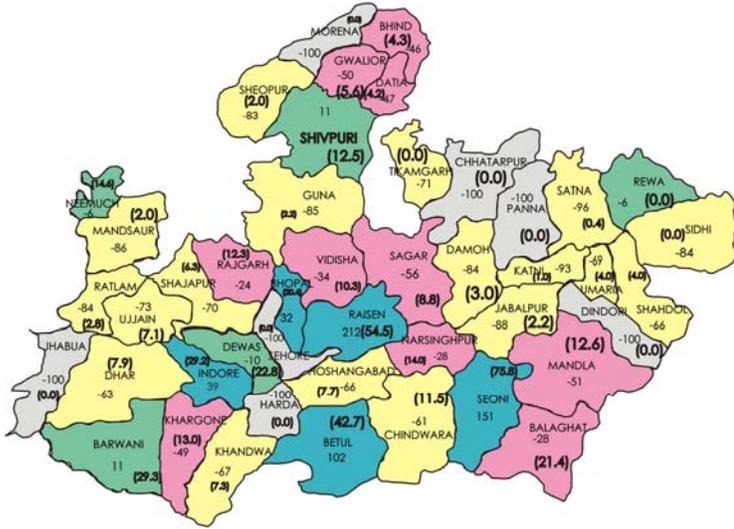
Maharashtra



Gujarat



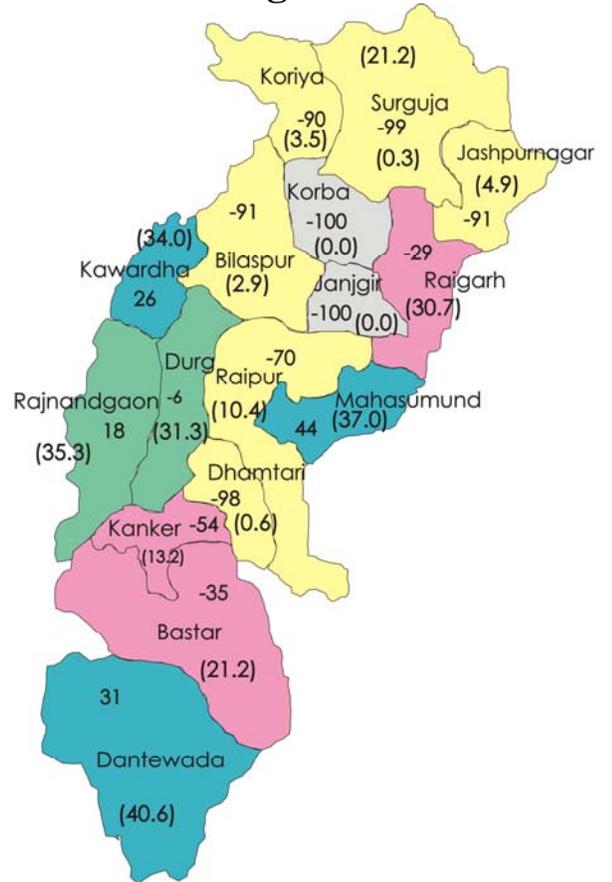
Madhya Pradesh



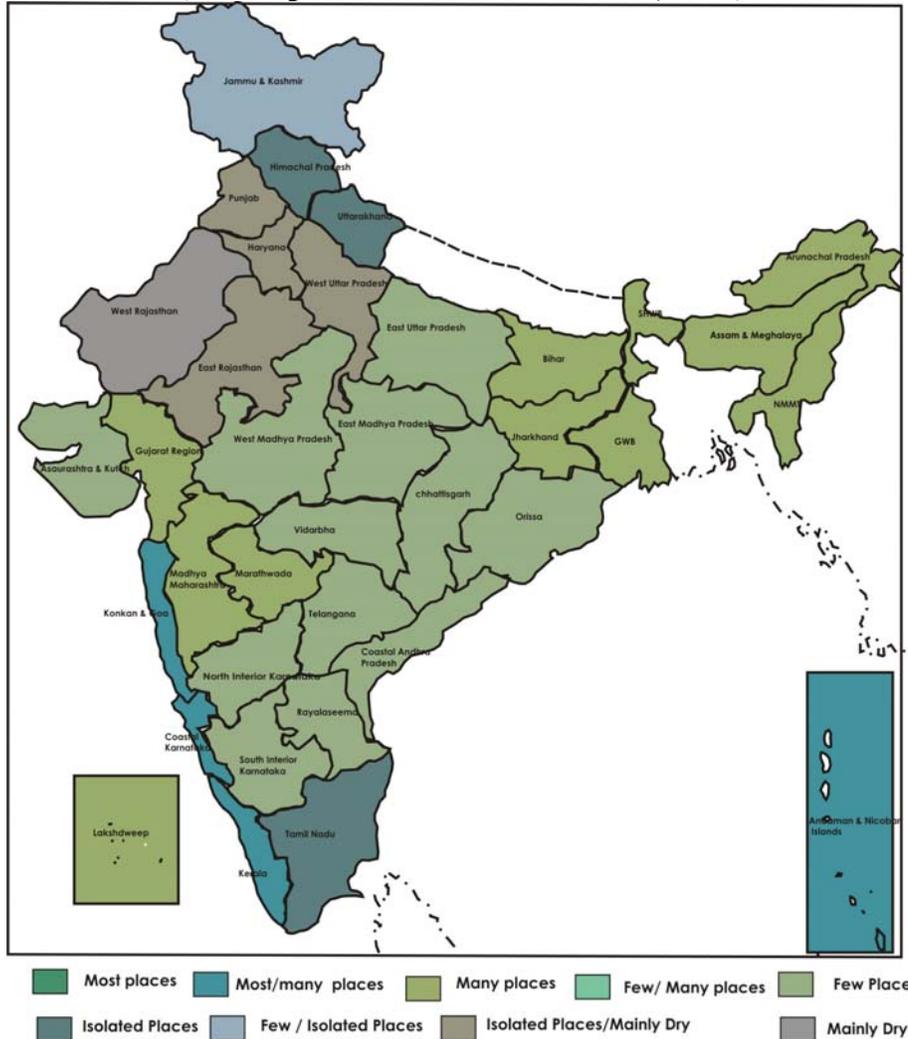
LEGEND

- EXCESS 20% OR MORE
- NORMAL +19% TO - 19%
- DEFICIENT - 20% TO - 59%
- SCANTY - 60% TO - 99%
- NO RAIN - 100%
- DATA NOT AVAILABLE
- DATA IN PARANTHESIS () IS ACTUAL RAINFALL IN MM

Chattisgarh



Weather Forecast
(Valid upto 1430 hours of 20th June, 2010)



- Rainfall is likely to occur at most/many places over Konkan & Goa, coastal Karnataka, Kerala, Andaman & Nicobar Islands, many places over North East India, West Bengal, Sikkim, Bihar, Jharkhand, Gujarat region, Madhya Maharashtra, Marathwada, Lakshdweep Islands, at a few places over Orissa, East Uttar Pradesh, Central India, Saurashtra, Kutch, Andhra Pradesh, Interior Karnataka, at a few places over Jammu & Kashmir for next 24 hours and isolated rainfall thereafter, at isolated places over over Uttarakhand, Himachal Pradesh, Tamil Nadu & Pondicherry, at isolated places over West Uttar Pradesh, Punjab, Haryana, Chandigarh & Delhi, East Rajasthan for next 24 hours and mainly dry thereafter, mainly dry weather is likely to prevail over remaining parts of the country.

Warning

- Isolated heavy to very heavy rainfall would occur over Madhya Maharashtra, Konkan & Goa and coastal Karnataka during next 48 hours.

Salient advisories

- As monsoon has already advanced in many parts of the country and the performance of rainfall is also satisfactory, sowing of *kharif* crops are continued in full swing in the States like Kerala, Karnataka, Andhra Pradesh, Maharashtra, Assam, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, West Bengal, Sikkim. The advisories specific to sowing of different crops have been issued to the farming community of these States.
- Farmers in Scarce Rainfall zone of Andhra Pradesh are advised to undertake sowing of red gram and castor as sufficient rainfall is received in the region. Continue sowing of groundnut with improved varieties like K-6, K-9 and Narayani etc.
- Farmers in Southern Telangana Zone of Andhra Pradesh are advised to undertake sowing of medium to long duration rice varieties in the nursery utilizing recent monsoon showers.
