



**India Meteorological Department
(Ministry of Earth Sciences)**

NATIONAL BULLETIN NO. 16 (BOB/05/2024)

TIME OF ISSUE: 2030 HOURS IST

DATED: 16.10.2024

FROM: INDIA METEOROLOGICAL DEPARTMENT

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Sub: Depression over southwest and adjoining westcentral Bay of Bengal

The depression over southwest and adjoining westcentral Bay of Bengal moved west-northwestwards with a speed of 17 kmph during past 6 hours and lay centered at 1730 hours IST of today, the 16th October 2024 over the same region near latitude 12.9° N and longitude 81.9° E, about 190 km east-southeast of Chennai (Tamil Nadu), 250 km east-northeast of Puducherry and 270 km southeast of Nellore (Andhra Pradesh).

It is likely to move west-northwestwards and cross north Tamil Nadu - South Andhra Pradesh coasts between Puducherry and Nellore, close to north of Chennai during early morning of 17th October. Thereafter, it is very likely to continue to move west-northwestwards and weaken into a well marked low pressure area over south coastal Andhra Pradesh and adjoining north Tamil Nadu by 17th forenoon.

Forecast track and intensity are given in the following table:

Date/Time (IST)	Position (Lat. °N/ Long. °E)	Maximum Sustained Surface Wind Speed (Kmph)	Category of Cyclonic Disturbance
16.10.24/1730	12.9/81.9	40-50 gusting to 60	Depression
17.10.24/0530	13.4/80.4	35-45 gusting to 55	Depression
17.10.24/1730	13.6/79.1	25-35 gusting to 45	Well Marked Low Pressure Area

Warnings:

(i) Rainfall Warning:

Tamil Nadu & Puducherry: Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is very likely over north Tamil Nadu & Puducherry on 16th October and isolated heavy rainfall over north interior Tamil Nadu on 17th October.

South Coastal Andhra Pradesh & Rayalaseema: Light to moderate rainfall at most places with heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places is likely on 16th October and heavy rainfall at isolated places is likely on 17th October.

South Interior Karnataka: Light to moderate rainfall at most places with heavy to very heavy rainfall at isolated places is likely over south Interior Karnataka during 16th and heavy rainfall at isolated places is likely on 17th October.

Kerala: Light to moderate rainfall at most places with isolated heavy rainfall is likely over Kerala during 16th to 17th October.

(ii) Wind Warning:

Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail over southwest and adjoining westcentral Bay of Bengal and along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts till mid-night of 16th October and decrease gradually thereafter becoming 35-45 kmph gusting to 55 kmph from early morning of tomorrow, the 17th October.

(iii) Sea Condition:

Rough to very Rough Sea condition is likely to prevail over southwest & adjoining westcentral Bay of Bengal and along & off Tamil Nadu, Puducherry and south Andhra Pradesh coasts till noon of 17th October and improve gradually thereafter.

(iv) Fishermen Warning:

Fishermen are advised not to venture into

- Southwest and adjoining westcentral Bay of Bengal till 17th October.

(v) Flash Flood Guidance:

24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 17-10-2024:

Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours

Coastal Andhra Pradesh & Yanam - Guntur, Prakasam and Nellore districts.

Rayalaseema - Chittoor and Kadapa districts.

Tamil Nadu - Cuddalore, Dharampuri, Krishnagiri, Perambalur, Salem, Tiruchirappalli, Tiruvallur and Vellore districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over area of concern as shown in map due to expected rainfall occurrence in next 24 hours.

❖ Significant Rainfall (in cm) recorded during past 24 hours till 0830 hours IST of today, the 16th October is given in Annexure-I

❖ Impact Expected [Tamil Nadu (including Chennai) and Andhra Pradesh due to heavy rainfall]

- 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 and poor visibility due to heavy rain leading to increased travel time and incidents
- Likely disruption of marine and inland water transportation like small boats and trawlers.
- 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 Webpage of Central Water Commission)

❖ **Action Suggested [Tamil Nadu and Andhra Pradesh due to heavy rainfall]**

- Fishermen are advised not to venture into
 - Southwest and adjoining westcentral Bay of Bengal till 17th October.
 - Fishermen out at sea are advised to return to coasts.
- Judicious regulation of surface transports including railways and roadways and onshore/offshore activities.
- 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.

