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

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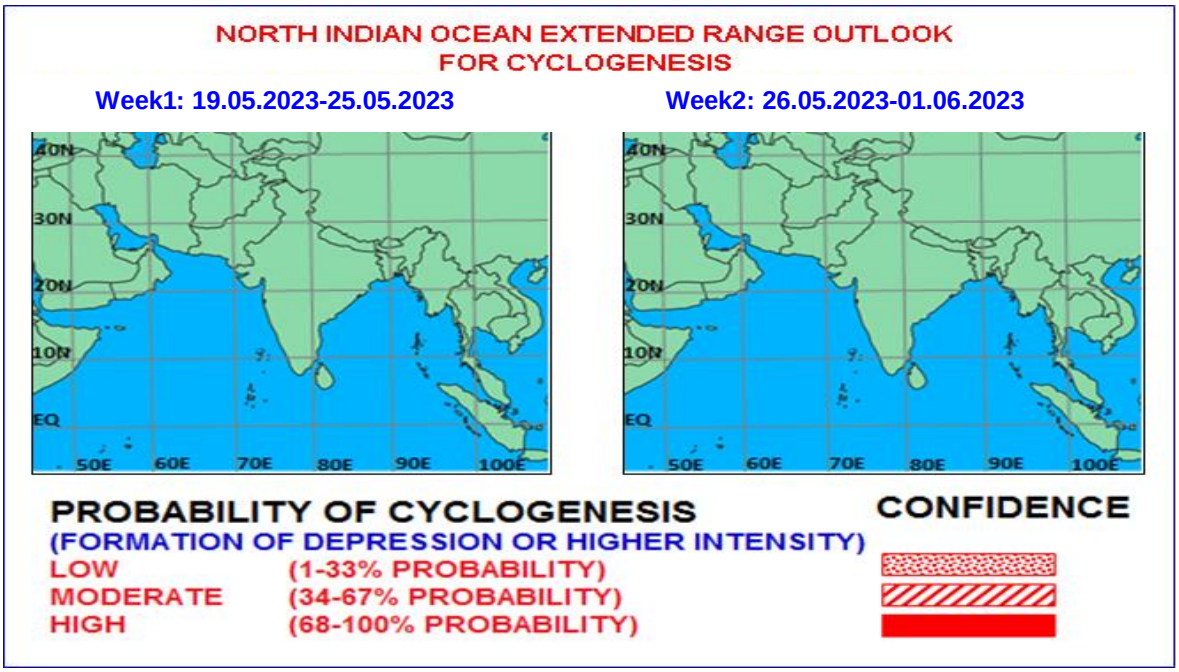

Fig.1: Graphical Cyclogenesis over north Indian Ocean during next two weeks

I. Environmental features:

The Madden Julian Oscillation (MJO) Index is currently in Phase 6 with amplitude more than 1. It would move to phase 7 during week 2. Hence, MJO is not likely to support cyclogenesis over the North Indian Ocean during entire forecast period. Westerly winds (3-5 mps) are likely over Central & Northern parts of Arabian Sea and Bay of Bengal. Easterly winds (1-3 mps) are likely over the southern & adjoining equatorial Indian Ocean during entire forecast period. These features do not support any cyclogenesis over the region.

II. Model Guidance:

Various deterministic models are not indicating any cyclogenesis over the North Indian Ocean. However, IMD's Coupled Forecast System Version 2 (IMD CFS V2) is indicating a probable zone for cyclogenesis over southeast AS during week 1. This is also supported by NCUM model

(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, CPC: Climate Prediction Center, NWS: National Weather Service)

III. Inference:

Considering the environmental features, climatological and model guidance, a cyclonic circulation may develop during week 1 over the southeast Arabian Sea and adjoining equatorial Indian Ocean without any significant intensification.

IV. Verification of forecast issued during last two weeks:

The forecast issued on 4th May, 2023 for week 2 (12.05.2023– 18.05.2023) indicated no fresh cyclogenesis during week 2. The forecast issued on 11th May for week 1 (12.05.2023–18.05.2023) indicated high probability of “Mocha” crossing over Myanmar coast. Thus, the forecast of depression around 9th May over southeast BoB was correctly indicated. Further the movement of “Mocha” towards Myanmar coast was also correctly indicated 1 week in advance.

The realized rainfall during 11th May, 2023 – 16th May, 2023 from satellite-gauge merged data is presented in Fig.2

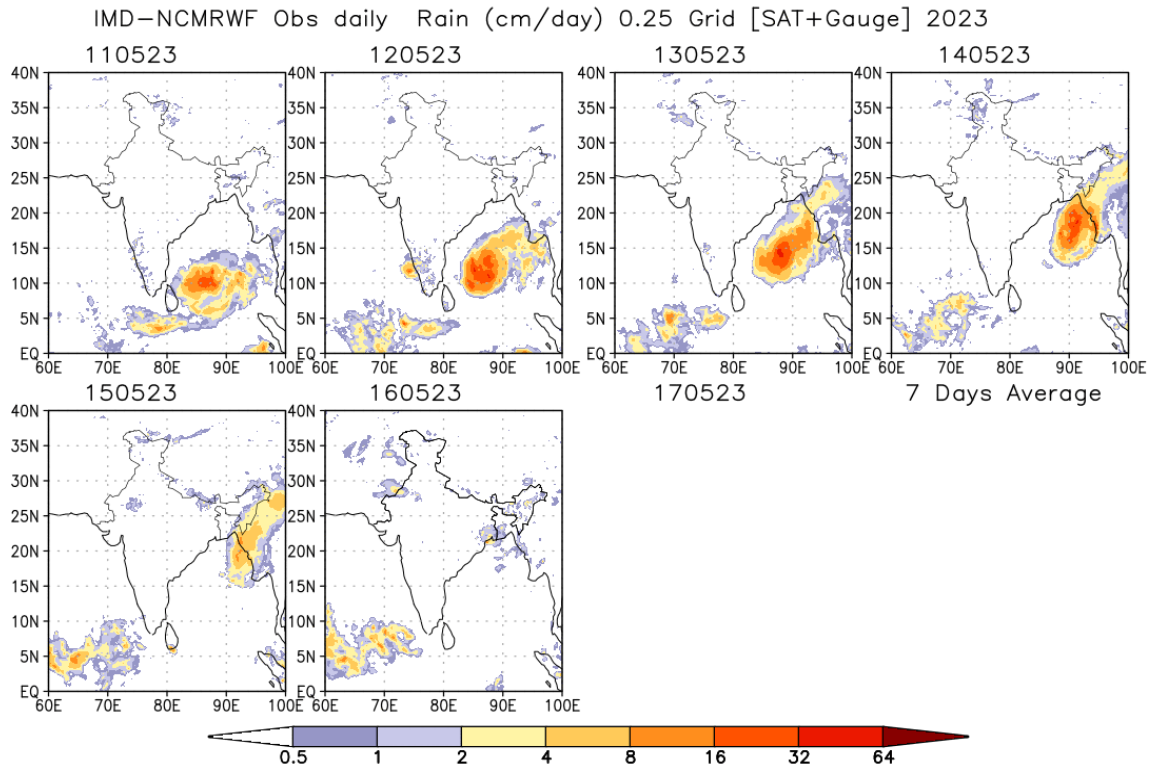

Fig.2: Rain gauge and satellite merged rainfall plots during 11th May– 16th May, 2023

Next update: 25.05.2023