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

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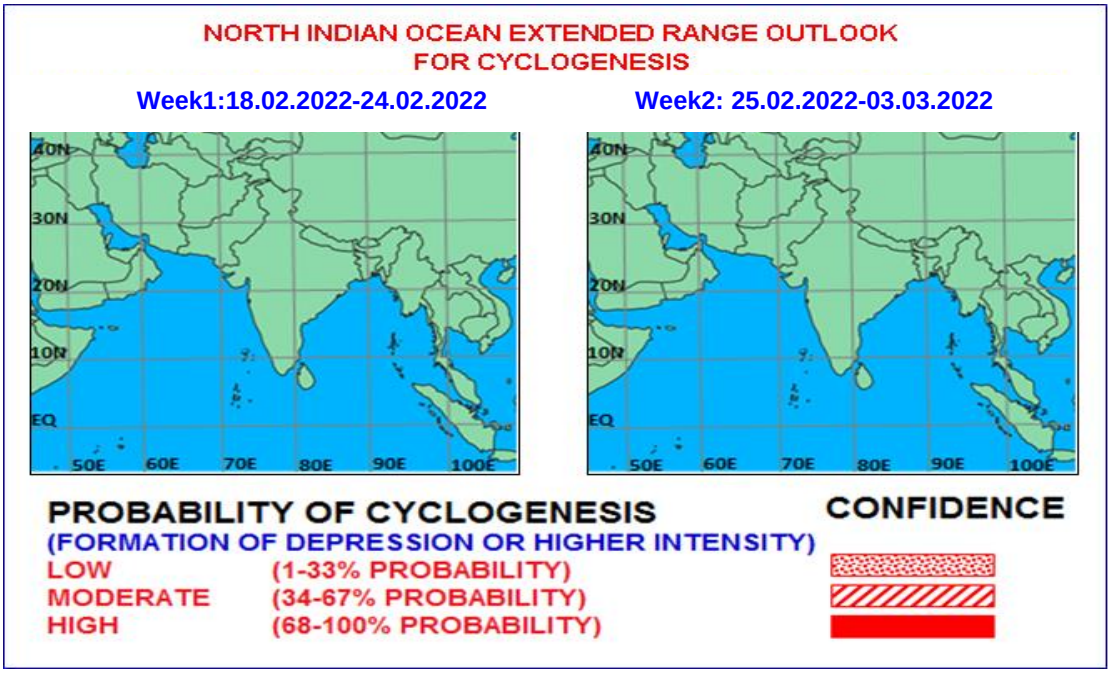

The Madden Julian Oscillation (MJO) Index currently lies in Phase 3 with amplitude more than 1 and will propagate eastwards and remain in Phase 4 from middle of week 1 to first half of week 2 with amplitude gradually becoming less than 1. Thereafter, it will enter into phase 5 during later part of week 2. MJO phase is thus favourable for enhancement of convective activity over the Bay of Bengal (BoB).

Based on CFS forecast, feeble easterly flow is likely to prevail over Equatorial Indian Ocean (EIO) and adjoining southeast Arabian Sea (AS) and eastcentral Bay of Bengal (BoB) (1-3 mps) during week 1. Strengthening (5-7 mps) of easterlies with increase in areal extension is predicted over EIO and adjoining south AS during week 2. Feeble westerlies (1-3 mps) are predicted over south Andaman Sea & adjoining Gulf of Thailand during first half of week 1. Strengthening of westerlies (3-5 mps) over the same region is predicted during later half of week 1. MJO is active over BoB during week 1. Equatorial Rossby (ER) waves and Kelvin Waves (KW) are not likely to prevail over the NIO region during entire forecast period. Further the sea surface temperatures are not favourable as they are around 26^0C over southern parts of NIO and less than that over the northern parts. The ocean heat content is 60-80 KJ/cm^2 over southern parts of NIO becoming less than 50 KJ/cm^2 over the northern parts. Thus, various broad scale features including MJO, westerlies, easterlies, ERW, KW and ITCZ etc. and oceanic conditions rule out any cyclogenesis over the NIO region during forecast period. The forecast fields of various numerical models including IMD GFS, IMD GPP, NCEP GFS, GEFS, NCUM, NEPS, ECMWF, ECMWF ensemble and MME CFS-V2 are not indicating any cyclogenesis over the NIO region during next two weeks. However, MJO and enhanced westerlies are likely to contribute towards increased convective activity over Andaman Sea and adjoining eastern parts of BoB during week 1.

