



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast

Valid for 28th August to 10th September 2015

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Earth System Science Organisation
India Meteorological Department

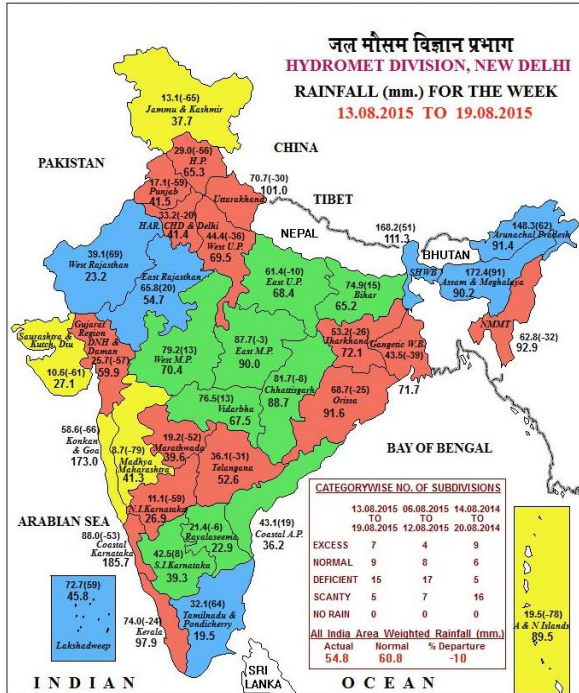
Indian Institute of Tropical Meteorology, Pune

&

Indian Council of Agricultural Research
AICRPAM, CRIDA, Hyderabad

Realized Rainfall (13th to 26th August 2015)

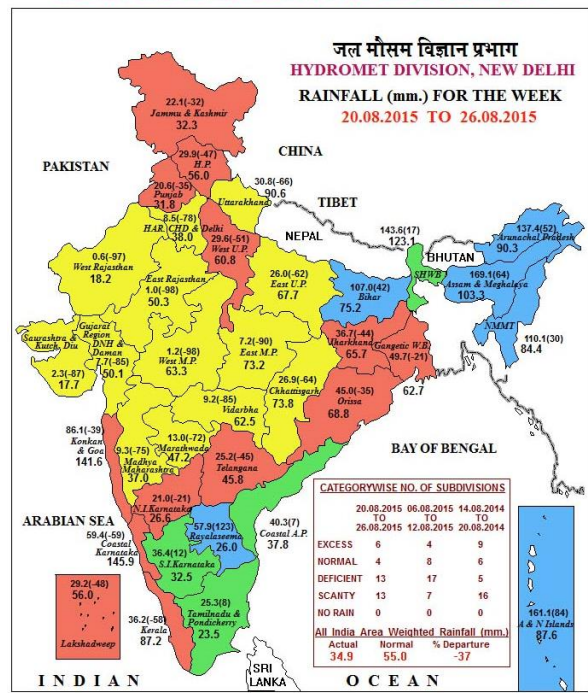
भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT



LEGEND: ■ EXCESS (+20% OR MORE) ■ NORMAL (+19% TO -19%) ■ DEFICIENT (-20% TO -59%)
■ SCANTY (-60% TO -99%) ■ NO RAIN (-100%) ■ NO DATA

NOTES:
 [a] Rainfall figures are based on operational data.
 [b] Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
 Percentage Departures of Rainfall are shown in Brackets.

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 Percentage Departures of Rainfall are shown in Brackets.

- Normal or above normal rainfall occurred during last two weeks in Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Andhra Pradesh, South Interior Karnataka and Tamil Nadu.
- Normal or above normal rainfall occurred in either of the last two weeks in Rajasthan, East Uttar Pradesh, Madhya Pradesh, Chhattisgarh, Vidarbha, Nagaland, Manipur, Mizoram and Tripura,.
- Below normal rainfall occurred in the last two weeks over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Haryana & Delhi, Punjab, West Uttar Pradesh, Jharkhand, Gangetic West Bengal, Odisha, Gujarat State, Konkan & Goa, Madhya Maharashtra, Marathwada, Telangana, Coastal Karnataka, North Interior Karnataka and Kerala.

