



Issued on 14.05.2026

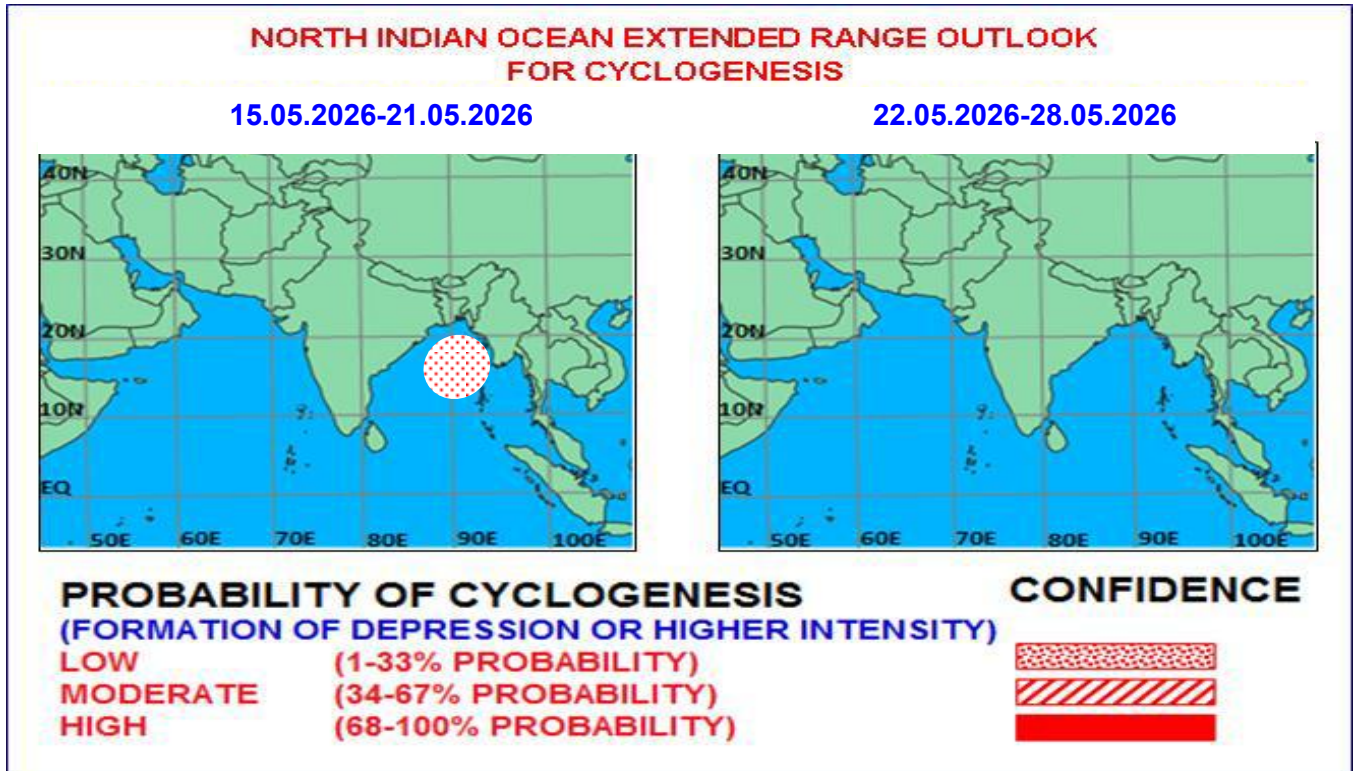


Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features and Equatorial waves:

The guidance from ECMM model indicates that the Madden-Julian Oscillation (MJO) index is currently in phase 4 with amplitude equal to 1. It will continue in same phase with gradually decreasing amplitude (close to 0.7) during week 1. Thereafter, it is likely to move across phases 5 and 6 with amplitude remaining close to 0.7-0.8 during week 2. Thus, MJO is likely to support enhancement of convective activity/ cyclogenesis over the Bay of Bengal (BoB) in particular central & north BoB during the entire forecast period.

