



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

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.05.2023

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0700 UTC OF 07.05.2023 BASED ON 0300 UTC OF 07.05.2023.

BAY OF BENGAL:

YESTERDAY'S CYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL (BOB) LAY OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA AT 0300 UTC OF TODAY THE 7TH MAY, 2023.

UNDER ITS INFLUENCE A LOW PRESSURE AREA IS LIKELY TO FORM OVER THE SAME REGION ON 8TH MAY. IT IS LIKELY TO INTENSIFY INTO A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA AROUND 9TH MAY. THEREAFTER, IT IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM WHILE MOVING NEARLY NORTHWARDS TOWARDS CENTRAL BOB AND ADJOINING NORTH ANDAMAN SEA. THE DETAILS OF ITS PATH AND INTENSIFICATION WILL BE PROVIDED AFTER THE FORMATION OF THE LOW PRESSURE AREA. THE SYSTEM IS UNDER CONSTANT WATCH AND BEING MONITORED REGULARLY.

SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER ANDAMAN SEA AND WEAK TO MODERATE CONVECTION LAY OVER WESTCENTRAL BAY OF BENGAL OFF ANDHRA PRADESH COAST & NORTH BAY OF BENGAL.

ASCAT PASS AT 0340 UTC OF 7TH MAY IS INDICATING MAXIMUM SUSTAINED WIND SPEED OF 15-20 KNOTS PREVAILING OVER THE SOUTH ANDAMAN SEA REGION. STRONG WINDS ARE SEEN IN THE EASTERN SECTOR AND SOUTHERN SECTOR. STRONGER WINDS IN THE SOUTHERN SECTOR INDICATE INCREASED CROSS EQUATORIAL FLOW, WHICH WILL ALSO FAVOUR CYCLOGENESIS BY INCREASING VORTICITY AND CONVERGENCE OVER THE REGION. A TROUGH IS ALSO SEEN NEAR 94°E UPTO 6°N. THESE FEATURES INDICATE STRENGTHENING OF SYSTEM.

CONSIDERING THE SURFACE OBSERVATIONS, THERE IS A FALLING TENDENCY OF MEAN SEA LEVEL PRESSURE OVER ANDAMAN & NICOBAR ISLANDS (1-2 HPA BELOW NORMAL).

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	LOW	HIGH	HIGH	HIGH

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°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION): NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
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ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LAY OVER SOUTH ARABIAN SEA & COMORIN AREA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 120 HRS:

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS
NIL	NIL	NIL	NIL	NIL

REMARKS:

THE MADDEN JULIAN INDEX (MJO) CURRENTLY LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE DURING NEXT 3 DAYS. THUS, MJO PHASE IS HIGHLY CONDUCTIVE FOR ENHANCED CONVECTION OVER THE BAY OF BENGAL (BOB) DURING NEXT 3-4 DAYS. EASTERLY WINDS (1-3 MPS) ARE LIKELY TO PREVAIL OVER SOUTH ANDAMAN SEA AND SOUTH BOB IN THE LOWER TROPOSPHERIC LEVELS ON 7TH. THEREAFTER, THE WESTERLY WINDS ARE LIKELY TO PREVAIL OVER THE SOUTH BOB AND SOUTH ANDAMAN SEA WITH EASTERLY WINDS OVER CENTRAL & NORTH BOB FROM 8TH MAY ONWARDS. THUS, THE EQUATORIAL WAVES AND MJO ARE LIKELY TO COLLECTIVELY CONTRIBUTE TOWARDS ENHANCEMENT OF CONVECTIVE ACTIVITY AND HENCE CYCLOGENESIS OVER SOUTH BOB AROUND 9TH MAY ONWARDS.

