



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.10.2025

TROPICAL WEATHER OUTLOOK FOR THE NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR THE NEXT 168 HOURS ISSUED AT 0800 UTC OF 21.10.2025 BASED ON 0300 UTC OF 21.10.2025.

ARABIAN SEA:

Sub: Well-marked low pressure area over Southeast Arabian Sea

Yesterday's, Well marked Low Pressure area over southeast Arabian Sea persisted over the same region at 0300 UTC of today, 21st October 2025. It is likely to move slowly westwards and intensify into a depression during next 24 hours.

As per INSAT 3D imagery at 0300 UTC, vortex over southeast Arabian Sea & neighbourhood centered within half a degree of 10.0° N/67.0° E with Intensity T1.0. Associated scattered to broken low and medium clouds with embedded intense to very intense convection lay over south & adjoining central Arabian Sea between latitude 5.0°N to 14.0° N and longitude 57.0° E to 71.0° E. The minimum cloud top temperature is minus 70 to 90 degree Celsius.

The associated maximum sustained wind speed (MSW) is 15 kt gusting to 25 kt. The estimated central pressure is 1006 hPa. A buoy (12.2°N/67.9°E) reported MSW of 14 kt/41° and mean sea level pressure of 1006.4 hPa. Island stations in Lakshadweep viz Agathi reported MSW of 08 kt/110°, MSLP of 1007.7 hPa, Pressure departure is -3.7 hPa and Pressure change in 24 hours is 0.7 hPa.

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over southeast & adjoining southwest Arabian Sea, eastcentral & westcentral Arabian Sea, Lakshadweep Islands, Maldives and Comorin area. The multi-satellite estimates of wind speed indicate stronger winds in southwest sector.

***PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
MOD	HIGH	-	-	NIL	NIL	NIL

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

"- "Genesis has already occurred"

BAY OF BENGAL:

Sub: Well Marked low pressure area over Southwest Bay of Bengal

A low pressure area formed over southwest Bay of Bengal at 0000 UTC and became a Well marked low pressure area over the same region at 0300 UTC of today, the 21st October 2025. It is likely to move west-northwestwards and intensify into a depression over southwest & adjoining Westcentral Bay of Bengal off north Tamil Nadu & south Andhra Pradesh coasts by 0900 UTC of tomorrow, the 22nd October 2025. Thereafter, it is likely to continue to move west-northwestwards

towards north Tamil Nadu, Puducherry & south Andhra Pradesh coasts and intensify further during subsequent 24 hours.

As per INSAT 3D imagery at 0300 UTC, Associated scattered to broken low and medium clouds with embedded intense to very intense convection lay over south Bay of Bengal, Tamil Nadu, Kerala, south Rayalaseema, south interior Karnataka, Palk strait, Gulf of Mannar and Sri Lanka (The minimum cloud top temperature is minus 70 to 90 degree Celsius).

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over south & westcentral Bay of Bengal and Andaman Sea. Scattered low and medium clouds with embedded isolated moderate to intense convection lay over the eastcentral & north Bay of Bengal.

***PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
MOD	HIGH	-	-	-	LOW	LOW

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

REMARKS:

The guidance from ECMM model indicates that Madden Julian Oscillation (MJO) index is presently entering into phase 4 & likely to remain in same phase till 28th with amplitude more than 1. Thereafter, it is likely to move across phase 5 with amplitude becoming less than 1. Thus, MJO support towards enhancement of convective activity over the Arabian Sea would decrease gradually, however, it would continue to support over the Bay of Bengal.

The latest weekly sea surface temperature SST departure over NINO 3.4 region is -0.5°C indicating possible development of La Niña conditions during October 2025. IOD is in negative phase with index - 1.39 deg C. Negative IOD conditions are likely to continue during the October - December 2025. All these are favourable for enhanced activity over North Indian Ocean.

Guidance from NCICS model indicates enhanced cross equatorial flow on 21st October onwards leading to westerly wind burst over southern parts of Arabian Sea and Bay of Bengal and adjoining equatorial Indian Ocean during 21st to 26th October. The Model indicates prevalence of equatorial Rossby wave (ERW) Kelvin wave (KW), MJO, Low frequency Background wave (LW), enhanced westerly wind Anomaly (>9mps) over the region during 21st to 26th October. The model is also indicating setting in of easterly winds anomaly (5-7 mps) over central and adjoining south Bay of Bengal during 21st to 25th October. It is indicating easterly wind anomaly (5-7 mps) during 21st to 23rd October over central Arabian Sea & central Bay of Bengal. These features indicate a favourable environment for cyclogenesis (formation of Depression) over Arabian Sea during 21st -22nd and over the Bay of Bengal during 22nd – 25th October.

