



Issued on 17.09.2026

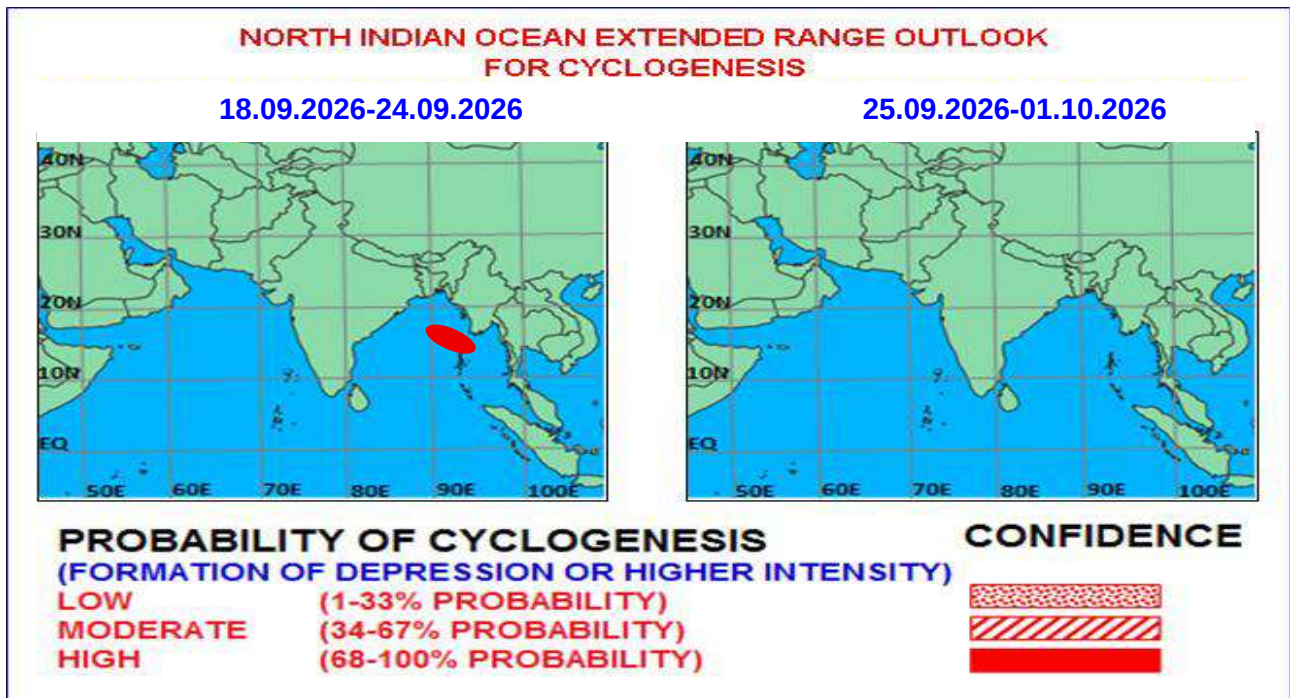


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicates that the Madden Julian Oscillation (MJO) is currently in Phase 8, over the Western Hemisphere and Africa, with amplitude close to 1. It is likely to move across phases 8 and 1 during most part of week 1 with amplitude remaining more than 1. From end of week 1 onwards, it is indicated to move across phase 2 with amplitude more than 1 during the remaining part of forecast period. Thus, MJO is favourable for enhancement of convective activity and cyclogenesis over the North Indian Ocean including the Bay of Bengal (BoB) and the Arabian Sea (AS) during end of week 1 and week 2.

The guidance from the NCICS model indicates the prevalence of westerly wind anomaly over south Andaman Sea (5-7 mps) alongwith prevalence of Equatorial Rossby wave (ERW) and an eastward moving Kelvin wave with easterly wind anomaly (5-7 mps) to its north over North Andaman Sea and adjoining areas of central BoB during beginning of week 1. These features are extending from South China Sea towards the North Andaman Sea, indicating a favourable environment for emergence of an upper air cyclonic circulation/ low pressure area from Thailand region into Andaman Sea. Thereafter, the guidance from NCICS indicates enhancement of westerly wind anomaly (7-9 mps) over south BoB alongwith prevalence of ERW and easterly wind anomaly (7-9 mps) over north Andaman Sea & adjoining areas of central & north BoB during first half of week 1. During later part of week 1, further strengthening of these features is indicated alongwith emergence of MJO also over the south & adjoining central BoB. Thus, during later part of week 1, the equatorial waves will provide a favourable environment for cyclogenesis. Similar features are likely to continue during first half of week 2 as well, with westerly wind anomaly extending upto northern parts of BoB alongwith MJO, ERW and easterly wind anomaly (5-7 mps) over Head BoB region & adjoining Indo-Gangetic plains (West Bengal, Bihar etc.). The simultaneous occurrence of MJO and ERW over central BoB during 23rd to 25th September will provide a favourable environment for genesis and further intensification of the system.

