

# Government of India Ministry of Earth Sciences India Meteorological Department



Press Release
Date: 11th October, 2024

Time of Issue: 1300 hours IST

Subject:(i) The Well marked low pressure area over eastcentral Arabian sea off Maharashtra coast is likely to move west-northwestwards and intensify into a Depression over central Arabian Sea by morning of 13<sup>th</sup> October.

(ii) Isolated heavy rainfall activity very likely over Kerala & Mahe and Tamil Nadu during the week; Coastal Andhra Pradesh & Yanam on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup>; Rayalaseema during 14<sup>th</sup> -16<sup>th</sup>; South Interior Karnataka on 11<sup>th</sup>, 12th, 15<sup>th</sup> & 16<sup>th</sup> October, 2024.

#### Realised weather during past 24 hours till 0830 hours IST of today (Annexure I)

**Heavy to very Heavy rainfall** at isolated places over Konkan & Goa; **Heavy rainfall** at isolated places over Arunachal Pradesh, Gujarat Region, Madhya Maharashtra, Coastal Andhra Pradesh & Yanam, Rayalaseema, Chhattisgarh, South Interior Karnataka, Tamil Nadu, Puducherry & Karaikal.

#### On further Withdrawal of Southwest Monsoon

- ✓ The line of withdrawal of Southwest Monsoon now passes through 29°N/86°E, Darbhanga, Hazaribagh, Pendra Road, Narsinghpur, Khargaon, Nandurbar, Navsari and 20°N/70°E.
- ✓ Conditions are favourable for further withdrawal of Southwest Monsoon from remaining parts of Gujarat, Madhya Pradesh, Jharkhand, Bihar, some more parts of Maharashtra, Chhattisgarh and some parts of Odisha, West Bengal & Sikkim during next 2 days.

#### **Weather Systems:**

- ✓ Yesterday's Well Marked Low pressure area now lies over eastcentral Arabian sea off Maharashtra coast at 0830 hours IST of today, the 11<sup>th</sup> October 2024. It is likely to move west-northwestwards and intensify into a Depression over central Arabian Sea by morning of 13<sup>th</sup> October.
- ✓ An **upper air cyclonic circulation** lay over south Tamil Nadu coast in lower tropospheric levels.
- ✓ Another **upper air cyclonic circulation** lay over central parts of south Bay of Bengal in lower tropospheric levels.

#### Forecast & Warnings (upto 7 days) (Annexure II & III):

#### **South Peninsular India**

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Lakshadweep, South Interior Karnataka, Kerala & Mahe; Scattered to Fairly widespread light to moderate rainfall very likely over Coastal Andhra Pradesh & Yanam, Rayalaseema, North Interior Karnataka, Coastal Karnataka, Tamil Nadu, Puducherry & Karaikal; Isolated to Scattered light to moderate rainfall very likely over Telangana during the week.
- ✓ **Isolated very heavy rainfall** very likely over Kerala & Mahe on 11<sup>th</sup>; Tamil Nadu, Puducherry & Karaikal on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup>; Rayalaseema, Coastal Andhra Pradesh & Yanam on 15<sup>th</sup> October.

✓ **Isolated heavy rainfall** very likely over Kerala & Mahe during the week; Tamil Nadu, Puducherry & Karaikal during 11<sup>th</sup> -16<sup>th</sup>; Lakshadweep, Coastal Karnataka & North Interior Karnataka on 11<sup>th</sup>; Coastal Andhra Pradesh & Yanam on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup>; Rayalaseema during 14<sup>th</sup> -16<sup>th</sup>; South Interior Karnataka on 11<sup>th</sup>, 12<sup>th</sup>, 15<sup>th</sup> & 16<sup>th</sup> October.

#### **Northeast & East India**

- ✓ Fairly widespread to widespread light to moderate rainfall very likely over Andaman & Nicobar Islands; Fairly widespread to widespread light to moderate rainfall very likely over Arunachal Pradesh, Assam & Meghalaya during next 2 days & Scattered light to moderate rainfall over the same region during the subsequent 5 days; Isolated to Scattered light to moderate rainfall very likely over East India, Nagaland, Manipur, Mizoram & Tripura during the week.
- ✓ **Isolated heavy rainfall** very likely over Arunachal Pradesh on 11<sup>th &</sup> 12<sup>th</sup>; Assam & Meghalaya on 11<sup>th</sup>; Andaman & Nicobar Islands on 13<sup>th</sup> October.

