INDIA METEOROLOGICAL DEPARTMENT

METEOROLOGICAL CENTRE, JAIPUR

RAJASTHAN
MONSOON REPORT-2025

Prepared by:

Meteorological Centre Jaipur

RAJASTHAN MONSOON REPORT-2025

HIGHLIGHTS

- **Southwest monsoon advanced over Kerala on 24th May and over Rajasthan on 18th June at scheduled normal date. Thereafter, monsoon covered the entire state by 29th June against normal date of 8th July (about 9 days ahead of normal date).**

- **The rainfall recorded during monsoon season (June-September, 2025) over the Rajasthan state as a whole was 715.2 mm against its normal of 435.6 mm which is 164% of its long period average (LPA) based on data of 1971-2020. The rainfall received over the state was Excess (Departure +64% of long period average). The previous record of highest ever rainfall 844.2 mm in 1917 and 682.2 mm in 1908 during the period of 1901-2025 in Rajasthan.**

- **Meteorological subdivision wise 161% of its LPA over East Rajasthan and 170% of its LPA over West Rajasthan observed during the monsoon season.**

- **Monthly rainfall received over the state was 133% of LPA in June, 78% of LPA in July, 118% of LPA in August and 182% of LPA in September.**

- **Cumulatively, 128 mm rainfall recorded in the month of June 2025. The observed rainfall was the 2nd highest in the history of June during the period of 1901-2025. Earlier, the highest rainfall 156.9 mm recorded in 2023 in June.**

- **Cumulatively, 287.1 mm rainfall recorded in the month of July 2025. The observed rainfall was the 3rd highest in the history of July during the period of 1901-2025. Earlier, the highest rainfall 308.7 mm was recorded in 1956 in July. the 2nd highest rainfall 288 mm was recorded in 1908 in July.**

- **Cumulatively, 715.2 mm rainfall recorded in the month of June to September 2025 (Monsoon season total). The observed rainfall was the second highest in the history of Monsoon season total during the period of 1901-2025. Earlier, the highest rainfall 844.2 mm recorded in 1917 in August.**

- **Out of total 33 districts, 20 districts received large excess rainfall (Departure +60% or more), 12 districts received excess rainfall (Departure +20% to +59%) and 01 districts received normal rainfall (Departure -19% to +19%) during the season.**

- **District wise highest rainfall 1593.5 mm (92% large excess than normal) observed in Baran followed by 1333.1 mm (102% large excess than normal) in Sawai Madhopur district.**

- **Southwest monsoon withdrew from parts of West Rajasthan on September 14, 2025 (about 3 days before normal date). Thereafter, monsoon withdrew from the entire state by 26th September against normal date of 30th September (about 4 days before normal date).**

1. Onset and Advance of Southwest Monsoon 2025

The Southwest Monsoon advanced into parts of the South Bay of Bengal, South Andaman Sea, Nicobar Islands, and some areas of the North Andaman Sea on 13 May 2025, ahead of the normal date of 19 May. By 19 May, it further progressed into parts of the Southeast Arabian Sea, South Bay of Bengal, South Arabian Sea, Maldives, Comorin area, Central Bay of Bengal, and Northeast Bay of Bengal.

On 24 May 2025, the monsoon advanced rapidly over the remaining parts of the South Arabian Sea, West central and East central Arabian Sea, entire Lakshadweep region, Kerala, Mahe, parts of Karnataka, Maldives, Comorin area, many parts of Tamil Nadu, Southwest and Eastcentral Bay of Bengal, West central and North Bay of Bengal, and some parts of Mizoram. The monsoon set in over Kerala on 24 May, eight days earlier than the normal date of 1 June, marking the earliest onset since 2009.

Following its onset in Kerala, the Southwest Monsoon progressed swiftly, covering South India and Northeast India by 29 May. After a brief pause, further advance resumed on 16 June. By 26 June, most parts of the country were covered except for some areas of Northwest Rajasthan, West Uttar Pradesh, South Punjab, South Haryana, and Delhi. The monsoon covered the entire country by 29 June 2025, nine days ahead of the usual date of 8 July. The onset dates of Monsoon 2025 are shown in.**Fig.1**.

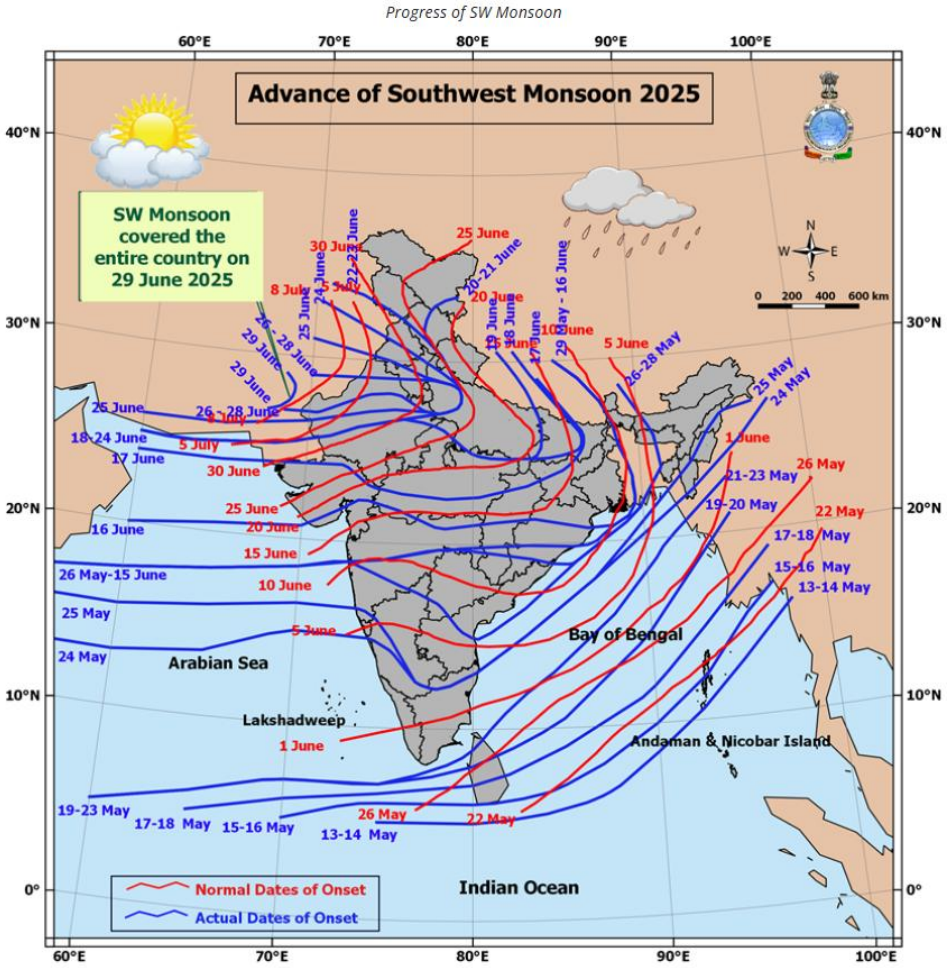

Fig. 1: Isochrones of advance of the Southwest monsoon during 2025

2. Observed Rainfall Distribution

The district wise, subdivision wise and seasonal rainfall over the state during Southwest Monsoon 2025 are given in **Table 1** along with respective long period average (LPA) values and % departure from normal.

The seasonal rainfall over Rajasthan was 164% of its LPA during SW monsoon season 2025. East Rajasthan 161% of its LPA and West Rajasthan 170% of its LPA. Out of 33 districts, 20 districts received large excess rainfall, 13 districts received excess rainfall and none of the districts received normal, deficient or scanty rainfall during the season.

