



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

**Tropical Cyclone Forecast Programme  
Report Dated 27<sup>th</sup> December 2022**

**Time of Issue: 1200 UTC**

**Synoptic features (based on 0600 UTC analysis):**

Yesterday's low pressure area over Comorin and neighbourhood moved nearly westwards and became less marked over Maldives and adjoining Comorin at 0300 UTC of today the 27<sup>th</sup> December, 2022.

**Dynamical and thermo-dynamical features**

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
<b>Sea Surface Temperature (SST) °C</b>	About 27 around the system, 28 over the south Andaman Sea and adjoining southeast Bay of Bengal, eastcentral BoB, 29-30 over north Andaman Sea, less than 25 over north BoB.	About 29-30°C over the Comorin Area, southeast and adjoining southwest AS, 26-28°C over eastcentral and adjoining north AS..
<b>Tropical Cyclone Heat Potential (TCHP) kJ/cm<sup>2</sup></b>	Not available	Not available
<b>Cyclonic Relative vorticity (X10<sup>-6</sup>s<sup>-1</sup>)</b>	No significant zone	20-30 over Lakshadweep & adjoining Maldives area with vertical extension upto 500 hPa
<b>Low Level convergence (X10<sup>-5</sup> s<sup>-1</sup>)</b>	05 over South Andaman Sea	05-10 over Lakshadweep
<b>Upper Level divergence (X10<sup>-5</sup> s<sup>-1</sup>)</b>	05-10 over south BoB and adjoining Equatorial Indian Ocean	30 over Maldives and adjoining Lakshadweep area
<b>Vertical Wind Shear (VWS knots)</b>	15-20 over southwest BoB.	05-15 over south AS.
<b>Wind Shear Tendency (knots)</b>	Increasing over south BoB and decreasing over central & north BoB.	Decreasing over Maldives.
<b>Upper tropospheric Ridge</b>	Along 13°N over the BoB.	Along 15.0°N over the AS.
<b>Trough in westerlies</b>	Near 35°N/58°E	

**Satellite observations based on INSAT imagery (0600 UTC):**

**a) Over the BoB & Andaman Sea:-**

Scattered to broken low and medium clouds with embedded moderate to intense convection lay over South BoB and weak convection lay over Andaman Sea.

**b) Over the Arabian Sea:-**

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over Lakshadweep Area, Southeast Arabian Sea and North Maldives. Minimum cloud top temperature is -88°Celsius.

**M.J.O. Index:**

The Madden Julian Oscillation (MJO) Index is currently in Phase 6 with amplitude greater than 1. It would move to phase 7 with amplitude greater than 1 from 29<sup>th</sup> December onwards.

**Storms and Depression over South China Sea/ South Indian Ocean:**

Cyclonic Storm Darian over South Indian ocean centered near 18.0S/83.0E. Intensity of the system is T 4.5/5.0.

**Model guidance based on 0000 UTC for the next 7 days**

<b>MODEL GUIDANCE</b>	<b>Bay of Bengal (BoB)</b>	<b>Arabian Sea (AS)</b>
<b>IMD-GFS</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked on 28/0000 UTC.
<b>IMD-GEFS</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked on 28/0000 UTC.
<b>GEFS Probabilistic guidance</b>	NA	NA
<b>IMD WRF</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked on 28/0000 UTC.
<b>NCMRWF-NCUM (G)</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked over southeast Arabian Sea on 30/0000 UTC
<b>NCMRWF-NEPS</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked over southeast Arabian Sea on 30/0000 UTC
<b>NCMRWF-UM (Regional)</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked over southeast Arabian Sea on 30/0000 UTC
<b>ECMWF</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked over southeast Arabian Sea on 29/0000 UTC
<b>ECMWF ensemble</b>	No significant system	No significant system

<b>NCEP-GFS</b>	No significant system	Cyclonic Circulation over Lakshadweep & adjoining Maldives on 27/0000 UTC to move westwards and become less marked on 28/0000 UTC.
<b>IMD MME</b>	No significant system	No significant system
<b>IMD HWRP</b>	No guidance	No guidance
<b>IMD-Genesis Potential Parameter (GPP)</b>	No significant zone over BoB	No significant zone over AS

### Summary and conclusion:

**Model guidance:** Most of the models are indicating the cyclonic circulation over Lakshadweep & adjoining Maldives on 27<sup>th</sup> to move westwards and become less marked during next 3-4 days.

**In view of all the above, it is inferred that**

#### 1. For the Bay of Bengal:

No significant system is likely over the Bay of Bengal during next 7 days.

**Probability of cyclogenesis (formation of depression and above intensity systems) over the BAY OF BENGAL of Bengal and Andaman 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	NIL	NIL	NIL	NIL

#### 2. For Arabian Sea:

No significant system is likely over the Arabian Sea during next 7 days.

**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	NIL	NIL	NIL	NIL

**Advisory: NIL**

**IOP: NIL**



























