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

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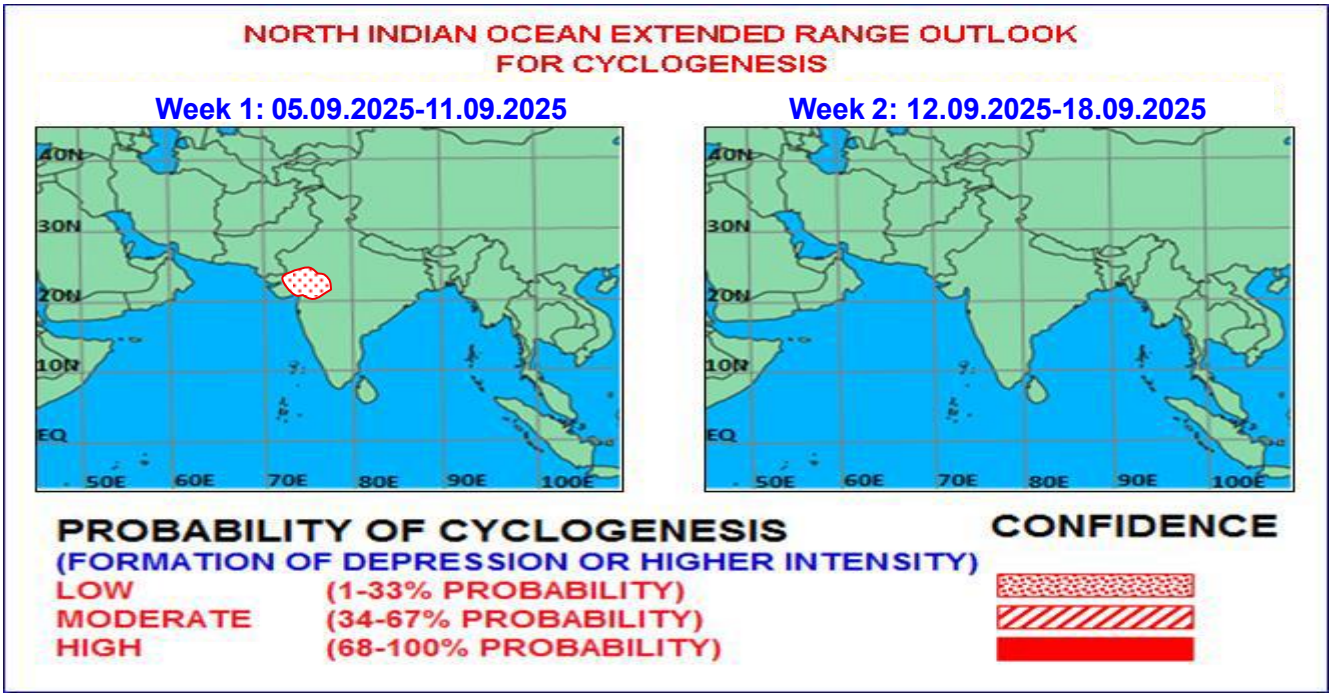


Fig. 1: Graphical Cyclogenesis over the north Indian Ocean during the next two weeks

I. **Environmental features:**

The guidance from various numerical models indicates that Madden Julian Oscillation (MJO) is currently in phase 2 with amplitude close to 1. It is likely to continue in same phase with gradually decreasing trend in amplitude till first half of week 2. Thereafter it will move rapidly across phases 8 & 1. Thus, MJO is likely to support enhancement of convective activity over the Arabian Sea (AS) region till first half of week 2. As the low pressure area/ cyclonic circulation is expected to move towards Gujarat during next 48 hours, the MJO will be favourable for maintaining/ strengthening the existing low pressure area over Gujarat.

The guidance from the NCICS CFS model indicates, westerly wind anomaly (3-5 mps) over south AS and equatorial Indian Ocean (EIO) & adjoining south Bay of Bengal (BoB) along with easterly wind anomaly (3-5mps) over north AS, central parts of India and central BoB till first half of week 2. The model is also indicating weak westerly wind anomaly (1-3 mps) over central parts of India along with weak easterly wind anomaly (1-3 mps) over Indo Gangetic plains during first half of week 1. Thus, equatorial waves are likely to support the convective activity associated with the low-pressure area over area over central India and may also support intensification of the existing low pressure area during its west northwestwards movement towards south Rajasthan and adjoining Gujarat during 5th-8th September, 2025.

