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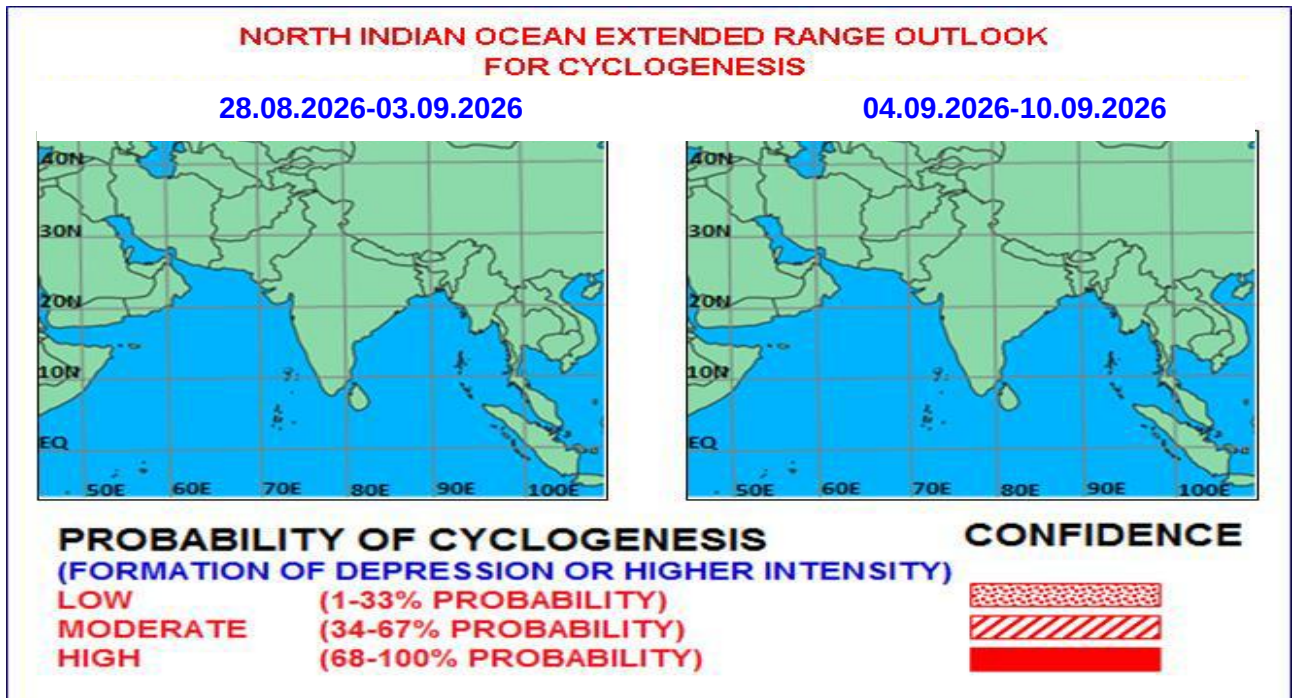


Fig. 1: Graphical Cyclogenesis over the North Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various numerical models indicates that the MJO is currently in Phase 6 and likely to enter Phase 7, with amplitude more than 1 during the next 1-2 days. Thereafter, it is likely to move very slowly eastwards across phases 7 and 8 with a gradually decreasing trend in amplitude, becoming less than 1 during week 2. Thus, MJO is not likely to support enhancement of any convective activity over the North Indian Ocean (NIO), including the Bay of Bengal (BoB) and the Arabian Sea (AS) during the entire forecast period.

