



**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
TROPICAL WEATHER OUTLOOK**

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 26.11.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR THE NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR THE NEXT 120 HOURS ISSUED AT 1500 UTC OF 26.11.2024 BASED ON 1200 UTC OF 26.11.2024.

Sub: Deep Depression over Southwest Bay of Bengal

The Deep Depression over Southwest Bay of Bengal moved north-northwestwards with a speed of 8 kmph during past 6 hours and lay centred at 1200 UTC of today, the 26th November 2024 over the same region near latitude 7.0°N and longitude 82.7°E, about 240 km southeast of Trincomalee (43418), 520 km southeast of Nagappattinam (43347), 640 km south-southeast of Puducherry (43331) and 720 km south-southeast of Chennai (43279).

It is very likely to continue to move north-northwestwards and intensify further into a cyclonic storm on 27th November. Thereafter, it will continue to move north-northwestwards towards Tamil Nadu coast skirting Sri Lanka coast during subsequent 2 days.

The system is being tracked by Doppler Weather Radar at Karaikal.

A continuous watch is being maintained for the movement and intensification of system.

Estimated Central Pressure in association with the system is 1001 hPa and associated maximum sustained wind speed is 30 kts gusting to 35 kts. Sea condition is likely to be very rough over southwest Bay of Bengal & along and off Sri Lanka coast till 27th November/0000 UTC. It is likely to become High from 27th/1200 UTC till 29th November. Rough to very rough sea condition is likely along & off Tamil Nadu-Puducherry and South Andhra Pradesh coasts till 29th November. Rough to very rough sea condition is likely over adjoining westcentral Bay of Bengal from 27th/1200 UTC till 29th November.

At 1300 UTC, Colombo reported Mean Sea Level Pressure of 1001 hPa and maximum sustained wind speed of 320°/06KT and Trincomalee reported Mean Sea Level Pressure of 1003 hPa and maximum sustained wind speed of 50°/03KT. A ship near 5.3N/80.6E reported maximum sustained wind speed of 290°/27KT

As per latest satellite imagery, intensity of the system is characterized as 2.0. Cloud are organized in central dense overcast pattern. Intense cloud mass is seen to the northwest of system centre. Associated scattered to broken low and medium clouds with embedded intense to very intense convection lay over south Bay of Bengal and adjoining EIO between latitude 4.0N to 15.0N and longitude 80.0E to 92.0E. Minimum cloud top temperature is minus 80-93°C.

The system is monitored by Doppler Weather Radar Karaikal.

Forecast track and intensity are given in the following table:

Date/ Time (UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.11.24/1200	7.0/82.7	55-65 gusting to 75	Deep Depression
27.11.24/0000	7.8/82.6	55-65 gusting to 75	Deep Depression
27.11.24/1200	8.8/82.5	60-70 gusting to 80	Cyclonic Storm
28.11.24/0000	9.7/82.4	60-70 gusting to 80	Cyclonic Storm
28.11.24/1200	10.5/82.1	65-75 gusting to 85	Cyclonic Storm
29.11.24/0000	11.3/81.7	65-75 gusting to 85	Cyclonic Storm
29.11.24/1200	12.1/81.1	60-70 gusting to 80	Cyclonic Storm

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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Remarks:

Currently, the system is lying very close to an intense patch of higher SST about 30°C (6-10°N and 84-88°E) which would cause warm moist air incursion into the core and may lead to marginal intensification into a cyclonic storm for a short period over southwest BoB. However, SST is relatively lesser along the coast and may thus lead to slight weakening of the system before landfall. Similarly, tropical cyclone heat potential is more than 100 KJ/cm² over southwest BoB & adjoining EIO. It is less 40-60 KJ/cm² over southwest & adjoining eastcentral BoB and along & off Sri Lanka/Tamil Nadu/ Andhra Pradesh coasts. The increase in barrier layer depth over the southwest BoB may also lead to marginal weakening near coast. Further the system is likely to track near t Sri Lanka coast and thus, land interactions may lead to slow intensification of system.

