



Issued on 15.10.2026

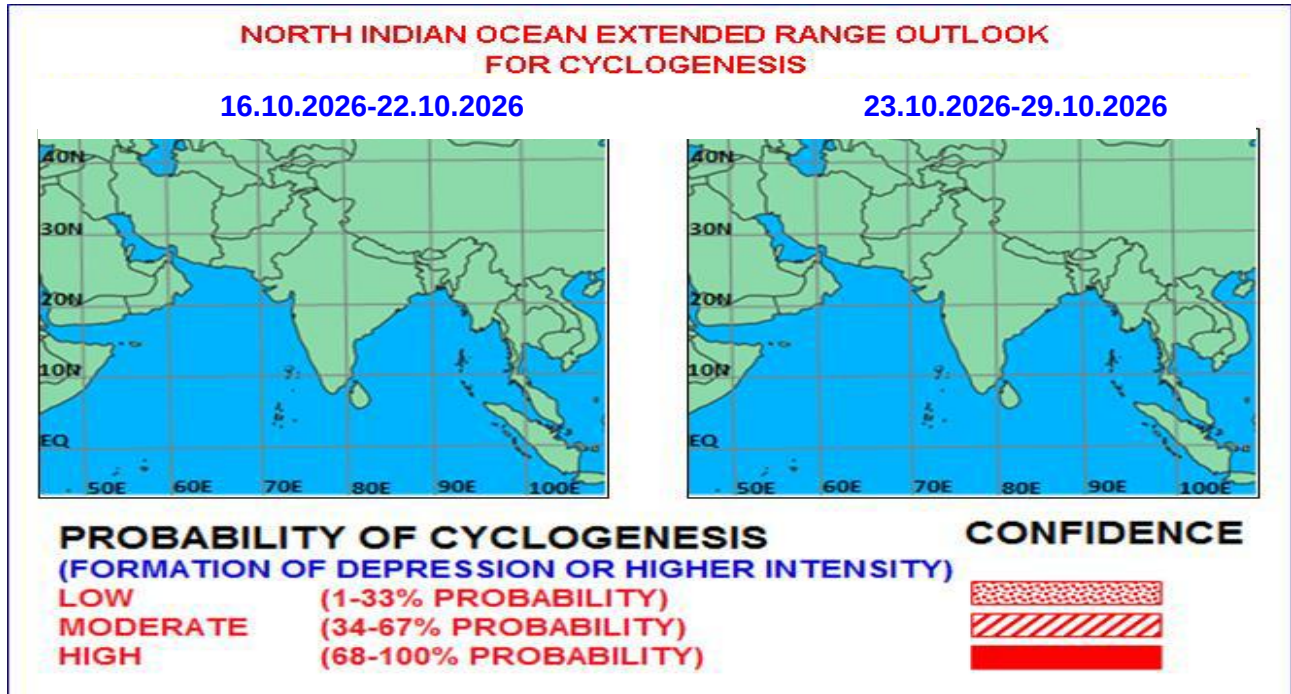


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicate that the Madden Julian Oscillation (MJO) is currently in Phase 2 with amplitude more than 1. It is likely to move across phase 3 from 15th October onwards with amplitude remaining close to 1 during week 1 & greater than 1 during week 2. 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 both the weeks.

The guidance from the NCICS model indicates the prevalence of westerly wind anomaly (7-9 mps) alongwith Equatorial Rossby Wave (ERW) & Kelvin Wave (KW) over southwest BoB & easterly wind anomaly (7-9mps) over eastcentral BoB during first half of week 1. Thereafter, during later part of week 1 the model is indicating westerly wind anomaly (3-5mps) over most parts of BoB along with ERW & MJO wave and easterly wind anomaly over northern parts of India & KW over north BoB during later part of week 1. These features indicate a favorable environment for development of cyclonic circulation /Low pressure area over central BoB during first half of week 1.

