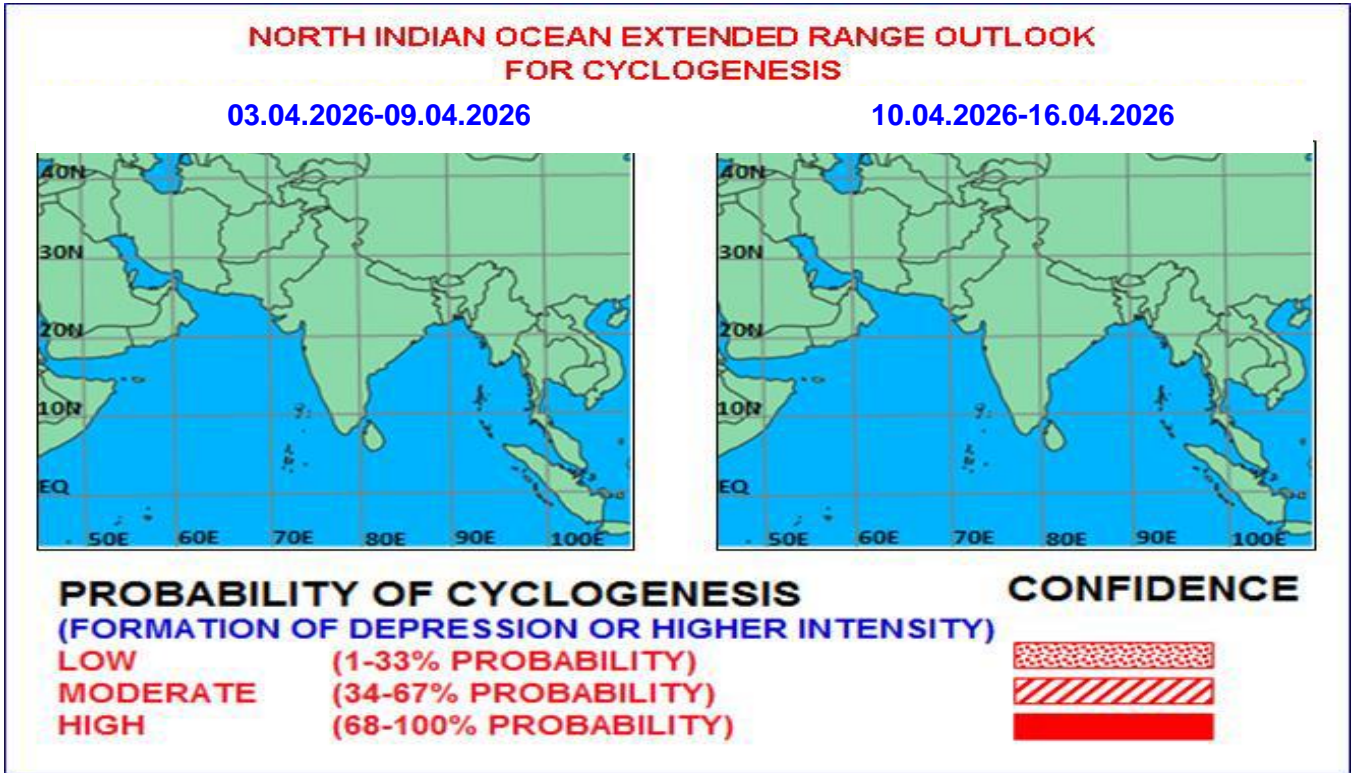




Issued on 02.04.2026



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

**I. Environmental features and Equatorial waves:**

The guidance from ECMM model indicates that the Madden-Julian Oscillation (MJO) index is currently in phase 2 with amplitude close to 1. It is likely to enter into phase 3 during next 2 days and move across phases 3, 4 and 5 with amplitude remaining close to 1 during remaining days of week 1. Thereafter, it is likely to move across phases 6, 7 and 8 with amplitude remaining close to 1 during week 2. Thus, MJO is likely to support enhancement of convective activity over the Bay of Bengal (BoB) during entire week 1 and over the Arabian Sea (AS) during first half of the week 1.

