



Issued on 24.09.2026

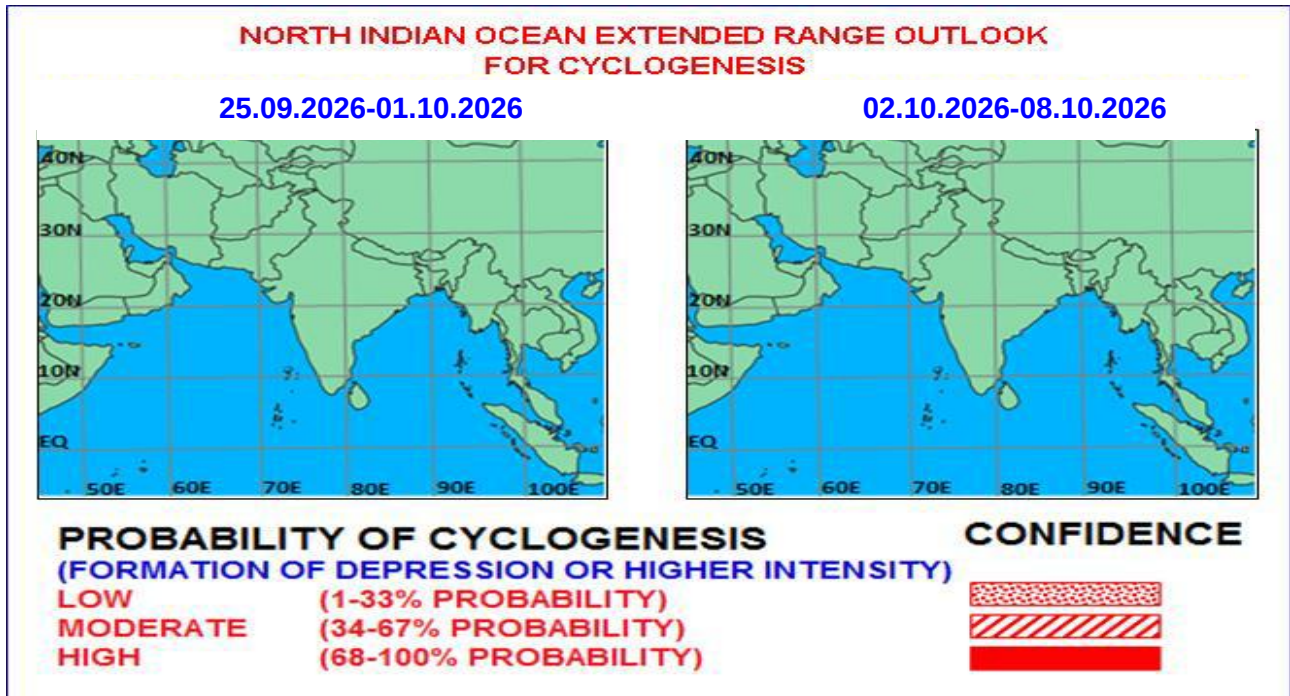


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicates that the Madden Julian Oscillation (MJO) is currently in Phase 1, over the Western Hemisphere and Africa, with amplitude close to 1. It is likely to portray looping movement within the same phase with gradual decrease in the amplitude during next two weeks. During end of week 2, it is indicated to move back to phase 8. Thus, MJO is favorable for enhancement of convective activity and cyclogenesis over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) during week 1 and likely to become less favorable at the end of week 2.

The guidance from the NCICS model indicates the prevalence of westerly wind anomaly (5-7 mps) over south AS and BoB along with the presence of Equatorial Rossby wave (ERW) over Southeast AS and Southwest BoB during week 1. The westerly wind anomaly (3-5 mps) is also precited over the entire AS. peninsular India and Westcentral BoB during week 1. During week 1, the easterly wind anomaly (3-5 mps) is likely over North & Eastcentral BoB and Andaman Sea.

