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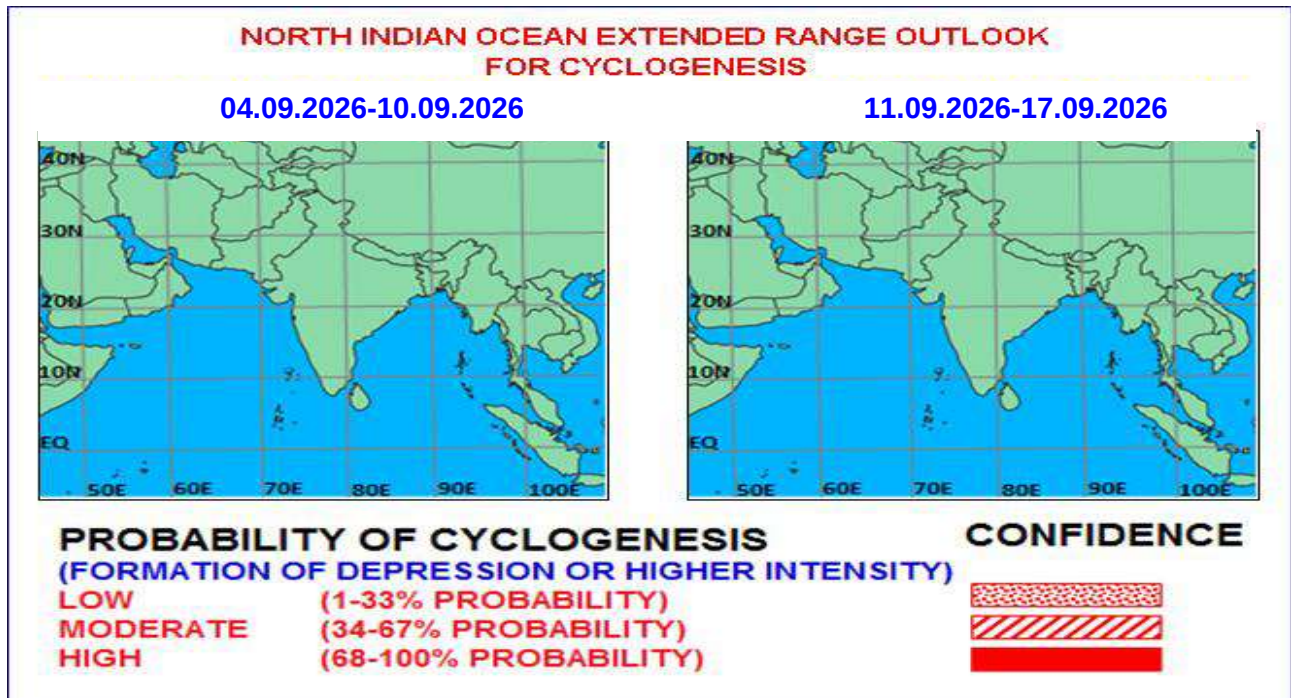


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicates that the MJO is currently in Phase 7 with amplitude more than 1. It is likely to continue in the same phase during week 1. Thereafter, it is likely to move across phases 7 & 8 with a decreasing trend in amplitude 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 the NCICS model indicates the prevalence of a weak westerly wind anomaly (1-3 mps) along with Equatorial Rossby wave (ERW) over central parts of India. The model is also indicating easterly wind anomaly (3-5 mps) over northern parts of Indo-Gangetic plains (Uttar Pradesh, Bihar). These features indicate a favorable environment for maintenance of intensity of the existing well-marked low-pressure area over north east Madhya Pradesh & neighbourhood. Over the BoB, mostly easterly wind anomaly (1-3 mps) is indicated during the same period. Over the AS, mostly westerly wind anomaly is seen over central & north AS along with ERW & easterly wind anomaly (3-5 mps) is seen over south AS. During later part of week 1, strengthening of easterly wind anomaly (5-7 mps) is indicated over south AS & westerly wind anomaly (1-3 mps) is indicated along with ERW over the northern parts of AS. All these features indicate unfavorable environment for development of any cyclonic circulation/Low pressure area over AS during week 1. However, over the BoB, during the later part of week 1, during (8-10 September) the model is indicating weak westerly wind anomaly (1-3 mps) over most parts of BoB along with ERW & Low frequency (LW) background wave over eastcentral BoB & weak easterly wind anomaly (1-3 mps) to its north over northeastern part of India, Bangladesh etc. These features indicate a favorable environment for development of an upper air cyclonic circulation / low pressure area (LPA) over north BoB and adjoining areas during later part of week 1 (8-10 September). Similar features are likely to continue during first half of week 2. During later half of week 2, the model indicates easterly wind anomaly (1-3 mps) over south AS & westerly wind anomaly over north AS, central & south peninsular India & most parts of BoB. Thus overall, the model indicates a favourable

environment for maintenance of intensity of existing LPA over northeast MP and neighborhood during next 2-3 days & for another upper air cyclonic circulation/LPA towards the end of week 1.

