India Meteorological Department
Ministry of Earth Sciences
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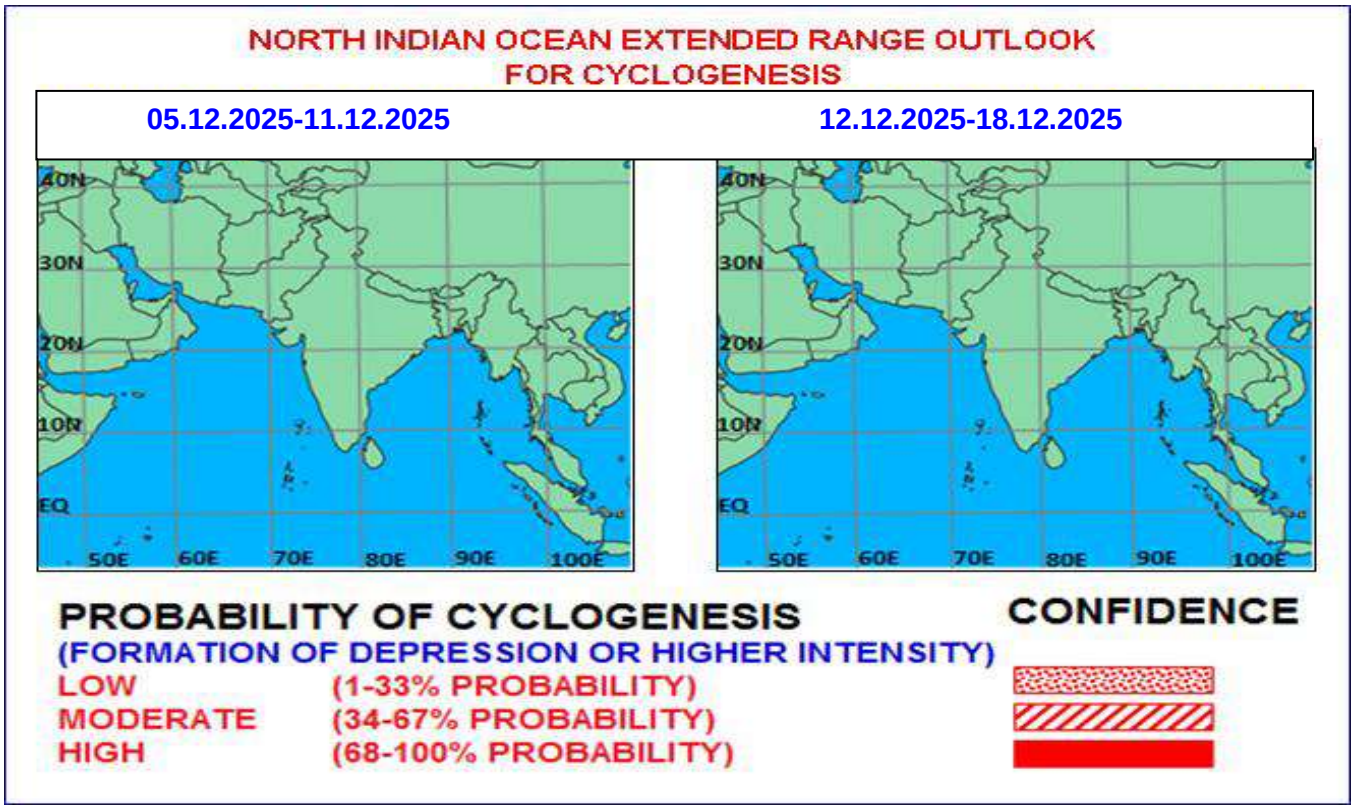

Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various models indicates that the Madden Julian Oscillation (MJO) index is presently in phase 8 with an amplitude of more than 2 in the phase diagram. It is very likely to remain in phase 8 with a slow eastward propagation and decreasing amplitude till the second half of week 1. Thereafter, the MJO index is likely to portray a looping trajectory within phase 8, maintaining amplitude close to 1 till the end of the forecast period. Thus, the MJO is likely to be favourable for the convective activities over the Arabian Sea during the entire forecast period.

