



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 29.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 48 HOURS ISSUED AT 0600 UTC OF 29.11.2017 BASED ON 0300 UTC OF 29.11.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**1. DEPRESSION OVER SOUTHWEST BAY OF BENGAL OFF SRI LANKA COAST:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT A DEPRESSION HAS FORMED OVER SOUTHWEST BAY OF BENGAL OFF SRI LANKA COAST. IT LAY CENTRED AT 0300 UTC OF TODAY, THE 29<sup>TH</sup> NOVEMBER, 2017 NEAR LATITUDE 6.5° N AND LONGITUDE 81.8 °E, ABOUT 80 KM TO THE EAST-SOUTHEAST OF HAMBANTOTA (43497) AND 500 KM EAST SOUTHEAST OF KANYAKUMARI (43377). THE SYSTEM IS VERY LIKELY TO MOVE WESTNORTHWESTWARDS AND CROSS SRI LANKA COAST CLOSE TO NORTHEAST OF HAMBANTOTA AROUND NOON OF TODAY. IT WOULD THEN CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS SRI LANKA AND EMERGE INTO COMORIN AREA BY TOMORROW. THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED MODERATE TO INTENSE CONVECTION LIE OVER SOUTHWEST BAY OF BENGAL AND ADJOINING SRI LANKA AND ADJOINING EQUATORIAL INDIAN OCEAN. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. A SHIP LOCATED AT 6.3 °N/ 78.2 °E REPORTS MEAN SEA LEVEL PRESSURE OF 1007.4 HPA AND A MEAN SURFACE WIND SPEED OF 330<sup>0</sup>/ 30 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (5-15 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO WEST AND TO THE SOUTH. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 140-160 X 10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30-40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE WEST-SOUTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

EVEN THOUGH THE SYSTEM IS LIKELY TO WEAKEN SLIGHTLY DUE TO LAND INTERACTION, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS WHEN IT EMERGES INTO COMORIN AREA BY TOMORROW AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

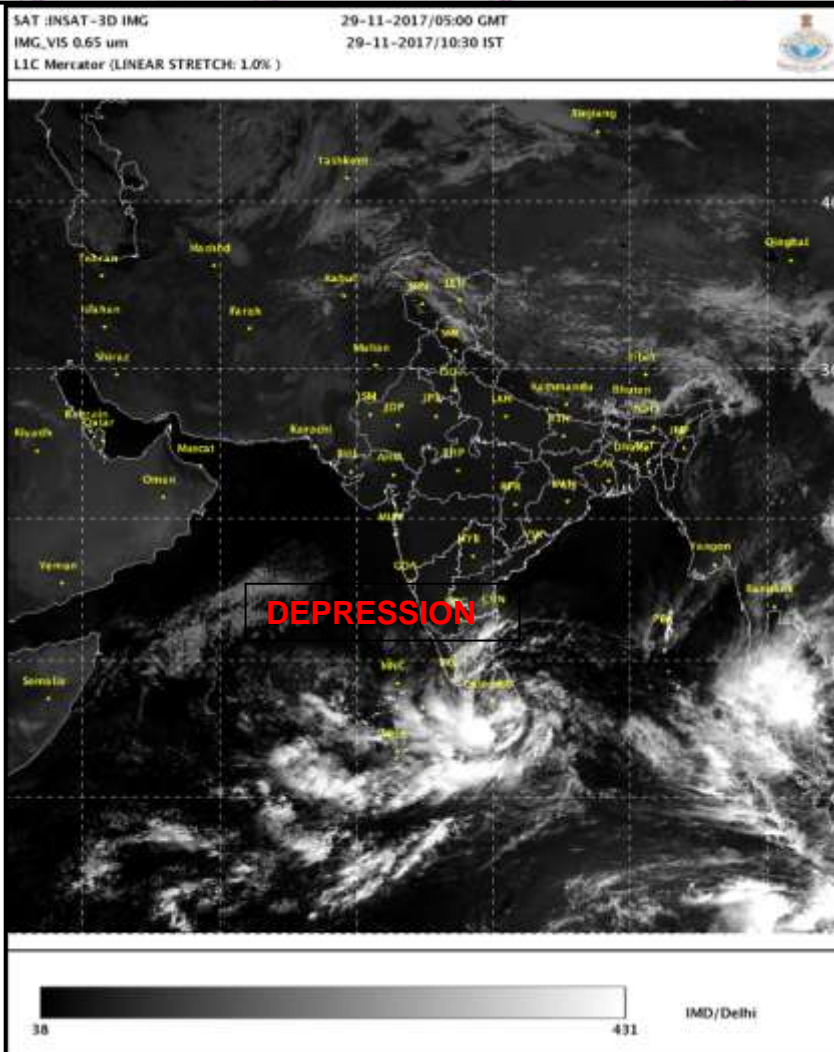
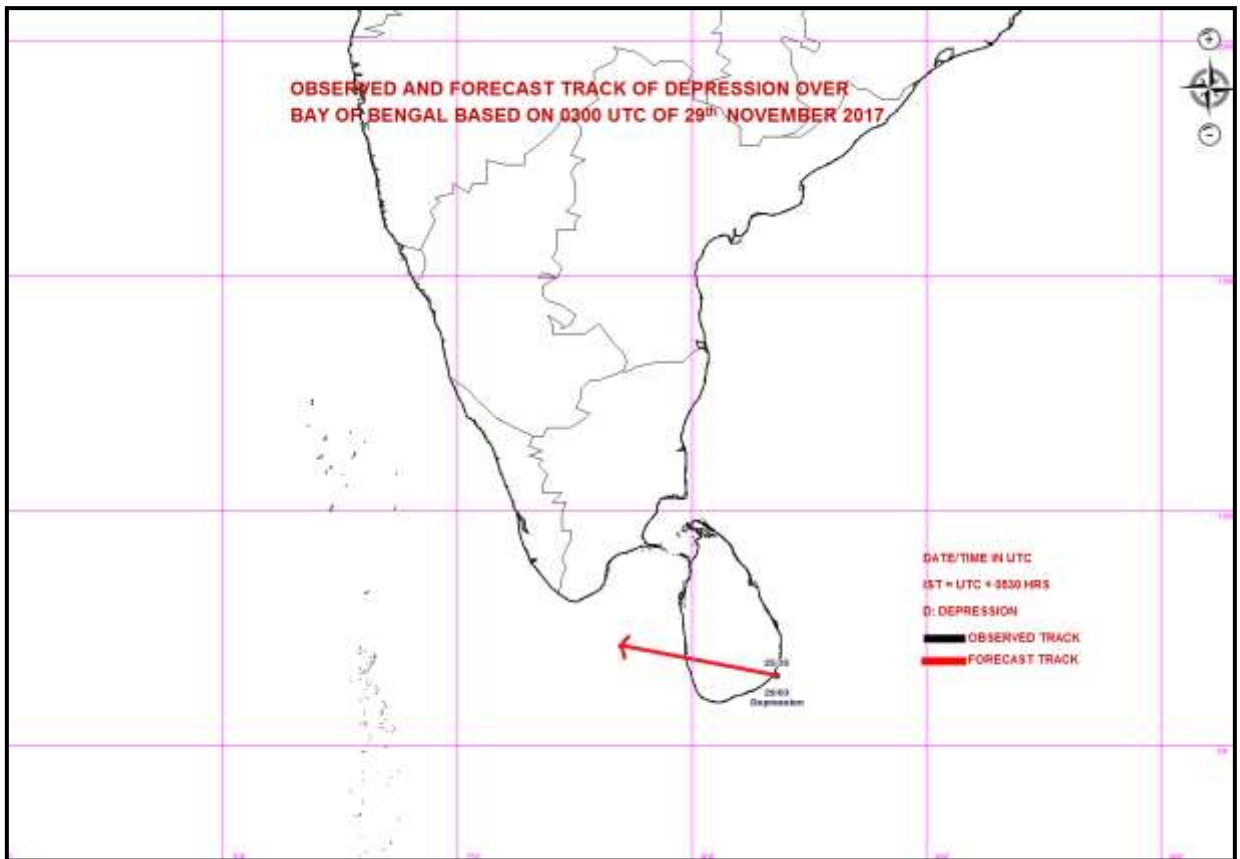
**2. THE TROUGH OF LOW AT MEAN SEA LEVEL OVER MALAY PENINSULA AND NEIGHBOURHOOD IS VERY LIKELY TO ORGANISE INTO A LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA DURING 24 HOURS AND LIKELY TO CONCENTRATE INTO A DEPRESSION DURING SUBSEQUENT 48 HOURS.**

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 29.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0900 UTC OF 29.11.2017 BASED ON 0600 UTC OF 29.11.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**1. DEPRESSION OVER SRI LANKA:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL OFF SRI LANKA COAST MOVED WESTWARDS AND CROSSED SRI LANKA COAST ABOUT 70 KM NORTHEAST OF HAMBANTOTA AROUND 0400 UTC AND LAY CENTRED AT 0600 UTC OF TODAY, THE 29<sup>TH</sup> NOVEMBER, 2017 OVER SRI LANKA NEAR LATITUDE 6.5° N AND LONGITUDE 80.4 °E, CLOSE TO RATNAPURA (43486) (SRI LANKA) AND 360 KM EASTSOUTHEAST OF KANYAKUMARI (43377). THE SYSTEM IS VERY LIKELY TO MOVE WESTNORTHWESTWARDS, EMERGE INTO COMORIN AREA AND INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED MODERATE TO INTENSE CONVECTION LIE OVER SOUTHWEST BAY OF BENGAL AND ADJOINING SRI LANKA AND ADJOINING EQUATORIAL INDIAN OCEAN. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. HAMBANTOTA (43497) REPORTED SURFACE WIND SPEED OF 180<sup>0</sup>/25 KNOTS AT 0600 UTC.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH OVER COMORIN AREA AND ALONG AND OFF SOUTHERN COAST OF SRI LANKA.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (5-15 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO WEST AND TO THE SOUTH. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 140-160 X 10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30-40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE WEST-SOUTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

EVEN THOUGH THE SYSTEM IS LIKELY TO WEAKEN SLIGHTLY DUE TO LAND INTERACTION, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS WHEN IT EMERGES INTO COMORIN AREA BY TOMORROW AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

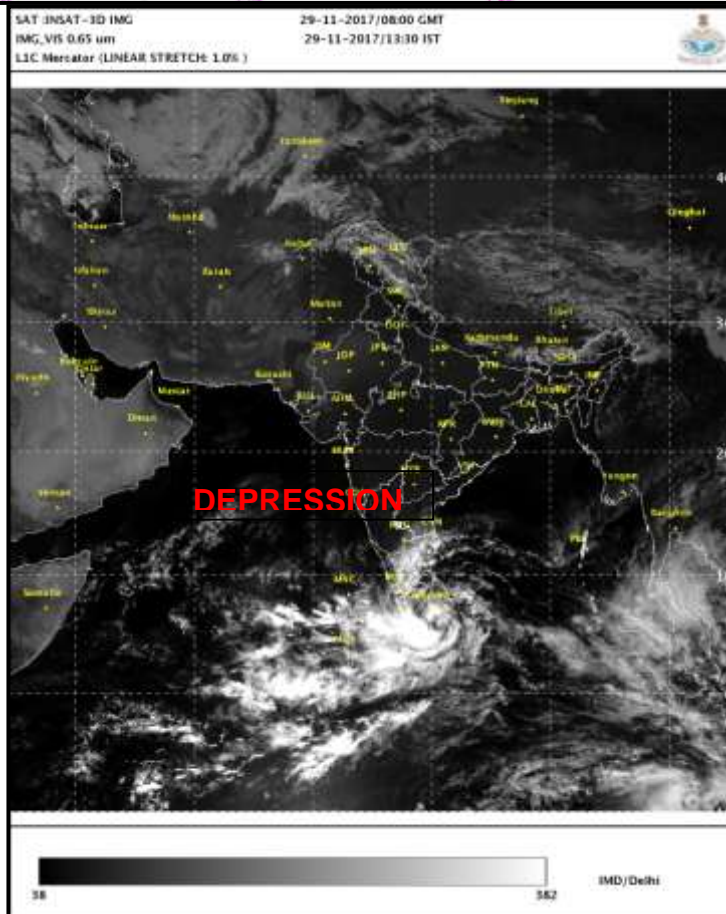
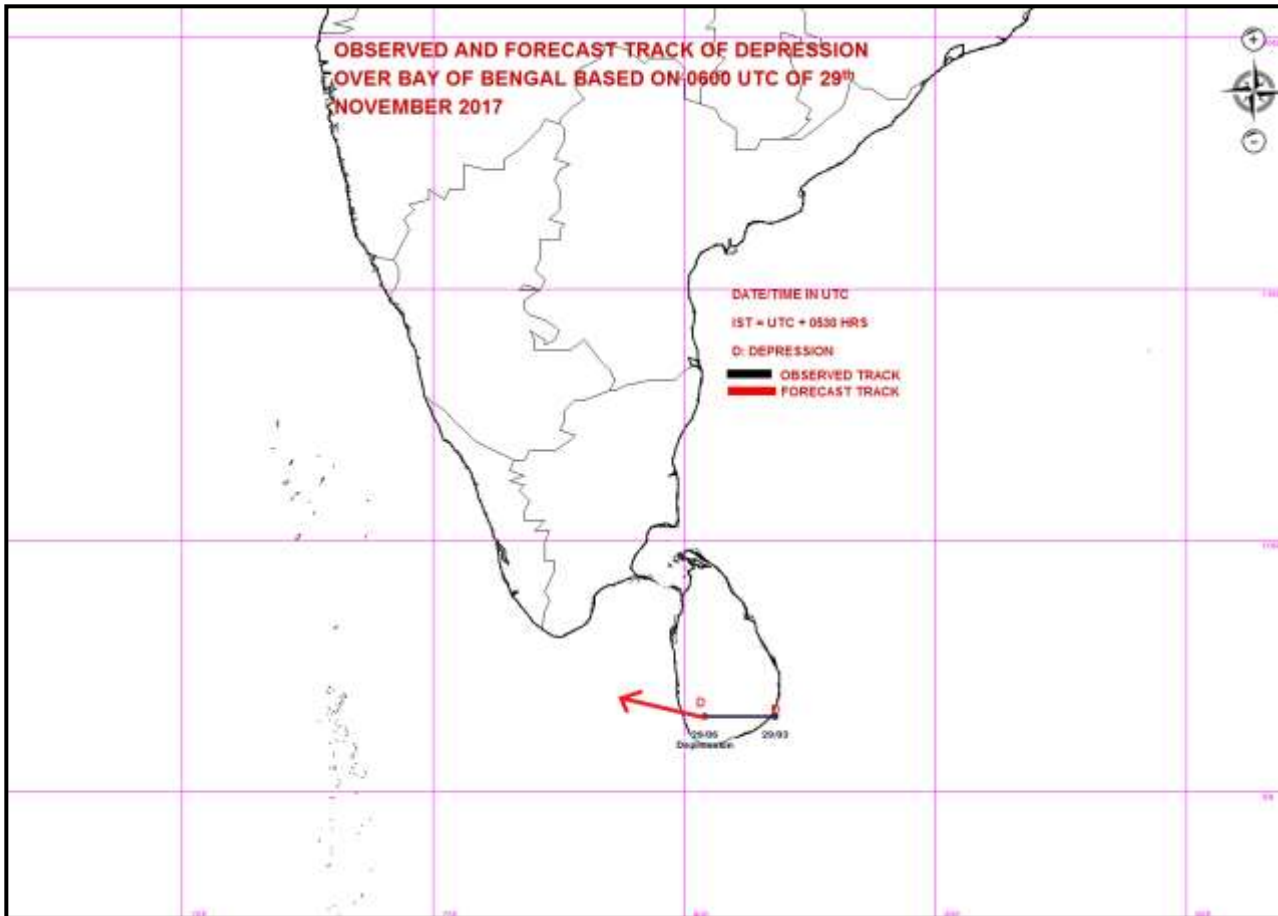
2. THE TROUGH OF LOW AT MEAN SEA LEVEL OVER MALAY PENINSULA AND NEIGHBOURHOOD IS VERY LIKELY TO ORGANISE INTO A LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA DURING 24 HOURS AND LIKELY TO CONCENTRATE INTO A DEPRESSION DURING SUBSEQUENT 48 HOURS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 29.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 29.11.2017 BASED ON 1200 UTC OF 29.11.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**1. DEPRESSION OVER COMORIN AREA AND ADJOINING SRI LANKA:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEPRESSION OVER SRI LANKA MOVED WEST-SOUTHWESTWARDS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 29<sup>TH</sup> NOVEMBER, 2017 OVER COMORIN AREA AND ADJOINING SRI LANKA NEAR LATITUDE 6.2° N AND LONGITUDE 80.0 °E, ABOUT 30 KM NORTHWEST OF GALLE (43495)(SRI LANKA) AND 340 KM SOUTHEAST OF KANYAKUMARI (43377). THE SYSTEM IS VERY LIKELY TO MOVE NEARLY WESTWARDS AND INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED MODERATE TO INTENSE CONVECTION LIE OVER SOUTHWEST BAY OF BENGAL AND ADJOINING SRI LANKA AND ADJOINING EQUATORIAL INDIAN OCEAN. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1001 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH OVER COMORIN AREA AND ALONG AND OFF SOUTHERN COAST OF SRI LANKA, SOUTH KERALA AND SOUTH TAMIL NADU.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 14 °N. HENCE THE WINDS ARE NEARLY EASTERLY OVER THE SYSTEM REGION AND BECOMES EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE INITIALLY NEARLY WESTWARDS AND THEN WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO WEST AND TO THE SOUTH. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 140-160 X 10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 60 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS AND MOVE WEST-NORTHWESTWRDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

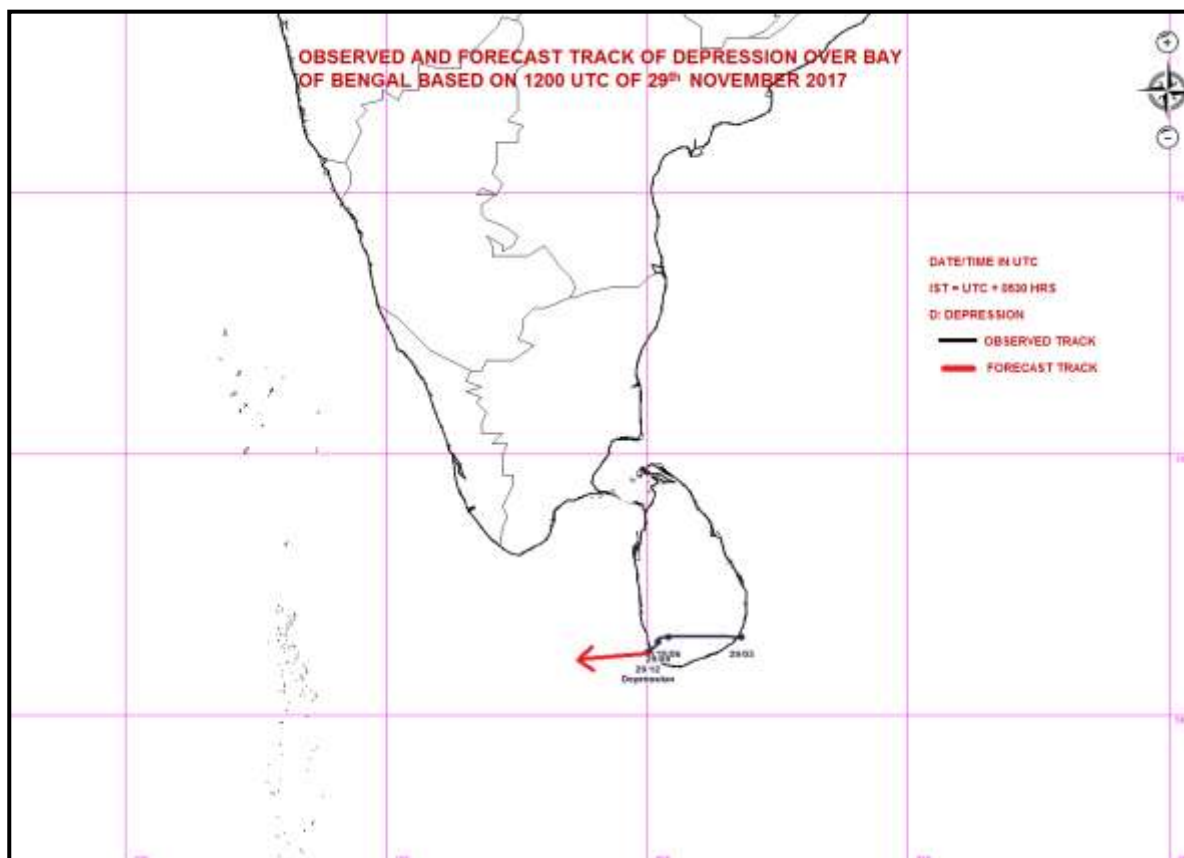
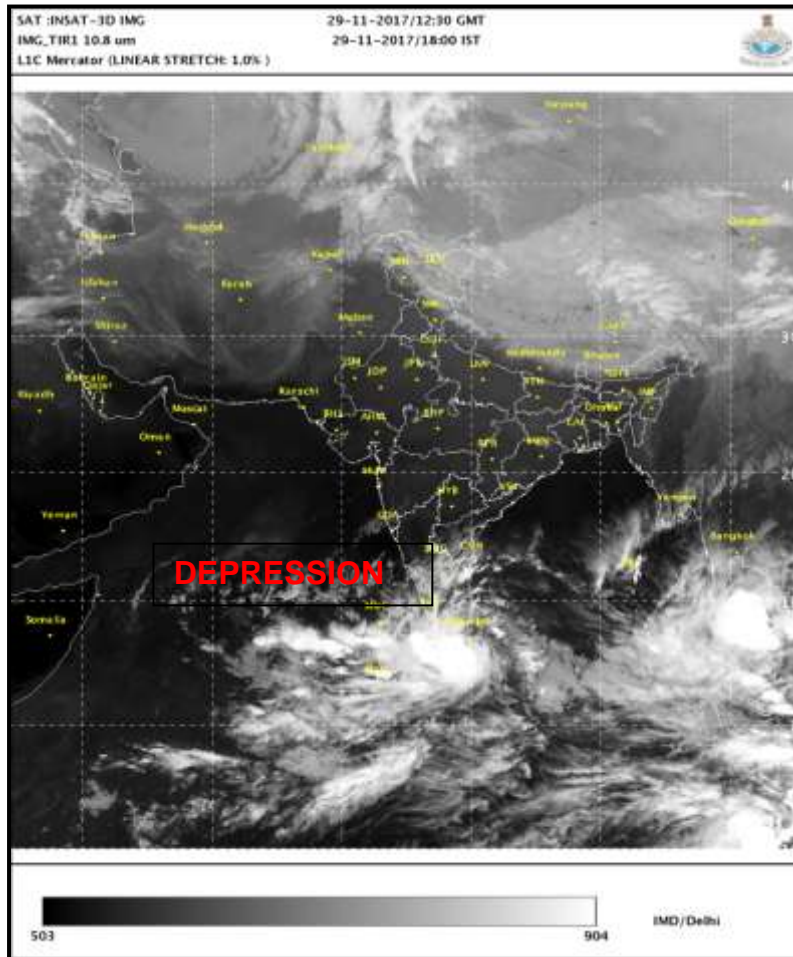
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(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 30.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0000 UTC OF 30.11.2017 BASED ON 2100 UTC OF 29.11.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**1. Deep Depression over Comorin area and neighbourhood:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEPRESSION OVER COMORIN AREA AND ADJOINING SRI LANKA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 06 HOURS AND HAS FURTHER INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0230 HRS IST OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER COMORIN AREA AND NEIGHBOURHOOD NEAR LATITUDE 6.5° N AND LONGITUDE 78.6° E, ABOUT 185 KM NORTHWEST OF GALLE (43495) (SRI LANKA) AND 210 KM SOUTH-SOUTHEAST OF KANYAKUMARI (43377). THE SYSTEM IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.0. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIES OVER COMORIN AREA AND ADJOINING MALDIVE AREA & EQUATORIAL INDIAN OCEAN. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 85 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1001 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH OVER COMORIN AREA AND ALONG AND OFF SOUTHERN COAST OF SRI LANKA, SOUTH KERALA AND SOUTH TAMIL NADU.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 14 °N. HENCE THE WINDS ARE NEARLY EASTERLY OVER THE SYSTEM REGION AND BECOMES EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE INITIALLY NEARLY WESTWARDS AND THEN WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO WEST AND TO THE SOUTH. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 200-250 X 10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 60 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 50 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

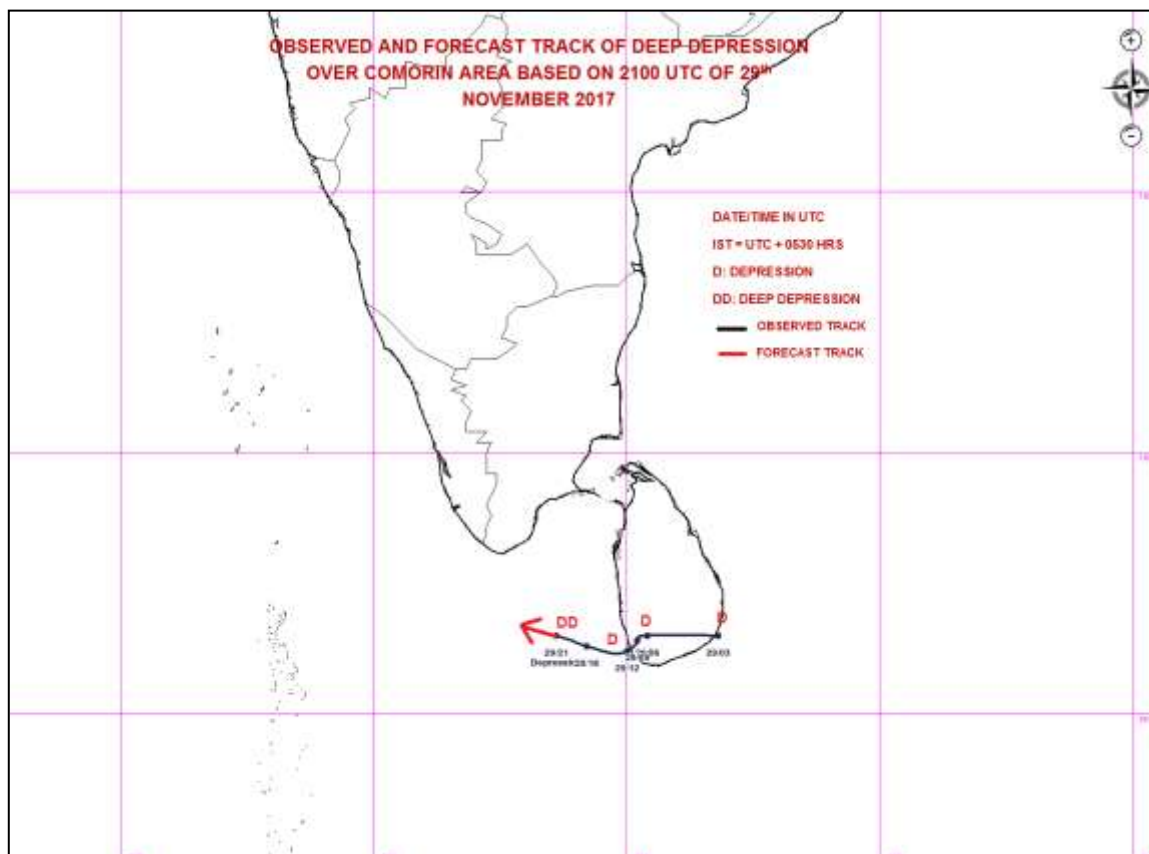
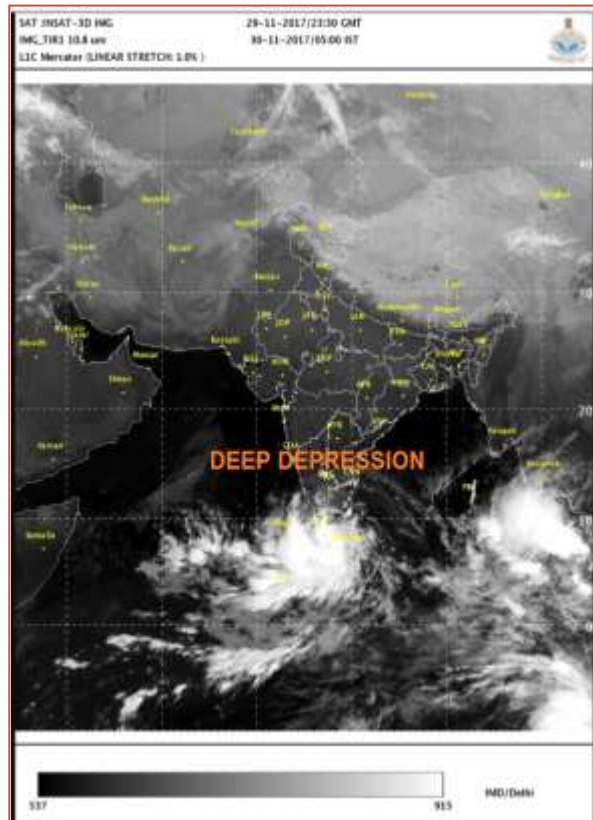
2. THE TROUGH OF LOW AT MEAN SEA LEVEL OVER MALAY PENINSULA AND NEIGHBOURHOOD IS VERY LIKELY TO ORGANISE INTO A LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA DURING NEXT 24 HOURS AND LIKELY TO CONCENTRATE INTO A DEPRESSION DURING SUBSEQUENT 48 HOURS.

(KRISHNA MISHRA)  
SCIENTIST 'B', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 30.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 30.11.2017 BASED ON 0000 UTC OF 30.11.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**1. DEEP DEPRESSION OVER COMORIN AREA & CYCLONE ALERT FOR LAKSHADWEEP ISLANDS**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEEP DEPRESSION OVER COMORIN AREA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 18 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0000 UTC OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER COMORIN AREA AND NEIGHBOURHOOD NEAR LATITUDE 6.7° N AND LONGITUDE 78.3° E, ABOUT 240 KM WEST-NORTHWEST OF GALLE (43495), 170 KM SOUTHEAST OF KANYAKUMARI (43377) AND 600 KM EAST-SOUTHEAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS.

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30/0000	6.7/78.3	50-60 GUSTING TO 70	DEEP DEPRESSION
30/0600	7.0/77.5	55-65 GUSTING TO 75	DEEP DEPRESSION
30/1200	7.4/76.7	60-70 GUSTING TO 80	CYCLONIC STORM
30/1800	7.8/75.8	70-80 GUSTING TO 90	CYCLONIC STORM
01/0000	8.2/75.0	80-90 GUSTING TO 100	CYCLONIC STORM
01/1200	9.2/73.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
02/0000	10.2/72.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
02/1200	11.2/70.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/0000	12.2/69.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.0. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIES BETWEEN LATITUDE 5°N TO 8.5°N TO LONGITUDE 73.0°E TO 80.0°E AND OVER SOUTH KERALA & SOUTH TAMILNADU THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 85 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH OVER COMORIN AREA AND ALONG AND OFF SOUTH KERALA AND SOUTH TAMIL NADU. A SHIL LOCATED NEAR LATITUDE 6°N AND LONGITUDE 78°E REPORTED 240°/30 KNOTS

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15°N. HENCE THE WINDS ARE NEARLY EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE SOUTH AND ALSO TO THE NORTH OF LATITUDE 15°N. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 50X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT 50 X 10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

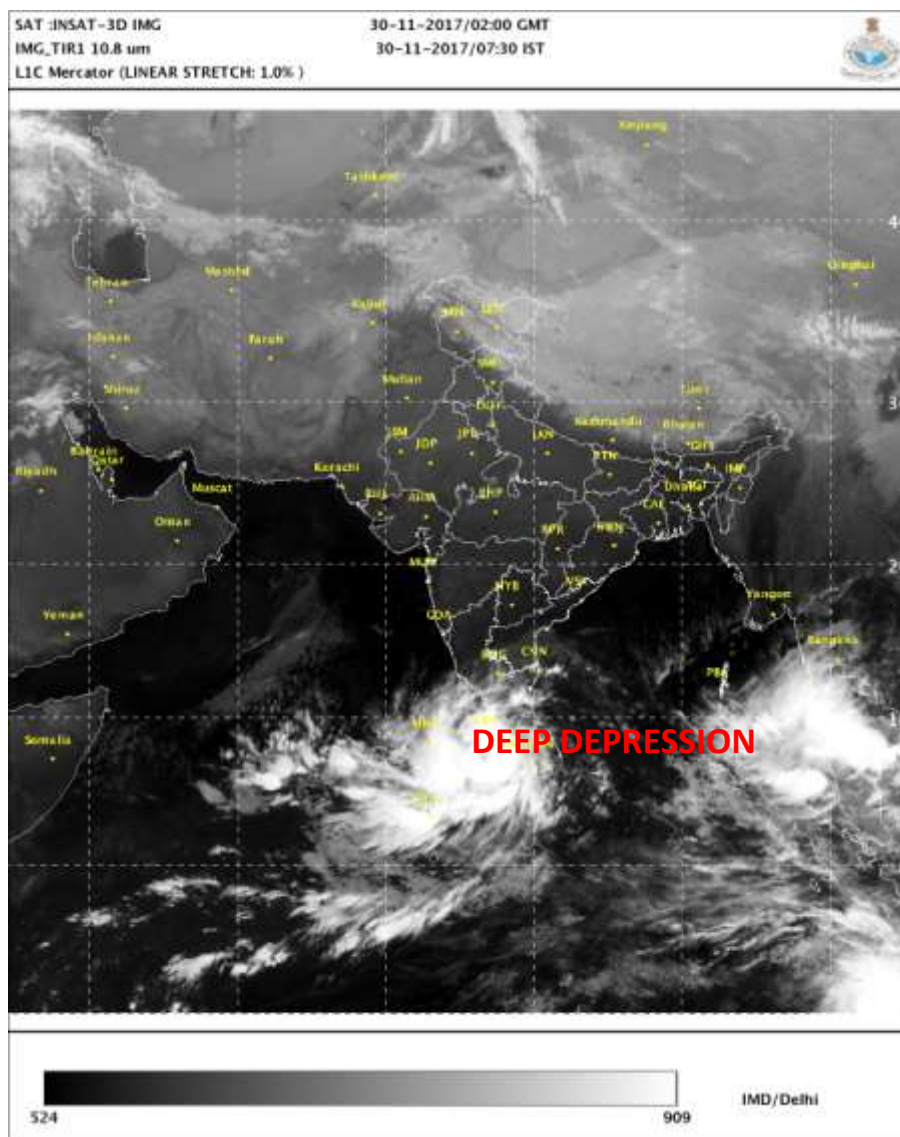
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DUE TO THE ABOVE FAVOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

2. THE TROUGH OF LOW AT MEAN SEA LEVEL OVER MALAY PENINSULA AND NEIGHBOURHOOD NOW LIES AS LOW PRESSURE AREAS OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA DURING AND LIKELY TO CONCENTRATE INTO A WELL MARKED DURING NEXT 24 HOURS AND INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

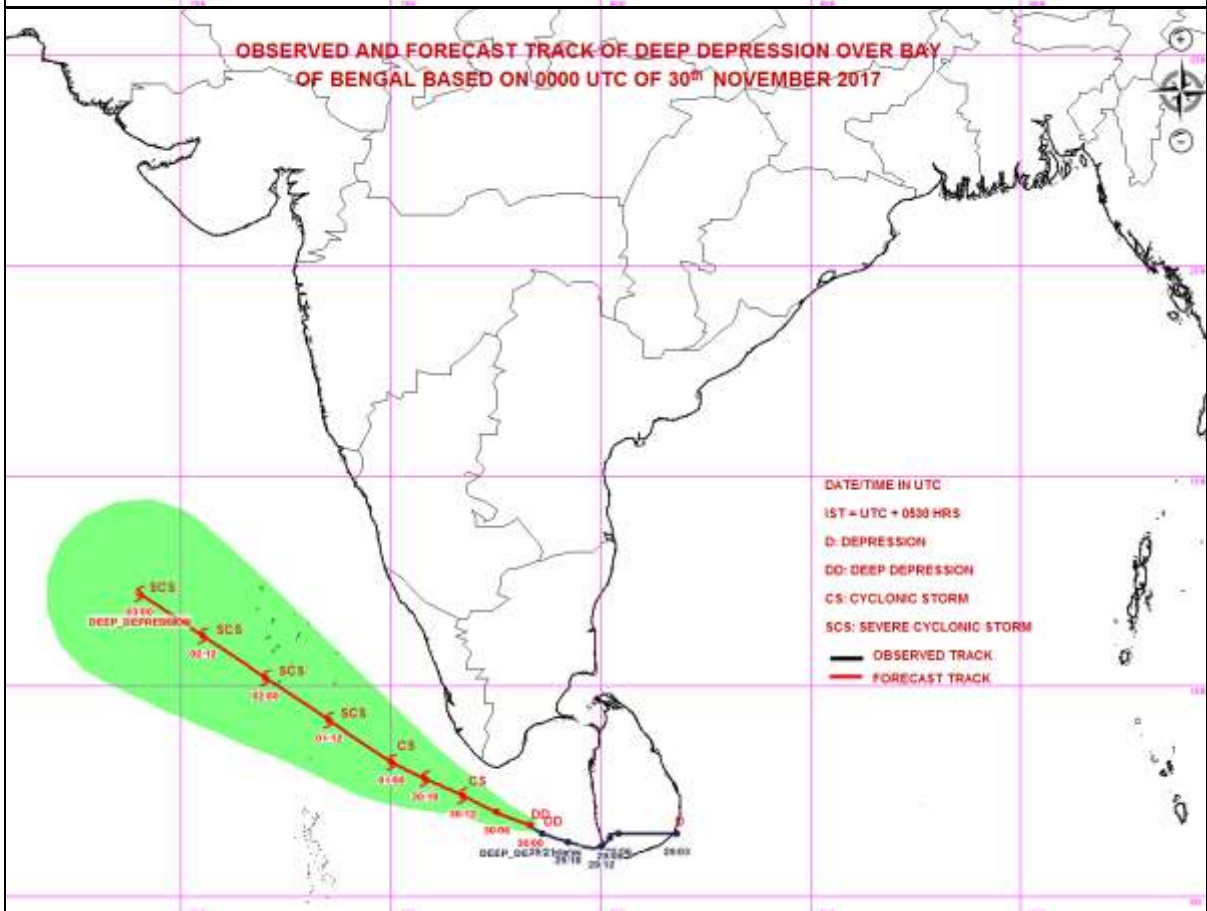
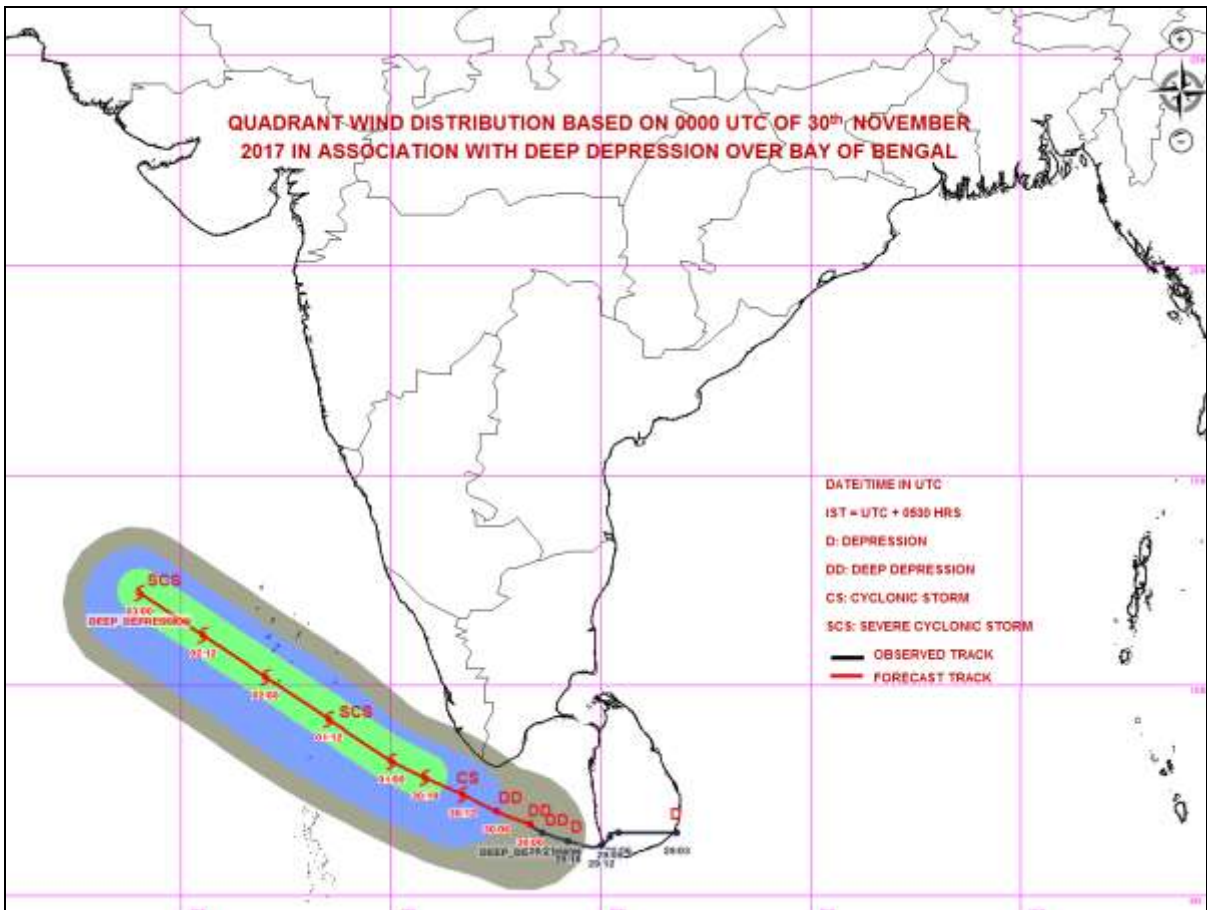
(KRISHNA MISHRA)  
SCIENTIST 'B', RSMC NEW DELHI



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
 NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. ONE ISSUED AT 0600 UTC OF 30<sup>TH</sup> NOVEMBER 2017**  
**BASED ON 0300 UTC CHARTS OF 30<sup>TH</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER COMORIN AREA:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEEP DEPRESSION OVER COMORIN AREA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 38 KMPH DURING PAST 06 HOURS AND INTENSIFIED INTO A CYCLONIC STORM 'OCKHI' AND LAY CENTRED AT 0300 HRS IST OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER COMORIN AREA AND NEIGHBOURHOOD NEAR LATITUDE 7.5° N AND LONGITUDE 77.5° E, ABOUT 340 KM WEST-NORTHWEST OF GALLE (43495) (SRI LANKA), 60 KM SOUTH OF KANYAKUMARI (43377), 120 KM SOUTHWEST OF THIRUVANANTHAPURAM (43372) AND 480 KM EAST-SOUTHEAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS LAKSHADWEEP ISLANDS AND INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

<b>Date/Time(IST)</b>	<b>Position (Lat. °N/ long. °E)</b>	<b>Maximum sustained surface wind speed (KMPH)</b>	<b>Category of cyclonic disturbance</b>
30/0300	7.5/77.5	60-70 GUSTING TO 80	CYCLONIC STORM
30/0600	7.8/77.0	60-70 GUSTING TO 80	CYCLONIC STORM
30/1200	8.5/75.8	70-75 GUSTING TO 85	CYCLONIC STORM
30/1800	9.0/75.0	80-90 GUSTING TO 100	CYCLONIC STORM
01/0300	9.5/74.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1200	10.4/72.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
02/0300	11.4/71.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/1200	12.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.5. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIES BETWEEN LATITUDE 3°N TO 10°N TO LONGITUDE 72.0°E TO 80.0°E AND OVER EXTREME SOUTH TAMIL NADU, SOUTH KERALA GULF OF MANNAR AND COMORIN AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

DURING NEXT 48 HOURS AND ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 24 HOURS. SEA CONDITIONS WOULD BE VERY ROUGH TO HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND HIGH TO VERY HIGH DURING SUBSEQUENT 48 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15°N. HENCE THE WINDS ARE NEARLY EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE SOUTH AND ALSO TO THE NORTH OF LATITUDE 15°N. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $50 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT  $50 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA PERSISTS AND LIKELY TO BE A WELL MARKED DURING NEXT 24 HOURS AND CONCENTARTE INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

(NEETHA K GOPAL)  
SCIENTIST 'E' , RSMC NEW DELHI

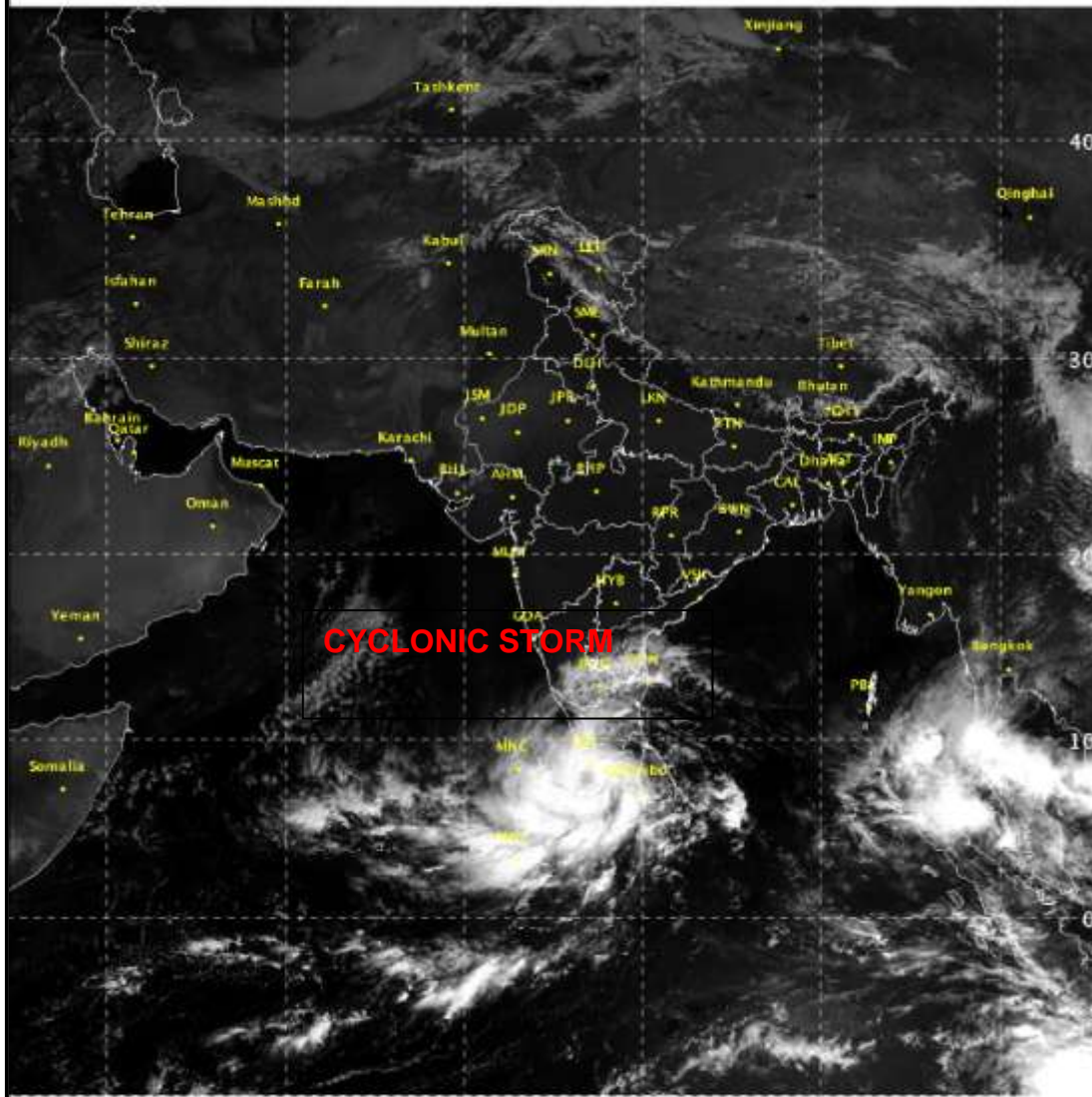
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**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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30-11-2017/05:00 GMT  
30-11-2017/10:30 IST

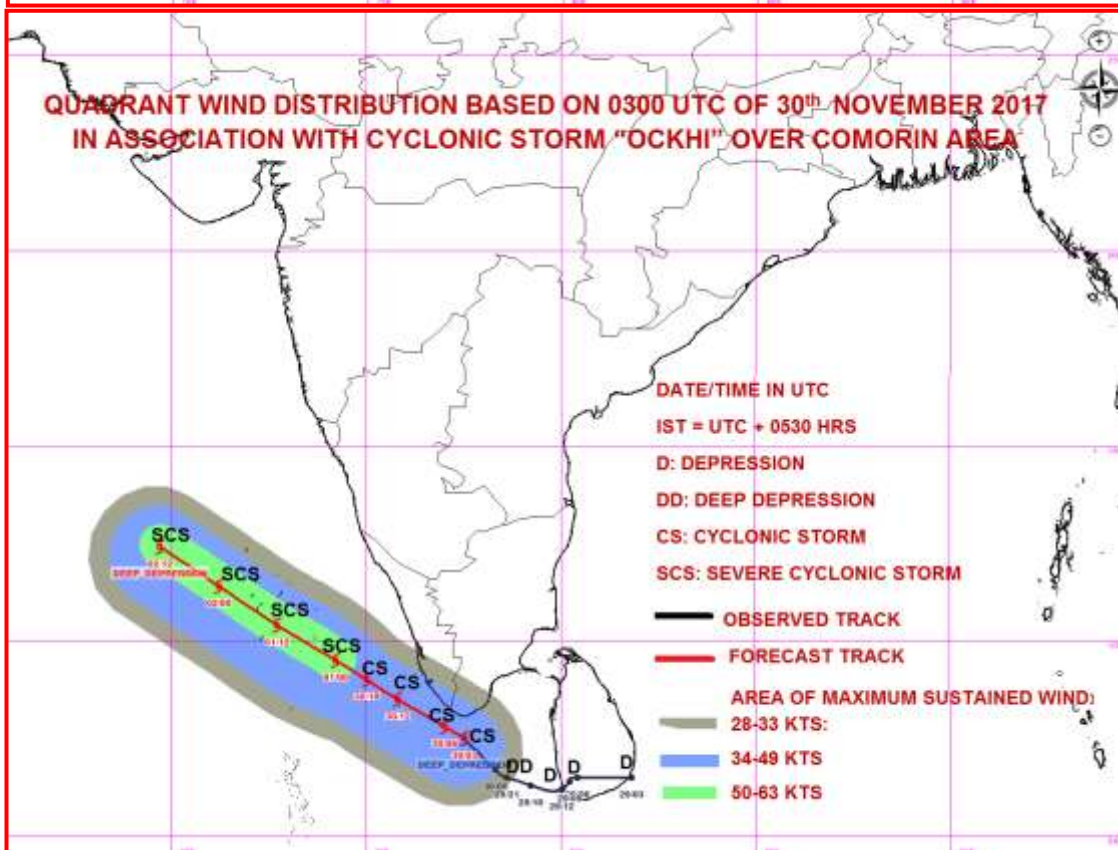
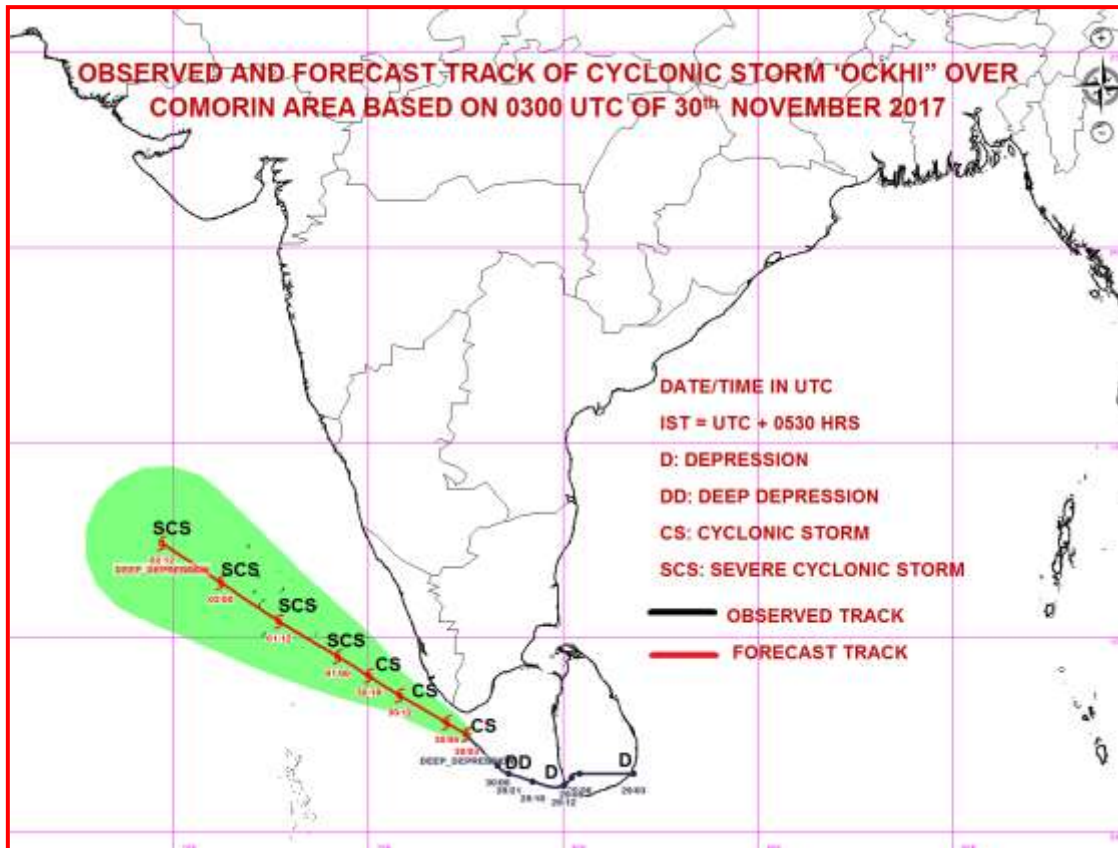


IMD/Delhi

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
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**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWO ISSUED AT 0900 UTC OF 30<sup>TH</sup> NOVEMBER 2017**  
**BASED ON 0600 UTC CHARTS OF 30<sup>TH</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER COMORIN AREA:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM 'OCKHI' OVER COMORIN AREA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 32 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER COMORIN AREA AND NEIGHBOURHOOD NEAR LATITUDE 7.8° N AND LONGITUDE 76.9° E, ABOUT 410 KM WEST-NORTHWEST OF GALLE (43495) (SRI LANKA), 70 KM SOUTHWEST OF KANYAKUMARI (43377), 70 KM SOUTH OF THIRUVANANTHAPURAM (43372) AND 410 KM EAST-SOUTHEAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS LAKSHADWEEP ISLANDS AND INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/0600	7.8/76.9	70-80 GUSTING TO 90	CYCLONIC STORM
30/1200	8.5/76.0	80-90 GUSTING TO 100	CYCLONIC STORM
30/1800	9.0/75.0	85-95 GUSTING TO 100	CYCLONIC STORM
01/0000	9.5/74.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/0600	10.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/1800	11.0/72.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0600	12.0/70.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.0. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIES BETWEEN LATITUDE 3°N TO 10°N TO LONGITUDE 72.0°E TO 80.0°E AND OVER EXTREME SOUTH TAMIL NADU, SOUTH KERALA GULF OF MANNAR AND COMORIN AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST DURING NEXT 48 HOURS AND ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 24 HOURS. SEA CONDITIONS WOULD BE VERY ROUGH TO HIGH OVER AND AROUND

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND HIGH TO VERY HIGH DURING SUBSEQUENT 48 HOURS.

