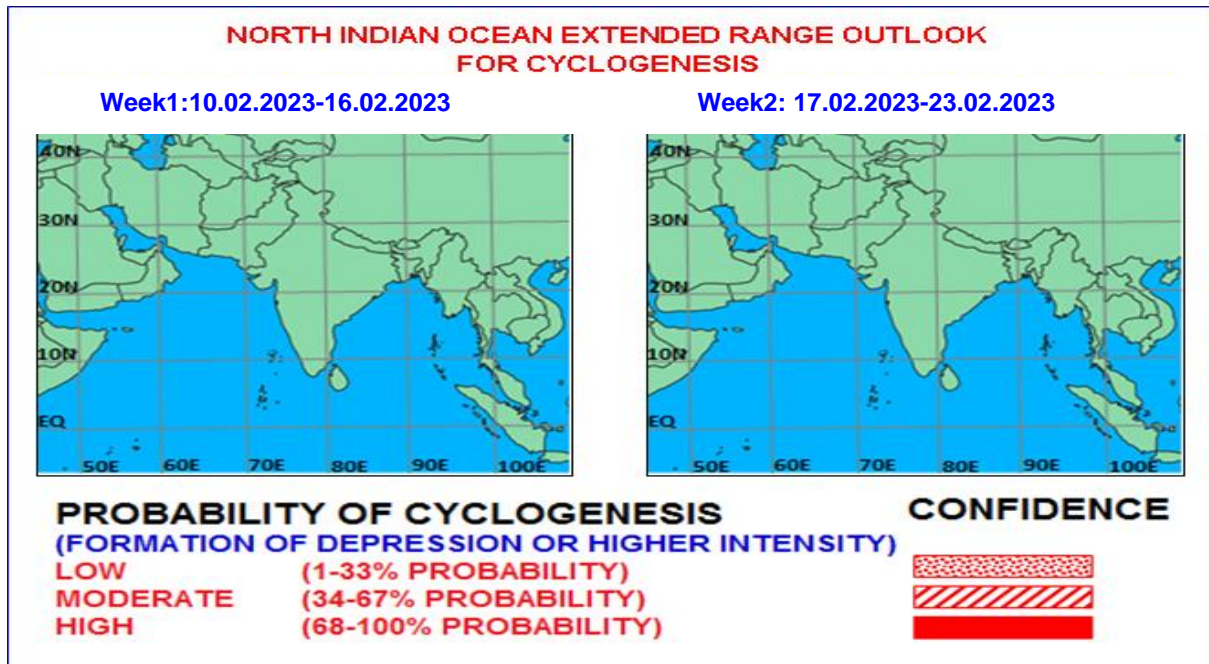




Issued on 09.02.2023



I. Environmental features:

The Madden Julian Oscillation (MJO) Index is currently in Phase 4 with amplitude more than 1. It will move across phases 4 and 5 during first half of week 1 with amplitude remaining more than 1. Thereafter, it will move across phases 6,7 and 8 with amplitude remaining more than 1 during remaining part of the forecast period. Thus, MJO will support enhancement of convective activity over the Bay of Bengal (BoB) during first half of week 1 only.

During first half of week 1, easterly winds (3-5 mps) over south BoB and strong westerly winds (5-7 mps) over South Indian Ocean are likely to prevail. Thereafter, weakening of easterly winds is indicated over south BoB and no other wave is likely over the NIO region. Easterly winds are thus not likely to influence the enhancement of convective activity and cyclogenesis over the north Indian Ocean (NIO) region during the period.

II. Model Guidance:

Various deterministic models (IMD GFS, NCUM, ECMWF, NCEP GFS) and ensemble models (NEPS, GEFS, ECMM) are indicating no cyclogenesis over the region during next two weeks. Extended range models including Coupled NCMRWF Unified Model (CNCUM), IMD Coupled Forecast System Version 2 (IMD CFS V2) and IMD genesis potential parameter (GPP) are also not indicating any cyclogenesis over the region during the forecast period.

