



Special Daily Weather Report 01 October, 2023

Salient Features of Monsoon 2023

- Rainfall over the country as a whole during monsoon season (June-September), 2023 was 94% of its long period average (LPA).
- Seasonal rainfalls over Northwest India, Central India, South Peninsula and Northeast (NE) India were 101%, 100%, 92% and 82% of respective LPA.
- The southwest monsoon seasonal (June to September) rainfall over the monsoon core zone, which consists of most of the rainfed agriculture regions in the country received 101% of LPA and thus was normal (94-106% of LPA).
- Out of the total 36 meteorological subdivisions, 3 subdivisions constituting 9% of the total area of the country received excess rainfall, 26 subdivisions received normal rainfall (73% of the total area) and 7 subdivisions (18% of the total area) received deficient season rainfall. The 7 Meteorological subdivisions which got deficient rainfall are Nagaland, Manipur, Mizoram & Tripura (NMMT), Gangetic West Bengal, Jharkhand, Bihar, East UP, South interior Karnataka and Kerala.
- Monthly rainfall over the country as a whole was 91% of LPA in June, 113% of LPA in July, 64% of LPA in August, and 113% of LPA in September.
- Southwest monsoon current advanced to the south Andaman Sea and Nicobar Islands in time (on 19th May, 3 days ahead of its normal date). However, further advance thereafter was sluggish. It set in over Kerala on 8th June, 7 days behind the normal date and covered the entire country by 2nd July, 6 days ahead of normal date. Monsoon withdrawal commenced from west Rajasthan on 25th September (with a delay of 8 days).
- The forecast for monsoon onset over Kerala for this year was correct, which is the seventeenth consecutive correct forecast for this event except the year 2015 since the commencement of this forecast in 2005. The Forecast date of onset of monsoon over Kerala was 4th June with a model error of \pm 4 days and the monsoon set in over Kerala on 8th June.
- The forecasts for the rainfall over the country during the season as a whole could be predicted well as the realized rainfall is 94% of LPA against the forecast of 96% \pm 4%.

All India Southwest Monsoon Seasonal Rainfall Departure for this year and last five years

YEAR	ACTUAL (mm)	NORMAL (mm)	% DEPARTURE FROM LONG PERIOD AVERAGE
2023	820.0	868.6	-6%
2022	925.0	868.6	+6%
2021	874.6	880.6	-1%
2020	957.6	880.6	+9%
2019	968.3	880.6	+10%
2018	804.0	887.5	-9%

Significant Weather Features of today, 1 October 2023

- ❖ The line of withdrawal of Southwest Monsoon continues to pass through Gulmarg, Dharamshala, Pantnagar, Etawah, Morena, Sawai Madhopur, Jodhpur, Barmer and 25.7°N/70.3°E.
- ❖ Conditions are becoming favourable for further withdrawal of Southwest Monsoon from remaining parts of Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh, Uttarakhand and West Uttar Pradesh; some more parts of West Madhya Pradesh; remaining parts of Rajasthan and some parts of Gujarat state during next 2-3 days.
- ❖ The **Depression** over south Konkan moved northeastwards and weakened into a **Well Marked Low Pressure Area** over south Madhya Maharashtra & neighbourhood at 0830 hours IST of today, the 1st October, 2023. It is very likely to move further northeastwards and weaken into a Low Pressure Area during next 12 hours.
- ❖ The Well Marked Low Pressure Area over southeast Jharkhand and adjoining areas of Gangetic West Bengal & north Odisha moved northwestwards and lay centered at 0830 hours IST of today, the 1st October, 2023 over western parts of Gangetic West Bengal and adjoining Jharkhand. It is likely to move further northwestwards slowly during next 24 hours.

- ❖ A trough runs from the above cyclonic circulation associated with the Well Marked Low Pressure Area over western parts of Gangetic West Bengal to East Uttar Pradesh at 0.9 km above mean sea level.
- ❖ The Western Disturbance as a trough in westerlies in mid-tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long. 68°E to the north of Lat. 30°N has moved away east-northeastwards.
- ❖ The cyclonic circulation over Southwest Bay of Bengal off Tamil Nadu coast at 5.8 km above mean sea level has become less marked.

- Withdrawal line of Southwest Monsoon is shown in ([Fig-1](#))
- Seasonal Met-subdivision wise rainfall of monsoon ([Fig.2](#))
- Monthly Met-Sub-division wise rainfall of monsoon ([Fig.-3](#))
- Spatial Rainfall Distribution is shown in ([Fig-4](#))
- Monsoon Activity is shown in ([Fig-5](#))
- Map of categorised rainfall (mm) during past 24 hours ([Fig.6](#))
- Latest Satellite Image of INSAT-3D is enclosed. ([Fig-7](#))
- Weather warning for today and next 4 days is shown in ([Fig-8](#))
- Meteorological Sub-division wise 7-day rainfall forecast is enclosed. ([Table-1](#))
- Sub-division wise rainfall recorded from 0830 IST of yesterday to 0830 IST of today is enclosed. ([Annexure-1](#))

Weather Warning for today and next 4 days

(Warning for any day is valid from 0830 hours IST of day till 0830 hours IST of next day)

01 Oct (Day 1):

- Heavy to very heavy rainfall at isolated places very likely over Chhattisgarh, Bihar, Jharkhand, Odisha, south Konkan, south Madhya Maharashtra; Heavy to very heavy rainfall very likely at isolated places over, East Madhya Pradesh, Andaman & Nicobar Islands, West Bengal & Sikkim, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- Thunderstorm with lightning very likely at isolated places over East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, Andaman & Nicobar Islands, Sub-Himalaya West Bengal & Sikkim, Gangetic West Bengal, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Konkan & Goa, Madhya Maharashtra, Marathwada, Coastal Andhra Pradesh & Yanam, Rayalseema, Telangana, North Interior Karnataka, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal.
- Squally Weather with wind speed reaching 45-55 kmph gusting to 65 kmph very likely over Eastcentral Arabian Sea along & off Maharashtra-Goa-Karnataka coasts. Squally wind speed of 45-55 kmph gusting to 65 kmph very likely over Southwest and adjoining Westcentral Arabian Sea, Gulf of Mannar and Squally weather speed of 40-45 kmph gusting to 55 kmph likely over South & adjoining Central Bay of Bengal, North Bay of Bengal along & off north Odisha-West Bengal coasts. Fishermen are advised not to venture into these areas.

02 October (Day 2):

- Heavy to very heavy rainfall with extremely heavy rainfall very likely at isolated places over north Chhattisgarh; Heavy to very heavy rainfall very likely at isolated places over Bihar, Jharkhand, Odisha; Heavy rainfall at isolated places over East Uttar Pradesh, East Madhya Pradesh, West Bengal & Sikkim, Assam & Meghalaya, Kerala & Mahe.
- Thunderstorm with lightning very likely at isolated places over East Uttar Pradesh, East Madhya Pradesh, Vidarbha, Chhattisgarh, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Assam & Meghalaya, Nagaland, Manipur, Mizoram & Tripura, Madhya Maharashtra, Marathwada, Telangana, Interior Karnataka, Tamil Nadu, Puducherry & Karaikal, Kerala & Mahe.
- Squally wind speed of 45-55 kmph gusting to 65 kmph very likely over Southwest and adjoining Westcentral Arabian Sea and Squally weather speed of 40-45 kmph gusting to 55 kmph likely over Southwest & adjoining Westcentral Bay of Bengal, Northwest Bay of Bengal along & off north Odisha-West Bengal coasts. Fishermen are advised not to venture into these areas.

03 October (Day 3):

- Heavy to very heavy rainfall likely at isolated places over Sub-Himalayan West Bengal & Sikkim and Bihar; Heavy rainfall at isolated places over East Uttar Pradesh, Chhattisgarh, Gangetic West Bengal, Jharkhand, Odisha, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
- Thunderstorm with lightning very likely at isolated places over East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Gangetic West Bengal, Bihar, Jharkhand and Kerala & Mahe.
- Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest and adjoining Westcentral Arabian Sea and Squally weather speed of 40-45 kmph gusting to 55 kmph likely over Westcentral & adjoining Southwest Bay of Bengal, Northwest Bay of Bengal along & off north Odisha-West Bengal coasts. Fishermen are advised not to venture into these areas.

04 October (Day 4):

- Heavy rainfall likely at isolated places over Andaman & Nicobar Islands, West Bengal & Sikkim, Bihar, Jharkhand, Odisha, Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura. ♦ Thunderstorm with lightning very likely at isolated places over East Madhya Pradesh, Andaman & Nicobar Islands, Gangetic West Bengal, Bihar and Jharkhand.
- Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest Arabian Sea. Fishermen are advised not to venture into these areas.

05 October (Day 5):

- Heavy rainfall likely at isolated places over Andaman & Nicobar Islands, Gangetic West Bengal, Bihar, Arunachal Pradesh, Assam & Meghalaya.
- Thunderstorm with lightning very likely at isolated places over East Madhya Pradesh, Andaman & Nicobar Islands and Bihar.
- Squally wind speed of 45-55 kmph gusting to 65 kmph likely over Southwest Arabian Sea. Fishermen are advised not to venture into these areas.

