



National Agromet Advisory Service Bulletin

based on

Extended Range Weather Forecast

Valid for 14th to 27th August, 2015

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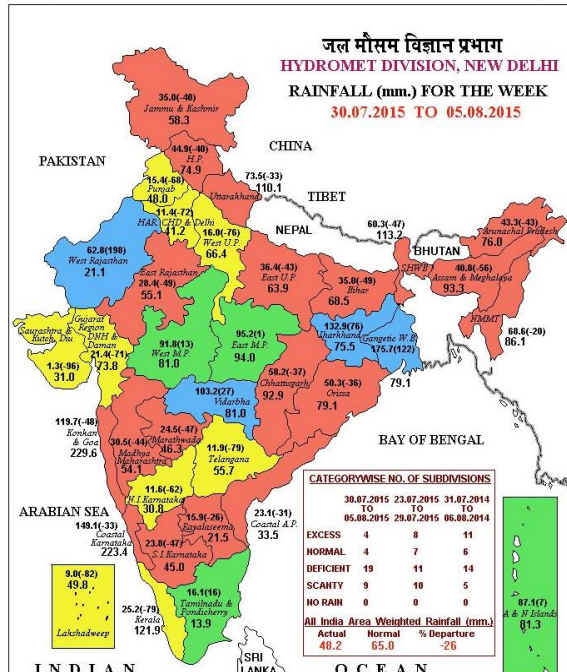
Indian Institute of Tropical Meteorology, Pune

&

Indian Council of Agricultural Research
AICRPAM, CRIDA, Hyderabad

Realized Rainfall (30th July to 12th August 2015)

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

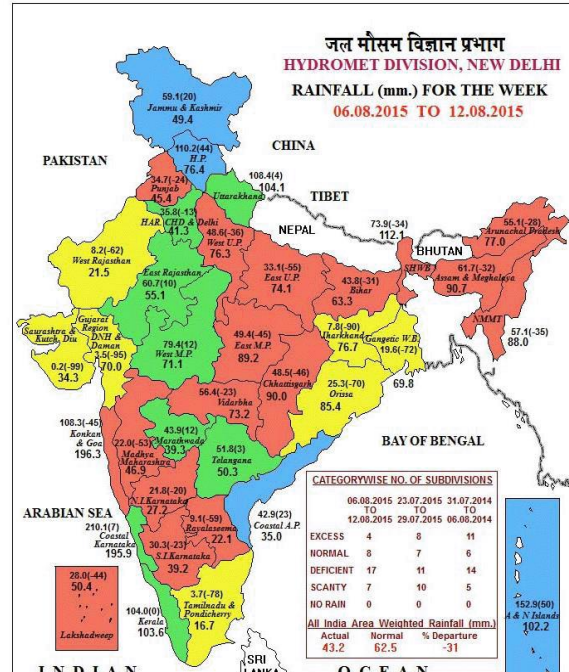


LEGEND: ■ EXCESS (+20% OR MORE) ■ NORMAL (+19% TO -19%) ■ DEFICIENT [-20% TO -59%]
■ SCANTY [-60% TO -99%] ■ NO RAIN [-100%] ■ NO DATA

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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- (b) Small figures indicate actual rainfall (mm.), while bold figures indicate Normal rainfall (mm.)
Percentage Departures of Rainfall are shown in Brackets.