Over the AS, during first half of week 1, the NCICS model is indicating easterly wind anomaly (3-5 mps) along with KW over south AS & westerly wind anomaly to its south over Equatorial Indian Ocean (EIO) and adjoining south AS along with ERW and MJO. These features indicate a favorable environment for development of an upper air cyclonic circulation over southeast AS/Lakshadweep Area during beginning of week 1. During later half of week 1, easterly wind anomaly (1-3 mps) along with ERW is indicated over the southeast AS & westerly wind anomaly (1-3mps) over central AS.

During week 2, model is indicating westerly wind anomaly (3-5 mps) over south and central BoB along with MJO and easterly wind anomaly (5-7 mps) to its south over EIO and adjoining south BoB. These features indicate that equatorial waves may not support convective activity over the BoB during this period. Similarly,

over the AS, during week 2, easterly wind anomaly (1-3mps) is indicated over south AS and westerly wind anomaly (1-3mps) along with ERW over central AS. Thus, Equatorial wave may not support any cyclonic circulation over 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 12-15%.

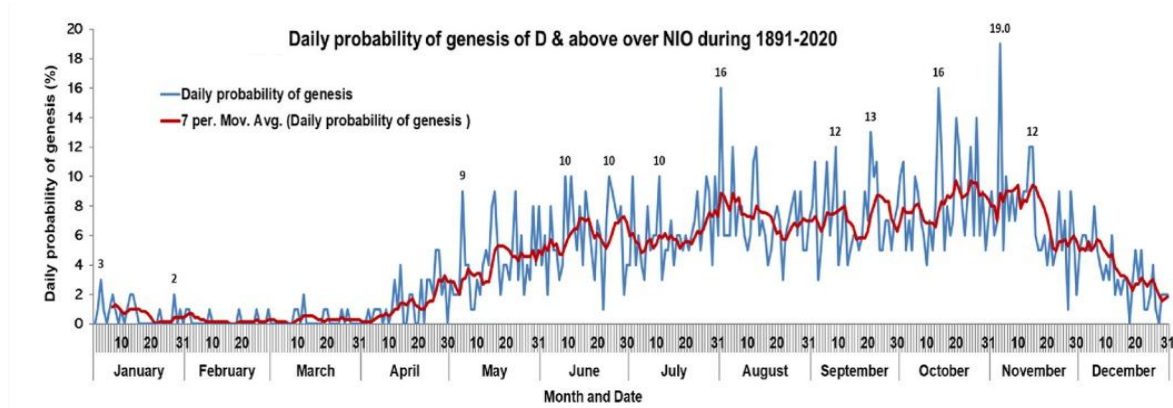


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

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.