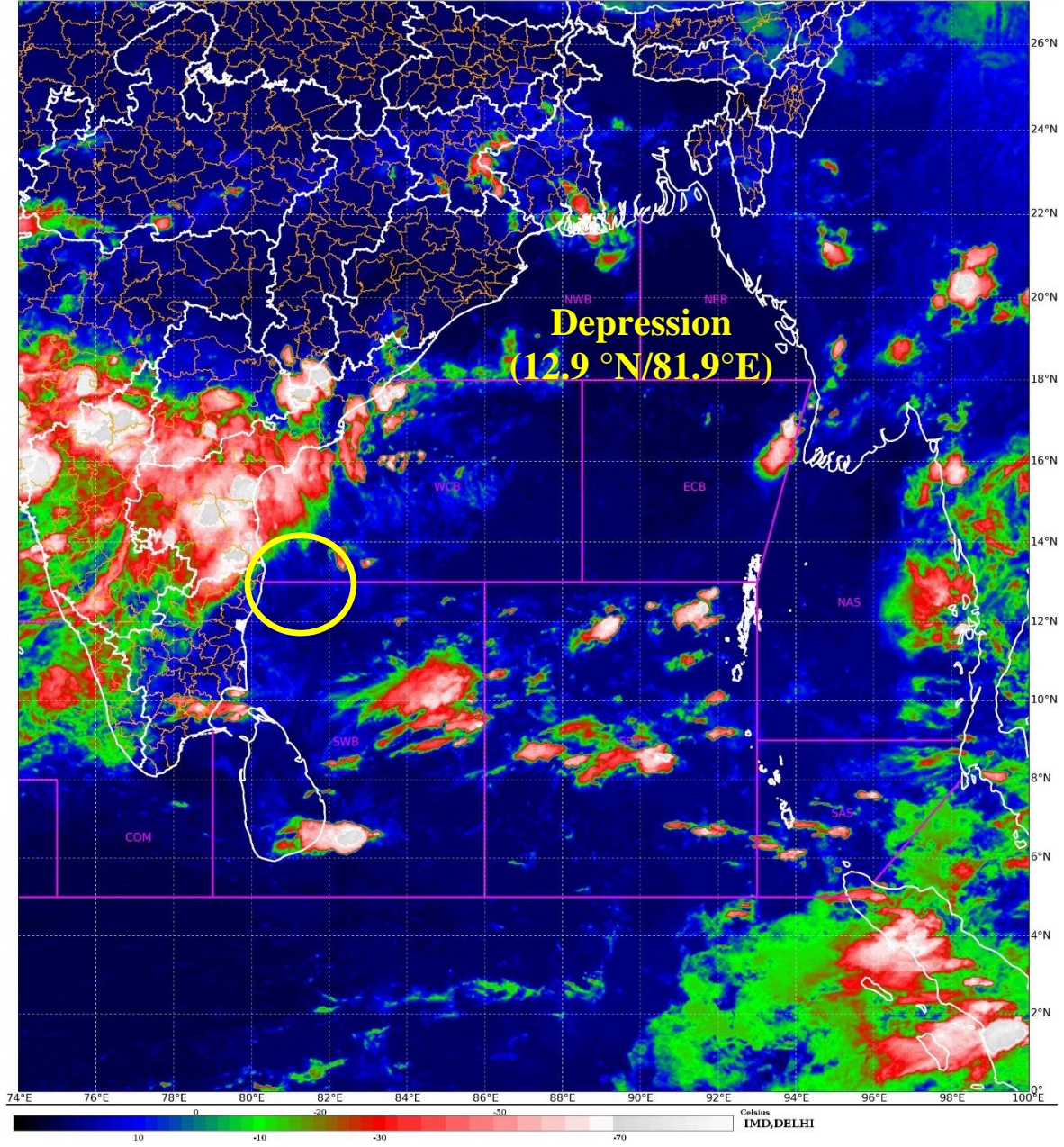
Agromet advisories for Heavy Rainfall

- Provide mechanical support to horticultural crops & staking to vegetables.
- Keep the harvested produce at safer place.

Next bulletin will be issued at 0230 hours IST of tomorrow, the 17th October, 2024.

(Dr. D. R. Pattanaik)
Scientist-F, RSMC & IMD, New Delhi

Copy to: ACWC Kolkata/ACWC Mumbai/ACWC Chennai/CWC Ahmedabad/CWC Bhubaneswar/CWC Vishakhapatnam CWC, Thiruvananthapuram/ MC, Goa





OBSERVED AND FORECAST TRACK ALONGWITH CONE OF UNCERTAINTY (COU) OF DEPRESSION OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC (1730 Hrs. IST) OF 16th OCTOBER, 2024



DATE/TIME IN UTC

IST=UTC + 0530

L: LOW PRESSURE AREA

WML: WELL MARKED LOW PRESSURE AREA

D: DEPRESSION (17-27 KT)

DD: DEEP DEPRESSION (28-33 KT)

CS: CYCLONIC STORM (34-47 KT)

SCS: SEVERE CYCLONIC STORM (48-63KT)

VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)

ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)