Total precipitable water imagery indicate warm moist air incursion into the core. Near to coast it is indicating cold dry air incursion. Madden Julian Oscillation (MJO) is in phase 3 with amplitude more than 1 and would move across phases 3 & 4 during next 7 days with amplitude remaining more than 1. Presence of Equatorial Rossby Waves over south BoB, MJO, strong westerly wind anomaly over south BoB and easterly wind anomaly to its north over South & adjoining central BoB during 26th - 28th November indicate a favourable environment for intensification of system.

Low level winds indicate broad scale circulation over south and adjoining EIO Low level positive cyclonic vorticity at 850 hpa level is around 100-120x10⁻⁵ s⁻¹ over southwest BoB near system area and is extending upto 500 hPa level. The low level convergence is around 30 x10⁻⁵ s⁻¹ over southwest BoB to the west of system centre. Upper level divergence is around 30x10⁻⁵ s⁻¹ to the north and another to the northwest of system centre. The system is not showing tilting with height. The system is being steered north-northwestwards along the periphery of upper tropospheric ridge near 10°N.

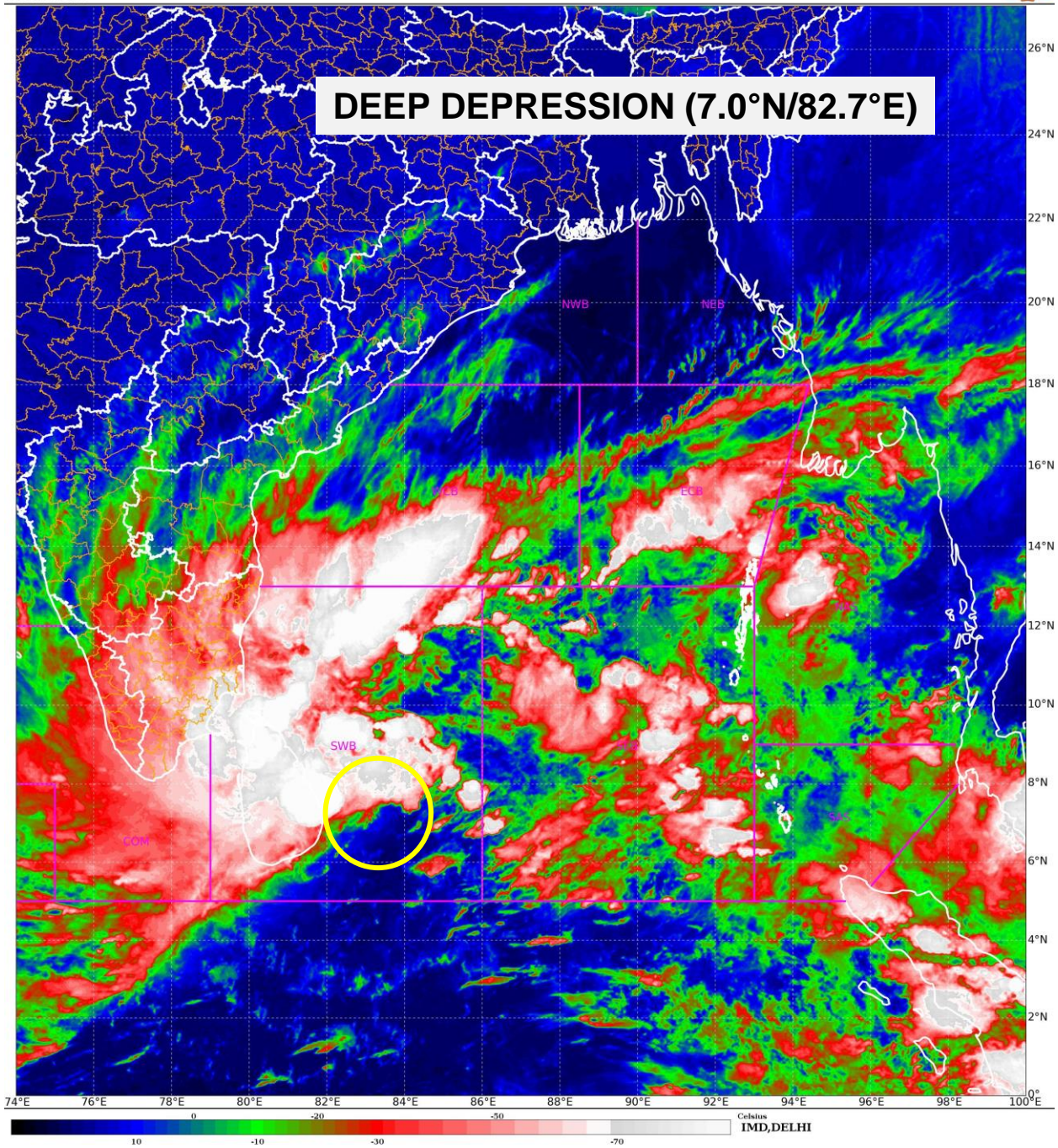
Various environmental features (higher SST, warm moist air incursion into the core, high ocean thermal energy, moderate wind shear, favourable MJO & Equatorial Rossby Waves) are indicating favourable environment for further intensification of system till 28th November.