Extended Range Forecast System

Subdivisionwise rainfall forecast map for the next 2 weeks (IC = 26 August)

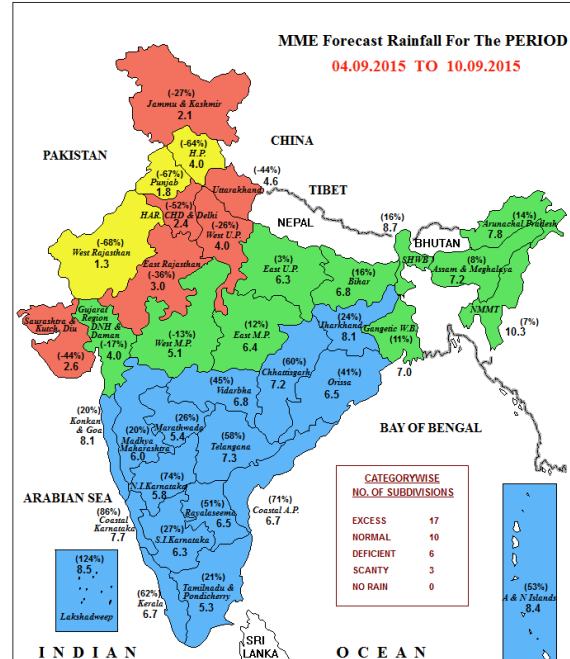
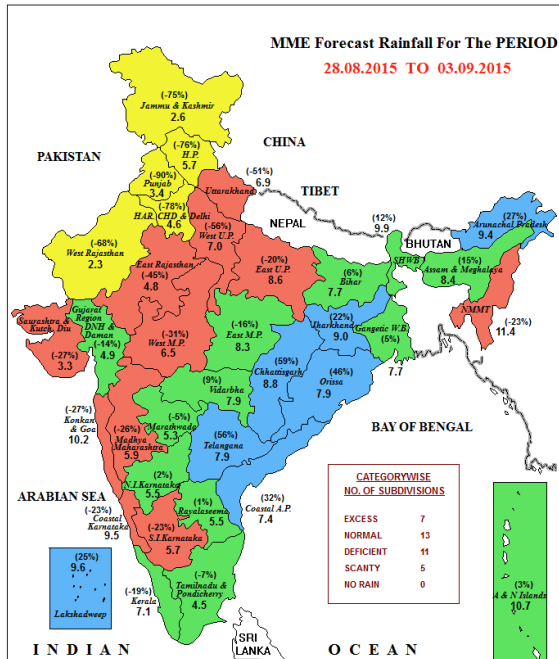
Rainfall forecast (mm/day) (28 August – 10 September, 2015)

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INDIA METEOROLOGICAL DEPARTMENT

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LEGEND: [Blue] EXCESS (+20% OR MORE) [Green] NORMAL (+19% TO -19%) [Red] DEFICIENT (-20% TO -59%)
[Yellow] SCANTY (-60% TO -99%) [Grey] NO RAIN (-100%) [White] NO DATA

LEGEND: [Blue] EXCESS (+20% OR MORE) [Green] NORMAL (+19% TO -19%) [Red] DEFICIENT (-20% TO -59%)
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Notes:

- (a) Rainfall figures are based on MME forecast
- (b) Bold figures indicate forecast Normal rainfall (mm/day)
- (c) Percentage Departures of Rainfall are shown in Brackets

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- (a) Rainfall figures are based on MME forecast
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- Normal or above normal rainfall would occur in next fortnight over Chhattisgarh, East Madhya Pradesh Arunachal Pradesh, Assam & Meghalaya, West Bengal & Sikkim, Bihar, Odisha, Jharkhand, Marathwada, Vidarbha, Telangana, North Interior Karnataka, Andhra Pradesh, Tamil Nadu and Kerala.
- Normal or above normal rainfall would occur in either of the next two weeks in East Uttar Pradesh, Nagaland, Manipur, Mizoram, Tripura, Gujarat Region, West Madhya Pradesh, Konkan and Goa, Madhya Maharashtra South Interior Karnataka and Coastal Karnataka.
- Below normal rainfall would occur in the next two weeks over Jammu & Kashmir, Himachal Pradesh, Uttarakhand, Punjab, Haryana & Delhi, West Uttar Pradesh, Rajasthan, Saurashtra & Kutch.