THE TROPICAL CYCLONE HEAT POTENTIAL (TCHP) IS MORE THAN 100 KJ/CM² OVER MAJOR PARTS OF SOUTH ANDAMAN SEA & ADJOINING SOUTHEAST BOB AND CENTRAL BOB. IT IS INDICATING DECREASING TENDENCY ABOUT 60-70 KJ/CM² ALONG THE EAST COAST OF INDIA & ALONG MYANMAR COAST. SEA SURFACE TEMPERATURE (SST) IS AROUND 30-32°C OVER ENTIRE BOB. THE SEA CONDITIONS OVER BOB ARE ALSO CONDUCTIVE FOR CYCLOGENESIS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, LOW LEVEL VORTICITY AT 850 HPA REMAINS SAME DURING PAST 24 HOURS AND IS ABOUT $50-60 \times 10^{-6} \text{S}^{-1}$ OVER SOUTH ANDAMAN SEA WITH VERTICAL EXTENSION UPTO 500 HPA LEVELS. HOWEVER, AS COMPARED TO YESTERDAY, THE VORTICITY AT 850 HPA HAS GOT ORGANISED. TODAY, AT 500 HPA LEVELS, INCREASE IN VORTICITY IS SEEN, INDICATING INCREASED CONVECTION AT 500 HPA LEVEL. IT IS MAINLY BECAUSE OF INCREASED RELEASE OF LATENT HEAT WHICH WILL SUPPORT INCREASE IN DEEP CONVECTION. LOW LEVEL CONVERGENCE IS AROUND $15 \times 10^{-5} \text{S}^{-1}$ OVER SOUTHEAST ANDAMAN SEA. UPPER LEVEL DIVERGENCE IS $20 \times 10^{-5} \text{S}^{-1}$ OVER SOUTHEAST BOB. COMPARED TO YESTERDAY, THE CONVERGENCE AND DIVERGENCE FIELDS OVER SOUTHWEST BOB ARE SHOWING WEAKENING TRENDS AND THAT OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA REGION ARE SHOWING ORGANISATION. THESE FEATURES INDICATE FAVOURABLE ENVIRONMENT FOR CYCLOGENESIS OVER THE REGION. THE UPPER TROPOSPHERIC RIDGE AT 200 HPA IS LOCATED NEAR 15.5N.

CONSIDERING THE MODEL GUIDANCE, THERE IS LARGE VARIATION AMONG VARIOUS MODELS WRT TIME OF GENESIS WITH IMD GFS INDICATING DEPRESSION AROUND 8TH, NCEP GFS ON 9TH & ECMWF AROUND 11TH. THESE MODELS ARE INDICATING INTENSIFICATION OF THIS SYSTEM INTO A SEVERE CYCLONIC STORM. WRT TRACK, VARIATION CONTINUES AMONG THESE MODELS WITH LANDFALL POINT VARYING BETWEEN 16.0/94.8 (GFS) AND 17.0/94.9 (ECMWF) DURING 13TH/1200