#### **West India**

- ✓ Scattered to Fairly widespread light to moderate rainfall very likely over Konkan & Goa, Gujarat State during next 3 days & Isolated to scattered light to moderate rainfall during the next subsequent 4 days; Isolated to scattered light to moderate rainfall over remaining region during the week
- ✓ **Isolated heavy rainfall** very likely over Konkan & Goa on 11<sup>th</sup>; Madhya Maharashtra & Gujarat Region on 11<sup>th</sup> & 12<sup>th</sup> October.

#### **Northwest & Central India:**

✓ No significant rainfall likely over these regions during the week.

#### **Fishermen warning**

✓ Squally weather with wind speed 35 kmph to 45 kmph gusting to 55 kmph is likely to prevail along and off Somalia coast, over Maldives, Lakshadweep Comorin areas, southeast Arabian sea and many parts of southwest Arabian sea, along and off Kerala, Karnataka, goa, Maharashtra, south Gujarat coasts, most parts of east central Arabian sea, Gulf of Mannar, along and off south Sri Lanka coast and central parts of south Bay of Bengal. Fishermen are advised not to venture into these areas during the period.

#### Southwest Monsoon withdrawal Map (ANNEXURE IV)

#### For more details, kindly refer:

https://mausam.imd.gov.in/responsive/all\_india\_forcast\_bulletin.php

For District wise warnings refer:

https://mausam.imd.gov.in/responsive/districtWiseWarningGIS.php

For Fishermen warnings, kindly refer:

https://rsmcnewdelhi.imd.gov.in/uploads/archive/51/51\_bdf575\_GRAPHIC.png

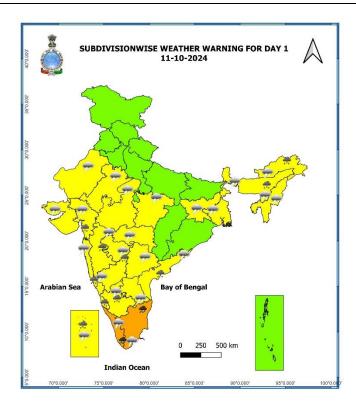
# Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 11.10.2024 (in cm):

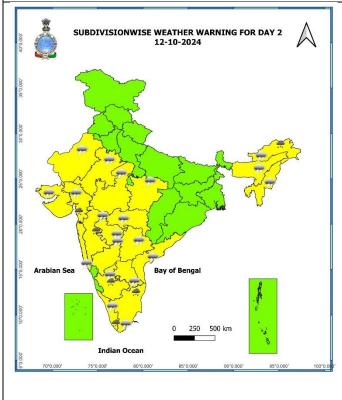
- \* Konkan & Goa: Matheran (dist Raigad) 13,
- ❖ Coastal Andhra Pradesh & Yanam: Santhamaguluru (dist Bapatla) 11, Karamchedu (dist Bapatla) 7,
- ❖ Arunachal Pradesh: Itanagar (dist Papumpara) 10, Oyan Arg (dist East Siang) 9, Naharlagun (dist Papumpara) 9, Pasighat\_ Aero (dist East Siang) 9,
- ❖ Tamil Nadu, Puducherry & Karaikal: Puducherry Town (dist Puducherry) 9, Madukkur (dist Thanjavur) 8,Singampunari (dist Sivagangai), Kallikudi (dist Madurai), Puducherry AWS (dist Puducherry) 7 each,
- ❖ Madhya Maharashtra: Malegaon Camp Imd Pt (dist Nashik) 9, Satna Baglan (dist Nashik) 7,
- ❖ Gujarat Region: Valod (dist Tapi) 8, Vyara (dist Tapi) 7, Dolvan (dist Tapi) 7,
- Chhattisgarh: Gangalur (dist Bijapur) 8,
- ❖ South Interior Karnataka: Nayakanahatty (dist Chitradurga) 9, Kottigehara (dist Chikkamagaluru) 7,
- \* Rayalaseema: Amarapuram (dist Sri Sathyasai District) 7,

