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Status of monsoon, Progress in *Kharif* Sowing and Agromet Advisories for Some Deficit/Excess Rainfall Areas

1. Status of southwest monsoon

Southwest monsoon has set in over Kerala on 30 May 2017. As on today, the monsoon has covered almost all parts of the country, except few areas viz., Punjab, parts of Western Rajasthan, Haryana and Jammu & Kashmir. During 1 June – 2 July, country as a whole received 191 mm rainfall, which is 6% more than the normal rainfall of the country for the same period (181 mm). Districts which received rainfall less than 50% of normal during June 1- July 2 were identified and depicted in Figure 1, Table 2 & 3.

2. Progress in kharif sowing (Source: Press Information Bureau and Ministry of Agriculture and Farmers' Welfare, Govt. of India)

The total sown area of major crops as on 30th June, 2017 (as per reports received from states), stands at 222 lakh hectare as compared to 187 lakh hectare, as on this date last year (Table 1).

Table 1: Progress in kharif sowing in India as on 30th June 2017 (Area in Lakh hectare)

Crop	Area sown in 2017	Area sown in 2016
Rice	38.9	39.1
Pulses	18.8	13.0
Coarse Cereals	38.1	35.4
Oilseeds	25.9	28.3
Sugarcane	47.5	44.8
Jute & Mesta	6.9	7.2
Cotton	46.1	19.1
Total	222.3	187.0

3. Agromet Advisories

Assam

The state has so far received 468 mm rainfall, which is 14% deficit. However, flood situation prevails in many parts of the state. Nine Districts of the state have been affected by flood in which Karimganj district being the worst hit. Other flood hit districts are Lakhimpur, Sivasagar, Golaghat, Jorhat, Sonitpur, Hojai and Cachar.

- Community nursery may be raised to meet the requirement of seedlings at flood affected areas.

- Late and staggered planting with the old seedlings (50-60 days old seedlings) of varieties like Profulla and Gitesh (If field is heavily damaged).
- Hoeing in between lines for aeration in root Zone is recommended after flood as post-flood management.

Kerala

The state so far has received 622 mm rainfall, which is 12% deficient compared to the normal (708 mm).

- As heavy rainfall continues, postpone application of fertilizer in paddy.
- Coconut: In hilly tracts, there are chances for the occurrence of 'yellowing of coconut leaves' due to deficiency of secondary and micro nutrients. This may cause infestation of bud rot disease, as weak palms may get infected easily. Apply lime @ 2 kg/palm. Apply 500g of Ayar® (micro nutrient mixture) along with the recommended dose of NPK fertilizers, after two weeks of lime application.
- Pepper: As prophylactic measure against wilt disease, apply 150 gram of Trichoderma enriched neem cake - cow dung mixture in the basins of the vines and incorporate thoroughly in the soil.
- Ginger: Remove weeds and apply urea @ 33 Kg per acre. To control soft rot, drench the soil with 1% Bordeaux mixture/0.3% mancozeb.

Karnataka

South Interior Karnataka has received 118 mm (25% deficit), North Interior Karnataka received 136 mm (21% surplus) and Coastal Karnataka received 917 mm (4% deficit) of rainfall during June 1- July 2.

South Interior Karnataka

- The following crops are suggested for sowing in this month

  Under monocropping the long duration crops:

  - Pigeon pea : TTB-7, BRG-1,2,4&5
  - Castor: DCS-9 (Jyothi), DCH-177&32

  Under double cropping the short duration crops:

  - Ragi : Indaf -8, ML-365 , MR-1,2 and 6,GPU-48&66
  - Maize: Ganga-11, Deccan -103, Vijaya composite, Composite NAC-6004 & 6002, Hybrid-Nityashree (NAH-2049)
  - Groundnut: TMV-2, JL-24, KCG-6 & 2
  - Black gram: Karagao-3, T-9, Rashmi (LBG-625)

- Agro forestry on the bund involving *Melia dubia* (Hebbevu), Silver oak and Causurina is recommended for sustainable income under abnormal extreme rainfall events

Andhra Pradesh

Coastal Andhra Pradesh has received 114 mm (42% surplus) so far, while Rayalaseema region received 89 mm (26% surplus)rainfall so far.