(Legends: IMD GFS: India Meteorological Department Global Forecast System, NCUM: National Centre for Medium Range Weather Forecasting Centre Unified Model, European Centre for Medium Range Weather Forecasting, National Centre for Environment Prediction GFS, ECMM: ECMWF ensemble)

III. Inference:

Considering the model guidance and various environmental features, it is inferred that no cyclogenesis is likely over the NIO region during next 2 weeks.

IV. Verification of forecast issued during last two weeks:

The forecast issued on 26th January, 2023 for week 2 (03.02.2023 – 09.02.2023) indicated no cyclogenesis over the North Indian Ocean. The forecast issued on 2nd February, 2023 for week 1 (03.02.2023 – 09.02.2023) indicated no cyclogenesis over the North Indian Ocean. Hence, nil cyclogenesis was correctly predicted in two weeks forecast.

The realized rainfall during 2nd Feb, 2023 – 8th Feb, 2023 from satellite-gauge merged data is presented in Fig.1

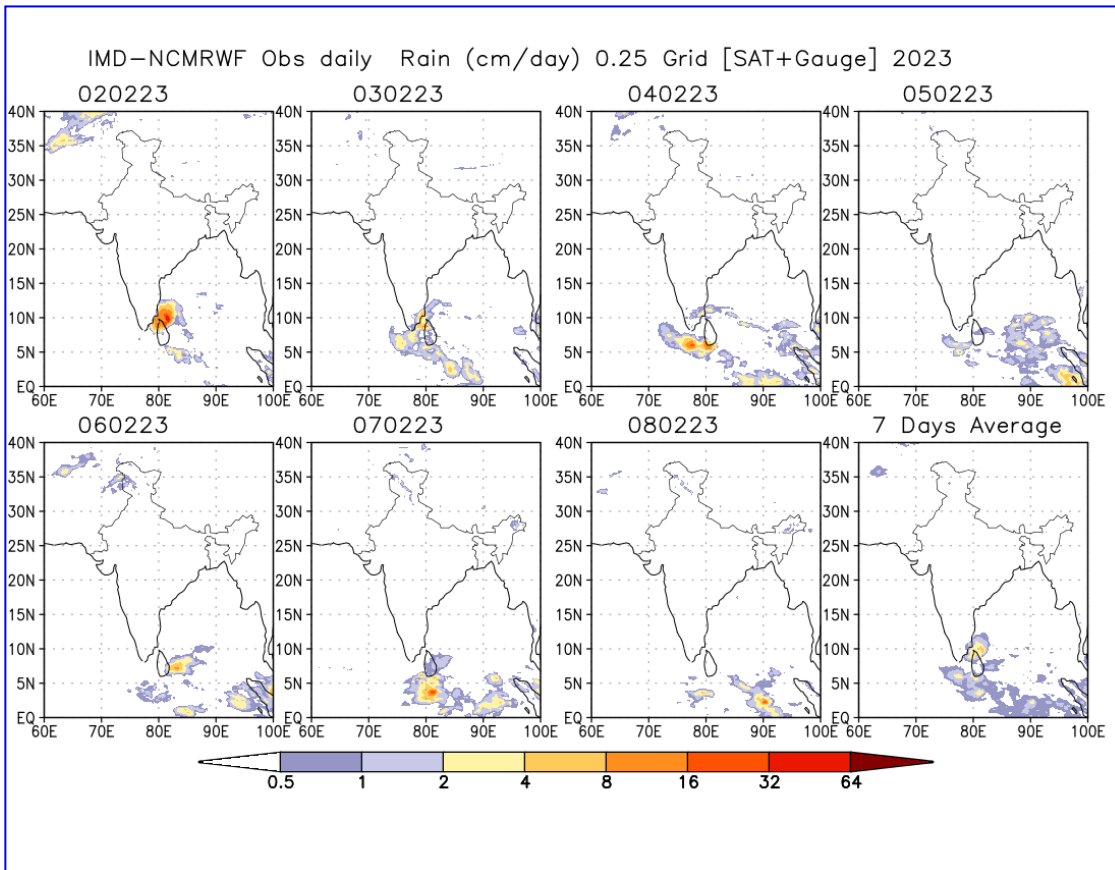


Fig.1: Rain gauge and satellite merged rainfall plots during 2nd Feb, 2023 – 8th Feb, 2023

Next update: 16.02.2023