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Ministry of Earth Sciences
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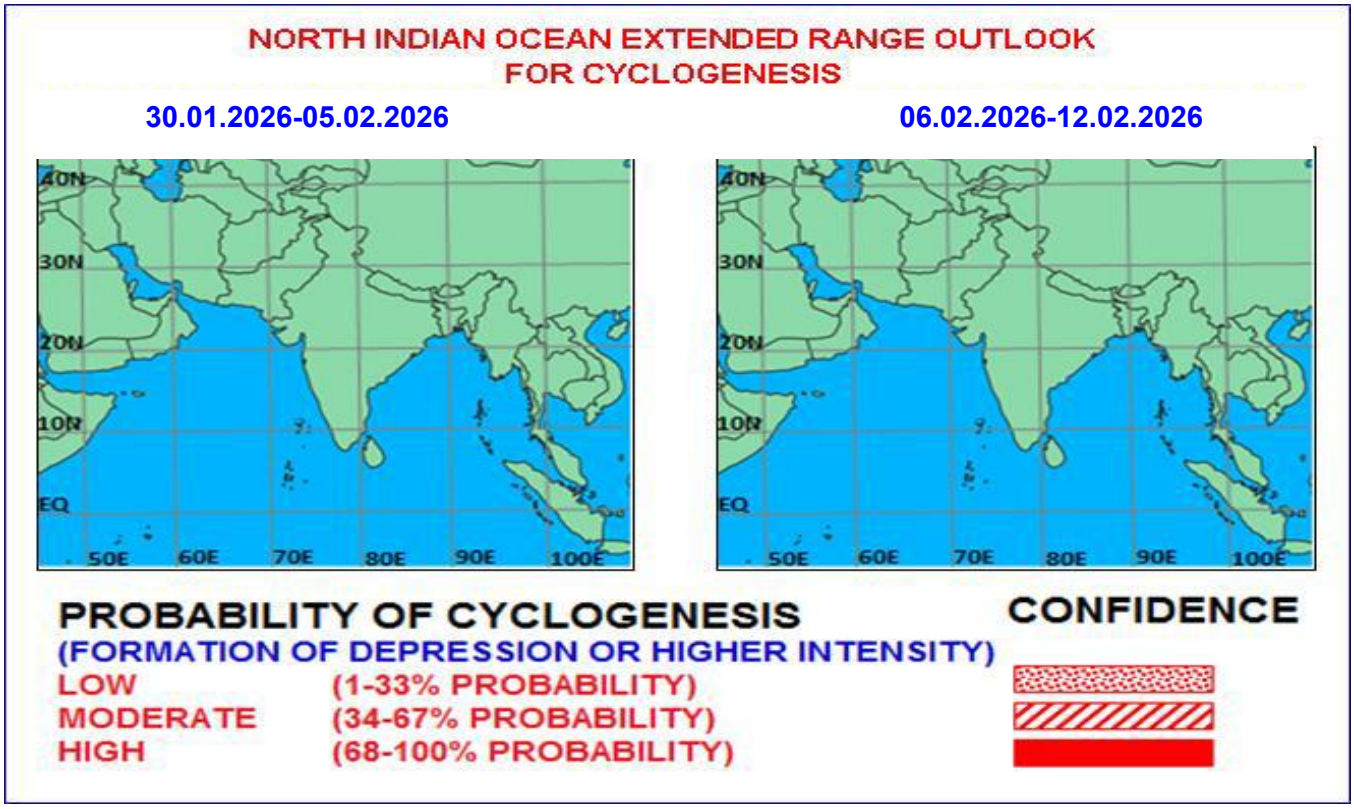

Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features:

The guidance from all models indicates that the Madden Julian Oscillation (MJO) index is currently in phase 7 with an amplitude greater than 1. There is a consensus between the NCEP & ECMWF groups of models that the MJO is likely to enter phase 8 during the next 1-2 days with decreasing amplitude reaching less than 1 during week 1. Thereafter, it is likely move across phases 8 and 1 with amplitude remaining close to 1 during the remaining days of the first week. As the members of the ensemble show a very large spread, the weak MJO signal shows an ambiguous slow propagation within phase 1 during week 2. Only the bias-corrected ECMWF ensemble shows a deviation with a little faster movement and reaching phase 2 during week 1 and slow movement in phase 2 during week 2. The MJO is likely to support the enhancement of convective activity over the North Indian Ocean (NIO), initially in the Arabian Sea (AS) during the first half of week 1 and subsequently in the Bay of Bengal (BoB).

