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 0300 UTC OF 26.11.2024 BASED ON 0000 UTC OF 26.11.2024.

Sub: Depression over Southwest Bay of Bengal

The Depression over Southwest Bay of Bengal and adjoining East Equatorial Indian Ocean moved north-northwestwards with a speed of 10 kmph during past 6 hours and lay centred at 0000 UTC of today, the 26th November 2024 over the Southwest Bay of Bengal near latitude 6.0°N and longitude 82.9°E, about 340 km south-southeast of Trincomalee (43418), 630 km south-southeast of Nagapattinam (43347), 750 km south-southeast of Puducherry (43331) and 830 km south-southeast of Chennai (43279).

It is likely to move nearly north-northwestwards and intensify into a deep depression during next 12 hours. Thereafter, it is likely to continue to move north-northwestwards towards Sri Lanka - Tamil Nadu coasts during subsequent 2 days.

Estimated Central Pressure in association with the system is 1003 hPa and associated maximum sustained wind speed is 25-30 kts gusting to 35 kts. Sea condition is likely to be rough to very rough over southwest Bay of Bengal & along and off Sri Lanka, Tamil Nadu-Puducherry coasts and southeast Bay of Bengal till 29th Novemeber and along & off Andhra Pradesh coast during 27th to 29th November.

As per latest satellite imagery, intensity of the system is characterized as T1.5. It shows shear pattern. The convective cloud mass is sheared to the northwest of system area. 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 13.0N and longitude 80.0E to 92.0E. Minimum cloud top temperature is minus 93°C. The multi-satellite based winds indicate stronger winds in the northern sector.

Forecast track and intensity are given in the following table:

Date/ Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26.11.24/0000	6.0/82.9	45-55 gusting to 65	Depression
26.11.24/1200	7.1/82.2	50-60 gusting to 70	Deep Depression
27.11.24/0000	8.2/81.8	50-60 gusting to 70	Deep Depression
27.11.24/1200	9.3/81.4	55-65 gusting to 75	Deep Depression
28.11.24/0000	10.2/81.0	55-65 gusting to 75	Deep Depression
28.11.24/1200	11.0/80.7	55-65 gusting to 75	Deep Depression
29.11.24/0000	11.8/80.5	55-65 gusting to 75	Deep Depression

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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Environmental features:

Sea surface temperature is more than 28-30^{0}C over south Bay of Bengal (BoB) with an intense patch of higher SST about 30^{0}C (6-10°N and 84-88°E). It is indicating the system to show marginal intensification 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. Tropical cyclone heat potential is more than 100 KJ/cm^2 over south BoB & adjoining EIO. It is less 40-60 KJ/cm^2 over southwest & adjoining eastcentral BoB and along & off Sri Lanka/Tamil Nadu/ Andhra Pradesh coasts. The barrier layer depth over the southwest BoB has increased upto 50 m which is unfavourable for intensification. 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. CFS-NCICS model forecast indicates presence of Equatorial Rossby Waves over South Andaman Sea and south BoB during 26th-30th. Strong westerly wind anomaly over south BoB and easterly wind anomaly to its north over South & adjoining central BoB is indicated during 26th - 30th November. During this period other waves including MJO, low frequency background waves, ERW are also likely over south BoB.

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 & adjoining East Equatorial Indian Ocean. The zone of the maximum vorticity has become more organized and is extending upto 500 hPa level. The low level convergence is around 30 x10^{-5} s^{-1} over southwest BoB and adjoining East EIO to the west of system centre. Upper level divergence is around 20x10^{-5} s^{-1} over the same region. The vertical wind shear is low to moderate (10-15 knots) over south BoB & adjoining EIO. Upper tropospheric ridge is near 10°N to the north of system. The southeasterly winds prevailing over the system area are likely to steer the system northwesterly.

