

All India Coordinated Research Project on Agrometeorology
CRIDA, Santoshnagar, Hyderabad – 500 059

Weekly Crop Weather Information during 08th to 14th October 2018

The crop weather conditions in different states as reported by the cooperating centres of AICRPAM

Maharashtra

Vidarbha region

Dry weather prevailed in Vidarbha during past week. Maximum temperature across the week was 1.4 °C above normal and the minimum temperature was -1.3 °C below normal. Agricultural field preparations are under way for rabi crops in harvested mono-crop fields of green gram/black gram. Harvesting and threshing of soybean and pearl millet is in progress. Need based plant protection is being undertaken in cotton (sap sucking pest and boll worm), pigeon pea (leaf roller) and castor (semilooper). Weeding, manuring /fertilization and basin mulching of established plantations are in progress. Soybean crop at harvest stage. Normal sown cotton is at boll development stage, sorghum at hard dough stage, pearl millet at harvest stage. Groundnut is at harvest stage and sunflower at seed development stage. Pigeonpea- at branching/development stage and castor at spike initiation /flowering stage. Low to moderate intensity of sucking pests & pink bollworm in cotton crop was noticed.

Madhya Maharashtra

Dry weather prevailed in Madhya Maharashtra region of Maharashtra state during this week. Agriculture operations like harvesting of pearl millet, field preparation for sowing of rabi season crops like sorghum, gram crops are in progress. Pearl millet and sunflower are at harvesting stage, rabi jowar is in seedling stage, Early chick pea is in germination stage. Low intensity of army worm in maize & sugarcane, fruit & shoot borer in brinjal crop was noticed.

Konkan region

Dry weather prevailed in Konkan region of Maharashtra state during this week. The Maximum temperature was ranged from 30.4 to 32.8°C and the minimum temperature was ranges from 21.4 to 23.5 °C. Agriculture operations like harvesting of early and mid late rice varieties and cleaning of field bunds and fruit orchards are in progress. Rice early and mid late varieties harvesting and late varieties at maturity stage. Fingermillet grain filling stage. Mango vegetative flush and cashew nut vegetative flush stage. Low intensity of seed borer in sapota and anthrax nose & midge fly in mango was noticed.

Assam

Light rainfall received in Assam state during this week. Daily average maximum temperature was 28.7°C which was 1.9°C below normal and the average daily minimum temperature was 21.3°C which was 1.2°C below normal for the week. Agriculture operations like land preparation and sowing of early varieties of rabi vegetables and land preparation for rabi maize crops are in progress. Sali rice is in panicle initiation stage and rabi vegetables are at seedling stage. No major pests and diseases were noticed.

Uttar Pradesh

East Uttar Pradesh

Dry weather prevailed in East Uttar Pradesh region of Uttar Pradesh state during this week. Agriculture operations like sowing of rabi crops like toria and early potato just occurred up to 30-35% under different regions, harvesting of short duration varieties of rice, sowing of toria, early potato transplanting of cauliflower, brinjal and sowing of autumn sugarcane crops are in progress. Short/medium duration varieties of rice is in maturity stage while long duration is in milking stage. Sugarcane is in grand growth stage. Pigeon pea is in vegetative stage. Low intensity of gundhibug in paddy and leaf webber in pigeonpea crop was noticed.

West Uttar Pradesh

Dry weather prevailed in West Uttar Pradesh region of Uttar Pradesh state during this week. Maximum temperature may be 1.0 °C above to its normal and minimum temperature is 1.0°C lower to its normal. Agriculture operations like irrigation, top dressing with urea and spray pesticide in paddy, harvesting of maize, spray pesticide in pigeonpea, harvest mature crop blackgram, greengram and weeding in toria and transplanting, irrigation, weeding, plucking in brinjal / chillies crops are in progress. Paddy is in dough / maturity stage, maize is in dough/ maturity stage, pigeon pea is in branching stage, black gram, green gram are at maturity stage, toria is in vegetative stage and vegetables are in flowering to fruiting stage. Low to moderate intensity of shoot borer / army worm/ gundhibug in paddy and leaf roller in pigeonpea crops was noticed.

Gujarat

Dry weather prevailed in Gujarat state during this week. The actual maximum temperature is 1.7°C higher and minimum temperature is 2.0°C lower as compared to normal values. Agriculture operations like weeding and interculturing in transplanted vegetables, harvesting of kharif crops and land preparation for rabi crops are in progress. Pearlmillet is in harvesting stage. Early sown cotton is in boll formation stage. Maize is in grain filling/milking stage. Soybean is in pod development stage. Tomato is in fruiting/picking stage. No major pests and diseases were noticed.

Haryana

Dry weather prevailed in Haryana state during this week. Maximum temperature was below normal during the period. Minimum temperature was observed above normal upto 12th October and below thereafter during the period. Agriculture operations like pest/disease management in cotton/late sown rice, field preparation for mustard sowing, harvesting of timely sown basmati rice are in progress. Cotton crop at ball opening stage as per date of sowing. Timely sown basmati rice at harvesting stage. Late sown rice at seed development stage. Mustard crop at sowing stage. No major pests and diseases were noticed.

Himachal Pradesh

Very light rainfall received in Himachal Pradesh state during this week. The maximum temperature during the week ranged between 23.5 to 28.5°C which was above normal by 0.4 to 3.5°C and minimum temperature between 10.2 to 15.5°C which was below normal by 0.8 to 3.9°C during the week. Agriculture operations like land preparation for sowing oats, mustard/gobi sarson, intercultural operations in peas, turnip, carrot, spinach in high hilly regions, arrangement of fodder for their cattle and dairy animals from maize and rice crop fields and grassland crops are in progress. Rice is at maturity stage, maize is at harvesting stage and winter vegetables crops are at sowing stage. Moderate intensity of blast in rice crop was noticed.

