

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

## Tropical Cyclone Forecast Programme Report Dated 26<sup>th</sup> October, 2024

Time of Issue: 1100 UTC

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

- ❖ Yesterday's cyclonic storm over north coastal Odisha moved nearly westwards, weakened into a deep depression over North Odisha in the afternoon (1430 hours IST) and into a depression in the midnight (2330 hours IST) of same day, i.e. the 25<sup>th</sup> October, 2024. Thereafter, it moved slightly westwards and gradually weakened into a well marked low pressure area over North Odisha in the early morning (0530 hours IST) and persisted over the same region in the forenoon (0830 hours IST) of today, the 26<sup>th</sup> October, 2024. It is likely to weaken further and become insignificant during the next 12 hours.
- ❖ The cyclonic circulation over Southeast Arabian Sea off south Kerala coast extending upto 1.5 km above mean sea level has become less marked.
- ❖ The upper air cyclonic circulation over Southeast & adjoining Southwest Arabian Sea now lies over Southwest Arabian Sea and extends upto 3.1 km above mean sea level.

#### **Environmental Features:**

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Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)			
Sea Surface	30°C over entire BoB	> 28-30°C over eastern parts of AS.			
Temperature (SST) °C		> 27°C over the western parts of AS			
Tropical Cyclone Heat	> >100 KJcm <sup>-2</sup> over north	> 80-90 over central parts of south			
Potential (TCHP)	BoB, south Andaman Sea	AS and adjoining EIO.			
kJ/cm <sup>2</sup>	& westcentral and	➤ 60-70 over eastcentral AS			
	adjoining southwest BoB.	> < 40 over westcentral AS & o			
	→ 60-80 KJcm <sup>-2</sup> over Oman and Somalia coasts.				
	remaining parts of BoB.				
Cyclonic Relative	50 over coastal Odisha. 40-50 over central parts of so				
vorticity (X10 <sup>-6</sup> s <sup>-1</sup> )		AS			
Low Level	5 over southeast BoB & 5-10 over Lakshadweep				
convergence (X10 <sup>-5</sup> s <sup>-1</sup> )	adjoining Andaman sea.	Comorin area.			
Upper Level	5-10 over south Andaman	10-20 over Lakshadweep and Comorin			
divergence (X10 <sup>-5</sup> s <sup>-1</sup> )	sea	area.			
Vertical Wind Shear	Moderate over north &	Moderate over central & adjoining			
(VWS knots)	adjoining central BoB	north AS and southwest AS.			
Low: 05-10 knots					
Moderate: 10-20 knots					
High: >20 knots					
		-			

Wind Shear Tendency (knots)	Increasing over Odisha.	Decreasing over central parts of south AS and central AS
Upper tropospheric Ridge	along 20.0°N in association with anticyclonic circulation over north Myanmar	Along 20.0°N in association with anticyclonic circulation over central parts of north AS in 250-350 hPa layer.

# Satellite observations based on INSAT imagery (0300 UTC):

# (a) Over the BoB & Andaman Sea: -

Scattered low and medium clouds with embedded moderate to intense convection lay over westcentral Bay of Bengal, south Bay of Bengal and south Andaman Sea.

# (b) Over the Arabian Sea:

Scattered low and medium clouds with embedded moderate to intense convection lay over westcentral Arabian Sea, southeast Arabian Sea, Maldives and Comorin area.

### (c) Outside India:

Scattered low & medium clouds with embedded moderate to intense convection lay over Sri Lanka, Gulf of Mannar, Maldives, China, Yellow Sea, East China Sea, Thailand, Cambodia, Laos, Vietnam, Gulf of Tonkin, Hainan, Sumatra, Strait of Malacca, Malaysia, Borneo, South China Sea, Celebes Islands & Sea, Philippines, Sulu Sea and over Indian ocean Between latitude 5.0°N to 16.0°S & long 60.0°E to 100.0°E.