Latest model runs indicate consensus wrt the track, intensity and landfall. Most of the models are indicating intensification into marginal cyclonic storm during 27th/1200 UTC to 29th/1200 UTC. Models also indicate gradual weakening of the system and slow movement near Tamil Nadu coast thereafter.

Hence it is inferred that the deep depression over Southwest Bay of Bengal is very likely to continue to move north-northwestwards and intensify further into a cyclonic storm on 27th November. Thereafter, it will continue to move north-northwestwards towards Tamil Nadu coast skirting Sri Lanka coast during subsequent 2 days. A continuous watch is being maintained for further intensification and movement of system towards Tamil Nadu - Sri Lanka coasts.

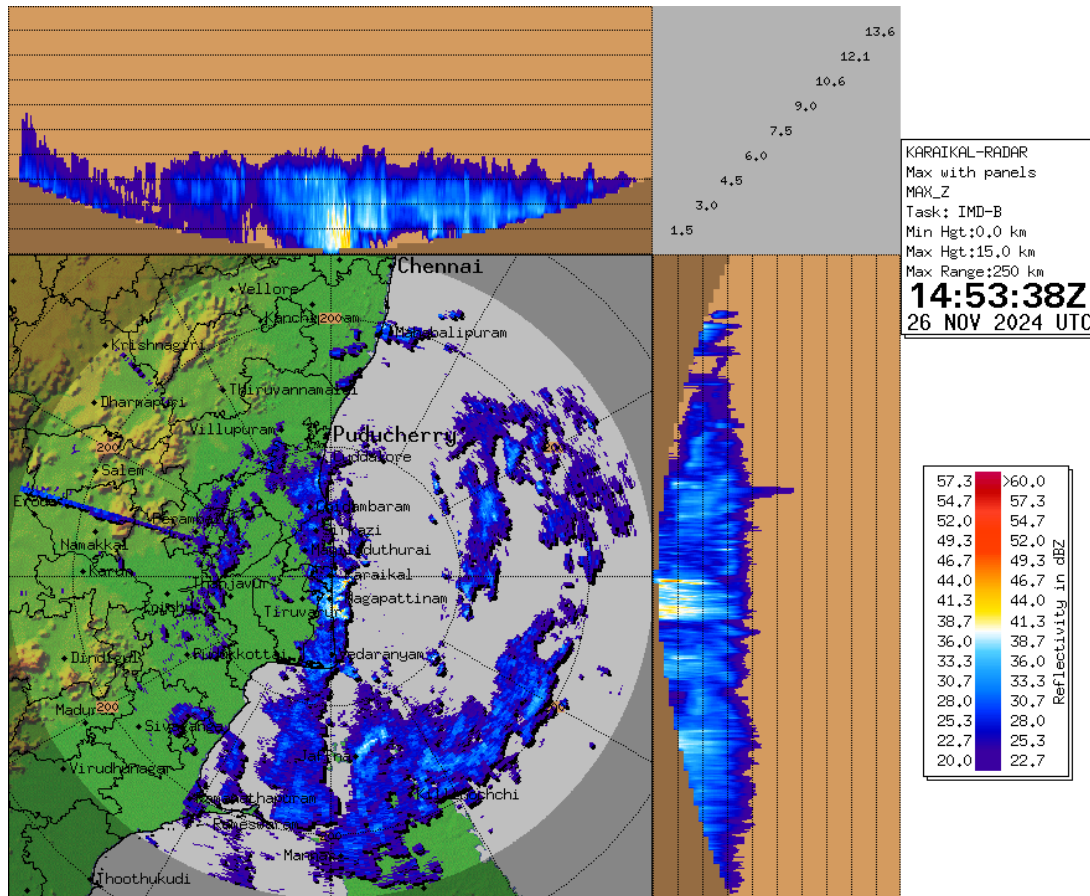
Next bulletin will be issued at 2100 UTC of today, the 26th November, 2024.

