



# *National Agromet Advisory Service Bulletin*

**based on**

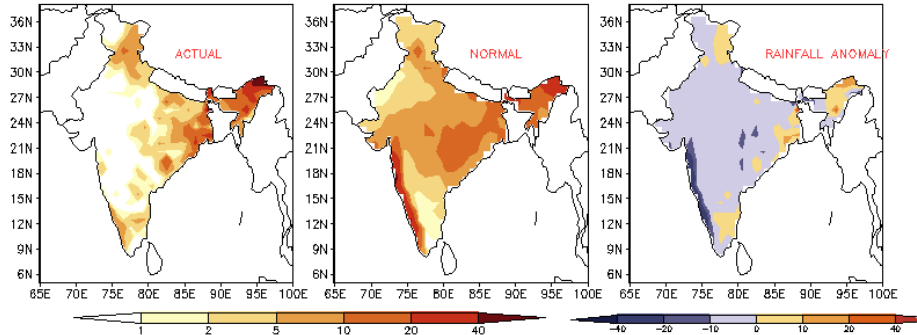
**Extended Range Weather Forecast  
Valid for 11<sup>th</sup> to 24<sup>th</sup> July, 2014**

**Date of Issue: 11<sup>th</sup> July, 2014**

**Issued by**

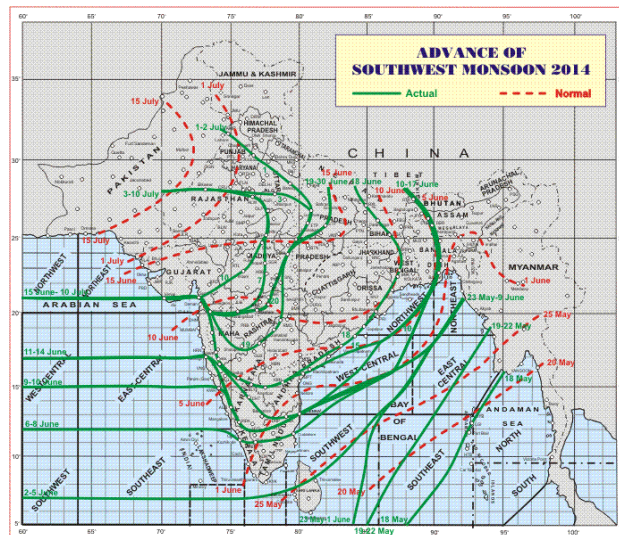
**Earth System Science Organisation  
Agricultural Meteorology Division  
India Meteorological Department, Pune  
&  
Indian Council of Agricultural Research  
AICRPAM, CRIDA, Hyderabad**

## Realized Rainfall (26<sup>th</sup> June to 9<sup>th</sup> July)



During the last two weeks, some parts of Arunachal Pradesh received an average rainfall of more than 40 mm/day. Remaining parts of northeastern states, West Bengal and Sikkim, some parts of Odisha received an average rainfall of about 10-40 mm/day. Some parts of Bihar, Jharkhand, Chhattisgarh, East Uttar Pradesh, Tamil Nadu, Kerala, South Interior Karnataka, Telangana, East Madhya Pradesh, Uttarakhand, Jammu & Kashmir and Himachal Pradesh received an average rainfall of about 2-10 mm/day. Mainly dry/dry weather prevailed over rest parts of the country.

## Northern Limit of Monsoon 11<sup>th</sup> July, 2014



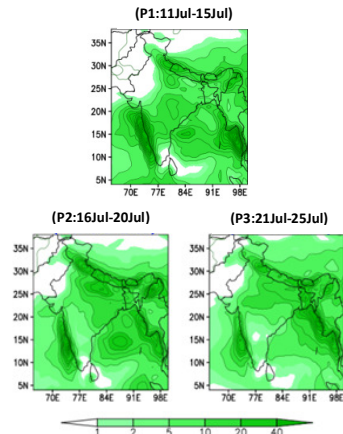
- The Northern Limit of Monsoon (NLM) passes through Lat. 21°N / Long. 60°E, Lat.21°N / Long. 65°E, Veraval, Surat, Indore, Shivpuri, Alwar, Bikaner and Lat.28°N / Long. 72°E.
- Conditions are favourable for further advance of Southwest Monsoon into some more parts of Gujarat and east Rajasthan and remaining parts of Madhya Pradesh during next 2-3 days.