SuCS: SUPER CYCLONIC STORM \geq 120 KT)

● LESS THAN 34 KT

○ 34-47 KT

○ \geq 48 KT

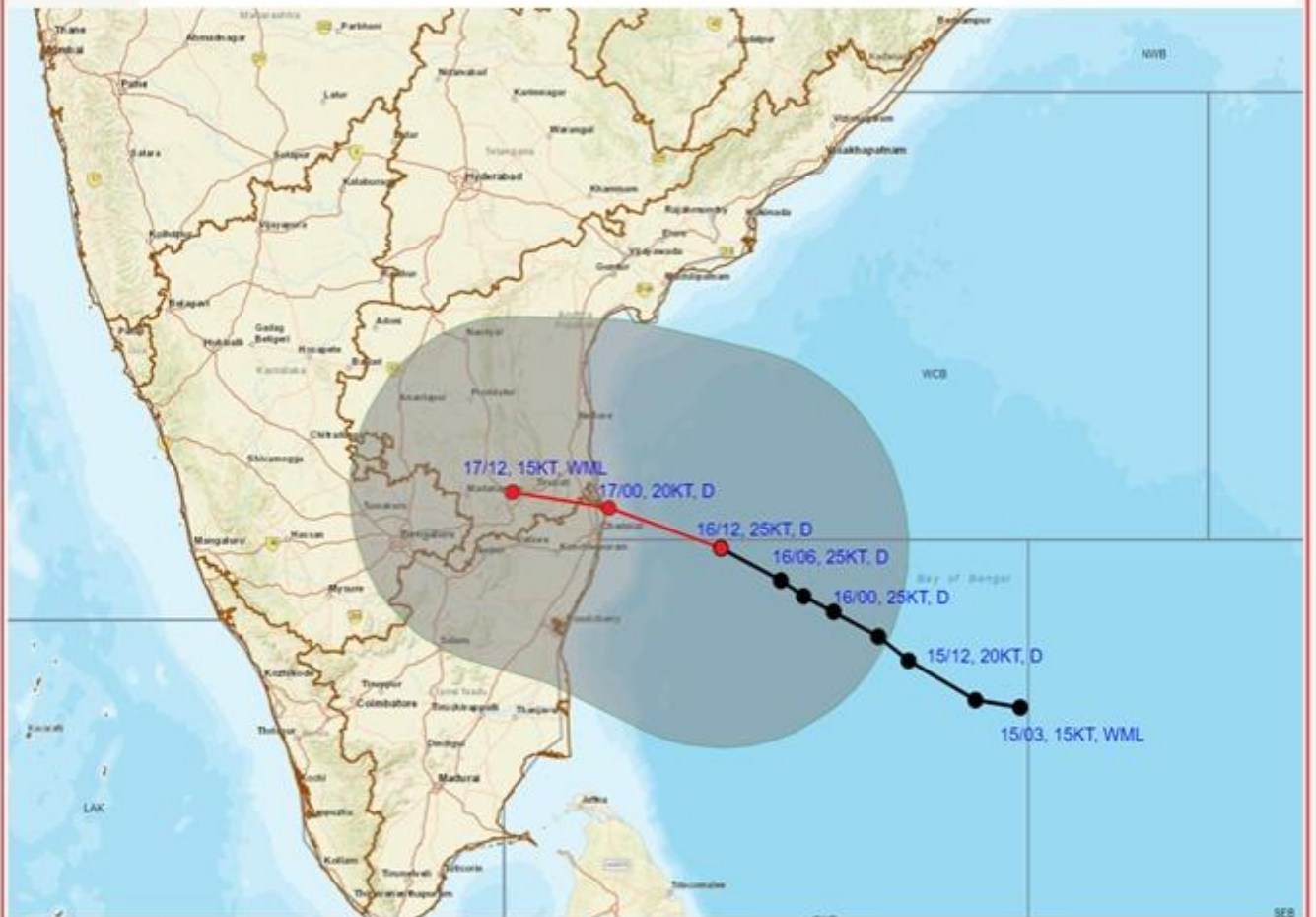
— OBSERVED TRACK

— FORECAST TRACK

▲ CONE OF UNCERTAINTY

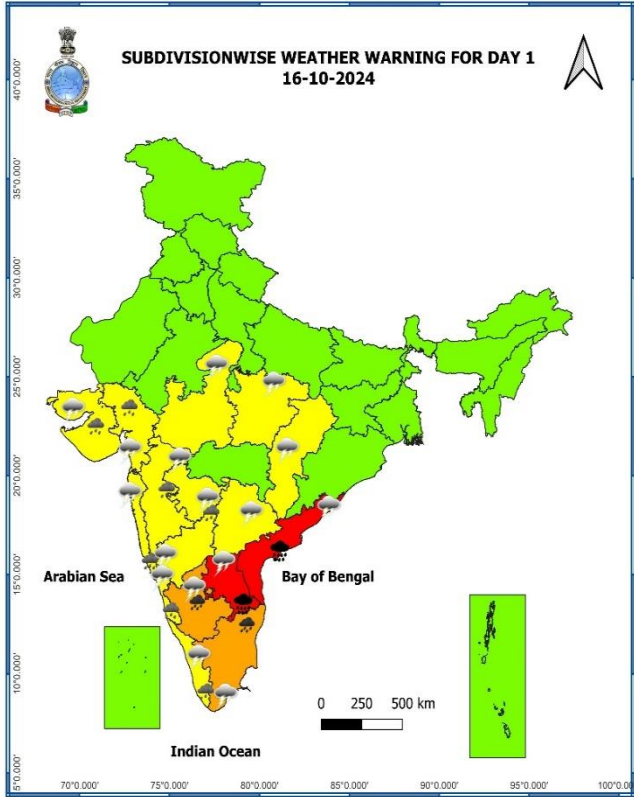


OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL BASED ON 1200 UTC (1730 Hrs. IST) OF 16th OCTOBER, 2024



DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)

● LESS THAN 34 KT
 ○ 34-47 KT
 ● ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 — CONE OF UNCERTAINTY
 — AREA OF MAXIMUM SUSTAINED WIND SPEED:
 — 20-30 KT (35-55 KMPH)



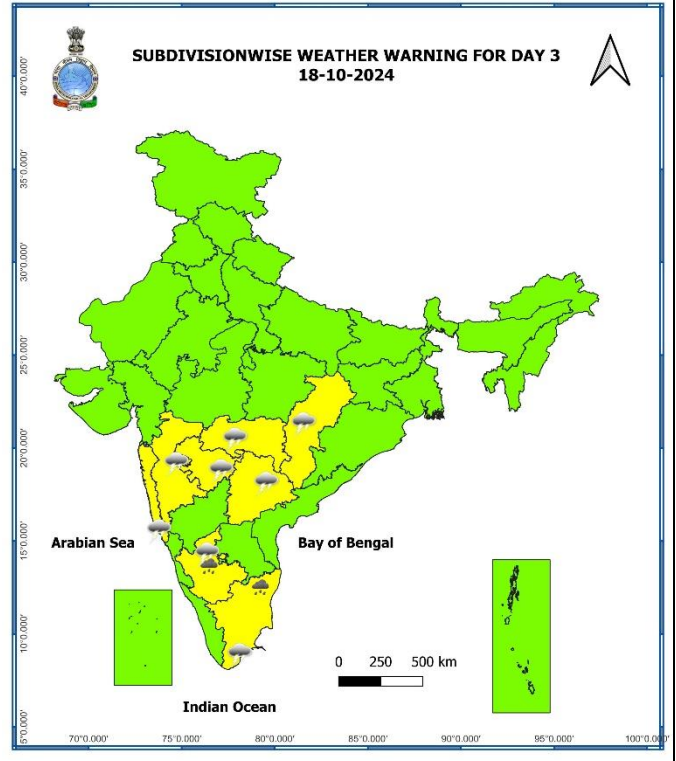
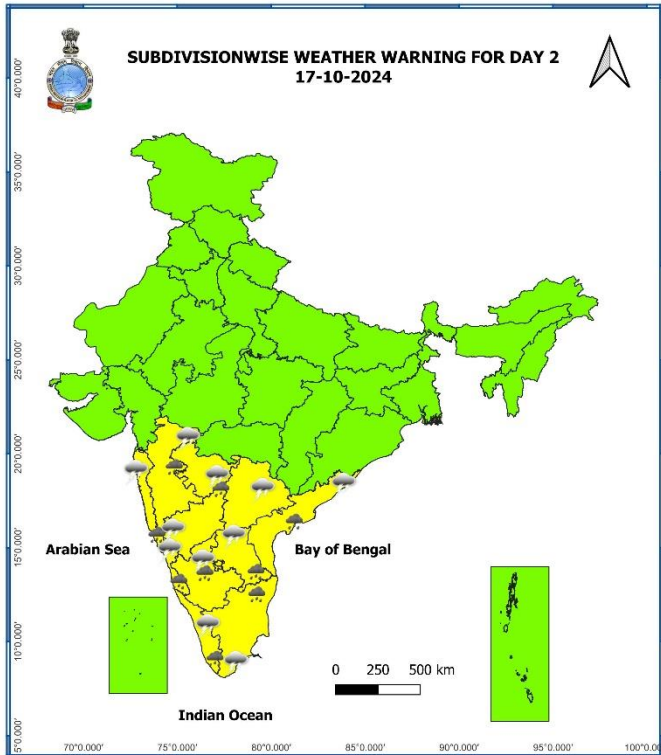
- Fog
- Heavy Rain
- Very Heavy Rain
- Extremely Heavy Rain
- Thunder & Lightning
- Hailstorm
- Dust Raising Winds
- Heavy Snow
- Dust Storm
- Heat Wave
- Warm Night
- Hot Day
- Hot & Humid
- Cold Wave
- Cold Day
- Ground Frost
- Strong Surface Winds

