



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 19.10.2025

TROPICAL WEATHER OUTLOOK FOR THE NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR THE NEXT 168 HOURS ISSUED AT 0600 UTC OF 19.10.2025 BASED ON 0300 UTC OF 19.10.2025.

ARABIAN SEA:

Sub: Well-marked low pressure area over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts

Yesterday's well-marked low pressure area over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts persisted over the same region at 0300 UTC of 19th October 2025. The associated cyclonic circulation extended upto 5.8 km above mean sea level. It is likely to move west-northwestwards and intensify into a depression during next 24 hours.

As per INSAT 3D imagery at 0300 UTC, vortex over southeast Arabian Sea adjoining Lakshadweep Islands & neighbourhood centered within half a degree of 10.0°N/70.30°E. 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 7.0°N to 14.0°N and longitude 63.0°E to 75.0°E & Lakshadweep Islands area. 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 & adjoining central Arabian Sea, Lakshadweep Islands and Comorin area. Scattered low and medium clouds with moderate to intense convection lay over the rest parts of central Arabian Sea and Maldives area.

***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	HIGH	-	-	-	-

***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**
"- "Genesis has already occurred"

BAY OF BENGAL:

Sub: Likely formation of low pressure area is likely to form over southeast Bay of Bengal around 21st October

Yesterday's upper air cyclonic circulation over Gulf of Mannar & neighbourhood persisted over the same region and extending upto 1.5 km above mean sea level at 0000 UTC of 19th October 2025.

Yesterday's upper air cyclonic circulation over south Andaman Sea & adjoining southeast Bay of Bengal extending upto 1.5 km above mean sea level persisted over the same region. Under its influence, a low pressure area is likely to form over southeast Bay of Bengal around 21st October. It is likely to move west-northwestwards and intensify further into a depression over central parts of south Bay of Bengal and adjoining westcentral Bay of Bengal during subsequent 48 hours.

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over westcentral Bay of Bengal off Andhra Pradesh coast, south Bay of Bengal & Andaman Sea. Scattered low and medium clouds with embedded moderate to intense convection lay over the rest parts of 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
NIL	NIL	NIL	LOW	MOD	HIGH	-

***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 likely to be in phase 3 on 19th October and in phase 4 during 20th to 28th October with amplitude more than 1. Thereafter, it is likely to move across phase 5 with amplitude becoming less than 1. Thus, MJO would support enhancement of convective activity over the Arabian Sea during 19th to 20th and over the Bay of Bengal from 20th onwards.

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 19th October onwards leading to westerly wind burst over southern parts of Arabian Sea and Bay of Bengal and adjoining equatorial Indian Ocean during 19th 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 19th 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 19th to 26th October. It is indicating weak easterly wind anomaly (1-3 mps) over southeast Arabian Sea during 19th-20th October and slightly higher easterly wind anomaly (5-7 mps) during 21st to 23rd October over central Arabian Sea. These features indicate a favourable environment for cyclogenesis (formation of Depression) over Arabian Sea during 20th to 21st and over the Bay of Bengal during 24th to 26th October.

Over the Arabian Sea (AS), the guidance from CIMSS indicates, the low level vorticity at 850 hPa is east-west oriented & is about $50-70 \times 10^{-6} \text{ s}^{-1}$ around the system with higher zone towards the west. Vertically it is extending upto 500 hPa level. The upper level divergence is around $20 \times 10^{-6} \text{ s}^{-1}$ to the southeast of system centre and another zone of $20 \times 10^{-6} \text{ s}^{-1}$ to the west of system area. Low level convergence is about $5-10 \times 10^{-6} \text{ s}^{-1}$ over system area. Vertical wind shear (VWS) of horizontal wind is moderate (10-20 kt) over the system area and to the west of system area along the predicted path. Upper tropospheric ridge runs along 17°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) indicate a low-pressure area over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts on 19th Oct. A few models are showing occasional development into a depression during 21st to 23rd October, particularly over the southwest Arabian Sea. There is consensus among various models wrt west-northwestwards movement of system towards Somali coast-Gulf of Aden. IMD MME is indicating near westwards

movement of system till 25th October and then west-southwestwards movement over the southwest AS.

Over the Bay of Bengal, the guidance from CIMSS indicates, positive low level vorticity at 850 hPa is about $40-50 \times 10^{-6} \text{ s}^{-1}$ over South Andaman Sea and adjoining southeast BoB. Two more positive vorticity zones are seen over central parts of south Bay of Bengal (BoB) and another over southwest BoB off southeast Sri Lanka coast. Vertically, it is extending upto 500 hPa level. The upper level divergence is around $05-10 \times 10^{-6} \text{ s}^{-1}$ over the region and is extending over entire south BoB and southeast AS. Low level convergence is about $10-20 \times 10^{-6} \text{ s}^{-1}$ over system area and is extending over entire southeast BoB and adjoining East Equatorial Indian Ocean (EEIO). 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 along the predicted path. Upper tropospheric ridge runs along 13°N over the Bay of Bengal in association with anticyclonic circulation over southeast & adjoining Andaman Sea.