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 climatological probability of cyclogenesis, valid for the duration of the next two weeks, ranges between 6-7%.

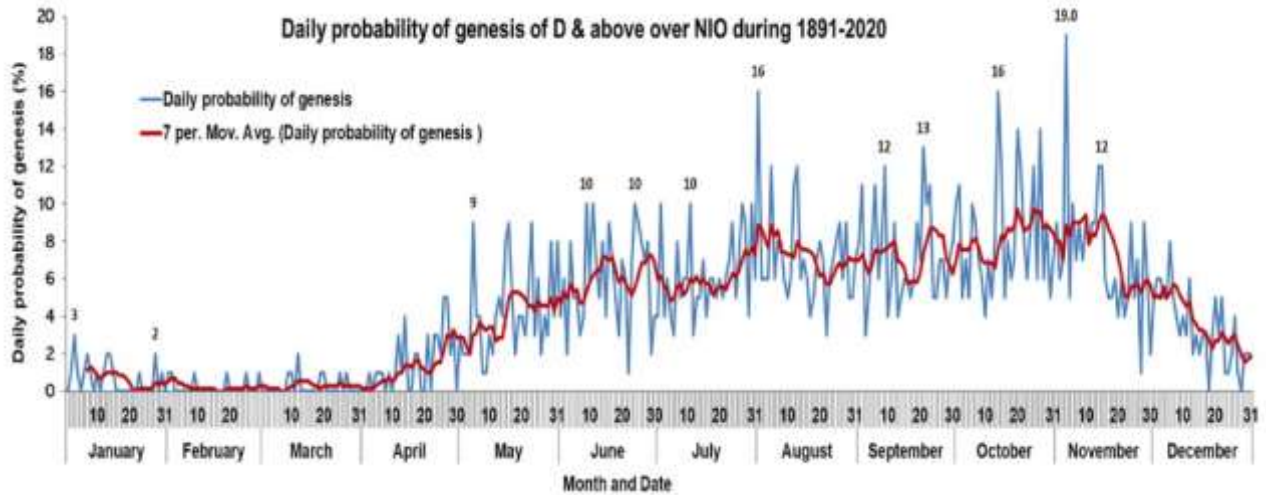
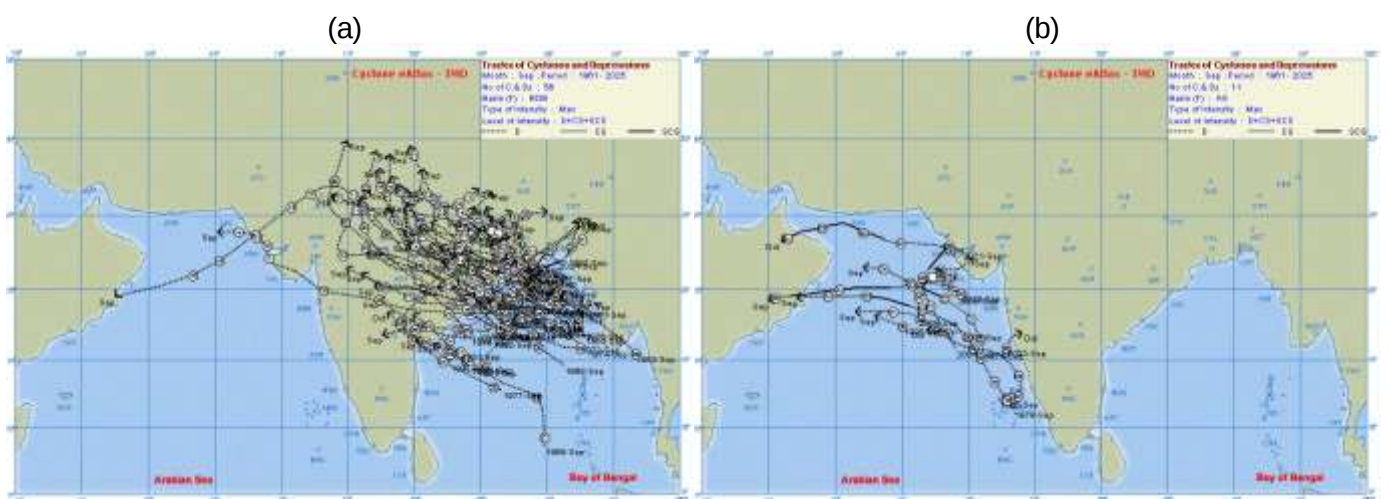


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

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.