The guidance from the NCICS model indicates the prevalence of westerly wind anomaly (>9 mps) over south BoB & adjoining East Equatorial Indian Ocean (EEIO) alongwith prevalence of MJO & Kelvin wave(KW) and easterly wind anomaly (>9 mps) over westcentral & northwest BoB off Andhra Pradesh & Odisha, West Bengal coasts, indicating a favourable environment for maintenance of intensity of the well marked low pressure area over southwest & adjoining westcentral BoB during next 2 days. Thereafter, the model is indicating shifting of westerly wind anomaly((5-7mps) towards central BoB alongwith prevalence of MJO, Equatorial Rossby wave (ERW) and easterly wind anomaly(3-5 mps) over central & north BoB indicating a favourable environment for cyclogenesis over central and adjoining northeast BoB during remaining part of week 1. From week 2 onwards, weakening of westerly wind anomaly (3-5 mps) over south BoB & south Andaman Sea is predicted, indicating unfavourable environment for further advance of southwest monsoon during week 2.

II. Model Guidance:

(a) Guidance for Extended Range models:

The 850 hPa mean wind field forecast of IMD Extended Range model (MME-CFSV2) indicates the prevalence of westerly winds over south AS and south BoB with a trough extending from Haryana to northwest BoB during week 1. However, an anticyclonic north-south-oriented ridge is still likely to prevail across the middle of the north and central AS during week 1. The east-west shear zone is predicted to be aligned along latitude 10°N over south AS. The corresponding anomaly field indicates two prominent cyclonic circulations, with one of them over the eastcentral BoB and adjoining north Andaman Sea, and the other over the eastcentral AS.

The mean wind field at 850 hPa indicates the trough from northwest India extending up to northwest BoB is likely to persist during week 2 with southwesterly/westerly winds prevailing over the entire BoB as well as over the entire AS with a cyclonic circulation over westcentral AS. The east-west shear zone is likely to move northwards and align along the latitude 17°N across central AS. The wind anomaly field again shows two prominent cyclonic circulations during week 2, with one of them over the northwest BoB, and the other over the westcentral AS.

The precipitation anomaly is positive over the entire southeast AS, along with central parts of AS and the entire Andaman Sea and southeast & adjoining southwest and central BoB during week 1, which is expanding and advancing northward along the west coast of India over AS, over the entire BoB and northeast India during week 2. The negative precipitation anomaly over northeast India during week 1 is becoming positive during week 2. However, during the second week, a negative anomaly is likely over the southern parts of south AS and south BoB adjacent to the Equatorial Indian Ocean (EIO).

The mean wind field at 850 hPa of NCMRWF extended range model (CNCUM) indicates nearly similar forecasts as IMD CFSV-2 model during week 1. However, the forecast wind anomaly field is showing an anomalous cyclonic circulation over the southwest & adjoining westcentral BoB during week 1, limiting the westerly/southwesterly wind flow to reach up to the west coast (Kerala) of India. However, a cyclonic circulation is indicated over eastcentral BoB during week 2, with westerly/southwesterly winds covering the entire west coast of India in the anomaly wind field during week 2. Slow progress of monsoon is indicated by the model compared to IMD CFSV-2 model.

The ECMWF Ensemble model forecast indicates a probable east-west oriented zone of cyclogenesis (10-20% probability) over the westcentral BoB around 16th May and another zone with 20-30% probability over eastcentral BoB and adjoining north Andaman Sea during 20-22 May. A zone with 10-20% probability of cyclogenesis is also indicated over the central parts of AS during 23-26 May.

The sub-seasonal forecast of ECMWF indicates 10-20 % probability of cyclogenesis over eastcentral AS and another over eastcentral BoB and adjoining Andaman Sea with 20-30% probability of cyclogenesis during 18th – 25th May. During 25th May to 1st June, two zones with 10-20% probability of cyclogenesis are likely, with one over north BoB and another over the central parts of AS.

With respect to cyclogenesis, IMD MME-CFSV2 model is indicating a zone with moderate (30-40%) probability of cyclogenesis over the southeast AS. An east-west oriented belt with 50-60 % probability of cyclogenesis is indicated across central BoB extending up to north Andaman Sea with a peak of 70% probability during week 1. During week 2, the probability of cyclogenesis decreases significantly (30-40%) and the significant zones move northwards over both the basins and one found to be located over the central parts of AS and another over north BoB.

Various extended range models are indicating an existing well-marked low-pressure area over the central parts of BoB in association with the onset and advance of the southwest monsoon over the region, Andaman Sea & Andaman & Nicobar Islands during first half of week 1. During the latter half of the first week, there is a likely northeastward movement of the well-marked low pressure area over eastcentral BoB and there will be a low probability of cyclogenesis over eastcentral BoB & adjoining north Andaman Sea. There is a likely westerly/southwesterly wind in the lower levels (up to 700 hPa) of the troposphere and associated probable onset of the southwest monsoon over Kerala during the middle of week 2.