## Extended Forecast System (based on CFS model)

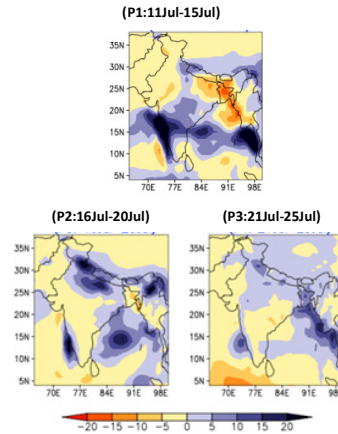
Forecast based on IC = 05<sup>th</sup> July, 2014

### Rainfall forecast for the 3 pentads

#### Rainfall Forecast Actual (mm/day)



#### Rainfall Forecast Anomaly (mm/day)



P1, P2, P3: PENTADS

**First pentad (11-15 July):** Rainfall of about 20-40 mm/day is likely over Konkan & Goa, Coastal Karnataka, rainfall of about 10-20 mm/day is likely over Himachal Pradesh, West Uttar Pradesh, Uttarakhand, Sikkim, Mizoram, Tripura, Odisha, Madhya Pradesh, Marathwada, Vidarbha, North Interior Karnataka, Coastal Andhra Pradesh, Telangana and parts of Assam & Meghalaya, Manipur, Nagaland, Chhattisgarh and Kerala, rainfall of about 2-10mm/day is likely over Arunachal Pradesh, Bihar, Jharkhand, West Bengal, parts of Saurashtra, Rayalaseema, Jammu & Kashmir, East Uttar Pradesh, Punjab, Haryana, East Rajasthan, Gujarat, Madhya Maharashtra, West Madhya Pradesh, South Interior Karnataka and Tamil Nadu.

**Second pentad (16-20 July):** Rainfall of about 20-40 mm/day is likely over Konkan & Goa, parts of Kerala and Coastal Karnataka, rainfall of about 10-20 mm/day is likely over Sikkim, Manipur, Nagaland, Uttar Pradesh, Uttarakhand, Himachal Pradesh, West Bengal, Odisha, Bihar, Jharkhand, Chhattisgarh, East Madhya Pradesh, parts of Punjab, Jammu & Kashmir, rainfall of about 2-10 mm/day is likely over Haryana, Mizoram, Tripura, East Rajasthan, Madhya Maharashtra, Gujarat, West Madhya Pradesh, Interior Karnataka, Coastal Andhra Pradesh, Rayalaseema, parts of Assam & Meghalaya, West Rajasthan, Tamil Nadu, remaining parts of Telangana and Coastal Andhra Pradesh.

**Third pentad (21-25 July):** Rainfall of about 20-40 mm/day is likely over Konkan & Goa and parts of Coastal Karnataka, Himachal Pradesh, Uttarakhand, rainfall of about 10-20 mm/day is likely over West Uttar Pradesh, East Madhya Pradesh, Bihar, Jharkhand, parts of Punjab, West Madhya Pradesh, Chhattisgarh, rainfall of about 2-10 mm/day is likely over Gujarat, Jammu & Kashmir, Haryana, Saurashtra, Kerala, Interior Karnataka and Andhra Pradesh, parts of Maharashtra, Tamil Nadu, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura, Odisha and Chhattisgarh.

## Strategic Agricultural Planning based on rainfall during next 2 weeks till 24<sup>th</sup> July

### **Current Status:**

**Southern India:** Due to deficient rainfall conditions during last fortnight, transplanting of rice seedlings is delayed in 7200 hectares in Palakkad district, Kerala, while in North interior Karnataka, sowing less than 50% of target area was achieved in six districts (Dharwad, Gadag, Koppal, Belgaum, Haveri and Bagalkot). In Andhra Pradesh, 48% of the normal *kharif* sown area is covered up to 2nd July, while it is 62% in Telangana.