Weather Outlook for subsequent 2 days (6 October to 8 October, 2022)

- ♦ Fairly widespread to widespread light/moderate rainfall likely over parts of east & northeast India and Islands.
- ♦ Isolated to scattered rainfall likely over parts of East, West & South peninsular India. Dry weather likely to prevail over rest parts of the country

Legend:

Probability of occurrence	Terminology	Probability of occurrence	Terminology
Less than 5%	unlikely	51-75%	Very likely
25-50%	likely	Above 5%	Most likely

Fig-1

Withdrawal Line of Southwest Monsoon 2023

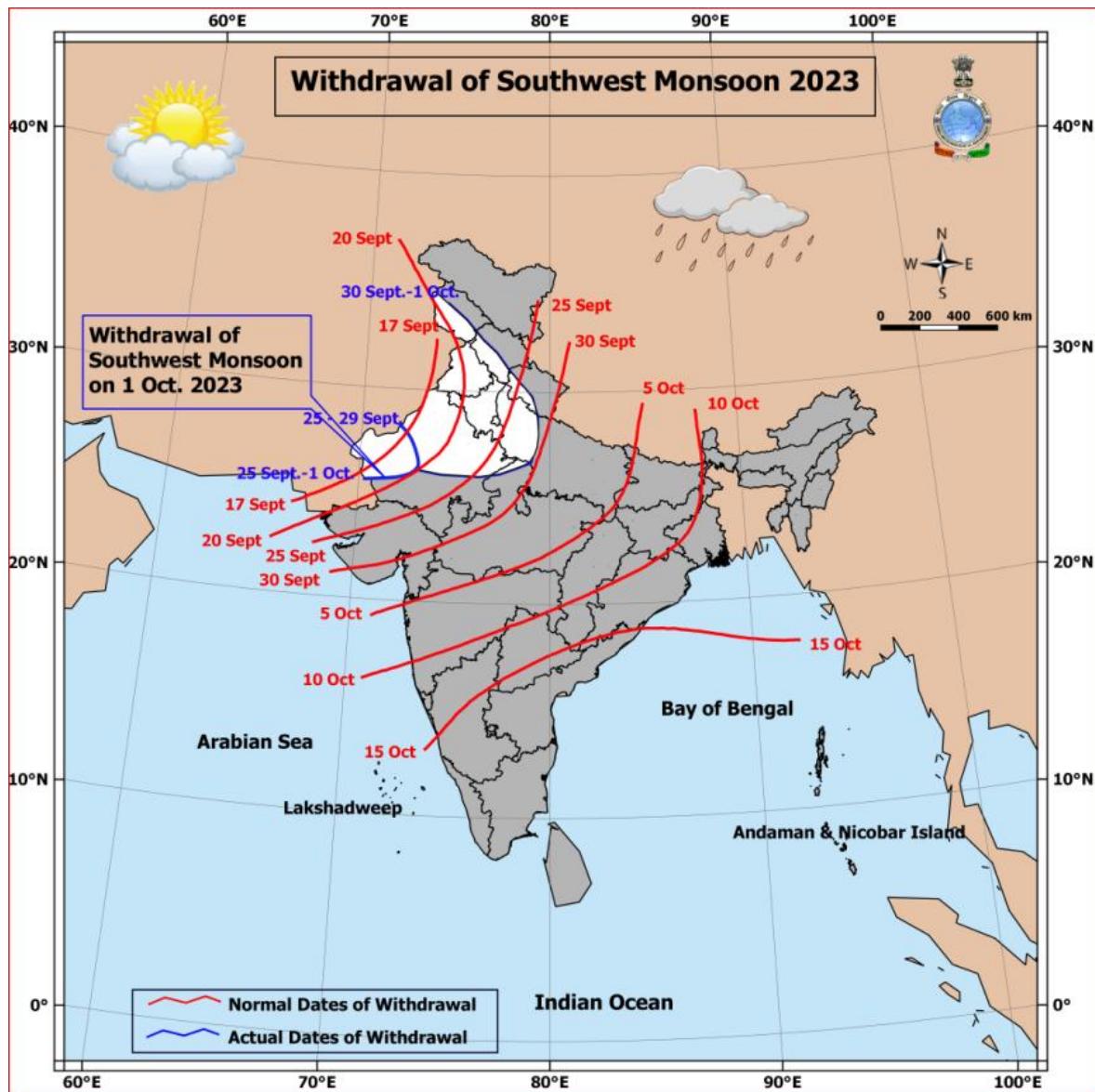


Fig-2

Seasonal Met-subdivision wise rainfall of monsoon 2023

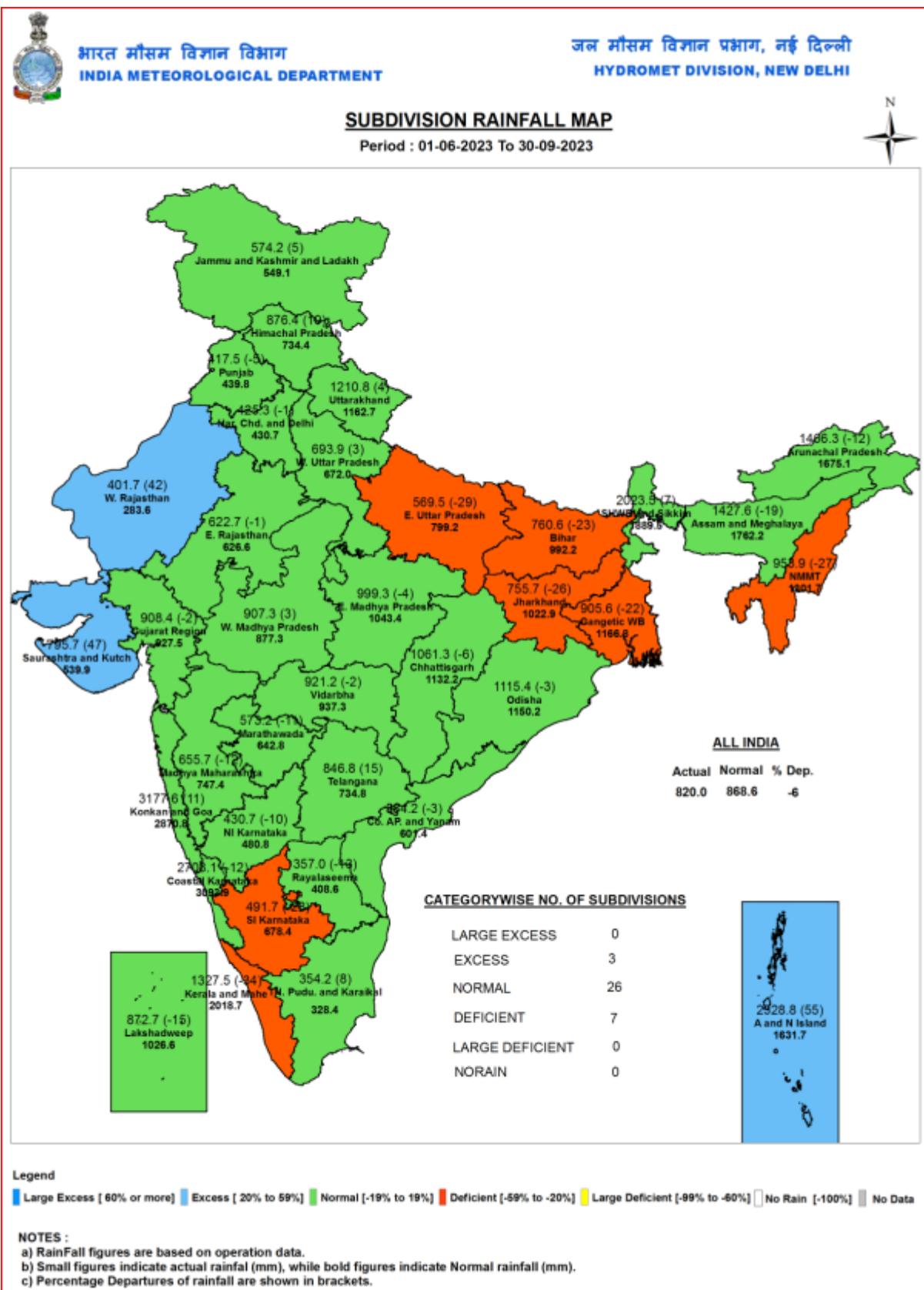


Fig-3

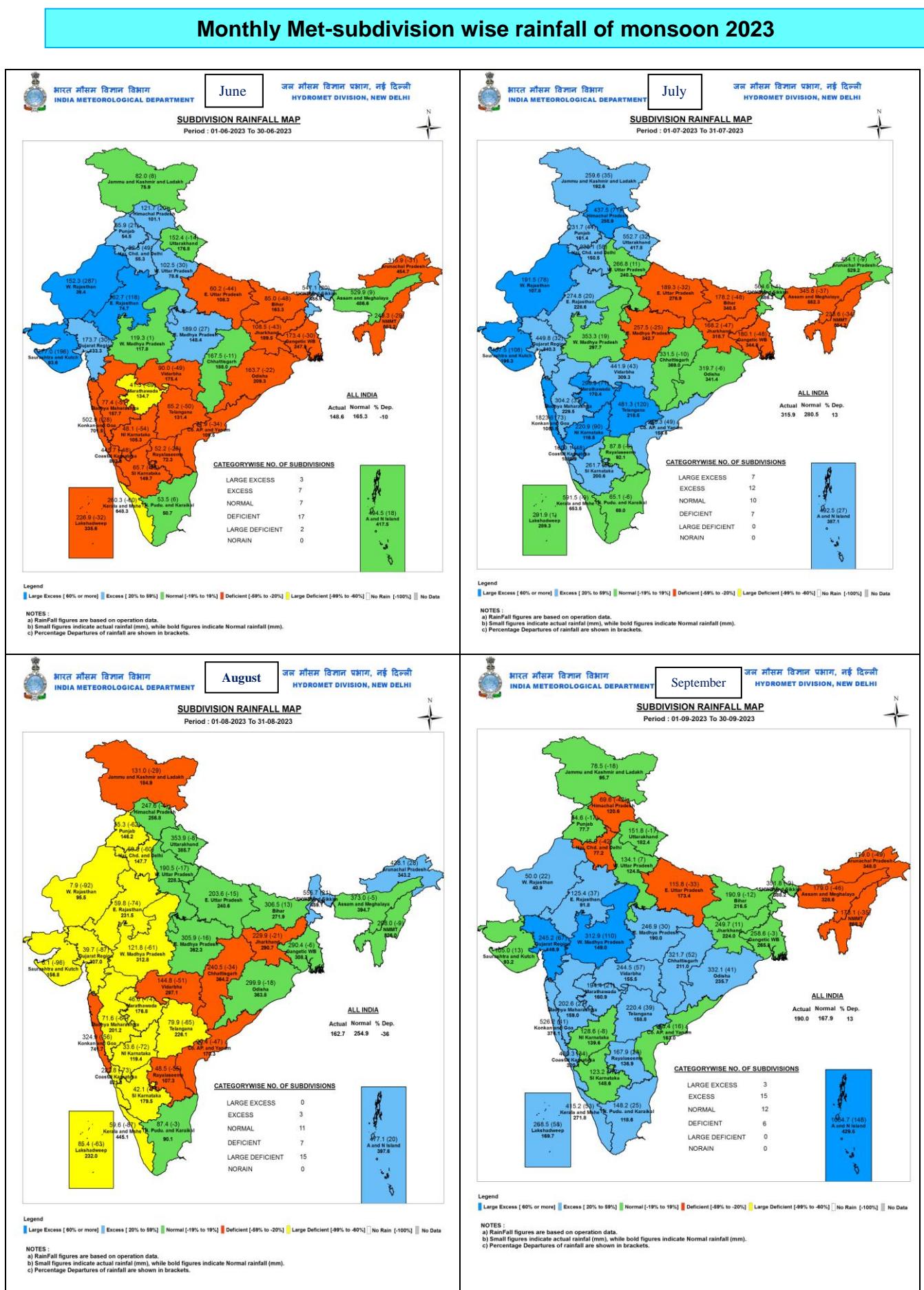


Fig.-4

Spatial Distribution of rainfall

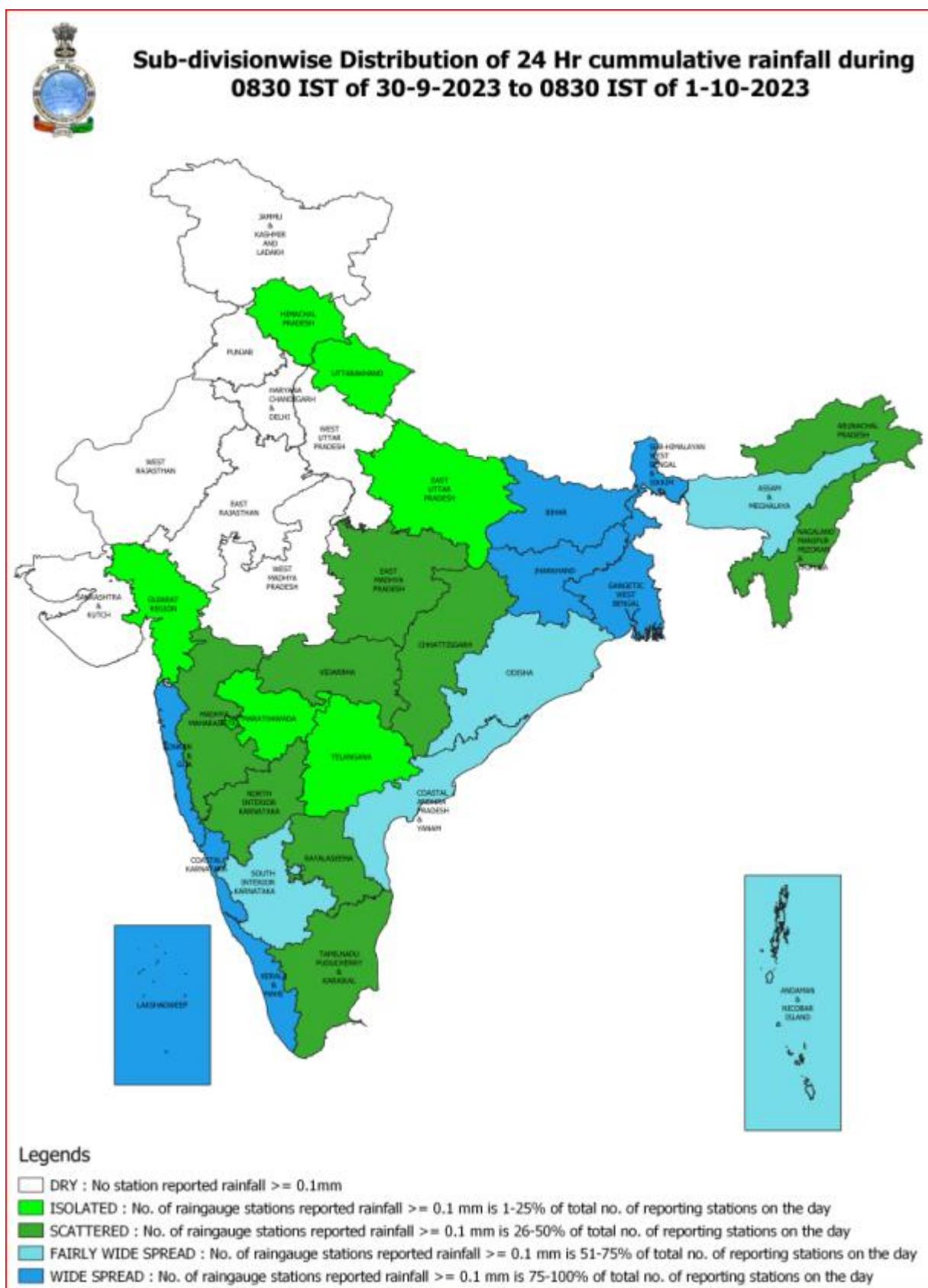
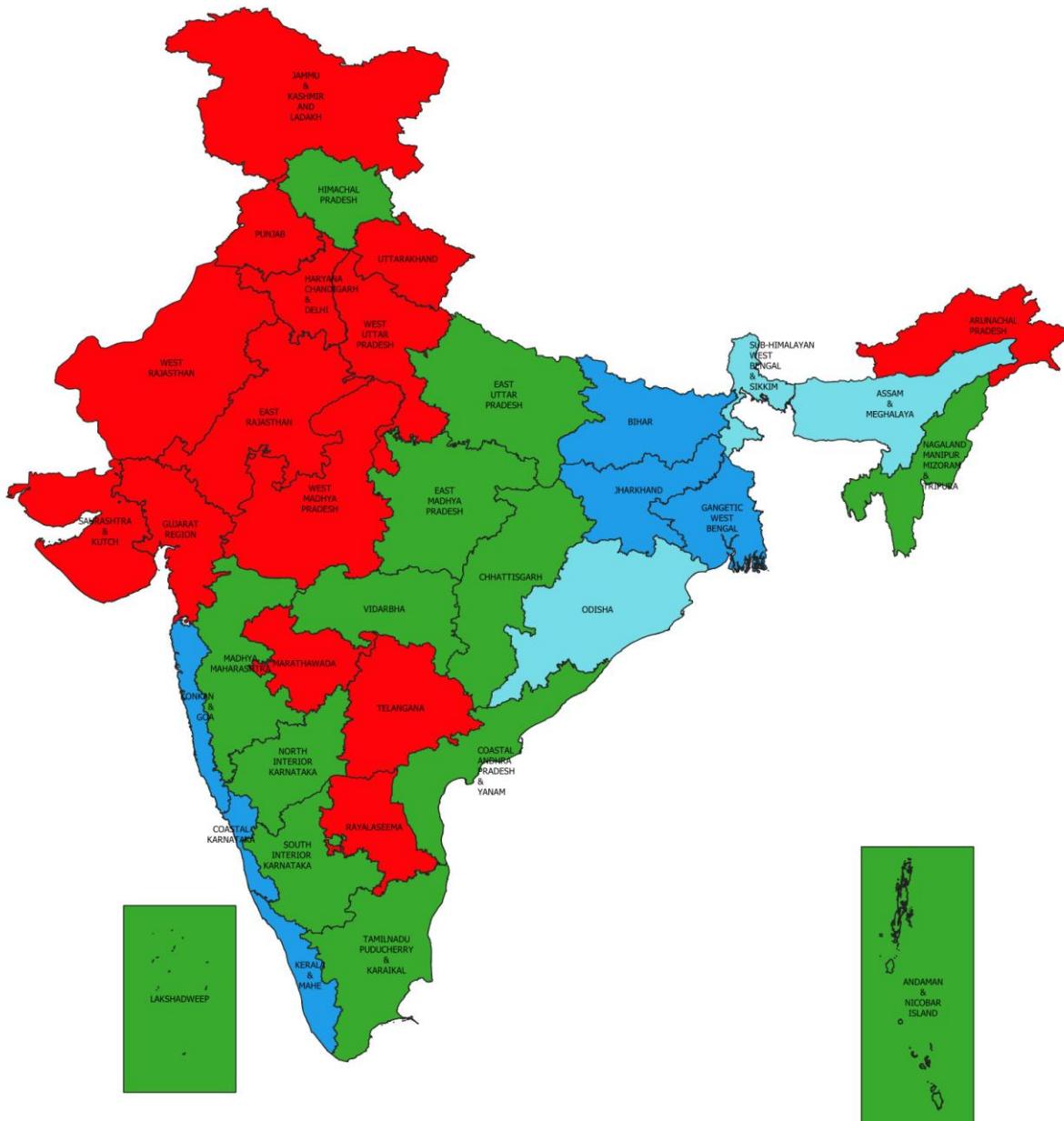