(b) Guidance from Medium-Range NWP models:

Various deterministic and ensemble models are indicating low pressure area over southwest and adjoining central BoB during next 2 days with no significant intensification thereafter. However, IMD GFS and BFS are indicating the existing well marked low pressure area over southwest & adjoining westcentral BoB to move gradually northeastwards and intensify into a depression over eastcentral & adjoining westcentral BoB around 16th May with northeastwards movement towards Myanmar as a depression. Deterministic models are also indicating likely formation of an upper air cyclonic circulation over southeast AS during middle of week 1 and another over central parts of south AS during first half of week 2.

(c) Climatological Guidance:

Climatologically, during the forecast period, the daily probability of cyclogenesis is about 4-10% based on the data during the period 1891-2000. During 1961-2024, there have been 74 cyclonic disturbances (maximum sustained wind speed ≥ 17 kt (31 kmph)) that developed over the North Indian Ocean with 52 over the BoB, 21 over the AS and 1 over the land in the Month of May. Tracks of cyclonic disturbances during 1961-2024 are presented in Fig. 2.

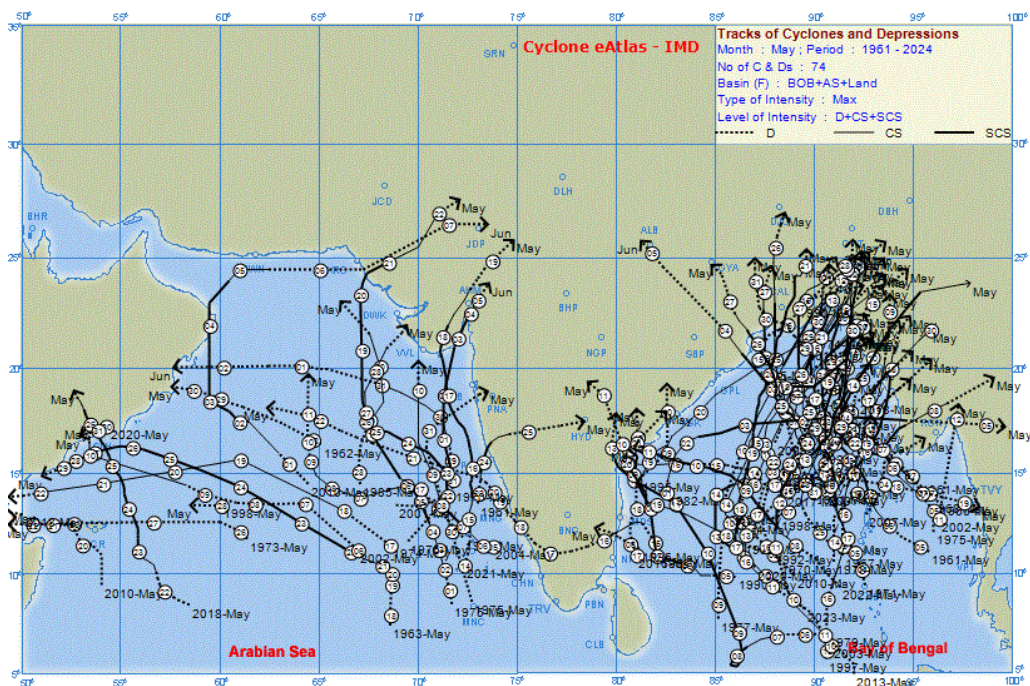


Fig. 2: Tracks of cyclonic disturbances (maximum sustained wind speed ≥ 17 kt (31 kmph)) during 1961-2024

III. Inference:

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

- (a) the existing well marked low pressure area over southwest & adjoining westcentral BoB is very likely to move northeastwards during next 2 days. There is also low probability of it's intensification into a depression over central Bay of Bengal during the first half of week 1 preferably around 16th May 2026. There is also likelihood of an upper air cyclonic circulation/ low pressure area over southeast Arabian Sea during middle of week 1.
- (b) there is likelihood of development of another upper air cyclonic circulation / low pressure area over south Arabian Sea during first half of week 2.