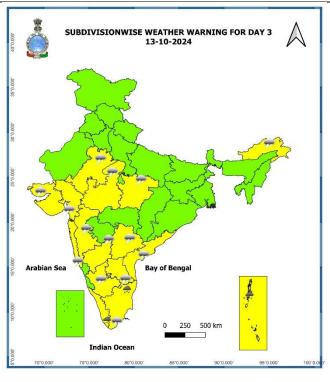
7 Days Rainfall Forecast									
S.		11- Oct	12- Oct	13- Oct	14- Oct	15- Oct	16- Oct	17- Oct	
No.	Subdivision	Day							
		1	2	3	4	5	6	7	
1	ANDAMAN & NICOBAR ISLANDS	FWS	FWS	WS	WS	FWS	FWS	FWS	
2	ARUNACHAL PRADESH	WS	FWS	SCT	SCT	SCT	SCT	SCT	
3	ASSAM & MEGHALAYA	FWS	SCT	SCT	SCT	SCT	SCT	SCT	
4	NAGALAND,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

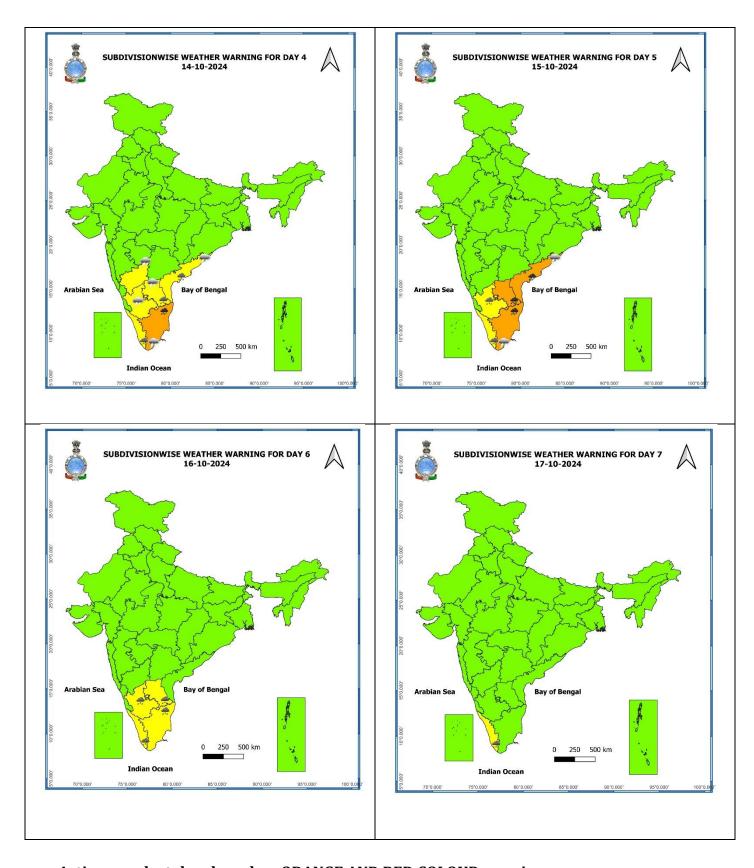
• As the lead period increases forecast accuracy decreases.

