



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL CYCLONE ADVISORY NO. 15

DEMS-RSMCSPECIAL TROPICAL CYCLONES NEW DELHI DATED 01.12.2024

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT,
MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES,
REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT,
SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)**

TROPICAL CYCLONE ADVISORY NO. 15 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 01.12.2024 BASED ON 0300 UTC OF 01.12.2024

SUB: CYCLONIC STORM “FENGAL” [PRONOUNCED AS FEINJAL] OVER NORTH COASTAL TAMIL NADU-PUDUCHERRY

THE CYCLONIC STORM “FENGAL” [PRONOUNCED AS FEINJAL] OVER NORTH COASTAL TAMIL NADU & PUDUCHERRY REMAINED PRACTICALLY STATIONARY DURING PAST 6 HOURS AND LAY CENTERED AT 0300 UTC OF THE 01ST DECEMBER, 2024 OVER THE SAME REGION NEAR LATITUDE 12.0°N AND LONGITUDE 79.8°E, CLOSE TO PUDUCHERRY ABOUT 30 KM NORTH OF CUDDALORE (43329), 40 KM EAST OF VILLUPURAM (TAMILNADU, INDIA) AND 120 KM SOUTH-SOUTHWEST OF CHENNAI (43279).

IT IS LIKELY TO MOVE WESTWARDS SLOWLY AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION OVER NORTH COASTAL TAMILNADU AND PUDUCHERRY DURING THE NEXT 6 HOURS. THE SYSTEM IS BEING CONTINUOUSLY MONITORED BY THE DOPPLER WEATHER RADAR AT CHENNAI & KARAIKAL.

ESTIMATED CENTRAL PRESSURE IN ASSOCIATION WITH THE SYSTEM IS 996 HPA AND ASSOCIATED MAXIMUM SUSTAINED WIND SPEED IS 35 KTS GUSTING TO 45 KTS. HIGH TO VERY ROUGH SEA CONDITIONS IS VERY LIKELY TO PREVAIL OVER SOUTHWEST BAY OF BENGAL AND ADJOINING AREAS OF WESTCENTRAL BAY OF BENGAL, GULF OF MANNAR AND ALONG & OFF TAMIL NADU-PUDUCHERRY,

SOUTH ANDHRA PRADESH AND NORTH SRI LANKA COASTS TILL 0600 UTC OF 01ST DECEMBER.

AS PER LATEST SATELLITE IMAGERY, ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER WEST CENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL, SOUTH COASTAL ANRPRDESH RAYALSEEMA TAMILNADU AND SOUTH INTERIOR KARNATAKA WITH MINIMUM CLOUD TOP TEMPERATURE AS MINUS 70-90°C.

PUDUCHERRY REPORTED MEAN SEA LEVEL PRESSURE (MSLP) OF 996.3 HPA, 24 HRS PRESSURE CHANGE OF(P24) OF -7.9 HPA, DEPARTURE FROM NORMAL (DEP) OF -16.4 HPA IS AND MAXIMUM SUSTAINED WIND SPEED (MSW) OF 320⁰/ 11KT AT 0300 UTC OF 1ST DECEMBER.

CUDDALORE REPORTED MSLP OF 998.5 HPA, P24 OF -5.1 HPA, DEP IS -14.6 HPA AND MSW OF 290⁰/ 12KT AT 0300 UTC OF 1ST DECEMBER.

PARANGIPETTAI REPORTED MSLP OF 999.2 HPA AND MSW OF 270⁰/ 05KT AT 0300 UTC OF 1ST DECEMBER.

CHENNAI REPORTED MSLP OF 1003.6 HPA, P24 OF +1.1 HPA, DEP IS -10.3 HPA AND MSW OF 160⁰/ 06KT AT 0300 UTC OF 1ST DECEMBER.