Fig. 2: District wise June-September 2025 Rainfall % Departures from the Long Period Average.

Table 1: CUMULATIVE RAINFALL STATISTICS (01/06/2025 to 30/09/2025)

SR NO.	NAME	ACTUAL RAINFALL (MM)	NORMAL RAINFALL (MM)	DEPARTURE FROM NORMAL (%)	CATEGORY
1	RAJASTHAN AS	715.9	435.6	64	LARGE
2	EAST RAJASTHAN	1010.5	626.6	61	LARGE
3	WEST RAJASTHAN	481.2	283.6	70	LARGE
	EAST RAJASTHAN				
1	AJMER	878	458.3	92	LARGE
2	ALWAR	730.9	545.9	34	EXCESS
3	BANSWARA	1117.5	886	26	EXCESS
4	BARAN	1593.5	832	92	LARGE
5	BHARATPUR	790.5	543.3	45	EXCESS
6	BHILWARA	1013.2	604.5	68	LARGE
7	BUNDI	1251.6	644.4	94	LARGE
8	CHITTORGARH	929.4	727.2	28	EXCESS
9	DAUSA	1240.8	594.5	109	LARGE
10	DHOLPUR	1133.5	584.1	94	LARGE
11	DUNGARPUR	878.4	706.5	24	EXCESS
12	JAIPUR	918.5	524.3	75	LARGE
13	JHALAWAR	1121.5	884.3	27	EXCESS
14	JHUNJHUNU	694	408.8	70	LARGE
15	KARAULI	1083.5	595.8	82	LARGE
16	KOTA	1242.2	732.2	70	LARGE
17	PRATAPGARH	1220.6	914.2	34	EXCESS
18	RAJSAMAND	836.9	538.1	56	EXCESS
19	SAWAI MADHOPUR	1333.1	661.5	102	LARGE
20	SIKAR	804.6	407.1	98	LARGE
21	SIROHI	1075	873	23	EXCESS
22	TONK	1149.8	566.8	103	LARGE
23	UDAIPUR	890	617.7	44	EXCESS
	WEST RAJASTHAN				
24	BARMER	389.5	272.7	43	EXCESS
25	BIKANER	383.9	247	55	EXCESS
26	CHURU	636.1	334	90	LARGE
27	HANUMANGARH	574.7	253.6	127	LARGE
28	JAISALMER	223.5	176.9	26	EXCESS
29	JALORE	766.8	417.8	84	LARGE
30	JODHPUR	501.3	292.6	71	LARGE
31	NAGAUR	746.7	369.5	102	LARGE
32	PALI	836.9	491.6	70	LARGE
33	SRI GANGANAGAR	454.2	204.7	122	LARGE

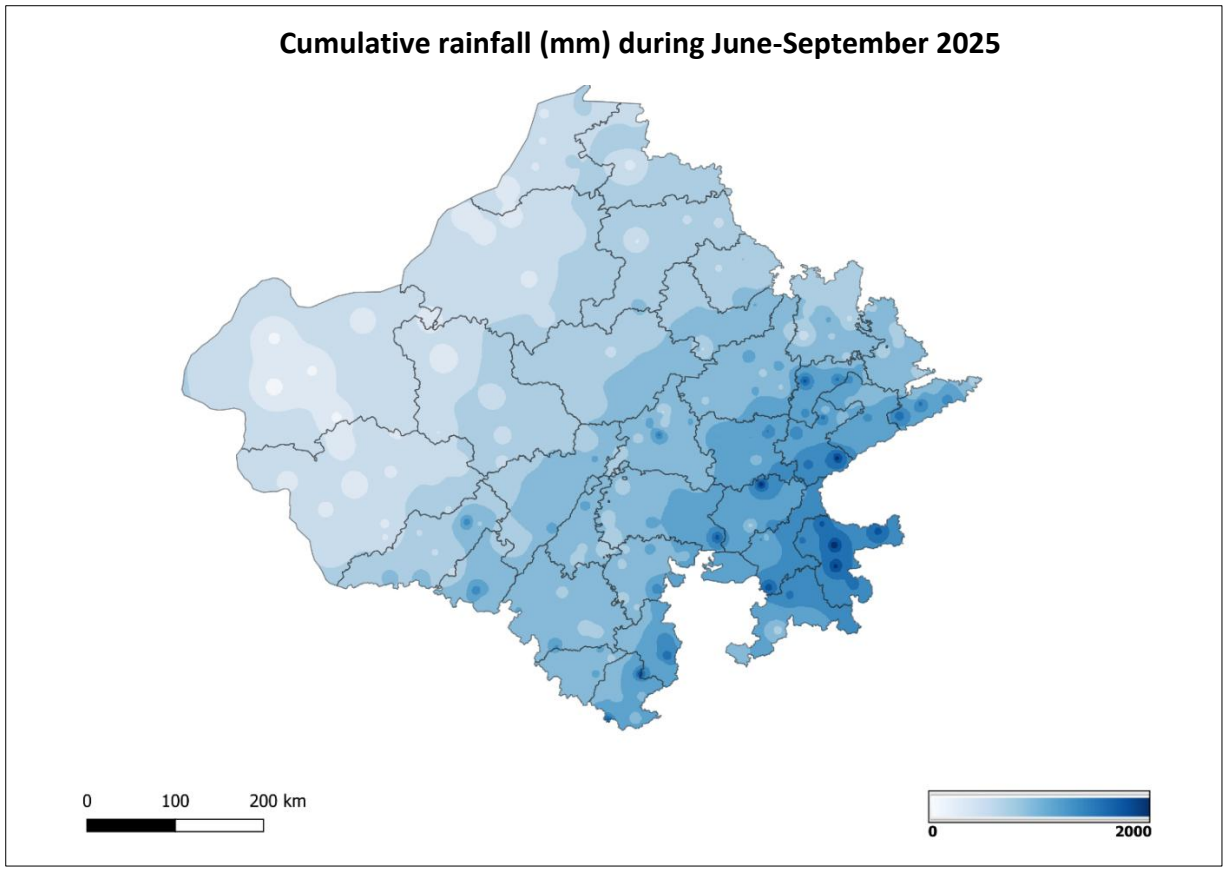

Fig 3.: Station wise Total Seasonal Rainfall

The rainfall recorded during monsoon season (June-September, 2025) over the Rajasthan state as a whole was 715.9 mm against its normal of 435.6 mm which is 164% of its long period average (LPA) based on data of 1971-2020. The top ten highest monsoon rainfall from 1901-2025 is shown in **Table 2**.

Table 2: Top Ten monsoon (1901-2025) for Rajasthan

Sr. No.	Year	Actual rainfall	Normal (1971-2020)	% Departure from LPA
1	1917	844.2	435.6	94
2	**2025**	**715.9**	**435.6**	**64**
3	1908	682.2	435.6	57
4	2024	678.4	435.6	56
5	1975	665.4	435.6	53
6	1973	641.8	435.6	47
7	1944	627.4	435.6	44
8	2022	596.1	435.6	37
9	2011	593.7	435.6	36
10	2019	583.8	435.6	34

South-eastern and Central parts of the state received more rainfall. In terms of percentage departure from normal, Sirohi district received least rainfall (123% of LPA) and Hanumangarh district received highest rainfall (227% of LPA).

The monthly rainfall during monsoon season (June to September) for the State as a whole

and its two meteorological sub divisions with respective LPA values and departure from normal is given in **Table 3-5**.