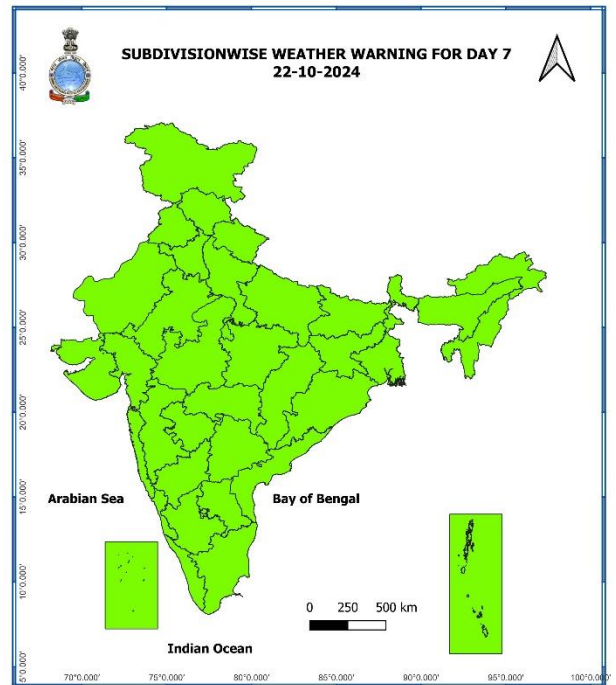
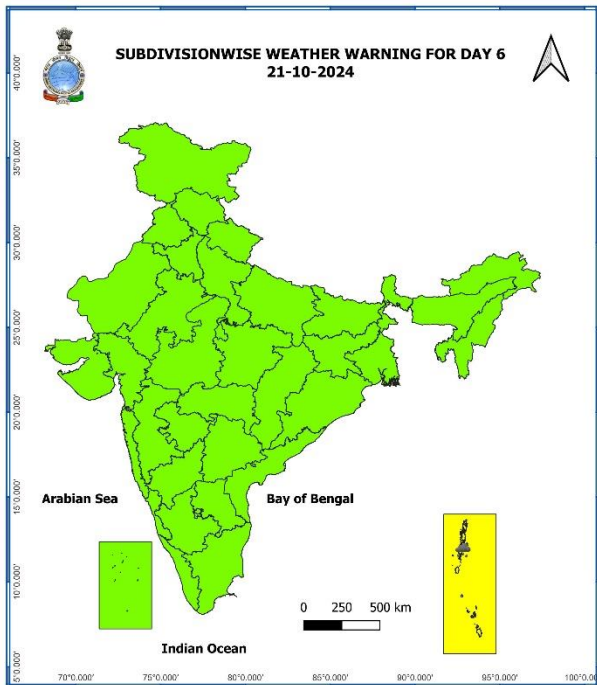
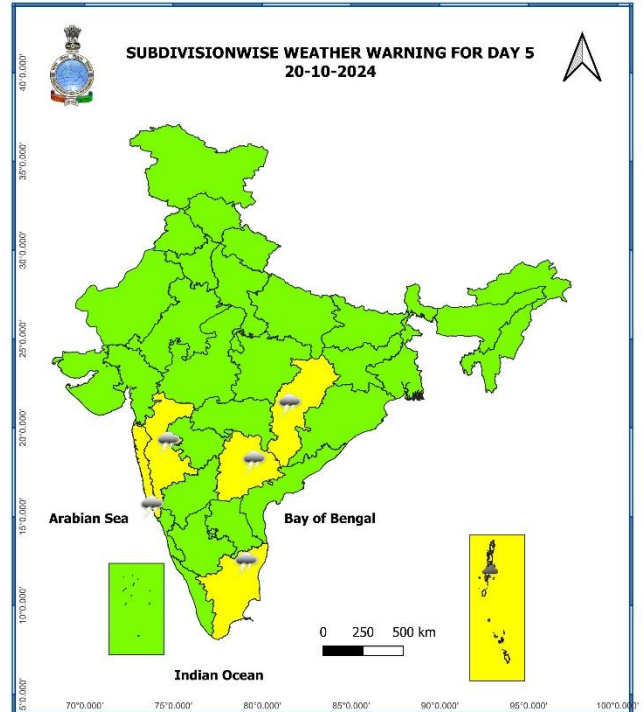
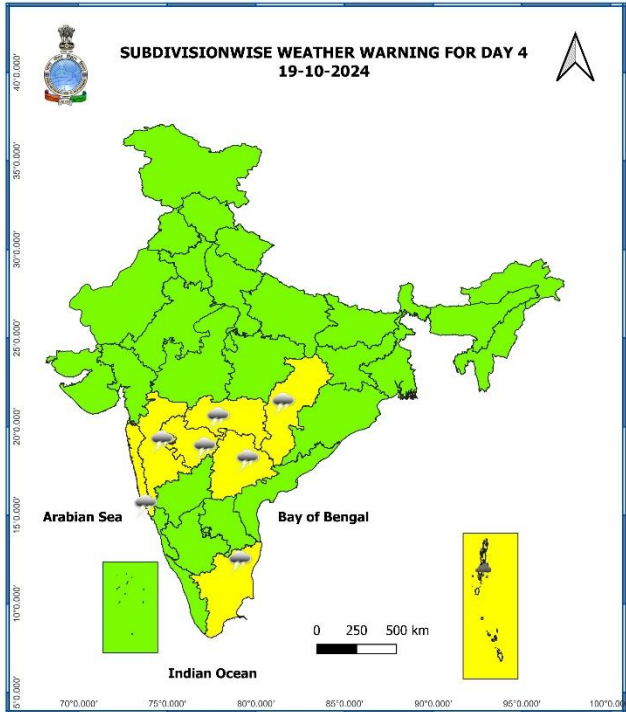
COLOUR CODED WARNING