The guidance from NCICS model indicates weak easterly wind anomaly (1-3 mps) is likely to prevail over south and central parts of Bay of Bengal (BoB) during first half of week 1. During the same period weak westerly is indicated over south & central Arabian Sea (AS) with Equatorial Rossby Wave (ERW) over southeast AS & adjoining areas of Comorin and southwest BoB. From the second half of week 1 onwards, the easterly wind anomalies are likely to strengthen (5-7 mps) gradually over the south and adjoining central BoB till first half of the second week. Thereafter, the easterly wind anomaly is likely to weaken slightly over the region. The ERW is likely to appear again over southeast BoB during the second half the week 2. The low-frequency background wave (LW) over the southern parts of the BoB and adjoining southeast AS. A very weak Kelvin Wave is likely to propagate across central parts of AS, peninsular India and central BoB during 6th to 14th December. As the wind anomalies over the south and adjoining central BoB are predominantly easterly, the prevalence of normal seasonal easterly waves over the south BoB and adjoining areas of peninsular India is expected during the forecast period.

The latest weekly sea surface temperature SST departure over NINO 3.4 region is -0.91ºC (30th November update), indicating weak La Niña conditions. Negative IOD conditions (IOD index with a weekly value of -0.46°C on 30th November) are likely to continue during December 2025.

II. Model guidance:

(a) Guidance for Extended Range models:

Mean wind field at 850 hPa of IMD ERF (CFS V-2) model is indicating prevalence of easterly/northeasterly winds over the entire BoB and AS during both weeks. The anomaly wind field of week 1 indicates two upper-air anticyclones over westcentral BoB and esstcentral AS with easterly flow dominating over south BoB and AS. During week 2, the 850 hPa anomaly wind field indicates the circulation pattern over AS is predominantly anticyclonic in nature, with two anticyclones over Gujarat and southwest AS. Therefore, IMD ERF does not indicate any development of low pressure systems over NIO region. NCMRWF Extended Range Prediction (ERP) model also indicates similar mean wind flow pattern during the entire forecast period. The anomaly wind field during week 1 also portrays similar anticyclonic flow over the central parts of BoB and AS, with easterly winds dominating over the southern parts of BoB and AS. During week 2, the anomaly wind at 850 hPa shows a strong upper-air anticyclone over Gujarat state is governing the easterly/northeasterly winds over BoB and AS.

IMD CFS V-2 model is indicating a low probability of cyclogenesis (30-40 %) over the Comorin region and adjoining areas during weeks 1 and 2, mostly associated with the propagation of easterly waves over the southwest BoB and adjoining Comorin region. ECMWF ensemble forecast indicates a zone with a low probability (10-20 %) of cyclogenesis over southwest BoB and adjoining north Sri Lanka & Tamil Nadu coasts with nearly westwards movement during 8th to 12th December. The sub-seasonal range forecast of ECMWF indicates a zone with very low probability of cyclogenesis over the central parts of south BoB during 15th to 22nd December.

(b) Guidance from Medium-Range NWP models:

During week 1, most of the deterministic models indicate the upper-air cyclonic circulation (remnant of low pressure area) over southeast AS and adjoining Lakshadweep is likely to move nearly westwards and persist over the same region for next 2 days. Models also indicate the signature of easterly waves is visible over South Andaman Sea around 7th December which is likely to propagate westwards and reach over southwest BoB off North Sri Lanka and adjoining Tamil Nadu coasts by 12 December. A few models indicate the associated formation of an upper air cyclonic circulation over the southeast BoB around 9th December.

III. Inference:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that there is no probability of cyclogenesis during the entire forecast period. However,

(a) The upper-air Cyclonic circulation over the southeast Arabian Sea and adjoining Lakshadweep coast is very likely to continue to move westwards and persist over the region during the next 2 days and gradually weaken thereafter.
(b) There is likely formation of an upper-air cyclonic circulation over the southeast Bay of Bengal around 9th December, 2025.
(c) There is a low probability of the emergence of another upper air cyclonic circulation over the South Bay of Bengal during the second half of week 2.

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

The extended range outlook issued on 20th November for week 2(28.11.2025-04.12.2025) indicated existing Depression and its intensification over the southwest Bay of Bengal during week 2. Therefore, no fresh cyclogenesis was predicted during week 2. The extended range outlook issued on 27th November for week 1 (28.11.2025-04.12.2025) indicated Cyclonic Storm Ditwah over southwest Bay of Bengal and adjoining Sri Lanka coast was very likely to move north-northwestwards across Sri Lanka coast & adjoining southwest Bay of Bengal and reach over southwest Bay of Bengal near North Tamil Nadu, Puducherry and adjoining south Andhra Pradesh coasts by 30th November early morning hours.

