India Meteorological Department
Ministry of Earth Sciences
Mausam Bhawan, Lodhi Road, New Delhi-110003

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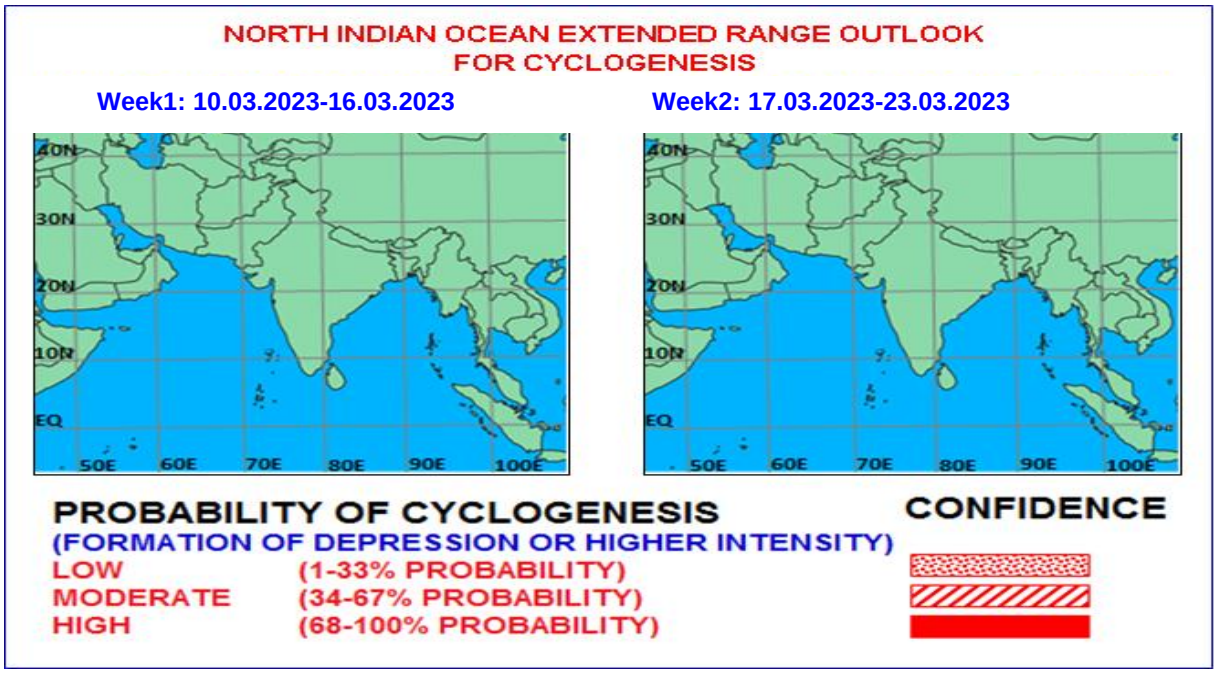

I. Environmental features:

The Madden Julian Oscillation (MJO) Index is currently in Phase 8 with large amplitude (more than 2). It will move across phases 8 and 1 with increased amplitude till first half of week 2. Thereafter, it would enter into phase 2 with amplitude close to 1. Hence, MJO would support enhancement of convective activity over the Arabian Sea during later part of the week 2.

During later part of week 1 and week 2, Equatorial Rossby Waves (ERW) and weak westerly winds (1-3 mps) are likely over central & south Bay of Bengal (BoB). During the same period, MJO, ERW and westerly winds (1-3 mps) are likely over central Arabian Sea. As such, equatorial waves are not likely to contribute towards cyclogenesis over the region.

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,

Extended range model viz. Coupled NCMRWF Unified Model (CNCUM) and IMD's Coupled Forecast System Version 2 (IMD CFS V2) are also not indicating development of any cyclonic disturbance over the region during next 2 weeks.

(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 multi model, GEFS: GFS ensemble, NEPS: NCUM ensemble prediction system)

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 February, 2023 for week 2 (03.03.2023 – 09.03.2023) indicated no cyclogenesis over the North Indian Ocean. The forecast issued on 2nd March February, 2023 for week 1 (03.03.2023 – 09.03.2023) indicated no cyclogenesis over the North Indian Ocean. Hence, nil cyclogenesis was correctly predicted in two weeks forecast.

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

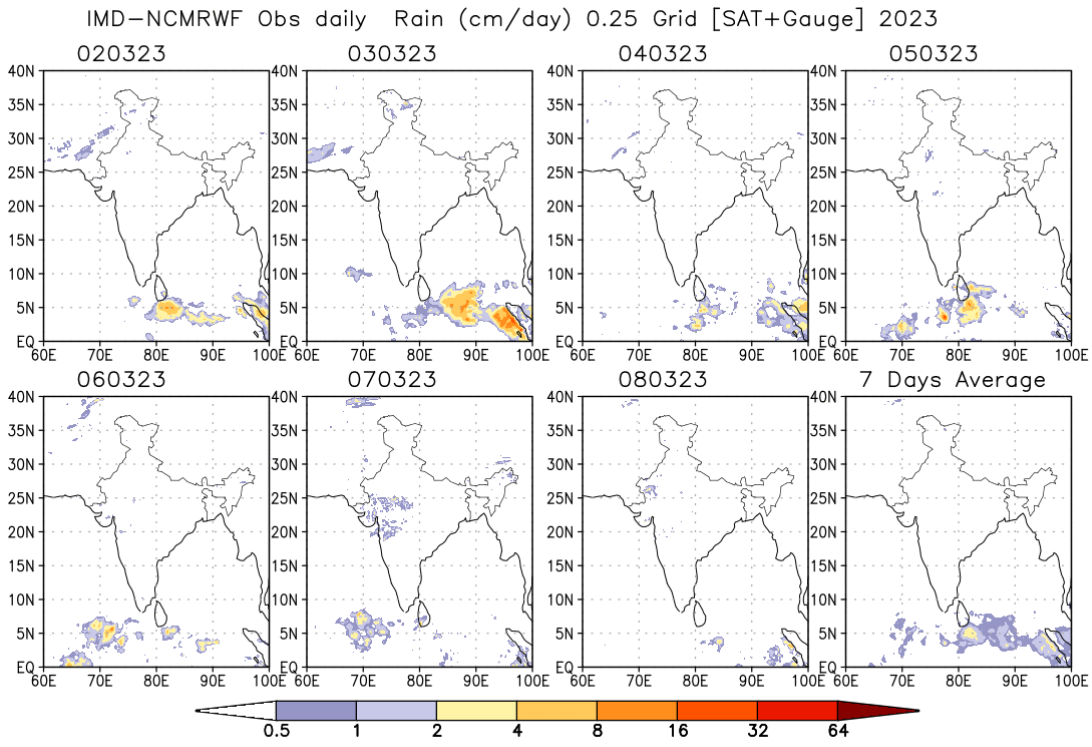

Fig.1: Rain gauge and satellite merged rainfall plots during 2nd March, 2023 – 8th March, 2023

Next update: 16.03.2023