



Issued on 01.10.2026

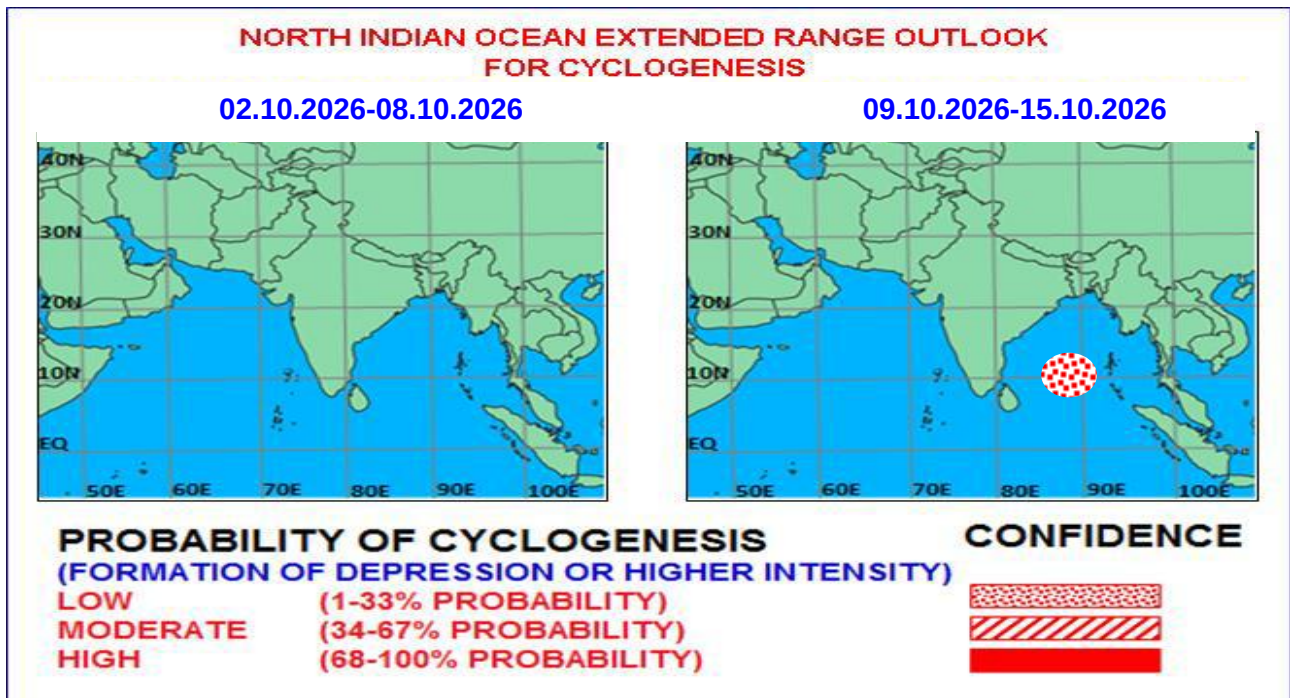


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

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 more than 1. It is likely to loop across phases 1 and 8 during week 1 with gradual decreasing trend in the amplitude. During week 2, it is indicated to move across phase 2 with amplitude close to 1. 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 2.

The guidance from the NCICS model indicates the prevalence of easterly wind anomaly (5-7 mps) over most parts of AS, central & south India and most parts of BoB and westerly wind anomaly to its north alongwith the presence of Equatorial Rossby wave (ERW) over Northeastern states of India and Northern parts of India during week 1. These features indicate gradual setting up of easterlies over the the region during week 1. Thus, equatorial waves may not contribute to enhancement of convective activity over the entire region during week1. During week 2, the model is indicating easterly wind anomaly confined to southwest BoB, south peninsular India and souteast AS. Westerly wind anomaly (2-3 mps) is indicated over central & northern parts of India. However, the model is indicating increase in ERW activity during 15-19 Oct. over south BoB.