- Utilizing the monsoon showers, farmers are advised to undertake sowing of red gram and ragi, greengram, blackgram, jowar, soybean and pigeonpea in North East Transition zone and maize and groundnut in Southern Transition Zone in Karnataka.
- Farmers are advised to undertake transplanting of rice in Northern Zone and Central zone and land preparation for sowing of upland rice in Southern zone in Kerala utilizing the monsoon showers.
- As monsoon covered entire State of Maharashtra & most of the districts received significant monsoon rain during last week, farmers are advised to undertake sowing of *kharif* crops by selecting improved & high yield varieties of *kharif* rice, jowar, bajra, groundnut, soybean, sunflower, *kharif* cotton, red gram, moong etc.
- Withhold sowing in Madhya Maharashtra, Konkan & Goa and coastal Karnataka during next 48 hours in view of likely occurrence of isolated heavy rainfall and continue sowing after that.
- 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 in Terai Zone and also to transplant *aus* rice in New Alluvial Zone and to sow brinjal, okra, pumpkin, bitter gourd, sponge gourd and ridge gourd in Coastal Saline Zone of West Bengal utilizing recent monsoon rainfall.
- Farmers in Hill zone, Lower, Upper and Central Brahmaputra valley zone of Assam are advised to undertake sowing of *sali* rice nursery. 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.
- As sufficient rain occurred in Dangs, Narmada, Navsari, Surat and Valsad districts of Gujarat region and most of the districts of Saurashtra, Kutch & Diu during last couple of weeks, farmers are advised to sow the *kharif* crops like rice, groundnut, cotton, castor, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram in these districts. Farmers in remaining districts of Gujarat are advised to start sowing operation within 3 – 4 days as monsoon rain is likely to start in those districts.
- Farmers in Orissa are advised to undertake field preparation and nursery sowing / direct sowing of rice and also sowing of maize, groundnut, pulses, vegetable crops etc. in Balasore, Bhadrak, Boudh, Cuttack, Deogarh, Gajapati, Ganjam, Jagatsingpur, Jajpur, Kandhamal, Keonjhar, Malkangiri, Nayagarh, Puri, Rayagada and Sambalpur districts where sufficient rain occurred. Farmers in remaining districts of Orissa may start sowing operation within 3 – 4 days as rain is likely to occur in those districts.