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
01.12.24/0300	12.0/79.8	60-70 GUSTING TO 80	CYCLONIC STORM
01.12.24/0600	12.0/79.7	60-70 GUSTING TO 80	CYCLONIC STORM
01.12.24/1200	12.0/79.6	50-60 GUSTING TO 70	DEEP DEPRESSION
01.12.24/1800	12.0/79.4	40-50 GUSTING TO 60	DEPRESSION

WIND WARNING:

- SOUTHWEST BAY OF BENGAL AND ALONG & OFF NORTH TAMIL NADU – PUDUCHERRY COASTS: GALE WIND SPEED REACHING 60-70 KMPH GUSTING TO 80 KMPH IS CONTINUING TO PREVAIL OVER SOUTHWEST BAY OF BENGAL. IT IS LIKELY TO DECREASE BECOMING SQUALLY WIND SPEED REACHING 50-60 KMPH GUSTING TO 70 KMPH FROM 12 UTC OF 1ST DECEMBER AND DECREASE GRADUALLY THEREAFTER.
- ADJOINING AREAS OF WESTCENTRAL BAY OF BENGAL AND ALONG & OFF SOUTH ANDHRA PRADESH COAST: SQUALLY WIND SPEED REACHING 45-55 KMPH GUSTING TO 65 KMPH IS LIKELY TO PREVAIL OVER ADJOINING AREAS OF WESTCENTRAL BAY OF BENGAL TILL 12UTC OF 1ST DECEMBER. IT IS LIKELY TO 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 12UTC OF 1ST DECEMBER AND GRADUALLY DECREASE THEREAFTER.

SEA CONDITION:

HIGH TO VERY ROUGH SEA CONDITIONS IS LIKELY TO PREVAIL OVER SOUTHWEST BAY OF BENGAL ADJOINING AREAS OF WESTCENTRAL BAY OF BENGAL, AND ALONG & OFF NORTH TAMIL NADU-PUDUCHERRY COASTS. VERY ROUGH TO ROUGH SEA CONDITIONS ARE LIKELY TO PREVAIL OVER ADJOINING AREAS OF WESTCENTRAL BAY OF BENGAL, GULF OF MANNAR, ALONG & OFF SOUTH ANDHRA PRADESH AND NORTH SRI LANKA COASTS TILL 12UTC OF TODAY, THE 1ST DECEMBER. IT WILL GRADUALLY IMPROVE THEREAFTER.

STORM SURGE WARNING:

STORM SURGE OF ABOUT 0.5 METRE HEIGHT ABOVE THE ASTRONOMICAL TIDE IS LIKELY INUNDATE THE LOW LYING AREAS OF THE COASTAL DISTRICTS OF NORTH TAMIL NADU, PUDUCHERRY AND ADJOINING SOUTH ANDHRA PRADESH DURING NEXT 06 HOURS.

FISHERMAN WARNING:

- TOTAL SUSPENSION OF FISHING OPERATIONS TILL EVENNING OF THE 1ST DECEMBER.
- 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 NORHT SRI LANKA COASTS TILL 01ND DECEMBER.
- FISHERMEN OUT AT SEA ARE ADVISED TO RETURN TO COAST.

REMARKS:

