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Ministry of Earth Sciences
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Issued on 27.11.2025

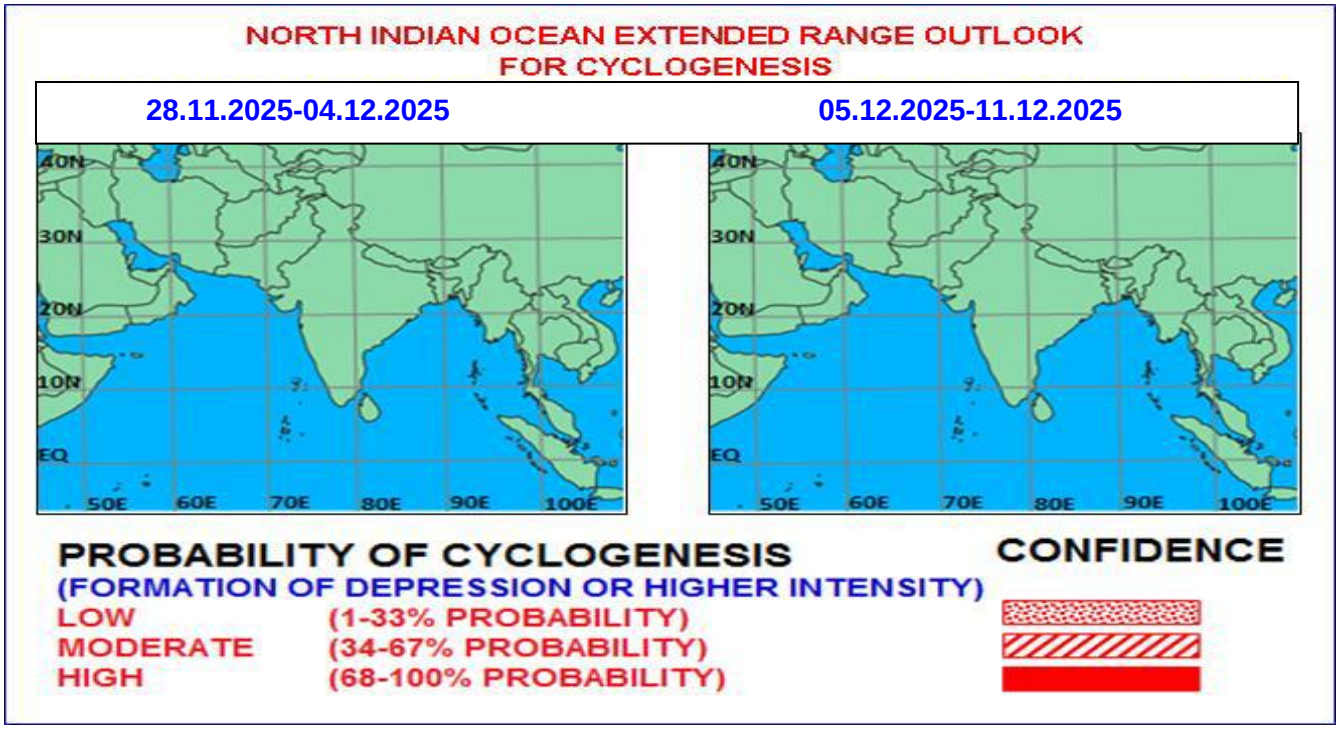

Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. Environmental features:

The guidance from various models indicates that the Madden Julian Oscillation (MJO) index is presently in phase 7 with amplitude more than 2 in the phase diagram. It is very likely to remain in phase 7 with a slow eastward propagation and decreasing amplitude during entire forecast period. Thus, the MJO is not favourable for enhancement of convective activities over the North Indian Ocean (NIO) during the entire forecast period.

The guidance from NCICS model indicates westerly wind anomaly (7-9 mps) alongwith prevalence of Equatorial Rossby Wave (ERW) and low frequency background wave (LW) over the southern parts of the Bay of Bengal (BoB) and adjoining southeast Arabian Sea (AS) and easterly wind anomaly (3-5 mps) to its north over southwest BoB off Tamil Nadu coast during 27th to 28th November. Kelwin wave (KW) is also approaching from southeast Arabian Sea (AS) from 27th November. Similar features are likely to continue till 2nd December. Thus, equatorial waves will support enhancement of convective activity in association with cyclonic storm Ditwah over coastal areas of Sri Lanka & adjoining southwest BoB during week 1. During week 2, strong westerly wind anomaly (7-9 mps) would persist till middle of week 2 and decrease thereafter. ERW will persist over south BoB till end of week 2. Weak easterlies are also seen over the northern parts of BoB. Thus, during week 2, equatorial waves may not support any cyclogenesis over the BoB. Later half of week 2 also marks the prevalence of normal easterly flow over the south BoB.

The latest weekly sea surface temperature SST departure over NINO 3.4 region is -0.93^{o}C (23rd November update), indicating a weak La Niña conditions. Negative IOD conditions (IOD index with a weekly value of -0.6°C on 23rd November) are likely to continue during November - December 2025.

II. Model guidance:

(a) Guidance for Extended Range models:

Mean wind field at 850 hPa of IMD ERF (CFS V-2) model is indicating prevalence of an upper air cyclonic circulation over southwest BoB off Sri Lanka & Tamil Nadu coasts in association with cyclonic storm Ditwah during week 1. Respective anomaly field is indicating a feeble cyclonic anomaly over Westcentral BoB & adjoining Southwest BoB off Andhra Pradesh-tamil Nadu coasts during week 1. During week 2, the 850 hPa mean anomaly field is indicating emergence of a cyclonic circulation into south Adaman Sea towards the end of week. However, mean wind field is not indicating any cyclonic circulation over the region. Similar features are seen in the NCMRWF extended range model.