Table 3: Rainfall during southwest monsoon 2025 over Rajasthan

Month	Actual Rainfall (in mm)	Long Period Average (in mm)	Departure from Normal (in %)
June	128	55	133
July	287.1	161.4	78
August	184.4	155.8	18
September	116.3	63.5	83

Table 4: Rainfall during southwest monsoon 2025 over East Rajasthan

Month	Actual Rainfall (in mm)	Long Period Average (in mm)	Departure from Normal (in %)
June	195	74.7	161
July	394.9	228.6	73
August	250.2	231.5	8
September	170.4	91.8	85

Table 5: Rainfall during southwest monsoon 2025 over West Rajasthan

Month	Actual Rainfall (in mm)	Long Period Average (in mm)	Departure from Normal (in %)
June	74.7	39.4	90
July	201.3	107.8	87
August	132	95.5	38
September	73.3	40.9	79

Both East Rajasthan and West Rajasthan received their highest rainfall during month of June which was 261 % of LPA (large excess) and 190 % of LPA (large excess) respectively.

Fig. 4: Districtwise Monthly Distribution over Rajasthan – June

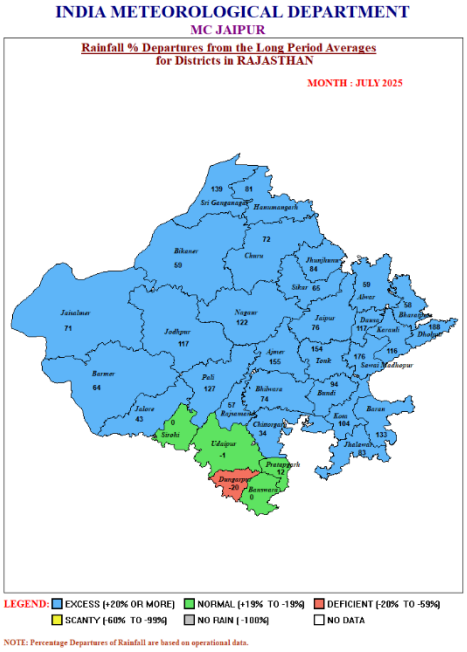

Fig. 5: Districtwise Monthly Distribution over Rajasthan – July

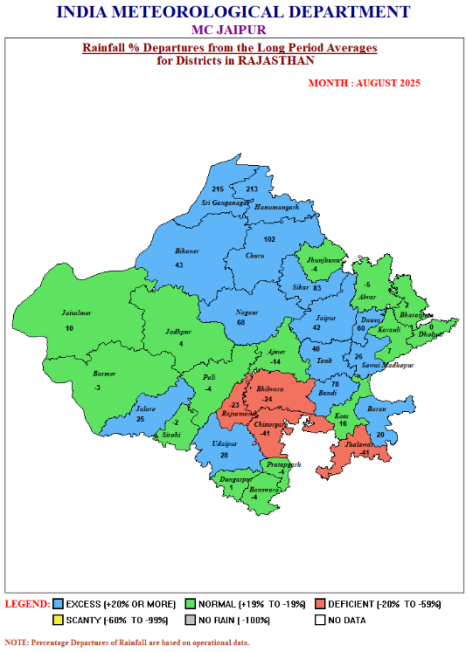

Fig. 6: Districtwise Monthly Distribution over Rajasthan – August

Fig. 7: Districtwise Monthly Distribution over Rajasthan – September

The monthly variation of rainfall over both east and west Rajasthan during southwest monsoon season 2025 is depicted in Fig.8. Weekly and cumulative weekly rainfall anomaly expressed as percentage departure from the LPA in Fig. 9.

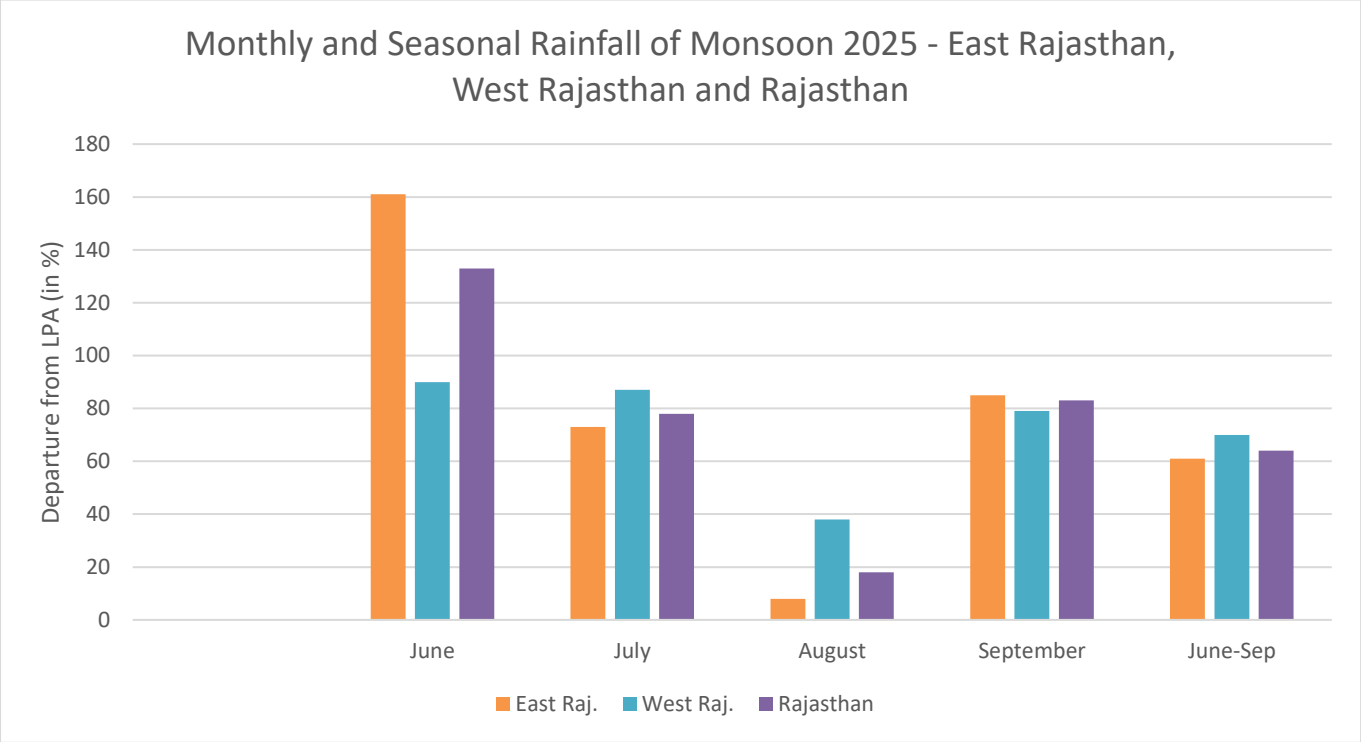

Fig. 8: Monthly and seasonal monsoon rainfall of 2025 over East Rajasthan, West Rajasthan and Rajasthan as whole in % departure.

