



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

NATIONAL BULLETIN NO. 16 (BOB/07/2024)

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FROM: INDIA METEOROLOGICAL DEPARTMENT (FAX NO. 24643965/24699216/24623220)

TO: CONTROL ROOM, NDM, MINISTRY OF HOME AFFAIRS (FAX.NO. 23093750)

CONTROL ROOM NDMA (FAX.NO. 26701729)

CABINET SECRETARIAT (FAX.NO.23012284, 23018638)

PS TO HON'BLE MINISTER FOR S & T AND EARTH SCIENCES (FAX NO.23316745)

SECRETARY, MOES (FAX NO. 24629777)

H.Q. (INTEGRATED DEFENCE STAFF AND CDS) (FAX NO. 23005137/23005147)

DIRECTOR GENERAL, DOORDARSHAN (23385843)

DIRECTOR GENERAL, AIR (23421105, 23421219)

PIB MOES (FAX NO. 23389042)

UNI (FAX NO. 23355841)

D.G. NATIONAL DISASTER RESPONSE FORCE (NDRF) (FAX NO. 26105912, 2436 3260)

DIRECTOR, PUNCTUALITY, INDIAN RAILWAYS (FAX NO. 23388503)

CHIEF SECRETARY, ANDAMAN & NICOBAR ISLANDS (FAX NO. 03192-232656)

CHIEF SECRETARY, TAMIL NADU (FAX NO. 044-25672304)

CHIEF SECRETARY, ANDHRA PRADESH (FAX NO. 0863-2441029)

CHIEF SECRETARY, PUDUCHERRY (FAX NO. 0413-2334145)

CHIEF SECRETARY, ODISHA (FAX NO. 0674-2536660)

Sub: Deep depression over Southwest Bay of Bengal

The Deep Depression over Southwest Bay of Bengal remained practically stationary during past 06 hours and lay centred at 0830 hours IST of today, the 28th November 2024 over the same region near latitude 9.1°N and longitude 82.1°E, about 110 km east-northeast of Trincomalee, 310 km southeast of Nagappattinam, 410 km southeast of Puducherry and 480 km south-southeast of Chennai.

It is very likely to move nearly north-northwestwards skirting Sri Lanka coast during next 12 hours. Thereafter, it will continue to move north-northwestwards and cross north Tamil Nadu-Puducherry coasts between Karaikal and Mahabalipuram around morning of 30th November as a deep depression with a wind speed of 50-60 kmph gusting to 70 kmph.

There is a possibility of marginal intensification of the deep depression into a Cyclonic Storm with wind speed 65-75 kmph gusting to 85 kmph over southwest Bay of Bengal during the evening of 28th November to morning of 29th November 2024.

The system is being tracked by DWR Karaikal. A continuous watch is being maintained for the movement and intensification of system.

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
28.11.24/0830	9.1/82.1	55-65 gusting to 75	Deep Depression
28.11.24/1130	9.6/82.0	55-65 gusting to 75	Deep Depression
28.11.24/1730	10.0/81.8	60-70 gusting to 80	Cyclonic Storm
28.11.24/2330	10.4/81.6	65-75 gusting to 85	Cyclonic Storm
29.11.24/0530	10.7/81.3	60-70 gusting to 80	Cyclonic Storm
29.11.24/1730	11.3/80.7	55-65 gusting to 75	Deep Depression
30.11.24/0530	11.7/80.1	50-60 gusting to 70	Deep Depression
30.11.24/1730	12.1/79.5	40-50 gusting to 60	Depression

Warnings:

(i) Rainfall Warning:

Tamil Nadu & Puducherry: Light to moderate rainfall at many places with Heavy rainfall at isolated places is very likely over North coastal Tamil Nadu-Puducherry on 28th November and heavy to very heavy rainfall at a few places and extremely heavy rainfall at isolated places is likely over north Tamil Nadu – Puducherry on 29th and isolated heavy to very heavy rainfall on 30th November & 1st December.

Coastal Andhra Pradesh: Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places is likely over south coastal Andhra Pradesh on 29th to 30th November; extremely heavy rainfall at isolated places on 29th November.

Rayalaseema: Light to moderate rainfall at many places with heavy to very heavy rainfall at isolated places is likely on 29th & 30th November; extremely heavy rainfall at isolated places on 29th November.

South interior Karnataka: Light to moderate rainfall at many places with isolated heavy rainfall at isolated places is likely on 29th, heavy to very heavy rainfall at isolated places on 30th November and 1st December and heavy rainfall at isolated places on 2nd December.

Kerala: Light to moderate rainfall at many places with heavy rainfall at isolated places is likely on 29th November and heavy to very heavy rainfall at isolated places on 30th November & 1st December.

(ii) Wind warning:

- **Southwest Bay of Bengal:** Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail over southwest Bay of Bengal till 30th forenoon. There could be increase in wind speed becoming gale wind speed reaching 65-75 kmph gusting to 85 kmph over this region during evening of 28th November till morning of 29th November.
- **Adjoining areas of westcentral Bay of Bengal:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is prevailing over adjoining areas of westcentral Bay of Bengal. It is likely to increase becoming 50-60 kmph gusting to 70 kmph from 29th evening till 30th November afternoon.
- **Along & off North Tamil Nadu – Puducherry and adjoining South Andhra Pradesh coasts:** Squally wind speed reaching 45-55 kmph gusting to 65 kmph is prevailing along & off **North Tamil Nadu - Puducherry and adjoining South Andhra Pradesh coasts**. It is likely to increase becoming 50-60 kmph gusting to 70 kmph from 29th evening till 30th November afternoon.
- **Along & off East Sri Lanka coasts:** Squally wind speed reaching 55-65 kmph gusting to 75 kmph is very likely to prevail **Along & off East Sri Lanka coasts** till 29th morning. It would decrease gradually thereafter becoming 45-55 kmph gusting to 65 kmph by 30th November morning and further decrease thereafter.
- **Along & off South Tamil Nadu coast and Gulf of Mannar:** Squally wind speed reaching 40-50 kmph gusting to 60 kmph is likely to prevail till 29th evening. It would increase thereafter, becoming 45-55 kmph gusting to 65 kmph till 30th morning and gradually decrease thereafter.

