



**भारत सरकार Government of India**  
**पृथ्वीविज्ञानमंत्रालय Ministry of Earth Sciences**  
**भारत मौसम विज्ञानविभाग India Meteorological Department**  
**New Normal Dates of Onset/Progress and Withdrawal of Southwest Monsoon over India**

The present normal monsoon onset and withdrawal dates are based on records of only a few stations (149 stations) during the period 1901-1940.

India Meteorological Department (IMD) has now revised the normal onset and withdrawal dates based on recent data. The normal dates of onset are revised based on data during 1961-2019 and normal dates of withdrawal are revised based on data during 1971-2019.

IMD has designed new objective criteria for defining monsoon onset over the entire country based on daily gridded ( $1^{\circ} \times 1^{\circ}$ ) rainfall data set. The new objective criteria used for deciding monsoon onset/progress dates are designed so as to closely simulate IMD's operational onset dates. However, the new withdrawal dates are fixed using the IMD's operational withdrawal dates during 1971-2019.

Monsoon onset over Kerala remains the same, i.e., 1 June. However, new monsoon advance dates over the states like Maharashtra, Gujarat, Madhya Pradesh, Chattisgarh, Telegana, Andhra Pradesh, Odisha, Jharkhand, Bihar and parts of Uttar Pradesh are delayed by 3-7 days compared to existing normal dates. However, over extreme northwest India, the monsoon arrives now little earlier, on 8<sup>th</sup> July compared to the existing date of 15<sup>th</sup> July. There are however appreciable changes in the monsoon withdrawal dates, especially over Northwest and Central India. Monsoon withdraws from NW India almost 7-14 days later from the existing dates. There is no change in the final withdrawal date over south India, i.e., 15<sup>th</sup> October.

These new dates are relevant for many applications like agriculture, water and power management etc.

The new and older onset and withdrawal dates are shown in Fig 1.

Table -1 shows new and old onset and withdrawal dates of few major cities in India. IMD will start using these new dates from 1 June 2020. IMD will release a very detailed report by 15 May 2020.

### Existing & New Dates of Normal Monsoon Onset/progress

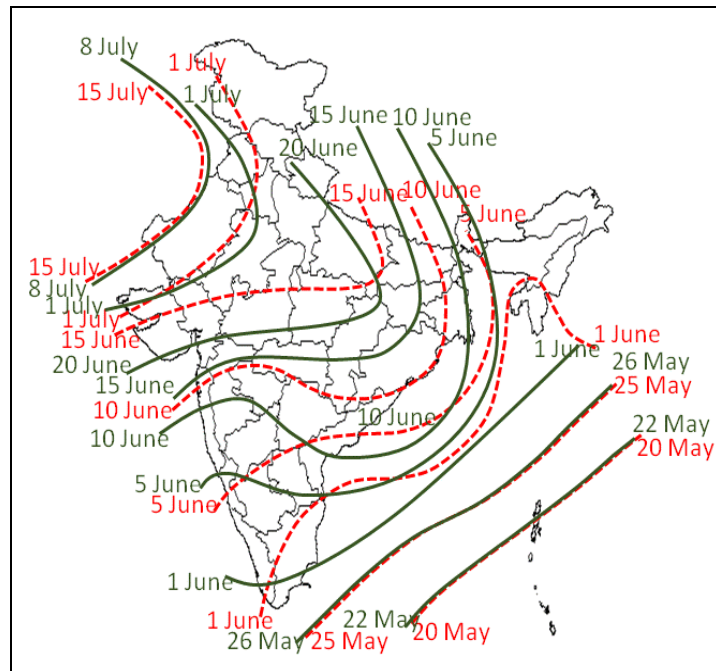


Fig.1(a) Map showing the new (black solid) normal dates of monsoon onset/progress over the country based on the new objective rainfall criteria for the base period of 1961-2019 along with existing normal dates (red dotted).