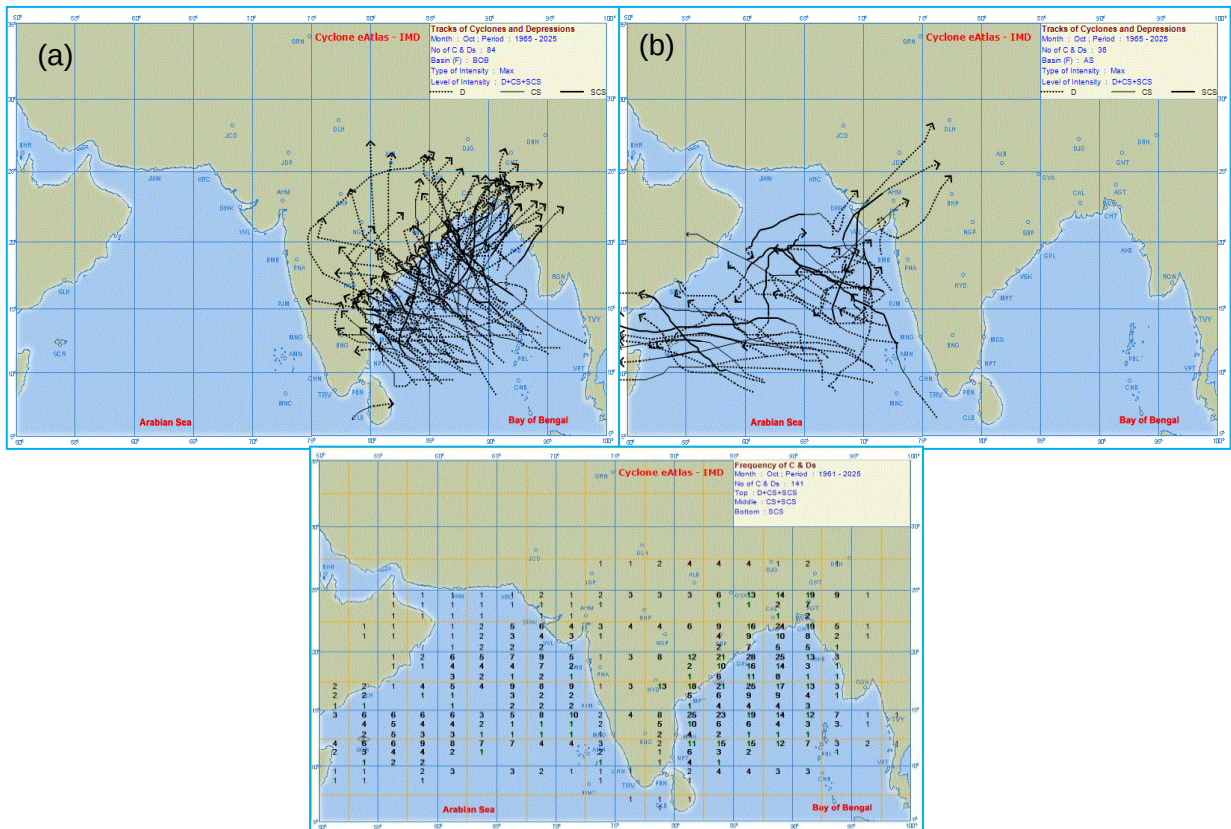


Fig. 3: Tracks of CDs over the (a) BoB (total 84) & (b) AS (total 36) and (c) frequencies of formation of depressions, cyclonic storms & severe cyclonic storms in the $2.5^\circ \times 2.5^\circ$ grid over BoB & AS during 1965-2025.

II. Model Guidance:

(a) Guidance from Extended Range models:

The mean wind field at 850 hPa pressure level from the IMD Extended Range model (MME CFS-V2) indicates that the winds are predominantly easterly/northeasterly over most parts of Arabian Sea (AS) & Bay of Bengal (BoB) during week 1, with an upper-air cyclonic circulation over southwest AS and a trough extending from north Tamil Nadu up to the centre of the cyclonic circulation across Tamil Nadu, Kerala and Southeast AS. The corresponding anomaly field for week 1, indicates an anticyclonic flow pattern over the entire BoB and peninsular India, with a ridge line extending from central Myanmar up to southeast AS across Eastcentral & South BoB, Gulf of Mannar and coastal areas of south Tamil Nadu & Kerala. The predominant easterly/northeasterly wind over most parts of AS and BoB is likely to persist during week 2 as well. However, an east-west trough is likely to develop along latitude 8°N across South Andaman, South BoB and South AS during week 2. The corresponding anomaly indicates a feeble & extended upper-air cyclonic circulation over Eastcentral AS.

The extended-range forecasts of NCMRWF indicate that the mean wind field is nearly similar to the forecast of IMD ERF, except that the upper-air cyclonic circulation is over the Southwest BoB instead of the Southeast BoB, along with an east-west trough along latitude 7-8°N across South BoB & AS during week 1. The corresponding wind anomaly is predominantly easterly over BoB with a cyclonic circulation over Westcentral & adjoining Southwest BoB off South Andhra Pradesh- north Tamil Nadu coasts during week 1. During week 2, the east-west trough is likely to persist with a little northward shift over BoB region, as there is likely development of an upper-air cyclonic circulation over the Central BoB. This signifies an enhancement of the amplitude of the easterly wave during week 2. The anomaly wind indicates a very strong cyclonic circulation over the Westcentral BoB & adjoining south Odisha- north Andhra Pradesh coasts during week 2.

IMD ERF indicates an east-west oriented zone with moderate (30-50%) probability of cyclogenesis across the Andaman Sea, central BoB, peninsular India, southeast and central parts of South AS with localised maxima over central parts of South AS (70%), coastal areas of Karnataka-north Kerala (80%) and Westcentral BoB (70%) during week 1. Similarly, an east-west zone of low probability (20-40%) of cyclogenesis from the Andaman Sea up to Southeast AS is indicated during week 2.