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%.

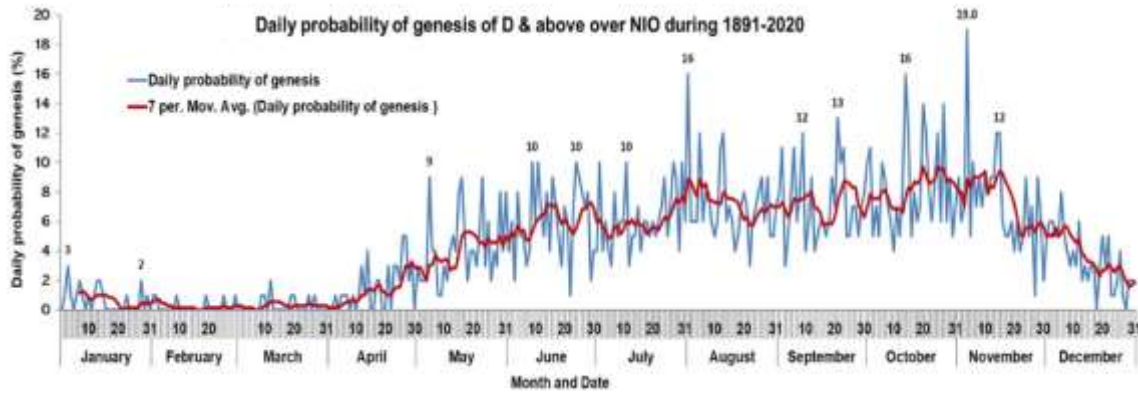


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

Climatologically, there have been 33 depressions (maximum sustained wind speed (MSW): 17-33 kt), 13 cyclonic storms (MSW: 34-47 kt) and 6 severe cyclones (MSW $\geq$ 48 kt) over the BoB during the period 1965 to 2025.