Over the Arabian Sea (AS), the guidance from CIMSS indicates, the low level vorticity at 850 hPa is east-west oriented & is about $50 \times 10^{-6} \text{ s}^{-1}$ around the system area. Vertically it is extending upto 500 hPa level. The upper level divergence is around $10\text{-}20 \times 10^{-6} \text{ s}^{-1}$ to the west of system area. Low level convergence is about $10\text{-}20 \times 10^{-6} \text{ s}^{-1}$ to the southeast of system area. Mid-level vertical wind shear (VWS) of horizontal wind is anticyclone & low (05-10 kt) over the system area and to the west of system area along the predicted path. Upper tropospheric ridge runs along 15°N over the Arabian Sea. The east-southeasterly winds prevailing over the system area are likely to steer the system west-northwestwards.

Most of the models (IMD-GFS, GEFS, ECMWF, NCUM, CMC and IMD MME) indicate slow west-northwestwards movement of system. Regarding intensification majority of models are indicating peak intensification in the range of 20-28 kt.

Over the Bay of Bengal, the guidance from CIMSS indicates, increase in low level vorticity at 850 hPa in past 24 hours to about $50\text{-}60 \times 10^{-6} \text{ s}^{-1}$ over southwest Bay of Bengal. Another positive vorticity zone is seen over south Andaman Sea ($25\text{-}50 \times 10^{-6} \text{ s}^{-1}$). Vertically, it is extending upto 500 hPa level. The upper level divergence is around $10\text{-}20 \times 10^{-6} \text{ s}^{-1}$ over the system area and is extending over entire south Bay of Bengal and southeast Arabian Sea. Low level convergence is about $5\text{-}10 \times 10^{-6} \text{ s}^{-1}$ over system area.

Another zone of low level convergence $5-10 \times 10^{-6} \text{ s}^{-1}$ over south Andaman Sea and adjoining southeast Arabian Sea. Vertical wind shear (VWS) of horizontal wind is low to moderate (05-15 kt) over the system area and to the west of system area. Upper tropospheric ridge runs along 13°N over the Bay of Bengal in association with anticyclonic circulation over southeast & adjoining Andaman Islands.

Most of the numerical models (NCEP, ECMWF, IMD GFS, GEFS, BFS) are indicating low pressure area over southwest & adjoining southeast BoB during 21st-22nd October and depression over southwest BoB during 22nd – 24th October. GFS group is indicating higher intensification to cyclonic storm stage whereas ECMWF group is indicating intensification to depression/deep depression stages only. The models are indicating slow movement towards north Tamil Nadu & south Andhra Pradesh coast. Most of the numerical Models are also indicating formation of an upper air cyclonic circulation near to south Bay of Bengal and neighbourhood around 23rd October and under its influence formation of a low pressure area over the same region during 24th-25th October with subsequent further intensification.

Current conditions indicate development of twin cyclonic systems on either side of the equator in both the AS and BoB basins. Interactions among these systems and varied role of convectively coupled equatorial waves over the region are causing inconsistencies in model forecast.

Hence, it is inferred that:

- (a) Well-marked low pressure area over southeast Arabian Sea is likely to move nearly west- and intensify into a depression during next 24 hours. Hence, moderate to high probability is assigned to cyclogenesis (formation of depression) during 21st to 22nd October and
- (b) Well-marked low pressure over Southwest Bay of Bengal is likely to move west-northwestwards and intensify into a depression over southwest & adjoining Westcentral Bay of Bengal off north Tamil Nadu & south Andhra Pradesh coasts by 0900 UTC of tomorrow, the 22nd October 2025. Thereafter, it is likely to continue to move west-northwestwards towards north Tamil Nadu, Puducherry & south Andhra Pradesh coasts and intensify further during subsequent 24 hours. Hence moderate to high probability is assigned to cyclogenesis (formation of depression) during 21st to 22nd October and Low probability for cyclogenesis (formation of depression) is assigned during 26th-27th October.

The well marked low pressure area systems are being monitored continuously and regular updates are being issued.