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

Forecast issued:

The extended range outlook issued on 30th April for week 2(08.05.2026-14.05.2026) indicated no probability of cyclogenesis over the North Indian Ocean during the entire forecast period. However, it indicated likelihood of the development of an upper-air cyclonic circulation/low pressure area over the southeast Arabian Sea during week 2. There is also a likely development of an upper-air cyclonic circulation over the south Bay of Bengal during week 2.

The extended range outlook issued on 07th May for week 1(08.05.2026-14.05.2026) indicated likelihood of development of an upper-air cyclonic circulation/low pressure area over southwest and adjoining areas of westcentral and southeast Bay of Bengal during second half of week 1. There is a low probability of cyclogenesis over the southwest & adjoining westcentral Bay of Bengal during the second half of week 1 and first half of week 2, preferably during 13-16 May 2026.

Realized weather:

- (a) An upper air cyclonic circulation formed over south Andaman Sea & neighbourhood on 08th May and became less marked on 9th May.
- (b) Another upper air cyclonic circulation formed over Comorin area & neighbourhood on 08th May. It lay over Gulf of Mannar and adjoining Sri Lanka on 09th May. Under its influence, a low-pressure area formed at 0000 UTC of 11th May over southwest Bay of Bengal off north Sri Lanka coast. It moved nearly northwards over southwest Bay of Bengal and became a well-marked low pressure area over the southwest and adjoining westcentral Bay of Bengal at 0300 UTC of 13th May and persisted over the same region on 14th May.
- (c) An upper air cyclonic circulation formed over southeast Arabian Sea & adjoining Lakshadweep off Kerala coast on 09th May and became less marked on the 10th May.
- (d) Another upper air cyclonic circulation lay over southeast Arabian Sea and Lakshadweep Islands area adjoining Kerala coast on 11th May and became less marked on the next day, the 12th May.

Thus, the formation of an upper air cyclonic circulation over southeast AS and over south BoB was predicted well in one week forecast and the formation of a low pressure area over southwest BoB and adjoining areas of westcentral and southeast BoB was predicted 1 week in advance. However, no cyclogenesis (formation of depression) occurred over the region during the specified week. Thus, cyclogenesis over southwest BoB towards the end of week 1 was not realized.

NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 30th April-06th May, 2026 is presented in **Fig. 2**.

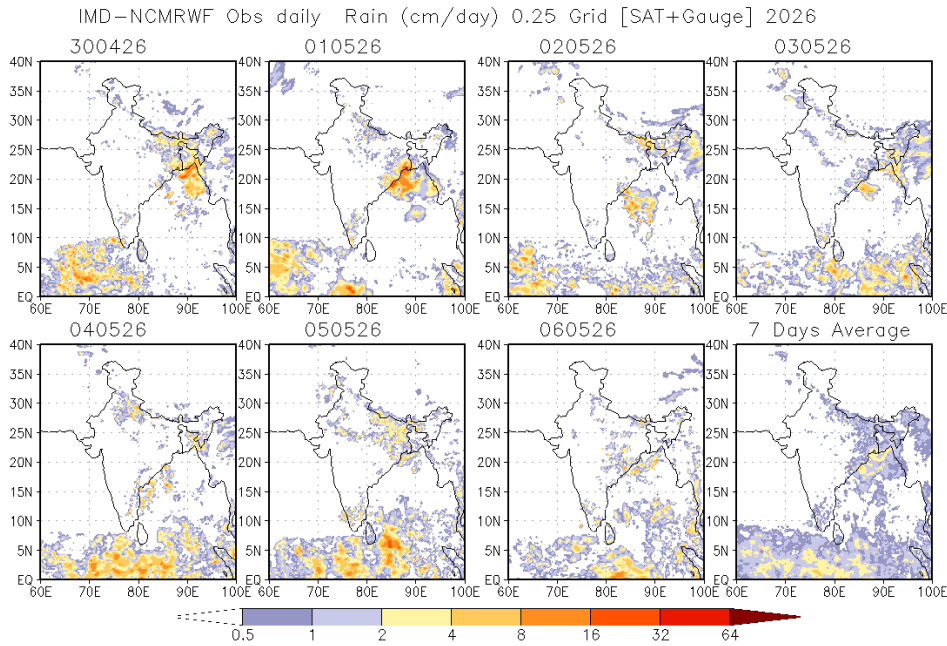


Fig. 2: NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 30th April-06th May, 2026

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: 21.05.2026