KANYAKUMARI (43377) REPORTED LOWEST MEAN SEA LEVEL PRESSURE OF 1004 HPA AND MEAN SURFACE WIND SPEED 090/21 KNOTS. A SHIP NEAR LATITUDE 6.8 N/ LONGITUDE 77.6 E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA AND MEAN SURFACE WIND SPEED 200/37 KNOTS. ANOTHER SHIP NEAR LATITUDE 8.2 N/ LONGITUDE 76 E MEAN SURFACE WIND SPEED 340/46 KNOTS. A THIRD SHIP NEAR LATITUDE 8.6 N/ LONGITUDE 76.6 E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.3 HPA AND MEAN SURFACE WIND SPEED 050/29 KNOTS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15°N. HENCE THE WINDS ARE NEARLY EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE SOUTH AND ALSO TO THE NORTH OF LATITUDE 15°N. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $50 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT  $50 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. Madden Julian Oscillation (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

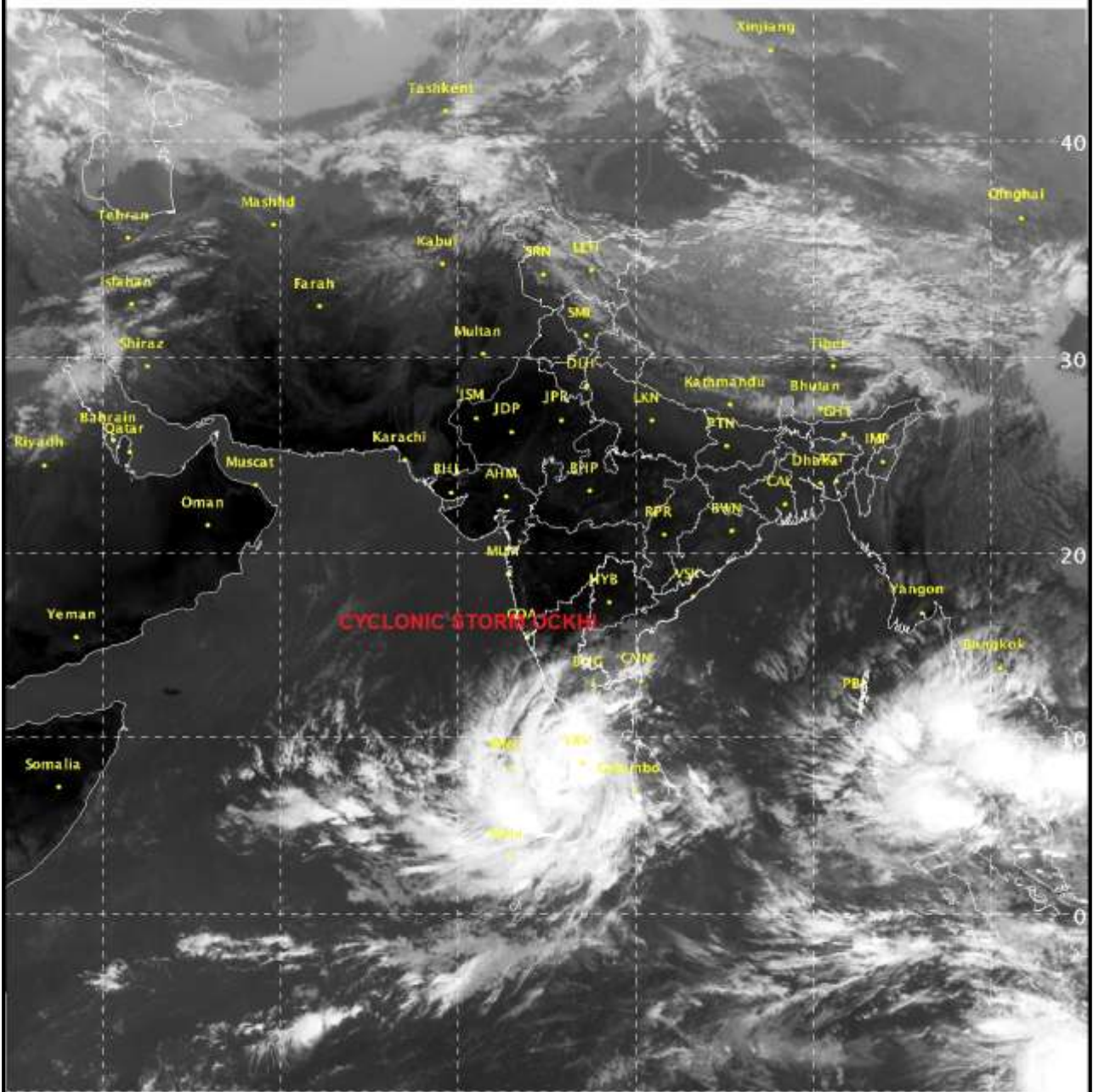
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA PERSISTS AND LIKELY TO BE A WELL MARKED DURING NEXT 24 HOURS AND CONCENTRATE INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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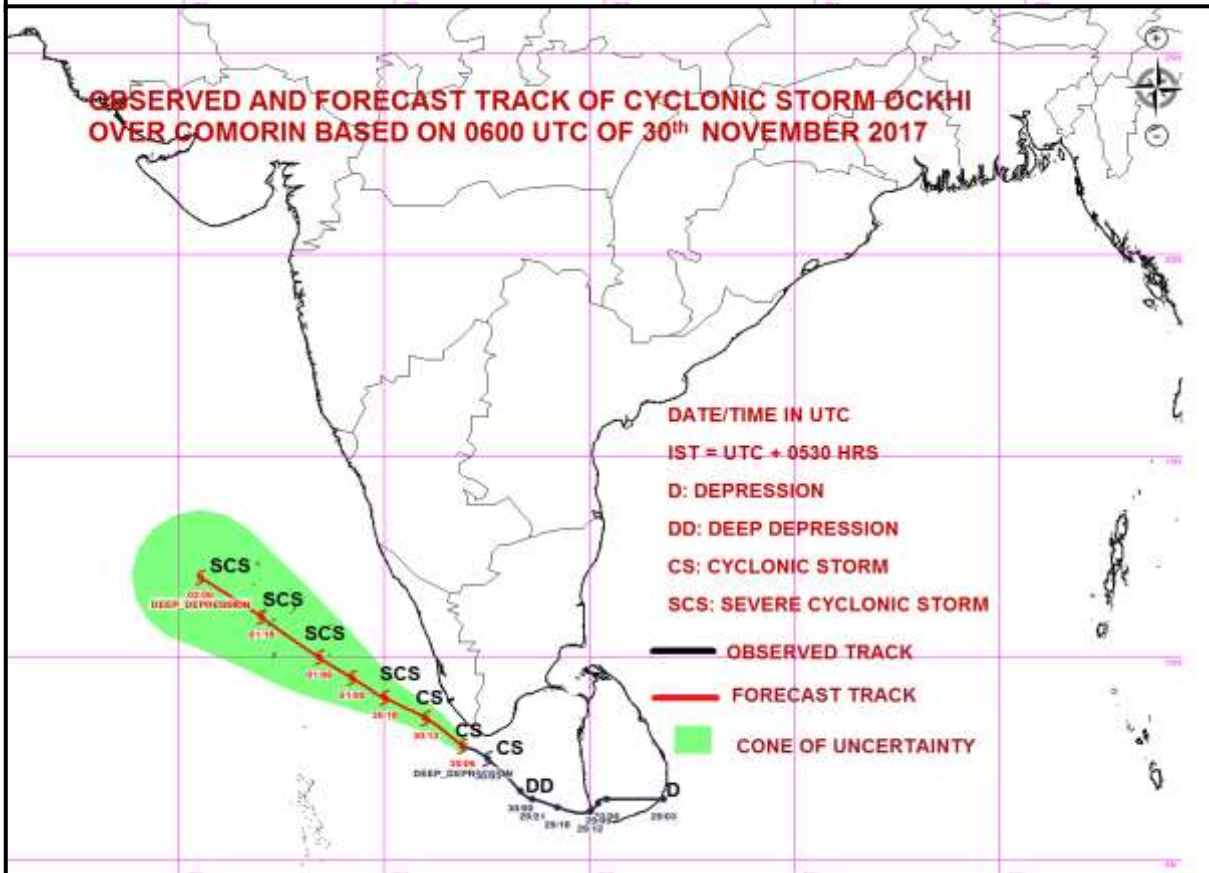
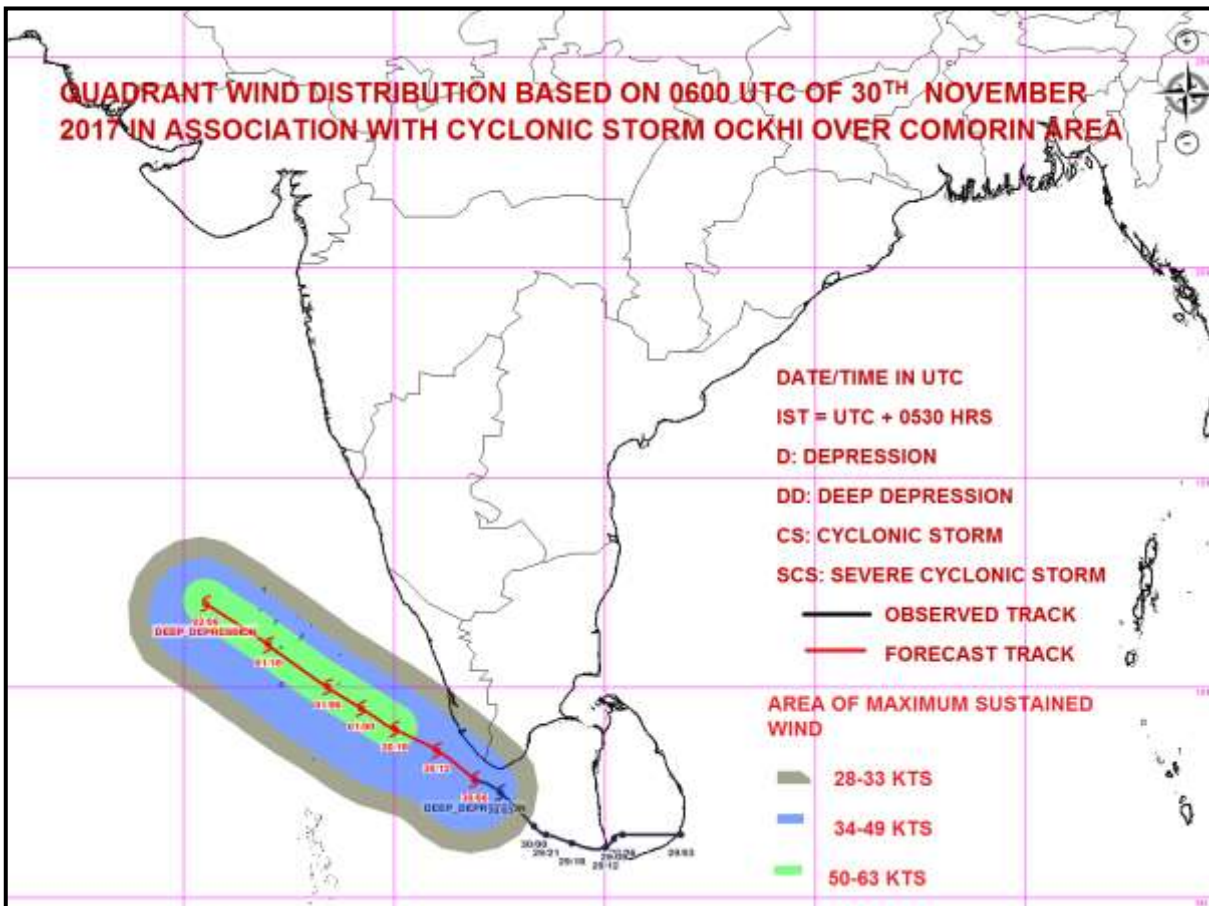
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IMD/Delhi

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

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**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THREE ISSUED AT 1200 UTC OF 30<sup>TH</sup> NOVEMBER 2017**  
**BASED ON 0900 UTC CHARTS OF 30<sup>TH</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER SOUTH KERALA COAST AND NEIGHBOURHOOD:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM 'OCKHI' OVER COMORIN AREA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER SOUTH KERALA COAST AND NEIGHBOURHOOD NEAR LATITUDE 7.9° N AND LONGITUDE 76.4° E, ABOUT 120 KM WEST-SOUTHWEST OF KANYAKUMARI (43377), 180 KM SOUTH-SOUTHWEST OF THIRUVANANTHAPURAM (43372) AND 360 KM EAST-SOUTHEAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS LAKSHADWEEP ISLANDS AND INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/0900	7.9/76.4	75-85 GUSTING TO 95	CYCLONIC STORM
30/1200	8.5/76.0	80-90 GUSTING TO 100	CYCLONIC STORM
30/1800	9.0/75.0	85-95 GUSTING TO 100	CYCLONIC STORM
01/0000	9.5/74.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/0600	10.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/1800	11.0/72.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
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THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST DURING NEXT 48 HOURS AND ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 24 HOURS. SEA CONDITIONS WOULD BE VERY ROUGH TO HIGH OVER AND AROUND

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND HIGH TO VERY HIGH DURING SUBSEQUENT 48 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15°N. HENCE THE WINDS ARE NEARLY EAST-SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SYSTEM MAY MOVE WEST-NORTHWESTWARDS. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE SOUTH AND ALSO TO THE NORTH OF LATITUDE 15°N. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 50X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT 50 X 10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND MOVE WEST-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

**LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

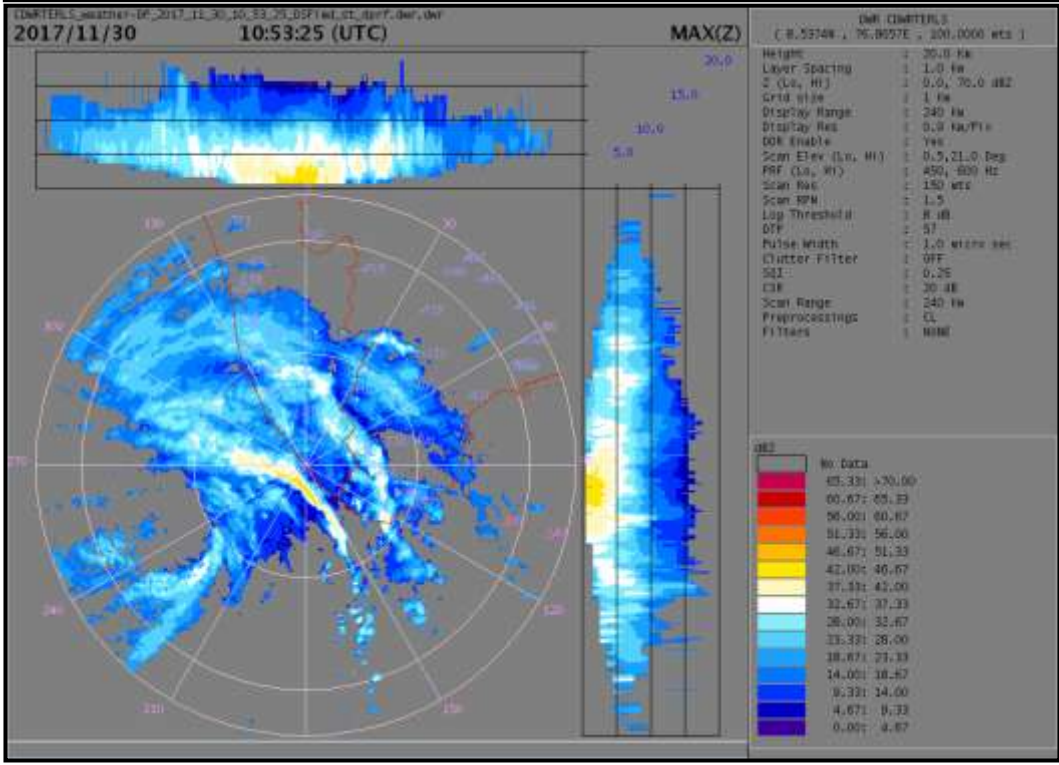
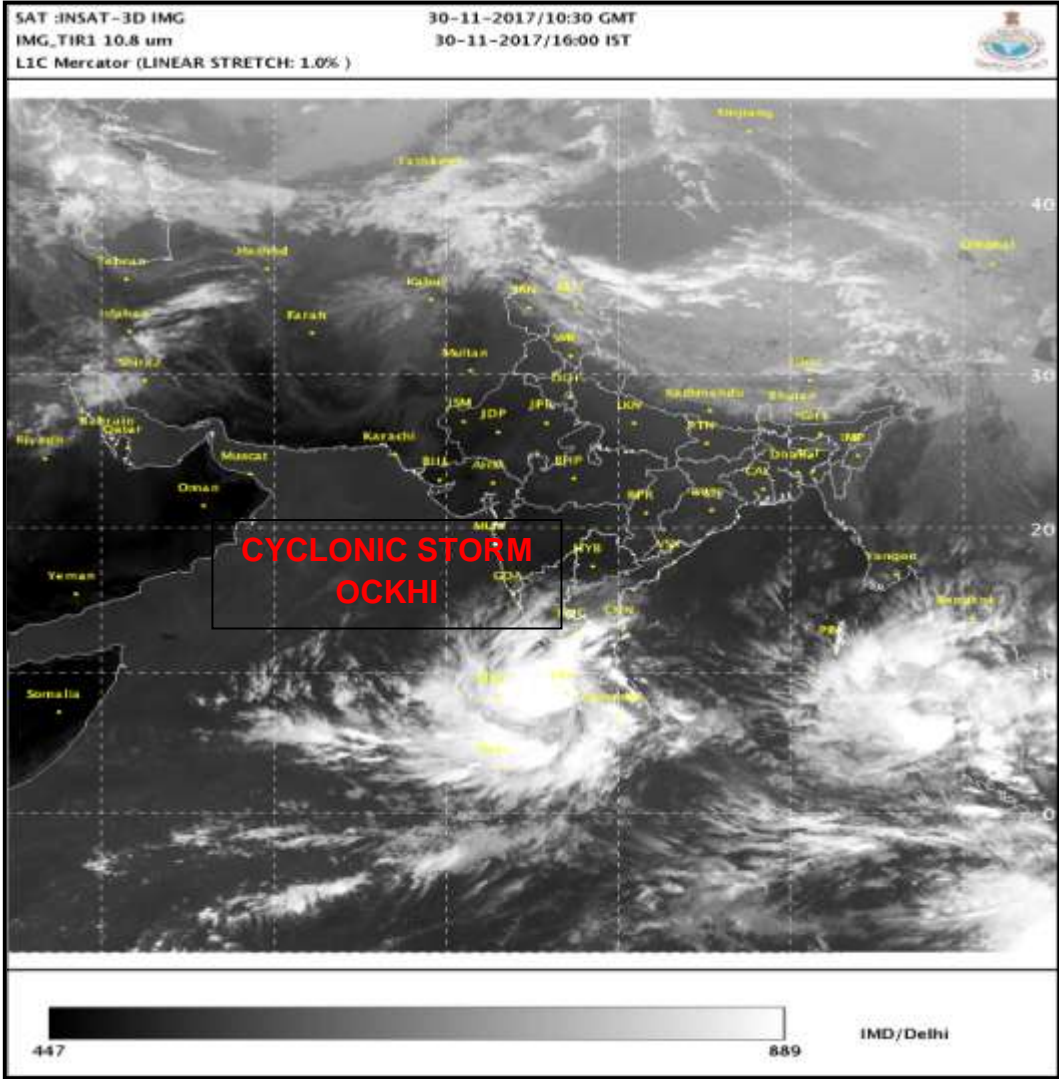
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(NEETHA K GOPAL)  
SCIENTIST 'E' , RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

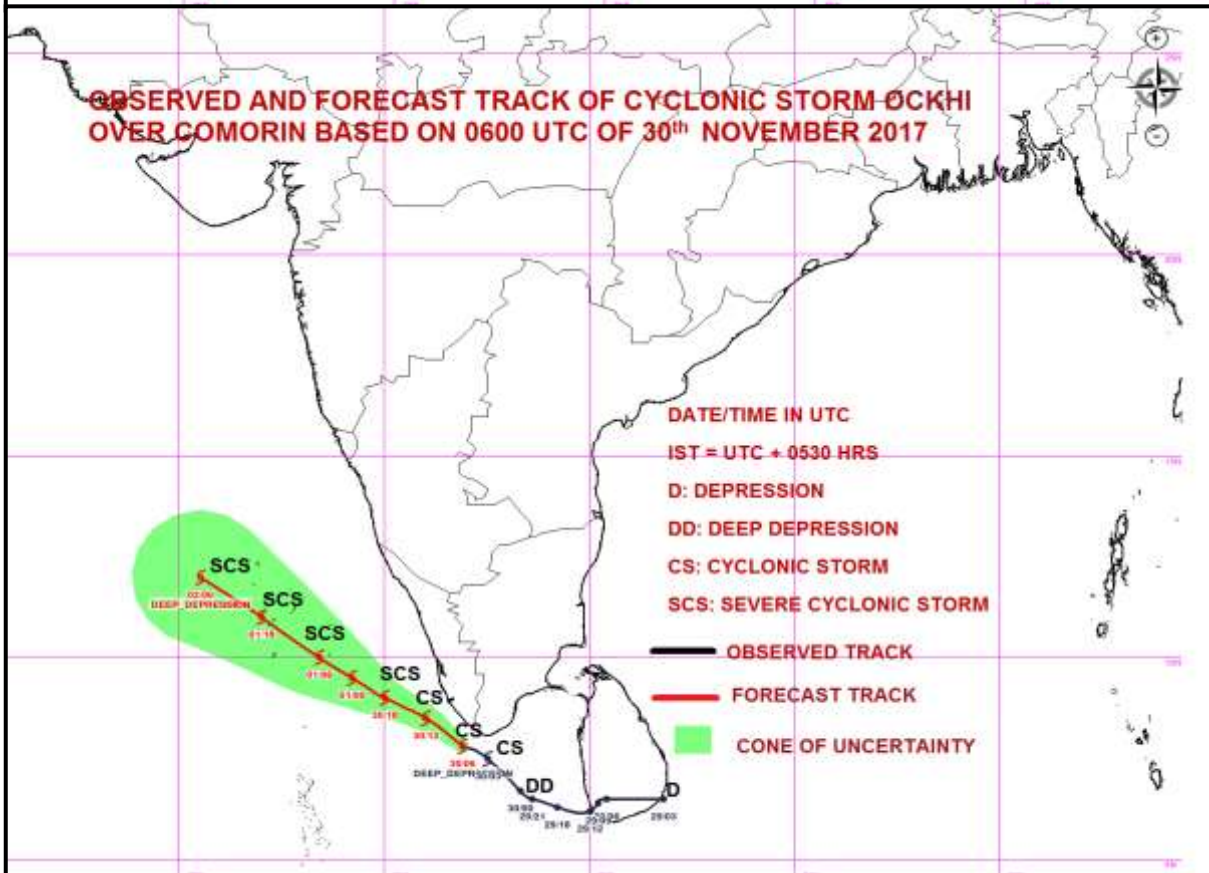
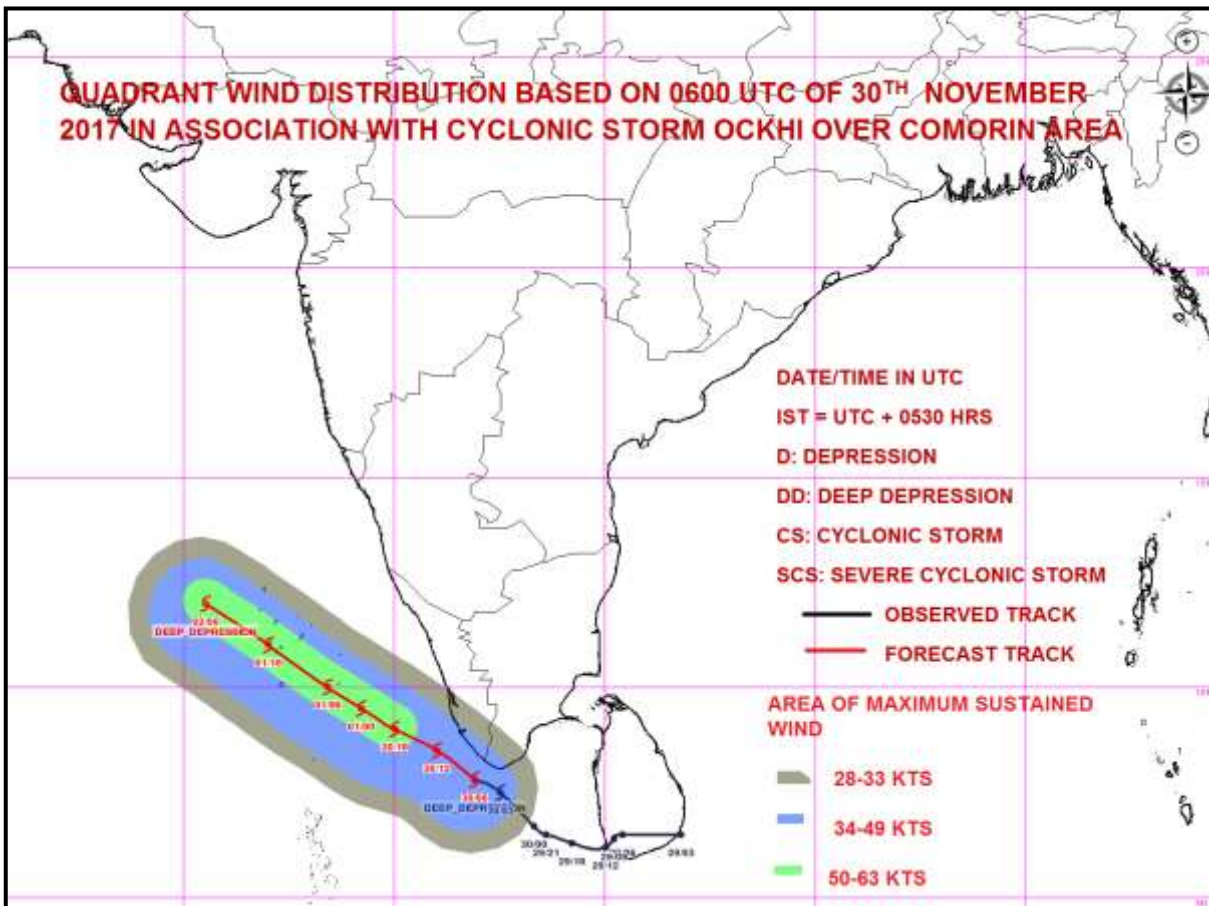
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

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**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
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**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FOUR ISSUED AT 1500 UTC OF 30<sup>TH</sup> NOVEMBER 2017  
BASED ON 1200 UTC CHARTS OF 30<sup>TH</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA:**

LATEST OBSERVATIONS, RADAR AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM 'OCKHI' OVER ARABIAN SEA OFF SOUTH KERALA COAST MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 30<sup>TH</sup> NOVEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.2° N AND LONGITUDE 75.8° E, ABOUT 130 KM WEST-SOUTHWEST OF THIRUVANANTHAPURAM (43372) AND 290 KM EAST- SOUTHEAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 36 HOURS AND THEN MOVE NORTHWESTWARDS DURING THE SUBSEQUENT 24 HOURS.

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30/1200	8.2/75.8	75-85 GUSTING TO 95	CYCLONIC STORM
30/1800	8.5/75.1	80-90 GUSTING TO 100	CYCLONIC STORM
01/0000	8.8/74.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/0600	9.2/73.5	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1200	9.6/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/0000	10.4/71.1	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1200	11.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0000	12.5/68.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1200	13.7/67.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0000	14.8/67.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1200	16.1/67.7	80-90 GUSTING TO 100	CYCLONIC STORM
05/0000	17.4/68.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	18.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 4°N AND 11 °N AND LONGITUDE 70.0°E AND 80.0°E . THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 °C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST DURING NEXT 48 HOURS AND ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 24 HOURS. SEA CONDITIONS WOULD BE VERY ROUGH TO HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND HIGH TO VERY HIGH DURING SUBSEQUENT 48 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 13°N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE WEST AND CONSTANT TO THE NORTH OF THE SYSTEM. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE AND  $10-20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. THE SYSTEM MAY MOVE INITIALLY WEST-NORTHWESTWARDS. HOWEVER THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIFERRY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARD AND THEN NORTEAST WARDS FROM THE FORENOON OF THIRD DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

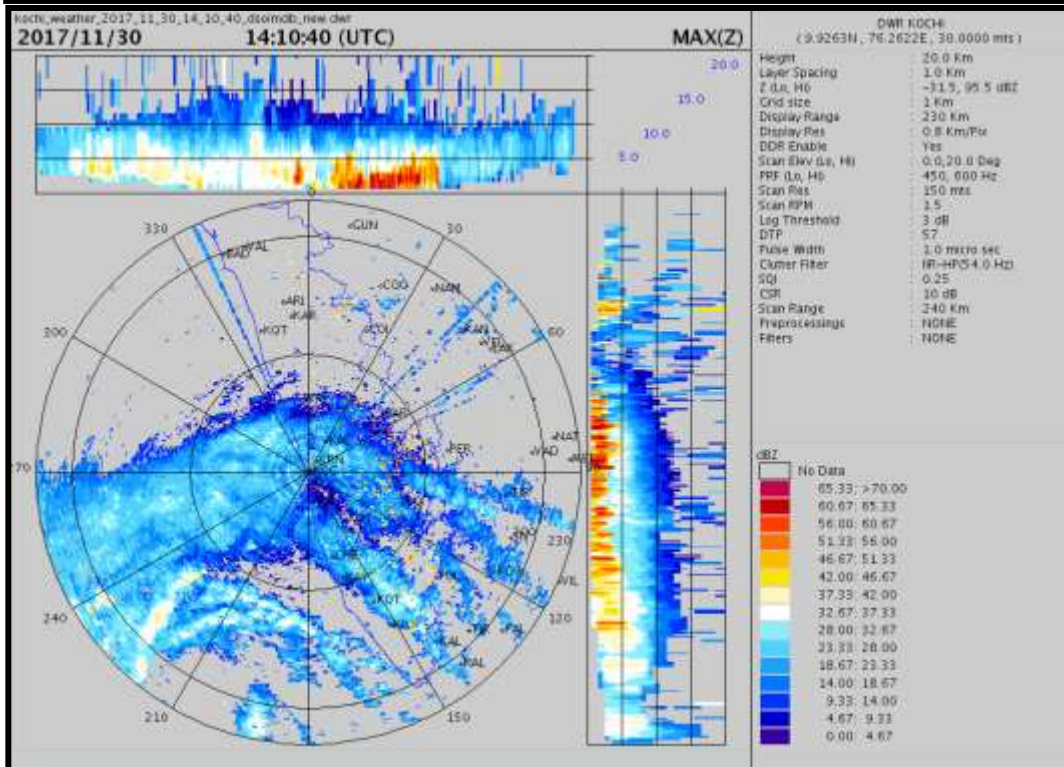
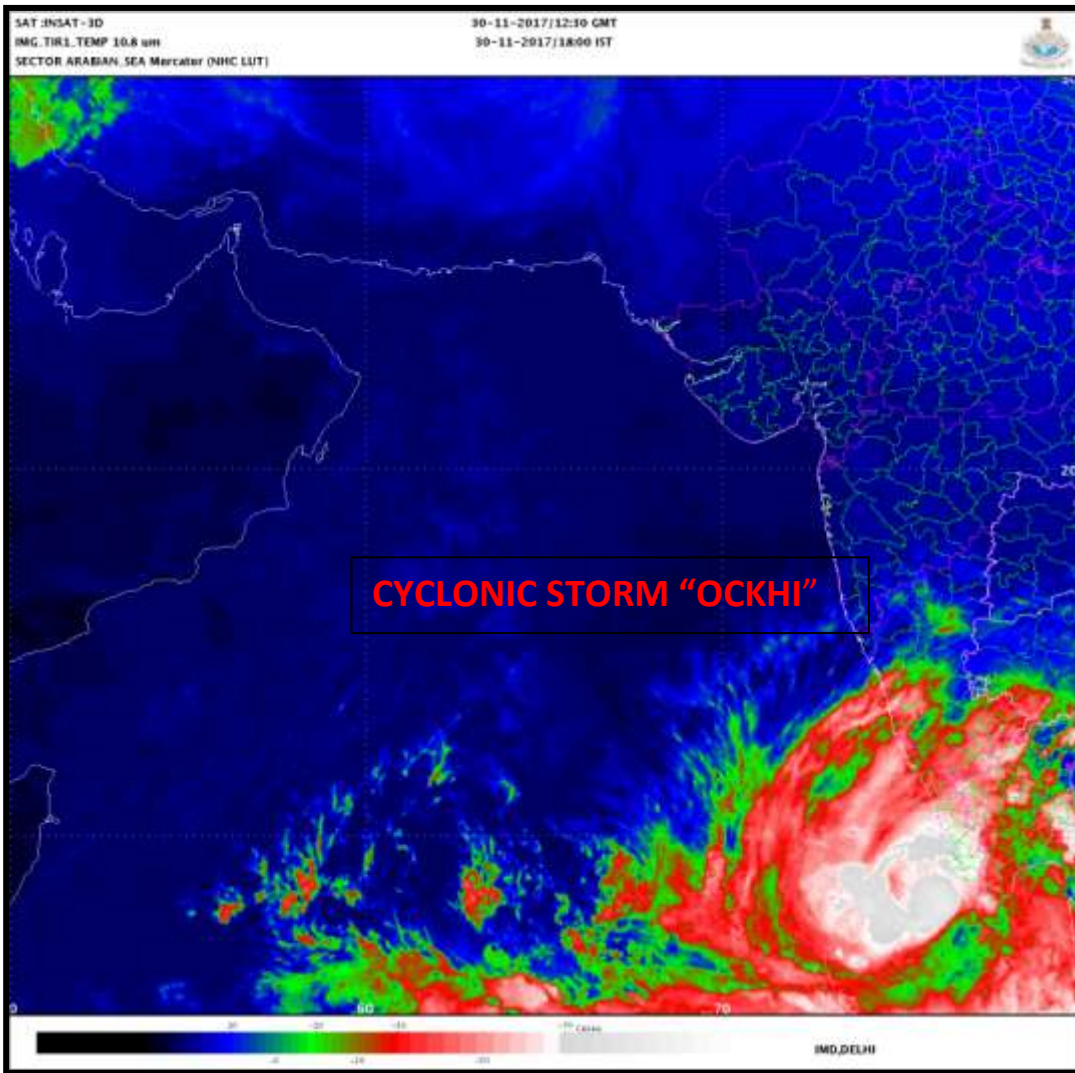
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTH ANDAMAN SEA AND ADJOINING MALAY PENINSULA AND LIKELY TO BECOME WELL MARKED DURING NEXT 24 HOURS AND CONCENTARTE INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

(NEETHA K GOPAL)  
SCIENTIST 'E' , RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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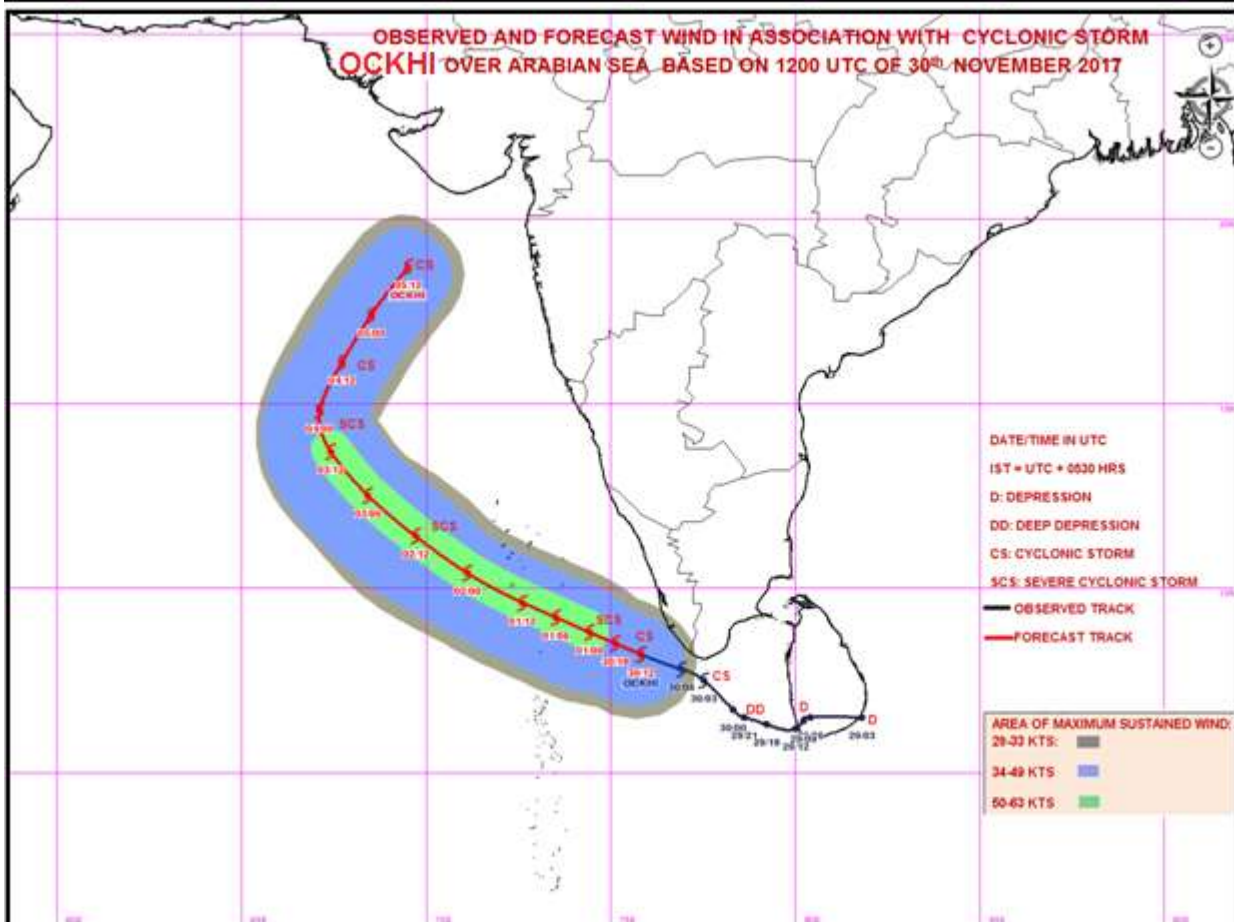
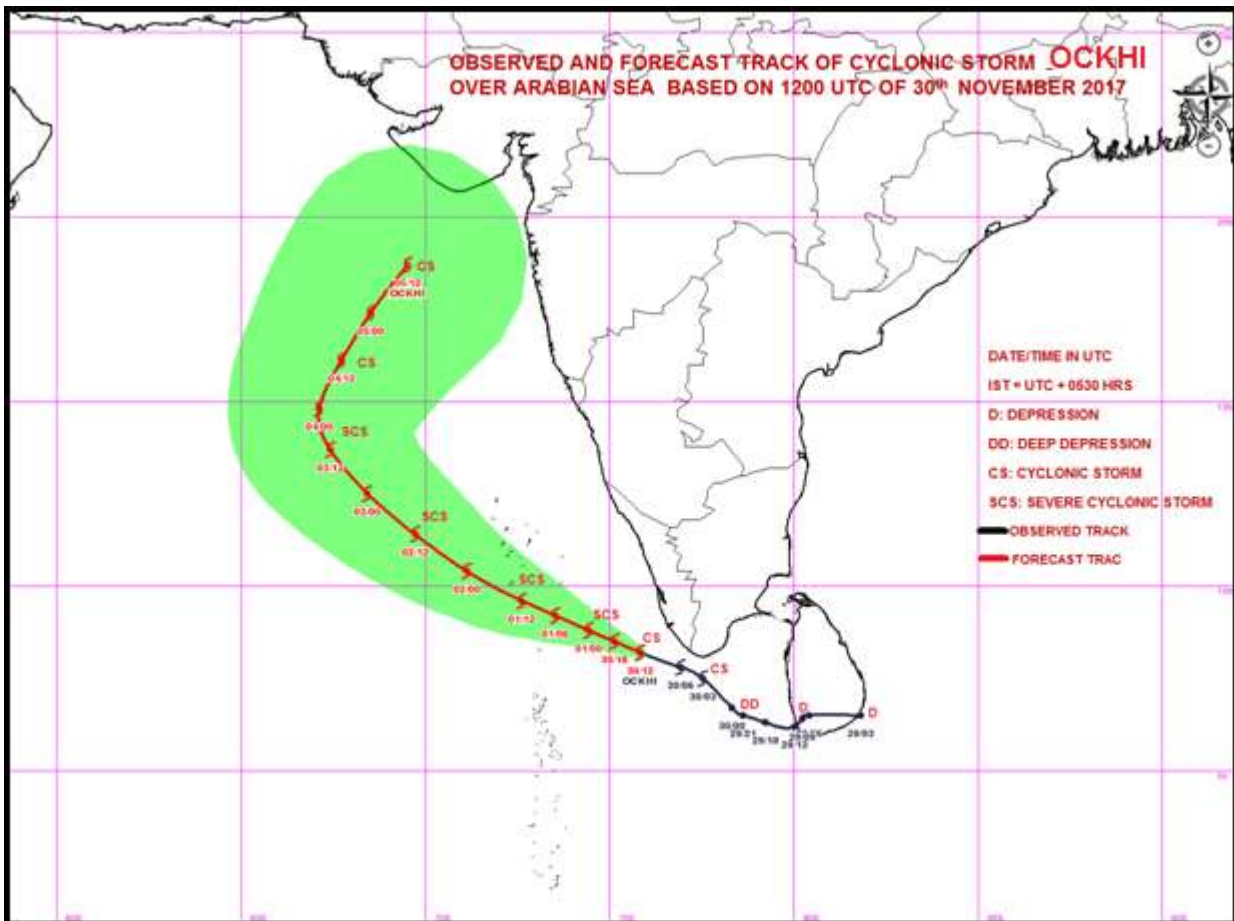
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FIVE ISSUED AT 1800 UTC OF 30<sup>TH</sup> NOVEMBER 2017**  
**BASED ON 1500 UTC CHARTS OF 30<sup>TH</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA:**

LATEST OBSERVATIONS, RADAR AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 25 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1500 UTC OF TODAY, THE 30TH NOVEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.3° N AND LONGITUDE 75.4° E, ABOUT 125 KM WEST OF THIRUVANANTHAPURAM (43372) AND 250 KM EAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTHWESTWARDS DURING THE SUBSEQUENT 24 HOURS.

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/2030	8.3 /75.4	80-90 GUSTING TO 100	CYCLONIC STORM
30/2330	8.5/75.0	85-95 GUSTING TO 105	CYCLONIC STORM
01/0530	8.8/74.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/1130	9.2/73.5	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1730	9.6/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
02/0530	10.4/71.1	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/1730	11.4/69.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0530	12.5/68.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/1730	13.7/67.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0530	14.8/67.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1730	16.1/67.7	80-90 GUSTING TO 100	CYCLONIC STORM
05/0530	17.4/68.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	18.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

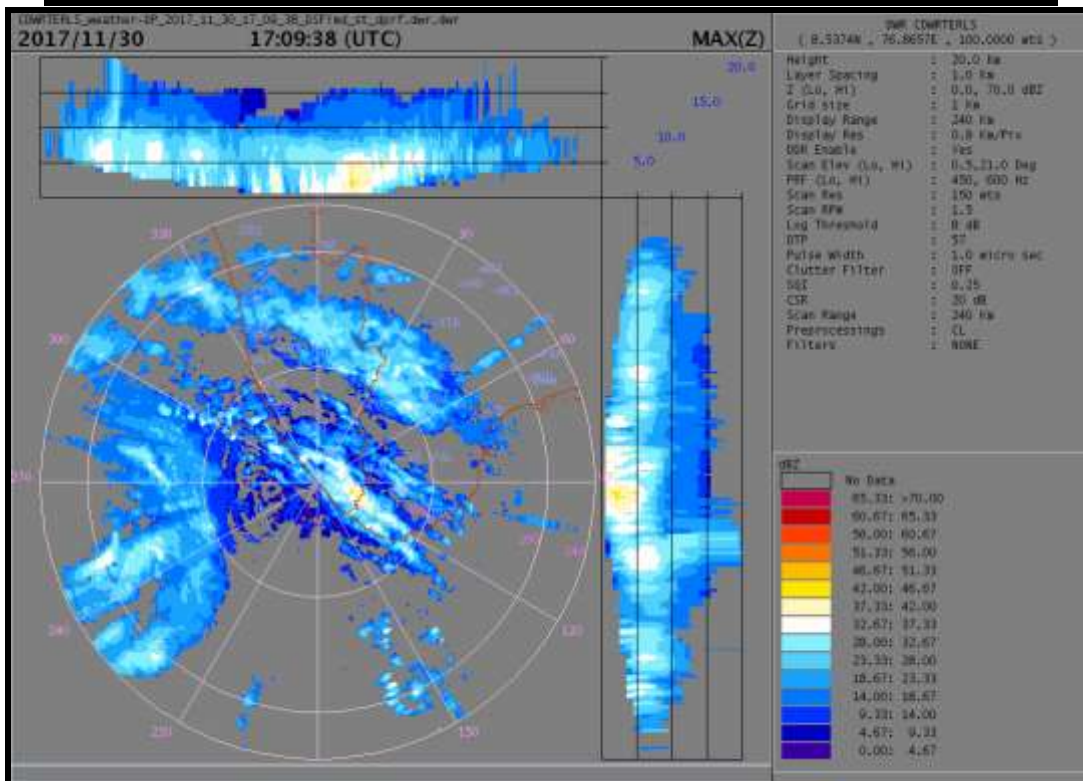
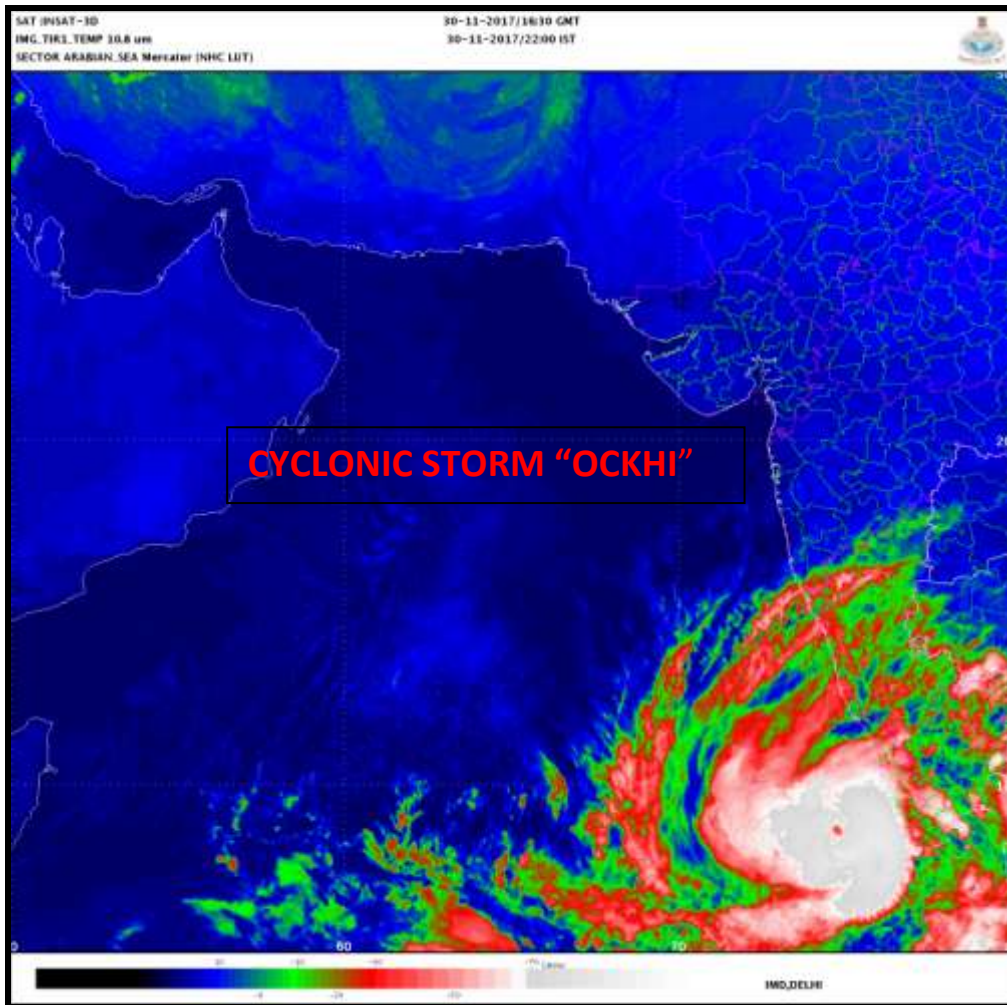
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(SHIBIN)  
SCIENTIST 'B' , RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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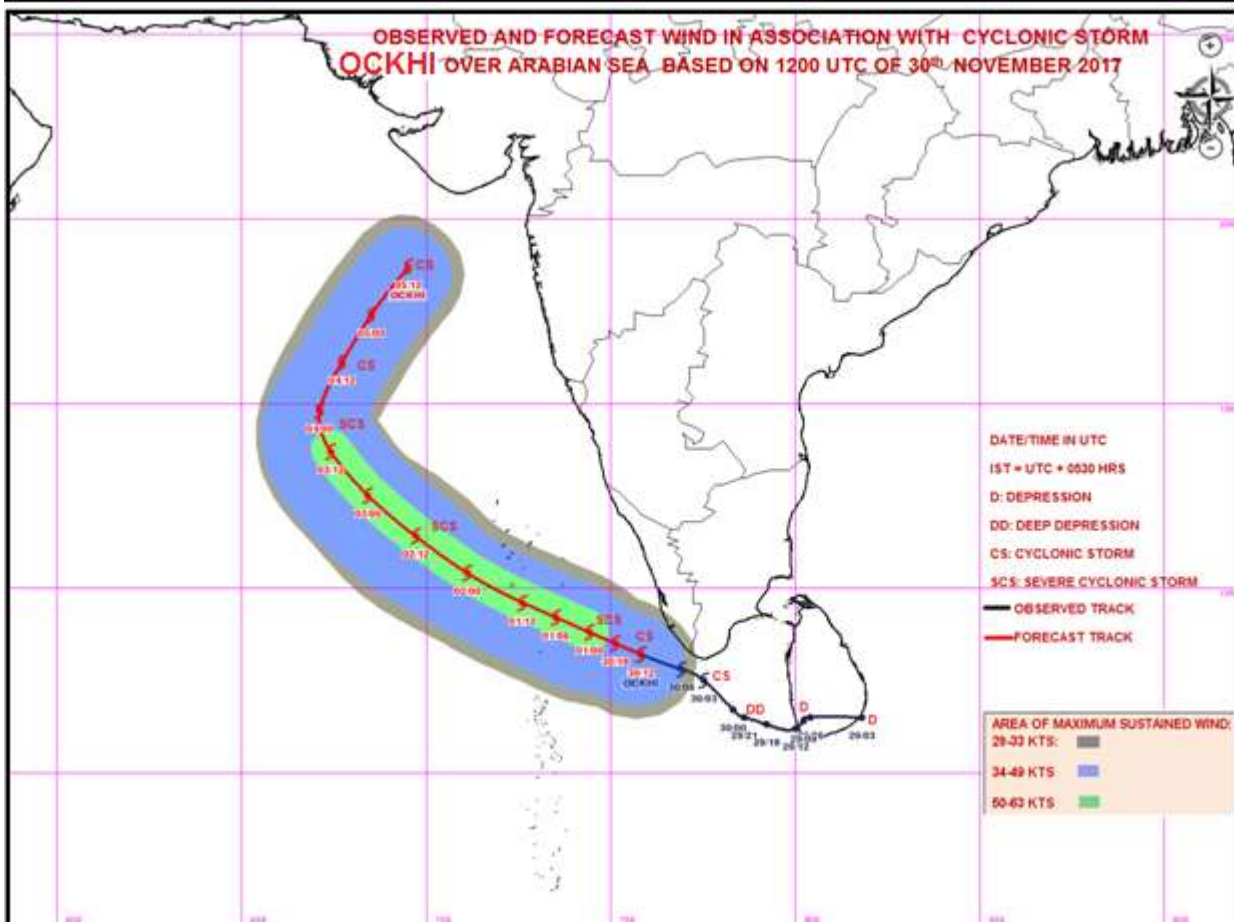
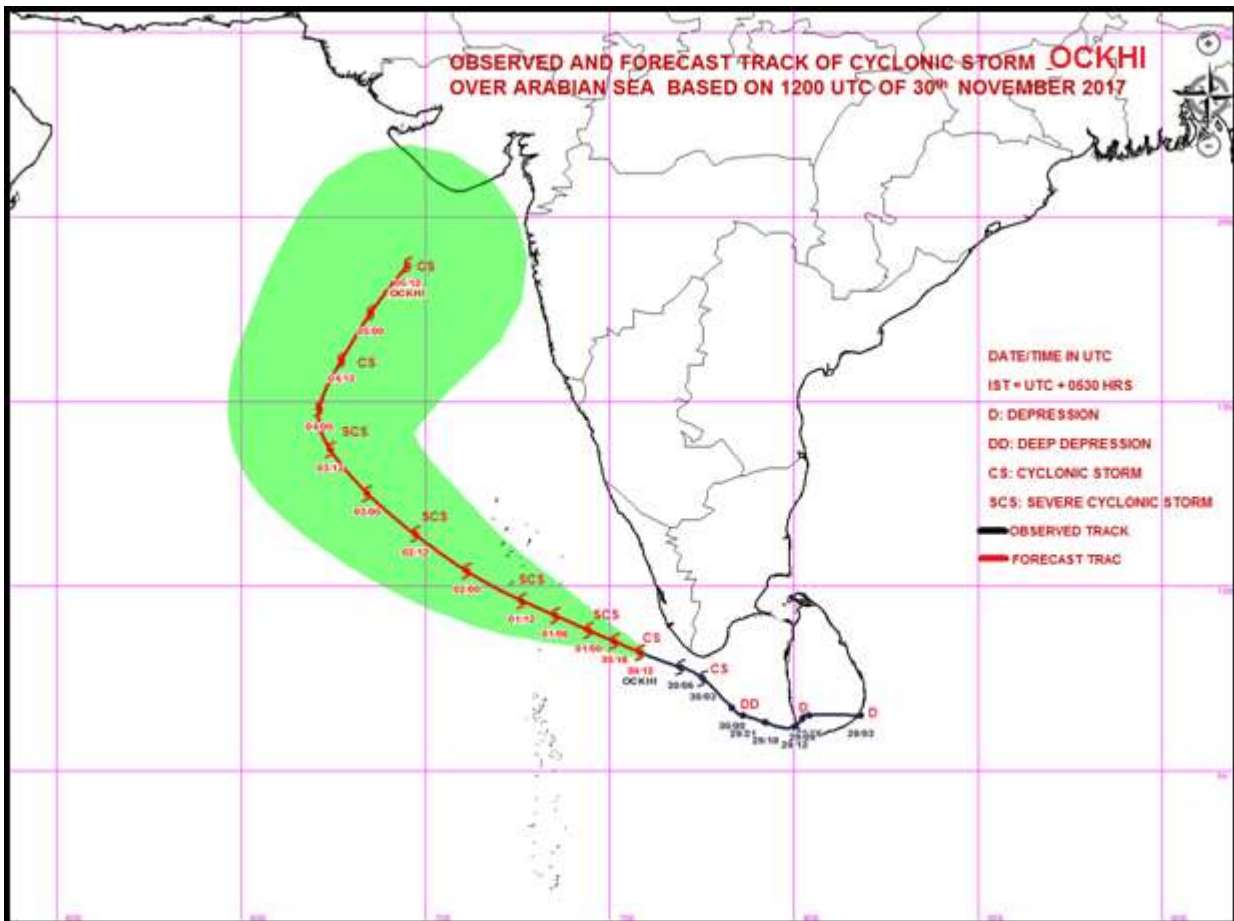
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
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**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. SIX ISSUED AT 2200 UTC OF 30<sup>th</sup> NOVEMBER 2017 BASED ON 1800 UTC CHARTS OF 30<sup>th</sup> NOVEMBER 2017**

**CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA:**

LATEST OBSERVATIONS, RADAR AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 25 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1800 UTC OF 30TH NOVEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.5° N AND LONGITUDE 74.9° E, ABOUT 180 KM WEST OF THIRUVANANTHAPURAM (43372) AND 200 KM EAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTHWESTWARDS DURING THE SUBSEQUENT 24 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/1800	8.5/74.9	85-95 GUSTING TO 105	CYCLONIC STORM
01/0000	8.9/74.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/0600	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1200	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1800	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0600	10.9.4/70.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1800	12.0/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0600	13.1/67.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/1800	14.3/67.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/0600	15.4/67.9	80-90 GUSTING TO 100	CYCLONIC STORM
04/1800	16.5/68.9	70-80 GUSTING TO 90	CYCLONIC STORM
05/0600	17.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	19.0/70.2	50-60 GUSTING TO 70	DEEP DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 5.0<sup>0</sup>N AND 13.0<sup>0</sup>N AND LONGITUDE 70.0<sup>0</sup>E TO 78.0<sup>0</sup>E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C (.)

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST AND VERY ROUGH TO HIGH ALONG AND OFF NORTH KERALA COAST DURING NEXT 36 HOURS AND VERY ROUGH TO HIGH ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 12 HOURS. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND VERY HIGH DURING SUBSEQUENT 48 HOURS.

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#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

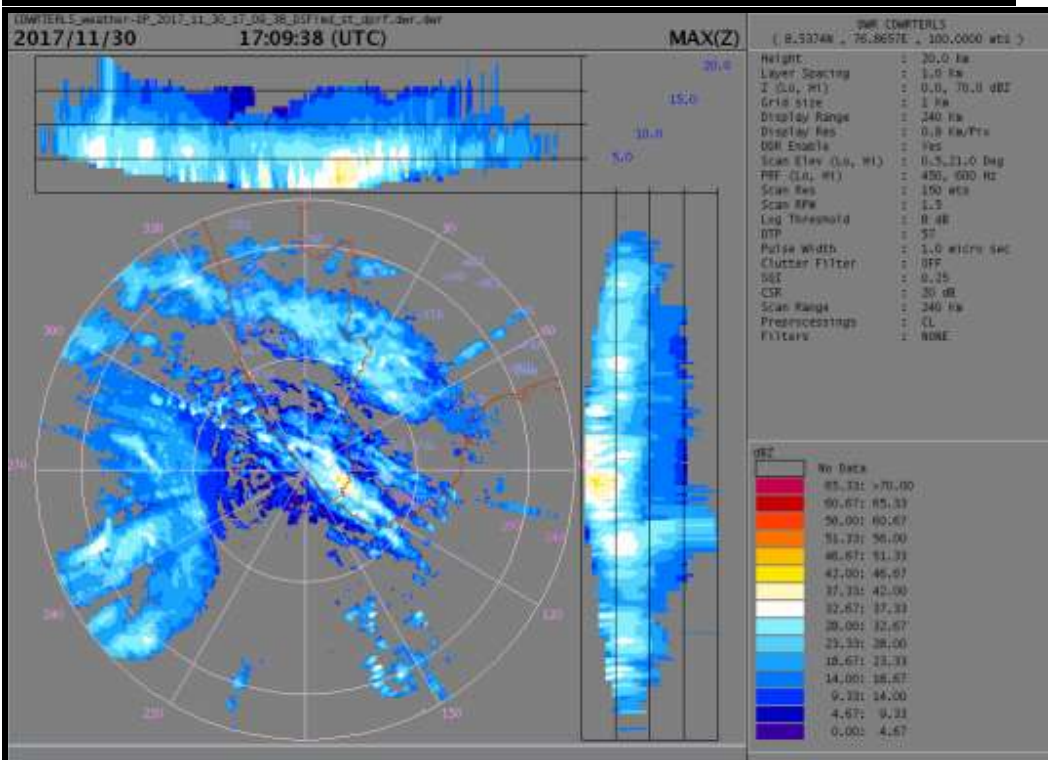
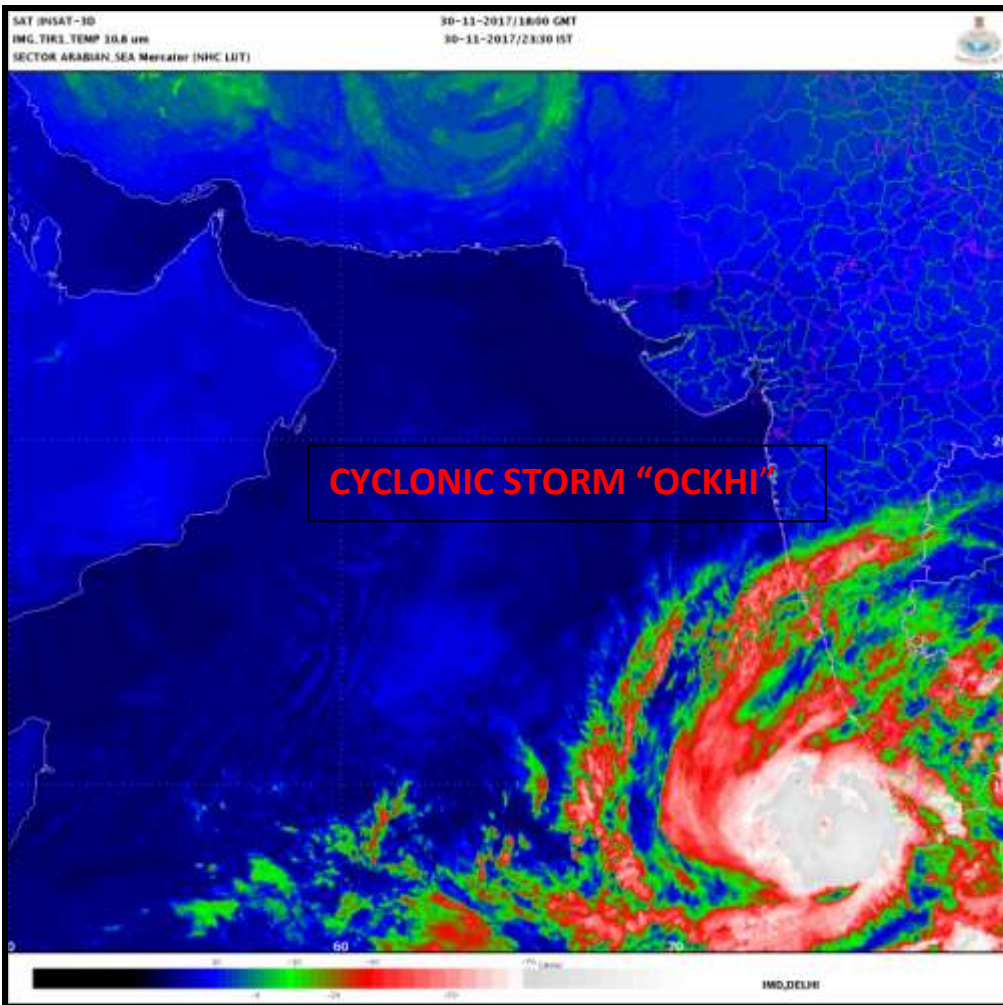
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(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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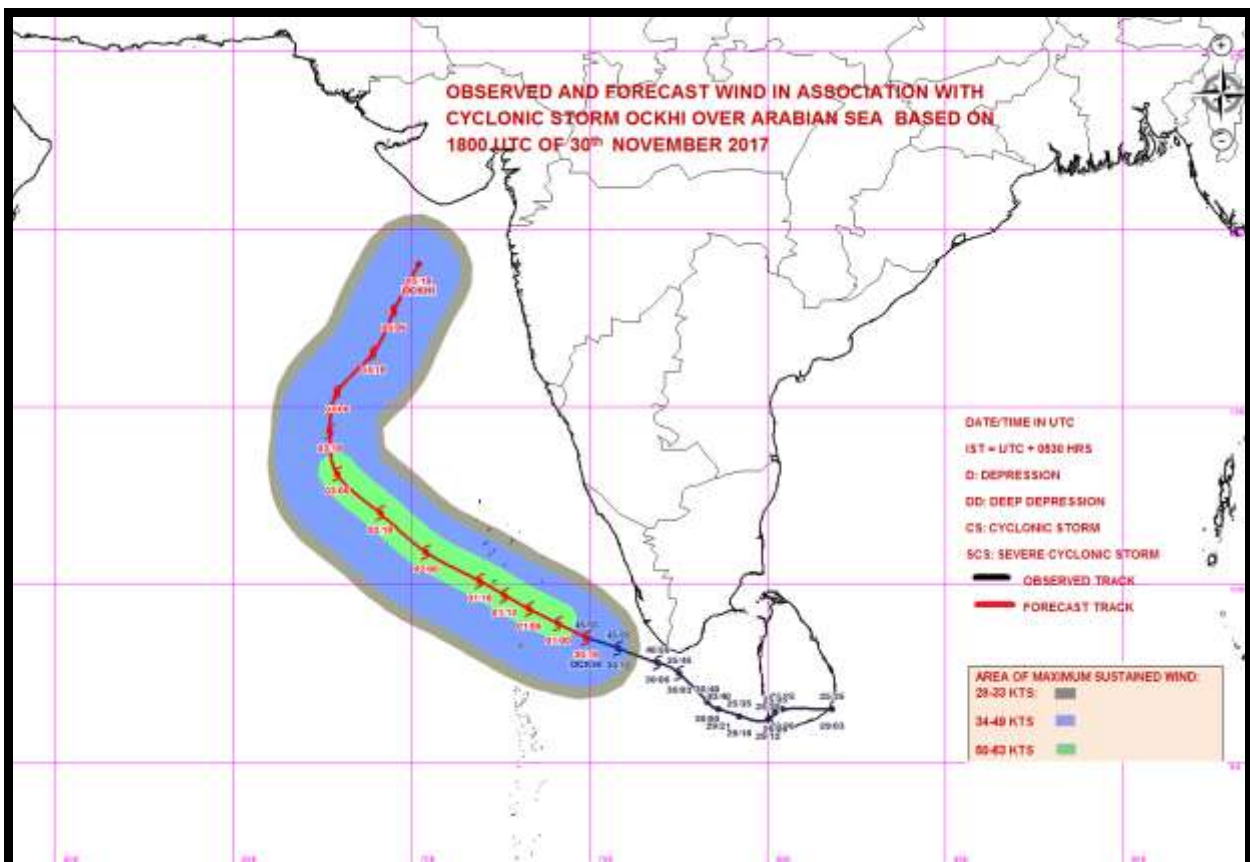
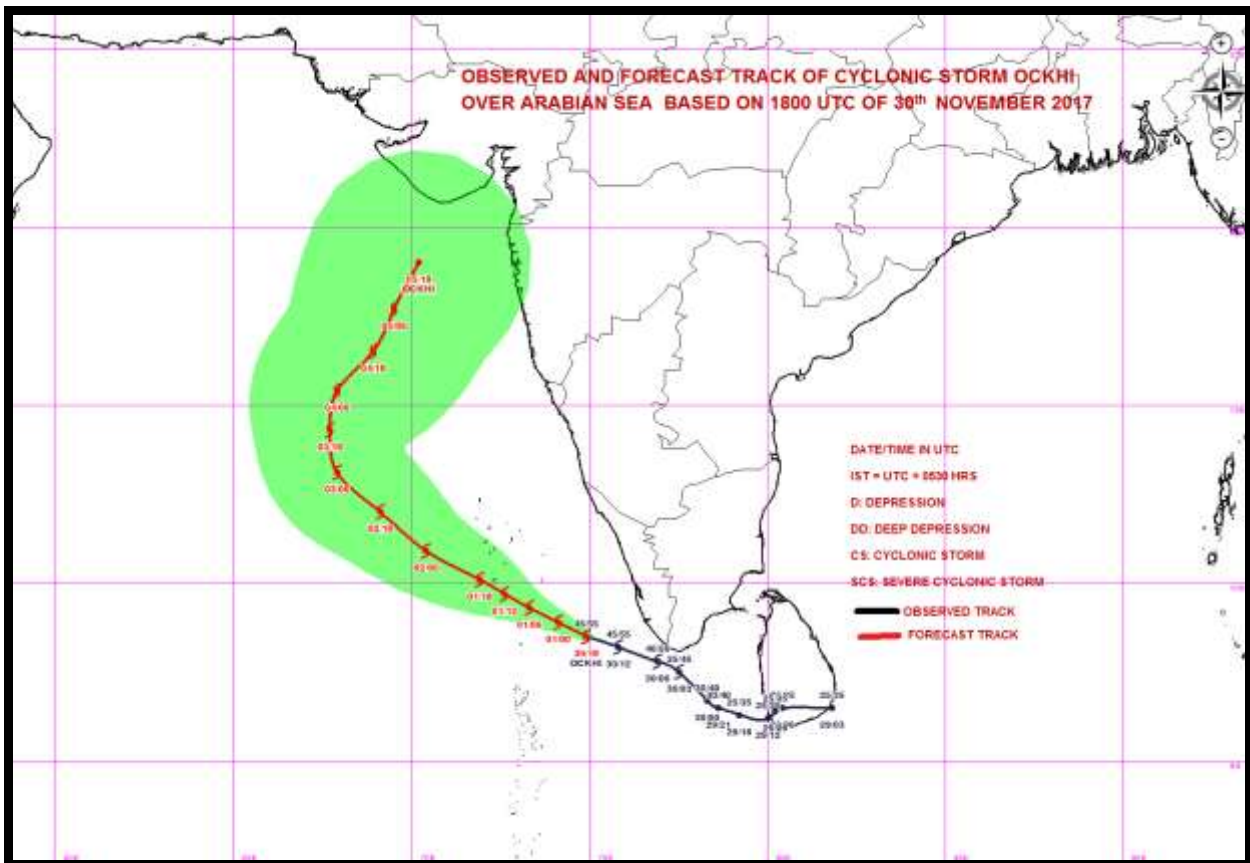
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. SEVEN ISSUED AT 2330 UTC OF 30<sup>th</sup> NOVEMBER 2017**  
**BASED ON 2100 UTC CHARTS OF 30<sup>th</sup> NOVEMBER 2017**

**CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA:**

LATEST OBSERVATIONS, RADAR AND SATELLITE IMAGERIES INDICATE THAT THE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 25 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 2100 UTC OF 30TH NOVEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.6° N AND LONGITUDE 74.5° E, ABOUT 230 KM WEST OF THIRUVANANTHAPURAM (43372) AND 160 KM EAST OF MINICOY (43369). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTHWESTWARDS DURING THE SUBSEQUENT 24 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
30/2100	8.6/74.5	85-95 GUSTING TO 105	CYCLONIC STORM
01/0000	8.9/74.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/0600	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1200	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1800	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0600	10.9.4/70.4	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1800	12.0/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0600	13.1/67.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
03/1800	14.3/67.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/0600	15.4/67.9	80-90 GUSTING TO 100	CYCLONIC STORM
04/1800	16.5/68.9	70-80 GUSTING TO 90	CYCLONIC STORM
05/0600	17.7/69.5	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	19.0/70.2	50-60 GUSTING TO 70	DEEP DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 5.0<sup>0</sup>N AND 13.0<sup>0</sup>N AND LONGITUDE 70.0<sup>0</sup>E TO 78.0<sup>0</sup>E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C (.)

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH ALONG & OFF SOUTH KERALA COAST AND VERY ROUGH TO HIGH ALONG AND OFF NORTH KERALA COAST DURING NEXT 36 HOURS AND VERY ROUGH TO HIGH ALONG & OFF SOUTH TAMILNADU COAST DURING NEXT 12 HOURS. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND VERY HIGH DURING SUBSEQUENT 48 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 13<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING TO THE WEST AND CONSTANT TO THE NORTH OF THE SYSTEM. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 150X10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTH SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ALSO ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE AND 10-20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS.