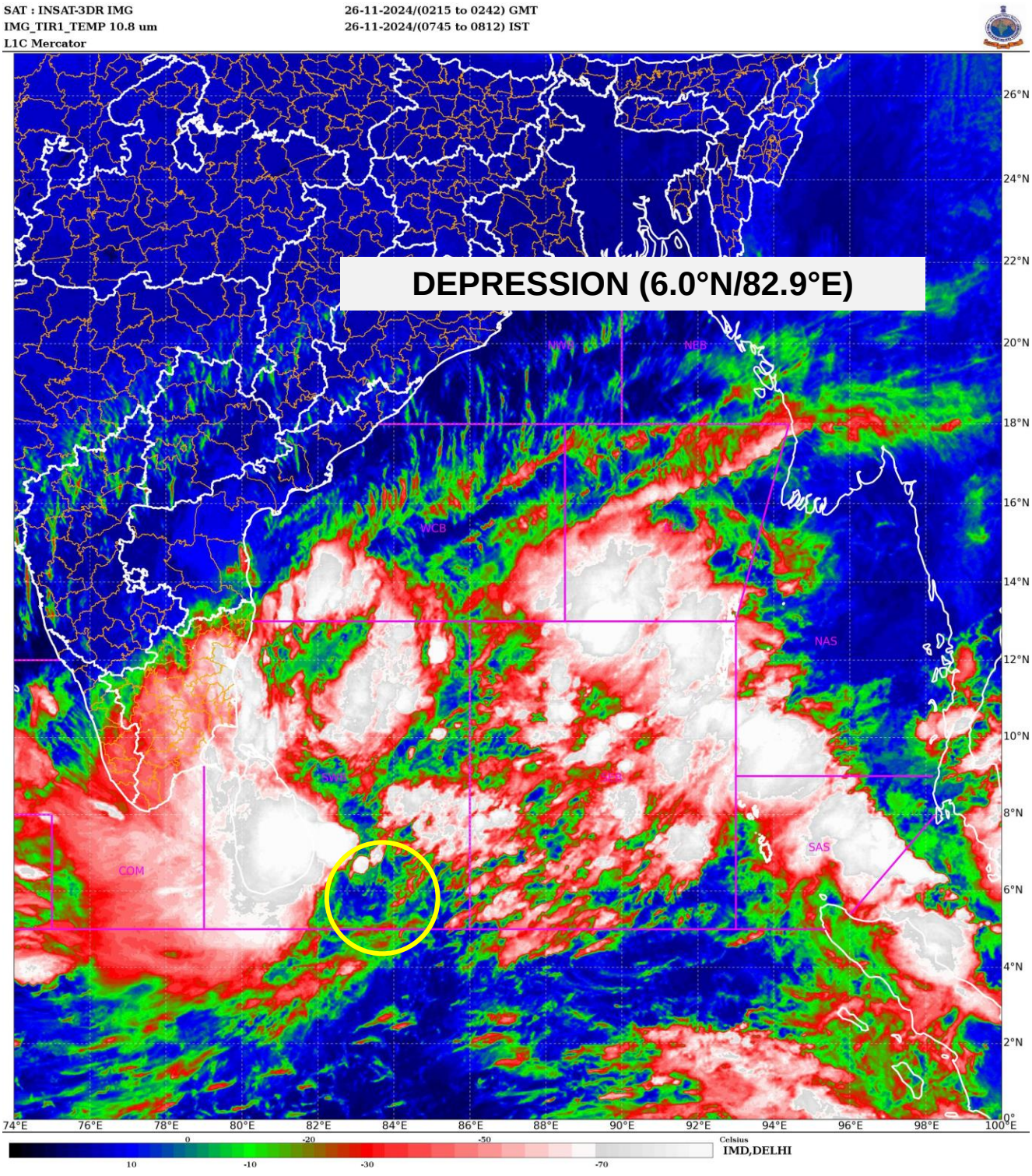
Various environmental features (higher SST, warm moist air incursion into the core, high ocean thermal energy) are indicating favourable environment for further intensification of system till 26th/1200 UTC.

Hence it is inferred that the depression over Southwest Bay of Bengal is likely to move nearly north-northwestwards and intensify into a deep depression during next 12 hours. Thereafter, it is likely to continue to move north-northwestwards towards Sri Lanka - Tamil Nadu coasts 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 0600 UTC of today, the 26th November, 2024.