#### **ANNEXURE III**

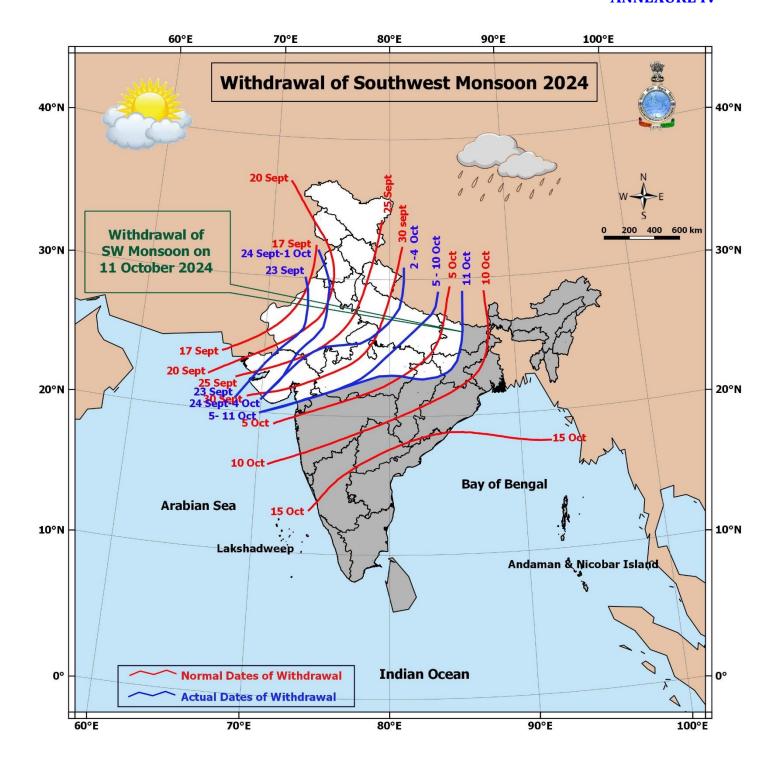








- Action may be taken based on ORANGE AND RED COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.



# Impact due to

✓ **Isolated heavy to very heavy rainfall** very likely over Kerala & Mahe on 11<sup>th</sup>; Tamil Nadu, Puducherry & Karaikal on 11<sup>th</sup>, 14<sup>th</sup> & 15<sup>th</sup>; Rayalaseema, Coastal Andhra Pradesh & Yanam on 15<sup>th</sup> October.

# **Impact Expected**

- ✓ Localized Flooding of roads, water logging in low lying areas and closure of underpasses mainly in urban areas of the above region.
- ✓ Occasional reduction in visibility due to heavy rainfall.
- ✓ Disruption of traffic in major cities and roadways due to water logging in roads leading to increased travel time.
- ✓ Minor damage to kutcha roads.
- ✓ Possibilities of damage to vulnerable structure.
- ✓ Localized Landslides/Mudslides/landslips/mud slips/land sinks/mud sinks.
- ✓ Damage to horticulture and standing crops in some areas due to inundation and wind.
- ✓ It may lead to riverine flooding in some river catchments (for riverine flooding please visit Web page of CWC)

### **Action Suggested**

- ✓ Judicious regulation of surface transports including railways and roadways.
- ✓ Check for traffic congestion on your route before leaving for your destination.
- ✓ Follow any traffic advisories that are issued in this regard.
- ✓ Avoid going to areas that face the water logging problems often.
- ✓ Avoid staying in vulnerable structure

## Agromet advisories for Heavy Rainfall likely over various parts of the country

- ✓ In **Tamil Nadu**, drain out excess water from rice nurseries and recently transplanted rice fields; postpone harvesting of matured millet crops.
- ✓ Make necessary arrangements for draining out excess water from standing crop fields and fruit orchards to avoid water stagnation in Konkan & Goa, Madhya Maharashtra, Gujarat region, Kerala, Lakshadweep, Karnataka, Arunachal Pradesh and Assam & Meghalaya.
- ✓ Keep the harvested produce at safer places.
- ✓ Provide mechanical support to horticultural crops & staking to vegetables.

#### **Legends & abbreviations:**

- **♦ Heavy Rain:**64.5-115.5mm; **Very Heavy Rain:**115.6-204.4mm; **Extremely Heavy Rain:** >204.4mm.
- ❖ Obsy: Observatory; AWS: Automatic Weather Station; ARG: Automatic Rain Gauge; dist: District: NH: National Highway; KVK: Krishi Vigyan Kendra; DVC: Damodar Valley Corporation; PTO: Part Time Office, Aero: Aerodrome, IAF: Indian Air Force.
- **Region wise classification of meteorological Sub-Divisions:** 
  - **Northwest India:** Western Himalayan Region (Jammu-Kashmir-Ladakh-Gilgit-Baltistan-Muzaffarabad, Himachal Pradesh and Uttarakhand); Punjab, Haryana-Chandigarh-Delhi; West Uttar Pradesh, East Uttar Pradesh, West Rajasthan and East Rajasthan.
  - Central India: West Madhya Pradesh, East Madhya Pradesh, Vidarbha and Chhattisgarh.
  - East India: Bihar, Jharkhand, Sub-Himalayan West Bengal & Sikkim; Gangetic West Bengal, Odisha and Andaman & Nicobar Islands.
  - Northeast India: Arunachal Pradesh, Assam & Meghalaya and Nagaland, Manipur, Mizoram & Tripura.
  - West India: Gujarat Region, Saurashtra & Kutch, Konkan & Goa, Madhya Maharashtra and Marathawada.
  - **South India:** Coastal Andhra Pradesh & Yanam, Telangana, Rayalaseema, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka, Kerala & Mahe, Tamil Nadu, Puducherry & Karaikal and Lakshadweep.



