

Southwest Monsoon 2023: Preliminary Report

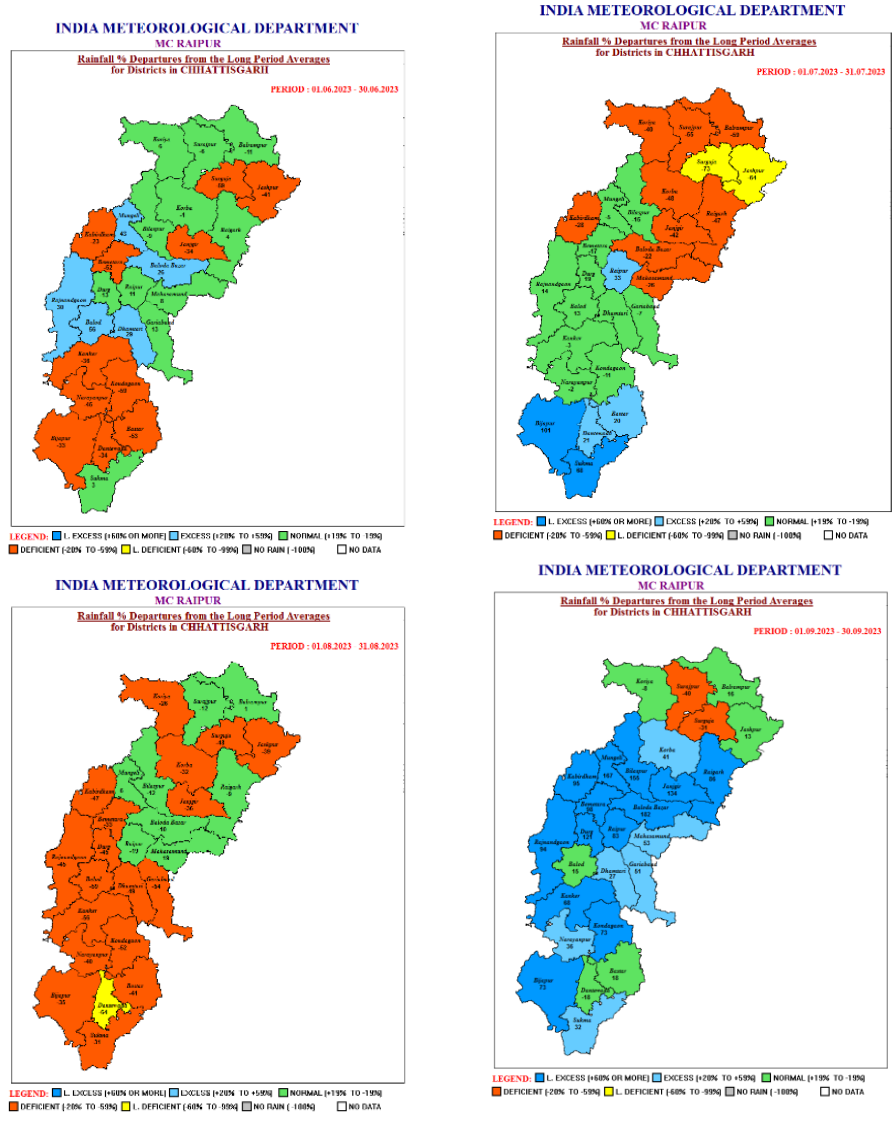
Heavy rainfall events and associated synoptic features over Chhattisgarh

Onset and Withdrawal:

The monsoon has delayed onset over south and central Chhattisgarh by 23rd Jun2023 and covered entire state by 24th June 2023. The Withdrawal of Southwest monsoon over entire Chhattisgarh was on 15th Oct2023

Rainfall Analysis:

Due to the delayed onset of monsoon over Chhattisgarh, June month witnessed deficient rainfall over south Chhattisgarh. July there was deficient to large deficient over north Chhattisgarh. In August most districts received deficient rainfall. September witnessed excess rainfall in most of the districts.