**Western India:** In the Konkan region, transplanting of rice is in progress. The different regions of Gujarat state viz., Gujarat region and Saurashtra and Kutch region have deficit rainfall (-92 and -83% of normal) during the period 1 June to 9 July respectively. State as a whole only 15 % area is covered under various crops.

**Central India:** Vidarbha region is experiencing scanty rainfall situation (-67% of normal) from 1 June-9 July. Till the end of June, 2% of normal *kharif* area is sown in Amravati division and 7.8% in Nagpur division. Chhattisgarh experienced -55% deficit in rainfall during 1 Jun-10 July. Only 34% of normal area is sown under *kharif* crops.

**Northwest India:** In the Jammu region, 55% of normal *kharif* sown area is covered by all the crops. In Haryana, onset of monsoon took place during 1st week of July in the state, but the distribution of rains in two agroclimatic zones in the state has been erratic. Most parts of the Rajasthan state is yet to receive monsoon rainfall. Deficit rainfall recorded in western and eastern part by 67 and 74%, respectively up to 10th July 2014. Only 5 to 8% of targeted area has been sown so far in the state due to lack of rainfall.

**East and Northeast India:** By taking advantage of good to moderate rainfall during last week, farmers continued transplanting long duration rice varieties in low and medium land areas of Bihar, while in upland areas, sowing of pigeon pea, green gram, and sesamum is in progress. In major parts of West Bengal, rice transplanting is progressing smoothly as rainfall in last three weeks is normal.

Agricultural situation is satisfactory in **Northeast India** and **West Bengal** also and following activities are in progress:

- Transplanting of *sali* rice and sowing of arhar, sesame and groundnut in Assam
- Transplanting of *Sali* rice and sowing of pigeon pea in Meghalaya
- Transplanting of *kharif* rice and sowing of soybean, black gram and green gram in Arunachal Pradesh
- Sowing /transplanting of *kharif* rice, sowing of soybean and groundnut in Mizoram
- Transplanting of *kharif* rice, sowing of soybean, groundnut and black gram (upland areas) in Manipur
- Transplanting of rice, sowing of soybean, groundnut, black gram and green gram in Nagaland
- Transplanting of *aman* rice, sowing of groundnut in Tripura and Nursery sowing / transplanting of *aman* rice in West Bengal.

### ***Future strategies:***

In **Southern India**, as there is slight improvement in rainfall during the first week of July and also there is probability of rainfall over Andhra Pradesh and Interior Karnataka from end of the second week of July, nursery sowing and transplanting of rice, sowing of red gram, maize, groundnut, cotton and castor in Rayalaseema, sowing of cotton, maize, groundnut, sorghum, soybean and pulses in Telangana, nursery sowing of rice (upto 15th July) and transplanting, direct sowing of rice, sowing of maize, green gram, black gram and red gram and planting of sugarcane in Coastal Andhra Pradesh, nursery sowing of rice and sowing of cotton, sorghum, pulses, maize, ragi, sunflower, groundnut, sesame in South Interior Karnataka, jowar and soybean in North Interior Karnataka may be carried out. Deficit rainfall condition prevailing in Kerala may result in salinity and acidity problems for rice. An additional dose of lime based on soil test is recommended. Dry sowing especially at Kariland shall be avoided. Practicing water conservation measures like husk burial and rainwater harvesting pits are recommended in coconut plantation. Farmers in Northern Dry Zone of Karnataka are advised not to take up sowing of green gram and black gram now. They are advised to keep the land fallow in areas where double cropping had been planned in medium to deep black soils. Suggested varieties of crops for South interior Karnataka are: Red gram -TTB-7, BRG-1 and BRG-2; Groundnut - TMV-2, JL-24 and Chintamani-2; Finger millet - Indaf- 8, MR-1, MR-2 and MR-6; Maize - Ganga, Deccan, Vijaya composite and Composite NAC.

