



**Ministry of Earth Sciences
India Meteorological Department
Cyclone Warning Division, New Delhi**

**Tropical Cyclone Forecast Programme
Report Dated 16th October 2025**

Time of Issue: 1400 UTC

Synoptic features (based on 0300 UTC analysis):

- An upper air cyclonic circulation lies over Comorin area & neighbourhood extending upto mid tropospheric levels.
- The upper air cyclonic circulation over southeast Arabian Sea & adjoining Lakshadweep area persists over the same region extending upto 5.8 km above mean sea level tilting southward with height. Under its influence, a low pressure area is likely to form over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts around 19th October, 2025.

Environmental Features based on 0300 UTC:

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) °C	➤ Around 30°C over central & adjoining north, south BoB, central parts of Andaman Sea, along and off Tamil Nadu, south Andhra Pradesh coasts.. ➤ 28-29°C over rest of the BoB.	➤ Around 30°C over southeast Arabian Sea, Lakshadweep, Maldives, Comorin areas, along and off Kerala, south Karnataka coast, parts of northwest Arabian Sea. ➤ 28-29°C over rest of the Arabian Sea.
Tropical Cyclone Heat Potential (TCHP) kJ/cm²	➤ 125-150 over northeast BoB, eastcentral BoB, south Andaman Sea and southern parts of south BoB. ➤ 50-100 over rest of BoB.	➤ 100-150 over southeast AS, Lakshadweep Islands, Maldives islands and Comorin area. ➤ 20-70 over rest AS.
Cyclonic Relative - vorticity (X10⁻⁶s⁻¹)	-	➤ 80-100 over Lakshadweep, Maldives, Comorin areas, and adjoining parts of southeast Arabian Sea and extending upto 500 hPa. ➤ 60-80 over southwest BoB adjoining to south Sri Lanka coast. ➤ 20-30 over most parts of Arabian Sea.
Low-Level convergence (X10⁻⁶ s⁻¹)	-	➤ 10-20 over southeast AS, Lakshadweep, Maldives areas and 5-10 over Kerala-Karnataka coasts, over Comorin area.
Upper-Level divergence (X10⁻⁶ s⁻¹)		➤ 30-50 over Lakshadweep, Maldives, Comorin areas and 10-30 over some parts of southeast, eastcentral AS, Kerala-Karnataka

		coasts, over Gulf of Mannar.
Vertical Wind Shear (VWS knots) Low: 05-10 knots Moderate: 10-20 knots High: >20 knots	➤ Low-Moderate over north BoB. ➤ Low over rest of BoB.	➤ Moderate-High over north & south AS and adjoining EIO region. ➤ Low over rest of Arabian Sea.
Wind Shear Tendency (knots)	➤ Increasing over north Andhra Pradesh-Odisha, West Bengal, Bangladesh coasts. ➤ Decreasing over rest of the BoB.	➤ Increasing south and adjoining central AS, over north AS, decreasing over rest of the Arabian Sea.
Upper tropospheric Ridge	➤ At 19° N.	➤ At 21° N.

Satellite observations based on INSAT imagery (0300 UTC):

Over the BoB & Andaman Sea:

Scattered low/medium clouds with embedded moderate to intense convection over Bay of Bengal and Andaman Sea.

Over the Arabian Sea:

Scattered to broken low/medium clouds with embedded intense to very intense convection over southeast Arabian Sea, Lakshadweep Islands area, Maldives and Comorin areas, adjoining equatorial Indian Ocean. Scattered low/medium clouds with embedded weak to moderate convection over central and southwest Arabian Sea.

Outside India:

Scattered low/medium clouds with embedded weak to moderate convection over Sri Lanka, Palak Strait, Gulf of Mannar, Maldives, Tibet, China, Yellow Sea, adjoining East China Sea, Myanmar, Thailand, Gulf of Thaailand, Cambodia, Laos, Vietnam, Gulf of Tonkin, Sumatra, Strait of Malacca, Malaysia, Borneo, South China Sea, Java Islands & Sea, Philippines and over Indian Ocean between latitude 5.0N TO 10.0S, longitude 50.0E TO 100.0E & between latitude 10.0S TO 22.0S, longitude 70.0E TO 95.0E.