Fig.-5

Monsoon Activity



Monsoon Activity during 0830 IST of 30-9-2023 to 0830 IST of 1-10-2023 with respect to Long Period Average (LPA)



Legends

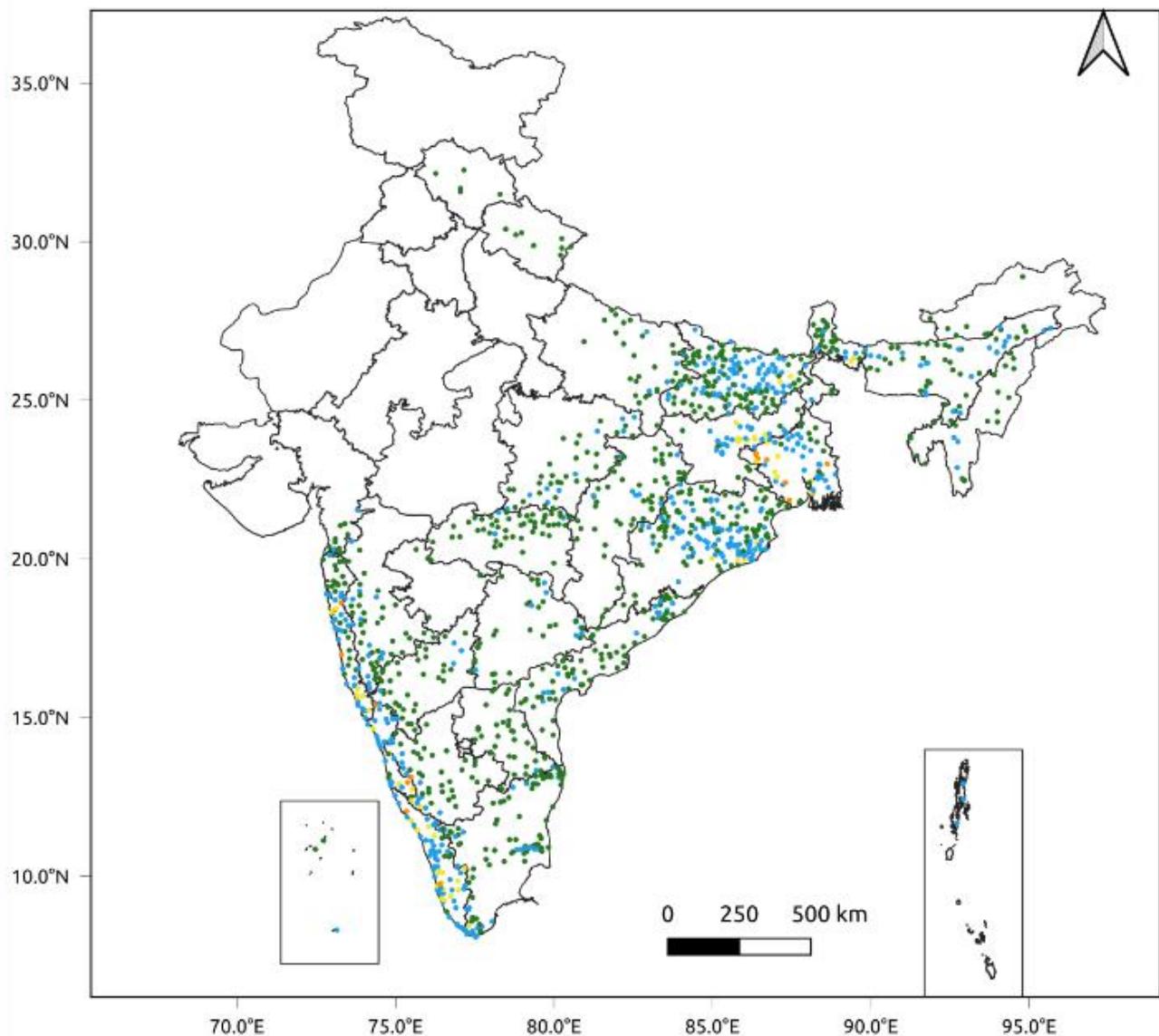
- Weak (Rainfall ≤ -1.5 times of LPA)
- Normal ($-1.5 \text{ times of LPA} < \text{Rainfall} \leq 1.5 \text{ times of LPA}$)
- Active ($1.5 \text{ times of LPA} < \text{Rainfall} \leq 4 \text{ times of LPA}$)
- Vigorous (Rainfall $> 4 \text{ times of LPA}$)

Fig-6

Map of categorised rainfall (mm) during past 24 hours



24 Hr cumulative rainfall recorded over different stations
during 0830 IST of 30-9-2023 to 0830 IST of 1-10-2023



Legends

- Very Light to Light Rainfall (0.1 - 15.5 mm)
- Moderate Rainfall (15.6 - 64.4 mm)
- Heavy Rainfall (64.5 - 115.5 mm)
- Very Heavy Rainfall (115.6 - 204.4 mm)
- Extremely Heavy Rainfall (>=204.5 mm)

