India Meteorological Department
Ministry of Earth Sciences
Mausam Bhawan, Lodhi Road, New Delhi-110003

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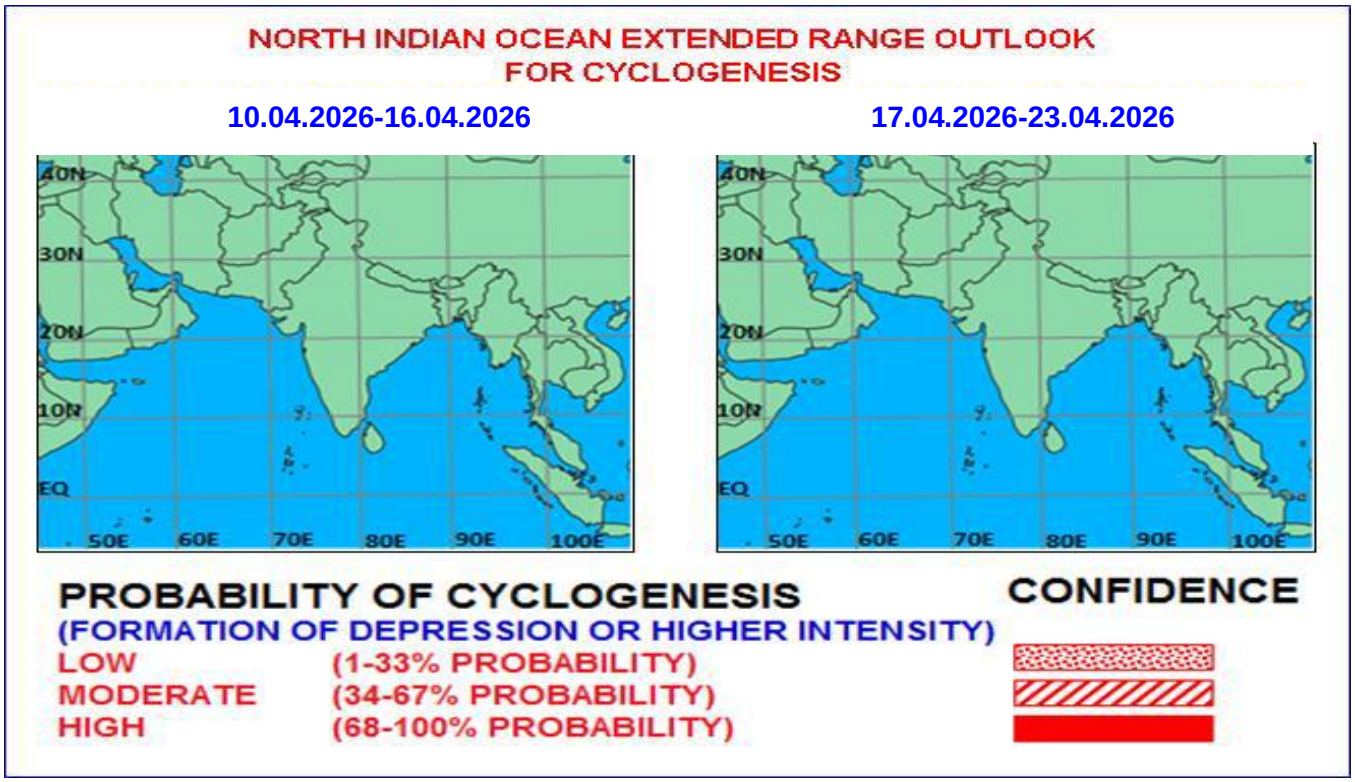


**Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks**

## I. Environmental features and Equatorial waves:

The guidance from ECMM model indicates that the Madden-Julian Oscillation (MJO) index is currently in phase 6 with amplitude greater than 1. It is likely to move across phases 6, 7 and 8 during next 2 weeks. Thus, MJO is not likely to support enhancement of convective activity over the Bay of Bengal (BoB) and the Arabian Sea (AS) during entire forecast period.

The guidance from the NCICS model indicates prevalence of westerly wind anomaly (7-9 mps) over east Equatorial Indian Ocean (EIO) and adjoining south BoB along with prevalence of Equatorial Rossby wave (ERW), MJO, Low frequency background wave (LW) and easterly wind anomaly (1-3mps) over central BoB along with Kelvin wave (KW) during first half of the week 1. Similarly, over the AS, the model is indicating westerly wind anomaly (1-3 mps) along with prevalence of ERW, KW over south AS and easterly wind anomaly (1-3 mps) over westcentral AS off Oman coast during first half of week 1. Thereafter, the model is indicating westerly wind anomaly (3-5mps) over EIO and adjoining south BoB and south AS along with prevalence of ERW and easterly wind anomaly (1-3mps) over central BoB and westcentral AS during later half of week 1. During week 2, the model is predominantly indicating week easterly wind anomaly (1-3mps) over the entire North Indian Ocean (NIO). Thus, Equatorial waves are likely to provide a favorable environment for development of a cyclonic circulation/low pressure area over south BoB and westcentral AS during week 1 only.

## 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 circulation over westcentral AS and a weak anti-cyclonic circulation

over central BoB during week 1. During week 2, the weakening of anticyclone over central AS is indicated and over the BoB the eastwards shifting of anticyclone towards eastcentral BoB is predicted. Predominantly easterly winds are indicated over the entire south BoB and south AS during both week 1 and week 2. Corresponding anomaly field is indicating week northeast-southwest oriented trough from eastcentral BoB to southeast BoB and a feeble anti-cyclone over westcentral AS during week 1. During week 2, the model is indicating a cyclonic circulation over westcentral AS and predominantly easterly winds over the BoB. The precipitation anomaly field is indicating below average rainfall over the entire region during both the weeks.