Most of the numerical models (NCEP, ECMWF, ECAI, IMD GFS, GEFS,, BFS) are indicating low pressure area over southeast and adjoining south Andaman Sea during 20th-21st October and depression during 22nd – 23rd October. Models are indicating west-northwestwards movement towards Andhra Pradesh-North Tamil Nadu coasts as a depression. Some of the models I particular the GFS group are indicating higher intensification also. IMD MME is indicating northwestwards movement of the system towards South Andhra Pradesh-North Tamil Nadu coast as a depression and crossing around 24/12 UTC. Thereafter, it is indicating northwestwards movement across South Peninsular India and emergence into eastcentral Arabian Sea.

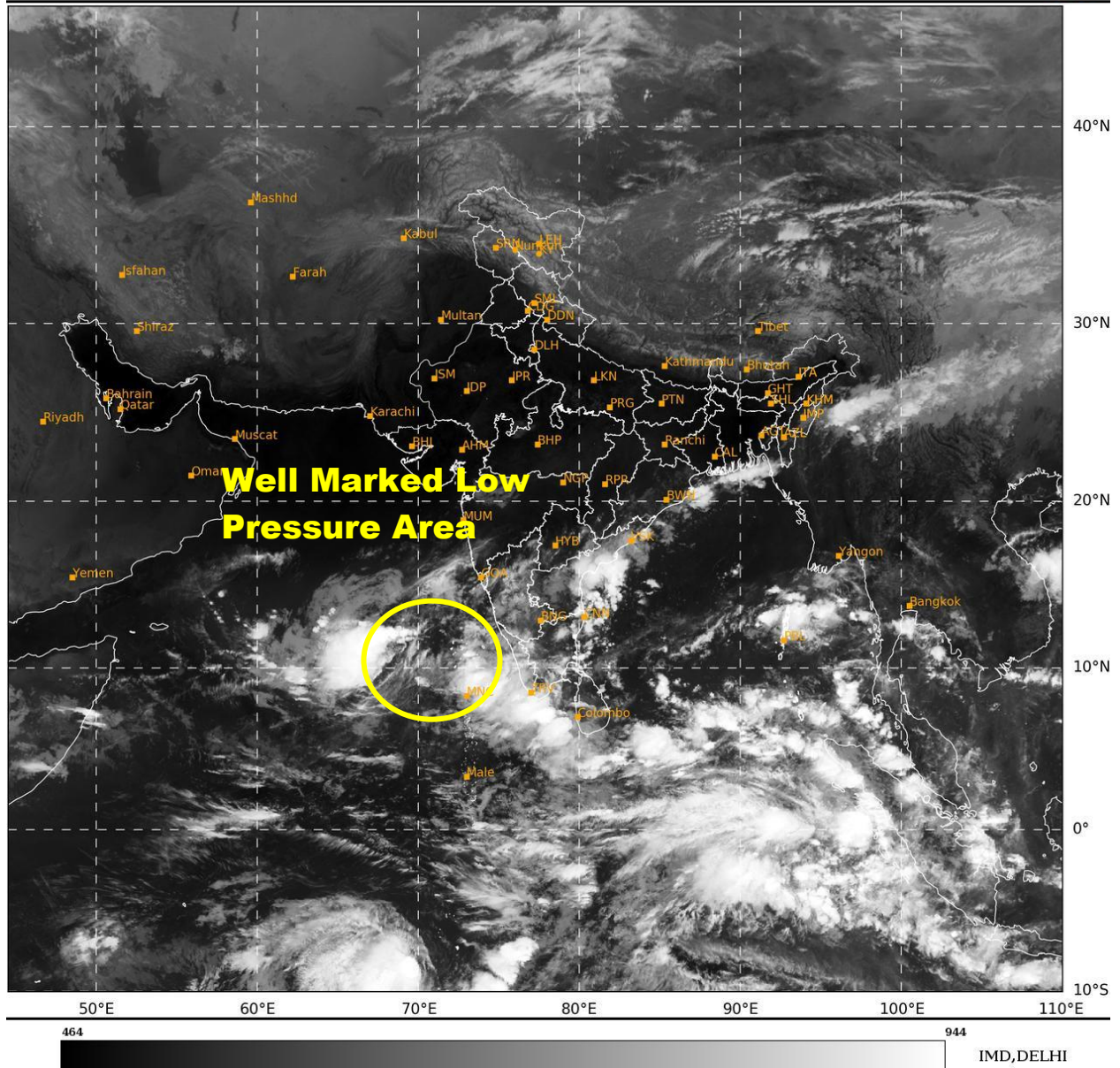
Hence, it is inferred that:

- (a) Well-marked low pressure area over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts is likely to move west-northwestwards and intensify into a depression during next 24 hours. Hence, moderate to high probability is assigned to cyclogenesis (formation of depression) during 19th to 21st October and
- (b) Under the influence of upper air cyclonic circulation over south Andaman Sea & adjoining southeast Bay of Bengal, a low pressure area is likely to form over southeast Bay of Bengal around 21st October. It is likely to move west-northwestwards and intensify further into a depression over central parts of south Bay of Bengal and adjoining westcentral Bay of Bengal during subsequent 48 hours.