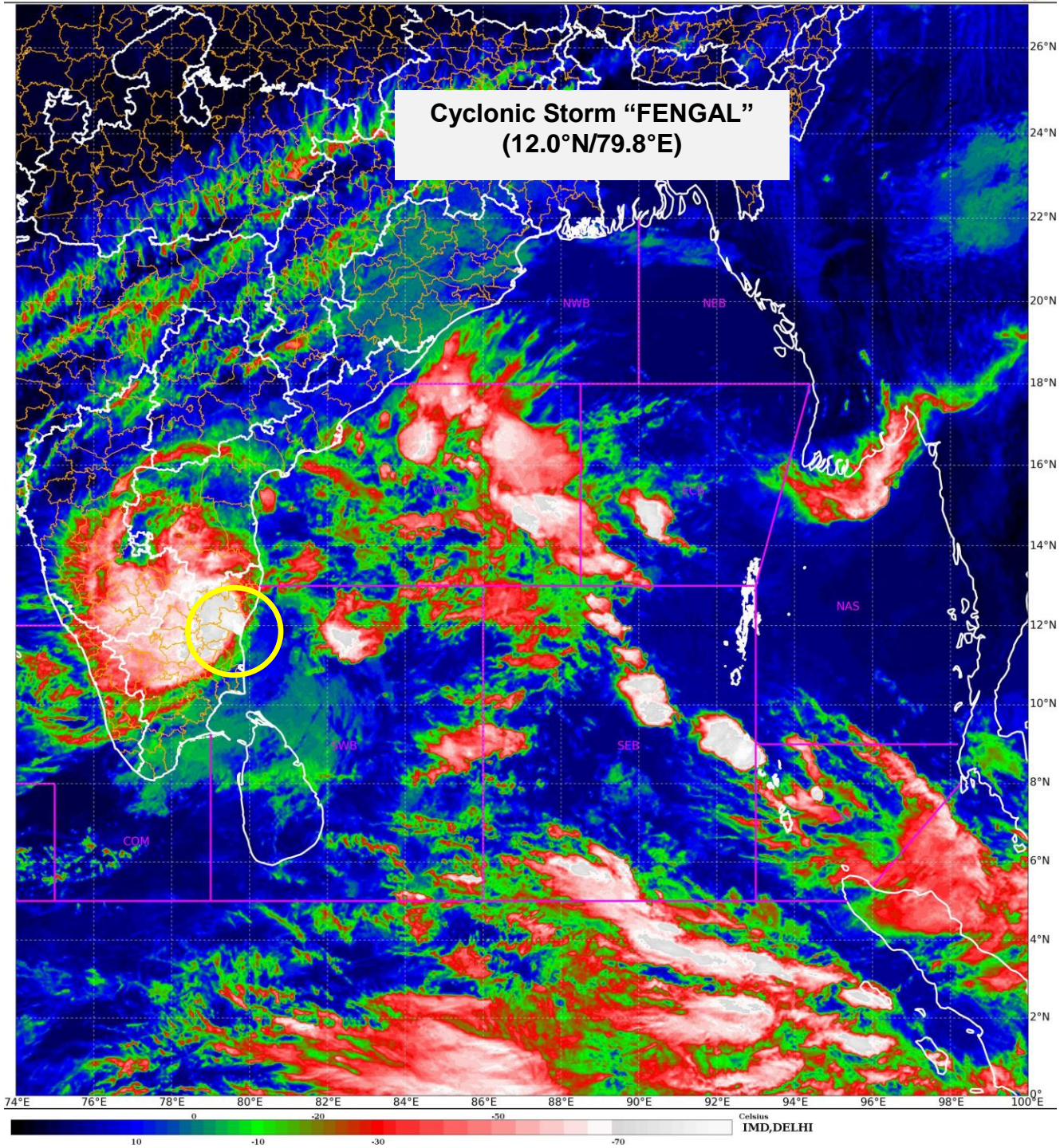
THE SYSTEM IS OVER AN AREA WITH SEA SURFACE TEMPERATURE (SST) ABOUT 27⁰C. THE TOTAL PRECIPITABLE WATER IMAGERY IS INDICATING WARM MOIST AIR AROUND SYSTEM AREA. HOWEVER, COLD DRY AIR INCURSION FROM SOUTHWEST IS REACHING UPTO SOUTHEAST SECTOR. THE TROPICAL CYCLONE HEAT POTENTIAL IS 40-50 KJ/CM² OVER SOUTHWEST & ADJOINING WESTCENTRAL BOB ALONG & OFF SRI LANKA/TAMIL NADU/ ANDHRA PRADESH COASTS

LOW LEVEL POSITIVE CYCLONIC VORTICITY AT 850 HPA LEVEL IS AROUND 150X10⁻⁵ S⁻¹ OVER SOUTH SOUTHEAST OF THE SYSTEM AREA WITH VERTICAL EXTENSION UPTO 500 HPA LEVEL. THE LOW LEVEL CONVERGENCE IS REDUCED TO 10 X10⁻⁵ S⁻¹ AND NOW SOUTH OF SYSTEM AREA. UPPER LEVEL DIVERGENCE IS REDUCED TO 10 X10⁻⁵ S⁻¹ TO THE SOUTH SOUTHWEST OF SYSTEM AREA. VERTICAL WIND SHEAR IS MODERATE (10-15 KT) OVER THE SYSTEM AREA. THE EAST-NORTHEASTERLY WINDS PREVAILING OVER SYSTEM AREA ARE STEERING THE SYSTEM WEST-SOUTHWESTWARDS. THE SYSTEM HAS STARTED WEAKENING DUE TO LAND INTERACTIONS, DECREASE IN VARIOUS FEATURES LIKE LOW LEVEL VORTICITY.

THERE IS CONVERGENCE AMONG VARIOUS MODELS WITH RESPECT TO MOVEMENT OF THE CYCLONIC SYSTEM. IT IS INFERRED THAT THE CYCLONIC STORM "FENGAL" WILL MOVE WESTWARDS SLOWLY AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION OVER NORTH COASTAL TAMILNADU AND PUDUCHERRY DURING THE NEXT 6 HOURS. THE SYSTEM IS BEING CONTINUOUSLY MONITORED BY THE DOPPLER WEATHER RADAR AT CHENNAI & KARAIKAL.