Similar features are seen in NCMRWF extended range model.

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

With respect to cyclogenesis IMD MME-CFSV2 model is indicating a 40-50% probability of cyclogenesis over east EIO during week 1. Similarly, during week 2, the model is indicating 30-40% probability of cyclogenesis off Indonesia coast.

**(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 the central parts of AS and another over the central parts of BoB are likely to persist on most days of week 1. However, the anticyclonic circulation over BoB is likely to become well-established over eastcentral BoB during the first half of week 1, whereas the anticyclonic circulation over the AS is likely to become prominent over the westcentral AS towards the end of the first week. Due to this, there is no significant development of any cyclonic circulation/low pressure system over both BoB & AS during week 1. The wind discontinuity along the east coast of India is also likely to persist during many days of week 1. There is a likely development of the upper-air cyclonic circulation over peninsular India embedded over the north-south trough across the central parts of the peninsular India.

The AI models (Pangu, GraphCast and FourCastNet) of NCMRWF are also not indicating any significant weather systems over BoB and AS, except for the seasonal anticyclonic circulations over both the sub-basins as indicated by the physics-based models. The EC-AIFS and NCEP GFSAI models are also 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.

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

The extended range outlook issued on 19th March for week 2(03.04.2026-09.04.2026) indicated no probability of cyclogenesis over the North Indian Ocean during the entire forecast period. The extended range outlook issued on 26th March for week 1(03.04.2026-09.04.2026) also indicated no probability of cyclogenesis over the North Indian Ocean during the entire forecast period.

Realized weather:
An upper air cyclonic circulation formed over westcentral Bay of Bengal off south coastal Andhra Pradesh at 0300 UTC of 05th April and became less marked on 07th April.

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 02nd – 08th April, 2026 is presented in Fig. 2.

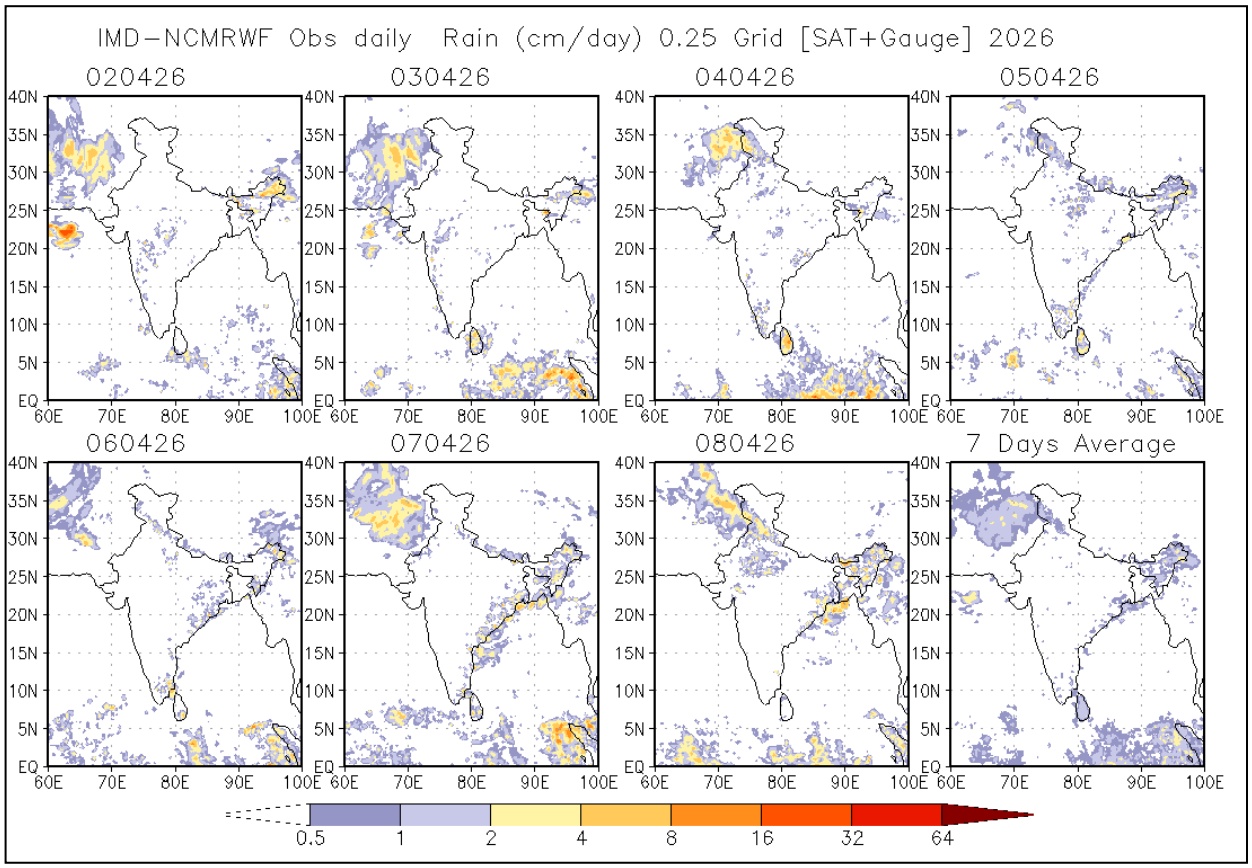


**Fig. 2: NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 02nd – 08th April, 2026**

**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: 16.04.2026**