(iii) Sea condition:

- Rough to very Rough Sea conditions is very likely over southwest Bay of Bengal adjoining areas of westcentral Bay of Bengal, Gulf of Mannar and along & off Tamil Nadu-Puducherry, South Andhra Pradesh and East Sri Lanka coasts till 30th November evening.
- The Sea condition could be very rough to high over Southwest Bay of Bengal during evening of 28th to morning of 29th November.

(iv) Fisherman warning:

- Fishermen are advised not venture into southwest Bay of Bengal adjoining areas of westcentral Bay of Bengal, Gulf of Mannar and along & off Tamil Nadu-Puducherry, South Andhra Pradesh and East Sri Lanka coasts till 30th November evening.
- Fishermen out at sea are advised to return to coast.

(v) Impact Expected [over Tamil Nadu – Puducherry, south Andhra Pradesh, south interior Karnataka and Kerala]

- Localized Flooding of roads, water logging in low lying areas.
- Occasional reduction in visibility due to heavy rainfall in some areas.
- Disruption of traffic in major cities due to water logging in roads leading to increased travel time in some areas.
- Minor damage to kutcha roads.
- Damage to horticulture and standing crops in some areas due to inundation.

(vi) Action Suggested

- Fishermen are advised not venture into southwest Bay of Bengal adjoining areas of westcentral Bay of Bengal, Gulf of Mannar and along & off Tamil Nadu-Puducherry, South Andhra Pradesh and East Sri Lanka coasts till 30th November evening.
- Fishermen out at sea are advised to return to coast.
- 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.
- Special care may be taken for fishing ponds and poultries over coastal areas.
- Avoid staying in vulnerable structure.

(vii) Agromet advisories [over Tamil Nadu – Puducherry and Andhra Pradesh, south interior Karnataka and Kerala]

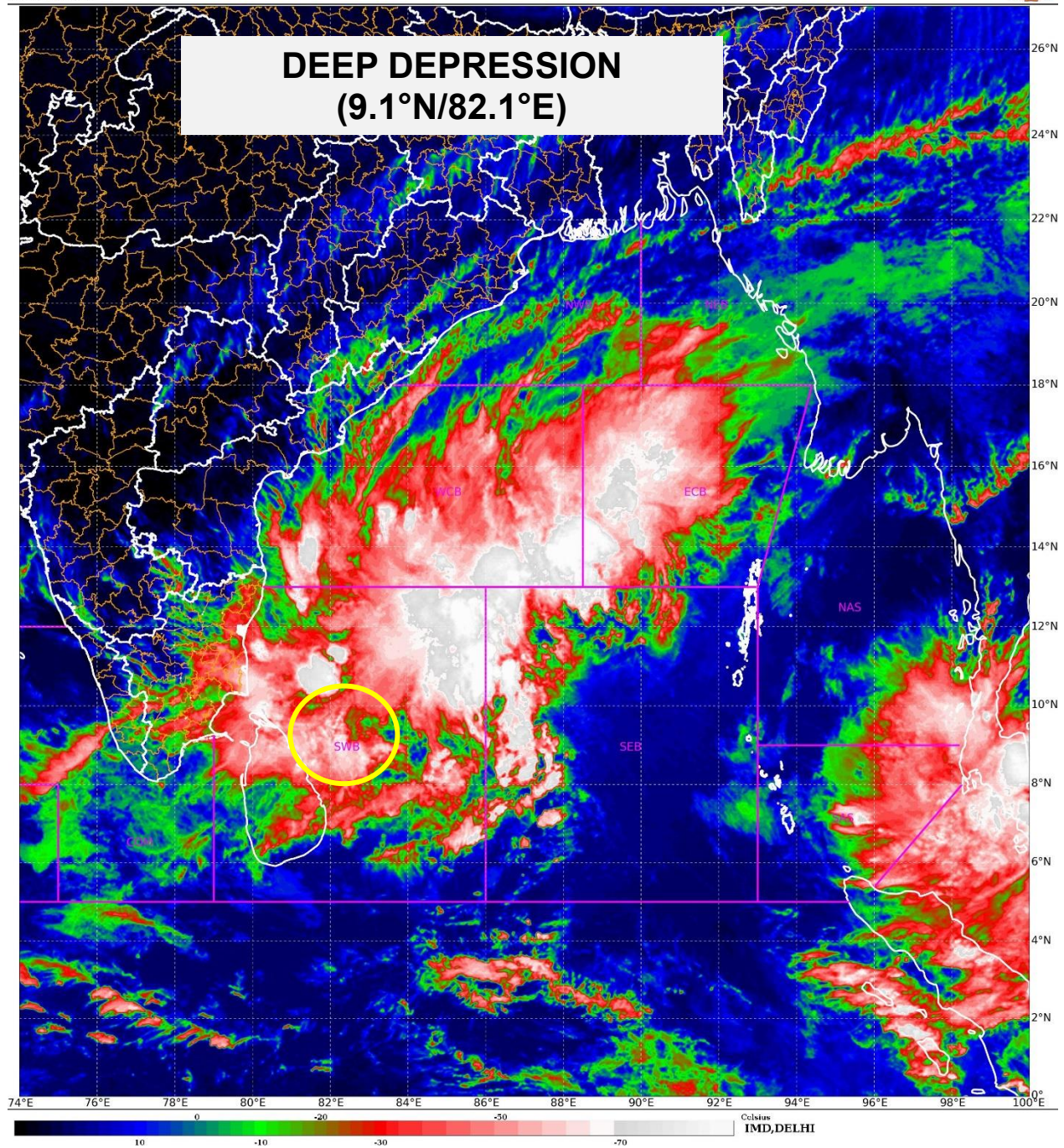
Provide adequate drainage facilities for the removal of excess water from rice, cotton, sugarcane, turmeric and vegetable fields, coconut and banana orchards. Provide mechanical support to banana plants to prevent lodging.