### M.J.O. Index:

Madden Julian Oscillation (MJO) index is currently in Phase 6 with amplitude greater than 1. It is likely to move across phases 6 & 7 during next seven days with amplitude remaining more than 1.

# Storms and Depression over South China Sea/ South Indian Ocean: Nil

# NWP Guidance for FDP Cyclone based on 0000 UTC for the next 7 days

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	No significant system over BoB during next 7 days.  A cyclonic circulation over southeast BoB on 4 <sup>th</sup> November.	Cyclonic circulation over southwest Arabian Sea on today with westwards movement till 30 <sup>th</sup> .
IMD-GEFS	No significant system over BoB during next 7 days.	Cyclonic circulation over southwest Arabian Sea as on today having westward movement till 28 <sup>th</sup> .  Another cycir over Lakshadweep Area on 31 <sup>st</sup> Oct with westwards movement till 2 <sup>nd</sup> November.

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IMD-WRF	No significant system over BoB during	Cyclonic circulation over southwest			
	next 3 days.	Arabian Sea as on today with			
		westwards movement till 28 <sup>th</sup> .			
NCMRWF-	No significant system over BoB during	No significant system over BoB during			
NCUM(G)	next 7 days.	next 7 days.			
NCMRWF-	No significant system over BoB during	No significant system over BoB during			
NCUM(R)	next 3 days.	next 3 days.			
NCMRWF-	No significant system over BoB during	No significant system over BoB during			
NEPS	next 7 days.	next 7 days.			
ECMWF	No significant system over BoB during	No significant system over BoB during			
	next 7 days.	next 7 days.			
NCEP-GFS	No significant system over BoB during	No significant system over BoB during			
	next 7 days. A cyclonic circulation	next 7 days.			
	over southeast BoB on 4 <sup>th</sup> November.				

### **Summary:**

### (a) Bay of Bengal:

No significant cyclonic disturbance is indicated by any of the models. However, GFS group of models are indicating a cyclonic circulation over southeast Bay of Bengal and adjoining Andaman Sea around 4<sup>th</sup> November.

### (d) Arabian Sea

No significant cyclonic disturbance is indicated by any of the models. **Inference**:

Considering various environmental conditions and model guidance, it is inferred that:

No fresh cyclogenesis is likely over Bay of Bengal & Arabian Sea for the next seven days.

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

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

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

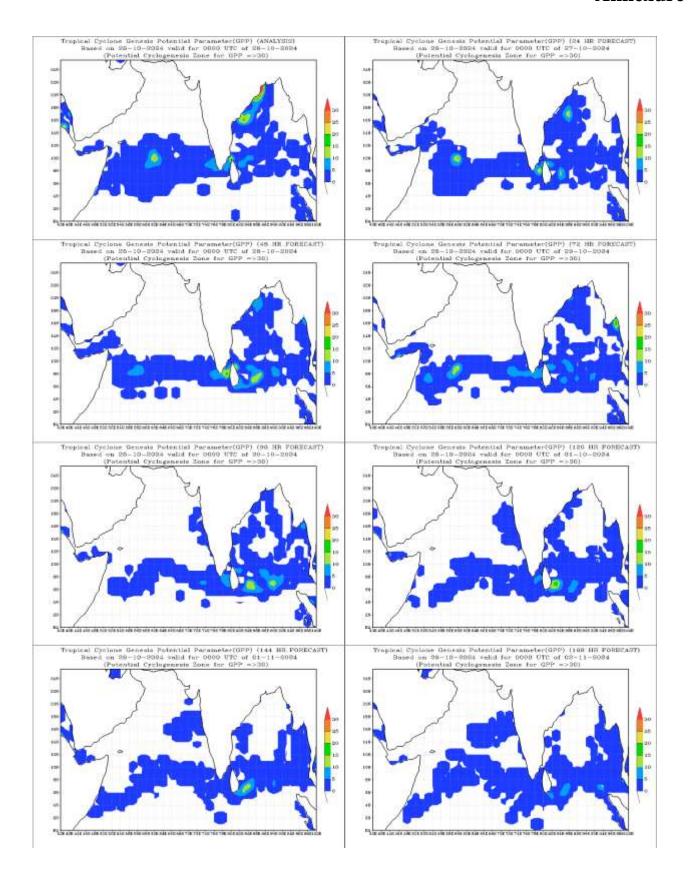
24	24-48	48-72	72-96	96-120	120-144	144-168
HOURS	HOURS	HOURS	HOURS	HOURS	HOURS	HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