- No Warning (No Action)
- Watch (Be Aware)
- Alert (Be Prepared To Take Action)
- Warning (Take Action)

Probabilistic Forecast

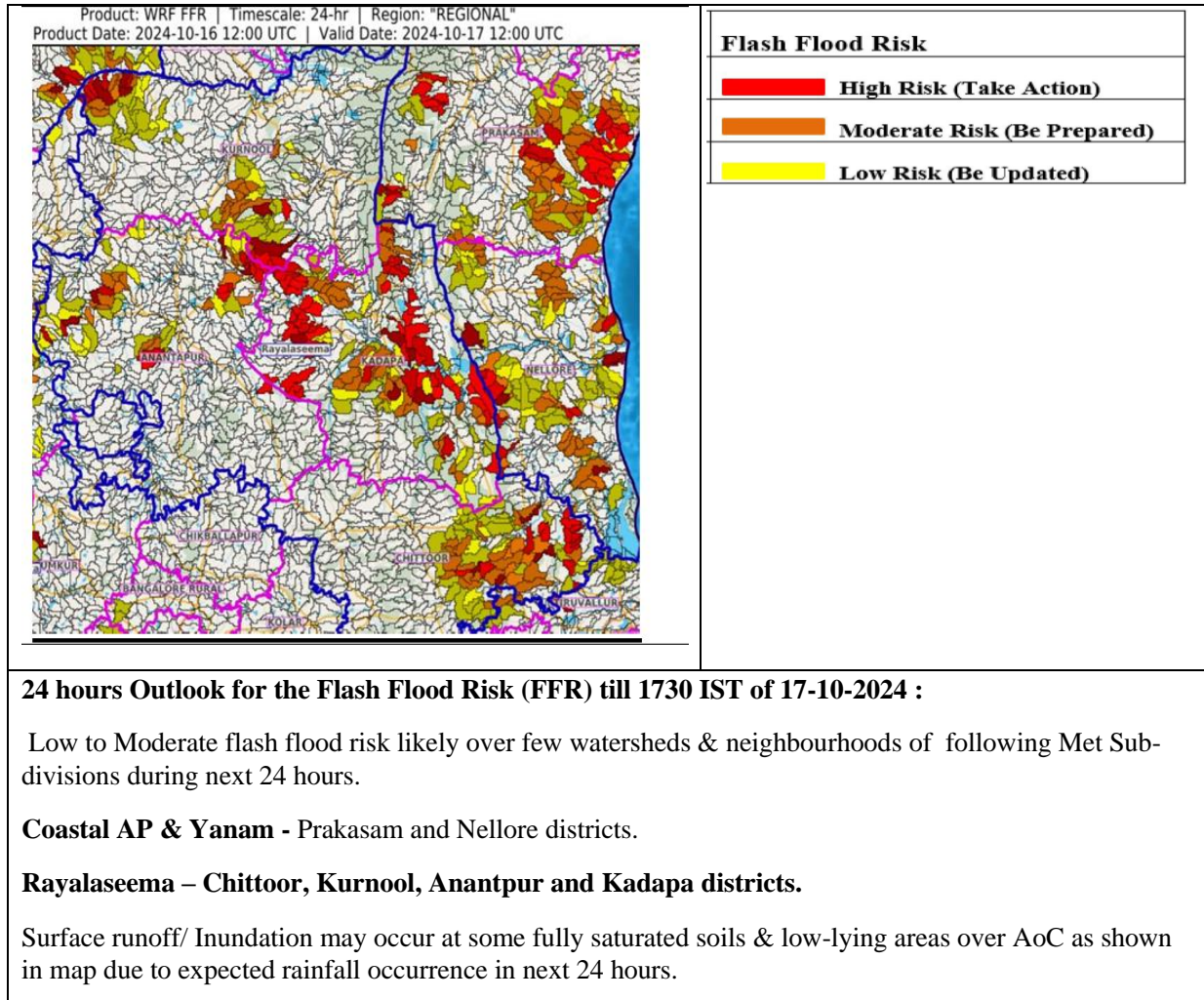
Terms	Probability of Occurrence (%)
Unlikely	< 25
Likely	25 - 50
Very Likely	50 - 75
Most Likely	> 75