**(Monica Sharma)
Scientist D, RSMC, New Delhi**



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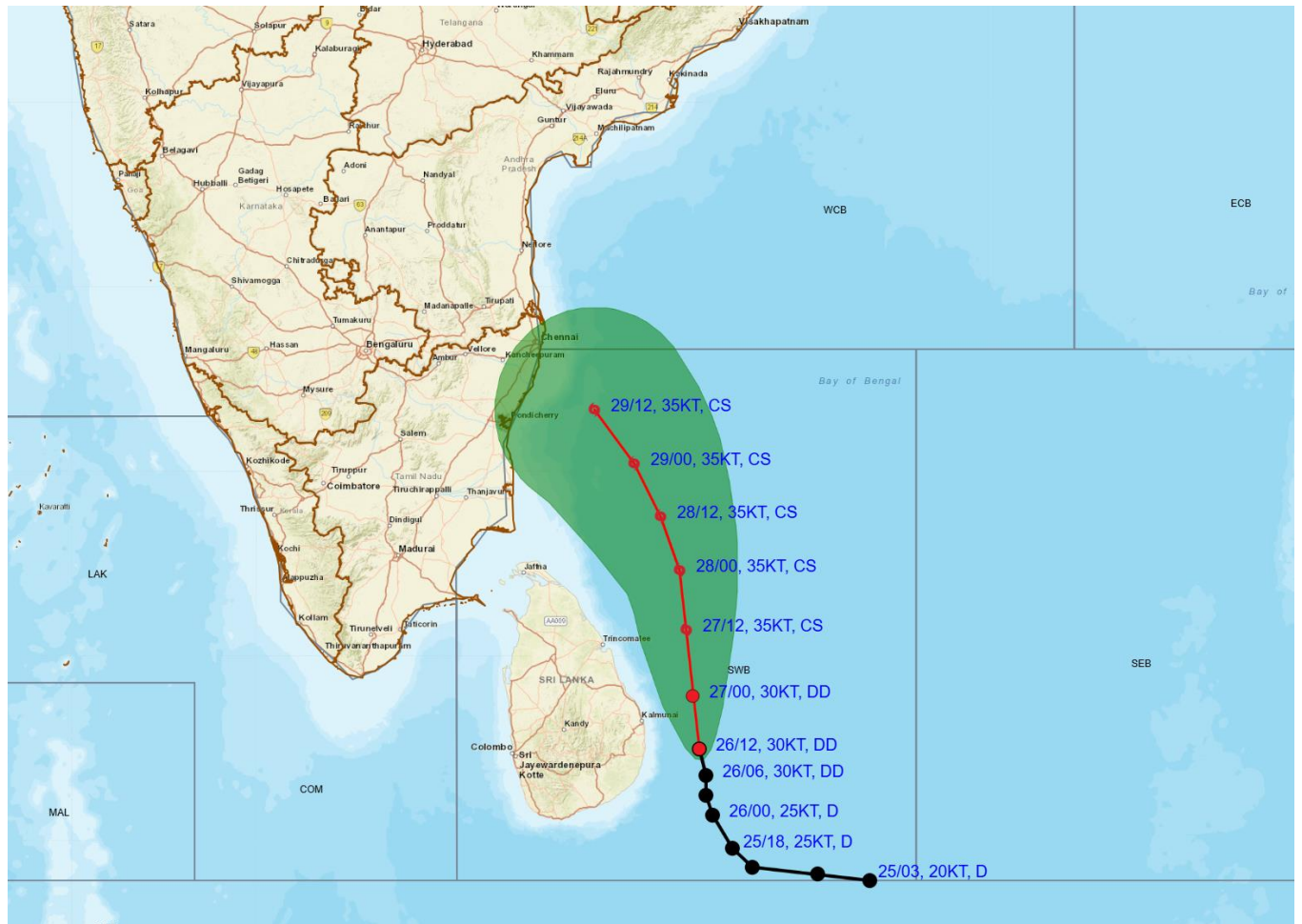
Doppler Weather Radar Observations at Karaikal (Max Z)