Fig-7

Latest Satellite Image of INSAT-3D

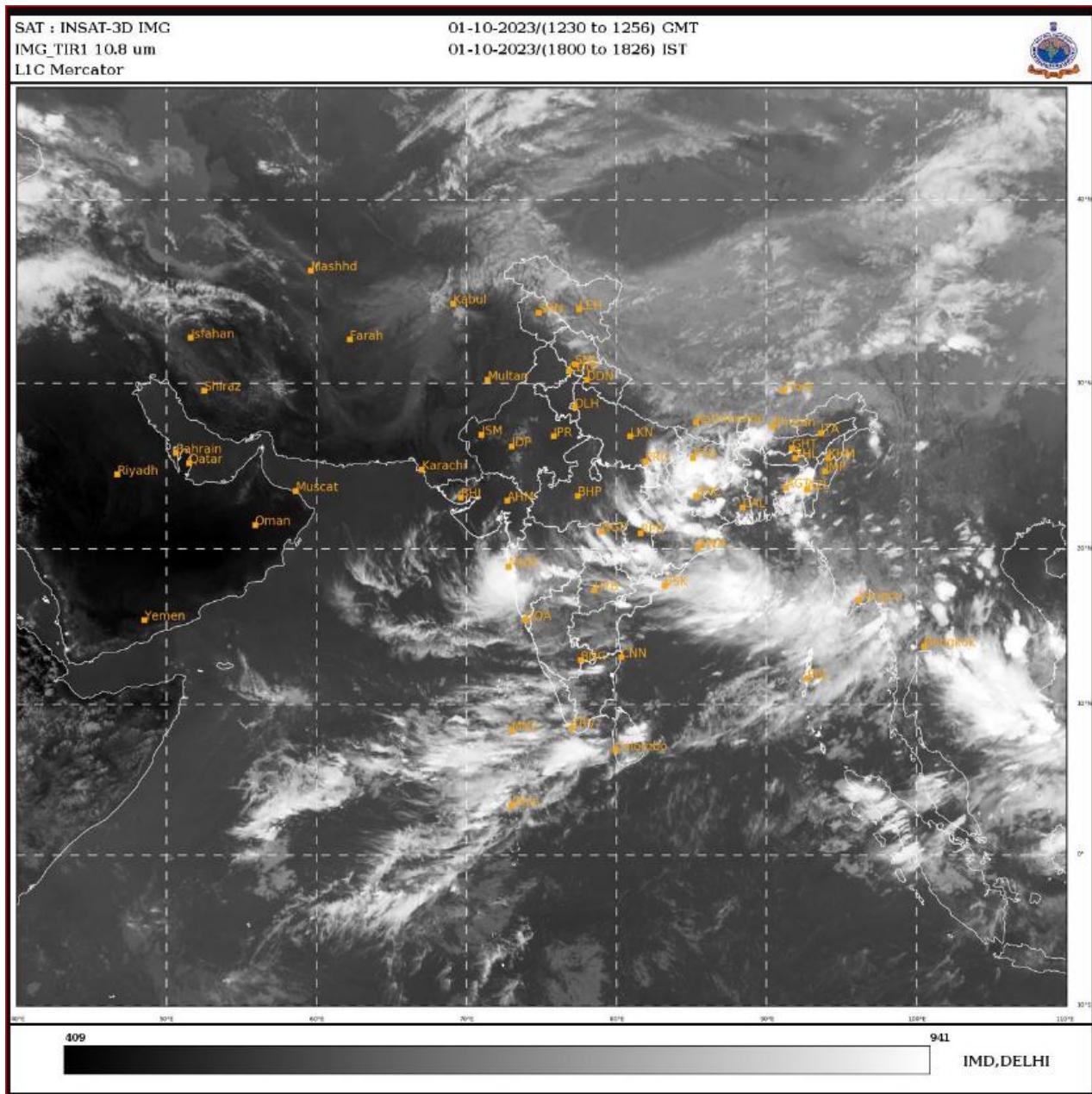


Fig-8
Warning

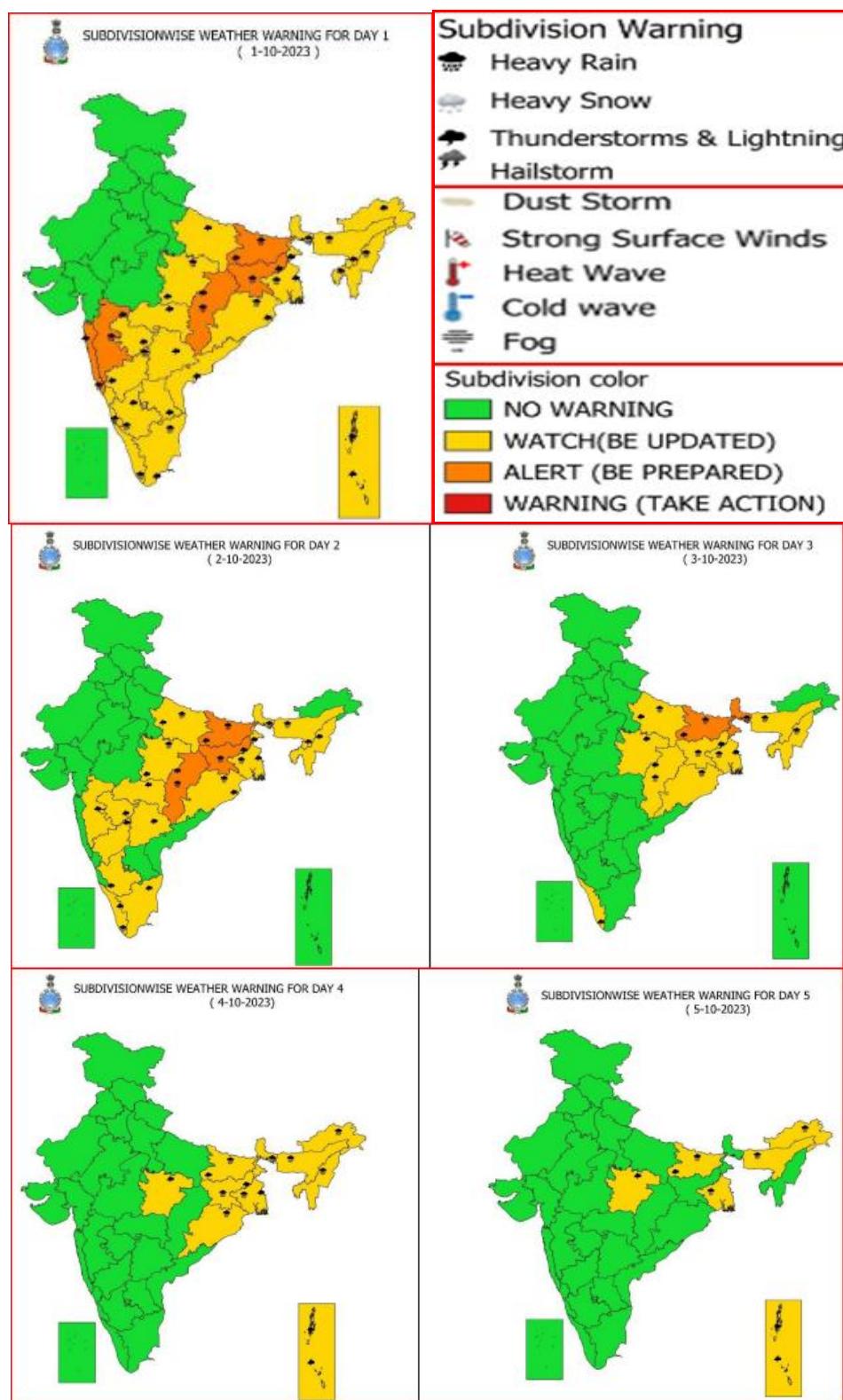


Table-1

7-Day Rainfall Forecast

S. No.	Subdivision	01- Oct	02- Oct	03- Oct	04- Oct	05- Oct	06- Oct	07- Oct
		Day 1	Day 2	Day 3	Day 4	Day 5	Day 6	Day 7
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	WS	WS	WS
2	ARUNACHAL PRADESH	SCT	SCT	FWS	WS	WS	FWS	FWS
3	ASSAM & MEGHALAYA	FWS	FWS	WS	WS	WS	FWS	FWS
4	NAGALAND, MANIPUR, MIZORAM & TRIPURA	FWS	FWS	FWS	WS	WS	FWS	FWS
5	SUB-HIMALAYAN WEST BENGAL & SIKKIM	FWS	WS	WS	WS	WS	FWS	FWS
6	GANGETIC WEST BENGAL	WS	WS	WS	WS	WS	SCT	SCT
7	ODISHA	WS	WS	WS	FWS	FWS	SCT	SCT
8	JHARKHAND	WS	WS	WS	WS	FWS	SCT	SCT
9	BIHAR	WS	WS	WS	FWS	FWS	SCT	SCT
10	EAST UTTAR PRADESH	SCT	SCT	SCT	ISOL	ISOL	DRY	DRY
11	WEST UTTAR PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
12	UTTARAKHAND	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
13	HARYANA CHANDIGARH & DELHI	DRY						
14	PUNJAB	DRY						
15	HIMACHAL PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
16	JAMMU & KASHMIR AND LADAKH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
17	WEST RAJASTHAN	DRY						
18	EAST RAJASTHAN	DRY						
19	WEST MADHYA PRADESH	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
20	EAST MADHYA PRADESH	SCT	SCT	SCT	ISOL	ISOL	DRY	DRY
21	GUJARAT REGION	ISOL	ISOL	DRY	DRY	DRY	DRY	DRY
22	SAURASHTRA & KUTCH	ISOL	DRY	DRY	DRY	DRY	DRY	DRY
23	KONKAN & GOA	WS	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
24	MADHYA MAHARASHTRA	FWS	SCT	ISOL	ISOL	DRY	DRY	DRY
25	MARATHAWADA	ISOL	ISOL	ISOL	DRY	DRY	DRY	DRY
26	VIDARBHA	SCT	SCT	ISOL	ISOL	DRY	DRY	DRY
27	CHHATTISGARH	FWS	FWS	SCT	SCT	ISOL	ISOL	ISOL
28	COASTAL ANDHRA PRADESH & YANAM	SCT	SCT	SCT	SCT	ISOL	ISOL	ISOL
29	TELANGANA	SCT	SCT	SCT	ISOL	ISOL	ISOL	ISOL
30	RAYALASEEMA	SCT	ISOL	ISOL	ISOL	ISOL	ISOL	ISOL
31	TAMILNADU PUDUCHERRY & KARAikal	ISOL						
32	COASTAL KARNATAKA	WS	FWS	FWS	FWS	SCT	SCT	SCT
33	NORTH INTERIOR KARNATAKA	FWS	SCT	ISOL	ISOL	ISOL	ISOL	ISOL
34	SOUTH INTERIOR KARNATAKA	SCT	SCT	SCT	SCT	ISOL	ISOL	ISOL
35	KERALA & MAHE	WS	WS	SCT	SCT	SCT	ISOL	ISOL
36	LAKSHADWEEP	WS	WS	FWS	FWS	SCT	SCT	SCT

Annexure-1

Significant amounts of rainfall (in cm)

(From 0830 hours IST of yesterday to 0830 hours IST of today)

Category of rainfall				
Light: Less than 2cm	Moderate: 2-6 cm	Heavy: 7-11 cm	Very heavy: 12-20 cm	Extremely Heavy: 21cm or more