The guidance from the NCICS model indicates the prevalence of a weak westerly wind anomaly (1-3 mps) over central & adjoining south BoB, central parts of India and parts of southeast AS, along with the presence of an elongated westwards-moving Equatorial Rossby wave (ERW) extending from south Andaman Sea to southeast AS during the beginning of week 1 (27th -28th August). Thereafter, the model indicates a gradual increase in westerly wind anomaly over central & south BoB (7-9 mps) along with ERW and prevalence of easterly wind anomaly (7-9 mps) over north & adjoining eastern parts of India with the signature of Kelvin waves (KW). These features indicate a favourable environment for development of an upper-air cyclonic circulation/ low pressure over north BoB towards the end of week 1 (during 3rd to 8th September). Subsequently, during week 2, a westerly wind anomaly (1-3 mps) is predicted over most parts of north & central BoB, Indian mainland and north & adjoining central AS and an easterly wind anomaly is indicated over the region to the south. Thus, towards the end of week 2, conditions will not become favourable for enhancement of any convective activity over the NIO.

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 climatological probability of cyclogenesis, valid for the duration of the next two weeks, ranges between 6-7%.

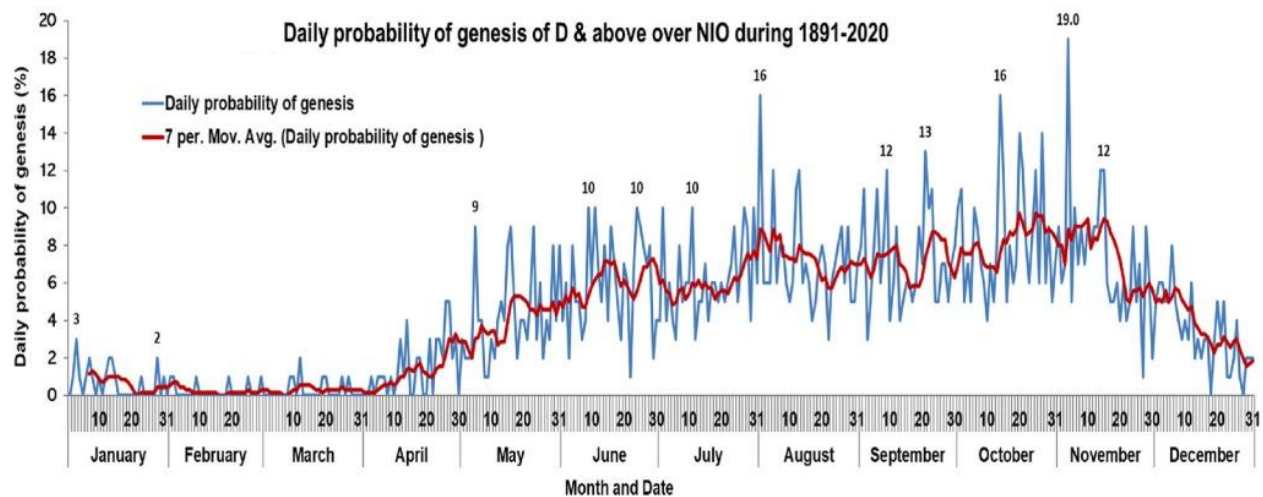


Fig. 2 Climatological daily probability of cyclogenesis over NIO region

A total of 56 cyclonic disturbances (maximum sustained wind speed (MSW) ≥ 31 kmph) developed over the BoB (Fig 2[a]) and 11 over AS (Fig 2[b]). The total frequencies of the storms exceeding intensity of depression, cyclonic storm and severe cyclonic storm in a specified box are plotted in Fig.3(c) with three different numbers placed vertically downward.