(c)

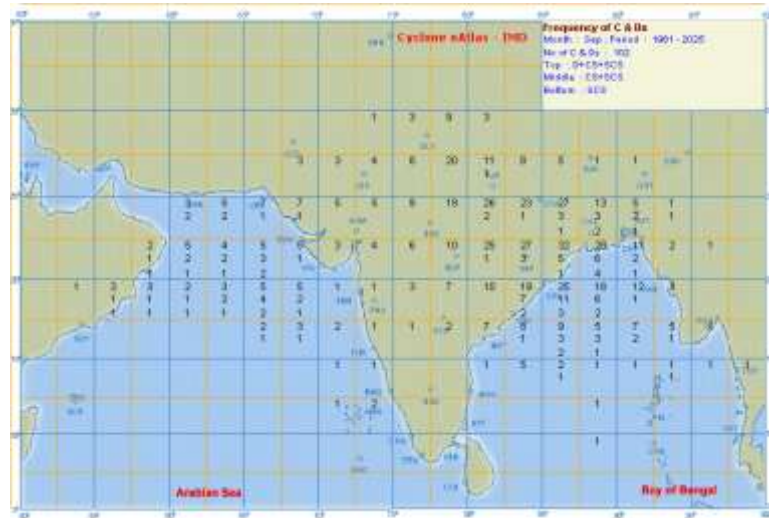


Fig. 3: Cyclonic disturbances in September during 1961-2025, over Bay of Bengal (total 56) and (b) the Arabian Sea (total 11). (c) Their frequencies in the month of September over NIO region.

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 along the foothills of the western Himalayas and the eastern end with embedded upper cyclonic circulation over northeast Madhya Pradesh and adjoining east Uttar Pradesh & eastern end extending eastwards towards Mizoram during week 1. In the mean wind field, southwesterly-westerly wind flow over eastern part of AS and northern part of AS is stronger compared to other parts of the AS with northwesterly flow across western coast of India. However, westerly flow is seen over entire BoB. Corresponding anomaly wind field indicates an anomalous upper-air cyclonic circulation over the location similar to the location of the cyclonic circulation in the mean wind field during the week. An anomalous anticyclonic wind flow pattern is seen over entire AS with easterly anomaly over southern parts of AS & westerly anomaly over northern parts of AS. A weak anticyclonic flow is also seen over southern & adjoining BoB.

During week 2, in the mean wind field westerly & southwesterly wind flow remains nearly similar to week 1. However, nearly a north-south trough with an embedded cyclonic circulation over northwest Bay of Bengal off Odisha is seen to be extending up to north Bihar. Respective anomaly wind field indicates an anticyclonic wind flow pattern over entire AS as seen during week 1 as well. There is a feeble east-west trough along 17°N latitude across central parts of BoB with easterly wind field over northern parts and westerly wind field over southern parts of BoB. The circulation features and anomalous cyclonic circulations indicates the monsoon activity will be subdued over Indian region due to persisting anticyclone over AS although eastern India is likely to experience good amount of rainfall activity due to upper cyclonic circulation in both the weeks.

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 also indicates anomalous cyclonic circulations over northeast Madhya Pradesh and adjoining east Uttar Pradesh during week 1 & over entire Odisha during week 2. During the anomaly wind field indicates a ridge along 15 degree extending across central parts of AS, Peninsular India & westcentral BoB. There is no obvious anticyclone over AS during week 1. Contrary to IMD CFSV-2, anomaly wind field of NCMRWF extended range model predicts a cyclonic circulation over westcentral AS instead of anticyclonic flow.

The model indicates a circular zone with prominent moderate to high probability (70-80%) of cyclogenesis over northeast Madhya Pradesh & east Uttar Pradesh during week 1. During week 2, there

is a low to moderate probability (30-40%) of cyclogenesis over westcentral and adjoining northwest BoB.

