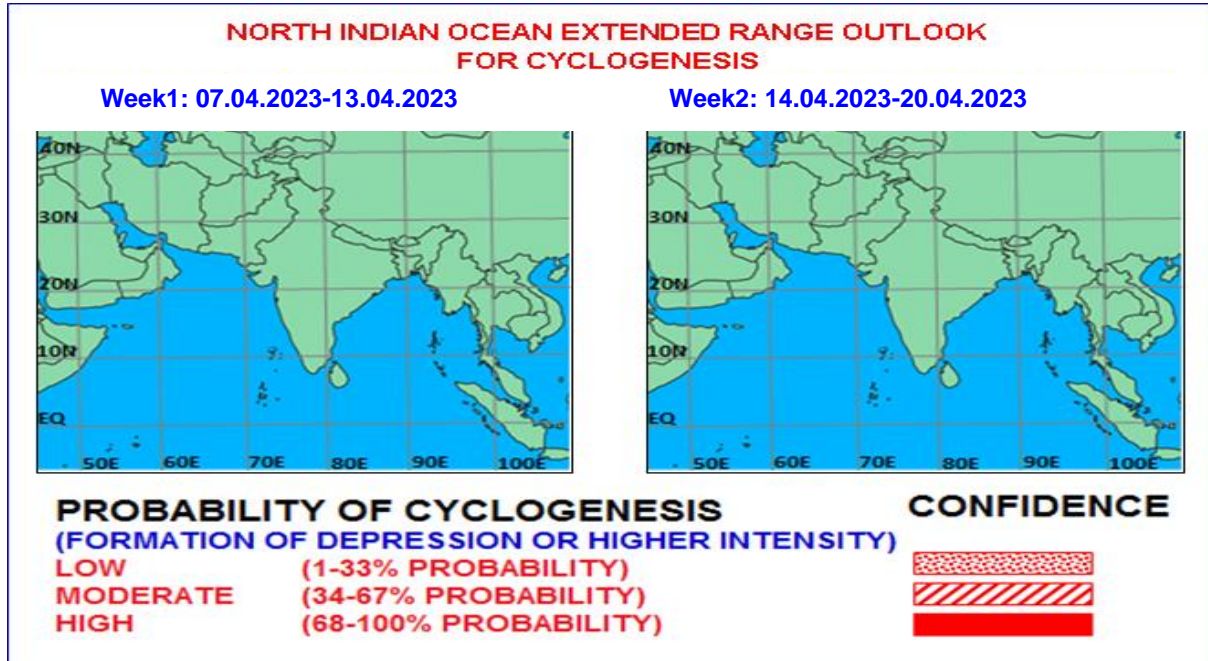




Issued on 06.04.2023



I. Environmental features:

The Madden Julian Oscillation (MJO) Index is currently in Phase 6 with amplitude close to 1. It will continue in same phase during first half of week 1. Thereafter, it will move to phase 7 with decreasing amplitude. Hence, MJO would not support enhancement of convective activity over the North Indian Ocean (NIO) during entire forecast period.

During week 1, westerly waves (1-3 mps) over Equatorial Indian Ocean (EIO) & adjoining southern parts of NIO, Equatorial Rossby Waves (ERW) over East EIO and easterly winds (1-3 mps) are likely over central Bay of Bengal (BoB) & central Arabian Sea (AS). During week 2, westerly winds (1-3 mps) over West EIO and easterly winds (3-5 mps) are likely over central parts of BOB & AS. Considering collectively, both MJO and equatorial waves are not likely to contribute towards enhancement of any convective activity over the North Indian Ocean (NIO) region including the BoB and AS.

II. Model Guidance:

Various models including IMD GFS, NCUM, ECMWF, ECMM, NEPS, GEFS and GPP are not indicating any cyclogenesis over the region during next 7-10 days.

IMD's Coupled Forecast System Version 2 (IMD CFS V2), IMD GPP and NCMRWF CNCUM are not indicating any cyclogenesis over the North Indian Ocean (NIO) region.