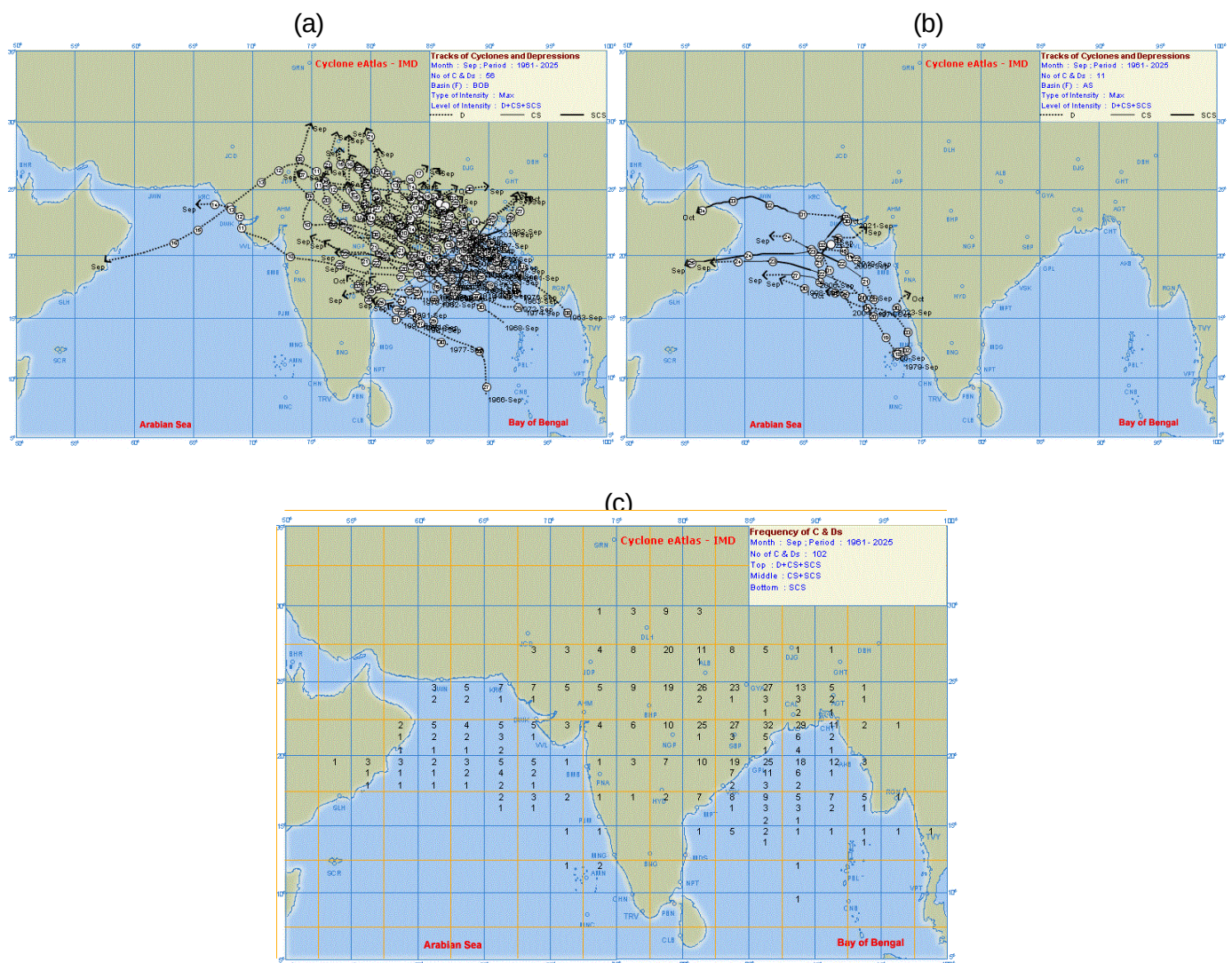


Fig. 3: Cyclonic disturbances in September during 1961-2025, over Bay of Bengal (total 56) and (b) Arabian Sea (total 11). (c) their frequencies in the month of September over NIO region.

II. Model Guidance:

(a) Guidance from Extended Range models:

The forecast of the mean wind field at 850 hPa pressure level from IMD Extended Range model (MME CFS-V2) indicates the western end of the seasonal monsoon trough along the foothills of the Himalayas and the eastern end dipping southward towards northwest BoB, with an embedded upper-air cyclonic circulation over northwest BoB and adjoining West Bengal - north Odisha coasts during week 1. Corresponding anomaly field indicates an anomalous upper-air cyclonic circulation over northeast & adjoining eastcentral BoB off south Bangladesh-Myanmar coasts during the week. The strength of the cross-equatorial Somali jet is likely to be weaker than normal as there is an easterly wind anomaly over south AS during week 1. During week 2, the seasonal monsoon trough continues to be in a similar pattern, as the eastern end is likely to be embedded with a prominent upper-air cyclonic circulation over north Odisha. The corresponding anomaly field indicates a prominent anomalous upper-air cyclonic circulation over northwest BoB. There is a strengthening of the monsoonal westerly-southwesterly winds over the entire AS except a feeble anticyclonic flow over southeast AS off the Kerala coast during week 2.