In the forecast, the westerly wind anomaly (3-5 mps) over the entire AS is likely to be replaced gradually by the easterly wind anomaly (3-5 mps) during week 2. However, westerly wind anomaly (1-3 mps) is likely to prevail over the BoB and Andaman Sea during week 2 strengthening (becoming 5-7 mps) eastward gradually with time during week 2. There is no other equatorial wave activities over both the basins during week 2 except an westward moving ERW approaching over Andaman Sea.

Thus, the wind circulation features along with equatorial waves will provide a favourable environment for the convective activities over NIO due to the simultaneous occurrence of MJO and ERW over BoB during week 1. However, environmental characteristics are not conducive for cyclogenesis over NIO during week 2.

II. Climatology of Cyclogenesis:

The daily probability of cyclogenesis over the NIO region (based on the data from 1891-2020) is plotted in **Fig. 2**. According to the values plotted in the figure, the daily climatological probability of cyclogenesis, valid for the duration of the next two weeks, ranges between 13-15%.

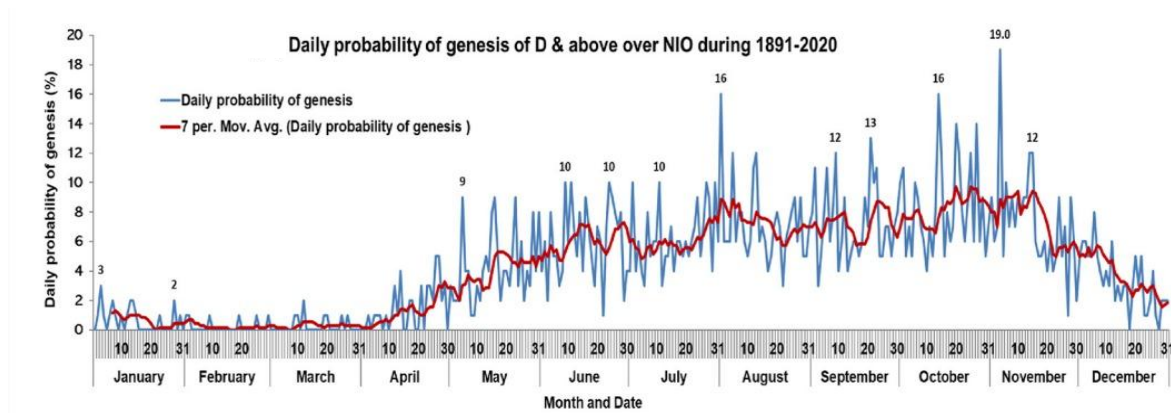


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

Climatologically, based on the data during the period 1961-2025, there have been development of 96 cyclonic disturbances (CDs) (maximum sustained wind speed (MSW) ≥ 17 kt) over the BoB and 40 CDs over the AS (Fig. 3 a & b). The frequency of depressions (MSW: 17-33 kt), cyclonic storms (MSW: 34-47 kt) and severe cyclonic storms (MSW ≥ 48 kt) in the $2.5^\circ \times 2.5^\circ$ grid over both the basins during the same period is presented in Fig. 3c.

