



Issued on 10.09.2026

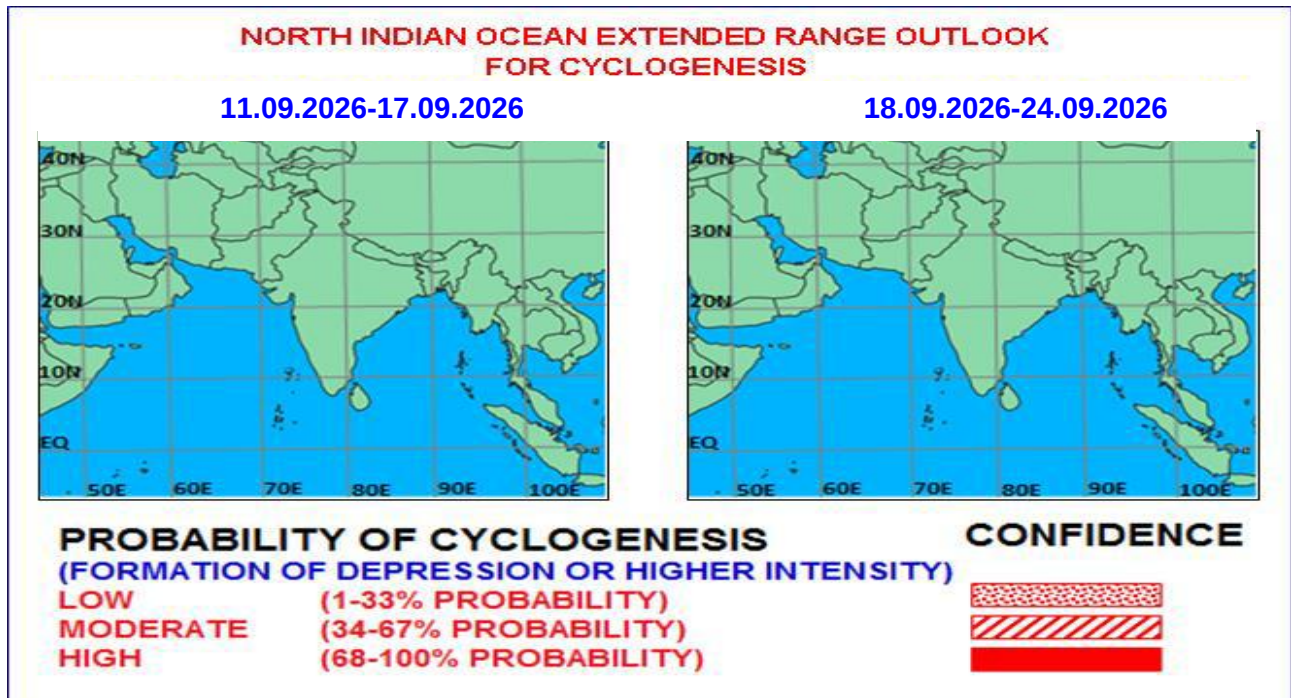


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicates that the Madden Julian Oscillation (MJO) is currently in Phase 8 with amplitude less than 1. It is likely to move across phases 8 & 1 with a decreasing trend in amplitude during first half of week 1. Thereafter, it is likely to make a loop in phases 1 & 8 with amplitude remaining less than 1 till middle of week 2. It is likely to enter into phase 2 with increasing trend in amplitude towards the end of week 2. These features indicate that MJO is not likely to support enhancement of convective activity over the North Indian Ocean (NIO) including the Bay of Bengal (BoB) and the Arabian Sea (AS) till the middle of week 2. However, during the later half of week 2, it is very likely to support enhancement of convective activity and also cyclogenesis over the AS.

The guidance from the NCICS model indicates the prevalence of easterly wind anomaly (5-7 mps) over north & adjoining central BoB and easterly wind anomaly (3-5 mps) over westcentral & adjoining southwest AS & 1-3 mps over eastcentral AS and westerly wind anomaly (1-3 mps) alongwith a westward moving Equatorial Rossby wave (ERW) over North AS during first half of week 1. During later half of week 1, gradual onset of westerly wind anomaly is seen over south BoB alongwith an approaching Equatorial Rossby wave (ERW) over southeast BoB and easterly wind anomaly (1-3 mps) to its north over most parts of central & north BoB. Similarly, over the AS, the model is indicating onset of westerly wind anomaly (1-3 mps) over western parts of AS alongwith MJO & ERW over the southwest AS. These features indicate a favourable environment for development of an upper air cyclonic circulation over southeast BoB during later part of week 1. During week 2, the model is indicating westerly wind anomaly (3-5 mps) over south BoB with and ERW and westerly wind anomaly (2-4 mps) over south AS alongwith MJO and weak easterly wind anomaly to its north over both the basins, indicating favourable environment for development of an upper air cyclonic circulation/ low pressure area over both the BoB and AS 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 6-7%.