Zonewise Agromet Advisories

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

- **Realised Rainfall:** Rain occurred in Anantnag, Doda, Pulwama, Srinagar districts in Jammu & Kashmir, Balrampur, Gonda and Gorakpur districts in Uttar Pradesh, Bhageswar, Dehradun, Garhwal Pauri and Nainital in Uttarakhand. No significant rainfall occurred in the remaining parts of the region during last week.
- **Rainfall Forecast:** Rainfall is likely at a few places in East Uttar Pradesh. Rainfall is likely at a few places in Jammu & Kashmir during next 24 hours and isolated thereafter. Either isolated rain will occur or mainly dry weather will prevail over remaining States of the region during the period.
- **Major Crops:**
 - Vegetables (Sowing/transplanting / vegetative) in Himachal Pradesh.
 - Vegetable crops (flowering / fruiting / harvesting) in Jammu & Kashmir.
 - Summer pulses (harvesting), sugarcane (vegetative) in Uttarakhand.
 - Sugarcane (vegetative), cotton, maize (early vegetative), rice(nursery sowing/transplanting) in Punjab.
 - Sugarcane (vegetative), cotton(early vegetative) in Haryana.
 - Summer vegetable crops (fruiting / harvesting) and *kharif* vegetables(transplanting) in Delhi.
 - Sugarcane (vegetative), sunflower (head formation), black gram and green gram (pod formation), vegetable crops (sowing) in Uttar Pradesh.
 - Vegetable crops (flowering / fruiting / harvesting) in Rajasthan.
- **Advisory:**
 - As rain occurred in Anantnag, Doda, Pulwama, Srinagar districts in Jammu & Kashmir, Balrampur, Gonda and Gorakpur districts in Uttar Pradesh, Bhageswar, Dehradun, Garhwal Pauri and Nainital in Uttarakhand, 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 continue nursery sowing of rice in Delhi with Hybrid varieties like K. R. H 2, PH B 71, Pant hybrid Dhan1, Narendra hybrid dhan 1, P R H 10, and high yielding varieties: Puss 44, Pant Dhan 10, Pant Dhan 4, Narendra Dhan 359 and Pusa 834. Rice nursery may be raised by Karnal technique to get early seedling for transplantation. In this technique leveled land should be divided into beds of width not more than one meter.
 - Farmers in Delhi are advised to undertake sowing of pigeon pea and continue field preparation for sowing of guar, bajra, maize, cluster bean, spinach, *amaranthus* and ladyfinger.
 - Farmers in Himachal Pradesh are advised to complete the transplanting of vegetables and potato and sowing of bhindi, *khira* and bitter gourd utilizing the realized rainfall during last week.
 - Farmers in Rajasthan are advised to undertake field preparation for sowing of maize utilizing the rainfall during last week. Procure 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 continue sowing of french bean var. VL Rajma-63 and bhindi with varieties like VL Bhindi-1 utilising the rainfall during last week.
 - As sufficient rainfall in Uttarakhand during the last week and also light rainfall is expected during this week, farmers area advised to undertake rice nursery preparation and transplanting of rice.
 - Farmers in intermediate zone are advised to undertake transplanting of rice @ 2-3 seedlings per hill when seedlings are at 4-6 leaf stage. Transplanting may be completed immediately in valley temperate zone if not done. As transplanting is delayed and seedlings are >30 days old, transplanting of 5-6 healthy seedlings per hill, immediately after uprooting from the nursery may be done and maintain a spacing of 15 cm x 15 cm.
 - Sowing of *kharif* pulses like moong, cowpea etc. may be completed up to mid June in valley temperate zone. Provide adequate drainage to avoid water stagnation in the field. Undertake sowing of maize in Rajouri and Udhampur district utilizing the realized rainfall during last week.

- Farmers in Punjab are advised to go for direct sowing of rice utilizing the realized rainfall during last week. Undertake transplanting of early sown rice.
- Farmers in Haryana are advised to sow the arhar crop with short duration varieties like UPAS 120, Manak and Paras.