The ECMWF ensemble prediction system is also indicating low probability (10-20%) of cyclogenesis formation over the Southwest AS around 19th October during week 1. S2S also indicates a low (10-20%) strike probability over Westcentral BoB off north Andhra Pradesh & adjoining south Odisha coasts during the week from 19th October till 26th October and 20-30 % over Westcentral & adjoining Northwest BoB off Odisha coast during the subsequent week from 26th October to 2nd November, 2026.

(b) Guidance from Medium-Range NWP models:

Models like IMD GFS, BFS, NEPS & AI models (Graphcast, Fourcastnet) are indicating development of an upper air cyclonic circulation over southwest AS & adjoining Lakshadweep during first half of week 1. It is indicated to move nearly westwards and intensify into low pressure area over southeast AS towards the end of week 1. It is indicated to move westwards thereafter. However, NCEP GFS is indicating an upper air cyclonic circulation over southwest AS on 16/1200 UTC with intensification into an LPA over Southwest AS on 17/1800 UTC & depression over the same region on 18/0600 UTC. It is indicated to move northwestwards towards Yemen/Oman coast till 26/00 UTC. ECMWF is indicating development of an upper air cyclonic circulation over southeast AS & adjoining Lakshadweep on 23/00 UTC with intensification into an LPA over southeast AS on 27/06 UTC & into a depression over the same region on 28/06 UTC. It is indicated to move initially north-northwestwards and then northeast wards towards Karnataka coasts as a Depression/ Deep Depression. Various AI models are not indicating any

significant system over the AS. There is large variation among various deterministic models wrt area of genesis, movement and intensification.

Over the BoB, most of the models are indicating a development of an upper air cyclonic circulation over southeast BoB and adjoining Andaman Sea during first half of week 2 and low pressure over the same region during later part of week 2. However, ECMWF is also indicating its further intensification into a depression (around 28/00) towards the end of week 2 and movement towards Odisha coast.

III. Operational extended range forecast for the next two weeks:

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

- (a) Existing upper air cyclonic circulation over southeast Arabian Sea is likely to move nearly westwards during next 1-2 days.
- (b) An upper upper air cyclonic circulation over southwest Arabian Sea around 17th October. It is indicated to move nearly westwards towards Gulf of Aden during subsequent 3-4 days.
- (c) An upper air cyclonic circulation is likely to develop over the Southeast Bay of Bengal and adjoining Andaman Sea during the beginning of the week 2. Under its influence, a Low-pressure area is likely to develop over the southeast BoB during the middle of the week 2.
- (d) Another upper air cyclonic circulation is likely over the Southeast Arabian Sea and adjoining Lakshadweep during the first half of the week 2. Under its influence, a Low-pressure area is likely to develop over the southeast & adjoining eastcentral Arabian Sea towards the latter half of week 2.

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

Forecast issued:

The extended range outlook issued on 01.10.2026 for week 2 (09.10.2026-15.10.2026) indicated emergence of an upper air cyclonic circulation over North Andaman Sea towards the middle of week 2 (around 12th October). Under its influence, formation a low-pressure area was indicated over Andaman Sea around 13th October. Thereafter, it was indicated to intensify into a depression over central parts of South and adjoining Central BoB with low probability (1-33%) towards the end of week 2 (around 15th October).

The extended range outlook issued on 08.10.2026 for week 1 (09.10.2026-15.10.2026) also indicated emergence of an upper air cyclonic circulation over North Andaman Sea & neighbourhood towards the middle of week 1 (around 11th October). Under its influence, formation of a low-pressure area was indicated over southeast BoB towards the later part of week 1 (around 13th October). Thereafter, it was further indicated to become more marked and move west-northwestwards towards North Tamil Nadu-South Andhra Pradesh coasts during subsequent 3-4 days.

