

The Madden Julian Oscillation Index (MJO) currently lies in phase 6 with amplitude equal to 1. It would continue in same phase with increasing amplitude during first half of week 1. Thereafter, it would move across phases 7 and 8 during remaining part of the forecast period. Hence, MJO will not support any convective activity over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) during the entire forecast period.

Based on CFS forecast, during first half of week 1, westerly winds (3-5 mps) with Equatorial Rossby Waves (ERW) & low frequency background waves (LW) are likely to prevail over south BoB. Over the AS, stronger westerly winds (5-7 mps) alongwith ERW are likely to prevail over south & central AS. During later part of week 1, decreased westerly winds (1-3 mps) are likely over south BoB and also over south & adjoining central AS. Thus, equatorial waves are not likely to contribute towards cyclogenesis over the NIO region during week 1. However, during week2, slightly stronger westerly winds are likely to prevail over the BoB and AS alongwith Kelvin Waves (KW) over south AS during first half migrating to south BoB during later half of the week. Thus, even during week 2, equatorial waves are not likely to contribute towards cyclogenesis over the NIO region.

Considering the sea conditions, sea surface temperature (SST) is around 30-31⁰C over entire BoB with higher values over eastern parts of BoB and off Tamil Nadu coast. Over the AS, the SST is 30-31⁰C over central parts of AS and adjoining south AS and also along & off west coast of India. The ocean heat content (OHC) is >100 KJ/cm² over major parts of BoB except over a small region over southwest & central BoB and along & off Andhra Pradesh-Odisha coasts. Over the AS, OHC is >100 KJ/cm² over south and adjoining eastcentral AS.

Considering the model guidance, most of the models including IMD GFS, NCEP GFS, ECMWF, NCUM, NEPS, GEFS and IMD MME CFS (V2) etc. are indicating no cyclogenesis over the region.

Hence, considering the model guidance and environmental features, no cyclogenesis is likely over the region during next two weeks.

Verification of forecast issued during last two weeks:

The forecast issued on 12th May for week 2 (20.05.2022-26.05.2022) indicated low probability of cyclogenesis over eastcentral BoB and adjoining areas during the beginning of week 2. The forecast issued on 19th May for week 1 (20.05.2022-26.05.2022) low probability of cyclogenesis over the Gulf of Martaban and adjoining eastcentral BoB during week 1. Actually a cyclonic circulation lay over Gulf of Martaban and adjoining Myanmar on 19th morning. It intensified into a low pressure area over the same region at 1200 UTC of 19th and into a well marked low pressure area over Gulf of Martaban and adjoining Myanmar at 0000 UTC of 20th May. It moved north-northeastwards, intensified into a depression at 0300 UTC over the same region and crossed south Myanmar coast close to Mawlamyine near 16.53°N/97.46°E between 0800 & 0900 UTC of 20th May. Hence cyclogenesis was correctly captured two weeks (8 days) in advance. The realised rainfall during 19th to 25th May, 2022 from satellite-gauge merged data is presented in Fig.1.

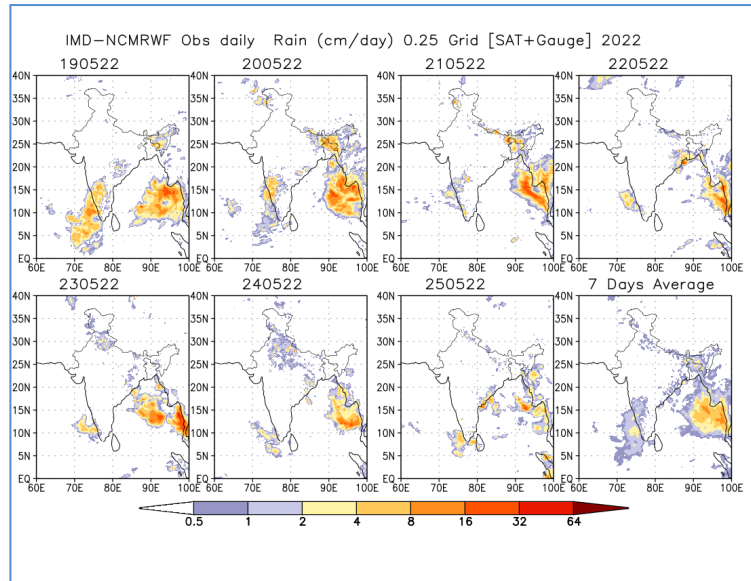


Fig.1: Rain gauge and satellite merged rainfall plots during 19th April to 25th May, 2022

Next update: 02.06.2022