

Sl. No.	Date	Origin Time (IST) Hh:mm:sec	Latitude (deg. N)	Longitude	Dept h (km)	Magnitude	Region
1.	05-12-2017	20:28:37.7	22.73	86.05	20	3.4	Seraikela-Kharsawan district.
2.	20-04-2019	06:20:10.0	22.80	86.10	18	4.4	Saraikela-Kharsawan district.

(c) National Centre for Seismology through its country wide Seismological Network, monitors the earthquake activity in and around the country on 24x7 basis and disseminates the earthquake information to all relevant State and Central government's agencies to help initiating rescue and emergency operations in the event of large earthquake. Also, detailed earthquake hazard assessment in the form of Microzonation maps for Delhi, Kolkata, Sikkim, Guwahati, Bengaluru, Jabalpur etc., has been taken up. These maps are useful in designing earthquake resistant structure, land use and urban planning. Various outreach activities for creating awareness among public about the earthquakes have also been taken up from time to time. Also, National Disaster Management Authority (NDMA) and State Government have taken up specific programmes to create awareness among the general-public through mock drill etc.

Development of weather prediction infrastructure

1312. DR. VIKAS MAHATME: Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether Government is aware of the extensive damage of crops due to heavy, unpredictable rains in States like Karnataka and Madhya Pradesh;

(b) whether any studies have been conducted to assess the damage of crops by these unseasonal rains, if so, the details thereof;

(c) whether the Ministry has any plans to improve the weather prediction infrastructure in order to predict such unseasonal weather changes more accurately; and

(d) whether Government has any plans to improve information dissemination and communication to farmers in order to allow them to prepare for such circumstances, if so, the details thereof?

THE MINISTER OF EARTH SCIENCES (DR. HARSH VARDHAN): (a) As per the information available with Ministry of Home Affairs (MHA), damage of crops due to floods/hydro-meteorological hazards/landslides during the southwest monsoon and post monsoon seasons (provisional 1/6/2019 to 14/11/2019) in the State of Madhya Pradesh is 6.04 lakh hectares and in Karnataka it is 9.35 lakh hectares.

(b) The Ministry of Home Affairs deposes an Inter-Ministerial Central Team (IMCT) to the States on receipt of memorandum from the States for an on-the-spot assessment of the damage and requirement of assistance for relief operations in the wake of natural calamities as per the existing terms and norms of SDRF/NDRF. The Central team is required to give its recommendations/report. The rainfall statistics (State/UT wise) for the country along with rainfall statistics (district wise) for Madhya Pradesh and Karnataka for Monsoon and Post-monsoon seasons, 2019 is given in Statement (See below).

(c) Yes Sir. India Meteorological Department (IMD) runs an operational Agrometeorological Advisory Service (AAS) viz., Gramin Krishi Mausam Sewa (GKMS) scheme for the benefit of farming community in the country. Under the scheme, medium range weather forecast at district level is generated and based on the forecast, Agromet Advisories are prepared and communicated by the 130 Agromet Field Units (AMFUs) located at State Agricultural Universities, institutes of ICAR and IITs etc., to the farmers on every Tuesday and Friday to take decision on day-to-day agricultural operations. AAS rendered by IMD is a step towards weather-based crop and livestock management strategies and operations dedicated to enhancing crop production and food security besides reducing crop damage and loss due to unusual weather.

IMD is planning to implement block level Agromet Advisory Services shortly in collaboration with Indian Council of Agriculture Research (ICAR) in the country. District Agromet Units (DAMUs) are being established in Krishi Vikas Kendras (KVKs) under ICAR network. Implementation of block level AAS would address the micro-level variation in weather and climate and hence more numbers of farmers will be benefitted.

(d) Agromet Advisories are communicated to the farmers through multichannel dissemination systems like print and electronic media, Doordarshan, radio, internet etc. as well as by SMS using mobile phones through Kisan Portal launched by Ministry

of Agriculture and Farmers' Welfare and through private companies under Public Private Partnership (PPP) mode. At present, 42 million farmers in the country receive the Agromet Advisories through SMS directly. Krishi Vigyan Kendras(KVKs) of Indian Council of Agricultural Research(ICAR) have also given link to the respective district level advisory in their web portal. A mobile App viz., 'Meghdoot' has been launched by Ministry of Earth Sciences, Government of India recently to help the farmers to get the weather information and related Agromet Advisories specific to their districts.