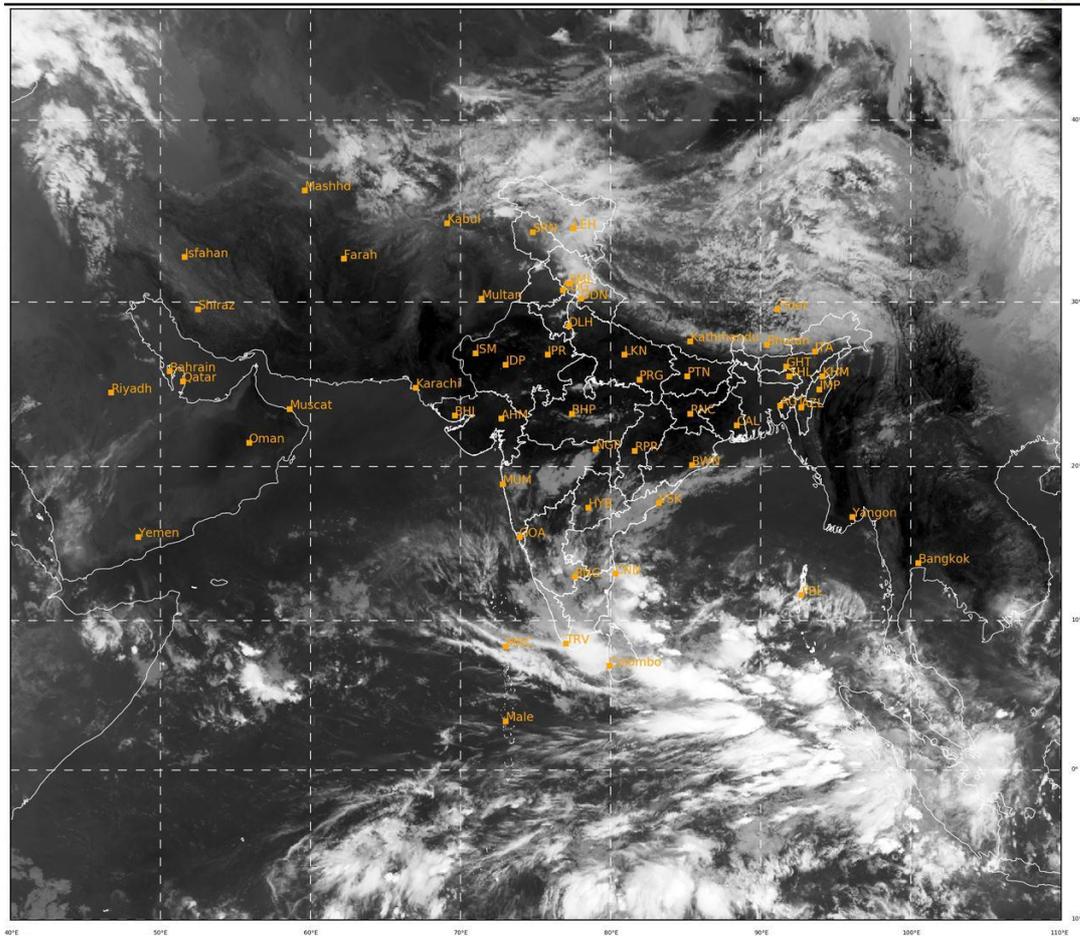
UTC TO 14TH/ 0600 UTC. NCUM IS STILL INDICATING NO SIGNIFICANT INTENSIFICATION OF THE SYSTEM AND WEST-NORTHWESTWARDS MOVEMENT TOWARDS TAMILNADU COAST & EMERGENCE INTO SOUTHEAST ARABIAN SEA. IMD MME IS ALSO INDICATING DEPRESSION AROUND 8TH MAY OVER SOUTH ANDAMAN SEA WITH NEARLY NORTHWARDS MOVEMENT TILL 13/1200 UTC TOWARDS EASTCENTRAL BAY OF BENGAL.

CURRENT INFERENCE IS BASED UPON THE SYNOPTIC ANALYSIS, ENVIRONMENTAL FEATURES AND GUIDANCE FROM GFS GROUP, ECMWF AND IMD MME MODELS.

HENCE TO CONCLUDE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER SOUTHEAST BAY OF BENGAL & ADJOINING SOUTH ANDAMAN SEA ON 8TH MAY. IT IS LIKELY TO INTENSIFY INTO A DEPRESSION OVER THE SAME REGION AROUND 9TH MAY. THEREAFTER, IT IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM WHILE MOVING NEARLY NORTHWARDS TOWARDS CENTRAL BOB AND ADJOINING NORTH ANDAMAN SEA. THE DETAILS OF ITS PATH AND INTENSIFICATION WILL BE PROVIDED AFTER THE FORMATION OF THE LOW PRESSURE AREA. THE SYSTEM IS UNDER CONSTANT WATCH AND BEING MONITORED REGULARLY.