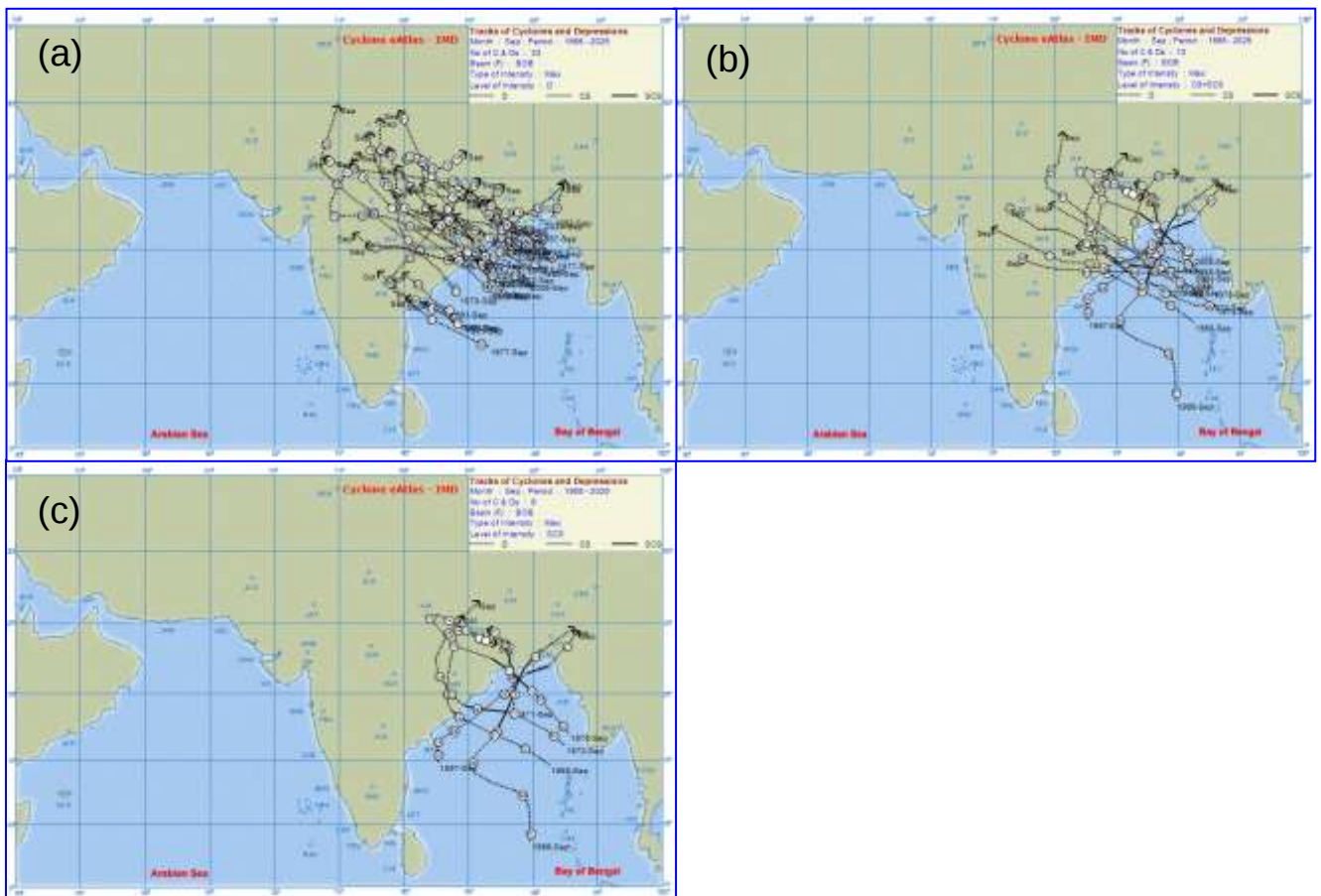


Fig. 3: Tracks of (a) depressions (maximum sustained wind speed (MSW): 17-33 kt), (b) cyclonic storms (MSW: 34-47 kt) and (c) severe cyclones (MSW $\geq$ 48 kt).

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 north Andaman Sea & adjoining eastcentral BoB during week 1 and another over northwest BoB off Odisha coast during week 2. Corresponding anomaly field is indicating an anomalous cyclonic circulation over north Andaman Sea during week 1 and another over north BoB during week 2. Corresponding rainfall anomaly charts are indicating above average rainfall activity over south Andaman Sea & adjoining areas of eastcentral BoB during week 1 and above average rainfall activity over Andaman Sea, central & north BoB, western parts of Myanmar, Thailand, northeastern states of India, Bangladesh, Indo-Gangetic Plains (Odisha, West Bengal and Bihar) during week 2. The mean wind field at 500 hPa is indicating an approaching westerly trough during later part of week 1 and beginning of week 2. The presence of westerly trough would restrict the westward movement of the system and may also cause northeastwards recurvature. The remnant of this system is indicated to move northwestwards upto North Chhattisgarh and then north-northwestwards upto east Uttar Pradesh & adjoining Bihar during first half of week 2.

The mean wind field at 850 hPa of NCMRWF ERF model is indicating a cyclonic circulation over south Odisha-north Andhra Pradesh coast & adjoining westcentral BoB during week 1. During week 2 weakening of southwest monsoonal winds are indicated over the south AS & BoB. Corresponding anomaly field is indicating anomalous cyclonic circulation over westcentral BoB & adjoining south Odisha-north Andhra Pradesh coast during week 1. During week 2 anomalous cyclonic circulation is indicated over Indo-Gangetic plains (Uttar Pradesh & adjoining Bihar).

IMD CFS(V-2) model indicates moderate probability (60-70%) of cyclogenesis over eastcentral BoB & adjoining north Andaman Sea during week 1 and low probability (30-40%) of cyclogenesis over north BoB during week 2. ECMWF is indicating 30-40% probability of cyclogenesis over eastcentral BoB during later part of week 1 and beginning of week 2. ECMWF sub-seasonal model is indicating 30-40% strike probability over Odisha coast during 21st -28th September.

(b) Guidance from Medium-Range NWP models:

Various deterministic models are indicating likely formation of cyclogenesis (depression) over the eastcentral BoB towards the end of week 1. ECMWF model is indicating emergence of an upper air cyclonic circulation into North Andaman Sea on 18th with intensification into a low pressure area (LPA) over North Andaman Sea around 20th, depression over eastcentral BoB on 21st, followed by west-northwestwards towards South Odisha-North Andhra Pradesh coasts with further intensification till 25th Sep. NCEP GFS is also indicating similarly emergence of the upper air cyclonic circulation into north Andaman Sea around 19th, intensification into LPA around 19th/ 12 UTC, depression over eastcentral BoB around 21st/ 1800 UTC, followed by west-northwestwards movement and further intensification towards South Odisha-North Andhra Pradesh coasts. IMD GFS is also indicating similar features but with higher intensification. NCMRWF Mithuna model is however indicating comparatively lesser intensification. Various AI models are also indicating similar features.