(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, GPP: Genesis Potential Parameter, National Centre for Environment Prediction GFS, ECMM: ECMWF multi model, GEFS: GFS ensemble, NEPS: NCUM ensemble prediction system, CNCUM: Coupled NCUM)

III. Inference:

Considering the environmental features and model guidance, it is inferred that no cyclogenesis (formation of depression) is likely over the North Indian Ocean region during next 2 weeks.

IV. Verification of forecast issued during last two weeks:

The forecast issued on 23rd March, 2023 for week 2 (31.03.2023 – 06.04.2023) indicated no cyclogenesis over the NIO region. The forecast issued on 30th March, 2023 for week 1 (31.03.2023 – 06.04.2023) indicated no cyclogenesis over the NIO region. Thus, nil cyclogenesis was correctly predicted in two weeks forecast.

The realized rainfall during 30th March, 2023 – 5th April, 2023 from satellite-gauge merged data is presented in Fig.2

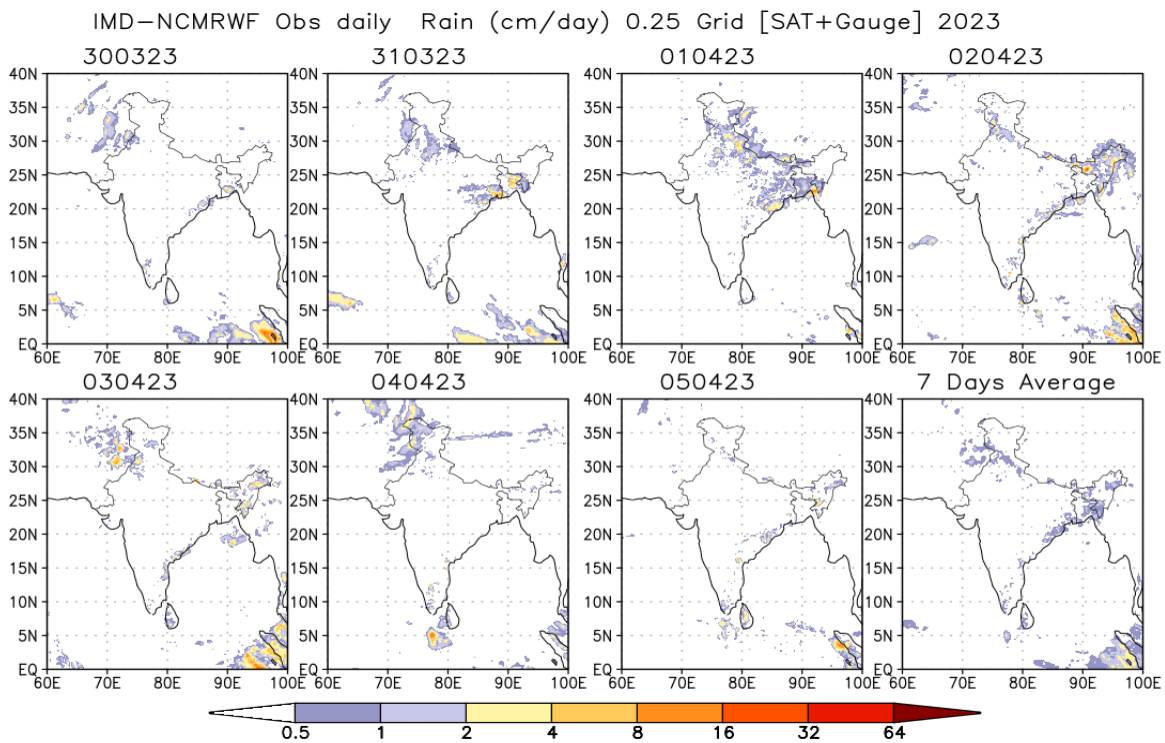


Fig.2: Rain gauge and satellite merged rainfall plots during 30th March, 2023 – 5th April, 2023

Next update: 13.04.2023