SAT : INSAT-3D IMG
 IMG_TIR1 10.8 um
 LIC Mercator

07-05-2023/(0330 to 0356) GMT
 07-05-2023/(0900 to 0926) IST



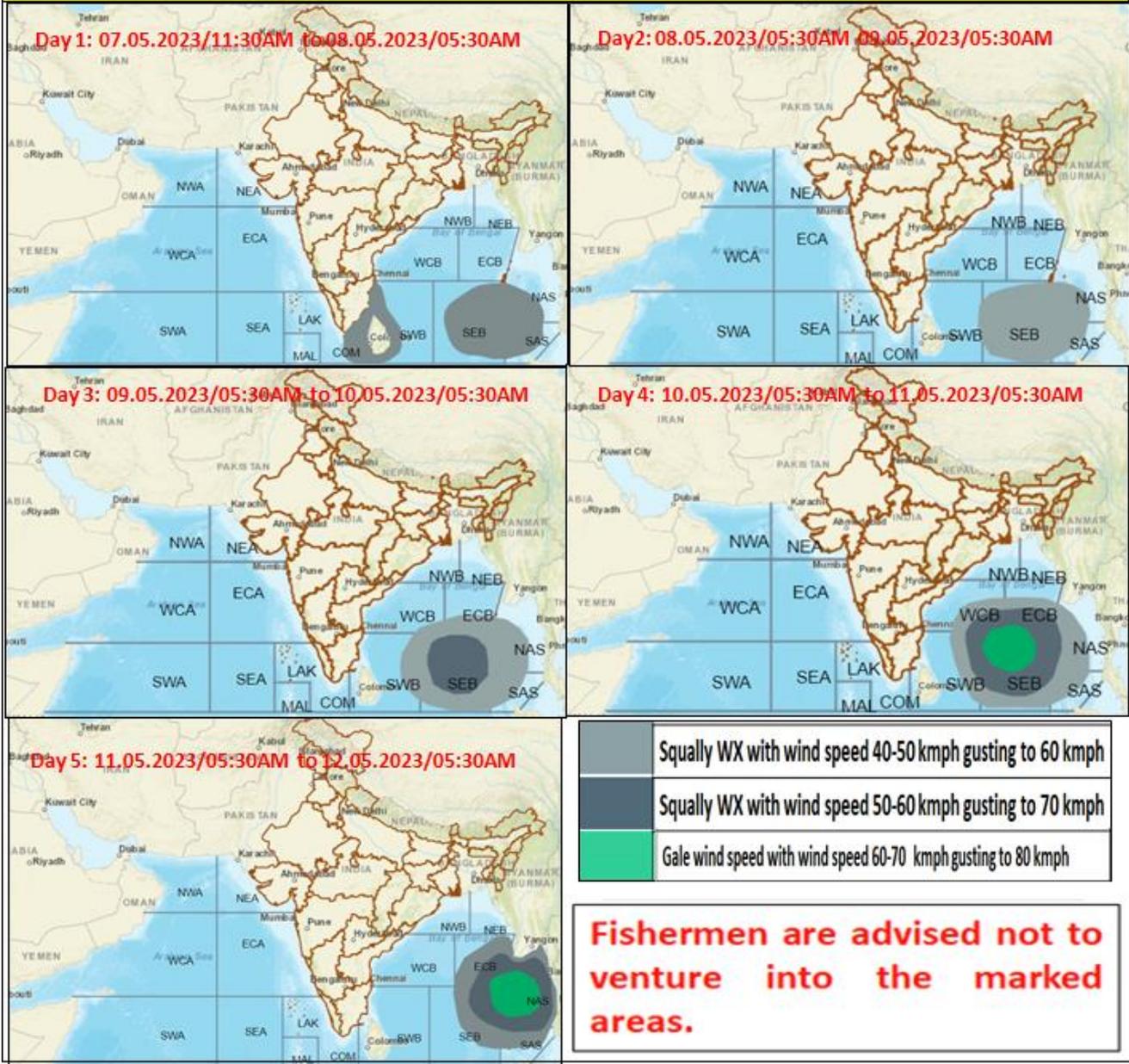
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IMD, DELHI