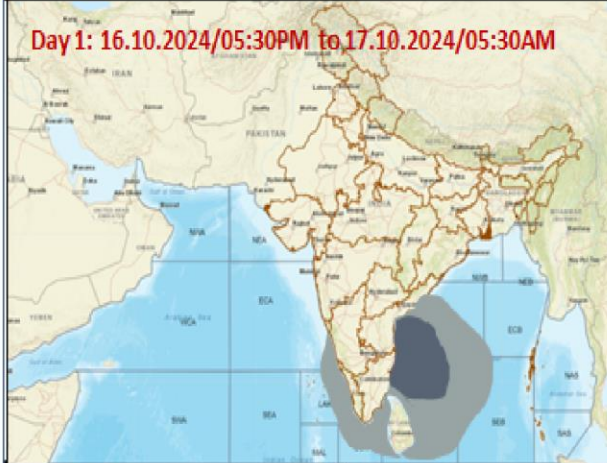
- Action may be taken based on **ORANGE AND RED** COLOUR warnings.
- Vulnerable regions likely urban and hilly areas action may be initiated for heavy rainfall warning.
- As the lead period increases forecast accuracy decreases.

Flash Flood Guidance

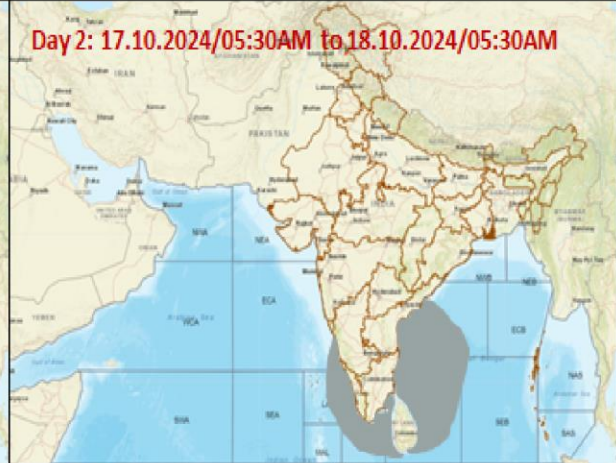


Fishermen Warning Graphics

Day 1: 16.10.2024/05:30PM to 17.10.2024/05:30AM



Day 2: 17.10.2024/05:30AM to 18.10.2024/05:30AM



Day 3: 18.10.2024/05:30AM to 19.10.2024/05:30AM



Day 4: 19.10.2024/05:30AM to 20.10.2024/05:30AM



Day 5: 20.10.2024/05:30AM to 21.10.2024/05:30AM



Squally Weather with wind speed 35-45 kmph gusting to 55 kmph

Squally WX with wind speed 40-50 kmph gusting to 60 kmph

Fishermen are advised not to venture into the marked areas.

ANNEXURE-I

Significant Rainfall recorded during past 24 hours till 0830 hours IST of today 16.10.2024 (in cm):

❖ Tamil Nadu, Puducherry & Karaikal:

Extremely heavy rainfall (> 20 cm): Cholavaram (Tiruvallur) 30, Red Hills (Tiruvallur) 28, Avadi (Tiruvallur) 25, Zone 01 Kathivakkam (Chennai) 23, Zone 02 D15 Manali (Chennai) 21,