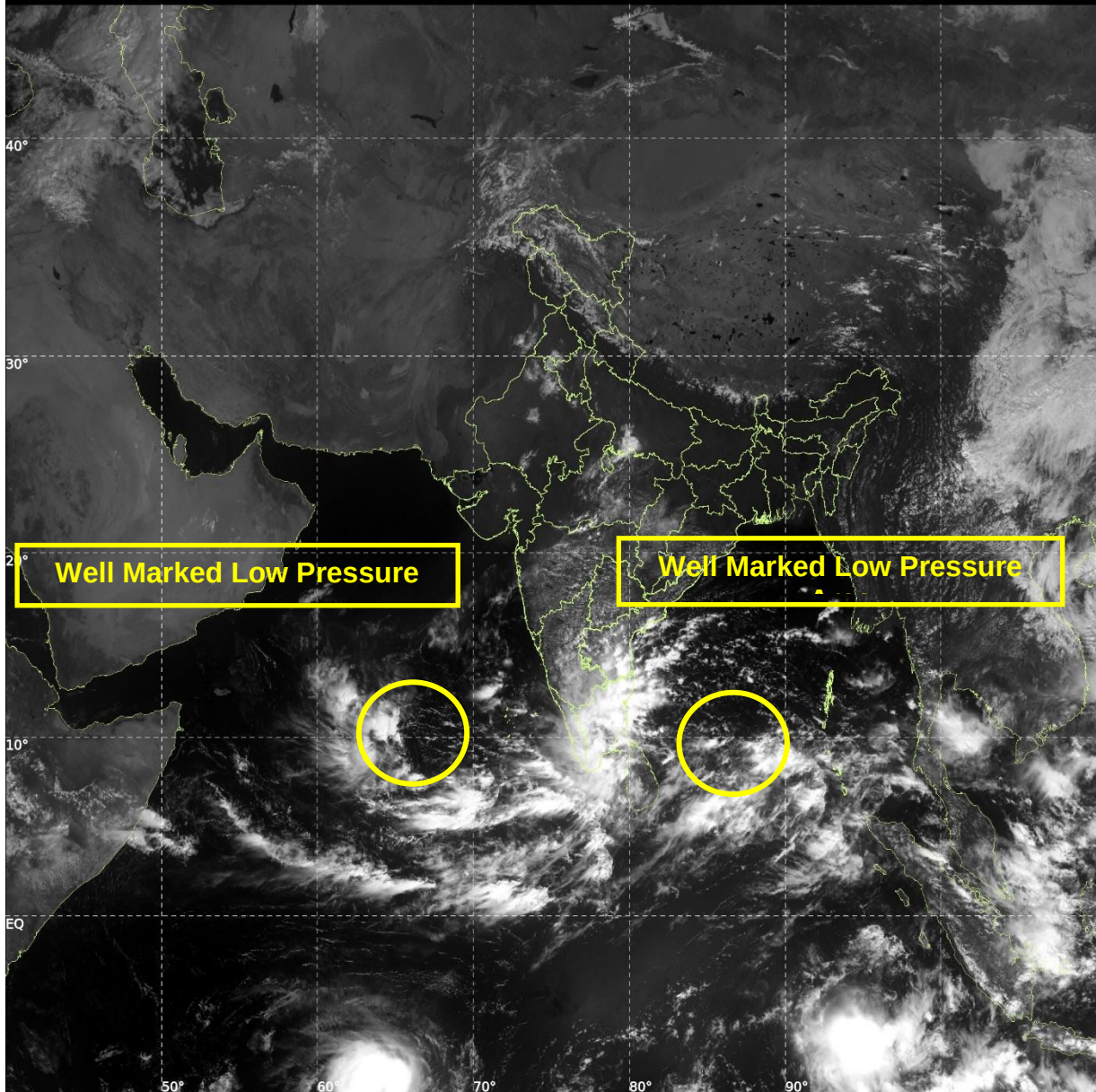
(Dr. Akhil Srivastava)
Scientist-D, IMD, New Delhi