The guidance from the NCICS model indicates westerly wind anomaly (5-7 mps) over south BoB along with prevalence of Equatorial Rossby wave (ERW) and MJO over south BoB along with easterly wind anomaly (3-5 mps) over westcentral BoB and adjoining eastern Indian during first half of week 1. Similarly, over the AS, the model is indicating westerly wind anomaly (3-5 mps) over central & south AS along with prevalence of Kelvin wave (KW) over central AS & MJO over south AS and easterly wind anomaly (1-3 mps) over north AS & adjoining areas of northwest India-Pakistan-Afghanistan. Thereafter, during later part of week 1 the model is indicating westerly wind anomaly (3-5 mps) over south BoB and southeast AS along with prevalence of ERW, MJO & Low frequency background wave (LW) over the same region. To its north, the model is indicating easterly wind anomaly (1-3 mps) over central AS, northwest & central India, Pakistan, and Afghanistan along with an easterly moving KW over north AS. Thereafter, during week 2 weakening of these features are indicated. The model is indicating weak westerly wind anomaly (1-3 mps) over entire BoB and westerly wind anomaly (1-3 mps) over south AS & easterly wind anomaly (1-3 mps) over central AS. Thus, equatorial waves are likely to contribute enhancement of convective activity over north AS and adjoining areas of northwest India-Pakistan-Afghanistan and over northwest BoB & adjoining areas of northeastern India during week 1.

## II. Model Guidance:

### (a) Guidance for Extended Range models:

The 850 hPa mean wind field forecast of IMD Extended Range model (MME-CFSV2) is indicating prevalence of seasonal anti-cyclonic circulations over central AS and extended anti-cyclonic circulation over central BoB during week 1. During week 2 the seasonal anticyclone over central AS is predicted to shift north-westwards and north-westerly wind are indicated to prevail over most parts of India and westerly winds over most parts of BoB. Corresponding anomaly field is indicating anti-cyclonic anomaly over central India and another over southwest BoB & adjoining Sri Lanka during week 1. During week 2 west-northwesterly winds are indicated to prevail over most parts of India and westerlies over most parts of BoB. The corresponding precipitation field is indicating above average rainfall activity over north AS, some parts of northwest India-Pakistan-Afghanistan and also over coastal Karnataka-Kerala region during week 1.

Similar features are seen in NCMRWF extended range model.

With respect to cyclogenesis IMD MME-CFSV2 model is indicating potential zone (60-70% probability) over southeast BoB and another zone (40-50%) over Pakistan-Afghanistan during week 1. During week 2 the model is indicating the potential zone for cyclogenesis (30-40%) over south Andaman Sea and adjoining areas of Malacca Strait & Indonesia.

The ECMWF ERF model (ensemble and sub-seasonal) forecast is also not indicating any probable zone for cyclogenesis during the entire forecast period.

### (b) Guidance from Medium-Range NWP models:

Most of the NWP models (IMD-GFS, GFS, BFS, ECMWF, NCUM, and NCMRWF) indicate that the seasonal anticyclonic wind patterns with one anticyclonic circulation over central AS and another over the north & central parts of BoB, are likely to persist on most days of week 1. However, the anticyclonic circulation over BoB is showing southward migration over the southeast BoB towards the end of the first week. During the first half of week 1, a trough in the easterly winds along with embedded cyclonic circulations is likely to move westwards from southeast BoB & adjoining Equatorial India Ocean (EIO) and reach up to the southwest BoB off south Sri Lanka coast around 8th April. A north-south trough with embedded cyclonic circulation over Marathwada & North Interior Karnataka is likely to persist for nearly the next 10 days. The wind discontinuity along the east coast of India is also likely to persist during the week 1. No model indicates any cyclogenesis over the NIO region during the next 10 days.

The AI models (Pangu, GraphCast and FourCastNet) of NCMRWF are also not indicating any significant weather systems over BoB and AS, except for more prevalent seasonal anticyclonic circulations over both the sub-basins. The EC-AIFS and NCEP GFS AI models are not predicting any cyclogenesis over the entire NIO during the forecast period.

## III. Inference:

Considering various large-scale environmental features, climatology and model guidance, it is inferred that there is no probability of cyclogenesis over the North Indian Ocean during the entire forecast period.