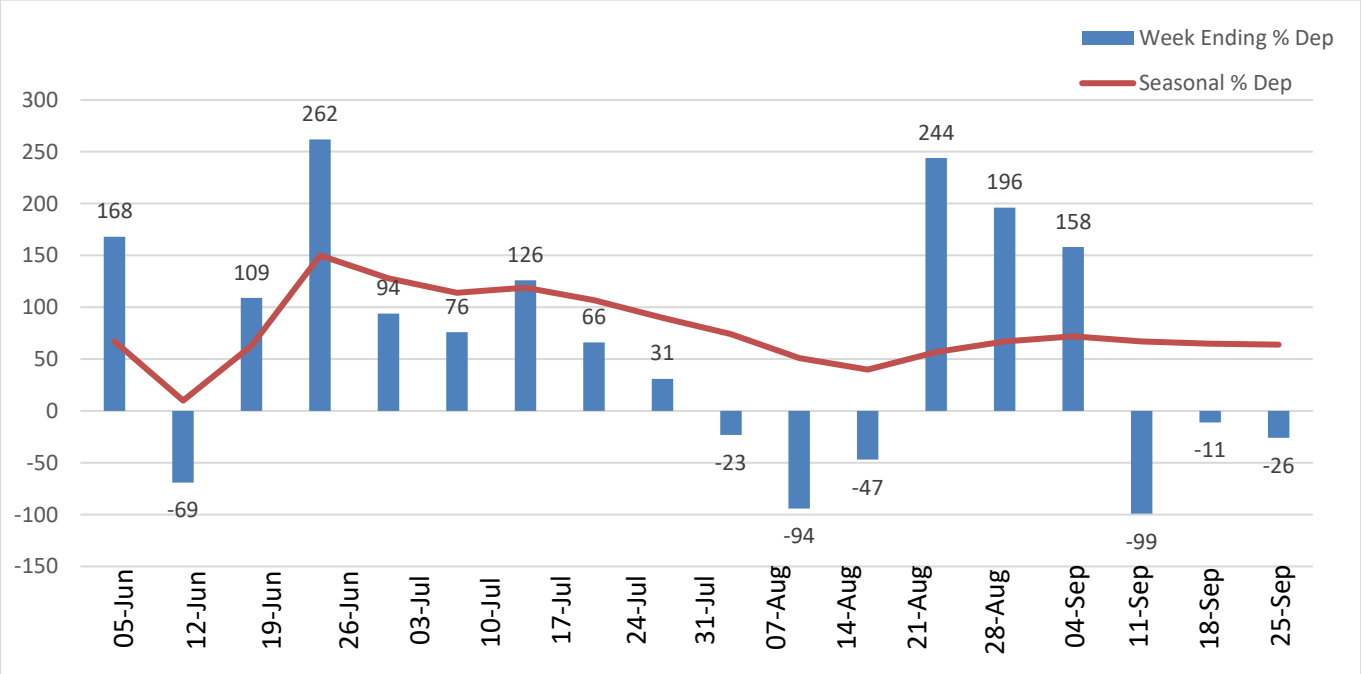

Fig. 9: Week by week progress and cumulative rainfall (% departure from normal) over Rajasthan as whole.

Out of the 11 weeks that showed a positive rainfall anomaly, 3 weeks were in June, 5 weeks in July, 2 weeks in August, and 1 week in September. The largest negative weekly rainfall anomaly occurred in the week ending 11 September (– 99 % of LPA). The highest positive rainfall anomalies were during the week ending 26 June (262 % of LPA), followed by the week ending 21 August (244 % of LPA). The increase in weekly rainfall during the season was mainly due to low-pressure systems traversing along the monsoon trough.

Table 6: Weekly Rainfall (in mm)

	4-Jun	11-Jun	18-Jun	25-Jun	2-Jul	9-Jul	16-Jul	23-Jul	30-Jul	6-Aug	13-Aug	20-Aug	27-Aug	3-Sep	10-Sep	17-Sep	24-Sep	30-Sep
RAJASTHAN	**14.7**	**2.1**	**24.4**	**58.9**	**47.1**	**46.7**	**84.2**	**69.6**	**58**	**29.1**	**2.2**	**20.3**	**106.3**	**78.4**	**61.2**	**0**	**8.3**	**3.7**
AJMER	9.9	1.1	36.4	54.4	73.7	69.6	85.8	141.6	78.3	10.9	0	19.9	94.1	71.7	112.1	0	5.6	9.1
ALWAR	8.5	4.6	53.9	25.2	77.5	35.3	92.9	54	39.2	54.9	16.4	12.4	100.5	106.7	44.9	0.1	1.3	0.6
BANSWARA	12.6	0.1	23.2	126.9	129	55.8	71.5	22.4	105.4	9.8	1.7	91.8	169.1	92.9	156.4	0	12.1	9.5
BARAN	18	0.5	50.3	275.9	84.3	73.2	132.9	84	368.3	40.6	17.8	44.3	253.8	105.6	37.4	0	6.9	4.5
BHARATPUR	8.6	1.1	45.9	57.1	76.3	33.7	73.7	44.5	65.2	57.7	16.7	45.7	58.2	122.1	71.8	0.2	9.1	0.8
BHILWARA	7.4	0	16.9	190.6	65.8	103.9	74.4	59.8	76.3	43.9	0.2	9.5	124.7	86.9	141.3	0	16.5	2.9
BUNDI	9.6	0.3	13.3	178.6	32.5	64	119	124	118.8	35.8	0.3	22.5	359.5	70.3	85	0	17	4.2
CHITTORGARH	19.9	2.5	41.1	131.1	61.5	73.6	76.5	71.4	84.5	10.4	0.9	17.7	111.5	54.5	98.7	0	78.2	3.4
DAUSA	3.2	2.8	52.6	98.8	85	84.8	119.4	93	120.8	61.2	14.6	22.8	217.4	197.6	66.2	0	0.6	0
DHOLPUR	2.2	0.5	17.5	101.5	161.7	60.7	156.3	69.8	167.3	59.3	11	56.3	68.8	89.8	103.7	0.5	6.7	2.7
DUNGARPUR	10.8	0	41.2	62.3	105.3	57.8	76.2	15.5	50.4	6.6	0	59	131.6	109	111.1	0	7.6	8.6
JAIPUR	12.9	4.3	31.9	91.2	41.5	53.4	110.1	47.4	78.3	75.3	1.1	15.9	178.9	110	57.2	0.2	3	0.9
JHALAWAR	31	0.5	24.3	100.2	108.5	27.8	61.8	95.2	267.1	32.9	10	36.2	82.2	170	59.1	0	13.1	8.3
JHUNJHUNU	27.3	16.6	43.8	26.6	27.4	34.6	110.7	60.2	49	45.8	5.8	15.8	73	93.7	51.3	0	0.6	16.3
KARAULI	2.5	1.8	39.3	135	96.3	68.5	128.7	74.7	91.8	46.2	10	12	198	112.5	41.5	0	25.3	0.2
KOTA	19.8	0	35.7	183	106.9	27.4	120.4	131.6	172.2	41.3	6.9	29.7	227.7	72.5	42.3	0.3	8.4	11.2
PRATAPGARH	16.6	0	49.4	81.2	86.8	61.8	57.8	67	150	16.2	0	58.4	195.2	141.6	145.4	0	49.6	9.2
RAJSAMAND	23.7	0.1	68.6	114.4	28.3	50.6	113.3	97.1	28.4	1.4	7.6	34.6	82.6	63.9	116.7	0	20.1	1
SAWAI MADHOPUR	8.4	7.7	12.9	104.7	51.1	143.6	164.4	117	237.9	25.4	0.3	5.4	279.7	110.3	48.1	0.3	16.6	0.4
SIKAR	29.4	3.8	52.5	40.4	44.8	52.1	99.4	31.3	48.6	66.1	2.9	17.6	126	131.8	52.6	0	0	14.4
SIROHI	28.7	0	13.1	137.4	75.6	68.8	76.3	103.1	93.6	28.2	3.7	62.4	159.4	66.9	181.3	0	0	1.2
TONK	11.1	3.9	22.9	140.3	53.4	67.5	130.4	102.3	167.4	56.6	5	33.6	235.8	81.4	41.8	0	15.8	2
UDAIPUR	19.3	0	48.3	58.4	72.3	55.6	86	46.8	21.8	7.9	0.1	57.8	154.4	69.8	137.3	0	58.7	5
EAST RAJASTHAN	**15.4**	**2.3**	**36.7**	**107.4**	**70.4**	**61.7**	**99.5**	**73.7**	**107**	**37.2**	**5**	**31.2**	**157.8**	**97.1**	**86.8**	**0.1**	**18.6**	**4.9**
BARMER	13.1	0	13.6	15	12.6	28.5	53.2	79.5	1.5	0	0	22.6	49.5	22.1	66.9	0	0	0
BIKANER	17.6	2.8	4.6	10.2	17.4	18.3	73.9	32.1	19	13.6	0	5.5	66.9	81.3	20.5	0	0	1.6
CHURU	32.5	6	25.7	13.2	49.9	35.7	109	38.3	14.1	105.4	0.8	4.7	79.8	97.9	18.1	0	0	5.7
HANUMANGARH	5.9	6.4	23.1	11.6	45	46.3	69.1	33	22.9	90.1	0	2.7	63.6	118.4	36.7	0	0	0
JAISALMER	9.2	0	1.3	1.9	34.5	26.2	14.6	51.7	7.6	3.6	0	13.9	15.5	40.7	6.8	0	0	0
JALORE	9.1	0	29.1	38.5	72.8	79.1	87.1	58.4	18	0.3	0	29.1	119.5	54.5	178.6	0.3	0	1.3
JODHPUR	5.6	0	10.9	39.2	12.2	19.3	71.8	115.9	16.6	7	0	9	49.2	82.8	43.1	0	0	0.8
NAGAUR	31.8	6.7	38.9	36.6	22.5	18.1	136.6	107.7	49.2	10.3	0	2.5	156.5	81.7	29.9	0	0	19.9
PALI	7.8	0	30.2	69.1	26.5	106.4	127.8	113.8	66.8	0.2	0	17.8	120.9	66.4	70.2	0	1.3	0.3
SRI GANGANAGAR	9.2	0.7	3.2	1	47.7	57.4	98.5	9.4	3.7	139.5	0.3	1.9	17.2	39.4	22.4	0	0	2.4
WEST RAJASTHAN	**14.2**	**1.8**	**14.6**	**20.4**	**28.6**	**34.8**	**72**	**66.2**	**18.9**	**22.6**	**0.1**	**11.6**	**65.3**	**63.5**	**40.9**	**0**	**0.1**	**2.8**

