REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI
SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 29.05.2025

SPECIAL TROPICAL WEATHER OUTLOOK FOR THE NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR THE NEXT 168 HOURS ISSUED AT 0700 UTC OF 29.05.2025 BASED ON 0300 UTC OF 29.05.2025.

Sub: Depression over Northwest Bay of Bengal off West Bengal-Bangladesh Coasts

The depression over Northwest Bay of Bengal off West Bengal-Bangladesh coasts moved nearly northwards with a speed of 20 kmph during past 3 hours, intensified into a deep depression and lay centred at 0300 UTC of today, the 29th May 2025 over the same region near latitude 21.3° N and longitude 88.5° E, about 60 km southeast of Sagar Island (42903), 110 km east-southeast of Digha(42901), 160 km east of Balasore(42895), 180 km south-southwest of Mongla (41958, Bangladesh) and 180 km west of Khepupara (41984, Bangladesh).

It is likely to continue to move nearly northwards and cross West Bengal – Bangladesh coasts between Sagar Island and Khepupara (Bangladesh) during 0600-0900 UTC of today, the 29th May, 2025.

As per the satellite imagery based on 0300 UTC of 29th May, the depression lay over northwest Bay of Bengal off Gangetic West Bengal and adjoining Bangladesh coasts. Intensity of the system is characterized as T2.0. Associated scattered to broken low and medium clouds with embedded intense to very intense convection lay over north and central Bay of Bengal, southwest & east Odisha, south Gangetic West Bengal, south Bangladesh. Minimum cloud top temperature is 75-90°C and moderate to intense convection lay over north coastal Andhra Pradesh, Mizoram, Tripura, north Gangetic West Bengal and North Bangladesh. Minimum cloud top temperature is 50-70°C

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over north & central Bay of Bengal, north Andaman Sea and Gulf of Martaban. Scattered low and medium clouds with embedded isolated moderate to intense convection lay over south Bay of Bengal & south Andaman Sea.

The associated estimated central pressure is 988 hPa and the associated maximum sustained wind speed is 25 kt gusting to 35 kt.

Digha (42901) reported mean sea level pressure (MSLP) of 992.2 hPa & maximum sustained wind speed (MSW) of 90^0/03kt, Khepupara (41984) reported MSLP as 992.0 hPa & MSW) of 180^0/12kt, Sagar Island reported MSLP as 992.1 hPa & MSW) of 40^0/07kt and Digha (42901) reported MSLP as 992.1 hPa & MSW) of 20^0/03kt.

Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature(CTT)>-25°C,(b)Moderate:CTT:-25°Cto-40°C,(c)Intense:CTT: -41°Cto -70°Cand(d)Very Intense::Less than -70°C
PROBABILITYOFCYCLOGENESIS(FORMATIONOFDEPRESSION):NIL:0%,LOW:1-33%,,MODERATE:34-66%ANDHIGH:67-100%
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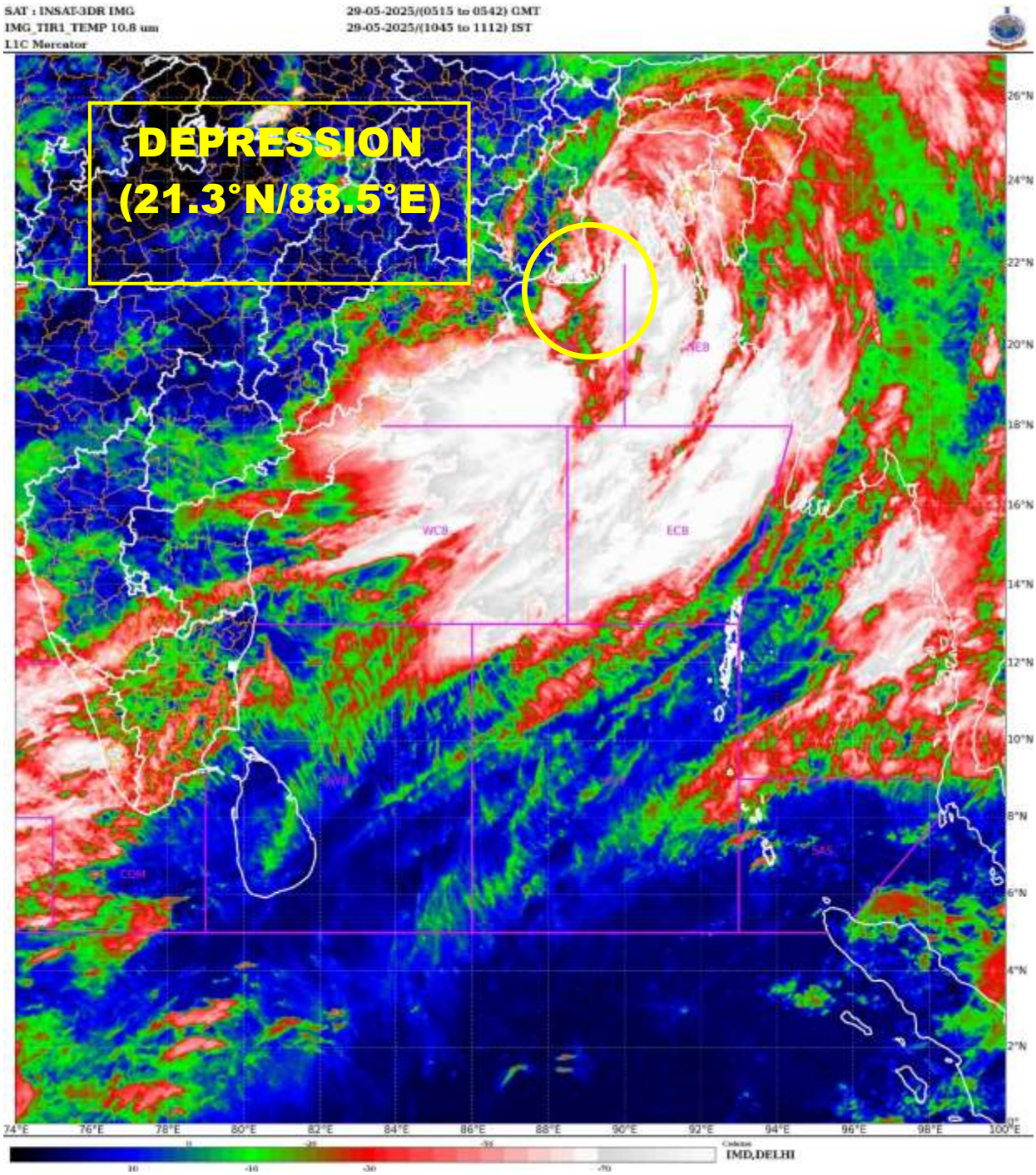
Remarks:

The sea surface temperature is 30-32^{0}C over entire the Bay of Bengal (BoB). The Madden Julian Oscillation (MJO) is in phase 5 with amplitude more than 1 during next 3 days and with amplitude less than 1 in the same phase thereafter. The guidance from NCICS model indicates strong westerly wind anomaly (5-7 mps) over the south Bay of Bengal (BoB) and strong easterly wind anomaly (5-7 mps) over north BoB till 30th May. The Equatorial Rossby wave (ERW) is likely to move westwards across peninsular India and central Arabian Sea (AS) during next 3 days. The Kelvin waves are also likely to move eastwards across north BoB during the same period.

The mid-level vertical wind shear is moderate (5-10 kt) over the system area. Low level relative vorticity is 150 X10^{-6} s^{-1} near system centre with vertical extension upto 200 hPa. Low level convergence is around 400X10^{-6} s^{-1} to the northeast of system centre and upper level divergence is the same and is around 30X10^{-6} s^{-1} to the southwest of system centre. The total precipitable water imagery indicates warm moist air over the entire region extending over Gangetic West Bengal and Bangladesh. Under these favourable features the depression over northwest Bay of Bengal intensified into a deep depression at 0300 UTC of today, the 29th May. The upper tropospheric ridge is located near 21^{0}N. The system is lying very close to ridge and is being steered nearly north-northeastwards along the ridge.