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

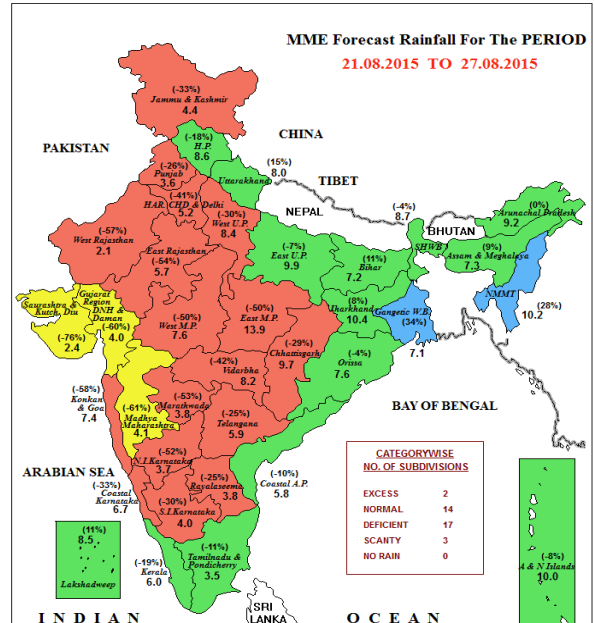
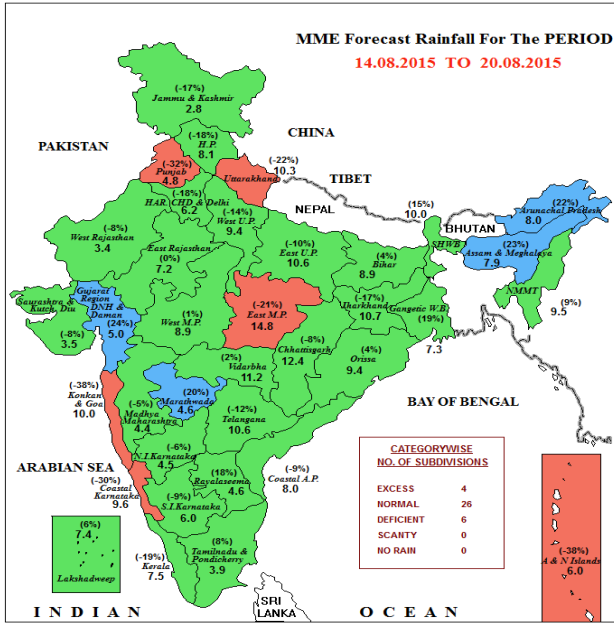
Extended Range Forecast System

Subdivisionwise rainfall forecast map for the next 2 weeks (IC = 12 August)

Rainfall forecast (mm/day) (14 – 27 August, 2015)

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

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

Strategic Agricultural Planning based on rainfall during next two weeks till 27th August

Good rainfall occurred mainly over Madhya Pradesh, Himachal Pradesh, Uttarakhand, Haryana & Delhi, Rajasthan, Jammu & Kashmir, Gangetic West Bengal, Jharkhand, Vidarbha, Marathwada, Telangana, Coastal Andhra Pradesh, Coastal Karnataka, Kerala and Tamil Nadu during last fortnight. Even though, due to deficient rainfall during earlier weeks, crops experienced moisture stress situation upto third week of July over the regions like **Gujarat** and **Madhya Maharashtra**, upto end of July over some districts of **West Vidarbha** (**Buldhana, Washim** and **Yavatmal** districts) and upto first week of August over **Telangana**, the situation improved due to good rainfall during last three weeks. Over the regions like **Marathwada, North Interior Karnataka** and **Rayalaseema**, crops have been still experiencing moisture stress situation due to deficient rainfall during last few weeks, even though there is some improvement of the situation in **Marathwada** due to occurrence of rainfall during last week. There are reports of floods in **Assam** during end of July and in **Gangetic West Bengal, Odisha** and **Manipur** during first week of August due to heavy to very heavy rainfall.

During week 1 (14-20 Aug), many parts of Central, south peninsula and Northeast India will receive close to normal rainfall, although major number of subdivisions of these regions are likely to receive rainfall on the negative (marginally negative) side of the departure. During week 2 (21-27 Aug), tendency of rainfall is likely towards deficient over most parts of India except Northeast regions and a few regions along the east coast i.e. almost like break monsoon.

In view of improvement of situation due to occurrence of good rainfall during last week of July in Gujarat State and Madhya Maharashtra, during last fortnight of August in West Vidarbha and during second week of August in Marathwada and Telangana following agricultural activities are suggested.

