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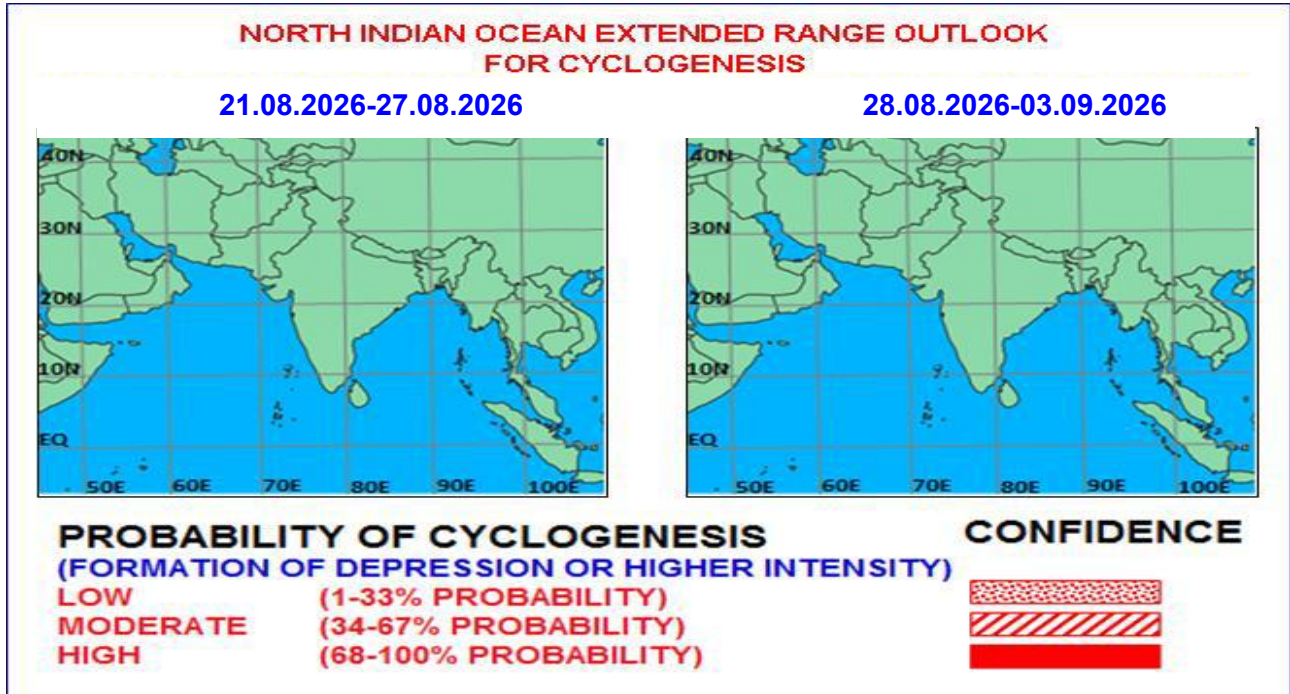


Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various models (ECMM, GEFSV12, BoMM, NCMRWF) indicates that the MJO is currently in Phase 6, with an amplitude more than 1. It is likely to move across phases 6, 7 and 8 with gradually decreasing trend in amplitude, becoming less than 1 during week 2. Thus, MJO is not likely to support enhancement of any convective activity over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) during the entire forecast period.

The guidance from NCICS model indicates prevalence of westerly wind anomaly (1-3 mps) over central & adjoining south BoB, central parts of India and north AS alongwith prevalence of a long westwards moving Equatorial Rossby wave (ERW) & Low frequency (LW) extending from south Andaman Sea to northeast AS across central India & Kelvin wave (KW) over south Andaman Sea & another over eastcentral AS & adjoining Maharashtra with easterly wind anomaly (1-3 mps) is indicated over eastern parts of India (Jharkhand & adjoining East Madhya Pradesh) during first half of week 1. These features indicate a favourable environment for maintenance of intensity of the existing well marked low pressure area over northeast Madhya Pradesh during next 2 days. During middle of week 1 (23rd & 24th August) enhanced westerly wind anomaly (5-7 mps) alongwith ERW, LW is predicted over southeast BoB & south Andaman Sea. During the same period, westerly wind anomaly (1-3 mps) alongwith ERW is also predicted over central parts of AS. However, no easterly wind anomaly is predicted over the entire region during this period. Towards the end of week 2 (25th - 27th August) westerly wind anomaly over central & south BoB alongwith ERW & LW and easterly wind anomaly (5-7 mps) to its north over eastern parts of India (West Bengal-Odisha) & Bangladesh is predicted. These features indicate a favourable environment for development of cyclonic circulation/ low pressure area over North BoB towards end of week 1 (during 25th- 27th August). Thereafter, during week 2, weakening of these features is indicated. Thus, equatorial waves are likely to support convective activity associated with the existing well marked low pressure area over the central India (Madhya Pradesh) during next 2 days and may also provide a favourable environment for development of another cyclonic circulation/ low pressure area over north BoB toward end of week 1 (during 25th – 27th August).