- Make arrangements to drain out excess water from the standing crop fields and fruit orchards in Kerala and Coastal Andhra Pradesh.
- Harvest the matured crops and keep it in safe place.
- Provide mechanical support to horticultural crops and staking to vegetables.

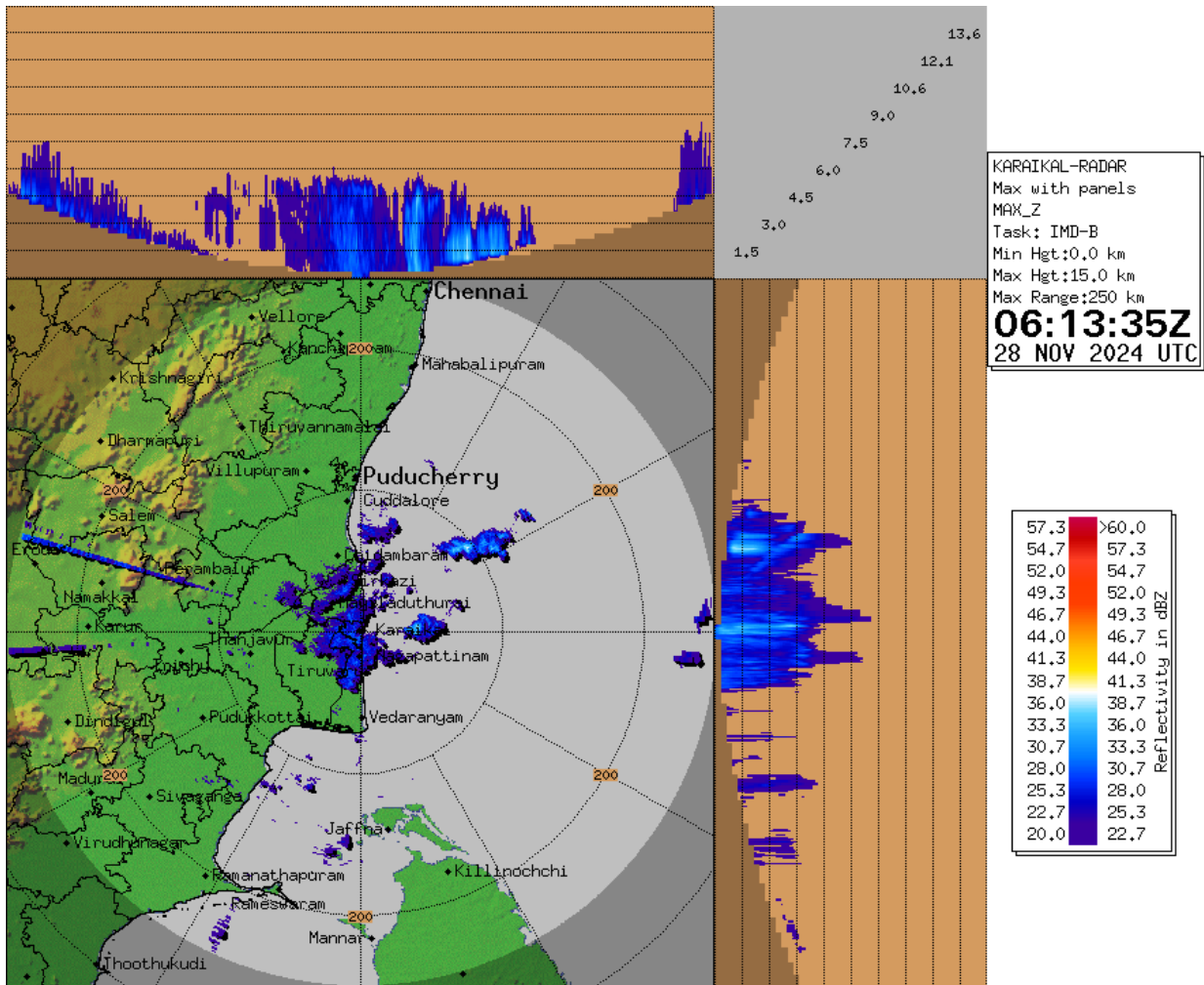
Next bulletin will be issued at 1430 hours IST of today, the 28th November, 2024.

(Dr. Ananda Kumar Das)
Scientist F, RSMC, New Delhi

Copy to: ACWC Kolkata/ACWC Chennai/CWC Bhubaneswar/MC, Amaravati/MC, Thiruvananthapuram/CWC, Vishakhapatnam