Most of the models are indicating northwards movement of the system and crossing over Bangladesh-West Bengal coasts during 0600-0900 UTC 29th May.

M. Sharma
Scientist-D
RSMC New Delhi



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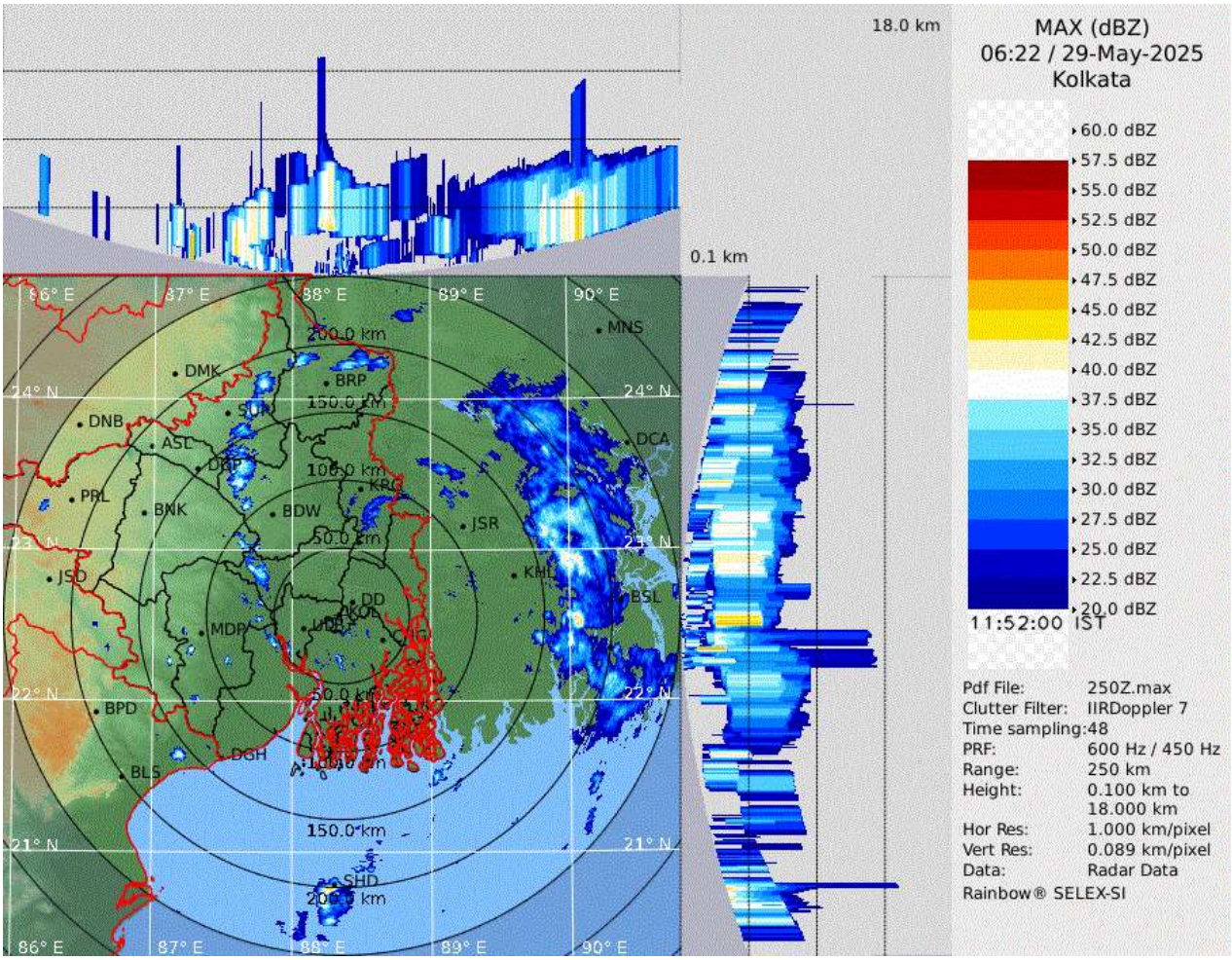