Gujarat

- Completion of sowing of cluster bean (GC-2) and castor (GAUCH-2, GCH-4 and GCH-7), fodder sorghum (S-1049, GFS-4 and GFS-5) and fodder maize (African Tall); resowing of these crops over the areas, where already sown crops had been affected due to recent heavy rainfall and transplanting of fennel, brinjal, tomato, chillies and other vegetables in North Gujarat Zone, North West Zone and Bhal and Coastal Zone.
- Maintenance of 5 cm water level and gap filling in transplanted rice field in Middle Gujarat Zone and South Gujarat Heavy Rainfall Zone.
- Plantation of different fruit crops (lemon, sapota, pomegranate, mango) in North Gujarat Zone and North West Zone.
- Sowing of tobacco.

Madhya Maharashtra

- Completion of sowing of contingent crops like sunflower (Morden, SS-56) and pigeon pea (Vipula, BSMR 736, 853, BDN 708, 711). However, sowing of contingent crops in Solapur district may be undertaken after receipt of sufficient rain.
- Completion of transplanting of rice in Western Ghat region.
- Sowing of fodder crops like jowar (Ruchira, Phule Amruta, Phule Godhan), maize (African Tall, Karveer, Rajshree) and bajra (Nutrifeed).
- Intercropping of onion and *adsali* sugarcane depending on availability of water in Ahmednagar, Pune, Satara and Sangli districts.
- Protective irrigation (sprinkler / drip irrigation method) in crops / 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.

- Weeding and organic mulching in newly planted orchards.
- Maintenance of 2-3 cm water level in transplanted rice in Western ghat (western parts of Sangli, Satara, Kolhapur, Pune, Ahmednagar, Dhule, Nandurbar and Nasik districts).
- In view of taking early *rabi* crops, compartmental bunding to conserve soil moisture wherever sowing is not carried out.
- Maintain optimum plant population.

Vidarbha

- Sowing of sunflower, red gram and coriander in the districts (Buldhana, Washim and Yeotmal) which experienced deficient rainfall situation during earlier weeks.
- Nursery sowing / transplanting of *kharif* vegetable seedlings (chilli, tomato, brinjal etc.).
- Completion of transplanting of rice in east Vidarbha.
- Maintenance of 2-3 cm water level in already transplanted rice field in east Vidarbha.
- Rainwater harvesting in view of protective irrigation during the remainder of the season.
- Drain out excess water from crop fields and orchards that are waterlogged.

Marathwada

- Even though there is some improvement of the situation due to occurrence of rainfall during last week, the same may not be adequate to enrich soil moisture for immediate sowing of contingent crops over most of the areas. However, rainfall is good for the standing crops.
- Sowing of contingent crops like sesame, sunflower and fodder maize after receipt of sufficient rainfall.
- Foliar spray of 8% Kaolin in orchards like banana, pomegranate and sweet lime and also spray of 2% Potassium Nitrate (KNO₃) on *kharif* jowar and soybean in Latur district.
- In view of taking early *rabi* crops, compartmental bunding to conserve soil moisture wherever sowing is not carried out.

Telangana

- Sowing of contingency crops like red gram (Maruti, Lakshmi, PRG 158 etc.), sunflower and castor; sowing of medium duration varieties of red gram with closer spacing 120 X 20 cm in black soils and 90 X 20 in red soils in Southern Telangana Zone.
- Intercropping of red gram with jowar / bajra @ 1:2 ratio in the Northern Telangana Zone.
- Maintenance 5 cm water level in rice fields.
- Mulching in early sown jowar, soybean, green gram and black gram for conservation of soil moisture.

In view of continuous deficient rainfall situation during last few weeks, following agricultural activities are suggested for North Interior Karnataka, Rayalaseema and some districts in East Uttar Pradesh.

North Interior Karnataka

- Long dry spell has resulted in severe depletion of soil moisture, hampering the growth of seedlings of the sown crops. However, there is no scope for taking up any sowing operation in view of poor soil moisture status. Following contingency measures are suggested:
 - Thinning operation by removal of weak seedlings in each row.
 - Spraying of 0.5 per cent KNO₃.
 - Repeated inter-cultivation.