Fairly widespread to widespread rainfall occurred on a minimum of 12 days and a maximum of 68 days across different districts in Rajasthan during the entire monsoon season. In fact, Pratapgarh district recorded the highest number of such days — 55 days — during the season. The district-wise daily rainfall distribution for Monsoon 2025 is shown in Fig. 10.

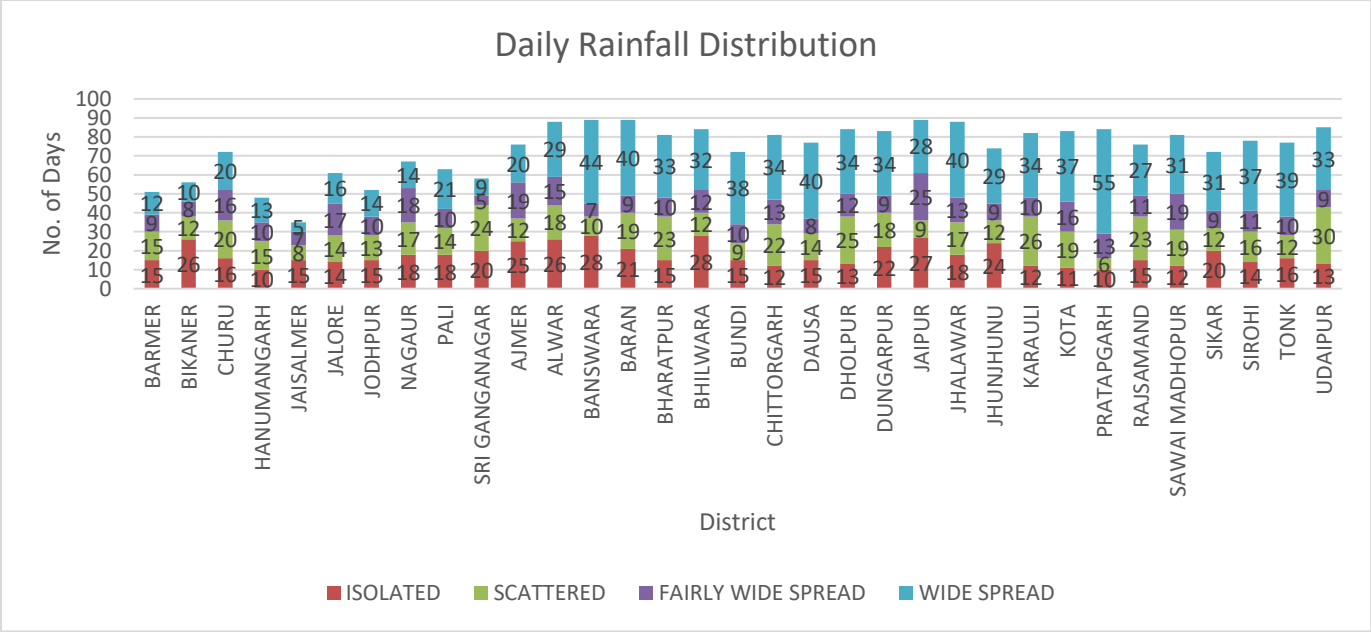

Fig. 10: Districtwise Daily Spatial Rainfall Distribution

Heavy to extremely heavy rainfall occurred over isolated to most places in many districts of the state on a few days. The districts of Banswara, Baran, Bhilwara, Ajmer, Kota, Dholpur, Jaipur, Pratapgarh, Udaipur, and Jhalawar recorded heavy rainfall on a comparatively large number of days during the season. The district-wise daily distribution of heavy to extremely heavy rainfall for Monsoon 2025 is shown in Fig. 11. The occurrence of extremely heavy rainfall during the season is summarized in Table 7