DISTRICT WISE SEASONAL RAINFALL 01.06.2023 to 30.09.2023

DISTRICT NAME	ACTUAL(mm)	NORMAL(mm)	DEP (%)	STATUS
BALOD	993	1013.5	-2	NORMAL
BALODA BAZAR	1199	946.1	27	EXCESS
BALRAMPUR	989.5	1185.8	-17	NORMAL
BASTAR	1005.6	1171	-14	NORMAL
BEMETARA	936.4	1008.9	-7	NORMAL
BIJAPUR	1701.9	1323.4	29	EXCESS
BILASPUR	1278.8	1090.8	17	NORMAL
DANTEWADA	1009.6	1290.2	-22	DEFICIENT
DHANTARI	988.4	1031.3	-4	NORMAL
DURG	1097	984	11	NORMAL
CARIABAND	995.1	1079.1	-8	NORMAL
JANJIR	1104	1174.3	-6	NORMAL
JASHPUR	871.7	1405.7	-38	DEFICIENT
KABIRDHAM	779.5	858.5	-9	NORMAL
KANKER	1093.8	1291.4	-15	NORMAL
KONDAGAON	973.3	1174.1	-17	NORMAL
KORBA	1049.4	1310.5	-20	DEFICIENT
KORIYA	886.2	1132.1	-22	DEFICIENT
MAHASAMUND	1014.1	1048.3	-3	NORMAL
MUNGELI	1340.7	967.7	39	EXCESS
NARAYANPUR	1019	1202.4	-15	NORMAL
RAIGARH	1184.6	1202.7	-2	NORMAL
RAIPUR	1296.2	1051.5	23	EXCESS
RAJNANDGAON	1110.3	976.8	14	NORMAL
SUKMA	1349.9	1124	20	EXCESS
SURAJPUR	770.2	1116.8	-31	DEFICIENT
SURGUJA	545.6	1223.2	-55	DEFICIENT
SUBDIVISION RAINFALL	1061.3	1142.1	-7	NORMAL

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

S.No	STATUS	NO.OF.DISTRICT
1.	LARGE EXCESS	00
2.	EXCESS	05
3.	NORMAL	16
4.	DEFICIENT	06
5.	LARGE DEFICIENT	00
6.	NO RAIN	00

Over all the south west monsoon 2023 rainfall over Chhattisgarh is normal. The normal rainfall over entire Chhattisgarh is 1142 mm against which the realized rainfall for the south west monsoon 2023 is 1061mm which ended with -7% departure.

Major Synoptic Systems causing heavy rain over Chhattisgarh during monsoon 2023:

1. A cyclonic circulation formed over Bay of Bengal (BoB) on 22nd June and under its influence a low pressure formed over North West BoB extending upto 7.6km above mean sea level above mean sea level. This moved northwest towards Jharkhand and North Chhattisgarh until 27th June and moved towards Madhya Pradesh.

2. On 16th July a low pressure system extending upto 7.6km above mean sea level above mean sea level formed over north Odisha and Jharkhand and moved west northwestwards across Jharkhand giving rise to wide spread rainfall all over Chhattisgarh and significant heavy to very heavy rainfall over the state.
3. A low pressure system formed over North Andhra coast on 19th July and moved west northwestwards towards south Odisha and south Chhattisgarh extending upto 4.5 km. The system persisted over south Chhattisgarh until 22nd July and later moved towards vidarbha. This system resulted in very heavy to extremely heavy rainfall events over south Chhattisgarh.
4. A well-marked low pressure area which formed as a cyclonic circulation over North Andhra coast on 24th Jul persisted over south Odisha coast until 27th July resulting in very heavy rainfall over entire Chhattisgarh.
5. A deep depression formed as a low over north Odisha on 29th July, moved towards Jharkhand and adjoining north Chhattisgarh by 03rd Aug, resulting in widespread rainfall activity over entire Chhattisgarh.
6. A low pressure system over south Odisha and south Chhattisgarh on 05th Sep caused heavy to very rainfall activity over south Chhattisgarh.
7. A very spell of rainfall persisted from 11th to 16th September due to a well-marked low pressure system which over from Odisha to Chhattisgarh with tilt southwards and from there on towards Madhya Pradesh. A trough along the centre of low-pressure through Chhattisgarh added to the synoptic system. Central Chhattisgarh mainly received wide spread activity along heavy rainfall spells.
8. The last spell of the monsoon was during a well-marked low extending upto 7.6km above mean sea level above mean sea level over September month end around 29th where it formed as low over east central bay and moved towards North Odisha and moved as a well-marked low towards North Chhattisgarh with southward tilt, resulting in heavy rainfall spell from 28th Sep to 03rd Oct.

Heavy rainfall days:

No of Days	Heavy	V. Heavy	Ext. Heavy
Jun	9	4	1
Jul	20	8	1
Aug	10	3	1
Sep	15	6	0
Total	54	21	3

Damage reports:

1. Damage like submerging of town roads and roads connecting highway due to flooding are reported over Bijapur district from 26th to 30th Jul 2023.
2. 17 lightning deaths, 23 injured and 15 livestock perished according to the reports received from various sources.