



Issued on 25.04.2024

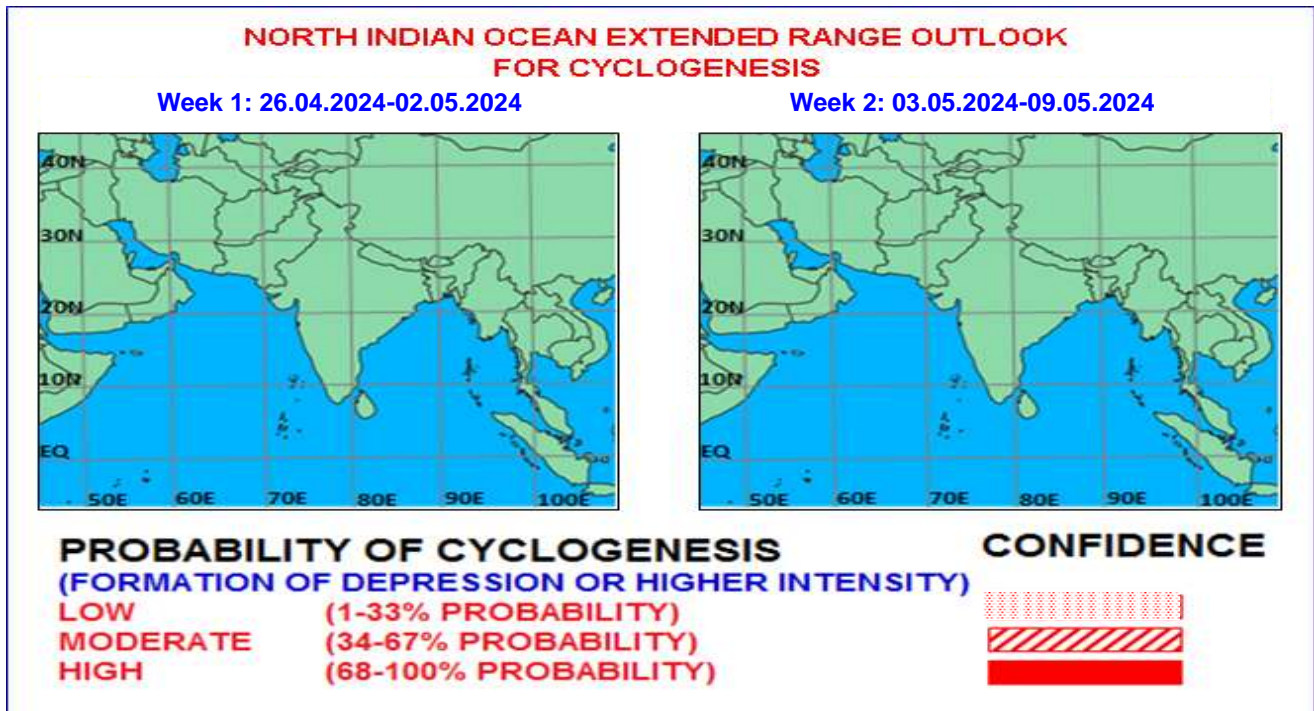


Fig. 1: Graphical Cyclogenesis over north Indian Ocean during next two weeks

I. Environmental features:

Madden Julian Oscillation (MJO) index is currently in Phase 4 with amplitude greater than 1. It will continue in same phase with gradually increasing amplitude during week 1. Thereafter, it would move across phase 5 during first half of week2 and across Phase 6 during later half of week 2. Thus, MJO Phase may support enhancement of convective activity over Bay of Bengal (BoB) till first half of week 2.

NCICS based forecasts for zonal winds indicate easterly winds over both the basins i.e. the BoB and the Arabian Sea (AS) during the entire forecast period. Thus, equatorial waves are not likely to contribute to cyclogenesis during entire forecast period.

II. Model Guidance:

Various deterministic models including NCUM, NEPS, ECMWF, IMD GFS, GEFS and NCEP GFS are not indicating any cyclogenesis over the region during entire forecast period. The IMD CFS (V2) is indicating 10-20% probability of cyclogenesis over southwest AS during week 1.