(Shibin Balakrishnan)
Scientist D, RSMC, New Delhi



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PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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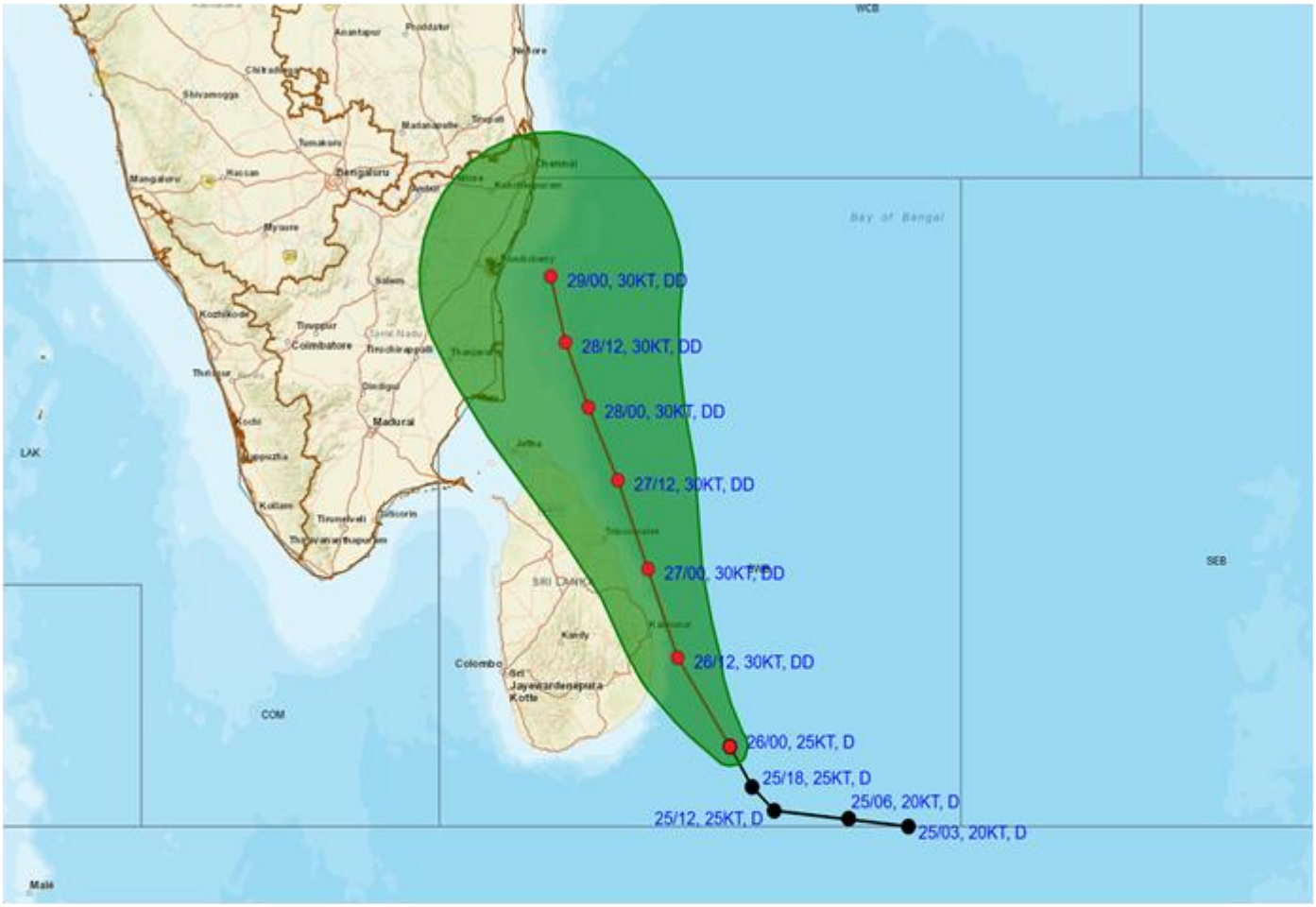
OBSERVED AND FORCAST TRACK ALONG WITH CONE OF UNCERTAINITY OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 HRS. IST) OF 26TH NOVEMBER, 2024



DATE/TIME	:	IN UTC
IST	:	UTC + 0530
KT	:	NAUTICAL MILES/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)	BATTICALOA	TRINCOMALEE	NAGAPPATTINAM	PUDUCHERRY	CHENNAI/MINAMBAKKAM
26.11.24/0000	230, SE	340, SSE	630, SSE	750, SSE	830, SSE
27.11.24/0000	60, NNE	80, SE	350, SE	470, SSE	560, SSE
28.11.24/0000	290, NNW	190, N	140, ESE	230, SSE	320, SSE
29.11.24/0000	480, NNW	370, NNW	140, NNE	80, ESE	140, SSE