Guidance from various deterministic models like NCUM(G), IMD GFS, NCEP GFS based on 0000 UTC of 04th September and models like IMD GEFS, ECMWF, ECAI, BFS & NCUM(R) based on 1200 UTC of 03rd September are indicating a low-pressure area over Chhattisgarh and neighbourhood. Most of the models are indicating the system to move west-northwestwards across Chhattisgarh, Madhya Pradesh, Rajasthan and Gujarat till 7th September. There is also a consensus among various models about further intensification of this low-pressure area into a well-marked low-pressure area over South Rajasthan adjoining north Gujarat around 8th September.

Various deterministic models (IMD GFS, NCEP GFS, ECMWF) are also indicating likely formation of an upper air cyclonic circulation over Gangetic West Bengal and neighbourhood around 8th September. Models (ECMWF, ECAI) are also indicating a fresh low pressure area over northwest and adjoining westcentral Bay of Bengal around 13th September.

The 850 hPa mean wind field as well as anomaly field of IMD ERF model is indicating a cyclonic

circulation over southwest Madhya Pradesh & adjoining east Rajasthan along with active monsoon trough with western end to the south of its normal position during week 1. The circulation in the anomaly field suggests intensification of the existing low pressure area into a well marked low pressure area / Depression on reaching Gujarat. During week 2, IMD ERF model is indicating a cyclonic circulation over east Uttar Pradesh and neighbourhood which could be due to northwestwards moving fresh cyclonic circulation/ Low pressure area over north BoB. The model is also indicating a north-south trough during week 2 over south peninsula and adjoining BoB, indicating weakening of monsoon circulation in week 2 compared to week 1. During week 2, monsoon trough is shifting to north of its normal position. Easterly anomaly over southern parts of BoB and AS during week 2 also suggest weakening of monsoon circulation over that region.

As per IMD ERF model, above average rainfall is indicated over plains of northwest India during week1 and also over Indo-Gangetic plains, northeast India & southeast peninsular India during week 2. During week 1, the model is indicating moderate to high (60-70%) probability of cyclogenesis over northwest India (Madhya Pradesh, Rajasthan and Gujarat). During week 2, IMD ERF model is indicating light to moderate (30-40%) probability of cyclogenesis over land regions over eastern parts of India (Bihar and east Uttar Pradesh) region.

ECMWF extended range model is indicating low probability (5%-10%) of cyclogenesis over northeast Arabian sea during second half of week 1 (around 11th). The model is also indicating low probability (5%-10%) of cyclogenesis over north Bay of Bengal with northwestwards movement towards Odisha coast during first half of week 2.

The 850hPa wind field of NCMRWF extended range model is also indicating a cyclonic circulation over south Rajasthan and adjoining Gujarat during week 1 and north-south trough extending form east India to westcentral Bay during week 2. The 850hPa anomaly field is also indicating a cyclonic circulation over south Rajasthan and adjoining Gujarat and another feeble cyclonic circulation over east India during week 1. The model is also indicating the anomalous cyclonic circulation over north BoB during week 2. The model is also indicating above average rainfall over south Rajasthan and Gujarat during week 1 and east & northeast India during week 2.

II. Inference:

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

(1) The existing low pressure area over central parts of India (North Chhattisgarh & adjoining East Madhya Pradesh) is likely to move west-northwestwards along the seasonal monsoon trough during next 48 hours. There is also high probability of its intensification into a well marked low pressure area over South Rajasthan & adjoining North Gujarat during middle of week 1 with low probability of its further intensification into a depression over Gujarat & neighbourhood.

(2) There is a likelihood of formation of an upper air cyclonic circulation over Gangetic West Bengal and neighbourhood during middle of week 1 (around 8th September).

(3) There is also a likelihood of formation of a fresh low pressure area over northwest & adjoining westcentral Bay of Bengal during first half of week 2 (around 13th September).

III. Anticipatory actions suggested:

1. Squally weather with windspeed reaching 45-55 gusting to 65 Kmph and rough to very rough sea conditions are very likely over northeast AS and along and off Gujarat & north Maharashtra coasts during 5th-9th September.
2. Fisherman are advised not to venture into northeast AS and along and off Gujarat & north Maharashtra coasts during 5th-9th September (Annexure-1).
3. Judicious regulations of recreational, tourism activities over Gujarat and Konkan coast during the period. Precautions may be taken by fishery officials, port authorities and disaster managers in coastal cities & towns in Gujarat & Maharashtra coasts.

Verification of forecast issued during the previous two weeks:

The forecast issued on 21st August for week 2 (29.08.2025-04.09.2025) indicated likelihood of formation of a cyclonic circulation/low pressure area over northwest Bay of Bengal off Odisha-West Bengal coasts during week 2.