### Existing & New Dates of Normal Monsoon Withdrawal

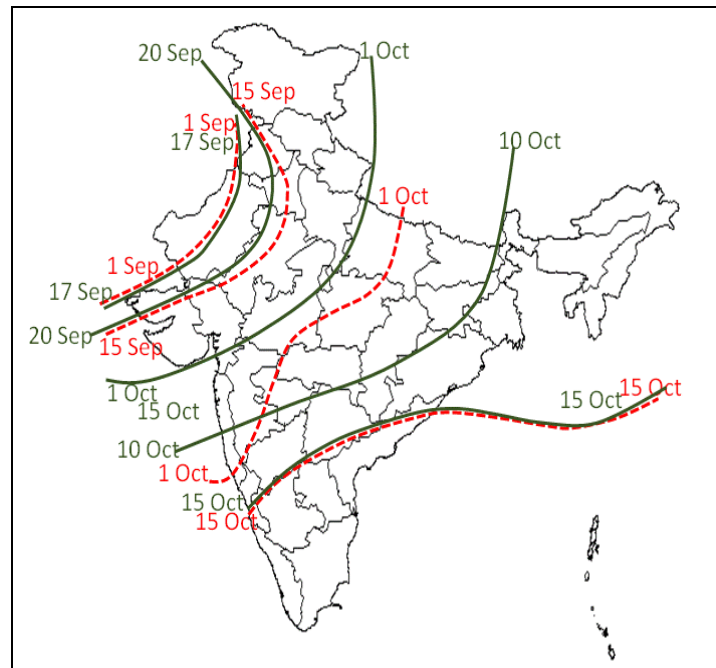


Fig.1(b) Map showing the new (black solid) normal dates of monsoon withdrawal over the country based on the new objective rainfall criteria for the base period of 1971-2019 along with existing normal dates (red dotted).

**Table-1:** Normal monsoon onset (1961-2019) dates based on new rainfall criteria and withdrawal (1971-2019) dates based on the operational data over a few major cities of the country.

Sr. No.	Station Name	Normal Monsoon Onset/ Progress Date		Normal Monsoon Withdrawal Date	
		New (1961-2019)	Existing (1901-1940)	New (1971-2019)	Existing (1901-1940)
1	Thiruvananthapuram, Kerala	01-Jun	01-Jun	*	*
2	Chennai, Tamil Nadu	04-Jun	01-Jun	*	*
3	Udupi, Karnataka	04-Jun	05-Jun	*	*
4	Panjim, Goa,	07-Jun	07-Jun	14-Oct	10-Oct
5	Gangawati, Karnataka	06-Jun	05-Jun	15-Oct	*
6	Ongole, Andhra Pradesh	08-Jun	04-Jun	*	*
7	Hyderabad	08-Jun	07-Jun	14-Oct	15-Oct
8	Machilipatnam, Andhra Pradesh	13-Jun	05-Jun	*	*
9	Kolhapur, Maharashtra	09-Jun	09-Jun	11-Oct	01-Oct
10	Satara, Maharashtra	10-Jun	09-Jun	09-Oct	30-Sep
11	Pune, Maharashtra	10-Jun	09-Jun	11-Oct	06-Oct
12	Jagdalpur, Chhattisgarh	13-Jun	09-Jun	13-Oct	15-Oct
13	Vizag, Andhra Pradesh	11-Jun	09-Jun	14-Oct	15-Oct
14	Mumbai, Maharashtra	11-Jun	10-Jun	08-Oct	29-Sep
15	Ahmednagar, Maharashtra	12-Jun	10-Jun	08-Oct	29-Sep
16	Cuttack, Odisha	12-Jun	11-Jun	12-Oct	13-Oct
17	Puri, Odisha	13-Jun	12-Jun	12-Oct	13-Oct
18	Surat, Gujarat	19-Jun	13-Jun	2-Oct	25-Sep