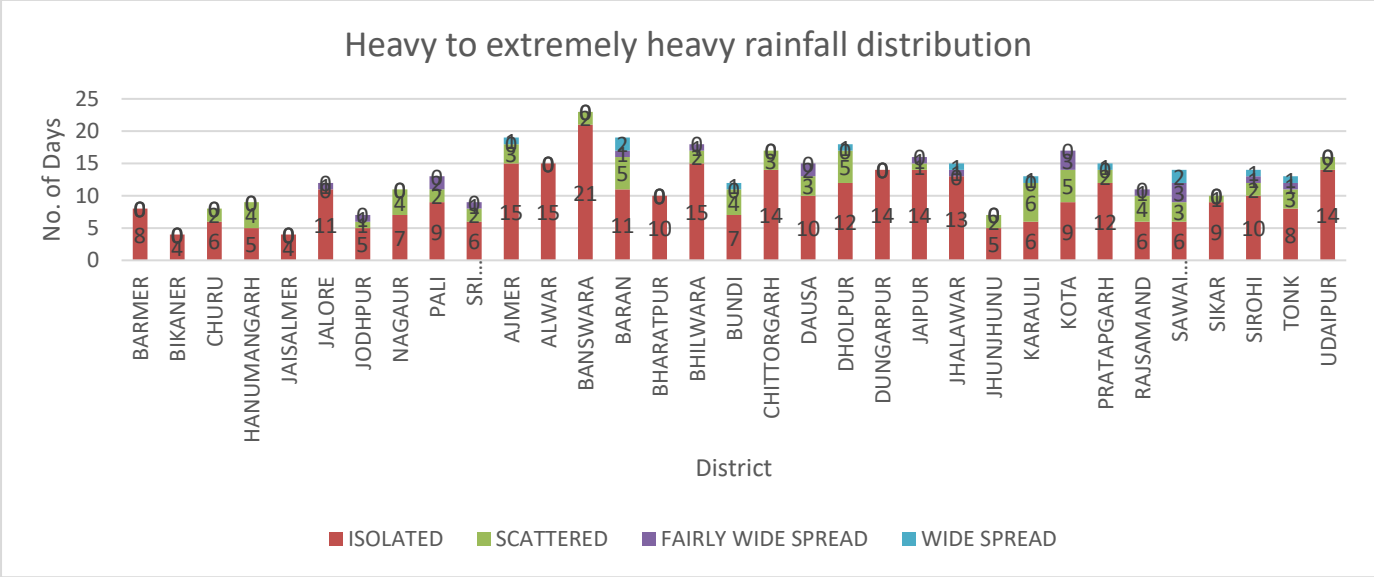

Fig. 11: Districtwise Daily Heavy to Extremely Heavy Rainfall Distribution

Table 7: Extremely Heavy Rainfall during Southwest Monsoon 2025

S.No.	Station	Date	Amount (in mm)	District
1	Nainwa	23 August	502.0	Bundi
2	Keshorai Patan	23 August	310.0	Bundi
3	Dausa	24 August	285.0	Dausa
4	Digod	23 August	272.0	Kota
5	Sawai Madhopur	22 August	254.0	Sawai Madhopur
6	Raipur	03 July	252.0	Pali
7	Mount Abu	08 September	250.0	Sirohi
8	Ramganj Mandi	28 July	242.0	Kota
9	Anta	23 August	240.0	Baran
10	Baran	23 August	237.0	Baran
11	Chhipabarod	23 August	235.0	Baran
12	Nainwa	19 July	234.0	Bundi
13	Khandar	30 July	230.0	Sawai Madhopur
14	Merta	19 July	228.0	Nagaur
15	Bhungra	27 August	224.0	Banswara
16	Malarna Dungar	30 July	218.0	Sawai Madhopur
17	Chauth ka Barwara	06 July	214.0	Sawai Madhopur
18	Sawai Madhopur	30 July	213.0	Sawai Madhopur
19	Keshorai Patan	22 August	212.0	Bundi
20	Sanchore	07 September	210.0	Jalore
21	Niwai	23 August	206.0	Tonk

Month-wise very heavy and extremely heavy rainfall events are shown in Fig. 12 and Fig. 13, respectively. Most of the very heavy to extremely heavy rainfall events occurred in July and August. The highest one day rainfall — 502 mm — was recorded at Nainwa on 23 August.

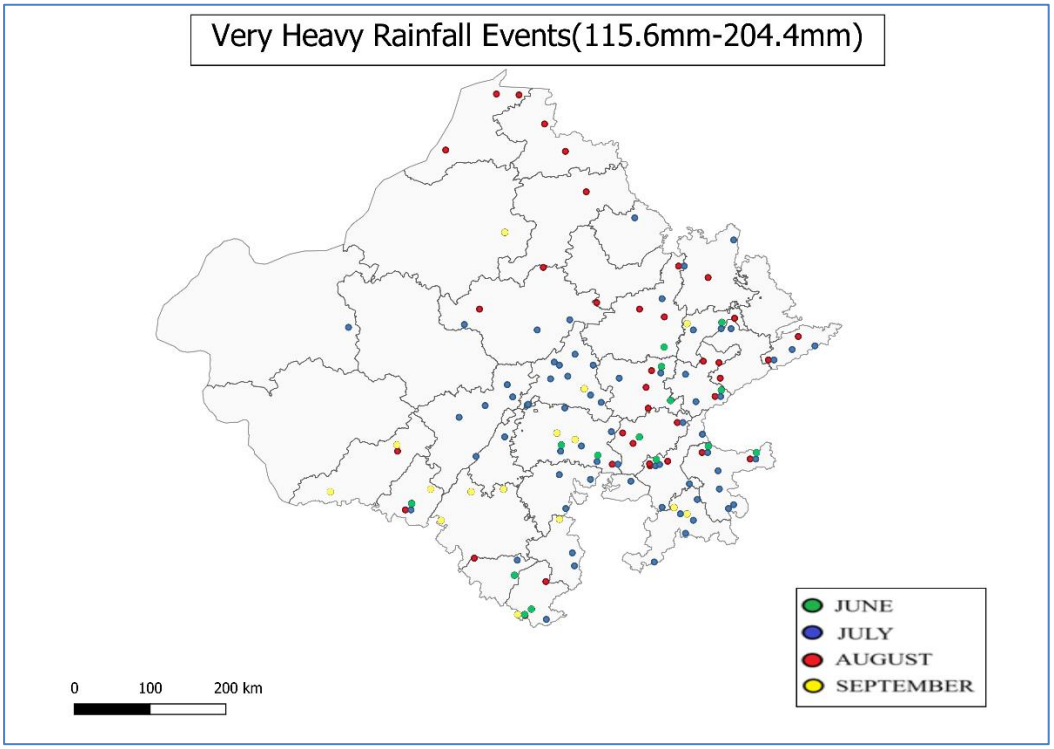

Fig. 12: The location of Very Heavy Rainfall (115.6 to 204.4 mm)

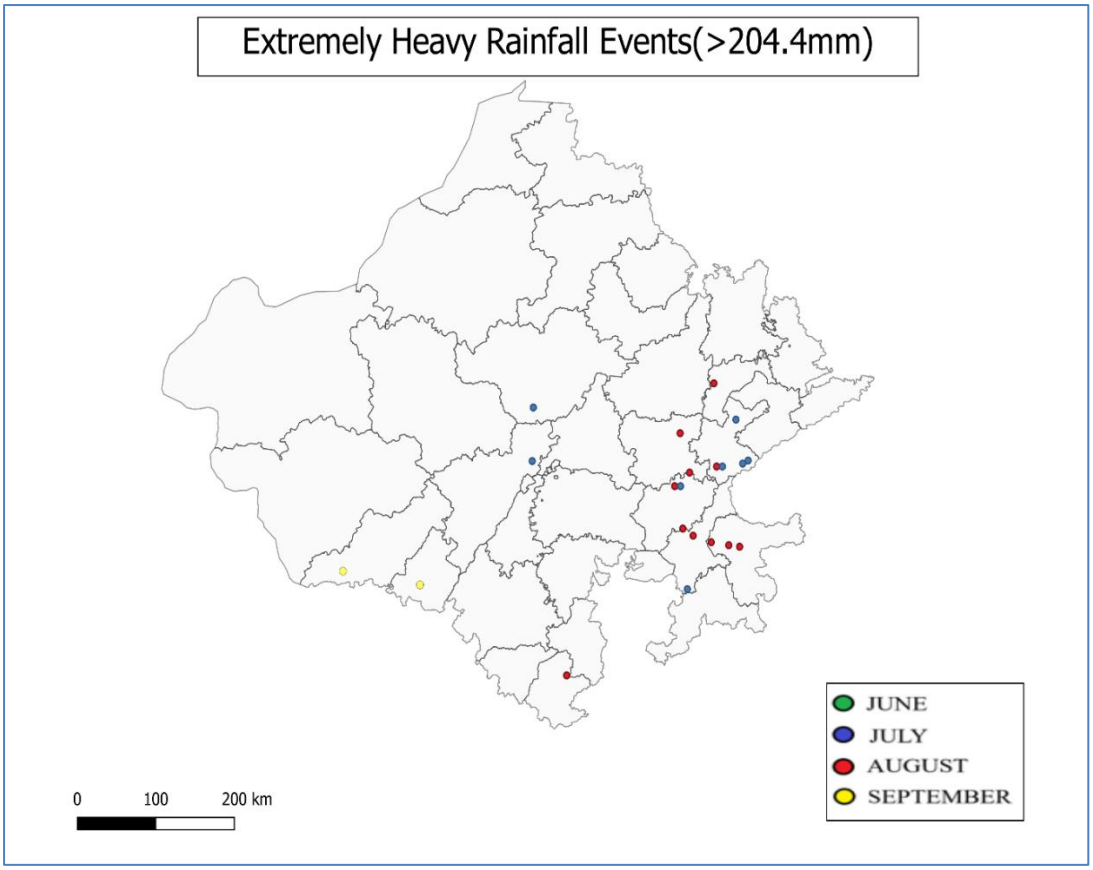

Fig. 13: The location of Extremely Heavy Rainfall (more than 204.4 mm)