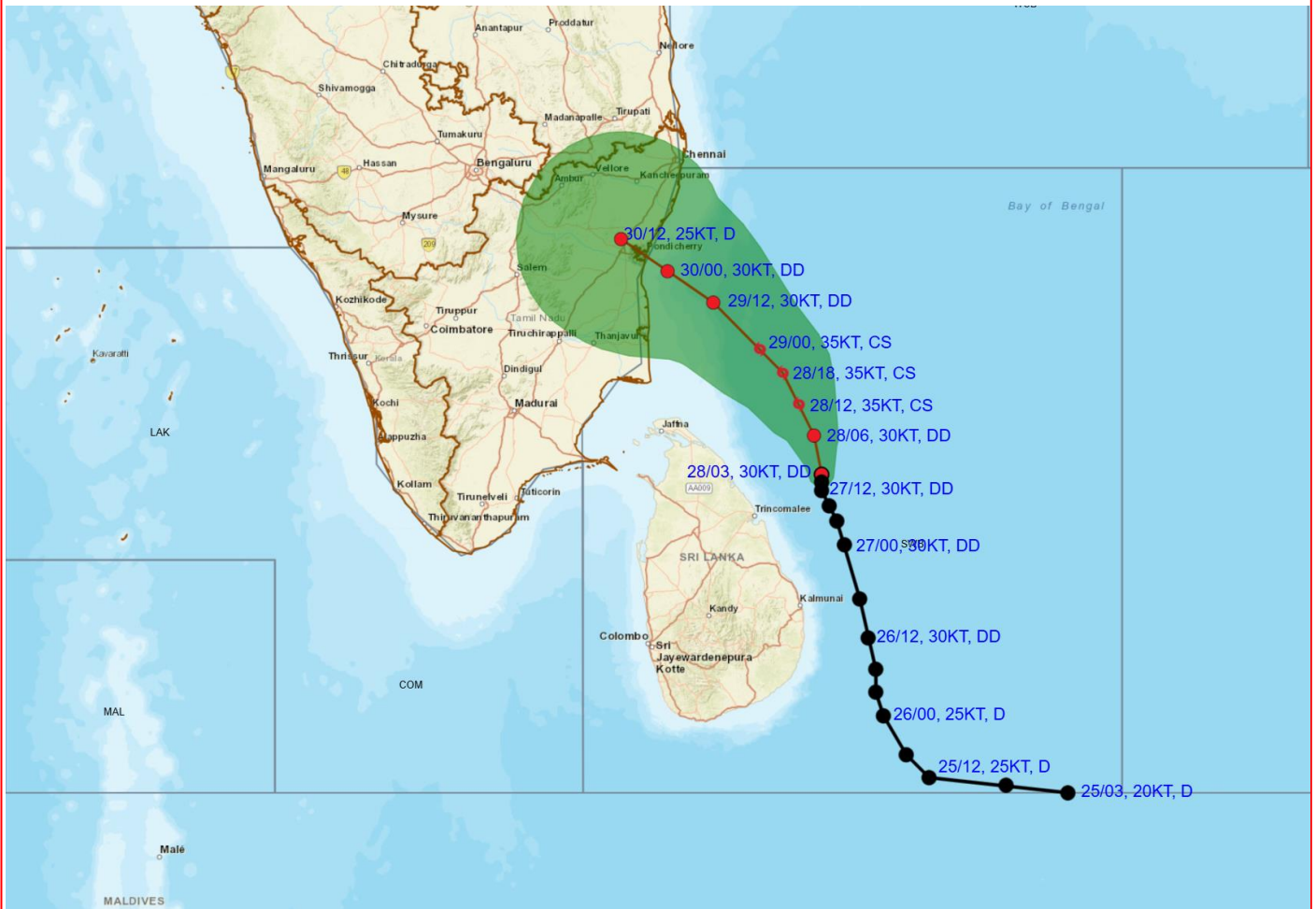


Doppler Weather Radar Observation (Max Z) at Karaikal





OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 HRS. IST) OF 28TH NOVEMBER, 2024



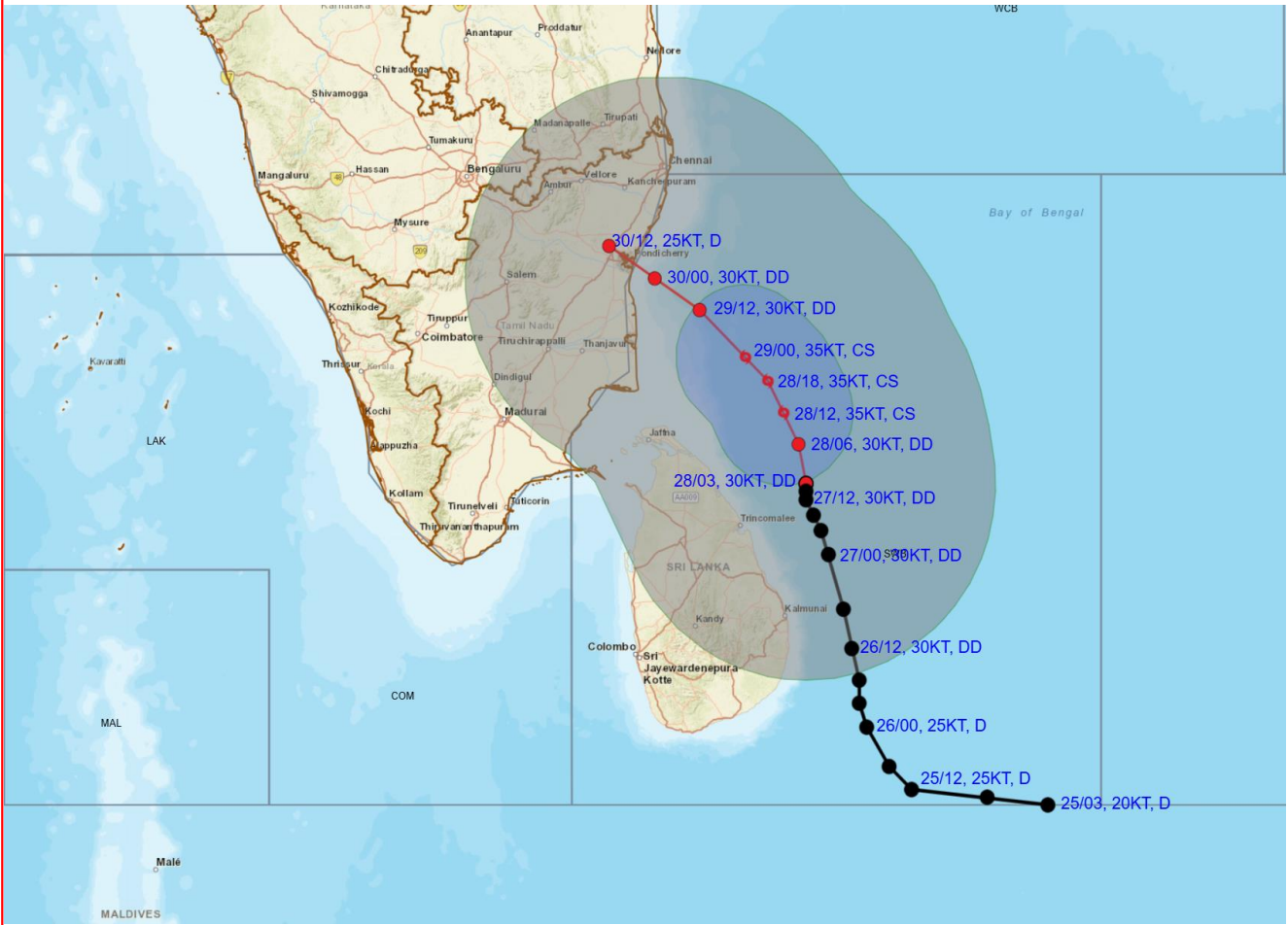
DATE/TIME : IN UTC
 IST : UTC + 0530
 KT : NAUTICAL MILE/HOUR = 1.85 KM/HOUR
 LPA : LOW PRESSURE AREA
 WML : WELL MARKED LOW PRESSURE AREA
 D : DEPRESSION (17-27 KT)
 DD : DEEP DEPRESSION (28-33 KT)
 CS : CYCLONIC STORM (34-47 KT)
 SCS : SEVERE CYCLONIC STORM (48-63 KT)
 VSCS : VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS : EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS : SUPER CYCLONIC STORM (≥ 120 KT)