The guidance from the NCICS model indicates a weak westerly wind anomaly (1-3 mps) over central AS with a weak easterly wind anomaly to its north over the north AS in the beginning of week 1. Similarly, over the Bay of Bengal (BoB), the model is indicating weak westerly wind anomaly (1-3 mps) over the south BoB with Equatorial Rossby wave (ERW) alongwith weak easterly wind anomaly over westcentral BoB & Kelvin wave (KW) over the north BoB. These features indicate that equatorial waves would support convective activity associated with the western disturbance over Jammu & neighbourhood near (25N/ 76E) during the beginning of week 1. Thereafter, during the remaining part of forecast period, no significant wind anomaly or equatorial wave is indicated over the North Indian Ocean (NIO) region during the entire forecast period.

II. Model Guidance:

(a) Guidance for Extended Range models:

The 850 hPa wind anomaly field of IMD Extended Range model (MME-CFSV2) indicates an anticyclone over Oman and another over westcentral India, a feeble trough over northeast AS, northwesterly winds over the entire north India, easterlies over south & central BoB and confluence of easterlies & north-northeasterlies over southwest BoB & Comorin area during week 1. During week 2, the model is indicating a weakening of the anticyclone over westcentral India and the prevalence of an east-west trough over the Malacca Strait & adjoining southeast BoB. The corresponding anomaly field indicates anomalous cyclonic flow over central AS and similarly over the BoB. It indicates a northeast to southwest-oriented trough along the east coast of India during week 1. During week 2, the anomaly field is indicating north-south oriented anticyclonic circulation over the westcentral parts of India with northerlies reaching upto southern tips of the BoB. The precipitation anomaly field indicates below-average rainfall activity over northwest India & above average rainfall over the Comorin area during week 1. During week 2, above average rainfall activity is indicated over the Afghanistan region & over the southeast BoB and below average rainfall activity is indicated over the Himalayan region & northeast India and over Sri Lanka & adjoining southwest BoB.

The 850 hPa wind field of NCMRWF extended range model indicates the seasonal anticyclone over eastcentral India and confluence of easterlies & northeasterlies over the Comorin area during week 1 and week 2. Precipitation anomaly charts are indicating below average rainfall over northwest India & above average rainfall over southwest BoB during week 1 and no anomalous rainfall during week 2.

Both the extended range models are suggesting below average rainfall over northwest India & adjoining North Pakistan and slightly above average rainfall over southwest BoB & Comorin area during week 1.

ECMWF sub-seasonal range forecast is indicating no probable zone for cyclogenesis over the NIO during next 2 weeks.

IMD ERF is indicating moderate (40-50 %) probability of cyclogenesis over Comorin area and over South Andaman Sea during week 1 and low probability of cyclogenesis over southeast BoB & adjoining North Indonesia during week 2.

(b) Guidance from Medium-Range NWP models:

Various deterministic models, including IMD GFS, GEFS, NCUM, NEPS, ECMWF, ECAI and NCEP GFS do not indicate any potential zone for cyclogenesis over the NIO region during the next 2 weeks. However, various deterministic models indicate enhanced easterlies over the south BoB during the latter part of week 1 and over the Comorin area at the beginning of week 2.

III. Inference:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that no cyclogenesis is likely over the North Indian Ocean during the entire forecast period. However, there is likelihood of strengthening of easterlies over south Andaman Sea & southeast Bay of Bengal initially and then over southwest Bay of Bengal, Gulf of Mannar and Comorin Area during later part of week 1 and beginning of week 2, leading to rainfall activity over southwest Bay of Bengal during later part of week 1 and over Comorin area & Gulf of Mannar during beginning of week 2.

IV. Verification of forecast issued during the previous two weeks:

Forecast issued:

The extended range outlook issued on 15th January 2026 for week 2 (23.01.2026-29.01.2026) indicated no cyclogenesis over the NIO region. However, it indicated the likelihood of formation of an upper air cyclonic circulation over the southeast BoB at the end of week 1 and beginning of week 2.

The extended range outlook issued on 22nd January 2026 for week 1 (23.01.2026-29.01.2026) indicated no cyclogenesis over the NIO region. However, it indicated the likelihood of strengthening of easterlies over the South Andaman Sea & southeast Bay of Bengal initially and then over southwest Bay of Bengal, Gulf of Mannar and Comorin Area during the first half of week 1.