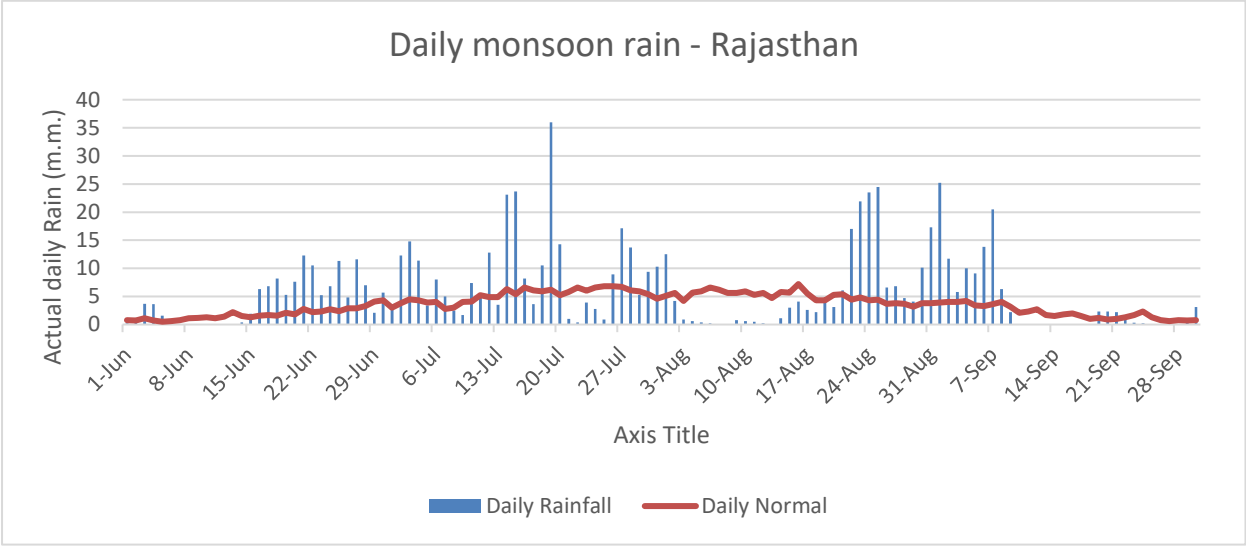

Fig. 14: Daily Rainfall - Rajasthan

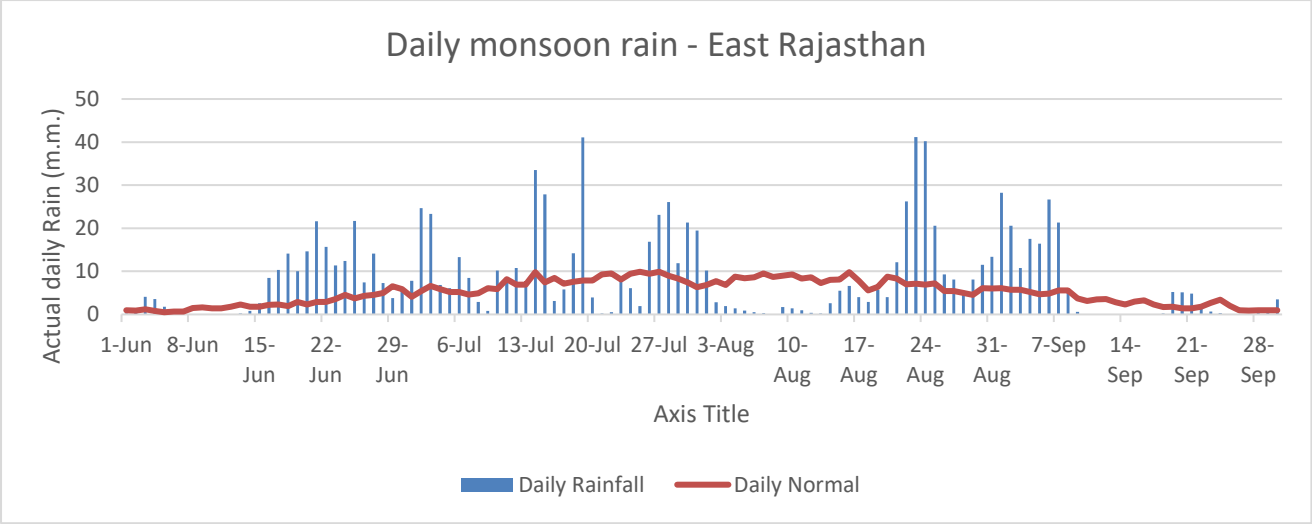

Fig. 15: Daily Rainfall – East Rajasthan

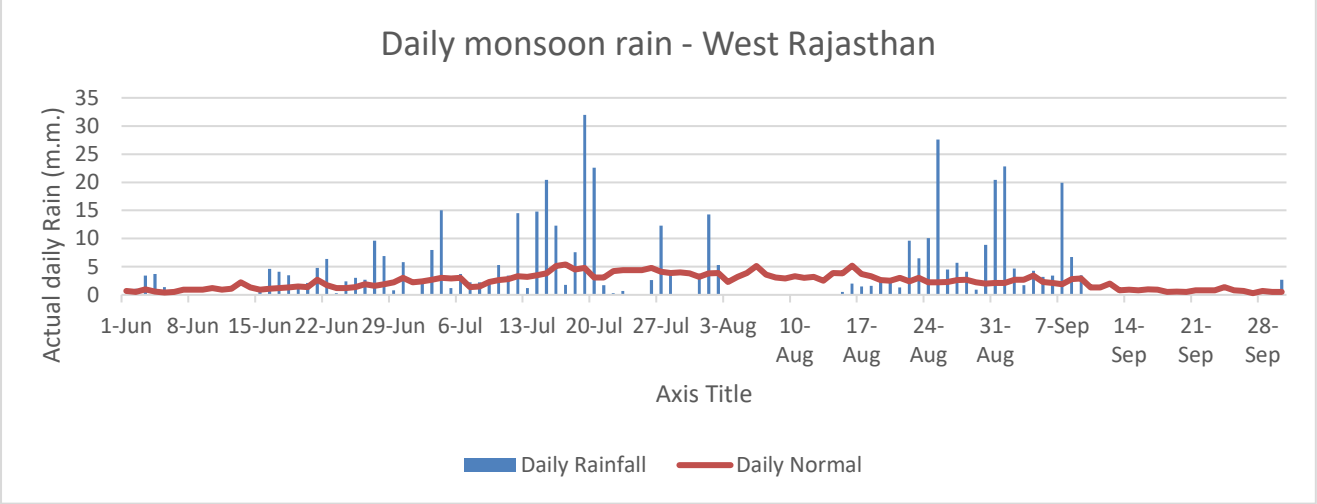

Fig. 16: Daily Rainfall – West Rajasthan

3. Chief Synoptic Features of Southwest Monsoon Season

During the season, Seven Monsoon depressions formed during the season and one intensified into Deep Depression. The tracks of the Monsoon Depression are shown in Fig.17. The information of number of low-pressure systems formed during the season is shown in Table-8.