Statement

(A) Details of State-wise rainfall (MM) distribution for Monsoon 2019

Period 01.06.2019 to 30.09.2019

Sl. No.	State	Periods 01.06.2019 to 30.09.2019			
		Actual	Normal	% Departure	Category
1	2	3	4	5	6
East & North East India					
1.	Arunachal Pradesh	1538.2	1726.6	-11%	N
2.	Assam	1334.3	1486.2	-10%	N
3.	Meghalaya	2431.8	2855.8	-15%	N
4.	Nagaland	991.8	1143.4	-13%	N
5.	Manipur	620.8	1404.9	-56%	D
6.	Mizoram	1506.9	1655.9	-9%	N
7.	Tripura	1382.9	1457.8	-5%	N
8.	Sikkim	1954.0	1606.8	22%	E
9.	West Bengal	1167.6	1405.0	-17%	N
10.	Jharkhand	865.6	1054.7	-18%	N
11.	Bihar	1050.4	1017.2	3%	N
North West India					
1.	Uttar Pradesh	718.0	790.2	-9%	N
2.	Uttarakhand	960.4	1176.9	-18%	N
3.	Haryana	255.2	438.6	-42%	D
4.	Chandigarh (UT)	716.4	846.5	-15%	N

1	2	3	4	5	6
5.	Delhi	378.1	585.8	-35%	D
6.	Punjab	444.3	467.3	-5%	N
7.	Himachal Pradesh	684.2	763.5	-10%	N
8.	Jammu and Kashmir	445.8	567.5	-21%	D
9.	Rajasthan	582.6	415.0	40%	E
Central India					
1.	Odisha	1232.5	1155.3	7%	N
2.	Madhya Pradesh	1351.1	940.6	44%	E
3.	Gujarat	993.3	692.4	43%	E
4.	Dadra and Nagar Haveli (UT)	3622.8	2161.9	68%	IE
5.	Daman and Diu (UT)	2161.6	1611.2	34%	E
6.	Goa	3917.6	2974.7	32%	E
7.	Maharashtra	1328.5	1004.2	32%	E
8.	Chhattisgarh	1255.6	1142.1	10%	N
South Peninsula					
1.	Andaman and Nicobar Islands (UT)	2331.3	1653.8	41%	E
2.	Andhra Pradesh	564.7	514.4	10%	N
3.	Telangana	805.0	759.6	6%	N
4.	Tamil Nadu	401.6	341.9	17%	N
5.	Puducherry (UT)	553.2	425.6	30%	E
6.	Karnataka	1033.3	840.7	23%	E
7.	Kerala	2310.0	2049.3	13%	N
8.	Lakshadweep (UT)	1231.7	1013.1	22%	E
	Country as a whole	968.3	880.6	+10%	

Categorywise Distribution of No. of States

Category	Period 01.06.2019 To 30.09.2019 No. of States
LE (Large Excess) (+60% or more)	1
E (Excess) (+20% to +59%)	11
N (Normal) (+19% to -19%)	20
D (Deficient) (-20% to -59%)	4
LD (Large Deficient) (-60% to -99%)	0
NR (No Rain)-100%)	0

(B) Details of State-wise Rainfall (MM) Distribution for Post monsoon 2019

Sl. No.	State	Period: 01.10.2019 to 31.12.2019			
		Actual	Normal	% Departure	Category
1	2	3	4	5	6
East & North East India					
1.	Arunachal Pradesh	145.4	267.4	-46%	D
2.	Assam	161.1	161.5	0%	N
3.	Meghalaya	365.6	328.0	11%	N
4.	Nagaland	213.5	160.8	33%	E
5.	Manipur	151.2	226.4	-33%	D
6.	Mizoram	166.6	264.1	-37%	D
7.	Tripura	239.7	221.8	8%	N
8.	Sikkim	110.0	216.3	-49%	D
9.	West Bengal	215.5	159.1	35%	E
10.	Jharkhand	141.3	90.3	56%	E
11.	Bihar	42.2	73.0	-42%	D
North West India					
1.	Uttar Pradesh	48.6	41.5	17%	N
2.	Uttarakhand	114.6	60.5	89%	LE