Legends: NCICS: North Carolina Institute for Climate Studies (for Equatorial waves Forecast), IMD GFS: India Meteorological Department Global Forecast System, NCUM: National Centre for Medium Range Weather Forecasting Centre (NCMRWF) Unified Model, European Centre for Medium Range Weather Forecasting (ECMWF), GPP: Genesis Potential Parameter, National Centre for Environment Prediction (NCEP) GFS, ECMM: ECMWF multi model, GEFS: GFS ensemble, NEPS: NCUM ensemble prediction system, CNCUM: Coupled NCUM, CPC: Climate Prediction Centre, NWS: National Weather Service.

III. Inference:

Considering various environmental conditions and model guidance, it is inferred that there is no probability of cyclogenesis over North Indian Ocean during next two weeks.

IV. Verification of forecast issued during last two weeks:

Forecast issued on 11th April for second week (19.04.2024-25.04.2024) and forecast issued on 18th April for first week (19.04.2024-25.04.2024) indicated no cyclogenesis over the NIO during the forecast period. Actually, no cyclogenesis occurred over the region during the specified week.

NCMRWF-IMD satellite gauge merged data plots of 24 hours accumulated realized rainfall during, 18th April to 24th April, 2024 are presented in **Fig. 2**.

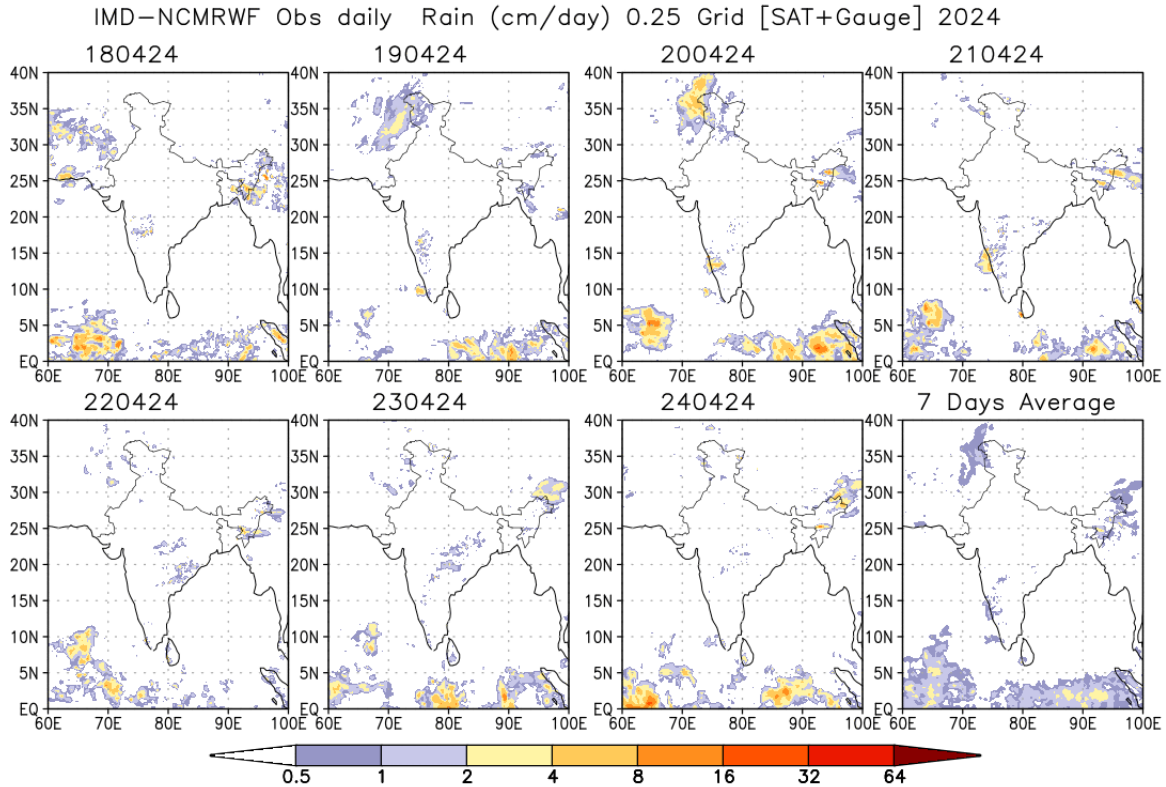


Fig.2: NCMRWF-IMD satellite gauge merged data plots of 24 hours accumulated realized rainfall during 18th to 24th April, 2024.

Next update: 02.05.2024