M.J.O. Index:

The guidance from ECMM model indicates that Madden Julian Oscillation (MJO) index is likely to be in phases 2 & 3 during 16th to 20th October and in phase 4 during 21st to 28th October with amplitude remaining close to 1. Thereafter, it is likely to enter into phase 5. Thus, MJO would support enhancement of convective activity and cyclogenesis over Arabian Sea during 16th to 20th and over the Bay of Bengal during 18th to 26th.

Equatorial waves guidance:

Guidance from NCICS model indicates enhanced cross equatorial flow from 17th October onwards leading to westerly wind burst over southern parts of Arabian Sea and Bay of Bengal and adjoining equatorial Indian Ocean during 18th 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 18th to 26th October. The model is also indicating setting in of easterly wind over the Bay of Bengal and Arabian Sea with enhanced easterly wind anomaly (5-7 mps) over central and adjoining south Bay of Bengal during 18th to 26th October and weak easterly wind anomaly (1-3 mps) over southeast Arabian Sea during 16th-20th October and 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 22nd and over the Bay of Bengal during 24th to 26th October.

NWP Guidance for FDP Cyclone:

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	LPA over southeast BoB and adjoining south Andaman Sea on 22/00 UTC. It is not indicating its intensification further.	LPA over southeast AS on 17/18 UTC over southeast Arabian Sea, intensify into depression over southeast and adjoining southwest Arabian Sea (AS) on 19/00 UTC. Indicating further intensification and west-northwestward movement towards Gulf of Aden till 23/00 UTC.
IMD-GEFS	The model indicates no significant system over BoB.	LPA over southeast AS on 18/00 UTC becoming Well Marked Low (WML) over southwest and adjoining southeast Arabian Sea (AS) on 19/00 UTC. Intensify into depression over southwest AS on 20/00 UTC and west-northwestward movement towards Gulf of Aden till 23/00 UTC without further intensification.
IMD-WRF	The model indicates no significant system over BoB.	LPA over southeast AS on 19/00 UTC.
BFS	The model indicates no significant system over BoB.	LPA over southeast AS on 17/00 UTC. Intensify into depression over southeast AS on 18/00 UTC. Indicating further intensification and west-northwestward movement towards Gulf of Aden till 23/00 UTC.
NCMRWF-NCUM(G)	The model indicates no significant system over BoB.	Extended low on 18/00 over southeast AS, moving westnorthwestwards and becoming low on 20/00 over southwest and adjoining southeast AS, moving in same direction till Gulf of Aden till 24/00 without further intensification.
NCMRWF-NCUM(R)	The model indicates no significant system over BoB.	Extended low on 18/00 & 19/00 over southeast AS.
NEPS	LPA over southwest Bay of Bengal (BoB) on 23/00 UTC.	Extended low on 18/00 over southeast AS, moving westnorthwestwards and becoming low on 19/00 over southwest and adjoining southeast AS, WML on 20/00 over southwest and adjoining southeast Arabian Sea, moving in same direction and

		intensify into depression over southwest AS off north Somalia coast on 22/00, weakening thereafter.
ECMWF	LPA over southeast Bay of Bengal (BoB) on 25/00 UTC. Moving westnorthwestwards and intensify into depression on 25/18. Further it will move initially northnortheastwards and weakening thereafter and cross West Bengal coast on 29/00.	LPA over southeast AS on 18/00 UTC becoming depression over southeast AS on 20/00 UTC. West-northwestwards movement towards Gulf of Aden till 24/06 UTC with no significant intensification.
NCEP-GFS	LPA over south Andman Sea and adjoining southeast BoB on 21/00, intensify into depression on the same day at 12 UTC over southeast BoB. Model is indicating initial intensification further and weaken gradually while moving towards north Tamil Nadu coast. Cross north Tamil Nadu coast (13.2N/79.3E) on 26/06 as LPA.	LPA over southeast AS on 18/06 UTC, moving westnorthwestwards and intensifying into depression on 21/00 UTC over southeast & adjoining southwest AS. West-northwestwards movement as a depression towards north Somalia coast till 25/18 UTC and become less marked on 26th.
EC-AIFS	Extended low over southwest BoB on 22/00.	LPA over southeast AS on 18/06 UTC over southeast Arabian Sea, intensifying into depression on 21/00. West-northwestwards movement towards Gulf of Aden and weakening over sea near north Somalia coast by 25/06 UTC.