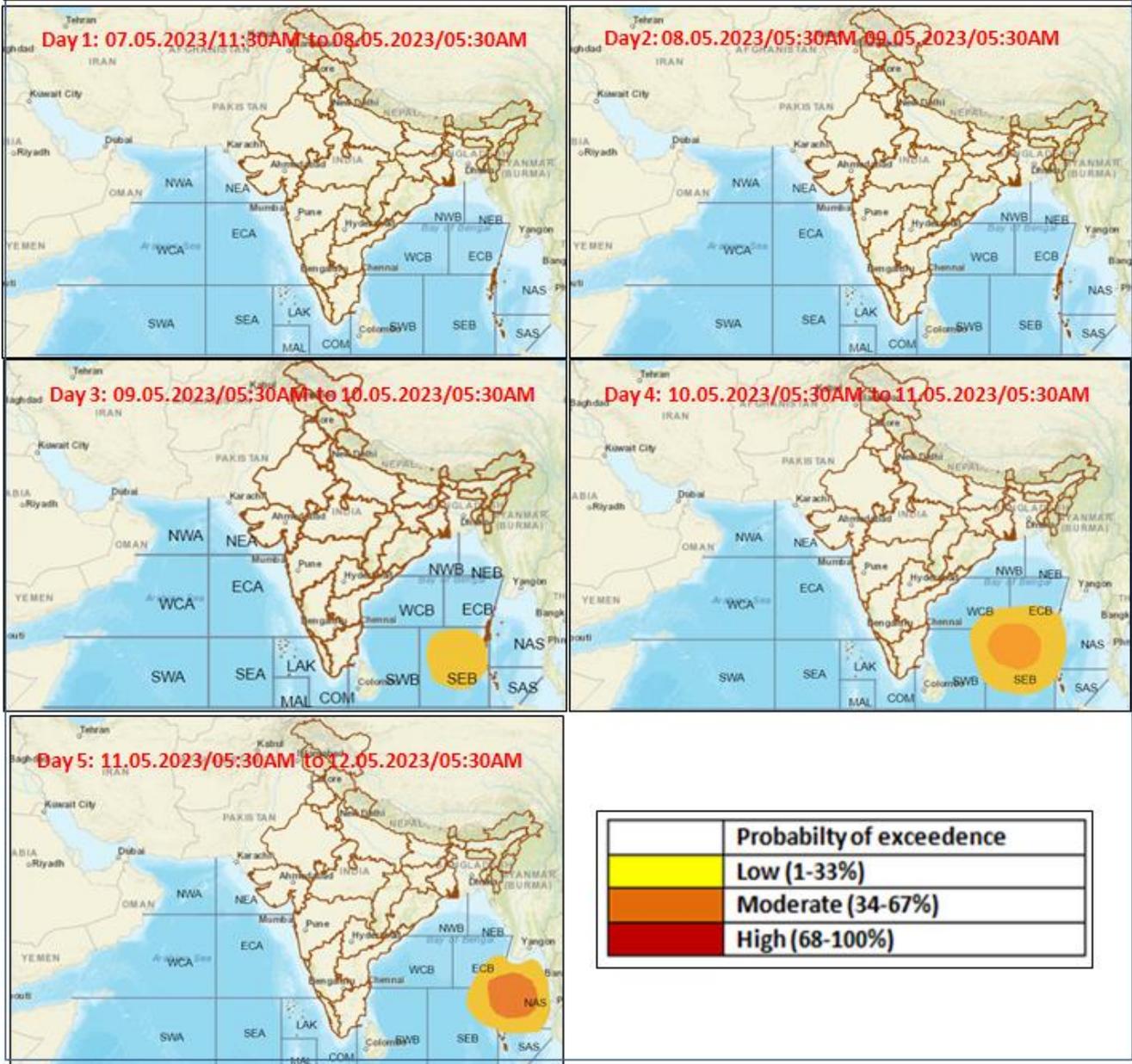
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Fishermen warning graphics



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Probability of exceedance of maximum sustained winds ≥ 45 kmph



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