The forecast issued on 28th August for week 1 (29.08.2025-04.09.2025) indicated the likelihood of formation low pressure area over the north Bay of Bengal around 3rd September, 2025.

Realized:

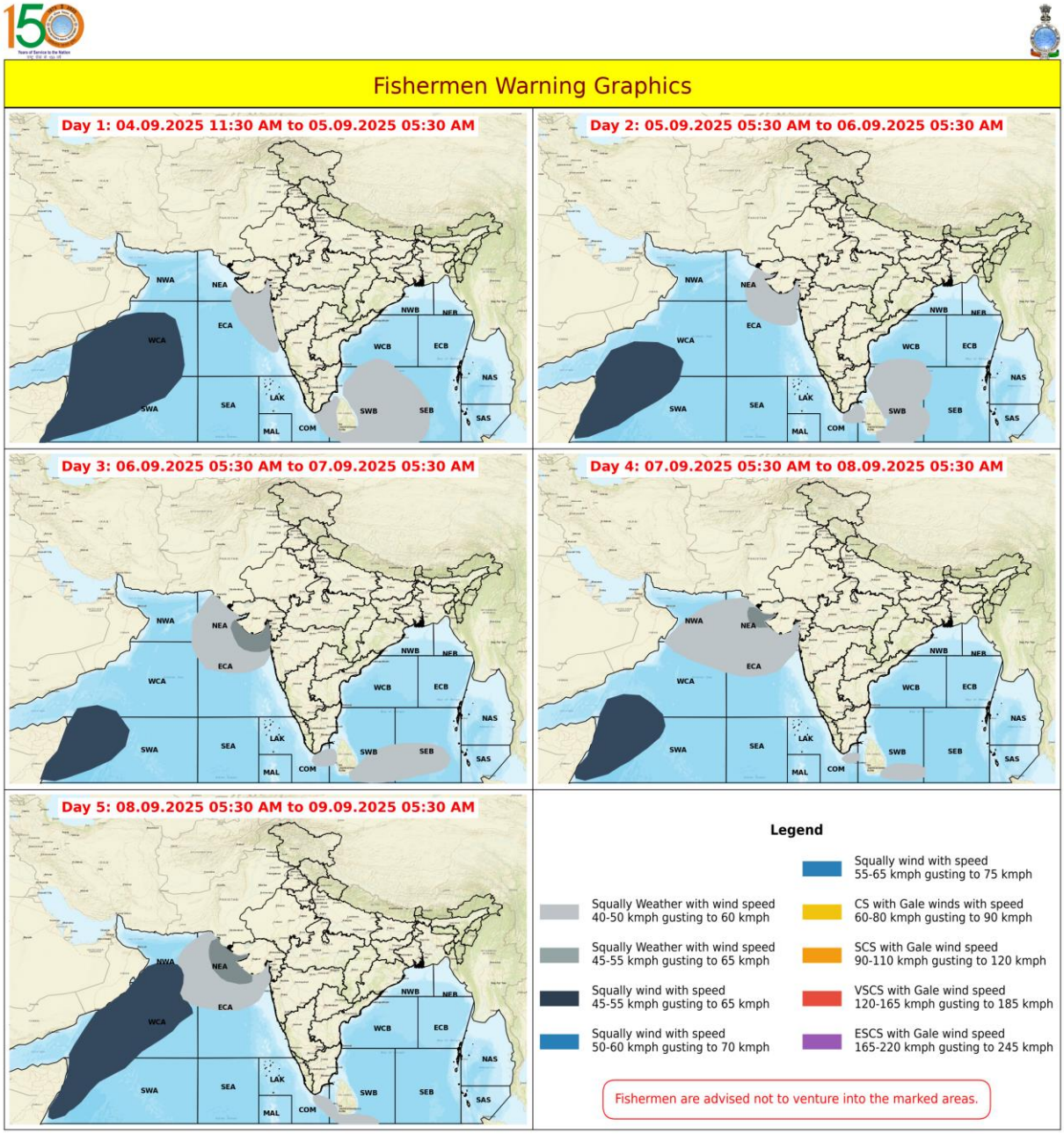
An upper air cyclonic circulation lay over northwest Bay of Bengal off West Bengal – Odisha coasts at 0300 UTC of the 31st August. Under its influence a low-pressure area formed over Northwest Bay of Bengal at 0000 UTC of 02nd Sept 2025. It became well marked low pressure area over the same region at 0000 UTC of 03rd September, 2025. It moved west northwestwards and weakened into a low-pressure area over north Chhattisgarh and neighbourhood at 0000 UTC of 04th September, 2025. Thus, Likely formation of low pressure area over northwest BoB around 3rd September could be well predicted two weeks ahead (since 21st August about 13 days in advance).