Jharkhand

Dry weather prevailed in Jharkhand state during this week. Both maximum and minimum temperatures ranged from 26.4 to 28.6°C and 16.1 to 19.6°C , respectively. Agriculture operations like harvesting and threshing of soybean, urd, maize, picking of moong and earthing of arhar and land preparation of rabi crops are in progress. Maturity in moong, flowering in urd, groundnut and soybean. No major pests and diseases were noticed.

Kerala

Light rainfall received in Kerala state during this week. Maximum temperature ranges from 30.0 to 35.4°C, minimum temperature ranges from 22.6 to 25.0 °C. Agriculture operations like land preparation for paddy(Mundakan season), nursery preparation for winter season vegetable crops are in progress. Bunching stage in banana, Berry development in pepper. Moderate intensity of bud rot and white fly in coconut, mahali in arecanut, aphids in banana and rust disease in cowpea was noticed.

Jammu & Kashmir

Light rainfall received in Jammu region of Jammu & Kashmir state during this week. The maximum remained below normal by 1.0 to 2.0 °C and was in the range of 29.2

to 31.4 °C. The minimum temperature also remained below normal by 1.0 °C and ranged from 14.6 to 18.7 °C. Agricultural operation like sowing of mustard, gobi sarson and chick pea. Harvesting of the maize, bajra, kharif oil seeds, pulses and early maturing paddy crop is in progress. Thinning and weeding of toria. Sowing of winter vegetable, irrigation in vegetable and newly planted fruit crops are in progress. Early sown paddy is at physiological maturity stage. Normal sown paddy is at hard dough stage. Late sown paddy is at soft dough stage. Early sown mustard is at emergence stage. Maize and bajra crop is at physiological maturity stage. Toria is at sixth leaf stage. Moderate intensity of hispa in paddy and sheath blight in basmati rice crop was noticed.

Karnataka

North Karnataka

Hot and dry weather prevailed in North Interior Karnataka of Karnataka state during this week. maximum temperature reaching 35.9°C which is more than normal by 4.2 °C at the station and similar situation prevailed over Northern Karnataka. Agriculture operations like sowing of rabi sorghum, chick pea and safflower have been ceased temporarily; inter-cultivation and weeding in already sown crops; plant protection in horticultural crops; pruning in grapes crops are in progress. Pigeon pea : vegetative to flowering. Sunflower : vegetative. Groundnut : peg initiation to pod development. Rabi sorghum and chick pea : germination. Maize : soft dough to hard dough. Low intensity of root grub in maize/sugarcane, leaf curl, fruit rot and fruit borer in tomato, anthracnose, fruit borer and bacterial blight pomegranate was noticed.

South Karnataka

Light rainfall received in South Interior Karnataka during this week. State actual rainfall was 21.0 mm as against the normal of 41.0 mm with (-) 50% deviation. Whereas SIK received 28.0 mm of rainfall as against the normal of 42.0 mm leading to (-) 34% deviation. Agriculture operations like land preparation and sowing of rabi crops, top dress is progress in maize and ragi crops is under progress. Kharif crops are in flowering to maturity stage and rabi crops are at sowing to germination stage. Low intensity of leaf roller in redgram crop was noticed.

Odisha

Moderate to heavy rainfall received in Odisha state during the week. Agricultural operations like harvesting of early rice. Top dressing and plant protection of rice. Harvesting of ragi. Plant protection and harvesting of maize for cob purpose. Plant protection of pigeon pea. Plant protection of cotton. Plant protection of groundnut. Retting of jute, plant protection of sugarcane. Intercultural operation of tuberoses. Intercultural operation of chrysanthemum and marigold. Plant protection of Kharif vegetables. Land preparation and planting of brinjal, tomato, and cole crops. Intercultural operation of pre-rabi crops and sowing of rabi crops like groundnut, mustard, sunflower crops are in

progress. Maturity to harvesting stage of early rice. Grain filling stage of medium rice. PI stage of late rice. Grand growth stage of sugarcane. Maturity stage of ragi. Maturity stage of kharif maize. Pod to seed development stage of early arhar. Maturity to harvesting stage of groundnut. Fruiting to harvesting stage of brinjal, okra and cucurbits, cowpea. Vegetative stage of turmeric, zinger, colocasia and yam. Retting stage of jute. Seedling stage of rabi groundnut. Low intensity of bacterial leaf blight, leaf folder/case worm, foot rot, gulmidge, sheath blight, brown plant hopper, swarming caterpillar, blast, mealy bug, yellow stem borer, white backed plant hopper, sheath rot and gundhi bug in paddy crop was noticed.

Punjab

Dry weather prevailed in Punjab state during the week. and minimum temperature ranged between The maximum temperature ranged from 29.1 to 32.6°C and minimum temperature ranged from 15.8 to 22.0°C. Agricultural operations like harvesting and threshing of paddy. picking of cotton. field preparation for sowing of mustard and berseem. arrangement of seeds of rabi crops viz., mustard, wheat, chickpea crops are in progress. Rice and maize at harvesting stage. Cotton at picking stage. Groundnut near maturity stage. No major pests and diseases were noticed.

Rajasthan

Dry weather prevailed in Rajasthan state during the week. The minimum temperature ranged from 33.0 to 35.0 °C with mean value of 34.2 °C which was 1.3 °C above the normal value. The minimum temperature ranged from 16.0 to 18.3°C with mean value of 17.1 which was 0.4 °C above to the normal. Agricultural operations like harvesting of kharif crops and field preparation for rabi crops like mustard etc are in progress. Mustard is at seedling stage and maize is at maturity stage. No major pests and diseases were noticed.

Tamil Nadu

Light rainfall received in Tamil Nadu state during the week. The maximum temperature was 0.9°C below normal and the rainfall was 36.9 mm below normal across the week. Agricultural operations like plant protection measures for controlling pests and diseases are in progress. sowing of cotton, millets and pulses are in progress. Paddy is in seedling to vegetative stage. Jasmine is in flowering stage. Tomato and Bhendi are in fruiting stage. Citrus is in fruiting stage. Cotton, Maize, Sorghum are in early vegetative stage. Chillies is in nursery stage. Moderate intensity of thrips in paddy, leaf webber, bud worm in jasmine and canker, scab in citrus was noticed.