Realised:

Bay of Bengal

An upper air cyclonic circulation formed over Gulf of Thailand & neighbourhood at 0300 UTC of 09th October. It emerged over south Andaman Sea & neighbourhood at 1200 UTC of 11th October, and merged with the trough in easterlies running from the upper air cyclonic circulation over southwest Bay of Bengal off south Sri Lanka coast to Central Bay of Bengal at 0300 UTC of 13th October, 2026. Thus, emergence of an upper air cyclonic circulation over Andaman Sea & neighbourhood was well predicted two weeks in advance. However, it didn't intensify further.

An upper air cyclonic circulation formed over Gulf of Mannar & adjoining south Tamil Nadu coast at 0000

UTC of 10th October. It lay over south coastal Tamil Nadu at 0300 UTC of 15th October, 2026.

An upper air cyclonic circulation lay over Lakshadweep area & neighbourhood at 0000 UTC of 11th October which became less marked over South Kerala & neighbourhood at 0300 UTC of 12th October 2026.

An upper air cyclonic circulation lay over the southeast Arabian Sea & adjoining Lakshadweep at 0300 UTC of 15th October, 2026.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 01st – 07th October, 2026 are presented in **Fig. 4**.

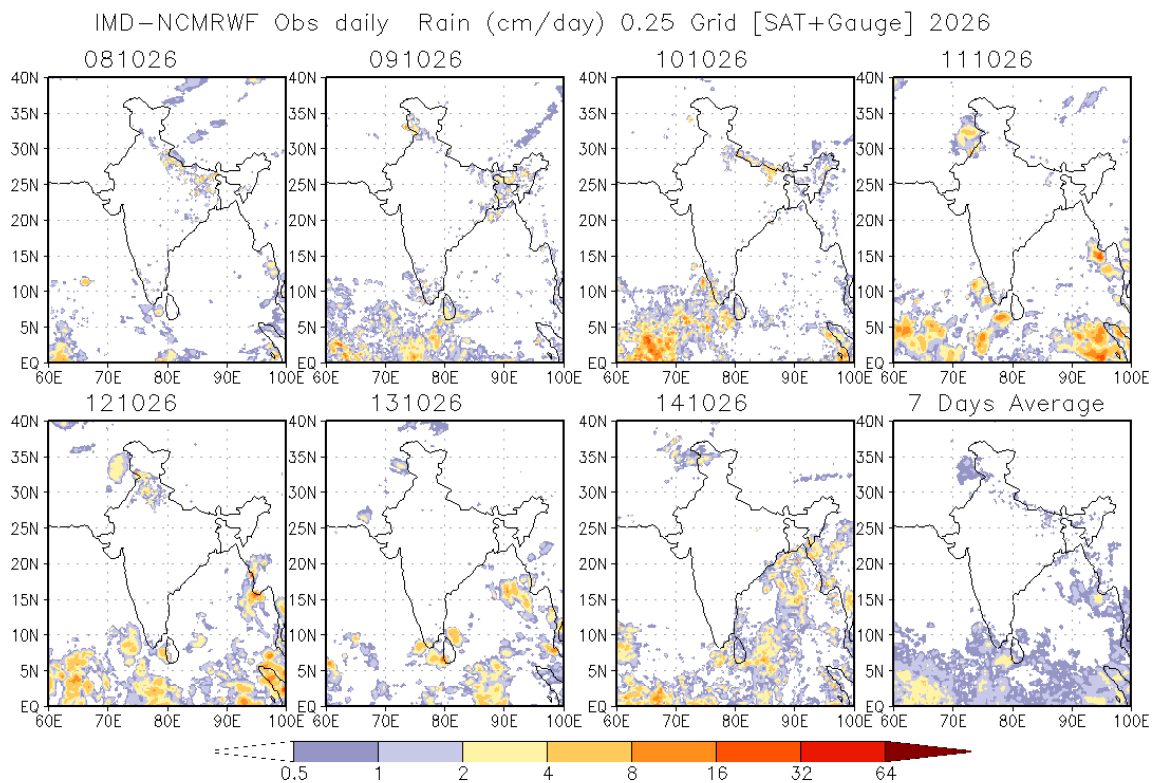


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 8th – 14th October, 2026.

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: 22.10.2026