Summary:

(a) Bay of Bengal:

Some of the deterministic models are indicating formation of a low pressure area over southeast Bay of Bengal and adjoining Andaman Sea during 21st-24th October (ECMWF on 24/00, IMD GFS on 22/00, NCEP on 21/00). Models like ECMWF and NCEP GFS are also indicating intensification of system into a depression (ECMWF on 25/18 and NCEP on 21/12). Models are indicating initial northwestwards movement of the system towards North Tamil Nadu and South Andhra Pradesh coasts.

(b) Arabian Sea

Most of the numerical models are indicating development of low-pressure area over southeast AS during 17th to 18th October with ECMWF, NCEP GFS, GEFS, ECAI, IMD GFS & NEPS on 18/00 UTC. However, BFS is showing Depression on 16/00 UTC. Thus, the model is over-estimating the intensity by 2-3 stages. There is also good consensus among various models (ECMWF, NCEP GFS, IMD GFS, GEFS) with respect to formation of depression over southeast AS during 19th to 21th October. There is good consensus among various models about intensification of the system upto Depression/ Deep Depression stage only (Except IMD GFS). There is also consensus among all the models w.r.t west-northwestwards movement of the system towards Gulf of Aden.

Inference:

- Considering various large-scale environmental features and model guidance, it is inferred that
- (a) Under the influence of existing upper air cyclonic circulation over southeast Arabian Sea & adjoining Lakshadweep area, a low-pressure area is likely to form over southeast Arabian Sea & Lakshadweep area off Kerala-Karnataka coasts around 18th October, 2025. Thereafter, it is likely to move west-northwestwards and intensify into a **depression** during subsequent 48 hours.
- (i) Confidence level in forecast of formation of Low: **High**
- (ii) Confidence level in forecast of location area of Low: **High**
- (iii) Confidence level in forecast of intensification (formation of Depression): **Moderate**
- (iv) Confidence level in forecast of location of Depression: **Moderate**
- (b) Another **low-pressure area** is likely to form over southeast Bay of Bengal in the first half of week 2 (around 24th October), it is likely to move west-northwestwards and intensify further thereafter. There is moderate probability of its intensification into a depression towards the middle of week 2 (around 26th October).

Both the systems are under continuous watch.

Probability of cyclogenesis (formation of depression and above intensity systems) over the Bay of Bengal during next 168 hours:

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

Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:

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	HIGH

“- “indicates genesis has already occurred.

Probability is indicated as NIL for 0%, LOW for 1-33%, MOD for 34-67% and High for 68-100%.

Every 24 hrs forecast ends at the 0300 UTC of date.

Intense Observation Period (IOP): IOP for Kerala, Karnataka, south Tamil Nadu and West Sri Lanka coasts during 18th to 22nd October.

Impact expected:

Squally weather with wind speed reaching 35-45 gusting to 55 kmph is likely over Southeast Arabian Sea, Lakshadweep & Comorin Area and along & off Karnataka, Kerala and adjoining South Tamilnadu coasts during 16th -19th October.

Squally weather with wind speed reaching 40-50 gusting to 60 kmph is likely over central parts of South Arabian Sea on 20th & 21st October and 45-55 gusting to 65 kmph is likely over southwest & adjoining westcentral Arabian Sea during 21st-23rd October.

Anticipatory Actions:

- (a) Forecasters may maintain round the clock watch and continuously monitor weather systems over the region as per Standard Operation Procedures during next 2 weeks.
- (b) Disaster managers, media and general public are advised to closely monitor official weather forecasts from India Meteorological Department available on websites, social networking channels, face book, X and mobile Apps.
- (c) Fishermen are advised not to venture into Southeast Arabian Sea, Lakshadweep & Comorin Area and along & off Karnataka, Kerala and adjoining South Tamilnadu coasts during 16th -19th October.
- (d) Fishermen are advised not to venture into central parts of South Arabian Sea on 20th & 21st October and into southwest & adjoining westcentral Arabian Sea during 21st-23rd October.
- (e) Judicious regulation of offshore/onshore, ports, recreational and tourism activities.

