1 October 2023

ANDAMAN & NICOBAR ISLANDS:- LONG ISLAND-4, MAYA BANDAR-3, PORT BLAIR-2, **ARUNACHAL PRADESH:-** DEOMALI-2, BHALUKPONG-1, TAWANG AWS-1, **ASSAM & MEGHALAYA:-** IIT GUWAHATI ARG-11, KHANAPARA-6, GUWAHATIARG-6, GUWAHATI CITY IMD-6, TEZPUR-5, BEKY RLY.BRIDGE-4, MAJULI-4, JORHAT-4, NEAMATIGHAT-4, MARGHERITA-4, GUWAHATI AP-3, KAMAKHYA ARG-3, KALAKSHETRA ARG-3, KOKRAJHAR-3, NUMALIGARH-3, SHELLA-3, CHERRAPUNJI(RKM)-2, MATIJURI-2, GOSSAIGAON-2, CHERRAPUNJI-2, DHOLAI-2, RANGANADI NT XING-2, GOLAGHATPTO-2, DHUBRI CWC-2, LUMDING-2, DHEKIAJULI-1, MAJBAT-1, DHUBRIIMD-1, KARIMGANJ-1, JIA BHARALI N T XING-1, MANASH NH XING-1, BARPETA-1, SIVASAGAR-1, GOLAGHAT CWC-1, MAWPHLANG-1, BHAGHMARA-1, **NAGALAND, MANIPUR, MIZORAM & TRIPURA:-** AIZWAL-6, LENGPUI-4, LAWNGTLAI AGRI-3, LUNGLEI-3, LAWNGTLAI-1, MOKOKCHANG-1, SAIHA-1, SAIHA AWS-1, SAIHA AGRI-1, **SUB-HIMALAYAN WEST BENGAL & SIKKIM:-** AMFU PUNDIBARI-11, COOCH BEHAR-10, MATHABHANGA-4, NAMTHANG-3, ALIPURDUAR (PTO)-3, MALDA-3, KUMARGRAM-3, FALAKATA-3, BAGDOGRA IAF-2, DOMOHANI-2, JALPAIGURI-1, CHAMPASARI-1, GAJOLDOBA-1, BALURGHAT-1, KABI-1, NH31 BRIDGE-1, NAGARKATA-1, MURTI-1, KALIMPONG-1, **GANGETIC WEST BENGAL:-** SIMULA-19, PURULIA-19, KHARIDWAR-14, MOHANPUR-14, KANSABATI DAM-13, MIDNAPORE(CWC)-13, MIDNAPORE-13, TUSUMA-12, PURIHANSA-9, BANKURA(CWC)-8, DURGACHACK-8, ASANSOL(CWC)-8, LALGARH-8, AMFU KHARAGPUR-7, PHULBERIA-7, ASANSOL-7, ULUBERIA-7, BANKURA-7, KALAIKUNDA (IAF)-6, KALYANI SMO-5, BURNPUR-5, MANKAR-5, JHARGRAM (PTO)-5, DIAMOND HARBOUR-4, GHEROPARA-4, SURI (PTO)-4, RAJNAGAR-4, TANTLOI-4, SRI NIKETAN-4, TILPARA BARRAGE-4, SURI (CWC)-4, HETAMPUR-3, NARAYANPUR-3, D.P.GHAT-3, HARINKHOLA-3, DURGAPUR-3, ALIPORE-3, AMFU KAKDWIP-3, LABPUR-3, MO SALT LAKE-3, BASIRHAT(PT)-2, BAGATI-2, MANGALKOTE-2, MANTESWAR-2, BURDWAN (PTO)-2, CANNING-2, DUM DUM-1, LUCHIPUR-1, BARRACKPUR(IAF)-1, DEBAGRAM-1, KANDI-1, CONTAI-1, RAMPURHAT (DRMS)-1, **ODISHA:-** JATNI-14, SATYABADI-10, KENDRAPARA-9, GOP-7, ODAGAON-7, BHUBAN-6, CUTTACK-6, NISCHINTAKOILI-6, KENDRAPADA PTO-6, LAKHANPUR-6, NAYAGARH-6, SALEPUR-5, AUL-5, KHORDHA PTO-5, TARVA-5, ASTARANGA-5, PARADEEP CWR-5, MAHANGA-4, HEMGIRI-4, LAHUNIPARA-4, DERABIS-4, ALIPINGAL-4, KAPTIPADA-4, KANTAMAL-4, NARAJ-4, BURLA-4, PIPILI-4, DHENKANAL PTO-4, DHENKANAL-4, JAGATSINGHPUR-4, RAGHUNATHPUR-3, TENSA-3, BANARPAL-3, BANAIGARH-3, BIRMAHARAJPUR-3, MOHAKALAPADA-3, PATTAMUNDI-3, PARJANG-3, TIGIRIA-3, MUNDALI-3, KAKATPUR-3, DEOGAON (DISTRICT: JHARSUGUDA)-3, BALIKUDA-3, BARMUL-3, CHILIKI-3, ATHGARH-3, BARI-3, UDALA-3, HIINDOL-3, KHAIRAMAL-3, TIKAPARA-3, KORUKUNDA-3, TANGI-3, KUJANGA-3, TIHIDI-3, BALISANKARA-3, BIRIDI-3, KALINGA-2, NAUGAON-2, SONEPUR-2, ULLUNDA-2, NIALI-2, JAMANKIRA-2, MARSAGHAI-2, PHIRINGIA-2, HARABHANGA-2, SOHELA-2, BAHANGA-2, TALCHER-2, TIRTOL-2, BARPALLI-2, PALLAHARA-2, PADMAPUR-2, PHULBANI-2, PADAMPUR-2, NIMPARA-2, RAIKIA-2, RANPUR-2, CHENDIPADA-2, BANKI-2, DASPALLA-2, KANIHA-2, JUJUMURA-2, KAMAKHYANAGAR-2, ATHMALIK-2, SWAM-PATNA-2, SUKINDA-2, BIJATALA-2, BOLAGARH-2, JHARBANDH-2, BHUBANESWAR AERO-2, KOLABIRA-2, RAJKISHORENAGAR-2, LATHIKATA-2, GANIA-2, SULIAPADA-2, KUSUMI-2, DEOGARH-2, PADIA-1, BINIKA-1, BANPUR-1, RAJNAGAR-1, CHAKAPAD-1, RAIKAKHOL-1, BOUDH GARH-1, GURUNDIA-1, BALIPATNA-1, GARADAPUR-1, KHAJURIPADA-1, BINJHARPUR-1, NARSINGHPUR-1, SAINTALA-1, BEGUNIA-1, BIJEPUR-1, BARGARH-1, NUAGAON-1, BANSPAL-1, ATABIRA-1, PANPOS-1, BRAHMAGIRI-1, DARINGIBADI-1, GONDIA-1, KANTAPADA-1, ANGUL-1, BELGAON-1, SAMBALPUR-1, DHANKAUDA-1, TIKABALI-1, BARKOTE-1, PATNAGARH-1, TIRING-1, TANGARPALI-1, KASHINAGAR-1, MURUDA-1, RAJKANIKA-1, DAITARI-1, **JHARKHAND:-** TENUGHAT-11, NANDADIH-9, PAPUNKI-9, CHAS-9, BOKARO KV AWS-9, PARSABAD-9, PUTKI-8, PANCHET-8, BOKARO THERMAL-8, PANCHET DVC-8, CHANDRAPURA-7, GOMIA-7, MAITHON DVC-7, CHANDANKIARY-6, PUTKI DVC-6, MAITHON-6, PHUSRO-6, PALGANJ-6, KHALARI-5, **RAMGARH (DISTRICT: RAMGARH)-5**, JAMTARA-5, RAMGARH(BDO)-5, GOBINDPUR DVC-5, TULADIH-5, CHANDWA-5, MESSENJOR-5, NARAYANPUR-5, NAWADIH-5, GARU-4, SIKATIA-4, BARKISURIYA-4, JAMTARA FMO-4, ICAR NAMKUM-4, BARKAGAON-4, CIT TATISILWAI-4, MANDU-4, LOHARDAGA KV AWS-4, KONER DVC-4, SAHIBGANJ KV AWS-4, KONER-4, BHURKUNDA-4, RANCHI AERO-3, RAMGARH KV AWS-3, KODERMA DVC-3, DUMRI DVC-3, SHILAICHAK-3, MANDAR-3, BANO SIMDEGA KV AWS-2, CHAKULIA-2, RAMGARH DVC-2, SUJANI KV AWS-2, PATHARGAMA-2, SATGAON-2, BANDGAON-2, DHALBHUMGARH-2, HENDIGIR-2, GIRIDIH BENG BAD KV AWS-2, BORAM-2, ZRS DUMKA-2, TILAIYA-2, TILAIYA DVC-2, JAMSHEDPUR-1, NIMDIH-1, DIYAKEL KHUNTI KV AWS-1, BARHI DVC-1, BURMU-1, PALAMU DTG KV AWS-1, KURDEG-1, RANIA-1, KHUNTPANI-1, JAMSHEDPUR AERO-1, GUMLA BISHNUPUR KV AWS-1, MAHARO-1, HIRANPUR-1, CHAIBASA-1, DALTONGANJ-1, **BIHAR:-** RUPOULI-7, PURNEA-7, JANDHAHA-6, BACHWARA-6, NARPATGANJ-6, MONGHYR-6, DALSINGHSARAI-6, GOGRI-6, CHAUSA-5, EKANGERSARAI-5, SAHEBGANJ-5, BARAUNI-5, MOHANIA-5, PANDAUL-5, ARWAL-4, LALBEGIAGHAT-4, ALALNAGAR-4, DHARHARA-4, MAHANAR-4, GAIGHAT-4, SALAKHUA-4, BAITUNTHPUR-4, KUMARKHAND-4, SABOUR-4, PUSA-4, ROSERA-4, BELDAUR-4, DARBHANGA-4, SIKTA-4, BIHPUR-4, GAUNAHA-4, COLGAON-4, FATEHPUR-3, FATUHA-3, MINAPUR-3,

