



The Madden Julian Oscillation (MJO) Index currently lies in Phase 3 with amplitude less than 1 and will continue in same phase with amplitude remaining less than 1 till middle of week 1. Thereafter, it is likely to move to phase 4 with amplitude remaining less than 1 during rest part of the forecast period. MJO phase is thus favourable for enhancement of convective activity over the Bay of Bengal (BoB).

Based on CFS forecast, feeble (1-3 mps) easterly flow is predicted over Equatorial Indian Ocean (EIO) and adjoining southeast Arabian Sea (AS) & southwest BoB and eastcentral BoB during week 1. Strengthening (3-5 mps) of easterlies with increase in area of extension is predicted over both the regions during week 2. Feeble westerlies are predicted over eastcentral AS during week 1. MJO wave is seen over West Pacific and EIO & adjoining south BoB during week 1. Equatorial Rossby (ER) waves are predicted over eastcentral AS during week 1. As per the available forecast, Kelvin Waves (KW) are not likely to prevail over the NIO region during the entire forecast period. Thus, various broad scale features including MJO, westerlies, easterlies, ERW, KW and ITCZ etc. are not in phase with each other and are not likely to contribute towards enhancement of convective activity over the NIO region during entire forecast period. Further the sea surface temperatures are not favourable as they are around 26°C over southern parts of NIO and less than that over the northern parts. Similarly, ocean heat content is 60-80 KJ/cm² over southern parts of NIO becoming less than 50 KJ/cm² over the northern parts.

The forecast fields of various numerical models including IMD GFS, IMD GPP, NCEP GFS, GEFS, NCUM, NEPS, ECMWF, ECMWF ensemble and CFS-V2, are not indicating any cyclogenesis over the NIO region during next two weeks.

Hence, various broad scale features, sea conditions and model guidance indicate that cyclogenesis is not likely over the North Indian Ocean during the ensuing 2 weeks.

Verification of forecast issued during last two weeks:

The forecast issued on 20th January for week 2 (28.01.2022-03.02.2022) and on 27th January for week 1 (28.01.2022-03.02.2022) indicated no cyclogenesis over the region during the forecast period. Hence non-occurrence of cyclogenesis was correctly predicted in the two weeks forecast.

Next update: 10.02.2022