The model indicates a zone with prominent moderate probability (40-50%) of cyclogenesis oriented along the eastern end of the monsoon trough during both the weeks. However, there is a higher probability (60-70%) of cyclogenesis over an area over east Uttar Pradesh and adjoining east Madhya Pradesh during the first week.

ECMWF ensemble is not indicating any probable zone for cyclogenesis (formation of depression) over the NIO region till 6th September, 2026. ECMWF sub-seasonal model is not indicating any probability of cyclogenesis during the consecutive two weeks from 31st August to 14 September, 2026.

(b) Guidance from Medium-Range NWP models:

ECMWF is indicating development of an upper-air cyclonic circulation over the north Bay of Bengal off West Bengal-Bangladesh coasts around 27th August. It is indicated that under its influence, a low pressure area is likely to form over the same region. It is likely to move very slowly northwestwards over the same region for some time and persist over northwest BoB and adjoining West Bengal-North Odisha coasts till 2nd September and then move west-northwestwards towards South Uttar Pradesh across Jharkhand till 4th September. NCEP GFS is indicating development of a low-pressure area over northwest BoB and adjoining Odisha-West Bengal coasts on 29th August. A fresh another low-pressure area is indicated over northeast BoB off south Bangladesh coast on 31st with nearly west-northwestward movement and intensification into a depression over northwest BoB and adjoining West Bengal-Odisha coasts on 1st September. Thereafter, with a west-northwestward movement across Gangetic West Bengal & adjoining North Odisha, it is likely to weaken into a low-pressure area over Jharkhand and neighbourhood on 3rd September. The remnant low pressure area is indicated to move west-northwestwards towards East Rajasthan till 6th September. IMD GFS is indicating development of a low pressure area over north and adjoining Bangladesh coast on 1st September with north-northwestwards movement till 3rd September and nearly west-northwestwards movement thereafter till 6th September towards East Madhya Pradesh. BFS is indicating a low-pressure area over northwest BoB off West Bengal-Odisha coast on 30th August. It is indicated to move slowly north-northwestwards till 3rd September towards Gangetic West Bengal and west-northwestwards thereafter towards Jharkhand. NCUM is indicating a low pressure area over northwest BoB off the West Bengal coast on 30th August with west-northwestward movement towards southeast Uttar Pradesh across Jharkhand till 4th September.

Pangu Weather is indicating a low-pressure area over northwest-adjoining westcentral BoB on 29th August with nearly westwards movement towards the Odisha coast. Further, it is indicated to persist over Odisha coast till 3rd September. The FourCast Net is indicating an extended low pressure area over Odisha coast during 29th August till 3rd September, whereas the GraphCast is indicating a low pressure area over eastcentral BoB on 29th August with intensification into a depression over north & adjoining central BoB on 30th August. It is likely to move west-northwestwards, intensify further and cross Odisha

coast on 31st August. It is indicated to move west-northwestwards across North Odisha, North Chhattisgarh, Northeast Madhya Pradesh towards south Uttar Pradesh till 3rd September as a depression. IMD GFS AI model is indicating a low pressure area over northwest BoB and adjoining West Bengal coast on 31st August with west-northwestward movement across Jharkhand & adjoining Bihar towards East Uttar Pradesh till 6th September. ECAI is indicating a low-pressure area over northwest BoB on 28th August with west-northwestwards movement across Gangetic West Bengal & adjoining North Odisha, Jharkhand and South Uttar Pradesh & adjoining North Madhya Pradesh till 2nd September. NCEP GFS AI model is indicating a low pressure area over north BoB on 30th August with intensification into a depression on 31st August. It is indicated to cross West Bengal-Bangladesh coasts as a depression and move west-northwestwards across Gangetic West Bengal & adjoining North Odisha and Jharkhand till 3rd September.