Maximum Reflectivity (dBZ) Observation by Doppler Weather Radar (DWR) at Kolkata

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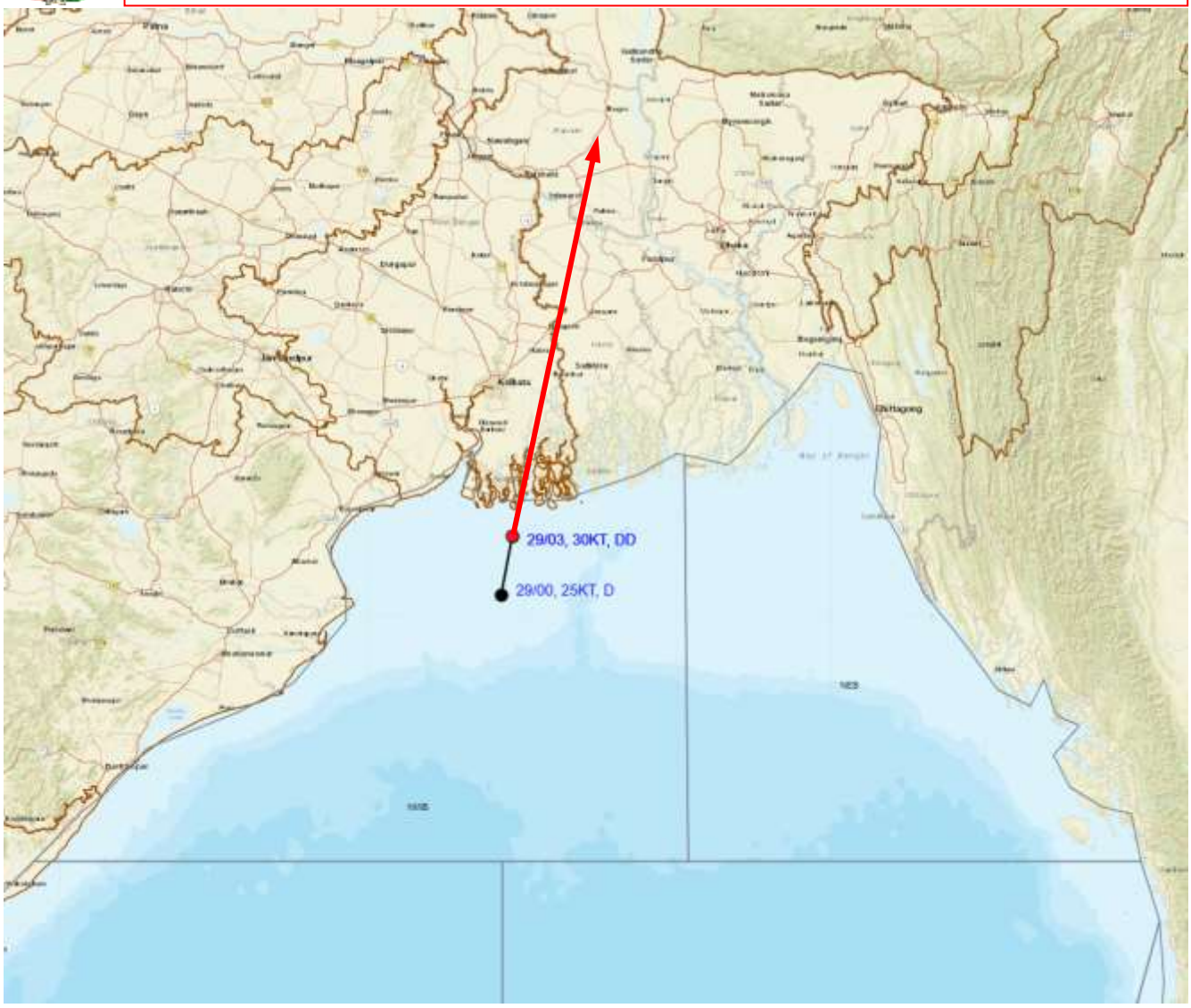
OBSERVED AND FORECAST TRACK OF DEEP DEPRESSION OVER NORTHWEST BAY OF BENGAL OFF WEST BENGAL – BANGLADESH COASTS BASED ON 0300 UTC (0830 IST) OF 29th MAY, 2025



