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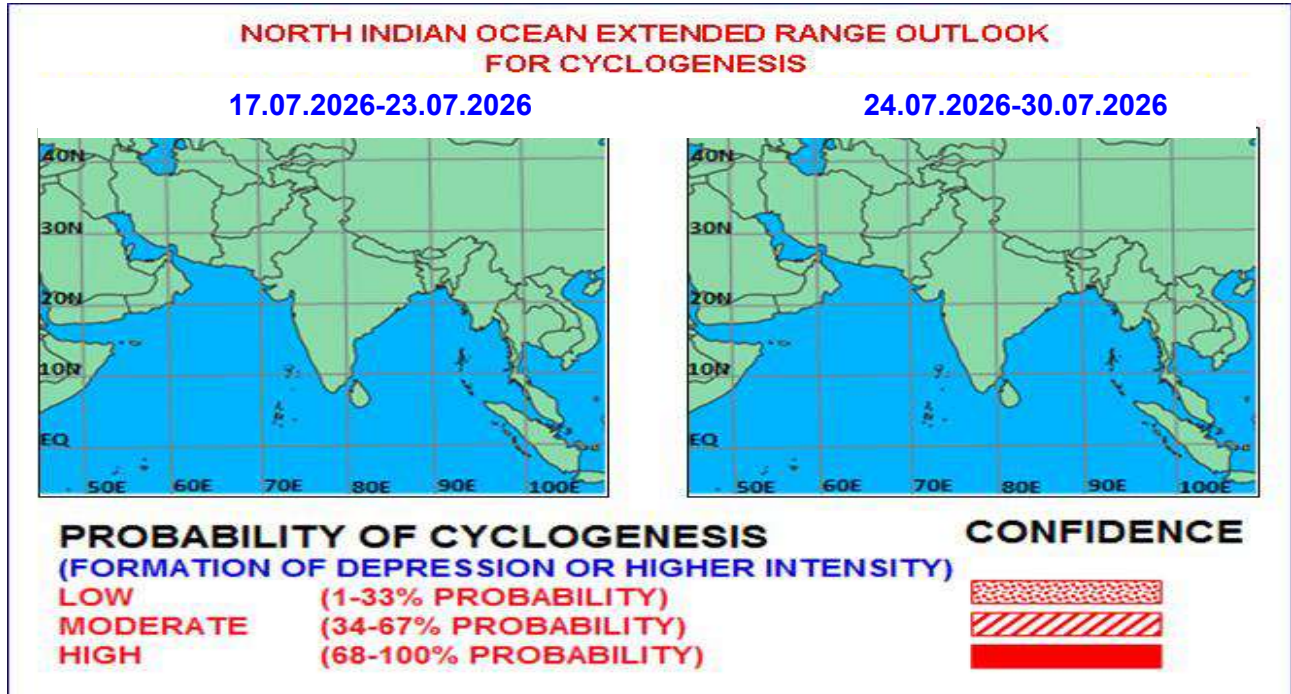


Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various models (ECMM, GEFSV12, BoMM, NCMRWF) indicates that the MJO is currently in Phase 8, with an amplitude exceeding 1. It is likely to remain in the same phase with looping movement and amplitude remaining more than 1 till the middle of week 2. Thereafter, it is likely to enter into phase 1 with amplitude becoming less than 1.

The guidance from NCICS model indicates prevalence of no convectively coupled equatorial wave over the region during next 2 weeks. During week 1, the model indicates prevalence of weak westerly wind anomaly (1-3 mps) over Bay of Bengal (BoB) and weak easterly wind anomaly (1-3 mps) over Eastern parts of India (Odisha-West Bengal). Over the Arabian Sea, weak easterly wind anomaly (1-3 mps) is likely to prevail over South Arabian Sea (AS) and weak westerly wind anomaly over North AS during week 1. These features indicate weakening of seasonal southwest monsoonal winds over the AS during week 1. During week2, the model indicates no significant anomalous winds over the AS. However, during week 2, strengthening of westerly wind anomaly is indicated over the central & south BoB.

El Niño conditions prevail over the equatorial Pacific Ocean, with sea surface temperature (SST) anomalies remaining above normal across the central and eastern equatorial Pacific. These conditions are expected to strengthen further during the Southwest Monsoon season. Forecasts from the Monsoon Mission Coupled Forecast System (MMCFS) also indicate a continued strengthening of El Niño conditions throughout the Southwest Monsoon season.

Neutral Indian Ocean Dipole (IOD) conditions prevail over the Indian Ocean. Forecasts from the Monsoon Mission Coupled Forecast System (MMCFS) indicate that these neutral IOD conditions are likely to persist throughout the Southwest Monsoon season

Model Guidance:

(a) Guidance from Extended Range models:

During week 1, the 850 hPa mean wind field forecast of IMD Extended Range model (MME CFS-V2) indicates strong seasonal southwesterly winds over south & central AS and entire BoB, with a weak upper-air cyclonic circulation over North Odisha-West Bengal during week 1. During week 2, the model indicates similar features in the mean 850 hPa wind field.