- Utilizing the rainfall received during the week in all districts of Andhra Pradesh except Ananthapuramu, farmers are advised to complete land preparation and take up sowing of kharif crops, whereever land preparation completed.
- Famers are advised to take up sowing of green manure crops like Sunnhemp or Daincha in paddy fields in north coastal, Godavari, Krishna and Guntur districts.
- Continue sowing of rice nurseries in Srikakulam, Vizianagaram, East and West Godavari, Krishna and Guntur districts under assured irrigation and utilizing the canal water released in Godavari Delta.
- Farmers are advised to continue sowing of mesta, sesame and ragi; planting of sugarcane in North Coastal AP, Krishna and Godavari districts with the available soil moisture.
- Utilizing the rainfall received during the week in Chittoor, Kadapa districts of Rayalaseema, farmers can go for sowing of rainfed crops like bajra, sorghum, foxtail millet, redgram, greengram, blackgram, castor and onion.

Maharashtra

Rainfall received in major meteorological sub-divisions of the state are as follows:

Vidarbha – 176 mm (6% deficit); Marathwada – 182 mm (18% surplus); Madhya Maharashtra- 211 mm (32% deficit) and Konkan- 921 mm (18% surplus)

Vidarbha

- With sufficient rainfall received, continue sowing of cotton, soybean, pigeonpea, green gram, black gram and sorghum.
- Feasible risk minimizing intercropping systems include: cotton + greengram/blackgram (1:1), pigeon pea + greengram / blackgram/soybean (2:4) , sorghum + greengram/pigeonpea (3:3) and cotton + sorghum+ pigeonpea+sorghum (3:1:1:1), cotton+soybean+pigeonpea+soybean (3:2:2:2). Also in soybean, after every 6 or 9 rows one row of pigeonpea may be sown.
- As far as possible, follow broad-bed and furrow (BBF) layout for sowing *kharif* crops, particularly soybean, green gram and black gram.
- Continue nursery sowing of *kharif* rice in eastern Vidarbha zone.
- Transplanting of kharif vegetables like chilli, tomato, brinjal and cauliflower may be initiated during this period.

West Bengal

Gangetic West Bengal has received 218 mm rainfall 17% deficit so far, while Sub-Himalayan West Bengal received 429 mm rainfall (-19%).

- Main field should be ready for transplanting of kharif rice in first week of July.
- Due to humid and warm weather, infestation of blight in vegetable crops is likely to increase; spray Mancozeb @ 2 g per liters of water.
- Maintain proper drainage channel for vegetable and jute fields.

Note: The above is a general overview for the states. However, ICAR (CRIDA) has prepared district level contingency plans (covering all farming situations within the district) and placed in the websites of the Department of Agriculture Cooperation & Farmers' Welfare, Government of India (www.agricoop.nic.in) and CRIDA (www.crida.in) for further details.