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

- **Realised Rainfall:** Kathihar and Purnea districts of Bihar, Balasore, Bhadrak, Boudh, Cuttack, Deogarh, Gajapati, Ganjam, Jagatsingpur, Jajpur, Kandhamal, Keonjhar, Malkangiri, Nayagarh, Puri, Rayagada and Sambalpur districts in Orissa, Hooghly, East Midnapore, 24 Pargana (S) and West Midnapore districts in Gangetic West Bengal and Coochbehar, Darjeeling and Jalpaiguri districts of Sub-Himalayan West Bengal and also North Sikkim received good rainfall during last week. Many of the remaining districts of Orissa, Gangetic West Bengal and Sub-Himalayan West Bengal also received some rain during last week. No significant rain occurred over remaining parts of the region.
- **Rainfall Forecast:** Rain is likely to occur at many places in Bihar, Jharkhand, West Bengal and at a few places over Orissa during the period.
- **Major Rabi Crops:**
 - Maize and moong (maturity / harvesting) in Bihar.
 - Green gram and black gram (maturity / harvesting) in Jharkhand.
 - Rice (nursery sowing / direct sowing) and maize, groundnut, pulses, vegetable crops (sowing) in Orissa.
 - Sugarcane (vegetative), vegetable crops (vegetative / flowering / fruiting / harvesting), jute (early vegetative / vegetative), *aus* rice (transplanting), *aman* rice (nursery sowing), pulses and vegetables (sowing) in West Bengal.
 - High hills (1500- 2000 m) in Sikkim: large cardamom (secondary flowering / capsule formation), seed potato (tuberization), summer potato (Very High Hills) (tuberization), *kharif* vegetables & off season vegetables (late vegetative), maize (late vegetative / tasseling and silking); Medium hills (1000 - 1500 m): large cardamom (secondary flowering / capsule formation), maize (tasseling / silking / cob formation / cob maturity), *kharif* vegetable (late vegetative), ginger (early vegetative), rice (sowing / nursery sowing / early tillering); Low Hills (Below 1000 m): large cardamom (secondary flowering / capsule formation), maize (tasseling / silking / cob formation / cob maturity), *kharif* vegetable (late vegetative), ginger (early vegetative), rice (sowing / nursery sowing / transplanting).
- **Advisories:**
 - As rain is likely to occur at many places in Bihar, Jharkhand, West Bengal and Sikkim, postpone intercultural operation, irrigation and application of plant protection measures and fertilizer to the standing crops.
 - As Balasore, Bhadrak, Boudh, Cuttack, Deogarh, Gajapati, Ganjam, Jagatsingpur, Jajpur, Kandhamal, Keonjhar, Malkangiri, Nayagarh, Puri, Rayagada and Sambalpur districts in Orissa, received good rainfall during last week, postpone irrigation to the crops in these districts. Apply irrigation to the standing crops in remaining districts of Orissa.
 - Farmers in Orissa are advised to undertake field preparation and nursery sowing / direct sowing of rice and also sowing of maize, groundnut, pulses, vegetable crops etc. in the districts mentioned above where sufficient rain occurred. Select rice varieties from Khandagiri, Vandana, ZHU XI-26, Parijat, Annada and Heera for upland, Lalat, Konark, Surendra, Naveen, Swarna, Kharavela, Pratikhya, MTU-1001 and Geetanjali (aromatic rice) for medium land and Mahanadi, Moti, Indravati and aromatic rice like Dubraj and Ketakijoha for low land and also maize varieties from composite varieties like Navjot, Megha, Pratap, Shakti 1, Pragati etc. hybrid varieties like Decan 103, Decan 109, Decan 115, Bio 9681, Pro 311, Ganga II, Cargil 900M, Cargil 633, Sartaj etc. Farmers in remaining districts may keep the land and inputs ready and wait for sufficient rain for sowing of the crops.
 - 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 in Terai Zone and also to transplant *aus* rice in New Alluvial Zone and to sow brinjal, okra, pumpkin, bitter gourd, sponge gourd and ridge gourd in Coastal Saline Zone of West Bengal utilizing recent monsoon rainfall.

- As rain is likely to occur at many places in Bihar and Jharkhand, farmers are advised to keep the land and inputs ready and wait for sufficient rain for sowing of the crops. Select rice varieties from Rajendra Suhashini 1, Rajendra Kasturi, Saroj, Sita, Saryug 52, Pusa 44, Pusa Basmati 1, Pusa Sugandh 2, Pusa Sugandh 3 in Bihar.
- 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 after current spells of rain.
- Due to cloudy weather and high humidity, fungal collar rot may be seen in Yam in New Alluvial Zone of West Bengal. Keep the field weed free and clean. Apply carbendazim (1 g) and Thiram (2 g) together per litre of water after current spells of rain.