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OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINTY OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 1200 UTC (1730 HRS. IST) OF 26TH 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)

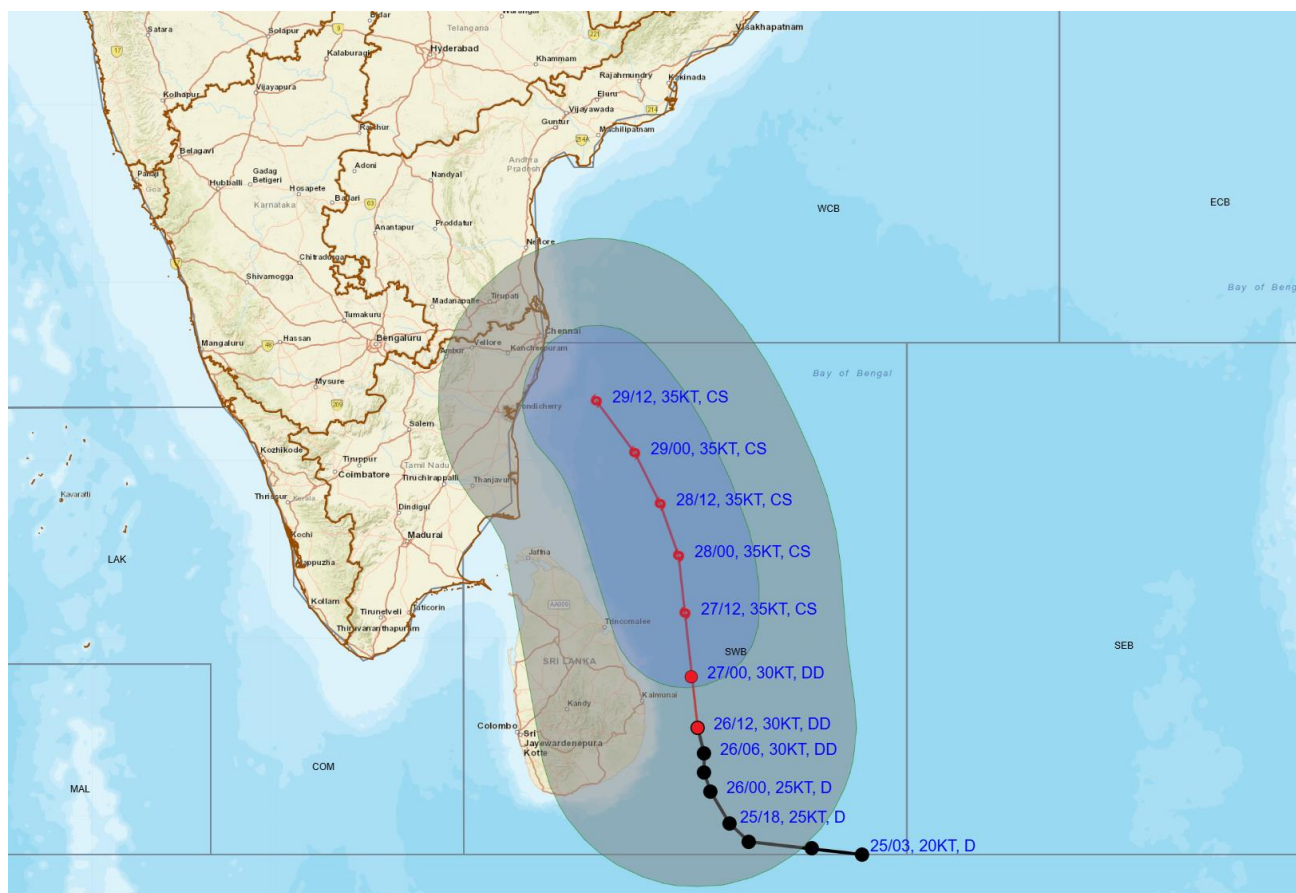
LESS THAN 34 KT
 34-47 KT
 ≥ 48 KT
 OBSERVED TRACK
 FORECAST TRACK
 CONE OF UNCERTAINTY