IMD CFS V-2 model is indicating 70-80% probability of cyclogenesis over southwest BoB off South Sri Lanka coast in association with TC Ditwah during week 1. During week 2, 10-20% probability of cyclogenesis over south Andaman Sea upto South Sri Lanka.

ECMWF ensemble forecast indicates a prominent zone of cyclogenesis (80-90%) over southwest BoB off Sri Lanka coast with nearly northwards movement along Sri Lanka- Tamil Nadu-Andhra Pradesh coasts till 3rd December. The sub-seasonal range forecast of ECMWF does not indicate any probable cyclogenesis zone thereafter till 15th December.

(b) Guidance from Medium-Range NWP models:

During week 1, most of the deterministic models are indicating the TC Ditwah to move nearly northwards along the Sri Lanka coast with intensification upto cyclonic storm stage. Models are also indicating gradual weakening as the system moves northwards towards the Tamil Nadu coast. During week 2, NCUM (G) and NCEP GFS are indicating emergence of an upper air cyclonic circulation/ low pressure area over South Andaman Sea during later part of week 2.

III. Inference:

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

(a) The **Cyclonic Storm Ditwah** over southwest Bay of Bengal and adjoining Sri Lanka coast is very likely to continue to move north-northwestwards across Sri Lanka coast & adjoining southwest Bay of Bengal and reach over southwest Bay of Bengal near North Tamil Nadu, Puducherry and adjoining south Andhra Pradesh coasts by 30th November early morning hours.
(b) There is low probability of emergence of an upper air cyclonic circulation over south Andaman Sea during middle of week 2.
(c) There is no probability of fresh cyclogenesis (formation of depression) over the North Indian Ocean during the forecast period.

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

The extended range outlook issued on 13th November for week 2(14.11.2025-20.11.2025) indicated low probability formation of depression over south BoB around 23rd November. The extended range outlook issued on 20th November for week 1 (14.11.2025-27.11.2025) indicated high probability of formation of depression over central parts of south Bay of Bengal around 24th

November 2025, under the influence of an upper air cyclonic circulation over central parts of Strait of Malacca. Thereafter, was indicated to intensify further over southwest Bay of Bengal during subsequent 48 hours.

Actually, under the influence of upper air cyclonic circulation over Malacca Strait, a depression formed over Strait of Malacca on 25th November. It intensified into the cyclonic storm Senyar over the same region on 26th November. It followed an anticlockwise looping track over Malacca Strait and adjoining areas and weakened into a depression on 27th November/ 0600 UTC and thereafter moved eastwards towards Malaysia. Though the likely formation of depression around 24th November could be detected, however there was large spatial error in area of prediction. It mainly occurred because there were multiple vorticity centres over the south BoB embedded in the ITCZ which were competing with each other which led to the back to back formation of cyclonic storm Senyar over Malacca Strait and cyclonic storm Ditwah over southwest BoB and adjoining Sri Lanka coast.

The NCMRWF-IMD satellite gauge merged data plot of 24-hour accumulated rainfall from 20th to 26th November 2025 is presented in **Fig.2.**

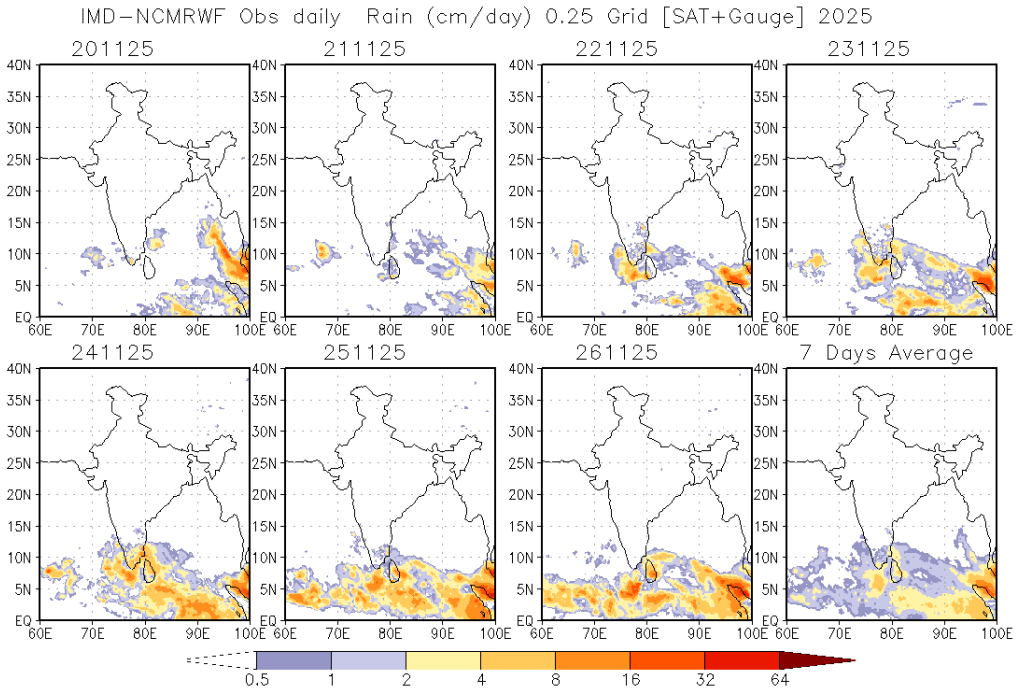

Fig. 2: NCMRWF-IMD satellite gauge merged data plots of 24-hour accumulated rainfall from 20th to 26th November 2025

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, 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: 04.12.2025