DUE TO THE ABOVE FAVOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. THE SYSTEM MAY MOVE INITIALLY WEST-NORTHWESTWARDS. HOWEVER THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARD AND THEN NORTHEAST WARDS FROM THE FORENOON OF THIRD DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

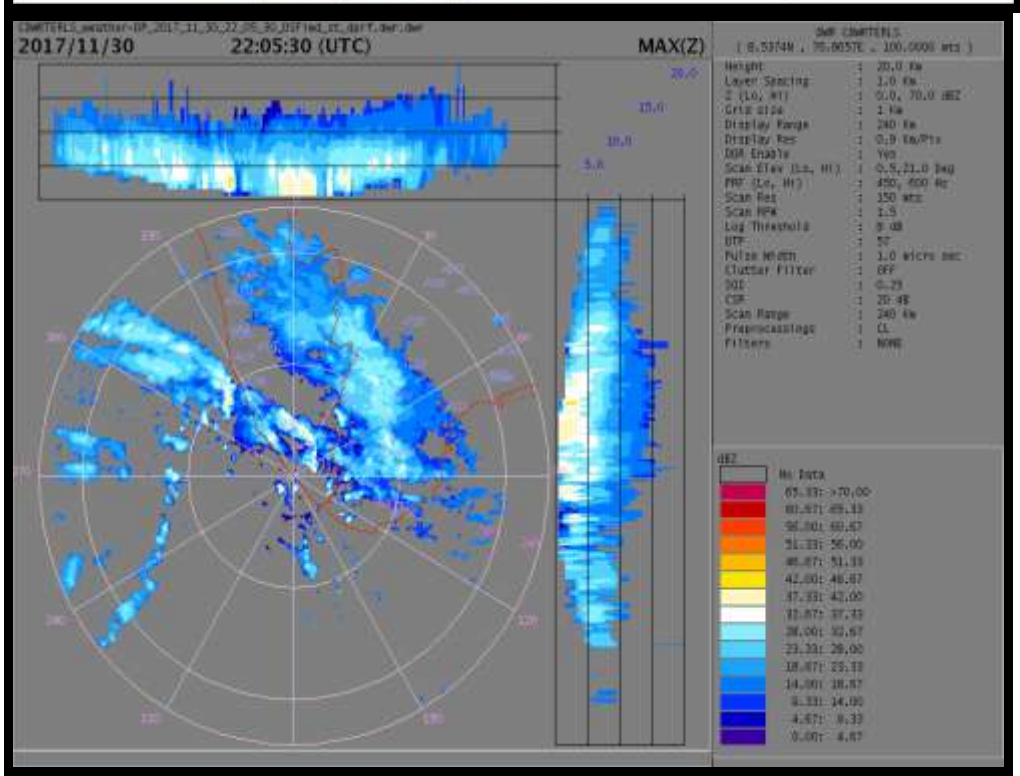
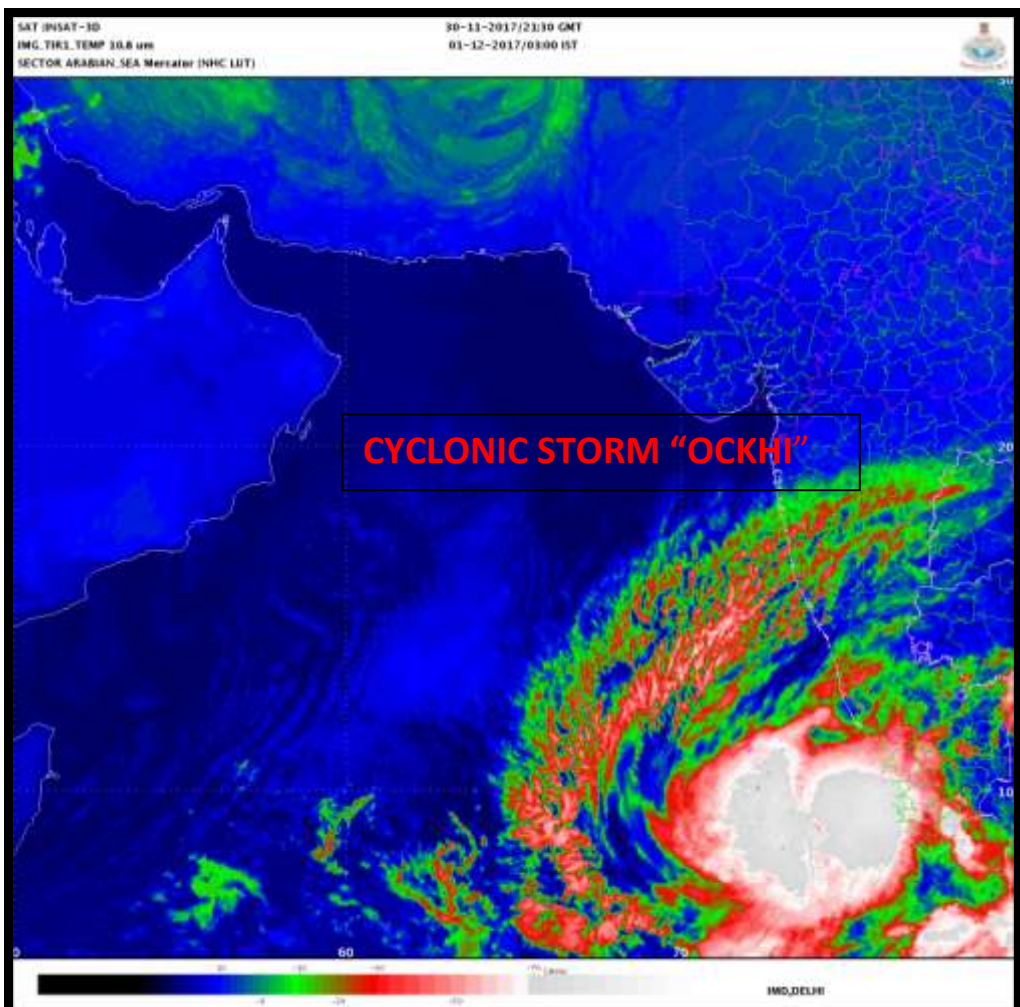
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTH ANDAMAN SEA AND ADJOINING MALAY PENINSULA AND LIKELY TO BECOME WELL MARKED DURING NEXT 24 HOURS AND CONCENTRATE INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

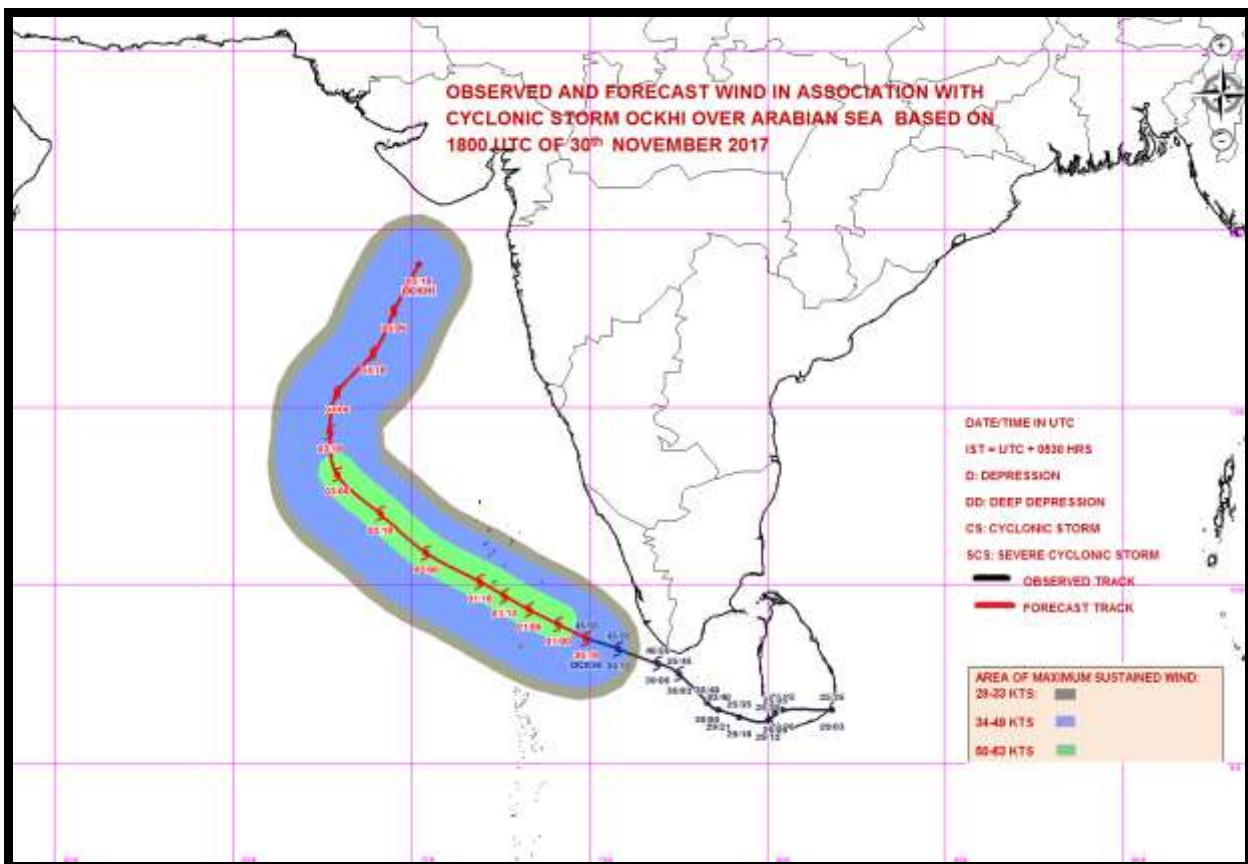
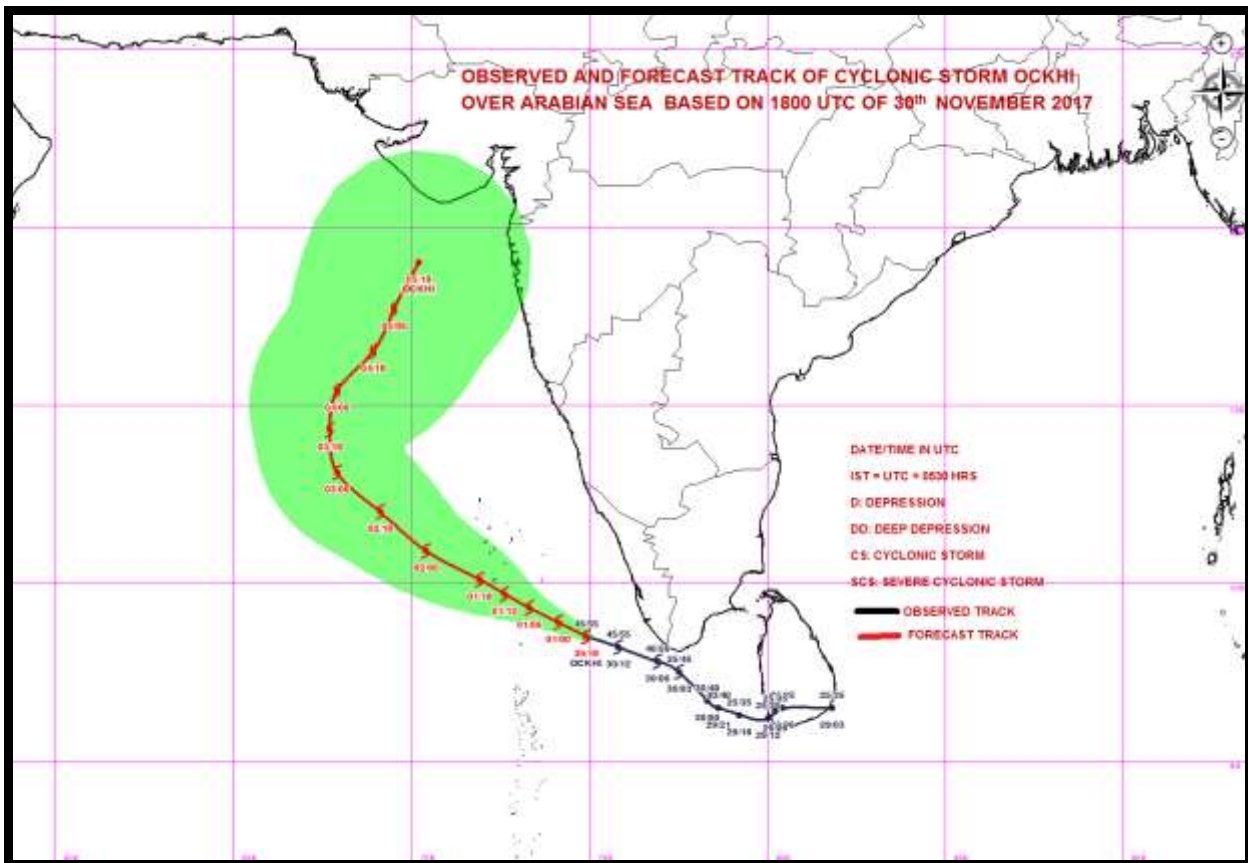
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
 NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. EIGHT ISSUED AT 0300 UTC OF 01<sup>ST</sup> DECEMBER 2017**  
**BASED ON 0000 UTC CHARTS OF 01<sup>ST</sup> DECEMBER 2017**

**SEVERE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA:**

THE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA CONTINUED TO MOVE WEST-NORTHWESTWARDS WITH A SPEED OF 17 KMPH DURING PAST 06 HOURS, INTENSIFIED INTO A SEVERE CYCLONIC STORM AND LAY CENTRED AT 0530 HRS IST OF TODAY, THE 01<sup>ST</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.8° N AND LONGITUDE 74.0° E, ABOUT 110 KM NORTH-NORTHEAST OF MINICOY AND 290 KM SOUTHEAST OF AMINI DIVI. THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
01/0000	8.8/74.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
01/0600	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1200	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1800	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0000	10.5/71.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1200	11.5/69.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0000	12.6/68.5	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
03/1200	13.7/67.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/000	14.8/67.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1200	16.0/68.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/0000	17.2/69.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	18.4/69.8	60-70 GUSTING TO 80	CYCLONIC STORM
06/0000	19.6/70.4	50-60 GUSTING TO 70	DEEP DEPRESSION

THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5. THE PATTERN OF THE SYSTEM IS CURVE BAND PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 5.5<sup>0</sup>N AND 12.5<sup>0</sup>N AND LONGITUDE 69.0<sup>0</sup>E TO 77.0<sup>0</sup>E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C (.)

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 17<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS CONSTANT TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY HAS INCREASE IN PAST SIX HOURS AND IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED IN PAST SIX HOURS AND IS ABOUT 50 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE AND 10-20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARD AND THEN NORTHEAST WARDS FROM THE FORENOON OF THIRD DECEMBER.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. THE SYSTEM IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

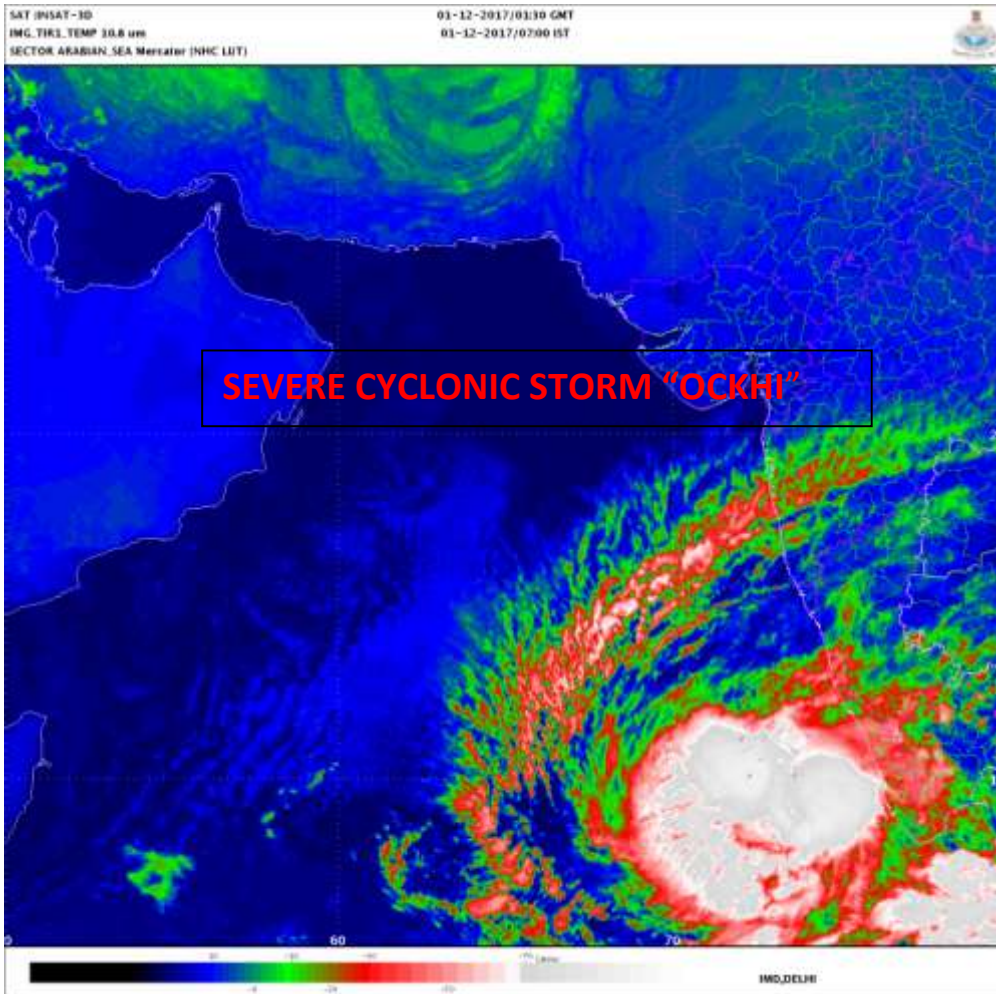
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTH ANDAMAN SEA AND ADJOINING MALAY PENINSULA AND LIKELY TO BECOME WELL MARKED DURING NEXT 24 HOURS AND CONCENTARTE INTO A DEPRESSION DURING SUBSEQUENT 24 HOURS.

(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

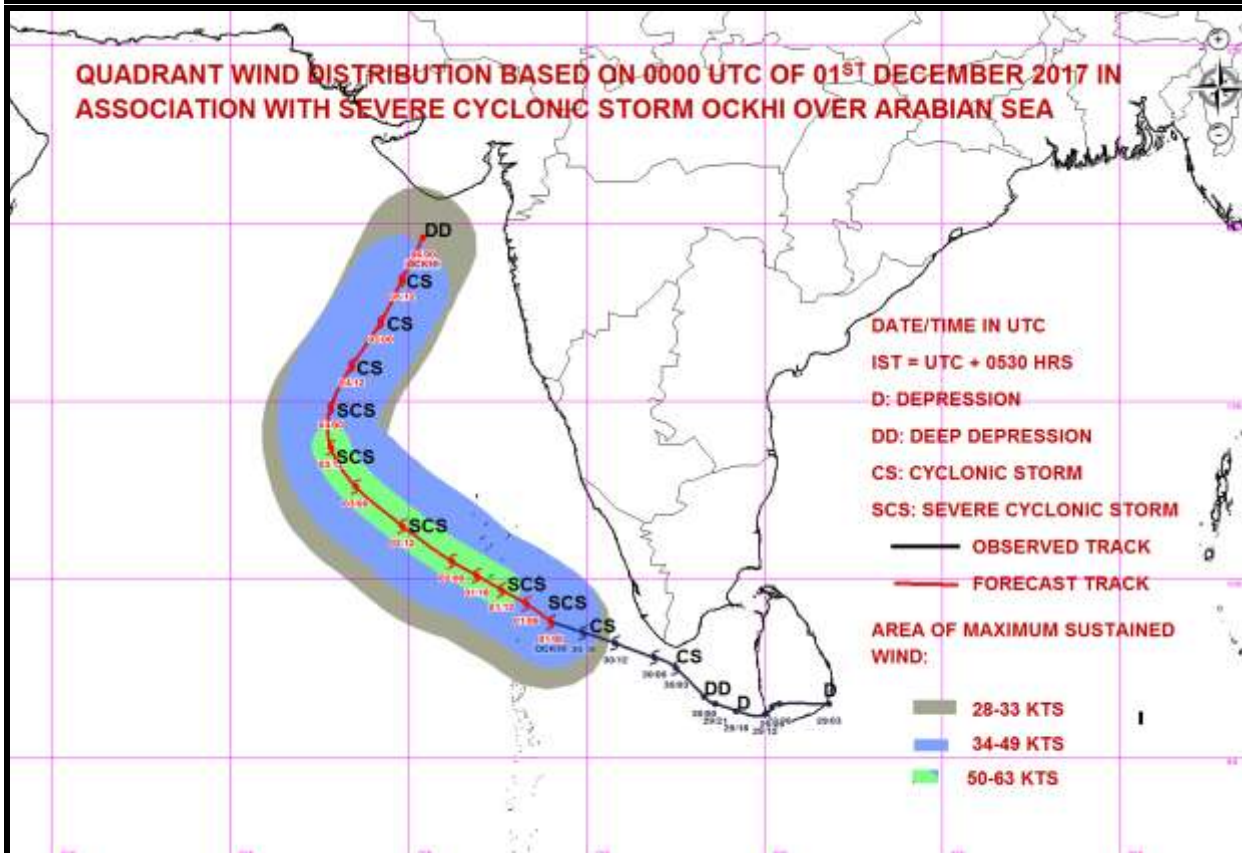
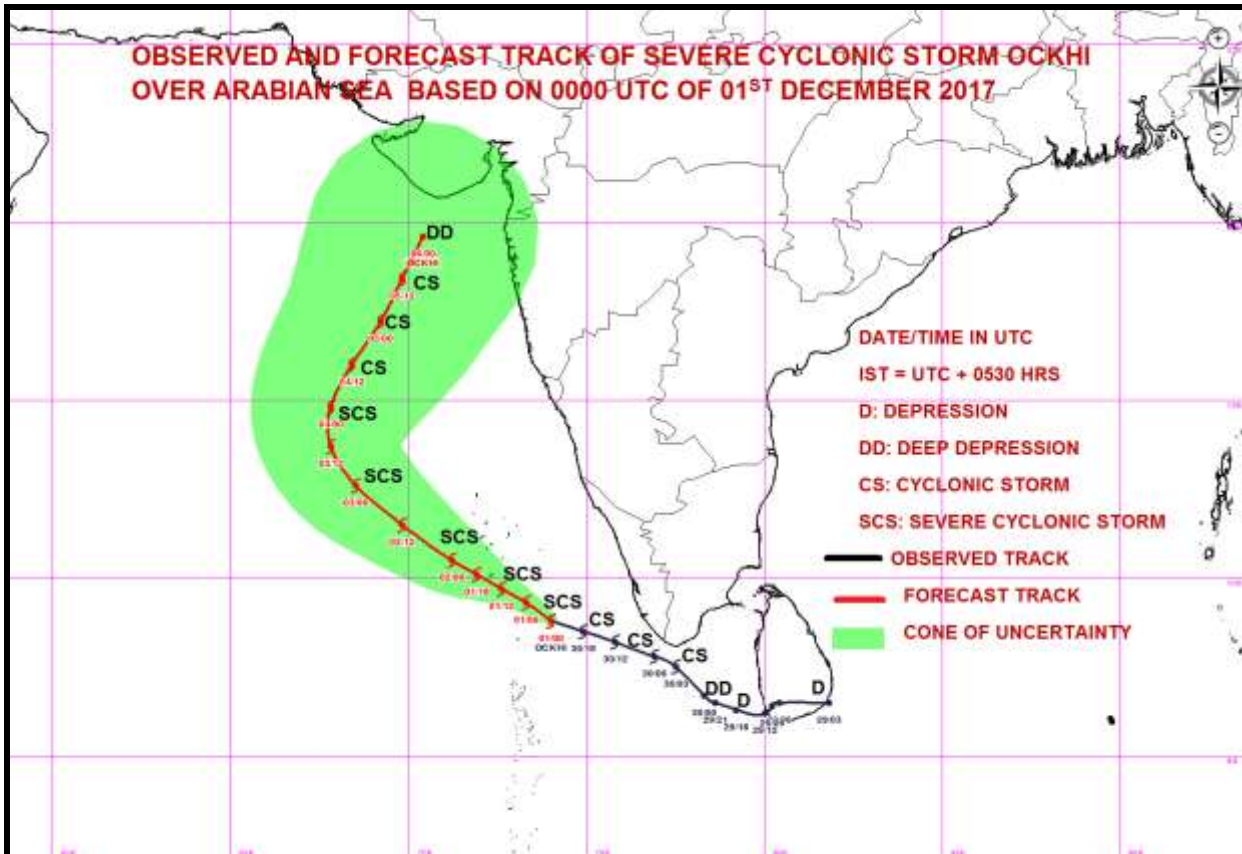
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
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**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. NINE ISSUED AT 0600 UTC OF 01<sup>ST</sup> DECEMBER 2017**  
**BASED ON 0300 UTC CHARTS OF 01<sup>ST</sup> DECEMBER 2017**

**SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA CONTINUED TO MOVE WEST-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 01<sup>ST</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 8.9° N AND LONGITUDE 73.8° E, ABOUT 90 KM NORTHEAST OF MINICOY (43369) AND 270 KM SOUTH-SOUTHEAST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/NORTH-NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0300	8.9/73.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/0600	9.3/73.3	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
01/1200	9.7/72.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1800	10.1/71.9	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
02/0000	10.5/71.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
02/1200	11.5/69.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
03/0000	12.6/68.5	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
03/1200	13.7/67.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0000	14.8/67.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04/1200	16.0/68.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/0000	17.2/69.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	18.4/69.8	60-70 GUSTING TO 80	CYCLONIC STORM
06/0000	19.6/70.4	50-60 GUSTING TO 70	DEEP DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5. THE PATTERN OF THE SYSTEM IS CURVE BAND PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 6°N AND 12.5°N AND LONGITUDE 69.0°E TO 76.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 14<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS CONSTANT TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS INCREASED IN PAST SIX HOURS AND IS AROUND 60X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 50 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE AND 10-20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARD AND THEN NORTHEAST WARDS FROM THE FORENOON OF THIRD DECEMBER.

DUE TO THE ABOVE FAVAOURABLE ENVIRONMENTAL CONDITIONS, IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. THE SYSTEM IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/ NORTH-NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

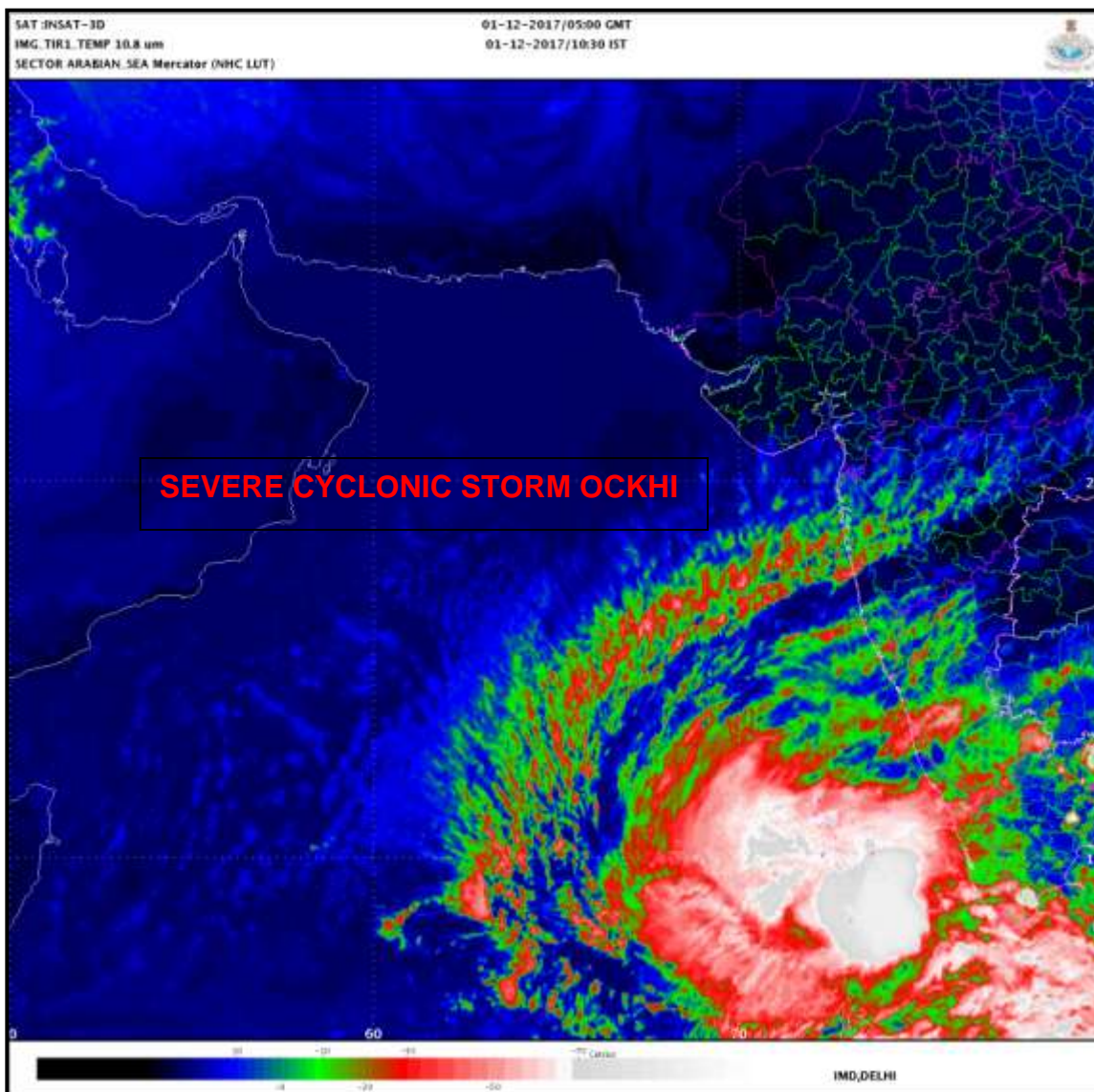
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES AS A WELL AMRKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE IN A WEST-NORTHWEST DIRECTION TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

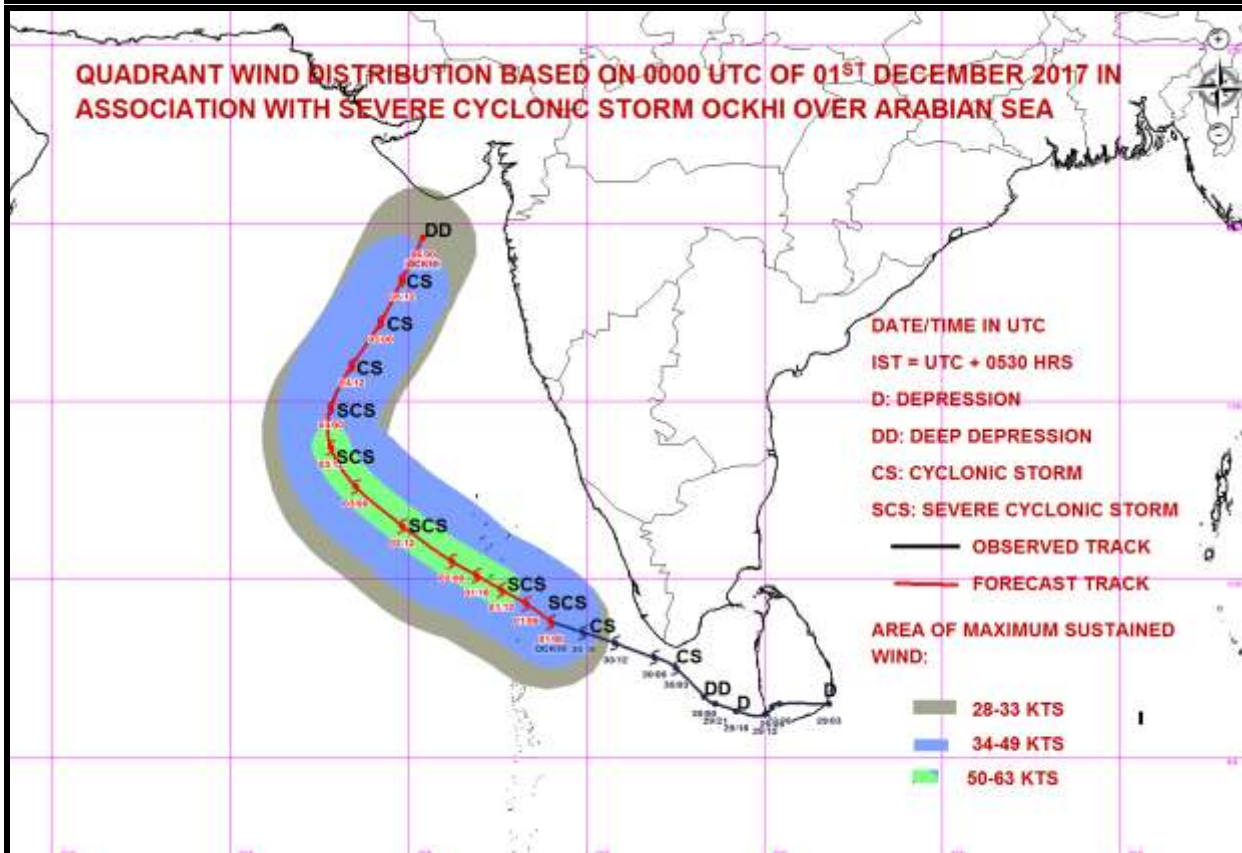
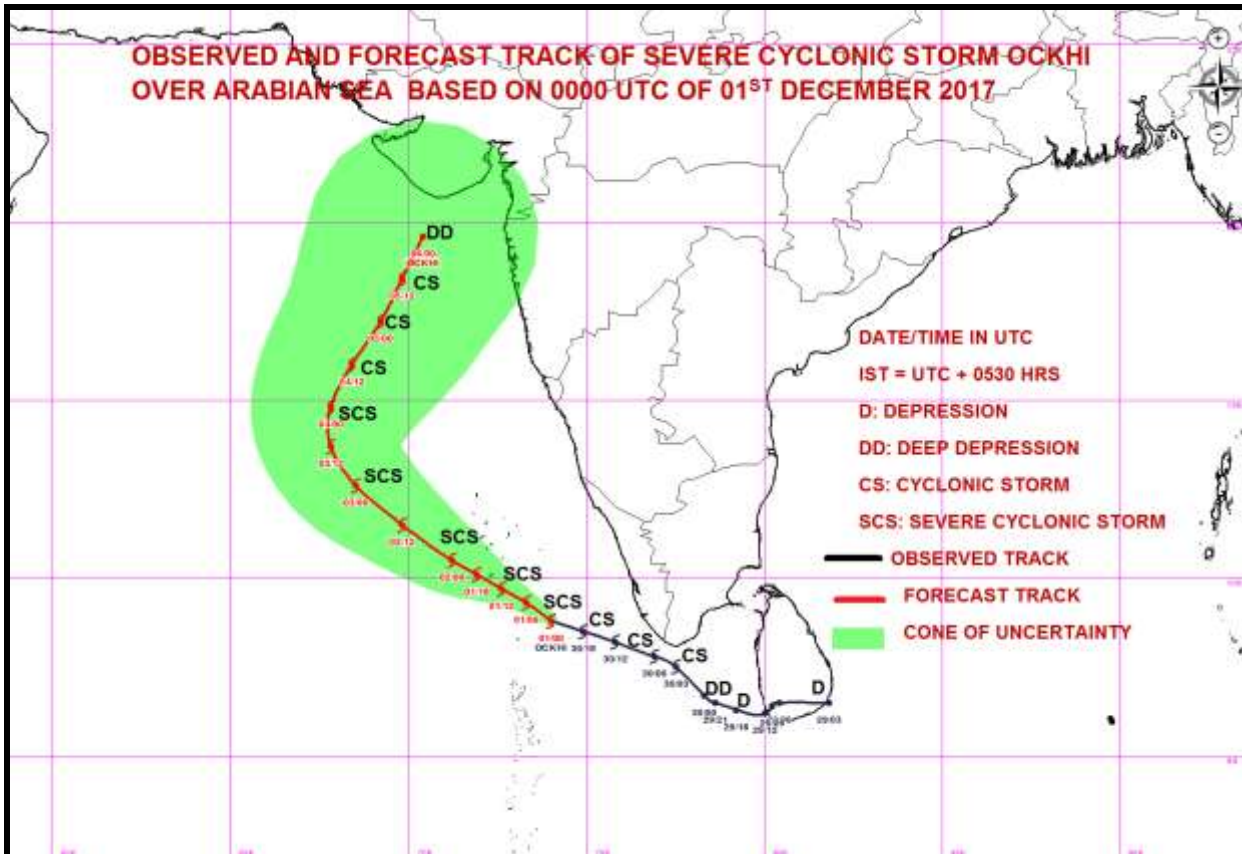
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. TEN ISSUED AT 0900 UTC OF 01<sup>ST</sup> DECEMBER 2017 BASED ON 0600 UTC CHARTS OF 01<sup>ST</sup> DECEMBER 2017**

**SEVERE CYCLONIC STORM ‘OCKHI’ OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **SEVERE CYCLONIC STORM ‘OCKHI’** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA CONTINUED TO MOVE WEST-NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1130 HRS IST OF TODAY, THE 01<sup>ST</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.0° N AND LONGITUDE 73.4° E, ABOUT 80 KM NORTH-NORTHEAST OF MINICOY AND 240 KM SOUTH-SOUTHEAST OF AMINI DIVI. THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/ NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0600	9.0/73.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
01/1200	9.3/72.8	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
01/1800	9.7/72.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
02/0000	10.1/71.4	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
02/0600	10.7/70.8	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
02/1800	11.9/69.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/0600	13.4/68.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/1800	14.8/68.7	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
04/0600	16.2/69.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
04/1800	17.6/70.3	70-80 GUSTING TO 90	CYCLONIC STORM
05/0600	18.9/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5. THE PATTERN OF THE SYSTEM IS EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 7<sup>0</sup>N AND 11.5<sup>0</sup>N AND LONGITUDE 69.0<sup>0</sup>E TO 75.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. MINICOY AT 0600 UTC REPORTED MEAN SEA LEVEL PRESSURE OF 994.6 HPA AND SURFACE WIND SPEED OF 290<sup>0</sup>/ 35 KNOTS. AMINI DIVI REPORTED MEAN SEA LEVEL PRESSURE OF 1006.2 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 08 KNOTS

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. HENCE THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS DECREASING TO THE NORTH OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS DECREASED IN PAST SIX HOURS AND IS AROUND 50X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO DECREASED DURING PAST 6 HOURS AND IS ABOUT 30-40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE AND 5-10 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 -36 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEAST WARDS FROM THE FORENOON OF THIRD DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

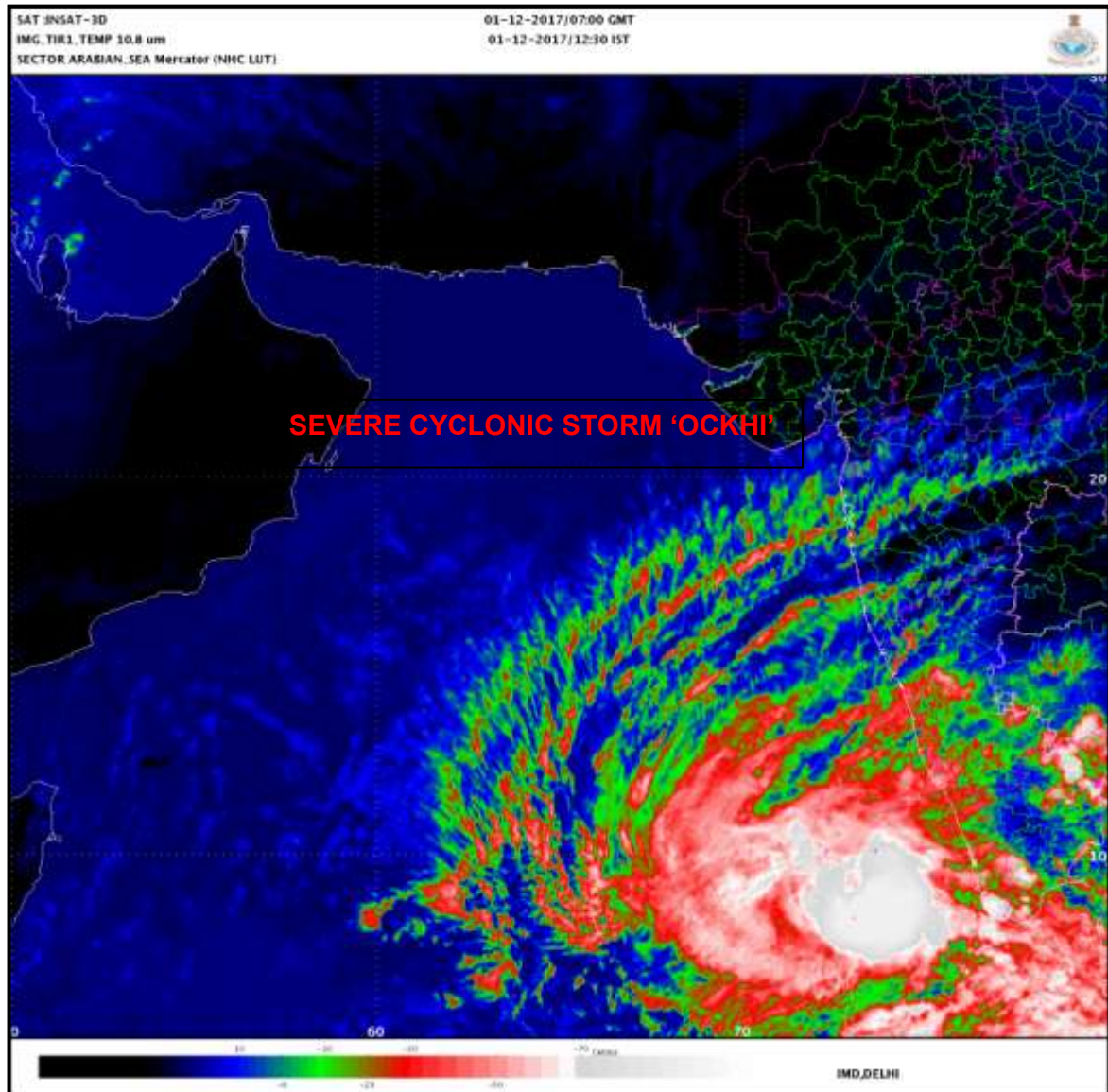
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES AS A WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT. IT IS VERY LIKELY TO CONCENTRATE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE IN A WEST-NORTHWEST DIRECTION TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

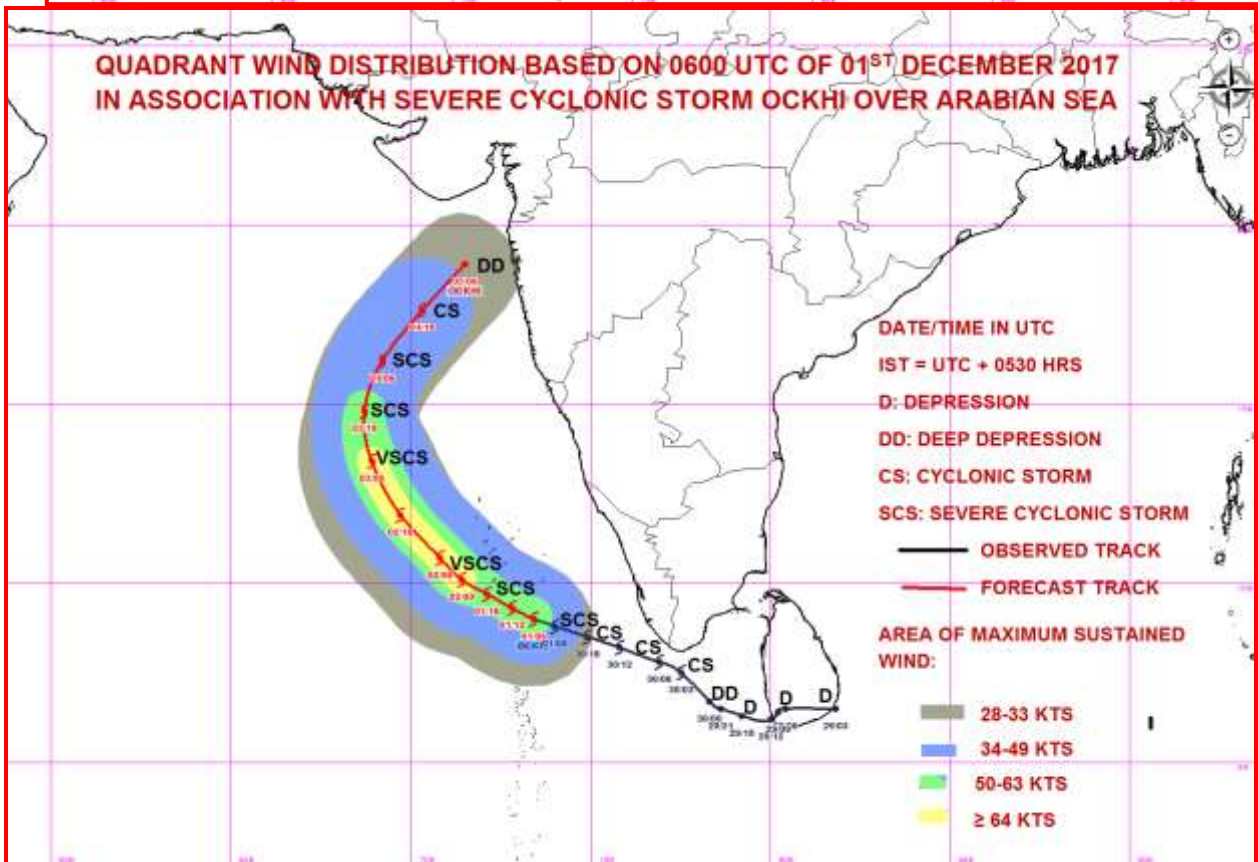
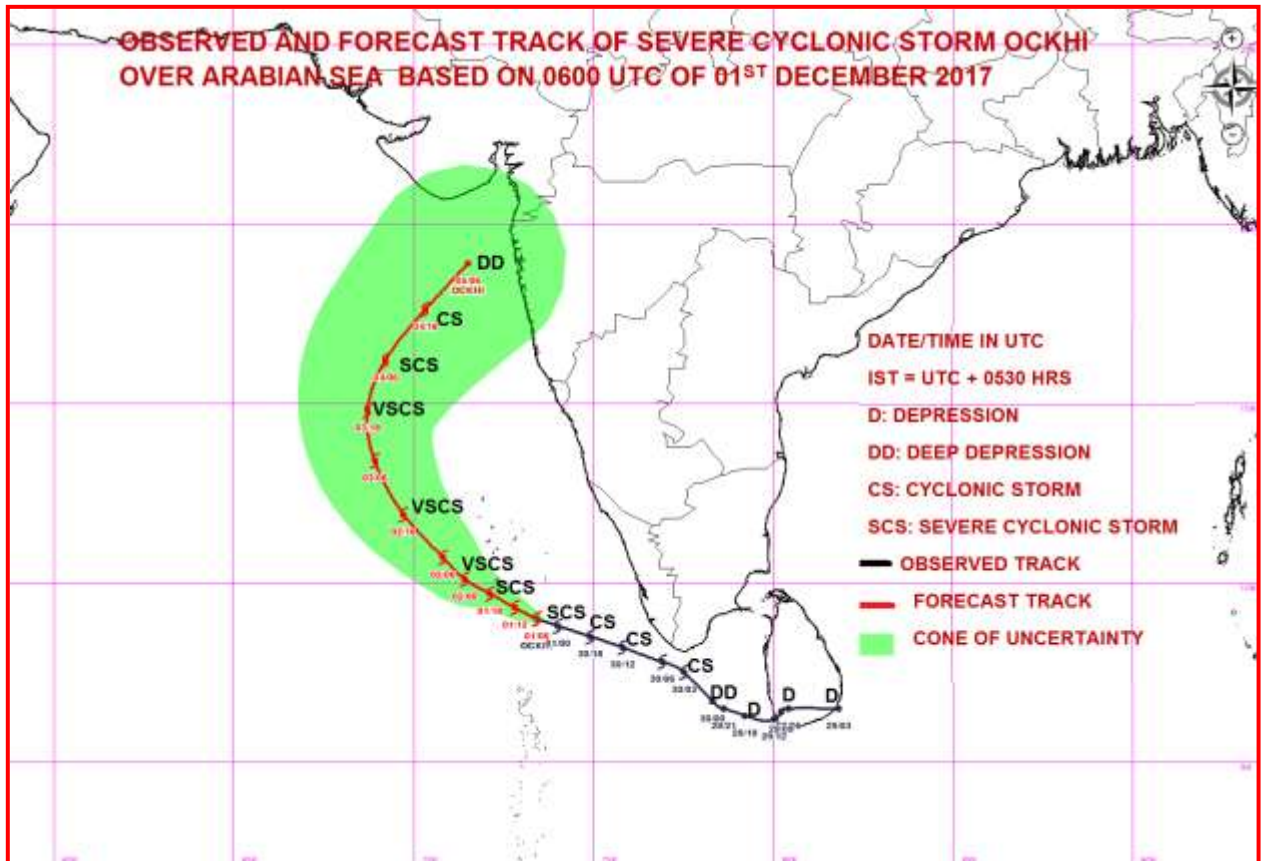
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. ELEVEN ISSUED AT 1200 UTC OF 01<sup>ST</sup> DECEMBER 2017**  
**BASED ON 0900 UTC CHARTS OF 01<sup>ST</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA CONTINUED TO MOVE WEST-NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND INTENSIFIED FURTHER INTO A **VERY SEVERE CYCLONIC STORM** AND LAY CENTRED AT 0900 UTC OF TODAY, THE 01<sup>ST</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.1° N AND LONGITUDE 73.0° E, ABOUT 90 KM NORTH OF MINICOY (43369) AND 220 KM SOUTH-SOUTHEAST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN MOVE NORTH/ NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/0900	9.1/73.0	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
01/1200	9.3/72.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/1800	9.7/72.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
02/0000	10.1/71.4	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0600	10.7/70.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/1800	11.9/69.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0600	13.4/68.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
03/1800	14.8/68.7	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
04/0600	16.2/69.2	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
04/1800	17.6/70.3	70-80 GUSTING TO 90	CYCLONIC STORM
05/0600	18.9/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. THE PATTERN OF THE SYSTEM IS EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 6<sup>0</sup>N AND 11.5<sup>0</sup>N AND LONGITUDE 67.0<sup>0</sup>E TO 75.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 0900 UTC MINICOY (43369) REPORTED MEAN SEA LEVEL PRESSURE OF 989 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 65 KNOTS. AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 AND SURFACE WIND SPEED OF 050<sup>0</sup>/ 14 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE. IT IS DECREASING TO THE NORTH OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS DECREASED IN PAST SIX HOURS AND IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO DECREASED AND IS ABOUT 30 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE AND 5-10 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTH. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 -36 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

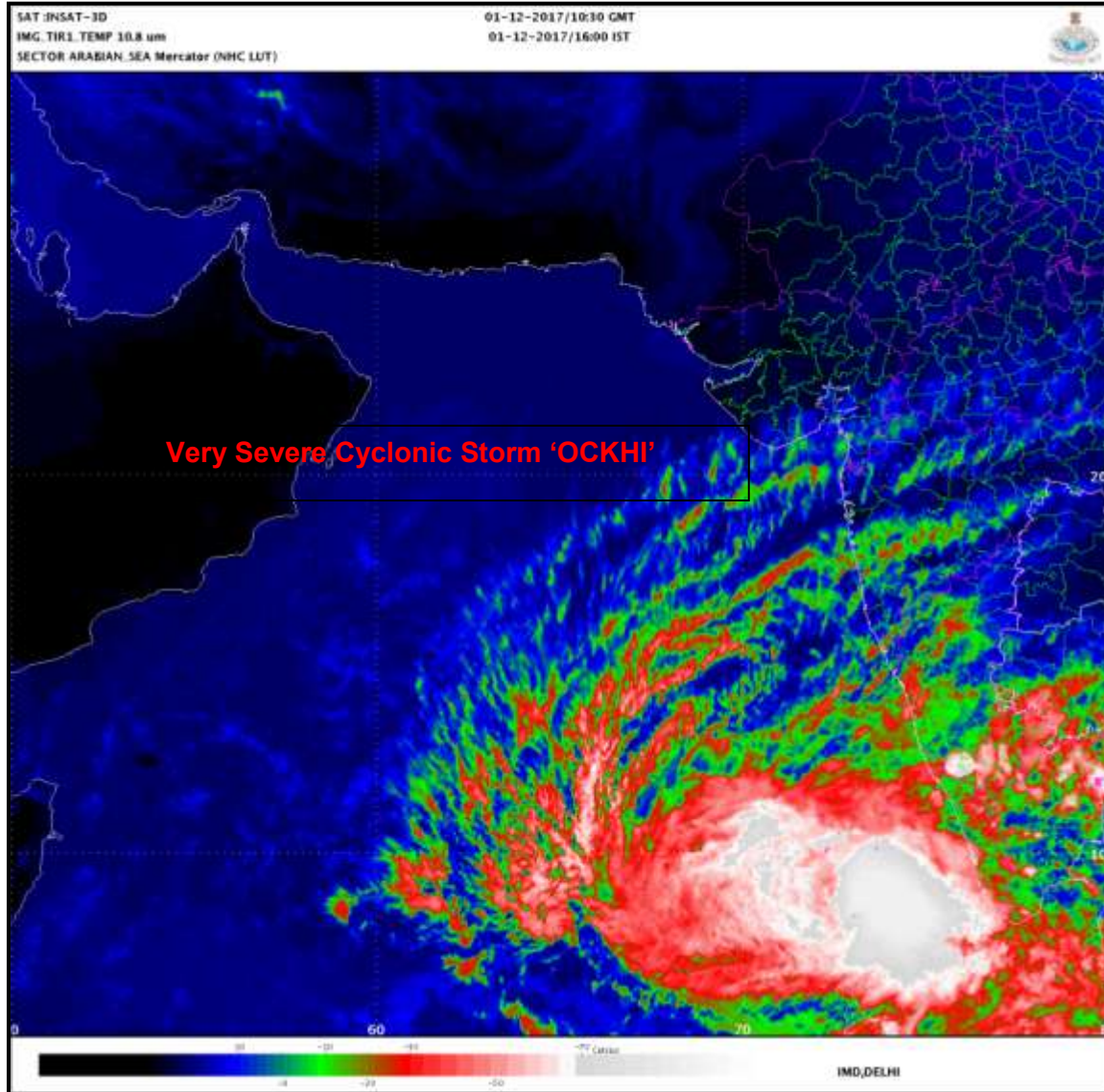
THE LOW PRESSURE AREA OVER MALAY PENINSULA AND ADJOINING SOUTH ANDAMAN SEA NOW LIES AS A WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE IN A WEST-NORTHWEST DIRECTION TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

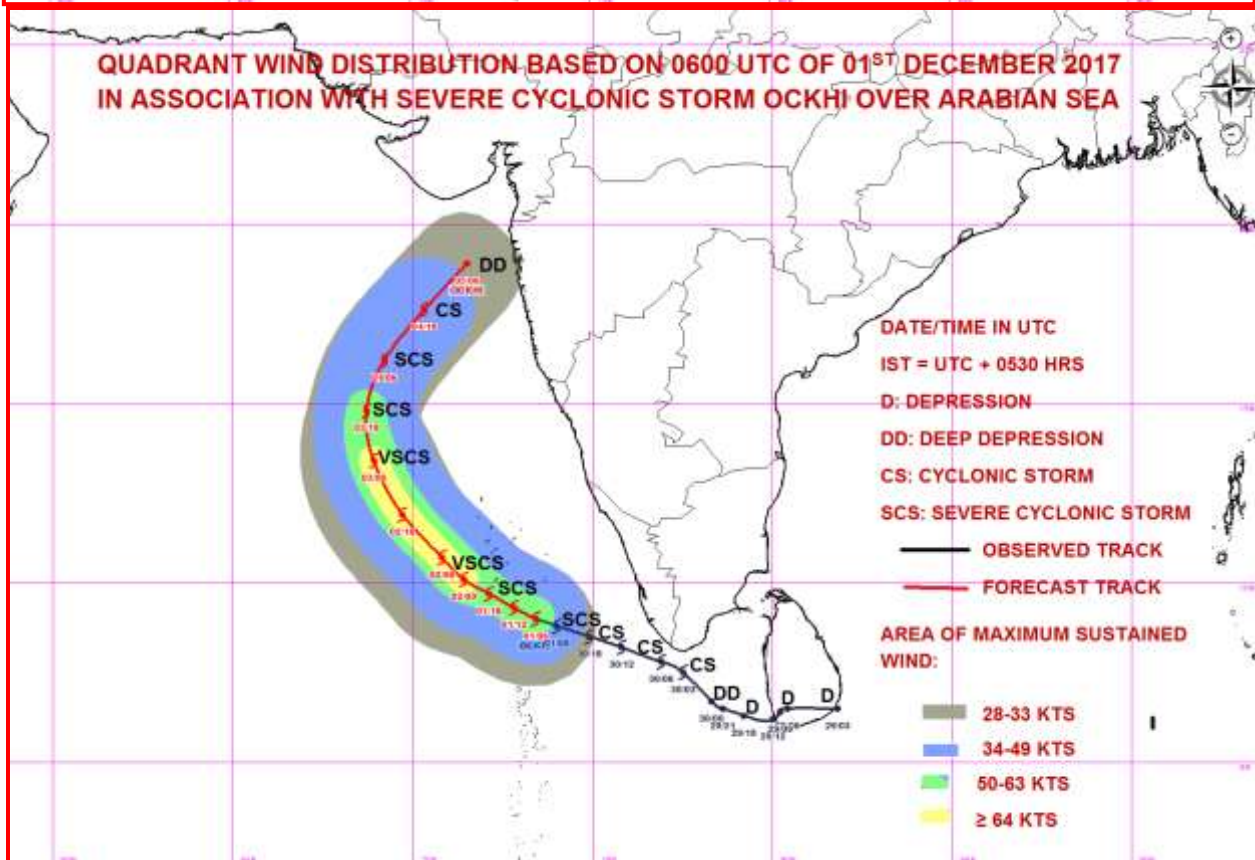
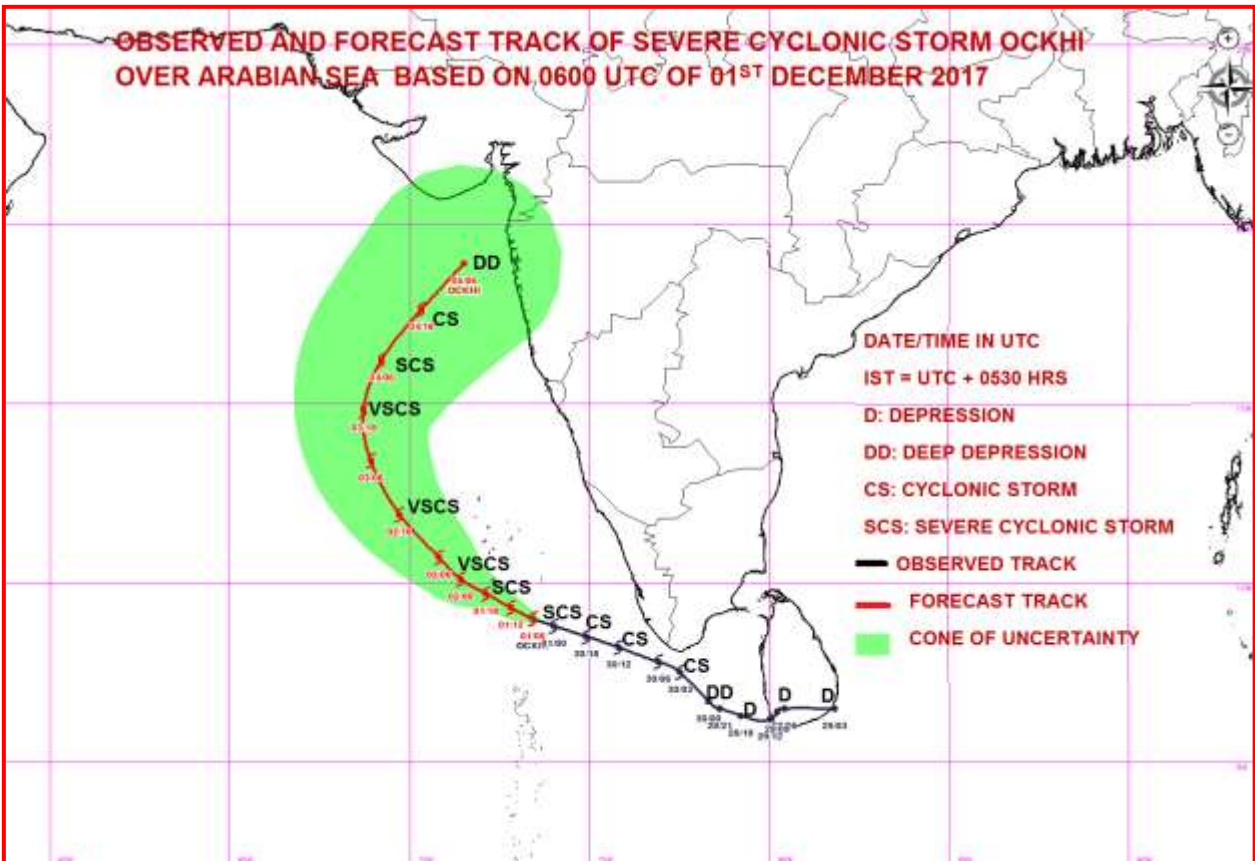
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWELVE ISSUED AT 1500 UTC OF 01<sup>ST</sup> DECEMBER 2017**  
**BASED ON 1200 UTC CHARTS OF 01<sup>ST</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 01<sup>ST</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.2° N AND LONGITUDE 72.8° E, ABOUT 100 KM NORTH NORTHWEST OF MINICOY (43369) AND 210 KM SOUTH OF AMINI DIVI(43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1200	9.2/72.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/1800	9.6/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0000	10.1/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0600	10.7/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1200	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0000	12.6/69.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1200	14.1/68.8	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
04/0000	15.5/69.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1200	16.9/69.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/0000	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1200	19.6/72.1	40-50 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 6<sup>0</sup>N AND 12.5<sup>0</sup>N AND LONGITUDE 66.0<sup>0</sup>E TO 76.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 1200 UTC MINICOY (43369) REPORTED MEAN SEA LEVEL PRESSURE OF 990.7 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 50 KNOTS. AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1002.9 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 15 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO THE NORTH AND MODERATE TO HIGH (20-25 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 40X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

**WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

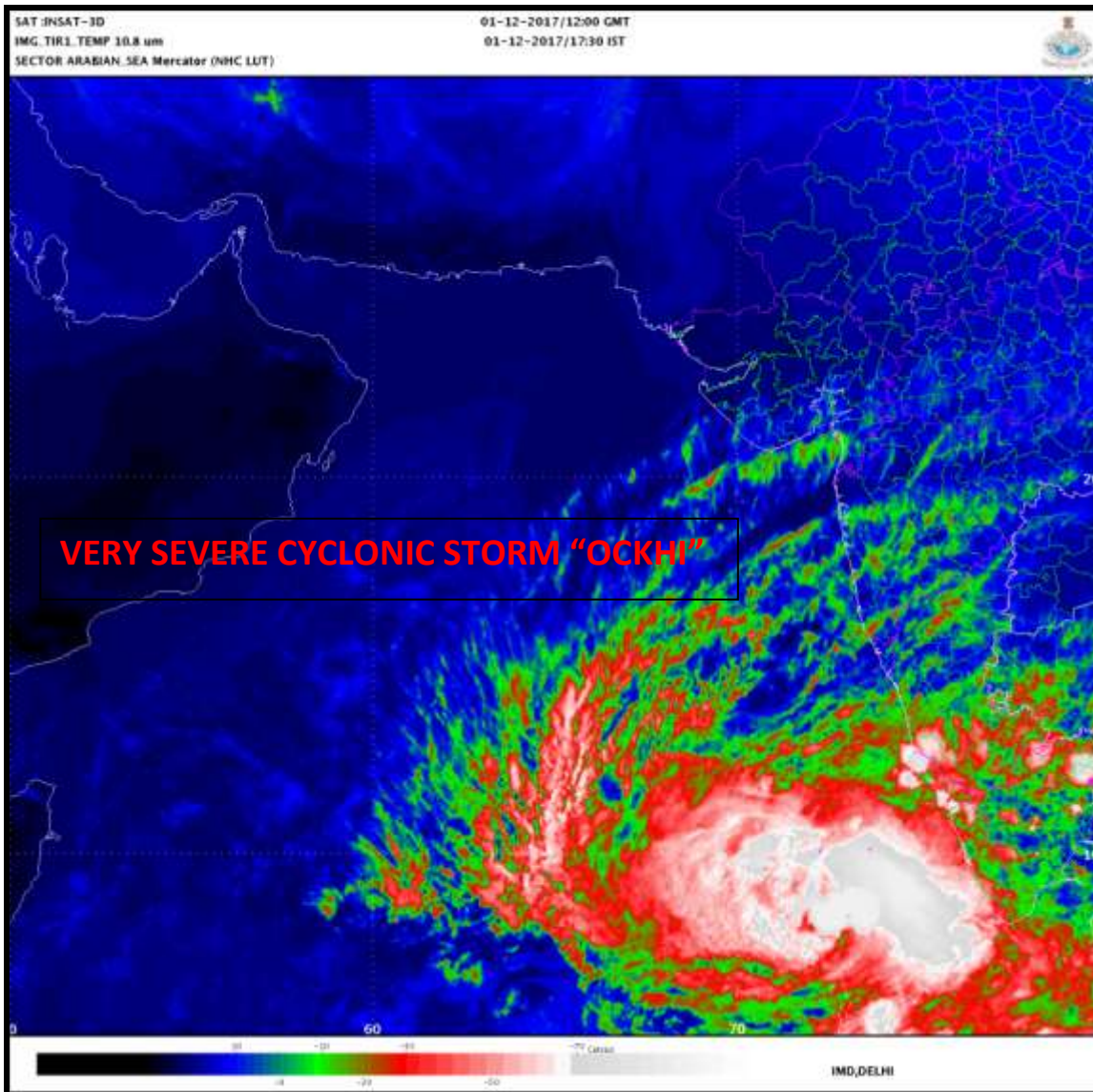
THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