Thus, favourable MJO and enhanced ERW activity may contribute to cyclogenesis (formation of depression) over BoB towards end of 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 12-15%.

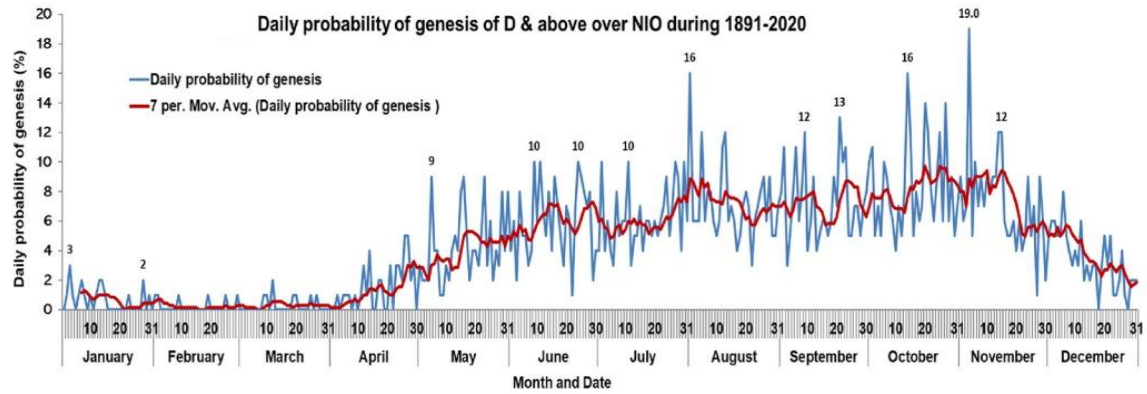


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

Climatologically, based on the data in the month of October during the period 1965-2025, there have been development of 84 cyclonic disturbances (CDs) (maximum sustained wind speed (MSW) ≥ 17 kt) over the BoB and 36 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.