Uttarakhand

Light rainfall received in Uttarakhand state during the week. Maximum temperature and minimum temperatures are slightly below normal. Agricultural

operations like harvesting of kharif crops like barnyard millet, amaranth, paddy (irrigated) pulses and sowing of leafy vegetables, nursery for onion, field preparation for rabi crops are in progress. Physiological maturity in most of kharif crops like finger millet, Paddy (irrigated) Pulses etc. growth stage in Vegetable Pea. Fruiting in cucurbits and solanaceous crops. Fruit development of citrus. No major pests and diseases were noticed.

Weather during 04th to 10th October 2018

Withdrawal of South West Monsoon:

- Southwest monsoon has withdrawn further from entire north eastern states, West Bengal & Sikkim, remaining parts of Bihar & Jharkhand, entire Odisha, most parts of Chhattisgarh and North Bay of Bengal, some more parts of Maharashtra, remaining parts of Gujarat State and north Arabian Sea on 5th October 2018. It has withdrawn further from remaining parts of North Bay of Bengal, Chhattisgarh and Maharashtra, entire Telangana, most parts of Central Bay of Bengal, Coastal Andhra Pradesh and Central Arabian Sea and some parts of Rayalaseema and Karnataka on 6th October 2018.
- In the beginning of the week, the withdrawal line of southwest monsoon passed through Lat. 26.5°N/Long. 87.0°E, Supaul, Hazaribag, Champa, Gondia, Jalgaon, Surat, Veraval and Lat. 21°N/ Long. 60°E. It passed through Lat. 20°N/Long. 93°E, Lat. 19°N/Long. 90°E Kalingapatnam, Sironcha, Washim, Dahanu and Lat. 20°N/ Long. 60°E on 5th October 2018; It passed through Lat. 16°N/Long. 94°E, Lat. 15°N/long. 90°E, Machilipatnam, Kurnool, Gadag, Vengurla and Lat. 16°N/ Long. 60°E on 6th October 2018 and continued to be there till the end of the week.

Low Pressure Systems:

- Two intense low pressure systems had formed and persisted over North Indian Ocean during the week; one over Arabian Sea and another over Bay of Bengal.
- The low pressure area which formed over South East Arabian Sea and neighbourhood in the beginning of the week has concentrated into a Depression on 6th October 2018 and subsequently intensified into a Cyclonic Storm 'LUBAN' on 8th October 2018. After intensifying further it lay as a 'Very Severe Cyclonic Storm' over West Central Arabian Sea towards the end of the week. This system during its initial stage has caused fairly widespread to widespread intense rainfall activity over parts of south Peninsula.
- Another low pressure area which formed over South East Bay of Bengal and adjoining north Andaman Sea on 7th October 2018 has concentrated into a Depression on 8th October 2018 and intensified into a Cyclonic Storm 'TITLI' over West Central Bay of Bengal on 9th October 2018. It further intensified into a Severe Cyclonic Storm and then into a Very Severe Cyclonic Storm on 10th October 2018. This system has caused fairly widespread to widespread rainfall with isolated intense rainfall activity over Andaman Nicobar islands during the second half of the week.

Heavy Rainfall Activity

- Heavy to very heavy rain had been reported over Kerala on four days; over Tamilnadu & Puducherry, Assam & Meghalaya and Coastal Karnataka one day each during the week.

- Heavy rain had been reported over South Interior Karnataka on two days; over Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa and Marathwada on one day each during the week.

Temperature:

- The highest maximum temperature of 42.4°C had been recorded at Bhuj (Gujarat) on 7th October 2018 and the lowest minimum temperature of 11.1°C had been recorded at Coonoor (Tamilnadu & Puducherry) on 9th October 2018, over the plains of the country during the week.

Meteorological Analysis

- Last week's cyclonic circulation over South East Arabian Sea and adjoining Lakshadweep area lay over South East Arabian Sea and adjoining Lakshadweep - Maldives area and extended up to 5.8 km above mean sea level on 4th October 2018. Under its influence, a low pressure area has formed over South East Arabian Sea & neighbourhood with the associated cyclonic circulation extending upto 7.6 Km above mean sea level on 5th; It lay as a Well Marked Low Pressure area over South East and adjoining East Central Arabian Sea with the associated cyclonic circulation extending upto 7.6 km above mean sea level on 6th October morning. It has concentrated into a Depression over South East and adjoining East Central Arabian sea and lay centred at 1430 hrs IST of 6th October 2018 near Lat 11.2o N and Long.67.0o E, about 1500 km southeast of Salalah(Oman), 1400 km east-southeast of Socotra islands(Yemen) and 730 km west- northwest of Minicoy(Lakshdweep islands). It moved west - northwestwards and lay centred at 0830 hrs IST of 7th October 2018, near Lat. 12.0°N and Long. 65.6°E, about 1360 km east-southeast of Salalah (Oman), 1270 km east-southeast of Socotra Island (Yemen) and 920 km west-northwest of Minicoy (Lakshadweep Islands).It intensified into a Deep Depression and further intensified into a Cyclonic Storm 'LUBAN' and lay centred at 0530 hrs IST of 8th October 2018 over West Central and adjoining South West Arabian Sea , near Lat 12.3o N and Long.62.4o E, about 1040 km east-southeast of Salalah(Oman) and 920 km east southeast of Socotra islands(Yemen) and 1260 km west-northwest of Minicoy(Lakshadweep islands).It moved west northwestwards and lay centred at 0830 hours IST of 8th October 2018, over West Central and adjoining South West Arabian Sea, near Lat. 12.4°N and Long. 62.0°E, about 990 km east-southeast of Salalah (Oman), 880 km east of Socotra Island (Yemen) and 1300 km west-northwest of Minicoy (Lakshadweep Islands) . It moved further west northwestwards and lay centred at 1430 hrs IST of 8th October 2018 over West Central and adjoining South West Arabian Sea , near Lat.12.5 o N and Long 61.5 o E, anout 940 km east-southeast of Salalah(Oman) , 820 km east of Socotra islands(Yemen) and 1350 km west - northwest of Minicoy(Lakshadweep islands). It moved further west-northwestwards and lay centred at 1730 hrs IST of 8th October 2018 over West Central and adjoining South West Arabian Sea near Lat. 12.5 o N and Long.61.0 o E, about 900 km east-southeast of Salalah(Oman), and 770 km east of Socotra islands(Yemen).It moved further west-