DATE/TIME IN UTC
IST=UTC + 0530
L: LOW PRESSURE AREA
WML: WELL MARKED LOW PRESSURE AREA
D: DEPRESSION (17-27 KT)
DD: DEEP DEPRESSION (28-33 KT)
CS: CYCLONIC STORM (34-47 KT)
SCS: SEVERE CYCLONIC STORM (48-63KT)
VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

LESS THAN 34 KT
34-47 KT
≥ 48 KT
OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY

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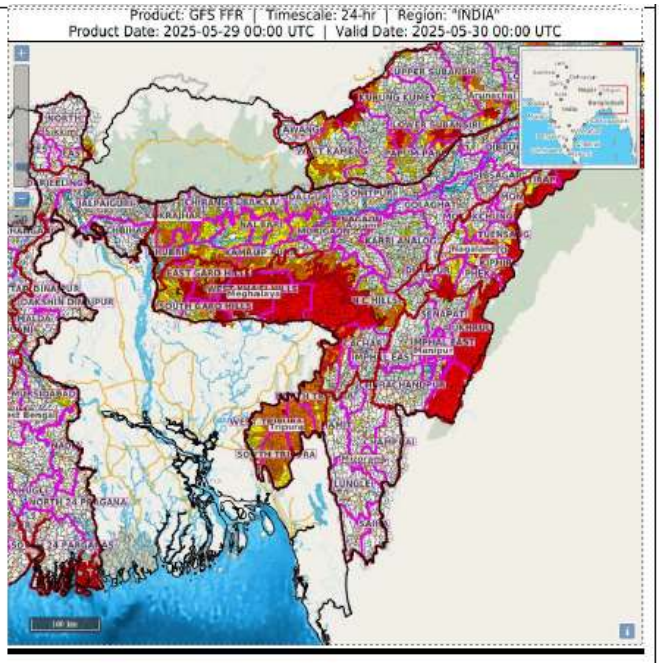
24 hours Outlook for the Flash Flood Risk (FFR) till 0530 IST of 30-05-2025 :

Low to Moderate flash flood risk likely over few watersheds & neighbourhoods of following Met Sub-divisions during next 24 hours.

Assam & Meghalaya - Kamrup Rural, N.C Hills, Karimganj, East Garo Hills, East Khasi Hills, South Garo Hills, West Garo Hills, West Khasi Hills and Jaintia Hills districts.

Nagaland Mizoram Manipur Tripura (NMMT) – Tuensang, Mon, Kiphire, Zunheboto, Kohima, Phek, Ukhrul, Chandel, Bishnupur, North Tripura, South Tripura and West Tripur, Thoubal, Aizawl districts.

Surface runoff/ Inundation may occur at some fully saturated soils & low-lying areas over Area of Concern (AoC) as shown in map due to expected rainfall occurrence in next 24 hours.