- 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.

Rayalaseema

- Mulching in already sown crops for conservation of soil moisture.
- Maintenance of 2-3 cm water level in rice field.
- Protective irrigation in early sown groundnut, pearl millet, cotton, castor, pigeon pea and sorghum to avoid moisture stress if water is available in farm ponds or bore wells; spraying of 2% urea solution to prevent wilting, running a dead furrow for every 12 rows i.e. for every 3.6 meters, intercultivation in groundnut in Anantpur and Kurnool districts.
- Intercultivation for weed control and moisture conservation.
- Due to lack of sufficient rains already sown rainfed crops are suffering from moisture stress in Rayalaseema districts and area sown under various crops is less than 40% of the normal due to deficit rainfall. Sowing of contingency crops, as mentioned below, after receipt of sufficient rain.
 - Sowing of sorghum, pearl millet, pigeon pea, horse gram, castor, cowpea, cluster bean and field bean in rainfed light soils in August; sowing of castor, cotton, chilli in rainfed heavy soils up to end of August in Ananthapur and Kurnool districts.
 - Varieties for sowing of red gram are LRG-41, ICPL-85063 for black soils and PRG-158, PRG-100 red soils in rainfed tracts of Kurnool district.
 - Sowing of pigeon pea, sorghum, black gram, green gram, castor, cowpea, field bean and sunflower up to end of August in rainfed light soils and sowing of horse gram, pillipesara and sunnhemp in rainfed heavy soils in Chittoor, Nellore and Cuddeph districts.
- Spraying of 2% urea solution + 10 g MgSO₄ / litre of water followed by DAP 15-20 g + 10 g Potassium Nitrate (KNO₃) / litre of water at weekly interval to control wilting in rainfed cotton in Cuddeph district.

East Uttar Pradesh (Central Plain Zone: Fatehpur, Pratapgarh, Allahabad , Chitrakoot, Kaushambi)

- Transplanting of rice upto 20-22nd August and direct sowing of short duration varieties of paddy such as NDR-97, NDR 80, NDR-2064, Pant Dhari-4 and Shusk Samrat and mustard after 22nd August.
- Intercultural operation in green gram and black gram and thinning in jowar and bajra.
- Undertake gap filling to maintain plant population of rice.

West Uttar Pradesh

- Spraying of 2% Urea to protect crops from moisture stress condition.
- Light hoeing, mulching with crop residue to conserve soil moisture.
- Weeding and thinning in green gram, black gram and pigeon pea.
- Due to humid and warm weather in Kanpur region, infestation of bacterial blight and brown leaf spot in rice crops is likely to increase; spray Mancozeb @ 25 g per 10 litres of water.

In view of occurrence of floods in Assam during end of July and in Manipur, Gangetic West Bengal, Madhya Pradesh, Jammu & Kashmir and Odisha during first week of August due to heavy to very heavy rainfall, following agricultural activities are suggested.

Assam

- In North Bank Plain Zone of Assam, in flood affected areas collection 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 long duration cultivars like Monohar Sali and Gitesh with 60 days seedlings.

- In Lower Brahmaputra Valley Zone of Assam, contingency plan for rice in flood affected area:
 - Raising of community nursery for late planting with old seedlings of the varieties like Profulla and Gitesh (If more than 50% damaged).
 - Nursery raising of the photo insensitive short duration varieties like Luit for replanting (in case of total damage).
 - Wet seeding of sprouted seeds (@ 75-80 kg/ha of short to medium duration varieties like Disang, Luit (100 days), Kapili, Kalong (120 days)).
 - Late and staggered planting with the old seedlings (50-60 days old seedlings) of the varieties like Profulla and Gitesh (if the field is heavily damaged).
 - Direct seeding with the photo insensitive short duration variety like Luit.
 - Adoption of submergence tolerance varieties like Jalashree and Jalkuwari for repeat flood prone areas.
- In partially affected fields, drain out excess water and apply 1/3rd N + 50% K₂O as top dressing during the tillering stage.
- Nursery bed preparation / sowing of finger millet, winter vegetables and sowing of green gram and black gram in Lower Brahmaputra Valley Zone of Assam.
- Sowing of *kharif* pulses like black gram / green gram and nursery raising of cole crops and early radish in North Bank Plain Zone and Central Brahmaputra Valley Zone.