northwestwards and lay centred at 2330 hrs IST of 8th October 2018 over West Central and adjoining South West Arabian Sea near Lat. 12.7 ° N and Long.60.5 ° E, about 840 km east-southeast of Salalah(Oman), and 710 km east of Socotra islands(Yemen). It moved further west-northwestwards and lay centred at 0530 hrs IST of 9th October 2018 over West Central and adjoining South West Arabian Sea near Lat. 12.9 ° N and Long.60.2 ° E, about 800 km east-southeast of Salalah (Oman), and 680 km east of Socotra islands(Yemen).It remained practically stationary and lay centred at 0830 hours IST of 9th October 2018, over West Central and adjoining South West Arabian Sea, near Lat. 12.9°N and Long. 60.2°E, about 800 km east-southeast of Salalah (Oman), 680 km east of Socotra Island (Yemen) and 940 km east-southeast of AlGhaidah (Yemen).It moved northwestwards and lay centred at 1130 hrs IST of 9th October over West Central and adjoining South West Arabian Sea near Lat.13.1 ° N and Long.60.1 ° E, about 780 km east southeast of Salalah (Oman), 670 km east of Socotra Island (Yemen) and 920 km east-southeast of AlGhaidah (Yemen). It moved northwestwards, intensified into a Severe Cyclonic Storm and lay centred at 1430 hrs IST of 9th October over West Central and adjoining South West Arabian Sea near Lat.13.2 ° N and Long.60.0 ° E, about 760 km east southeast of Salalah(Oman), 660 km east of Socotra Island (Yemen) and 900 km east-southeast of AlGhaidah (Yemen). It moved west-northwestwards and lay centred at 1730 hrs IST of 9th October over West Central Arabian Sea near Lat.13.3 ° N and Long.59.7 ° E, about 730 km east southeast of Salalah(Oman), 630 km east-northeast of Socotra Island (Yemen) and 870 km east-southeast of AlGhaidah (Yemen). It moved west- northwestwards and lay centred at 2330 hrs IST of 9th October over West Central Arabian Sea near Lat.13.5 ° N and Long.59.3 ° E, about 680 km east-southeast of Salalah(Oman), 590 km east-northeast of Socotra Island (Yemen) and 820 km east-southeast of AlGhaidah (Yemen). It moved west- northwestwards and lay centred at 0230 hrs IST of 10th October over West Central Arabian Sea near Lat.13.6° N and Long.59.1° E, about 660 km east southeast of Salalah(Oman), 570 km east-northeast of Socotra Island (Yemen) and 800 km east-southeast of AlGhaidah (Yemen). It moved north-northwestwards, intensified into a Very Severe Cyclonic Storm and lay centred at 0530 hrs IST of 10th October over West Central Arabian Sea near Lat.14.1 ° N and Long.59.0 ° E, about 610 km east southeast of Salalah (Oman), 570 km east-northeast of Socotra Islands (Yemen) and 770 km east-southeast of AlGhaidah (Yemen). It remained practically stationary and lay centred at 0830 hrs IST 10th October 2018 over West Central Arabian Sea, near latitude 14.1°N and longitude 59.0°E, about 610 km east-southeast of Salalah (Oman), 570 km east-northeast of Socotra Islands (Yemen) and 770 km east-southeast of Al-Ghaidah (Yemen).

- Last week's trough at 0.9 km above mean sea level ran from the cyclonic circulation over South Kerala and adjoining interior Tamilnadu to north Konkan across Karnataka on 4th October 2018 and it has become less marked on 5th October 2018.
- Last week's cyclonic circulation extending upto 0.9 km above mean sea level over South West Bay of Bengal & adjoining Sri Lanka off Tamilnadu coast persisted on 4th October