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 during the period.
- **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, sesame 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 during the period, postpone irrigation to the standing crops.
 - Farmers are also advised to postpone intercultural operation, application of fertilizers and plant protection measures to sugarcane, maize and jute.
 - Farmers in Hill zone, Lower, Upper and Central Brahmaputra valley zone of Assam are advised to undertake sowing of *sali* rice nursery. Recommended high yielding varieties of *sali* rice are Ranjit, Bahadur, Vasundhara, Kushal, Piyoli, Moniram, Rangali, Bhogali, Ketkijaha etc.
 - 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 T-21 for red gram and AST-1, Madhabi, Binayak, Punjab til -1, Gouri etc. for sesamum.
 - Delay the harvesting of mature crop of *ahu* rice in Upper Brahmaputra valley zone as there will be rain in the coming days.
 - As there was sufficient rainfall in the previous week farmers may start preparatory tillage in Barak Valley Zone for cultivation of early semi dwarf *Autumn* rice under medium land situation.
 - Farmers are advised to drain out excess water from the maize, sugarcane, green gram, black gram, ginger, turmeric and vegetable crop fields as stagnant water in the root zone is harmful to these crops.
 - Farmers should provide proper support to the fruit crops like papaya and banana to reduce the probable damage due to high wind speed and drain out excess water.
 - 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.

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

- **Realised Rainfall:** All the districts in Kerala, Andhra Pradesh, Coastal Karnataka, North Interior Karnataka except Bidar district, Bellary, Chikamagalur, Kodagu, Kolar and Shimoga districts in South Interior Karnataka and Coimbatore, Cuddalore, Kanchipurami, Kanyakumari, Nilgiris, Pudukkottai, Theni and Thiruvavarur districts in Tamil Nadu received rainfall during last week.
- **Rainfall Forecast:** Rain is likely to occur at most/many places over Kerala and Coastal Karnataka during next three days. Rain is likely at a few places over the remaining region except Tamil Nadu where rain will occur at isolated places. Heavy rainfall is likely at isolated places in Coastal Karnataka during next 48 hours
- **Major Crops:**
 - *Kharif* crops viz., rice, groundnut, red gram, etc. (sowing) in Andhra Pradesh.
 - Sugarcane (cane development) and *kharif* crops viz., redgram, ragi, greengram, blackgram, jowar, soybean, maize and groundnut (sowing) in Karnataka.
 - *Virippu* rice (transplanting), bhindi (sowing), upland rice (land preparation), coconut, cashew, ginger and turmeric (planting) and plantation crops (coconut, arecanut, pepper and cashew – various stages) in Kerala.
 - Rice (*kuruvai* – transplanting) in Tamil Nadu.
- **Advisories:**
- Due to forecast of rainfall likely at most/many places over Kerala and Coastal Karnataka, farmers are advised to postpone irrigation to sugarcane and vegetable crops. Arrange for drainage facilities in Coastal Karnataka as heavy rainfall is likely at isolated places during next 48 hours.
- As there was rainfall in Andhra Pradesh, Coastal Karnataka, North Interior Karnataka except Bidar district, Bellary, Chikamagalur, Kodagu, Kolar and Shimoga districts in South Interior Karnataka and Coimbatore, Cuddalore, Kanchipurami, Kanyakumari, Nilgiris, Pudukkottai, Theni and Thiruvavarur districts in Tamil Nadu, farmers are advised to postpone irrigation to standing crops.
- Farmers in Scarce Rainfall zone of Andhra Pradesh are advised to undertake sowing of redgram and castor since sufficient rains were received in the region. Continue sowing of groundnut with improved varieties like K-6, K-9, Narayani etc. As stem necrosis in groundnut is likely to spread due to present weather, undertake border cropping with four rows of bajra or jowar around the field.
- Farmers in Southern Telangana Zone of Andhra Pradesh are advised to undertake sowing of medium to long duration rice varieties in the nursery utilizing recent monsoon showers. They are also advised to raise the nurseries of vegetable crops like brinjal, capsicum and tomato
- Utilizing the monsoon showers, farmers are advised to undertake sowing of redgram (varieties: TTB-7, BRG-1 and Hyd-3C) and ragi (varieties: Indaf-8, MR-1) in Eastern Dry Zone, greengram, blackgram, jowar, soybean and pigeonpea in North East Transition zone and maize and groundnut in Southern Transition Zone in Karnataka.
- As high wind speed is expected in Eastern Dry Zone of Karnataka and Southern zone of Kerala and Tamil Nadu, farmers are advised to provide mechanical support to banana and sugarcane to prevent from lodging.
- Farmers are advised to undertake transplanting of rice and planting of coconut and cashew in Northern Zone, transplanting of *virippu* rice and planting of ginger and turmeric in Central zone and sowing of bhindi and land preparation for upland rice in Southern zone in Kerala utilizing the monsoon showers.
- As drenching showers occur, moths of red hairy caterpillar may emerge mainly in the districts of Mahabubnagar, Chittoor and Anantapur in Andhra Pradesh. To manage the pest, keep bon fires at night between 7 pm to 11 pm to attract and kill the moths.

- Due to cloudy weather in Mysore and Chamrajnagar districts, there are chances of incidences of thrips, mites and murda-complex diseases in chilli; spray 1.7 ml Roger or 1.5 ml Metasystox + 2.5 ml Dicofol per liter of water after current spells of rain to control the pests and diseases.
- Due to increase in relative humidity in High Altitude zone of Kerala, Sigatoka leaf spot in rainfed banana and leaf rust in coffee may become severe. Spray 1% Bordeaux mixture or Tilt 25 EC (1ml/lit of water) and 0.5% Bordeaux mixture or plant wax 20 EC @1-2 ml per litre after current spells of rain to control Sigatoka leaf spot in banana and leaf rust in coffee, respectively.