Forecast	DISTANCE (KM) AND DIRECTION FROM STATIONS				
	BATTICALOA	TRINCOMALEE	NAGAPPATTINAM	PUDUCHERRY	CHENNAI/MINAMBAKKAM
26.11.24/1200	140, SE	240, SE	520, SE	640, SSE	720, SSE
27.11.24/1200	150, NE	140, E	360, SE	460, SE	530, SSE
28.11.24/1200	310, N	230, NNE	250, E	300, ESE	350, SE
29.11.24/1200	490, N	390, N	200, NE	140, E	140, SE

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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 1200 UTC (1730 HRS. IST) OF 26TH 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

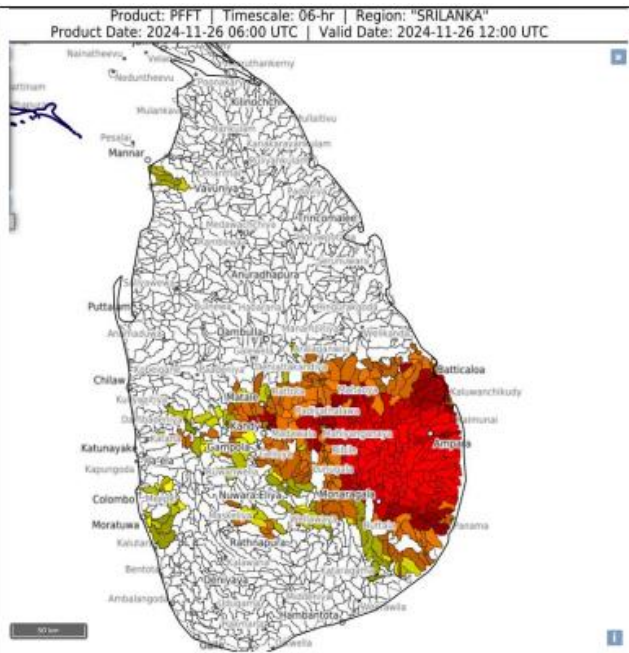
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Persistent Flash Flood Threat (PFFT)

Till 1200 UTC of 26.11.2024:

Moderate to High flash flood threat likely over few watersheds & neighbourhood of South-East parts of Sri Lanka during next 6 hours.