NCMRWF-IMD satellite gauge merged data plots of realized 24-hour accumulated rainfall from 28th August to 03rd September, 2025, are placed in Annexure-2.

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.

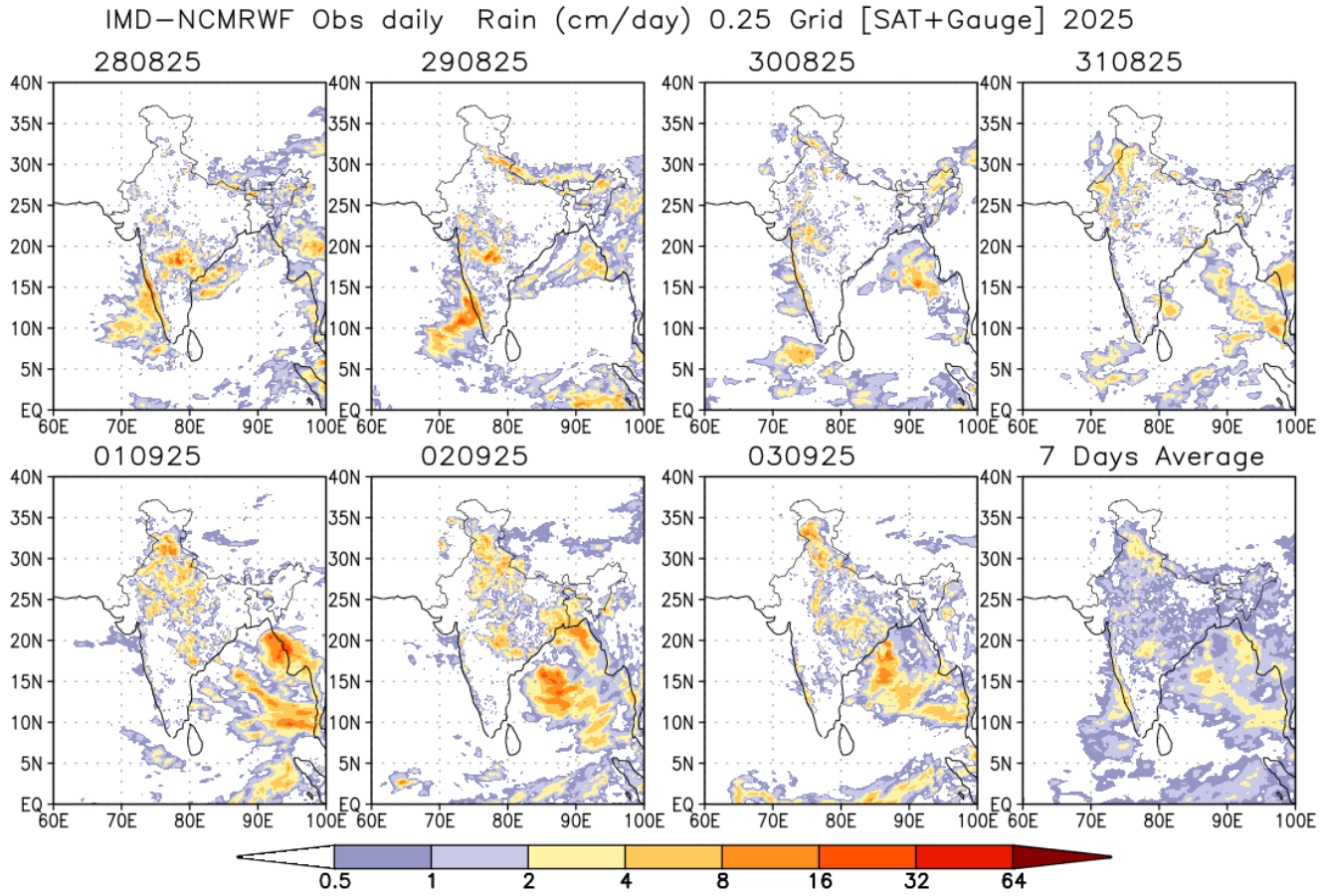
Next update: 11.09.2025

Annexure-1



Fishermen Warning Graphics for next 5 days

Annexure-2



NCMRWF-IMD satellite gauge merged data plots of realized 24-hour accumulated rainfall from 28th August to 03rd September, 2025.