Cattle and Buffaloes

- Prevailing weather conditions are congenial for the occurrence of Hemorrhagic Septicemia, Foot and mouth disease in cattle, ET and sheep pox in sheep and Ranikhet disease in poultry in Andhra Pradesh. To prevent the diseases, vaccinate the animals at the earliest.

WEST INDIA [GOA, MAHARASHTRA, GUJARAT]

- **Realised Rainfall:** Rain occurred in Dangs, DNH and Daman, Narmada, Navsari, Surat and Valsad districts of Gujarat region, Amreli and Rajkot districts of Saurashtra, Kutch & Diu and most of the districts of Maharashtra 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 and at many places thereafter. Rain is likely to occur at many places in Madhya Maharashtra, Marathwada and Gujarat region and at a few places in Vidarbha and Saurashtra, Kutch & Diu region during the period. Isolated heavy to very heavy rainfall would occur over Madhya Maharashtra and Konkan & Goa during next 48 hours.
- **Major Crops:**
 - Maharashtra: Vegetables (vegetative / flowering / fruiting / harvesting), *kharif* rice (nursery sowing / germination) and cotton, soybean, jowar, groundnut, sunflower, red gram, green gram and bajra (land preparation / sowing in Madhya Maharashtra & Marathwada).
 - Gujarat: Rice, groundnut, cotton, castor, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram (land preparation / sowing).
- **Advisory:**
 - As rain occurred in Dangs, Narmada, Navsari, Surat and Valsad districts of Gujarat region, most of the districts of Maharashtra during last week and in most of the districts of Saurashtra, Kutch & Diu during last couple of weeks, postpone irrigation to the standing crops in these districts.
 - As rain is likely to occur at most places in Konkan and Goa and at many places in Madhya Maharashtra, Marathwada and Gujarat region, farmers are advised to postpone intercultural operation, irrigation, application of fertilizer and plant protection measures to the crops. Farmers in Konkan and Goa and Madhya Maharashtra are also advised to postpone sowing of crops and drain out excess water from the fields in view of likely heavy to vary heavy rainfall during next 48 hours.
 - As monsoon covered entire State of Maharashtra & most of the districts received significant monsoon rain during last week, farmers are advised to undertake sowing of *kharif* crops by selecting improved & high yield varieties of *kharif* rice, jowar, bajra, groundnut, soybean, sunflower, *kharif* cotton, red gram, moong etc. Select early maturing varieties from Karjat-4, 184, Ratnagiri-24, Ratna and Pawana in Konkan, medium maturing varieties like Phule Samrudhi, Indrayani & Pusa Basmati in Pune division and PKV Khamang, PKV HMT & PKV Makrand for east Vidarbha in Maharashtra for rice, CSH-14 to 18, CSH-23, SSV-84, Phule Amruta (RSSV) for jowar, Shardha, 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, Ganga -11, Deccan-105, Trishulata, Pro -311, Bio - 9681, Dhaval and African tall for maize, Vaibhav, Kopergaon-1, B.P.M.R- 145, Jalgaon 781, S-8 and

PhuleM-2 for moong, P.K-1029, M.A.C.S.-450, JS-335, Phule kalyani (DS-228) for soybean and EC-68414, Modern, SS-56, K.B.S.H-1, Bhanu, Phule Raviraj for sunflower.