Very heavy rainfall (20 cm ≤ and ≥ 12cm): Zone 06 T.V.K Nagar (Chennai) 19, Zone 06 D65 Kolathur (Chennai), Zone 13 U39 Adyar (Chennai), Puzhal ARG (Tiruvallur), Zone 07 Ambattur (Chennai) 18 each, Zone 01 Thiruvottiyur (Chennai), Perungudi (Chennai), Zone 02 Manali (Chennai), Hindustan_University (Kancheepuram), Ennore AWS (Chennai) 17 each, Perambur (Chennai), Zone 08 Malar Colony (Chennai), Good Will School Villivakkam ARG (Tiruvallur), Zone 03 Puzhal (Chennai), Ayanavaram Taluk Office (Chennai), Anna University ARG (Chennai), Ponneri (Tiruvallur), Thamaraipakkam (Tiruvallur) 16 each, Ambathur (Chennai), Anna University (Chennai), MGR Nagar (Chennai), Sholinganallur (Chennai), Thiru-Vi-Ka Nagar (Chennai), Tondiarpet (Chennai), Zone 05 Royapuram (Chennai), Adayar (Chennai) 15 each, Zone 03 Madhavaram (Chennai), Zone 04 Tondiarpet (Chennai), Chennai(N) AWS (Chennai), Chennai (N) (Chennai), CD Hospital Tondiarpet (Chennai), YMCA Nandnam ARG (Chennai), Kodambakkam (Chennai) 14 each, Zone 08 Anna Nagar (Chennai), Anna Nagar (Chennai), Zone 07 U18 D81 Vanagaram (Chennai), Chennai Collector Office (Chennai), Zone 10 Kodambakkam (Chennai), DGP Office (Chennai), Royapuram (Chennai) 13 each, Zone 09 Ice House (Chennai), NIOT_Pallikaranai ARG (Chennai), Zone 09 Teynampet (Chennai), Teynampet (Chennai), Alandur (Chennai), Chennai (AP) (Chennai), Meenambakkam AWS (Chennai), Zone 11 U32 Maduravoyal (Chennai) 12 each,

Heavy rainfall (11 cm ≤ and ≥ 7cm): Zone 12 Meenambakkam (Chennai), Kolapakkam ARG (Kancheepuram), Zone 11 Valasaravakkam (Chennai), Zone 15 Uthandi (Chennai), Zone 05 GCC (Chennai), Tiruvottiyur (Chennai), Zone Adyar Eco Park (Chennai) 11 each, Zone 12 D156 Mugalivakkam (Chennai), Jaya Engg College AWS (Tiruvallur), Zone 14 Perungudi (Chennai), Zone 15 Sholinganallur (Chennai), Tiruppur IB PWD (Tiruppur) 10 each, Gummidipoondi (Tiruvallur), Zone 14 U41 Perungudi (Chennai), Uthukottai (Tiruvallur), Manimutharu Dam PWD (Kallakurichi), Tiruvallur (Tiruvallur), KCS Mill-2 Kachirayaopalayam (Kallakurichi), Mahabalipuram (Chengalpattu), Satyabama Uty ARG (Kancheepuram), Poonamallee (Tiruvallur), Chembarabakkam (Kancheepuram) 9 each, Zone Adyar (Chennai), ACS Medical College ARG (Kancheepuram), Bhuvanagiri (Cuddalore), VIT_Chennai AWS (Chengalpattu), RSCL-2 Valavanur (Villupuram), Mahabalipuram AWS (Chengalpattu), Koratur (Tiruvallur), RSCL-2 Koliyanur (Villupuram) 8 each, Uthangarai (Krishnagiri), Tiruttani (Tiruvallur), Pallipattu (Tiruvallur), Kundrathur (Kancheepuram), Tambaram (Chengalpattu), Tiruppur South (Tiruppur) 7 each;

❖ **Rayalaseema:** Sullurpeta (Tirupati) 22, Tada (Tirupati) 12, Tirupati Aero (Tirupati) 11, Satyavedu (Tirupati) 10, Porumamilla (Ysr District) 9, Srikalahasti (Tirupati) 8, Thottambedu (Tirupati) 8, Venkatagiri (Tirupati) 8, Penagaluru (Annamayya District) 8, Kodur (Ysr District) 8, Nagari (Chittoor) 8, Gudur (Tirupati) 7, Pullampeta (Annamayya District) 7;

❖ **Coastal Andhra Pradesh & Yanam:** Kavali (Nellore) 18, Nellore (Nellore) 13, Kandukur (Nellore) 10, Seetharamapuram (Nellore) 10, Vinjamur (Nellore) 9, Udayagiri (Nellore) 9;

❖ **South Interior Karnataka:** Bengaluru Hal Ap Obsy (Bengaluru Urban) 9, Hesaraghatta (Bengaluru Urban) 7, Bellur (Mandya) 7, Bengaluru City Obsy (Bengaluru Urban) 7;