GHOSI-3, BHAGALPUR-3, KHAGADIA-3, BALTARA-3, MADHEPUR-3, MADHIPURA-3, SAHEBPUR KANAL-3, SIKANDARA-3, SAURBAZAR-3, UDAI KISHANGANJ-3, JHANJHARPUR-3, FORBESGANJ-3, PATORI-3, ASARGANJ-3, CHARPOKHIRI-3, BARH-3, AURAI-3, DIGHALBANK-3, TRIBENIGANJ-3, BARIARPUR-3, SONHAULA-3, BANMANKHI-3, SARAIYA-3, KODAWANPUR/C.B II-3, SONBARSA (DISTRICT: SAHARSA)-3, KURSOLA-3, BARARI-3, KUSHESWARSTAN-3, VAISHALI-3, MUSHARI-3, ISLAMPUR-3, PIRPAITI-3, PATARGHAT-3, ITARAH-3, BHABHUA-3, MATIYANI-3, MURLIGANJ-2, WAZIRGANJ-2, MAHARAJGANJ-2, SANDESH-2, BENIBAD-2, SIRMARI B.PUR-2, ALAULI-2, NAUHATTA (DISTRICT: SAHARSA)-2, JALEY-2, GORI AKOTHI-2, RAJAULI-2, MARSRAKH-2, MAHESHI-2, SINGHESHWAR-2, BASUA-2, JHAJHA-2, PATEPUR-2, MORWA/TAJPUR-2, HARNAUT-2, PHULPARAS-2, SONO-2, GHANSHYAMPUR-2, NAUGACHIA-2, GORaul/DOLI-2, NAWADA-2, SARNERA-2, LAURIA NANDANGARH-2, SUPAUL-2, GUTHANI-2, SAMASTIPUR-2, KAMTAUL-2, KAKO-2, BHORE-2, MAHUA-1, WARISALIGANJ-1, CHERIA B.PUR 1-1, DHENGBRIDGE-1, BAKHARI-1, NAUTAN-1, REWAGHAT-1, CHANAN-1, HAYAGHAT-1, MARAUNA-1, KAUWAKOL-1, PARSA-1, HASANPUR-1, KUDRA-1, PUPARI-1, RANIGANJ-1, HAJIPUR-1, TARARI-1, BARAHARA-1, SURYAGADHA-1, DHENGRAGHAT-1, DEO-1, AMDABAD-1, HISUA-1, GARHI-1, ARARIA-1, SULTANGANJ-1, BIHTA-1, RAJGIR-1, JALALPUR-1, PALIGANJ-1, CHANDAN-1, BARACHATTI-1, RAFIGANJ-1, MOTIHARI-1, GOPALGANJ-1, MADANPUR-1, SHAHPUR-1, PIPRAHI-1, PATAHI-1, MOKAMA-1, NARHAT-1, SAHAR-1, HUSSAINGANJ-1, BIHAR SHRIF-1, BHIMNAGAR-1, TARAPUR-1, KURHANI-1, BARSOI-1, GHURRIYA-1, BAIRGANIA-1, CHERWA-1, SANGRAMPUR-1, HALSI-1, CHAKAI-1, RAMPUR-1, SIKTI-1, BAHARGAMA-1, **EAST UTTAR PRADESH:-** GHAZIPUR CWC-6, BANSI CWC-4, VARANASI-B.H.U.-3, TURTIPAR-3, RAJGHAT (VNS CWC)-1, MARIAHU-1, BALRAMPUR(T)-1, CHUNAR-1, MADIAHAN-1, AZAMGARH-1, JALALPUR FMO-1, **HIMACHAL PRADESH:-** MANALI-1, **EAST MADHYA PRADESH:-** SINGRAULI-AWS-5, DHANORA-5, KATANGI-3, BAHRI-3, CHAND-3, CHITRANGI-3, BIJURI-2, PARASWADA-2, SARAI-2, PANDHURNA-2, CHAURI-2, GHUGHRI-2, BEOHARI-2, BICHHIA-1, UMARIA-AWS-1, MATIYARI-1, BAJAG-1, KOTMA-1, KHAIRLANJI-1, BENIBARI-1, KATNI(MUDWARA)-1, **GUJARAT REGION:-** SAGBARA-3, SILVASSA-2, KAPRADA-1, VALSAD KVK AWS-1, DANGKVK AWS-1, VAPI-1, **KONKAN & GOA:-** RATNAGIRI - IMD OBSY-13, SUDHAGAD PALI-12, ROHA-12, SAWANTWADI-9, MURUD-8, MAPUSA-8, PERNEM-8, DODAMARG-7, SANGUEM-7, TALA-7, RAMESHWARAGRI-6, QUEPEM-6, MULDE AGRI-6, AWALEGAON - ARG-5, KHALAPUR-5, KARJATAGRI-5, PEN-5, MATHERAN-5, PANJIM - IMD OBSY-5, CANACONA-4, MORMUGAO - PMO IMD-4, MARGAO-4, MALVAN-4, MHASLA-3, DAPOLIAGRI-3, SHRIWARDHAN-3, HARNAI IMD OBSY-3, KUDAL-3, DABOLIM N.A.S.-NAVY-3, TALASARI-3, WAKWALIAGRI-3, COLABA - IMD OBSY-3, KANKAVLI-2, URAN-2, POLADPUR-2, GUHAGARH-2, MAHAD-2, MANGAON-2, PANVELAGRI-1, BHIWANDI-1, SANGAMESHWAR DEVRUKH-1, LANJA-1, TBIA IMD PART TIME-1, CHIPLUN-1, VAIBHAVWADI-1, DEVGAD-1, JAWHAR-1, MURBAD-1, RAJAPUR-1, MANDANGAD-1, MAHALAXMIAWS-1, SANTACRUZ - IMD OBSY-1, KHED-1, **MADHYA MAHARASHTRA:-** LONAVALAAGRI-6, VADGAON MAVAL-6, CHINCHWAD - ARG-5, SURGANA-4, CHANDGAD-4, KARAD-3, BHOR-3, AJRA-2, TASGAON-2, SHIRUR GHODNADI-2, AMBEGAON GHODEGAON-2, SHIRALA-2, SANGLI - IMD OBSY-2, GARGOTI / BHUDARGAD-2, GAGANBAWADA-2, MAHABALESHWAR- IMD OBSY-2, PAUD MULSHI-1, SHOLAPUR - IMD OBSY-1, PATAN-1, NDA PUNE - ARG-1, KHANDALA BAVDA-1, WAI-1, WALVA ISLAMPUR-1, KAGAL-1, PARNER-1, PUNE CITY - IMD OBSY-1, TRIMBAKSHWAR-1, PALUS-1, VELHE-1, GADHINGLAJ-1, MANGALVEDHA-1, SHAHUWADI-1, **MARATHWADA:-** HADGAON-1, **VIDARBHA:-** AMGAON-4, WARUD-3, DHAMANGAON RLWY-2, AGRICULTURE COLLEGE-2, CHAMORSHI-1, SADAKARJUNI-1, SALEKASA-1, MOHADI-1, AKOLA-1, RAMTEK-1, GOREGAON-1, HINGNA-1, TUMSAR-1, **CHHATTISGARH:-** CHAMPA-5, PUSAUR-2, JANJGIR-2, KUSMI-2, BALODA-2, KAWARDHA-2, BASANA-1, MARWAHI-1, MALKHARODA-1, PANDHARIA-1, PATHALGAON-1, SARANGARH-1, RAIGARH-1, RAJPUR-1, **COASTAL ANDhra PRADESH & YANAM:-** SATTENAPALLE-5, GANTYADA-3, NARSIPATNAM-3, PALAKONDA-3, KARAMCHEDU-3, SALUR-3, MENTADA-3, MUNDLAMURU-3, MARRIPUDI-2, BONDAPALLE-2, TENALI-2, GAJAPATHINAGARAM-2, SEETHANAGARAM-2, Darsi-2, LAM(A)-1, NELLIMARLA-1, TADEPALLIGUDEM-1, KOYYALAGUDEM-1, BAPATLA-1, CHIMAKURTHI-1, MASULIPATNAM CDR-1, AVANIGADA-1, BESTAVARIPETA-1, VIJAYAWADA A.P.-1, KUKUNOOR-1, VEERAGHATTAM-1, REPALLE-1, POLAVARAM-1, MANDASA-1, AMALAPURAM-1, DENKADA-1, SANTHAMAGULURU-1, VIZIANAGARAM-1, JIYYAMMA VALASA-1, **TELANGANA:-** BHADRACHALAM-5, ASWAPURAM-4, BHADRACHALAM(ARG)-4, KOTAPALLE-3, PALAWANCHHA-3, TANDOORMNCL-3, SULTANABAD-2, MAKTHAL-2, DAHEGAON-2, BURGAMPADU-2, PINAPAKA-1, ASIFABAD-1, BAZARHATHNOOR-1, SRIRAMPUR-1, TANDUR(A)-1, **RAYALASEEMA:-** SATYAVEDU-3, GUDUR (DISTRICT: TIRUPATI)-2, PAKALA-1, BADVEL-1, CHITTOOR-1, NAGARI-1, KALAKADA-1, RUDRAVARARAM-1, **TAMILNADU, PUDUCHERRY & KARAikal:-** OOTHU-11, WORTH ESTATE CHER-10, NLUMUKKU-9, CHINNAKALAR-9, GUNDAR DAM-8, TALUK OFFICE PANDALUR-8, KALIAL-7, CINCONA-7, BALAMORE-7, PECHIPARAI-7, VALPARAI PTO-6, ADAYAMADAI-6, KAKKACHI-6, SHOLAYAR-6, KOZHIPORVILAI-5, PERUNCHANI DAM-5, VALPARAI PAP-5, PUTHAN DAM-5, SURALACODE-5, VALPARAI TALUK OFFICE-5, THIRPARAPP-5, MANJOLAI-5, AVALANCHE-5, KUZHITHURAI-5, KANNIMAR-4, MULLANGINAVILLAI-4, SHENCOTTAH-4, CHITTAR-4, MUKKDAL DAM-4, PERIYAR-4, THEKKADI-4, THUCKALAY-4, MYLAUDY-4, BARWOOD-4, MAMBZHATHURAIYARU-3, COLACHEL-3, GRAND ANAICUT-3, ERANIEL-3, BHoothapandy-3, ANAIKEDANKU-3, ADAVINAINNARKOIL DAM-3, DEVALA-3, HARISAN MALAYALAM LTD.-3, TIRUVAIYARU-3, UPPER BHAVANI-3, KOTTARAM-3, SIVALOGAM(CHITTAR II)-3, PAPANASAM-3, AYIKUDI-3, NADUVATTAM-3, SIRUVANI ADIVARAM-3, AMBUR-3, NAGERCOIL-2, ARALVAIMOZHI-2, PALLIPATTU-2, WOOD BRAIYAR ESTATE-2, TIRUCHIRAPPALLI JUNCTIO-2, VALANGAIMAN-2, KODUMUDIYARU DAM-2, THENKASI-2, VELLORE-2, KODAVASAL-2, AMBATHUR-2, VADAPUDUPATTU-2, G BAZAR-2, KANYAKUMARI-2, THIRUPATHISARAM AWS-2, TIRUKATTUPALLI-2, TRP