II. Model Guidance:

(a) Guidance from Extended Range models:

The forecast of the mean wind field at 850 hPa pressure level from IMD Extended Range model (MME CFS-V2) indicates the western end of the seasonal monsoon trough to be north of its normal position and the eastern end embedded with an upper-air cyclonic circulation over Gangetic West Bengal & neighbourhood. Corresponding anomaly field indicates an anomalous upper-air cyclonic circulation over north BoB & adjoining eastern parts of India during week 1. The strength of the cross-equatorial Somali jet during week 1 is likely to be weaker than that during week 1. During week 2, the seasonal monsoon trough continues to be to the north of its normal position with eastern end over northwest BoB embedded with a prominent upper air cyclonic circulation over north BoB in the beginning of week 2. Corresponding anomaly field is indicating a prominent anomalous cyclonic circulation over north BoB in the beginning of week 2. The precipitation field is indicating positive anomaly over central parts of India & North Andaman Sea & adjoining central BoB during week 1. During week 2, above normal precipitation anomaly is predicted over southeast AS, eastern parts of India and north Andaman Sea.

NCMRWF extended range model is also indicating similar features.

The model indicates an east-west oriented zone across the northern plains of India with a low-moderate (30-40 %) probability of cyclogenesis during both the weeks. ECMWF sub-seasonal model is not indicating any probable zone for cyclogenesis over the region. ECMF ensemble is indicating (5-10%) probability of cyclogenesis (formation of depression) over north BoB with ensemble tracks indicating west-northwestwards movement along the monsoon trough.

(b) Guidance from Medium-Range NWP models:

Most of the deterministic models are indicating the existing well marked low pressure area over central parts of India (Northeast Madhya Pradesh) to maintain its intensity of well marked low pressure area/ low pressure area over the same region during next 2-3 days. However, associated upper air cyclonic circulation is predicted to gradually move eastwards thereafter towards northwest BoB during subsequent 3-4 days.

Most models also indicate an upper air cyclonic circulation over the north BoB during 23rd to 27th August near the West Bengal–Bangladesh coasts. ECMWF indicates formation of an upper air cyclonic circulation over north BoB around 24th August with west-northwestwards movement and intensification into a low pressure area around 25th August. NCEP GFS indicates an upper air cyclonic circulation over north BoB during 23rd to 30th August. It also predicts another upper air cyclonic circulation over eastcentral & adjoining north BoB around 2nd September with west-northwestward and further intensification. IMD GFS is predicting an upper air cyclonic circulation over north BoB & neighbourhood around 27th August till 30th August. BFS is predicting an upper air cyclonic circulation over eastcentral BoB around 25th August. Pangu weather is indicating an upper air cyclonic circulation over north BoB around 21st August with westwards movement and formation of a low-pressure area around 23rd August. Similarly, EC AI is showing an upper air cyclonic circulation over northwest BoB around 23rd August with west-northwestwards movement. Mithuna indicates an upper air cyclonic circulation over north BoB around 29th August and low-pressure area over northwest BoB around 29th August. GraphCast shows upper air cyclonic circulation over northeast BoB near the Myanmar coast around 28th August with west-northwestwards movement.

II. Operational extended forecast for the next two weeks:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that:

- (a) existing well-marked low-pressure area over northeast Madhya Pradesh & neighbourhood is likely to weaken over the same region during the next 2 days. However, associated upper-air cyclonic circulation is likely to prevail over East India & neighbourhood during subsequent 3-4 days.

- (b) A fresh upper air cyclonic circulation is likely to form over the north Bay of Bengal towards the end of week 1 (during 25th – 27th August). Under its influence, a low-pressure area is likely to form over northwest Bay of Bengal in the beginning of week 2.

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

Forecast issued:

The extended range outlook issued on 6th August for week 2 (14.08.2026-20.08.2026) indicated a fresh upper air cyclonic circulation is likely to form over north BoB at the end of week 1 (around 12th August). Under its influence, a low-pressure area is likely to form over northwest BoB in the beginning of week 2 (around 14th August).

The extended range outlook issued on 13th August for week 1 (14.08.2026-20.08.2026) indicated formation of:

- (a) the existing depression over coastal West Bengal is likely to move west-northwestwards across Gangetic West Bengal and Jharkhand during the next 24 hours. Thereafter, it is likely to move over southeast Bay of Bengal and move gradually west-northwestwards across Jharkhand and east Madhya Pradesh & adjoining southeast Uttar Pradesh during the next 2 days.
- (b) A fresh upper air cyclonic circulation is likely to develop over north Bay of Bengal off Bangladesh-West Bengal coasts around 19th August, and under its influence a low pressure area is likely to form over the same region around 20th August.

Realised:

- (1) A Depression formed over coastal West Bengal at 0300 UTC of 13th August 2026. It moved west-northwestwards across Gangetic West Bengal & Jharkhand and weakened into a Well Marked Low Pressure Area over Jharkhand at 1200 UTC of 14th August 2026.
- (2) An upper air cyclonic circulation formed over the northwest Bay of Bengal at 1200 UTC of 14th August 2026. Under its influence, a Low Pressure Area formed over the northwest Bay of Bengal and adjoining West Bengal-North Odisha coasts at 0000 UTC of 16th August 2026. Moving nearly northwestwards, it intensified into a Well Marked Low Pressure Area over the same region and subsequently concentrated into a Depression over coastal West Bengal and adjoining areas of Bangladesh and the northwest Bay of Bengal at 0000 UTC of 17th August 2026. It moved west-northwestwards across Gangetic West Bengal & Jharkhand and weakened into a Well Marked Low Pressure Area over north Jharkhand and adjoining southwest Bihar & southeast Uttar Pradesh at 0600 UTC of 19th August 2026.

Hence, it is inferred that the formation of upper air cyclonic circulation, low pressure area & further intensification was well predicted, the formation of depression was not indicated in the extended range outlook.

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, Mithuna: 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: 27.08.2026