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

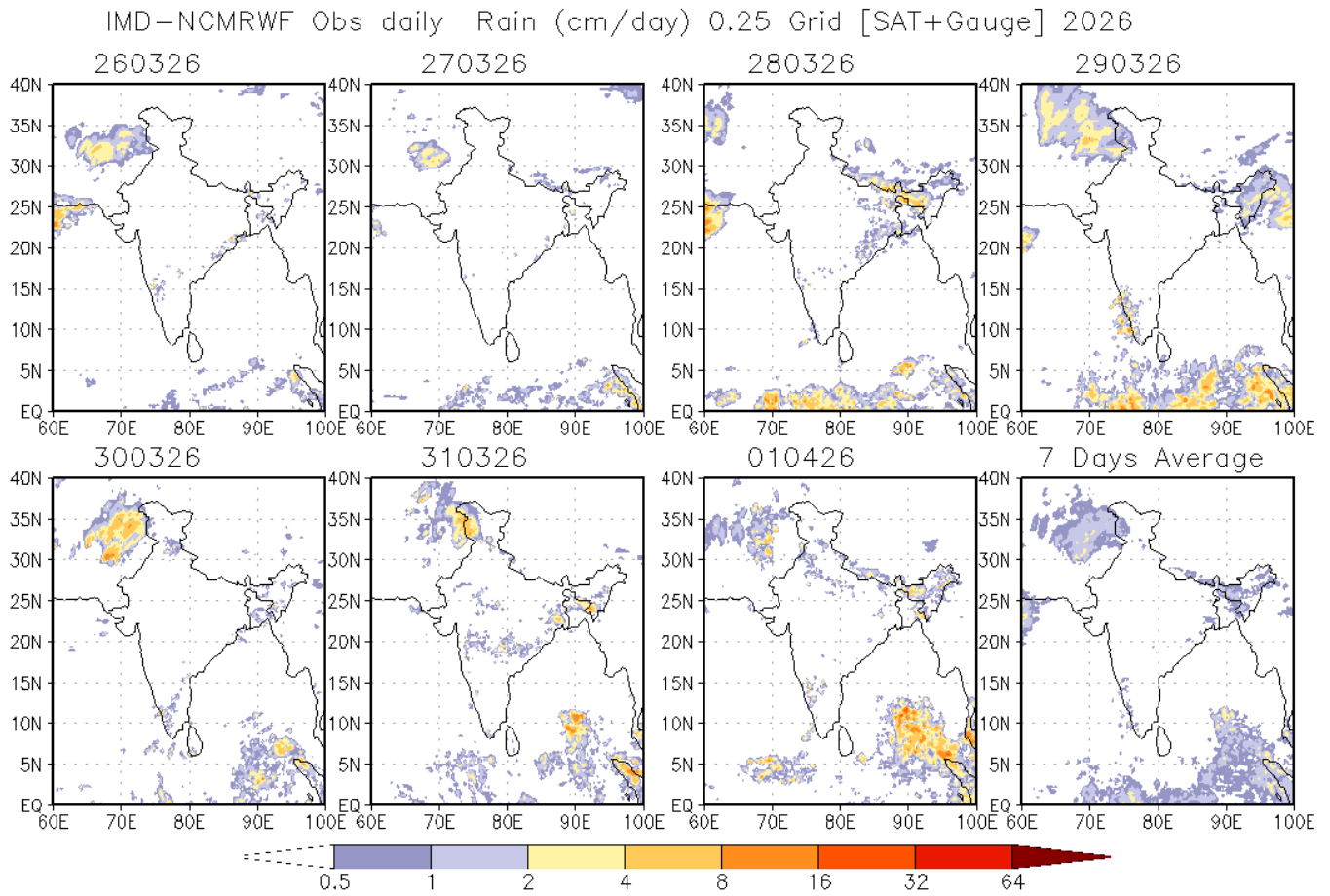
### Forecast issued

The extended range outlook issued on 12th March for week 2 (27.03.2026-02.04.2026) indicated no probability of cyclogenesis over the North Indian Ocean during week 2. The extended range outlook issued on 19th March for week 1 (27.03.2026-02.04.2026) indicated no probability of cyclogenesis over the North Indian Ocean during the entire forecast period.

### Realised Weather

Actually, a fresh upper air cyclonic circulation formed over Southeast Arabian Sea off Kerala coast at 0.9 km above mean sea level at 1200 UTC of 31st March, 2026. It became less marked at 0300 UTC of today the 01st April, 2026. **Thus, the non-occurrence of cyclogenesis was correctly predicted two weeks in advance.**

NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 26<sup>th</sup> March – 01<sup>st</sup> April, 2026 is presented in **Fig. 2**.



**Fig. 2:** NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 26<sup>th</sup> March – 01<sup>st</sup> April, 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, NCUM: 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: 09.04.2026**