**There is also need to take measures at appropriate level to keep the inputs like seeds ready for alternate contingency crops like sunflower, castor etc., after the cut-off date of 15th July for sowing.**

In **Western India**, southwest monsoon was subdued over Maharashtra State excluding Konkan during last few weeks. Intercropping method may be adopted instead of sowing sole crops like sunflower, red gram, green gram or black gram after receiving significant rainfall. Short duration and improved varieties may be selected for sowing. In Madhya Maharashtra, sowing of sunflower, soybean, cotton, hybrid jowar, hybrid pearl millet, red gram and sesame may be undertaken after receiving significant rainfall. Also intercropping of pearl millet+redgram in 2:1, sunflower+redgram in 2:1, soybean+redgram in 3:1 and guar+redgram in 2:1 ratios is recommended. For sowing of red gram, Vipula variety may be selected. In Marathwada, sowing of *kharif* crops like cotton, soybean, red gram, jowar, green gram, sunflower, maize and black gram may be undertaken after receiving significant rainfall. InKonkan, in view of occurrence of good rainfall and likely occurrence of rainfall during next fortnight, there is good progress in transplanting of rice and finger millet. Due to non-receipt of rainfall during June and in first week of July in most of the districts of Gujarat, normal *kharif* crops like cotton, pigeon pea, castor, pearl millet and other crops could not been sown. Contingency plan for different regions of Gujarat is as follows:

#### **1. For South and Middle Gujarat region:**

- Prefer short duration oilseeds crops for sowing like Sunflower (cv. Modern and EC-68414 and Guj-1) and Sesamum (cv. Guj. Tal 1,2, 10 ).
- Prefer pulse crops like: Black gram (cv. T-9, Guj. Udid-1), Green gram (cv. GM-4, K-851, Meha), Cowpea (cv.Guj. Cowpea 1,2,4, Pusa Falguni).
- Prefer grain Sorghum (cv. CSH-5,6,1, GJ-39, 40, 41) and Fodder sorghum (cv. S-1049, C-10-2,

Gundari, GFS 4,5).

- Where canal water is available up to 20 th July
- Paddy: GR-8,9, Sathi 34-36, Ambica and Gurjari can be transplanted.

## 2. North Gujarat Region:

Sesamum (cv. Guj. Tal 1,2, 10), Sunflower (cv. Modern, EC 68414), Fodder sorghum (cv. S-1049, C-10-2) are to be sown.

Cotton cv. Hy-8, 10, V-797, G. Cot 13,21, 23 can be cultivated.

## 3. For Saurashtra region:

Groundnut: Erect variety (cv.GG-2, 5,7), Fodder sorghum(cv. S-1049, C-10-2), Sunflower(cv. Modern, EC 68414), Green gram (cv. GM-4, K-851, Meha), Black gram (cv. T-9, Guj. Udid-1) and Green gram (cv. GM-4, K-851, Meha) are preferred for sowing.

For risk reduction in groundnut follow mix cropping with castor or Tur in 3:1 row.