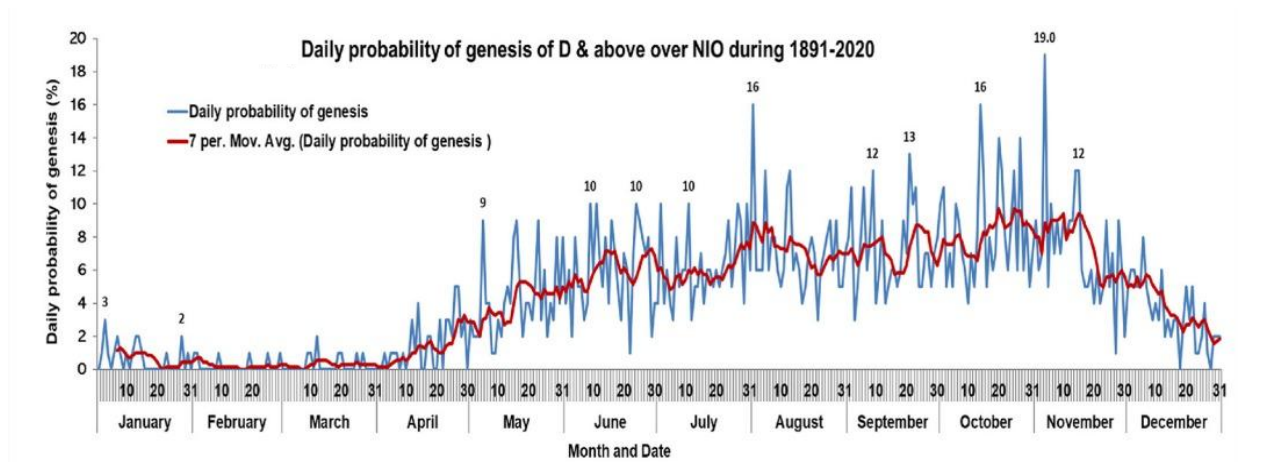
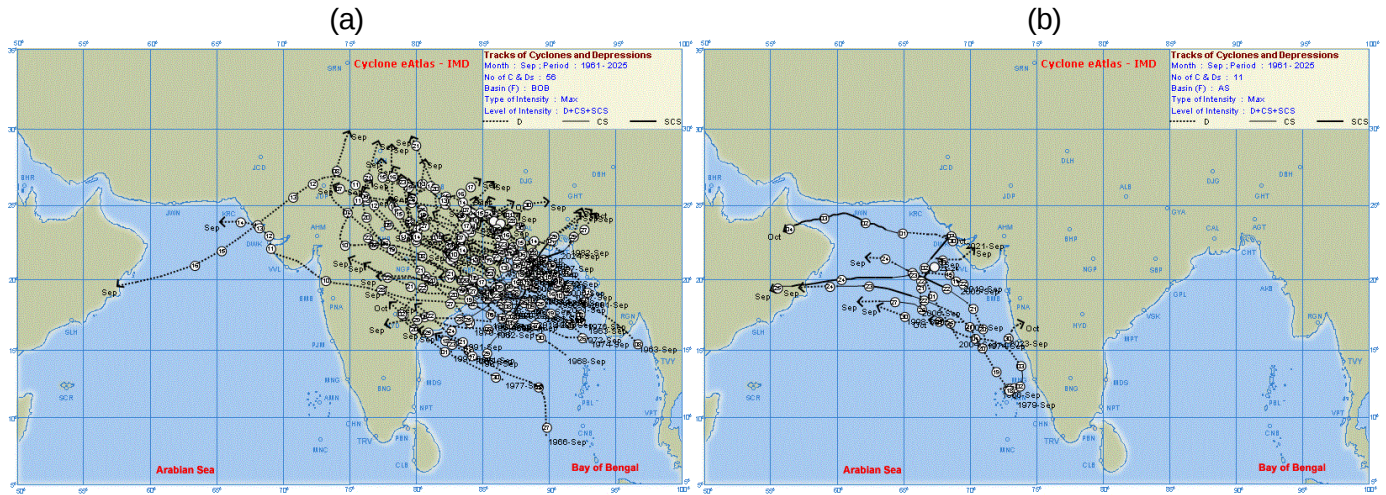


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

A total of 56 cyclonic disturbances (maximum sustained wind speed (MSW) ≥ 31 kmph) developed over the BoB (Fig 2[a]) and 11 over AS (Fig 2[b]). In the month of September during 1961-2025, the total frequencies of the storms exceeding intensity of depression, cyclonic storm and severe cyclonic storm in a specified box are plotted in Fig.3(c) with three different numbers placed vertically downward during the same period. Thus, climatologically, about 3 low pressure systems, including 1 depression/deep depression, form over the BoB during September.