LESS THAN 34 KT
 34-47 KT
 ≥ 48 KT
 OBSERVED TRACK
 FORECAST TRACK
 CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS				
Date and Time (UTC)	TRINCOMALEE	BATTICALOA	NAGAPPATTINAM	PUDUCHERRY	CHENNAI/MINAMBAKKAM
28.11.24/0300	110, ENE	160, NNE	310, SE	410, SE	480, SSE
29.11.24/0000	240, N	330, N	160, E	210, SE	280, SSE
30.11.24/0000	370, NNW	480, NNW	110, NNE	40, SE	140, S



OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0300 UTC (0830 HRS. IST) OF 28TH NOVEMBER, 2024.



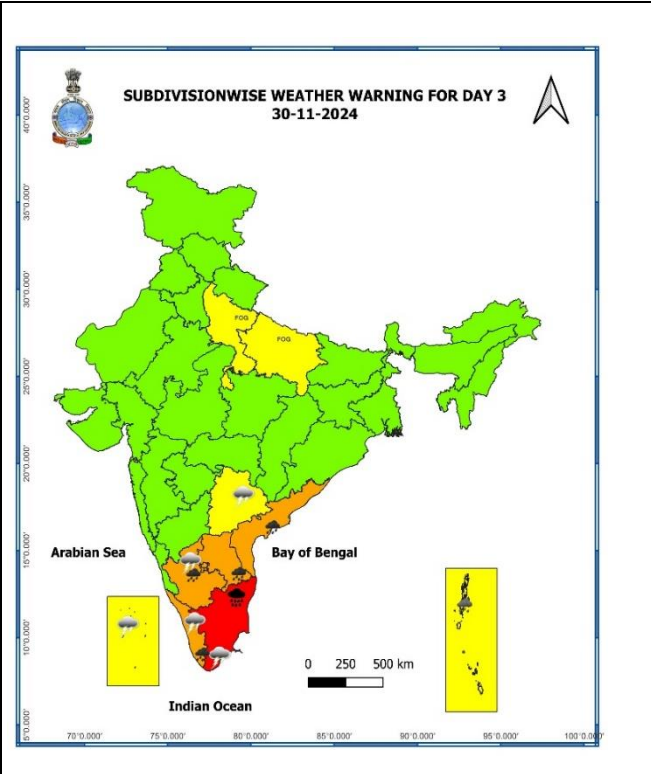
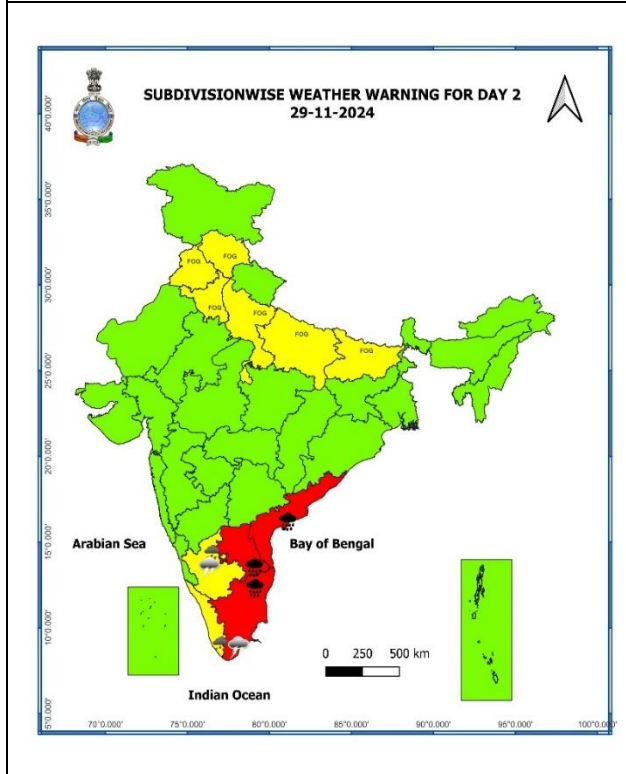
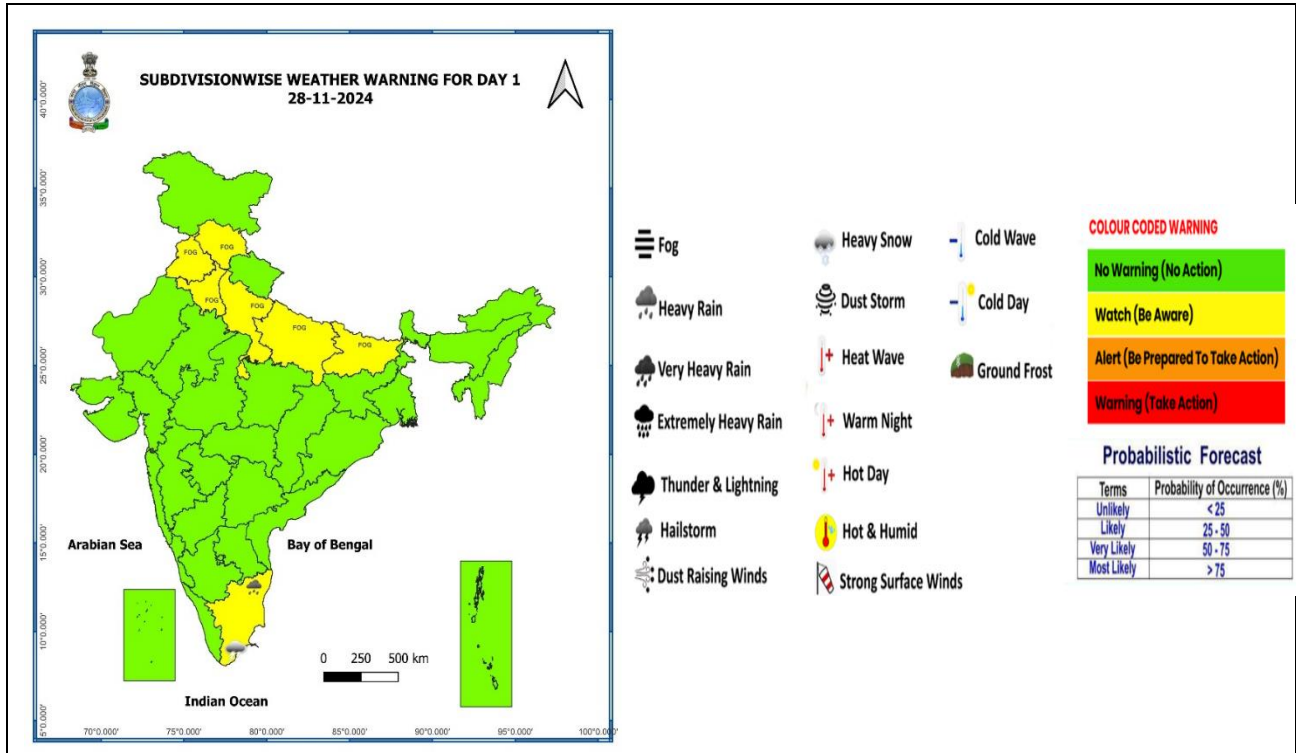
DATE/TIME : IN UTC
 IST : UTC + 0530
 KT : NAUTICAL MILE S/HOUR = 1.85 KM/HOUR
 LPA : LOW PRESSURE AREA
 WML : WELL MARKED LOW PRESSURE AREA
 D : DEPRESSION (17-27 KT)
 DD : DEEP DEPRESSION (28-33 KT)
 CS : CYCLONIC STORM (34-47 KT)
 SCS : SEVERE CYCLONIC STORM (48-63 KT)
 VSCS : VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS : EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS : SUPER CYCLONIC STORM (≥120 KT)