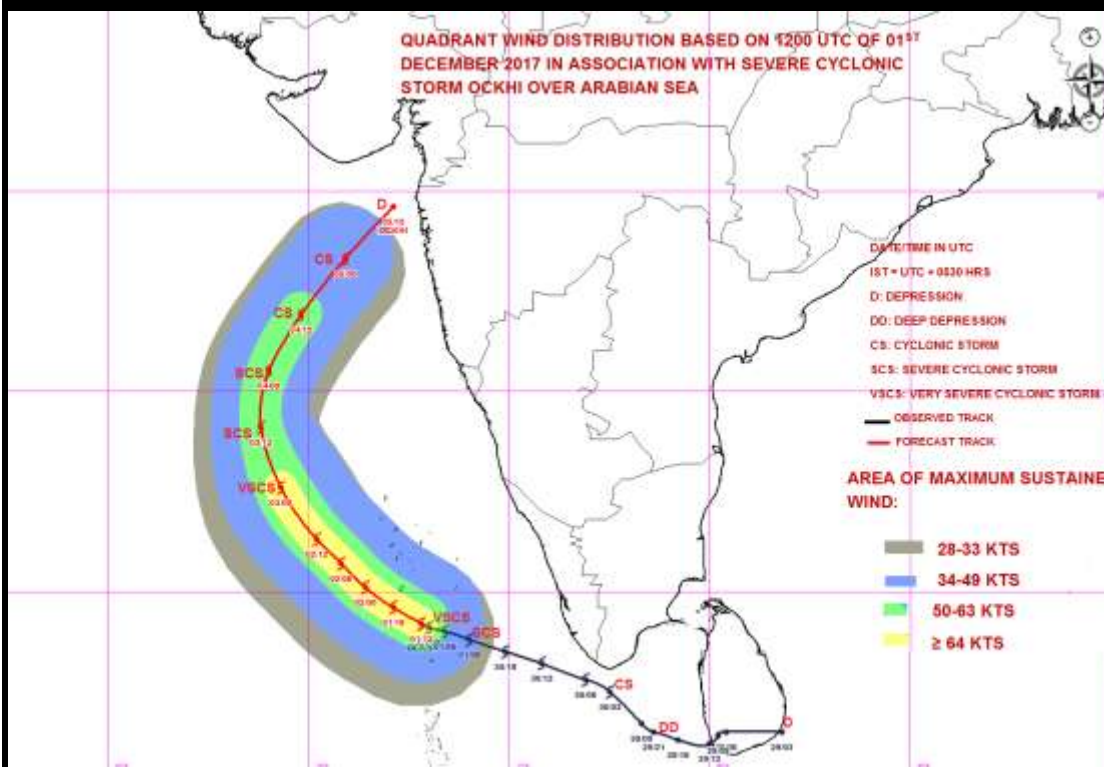
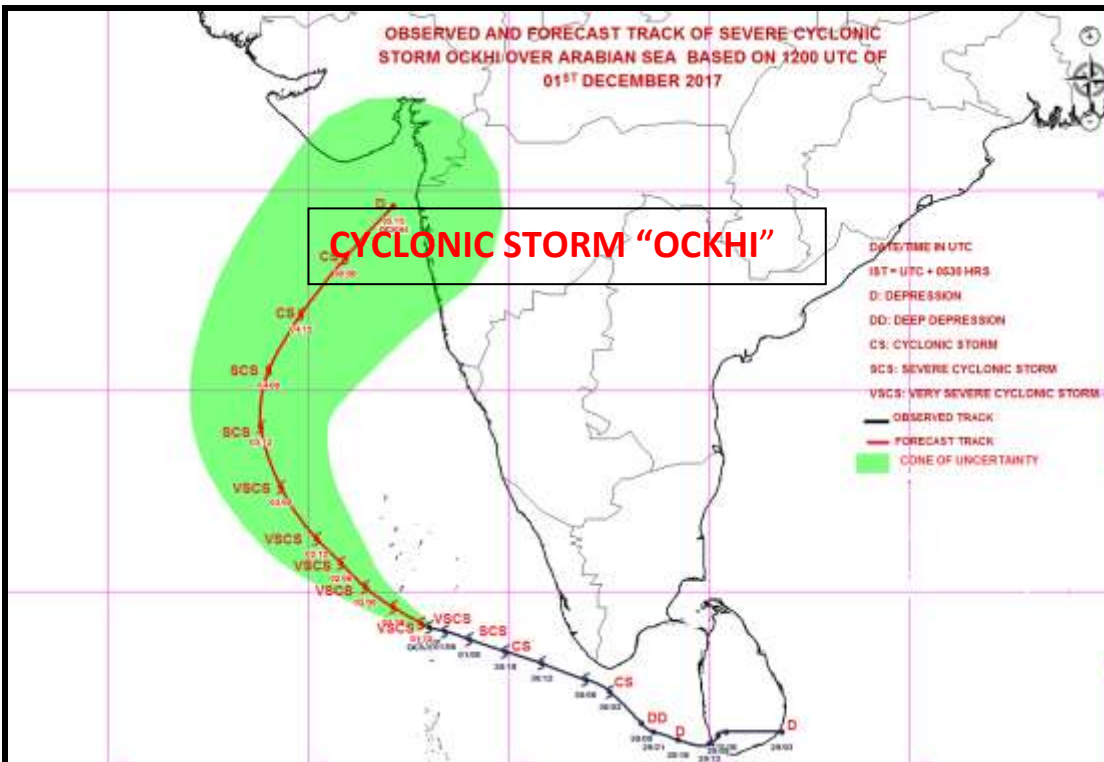
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTEEN ISSUED AT 1730 UTC OF 01<sup>st</sup> DECEMBER 2017**  
**BASED ON 1500 UTC CHARTS OF 01<sup>st</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1500 UTC OF TODAY, THE 01<sup>st</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.3° N AND LONGITUDE 72.5° E, ABOUT 130 KM NORTH NORTHWEST OF MINICOY (43369) AND 200 KM SOUTH OF AMINI DIVI(43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1500	9.3/72.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
01/1800	9.6/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0000	10.1/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0600	10.7/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1200	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0000	12.6/69.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1200	14.1/68.8	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
04/0000	15.5/69.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1200	16.9/69.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/0000	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1200	19.6/72.1	40-50 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 6<sup>0</sup>N AND 12.5<sup>0</sup>N AND LONGITUDE 66.0<sup>0</sup>E TO 76.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 1200 UTC MINICOY (43369) REPORTED MEAN SEA LEVEL PRESSURE OF 990.7 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 50 KNOTS. AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1002.9 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 15 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO THE NORTH AND MODERATE TO HIGH (20-25 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 40X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

**WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

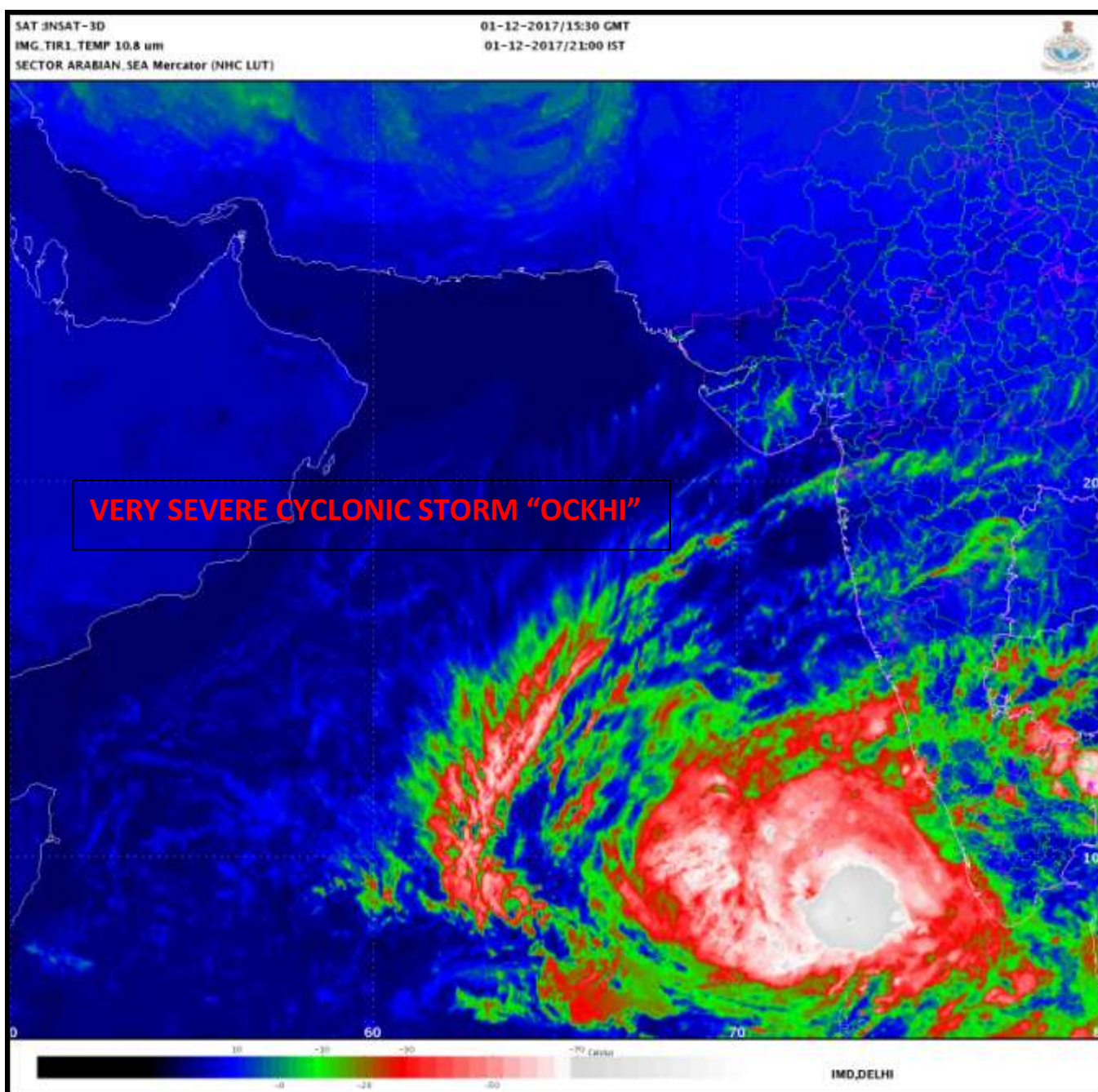
THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

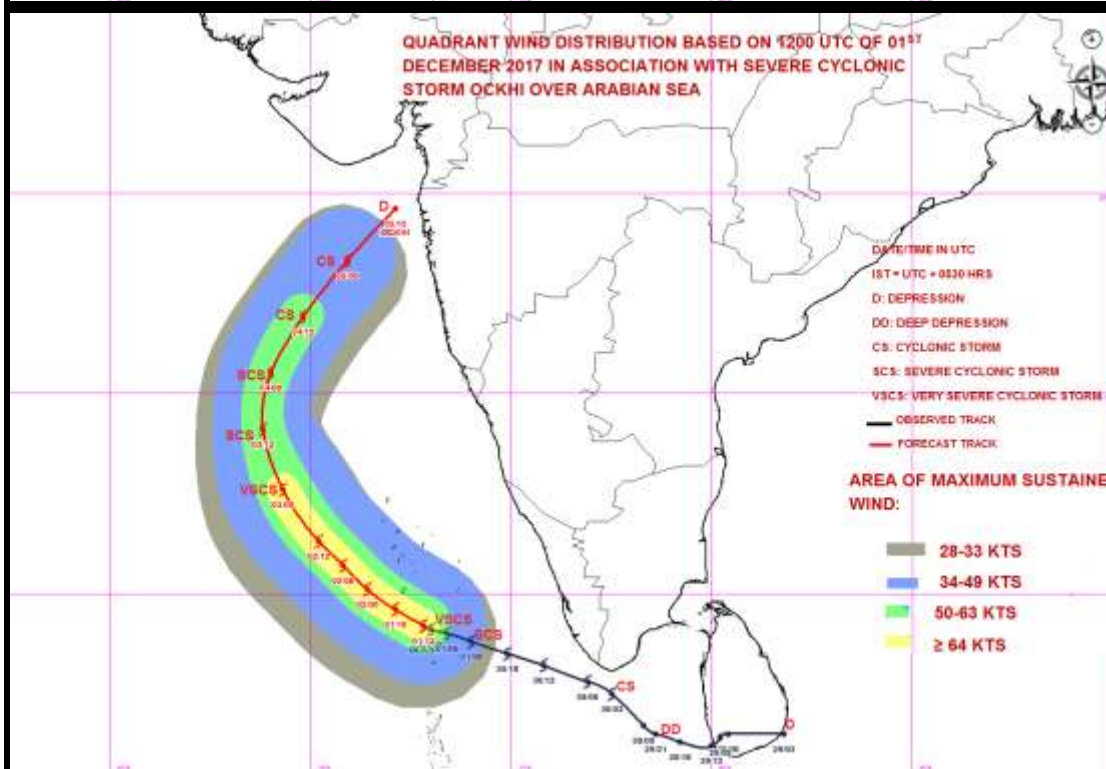
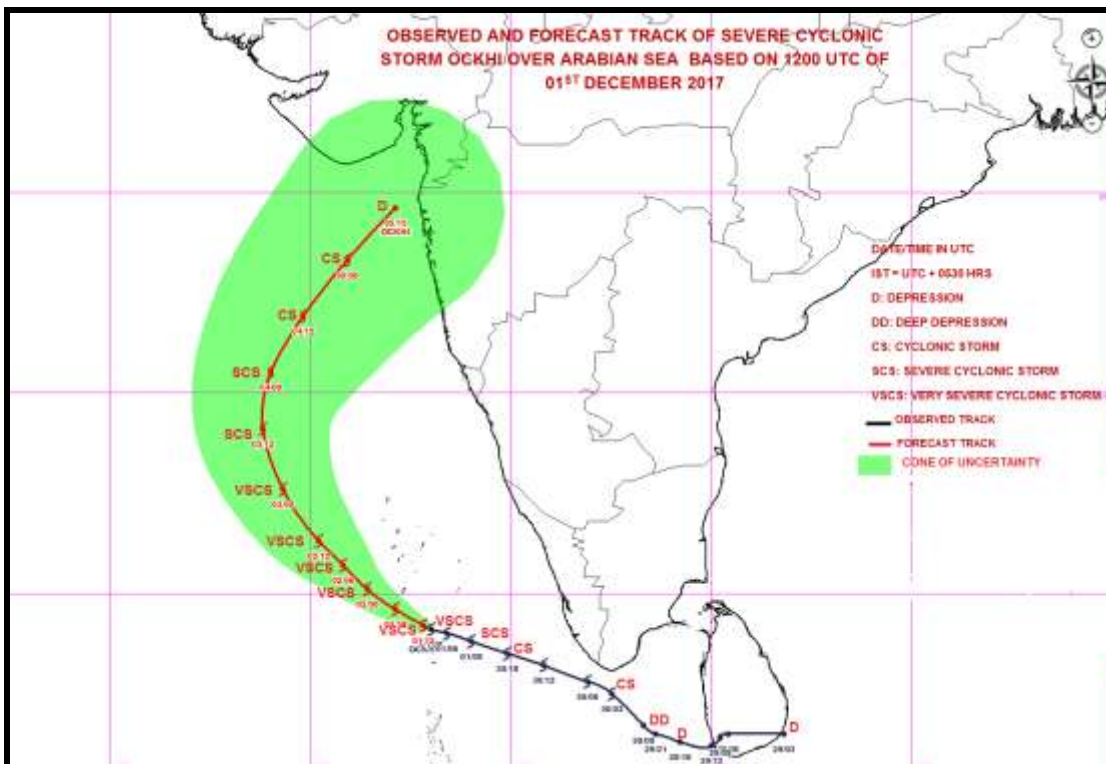
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
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**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FOURTEEN ISSUED AT 2100 UTC OF 01<sup>st</sup> DECEMBER 2017  
BASED ON 1800 UTC CHARTS OF 01<sup>st</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND  
ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 14 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1800 UTC OF 01<sup>st</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.5° N AND LONGITUDE 72.1° E, ABOUT 170 KM NORTH NORTHWEST OF MINICOY (43369) AND 190 KM SOUTH OF AMINI DIVI(43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/1800	9.5/72.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0000	10.0/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0600	10.6/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1200	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1800	12.3/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0600	13.3/68.8	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
03/1800	14.8/68.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0600	16.2/69.2	80-90 GUSTING TO 100	CYCLONIC STORM
04/1800	17.5/70.1	60-70 GUSTING TO 80	CYCLONIC STORM
05/0600	18.6/71.2	40-50 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 7<sup>0</sup>N AND 12.5<sup>0</sup>N AND LONGITUDE 69.0<sup>0</sup>E TO 75.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 1200 UTC MINICOY (43369) REPORTED MEAN SEA LEVEL PRESSURE OF 990.7 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 50 KNOTS. AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1002.9 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 15 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO THE NORTH AND MODERATE TO HIGH (20-25 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 40X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

**WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

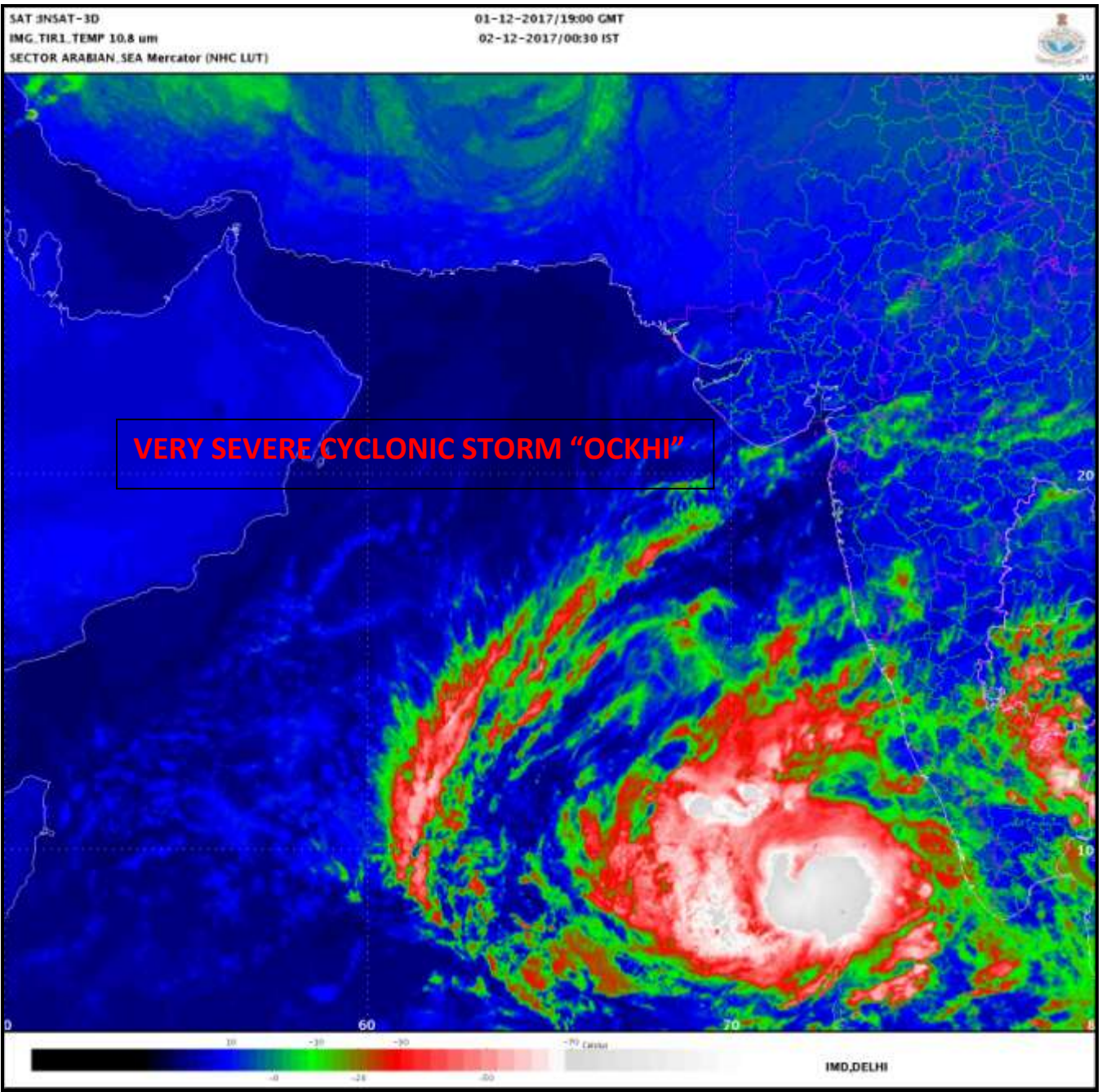
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(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

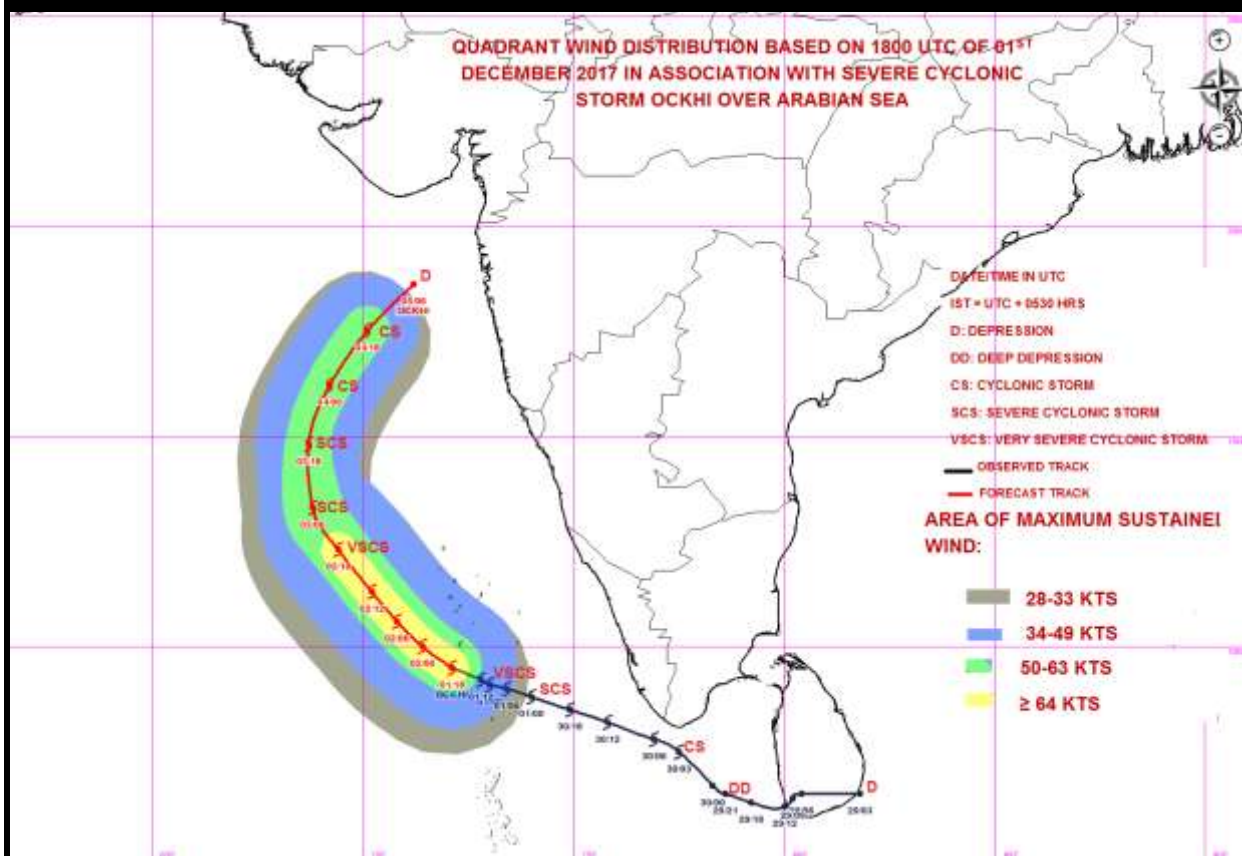
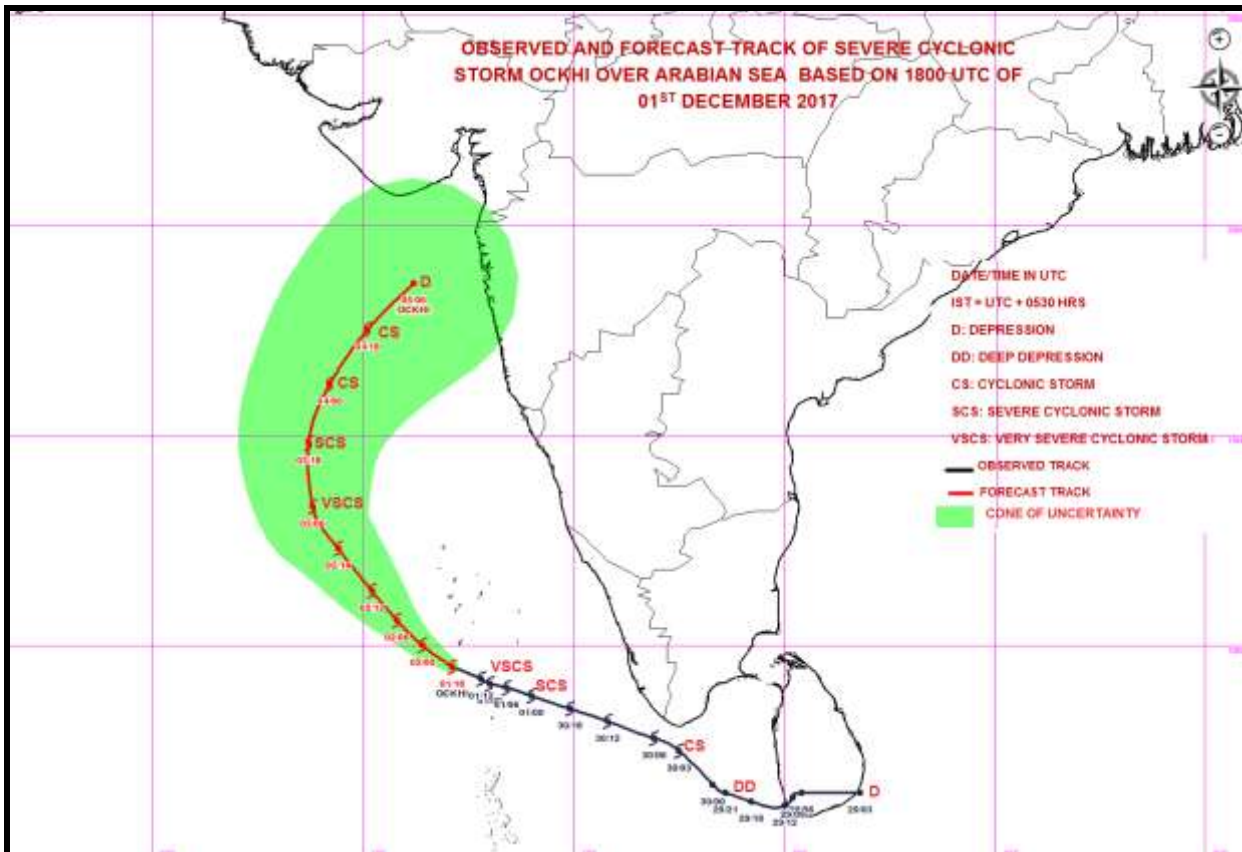
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FIFTEEN ISSUED AT 2300 UTC OF 01<sup>st</sup> DECEMBER 2017  
BASED ON 2100 UTC CHARTS OF 01<sup>st</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND  
ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 19 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 2100 UTC OF 01<sup>st</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.5° N AND LONGITUDE 71.8° E, ABOUT 200 KM NORTH NORTHWEST OF MINICOY (43369) AND 205 KM SOUTH OF AMINI DIVI(43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
01/2100	9.5/71.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0000	10.0/71.4	130-145 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
02/0600	10.6/70.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1200	11.3/70.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/1800	12.3/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0600	13.3/68.8	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
03/1800	14.8/68.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/0600	16.2/69.2	80-90 GUSTING TO 100	CYCLONIC STORM
04/1800	17.5/70.1	60-70 GUSTING TO 80	CYCLONIC STORM
05/0600	18.6/71.2	40-50 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER AREA BETWEEN LATITUDE 7<sup>0</sup>N AND 12.5<sup>0</sup>N AND LONGITUDE 69.0<sup>0</sup>E TO 75.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 1200 UTC MINICOY (43369) REPORTED MEAN SEA LEVEL PRESSURE OF 990.7 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 50 KNOTS. AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1002.9 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 15 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE HIGH TO VERY HIGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING SUBSEQUENT 24 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 15<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 <sup>0</sup>C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO THE NORTH AND MODERATE TO HIGH (20-25 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 40X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24-36 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

**WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

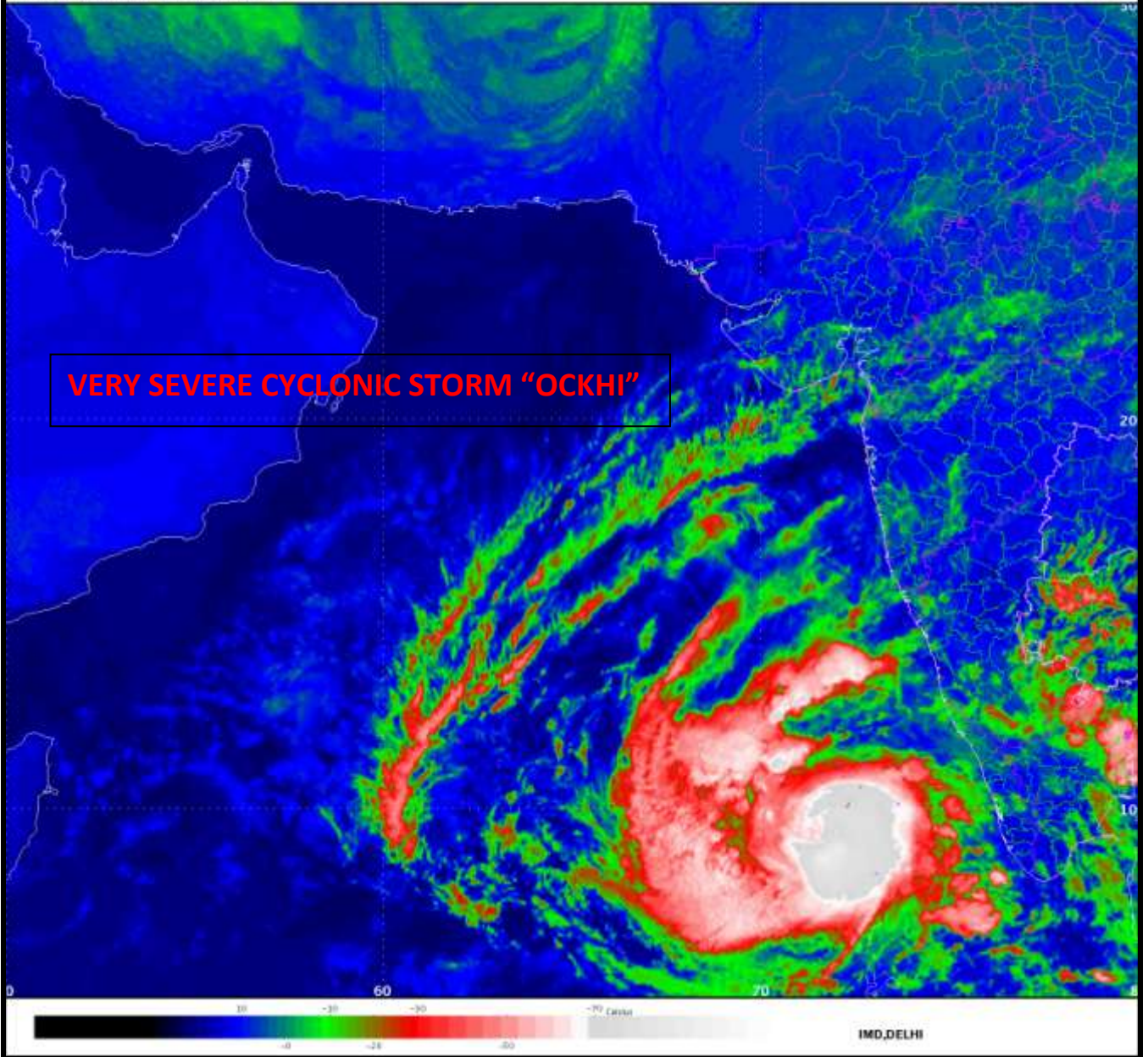
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

SAT :INSAT-3D  
IMG\_TIR1\_TEMP 10.8 um  
SECTOR ARABIAN\_SEA Mercator (NHC LUT)

01-12-2017/21:30 GMT  
02-12-2017/03:00 IST



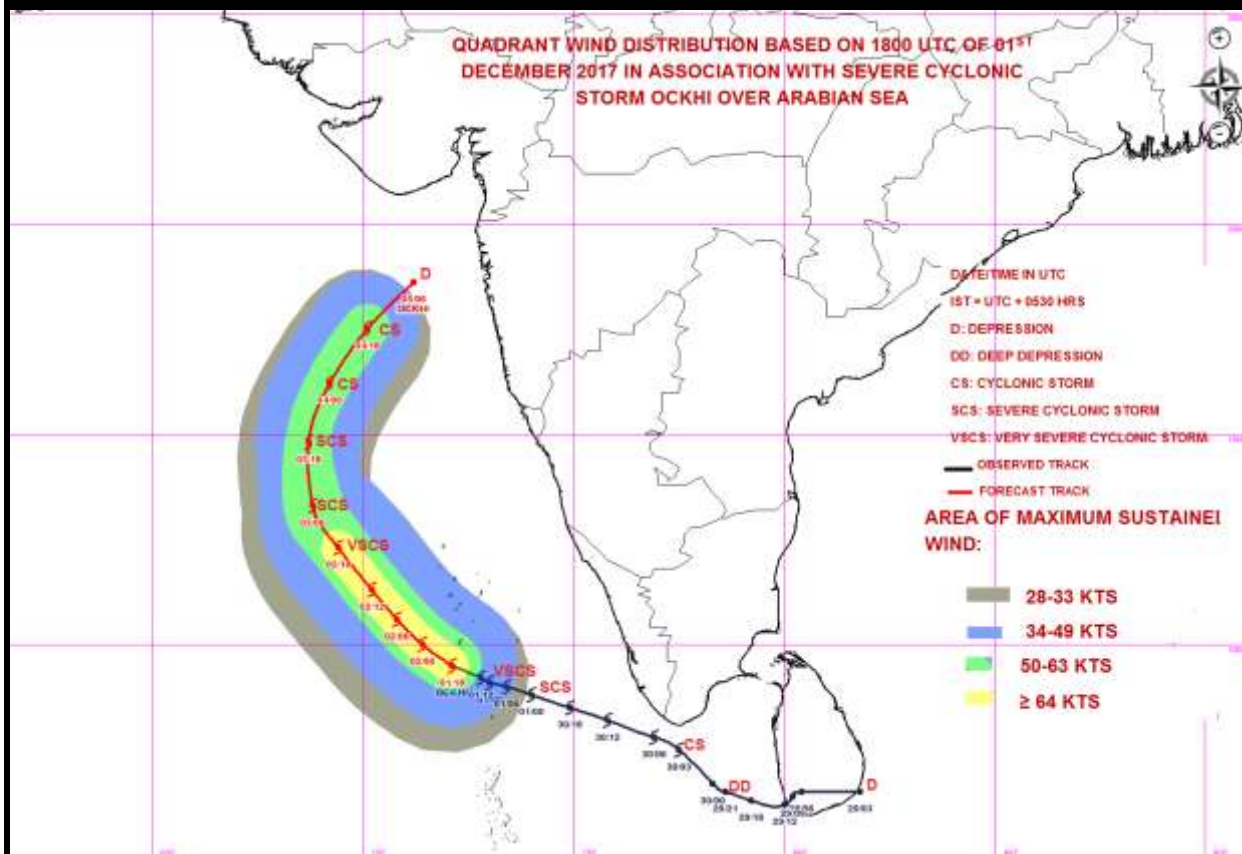
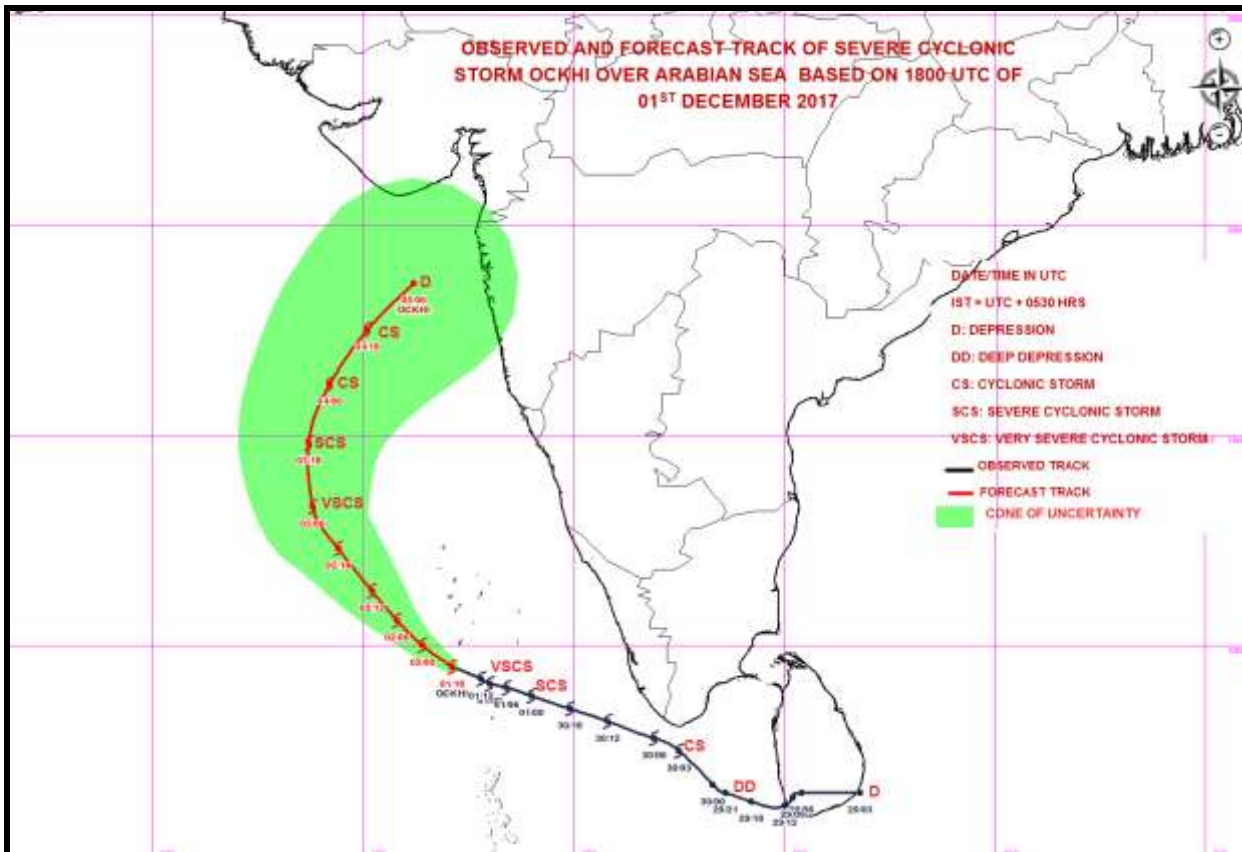
**VERY SEVERE CYCLONIC STORM "OCKHI"**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. SIXTEEN ISSUED AT 0300 UTC OF 02<sup>nd</sup> DECEMBER 2017  
BASED ON 0000 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER LAKSHADWEEP AREA AND  
ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0000 UTC OF 02<sup>nd</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.6° N AND LONGITUDE 71.5° E, ABOUT 230 KM WEST NORTHWEST OF MINICOY (43369) AND 215 KM SOUTH SOUTHWEST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0000	9.6/71.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02/0600	10.0/71.0	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/1200	10.5/70.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/0000	11.8/69.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1200	13.5/68.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
04/0000	14.9/69.1	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
04/1200	16.3/69.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0000	18.2/70.8	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.9/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.3/72.4	30-40 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. THE SATELLITE IMAGERY INDICATE THAT THE EYE IS VISIBLE WITHIN CDO, WITH RAIN BAND CLOUDS WRAPPING TO THE NORTH AND NORTHWEST OF THE SYSTEM. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 7<sup>0</sup>N AND 12.0<sup>0</sup>N AND LONGITUDE 67.0<sup>0</sup>E TO 74.0<sup>0</sup>E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 0000 UTC AMINI DIVI (43311) REPORTED MEAN SEA LEVEL PRESSURE OF 1003.1 AND SURFACE WIND SPEED OF 070<sup>0</sup>/ 15 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE PHENOMENAL OVER AND AROUND LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND VERY HIGH DURING SUBSEQUENT 24 HOURS. SEA CONDITIONS WOULD BE VERY ROUGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING NEXT 48 HOURS.

THE UPPER TROPOSPHERIC RIDGE RUNS ALONG LATITUDE 14<sup>0</sup>N. HENCE THE WINDS ARE NEARLY SOUTHEASTERLY OVER SOUTHEAST ARABIAN SEA. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE AREA. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE. HOWEVER, THE RELATIVE SHEAR IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM FOR SOME MORE TIME. THE LOW LEVEL RELATIVE VORTICITY IS AROUND 250X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X 10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. AFTER 24 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHIBIN B)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

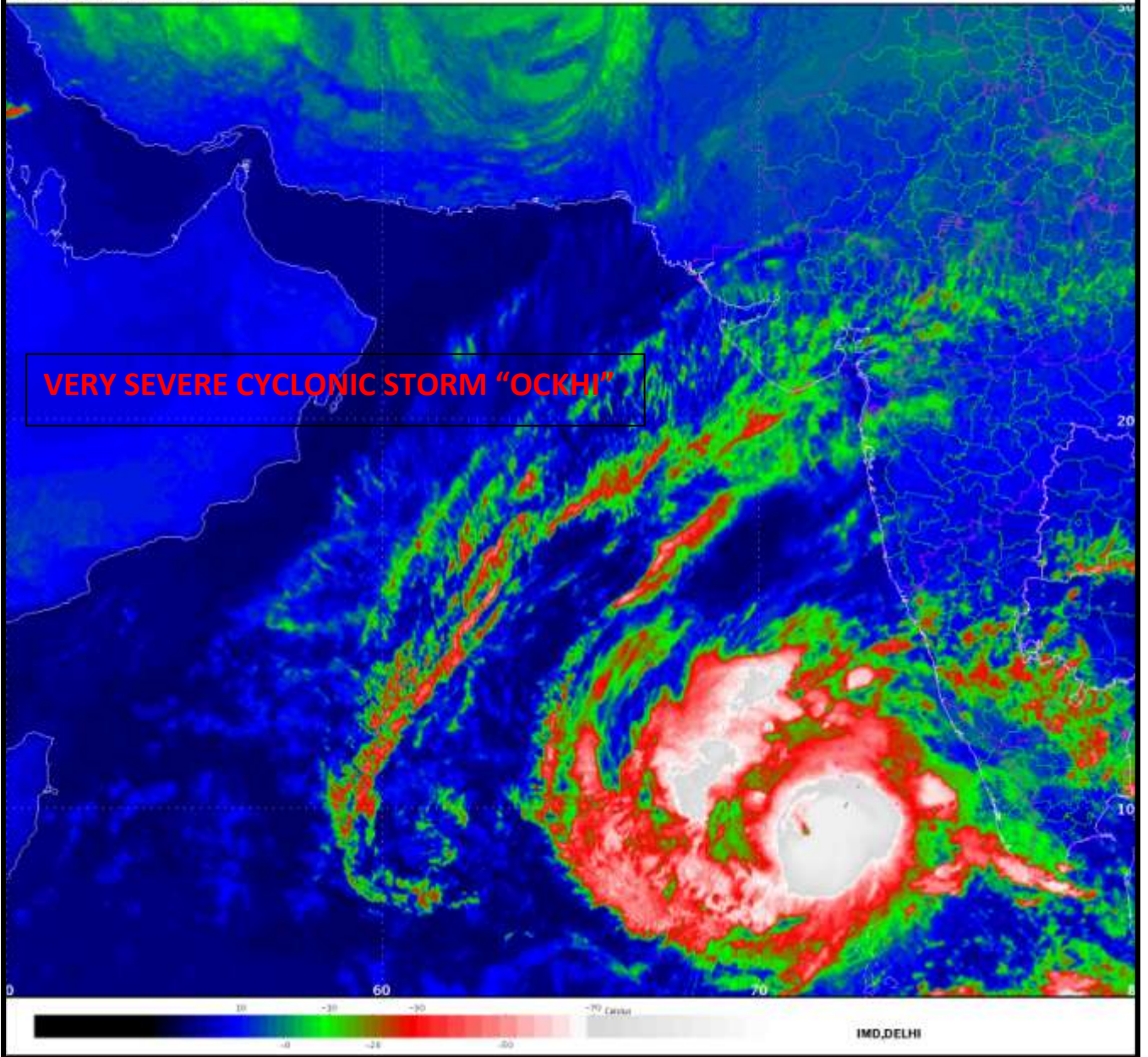
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

SAT :INSAT-3D  
IMG. TIR1\_TEMP 10.8 um  
SECTOR ARABIAN\_SEA Mercator (NHC LUT)

02-12-2017/01:30 GMT  
02-12-2017/07:00 IST



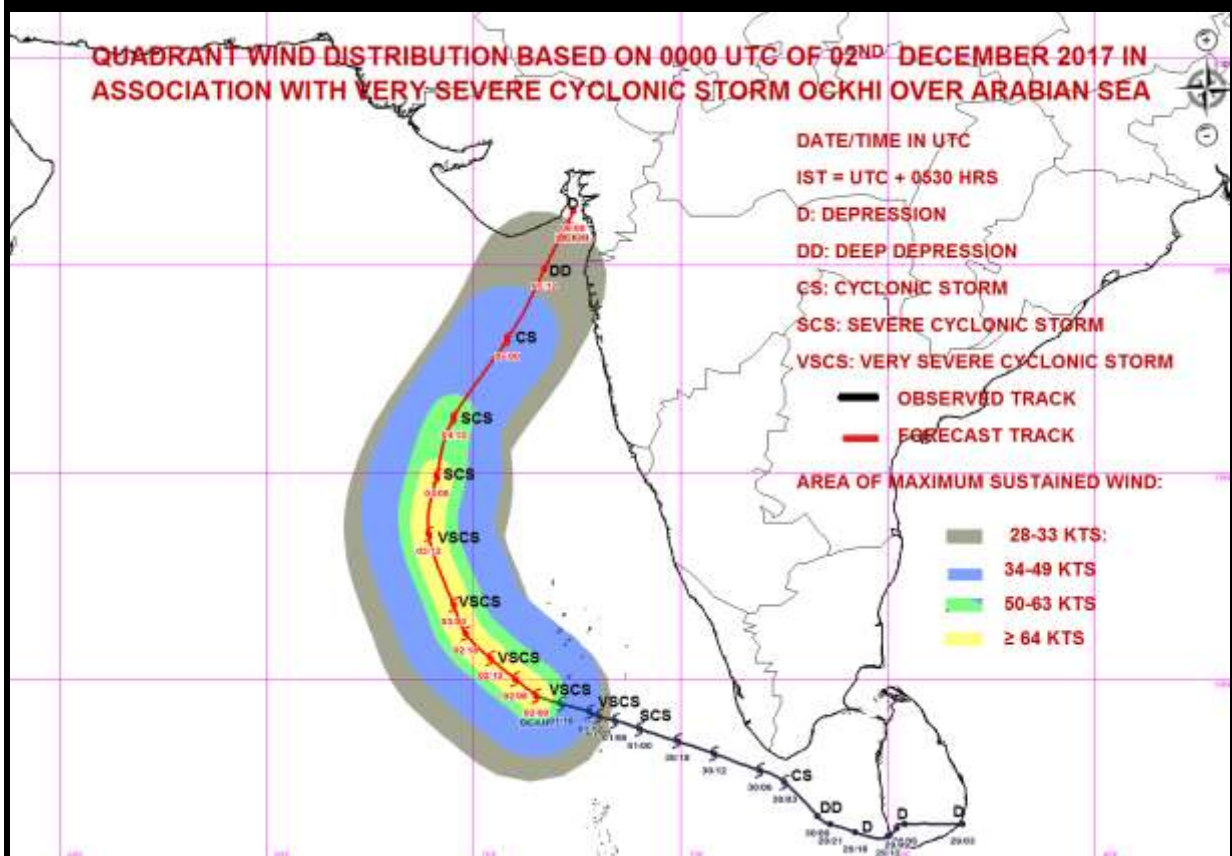
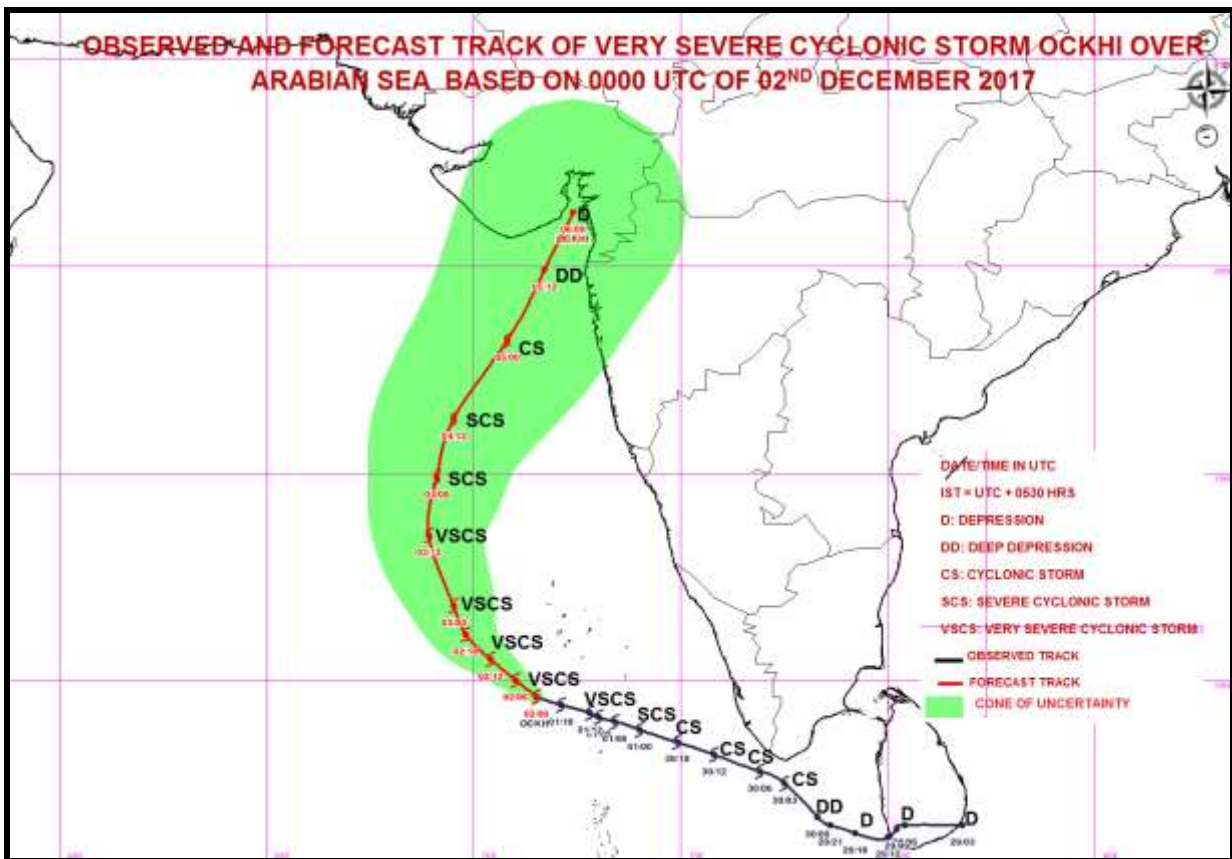
**VERY SEVERE CYCLONIC STORM "OCKHI"**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. SEVENTEEN ISSUED AT 0600 UTC OF 02<sup>nd</sup> DECEMBER 2017 BASED ON 0300 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER WEST-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 02<sup>ND</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.7° N AND LONGITUDE 71.2° E, ABOUT 260 KM WEST-NORTHWEST OF MINICOY (43369) AND 230 KM SOUTHWEST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO CONTINUE TO MOVE WEST-NORTHWESTWARDS ACROSS LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0300	9.7/71.2	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/0600	10.0/71.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/1200	10.5/70.4	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/0000	11.8/69.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/1200	13.5/68.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
04/0000	14.9/69.1	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
04/1200	16.3/69.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0000	18.2/70.8	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.9/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.3/72.4	30-40 GUSTING TO 60	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. THE SATELLITE IMAGERY INDICATES EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 6.5°N AND 14.5°N AND LONGITUDE 66.5°E TO 74.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C. AT 0300 UTC, A BOUY LOCATED NEAR LATITUDE 10.2 °N/ LONGITUDE 72.6 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.8 HPA AND SURFACE WIND SPEED OF 130/ 29 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE PHENOMENAL OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 24 HOURS AND VERY HIGH DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO BE HIGH TO VERY HIGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND VERY ROUGH TO HIGH DURING SUBSEQUENT 24 HRS. ALSO, SEA CONDITIONS WOULD BE ROUGH TO VERY ROUGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING NEXT 48 HOURS

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE AND INCREASES TO THE NORTH. HOWEVER, THE RELATIVE SHEAR IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM FOR SOME MORE TIME. AFTER 24 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO INTESIFY FURTHER DURING NEXT 24 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE NORTHWARDS AND THEN NORTHEASTWARDS FROM THE FORENOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTARTE INTO A DEPRESSION DURING NEXT 36 HOURS. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

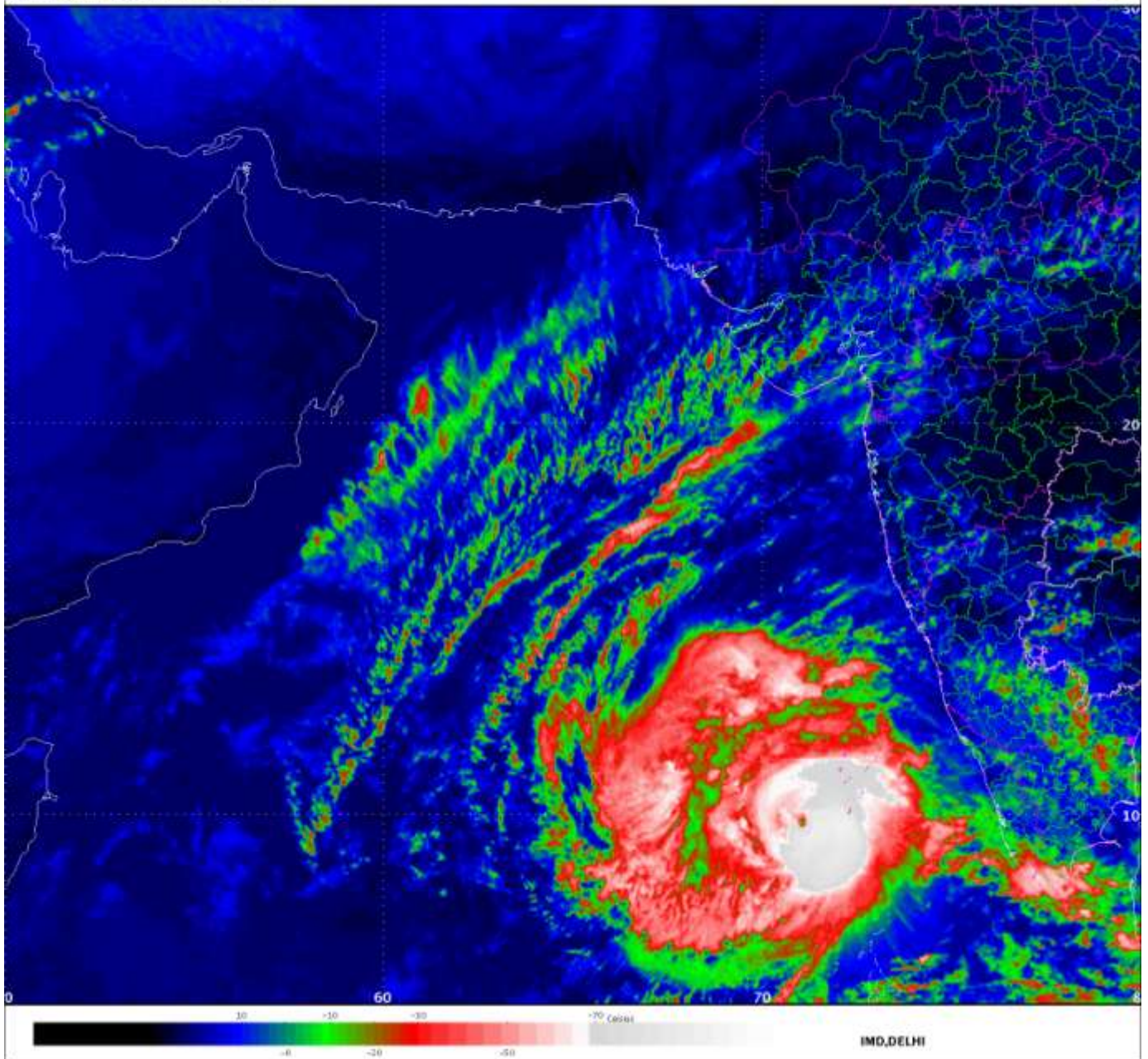
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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SECTOR ARABIAN SEA Mercator (NHC LUT)

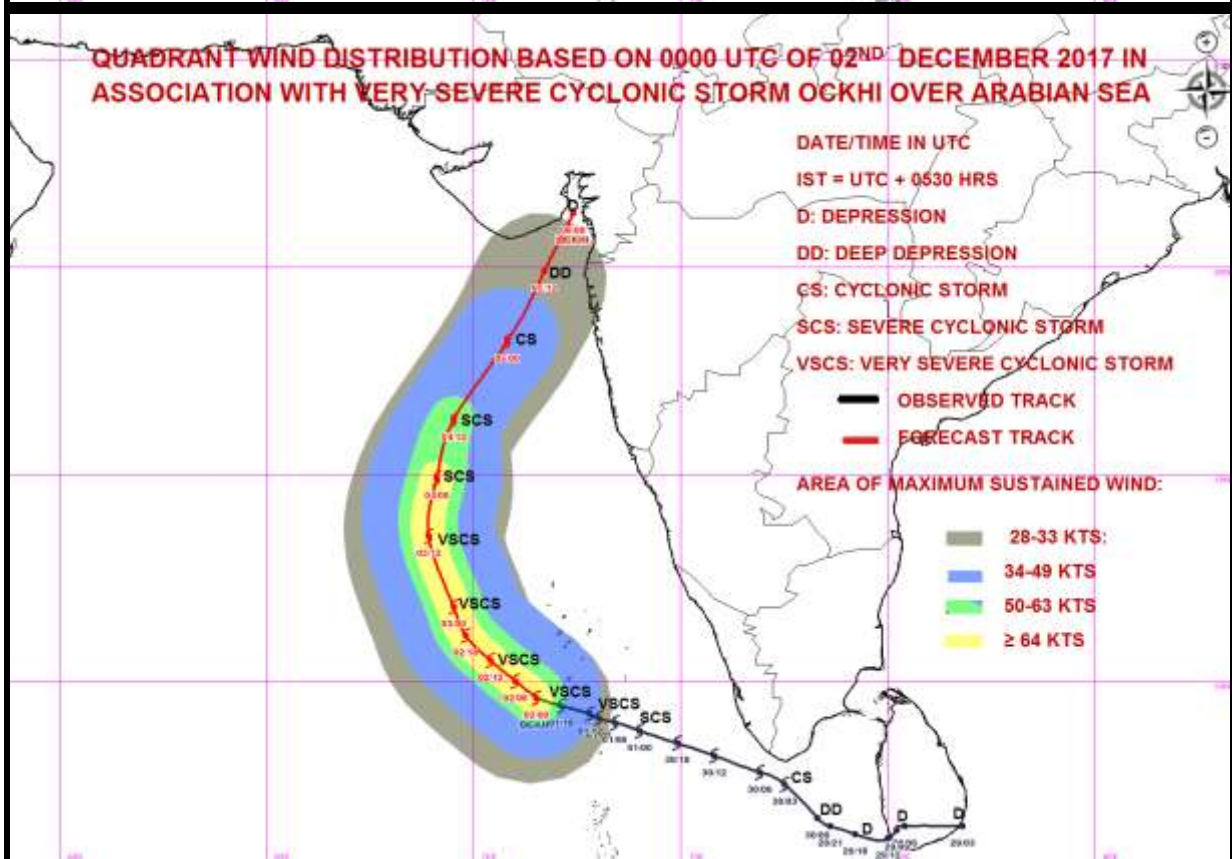
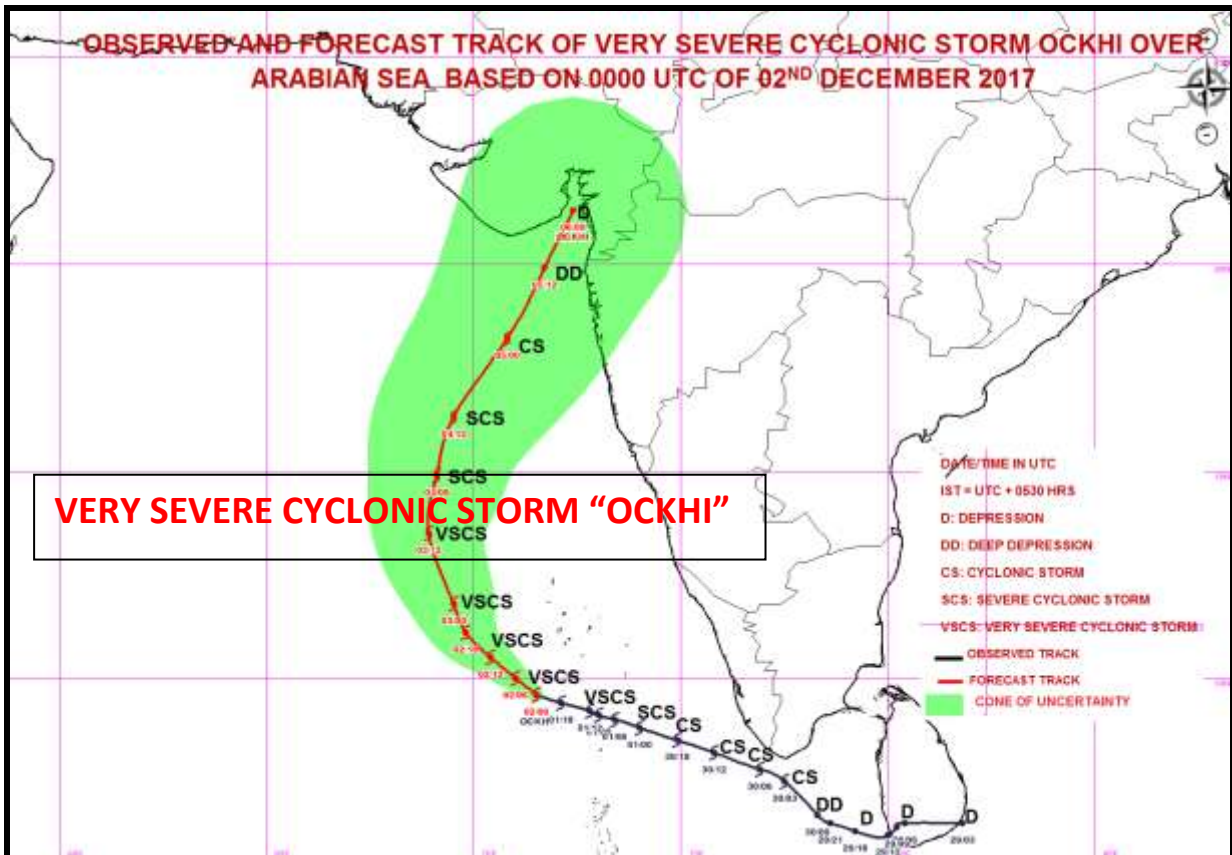
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02-12-2017/10:30 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. EIGHTEEN ISSUED AT 0900 UTC OF 02<sup>nd</sup> DECEMBER 2017  
BASED ON 0600 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER WEST-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 02<sup>ND</sup> DECEMBER, 2017 OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 9.8° N AND LONGITUDE 71.0° E, ABOUT 280 KM NORTHWEST OF MINICOY (43369) AND 240 KM SOUTHWEST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TONIGHT. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0600	9.8/71.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
02/1200	10.4/70.3	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1800	13.7/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1800	16.9/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/0600	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.6/72.1	50-60 GUSTING TO 70	DEEPDEPRESSION
06/0600	21.9/72.9	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. THE SATELLITE IMAGERY INDICATES IRREGULAR EYE PATTERN SUGGESTING SLIGHT WEAKENING OF CLOUD STRUCTURE COMPARED TO MORNING. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 6.5°N AND 14.5°N AND LONGITUDE 65.5°E TO 74.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AT 0600 UTC, A SHIP LOCATED NEAR LATITUDE 7.5 °N/ LONGITUDE 72.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.8 HPA AND SURFACE WIND SPEED OF 200<sup>0</sup>/ 35 KNOTS. ANOTHER SHIP LOCATED NEAR LATITUDE 8<sup>0</sup>N/ LONGITUDE 69.8 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.6 HPA AND SURFACE WIND SPEED OF 270<sup>0</sup>/ 32 KNOTS

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE PHENOMENAL OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING HIGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING. IT IS VERY LIKELY TO BE HIGH TO VERY HIGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING ROUGH TO VERY ROUGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING. SEA CONDITIONS WOULD BE ROUGH TO VERY ROUGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING NEXT 48 HOURS.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE AND INCREASES TO THE NORTH. HOWEVER, THE RELATIVE SHEAR IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM FOR SOME MORE TIME. AFTER 24 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 12 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