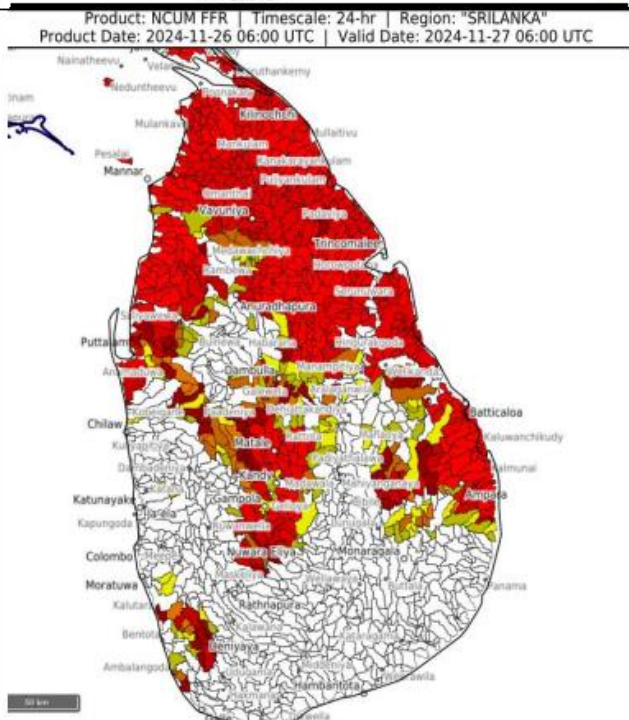
Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over AoC as shown in map due to expected rainfall occurrence in next 6 hours.









24 hours Flash Flood Risk Outlook till 0600 UTC of 27.11.2024:

High flash flood risk likely over few watersheds & neighbourhood of North, East and Central parts of Sri Lanka during next 24 hours.

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



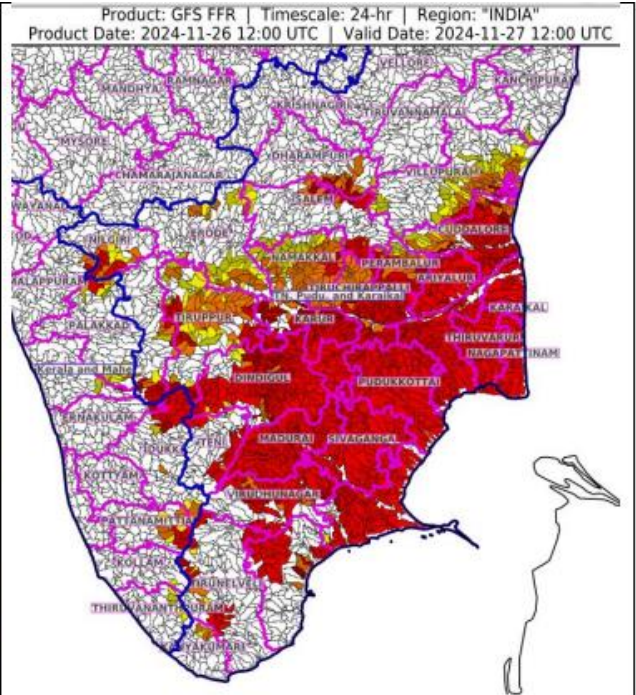
Flash Flood Threat	Flash Flood Risk
 High Threat (Take Action)	 High Risk (Take Action)
 Moderate threat (Be Prepared)	 Moderate Risk (Be Prepared)
 Low Threat (Be Updated)	 Low Risk (Be Updated)







24 hours Outlook for the Flash Flood Risk (FFR) till 1730 IST of 27-11-2024 :

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

Tamil Nadu - Pudu & Karaikal - Karaikal, Mahe, Puduchery, Ariyalur, Chengalpattu, Coimbatore, Cuddalore, Dharampuri, Dindigul, Erode, Kallakurichi, Kanyakumari, Karur, Madurai, Mayiladuthurai, Nagapattinam, Namakkal, Nilgiri, Perambalur, Pudukkottai, Ramanathapuram, Ranipet, Salem, Sivaganga, Teni, Tenkasi, Thanjavur, Thiruvarur, Tiruchirappalli, Tirunelveli, Tirupattur, Tiruppur, Tuticorin, Villupuram and Virudhunagar districts.