Realised Weather:

Actually, enhanced easterlies prevailed over the Comorin Area & Gulf of Mannar region during 24th to 26th January, 2026.

NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 22nd January-28th January, 2026 is presented in **Fig. 2**.

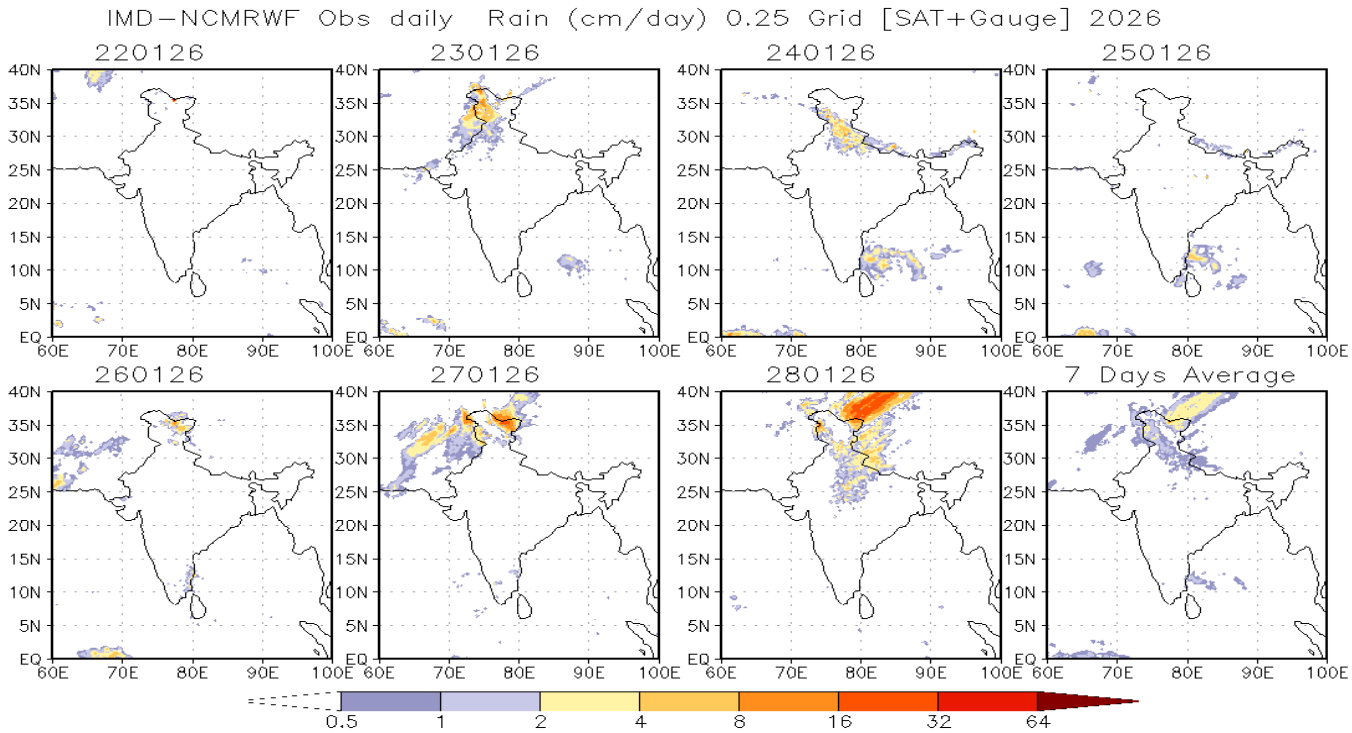

Fig. 2: NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 22nd - 28th January 2026

Legends: MJO: Madden Julian Oscillation, ERW: Equatorial Rossby Waves, KW: Kelvin Waves, 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, ECMWF: European Centre for Medium-Range Weather Forecasting, BOMM: Bureau of Meteorology, Australia, EC-AIFS: ECMWF Artificial Intelligence Forecasting System, ECMM: ECMWF-Ensemble System Bias Corrected, BFS: Bharat Forecast System, GPP: Genesis Potential Parameter, NCEP GFS/GEFS/CFS: National Centre for Environment Prediction GFS/GEFSv12/CFSV2, CPC: Climate Prediction Center (for MJO update), IMD-GEFS: GFS ensemble forecast system of IMD, NEPS: NCUM ensemble prediction system, CNCUM: Coupled NCUM, CPC: Climate Prediction Centre, NWS: National Weather Service, INCOIS: Indian National Centre for Ocean Information Services.

Next update: 05.02.2026