2018. It lay over south coastal Tamilnadu & neighbourhood on 5th and has become less marked on 6th October 2018.

- Last week's trough from Sub-Himalayan West Bengal to North East Bay of Bengal lay as a cyclonic circulation over northern parts of Bangladesh and adjoining West Bengal and extended upto 2.1 km above mean sea level on 4th October 2018. It lay over Bangladesh and adjoining areas of Assam & Meghalaya and extended between 1.5 km & 3.1 km above mean sea level on 5th; It persisting over the same region and extended upto 1.5 km above mean sea level on 6th; It lay over central parts of Assam & neighbourhood and extended upto 1.5 km above mean sea level on 7th and has become less marked on 8th October 2018 .
- The cyclonic circulation over east Assam & neighbourhood has become less marked on 4th October 2018.
- Last week's Western Disturbance as an upper air cyclonic circulation over north Pakistan & neighbourhood lay over Jammu & Kashmir & neighbourhood between 3.1 km & 5.8 km above mean sea level with a trough aloft running roughly along Long. 68°E to the north of lat. 28°N on 4th October 2018 and it has moved away east-northeastwards on 5th October 2018.
- A cyclonic circulation extending upto 0.9 Km above mean sea level lay over South Kerala and adjoining interior Tamilnadu on 4th October 2018 and it has become less marked on 5th October 2018.
- A Western Disturbance as an upper air cyclonic circulation extending upto 5.8 km above mean sea level lay over northeast Afghanistan & neighbourhood on 4th October 2018. It lay over north Pakistan and neighbourhood, extending upto 5.8 km above mean sea level on 5th; It lay over northern parts of Jammu & Kashmir and neighbourhood at 5.8 km above mean sea level on 6th; It lay over northeastern parts of Jammu & Kashmir at 5.8 km above mean sea level on 7th and has moved away east-northeastwards on 8th .
- A cyclonic circulation extending upto 1.5 km above mean sea level lay over south Andaman Sea & neighbourhood on 5th October 2018. It persisted over the same region and extended upto 5.8 km above mean sea level on 6th. Under its influence, a low pressure area has formed over South East Bay of Bengal and adjoining north Andaman Sea with the associated cyclonic circulation extending upto 5.8 km above mean sea level on 7th. It became Well Marked Low Pressure Area in the evening of the same day and lay over South East and adjoining East Central Bay of Bengal. It has concentrated into a Depression and lay centred at 0830 hours IST of 8th October 2018, over East Central Bay of Bengal near Lat. 14.0°N and Long. 88.8°E, about 720 km south-southeast of Gopalpur (Odisha) and about 690 km southeast of Kalingapatnam (Andhra Pradesh); It moved west- northwestwards, intensified into a Deep Depression and lay centred at 2330 hrs IST of 8th October 2018 near Lat 14.5o N and Long. 87.6o E, about 600 km southeast of Gopalpur(Odisha) and 560 km

southeast of Kalingapatnam(Andhra Pradesh).It moved further west-northwestwards and lay centred at 0530 hrs IST of 9th October 2018 over West Central Bay of Bengal near Lat.14.7o N and Long.87.1o E , about 560 km southeast of Gopalpur(Odisha) and 510 km southeast of Kalingapatnam(Andhra Pradesh).It remained practically stationary and lay centred at 0830 hours IST of 9th October 2018, over West Central Bay of Bengal near Lat. 14.7°N and Long. 87.1°E, about 560 km southeast of Gopalpur (Odisha), 510 km southeast of Kalingapatnam (Andhra Pradesh). It moved west-northwestwards and intensified into a cyclonic storm, 'TITLI' and lay centred at 1130 hrs IST of 9th October 2018 over West Central Bay of

- Bengal near Lat.14.8o N and Long.86.7o E, about 530 km southeast of Gopalpur (Odisha) and 480 km east-southeast of Kalingapatnam (Andhra Pradesh). It moved initially northwestwards and then north-northwestwards and intensified into a Severe Cyclonic Storm and lay centred at 0530 hrs IST of 10th October 2018 over West Central Bay of Bengal near Lat. 16.0 o N and Long.85.8 o E, about 370 km south-southeast of Gopalpur(Odisha) and 310 km southeast of Kalingapatnam (Andhra Pradesh). It lay centred at 0830 hrs IST of the same day over Westcentral Bay of Bengal near Lat.16.5°N and Long. 85.8°E, about 320 km south-southeast of Gopalpur (Odisha) and 270 km southeast of Kalingapatnam (Andhra Pradesh).
- An induced cyclonic circulation extending upto 0.9 km above mean sea level lay over northwest Rajasthan & neighbourhood on 5th October 2018; It lay over north Rajasthan and neighbourhood on 6th; lay over West Rajasthan & neighbourhood and extended upto 1.5 km above mean sea level on 7th and it persisted over the same region and continued to extend upto 1.5 km on 8th, 9th and 10th October 2018.
- A cyclonic circulation at 1.5 km above mean sea level lay over Comorin area & neighbourhood on 7th October 2018 and it has become less marked on 8th October 2018.
- A trough in westerlies between 2.1 & 3.6 km above mean sea level ran roughly along Long. 90°E to the north of Lat. 20°N on 7th October 2018 and it has become less marked on 8th October 2018.
- A Western Disturbance as an upper air cyclonic circulation at 3.1 km above mean sea lay over northeast Afghanistan & neighbourhood on 7th October 2018; It lay over north Pakistan & neighbourhood at 5.8 km above mean sea level on 8th. It lay as an upper air cyclonic circulation extending upto 5.8 km above mean sea level over north Pakistan and adjoining Jammu & Kashmir on 9th October 2018 and it has moved away east northeastwards on 10th October 2018.
- A trough in westerlies between 2.1 & 3.1 km above mean sea level ran roughly along Long. 87°E to the north of Lat. 22°N on 8th October 2018. It ran roughly along Long. 89°E to the

north of Lat. 22°N between 3.1 km & 3.6 km above mean sea level 9th and it has become less marked on 10th October 2018 morning.

- A western disturbance as an upper air cyclonic circulation extending upto 5.8 km above mean sea level lay over northeast Afghanistan & neighbourhood on 9th October 2018; It persisted over the same region and extended upto 7.6 km above mean sea level on 10th October 2018.

Average rainfall during the week

The All India area weighted rainfall during the week 9.8 mm was 62% below normal (25.5 mm).

The subdivision-wise weekly rainfall distribution is presented in Fig.1. Rainfall was Large excess in 4, excess in 1, normal in 2, deficit in 0, Large deficit in 29 and no rain in 0 out of 36 meteorological sub-divisions.

Cumulative Seasonal rainfall (01st October to 10th October 2018)

The cumulative seasonal rainfall during 01st October to 10th October 2018 over the country as a whole was 12.9 mm which is 66% below normal rainfall of 38.1 mm.

The subdivision-wise seasonal rainfall distribution is presented in Fig. 2. Rainfall was Large excess in 1, excess in 4, normal in 0, deficit in 3 and L. deficit in 28 and no rain in 0 out of 36 meteorological sub-divisions.