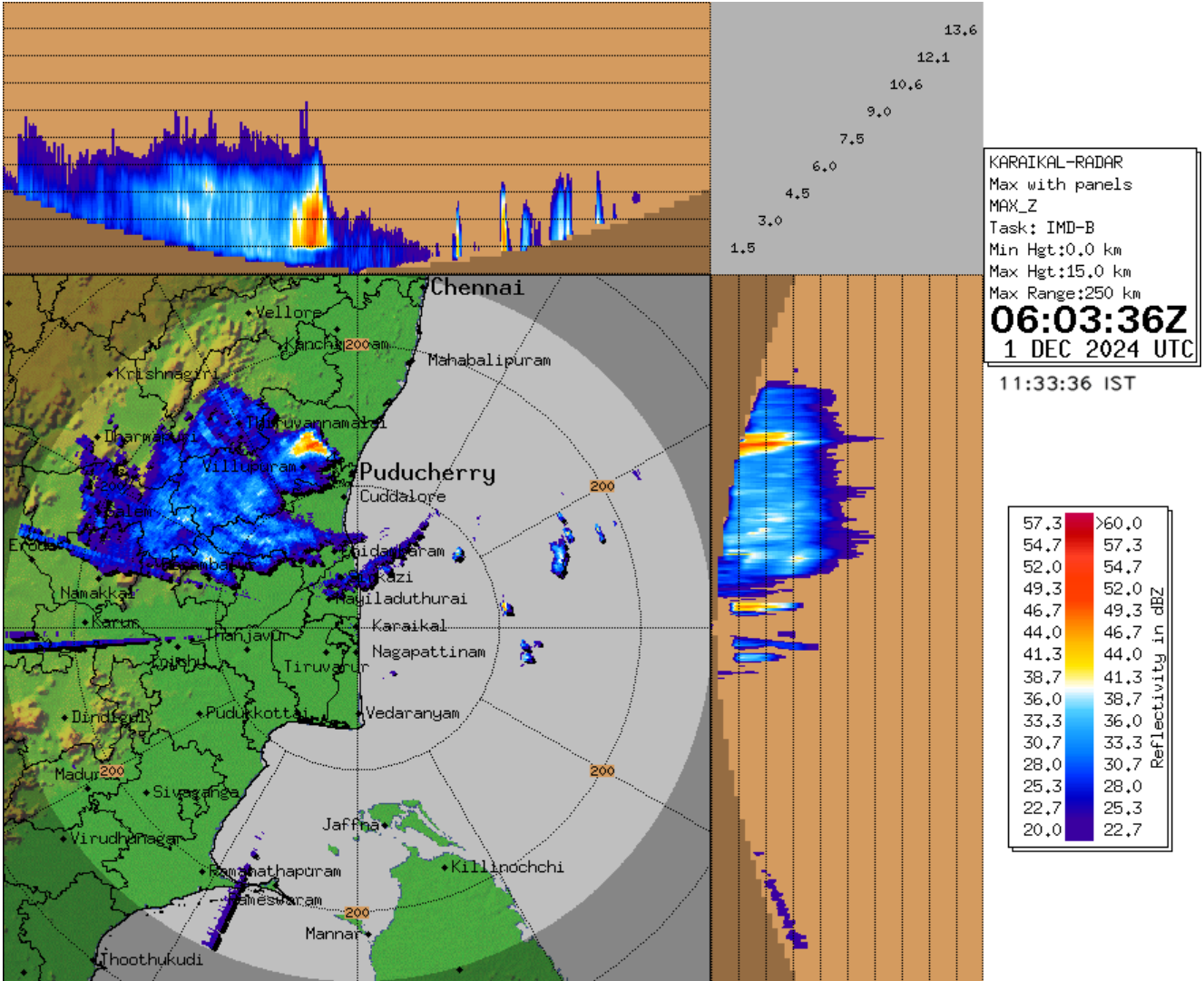
NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 01st DECEMBER, 2024.