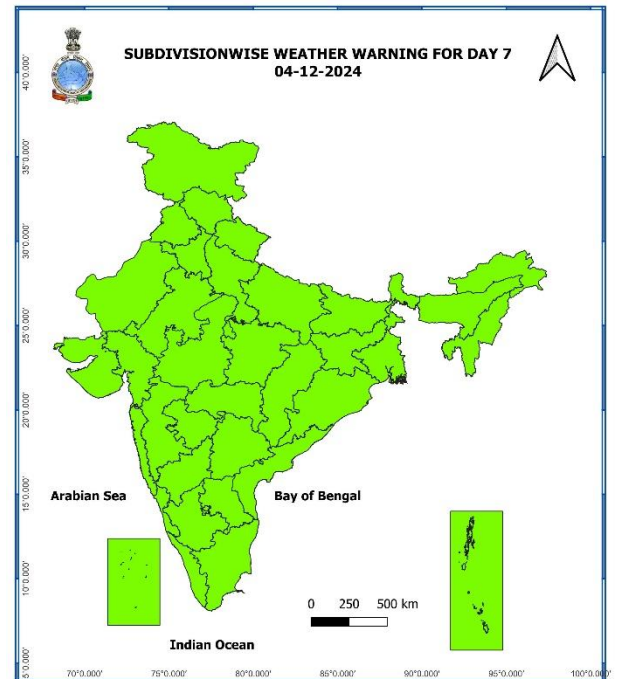
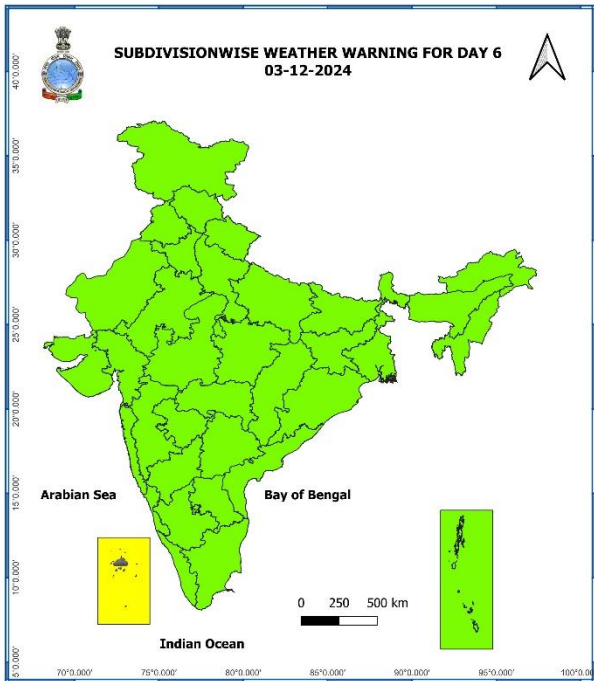
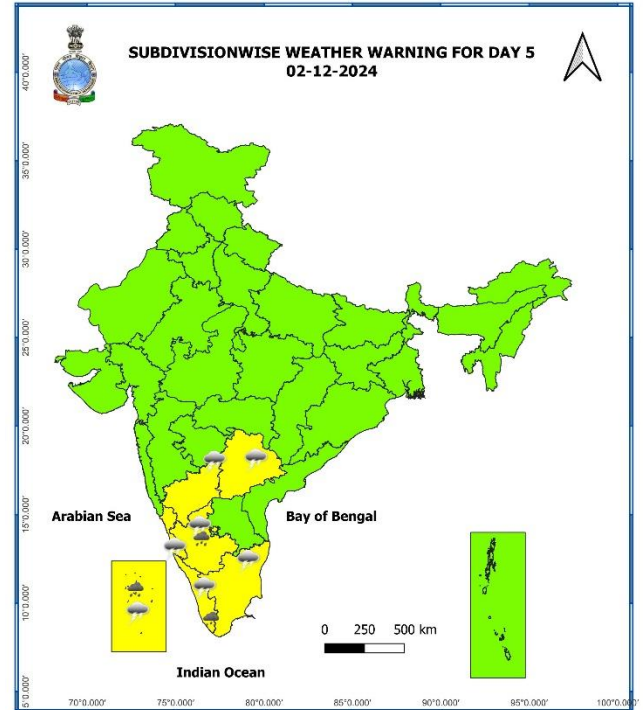
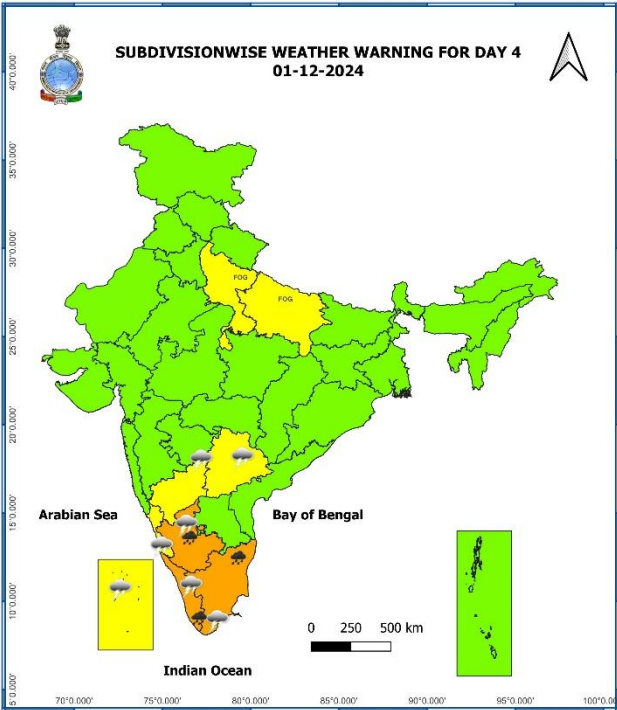
● LESS THAN 34 KT
 ○ 34-47 KT
 ○ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ○ CONE OF UNCERTAINTY
 AREA OF MAXIMUM SUSTAINED WIND SPEED:
 ■ 28-33 KT (52-61 KMPH)
 ■ 34-49 KT (62-91 KMPH)
 ■ 50-63 KT (92-117 KMPH)
 ■ ≥ 64 KT (≥118 KMPH)

IMPACT OVER THE SEA

MSW (knot/kmph)	Impact	Action
28-33 (52-61)	Very rough seas	Total suspension of fishing operations
34-49 (62-91)	High to very high seas	Total suspension of fishing operations
50-63 (92-117)	Very high seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

Weather Warning Graphics





- 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

24 hours Outlook for the Flash Flood Risk (FFR) till 1130 IST of 29-11-2024 :

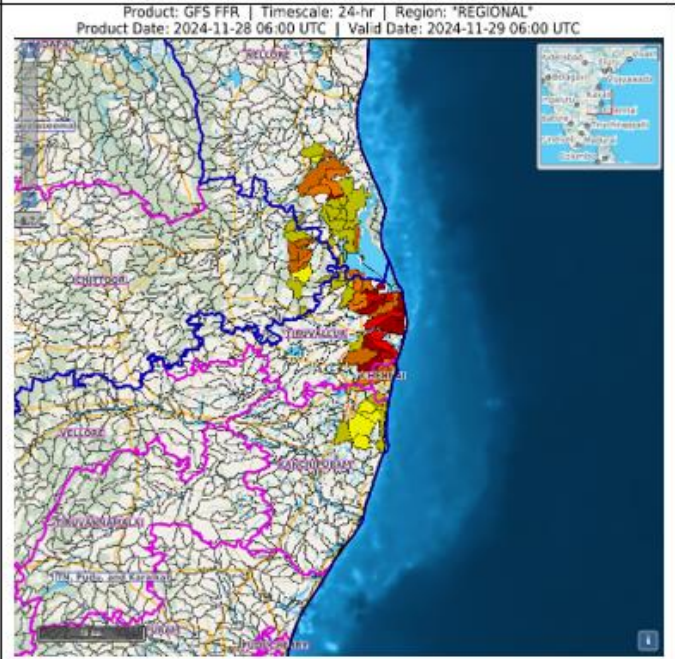
Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Meteorological Sub-divisions during next 24 hours.