AP-1, TIRUTTANI-1, SERVALAR DAM-1, RADHAPURAM-1, UPPER GUDALUR-1, KURUNTHancode-1, PERAMBUR-1, AYYAMPETTAI-1, PONMALAI-1, NANNILAM-1, NANDHIYAR HEAD-1, AVADI-1, GADANA DAM-1, PANAPAKKAM-1, MANIMUTHARU-1, KALAKADU-1, THUVAKUDI IMTI-1, PALACODE-1, AMMUNDI-1, TIRUR KVK AWS-1, EMERALAD-1, KVK KATTUKUPPAM ARG-1, THONDAMUTHUR-1, CHENNAI COLLECTORATE BU-1, PONNERI-1, KARUPPANADHI DAM-1, YERCAUD-1, THIRUMANUR-1, THANJAI PAPANASAM-1, ANAIMADUVU DAM-1, MYLAMPATTI-1, **COASTAL KARNATAKA:-** DHARMASTHALA-15, CASTLE ROCK-14, MANI-11, UPPINANGADI-9, ANKOLA-8, KOLLUR-7, SIDDAPURA-6, JAGALBET-6, MANCHIKERE-5, MANKI-5, KUMTA-5, KADRA-5, PUTTUR HMS-5, GERSOPPA-4, PANAMBUR OBSY-4, SHIRALI PTO-4, YELLAPUR-4, HONAVAR OBSY-4, KARWAR OBSY-3, MANGALURU AP OBSY-3, MANGALURU-3, KUNDAPUR-3, SIDDAPUR-2, KIRAVATTI-2, MUNDGOD-2, HALIYAL-1, SULYA-1, BANAVASI-1, KOTA-1, **NORTH INTERIOR KARNATAKA:-** LONDA-5, KALABURGI OBSY-3, CHITTAPUR-2, SHAHPUR-2, BELAGAVI PTO-2, HUKKERI-1, SANKESHWAR-1, KALGHATGI-1, SEDAM-1, BELAGAVI AP OBSY-1, HIDKAL DAM-1, DHARWAD (HOS)-1, **SOUTH INTERIOR KARNATAKA:-** KOTTIGEHARA-12, BHAGAMANDALA-11, VIRAJPET-9, MADIKERI PTO-6, NAPOKLU-5, SAKLESHPURA-5, PONNAMPET PWD-5, HUNCHADAKATTE-3, THALAGUPPA-3, LINGANAMAKKI HMS-3, SARGUR-2, SRINGERI HMS-2, KAMMARDI-2, KALASA-2, HARANGI-2, SOMWARPET-1, BELUR-1, TUMAKURU-1, HUNSUR-1, GOWRIBIDANUR-1, **KERALA & MAHE:-** TALIPARAMBA-13, VAIKOM-13, THYCAUTTUSSERY AWS-11, CHERTHALA-10, PEERMADE TO-10, PIRAVAM-9, ODAKALI AWS-9, PADINJARATHARA DAM AWS-8, VILANGAD AWS-8, VYTIRI-8, PIRAPPANCODE AWS-8, PINARAYI AWS-8, NILAMBUR-8, ALWAYE PWD-8, MAVELIKARA-7, PERUMPNAVUR-7, KURUDAMANNIL-7, KOTTAYAM-7, AMS KANNUR-7, VILANGANKUNNU ARG-7, IDAMALAYAR DAM AWS-7, TELLICHERY-7, KOCHI C.I.A.L.-7, HARIPAD-7, PALLURUTHY ARG-7, MATTANNUR ARG-7, QUILANDI-7, IDUKKI-7, VADAKARA-6, KONNI-6, MANJERI-6, NEELESWARAM ARG-6, KANJIRAPPALLY-6, KARIKUR AP.-6, KUMARAKAM-6, KOTTARAKKARA AWS-6, PADANNAKKAD AWS-6, URUMI AWS-6, PUNALUR-6, KOOTHATTUKULAM AWS-6, KODUNGALLUR-5, THIRUVALLA AWS-5, KOCHI I.A.F.-5, THODUPUZHA-5, ARALAM AWS-5, ENAMAKKAL-5, VADAKKANCHERRY-5, MANNARKKAD AWS-5, MAHE-5, CHOONDY AWS-5, KOZHIKODE-5, KANNUR-5, KUNNATHANAM AWS-5, ANGADIPURAM-4, BAYAR AWS-4, RANNI AWS-4, CHEMBERI AWS-4, ALAPUZHA-4, VYANTHALA ARG-4, THATTATHUMALA AWS-4, LAHA AWS-4, PALEMAD AWS-4, MYLADUMPARAAGRI-4, VELLANIKKARA-4, PAMPADUMPARA AWS-4, CHALAKUDI-4, VARKALA-4, MUNNAR KSEB-4, MANNARKKAD-4, HOSDURG-4, THIRUVANANTHAPURAM-3, MANCOMPU-3, MALAMPUZHA DAM AWS-3, AMBALAVAYAL-3, TRIVANDRUM AERO-3, NEYYATTINKARA-3, PALAKKAD-3, KUPPADY-3, LOWER SHOLAYAR AWS-3, THRITLA-3, VAKKAD AWS-3, ALUVA AWS-3, PATTEMBI-3, KAYAMKULAM-3, THAVANUR AWS-3, KALAMASSERY AWS-3, IRINJALAKUDA-3, NOORANAD AWS-3, KUNNAMKULAM-2, CHERTHALA AWS-2, MANANTODDY-2, PARIPALLI AWS-2, KUDULU-2, KAYAMKULAM AGRI-2, OTTAPALAM AWS-2, KUNDALA DAM AWS-2, KUPPADI AWS-2, KARUMADI AWS-2, OTTAPALAM-2, ANCHAL ARG-1, MEENANGADI ARG-1, KOLLAM RLY-1, VATTAVADA AWS-1, **LAKSHADWEEP:-** MINICOY-3.

AP	Airport	FMO	Flood Meteorological Office	PBO	Pilot Balloon Observatory
AWS	Automated Weather Station	IAF	Indian Air Force	REV	Revenue
ARG	Automated Rain Gauge	IMD	India Meteorological Department	SR	State Raingauge
CDR	Cyclone Detection Radar	PWD	Public Works Department		