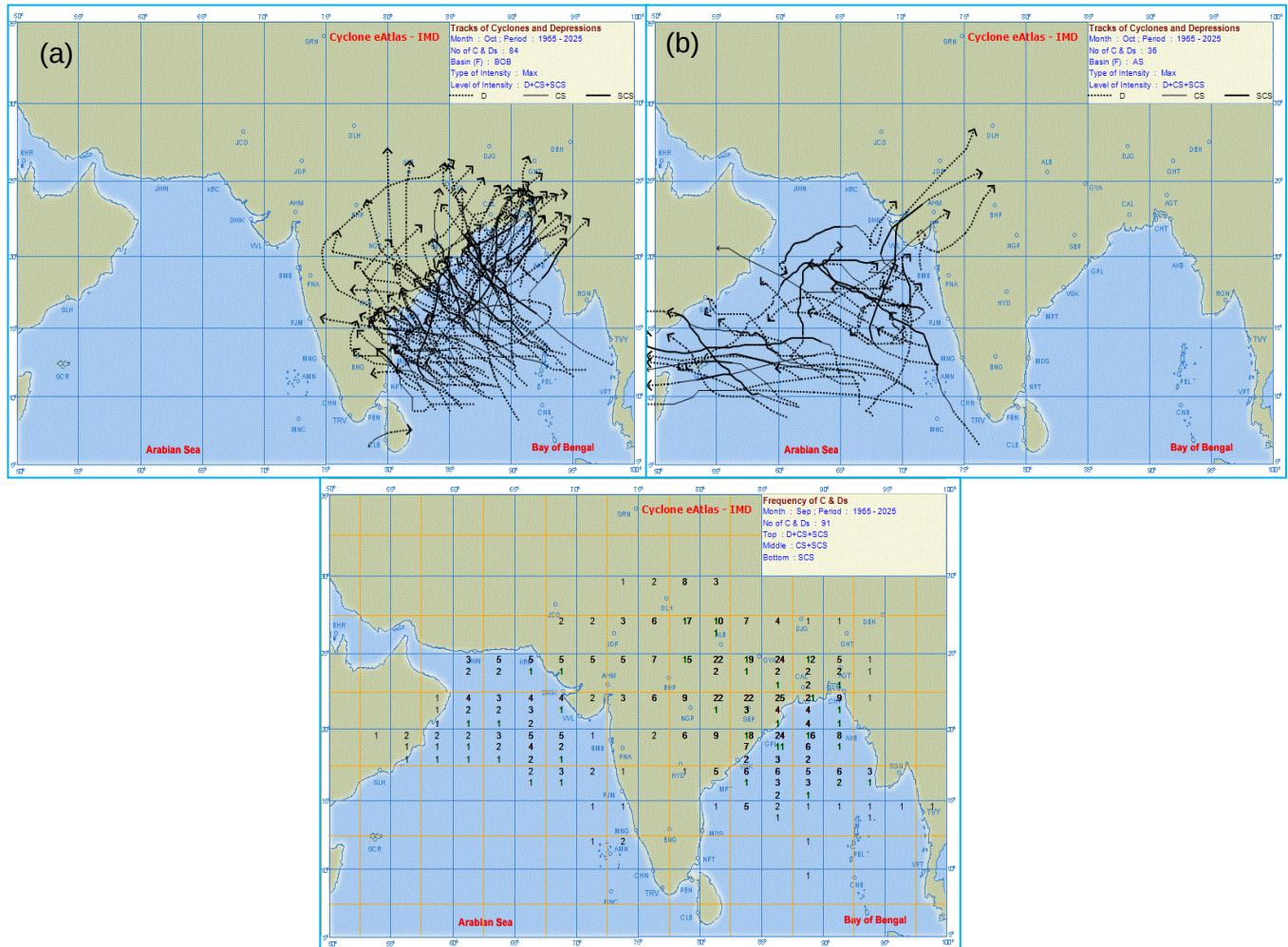


Fig. 3: Tracks of CDs over the (a) BoB (total 84) & (b) AS (total 36) and (c) frequencies of formation of depressions, cyclonic storms & severe cyclonic storms in the $2.5^\circ \times 2.5^\circ$ grid over BoB & AS during 1965-2025.

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 that the wind flow patterns are mainly anti-cyclonic in nature over the Indian Sub-continent with a prominent anticyclone over Gujarat region during both week 1 and week 2. Accordingly, the winds are mostly northerly over most parts of the AS except western parts of Northwest, Westcentral & Southwest AS with northerly winds and westerlies over southern parts of AS. There is a likely development of an anticyclone over Southeast & adjoining Eastcentral BoB during week 1. However, there is an upper-air cyclonic circulation over southwest BoB during week 2. The wind anomaly field indicates an anomalous trough over eastcentral & adjoining southeast BoB during week 2. The anomalous easterly winds are mostly pre-dominant over south BoB and AS during both the weeks.

The extended-range forecasts of NCMRWF indicates nearly similar mean wind features except with stronger anticyclonic flow patterns during both week 1 and 2. The anomalous anticyclonic wind patterns winds with strong anticyclone over central India are also indicated during both the weeks. The upper-air cyclonic circulation over southwest BoB is also indicated during week 2 as well.

The ECMWF ensemble prediction system is also indicating low probability (10-30%) of formation of depression over the southeast BoB towards the end of week 2 around 13th Oct. ECMWF is not showing any cyclogenesis over the region during the forecast period. IMD ERF Model is indicating (40-50%) probability of cyclogenesis(formation of depression) in land regions over Central India & NW India and low (20-30%) probability of cyclogenesis over westcentral BOB during week 1. During week 2, the model is indicating low (20-30%) probability of cyclogenesis over westcentral BOB and Andaman Sea.