Strategic Agricultural Planning based on rainfall during next two weeks till 10 September

Good rainfall occurred mainly over East Rajasthan, Madhya Pradesh, Chhattisgarh, Vidarbha, Bihar, Sub-Himalayan West Bengal & Sikkim, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram and Tripura, Andhra Pradesh, South Interior Karnataka and Tamil Nadu during last fortnight. Even though crops experienced moisture stress situation over the region like **Rayalaseema** upto first fortnight of August due to deficient rainfall during earlier weeks, the situation improved due to good rainfall during last couple of weeks.

Over the regions like **Marathwada, North Interior Karnataka, Telangana, Madhya Maharashtra** and **Gujarat**, crops have been still experiencing moisture stress situation due to deficient rainfall during last few weeks, even though there was some improvement of the situation in **Gujarat, Madhya Maharashtra** and **Telangana** during earlier part of August due to occurrence of rainfall during last week of July or first week of August. There are reports of floods in some districts of **Assam** during last week and in **Gangetic West Bengal** and **Manipur** during first week of August due to heavy to very heavy rainfall.

Most parts of eastern coastal regions of India will get rainfall during week 1 (28 Aug - 3 Sept.). Most of the areas of southern peninsula, parts of Central India and eastern region will get normal / above normal rainfall during week 2 (4 - 10 Sept.).

In view of prevailing poor rainfall situation in Marathwada, North Interior Karnataka, Gujarat State, Madhya Maharashtra, Telangana and West Uttar Pradesh and likely occurrence of good rainfall in Marathwada, North Interior Karnataka, Gujarat region, Madhya Maharashtra and Telangana, following agricultural activities are suggested.

Marathwada

- For taking *rabi* crops, compartmental bunding to conserve soil moisture wherever sowing is not carried out.
- Preparation of fields for early *rabi* crops like Jowar and safflower.

North Interior Karnataka

- North Interior Karnataka overall received deficit rainfall (43% deficit) in all the districts except Bellary (-8% normal) during the season.
- Total area sown in North Interior Karnataka is 28.40 lakh ha (as on 18th August 2015) and this accounts for 82% of the normal sowing area of 34.25 lakh ha till the date (August 18). In almost all the districts more than 60% of the normal area is covered with Bidar, Belagavi, Haveri, Dharwad and Uttara Kannada districts reaching almost 100% of the Normal area sown.
- Long dry spell has resulted in severe depletion of soil moisture, hampering the growth of seedlings of the sown crops. However, there is possibility of rainfall during next fortnight improving soil moisture status. In view of above, following contingency measures are suggested:
- Soil moisture being extremely low now, it will be difficult to implement immediate sowing of contingency crops. It is more than necessary to concentrate on fodder based cropping as when and where rainfall occurs. Also, the suggested drought proofing and soil moisture conservation measures need to be continued:
- There is no scope for taking up any sowing operation in view of forecast of poor rainfall.
- Thinning may be done by removing alternate rows that have majority of week seedlings, as the moisture stress is severe.
- Take up repeated inter-cultivation and earth up the rows.
- Top dressing may be taken up wherever good rainfall has been received.
- Keep the crops free from weeds.

- Open conservation furrow after two rows in wider spaced crops and after every 8th row in narrow spaced crops.
- Fodder crops should be given preference.
- In view of the exceedingly low rainfall so far, it is essential to conserve soil moisture before the start of *rabi* season. Compartment bunds, ridges-furrows and conservation furrows may be taken up in these soils.
- Adoption of moisture conservation techniques for dry land such as compartmental bunding, ridges furrow and scooping in fields spared for *rabi* sowing in North Dry Zone.
- Sowing of sunflower at wider spacing of 90 x 20 cm and fodder crops like jowar, maize, bajra after receipt of sufficient rain in the North East Dry Zone.

Gujarat

Progress in kharif sowing:

Average sowing area of Gujarat is 85.5 lakh ha and out of this 78.2lakh ha (91%) area sown in this *kharif* season. The sown area accounts 17% in cereals, 5% in pulses, 26% oilseeds and other crops in 52%.