State-wise distribution of rainfall in number of districts with large excess, excess, normal, deficient, large deficient and no rainfall during post monsoon season (01st October to 10th October 2018)

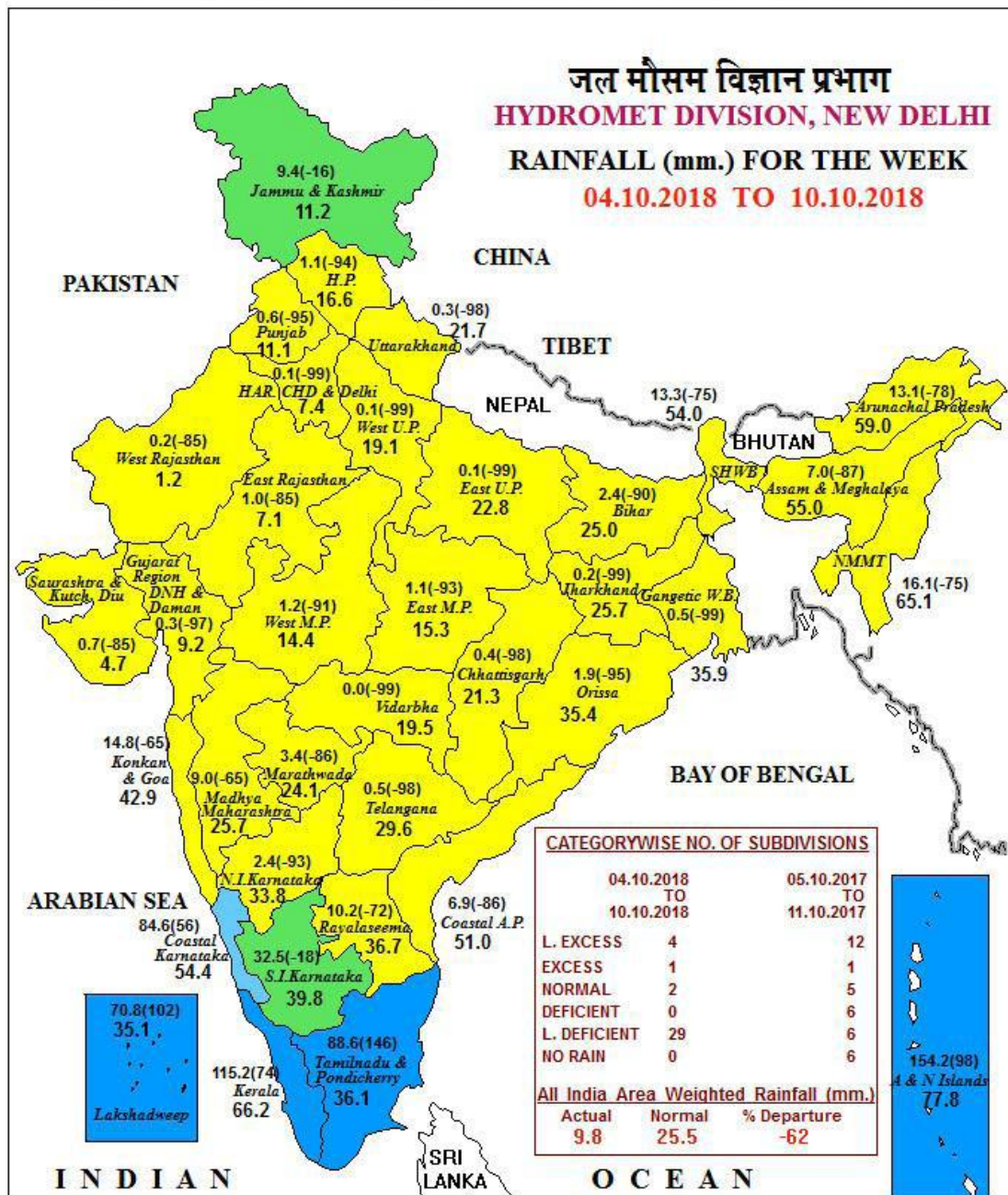
In the country, 5% districts received large excess, 3% districts received excess and 3% districts normal rainfall during post monsoon season so far. However, 6% districts received deficient, 32 % districts received large deficient rainfall and 51% districts received no rainfall and 0 districts received no data. (Table-1).

Weekly rainfall departure (%) at different IMD subdivisions (2018)

During the week under report 4 Sub-divisions viz.; Tamil Nadu & Puducherry, Kerala, Lakshadweep and Andaman & Nicobar Islands received large excess rainfall, 1 Sub-division viz.; Coastal Karnataka received excess rainfall, 2 Sub-divisions viz.; Jammu & Kashmir and South Interior Karnataka received normal rainfall and remaining 29 Sub - divisions received either deficit / large deficit / no rainfall. (Table-2).

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

**जल मौसम विज्ञान प्रभाग
HYDROMET DIVISION, NEW DELHI
RAINFALL (mm.) FOR THE WEEK
04.10.2018 TO 10.10.2018**



LEGEND: ■ L. EXCESS [+60% OR MORE] ■ EXCESS [+20% TO +59%] ■ NORMAL [+19% TO -19%]
 ■ DEFICIENT [-20% TO -59%] ■ L. DEFICIENT [-60% TO -99%] ■ NO RAIN [-100%] □ NO DATA

