



The Madden Julian Index (MJO) currently lies in phase 4 with amplitude more than 1. Thereafter, it will move to phase 5 and continue in same phase with amplitude remaining more than 1 during subsequent 4 days. The Tropical Cyclone Heat Potential (TCHP) is more than 100 KJ/cm² over central and adjoining north BOB. It is slightly decreasing over extreme north BOB and along & Off Andhra, Odisha, west Bengal coasts. Sea Surface Temperature (SST) is around 30-31⁰C over major parts of BOB. Thus, MJO and sea conditions are conducive for enhancement of convection over the Bay of Bengal (BOB) during next 5 days. The current environmental conditions like vorticity, low level convergence and upper level divergence are also favourable for cyclogenesis over north Andaman Sea and its intensification

Most of the numerical models including IMD GFS, NCEP GFS, GEFS, NEPS, ECMWF and NCUM are indicating formation of a Low Pressure Area over north Andaman Sea and adjoining eastcentral BOB around 22nd with northwestwards movement and intensification of the system. With respect to track, all the models are indicating northwestwards movement. However, there is some divergence among various models w.r.t. landfall point and time. Considering the mean model guidance, it can be inferred that the system is expected to reach north Bay of Bengal off Odisha-West Bengal coasts around 26th morning. The genesis potential parameter (GPP) based on IMD GFS indicates potential zone for cyclogenesis over North Andaman Sea on 22nd with northwestward movement of genesis area across central Bay of Bengal till 26th May. The MME (CFSV2) is also indicating 30-40% probability of cyclogenesis over North Andaman Sea and adjoining eastcentral Bay of Bengal during week 1.

Considering all the above, it may be concluded that a low pressure area is very likely to form over north Andaman Sea and adjoining eastcentral BOB around 22nd May, 2021 with moderate to high probability of formation of depression around 23rd. The system is very likely to intensify into a cyclonic storm by 24th. It is very likely to move northwestwards and reach north Bay of Bengal near Odisha - West Bengal coasts around 26th may

morning. Thus, there is high probability of cyclogenesis during first half of week 1 over Andaman Sea and adjoining eastcentral BoB.

Areas likely to be affected: Andaman & Nicobar Islands, central, southeast & north Bay of Bengal and coastal areas of Andhra Pradesh, Odisha, West Bengal, Bangladesh and Myanmar.

(a) Impact expected:

- i. Sea conditions will be rough to very rough over southeast Bay of Bengal & south Andaman Sea from 21st May onwards.
- ii. Sea conditions will be rough to very rough over Andaman Sea & adjoining eastcentral and southeast Bay of Bengal on 22nd and 23rd May, High to very High over major parts of central Bay of Bengal during 24th – 26th May. It would be rough to very rough on 24th and high to very high during 25th – 26th May over north Bay of Bengal and along & off Odisha, West Bengal and Bangladesh coasts.

(b) Warnings / Advisory:

- The fishermen are advised not to venture into southeast Bay of Bengal & south Andaman Sea from 21st May onwards, into eastcentral Bay of Bengal, north Andaman Sea and adjoining southeast Bay of Bengal from 23rd – 24th May and into north and central Bay of Bengal and along & off West Bengal – Odisha – Bangladesh coasts from 24th – 26th May.
- Those who are out in the Deep Sea are advised to return to the coast by 22nd May.
- Ships are advised to avoid these areas
- Ports along the east coast of India may take necessary pre-cautions.
- Naval base operations may maintain necessary pre-cautions
- Tourism activities may be restricted over these areas.

Verification of forecast issued during last two weeks:

The forecast issued on 6th May indicated low probability of cyclogenesis over central parts of south Arabian Sea during later part of week 2 (14.5.2021- 20.05.2021). The forecast issued on 13th May indicated high probability of cyclogenesis over Lakshadweep region upto northeast Arabian Sea during the week 1 (14.05.2021-20.05.2021). A low pressure area formed over southeast Arabian Sea & adjoining Lakshadweep area on 13th May morning (0830 hrs IST). Moving eastwards, it intensified into a Depression over Lakshadweep area on 14th May morning (0300 UTC), into the cyclonic storm “Tauktae” in the same midnight (1800 UTC), into an extremely severe cyclonic storm over eastcentral Arabian Sea on 17th morning (0000 UTC). It crossed Gujarat coast to the northeast of Diu around midnight of 17th. Thus, cyclogenesis over Arabian Sea could be predicted correctly two weeks (8 days) in advance.

Next update: 27.05.2021