Overall, there is a very good consensus among various deterministic models including the AI models with respect to the formation of a low pressure area over North BoB around 29th August with west-northwestward movement towards East Uttar Pradesh across Gangetic West Bengal & adjoining North Odisha and Jharkhand till at least 2nd/ 3rd September. However, some models are also indicating formation of a depression around 1st September.

III. Operational extended forecast for the next two weeks:

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

- a) Existing low-pressure area over southeast Uttar Pradesh & neighbourhood is likely to persist over the same region during the next 24 hours.
- b) Under the influence of the existing upper-air cyclonic circulation over northwest Bay of Bengal & adjoining Gangetic West Bengal-north Odisha coasts, a low pressure area is likely to form over the same region in the middle of the first week around 29th August, 2026. It is likely to move slowly west-northwestwards across Gangetic West Bengal-north Odisha & Jharkhand during the subsequent 2 days.
- c) Another fresh upper-air cyclonic circulation/low pressure area is likely to form over north Bay of Bengal during the first half of week 2.

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

Forecast issued: The extended range outlook issued on 13.08.2026 for week 2 (21.08.2026-27.08.2026) indicated that a fresh upper air cyclonic circulation/low pressure area was likely to form over the north Bay of Bengal off Bangladesh-West Bengal coasts during the second half of week 2.

The extended range outlook issued on 20.08.2026 for week 1 (21.08.2026-27.08.2026) indicated that

(a) the existing well-marked low-pressure area over northeast Madhya Pradesh & neighborhood was likely to weaken over the same region during the next 2 days. However, associated upper-air cyclonic circulation was likely to prevail over East India & neighborhood during the subsequent 3-4 days.

(b) a fresh upper-air cyclonic circulation was likely to form over the north Bay of Bengal towards the end of week 1 (during 25th – 27th August).

Realised: A depression formed over coastal West Bengal at 0300 UTC of 13th August 2026, moved west-northwestwards across Gangetic West Bengal & Jharkhand and weakened into a Well Marked Low Pressure Area over Jharkhand at 1200 UTC of 14th August 2026. It further weakened into a Low Pressure Area over northeast Madhya Pradesh & neighbourhood at 0000 UTC of 21st August 2026 and became less marked at 0000 UTC of 23rd August 2026.

An upper air cyclonic circulation formed over the Westcentral and adjoining Northwest Bay of Bengal & north Andhra Pradesh – South Odisha coasts at 0000 UTC of 21st August, 2026. It merged with the cyclonic circulation over north Bay of Bengal off West Bengal-Bangladesh Coasts at 0300 UTC of 22nd August, 2026.

Another upper air cyclonic circulation formed over central Myanmar & neighborhood at 0000 UTC of 22nd August. Under its influence, a Low-Pressure Area formed over the Northwest Bay of Bengal & neighborhood at 0000 UTC of 23rd August. It moved northwestwards across Gangetic West Bengal, north Odisha, Jharkhand, Northeast Madhya Pradesh and lay over southeast Uttar Pradesh & neighborhood at 0300 UTC of 27th August 2026.

Another fresh upper air cyclonic circulation formed over Westcentral - Northwest Bay of Bengal and adjoining north Andhra Pradesh - South Odisha coasts at 0300 UTC of 26th August 2026. It lay over south Bangladesh & adjoining Gangetic West Bengal at 0000 UTC of 27th August 2026.

In case of Arabian Sea, an upper air cyclonic circulation lay over Konkan & adjoining Eastcentral Arabian Sea at 0300 UTC of 27th August 2026.

Hence, it is inferred that the formation of upper air cyclonic circulation, low pressure area & further intensification was well predicted. However, further intensification and the formation of a depression on 13th August was not indicated in the extended range outlook.

NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from, 20th – 26th August, 2026 are presented in **Fig. 4**.