Rayalaseema - Chittoor district.




Coastal Andhra Pradesh – Nellore district

Tamil Nadu - Puducherry & Karaikal - Chennai, Kanchipuram and Tiruvallur districts.

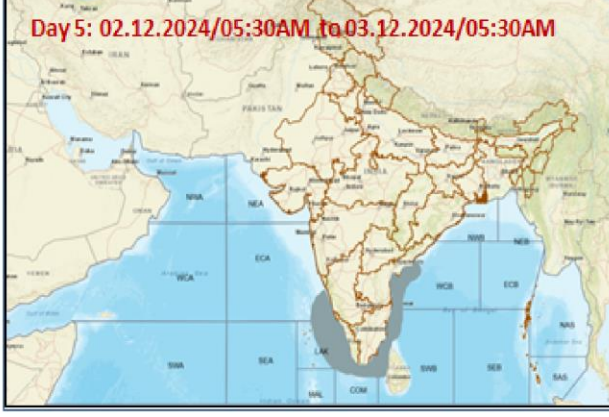
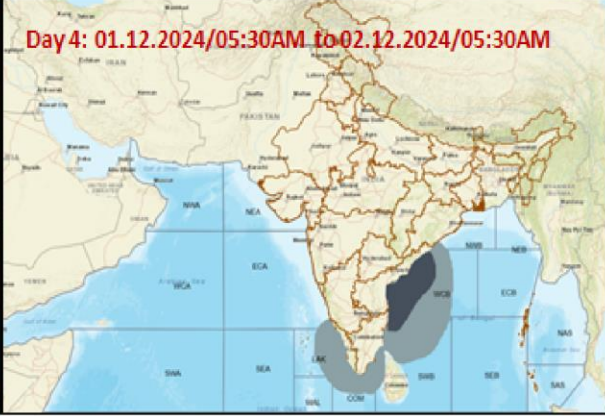
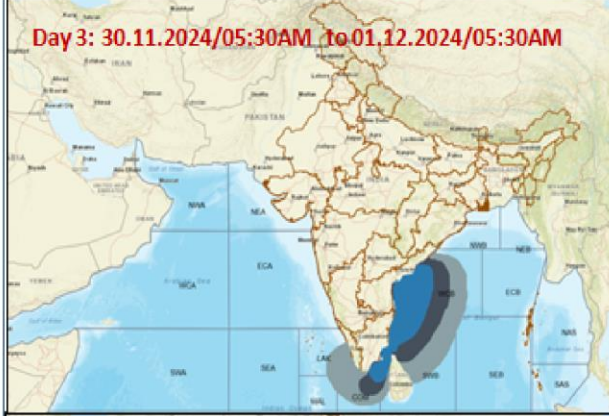
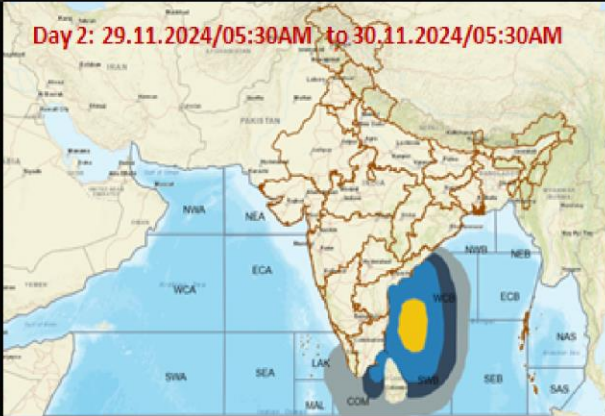
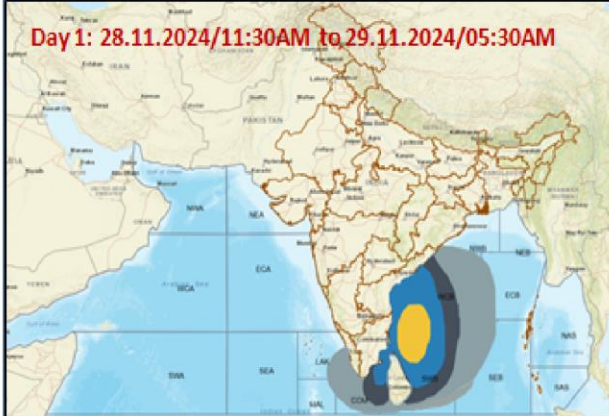
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern as shown in map due to expected rainfall occurrence in next 24 hours.



Flash Flood Risk

	High Risk (Take Action)
	Moderate Risk (Be Prepared)
	Low Risk (Be Updated)

Fishermen Warning Graphics



	Squally Weather with wind speed 35-45 kmph gusting to 55 kmph
	Squally wind with speed 45-55 kmph gusting to 65 kmph
	Deep depression with wind speed 55-65 kmph gusting to 75 kmph
	CS with Gale winds with speed 60-80 kmph gusting to 90 kmph

Fishermen are advised not to venture into the marked areas.