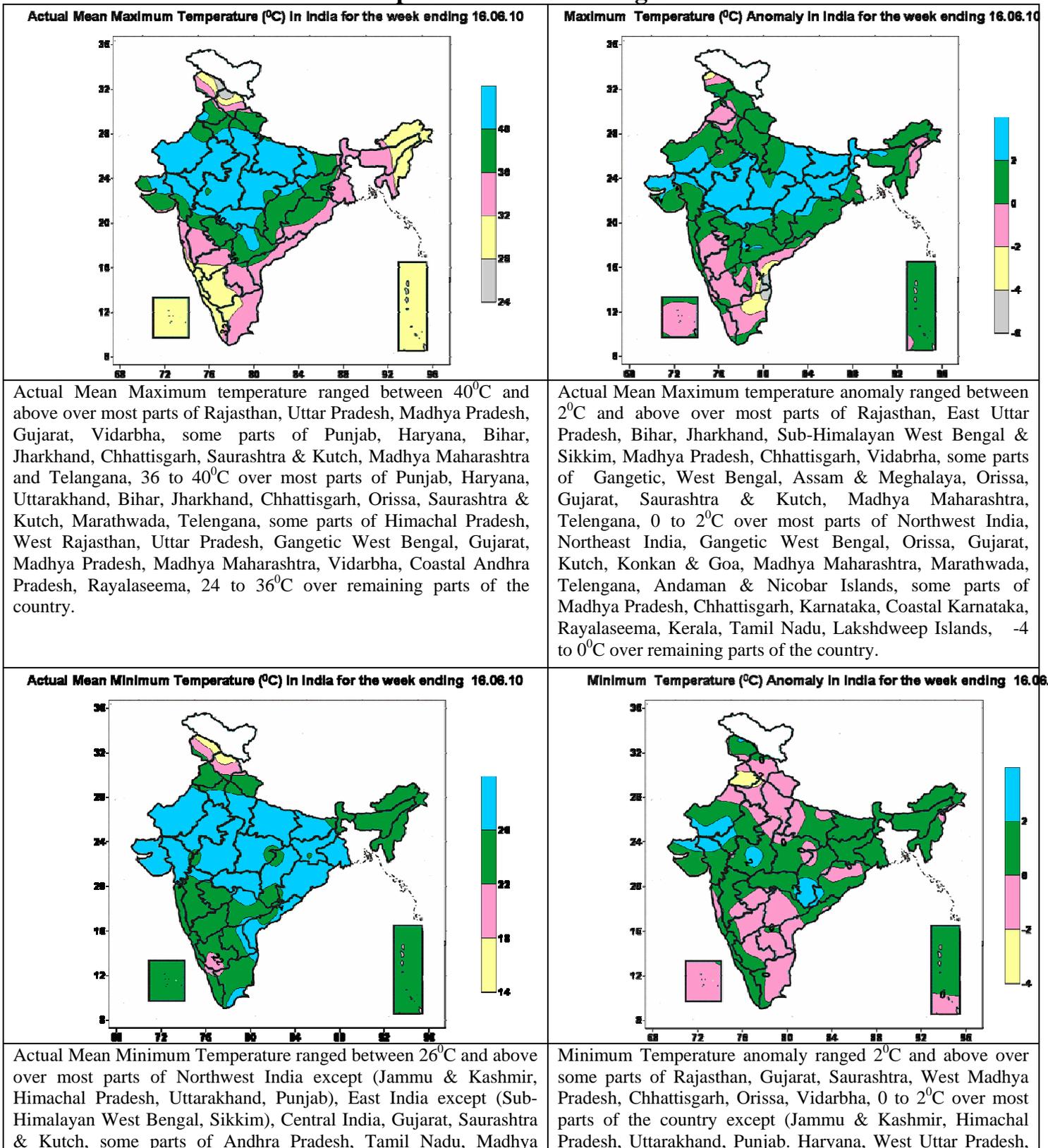
- As sufficient rain occurred in Dangs, DNH and Daman, Narmada, Navsari, Surat and Valsad districts of Gujarat region and most of the districts of Saurashtra, Kutch & Diu during last couple of weeks, farmers are advised to sow the *kharif* crops like rice, groundnut, cotton, castor, maize, bajra, pigeon pea, soybean, sesamum, green gram and black gram in these districts. Farmers of remaining districts of Gujarat State are advised to complete the preparatory tillage and keep the inputs ready for sowing of *kharif* crops. 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, GM-3, GM-4, GM-6, Ganga Safed-2, Farm sameri, Narmda Moti for maize, GHB-183, GHB-215, GHB-316, GHB-528 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-1, GT-100 and GT-101 for pigeon pea, GT-2 or GT-3 for sesamum and Guj.Soyabean-1, Guj.Soyabean-2 for soybean.
- Due to cloudy and rainy weather conditions, there is chance of more infestation of fruit borer in brinjal in Maharashtra, farmers are advised to spray 4 % Neemark or Profenophos @ 20 ml or Trizophos @ 20 ml or Carbosulfan @ 10 ml in 10 litres of water after current spells of rain.
- Decrease in temperature, high cloud cover and humidity during the coming days are conducive for the incidence of cigatago leaf spot in banana in South Gujarat region. If incidence is noticed, spray carbendazim at 1 g / litre of water after current spells of rainfall.

CENTRAL INDIA [M.P., CHHATTISGARH]

- **Realised Rainfall:** No significant rainfall occurred over the States during the period.
- **Rainfall Forecast:** Rain is likely at a few places over the region.
- **Major Crops:**
 - Sugarcane (cane development) in Madhya Pradesh.
 - Rice (nursery sowing) in Chhattisgarh.
 - **Advisory:**
 - As conditions are favourable for normal arrival of monsoon, farmers are advised to start land preparation for sowing of *kharif* crops like soybean, maize, sorghum etc. and raising nursery for brinjal, tomato, onion, chilli and other *kharif* vegetables in Malwa Plateau Zone, land preparation for direct sowing of rice in Kymore Plateau and Satpura Hill Zone and raise nursery for *kharif* onion, chilli, tomato, brinjal, etc. in Jhabua Hills Zone in Madhya Pradesh.
 - Looking to the monsoon activities, farmers in Chattisgarh Plain Zone in Chattisgarh are advised to arrange inputs for sowing of *kharif* crops like black gram, green gram, soyabean, maize, etc.
 - Higher wind speed is likely to occur due to thunderstorm activities during pre-monsoon period in Chattisgarh Plain Zone. Therefore, farmers are advised to provide support to the sugarcane crop by tying each other with rope or older leaves of the cane. Also, farmers are advised for the application of last doze of nitrogen followed by earthing before the heavy rainfall during monsoon.
 - Farmers with assured irrigation facilities are advised for seed bed preparation for sowing of rice in nursery.

