



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



FDP (Cyclone) NOC Report Dated 12th November, 2019

Time of Issue: 1200 UTC

Synoptic features:

No significant low pressure system prevails over the north Indian Ocean as on date.

Dynamical and thermodynamical features

Sea Surface Temperature (SST):

Sea Surface Temperature is around 26-29°C over most parts of central Arabian Sea. It increases to 28-30°C over north Arabian Sea and also over south Arabian Sea.

SST is around 27-28 °C over north BoB. It is around 28 - 30°C over rest BoB.

Tropical Cyclone Heat Potential (TCHP):

Tropical Cyclone Heat Potential (TCHP) is 20-40 kJ/cm² over most parts of central Arabian Sea and north Arabian Sea. There is a narrow strip of value 50-70 kJ/cm² off west coast of India. It is around 80-100 kJ/cm² over south Arabian Sea.

TCHP is around 30-50 kJ/cm² over north BoB and is around 80-90 kJ/cm² over rest of the BOB.

Relative Vorticity:

Cyclonic relative vorticity at 850 hPa of value 10-20 X10⁻⁶s⁻¹ is seen over northeast BoB and neighborhood.

Cyclonic relative vorticity at 850 hPa of value 10-20 X10⁻⁶s⁻¹ is seen over the eastcentral Arabian Sea off Maharashtra coast.

Low level Convergence:

No significant positive lower level convergence area is seen over BoB region.

An area of positive lower level convergence area of value 5-10x10⁻⁵ s⁻¹ is seen over western equatorial Indian Ocean, very close to the equator.

Upper level Divergence:

There is no significant area of positive upper level divergence over BoB.

Upper level divergence of value 05-10x10⁻⁵ s⁻¹ is seen over central Arabian Sea.

Wind Shear:

Wind shear is high over north, central and south Arabian Sea. It is low to moderate over Comorin area.

Wind shear is low to moderate over Andaman Sea and south BoB. It is high elsewhere.

Wind Shear Tendency:

The wind shear tendency is positive over north and adjoining westcentral BoB. It is negative or neutral elsewhere.

It is negative over some parts of Gulf of Oman and adjoining westcentral Arabian Sea. It is positive or neutral over rest Arabian Sea.

Upper tropospheric ridge:

The upper tropospheric ridge at 200 hPa runs roughly along 12°N over the BoB.

Satellite observations based on INSAT imagery:

Arabian Sea:-

As per the satellite imagery at 0600 UTC of 12th November, 2019, scattered low to medium clouds with embedded isolated moderate to intense convection lies over southeast Arabian Sea.

Bay of Bengal & Andaman Sea:

According to 0600 UTC satellite imagery, scattered low/medium clouds with weak to moderate convection lies over South Andaman Sea and adjoining southeast BoB.

Large scale features

M.J.O. Index:

MJO index is in Phase 8 with amplitude more than 1. A fast propagating mode is predicted in which MJO convective phase is likely to propagate eastwards from phase 8 to phase 1 after 3-4 days with amplitude >1.

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

NWP Input for FDP Cyclone based on 0000 UTC of today

IMD-GFS T-1534: Indicates development of no low pressure systems for the next 10 days.

IMD-GEFS: Indicates development of no low pressure systems for the next 8 days.

IMD-WRF: Analysis shows a Low Pressure area over Andaman islands & neighborhood on 12th November (today) which gets less marked tomorrow and no subsequent development.

NCMRWF-NCUM: Indicates development of no low pressure systems for the next 10 days.

NCMRWF-UM-Regional Model: Indicates development of no low pressure systems for the next 3 days.

NEPS Model: Indicates development of no low pressure systems for the next 10 days.

ECMWF: Indicates development of no low pressure systems for the next 10 days.

NCEP-GFS: Indicates development of no low pressure systems for the next 10 days.

ARP-Meteo France : Indicates development of no low pressure systems for the next 3 days

Dynamical statistical models

IMD Genesis Potential Parameter (GPP):

No area of significant zone of GPP is seen to develop over NIO region during next 5 days.

IMD NWP products are available at:

<http://nwp.imd.gov.in/bias/gfsproducts.php>

<http://nwp.imd.gov.in/bias/wrf27pro.php>

http://www.rsmcnewdelhi.imd.gov.in/NWP_CYC/Analysis.htm or

http://www.rsmcnewdelhi.imd.gov.in/NWP_CYC/<HH> hrs.htm

<HH> are forecast hours i.e. 24, 48, 72 and etc.

Summary and Conclusion:

As per the NWP models considered, no low pressure area is seen to form for the next 8-10 days.

Probability of cyclogenesis over Bay of Bengal and Andaman Sea during next 120 hours:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
Nil	Nil	Nil	Nil	Nil

Probability of cyclogenesis over Arabian Sea during next 120 hours:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
Nil	Nil	Nil	Nil	Nil

Advisory: No IOP area for the next 5 days