35. केरल और माहे

36. लक्षद्वीप

#### राष्ट्रीय मौसम पूर्वानुमान केन्द्र भारत मौसम विज्ञान विभाग पृथ्वी विज्ञान मंत्रालय

#### National Weather Forecasting Centre India Meteorological Department Ministry of Earth Sciences

35. Kerala & Mahe

36. Lakshadweep

# **LEGENDS**



# **SPATIAL DISTRIBUTION** (% of Stations reporting)

% Stations	Category	% Stations	Category
76-100	Widespread (WS/Most Places)	26-50	Scattered (SCT/A Few Places)
51-75	Fairly Widespread (FWS/Many Places)	1-25	Isolated (ISOL)





Sea State

Cyclone



#### **DEFINITION/CRITERIA** Heavy: 64.5 to 115.5 mm/cm \* Very Heavy: 115.6 to 204.4 mm/cm Rain/ Snow \* Extremely Heavy: > 204.4 mm/cm When maximum temperature of a station reaches ≥40° C for plains and ≥30° C for hilly regions (a) Based on Departure from normal Heat Wave: Maximum Temperature Departure from normal 4.5° C to 6.4° C. Severe Heat Wave: Maximum Temperature Departure from normal ≥6.5° C (b). Based on Actual maximum temperature **Heat Wave** Heat Wave: When actual maximum temperature ≥45°C Severe Heat Wave: When actual maximum temperature ≥47°C (c). Criteria for heat wave for coastal stations When maximum temperature departure is >4.5°C from normal. Heat Wave may be described provided maximum temperature ≥37°C When maximum temperature remains 40°C Warm Night: When minimum temperature departure 4.5 °C to 6.4 °C Warm Night Severe Warm Night: When minimum temperature departure >6.4 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions. (a). Based on departure Cold Wave: Minimum Temperature Departure from normal -4.5 °C to -6.4 °C. Severe Cold Wave: Minimum Temperature Departure from normal $\leq$ -6.5 °C **Cold Wave** (b) Based on actual Minimum Temperature (for Plains only) Cold Wave : When Minimum Temperature is ≤ 4.0 °C Severe Cold Wave: When Minimum Temperature is ≤ 2.0 °C (c) For Coastal Stations When Minimum Temperature departure is ≤-4.5 °C & actual Minimum Temperature is ≤ 15 °C When minimum temperature of a station ≤10°C for plains and ≤0°C for hilly regions Based on departure **Cold Day** Cold Day: Maximum Temperature Departure from normal -4.5 °C to -6.4 °C. Severe Cold Day: Maximum Temperature Departure from normal $\leq$ -6.5 °C Phenomenon of small droplets suspended in air and the horizontal visibility < 1km Moderate Fog: When the visibility between 500-200 metres Fog when the visibility between 50- 200 metres Dense Fog: v Very Dense Fog: when the visibility < 50 metres Sudden electrical discharges manifested by a flash of light (Lightning) and a sharp rumbling sound (thunder) Thunderstorm Dust/Sand An ensemble of particles of dust or sand energetically lifted to great heights by a strong and turbulent wind. Ice deposits on ground Frost Air temperature ≤4°C ( over Plains) A strong wind that rises suddenly, lasts for atleast 1 minute. Moderate: Wind speed 52-61 kmph Squall Severe: Wind speed 62-87 kmph Very Severe: Wind speed >87 kmph

Effect of various waves in the sea over specific area

Rough to very rough: Wind speed 41-62 kmph (22-33 knots) & Wave height 2.5-6 metre

High to very high: Wind speed 63-117 kmph ( 34-63 knots) & Wave height 6-14 metre Phenomenal: Wind speed >117 kmph (>63 knots) & Wave height >14 metre

Very Severe Cyclonic Storm: Wind speed 118-165 kmph (64 - 89 knots)

Extremely Severe Cyclonic Storm: Wind speed 166-220 kmph (90 -119 knots)

Cyclonic Storm: Wind speed 62-87 kmph (34-47 knots)
Severe Cyclonic Storm: Wind speed 88-117 kmph (48-63 knots)

Super Cyclone Strom: Wind speed >220 kmph (>119 knots)