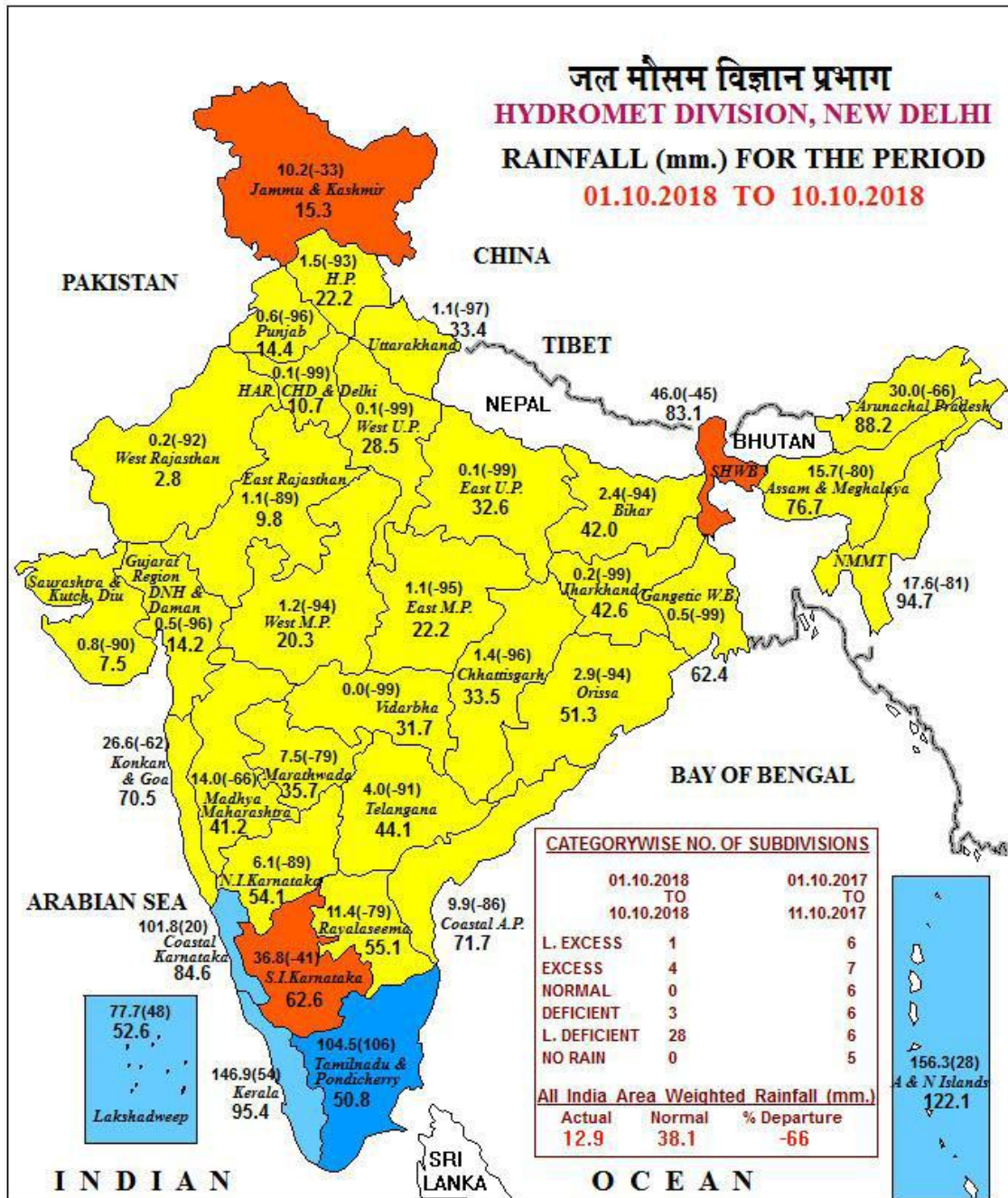
NOTES:

- [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.

Fig-1

भारत मौसम विज्ञान विभाग INDIA METEOROLOGICAL DEPARTMENT

**जल मौसम विज्ञान प्रभाग
HYDROMET DIVISION, NEW DELHI
RAINFALL (mm.) FOR THE PERIOD
01.10.2018 TO 10.10.2018**



LEGEND: ■ L. EXCESS (+60% OR MORE) ■ EXCESS (+20% TO +59%) ■ NORMAL (+19% TO -19%)
 ■ DEFICIENT (-20% TO -59%) ■ L. DEFICIENT (-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.

Fig-2







Table 1. State wise distribution of number of districts with large excess, excess, normal, deficient, large deficient, no rainfall and data inadequate shown (01.06.2018 to 30.09.2018)

S.NO.	STATES	PERIOD FROM : 01.06.2018 TO 30.09.2018							
		LE	E	N	D	LD	NR	ND	TOTAL
1.	A & N ISLAND (UT)	0	2	0	1	0	0	0	3
2.	ARUNACHAL PRADESH	0	0	3	1	9	2	1	16
3.	ASSAM	0	1	2	6	16	2	0	27
4.	MEGHALAYA	0	0	1	0	1	4	1	7
5.	NAGALAND	0	0	1	0	9	1	0	11
6.	MANIPUR	0	0	0	0	4	2	3	9
7.	MIZORAM	0	0	1	0	3	1	4	9
8.	TRIPURA	0	0	0	0	4	0	0	4
9.	SIKKIM	0	1	0	1	2	0	0	4
10.	WEST BENGAL	0	0	0	2	3	14	0	19
11.	ODISHA	0	0	0	1	18	11	0	30
12.	JHARKHAND	0	0	0	0	2	21	1	24
13.	BIHAR	0	0	0	1	17	20	0	38
14.	UTTAR PRADESH	0	0	0	0	3	69	0	72
15.	UTTARAKHAND	0	0	0	0	5	8	0	13
16.	HARYANA	0	0	0	0	1	20	0	21
17.	CHANDIGARH (UT)	0	0	0	0	0	1	0	1
18.	DELHI	0	0	0	0	0	8	1	9
19.	PUNJAB	0	0	0	0	2	18	0	20
20.	HIMACHAL PRADESH	0	0	0	0	9	3	0	12
21.	JAMMU & KASHMIR	3	3	0	5	6	2	3	22
22.	RAJASTHAN	2	0	0	1	6	24	0	33
23.	MADHYA PRADESH	0	0	0	2	12	37	0	51
24.	GUJARAT	0	0	0	1	9	23	0	33
25.	DADRA & NAGAR HAVELI (UT)	0	0	0	0	1	0	0	1
26.	DAMAN & DIU (UT)	0	0	0	0	1	1	0	2
27.	GOA	0	0	0	2	0	0	0	2
28.	MAHARASHTRA	0	0	2	4	13	17	0	36
29.	CHHATISGARH	0	0	0	1	4	22	0	27
30.	ANDHRA PRADESH	0	0	0	2	11	0	0	13
31.	TELANGANA	0	0	0	1	21	9	0	31
32.	TAMILNADU	22	3	5	2	0	0	0	32
33.	PUDUCHERRY (UT)	2	0	0	0	0	0	2	4
34.	KARNATAKA	1	3	3	6	16	1	0	30
35.	KERALA	5	6	3	0	0	0	0	14
36.	LAKSHADWEEP (UT)	0	1	0	0	0	0	0	1
TOTAL		35	20	21	40	208	341	16	681
CATEGORYWISE DISTRIBUTION OF DISTRICTS OUT OF THE 665 WHOSE DATA RECEIVED		5%	3%	3%	6%	32%	51%		