Contingency plan for different regions of Gujrat state

For South and Middle and East-Central Gujarat region:

- Prefer oilseeds crops like sesamum (cv. Guj. Tal 1, 2, 10).
- Prefer sorghum (cv. CSH-5, 6, 1, GJ-39, 40, 41) and fodder sorghum (cv. S-1049, C-10-2, Gundari, GFS 4, 5).

North Gujarat Region:

- Sesamum(cv. Guj. Tal 1, 2, 10), Castor (GCH- 2,4,5 and 7) and Fodder sorghum(cv. S-1049, C-10-2) are to be sown.

For Saurashtra region:

- Fodder Sorghum (cv. S-1049, C-10-2), Sesamum (cv. Guj. Tal 1, 2, 10) and Clusterbean (cv.Guj. Guar-1 & 2 especially for kutch) are preferred for sowing.

General Advisory:

- Need based irrigation should be apply in all crops.
- Do not sow groundnut, maize and bajra for all regions of the state.
- Carry out proper plant protection measures in tobacco and vegetable nursery
- Weeding, hoeing and intercultural operations in the standing crops to conserve soil moisture.
- Protective irrigation to cotton and groundnut crops in Saurashtra, sugarcane, banana and vegetables crops in South Gujarat Zone and rice, pulses in Middle Gujarat Zone.
- Gap filling and thinning to maintain plant population in maize and pearl millet in North Gujarat Zone and North West Zone.
- Completion of transplanting of fennel, brinjal, tomato, chilli and other vegetables in North Gujarat Zone, North West Zone and Bhal and Coastal Zone.
- Maintenance of 5 cm water level in transplanted rice field in Middle Gujarat Zone and South Gujarat Heavy Rainfall Zone.
- Intercropping of soybean with two rows of castor to get more production and more income in South Saurashtra Zone.

Madhya Maharashtra

- For taking *rabi* crops, compartmental bunding to conserve soil moisture wherever sowing is not carried out.
- Maintenance of 5 cm water level in transplanted rice in Western Ghat regions of Nasik, Pune and Kolhapur districts.
- Protective irrigation (sprinkler / drip irrigation method) in jowar, groundnut, cotton, soybean

and sugarcane crops and orchards under moisture stress in rainfall deficient districts like Sangli and Solapur or light hoeing in late sown crops to create soil mulch to conserve soil moisture during week 1 (28 Aug - 03 Sep.).

- Light hoeing, weeding and organic mulching in newly planted orchards.

Telangana

- Sowing of contingency crops like red gram and sunflower in North Telangana Zone.
- Sowing of contingency crops like castor, red gram (Maruti, Lakshmi, PRG 158 etc.) and sunflower in South Telangana Zone.
- Sowing of medium duration varieties of red gram with closer spacing 120 x 20 cm in black soils and 90 x 20 cm in red soils in Southern Telangana Zone.
- Maintenance of 5 cm water level in rice fields.

Uttar Pradesh

Due to deficit rainfall in the region, following measures are recommended

For Eastern UP

- Frequent irrigation in paddy crop as to maintain proper moisture in the field.
- Spraying of 2% Urea and Potash in transplanted paddy in below normal rainfall region.
- Undertake intercultural operation and mulch with crop residue to conserve soil moisture
- Apply protective irrigation in standing crops in view of water stress condition.
- Undertake weeding in green gram and black gram.
- Sowing of short duration and low water requiring vegetables such as carrot, turnip, spinach, coriander etc.

In other parts of UP

- Gap filling in transplanted paddy crop if plants are died.
- Spraying of 2% Urea in transplanted paddy under below normal rainfall region.
- Light hoeing, mulching with crop residue to conserve soil moisture.
- Weeding and thinning in paddy, pearl millet pigeon pea, green gram, black gram, sesamum and lobia.
- Apply protective irrigation in standing crops in view of water stress condition.
- In Bundelkhand Zone, nursery sowing of early cauliflower, tomato, chilli and brinjal on raised beds and planting in main field, if nurseries are ready and application of light irrigation in groundnut, soybean, sesame, vegetables and fodder crops.

In view of improvement of condition in Rayalaseema due to good rainfall during last couple of weeks, following agricultural activities are suggested.