Flash Flood Threat	Flash Flood Risk
High Threat (Take Action)	High Risk (Take Action)
Moderate threat (Be Prepared)	Moderate Risk (Be Prepared)
Low Threat (Be Updated)	Low Risk (Be Updated)

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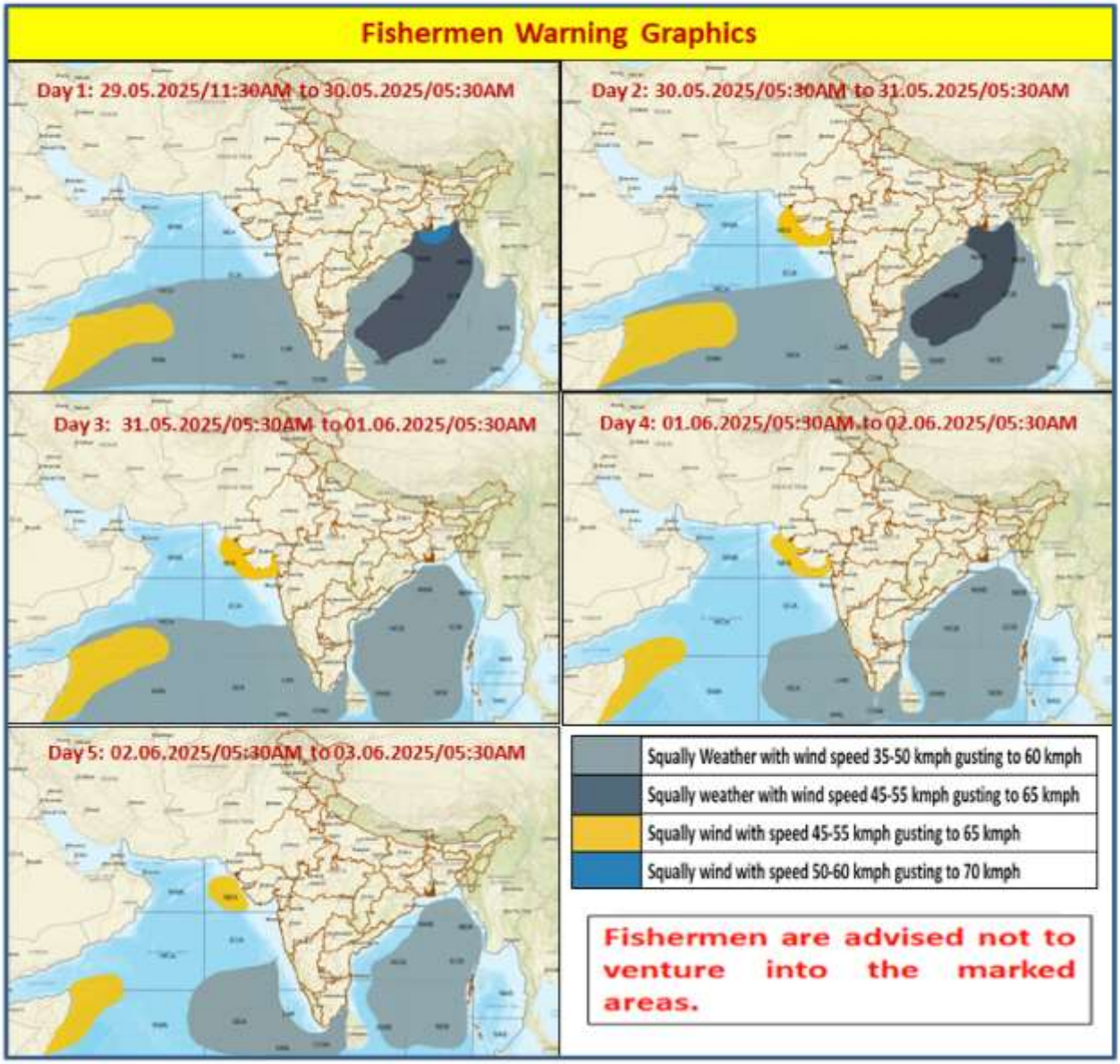
Fishermen Warning Graphics



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