Table 2. Weekly Rainfall Departure (%) at different IMD subdivisions (2018)

S.No.	Meteorological Sub Division	15 Aug (33)	22 Aug (34)	29 Aug (35)	05 Sep (36)	12 Sep (37)	19 Sep (38)	26 Sep (39)	03 Oct (40)	10 Oct (41)
1	Andaman & Nicobar Islands	Blue	Orange	Blue	Blue	Yellow	Blue	Orange	Yellow	Blue
2	Arunachal Pradesh	Orange	Orange	Orange	Orange	Blue	Orange	Orange	Orange	Yellow
3	Assam & Meghalaya	Orange	Orange	Green	Green	Green	Orange	Green	Orange	Yellow
4	Nagaland, Manipur, Mizoram, Tripura	Green	Green	Green	Orange	Orange	Orange	Orange	Yellow	Yellow
5	Sub-Himalayan West Bengal & Sikkim	Green	Orange	Green	Orange	Blue	Blue	Green	Orange	Yellow
6	Gangetic West Bengal	Yellow	Orange	Orange	Orange	Orange	Yellow	Green	Yellow	Yellow
7	Orissa	Blue	Blue	Blue	Green	Blue	Orange	Blue	Yellow	Yellow
8	Jharkhand	Orange	Orange	Green	Blue	Orange	Yellow	Orange	Yellow	Yellow
9	Bihar	Orange	Yellow	Green	Blue	Orange	Yellow	Yellow	Yellow	Yellow
10	East Uttar Pradesh	Orange	Yellow	Blue	Blue	Yellow	Yellow	Orange	Yellow	Yellow
11	West Uttar Pradesh	Orange	Orange	Blue	Blue	Orange	Yellow	Blue	Grey	Yellow
12	Uttarakhand	Green	Orange	Blue	Blue	Orange	Yellow	Blue	Yellow	Yellow
13	Haryana, Chandigarh & Delhi	Orange	Yellow	Orange	Blue	Green	Yellow	Blue	Grey	Yellow
14	Punjab	Orange	Orange	Orange	Orange	Green	Orange	Blue	Yellow	Yellow
15	Himachal Pradesh	Blue	Orange	Green	Green	Green	Orange	Blue	Orange	Yellow
16	Jammu & Kashmir	Blue	Orange	Orange	Green	Orange	Green	Blue	Orange	Green
17	West Rajasthan	Yellow	Blue	Yellow	Yellow	Orange	Yellow	Blue	Yellow	Yellow
18	East Rajasthan	Orange	Blue	Green	Green	Blue	Yellow	Blue	Yellow	Yellow
19	West Madhya Pradesh	Orange	Blue	Orange	Green	Green	Yellow	Blue	Yellow	Yellow
20	East Madhya Pradesh	Orange	Orange	Blue	Green	Blue	Yellow	Orange	Yellow	Yellow
21	Gujarat Region	Yellow	Blue	Orange	Orange	Yellow	Yellow	Green	Yellow	Yellow
22	Saurashtra, Kutch & Diu	Yellow	Blue	Orange	Orange	Yellow	Yellow	Yellow	Yellow	Yellow
23	Konkan & Goa	Orange	Blue	Green	Orange	Yellow	Yellow	Yellow	Orange	Yellow
24	Madhya Maharashtra	Orange	Blue	Green	Orange	Yellow	Yellow	Yellow	Orange	Yellow
25	Marathwada	Yellow	Blue	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow	Yellow
26	Vidarbha	Orange	Blue	Orange	Yellow	Orange	Yellow	Blue	Yellow	Yellow
27	Chhattisgarh	Green	Blue	Blue	Orange	Orange	Yellow	Green	Yellow	Yellow
28	Coastal Andhra Pradesh	Blue	Blue	Orange	Yellow	Yellow	Green	Green	Yellow	Yellow
29	Telangana	Blue	Blue	Orange	Yellow	Yellow	Orange	Green	Yellow	Yellow
30	Rayalaseema	Green	Yellow	Yellow	Yellow	Orange	Blue	Orange	Yellow	Yellow
31	Tamil Nadu & Pondicherry	Blue	Orange	Orange	Green	Orange	Green	Orange	Blue	Blue
32	Coastal Karnataka	Blue	Blue	Green	Orange	Yellow	Yellow	Yellow	Green	Blue
33	North interior Karnataka	Green	Green	Green	Yellow	Yellow	Yellow	Orange	Orange	Yellow
34	South interior Karnataka	Blue	Blue	Orange	Orange	Orange	Orange	Green	Green	Green
35	Kerala	Blue	Blue	Orange	Yellow	Yellow	Yellow	Orange	Green	Blue
36	Lakshadweep	Orange	Green	Green	Yellow	Yellow	Yellow	Yellow	Blue	Blue

LEGEND:

L. Excess: (+60 % or more)	
Excess: (+20 % to +59 %)	
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Deficient: (-20 % to -59 %)	
L. Deficient: (-60 % to -99 %)	
No Rain: (-100 %)	
No Data:	