(b) Guidance from Medium-Range NWP models:

Most of the models are indicating development/ emergence of an upper air cyclonic circulation over North Andaman Sea around 12th October. Further ECMWF is indicating west-northwestwards movement and further intensification into a low-pressure area over southeast BoB & adjoining Andaman Islands around 13th/1200 UTC, well marked low pressure area over eastcentral BoB around 14th/0600 UTC, depression over eastcentral & adjoining westcentral BoB around 14th/ 1200 UTC and into a deep depression over westcentral BoB around 15th/ 1200 UTC. EC AIFS is indicating an upper air cyclonic circulation over northeast & adjoining eastcentral BoB around 14th/1800 UTC. It is indicated to move northwestwards towards northeast & adjoining northwest BoB till 15th/ 0600 UTC. Pangu Weather is indicating emergence of a fresh upper air cyclonic circulation over North Andaman Sea around 10th Oct and its consolidation into a low pressure area around 12th Oct over North Andaman Sea. Fourcast is indicating an upper air cyclonic circulation over southeast BoB around 10th Oct. Graphcast is also indicating emergence of an upper air cyclonic circulation over North Andaman Sea around 11th Oct. IMD GFS AI is also indicating emergence of an upper air cyclonic circulation over Andaman Sea around 11th Oct.

NVIDIA's FourCast model indicates the formation of an extended cyclonic circulation over the southeast AS and adjoining Equatorial Indian Ocean (EIO) during the second half of the first week, around 7th October, with a westward movement. The system is likely to become a cyclonic circulation by 8th October. Thereafter, the model indicates a westward movement of the cyclonic circulation till 10th October, towards southwest AS and adjoining EIO. The AI-based GraphCast model also indicates the formation of an extended cyclonic circulation over the southeast AS around 6th October. NCMRWF Mithuna is indicating an upper air cyclonic circulation over southeast AS on 1st Oct. and an extended cyclonic circulation over southwest BoB on 2nd Oct. It is indicated to move gradually westwards towards southwest AS till 11th Oct

There is very good consensus among various models wrt emergence of an upper air cyclonic circulation

over Andaman Sea around 11th/ 12th Oct. Further, there is also probability of its west-northwestwards movement and intensification into a low pressure area over southeast BoB and adjoining areas of Andaman Islands around 13th Oct.

III. Operational extended forecast for the next two weeks:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that there is likelihood of emergence of an upper air cyclonic circulation over North Andaman Sea towards the middle of week 2 (around 12th Oct.). Under its influence, a low-pressure area is likely to form over Andaman Sea around 13th Oct. There is also low probability of cyclogenesis (formation of depression) over central parts of South Bay of Bengal and adjoining central Bay of Bengal towards the end of week 2 (around 15th Oct.).

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

Forecast issued:

The extended range outlook issued on 17.09.2026 for week 2 (25.09.2026-01.10.2026) indicated the remnant of predicted depression over eastcentral BoB to move northwestwards upto North Chhattisgarh and north-northwestwards upto East Uttar Pradesh & adjoining Bihar during first half of week 2.

The extended range outlook issued on 24.09.2026 for week 1 (25.09.2026-01.10.2026) indicated:

(i) existing deep depression over north coastal Andhra Pradesh and South Odisha coasts to move north-northwestwards and weaken gradually into a depression during next 6 hours. Thereafter, it was indicated to move north-northwestwards and weaken gradually during subsequent 24 hours. The remnant low pressure area was indicated to move further north-northwestwards upto central parts of Uttar Pradesh till 27th September.

(ii) migration of an upper-air cyclonic circulation from Thailand to north Andaman Sea in the later part of week 1. Subsequently, it was indicated to move northwestwards along Myanmar coast towards northeast Bay of Bengal without any further intensification.

Realised:

The deep depression over coastal Andhra Pradesh and South Odisha coasts moved north-northwestwards across Chhattisgarh, east Madhya Pradesh & Uttar Pradesh and weakened into a Depression on 25th/0000 UTC, a Well marked Low Pressure Area over northern parts of central Uttar Pradesh at 0000 UTC 27th September.