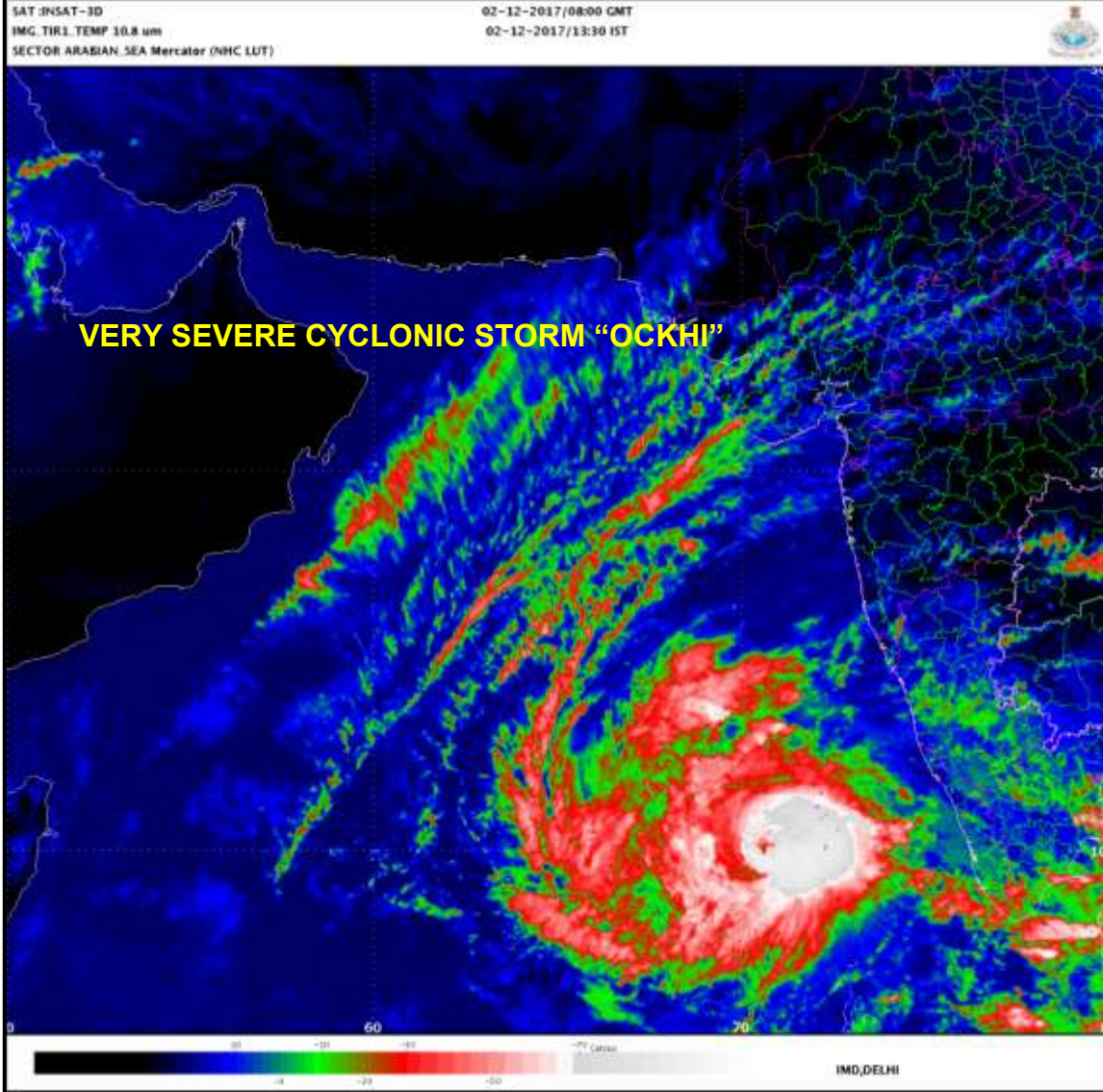
THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTRATE INTO A DEPRESSION DURING NEXT 36 HOURS. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

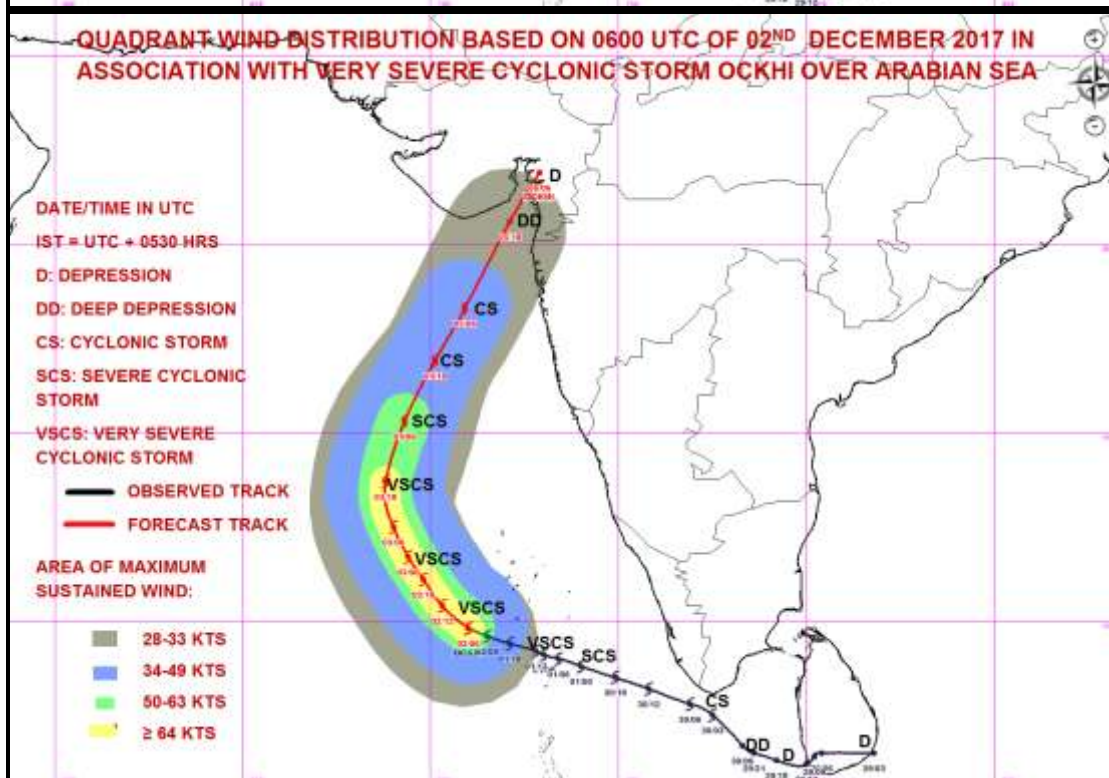
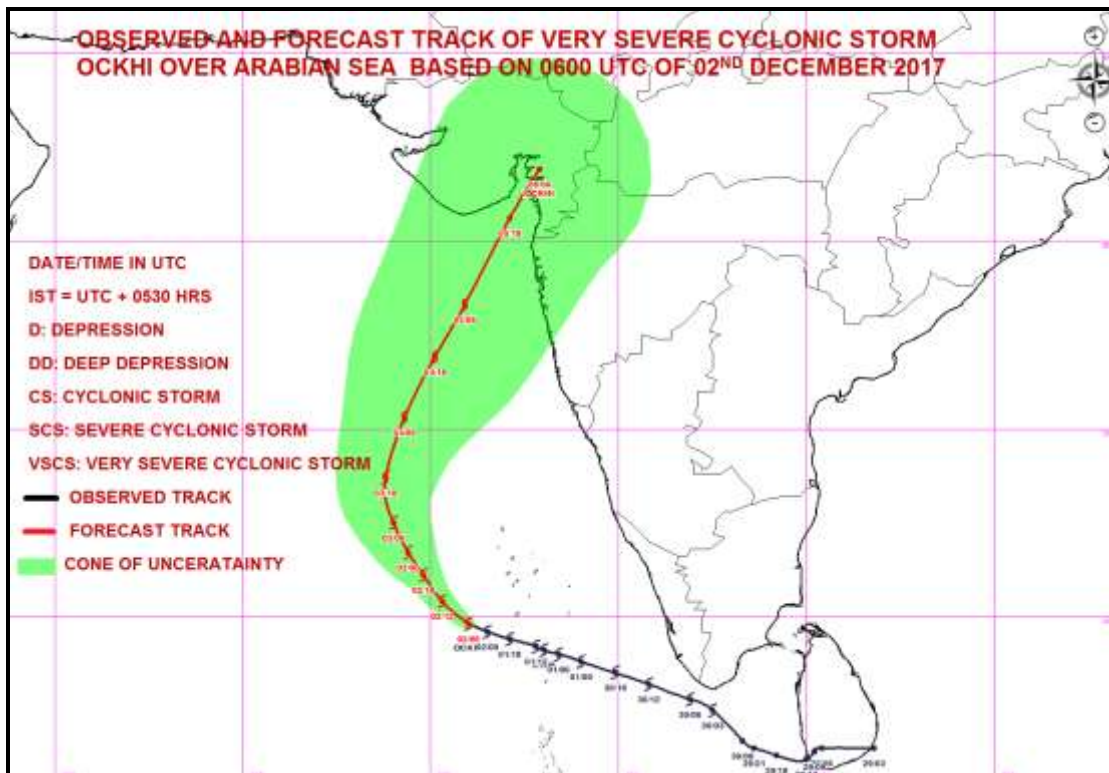
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. NINETEEN ISSUED AT 1200 UTC OF 02<sup>nd</sup> DECEMBER 2017**  
**BASED ON 0900 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST 03 HOURS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 02<sup>ND</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA AND ADJOINING LAKSHADWEEP AREA NEAR LATITUDE 10.2° N AND LONGITUDE 70.6° E, ABOUT 250 KM WEST-SOUTHWEST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TOMORROW, THE 03<sup>RD</sup> DECEMBER, 2017 MORNING. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 24 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/0900	10.2/70.6	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/1200	10.4/70.3	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1800	13.7/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1800	16.9/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/0600	18.3/70.9	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.6/72.1	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	21.9/72.9	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5 THE SATELLITE IMAGERY INDICATES EYE PATTERN. DIAMETER OF THE EYE IS APPROXIMATELY 20KM. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 7°N AND 14.5°N AND LONGITUDE 65.5°E TO 74.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AT 0900 UTC, A BUOY LOCATED NEAR LATITUDE 10.3 °N/ LONGITUDE 72.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.8 HPA AND SURFACE WIND SPEED OF 170<sup>0</sup>/ 31 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 10.5<sup>0</sup>N/ LONGITUDE 72.2 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.8 HPA AND SURFACE WIND SPEED OF 160<sup>0</sup>/ 31 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE PHENOMENAL OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING HIGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING. IT IS VERY LIKELY TO BE HIGH TO VERY HIGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING ROUGH TO VERY ROUGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING. SEA CONDITIONS WOULD BE ROUGH TO VERY ROUGH ALONG & OFF KERALA COAST DURING NEXT 24 HOURS AND ALONG & OFF KARNATAKA COAST DURING NEXT 48 HOURS. SEA CONDITIONS WOULD BE ROUGH TO VERY ROUGH ALONG & OFF SOUTH GUJARAT COAST ON 4<sup>TH</sup> AND 5<sup>TH</sup> DECEMBER 2017.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHWEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) AROUND THE SYSTEM CENTRE AND INCREASES TO THE NORTH. HOWEVER, THE RELATIVE SHEAR IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM FOR SOME MORE TIME. AFTER 24 HOURS THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 12 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

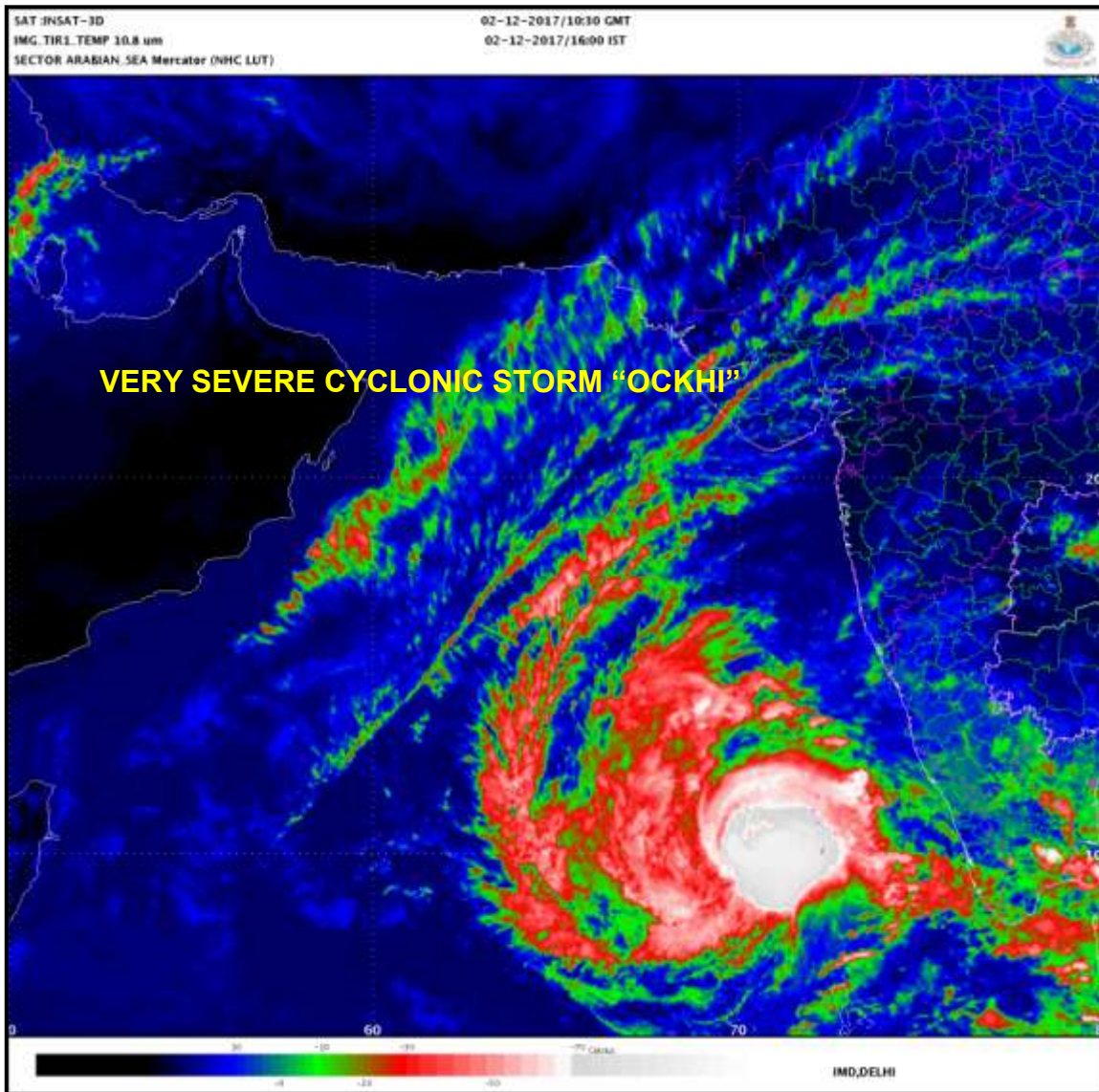
THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA AND ADJOINING MALACCA STRAIT PERSISTS. IT IS VERY LIKELY TO CONCENTRATE INTO A DEPRESSION DURING NEXT 36 HOURS. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

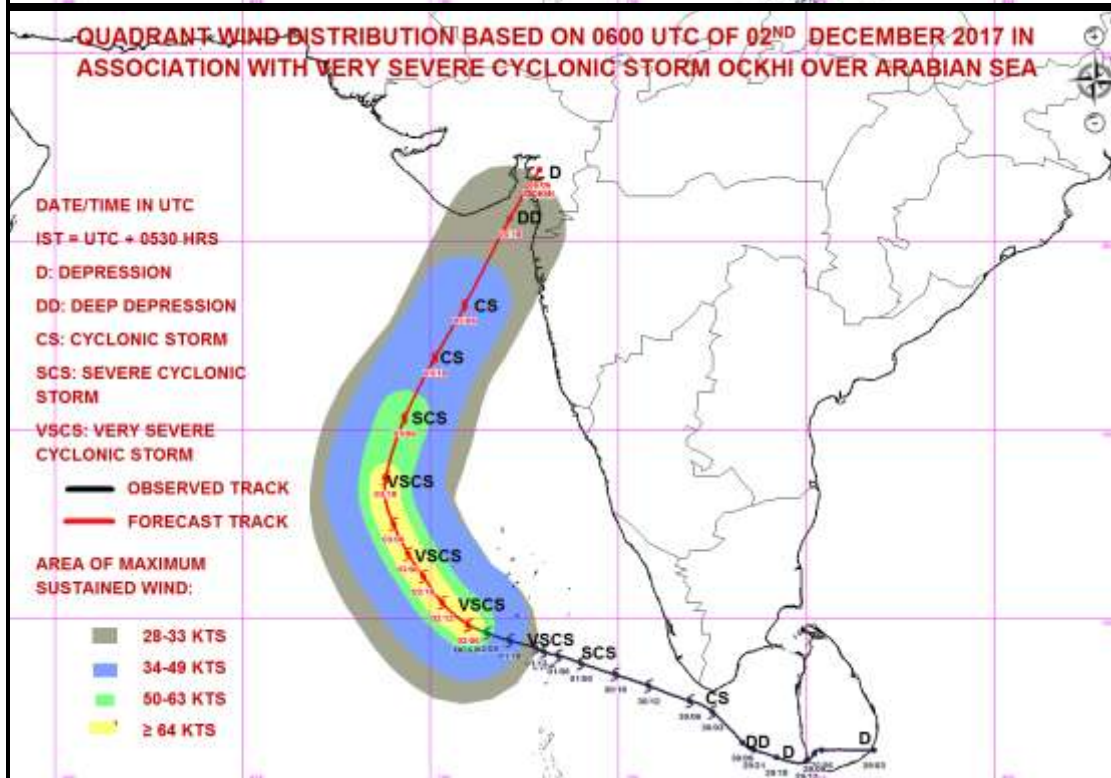
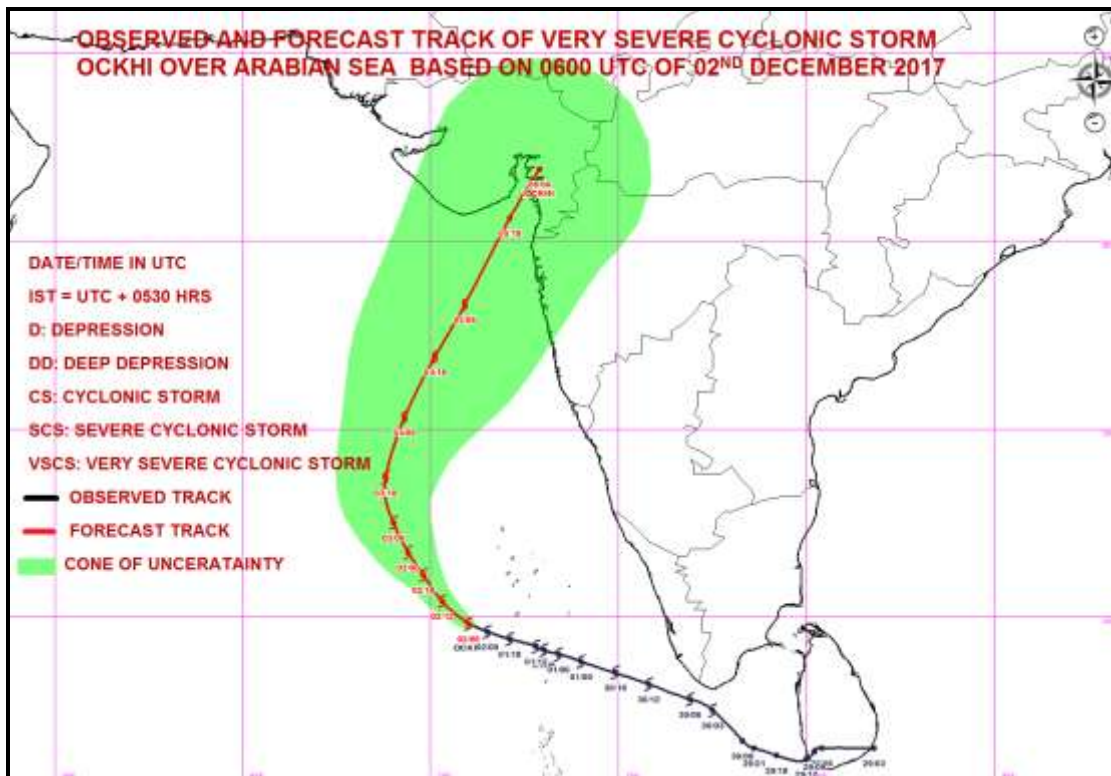
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. TWENTY ISSUED AT 1500 UTC OF 02<sup>ND</sup> DECEMBER 2017  
BASED ON 1200 UTC CHARTS OF 02<sup>ND</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA FURTHER MOVED NORTHWESTWARDS WITH A SPEED OF 18 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 02<sup>ND</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 10.5° N AND LONGITUDE 70.3° E, ABOUT 275 KM WEST-SOUTHWEST OF AMINI DIVI (43311). THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TOMORROW, THE 03<sup>RD</sup> DECEMBER, 2017 MORNING. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time (UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1200	10.5/70.3	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1200	13.1/68.9	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0000	14.5/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
04/1200	16.1/69.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0000	17.6/70.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.5/71.5	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0000	21.3/72.5	45-55 GUSTING TO 65	DEPRESSION
06/1200	23.1/73.5	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 8.0°N AND 15.0°N AND LONGITUDE 66.0°E TO 74.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 1200 UTC, A SHIP LOCATED NEAR LATITUDE 07.8 °N/ LONGITUDE 74.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.8 HPA AND SURFACE WIND SPEED OF 200°/ 30 KNOTS.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING VERY ROUGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING FOR SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO BE ROUGH TO VERY ROUGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND MODERATE TO ROUGH DURING THE SUBSEQUENT 12 HOURS. SEA CONDITION WOULD BE ROUGH TO VERY ROUGH ALONG & OFF NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS ON 4<sup>TH</sup> NIGHT AND 5<sup>TH</sup> DECEMBER 2017.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) TO THE NORTH AND NORTHWEST OF SYSTEM CENTRE.

FROM TOMORROW THE 3<sup>RD</sup> DECEMBER THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 12 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

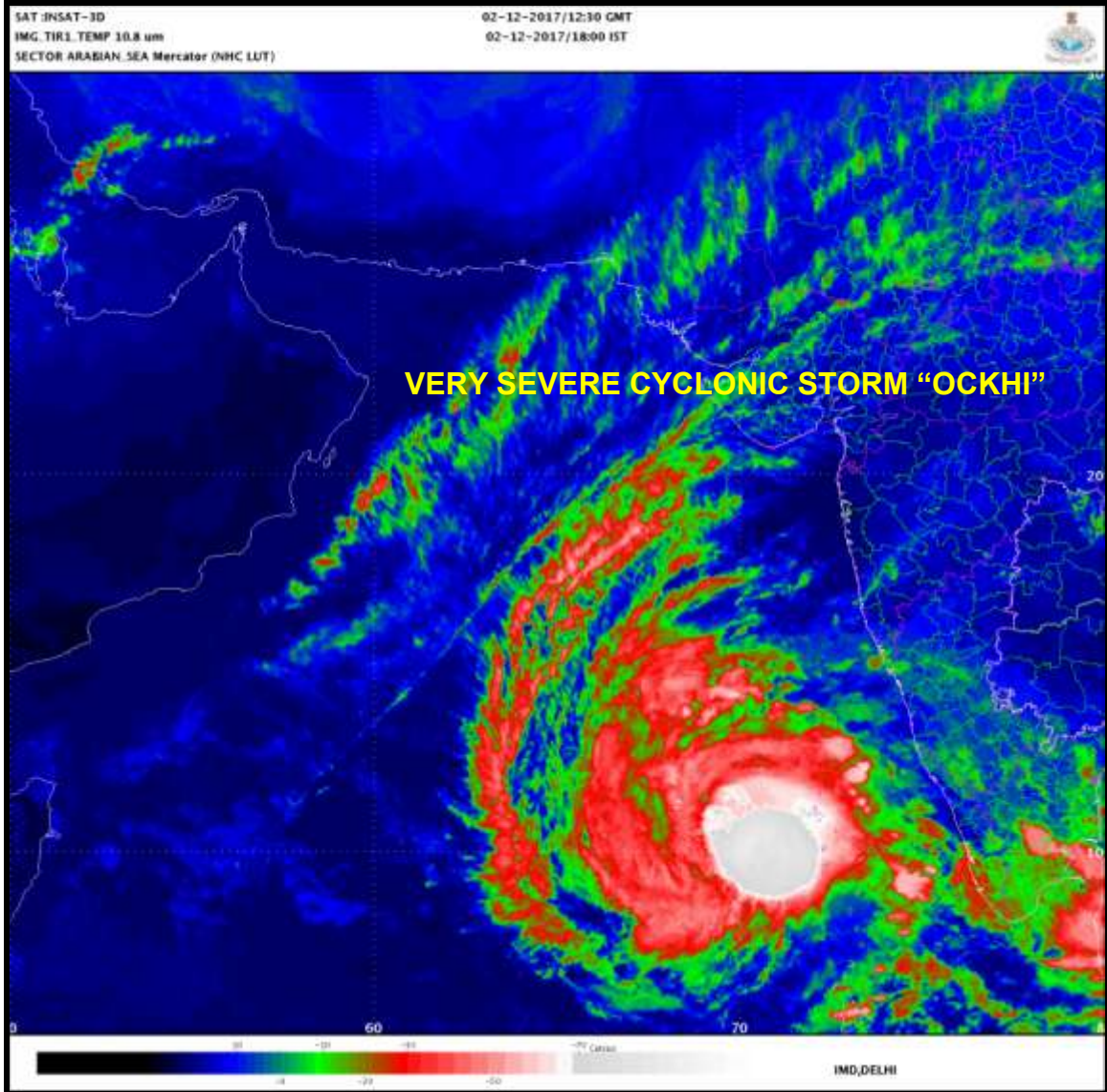
THE WELL MARKED LOW PRESSURE AREA OVER NORTH SUMATRA COAST AND ADJOINING SOUTH ANDAMAN SEA PERSISTS. ASSOCIATED CYCLONIC CIRCULATION EXTENDS UPTO 5.8 KM ABOVE MEAN SEA LEVEL. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 36 HOUR. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

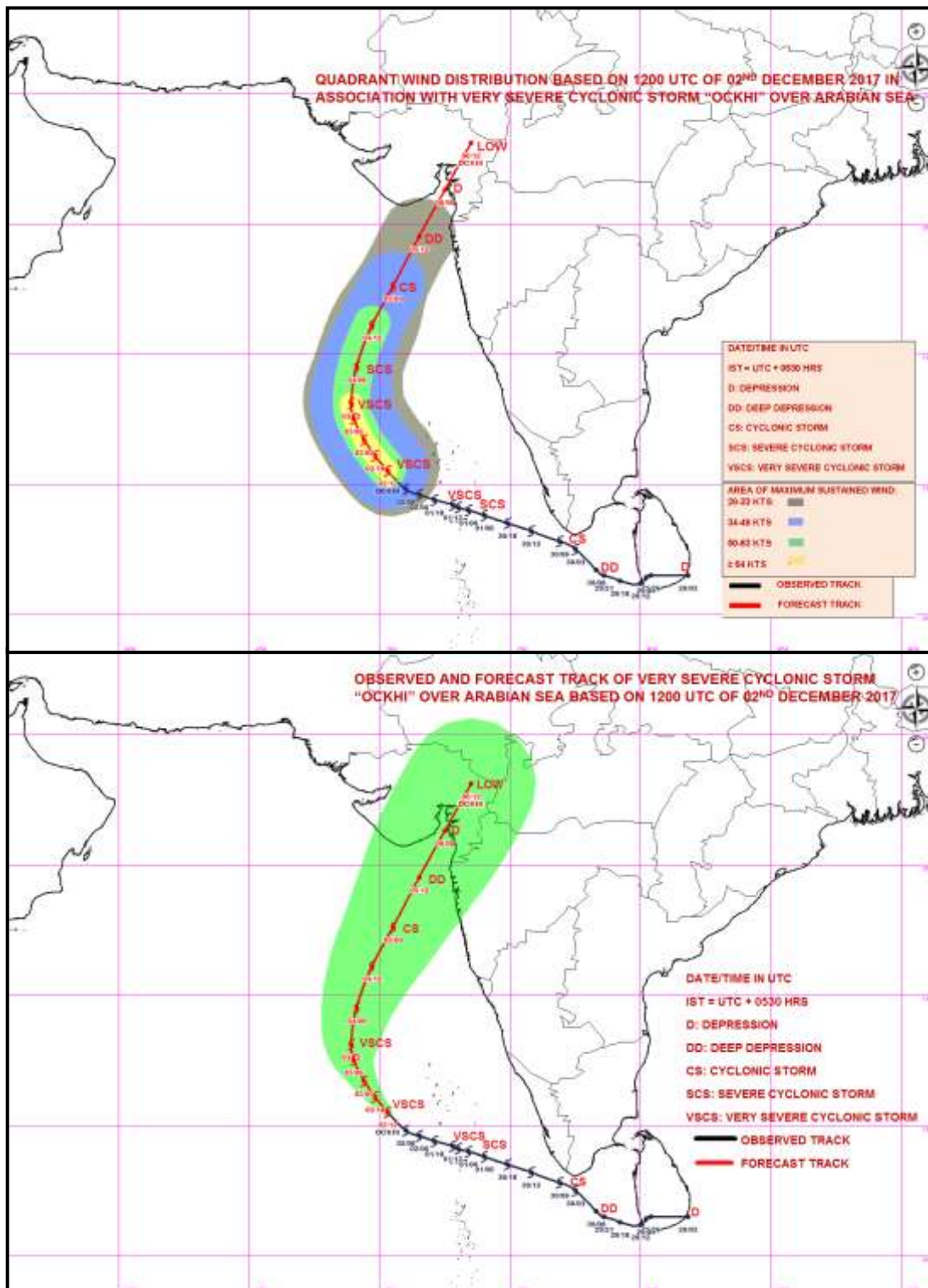
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY ONE ISSUED AT 1700 UTC OF 02<sup>nd</sup> DECEMBER 2017 BASED ON 1500 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA FURTHER MOVED NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1500 UTC OF TODAY, THE 02<sup>ND</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 10.8° N AND LONGITUDE 70.0° E, ABOUT 300 KM WEST-SOUTHWEST OF AMINI DIVI. THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TOMORROW, THE 03<sup>RD</sup> DECEMBER, 2017 MORNING. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time (UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1500	10.8/70.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
02/1800	11.1/69.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1200	13.1/68.9	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0000	14.5/69.1	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
04/1200	16.1/69.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0000	17.6/70.5	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.5/71.5	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0000	21.3/72.5	45-55 GUSTING TO 65	DEPRESSION
06/1200	23.1/73.5	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 8.0°N AND 13.0°N AND LONGITUDE 66.0°E TO 72.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AT 1500 UTC, A SHIP LOCATED NEAR LATITUDE 10.3 °N/ LONGITUDE 72.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.3 HPA AND SURFACE WIND SPEED OF 160<sup>0</sup>/ 18 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND GRADUALLY BECOMING VERY ROUGH BY TOMORROW, THE 3<sup>RD</sup> DECEMBER MORNING FOR SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO BE ROUGH TO VERY ROUGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 12 HOURS AND MODERATE TO ROUGH DURING THE SUBSEQUENT 12 HOURS. SEA CONDITION WOULD BE ROUGH TO VERY ROUGH ALONG & OFF NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS ON 4<sup>TH</sup> NIGHT AND 5<sup>TH</sup> DECEMBER 2017.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) TO THE NORTH AND NORTHWEST OF SYSTEM CENTRE.

FROM TOMORROW THE 3<sup>RD</sup> DECEMBER THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 12 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

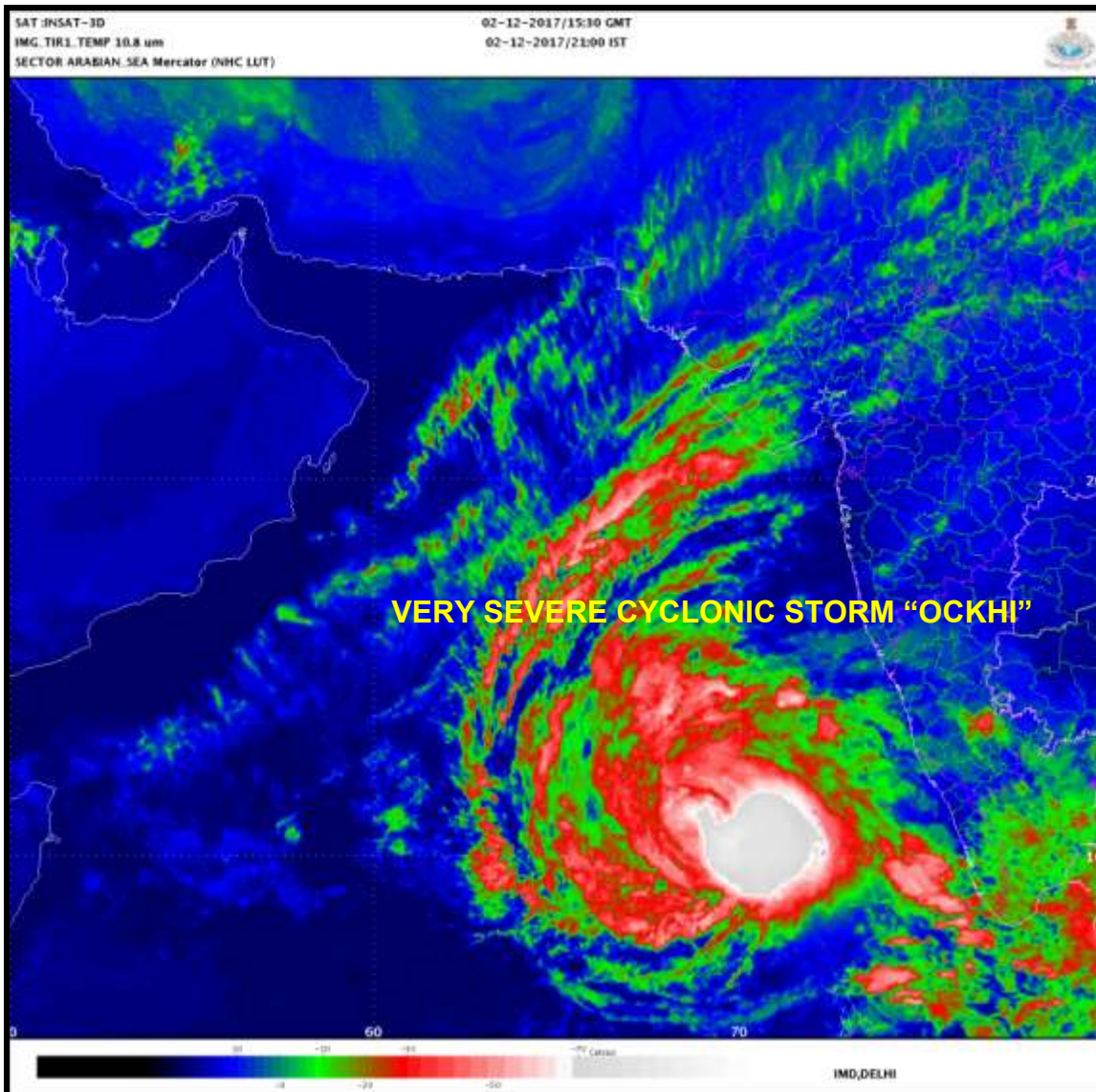
THE WELL MARKED LOW PRESSURE AREA OVER NORTH SUMATRA COAST AND ADJOINING SOUTH ANDAMAN SEA PERSISTS. ASSOCIATED CYCLONIC CIRCULATION EXTENDS UPTO 5.8 KM ABOVE MEAN SEA LEVEL. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 36 HOUR. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

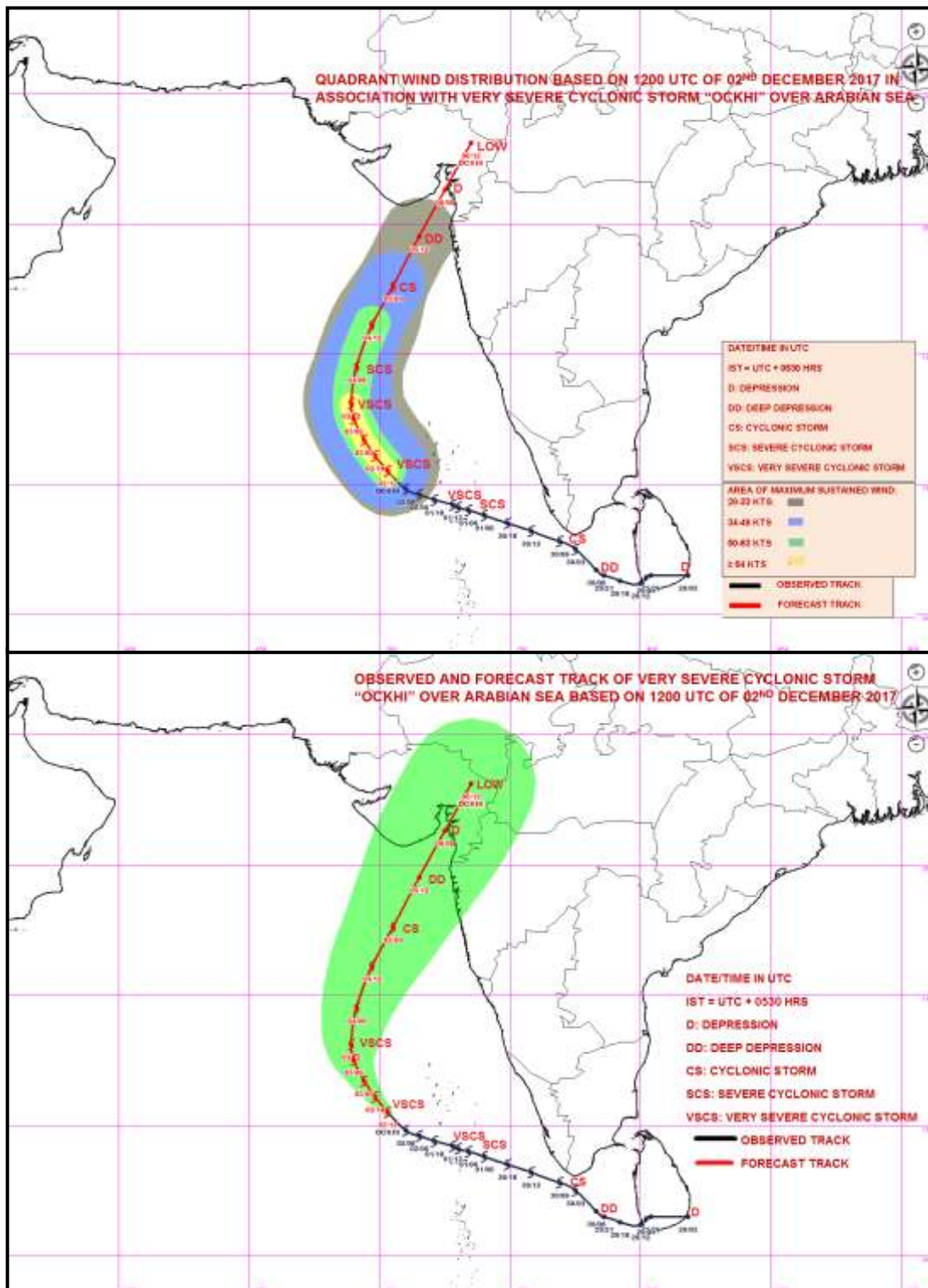
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. TWENTY TWO ISSUED AT 2100 UTC OF 02<sup>ND</sup> DECEMBER 2017 BASED ON 1800 UTC CHARTS OF 02<sup>ND</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA FURTHER MOVED NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1800 UTC OF 02<sup>ND</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 11.1° N AND LONGITUDE 69.7° E, ABOUT 330 KM WEST OF AMINI DIVI. THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TODAY THE 03<sup>RD</sup> DECEMBER, 2017 MORNING. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/1800	11.1/69.7	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1200	13.1/68.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	13.8/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1800	16.8/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/0600	18.5/71.0	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.4/72.0	40-50 GUSTING TO 60	DEPRESSION
06/0600	22.2/73.0	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 8.0°N AND 13.0°N AND LONGITUDE 66.0°E TO 72.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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AT 1800 UTC, A SHIP LOCATED NEAR LATITUDE 8.0 °N/ LONGITUDE 68.9 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.5 HPA AND SURFACE WIND SPEED OF 260<sup>0</sup>/ 30 KNOTS AND A BUOY (23454) LOCATED NEAR LATITUDE 10.2 °N/ LONGITUDE 72.6 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.1 HPA AND SURFACE WIND SPEED OF 190<sup>0</sup>/ 22 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 06 HOURS AND GRADUALLY BECOMING VERY ROUGH TO ROUGH DURING THE SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO BE ROUGH TO VERY ROUGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 06 HOURS AND ROUGH TO MODERATE DURING THE SUBSEQUENT 12 HOURS. SEA CONDITION WOULD BE ROUGH TO VERY ROUGH ALONG & OFF NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS ON 4<sup>TH</sup> NIGHT AND 5<sup>TH</sup> DECEMBER 2017.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 300X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 20X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X 10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) TO THE NORTH, NORTHWEST, NORTHEAST AND WEST OF SYSTEM CENTRE.

FROM TOMORROW THE 3<sup>RD</sup> DECEMBER THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 06 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

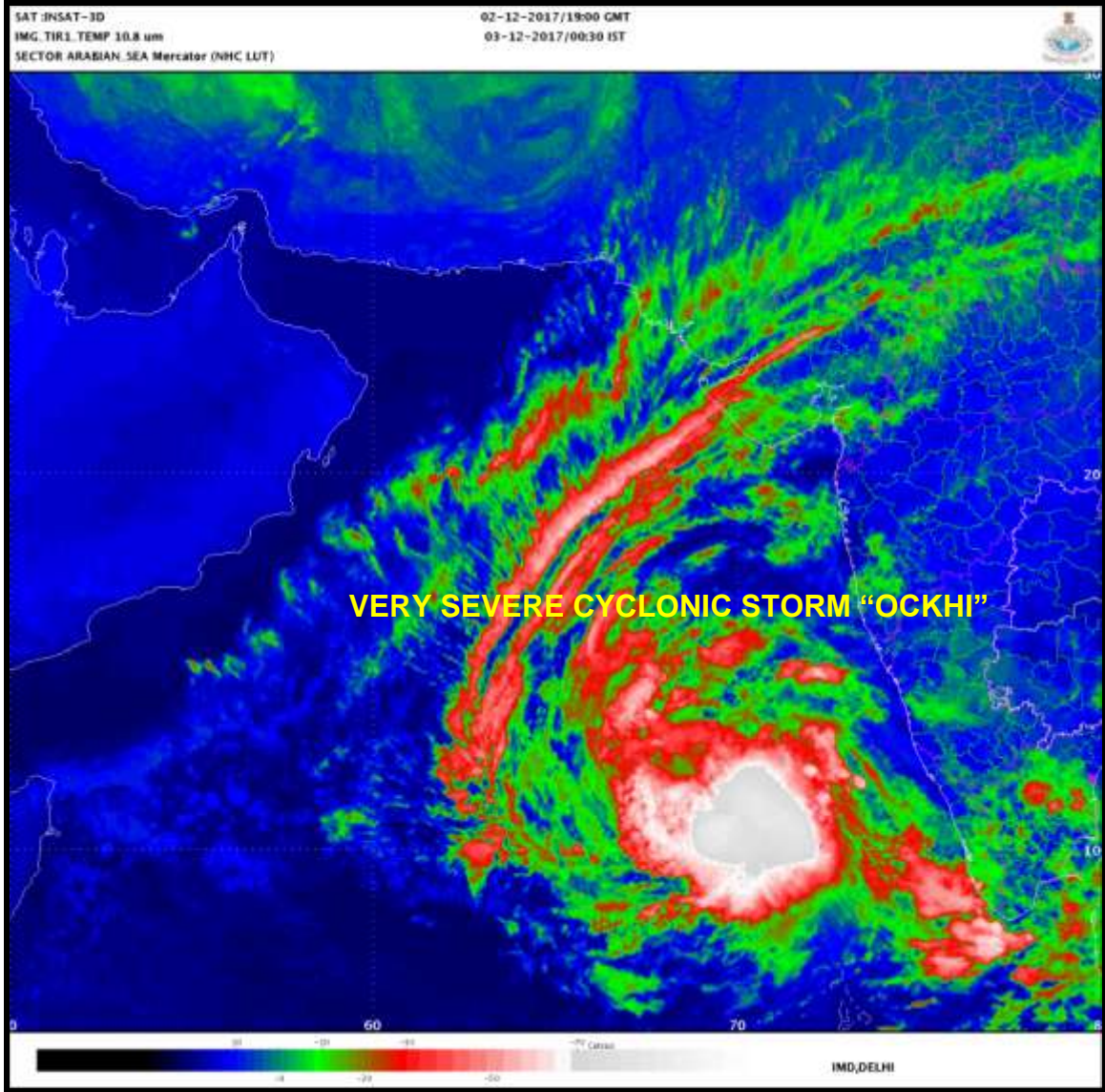
THE WELL MARKED LOW PRESSURE AREA OVER NORTH SUMATRA COAST AND ADJOINING SOUTH ANDAMAN SEA AND ASSOCIATED CYCLONIC CIRCULATION EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 36 HOUR. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

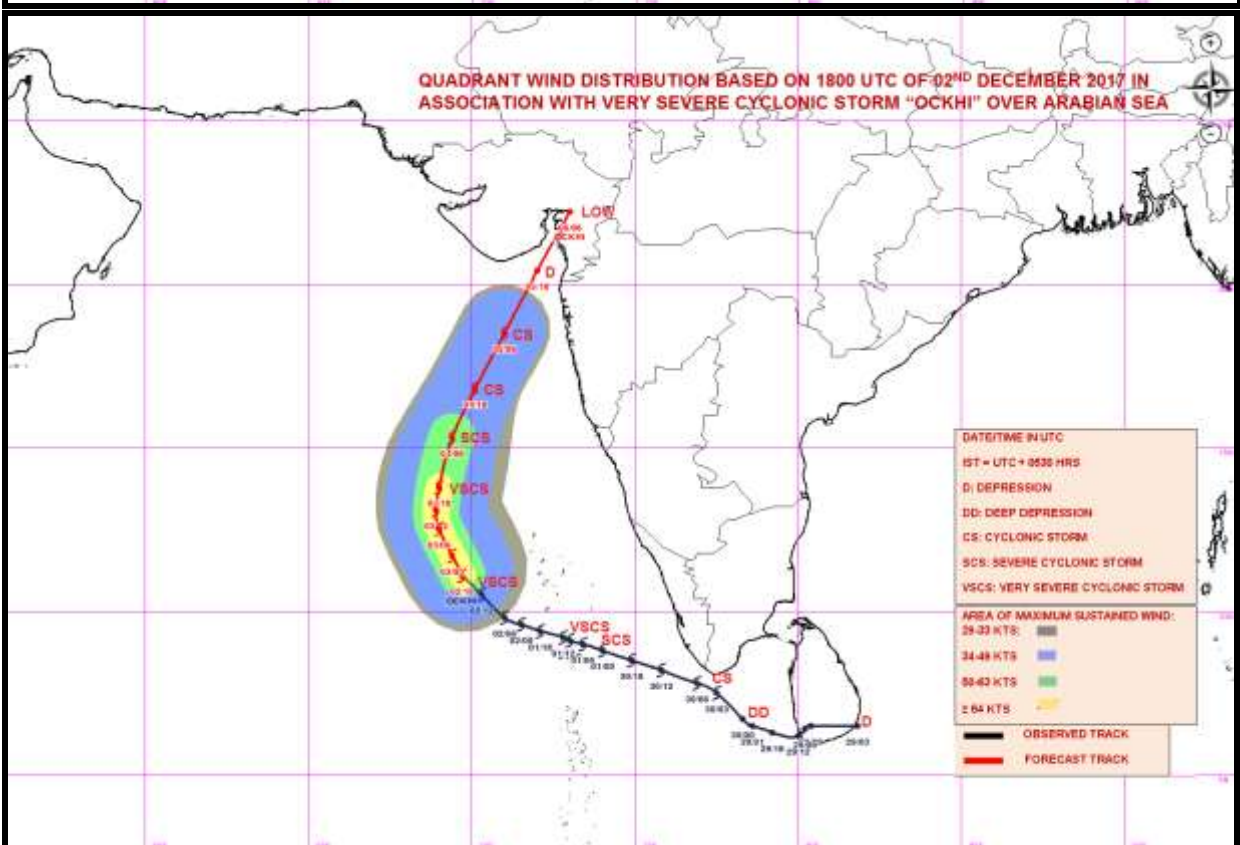
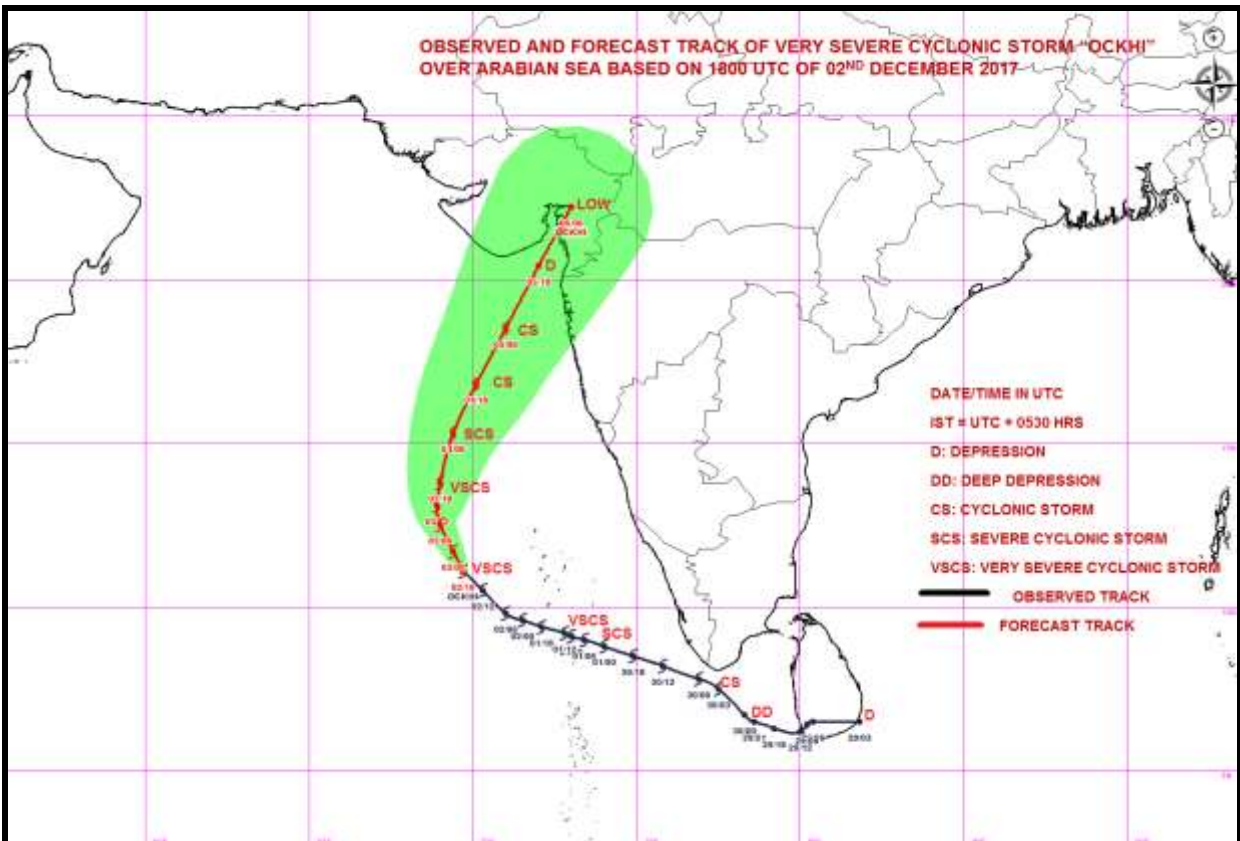
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
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**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY THREE ISSUED AT 2300 UTC OF 02<sup>nd</sup> DECEMBER 2017 BASED ON 2100 UTC CHARTS OF 02<sup>nd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER LAKSHADWEEP AREA AND ADJOINING SOUTHEAST ARABIAN SEA FURTHER MOVED NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 2100 UTC OF 03<sup>RD</sup> DECEMBER, 2017 OVER SOUTHEAST ARABIAN SEA NEAR LATITUDE 11.3° N AND LONGITUDE 69.5° E, ABOUT 350 KM WEST-NORTHWEST OF AMINI DIVI. THE SYSTEM IS VERY LIKELY TO WEAKEN GRADUALLY FROM TODAY THE 03<sup>RD</sup> DECEMBER, 2017 MORNING. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
02/2100	11.3/69.5	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0000	11.7/69.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0600	12.5/69.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03/1200	13.1/68.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	13.8/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
04/1800	16.8/70.1	80-90 GUSTING TO 100	CYCLONIC STORM
05/0600	18.5/71.0	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.4/72.0	40-50 GUSTING TO 60	DEPRESSION
06/0600	22.2/73.0	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 8.0°N AND 13.0°N AND LONGITUDE 66.0°E TO 72.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AT 2100 UTC, A BUOY (23454) LOCATED NEAR LATITUDE 10.1 °N/ LONGITUDE 72.3 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.8 HPA AND SURFACE WIND SPEED OF 160<sup>0</sup>/ 21 KNOTS AND ANOTHER BUOY (23492) LOCATED NEAR LATITUDE 10.8 °N/ LONGITUDE 72.1 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.5 HPA AND SURFACE WIND SPEED OF 170<sup>0</sup>/ 21 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE. SEA CONDITIONS WOULD BE HIGH OVER AND AROUND NORTH LAKSHADWEEP ISLANDS DURING NEXT 06 HOURS AND GRADUALLY BECOMING VERY ROUGH TO ROUGH DURING THE SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO BE ROUGH TO VERY ROUGH OVER AND AROUND SOUTH LAKSHADWEEP ISLANDS DURING NEXT 06 HOURS AND ROUGH TO MODERATE DURING THE SUBSEQUENT 12 HOURS. SEA CONDITION WOULD BE ROUGH TO VERY ROUGH ALONG & OFF NORTH MAHARASHTRA AND SOUTH GUJARAT COASTS ON 4<sup>TH</sup> NIGHT AND 5<sup>TH</sup> DECEMBER 2017.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 300X10<sup>-6</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 20X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X 10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) TO THE NORTH, NORTHWEST, NORTHEAST AND WEST OF SYSTEM CENTRE.

FROM TOMORROW THE 3<sup>RD</sup> DECEMBER THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 06 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE FORENOON OF 03<sup>RD</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

THE WELL MARKED LOW PRESSURE AREA OVER NORTH SUMATRA COAST AND ADJOINING SOUTH ANDAMAN SEA AND ASSOCIATED CYCLONIC CIRCULATION EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 36 HOUR. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

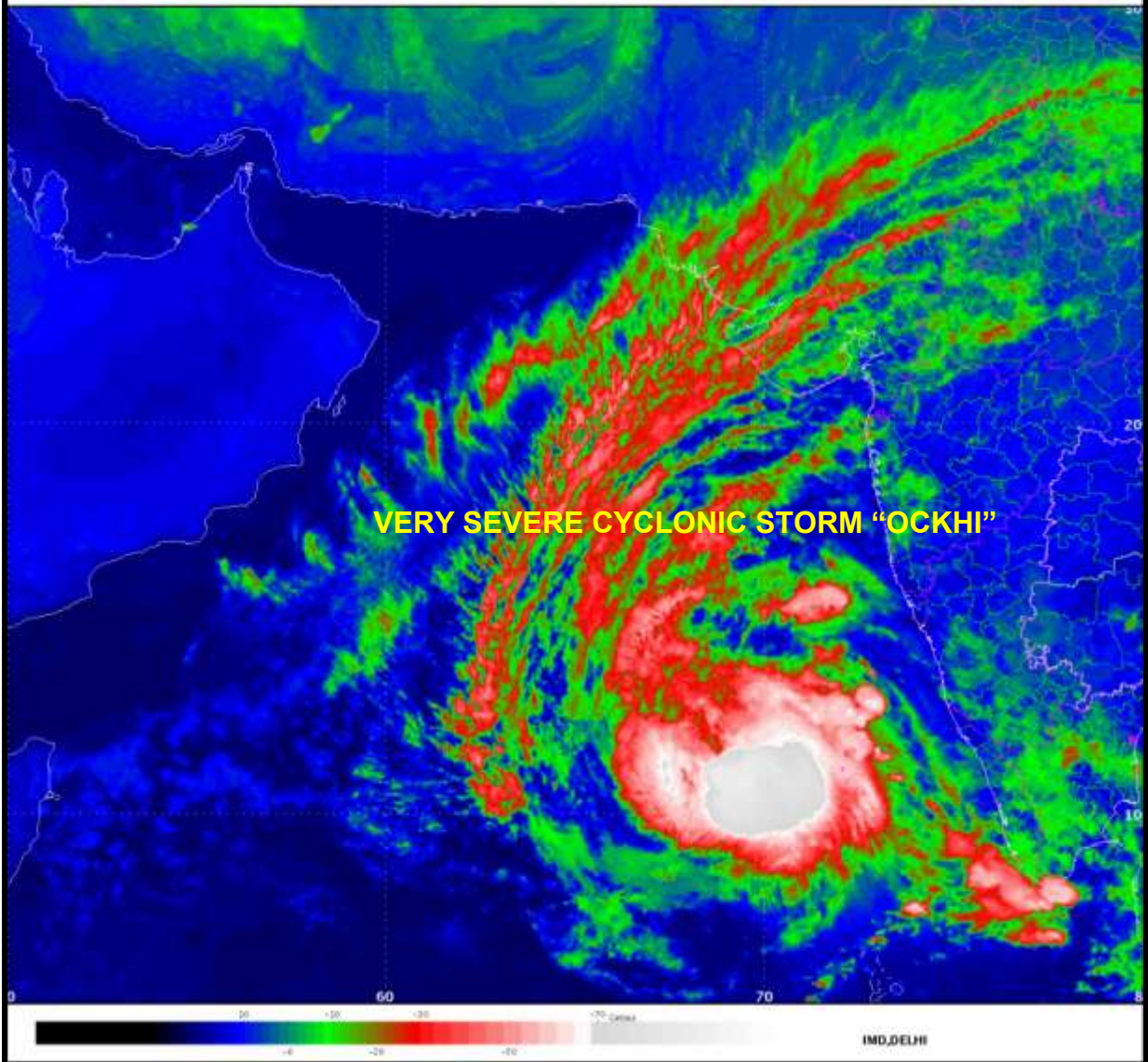
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

SAT INSAT-3D  
IMG\_TIR1\_TEMP 10.8 um  
SECTOR ARABIAN\_SEA Mercator (NHC LUT)

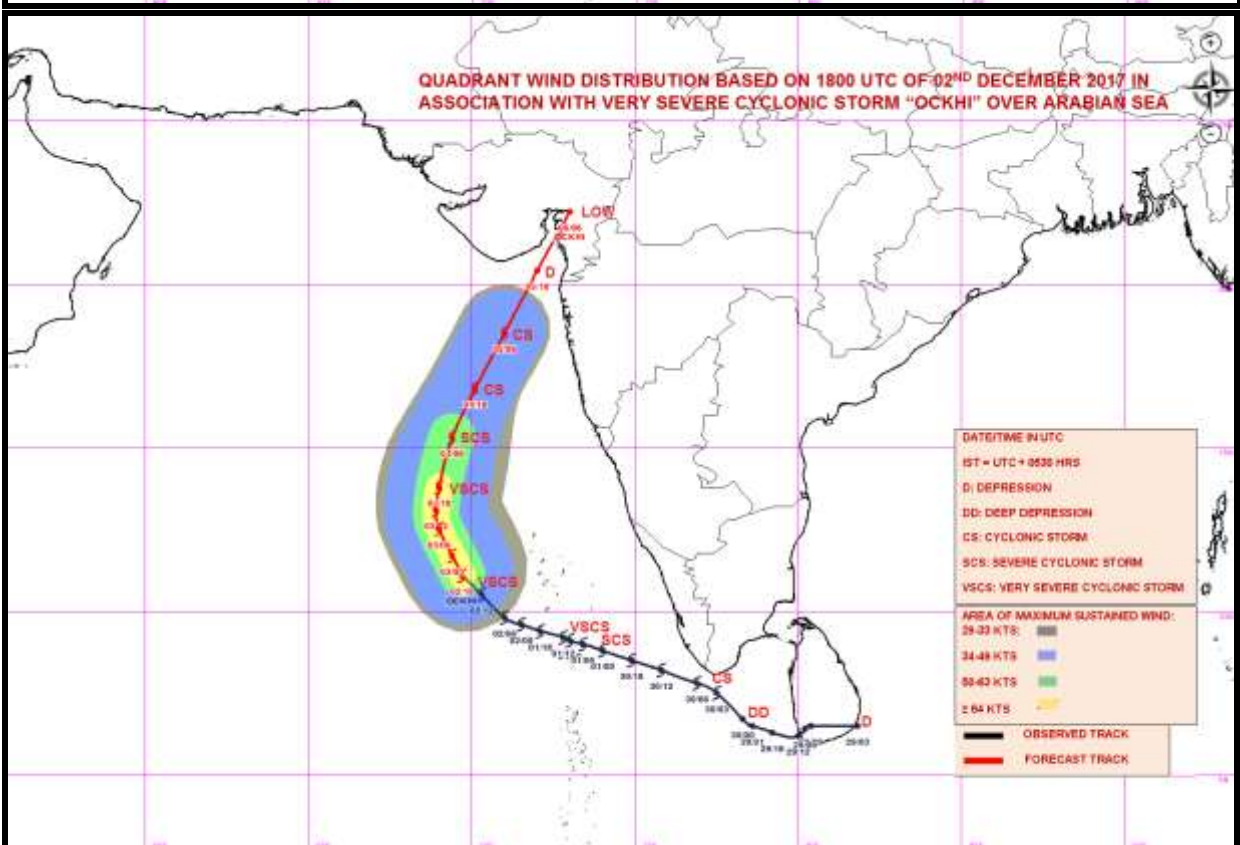
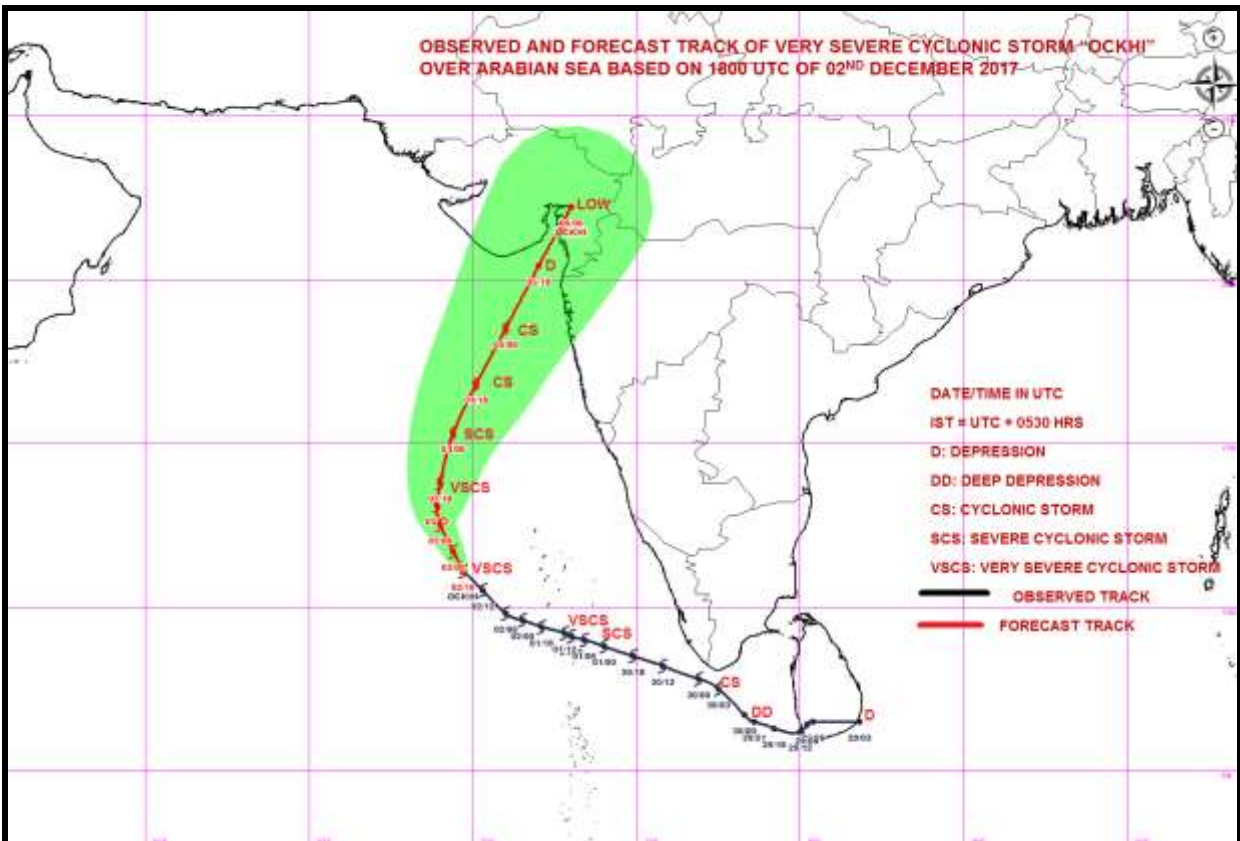
02-12-2017/21:30 GMT  
03-12-2017/03:00 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. TWENTY FOUR ISSUED AT 0300 UTC OF 03<sup>RD</sup> DECEMBER 2017 BASED ON 0000 UTC CHARTS OF 03<sup>RD</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER SOUTHEAST ARABIAN SEA FURTHER MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 14 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0000 UTC OF 03<sup>RD</sup> DECEMBER, 2017 OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA NEAR LATITUDE 11.7° N AND LONGITUDE 69.2° E, ABOUT 390 KM WEST-NORTHWEST OF AMINI DIVI, 910 KM SOUTH-SOUTHWEST OF MUMBAI AND 1120 KM SOUTH-SOUTHWEST OF SURAT. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS AND WEAKEN GRADUALLY

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0000	11.7/69.2	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03/0600	12.5/68.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/1200	13.3/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0000	14.8/68.9	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/0000	17.7/70.6	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.7/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.2/72.8	40-50 GUSTING TO 60	DEPRESSION
06/1200	22.7/73.9	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 8.0°N AND 13.0°N AND LONGITUDE 66.0°E TO 72.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AT 0000 UTC, A BUOY (23451) LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.0 HPA AND SURFACE WIND SPEED OF 30<sup>0</sup>/ 21 KNOTS AND A SHIP LOCATED NEAR LATITUDE 8.5 °N/ LONGITUDE 71.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.7 HPA AND SURFACE WIND SPEED OF 220<sup>0</sup>/ 38 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 75-100 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $25 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN PHASE 4 FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND INCREASES TOWARDS NORTH.

THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO MAINTAIN THE INTENSITY DURING NEXT 12 HOURS AND THEN WEAKEN GRADUALLY. THE SYSTEM IS LIKELY TO BE STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE AND HENCE LIKELY TO RECURVE FROM THE AFTERNOON OF 03<sup>rd</sup> DECEMBER. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA:**

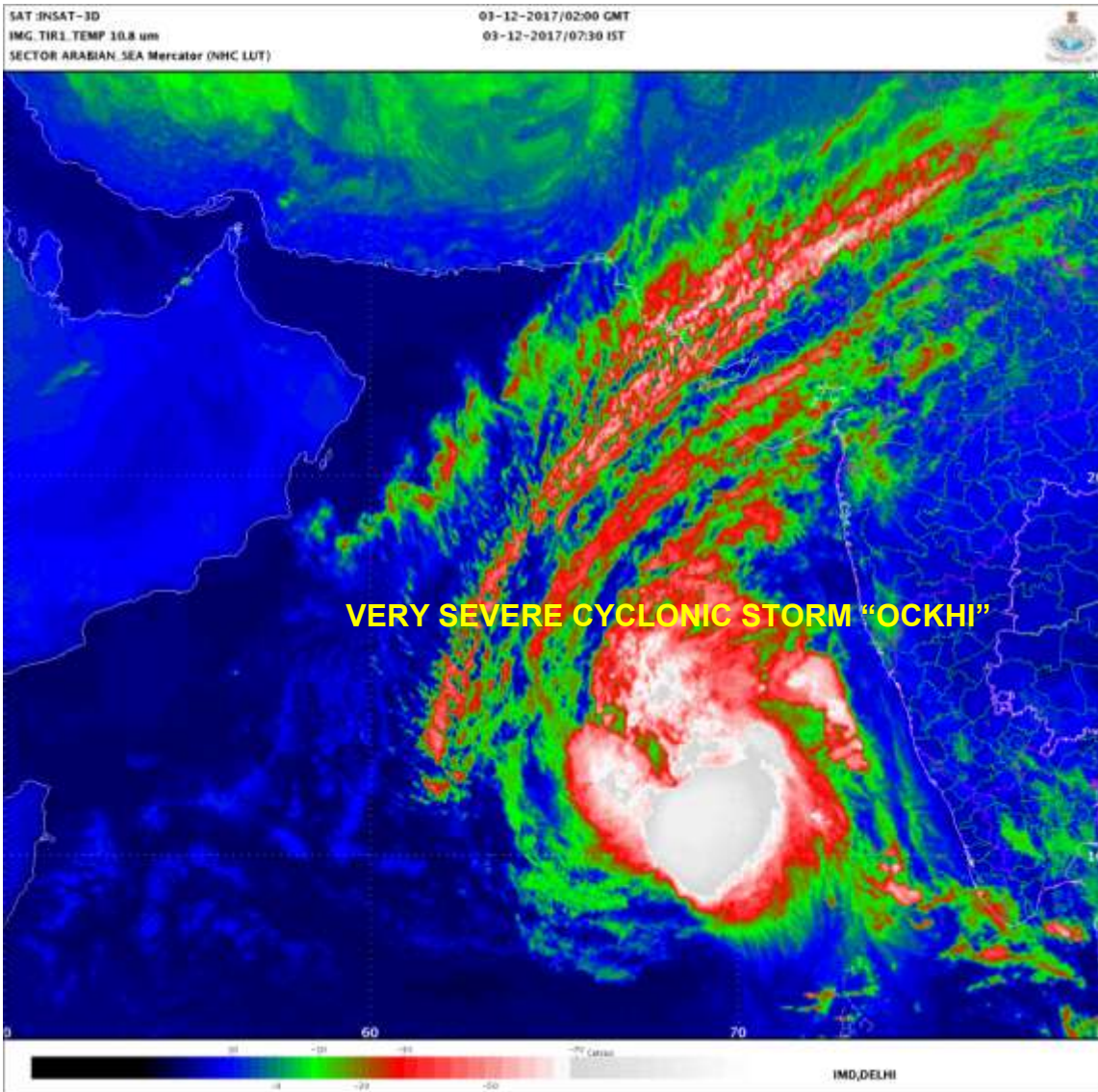
THE WELL MARKED LOW PRESSURE AREA OVER NORTH SUMATRA COAST AND ADJOINING SOUTH ANDAMAN SEA AND ASSOCIATED CYCLONIC CIRCULATION EXTENDING UPTO 5.8 KM ABOVE MEAN SEA LEVEL PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOUR. SUBSEQUENTLY IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE WEST-NORTHWEST WARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

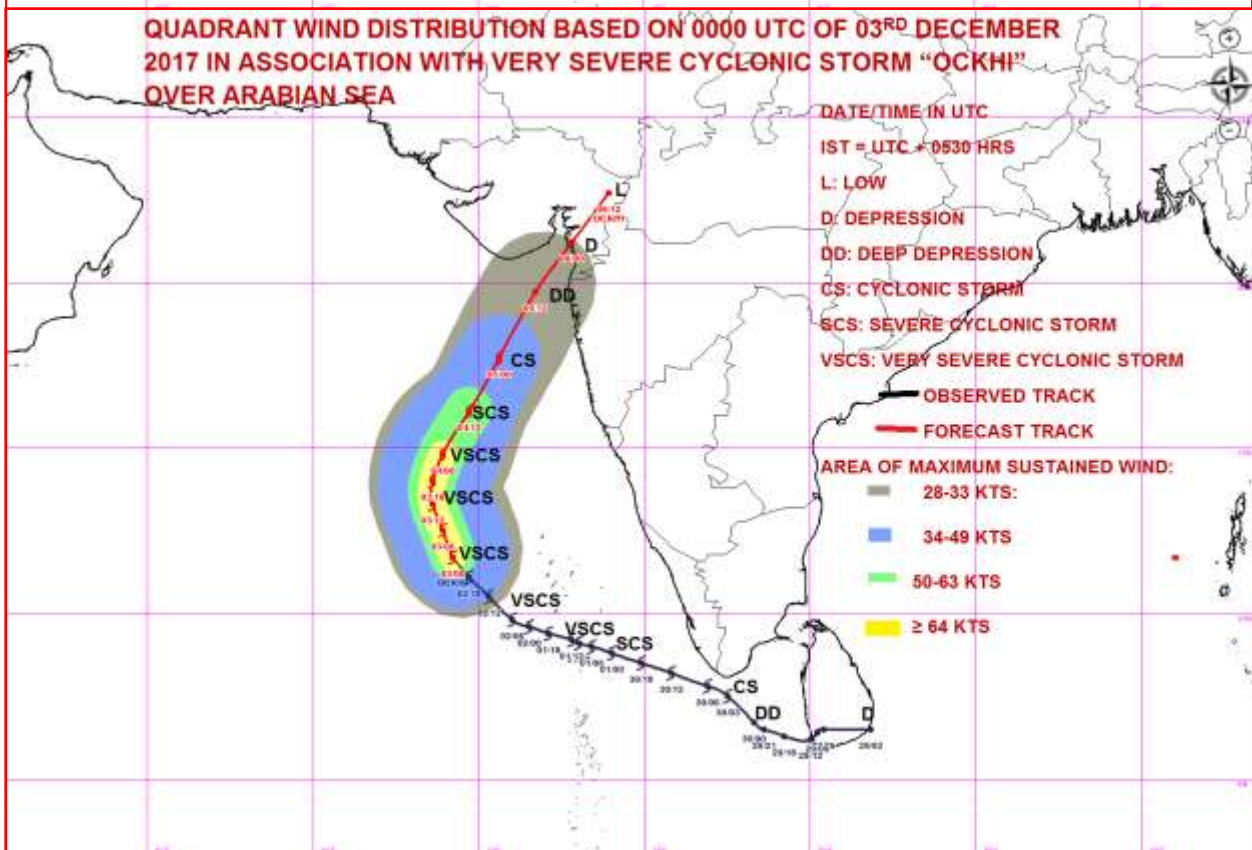
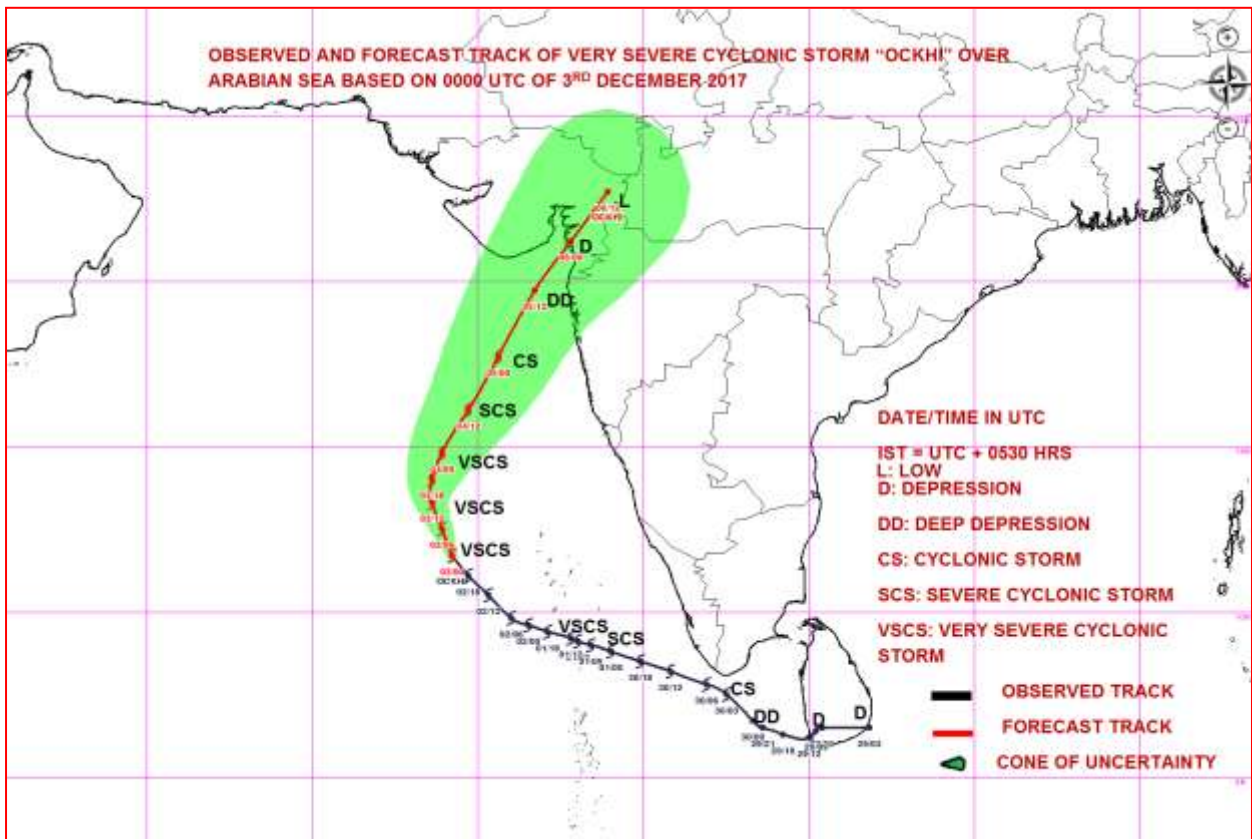
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY FIVE ISSUED AT 0600 UTC OF 03<sup>RD</sup> DECEMBER 2017 BASED ON 0300 UTC CHARTS OF 03<sup>RD</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA FURTHER MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 17 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0300 UTC OF 03<sup>RD</sup> DECEMBER, 2017 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 12.1° N AND LONGITUDE 69.0° E, ABOUT 420 KM WEST-NORTHWEST OF AMINI DIVI (43311), 880 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 1090 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS DURING NEXT 12 HOURS AND THEN RECURVE NORTHEASTWARDS DURING THE SUBSEQUENT 48 HOURS AND WEAKEN GRADUALLY.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0300	12.1/69.0	140-150 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
03/0600	12.5/68.9	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1200	13.3/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0000	14.8/68.9	115-125 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.7	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/0000	17.7/70.6	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.7/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.2/72.8	40-50 GUSTING TO 60	DEPRESSION
06/1200	22.7/73.9	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 9.0°N AND 14.0°N AND LONGITUDE 66.0°E TO 73.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AT 0300 UTC, A BUOY LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.6 HPA AND SURFACE WIND SPEED OF 50<sup>0</sup>/ 19 KNOTS AND ANOTHER BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.4 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1010.9 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/ 16 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH OCEAN THERMAL ENERGY LESS THAN 50 KJ/CM<sup>2</sup> AFTER 24 HOURS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 300X10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X 10<sup>-5</sup> S<sup>-1</sup> TO THE NORTHWEST OF THE SYSTEM CENTRE. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 4 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO REMAIN IN SAME PHASE FOR THE NEXT TWO DAYS. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH.

THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUNCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY. THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR SOME MORE TIME AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

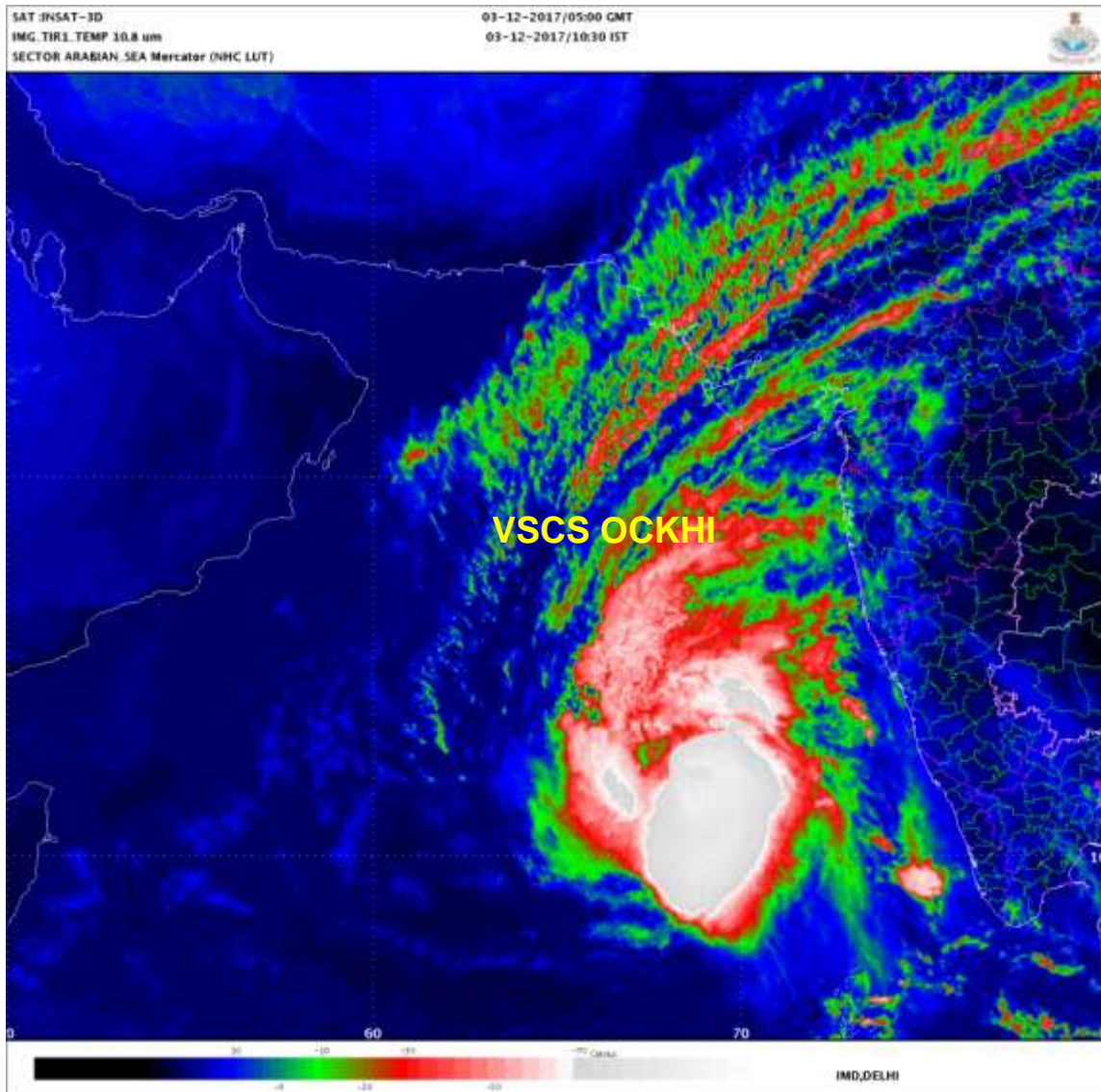
AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

(CHARAN SINGH)  
SCIENTIST 'E', NWFC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

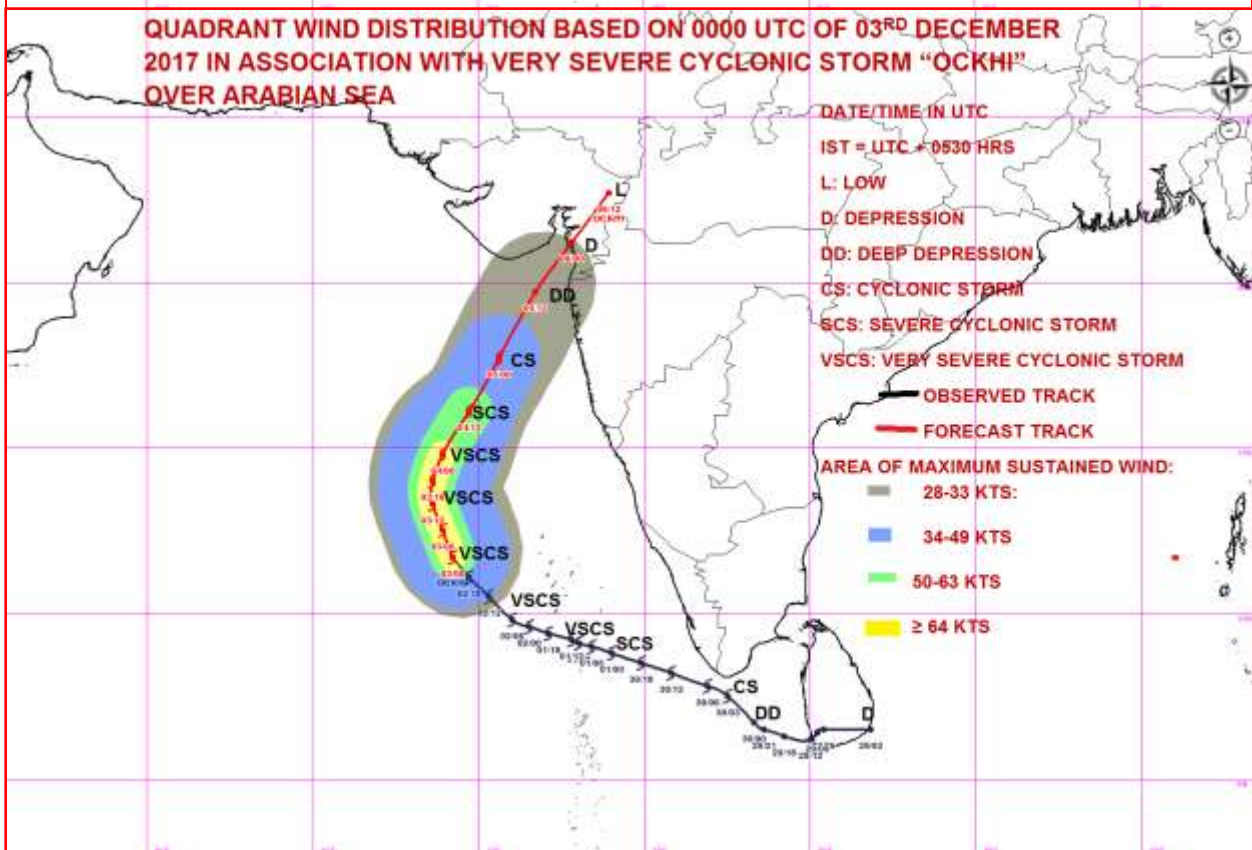
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :[cwdhq2008@gmail.com](mailto:cwdhq2008@gmail.com)**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY SIX ISSUED AT 0900 UTC OF 03<sup>RD</sup> DECEMBER 2017  
BASED ON 0600 UTC CHARTS OF 03<sup>RD</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER SOUTHEAST AND ADJOINING EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0600 UTC OF 03<sup>RD</sup> DECEMBER, 2017 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 12.3° N AND LONGITUDE 68.9° E, ABOUT 440 KM WEST-NORTHWEST OF AMINI DIVI (43311), 870 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 1070 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS FOR SOME MORE TIME AND THEN RECURVE NORTHEASTWARDS TOWARDS SOUTH GUJARAT COAST DURING NEXT 72 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0600	12.3/68.9	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1200	13.2/68.7	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1800	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0000	14.7/68.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/0600	15.4/69.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0600	18.7/71.4	70-80 GUSTING TO 90	CYCLONIC STORM
05/1800	20.5/70.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.2/73.6	30-40 GUSTING TO 50	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 9.0°N AND 14.0°N AND LONGITUDE 66.0°E TO 73.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0600 UTC, A BUOY LOCATED NEAR LATITUDE 11.7 °N/ LONGITUDE 68.6 °E REPORTED SURFACE WIND SPEED OF 110°/ 51 KNOTS AND ANOTHER BUOY LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.1 HPA AND SURFACE WIND SPEED OF 030 °/ 18 KNOTS. A SHIP LOCATED NEAR LATITUDE 8.4 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.3 HPA AND SURFACE WIND SPEED OF 250 °N/ 28 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR SOME MORE TIME AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

(SHIBIN B)  
SCIENTIST 'B', NWFC NEW DELHI

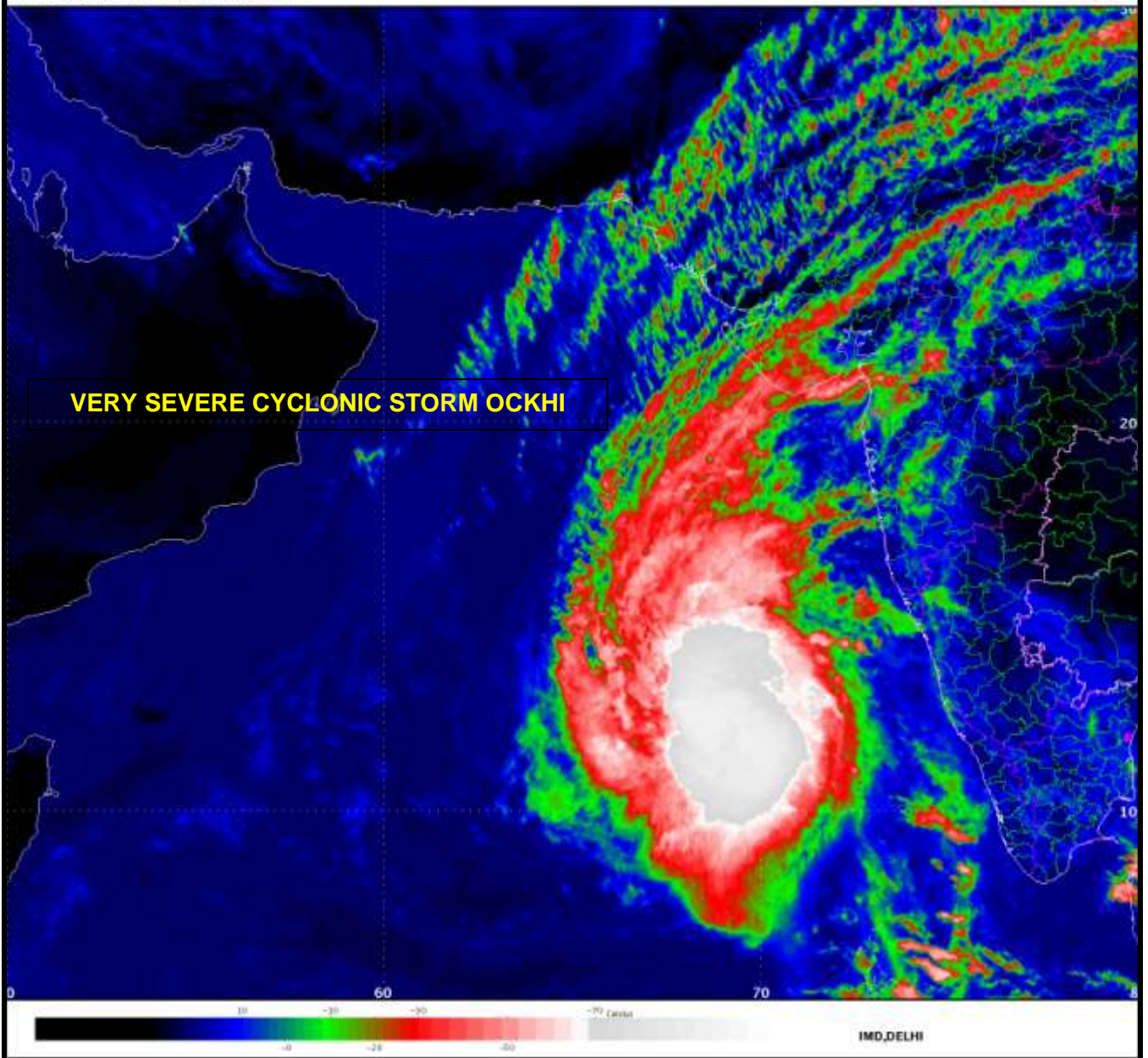
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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IMG\_TIR1\_TEMP 10.8 um  
SECTOR ARABIAN\_SEA Mercator (NHC LUT)

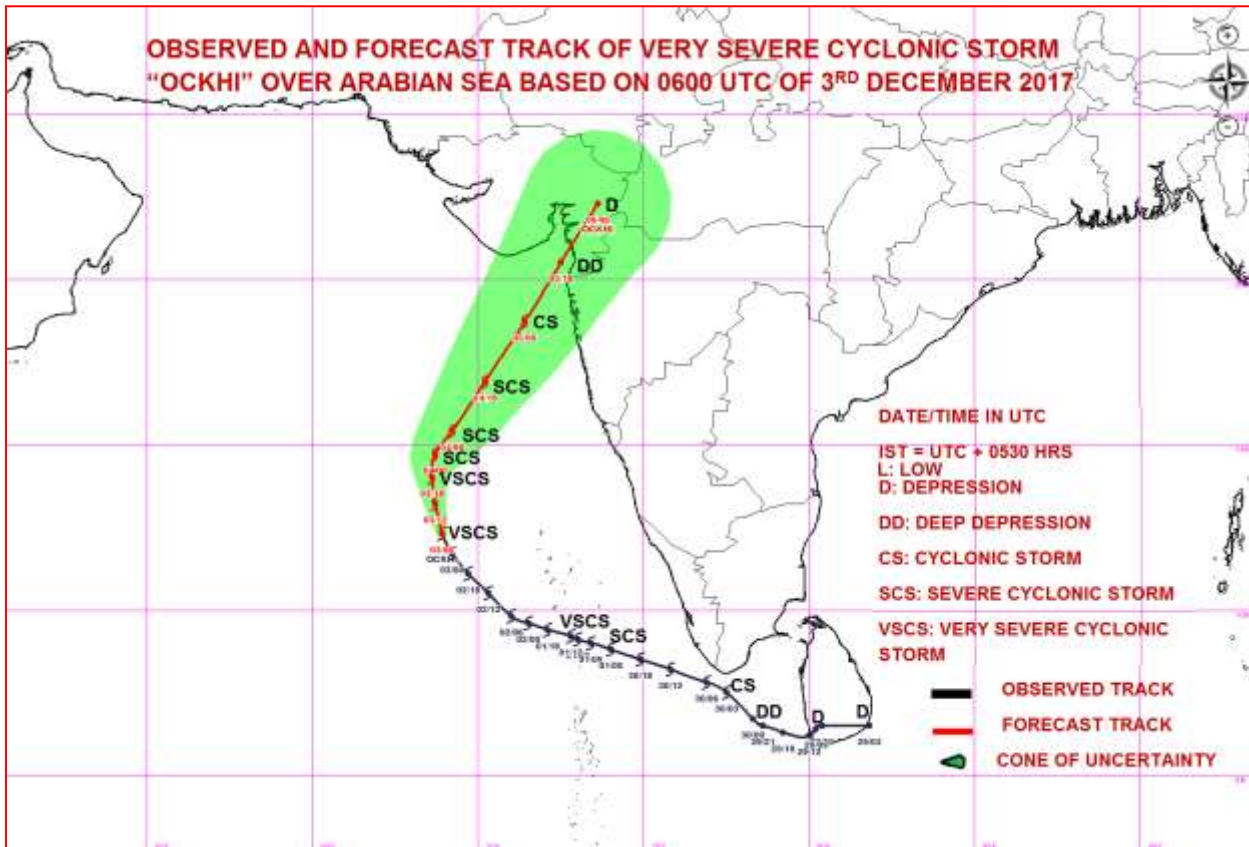
03-12-2017/08:30 GMT  
03-12-2017/14:00 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY SEVEN ISSUED AT 1200 UTC OF 03<sup>rd</sup> DECEMBER 2017 BASED ON 0900 UTC CHARTS OF 03<sup>rd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 6 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0900 UTC OF 03<sup>rd</sup> DECEMBER, 2017 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 12.4° N AND LONGITUDE 68.8° E, ABOUT 450 KM WEST-NORTHWEST OF AMINI DIVI (43311), 860 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 1070 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS FOR ABOUT 6 HOURS AND THEN RECURVE NORTHEASTWARDS TOWARDS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS DURING NEXT 72 HOURS.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/0900	12.4/68.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
03/1200	13.2/68.7	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
03/1800	14.0/68.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0000	14.7/68.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/0600	15.4/69.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0600	18.7/71.4	70-80 GUSTING TO 90	CYCLONIC STORM
05/1800	20.5/70.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.2/73.6	30-40 GUSTING TO 50	DEPRESSION

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 9.0°N AND 14.0°N AND LONGITUDE 66.0°E TO 73.0°E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0600 UTC, A BUOY LOCATED NEAR LATITUDE 11.7 °N/ LONGITUDE 68.6 °E REPORTED SURFACE WIND SPEED OF 110°/ 51 KNOTS AND ANOTHER BUOY LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.1 HPA AND SURFACE WIND SPEED OF 030 °/ 18 KNOTS. A SHIP LOCATED NEAR LATITUDE 8.4 °N/ LONGITUDE 69.0 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.3 HPA AND SURFACE WIND SPEED OF 250 °N/ 28 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR ABOUT SIX HOURS AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

(SHIBIN B)  
SCIENTIST 'B', NWFC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

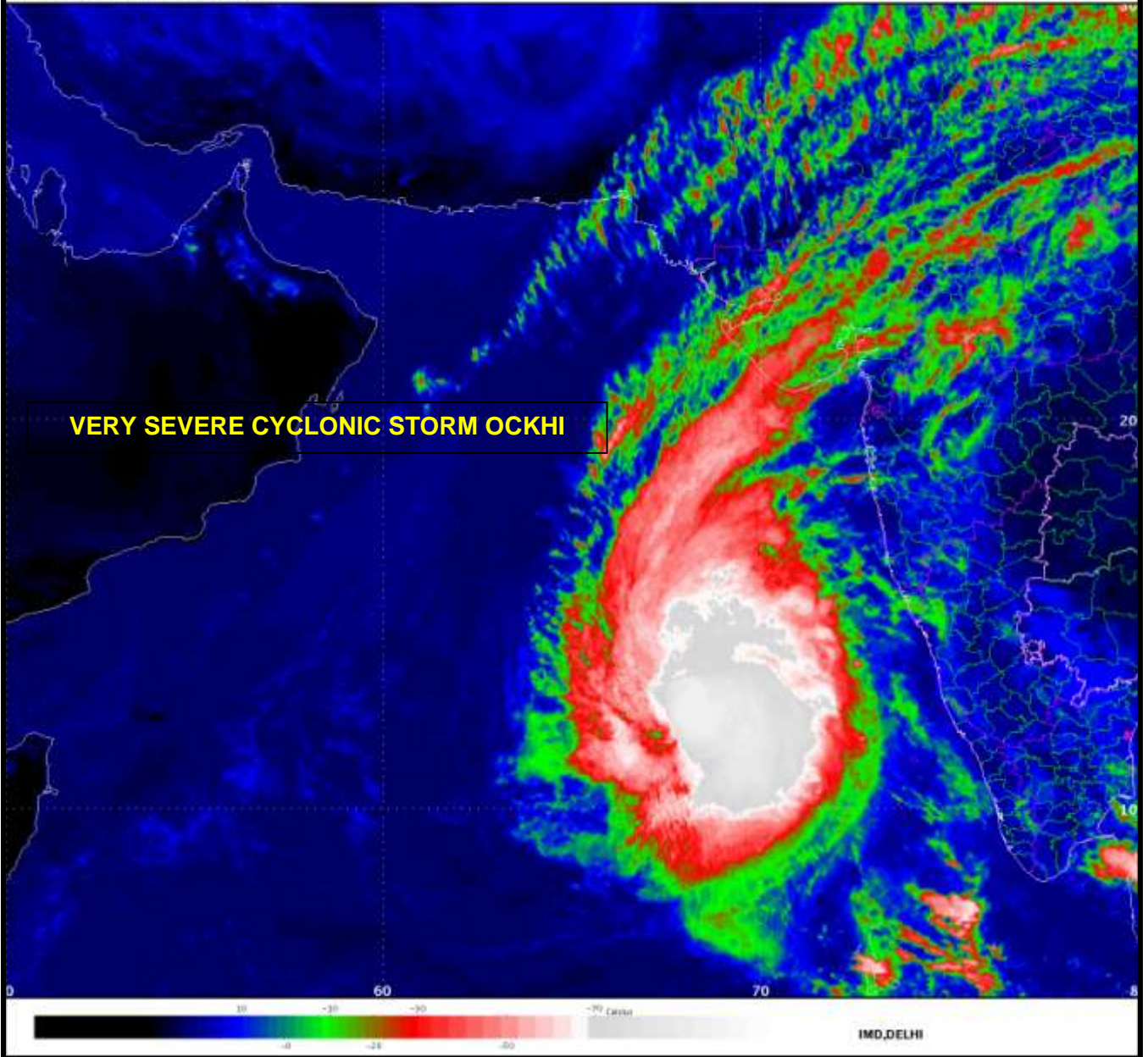
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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SECTOR ARABIAN\_SEA Mercator (NHC LUT)

03-12-2017/10:30 GMT  
03-12-2017/16:00 IST



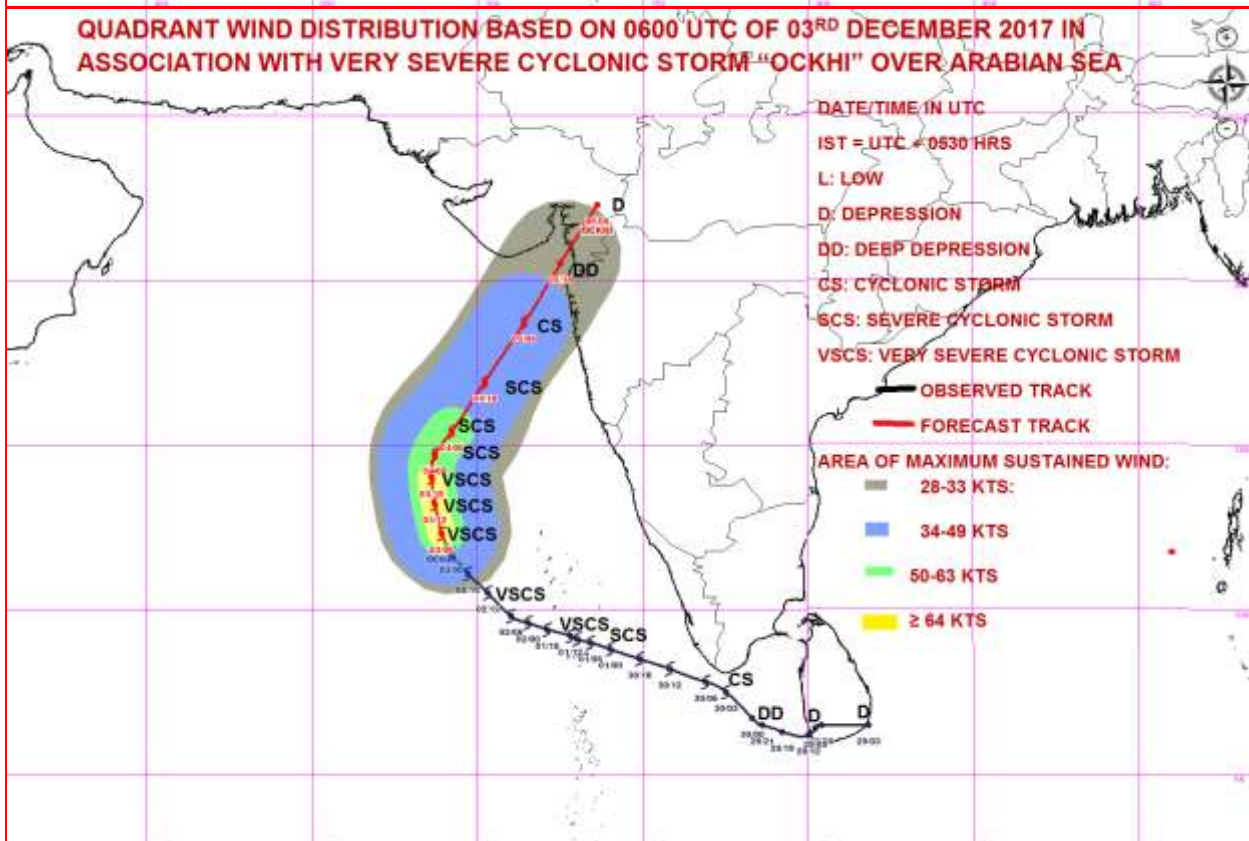
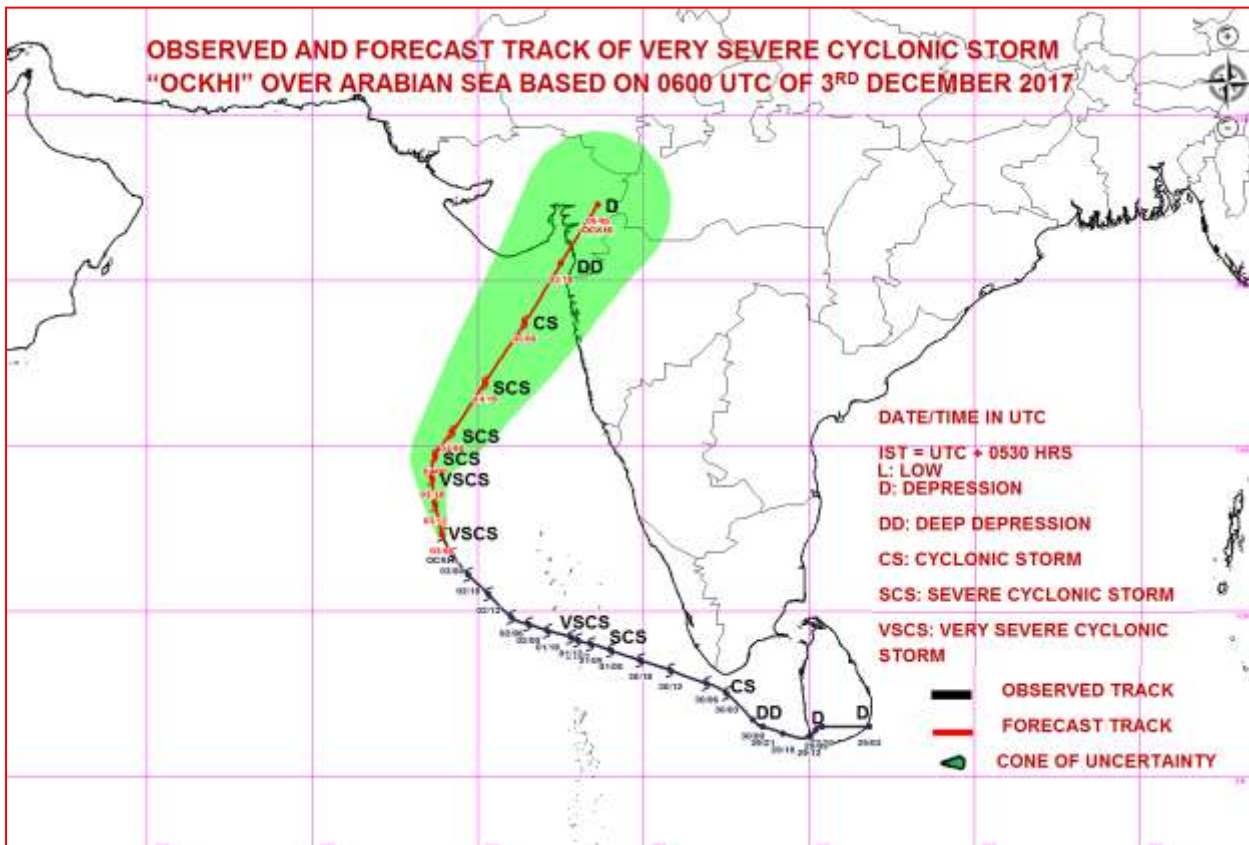
**VERY SEVERE CYCLONIC STORM OCKHI**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY EIGHT ISSUED AT 1500 UTC OF 03<sup>rd</sup> DECEMBER 2017 BASED ON 1200 UTC CHARTS OF 03<sup>rd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1200 UTC OF 03<sup>rd</sup> DECEMBER, 2017 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 12.9° N AND LONGITUDE 68.7° E, ABOUT 480 KM WEST-NORTHWEST OF AMINI DIVI (43311), 820 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 1020 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS FOR ABOUT 6 HOURS AND THEN RECURVE NORTHEASTWARDS TOWARDS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS DURING NEXT 72 HOURS. IT IS VERY LIKELY TO CROSS SOUTH GUJARAT COAST NEAR SURAT AS A DEEP DEPRESSION AROUND MIDNIGHT OF 5<sup>th</sup> DECEMBER 2017.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1200	12.9/68.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	14.0/68.6	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/0000	14.7/68.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.4/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1200	16.1/69.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.8/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1200	19.6/71.9	65-75 GUSTING TO 85	CYCLONIC STORM
06/0000	21.3/73.0	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1200	23.0/74.1	25-35 GUSTING TO 45	LOW

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 9.0 °N AND 16.0 °N AND LONGITUDE 65.0 °E TO 72.5 °E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 1200 UTC, A BUOY LOCATED NEAR LATITUDE 14.58 °N/ LONGITUDE 68.58 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA AND SURFACE WIND SPEED OF 50<sup>0</sup>/ 17 KNOTS. A SHIP LOCATED NEAR LATITUDE 14.21 °N/ LONGITUDE 72.59 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004 HPA AND SURFACE WIND SPEED OF 150<sup>0</sup>N/ 18 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 300X10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR ABOUT SIX HOURS AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

(M.MOHAPATRA)  
SCIENTIST 'G', SERVICES  
HEAD, RMSC NEW DELHI

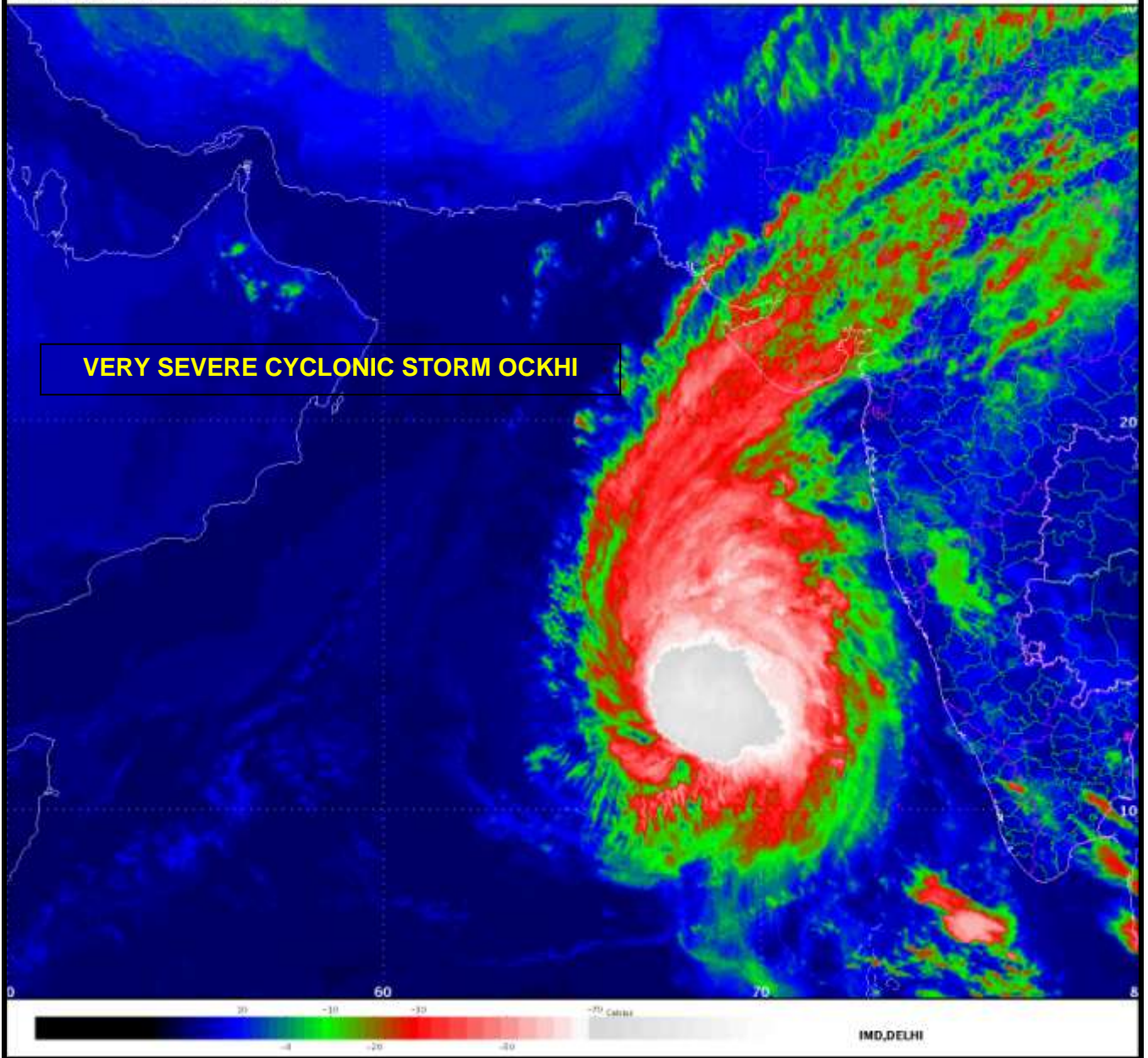
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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SECTOR ARABIAN\_SEA Mercator (NHC LUT)

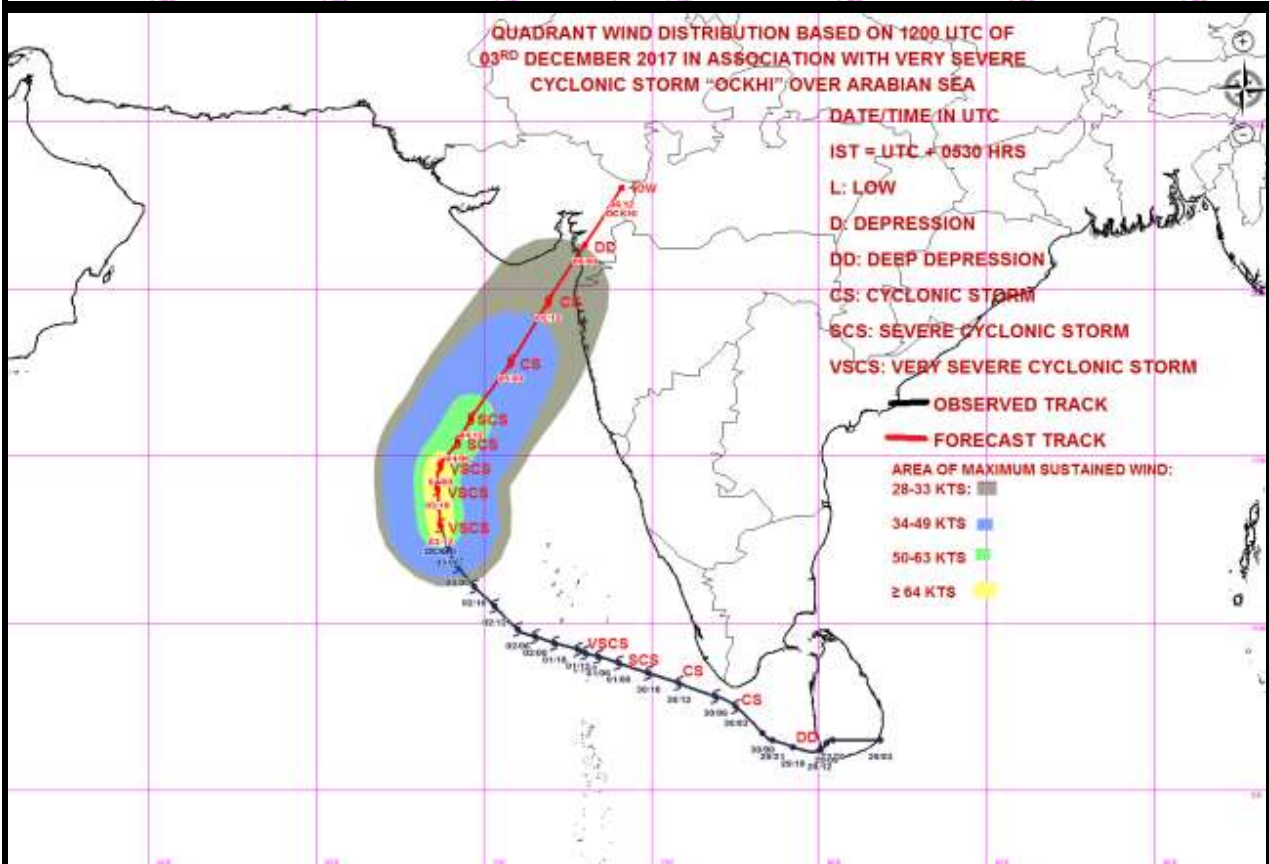
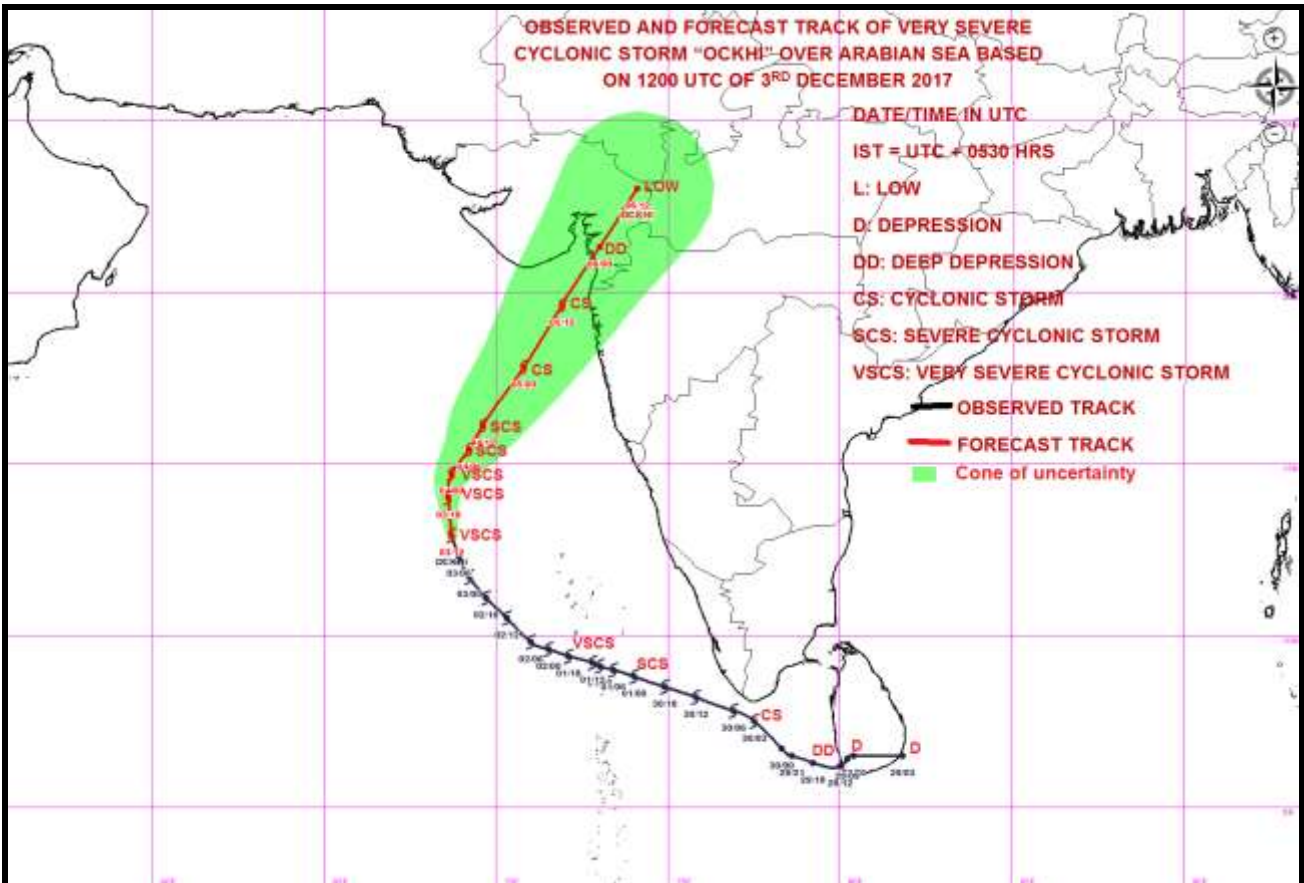
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. TWENTY NINE ISSUED AT 1800 UTC OF 03<sup>rd</sup> DECEMBER 2017 BASED ON 1500 UTC CHARTS OF 03<sup>rd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1500 UTC OF 03<sup>rd</sup> DECEMBER, 2017 OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA NEAR LATITUDE 13.1° N AND LONGITUDE 68.6° E, ABOUT 500 KM WEST-NORTHWEST OF AMINI DIVI (43311), 810 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 1005 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS FOR ABOUT 6 HOURS AND THEN RECURVE NORTHEASTWARDS TOWARDS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS DURING NEXT 72 HOURS. IT IS VERY LIKELY TO CROSS SOUTH GUJARAT COAST NEAR SURAT AS A DEEP DEPRESSION AROUND MIDNIGHT OF 5<sup>th</sup> DECEMBER 2017.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1500	13.1/68.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03/1800	13.5/68.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/0000	14.7/68.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.4/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1200	16.1/69.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.8/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1200	19.6/71.9	65-75 GUSTING TO 85	CYCLONIC STORM
06/0000	21.3/73.0	50-60 GUSTING TO 70	DEEP DEPRESSION
06/1200	23.0/74.1	25-35 GUSTING TO 45	LOW

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 9.0 °N AND 16.0 °N AND LONGITUDE 65.0 °E TO 72.5 °E AND LAKSHADWEEP AREA. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 1200 UTC, A BUOY LOCATED NEAR LATITUDE 14.58 °N/ LONGITUDE 68.58 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA AND SURFACE WIND SPEED OF 50<sup>0</sup>/ 17 KNOTS. A SHIP LOCATED NEAR LATITUDE 14.21 °N/ LONGITUDE 72.59 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004 HPA AND SURFACE WIND SPEED OF 150<sup>0</sup>N/ 18 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND 300X10<sup>-6</sup> S<sup>-1</sup> TO THE SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND 30X10<sup>-5</sup> S<sup>-1</sup> AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X 10<sup>-5</sup> S<sup>-1</sup> TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR ABOUT SIX HOURS AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

SHIBIN B  
SCIENTIST 'B'  
RSMC NEW DELHI

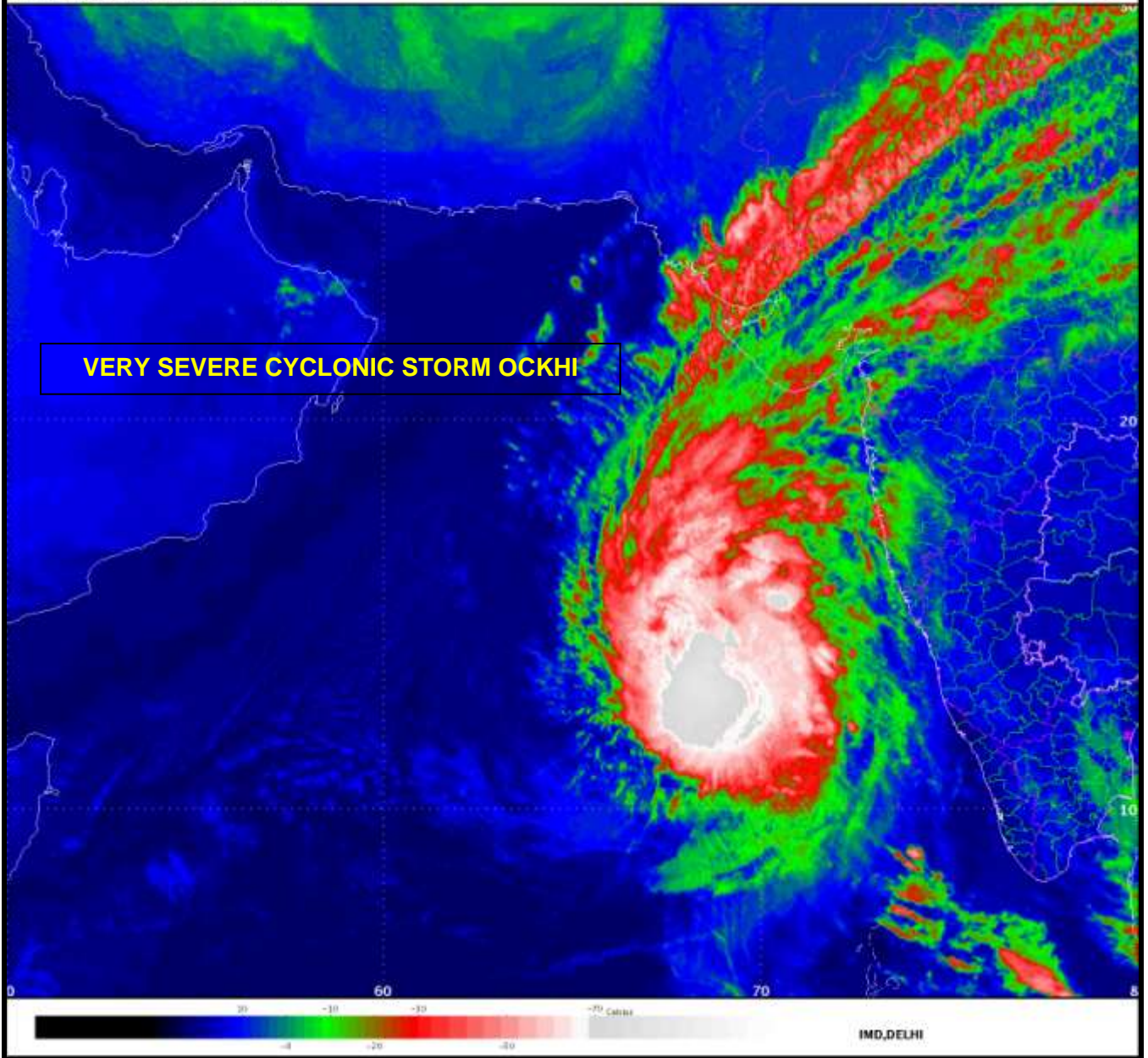
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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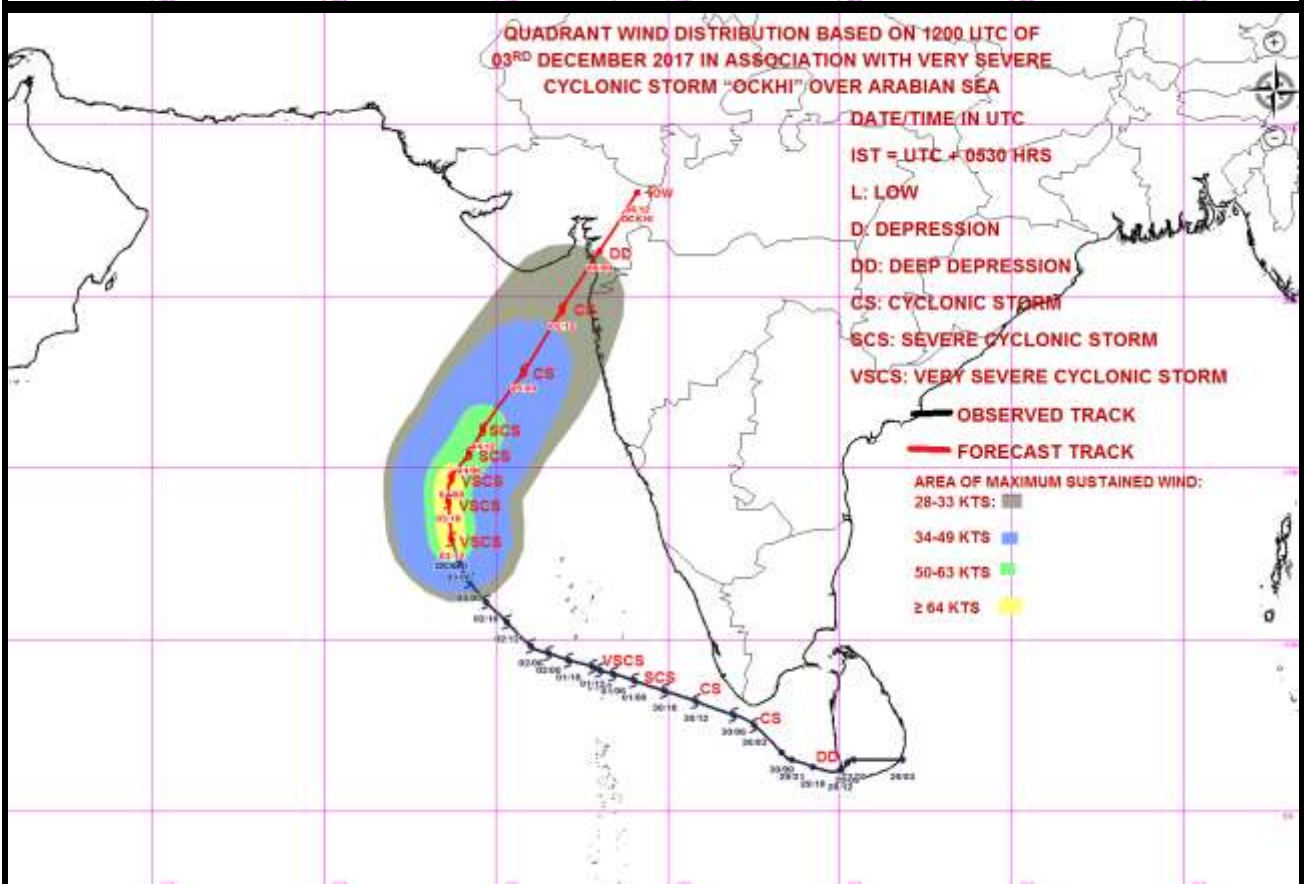
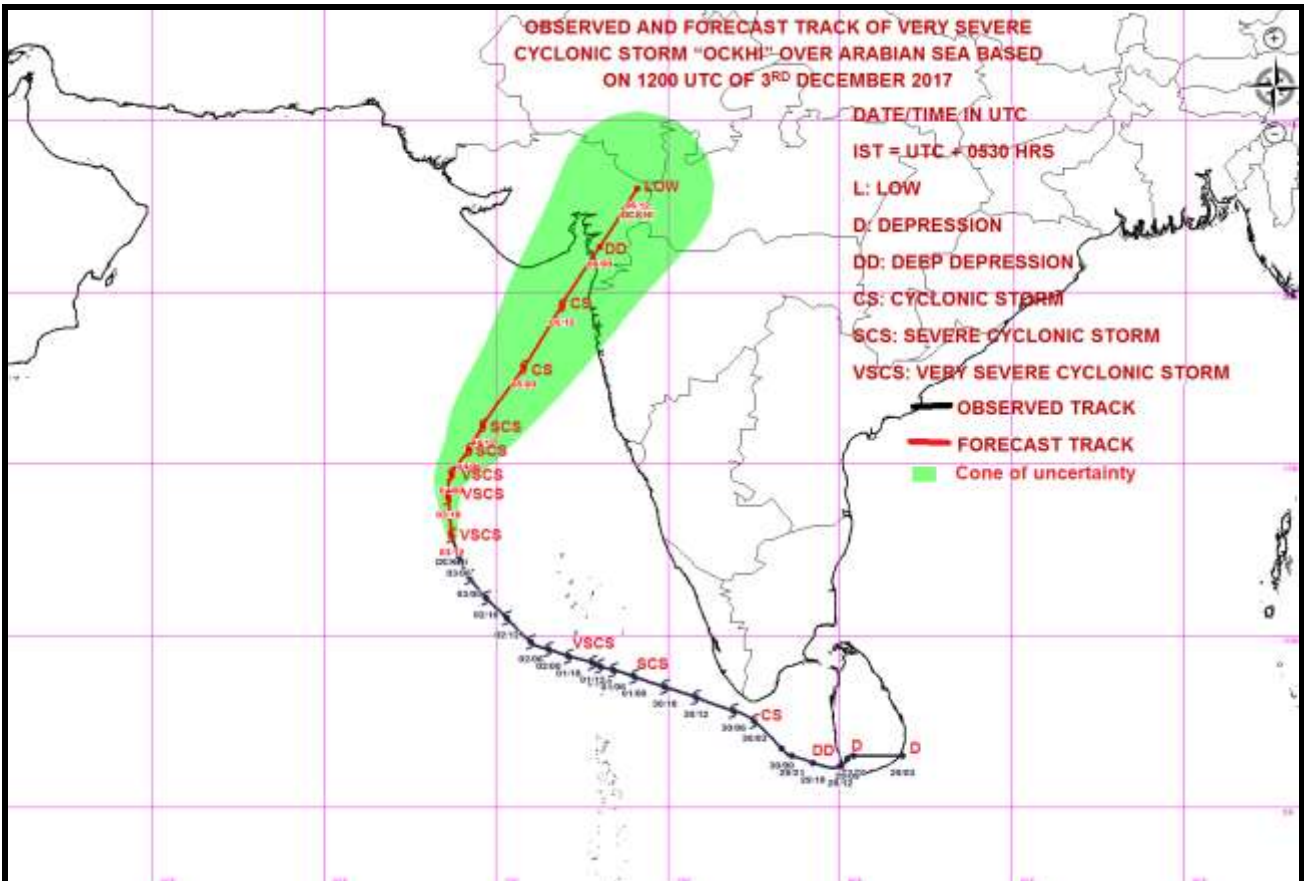
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03-12-2017/22:30 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. THIRTY ISSUED AT 2100 UTC OF 03<sup>rd</sup> DECEMBER 2017  
BASED ON 1800 UTC CHARTS OF 03<sup>rd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 1800 UTC OF 03<sup>rd</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 13.1° N AND LONGITUDE 68.5° E, ABOUT 530 KM WEST-NORTHWEST OF AMINI DIVI (43311), 770 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 970 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 6 HOURS AND THEN RECURVE NORTHEASTWARDS TOWARDS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS. IT IS VERY LIKELY TO CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY MIDNIGHT OF 5<sup>th</sup> DECEMBER 2017.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/1800	13.5/68.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0000	14.5/68.5	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.6	100-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0600	18.7/71.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/1800	20.5/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.1/73.5	25-35 GUSTING TO 45	WELL MARKED LOW

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 11.0 °N AND 17.0 °N AND LONGITUDE 66.0 °E TO 72 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 88 DEG C.