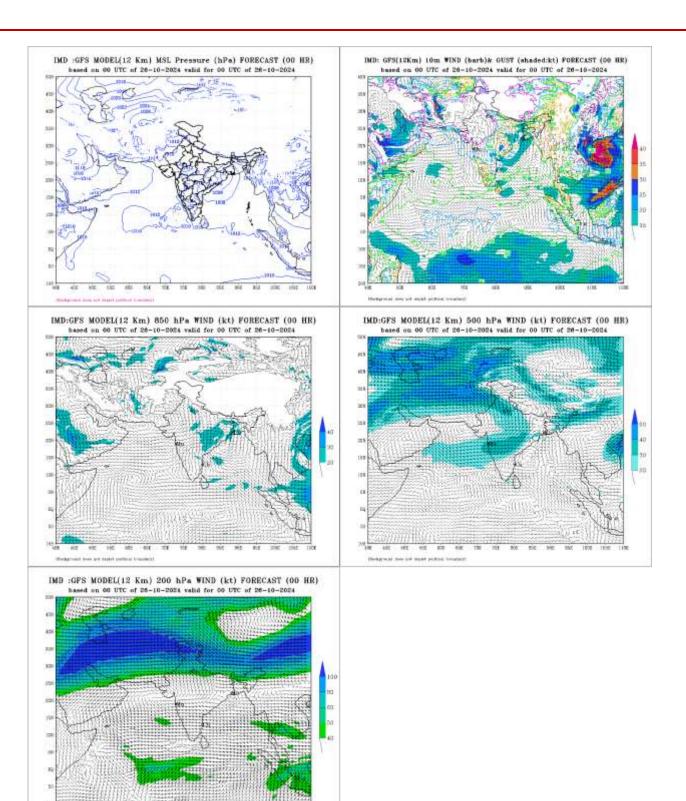
<sup>&</sup>quot;-" indicate genesis has already occurred.

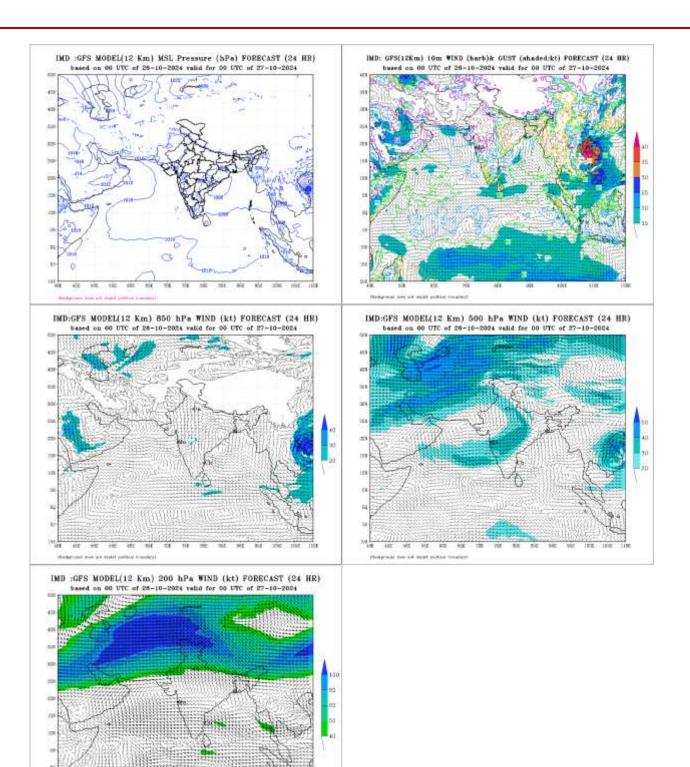
Probability is indicated as NIL for 0%, LOW for 1-33%, MOD for 34-67% and High for 68-100%.

