

The Madden Julian Oscillation Index (MJO) currently lies in phase 5 with amplitude less than 1 and would continue in same phase with amplitude remaining less than 1 during first half of week 1. Thereafter, it will move across phases 6,7 & 8 with amplitude remaining less than 1 during remaining part of the forecast period. Thus, MJO would not support cyclogenesis over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) during entire forecast period.

Based on CFS forecast for equatorial waves, during week 1, easterlies (3-7 mps) are likely to prevail over entire BoB and over central & south India. During week 2 (3-5 mps) easterlies are likely to prevail over north BoB and stronger (5-7 mps) easterlies are likely over central India. Hence equatorial waves are not likely to contribute towards cyclogenesis during the forecast period.

Current environmental conditions (including low level vorticity, low level convergence, upper level divergence and vorticity at different levels) indicate favourable environment over southwest BoB, intervening Southern Peninsular India and adjoining southeast AS.

The guidance from various deterministic & ensemble numerical models including IMD GFS, NCEP GFS, ECMWF, GEFS indicate no probable cyclogenesis over the North Indian Ocean during next 2 weeks. Most of these models are indicating likely formation of a low pressure area over eastcentral BoB around 7th September with initial northwestwards movement towards northwest BoB during beginning of week 2 and gradual west-northwestwards movement across central India during middle of week 2. However, NCUM (R) is indicating likely emergence of this cyclonic circulation into northeast Arabian Sea off Gujarat coast as depression around 11th September. IMD GPP is indicating a potential zone for cyclogenesis over eastcentral BoB around 7th September. No intensification of this system is indicated by any of the models. Models like IMD GFS indicate that the existing cyclonic circulation over south Tamilnadu and neighbourhood is likely to move westwards across southern Peninsular region during next 2 days with no further intensification.

Hence, considering the model guidance and environmental features, it is inferred that no cyclogenesis (formation of depression) is likely over the North Indian Ocean during next 2 weeks. However, there is likelihood of formation of cyclonic circulation/low pressure area over westcentral and adjoining northwest Bay of Bengal during week 1 and week 2.

Verification of forecast issued during last two weeks:

The forecast issued on 18th August for week 2 (26.08.2022 - 01.09.2022) indicated no probability of cyclogenesis over the North Indian Ocean region during week 2. The forecast issued on 25th August for week 1 (26.08.2022 - 01.09.2022) indicated no probability of cyclogenesis over the North Indian region during week 1. Hence non-occurrence of cyclogenesis was correctly predicted in the two weeks forecast.

The realized rainfall during 25th August, 2022 to 31st August 2022 from satellite-gauge merged data is presented in Fig.1.

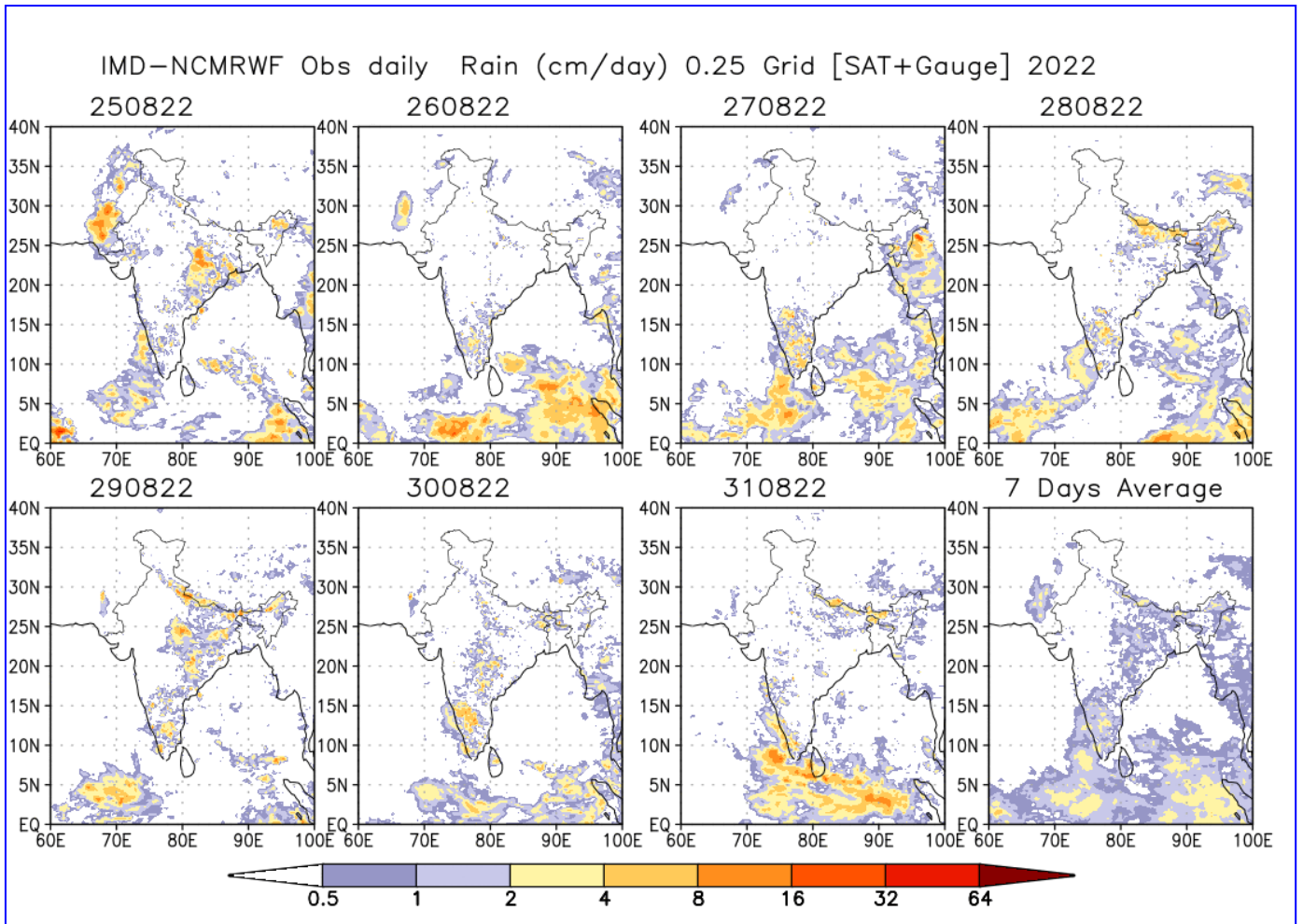


Fig.1: Rain gauge and satellite merged rainfall plots during 25th August to 31st August, 2022

Next update: 08.09.2022