Annexure I

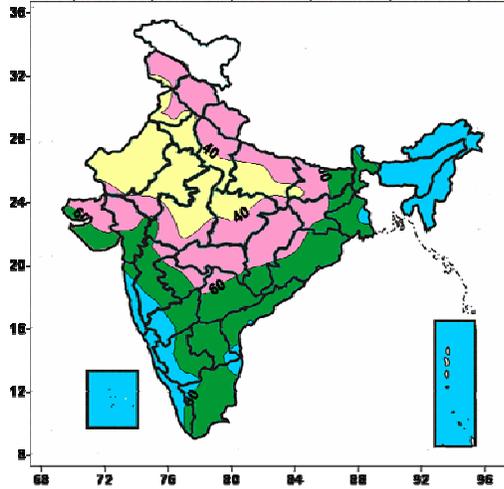
Contour maps for the week ending 16.06.10



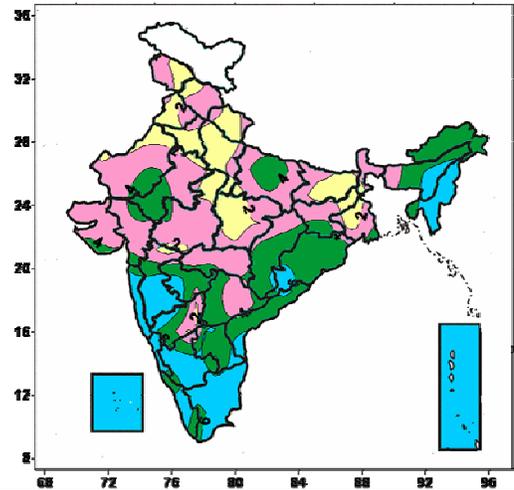
Maharashtra, 22 to 26°C over most parts of Uttarakhand, Punjab, Sub-Himalayan West Bengal, Sikkim, Northeast India, South India, Maharashtra (except Vidarbha), some parts of Jammu & Kashmir, Himachal Pradesh, Haryana, West Uttar Pradesh, Chattisgarh, Madhya Pradesh, Bihar, Jharkhand, 12 to 24°C over remaining parts of the country.

most parts of Andhra Pradesh, Interior Karnataka, Tamil Nadu, Lakshdweep Islands), -4 to 0°C over remaining parts of the country.

Relative Humidity (%) over India for the week ending 16.06.10



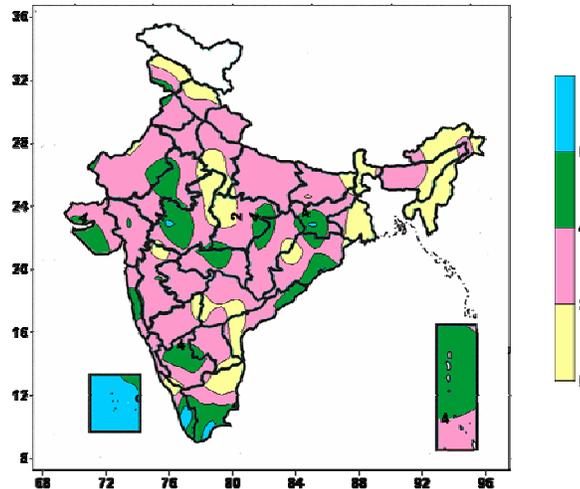
Cloud amount (okta) over India for the week ending 16.06.10



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

Cloud amount 6 okta and above over most parts of Nagaland, Manipur, Mizoram, Tamil Nadu, Kerala, Coastal & South Interior Karnataka, Konkan & Goa, Madhya Maharashtra, Lakshadweep, Andaman & Nicobar Islands, some parts of Assam, Orissa, Chattisgarh, Coastal Andhra Pradesh, Rayalaseema, Marathwada, 4 to 6 okta over most parts Arunachal Pradesh, Assam, Orissa, Chhattisgarh, Andhra Pradesh, Marathwada, some parts of East Uttar Pradesh, Rajasthan, Jharkhand, Gujarat, Kutch, Tamil Nadu, Kerala, Karnataka, Konkan, Madhya Maharashtra, West Madhya Pradesh, 0 to 4 okta over remaining parts of the country.

Wind speed (knots) over India for the week ending 16.06.10



Wind speed ranged between 6 knots and above over most parts of Lakshadweep Islands, some parts of West Madhya Pradesh, Jharkhand, Kerala, Tamil Nadu, 4 to 6 knots over most parts of Kerala, Andaman & Nicobar Islands, some parts of Rajasthan, Jammu & Kashmir, Punjab, Madhya Pradesh, Jharkhand, Orissa, Chattisgarh, Coastal Andhra Pradesh, Rayalaseema, South Interior Karnataka, Konkan & Goa, Vidarbha, Gujarat, Saurashtra & Kutch, and Lakshadweep Islands, 0 to 4 knots over remaining parts of the country.