Manipur

- Due to heavy rain during last fortnight, low lying areas in many districts got flooded. Crops like rice, ginger and turmeric were affected due to water logging. Contingency measures are-
 - Draining out excess water.
 - Transplanting with old seedlings of rice (40-45 days old) @ 4 to 5 seedlings per hill.
 - Gap filling of rice seedlings.
 - For flood affected areas, raising contingency rice nurseries (late variety RC Maniphou 7).
 - Nursery raising for cauliflower and tomato.
 - Planting of banana after recession of flood water.

West Bengal

- Due to heavy rainfall in past consecutive two weeks and release of water from different dams (Panchet, Massanjore, Maithon, Hinglo etc.) flood situation occurred in South 24 Parganas, East and West Midnapore, Burdwan, Birbhum, Murshidabad, Howrah and Nadia Districts. Crop damage in 12 districts of West Bengal is reported. Contingency plan for flood affected areas is as follows-
 - In all flood prone districts, farmers are advised to collect rice seedling from non-flooded areas and transplant or fill the gaps as early as possible. Collect vegetable seeds and start seedbed preparation after drainage of excess water.
 - Carry out replanting in the flood affected area (after flood water recedes) with short duration cultivars of rice. Farmers can choose PNR-519, Kalinga, Kalyani, Rasi and Satabdi (IET-4786).
 - In flood prone areas, farmers (those who have not yet planted the crop) may opt for submergence tolerance rice cultivars (e.g. Jaladhi, Jalashree, Plaban).
 - Jute farmers, who have rice seedlings, are advised to harvest jute crop and prepare main field for transplanting operation. Transplanting should be done when seedlings will be three weeks old.
 - For medium land condition, sprouted seeds of rice can also be directly sown after recede of the flood water.

Odisha

- After recession of flood water, sowing in areas, where damage is noticed, with sprouted rice

seeds of short duration varieties of rice like Khandagiri and Parijat.

- In East and South Eastern Coastal Plain Zone, direct seedling of rice in medium and deep low lands and transplanting of rice in medium land after recession of flood water. In uplands, complete sowing of green gram, black gram, ragi and sesame.
- In North Eastern Coastal Plain Zone, resowing with germinated seeds with varieties having less than 15 to 20 days duration than the recommended one in the areas where rice nursery is completely damaged due to heavy rain occurred during last few weeks.

Madhya Pradesh

- Prepare drainage channels for removing excess water from soybean, oilseeds, orchards, and other pulse crops.
- In paddy, control weeds by applying post-emergent application of herbicide like Whip super @ 250 ml/acre. Also apply nitrogenous fertilizers in paddy crops.
- In mung and urd crops, post-emergent application of Pursuit @ 250 ml/acre for weed control.
- In soybean, insecticide application of Imidacloprid 17.8 SL at 200 ml/ha for white fly control. For controlling leaf eating caterpillar, apply Triazophos 40 EC at 80 ml/ha as spray on soybean plants.

Jammu & Kashmir

- To control blast in paddy spray tricyclozole @ 0.06% and to control brown spot spray mancozeb @ 0.25%.
- For control of weeds in paddy crop apply Bispyrebac @ 25-30 gm/ ha in 500 liters of water to the crop between 30-35 days after transplanting when ponded water just disappears from the field.
- Application of 2nd dose of nitrogen fertilizer as top dressing in normal sown maize crop before tassel formation as sufficient moisture is present in the soil.
- Sowing of mixed fodder i.e. legume + cereal (maize, cowpea & chari) at optimum soil moisture conditions.
- In pulse crop do not allow water to stagnate and farmer may go for intercultural operations (thinning, weeding and hoeing) keeping in view the moisture status of fields.

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