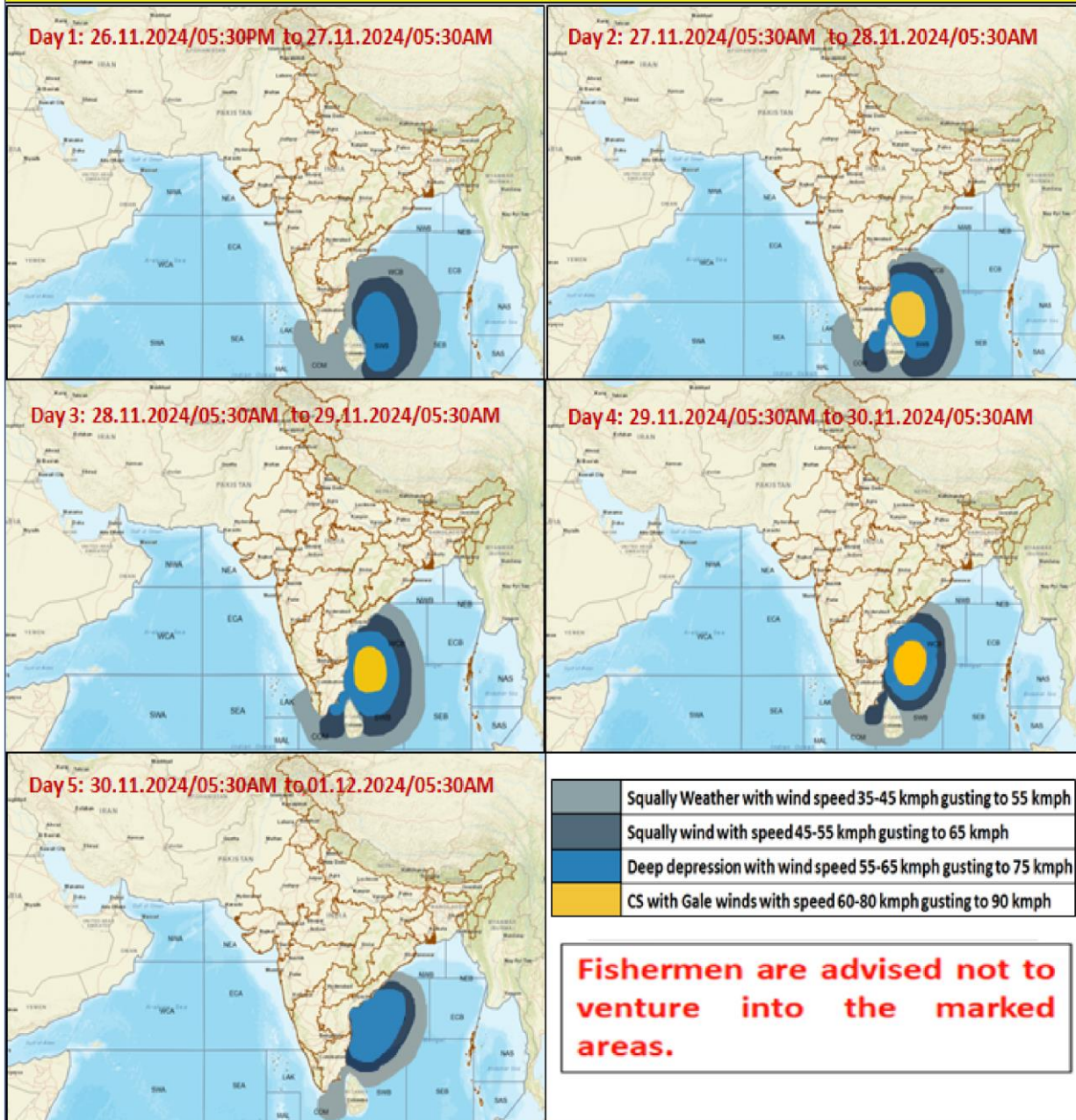
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Flash Flood Threat	Flash Flood Risk
 High Threat (Take Action)	 High Risk (Take Action)
 Moderate threat (Be Prepared)	 Moderate Risk (Be Prepared)
 Low Threat (Be Updated)	 Low Risk (Be Updated)

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Fishermen Warning Graphics



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