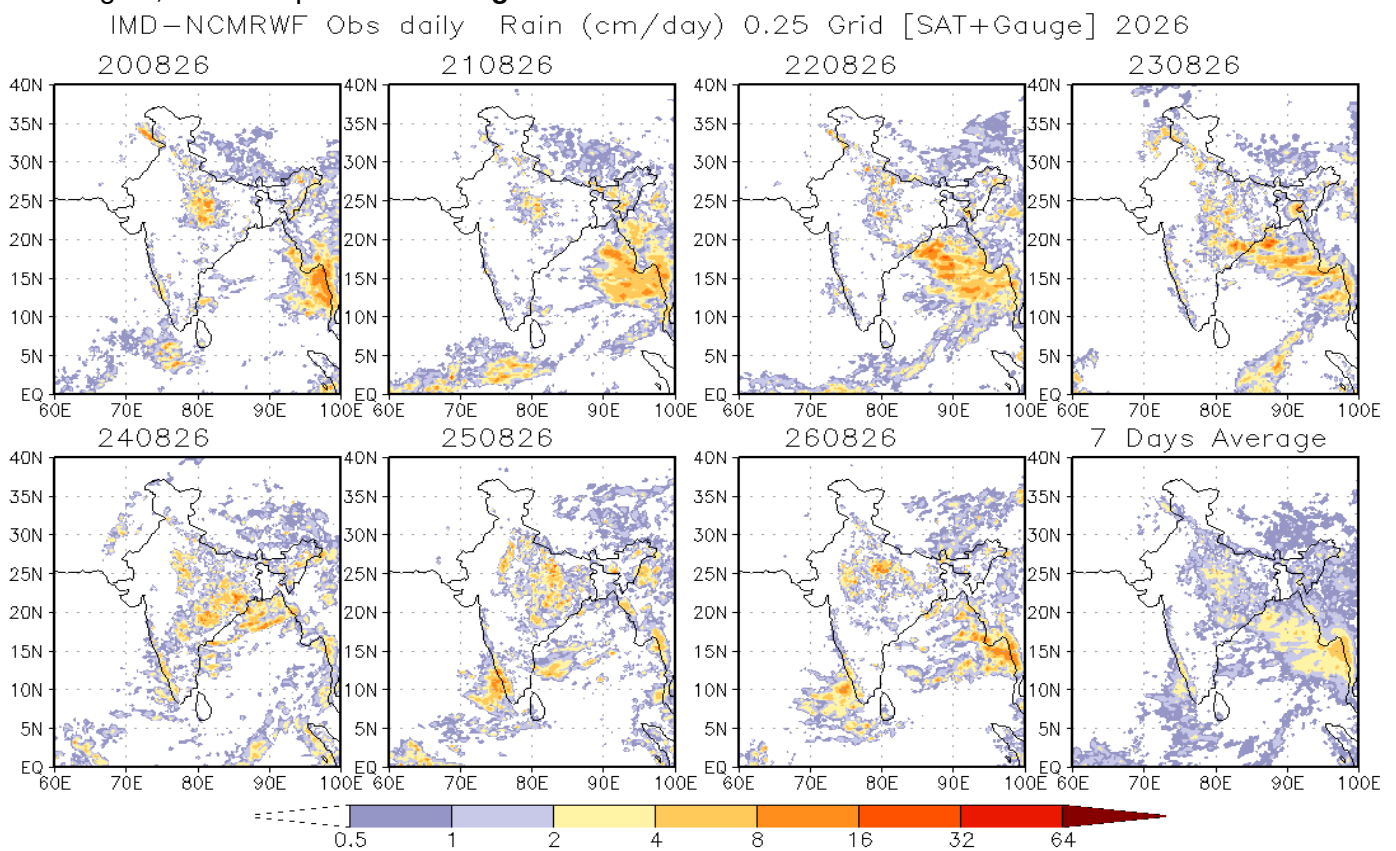


Fig.4: NCMRWF-IMD satellite gauge merged data plots of realized 24 hours accumulated rainfall from 20th to 26th August, 2026.

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: 03.09.2026