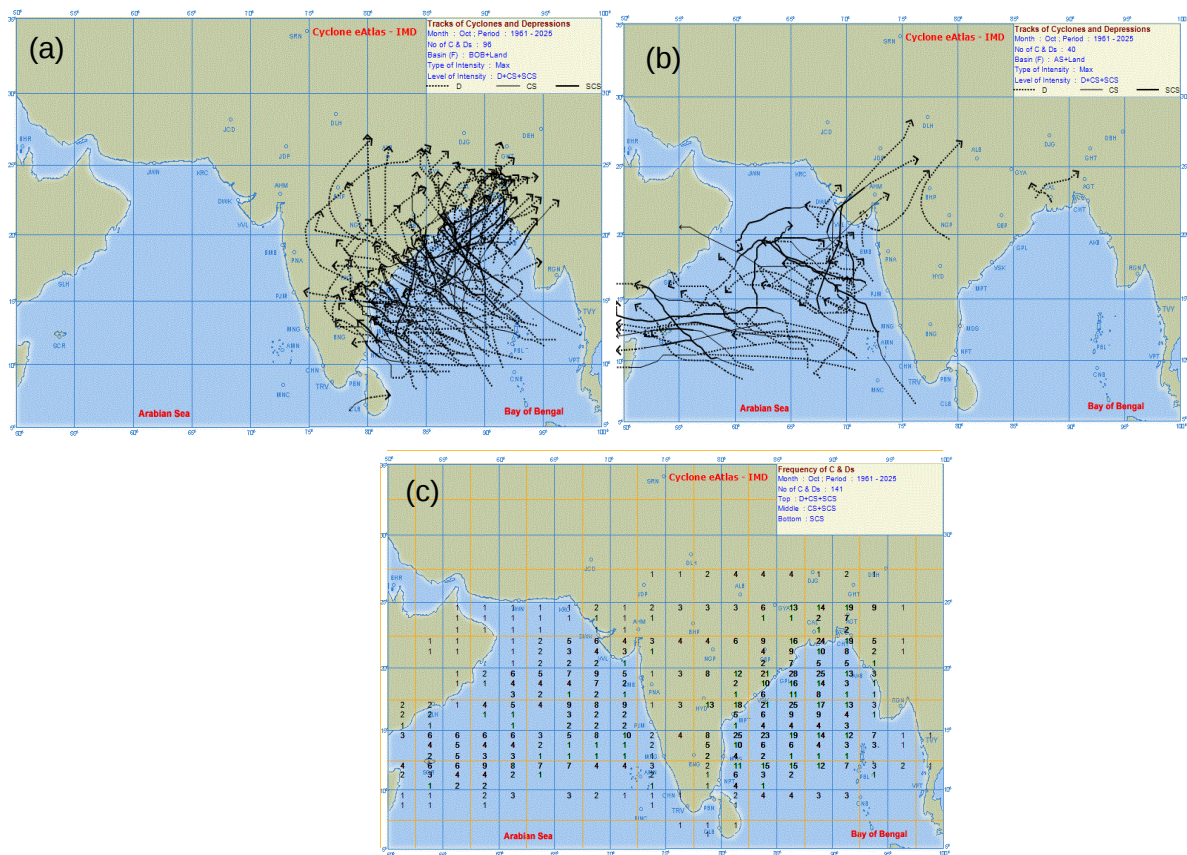


Fig. 3: Tracks of CDs over the (a) BoB (total 56) & (b) AS (total 11) and (c) frequencies of formation of depressions, cyclonic storms & severe cyclonic storms in the $2.5^\circ \times 2.5^\circ$ grid over BoB & AS during 1961-2025.

II. Model Guidance:

(a) Guidance from Extended Range models:

The mean wind field at 850 hPa pressure level from IMD Extended Range model (MME CFS-V2) indicates, an upper air cyclonic circulation over south Odisha and neighbourhood with prevalent westerly mean wind over the entire AS and South & Central BoB during week 1. Corresponding wind anomaly field also indicates nearly similar wind circulation features with an upper-air cyclonic circulation over the same region during week 1. The mean wind field at 850 hPa is indicating prevalent northerly over the entire Arabian Sea with an anticyclonic circulation over Gujarat State during week 2. However, westerly wind is likely to prevail over South BoB and easterly over central BoB during the week. The corresponding wind anomaly indicates a largescale anticyclonic circulation over the entire Indian region with an east-west ridge line passing along 15°N across North Andaman Sea, Central BoB, Peninsular India and Central AS during week 2.