1	2	3	4	5	6
3.	Haryana	27.9	20.1	39%	E
4.	Chandigarh (Ut)	65.5	55.5	18%	N
5.	Delhi	41.6	22.7	83%	IE
6.	Punjab	62.4	26.3	137%	IE
7.	Himachal Pradesh	121.4	91.6	33%	E
8..	Jammu and Kashmir	253.3	134.4	88%	IE
9.	Rajasthan	42.2	17.9	136%	IE
Central India					
1.	Odisha	188.6	131.3	44%	E
2.	Madhya Pradesh	64.8	53.7	21%	E
3.	Gujarat	72.8	28.5	156%	IE
4	Dadra and Nagar Haveli (UT)	128.2	54.8	134%	IE
5.	Daman and Diu (UT)	104.4	50.0	109%	IE
6.	Goa	568.5	202.9	180%	IE
7.	Maharashtra	184.9	98.5	88%	IE
8.	Chhattisgarh	106.2	76.7	39%	E
South Peninsula					
1.	Andaman and Nicobar Islands (UT)	293.0	675.8	-57%	D
2.	Andhra Pradesh	269.0	290.7	-7%	N
3.	Telangana	172.6	123.7	40%	E
4.	Tamil Nadu	452.0	445.7	1%	N
5.	Puducherry (UT)	780.0	895.6	-13%	N
6..	Karnataka	308.4	181.7	70%	IE
7.	Kerala	625.0	491.6	27%	E
8.	Lakshadweep (UT)	874.3	321.8	172%	IE
Country as a whole		160.0	123.8	+29%	

Categorywise Distribution of No. of States

Category	Period: 01.10.2019 To 31.12.2019 No. of States
LE (Large Excess) (+60% or more)	12
E (Excess) (+20% to +59%)	10
N (Normal) (+19% to -19%)	8
D (Deficient) (-20% to -59%)	6
LD (Large Deficient) (-60% to -99%)	0
NR (No Rain)-100%)	0

(C) District-wise RF statistics of Madhya Pradesh & Karnataka for Monsoon 2019

District	Met. State/ UT/Subdivision/ District (Name)	Period 01.06.2019 to 30.09.2019			
Sl. No.		Actual (MM)	Normal (MM)	%Departure	Category
1	2	3	4	5	6
	Madhya Pradesh	1351.1	940.6	44%	E
	East Madhya Pradesh	1309.7	1048.4	25%	E
1	Anuppur	1342.3	1099.6	22%	E
2	Balaghat	1284.1	1323.0	-3%	N
3	Chhatarpur	1205.1	947.5	27%	E
4	Chhindwara	1275.3	1001.3	27%	E
5	Damoh	1489.0	1046.3	42%	E
6	Dindori	1453.4	1182.0	23%	E
7	Jabalpur	1587.0	1111.2	43%	E
8	Katni	1283.0	1011.9	27%	E
9	Mandla	1747.2	1210.7	44%	E
10	Narsinghpur	1719.4	1046.6	64%	LE
11	Panna	1115.5	1087.4	3%	N

1	2	3	4	5	6
12	Rewa	1199.2	950.7	26%	E
13	Sagar	1519.9	1080.2	41%	E
14	Satna	903.0	949.2	-5%	N
15	Seoni	1474.7	1027.0	44%	E
16	Shahdol	869.0	989.5	-12%	N
17	Sidhi	916.0	987.5	-7%	N
18	Singrauli	1211.3	837.0	45%	E
19	Tikamgarh	1053.0	889.2	18%	N
20	Umaria	1334.2	1075.0	24%	E
	West Madhya Pradesh	1383.0	857.7	61%	LE
1	Agar-Malwa	1855.0	812.1	128%	LE
2	Alirajpur	1394.5	784.3	78%	LE
3	Ashoknagar	1366.5	852.1	60%	LE
4	Barwani	1138.2	658.7	73%	LE
5	Betul	1250.9	957.8	31%	E
6	Bhind	734.2	657.7	12%	N
7	Bhopal	1756.5	962.4	83%	LE
8	Burhanpur	1206.3	741.4	63%	LE
9	Datia	719.9	755.8	-5%	N
10	Dewas	1465.2	904.4	62%	LE
11	Dhar	1217.2	835.9	46%	E
12	Guna	1557.2	888.1	75%	LE
13	Gwalior	823.0	747.9	10%	N
14	Harda	1591.5	1042.1	53%	E
15	Hoshangabad	1934.1	1308.7	48%	E
16	Indore	1434.6	827.0	73%	LE
17	Jhabua	1424.7	774.7	84%	LE
18	Khandwa	1311.3	790.9	66%	LE