ECMWF ensemble is indicating very weak (5-10%) probability of cyclogenesis over eastcentral & adjoining northeast BoB during 12th to 15th September. However, sub seasonal forecast of ECMWF shows a very low probability of cyclogenesis over westcentral & northwest BoB during the week 2 (7 to 14th September) & the model is not indicating any probability of cyclogenesis during the week 2.

(b) Guidance from Medium-Range NWP models:

ECMWF is indicating the existing well marked low pressure area to persist over the same region during next 5-6 days. The model is also indicating a fresh low pressure area over westcentral & adjoining northwest BoB around 12th September. with nearly westwards movement. NCEP GFS is indicating a low pressure area over the north Madhya Pradesh & adjoining South Uttar Pradesh till 6th Sep. It is indicating development of a fresh low pressure area over westcentral BoB around 12th Sep. It is indicated to hover over the same region till 15th Sep and become marked thereafter. IMD GFS is capturing the existing well marked low pressure area over Madhya Pradesh as a low pressure area. It is indicated to move over the same region during next 3-4 days and thereafter, the associated cyclonic circulation is indicated to move gradually east-southeastwards and emerge into westcentral BoB off North Odisha coast around 11th September and then gradually move northwestwards till 13th September. BFS is indicating capturing existing well marked low pressure area over Northeast Madhya Pradesh & neighbourhood correctly. It is indicated to weaken into a low pressure area over the same region and recurve gradually north-northeastwards and become less marked around 7th September. Thereafter, the associated cyclonic circulation is indicated to move southeastwards and emerge into westcentral BoB around 11th Sept. and move gradually westwards till 13th Sept.

Various AI models are also indicating existing well marked low pressure area to persist over the same region during next 4-5 days and development of a fresh low pressure area over westcentral & adjoining northwest BoB around 12th September.

Overall, there is a very good consensus among various deterministic models including the AI models with respect persistence of existing well marked low pressure area over North Madhya Pradesh & adjoining south Uttar Pradesh during next 4-5 days. However, there is variation among various models wrt it's intensity. Various models are also indicating development of a fresh low pressure area over westcentral & adjoining northwest BoB around 12th 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 well-marked low-pressure area over northeast Madhya Pradesh & neighbourhood is likely to be quasi-stationary over north Madhya Pradesh & adjoining south Uttar Pradesh during next 3 days.
- b) A fresh upper-air cyclonic circulation is likely 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). Under its influence, a low pressure area is likely to form over the same region in beginning of week 2. Thereafter, it is likely to move northwestwards and may maintain its intensity till 13th September.

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

Forecast issued:

The extended range outlook issued on 20th August 2026 for week 2 (28.08.2026-03.09.2026) indicated the formation of low-pressure area over northwest Bay of Bengal in the beginning of week 2.

And the extended range outlook issued on 27th August for week 1 (28.08.2026-03.09.2026) indicated:

- a) existing low-pressure area over southeast Uttar Pradesh & neighbourhood to persist over the same region during the next 24 hours.
- b) under the influence of the existing upper-air cyclonic circulation over northwest Bay of Bengal & adjoining Gangetic West Bengal-north Odisha coasts, a low pressure area to form over the same region in the middle of the first week around 29th August, 2026. It was likely to move slowly west-northwestwards across Gangetic West Bengal-north Odisha & Jharkhand during the subsequent 2 days.

Realised:

- 1) An upper air cyclonic circulation formed over central Myanmar & neighborhood at 0000 UTC of 22nd August. Under its influence, a Low-Pressure Area formed over the Northwest Bay of Bengal & neighborhood at 0000 UTC of 23rd August. It moved northwestwards across Gangetic West Bengal, north Odisha, Jharkhand, Northeast Madhya Pradesh, southeast Uttar Pradesh, northeast Uttar Pradesh and became less marked at 0000 UTC of 29th August 2026.
- 2) Under the influence of upper air cyclonic circulation over Northwest Bay of Bengal and adjoining West Bengal-Bangladesh coasts, a low pressure area formed over northwest Bay of Bengal & adjoining West Bengal-north Odisha coasts at 0000 UTC of 29th August, 2026. It became more marked and lay as a well marked low pressure area over the same region at 0300 UTC of 30th August. It lay over Gangetic West Bengal and adjoining areas of north coastal Odisha, Jharkhand & northwest Bay of Bengal at 0300 UTC of today, the 01st September, 2026. It moved west-northwestwards and lay over northeast Madhya Pradesh & neighbourhood at 0300 UTC of 02nd September and persisted over the same region at 0300 UTC of today, the 03rd September 2026.
- 3) An upper air cyclonic circulation lay over Westcentral Bay of Bengal adjoining north Coastal Andhra Pradesh between 3.1 & 5.8 km above mean sea level at 1200 UTC of 31st August which became less marked at 0000 UTC, the 01st September, 2026.