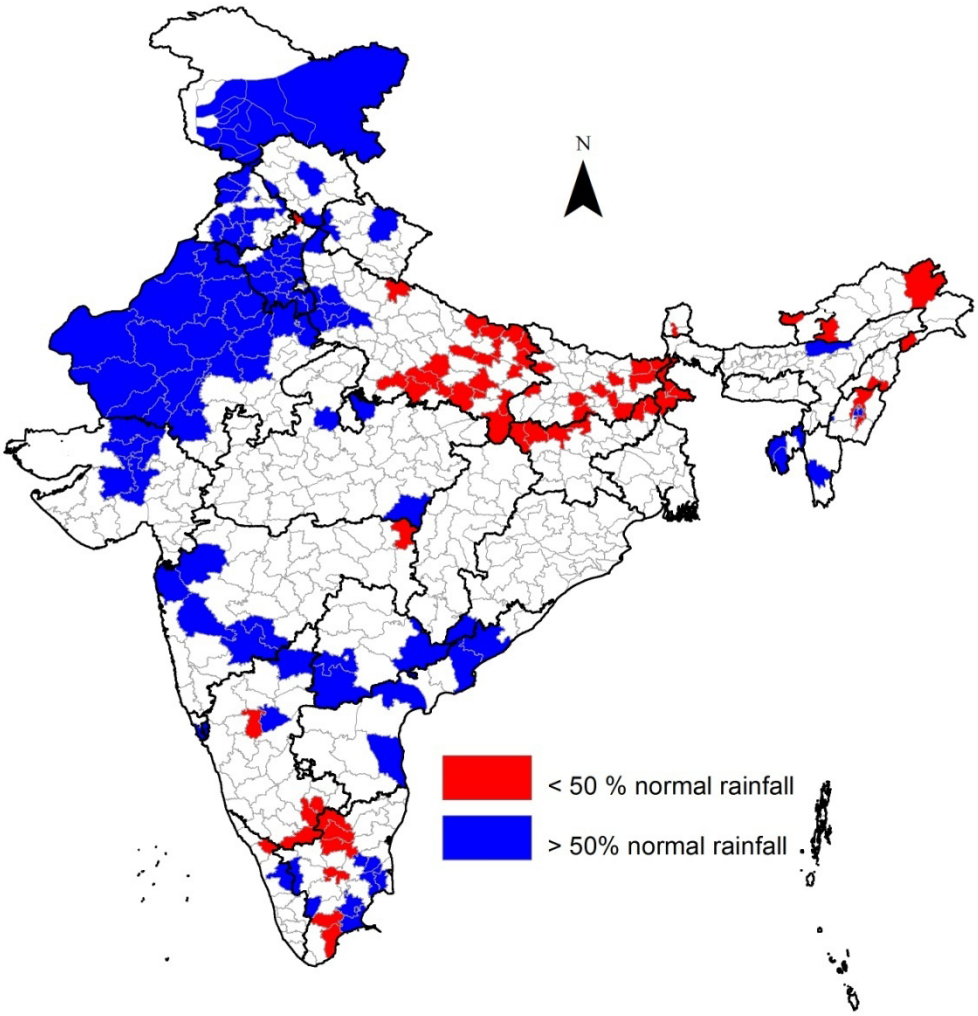

Figure 1: Districts received > 50% deficit and excess rainfall compared to normal during 1 June - 2 July 2017 ***(Prepared by AICRPAM based on the data provided by IMD)***

Table 2: Districts which received more than 50% deficit rainfall compared to normal (1 June to 2 July 2017) (Source: IMD)

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
1	Arunachal Pradesh	DIBANG VALLEY	69	401.3	-83
2		EAST KAMENG	177.3	370	-52
3		TAWANG	84	719.9	-88
4		TIRAP	203.8	688.6	-70
5	NMMT	PHEK	99	333	-70
6		SENAPATI	75	399.9	-81
7		THOUBAL	53	343.1	-85
8		SAIHA	154	419.2	-63
9	SHWB & Sikkim	SOUTH	188.9	498.2	-62
10		DAKSHIN DINAJPUR	150.3	314.8	-52
11		MALDA	79.6	243.4	-67
12		UTTAR_DINAJPUR	147.6	338.9	-56
13	Jharkhand	CHATRA	71	176.2	-60
14		GARHWA	13.9	136.3	-90
15		GOODA	36.8	190.9	-81
16		KODARMA	17.5	187.1	-91
17		PALAMU	55.8	154.6	-64
18		SAHEBGANJ	147.8	293.3	-50
19	Bihar	ARARIYA	144.6	299.8	-52
20		BEGUSARAI	85.9	179.6	-52
21		BUXAR	21.3	128	-83
22		KISHANGANJ	177.7	403.9	-56
23		MUNGER	56.4	190.4	-70
24		NALANDA	71.9	143.6	-50
25		NAWADA	76.3	160.8	-53
26		PURNIA	117.3	273.7	-57
27		SAHARSA	130.2	308	-58
28		SIWAN	71.8	162.6	-56
29	East UP	ALLAHABAD	46.2	93.9	-51
30		AMBEDKARNAGAR	54	117.5	-54
31		BALRAMPUR	55.9	155.5	-64
32		BANDA	41.1	106.8	-62
33		CHANDAULI	32.3	90.5	-64
34		DEORIA	76.5	152	-50
35		FAIZABAD	55.7	135.1	-59
36		FATEHPUR	24.7	95	-74
37		GONDA	62.7	158.7	-61
38		JAUNPUR	34.7	108.4	-68
39		KAUSHAMBI	22.8	83.8	-73
40		KUSHINAGAR	47.9	209.8	-77
41		MAHARAJGANJ	54	215.8	-75
42		MAU	14.5	132.2	-89