In **Central India**, due to good rainfall in Chhattisgarh during last fortnight and likely occurrence of rainfall during next fortnight, sowing of soybean, black gram, green gram and maize is suggested. Early and medium rice varieties may be sown in lines as they mature 10-12 days earlier and don't require *biasi* operation. Nursery sowing of rice is recommended up to 20<sup>th</sup> July. As rain is also likely to occur in East Madhya Pradesh from end of second week of July, transplanting of *kharif* rice may be started. If soybean, maize and sorghum could not be sown due to subdued rainfall in east Madhya Pradesh, sowing of pigeonpea, green gram, black gram and sesame is suggested. Recommended varieties for pigeonpea - Pragati , Jagriti, Asha, Number-148, JKM-7, JA-4, Type-21-Pusa- 855, ICPL-85063 (Laxmi), JKM-189, for Green gram- Pusa vishal,K851,JM721, Jawahar 99 -37,Hum-1, Hum-2, Tarme-1 L.G.450, T.M.98-50,JM-98-90, PDM 11, 54 and 139, for Black gram – JU-2, JU-3, JU-86, T- 9, JBG-623, LBG684, TAU- 1, Berkha and for Sesame - TKG -306, TKG-35, JGS-8, JT-21, JT-22, JT-55,PKTS-11, PKTS-12, JT-1. In West Madhya Pradesh for soybean select varieties Soybean JS-95 60, IS 93 05 and instead of cotton prefer black gram- T 9, JU 86, for maize select varieties JVM 421, JM 12, for sorghum select varieties JJ-938, JJ-1022, for bajra select varieties JVB 3, JBV-2, for red gram select varieties UPAS 120, Pusa 9, TJT 501, for sunflower select variety Modern and for sesame select variety TKG-8. In Vidarbha region of Maharashtra, early hybrids/varieties of American/*Desi* cotton may be selected for sowing during first fortnight of July. 20% more seed rate may be used with reduced intra-row spacing. Three tier intercropping of cotton:sorghum:pigeonpea:sorghum in 6:1:1:1 or 3:1:1:1 ratio is recommended. Sowing of green gram / black gram with slightly higher seed rate as intercrops in cotton in 1:1 ratio is recommended. Transplanting of rice, sowing of cotton, soybean and pigeon pea may be taken up in Vidarbha region.

In **Northwest India**, as there is likely occurrence of rainfall in Jammu & Kashmir, Himachal Pradesh, Uttarakhand and some parts of Uttar Pradesh, agricultural activities like transplanting of rice and sowing of maize in Jammu & Kashmir, transplanting of rice, sowing of green gram in Himachal Pradesh, transplanting of rice and sowing of sorghum, groundnut and pigeon pea in Uttarakhand, sowing of pigeon pea, maize, guar, bajra, jowar, maize, black gram and green gram in east Uttar Pradesh may be continued. Direct sowing of rice and sowing of moong, mash and kulthi in Himachal Pradesh, sowing of maize, red gram, bajra, jowar and soybean in Uttarakhand may be completed. It is

advised to wait for sufficient rain for sowing of *kharif* crops in remaining parts of northwest India.

**Rajasthan:**

1. Dry sowing of maize should be done after 10th July.
2. Intercropping of maize + black gram (2:2) or maize + green gram(1:1) in maize growing region should be done.
3. Seed priming of maize (0.1 % thiourea)for 6 hrs should be done before sowing.
4. Intercropping of Groundnut variety JL-24 or Pratap mungphali-2 with sesamum at 6:2 row ratio under present situation.
5. Sorghum varieties CSH – 6, CSH – 14, Pratap jowar 1430,CSV-17, CSV-15, CSH-13, CSV-13, RJ – 96 may be used at 25 % higher seed rate.
6. In eastern and western parts,) only short duration varieties of Bajra (HHB-67, Improved, RHB-121, RHB-90 and Raj-171) can be sown upto 20th July as these varieties are mature in 65-80 days.

In **East India**, conditions are favourable for normal agricultural activities like transplanting of *kharif* rice in low and medium land areas and sowing of pigeon pea and kulthi in Bihar. In uplands of Bihar avoid paddy and sow sesamum (cv.Krishna) or arhar (cv. Bahar/Narendra, pusa-9, Arhar-1, Malviyal-3) or intercrop of maize (cv.Suwan) and urad (Pant U-31). Short (Turanta, Prabhat, Richhariya, Dhanlakshmi, Saket) or medium duration (Sita, Kanak, IR-36, Santosh) paddy varieties are suggested, in place of long duration varieties for medium and low lands. In Jharkhand sowing of direct seeded rice, maize, green gram, black gram, groundnut, soybean, sesame and pigeon pea and transplanting of rice and finger millet are suggested. Nursery sowing of rice, direct sowing of rice in low land areas and sowing of maize, cotton, arhar, groundnut, green gram, black gram, ragi and sesame is recommended for Odisha.