19	Jalgaon, Maharashtra	18-Jun	13-Jun	6-Oct	27-Sep
20	Nagpur, Maharashtra	15-Jun	13-Jun	6-Oct	6-Oct
21	Raipur, Chhattisgarh	16-Jun	13-Jun	9-Oct	10-Oct
22	Ahmedabad	21-Jun	14-Jun	30-Sep	22-Sep
23	Khandwa, Madhya Pradesh	20-Jun	14-Jun	3-Oct	25-Sep
24	Bilaspur, Chhattisgarh	16-Jun	14-Jun	7-Oct	7-Oct
25	Jamshedpur, Jharkhand	14-Jun	12-Jun	10-Oct	12-Oct
26	Kolkata, West Bengal	11-Jun	10-Jun	12-Oct	14-Oct
27	Aizawl, Mizoram	5-Jun	1-Jun	14-Oct	15-Oct
28	Bhuj, Gujarat	30-Jun	21-Jun	26-Sep	15-Sep
29	Surendranagar, Gujarat	26-Jun	15-Jun	27-Sep	20-Sep
30	Bhopal, Madhya Pradesh	22-Jun	15-Jun	30-Sep	20-Sep
31	Varanasi, Uttar Pradesh	20-Jun	15-Jun	5-Oct	6-Oct
32	Agartala, Tripura	4-Jun	1-Jun	14-Oct	15-Oct
33	Shillong	5-Jun	1-Jun	14-Oct	15-Oct
34	Imphal, Manipur	5-Jun	1-Jun	15-Oct	15-Oct
35	Gaya, Bihar	16-Jun	12-Jun	8-Oct	12-Oct
36	Siliguri, West Bengal	8-Jun	9-Jun	12-Oct	14-Oct
37	Tripura	4-Jun	2-Jun	14-Oct	14-Oct
38	Guwahati, Assam	4-Jun	2-Jun	14-Oct	15-Oct
39	Dimapur, Nagaland	4-Jun	2-Jun	14-Oct	15-Oct
40	Ajmer, Rajasthan	1-Jul	23-Jun	21-Sep	12-Sep
41	Dholpur, Rajasthan	28-Jun	20-Jun	29-Sep	25-Sep
42	Lucknow	23-Jun	20-Jun	3-Oct	30-Sep
43	Azamgarh, Uttar Pradesh	20-Jun	17-Jun	4-Oct	5-Oct
44	Chhapra, Bihar	18-Jun	13-Jun	6-Oct	10-Oct

45	Gangtok, Sikkim,	10-Jun	10-Jun	9-Oct	14-Oct
46	Jalpaiguri, West Bengal	7-Jun	9-Jun	12-Oct	14-Oct
47	Tezpur, Assam	5-Jun	3-Jun	14-Oct	14-Oct
48	Jaisalmar, Rajasthan	8-Jul	15-Jul	17-Sep	1-Sep
49	Jaipur, Rajasthan	1-Jul	23-Jun	22-Sep	12-Sep
50	Agra, Uttar Pradesh	30-Jun	23-Jun	14-Sep	22-Sep
51	Itanagar, Arunachal Pradesh	5-Jun	4-Jun	14-Oct	14-Oct
52	Dibrugarh, Assam	4-Jun	3-Jun	14-Oct	14-Oct
53	Bikaner, Rajasthan	5-Jul	13-Jul	17-Sep	1-Sep
54	Churu, Rajasthan	4-Jul	6-Jul	19-Sep	10-Sep
55	Sonepat, Haryana	30-Jun	30-Jun	23-Sep	15-Sep
56	New Delhi	27-Jun	23-Jun	25-Sep	22-Sep
57	Bhiwani, Haryana	3-Jul	6-Jul	21-Sep	12-Sep
58	Pithoragarh, Uttarakhand	20-Jun	21-Jun	28-Sep	27-Sep
59	Shimla, Himachal Pradesh	24-Jun	23-Jun	24-Sep	22-Sep
60	Jalandhar, Punjab	28-Jun	13-Jul	21-Sep	10-Sep
61	Chandigarh	26-Jun	1-Jul	22-Sep	22-Sep
62	Jammu,	28-Jun	13-Jul	21-Sep	20-Sep
63	Srinagar-Kyomon Road, Ladakh	22-Jun	22-Jun	24-Sep	30-Sep
64	Ladakh, Ladakh	23-Jun	26-Jun	23-Sep	29-Sep

\*SW Monsoon retreats from the area and Northeast monsoon gets established