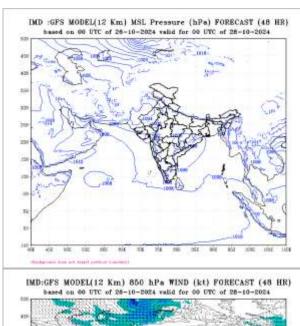
Intense Observation Period (IOP): NIL

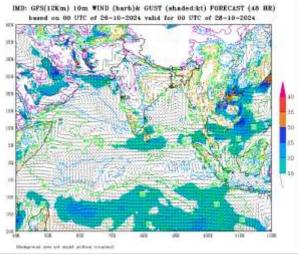
# **Annexure**

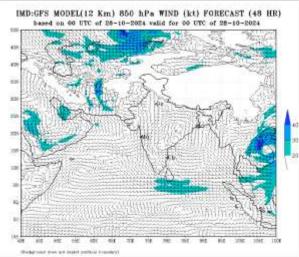


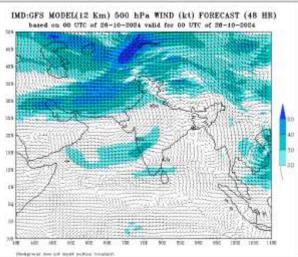


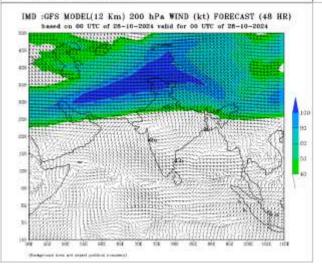


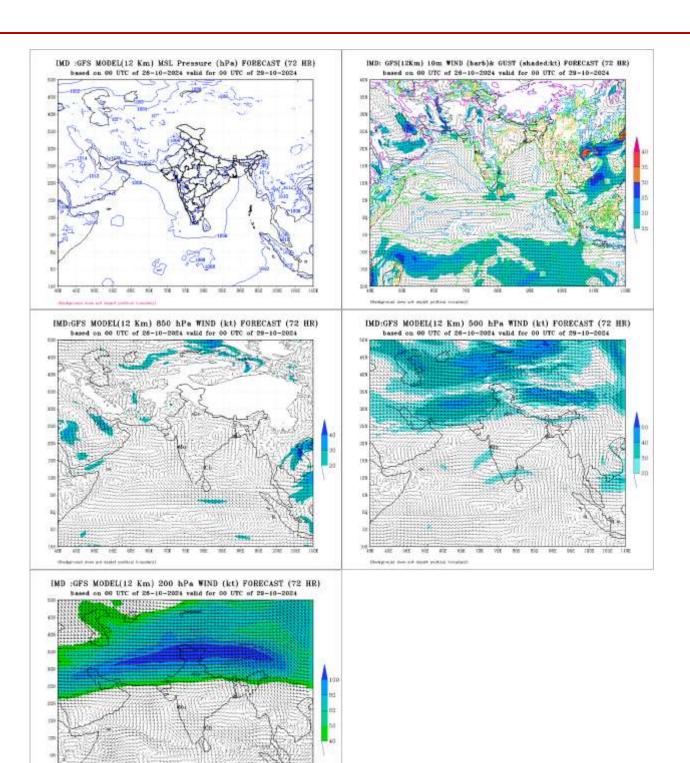












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