Hence to conclude, various broad scale features, sea conditions and model guidance indicate that cyclogenesis is not likely over the North Indian Ocean during the ensuing 2 weeks. However, enhanced convective activity is likely over Andaman Sea and adjoining eastern parts of Bay of Bengal during week 1.

Verification of forecast issued during last two weeks:

The forecast issued on 3rd February for week 2 (11.02.2022-17.02.2022) and on 10th February for week 1 (11.02.2022-17.02.2022) indicated no cyclogenesis over the region during the forecast period. Hence non-occurrence of cyclogenesis was correctly predicted in the two weeks forecast. Also enhanced convective activity over the EIO and adjoining southwest BoB during week 1 (11.02.2022-17.02.2022) was correctly indicated (Fig.1 in Annexure).

Next update: 24.02.2022

Annexure

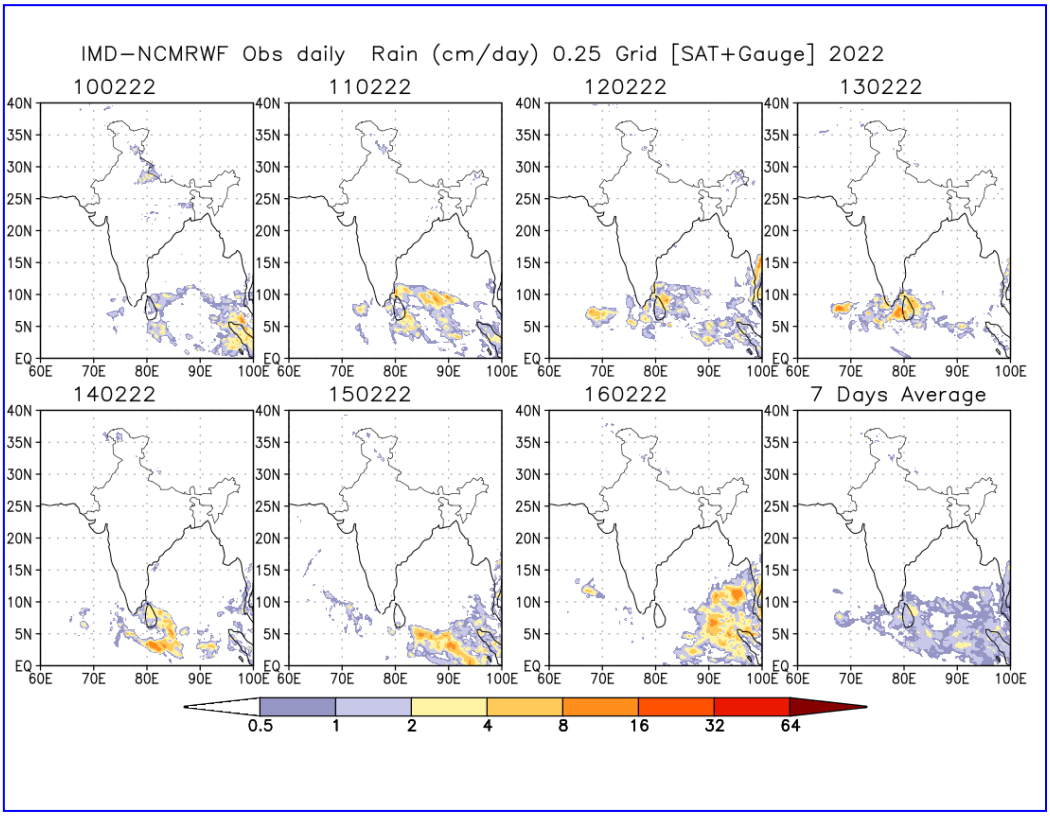

Fig. 1: IMD-NCMRWF merged satellite rain gauge plots during 10th to 16th February, 2022