In June 2025, there were five low-pressure systems (LPS) formed during June. Three over the Head Bay of Bengal (17 to 23 June, 26 to 27 June and 29 June onwards). Out of these, one system (17th to 23rd June) intensified into a well-marked low-pressure system. Two systems formed over the Arabian Sea (17 to 19 June and 28 to 29 June). These lowpressure systems help to get good amount of rainfall over most part of country especially Northwest India, Central India and west coast of Peninsular India. There were four Western Disturbances (WDs) observed over Indian region during 29 May to 9 June, 6-9 June, 8-11 and 11-19 June.

During July 2025, four depressions formed during 15 – 16 July, 14 – 15 July, 17 – 20 July (remnant of depression over Gangetic West Bengal) and 25 – 27 July (remnant of cyclone WIPHA from south China Sea). Out of these four depressions three formed over land and one over north Bay of Bengal. Besides these depressions one low pressure area formed over Bay of Bengal

during 6 – 10 July. During July 2025, there were five western disturbances affected the country during 11 – 13, 13 – 18, 18 – 20, 23 – 28 and 28 July onwards.

In August 2025, four low-pressure systems developed— slightly below the climatological normal of 5.38. These included one depression over the Bay of Bengal that formed during 18–19 August, a well-marked low-pressure area from 26–29 August, and two low-pressure areas that developed during 13–17 August and 22–25 August. The total number of low-pressure system (LPS) days was 15, compared to the normal of approximately 16.3 days. During August 2025, five Western Disturbances affected the country in the periods: 28 July–5 August, 5–10 August, 10–13 August, 18–22 August, and 24–31 August.

During September 2025, one deep depression formed over the north Bay of Bengal during 6–11 September, and another depression formed during 26–27 September. In addition, two low-pressure areas developed over the north Bay of Bengal during 12–15 September and 22–24 September.

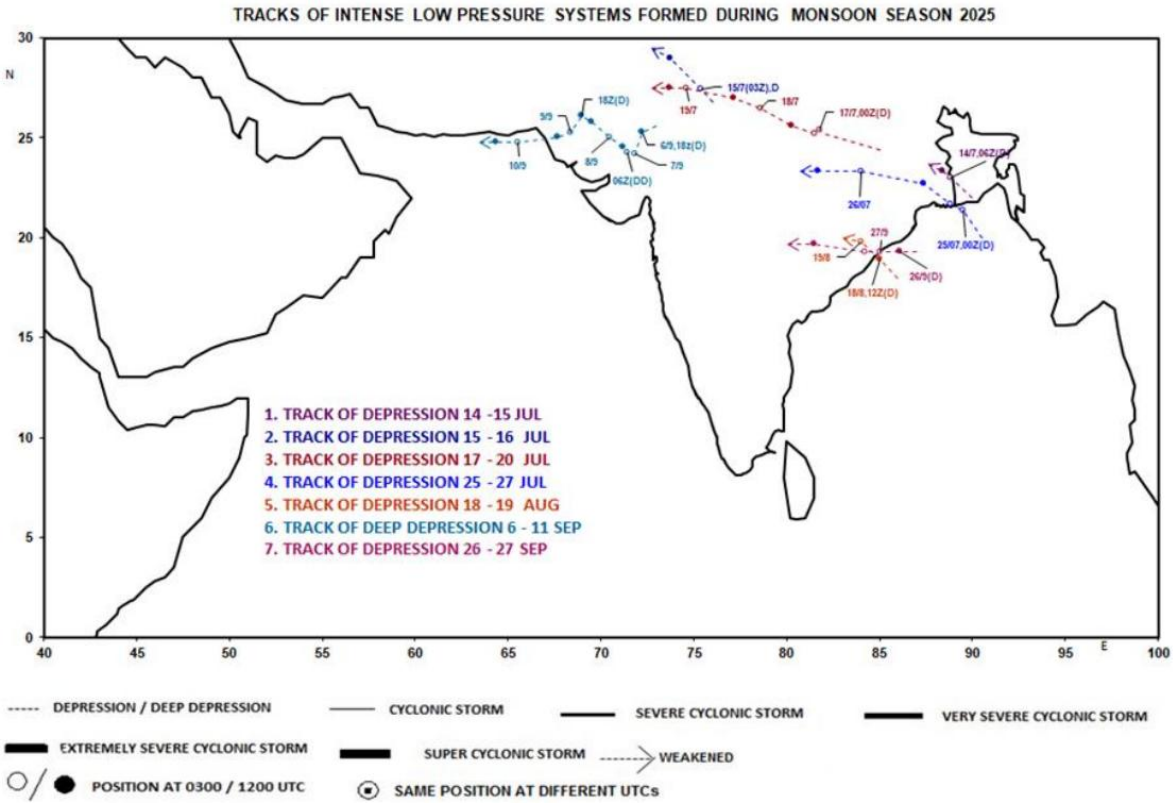

Fig. 17: Tracks of the Cyclonic Storms and Depressions formed during Monsoon 2025

Table 8: Number of Low-pressure System (LPS) including Low (L), Well Marked Low (WML), Depression (D), Deep Depression (DD), Cyclonic Storm (CS) and number of LPS days in monsoon 2025.

Category	CS	DD	D	WML	LOW	Total LPS	Total LPS days	Long period Average of Total monsoon systems /Days	
June	0	0	0	1 (BOB)	2(BOB) 2(AS)	5	13	3	11
July	0	0	1(BOB) 3(Land)	0	1(BOB)	5	18	3	14
August	0	0	1 (BOB)	1 (BOB)	1(BOB)	4	15	4	17
September	0	1 (BOB)	1 (BOB)	0	2(BOB)	4	23	3	12
Season	0	1	6	2	9	18	69	13	55
	AS: Arabian Sea) (BOB: Bay of Bengal)								

4. Withdrawal of Southwest Monsoon 2025

The withdrawal of the Southwest Monsoon 2025 commenced on September 14, 3 days before its normal date of September 17. Southwest monsoon 2025 withdrew from the entire state on September 26. The withdrawal dates of the 2025 Southwest Monsoon are illustrated in **Fig.18**.

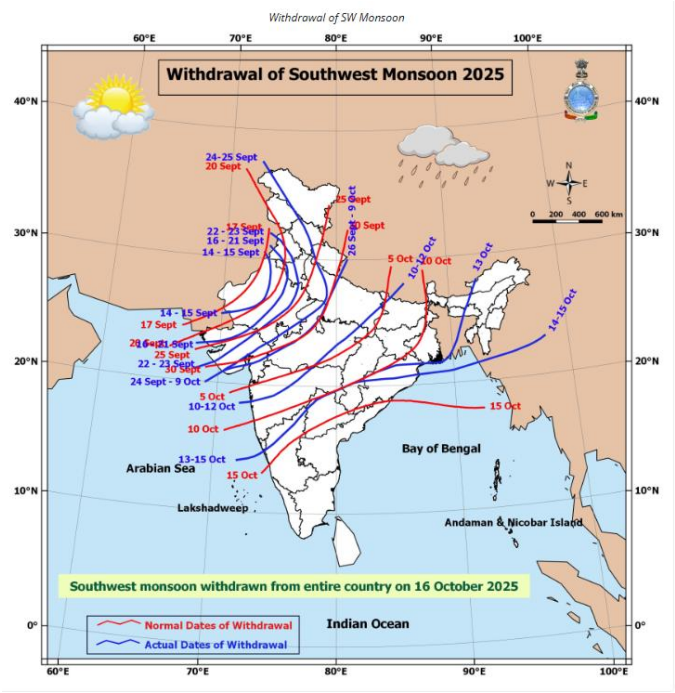

Fig. 18: Isochrones of advance of the Southwest monsoon during 2025

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