The mean wind field at 850 hPa of NCMRWF ERF model is indicating a cyclonic circulation over East Uttar Pradesh with westerly wind being prevalent over the entire AS and South and adjoining Central BoB during week 1. Corresponding anomaly wind field also indicates an cyclonic circulation over the same region and a ridgeline developing across South AS and South BoB along latitude 7-8°N. The mean wind circulation feature during week 2 is nearly similar to the forecast IMD ERF with easterly is weaker over northern parts of BOB. During week 2 anomalous anticyclonic circulation in the forecast over Indian region is prominently indicated with a established anticyclone over central India.

The probability of cyclogenesis predicted by IMD ERF is significant (moderate to high 70-80 %) over eastern India during week 1. But there is no zone with significant probability of cyclogenesis over NIO region during week 2. The ECMWF ensemble forecasts indicates a zone with 70-80% probability of cyclogenesis over Odisha and adjoining areas till 27th September due to the presence of existing Deep Depression over the region. It also indicates another region with low probability of cyclogenesis (10-20%) over north Andaman Sea and adjoining coastal Myanmar during 28-29th September, 2026. The sub-seasonal forecast of ECMWF indicates no significant probability of cyclogenesis over NIO region during two consecutive weeks 28th to 5th October and 5th to 12th October, 2026.

(b) Guidance from Medium-Range NWP models:

Various deterministic global Numerical Weather Prediction (NWP) models are indicating the movement of existing Deep Depression over North Andhra Pradesh and south Odisha coast very likely to weaken further into depression and move towards north-northwestwards and reach to central parts Uttar Pradesh across Chhattisgarh and adjoining East Madhya Pradesh around 27th and further across Uttar Pradesh till 28th September 2026 before it become less marked over the region.

Most of the models are indicating likely formation of a Low Pressure Area over Thailand and adjoining areas on 25th September 2026. ECMWF, GFS and Mithuna all three models are indicating migration of associated upper air cyclonic circulation towards NIO region but models are not showing any further intensification of the system within their forecast period. However, Mithuna global and NCEP GFS models are indicating northwestwards movement of the system reaching close to northeast India across Myanmar around 1st October and weaken thereafter.

III. Operational extended forecast for the next two weeks:

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

- (i) The existing deep depression is very likely to move north-northwestwards and weaken gradually into a Depression during next 6 hours. Thereafter, it is very likely to continue to move north-northwestwards and weaken gradually during subsequent 24 hours. The remnant low pressure area is likely to move further north-northwestwards up to central parts of Uttar Pradesh around 27th September before it become less marked around 28th September, 2026.
- (ii) There is a likely migration of an upper-air cyclonic circulation from Thailand to north Andaman Sea in the later part of week 1. Subsequently it may move northwestwards along Myanmar coast towards northeast Bay of Bengal without any further intensification.

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

Forecast issued:

The extended range outlook issued on 10.09.2026 for week 2 (18.09.2026-24.09.2026) indicated the development/emergence of an upper air cyclonic circulation over North Andaman Sea and adjoining Thailand during beginning of week 2 (around 20th September). It was indicated to move northwestwards as a cyclonic circulation or low pressure area, reaching near south Odisha and north Andhra Pradesh coast around 22nd September, 2026.

The extended range outlook issued on 17.09.2026 for week 1 (18.09.2026-24.09.2026) indicated the existing upper-air cyclonic circulation over north Thailand to emerge over the north Andaman Sea around 18th September evening (1200 UTC). Under its influence, formation of a low pressure area was indicated over the same region around 19th September evening (1200 UTC). Thereafter, it was indicated to intensify into a depression over Eastcentral Bay of Bengal in the later half of week 1 (during 21st -22nd September) with high probability (67-100%). It was further predicted to move further west-northwestwards towards south Odisha-north Andhra Pradesh coasts during subsequent 3-4 days.