**(AMIT BHARDWAJ)
SCIENTIST-C, RSMC, NEW DELHI**



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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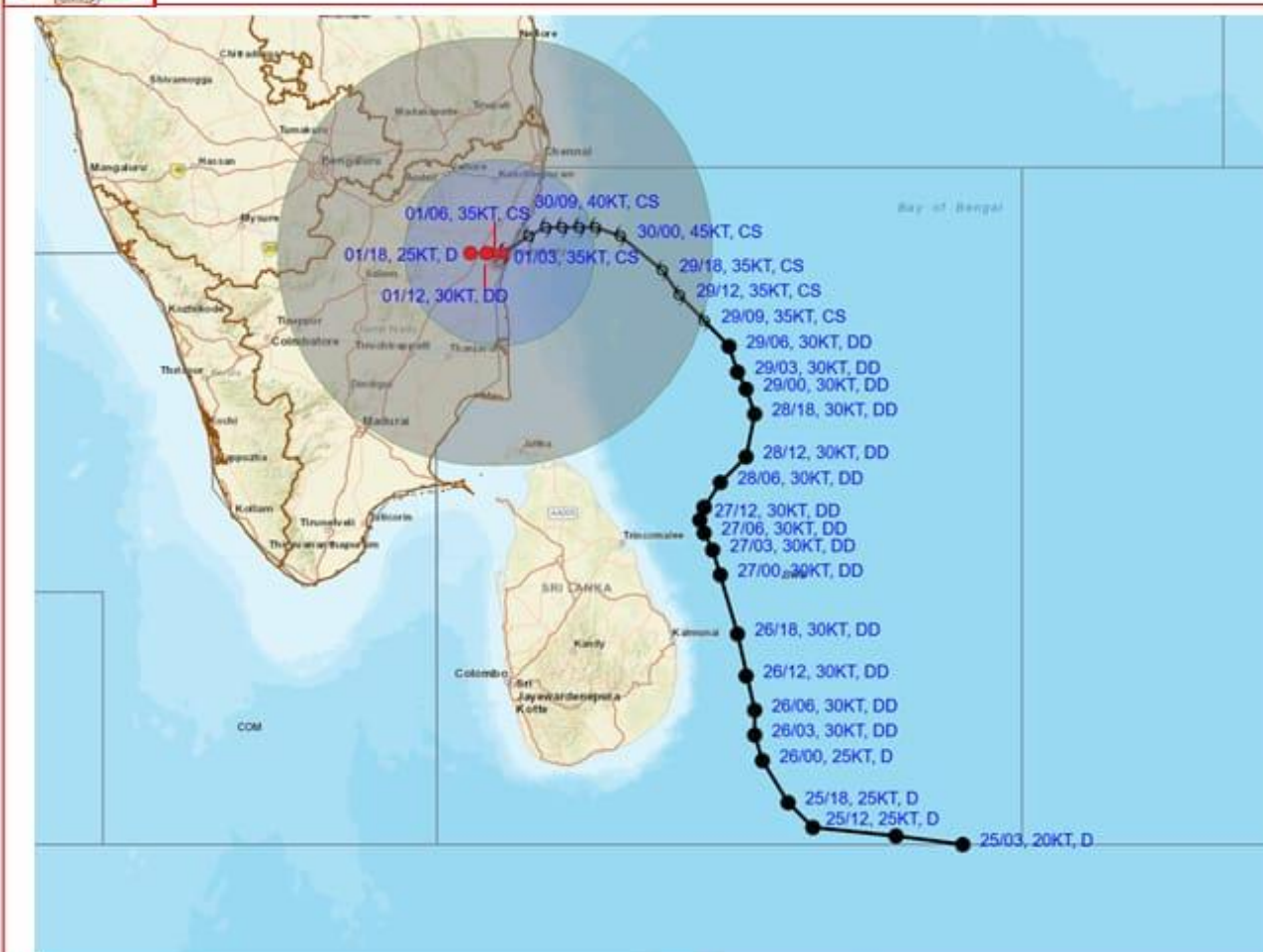
MAXIMUM REFLECTIVITY IMAGERY FROM DOPPLER WEATER RADAR, KARAIKAL