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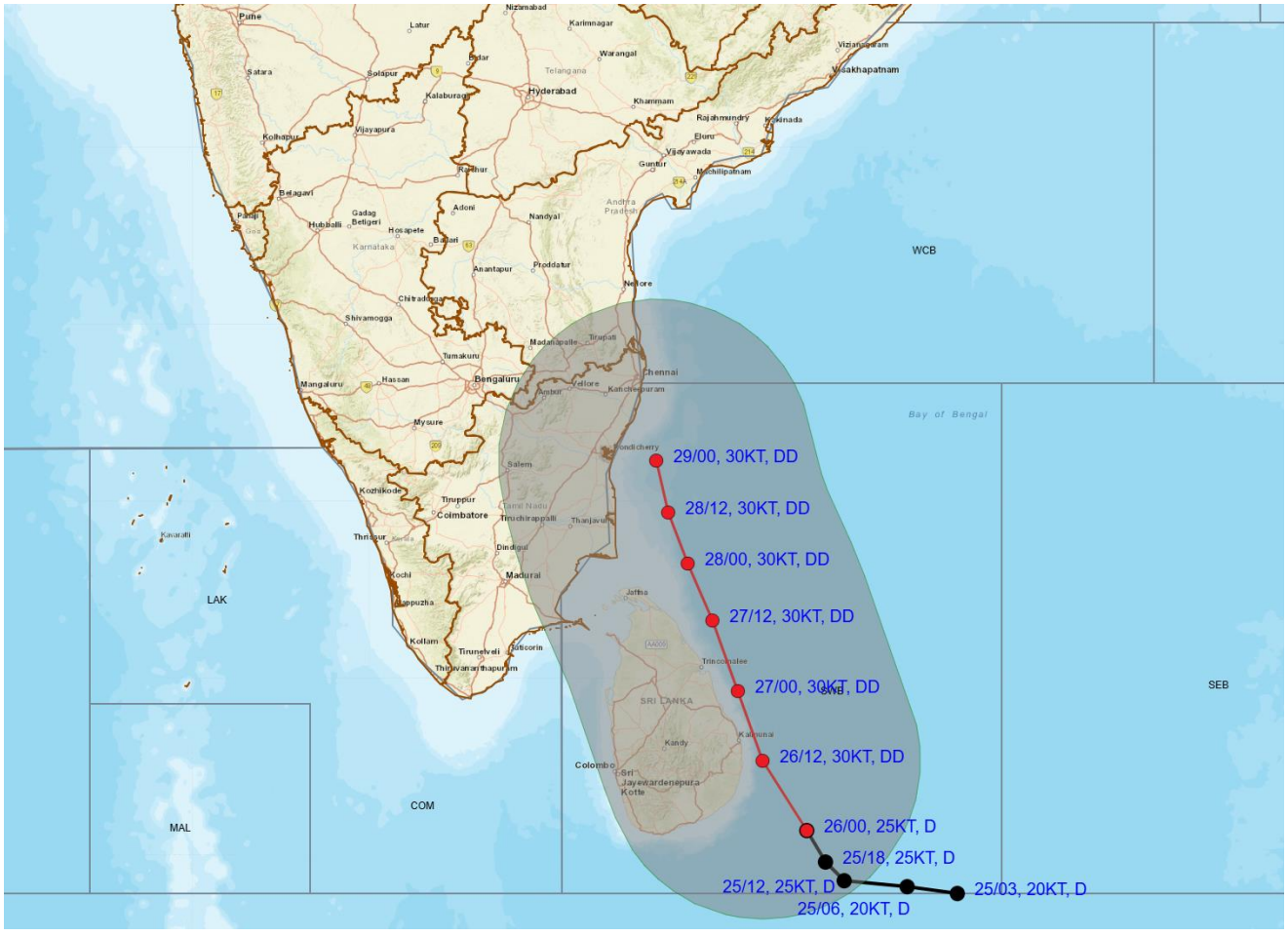
OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF DEPRESSION OVER SOUTHWEST BAY OF BENGAL BASED ON 0000 UTC (0530 HRS. IST) OF 26TH NOVEMBER, 2024.