III. Operational extended forecast for the next two weeks:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that the existing upper-air cyclonic circulation over north Thailand is very likely to emerge over the north Andaman Sea around 18th September evening (1200 UTC). Under its influence, a low pressure area is very likely to form over the same region around 19th September evening (1200 UTC). Thereafter, there is high probability of its intensification into a depression over eastcentral Bay of Bengal in the later half of week 1 (during 21st-22nd September). It is very likely to move further west-northwestwards towards south Odisha-north Andhra Pradesh coasts during subsequent 3-4 days. The remnant of this system is very likely to move northwestwards upto North Chhattisgarh and north-northwestwards upto East Uttar Pradesh & adjoining Bihar during first half of week 2.

IV. Anticipatory actions suggested:

Due to expected squally weather over Andaman Sea, central Bay of Bengal and adjoining northwest Bay of Bengal following anticipatory actions are suggested:

- (a) Fishermen are advised not to venture into Andaman Sea & southeast BoB and along & off Myanmar & Thailand coasts during 19th to 22nd Sept and into central BoB during 20th to 24th Sept.; adjoining areas of northwest BoB and along & off Odisha & north Andhra Pradesh coasts during 23rd to 25th Sept.
- (b) Judicious regulation of tourism activities over Andaman Islands during 19th - 22nd Sept.
- (c) Judicious regulation of all offshore/ onshore industries; port activities and helicopter operations over Andaman Islands during 19th to 22nd Sept and over Odisha/ North Andhra Pradesh coasts during 23rd-25th Sept.

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

Forecast issued:

The extended range outlook issued on 3rd September indicated formation of an upper-air cyclonic circulation 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.

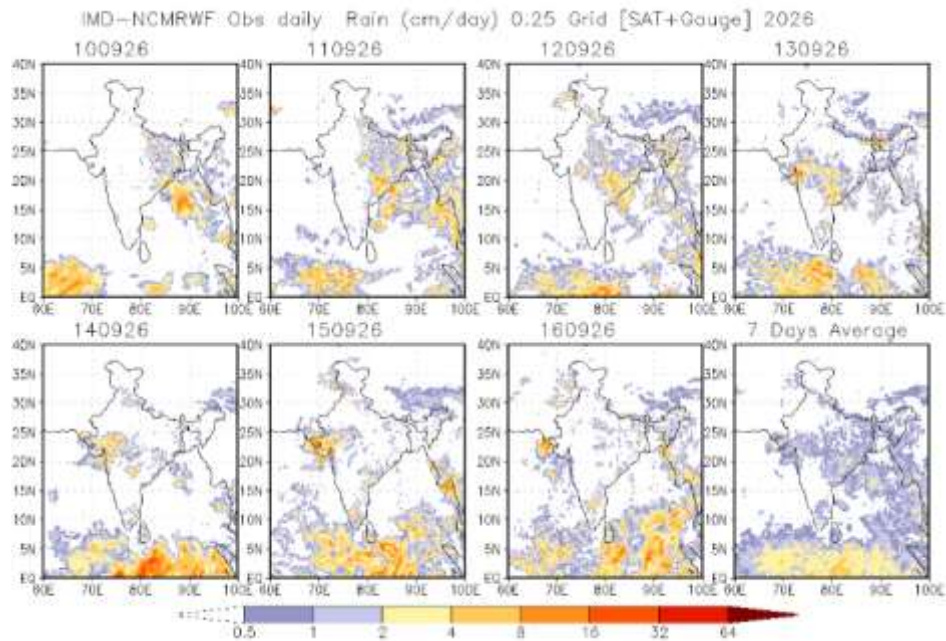
The extended range outlook issued on 10.09.2026 for week 1 (11.09.2026-17.09.2026) indicated the existing low-pressure area over North Bay of Bengal and neighbourhood to move west-northwestwards across northwest Bay of Bengal and central India during next 5 days and emergence into northeast Arabian Sea off Gujarat coast towards the end of week 1 (around 16th September). Thereafter it was indicated to recurve east-northeastwards and move into land across northwest India.

Realised:

Under the influence of upper air cyclonic circulation over North Bay of Bengal & adjoining Bangladesh coast a Low Pressure Area formed over North Bay of Bengal & neighbourhood at 0000 UTC of 10th September. It moved west-northwestwards across south Odisha-north Andhra Pradesh coasts, south Chhattisgarh & Vidarbha, southwest Madhya Pradesh, Rajasthan, north Gujarat & adjoining Kutch region and southeast Pakistan during 10th to 16th September. It lay over

Saurashtra & adjoining Northeast Arabian Sea at 0300 UTC of 17th September 2026.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 10th -16th September, 2026 are presented in Fig. 4.



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: 24.09.2026