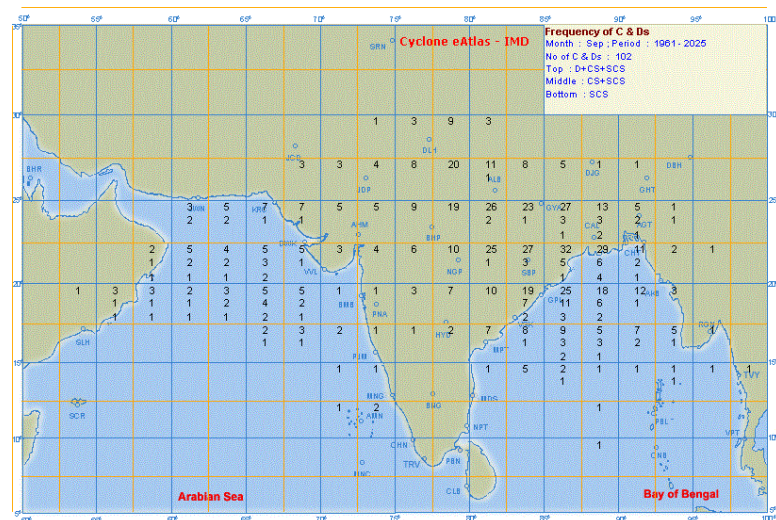


Fig. 3: Cyclonic disturbances in September during 1961-2025, over (a) Bay of Bengal (total 56) and (b) the Arabian Sea (total 11) and (c) Frequencies of all CDs, all cyclones (CS+SCS) and all severe cyclones (SCS & above) in the 2.5°X 2.5° grid

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 a cyclonic circulation over northwest & adjoining westcentral BoB and prevalence of southwesterly to west-southwesterly over most parts of AS and westerly winds over the south & central BoB during week 1. During week 2, the model is indicating mostly southwesterly to west-southwesterly winds over most parts of central & south AS and south BoB. The model is also indicating mostly northwesterly winds are extending upto northern peninsular region during week 2. Corresponding anomaly field is indicating an anomalous anticyclonic circulation over the AS and an anomalous cyclonic circulation over the central parts of India during week 1. During week 2, the anomaly field is indicating (a) anomalous anticyclonic circulation over westcentral AS, (b) anomalous anticyclonic circulation over the east coast of India (over South Odisha & adjoining North Andhra Pradesh) and (c) anomalous cyclonic circulation over Gulf of Thailand. The precipitation anomaly field is indicating, above normal precipitation over northwest & adjoining westcentral BoB, central India (Odisha to North Maharashtra) and eastcentral & adjoining northeast AS off south Gujarat coast during week 1. During week 2, the model is indicating above normal precipitation over (a) southeast AS & adjoining Comorin - Gulf of Mannar and (b) southeast BoB.

The extended range forecast of NCMRWF model indicates similar features in the mean wind field at 850hPa as IMD CFSV-2 during both the weeks. The corresponding anomaly wind field indicates anomalous cyclonic circulations over Gujarat and neighbourhood during week 1 & over north and central Bay of Bengal during week 2. During the week 2 anomaly wind field indicates an anticyclonic circulation over central and adjoining western parts of India.

IMD CFS(V-2) model indicates a circular zone with prominent moderate to high probability (60-70%) of cyclogenesis over central parts of India (Odisha to North Maharashtra) during week 1. During week 2, there is a low to moderate probability (30-40%) of cyclogenesis over (a) Comorin - Gulf of Mannar region & adjoining areas of southwest BoB and (b) Gulf of Thailand & adjoining areas of south Andaman Sea.

ECMWF sub-seasonal model is indicating very low (10-20%) probability of cyclogenesis over north BoB during middle of week 1 to middle of week 2 (14th to 21st September). ECMWF ensemble is showing moderate to high (60-80%) probability of cyclogenesis over North BoB during beginning of week 1. During week 2, it is indicating moderate to high (60-70%) probability of cyclogenesis over the AS and low probability (10-30%) over South BoB towards beginning of week 2. The member runs are indicating the

movement of cyclonic disturbance form North BoB across Indian region and then emergence into northeast AS.