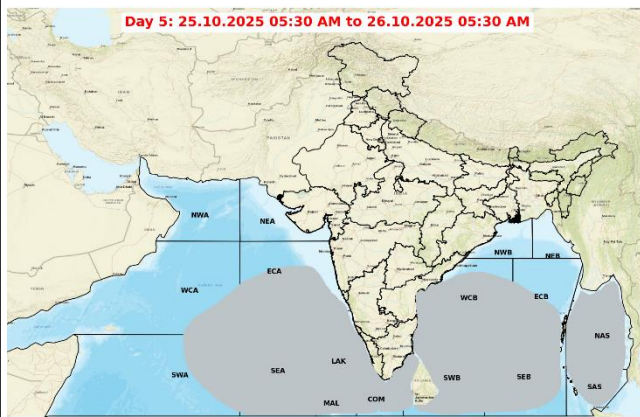
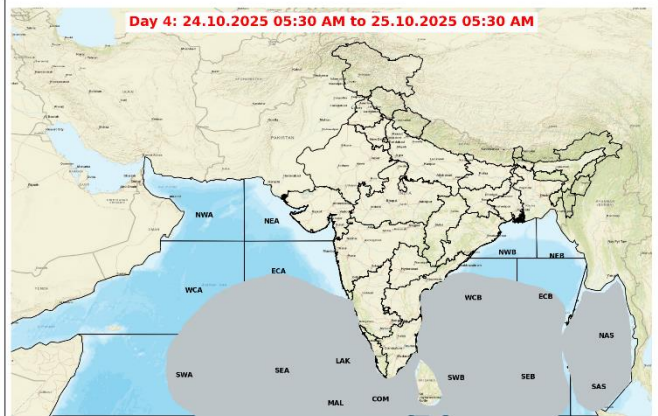
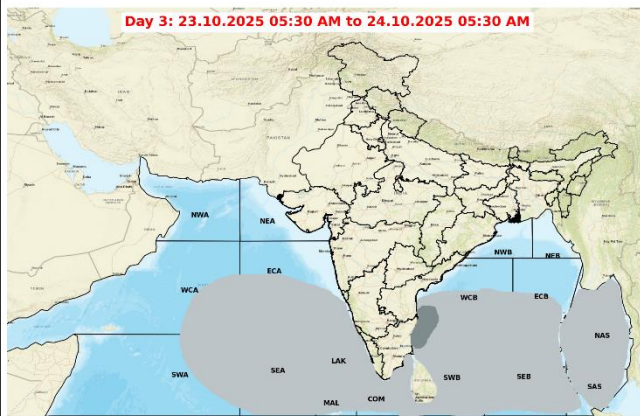
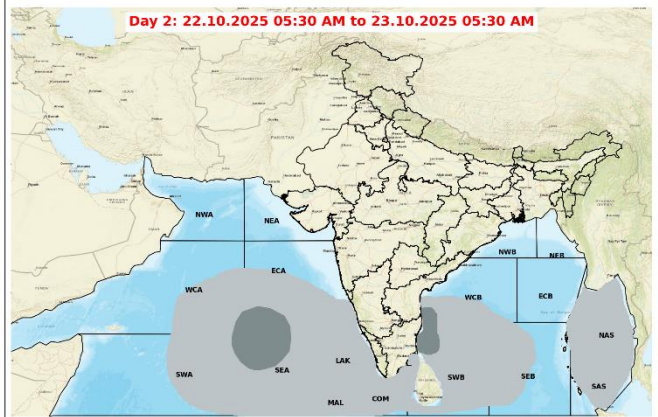
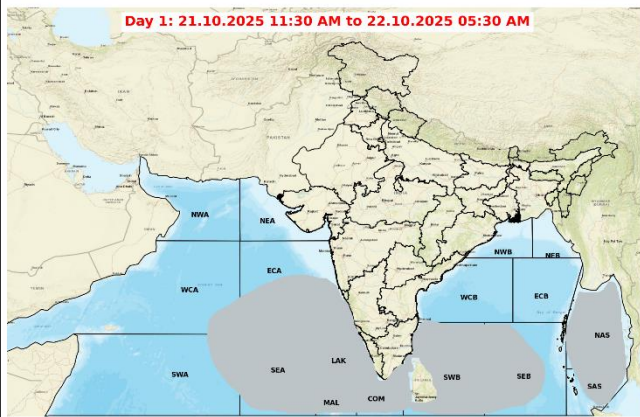
INSAT-3DS IMG, Visible Count @ 0.65 μm
GMT:21-10-2025/(0600-0627) IST:21-10-2025/(1130-1157)
L1C MERCATOR (LINEAR STRETCH: 0.5%)

70

462



Fishermen Warning Graphics



Legend

- | | |
|---|---|
| Squally Weather with wind speed 35-45 kmph gusting to 55 kmph | Squally wind with speed 55-65 kmph gusting to 75 kmph |
| Squally Weather with wind speed 40-50 kmph gusting to 60 kmph | CS with Gale winds with speed 60-80 kmph gusting to 90 kmph |
| Squally Weather with wind speed 45-55 kmph gusting to 65 kmph | SCS with Gale wind speed 90-110 kmph gusting to 120 kmph |
| Squally wind with speed 45-55 kmph gusting to 65 kmph | VSCS with Gale wind speed 120-165 kmph gusting to 185 kmph |
| Squally wind with speed 50-60 kmph gusting to 70 kmph | ESCS with Gale wind speed 165-220 kmph gusting to 245 kmph |

Fishermen are advised not to venture into the marked areas.