Actually, A low-pressure area formed over the Comorin and adjoining areas of southwest Bay of Bengal & Sri Lanka in the early morning hours (0000 UTC) of 25th November, 2025. It lay as a well-marked low-

pressure area over Southwest Bay of Bengal and adjoining areas of Southeast Sri Lanka & Equatorial Indian Ocean in the early morning hours (0000 UTC) of 26th November, 2025. It intensified into a Depression in the midnight (1800 UTC) of 26th November 2025 over southwest Bay of Bengal and adjoining Sri Lanka coast. It moved north-northwestwards and intensified into a deep depression over the same region in the early morning hours (0000 UTC) and into the Cyclonic Storm Ditwah in the noon (0600 UTC) of 27th November 2025 over the same region. The Cyclonic Storm Ditwah weakened into a Deep Depression in the evening of 30th November, further into a Depression over southwest Bay of Bengal and adjoining areas of westcentral Bay of Bengal, North Tamil Nadu, Puducherry & South Andhra Pradesh coasts on 1st December. It gradually weakened into a well marked low pressure area over North Tamil Nadu, Puducherry coasts in the early morning (0000 UTC) and into a low pressure area in the evening (1200 UTC) of 3rd December, 2025. The low pressure area became less marked in the morning (0000 UTC) of today, 4th December and associated cyclonic circulation over the southeast AS and Lakshadweep region.

The NCMRWF-IMD satellite gauge merged data plot of 24-hour accumulated rainfall from 27th November-03rd December 2025 is presented in **Fig.2.**

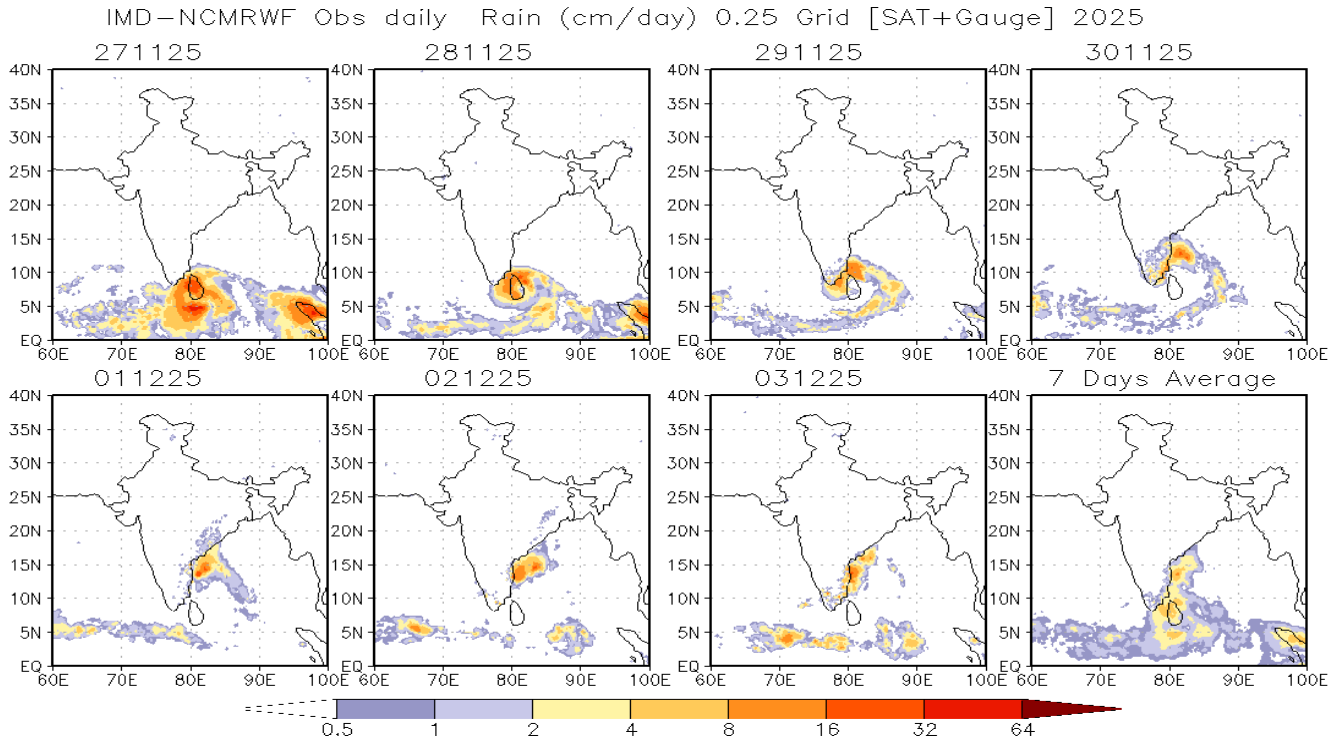

Fig. 2: NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 27th November-03rd December 2025

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, 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: 11.12.2025