The corresponding wind anomaly at 850 hPa pressure level indicates development of an east-west oriented extended anticyclonic circulation over central AS and an anomalous cyclonic circulation over northwest BoB off Odisha-West Bengal coasts. Similar features are seen during week 2 over the AS. However, over the BoB an east-west oriented trough is indicated extended from South China Sea upto eastcentral BoB across Myanmar during week 2. Above normal precipitation is indicated over eastern parts of India (Bihar-Jharkhand-West Bengal, Odisha) and also over Nepal & Bhutan. During week 2, above normal rainfall activity is indicated over central India and parts of central BoB.

IMD CFSV2 is indicating 40-50% probability of cyclogenesis over Indo-Gangetic Plains and Himalayan region during week 1 and 30-40% probability of cyclogenesis is indicated over eastern parts of India during week 2.

The NCMRWF ERF model indicates weaker than normal monsoonal southwesterlies over the AS during week 1 and week 2. It is also indicating anomalous cyclonic circulation over the eastern parts of India (Odisha-West Bengal) during week 1. During week 2, an anomalous cyclonic circulation is indicated over central BoB and another over eastern parts of India (Uttar Pradesh). Precipitation field indicates above normal rainfall activity over eastern parts of India (Odisha-West Bengal-Jharkhand-Bihar-North Chhattisgarh region) during week 1. Similarly, during week 2, above normal rainfall activity is indicated over central parts of India (East Madhya Pradesh-Chhattisgarh-South Uttar Pradesh), Bangladesh and North BoB.

The sub-seasonal forecast of ECMWF shows no probability of cyclogenesis till middle of week 2. Thereafter, the model is indicating low (5-10%) probability of cyclogenesis during 27th July to 3rd August over northeast AS off Gujarat coast. The ECMWF ensemble forecast indicates high (70-80%) probability of cyclogenesis over northwest BoB and adjoining West Bengal-Jharkhand region during next 2 days.

Climatologically, there is around 15-20% probability of cyclogenesis over the North Indian Ocean region during the forecast period. The cyclogenesis forecast probability by ECMWF over BoB is higher than the climatological probability.

(b) Guidance from Medium-Range NWP models:

Most of the deterministic models (IMD GFS, BFS, NCEP GFS, ECMWF, NCUM) are indicating a low-pressure area over northwest BoB on 16th July. It is indicated to move slowly nearly northwestwards during next 2-3 days. Models (GFS group, ECMWF, NCUM) are also indicating a fresh upper air cyclonic circulation over eastern parts of India (Odisha-West Bengal) around 24th July with west-northwestwards movement during subsequent 2-3 days. AI Models (ECAI, GFS AI) are indicating existing well marked low pressure area over northwest BoB to move slowly northwestwards and become less marked during next 24 hours. These models are also indicating development of a fresh upper air cyclonic circulation/ low pressure area over central parts of India around 24th July and another over north BoB around 27th July. NCMRWF AI models (Pangu Weather, GraphCast & FourCast) are also indicating similar features.

II. Operational extended forecast for the next two weeks:

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

- (a) the existing Well Marked Low Pressure area over northwest Bay of Bengal and adjoining North Odisha-West Bengal is likely to move slowly northwestwards & weaken gradually during next 2 days.
- (b) an upper-air cyclonic circulation is likely to develop over Bihar & neighbourhood during first half of week 2 (around 24th July).
- (c) there is a likelihood of development of a fresh upper-air cyclonic circulation over the northwest Bay of Bengal during later half of week 2 (around 27th July).

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

Forecast issued:

- (i) The extended range outlook issued on 2nd July for week 2 (10.07.2026-16.07.2026) indicated the formation of an upper-air cyclonic circulation over the north BoB towards the first half of week 2.
- (ii) The extended range outlook issued on 9th July for week 1 (10.07.2026-16.07.2026) indicated
 - (a) existing Well Marked Low Pressure area over southwest Uttar Pradesh & neighbourhood is very likely to move slowly northeastwards and weaken gradually during the next 24 hours.
 - (b) likelihood of development of an upper-air cyclonic circulation over eastern parts of India (Bihar & neighbourhood) during second half of week 1.
 - (c) likelihood of development of a fresh upper-air cyclonic circulation over the northwest Bay of Bengal and adjoining areas of West Bengal & Odisha coasts towards the end of week 1.

Realised:

- (a) A low-pressure area formed over northwest BoB and adjoining north Odisha-West Bengal coasts at 0300 UTC of 2nd July. It became a Well-Marked low Pressure Area over Northwest BoB & neighbourhood at 0000 UTC of the 4th July, 2026. It moved west northwestwards and concentrated into a Depression over northwest BoB and adjoining areas of North Odisha-West Bengal coasts at 0300 UTC of 5th July, 2026. Continuing to move further west-northwestwards, it weakened into a well marked Low Pressure area over east Madhya Pradesh and neighbourhood at 0000 UTC of 7th July, 2026. Continuing to move further west-northwestwards, it lay over southwest Uttar Pradesh and neighbourhood at 0300 UTC of 9th July. It weakened into a Low Pressure Area over northern parts of central Uttar Pradesh at 0000 UTC of 10th July and became less marked at 0000 UTC of 11th July .
- (b) An upper air cyclonic circulation formed over North Bay of Bengal & adjoining South Bangladesh on 13th July. Under its influence a Low Pressure Area formed over Northwest Bay of Bengal off north Odisha-West Bengal coasts at 0000 UTC 15th July. The system intensified into a Well-marked low pressure area over the same region at 0300 UTC of 16th July, 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: 23.07.2026