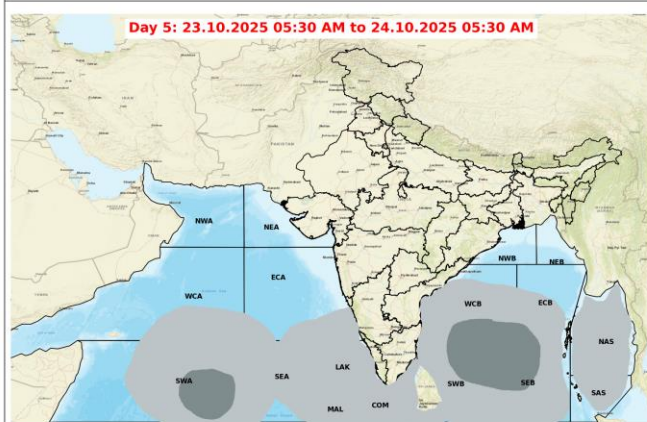
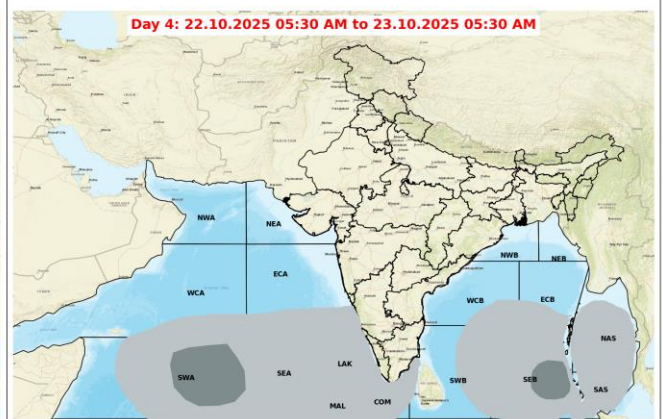
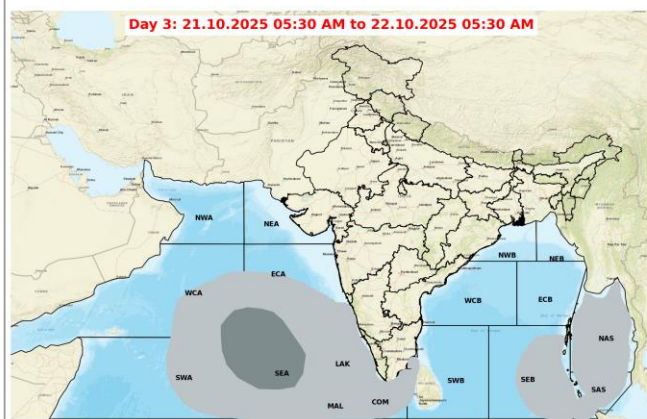
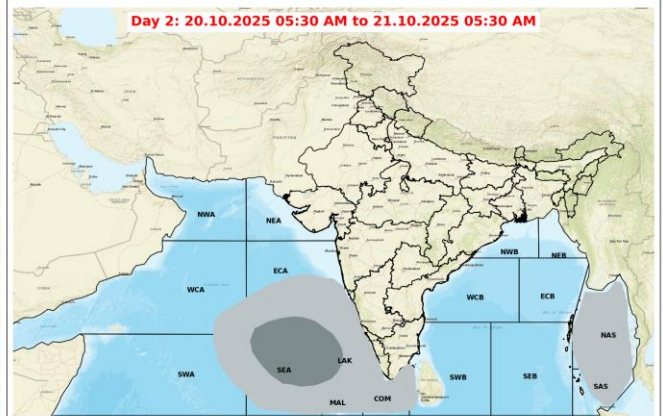
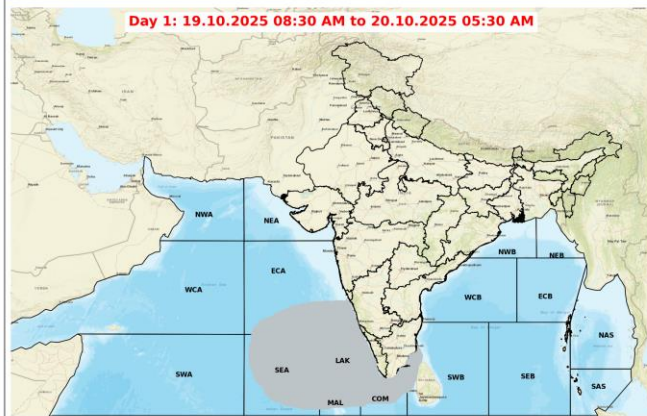
(M. Sharma)
Scientist-E, RSMC & IMD, New Delhi

SAT : INSAT-3DR IMG
IMG_TIR1 10.8 um
L1C Mercator

19-10-2025/(0315 to 0342) GMT
19-10-2025/(0845 to 0912) IST



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.