(b) Guidance from Medium-Range NWP models:

ECMWF is indicating a low pressure area over northwest BoB on 10th Sept. It is indicated to become well marked low pressure area on 11th & 12th Sept. over northwest & adjoining westcentral BoB, cross South Odisha-North Andhra Pradesh coast on 13th Sept and move west-northwestwards across central India and emerge into northeast AS around 15th Sept. and intensify into a depression over northeast AS off Gujarat coast around 16th Sept. It is indicated to persist over the same region on 17th Sept and then gradually recurve northeastwards as a low pressure area. NCEP GFS is indicating a low pressure area over westcentral & adjoining northwest BoB on 10th Sept. It is indicated to move west-northwestwards across Odisha-Chhattisgarh-Madhya Pradesh till 14th Sept and become less marked on 15th Sept. IMD GFS is indicating low pressure area over northwest & adjoining westcentral BoB on 10th. It is indicated to persist over the same region till 13th and slowly move west-northwestwards and weaken over south Odisha around 14th Sept. The associated cyclonic circulation is indicated to west-northwestwards till 15th and then recurve northeastwards till 17th Sept. It is also indicating an upper air cyclonic circulation over northeast AS on 12th Sept. with west-southwestwards movement towards Yemen coast till 16th Sept. BFS is predicting similar to IMD GFS. NCMRWF Mithuna is indicating an upper air cyclonic circulation over Northwest BoB. It is predicted to become a low-pressure area over westcentral & adjoining northwest BoB off South Odisha coast on 11th Sept. It is indicated to move west-northwestwards as an upper air cyclonic circulation from 13th onwards towards Gujarat till 15th Sep. and less marked thereafter.

ECMWF is also showing development/ emergence of a fresh upper air cyclonic circulation into North Andaman Sea around 19th Sept. It is indicated to move gradually west-northwestwards and intensify into a low-pressure area over north & adjoining central BoB around 21st and depression over westcentral & adjoining northwest BoB around 24th/ 12 UTC. NCEP GFS is also indicating emergence of cyclonic circulation / low pressure area into North Andaman Sea around 19th sept. It is indicated to move slowly northwestwards and intensify into a depression over North Andaman Sea around 21st/ 00 UTC. Thereafter, it is indicated to move west-northwestwards, intensify further and cross Odisha coast around 24th/ 12 UTC. IMD GFS is indicating emergence of an upper air cyclonic circulation into North Andaman Sea around 21st Sep. NCUM is also indicating over eastcentral BoB an upper air cyclonic circulation around 20th Sept.

III. Operational extended forecast for the next two weeks:

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

- a) Existing low-pressure area over North Bay of Bengal and neighbourhood is likely to move west-northwestwards across northwest Bay of Bengal and central India during next 5 days. There is also likelihood of its emergence into northeast Arabian Sea off Gujarat coast towards the end of week 1 (around 16th September). Thereafter it is likely to recurve east-northeastwards and move into land across northwest India. As a result, the easterlies are likely to prevail over northern and central Bay of Bengal, plains of north India & central India and weak westerlies are likely prevail over peninsular India.
- b) There is also likelihood of development/emergence of an upper air cyclonic circulation over North Andaman Sea and adjoining Thailand during beginning of week 2 (around 20th September). It is likely to move northwestwards as a cyclonic circulation or low pressure area, reaching near south Odisha and north Andhra Pradesh coast around 22nd September, 2026.

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

Forecast issued:

The extended range outlook issued on 27th August 2026 for week 2 (04.09.2026-10.09.2026) indicated the formation of an upper-air cyclonic circulation/low pressure area over north Bay of Bengal during the first half of week 2.