The upper air cyclonic circulation over central Thailand & adjoining Myanmar, emerged into North Andaman Sea & neighbourhood at 1200 UTC of 26th Sept. Under its influence, a low pressure area formed over south coastal Myanmar and neighbourhood at 0000 UTC of 27th September. It intensified into a Depression over north Andaman Sea & adjoining Myanmar coast on 28th September (0000 UTC) and further into a Deep Depression over north Andaman Sea & adjoining Myanmar coast on 28th September (0600 UTC). It crossed the Myanmar coast close to east of Kyaikto night of 28th September, as a Deep Depression with wind speed of 50-60 kmph gusting to 70 kmph. Thereafter, it moved north-northwestwards and weakened into a depression over Myanmar and adjoining Eastcentral & Northeast Bay of Bengal on 29th September (0000 UTC) and further weakened into a well marked low pressure area over North Myanmar and adjoining areas of southeast Bangladesh, Mizoram and northeast Bay of Bengal at 0000 UTC of 30th September. It weakened into a low pressure area over the same region at 0000 UTC of today, the 1st October 2026.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 24th – 30th September, 2026 are presented in Fig. 4.

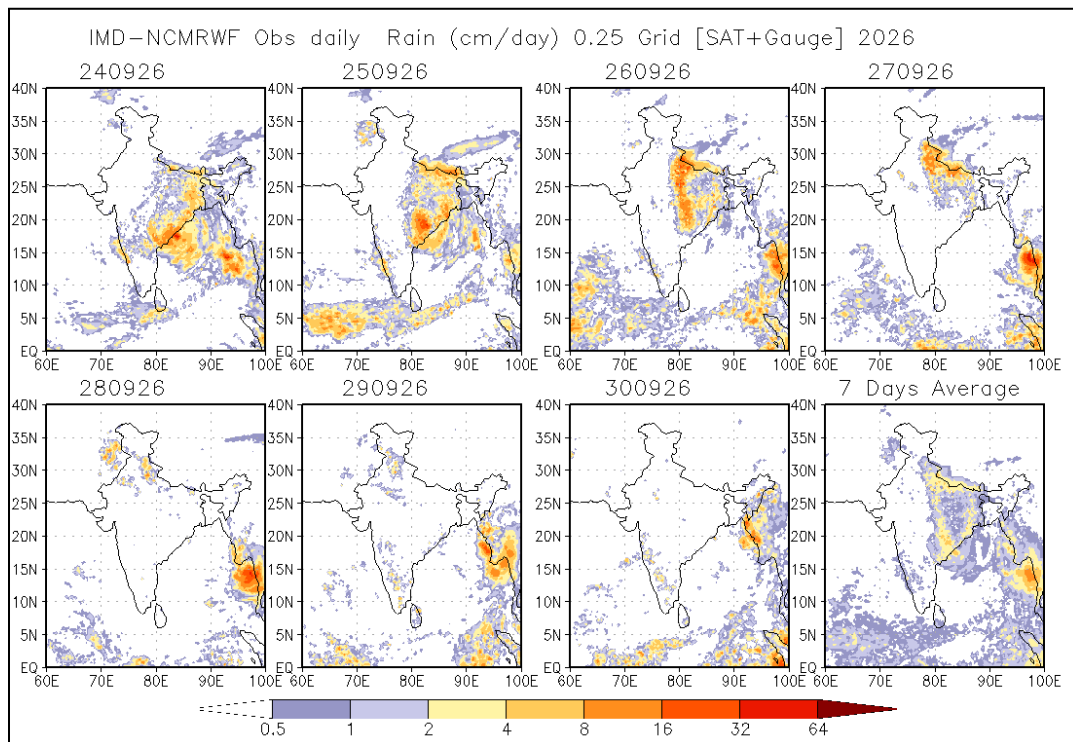


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 24th -30th September, 2026.

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: 08.10.2026