In case of Arabian Sea,

- a) an upper air cyclonic circulation formed over Konkan & adjoining Eastcentral Arabian Sea at 0300 UTC of 27th August and became less marked at 0000 UTC of 28th August 2026.
- b) another upper air cyclonic circulation formed over northeast Arabian Sea & adjoining Saurashtra between 3.1 & 5.8 km above mean sea level at 0300 UTC of 02nd September became less marked at 0300 UTC of today, the 03rd September 2026.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 27th August – 02nd September, 2026 are presented in **Fig. 4**.

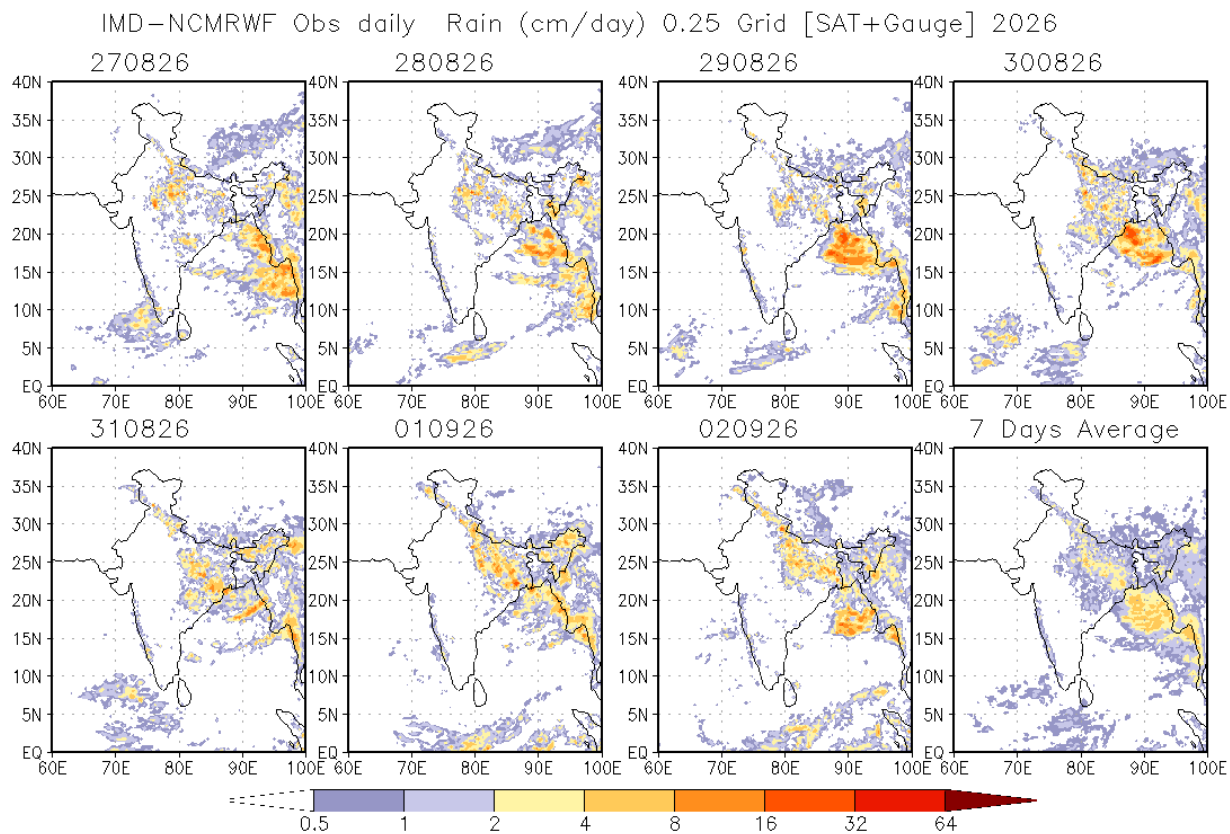


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 20th to 26th August, 2026.

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: 10.09.2026