Realised:

The upper-air cyclonic circulation over north Thailand emerged over north Andaman Sea & neighbourhood at 1200 UTC of 18th September. Under its influence a Low Pressure area formed over the same region at 1200 UTC of 19th September. It moved west-northwestwards and lay over Eastcentral Bay of Bengal & adjoining north Andaman Sea at 0300 UTC of 20th September. It lay as a Well Marked Low Pressure area over Eastcentral & adjoining Westcentral Bay of Bengal at 0000 UTC of 21st September. It moved west-northwestwards and intensified into a Depression, over Westcentral & adjoining Northwest Bay of Bengal at 1200 UTC of 21st September. Continuing to move further west-northwestwards, it intensified into a deep depression over the same region at 1200 UTC of 22nd September. Further moving west-northwestwards, it crossed North Andhra Pradesh-Odisha coasts between Visakhapatnam and Gopalpur close to southwest of Kalingapatnam during 1730-1830 UTC of 23rd September as a Deep Depression with maximum sustained wind speed of 55-65 gusting to 75 kmph. Thereafter, it moved slowly northwestwards and lay over north coastal Andhra Pradesh and South Odisha coasts at 0600 UTC of today, the 24th September.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 17th – 23rd September, 2026 are presented in Fig. 4.

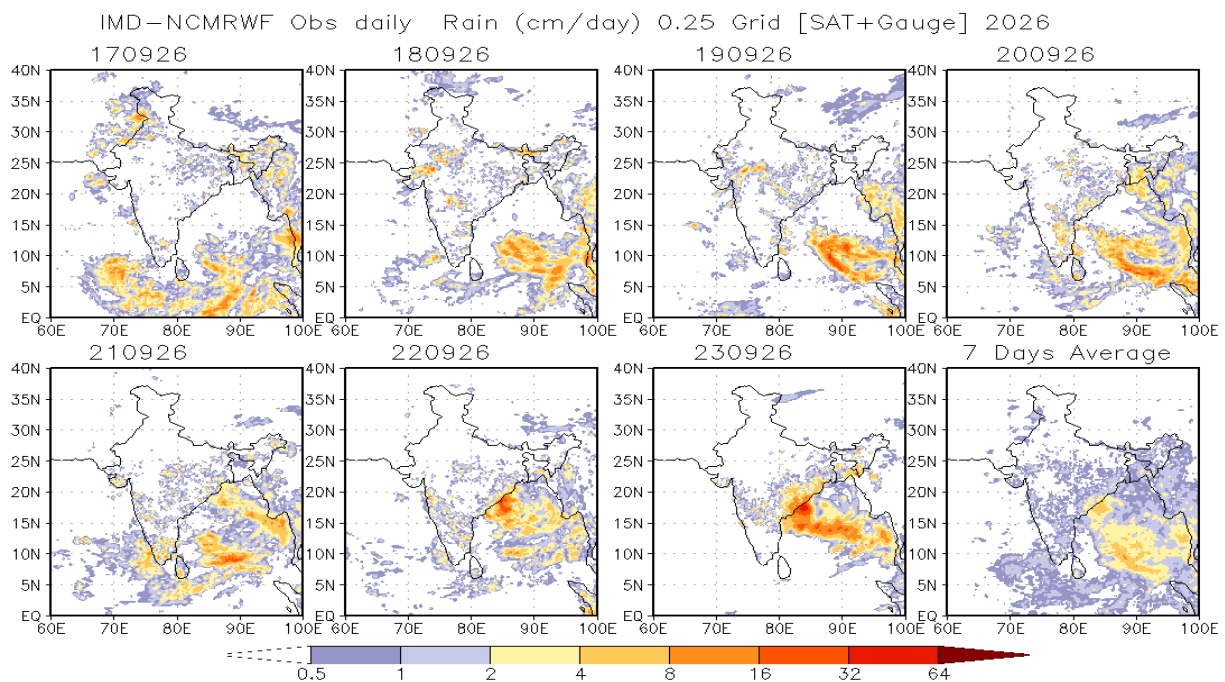


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 17th -23rd September, 2026.

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, 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: 01.10.2026