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OBSERVED AND FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION OF CYCLONIC STORM "FENGAL" OVER NORTH COASTAL TAMIL NADU AND PUDUCHERRY BASED ON 0300 UTC (0830 HRS. IST) OF 01st DECEMBER, 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
 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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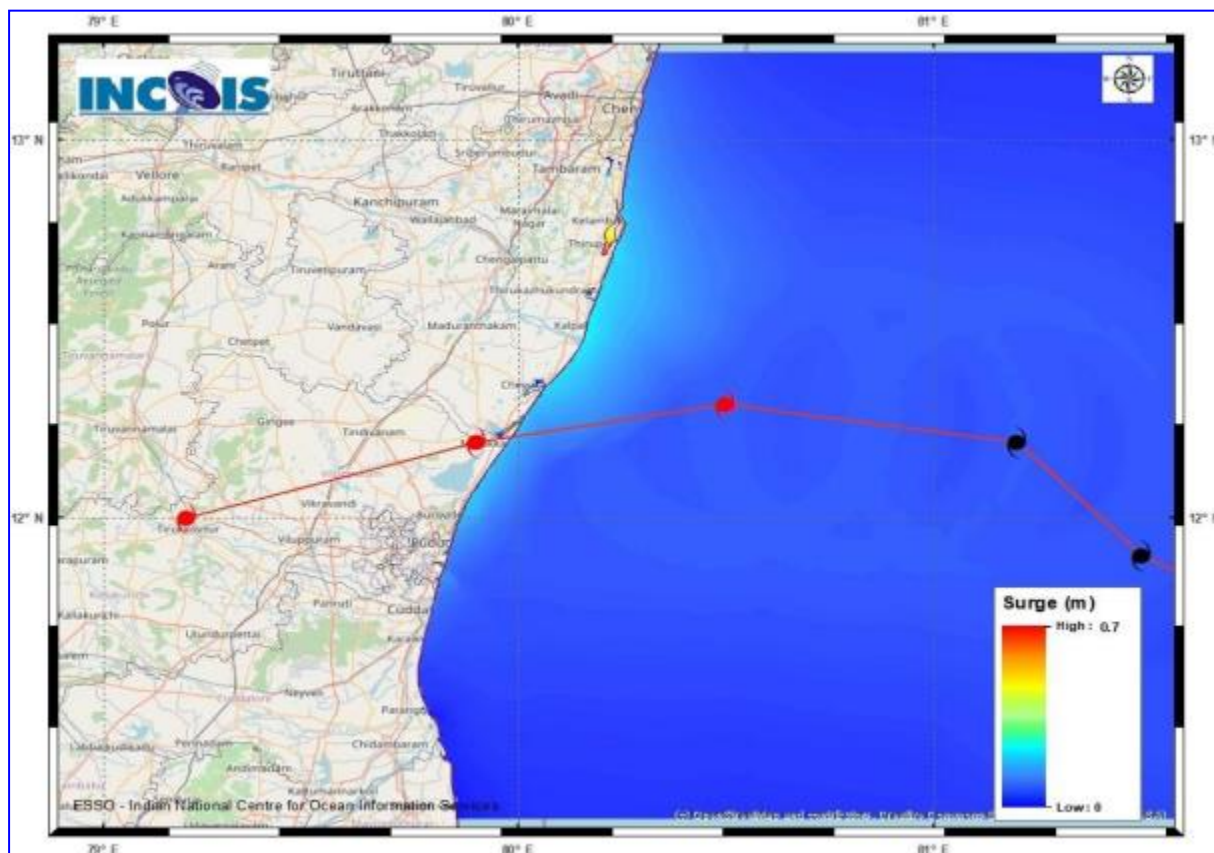


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● LESS THAN 34 KT
 ○ 34-47 KT
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 — OBSERVED TRACK
 — FORECAST TRACK
 ▲ CONE OF UNCERTAINTY

Forecast Date and Time (UTC)	DISTANCE (KM) AND DIRECTION FROM STATIONS		
	MAHABALIPURAM	MO PONDICHERRY	CHENNAI/MINAMB AKKAM
01.12.24/0300	80, SSW	0, NNW	120, SSW
01.12.24/0600	90, SW	10, WNW	120, SSW
01.12.24/1200	90, SW	20, W	130, SSW
01.12.24/1800	110, SW	50, W	140, SW

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STORM SURGE HEIGHT INFORMATION:

* The below listed surge heights are over and above astronomical tide.

MANDAL/ TALUK	DISTRICT	STATE / UNION TERRITORY	NEAREST PLACE OF HABITATION	STORM SURGE (m)*	EXPECTED INUNDATION EXTENT (km)
Chengalpattu	Kancheepuram	Tamil Nadu	Muthukadu	0.2-0.7	Upto 0.13

Fishermen Warning Graphics