1	2	3	4	5	6
19	Khargone	1016.5	714.4	42%	E
20	Mandsaur	2018.6	786.5	157%	IE
21	Morena	731.1	651.5	12%	N
22	Neemuch	1711.7	742.3	131%	IE
23	Raisen	1863.2	1074.9	73%	IE
24	Rajgarh	1631.0	833.2	96%	IE
25	Ratlam	1563.5	867.5	80%	IE
26	Sehore	1774.4	1043.3	70%	IE
27	Shajapur	1712.9	886.7	93%	IE
28	Sheopur	849.2	670.7	27%	E
29	Shivpuri	895.0	779.8	15%	N
30	Ujjain	1477.3	844.3	75%	IE
31	Vidisha	1603.8	982.2	63%	IE
	Karnataka	1033.3	840.7	23%	E
	Coastal Karnataka	3796.5	3095.1	23%	E
1	Dakshina Kannada	3515.5	3354.3	5%	N
2	Udupi	4536.3	3742.3	21%	E
3	Uttara Kannada	3670.1	2753.7	33%	E
	N.I. Karnataka	612.3	497.1	23%	E
1	Bagalkote	441.5	353.8	25%	E
2	Belagavi	1088.4	572.1	90%	IE
3	Bidar	643.3	680.5	-5%	N
4	Dharwad	746.5	524.1	42%	E
5	Gadag	444.7	367.4	21%	E
6	Haveri	772.9	507.1	52%	E
7	Kalaburgi	594.2	588.0	1%	N
8	Koppal	424.2	388.2	9%	N
9	Raichur	441.7	464.1	-5%	N
10	Vijayapura	370.0	416.3	-11%	N

1	2	3	4	5	6
11	Yadgir	473.8	560.8	-16%	N
	S.I. Karnataka	839.2	681.8	23%	E
1	Ballari	439.0	388.6	13%	N
2	Bengaluru Rural	433.0	469.6	%8%	N
3	Bengaluru Urban	453.5	476.5	-5%	N
4	Chamarajnagar	383.1	330.8	16%	N
5	Chikaballapura	386.7	422.0	-8%	N
6	Chikkamagaluru	2091.5	1591.3	31%	E
7	Chitradurga	371.0	276.9	34%	E
8	Davangere	485.4	388.5	25%	E
9	Hassan	825.8	673.9	23%	E
10	Kodagu	2628.9	2257.4	16%	N
11	Kolar	317.2	393.4	-19%	N
12	Mandya	418.9	305.1	37%	E
13	Mysuru	612.2	366.7	67%	LE
14	Ramanagara	436.9	465.9	-6%	N
15	Shivamogga	2124.3	1600.3	33%	E
16	Tumakuru	428.9	372.7	15%	N

(D) District-wise RF statistics of Madhya Pradesh & Karnataka
for Post-monsoon 2019

District	Met. State/ UT/Subdivision/ District (Name)	Period 01.10.2019 to 31.12.2019			
Sl. No.		Actual (MM)	Normal (MM)	% Departure	Category
1	2	3	4	5	6
	Madhya Pradesh	64.8	53.7	21%	E
	East Madhya Pradesh	59.9	57.4	4%	N
1	Anuppur	29.2	72.7	-60%	LD

1	2	3	4	5	6
2	Balaghat	29.2	80.4	-64%	LD
3	Chhatarpur	62.3	50.4	24%	E
4	Chhindwara	84.9	77.0	10%	N
5	Damoh	35.0	45.3	-23%	D
6	Dindori	114.7	59.5	93%	IE
7	Jabalpur	39.4	50.8	-23%	D
8	Katni	66.4	34.6	92%	IE
9	Mandla	67.0	59.0	14%	N
10	Narsinghpur	14.4	43.9	-67%	LD
11	Panna	81.6	47.1	73%	IE
12	Rewa	71.0	50.5	41%	E
13	Sagar	19.5	54.7	-64%	LD
14	Satna	24.1	47.5	-49%	D
15	Seoni	90.9	76.7	18%	N
16	Shahdol	55.0	45.5	21%	E
17	Sidhi	96.4	49.8	94%	IE
18	Singrauli	91.0	56.8	60%	IE
19	Tikamgarh	108.7	43.5	150%	IE
20	Umaria	31.3	70.4	-56%	D
	West Madhya Pradesh	68.5	50.9	35%	E
1	Agar-Malwa	62.2	44.5	40%	E
2	Alirajpur	123.5	36.2	241%	IE
3	Ashoknagar	63.5	39.8	60%	IE
4	Barwani	62.4	48.3	29%	E
5	Betul	127.3	70.4	81%	IE
6	Bhind	19.8	43.9	-55%	D
7	Bhopal	154.8	57.5	169%	IE