DATE/TIME	:	IN UTC
IST	:	UTC + 0530
KT	:	NAUTICAL MILES/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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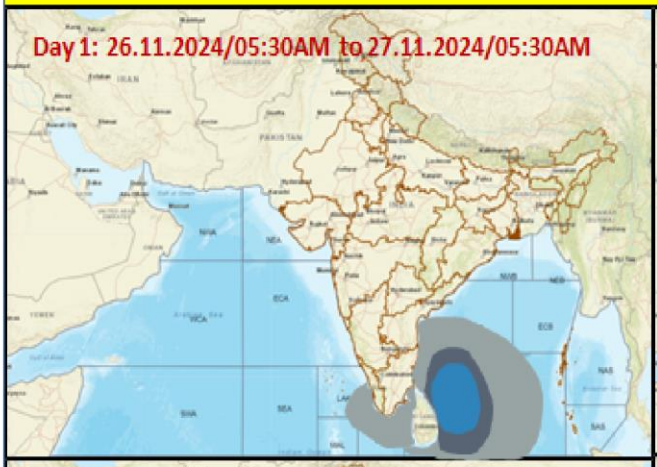
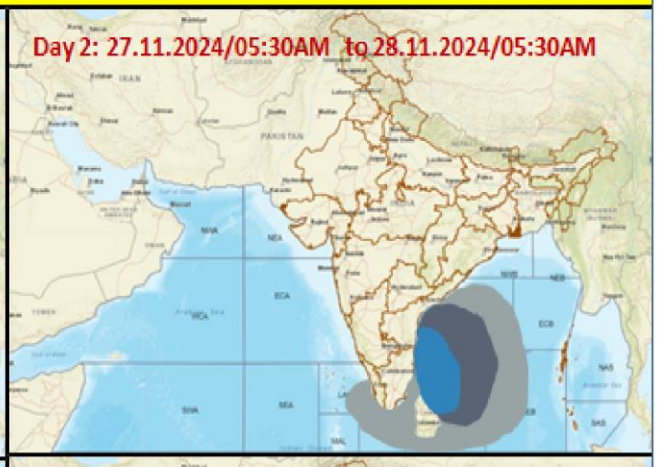
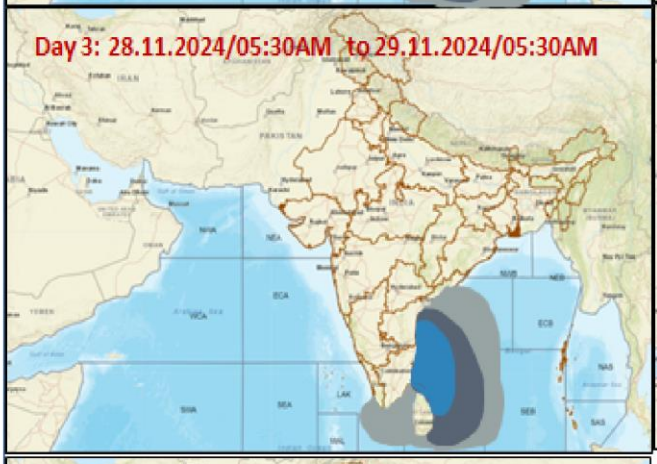
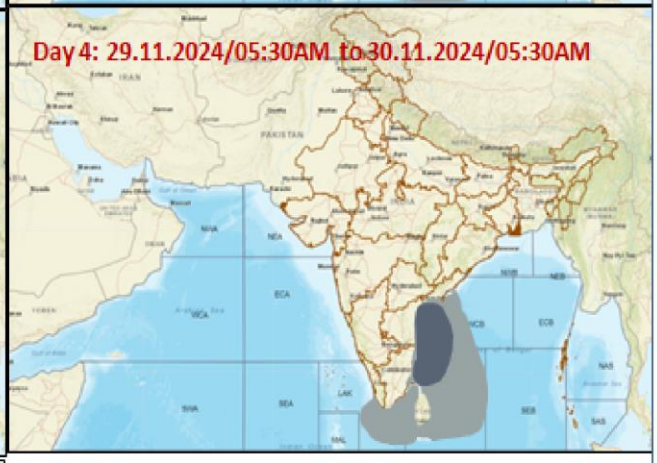
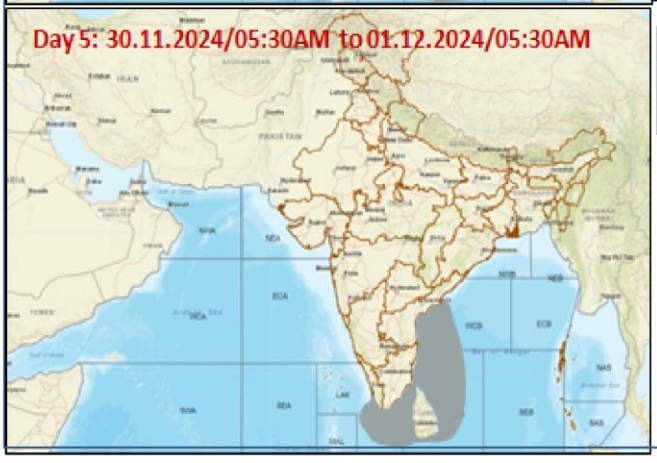
Fishermen Warning Graphics











	Squally Weather with wind speed 35-45 kmph gusting to 55 kmph
	Squally wind with speed 45-55 kmph gusting to 65 kmph
	Squally winds with speed 55-65 kmph gusting to 75 kmph

Fishermen are advised not to venture into the marked areas.

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