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
43		RAIBEARELI	35.5	79.4	-55
44		SANTKABIRNAGAR	58	158	-63
45		SANTRAVIDASNAGAR	5	90.5	-94
46		SIDDHARTHNAGAR	41.5	154.2	-73
47		SONBHADRA	55.3	142.8	-61
48	West UP	HAMIRPUR	31.8	87.8	-64
49		PILHIBHIT	18.5	128.4	-86
50	Har Cha Del	PANCHKULA	51	120.9	-58
51	Chhattisgarh	BALARAMPUR	45	200.4	-78
52		SURAJPUR	64.4	207.2	-69
53	Tamilnadu & Puducherry	DHARAMPURI	16.3	55.3	-71
54		KARUR	9.8	20.3	-52
55		KRISHNAGIRI	19.1	57.7	-67
56		SALEM	24.6	68.9	-64
57		TUTICORIN	1.2	7.4	-83
58		VIRUDHUNAGAR	10	22.7	-56
59	NI Karnataka	GADAG	33.7	88.8	-62
60		BANGALORE RURAL	27.6	73.9	-63
61	SI Karnataka	BANGLORE URBAN	33.3	76.7	-57
62		CHAMARAJANAGAR	14.5	66.2	-78
63		RAMNAGAR	32.5	75.4	-57
64	Kerala	WAYANAD	363.4	797.5	-54

Table 3: Districts which received more than 50% surplus rainfall compared to normal (1 June to 2 July 2017) (Source: IMD)

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
1	Arunachal Pradesh	LOWER DIBANG VALLEY	955	401.3	138
2	Assam & Meghalaya	SONITPUR	634.6	392.3	62
3	NMMT	DIMAPUR	371.5	217.8	71
4		IMPHAL WEST	567.6	350.6	62
5		LUNGLEI	1047	491.3	113
6		SERCHHIP	727.3	435	67
7		NORTH TRIPURA	796.3	506.7	57
8		WEST TRIPURA	744.8	452	65
9	Odisha	MALKANGIRI	409.8	228.1	80
10	West UP	ALIGARH	208.5	53.1	293
11		BAGHPAT	188.6	48	293
12		BULANDSAHAR	128.6	63.6	102
13		ETAH	165.4	61.5	169
14		GAUTAMBUDHNAGAR	87	46.4	88
15		KANSHIRAMNAGAR	126	61.5	105
16		MAHAMAYANAGAR	123.5	55	125

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
17		MATHURA	124.8	51.2	144
18		SHARANPUR	187.7	112.3	67
19	Uttarakhand	CHAMOLI	219	123.2	78
20		DEHRADUN	397.7	220.5	80
21	Har Cha Del	BHIWANI	114.3	37.6	204
22		FARIDABAD	194.3	46.9	314
23		GURGAON	133.3	42.2	216
24		HISAR	142.1	40.3	253
25		JHAJJAR	269.4	42.7	531
26		JIND	155.7	53.8	189
27		KAITHAL	112.6	45.7	146
28		KARNAL	194.6	69.3	181
29		KURUKSHETRA	130.2	72.6	79
30		MAHENDRAGARH	165.3	49.7	232
31		MEWAT	167.7	49.3	240
32		PALWAL	98.5	34.8	183
33		PANIPAT	117.8	60.4	95
34		REWARI	182.1	38.7	370
35		ROHTAK	139.1	57.3	143
36		SIRSA	80.9	29.7	172
37		SONIPAT	153.2	53.7	185
38		NEW DELHI	232.3	67.1	246
39		NORTH DELHI	182.9	67.1	173
40		NORTH WEST DELHI	115.5	67.1	72
41		SOUTH DELHI	126.9	67.1	89
42		SOUTH WEST DELHI	130.5	67.1	94
43	Punjab	AMRITSAR	139	53.6	159
44		BARNALA	181	40.6	346
45		BATHINDA	141.8	42.6	233
46		FARIDKOT	132.2	45.6	190
47		GURDASPUR	141.5	72.9	94
48		KAPURTHALA	187.8	46.4	305
49		LUDHIANA	107	59.8	79
50		MANSA	124.7	36.7	240
51		MOGA	166.2	38.5	332
52		MUKTSAR	179.7	39.8	351
53		RUPNAGAR	140.6	80.5	75
54		TARN TARAN	67	28.6	134
55	Himachal Pradesh	KULLU	154.8	90	72
56		SIRMAUR	277.5	166.2	67
57		UNA	142.5	87.5	63
58	Jammu & Kashmir	ANANTNAG	146.5	71.3	105
59		BADGAM	73.9	38.1	94