Rayalaseema

- Maintenance of 2-3 cm water level in rice field.
- Spraying of 2% urea solution on groundnut, pearl millet, cotton, castor, pigeon pea and sorghum to prevent wilting, running a dead furrow for every 12 rows i.e. for every 3.6 meters.
- Thinning in jowar, korra, bajra in Anantpur district.
- Due to lack of sufficient rains during earlier weeks, already sown rainfed crops suffered under moisture stress situation in the districts of Rayalaseema. In view of receipt of good rainfall and likely occurrence of rainfall, sowing of contingency crops, as mentioned below-
 - Sowing of green gram and korra in Ananthapur and Kurnool districts.
 - Sowing of red gram (LRG 30, LRG 41, TRG 22) as mono crop in areas where there is

enough soil moisture in Cuddepah district in the Southern Zone.

- Compartmental bunding to conserve soil moisture for taking *rabi* crops, wherever sowing is not carried out.

In view of occurrence of floods in Assam during end of July and third week of August and in Gangetic West Bengal during first week of August, following agricultural activities are suggested.

Assam

- Drain out excess water from crop fields.
- In North Bank Plain Zone of Assam, in flood affected areas cultivation of short duration HYV of rice like Luit, Kapili, Kolong, Dishang etc. These varieties can be transplanted or sown upto 1st week of September. Transplanting of old seedlings of other improved long duration varieties like Monohar Sali, Salpona, Prasadbhog, Gobinbhog etc. up to mid-September. Sowing of *kharif* sesame, green gram, black gram, early cauliflower and radish. Late and staggered planting after receding of flood water with 60 to 80 days old seedlings of the varieties like Prafulla (80 days) and Gitesh (60 days) up to mid-September.
- In Lower Brahmaputra Valley Zone of Assam (Bongaigaon, Chirang and Kokrajhar districts), in flood affected areas, if nursery is available, undertake transplanting of short duration HYV rice varieties like Luit, Kapili, Kolong, Dishang etc., and if nursery is not available, undertake direct sowing of rice during 1st week of September.
- Transplanting of finger millet, sowing of green gram (T44, Kopergaon, K851, ML56, ML131, SG1 (Pratap), SG 21-5) and black gram (T9, T27, Pant U 19, T122, Saonia Mah (SB123), KU 301, USJD113) and winter vegetables in Lower Brahmaputra Valley Zone of Assam.
- As time is not yet over for sowing / transplanting of *sali* paddy, go for replanting in the flood affected area with medium to short duration cultivars of rice.
- If *sali* paddy is in active tillering stage (30-35 days after sowing) go for 1st split application of nitrogenous fertilizer.
- Look out for incidence of any pest/diseases.

West Bengal

- 12 districts in Bengal was flood-hit with heavy rain in the state during July and early August and 80% of the damaged farmland is under *kharif* rice (*aus* and *aman*). Widespread damage to standing paddy crops occurred in Bardhaman, Murshidabad, East and West Midnapore districts. Total 243 blocks have been affected due to the floods. Contingency measures are:

Post Flood Crop Contingency Plan:

- Take up transplanting of short duration rice varieties after jute harvesting.
- Adopt transplanting of extra early duration rice varieties (75-80 days) like kalyani, kalinga, hira etc. or early duration rice varieties (100-115 days) like Rasi and Satabdi (IET-4786) in up and medium lands.
- Plant short duration pulse crops like urd, arhar, kulthi in mid and uplands.
- Plant short duration oil seeds crop like *kharif* ground nut.
- Grow vegetables like cucurbits, okra, brinjal, tomato etc.
- Grow maize, cow peas, sorghum hybrid napier, etc. for fodder.

Existing Crops: In water stress areas

- In-situ moisture conservation to safeguard the standing crop from moisture stress.
- Avoid applying fertilizer till sufficient soil moisture is available.

- Mulching with crop residue or thin plastic sheets if the water stress continues.
- Weeding and intercultural operations to minimize the loss of moisture
- Conserving the water in ponds and earmarking for use of life saving irrigation in critical stages of the crops.
- Trenching to avoid water logging in case of occurrence of heavy rains.

Normal agricultural activities are continued over remaining parts of the country in view of receipt of good rainfall during the season.