1	2	3	4	5	6
8	Burhanpur	127.2	72.2	76%	IE
9	Datia	22.7	42.5	-47%	D
10	Dewas	39.7	51.5	-23%	D
11	Dhar	68.0	53.1	28%	E
12	Guna	35.4	48.8	-27%	D
13	Gwalior	12.0	47.5	-75%	LD
14	Harda	101.9	64.5	58%	E
15	Hoshangabad	88.5	62.3	42%	E
16	Indore	63.6	56.1	13%	N
17	Jhabua	120.4	47.6	153%	IE
18	Khandwa	90.8	54.9	65%	IE
19	Khargone	47.3	49.4	-4%	N
20	Mandsaur	83.5	46.5	80%	IE
21	Morena	38.9	30.4	28%	E
22	Neemuch	70.0	35.7	96%	IE
23	Raisen	61.0	55.3	10%	N
24	Rajgarh	85.6	53.9	59%	E
25	Ratlam	80.7	55.8	45%	E
26	Sehore	55.2	57.9	-5%	N
27	Shajapur	88.1	51.6	71%	IE
28	Sheopur	25.0	33.4	-25%	D
29	Shivpuri	44.4	43.6	2%	N
30	Ujjain	90.1	52.0	73%	IE
31	Vidisha	47.0	49.4	-5%	N
	Karnataka	308.4	181.7	70%	IE
	Coastal Karnataka	582.3	256.8	127%	IE
1	Dakshina Kannada	619.4	369.5	68%	IE

1	2	3	4	5	6
2	Udupi	688.2	272.8	152%	IE
3	Uttara Kannada	527.9	197.7	167%	IE
	N. I. Karnataka	245.1	138.1	77%	IE
1	Bagalkote	292.9	140.1	109%	IE
2	Belagavi	346.0	132.5	161%	IE
3	Bidar	217.6	118.8	83%	IE
4	Dharwad	300.7	150.6	100%	IE
5	Gadag	279.7	145.9	92%	IE
6	Haveri	441.6	163.1	171%	IE
7	Kalaburgi	173.9	125.2	39%	E
8	Koppal	251.2	141.6	77%	IE
9	Raichur	98.9	141.3	-30%	D
10	Vijayapura	201.4	144.3	40%	E
11	Yadgir	77.9	134.6	-42%	D
	S. I. Karnataka	307.7	204.1	51%	E
1	Ballari	241.2	160.1	51%	E
2	Bengaluru Rural	262.0	230.3	14%	N
3	Bengaluru Urban	300.8	213.8	41%	E
4	Chamarajanagar	249.3	260.2	-4%	N
5	Chikaballapura	223.9	210.0	7%	N
6	Chikkamagaluru	464.4	224.7	107%	IE
7	Chitradurga	295.9	153.6	93%	IE
8	Davangere	354.4	163.0	117%	IE
9	Hassan	305.9	214.0	43%	E
10	Kodagu	405.2	306.3	32%	E
11	Kolar	214.1	216.9	-1%	N
12	Mandya	349.5	214.4	63%	IE

1	2	3	4	5	6
13	Mysuru	255.3	209.9	22%	E
14	Ramanagara	284.3	232.7	22%	E
15	Shivamogga	387.5	190.5	103%	IE
16	Tumakuru	267.7	190.4	41%	E

Category

LE (Large Excess) (+60% or more)

E (Excess) (+20% to +59%)

N (Normal) (+19% To -19%)

D (Deficient) (-20% To -59%)

LD (Large Deficient) (-60% To -99%)

NR (No Rain)-100%

Waiving off MDR

1313. SHRI NARAYAN LAL PANCHARIYA: Will the Minister of FINANCE be pleased to state:

(a) whether Government is considering waiving off Merchant Discount Rate (MDR) charges on digital transactions;

(b) if so, the details thereof and if not, the reasons therefor;

(c) whether the Rajasthan Government has made any request in this regard;

(d) if so, the details thereof;

(e) whether Government has taken any action on the request to grant reprieve from MDR charges; and

(f) if so, the details thereof and if not, the reasons therefor?

THE MINISTER OF STATE IN THE MINISTRY OF FINANCE (SHRI ANURAG SINGH THAKUR): (a) and (b) Through Finance (No.2) Act, 2019 a new section 10A was inserted in the Payment and Settlement Systems Act, 2007, by which it was provided that no bank or system provider shall impose, whether directly or indirectly, any charge upon a person making or receiving a payment by using the electronic modes of payment prescribed under section 269SU of the Income-tax Act, 1961.