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
60		BANDIPORE	93	32.2	189
61		BARAMULA	159.2	64.3	148
62		DODA	203.2	78.6	159
63		GANDERWAL	108.2	40	171
64		JAMMU	196	75.8	159
65		KARGIL	24	5.5	336
66		KATHUA	147.4	95.2	55
67		KULGAM	145	43.8	231
68		LEH AND LADAKH	19.6	5.4	262
69		PULWAMA	100.1	27.6	263
70		RAJOURI	130.4	54.4	140
71		RAMBAN	187.6	66.5	182
72		RIASI	432.6	103.2	319
73		SHOPIAN	123	45.1	173
74		SRINAGAR	97.6	40	144
75		UDHAMPUR	198.8	111.2	79
76	West Rajasthan	BARMER	92.1	31.4	193
77		BIKANER	90.9	33.5	171
78		CHURU	100.8	43.5	132
79		GANGANAGAR	46.5	30	55
80		HANUMANGARH	94.9	39.7	139
81		JAISELMER	45.9	22	109
82		JALOR	125.1	41.2	204
83		JODHPUR	120.2	31.1	286
84		NAGAUR	146.4	46.8	213
85		PALI	148	51.4	188
86	East Rajasthan	AJMER	134.3	50	169
87		ALWAR	82.7	51.4	61
88		BHARATPUR	80.3	48.5	66
89		JAIPUR	94.5	59.7	58
90		JHUNJHUNUN	122	59.7	104
91		RAJSMAND	130.1	77.3	68
92		SIKAR	117.4	55.4	112
93		SIROHI	153.5	81.4	89
94		TONK	109.6	63.4	73
95		UDAIPUR	127.5	82.3	55
96	West MP	ASHOKNAGAR	183.5	89.7	105
97	East MP	TIKAMGARH	150	99.8	50
98	Gujarat	DAMAN	787	408.1	93
99		BANASKANTHA	181.1	70.8	156
100		MAHESANA	174.1	85.9	103
101		PATAN	257.9	68.7	275
102	Sourashtra & Kutch	DADAR & NAGAR	852.8	408.1	109

Sl No	Met Sub Division	District	Actual (mm)	Normal(mm)	Dep (%)
		HAVELI			
103		DEVBHOOMI DWARKA	159.2	101.3	57
104		MORBI	278.8	104.1	168
105		SURENDRANAGAR	191.8	106.4	80
106		DIU	325.1	189.9	71
107	Konkan & Goa	PALGHAR	913	476.6	92
108		THANE	829.2	526.5	57
109	Madhya Maharashtra	AHMADNAGAR	181.8	111.9	62
110		NASIK	275.5	170.4	62
111		PUNE	306.9	176.5	74
112		SOLAPUR	218.8	108.2	102
113	Marathwada	OSMANABAD	252.6	141.8	78
114	Chhattisgarh	BALOD	354.7	203.8	74
115		KONDAGAON	408.4	210.4	94
116		SUKMA	525.7	197.8	166
117	Coastal AP	EAST GODAVARI	273.6	146.7	87
118		GUNTUR	169.1	97.7	73
119		NELLORE	91.3	59.1	54
120		VISHAKHAPATNAM	226.2	144.5	57
121	Telangana	KHAMMAM	277.8	162.4	71
122		MAHABUBNAGAR	156.9	100.9	55
123		RANGA REDDY	180.9	120	51
124	Tamilnadu & Puducherry	ARIYALUR	98.9	53.3	85
125		COIMBATORE	76.5	35.7	114
126		PERAMBALUR	68.8	33.9	103
127		RAMANATHAPURAM	32.6	17.7	84
128		SIVAGANGA	130.8	44.4	195
129		TENI	55.8	23.6	136
130		THANJAVUR	70.8	41	73
131		THIRUVARUR	61	35.6	71
132	NI Karnataka	GULBARGA	232.4	121	92
133		KOPPAL	134.6	74.4	81
134	Lakshadweep	LAKSHADWEEP	549.1	347.7	58