The extended range outlook issued on 3rd September for week 1 (04.09.2026-10.09.2026) indicated:

- a) Well-marked low-pressure area over northeast Madhya Pradesh & neighbourhood to remain quasi-stationary over north Madhya Pradesh & adjoining south Uttar Pradesh during next 3 days.
 - b) An upper-air cyclonic circulation to form over westcentral & adjoining northwest Bay of Bengal off south Odisha & adjoining north Andhra Pradesh coasts during the second half of week 1 (around 09th September).
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- 1) A low-pressure area formed over the northwest Bay of Bengal and adjoining West Bengal–north Odisha coasts on 29th August 2026. It subsequently intensified into a well-marked low-pressure area over the same region, further it moved across northwest Madhya Pradesh and adjoining southwest Uttar Pradesh and weakened again into a low-pressure area over same region at 0300 UTC of 5th September.
 - 2) An upper air cyclonic circulation formed over coastal Tamil Nadu & adjoining Southwest Bay of Bengal at 0000 UTC of 04th September 2026. It became less marked at 1200 UTC of 05th September 2026.
 - 3) Another upper air cyclonic circulation formed over north coastal Andhra Pradesh & Yanam and Westcentral Bay of Bengal at 1200 UTC of 05th September 2026. It became less marked at 0300 UTC of 06th September 2026.
 - 4) Another fresh upper air cyclonic circulation formed over Westcentral Bay of Bengal & adjoining Coastal Andhra Pradesh on 08th September, 2026. It became less marked at 0300 UTC of 09th September, 2026.
 - 5) Another upper air cyclonic circulation formed over North Bay of Bengal & adjoining Bangladesh coast at 0000 UTC of 09th September, 2026. Under its influence, a Low-Pressure Area has formed over North Bay of Bengal & neighbourhood 0000 UTC of 10th September 2026.

Hence, forecast for movement of WML over north MP and formation of Cyclonic circulation over westcentral and adjoining northwest BoB was well predicted one week in advance.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 03rd September to 09th September, 2026 are presented in Fig. 4.

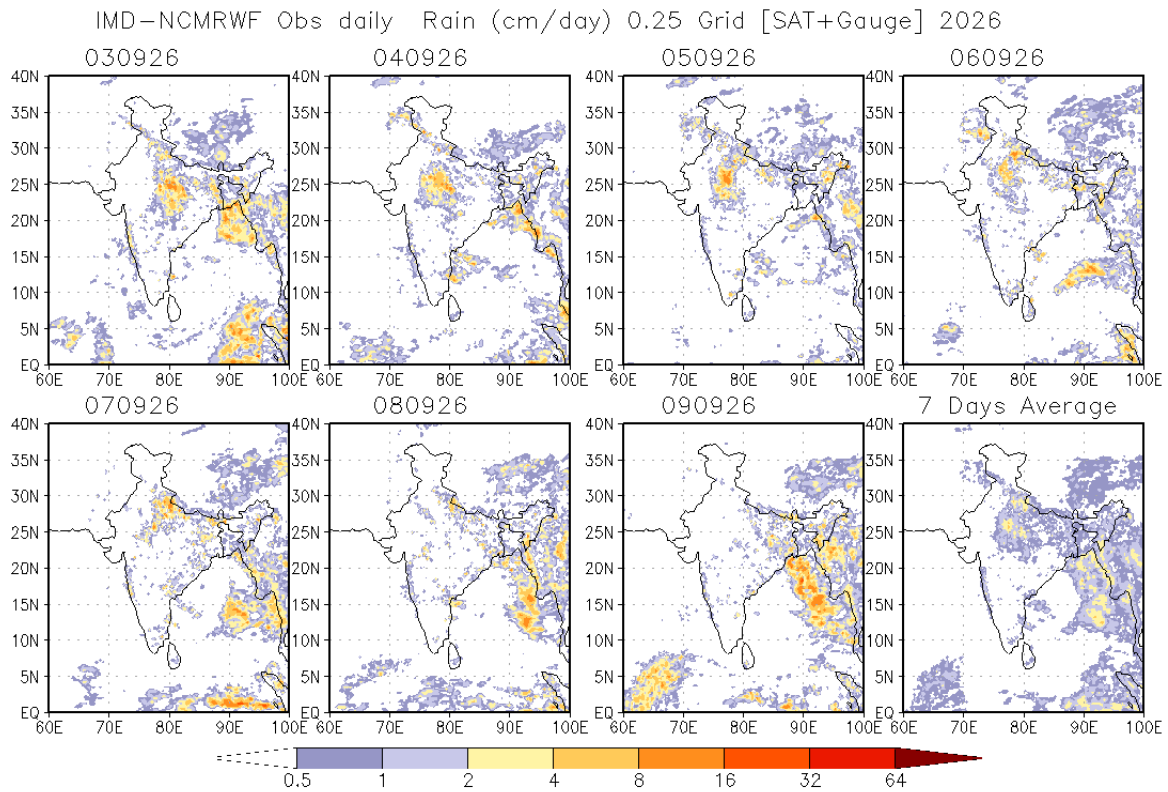


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 03rd September to 09th September, 2026.

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: 17.09.2026