AT 1800 UTC, AMINI DIVI (43311) REPORTED A MEAN SEA LEVEL PRESSURE OF 1009.6 HPA AND SURFACE WIND SPEED OF 160°/ 15 KNOTS. A BUOY LOCATED NEAR LATITUDE 14.27 °N/ LONGITUDE 68.57 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.2 HPA AND SURFACE WIND SPEED OF 60 °/ 30 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR ABOUT SIX HOURS AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

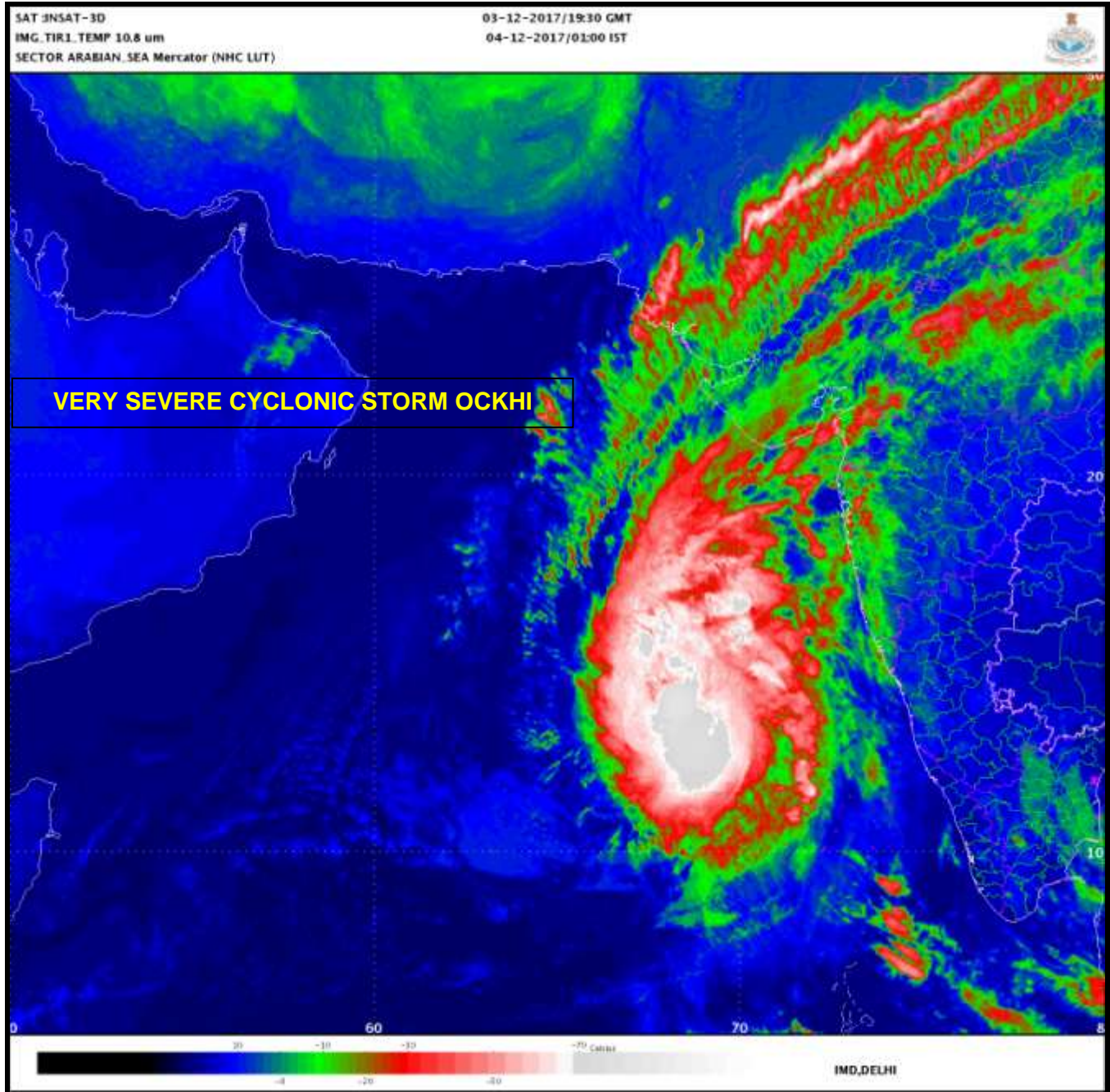
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SHIBIN B  
SCIENTIST 'B'  
RSMC NEW DELHI

#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

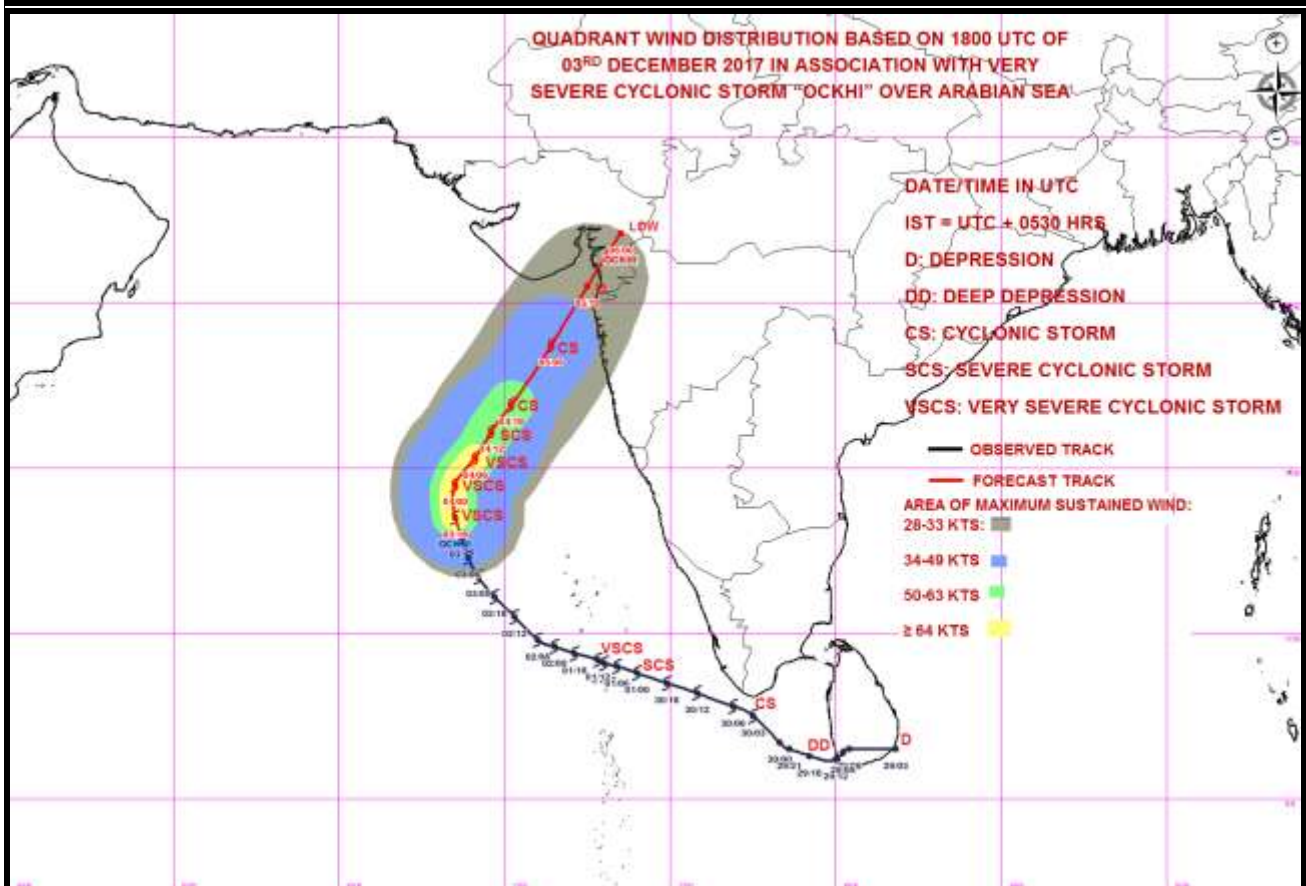
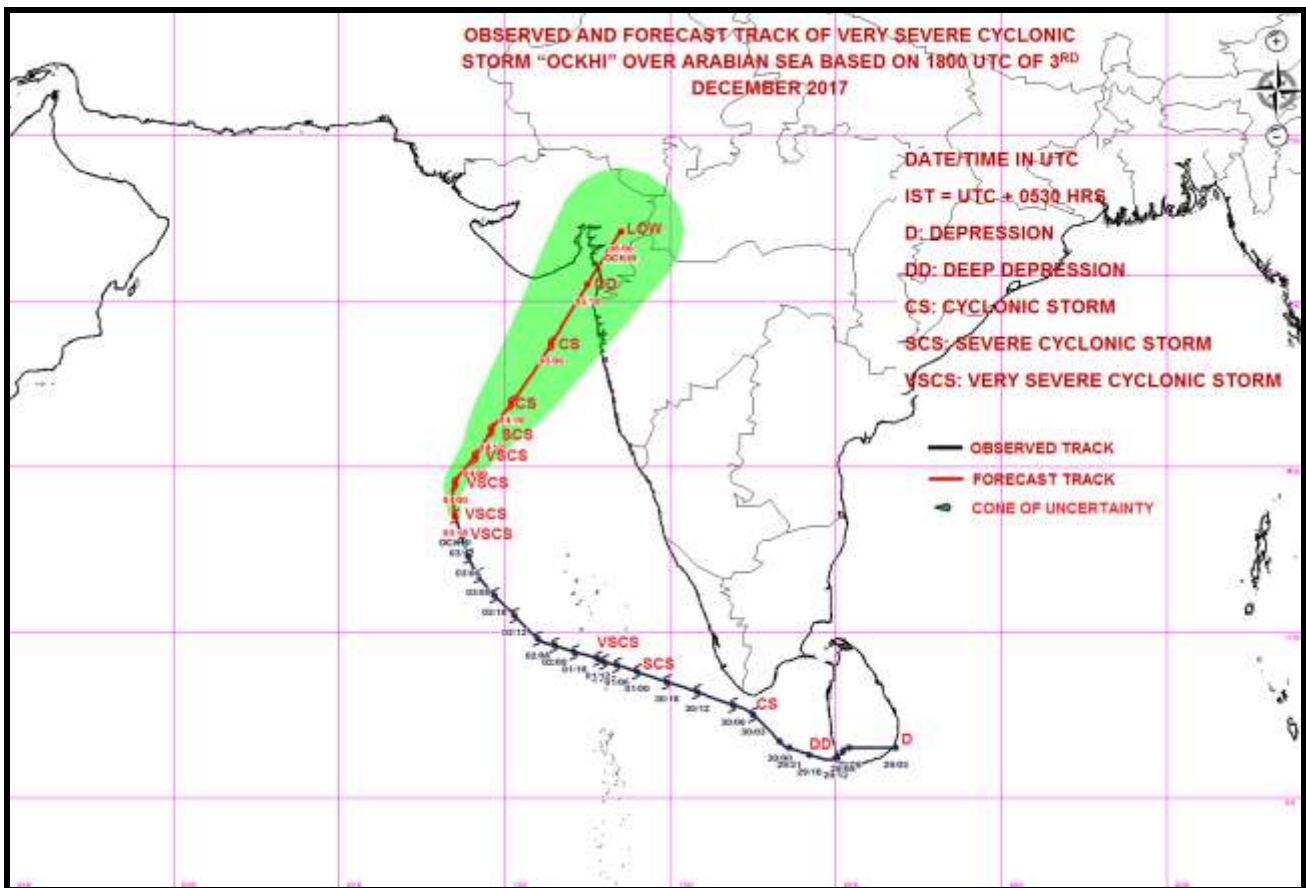
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY ONE ISSUED AT 2200 UTC OF 03<sup>rd</sup> DECEMBER 2017  
BASED ON 2100 UTC CHARTS OF 03<sup>rd</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 16 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 2100 UTC OF 03<sup>rd</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.0° N AND LONGITUDE 68.5° E, ABOUT 560 KM WEST-NORTHWEST OF AMINI DIVI (43311), 730 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 920 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 6 HOURS AND THEN RECURVE NORTH NORTHEASTWARDS TOWARDS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS. IT IS VERY LIKELY TO CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY MIDNIGHT OF 5<sup>th</sup> DECEMBER 2017.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
03/2100	14.0/68.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
04/0000	14.5/68.5	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.6	100-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0600	18.7/71.4	80-90 GUSTING TO 100	CYCLONIC STORM
05/1800	20.5/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.1/73.5	25-35 GUSTING TO 45	WELL MARKED LOW

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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AT 1800 UTC, AMINI DIVI (43311) REPORTED A MEAN SEA LEVEL PRESSURE OF 1009.6 HPA AND SURFACE WIND SPEED OF 160°/ 15 KNOTS. A BUOY LOCATED NEAR LATITUDE 14.27 °N/ LONGITUDE 68.57 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.2 HPA AND SURFACE WIND SPEED OF 60 °/ 30 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. THE OCEAN THERMAL ENERGY IS ABOUT 60-70 KJ/CM<sup>2</sup> OVER THE AREA. IT DECREASES TOWARDS THE NORTH. AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO SOUTHWEST PERIPHERY OF THE SYSTEM. AS A RESULT WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND HENCE IS MOVING NORTH-NORTHWESTWARDS. IT WILL CONTINUE TO MOVE IN SAME DIRECTION FOR ABOUT SIX HOURS AND THEN RECURVE NORTHEASTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3-4 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

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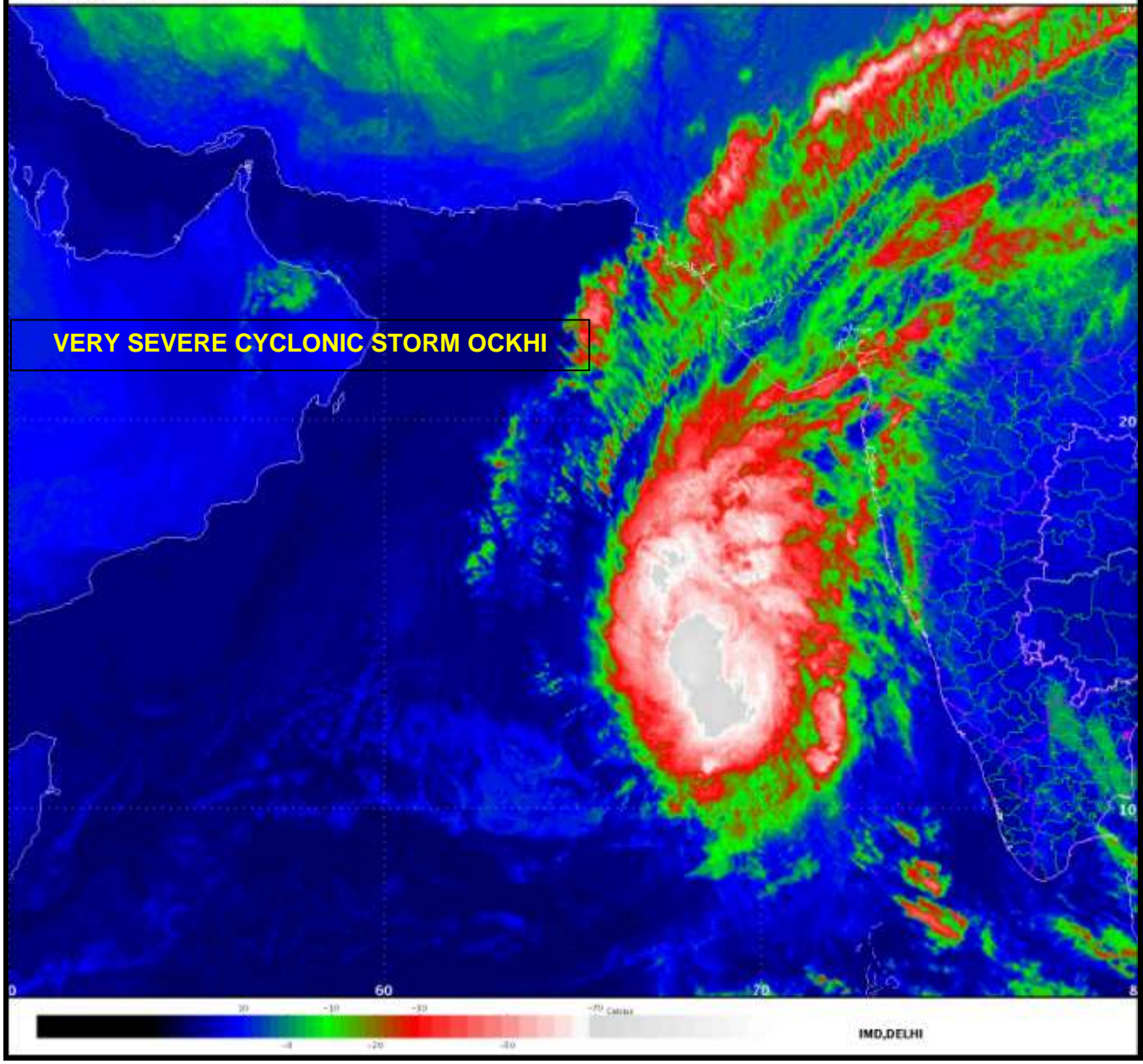
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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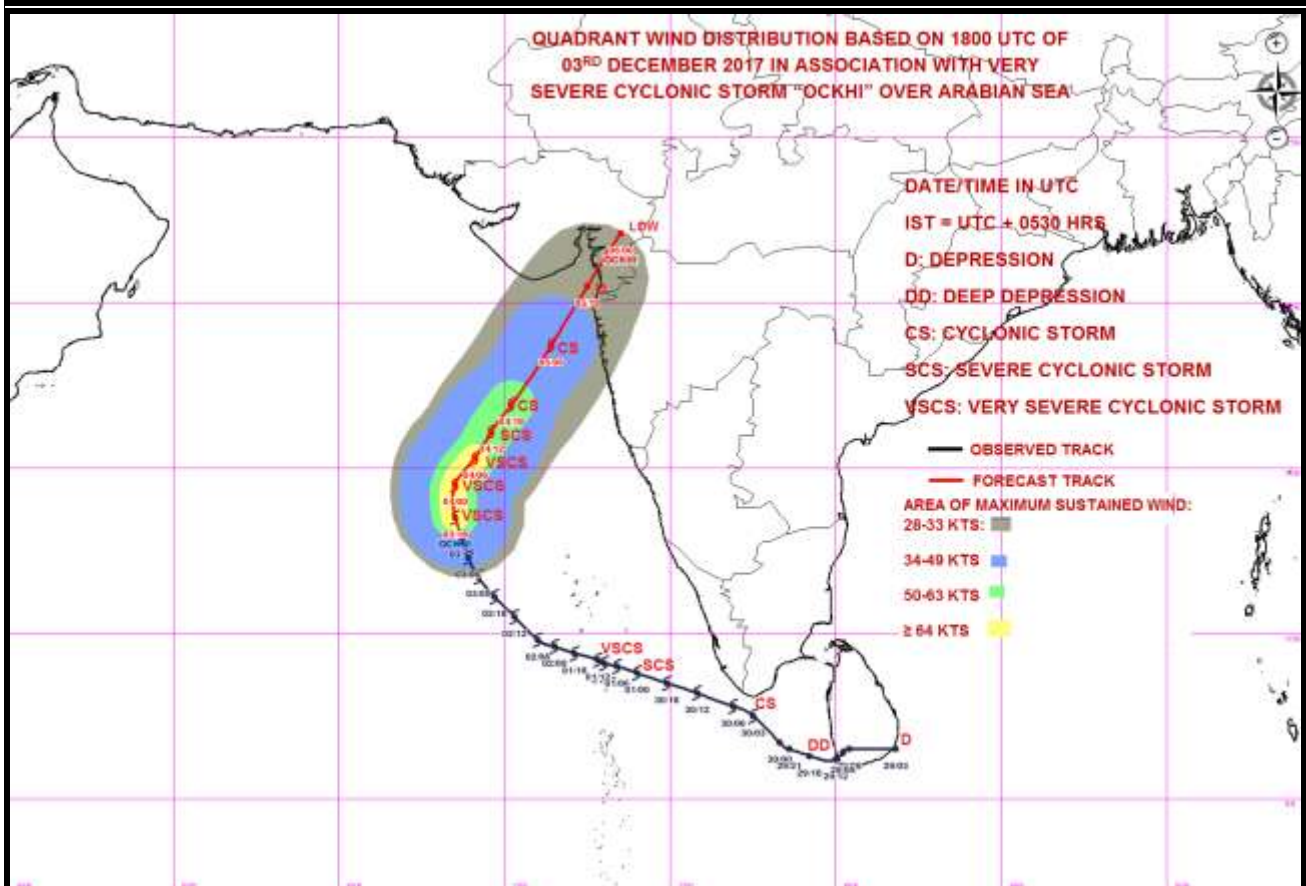
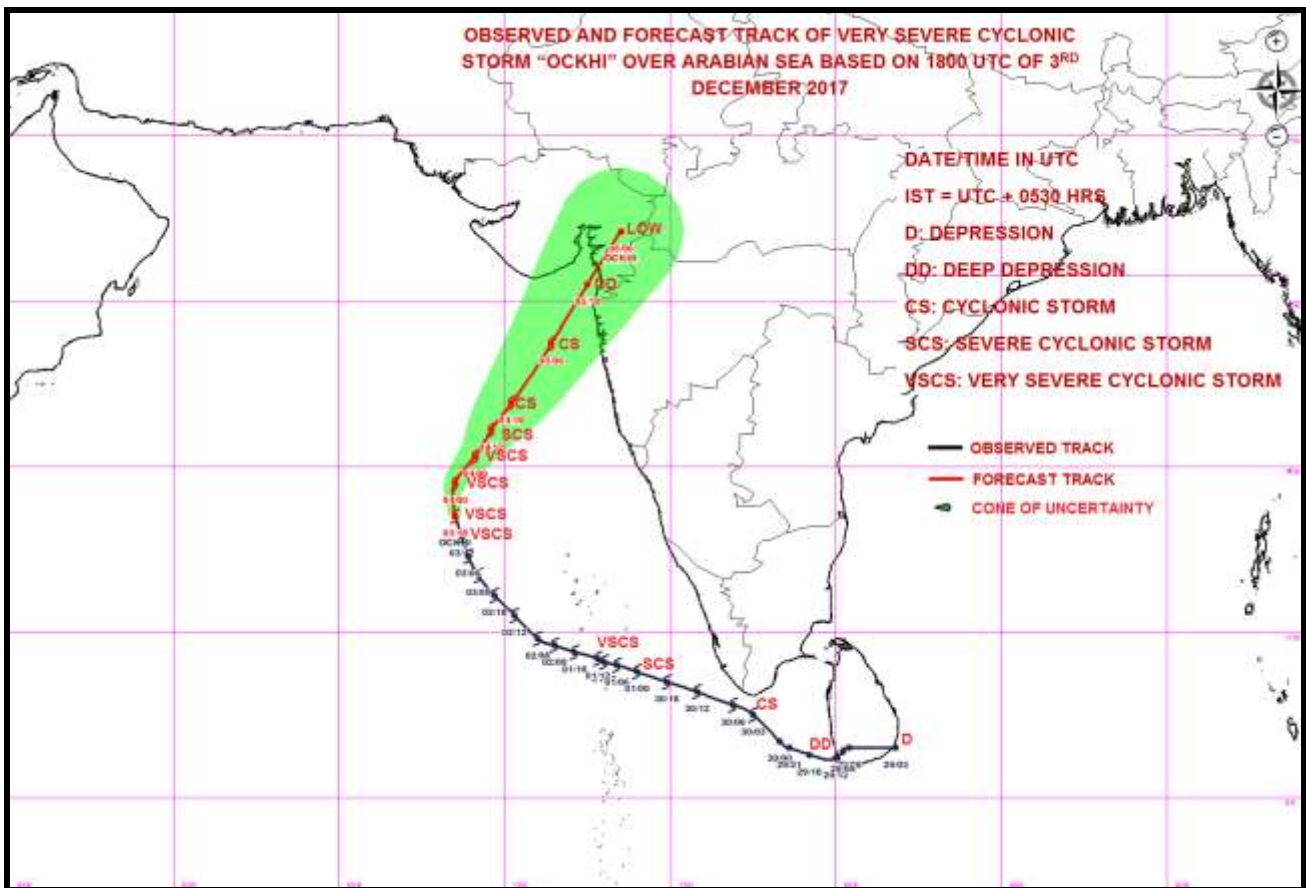
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SECTOR ARABIAN\_SEA Mercator (NHC LUT)

03-12-2017/20:30 GMT  
04-12-2017/02:00 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. THIRTY TWO ISSUED AT 0300 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 0000 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**VERY SEVERE CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA:**

THE **VERY SEVERE CYCLONIC STORM ‘OCKHI’** OVER EASTCENTRAL AND ADJOINING SOUTHEAST ARABIAN SEA MOVED FURTHER NORTHWARDS WITH A SPEED OF 18 KMPH DURING PAST 06 HOURS AND LAY CENTRED AT 0000 UTC OF 04<sup>th</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.5° N AND LONGITUDE 68.5° E, ABOUT 590 KM WEST-NORTHWEST OF AMINI DIVI (43311), 690 KM SOUTH-SOUTHWEST OF MUMBAI (43003) AND 870 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY MID-NIGHT OF 5<sup>th</sup> DECEMBER 2017.

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0000	14.5/68.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.7/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1200	19.6/72.0	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0000	21.3/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1200	23.0/74.4	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 12.0 °N AND 17.0 °N AND LONGITUDE 66.5 °E TO 72 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0000 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.0 HPA AND SURFACE WIND SPEED OF 100 / 35 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.9 HPA AND SURFACE WIND SPEED OF 020 / 18 KNOTS. A

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



SHIP LOCATED NEAR LATITUDE 10.6 °N/ LONGITUDE 65.1 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.9 HPA AND SURFACE WIND SPEED OF 310<sup>0</sup>/ 24 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 984 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 70 KNOTS GUSTING TO 80 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $70 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 27-28 °C. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

#### **WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA & EQUATORIAL INDIAN OCEAN PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD DURING NEXT 24 HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER NICOBAR ISLANDS, SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA.

SHIBIN B  
SCIENTIST 'B'  
RSMC NEW DELHI

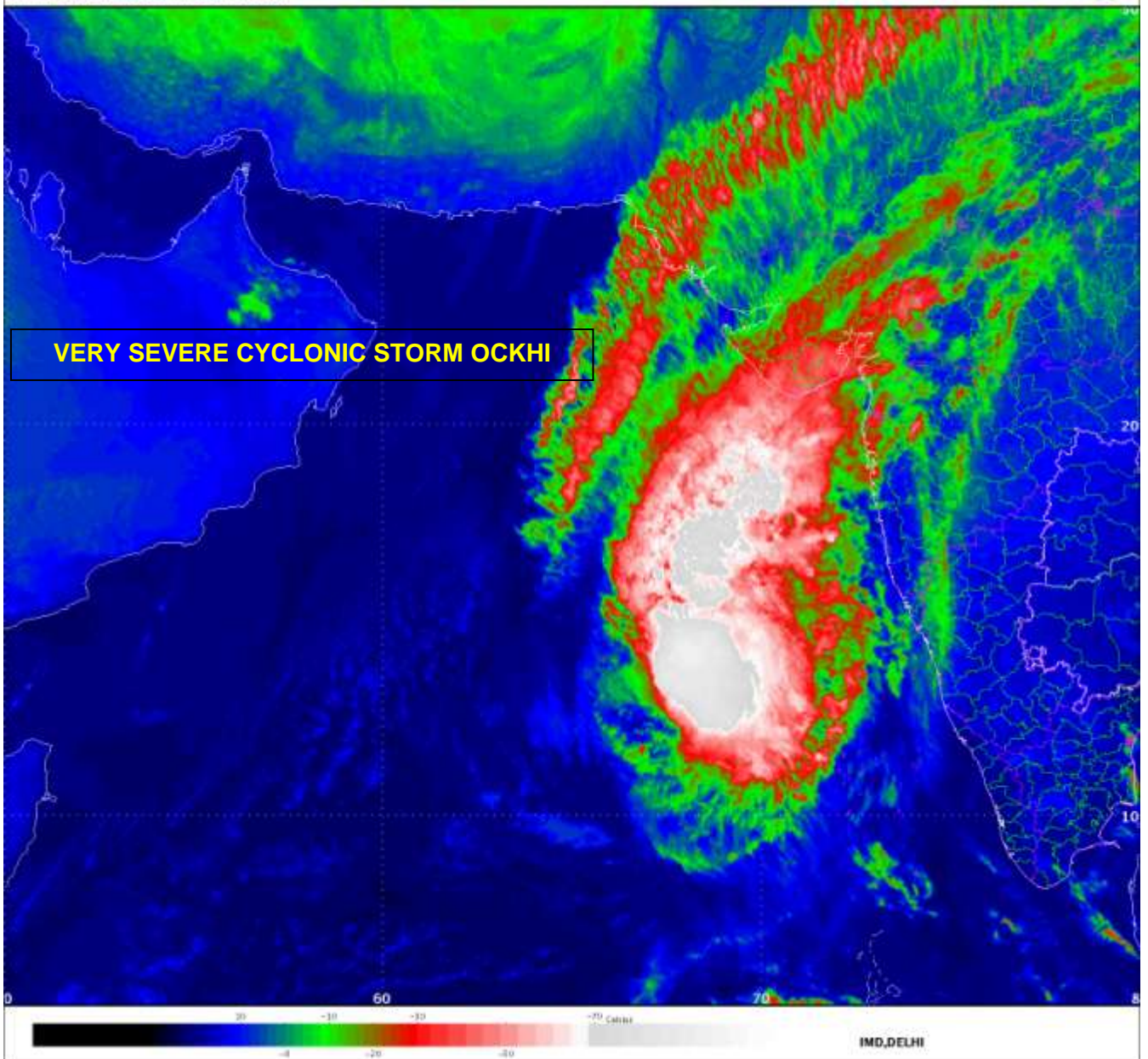
#### **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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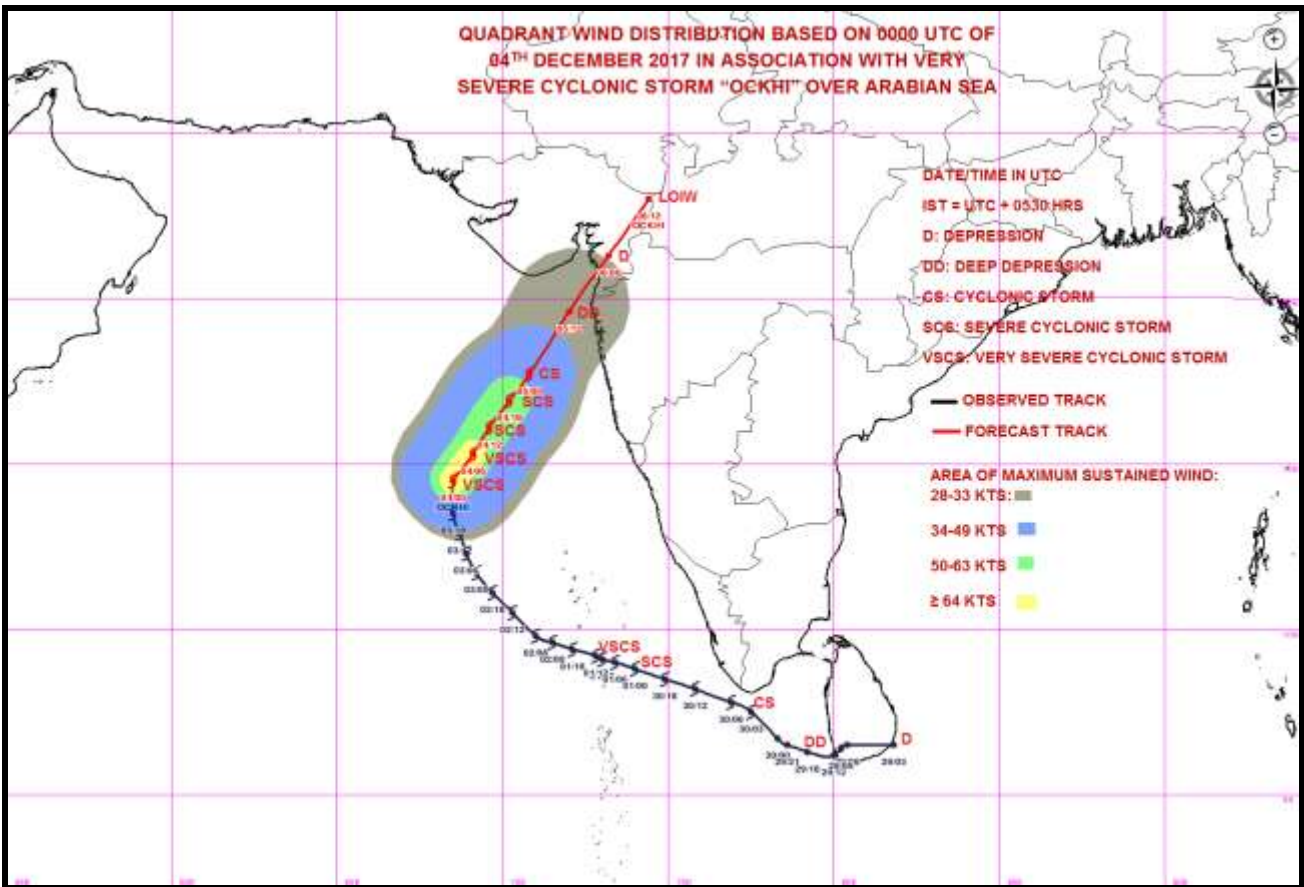
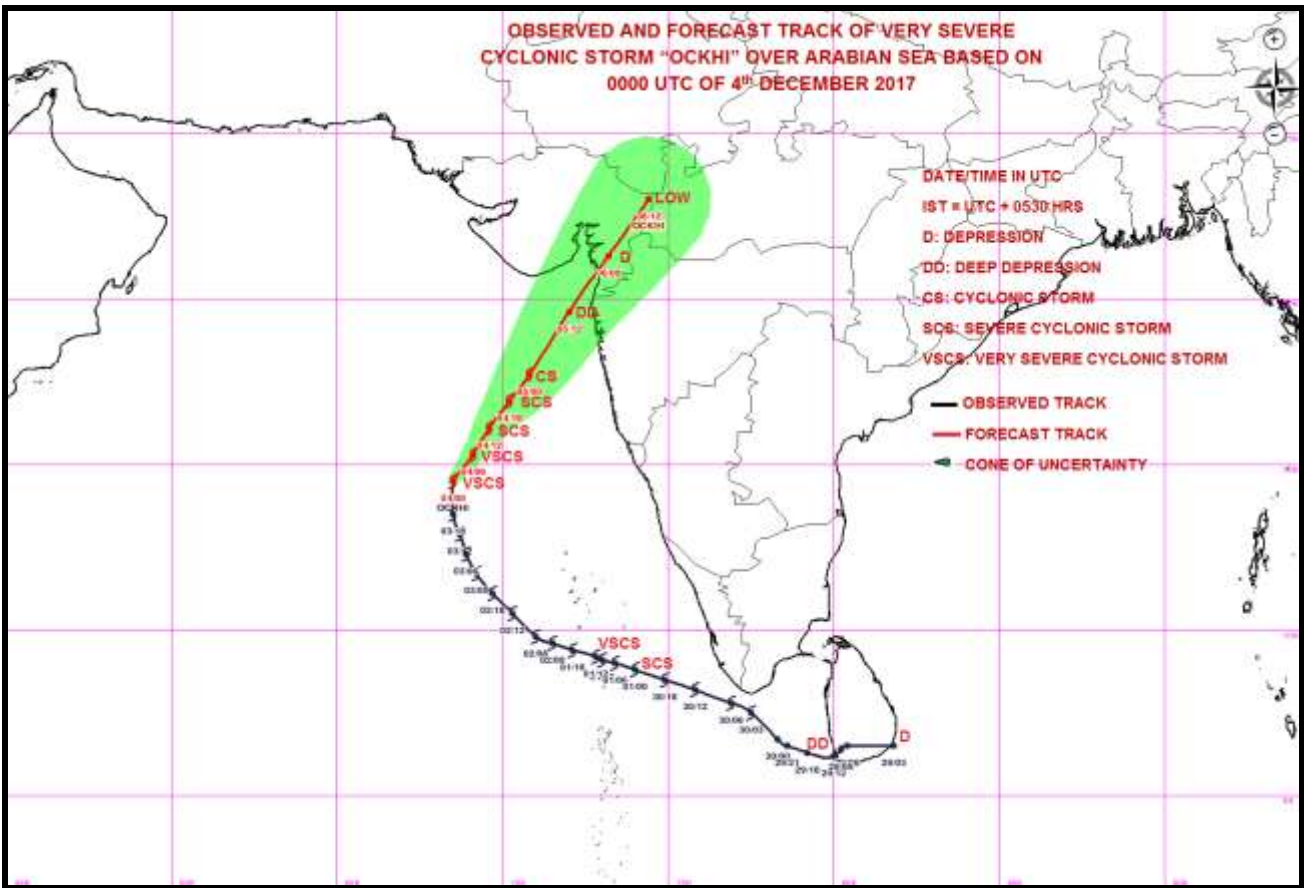
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04-12-2017/07:00 IST



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY THREE ISSUED AT 0600 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 0300 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTHWARDS WITH A SPEED OF 13 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.7° N AND LONGITUDE 68.5° E, ABOUT 600 KM NORTH-NORTHWEST OF AMINI DIVI (43311), 670 KM SOUTHWEST OF MUMBAI (43057) AND 850 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY MID-NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0300	14.7/68.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/0600	15.3/69.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1200	16.1/69.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.9/70.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.7/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/1200	19.6/72.0	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0000	21.3/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1200	23.0/74.4	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0/4.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 12 °N AND 20.0 °N AND LONGITUDE 66.0 °E TO 72 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0300 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 15 °N/ LONGITUDE 69 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.6 HPA AND SURFACE WIND SPEED OF 100 °/ 45 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1009.2 HPA AND SURFACE WIND SPEED OF 040 °/ 18 KNOTS.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $300 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $70 \times 10^{-5} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 27-28 °C. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

A WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

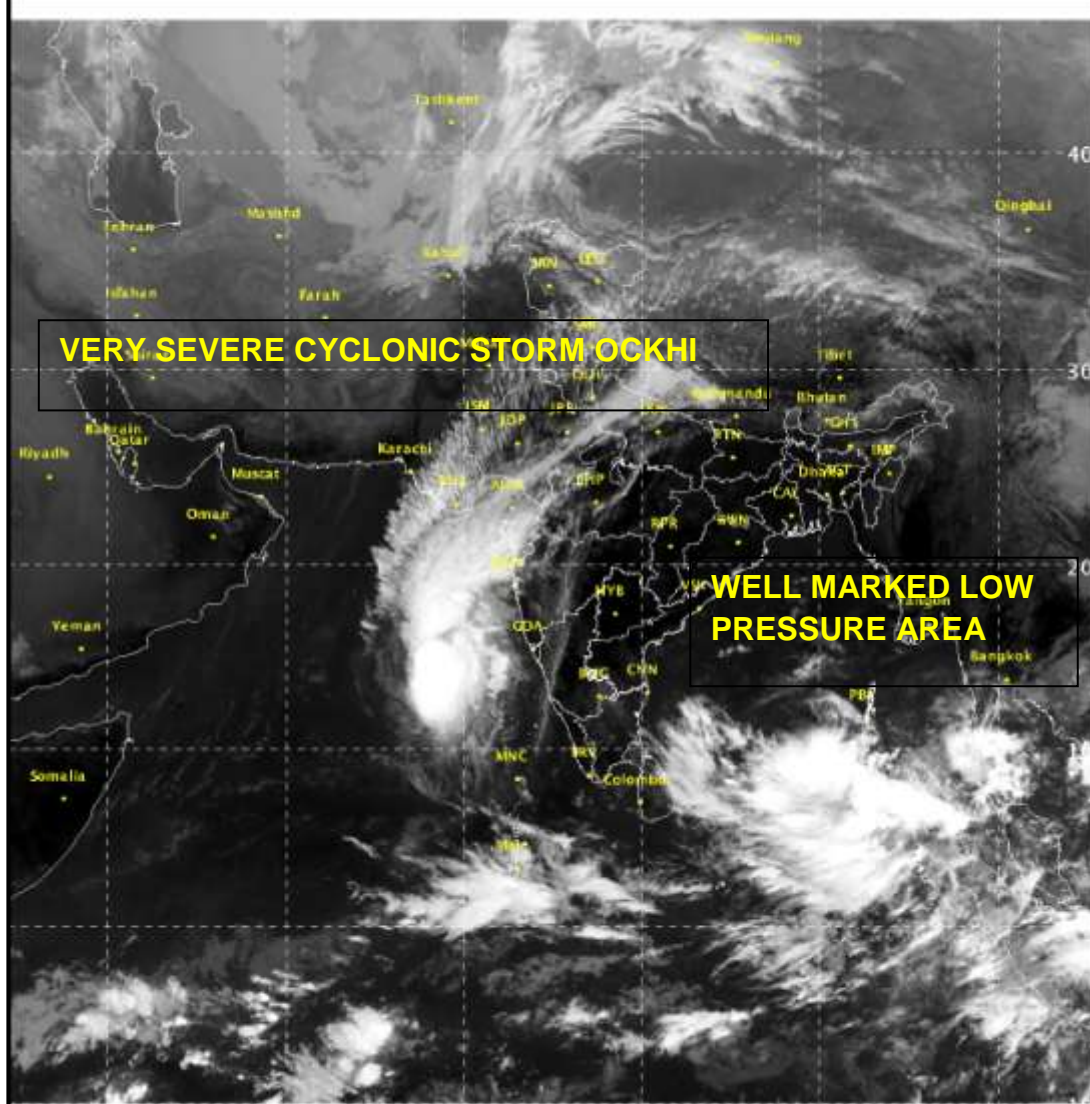
## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

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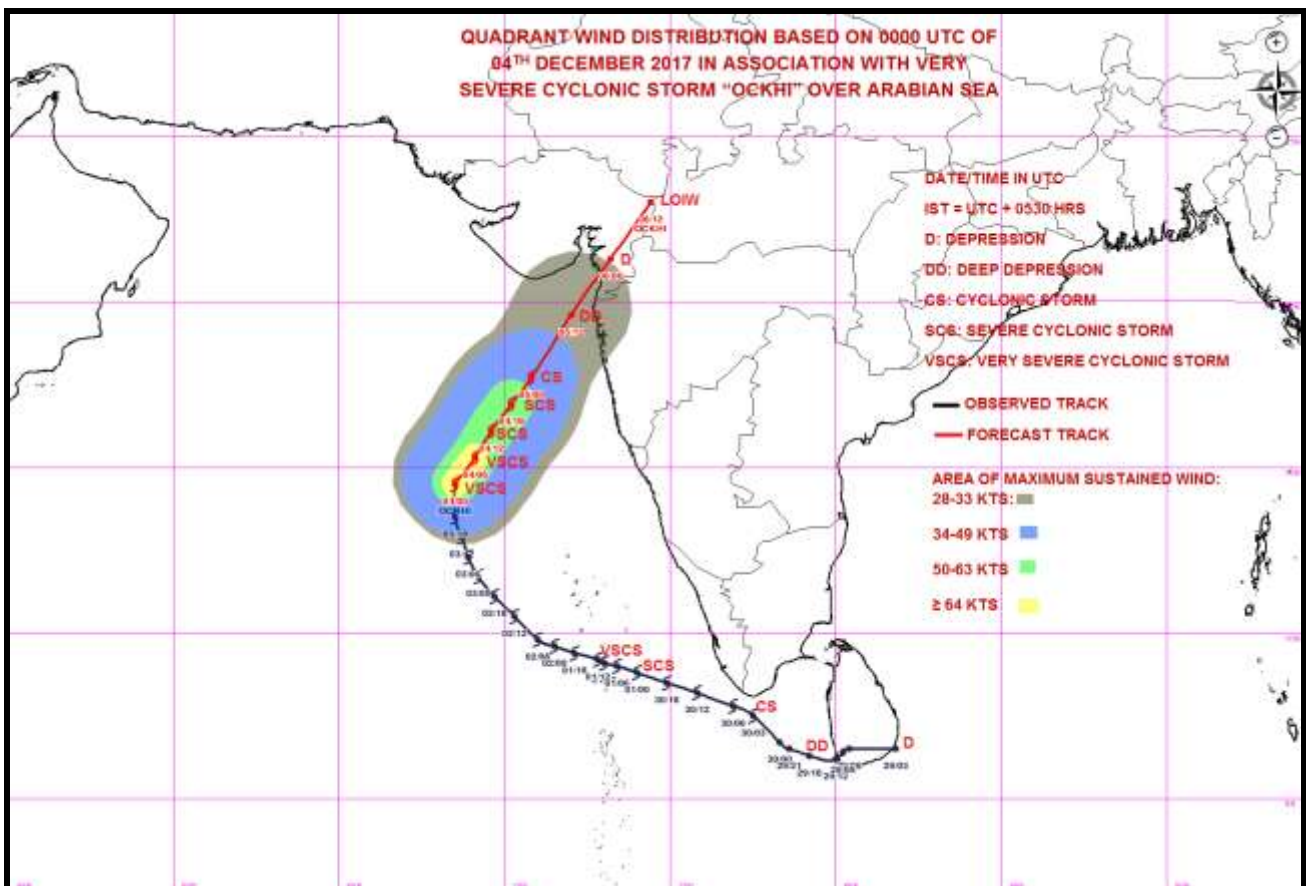
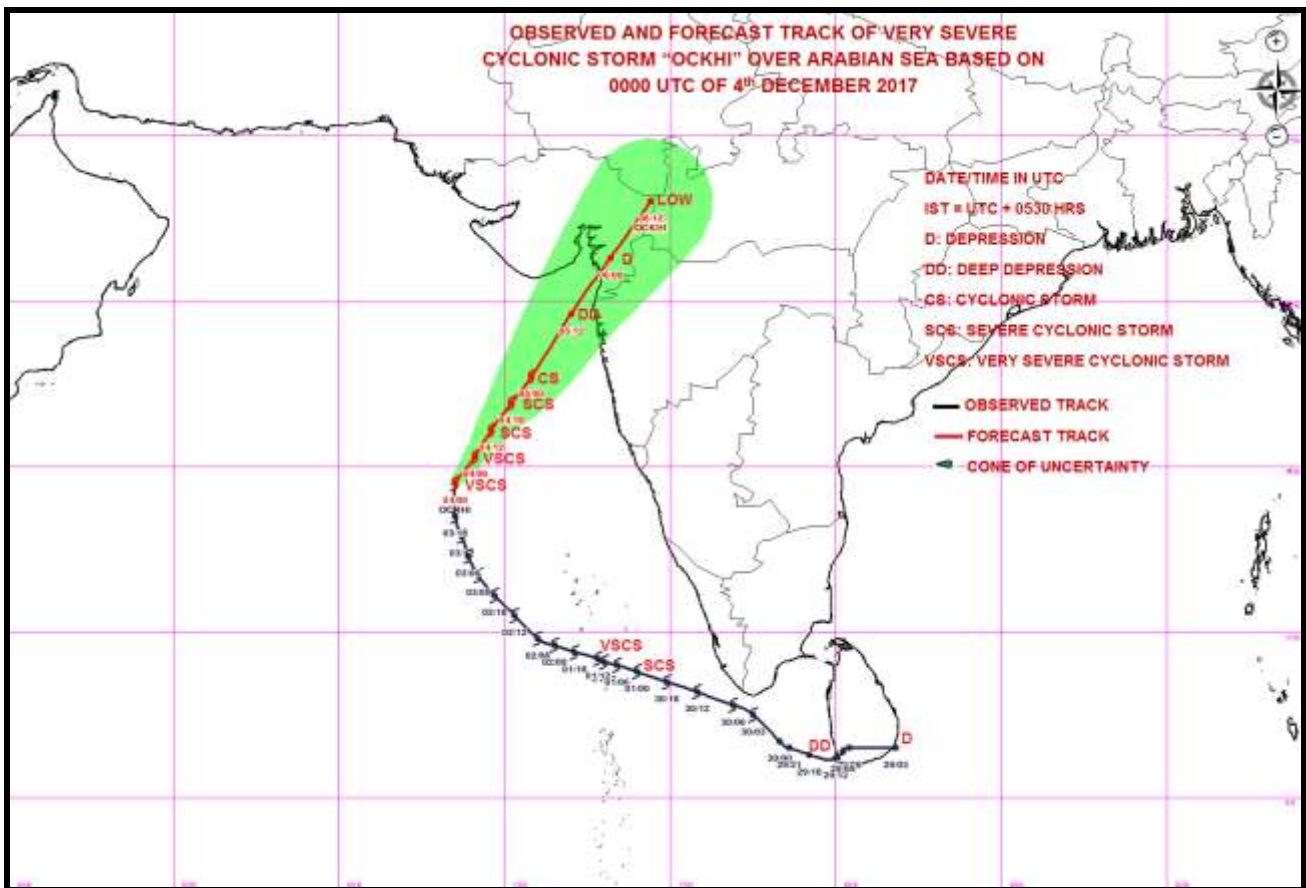


IMD/Delhi

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
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**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY FOUR ISSUED AT 0900 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 0600 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF 9 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0600 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 14.9° N AND LONGITUDE 68.8° E, ABOUT 630 KM SOUTHWEST OF MUMBAI (43057) AND 810 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY MID-NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0600	14.9/68.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1200	15.8/69.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.3/70.4	90-100 GUSTING TO 110	CYCLONIC STORM
05/0600	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1800	20.5/72.6	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.3/73.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 12 °N AND 20.0 °N AND LONGITUDE 66.0 °E TO 72 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

AT 0300 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 15 °N/ LONGITUDE 69 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.6 HPA AND SURFACE WIND SPEED OF 100 °/ 45 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1009.2 HPA AND SURFACE WIND SPEED OF 040 °/ 18 KNOTS.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



THE ESTIMATED CENTRAL PRESSURE IS ABOUT 984 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40-50 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

A WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

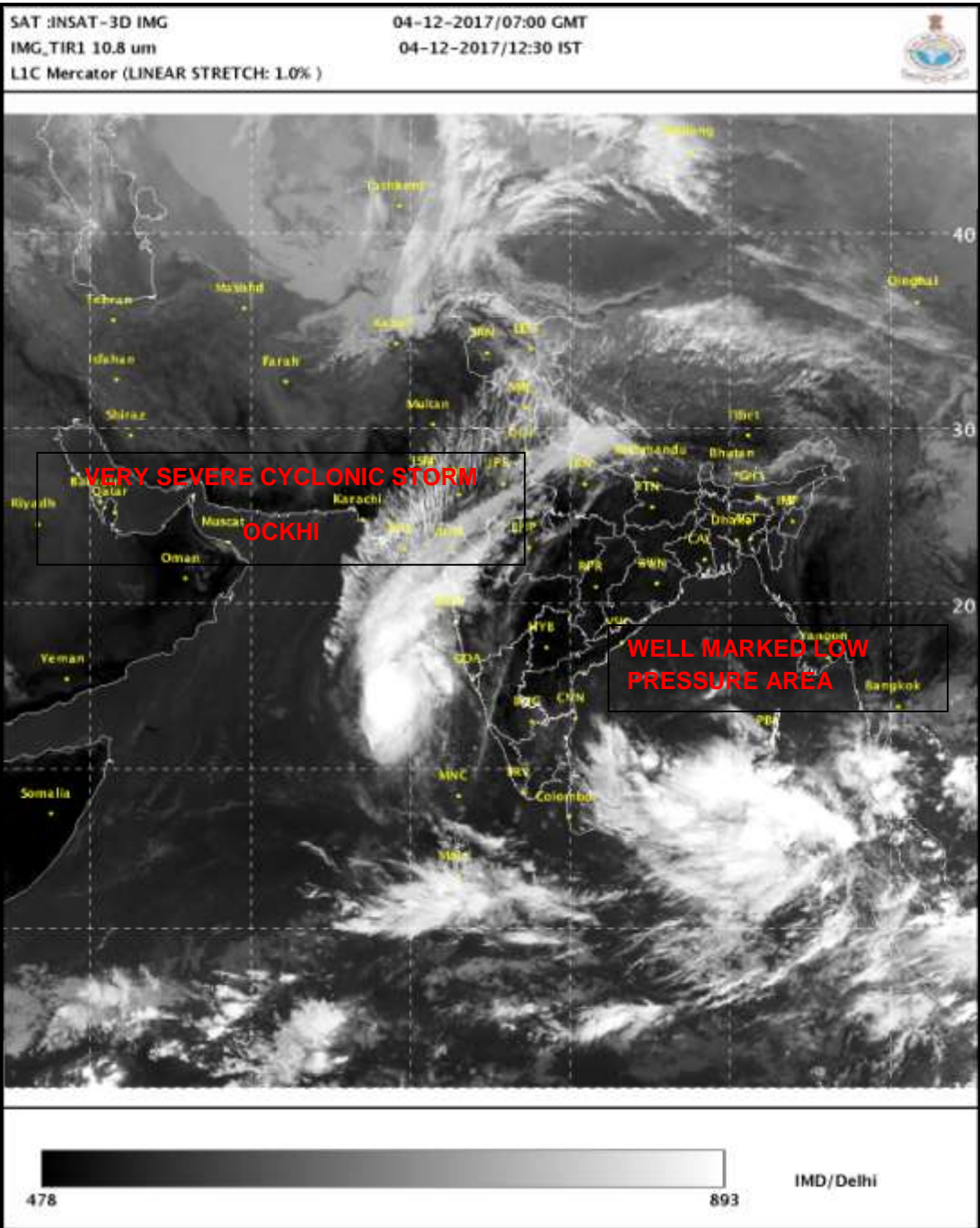
AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

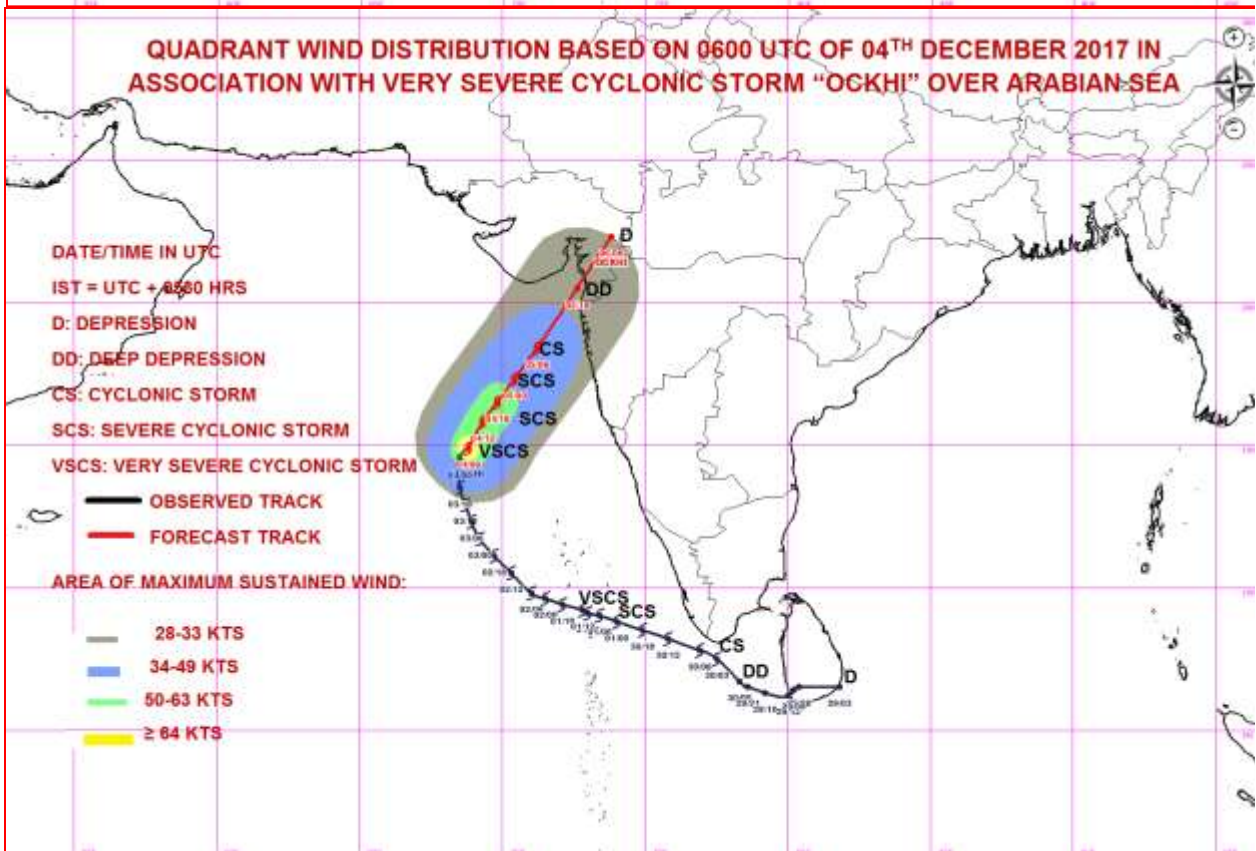
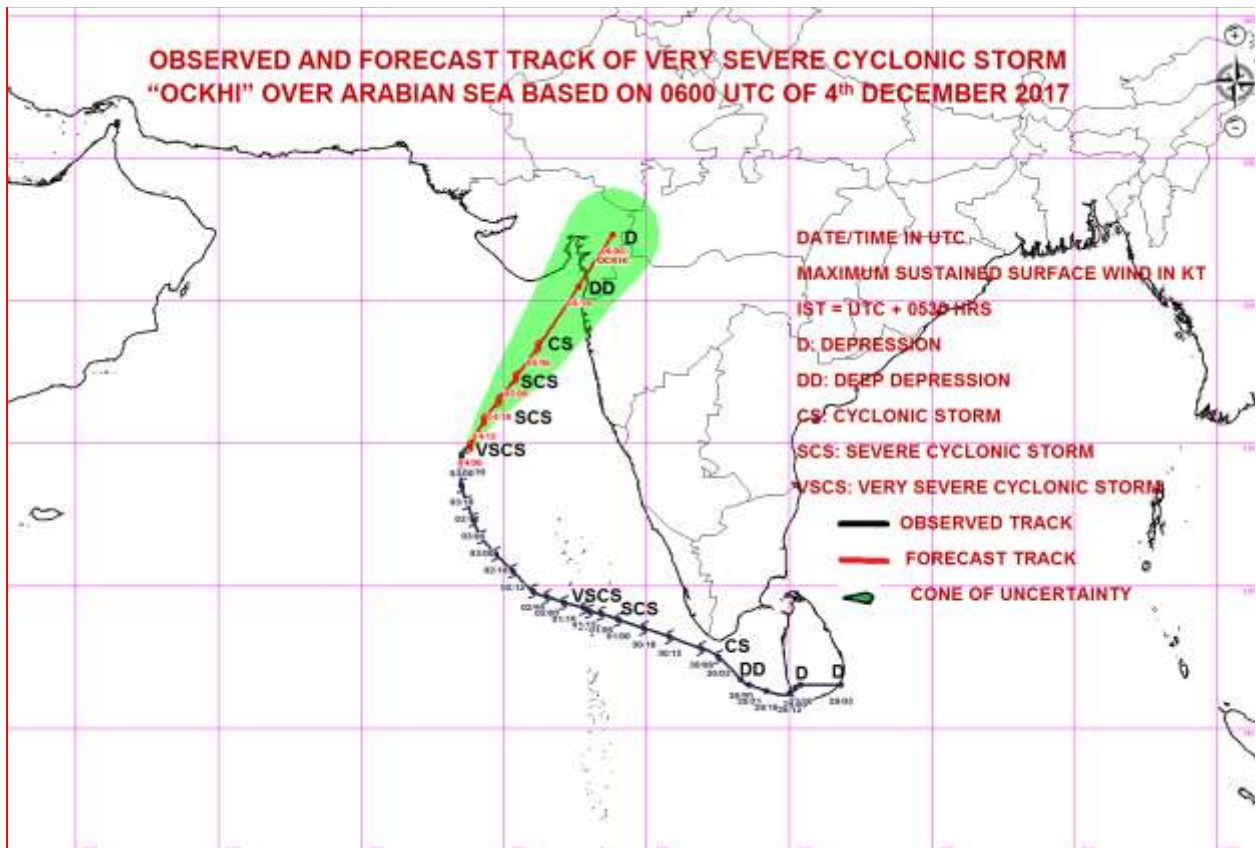
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY FIVE ISSUED AT 1200 UTC OF 04<sup>th</sup> DECEMBER 2017**  
**BASED ON 0900 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **VERY SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 13 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0900 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 15.2° N AND LONGITUDE 69.0° E, ABOUT 590 KM SOUTHWEST OF MUMBAI (43057) AND 770 KM SOUTH-SOUTHWEST OF SURAT (42840). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF TOMORROW, THE 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/0900	15.2/69.0	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
04/1200	15.8/69.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.3/70.4	90-100 GUSTING TO 110	CYCLONIC STORM
05/0600	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1800	20.5/72.6	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.3/73.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T4.0/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 13 °N AND 17.0 °N AND LONGITUDE 67.0 °E TO 71 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 984 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40-50 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF THE SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. ALSO IT WILL BE INFLUENCED BY THE MID-LATITUDE DRY AND COLD WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERING INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS GRADUALLY DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

A WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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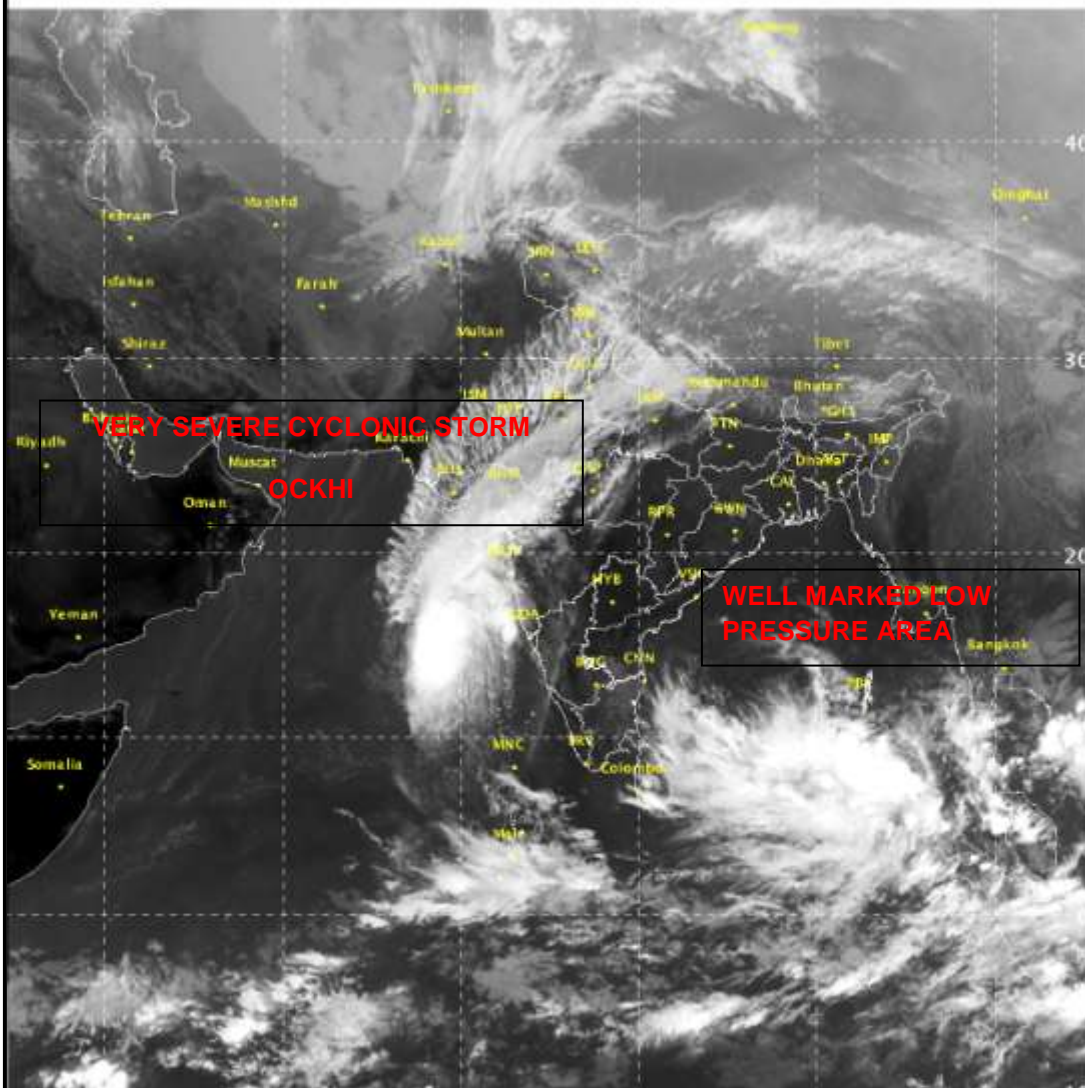
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04-12-2017/09:30 GMT

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04-12-2017/15:00 IST

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**VERY SEVERE CYCLONIC STORM  
OCKHI**

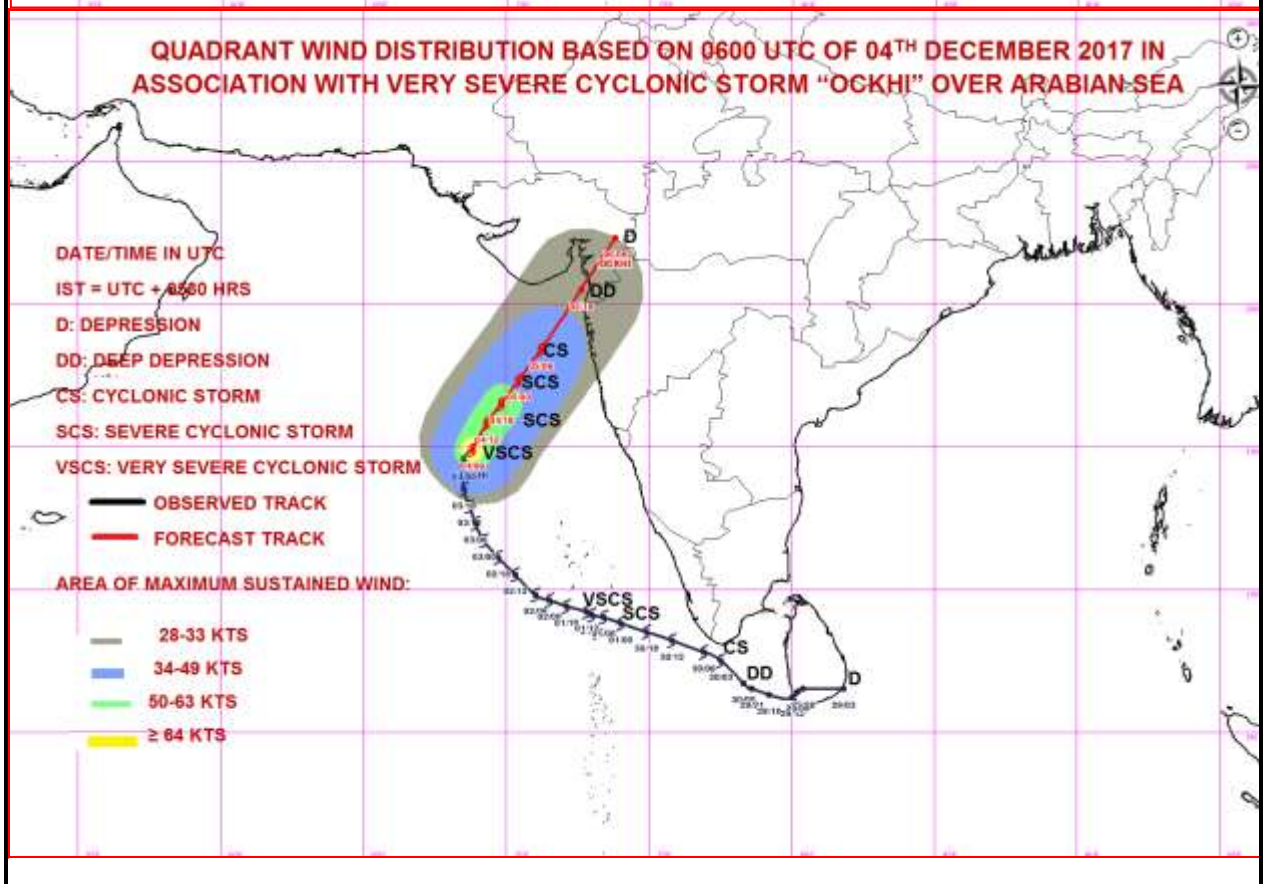
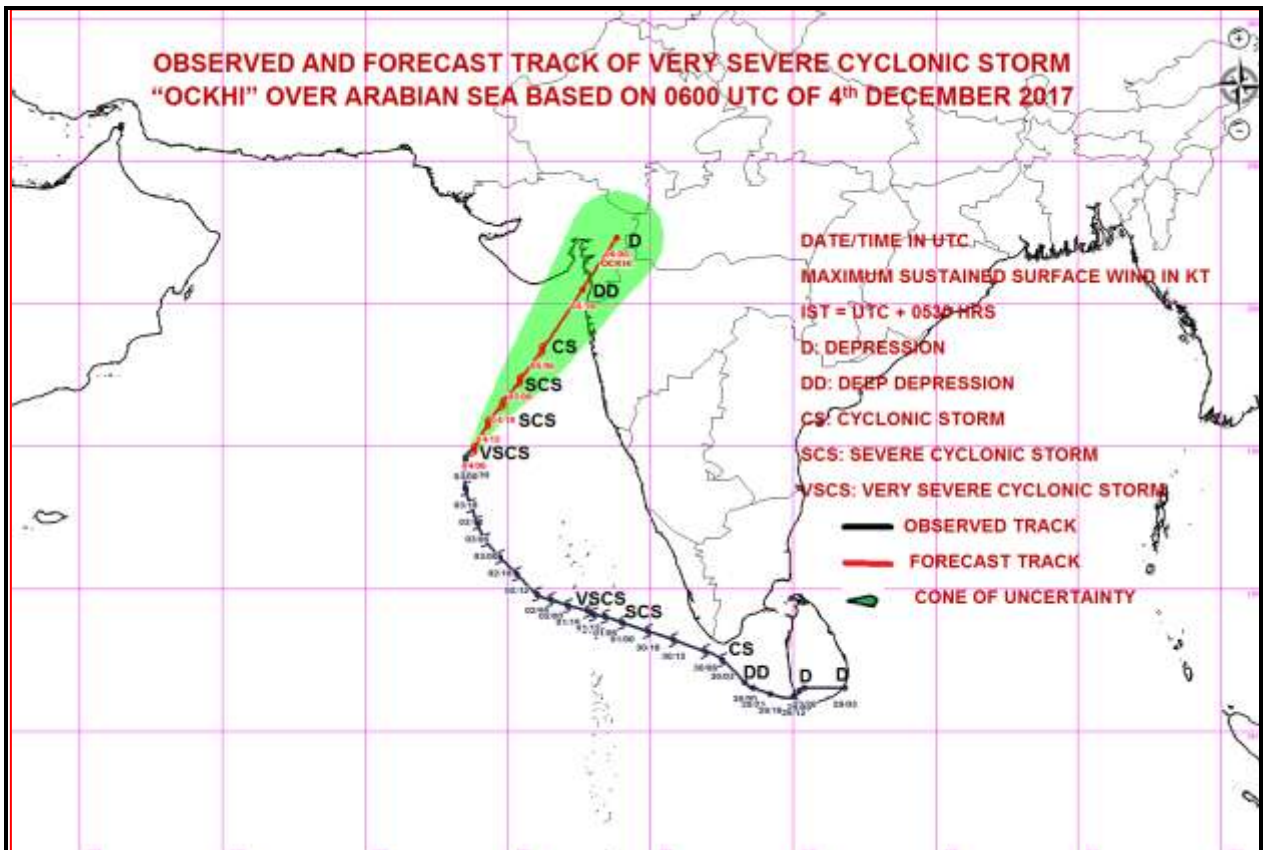
**WELL MARKED LOW  
PRESSURE AREA**



IMD/Delhi

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)  
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY SIX ISSUED AT 1500 UTC OF 04<sup>th</sup> DECEMBER 2017  
BASED ON 1200 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE VERY SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 16 KMPH DURING PAST 6 HOURS AND WEAKENED INTO A **SEVERE CYCLONIC STORM** AND LAY CENTRED AT 1730 HRS IST OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 15.7° N AND LONGITUDE 69.2° E, ABOUT 720 KM SOUTH-SOUTHWEST OF SURAT (42840) AND 540 KM SOUTHWEST OF MUMBAI (43057). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF TOMORROW, THE 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1730	15.7/69.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/2330	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0530	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/1130	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1730	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0530	21.4/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1730	23.3/74.5	25-35 GUSTING TO 45	WELL MARKED LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 13 °N AND 18.0 °N AND LONGITUDE 67.0 °E TO 71 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 81 DEG C. SATELLITE IMEGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 60 KNOTS GUSTING TO 70 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AT 1200 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 14.9 °N/ LONGITUDE 69 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA AND SURFACE WIND SPEED OF 050<sup>0</sup>/ 18 KNOTS. A SHIP LOCATED NEAR LATITUDE 14.3 °N/ LONGITUDE 73.1 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1004 HPA AND SURFACE WIND SPEED OF 150<sup>0</sup>/ 18 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS DECREASED AND IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (25-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. HENCE, THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. THE SYSTEM HAS WEAKENED DUE TO THE INFLUENCE OF DRY AND COLD MID-LATITUDE WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS AND HENCE, IT WILL CONTINUE TO WEAKEN FURTHER. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

A WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

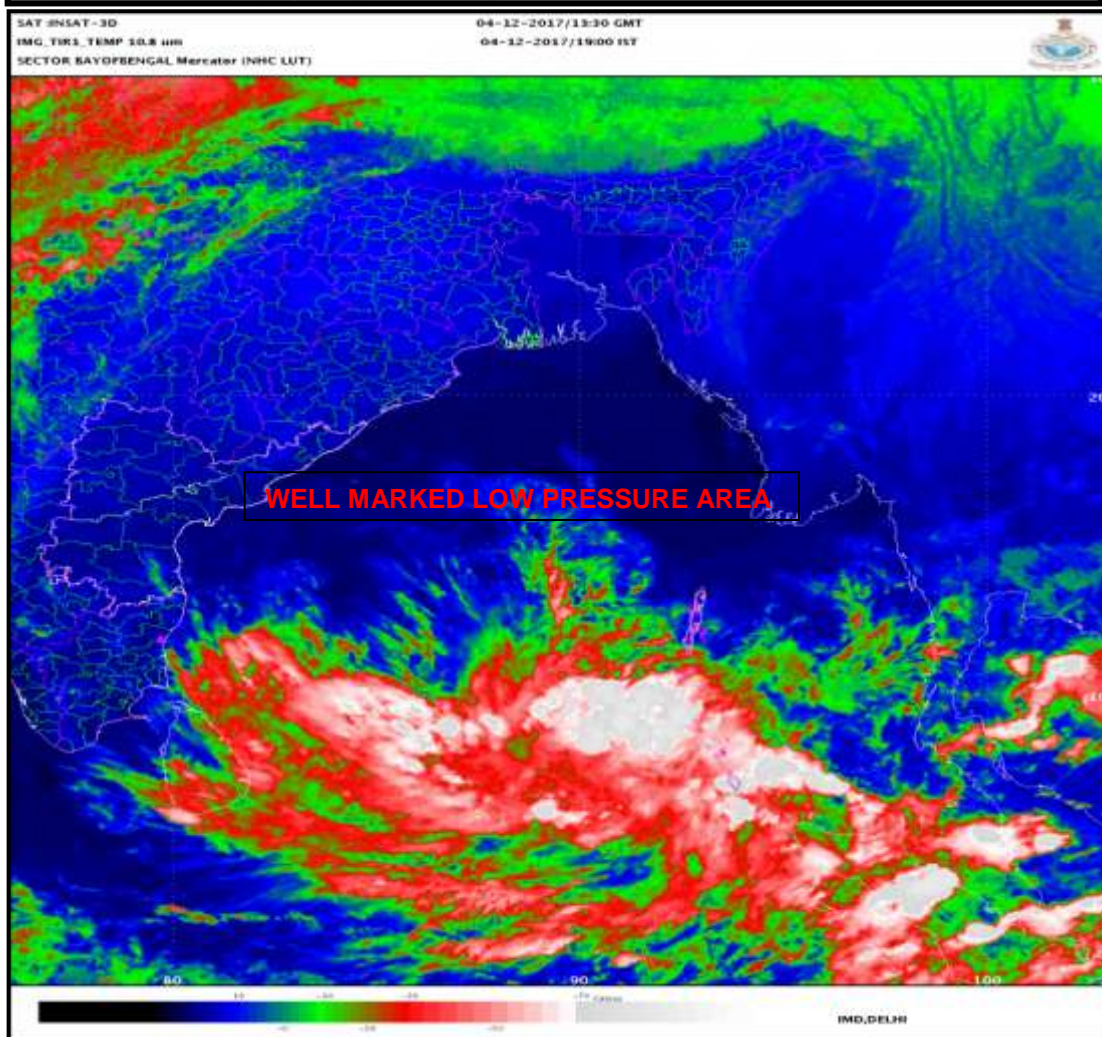
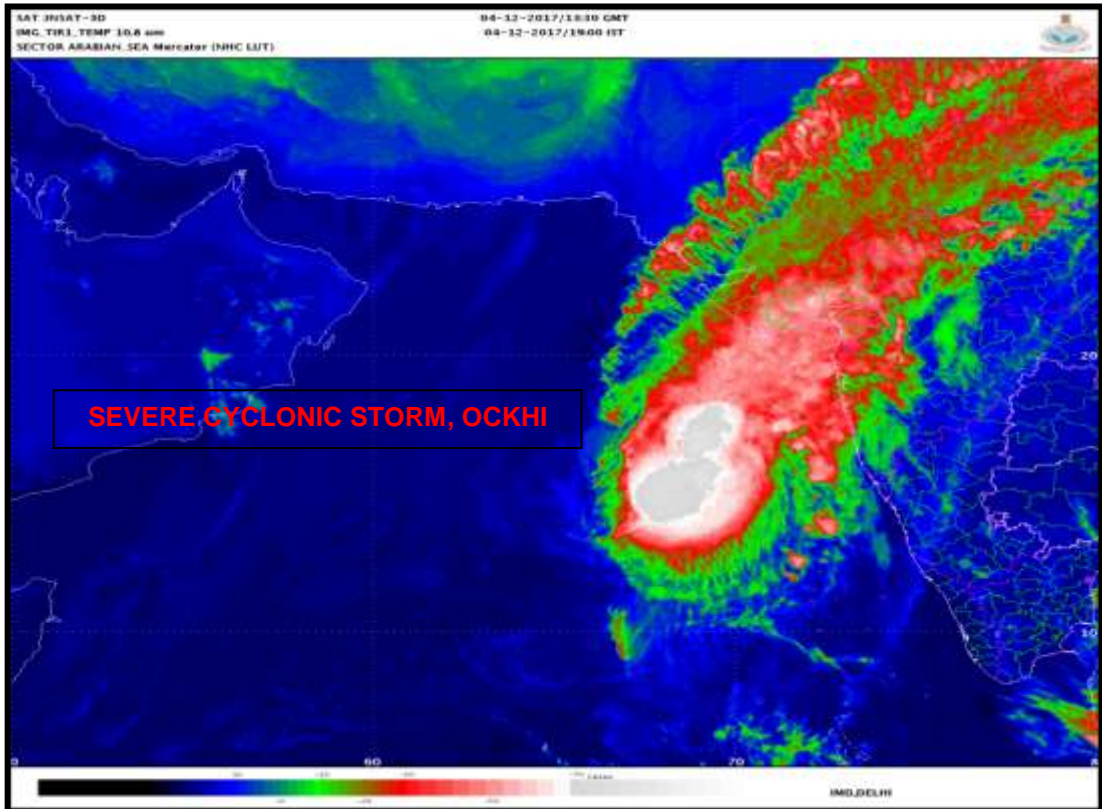
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(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

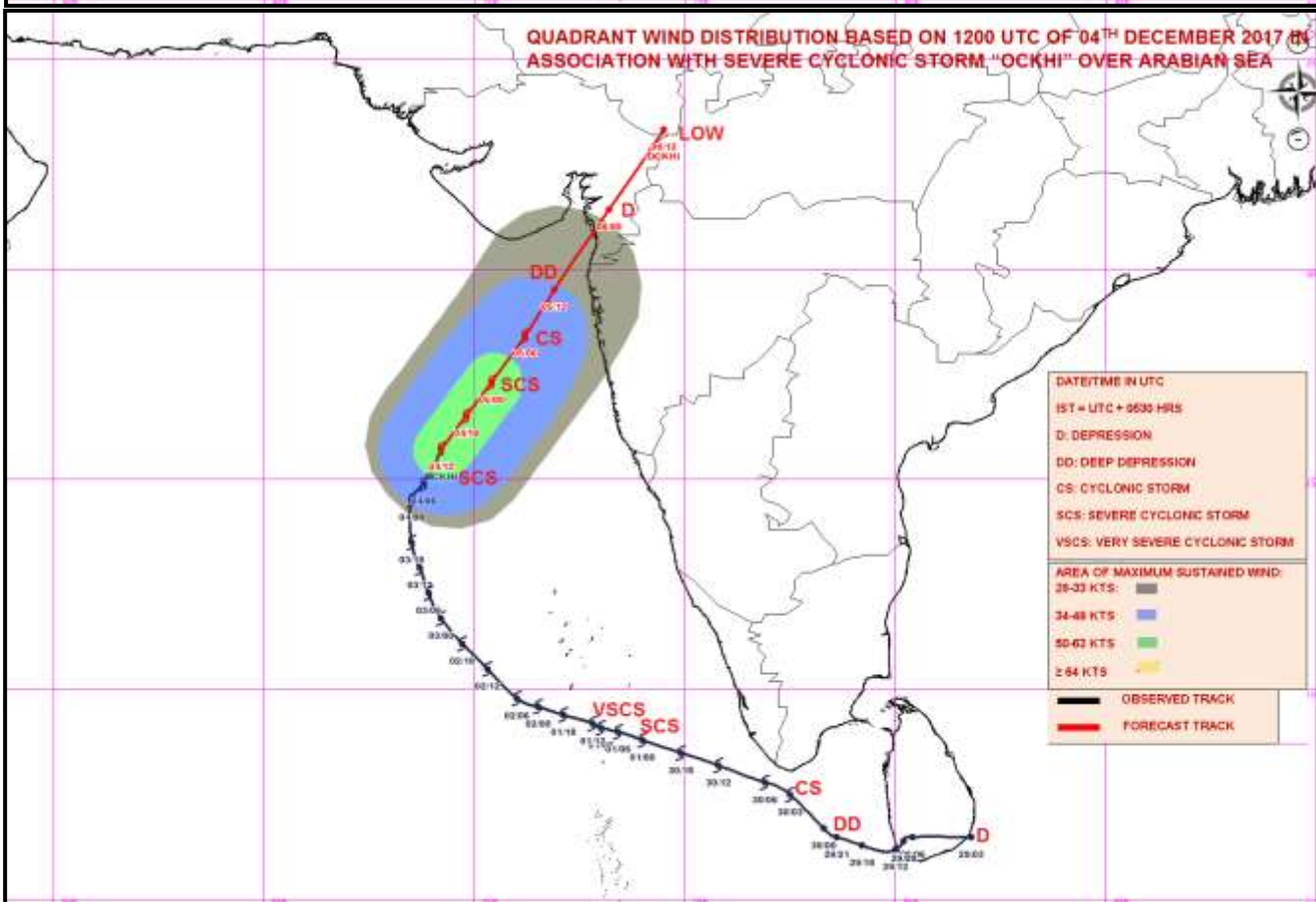
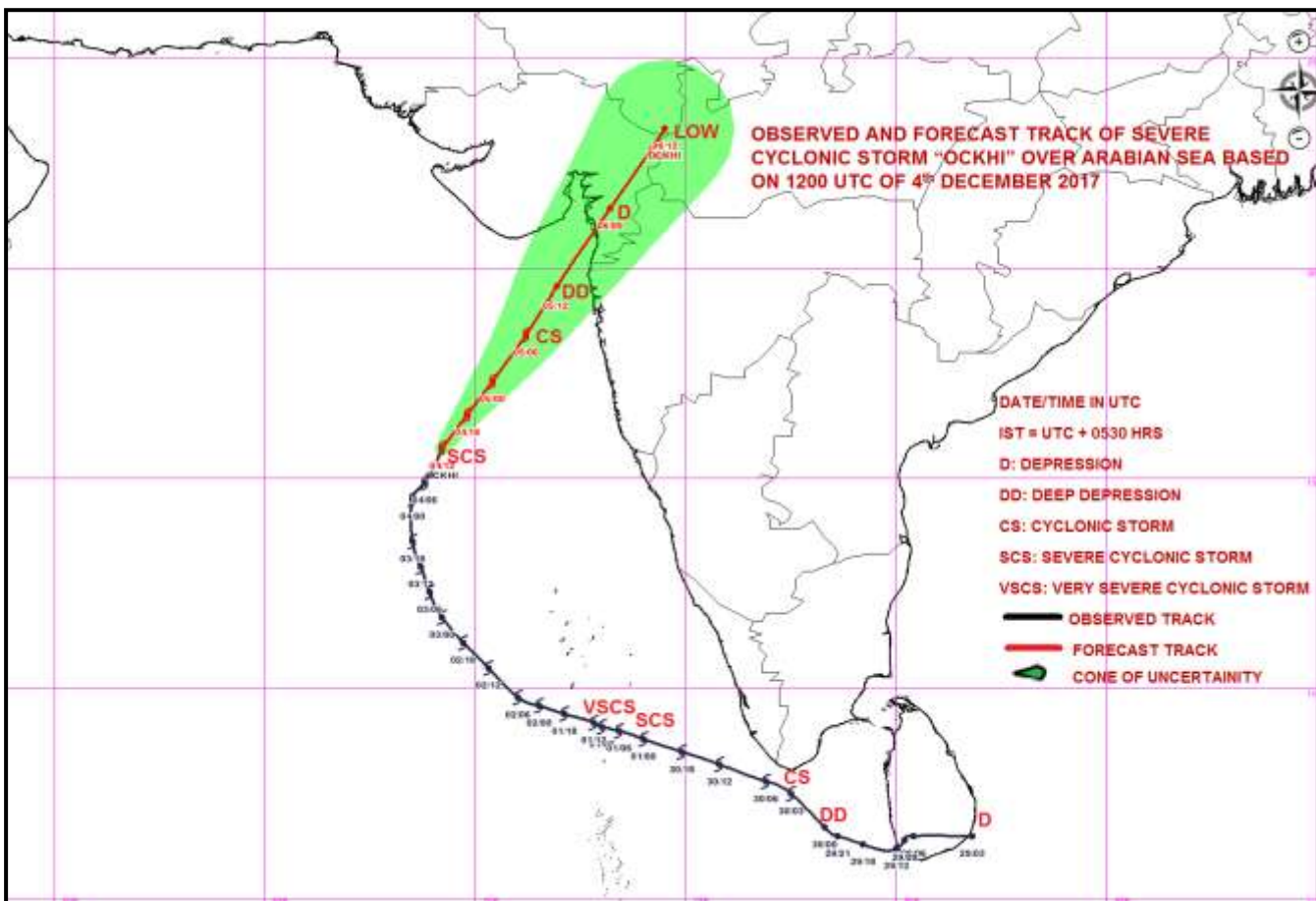
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
 NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
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**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. THIRTY SEVEN ISSUED AT 1745 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 1500 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) SEVERE CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA**

THE **SEVERE CYCLONIC STORM ‘OCKHI’** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 19 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1500 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 16.1° N AND LONGITUDE 69.5° E, ABOUT 660 KM SOUTH-SOUTHWEST OF SURAT AND 470 KM SOUTHWEST OF MUMBAI. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF TOMORROW, THE 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1500	16.1/69.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04/1800	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0600	18.4/71.2	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
06/0000	21.4/73.2	40-50 GUSTING TO 60	DEPRESSION
06/1200	23.3/74.5	25-35 GUSTING TO 45	WELL MARKED LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 14.0 °N AND 19.0 °N AND LONGITUDE 67.0 °E TO 72.0 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 82 DEG C. SATELLITE IMAGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 60 KNOTS GUSTING TO 70 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE.

AT 1500 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.9 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/21 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE HAS DECREASED AND IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (25-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH. HENCE, THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. THE SYSTEM HAS WEAKENED DUE TO THE INFLUENCE OF DRY AND COLD MID-LATITUDE WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS AND HENCE, IT WILL CONTINUE TO WEAKEN FURTHER. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

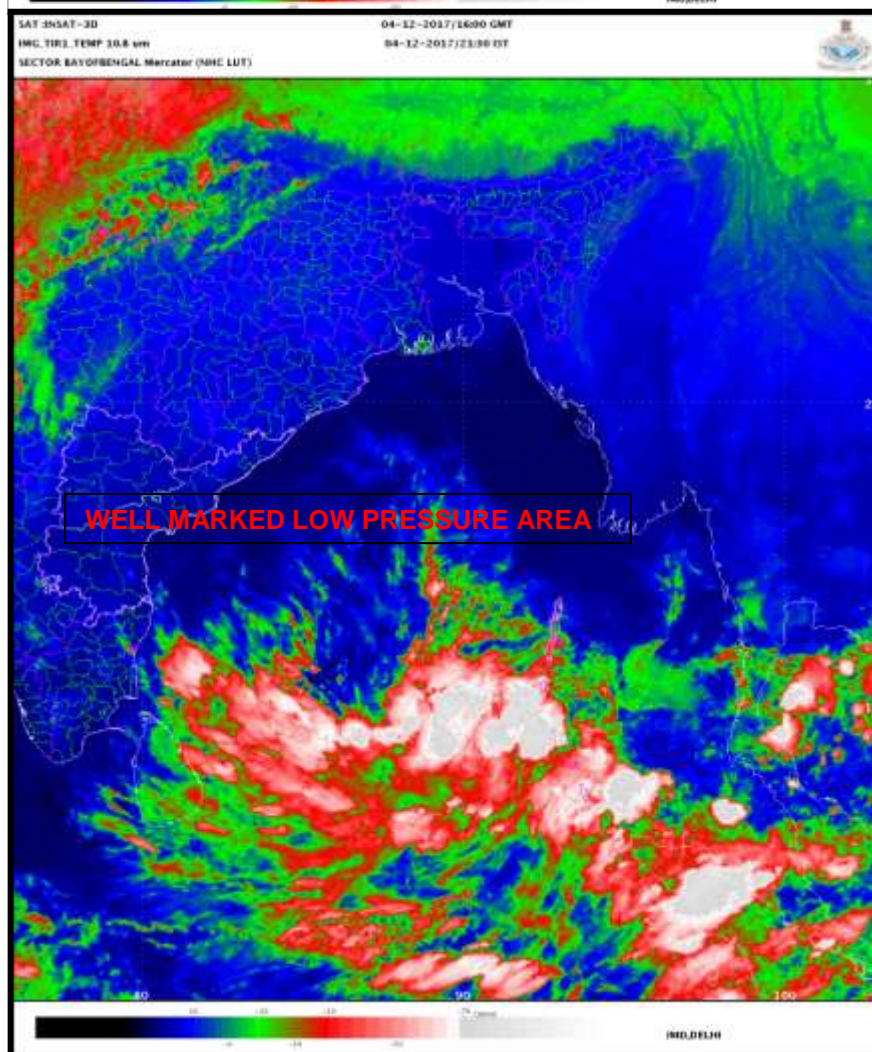
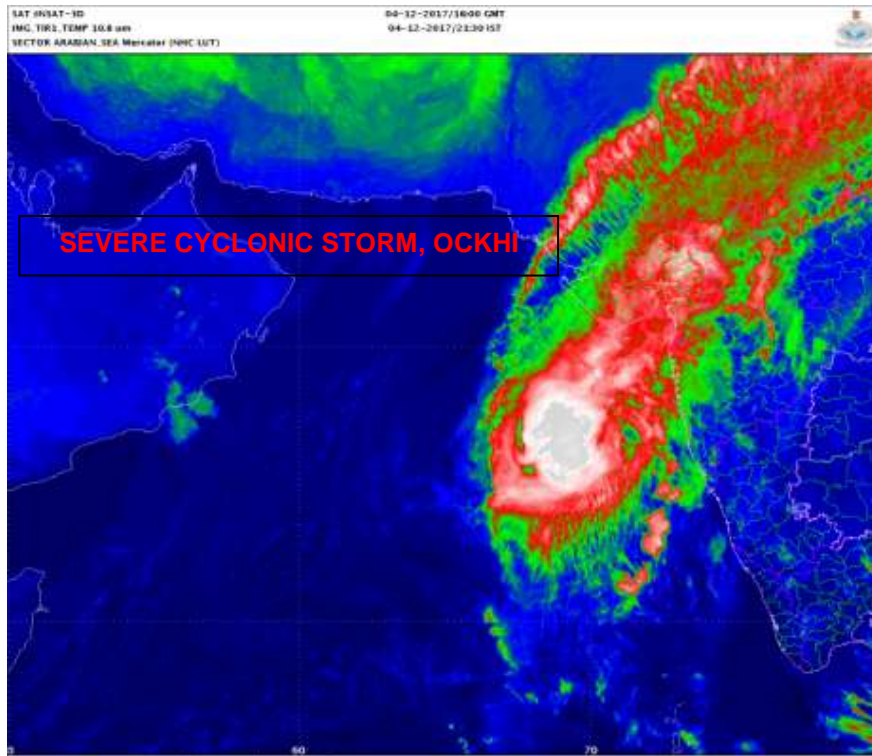
AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(SHOBHIT KATIYAR)  
SCIENTIST 'B'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

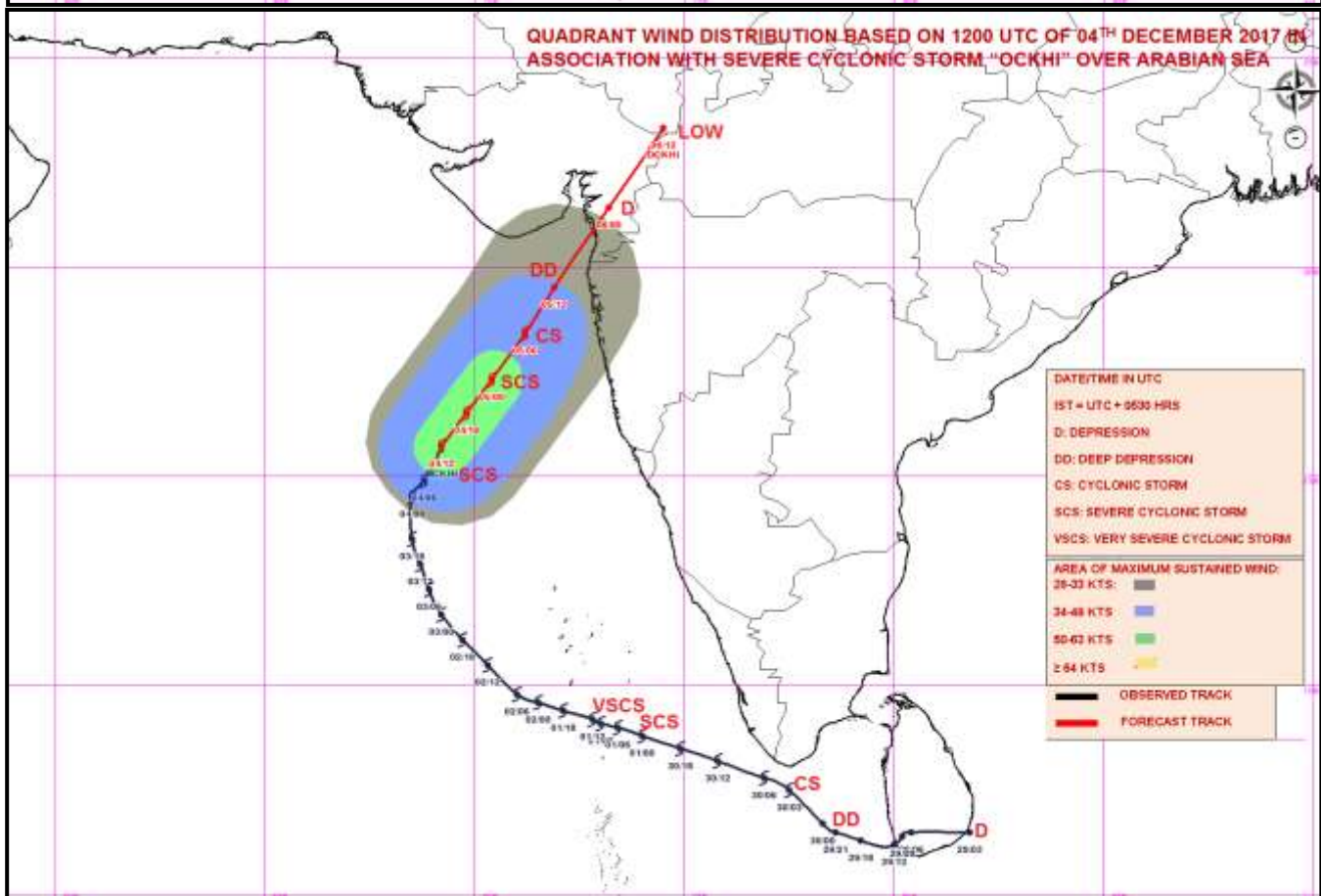
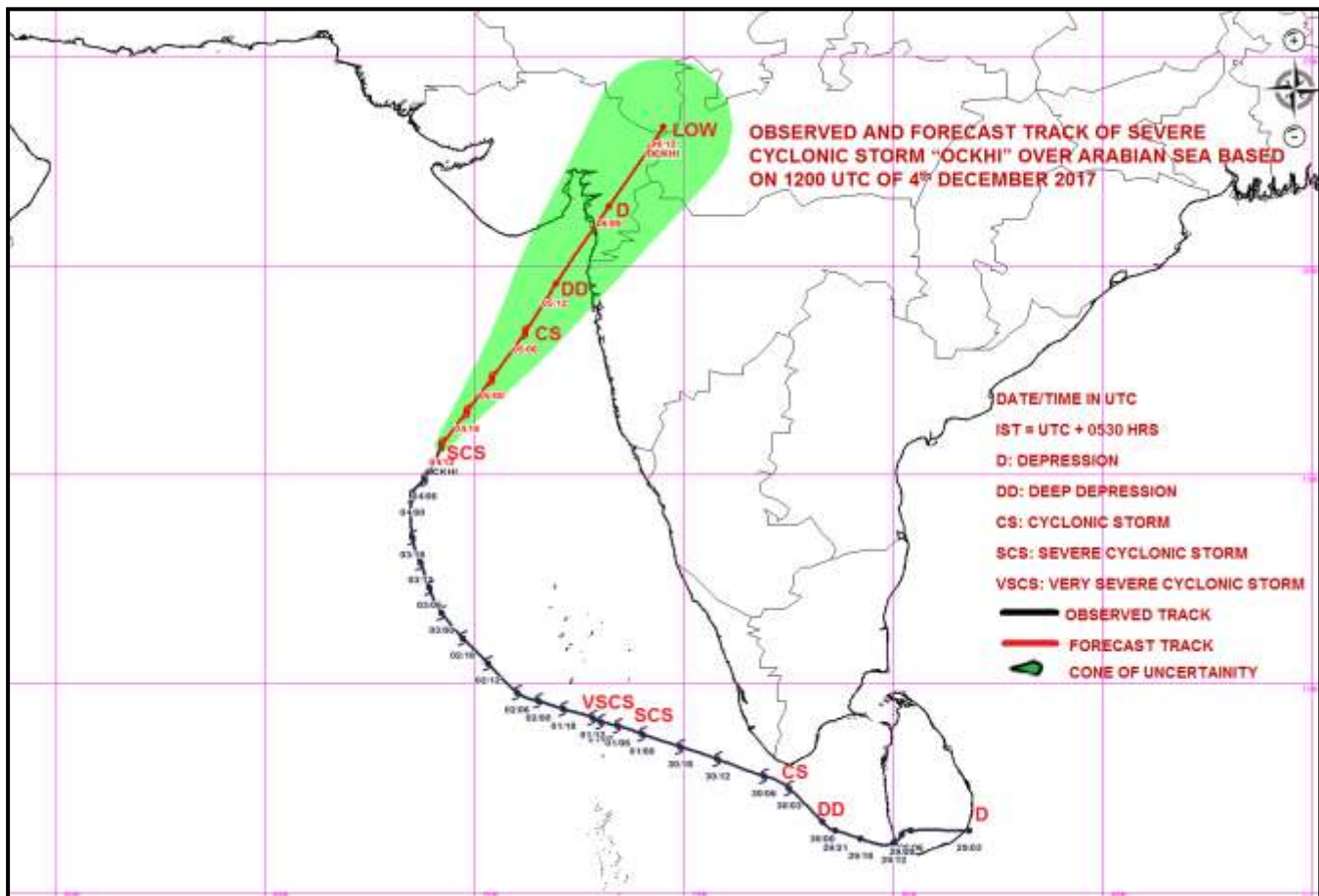
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY EIGHT ISSUED AT 2000 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 1800 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 18 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1800 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 16.5° N AND LONGITUDE 69.8° E, ABOUT 610 KM SOUTHWEST OF SURAT AND 420 KM SOUTHWEST OF MUMBAI. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/1800	16.5/69.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0600	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1200	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
05/1800	20.0/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.4/73.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 15.0 °N AND 19.0 °N AND LONGITUDE 67.0 °E TO 72.0 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92 DEG C. SATELLITE IMAGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AT 1800 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.7 HPA AND SURFACE WIND SPEED OF 10<sup>0</sup>/19 KNOTS AND A SHIP LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 72.9 °E REPORTED MEAN SEA LEVEL PRESSURE OF 10019 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/22 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (25-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH AND NORTHEAST. HENCE, THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. THE SYSTEM HAS WEAKENED DUE TO THE INFLUENCE OF DRY AND COLD MID-LATITUDE WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS AND HENCE, IT WILL CONTINUE TO WEAKEN FURTHER. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING ALONG 60 DEGREE EAST TO THE NORTH OF 17 DEGREE NORTH. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHWESTWARDS. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

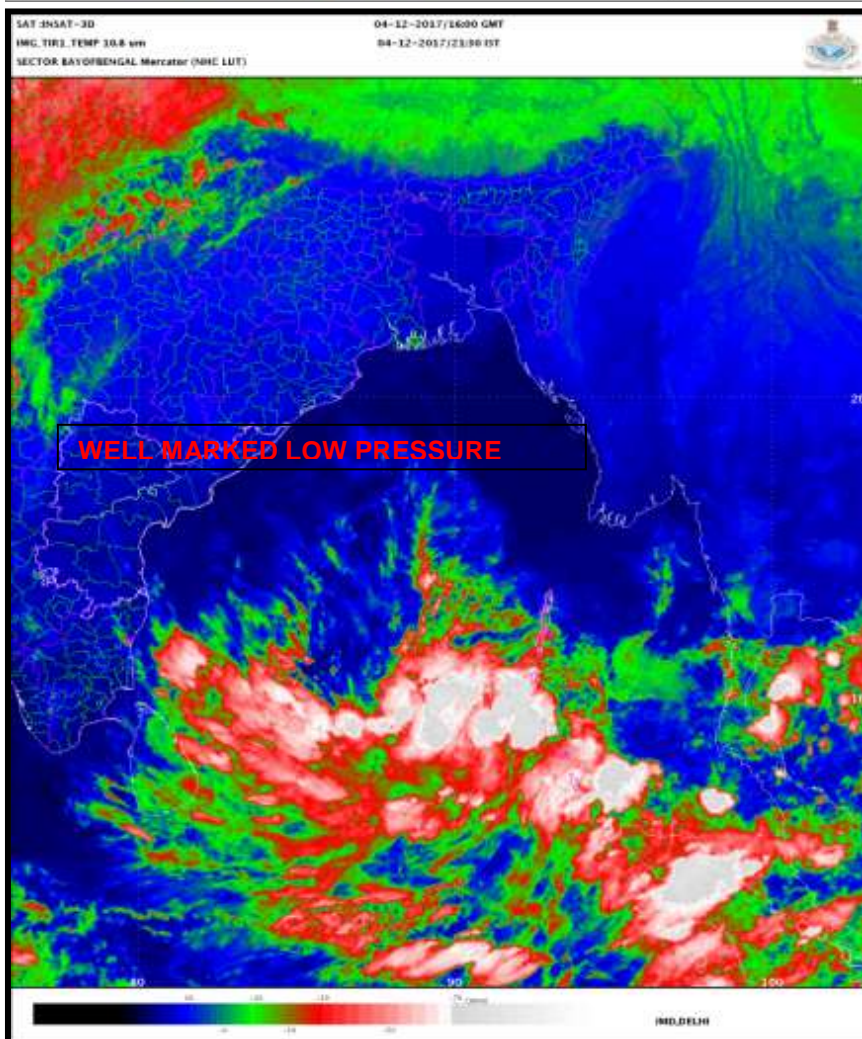
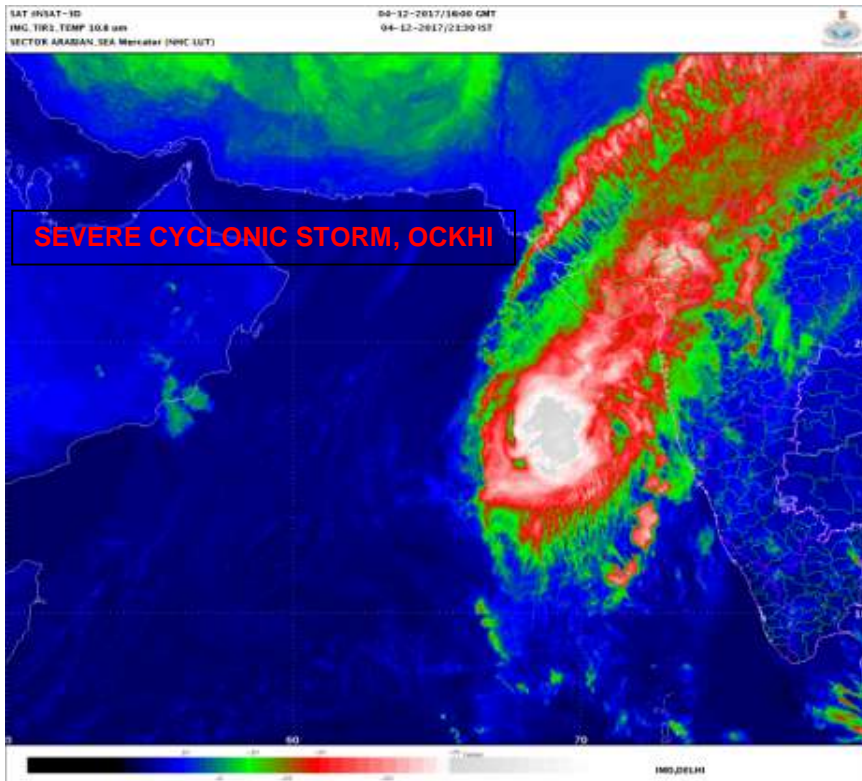
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(SHOBHIT KATIYAR)  
SCIENTIST 'B'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

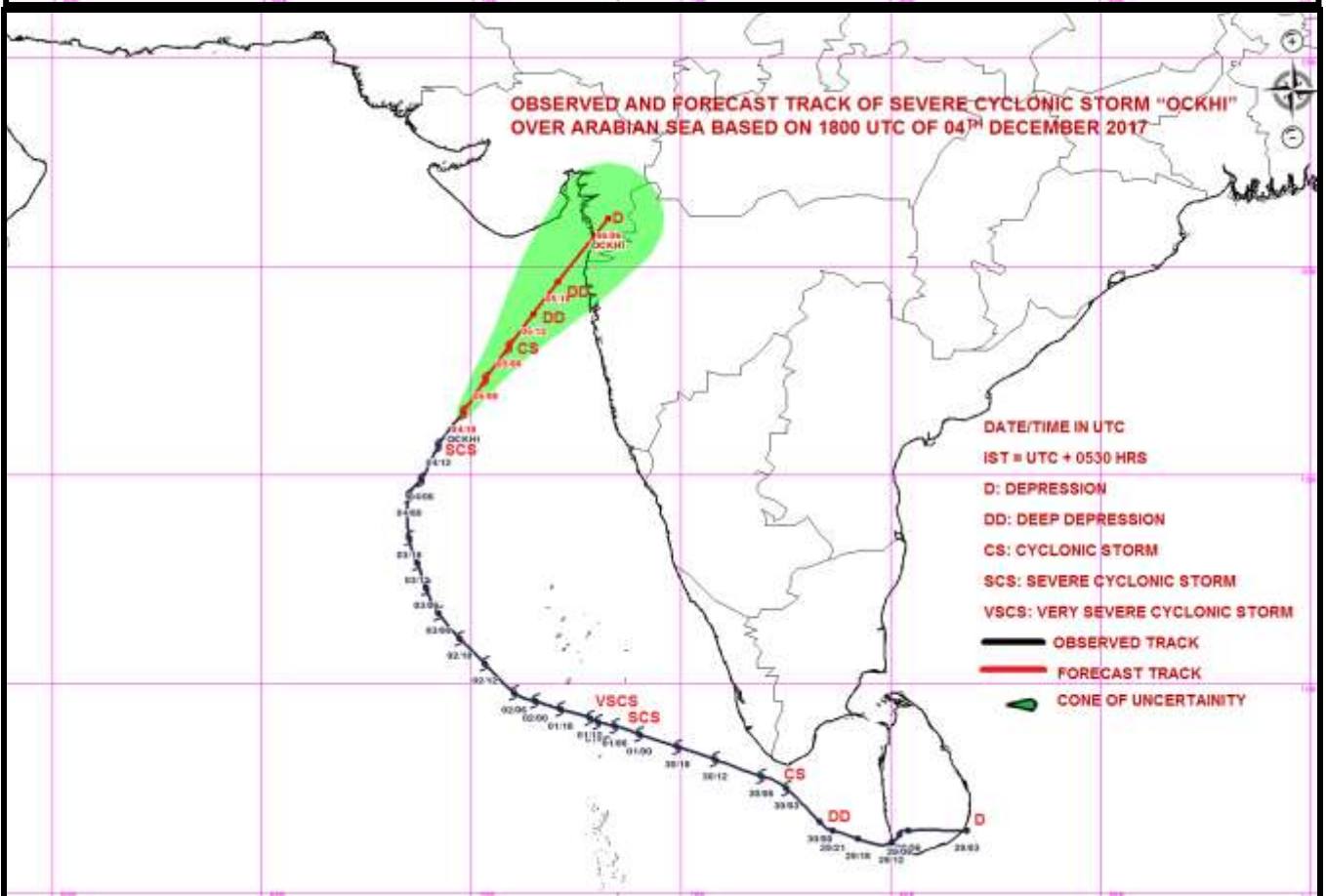
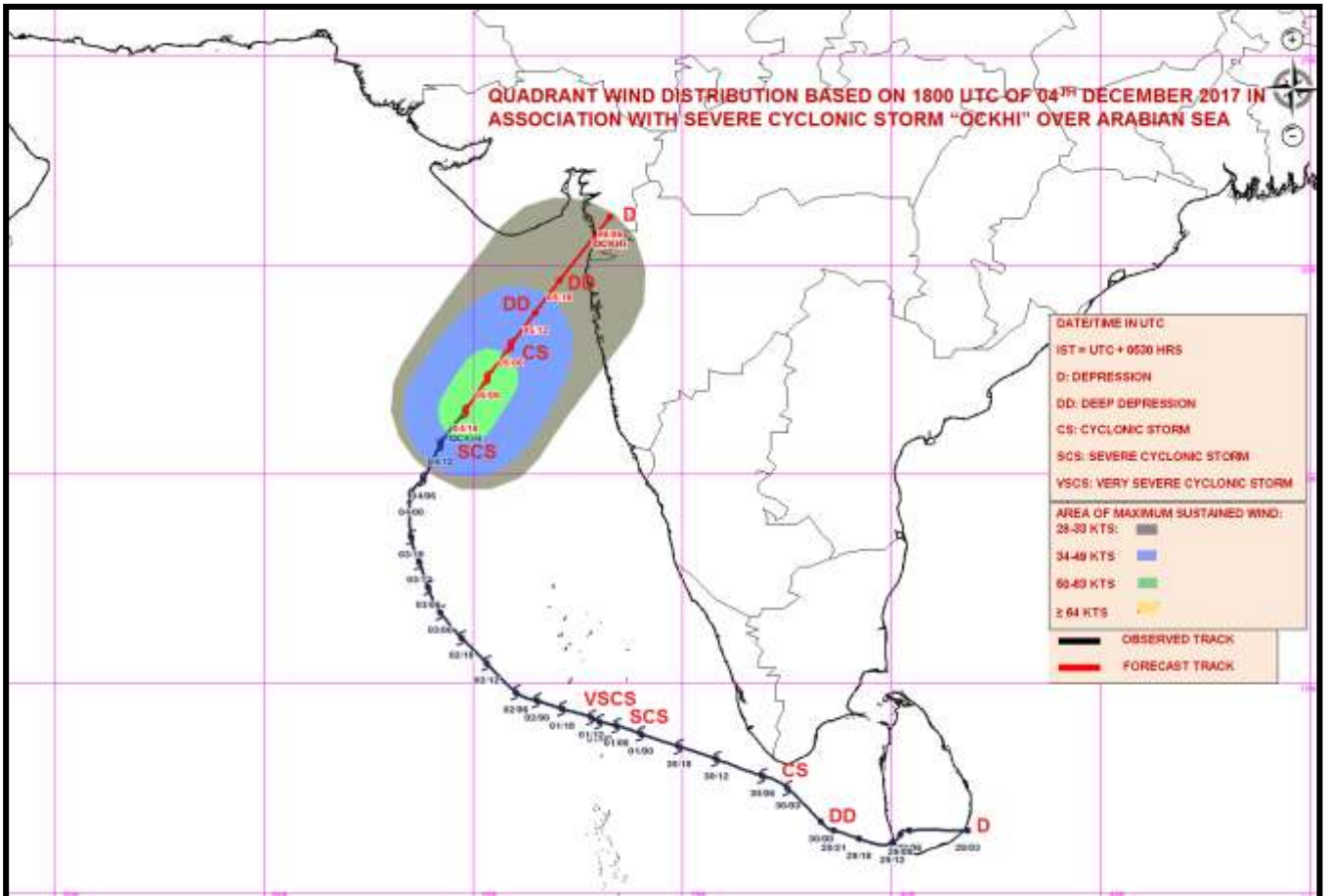
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**TROPICAL CYCLONE ADVISORY BULLETIN**

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**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. THIRTY NINE ISSUED AT 2200 UTC OF 04<sup>th</sup> DECEMBER 2017 BASED ON 2100 UTC CHARTS OF 04<sup>th</sup> DECEMBER 2017**

**(1) SEVERE CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 18 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 2100 UTC OF 04<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 16.9° N AND LONGITUDE 70.1° E, ABOUT 560 KM SOUTH-SOUTHWEST OF SURAT AND 360 KM SOUTHWEST OF MUMBAI. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
04/2100	16.9/70.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
05/0000	17.3/70.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05/0600	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1200	19.5/71.9	55-65 GUSTING TO 75	DEEP DEPRESSION
05/1800	20.0/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0600	22.4/73.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 15.0 °N AND 19.0 °N AND LONGITUDE 67.0 °E TO 72.0 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92 DEG C. SATELLITE IMEGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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AT 1800 UTC OF 04<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.5 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.7 HPA AND SURFACE WIND SPEED OF 10<sup>0</sup>/19 KNOTS AND A SHIP LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 72.9 °E REPORTED MEAN SEA LEVEL PRESSURE OF 10019 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/22 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $250 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (25-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCREASES TOWARDS NORTH AND NORTHEAST. HENCE, THE SYSTEM WILL EXPERIENCE HIGHER WIND SHEAR WITH FURTHER NORTHWARD MOVEMENT. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 28-29 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. THE SYSTEM HAS WEAKENED DUE TO THE INFLUENCE OF DRY AND COLD MID-LATITUDE WESTERLIES IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS AND HENCE, IT WILL CONTINUE TO WEAKEN FURTHER. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY.

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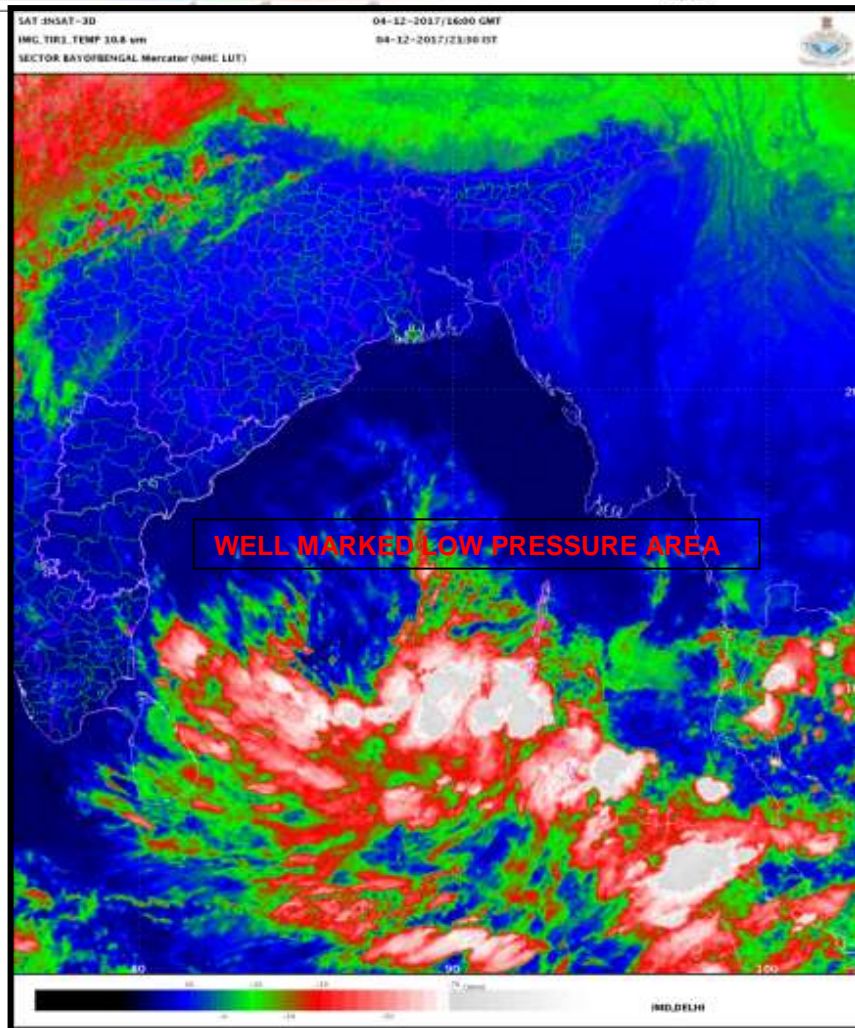
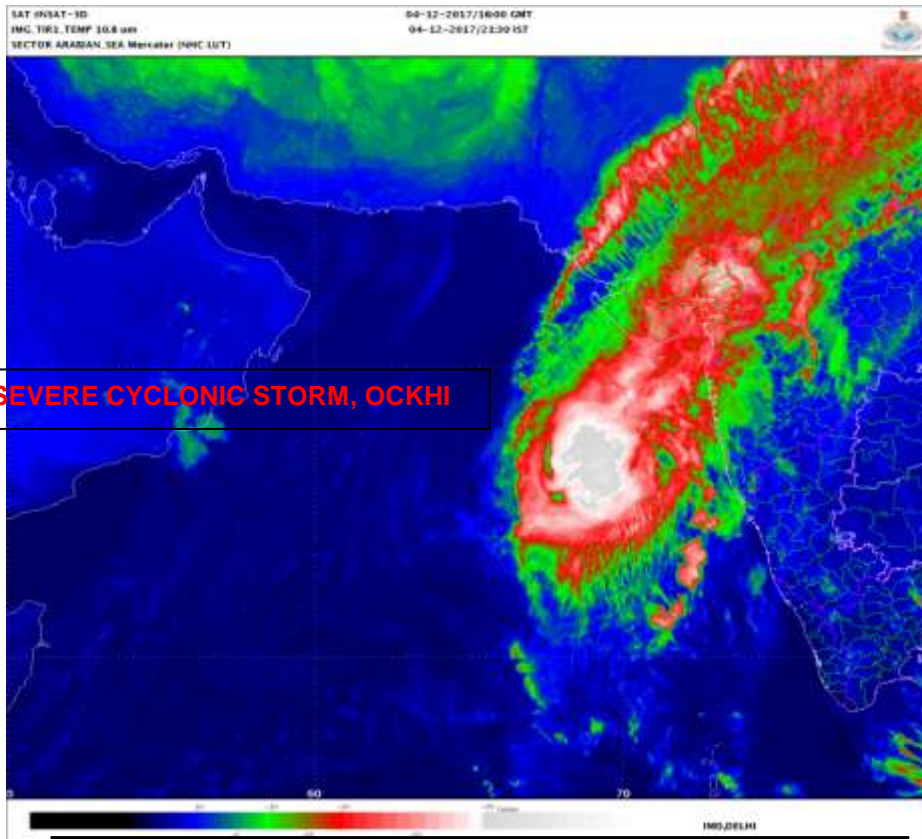
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(SHOBHIT KATIYAR)  
SCIENTIST 'B'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

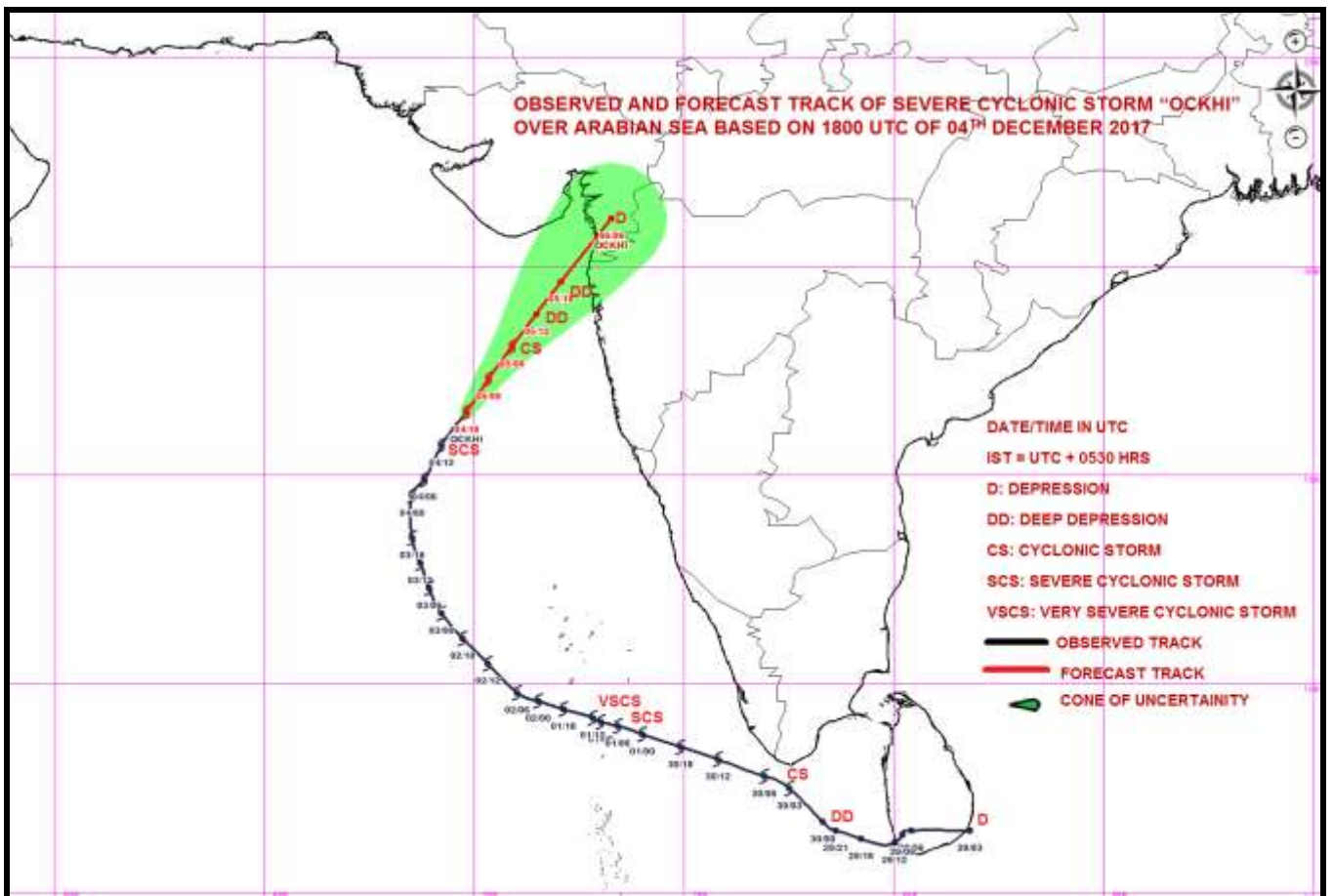
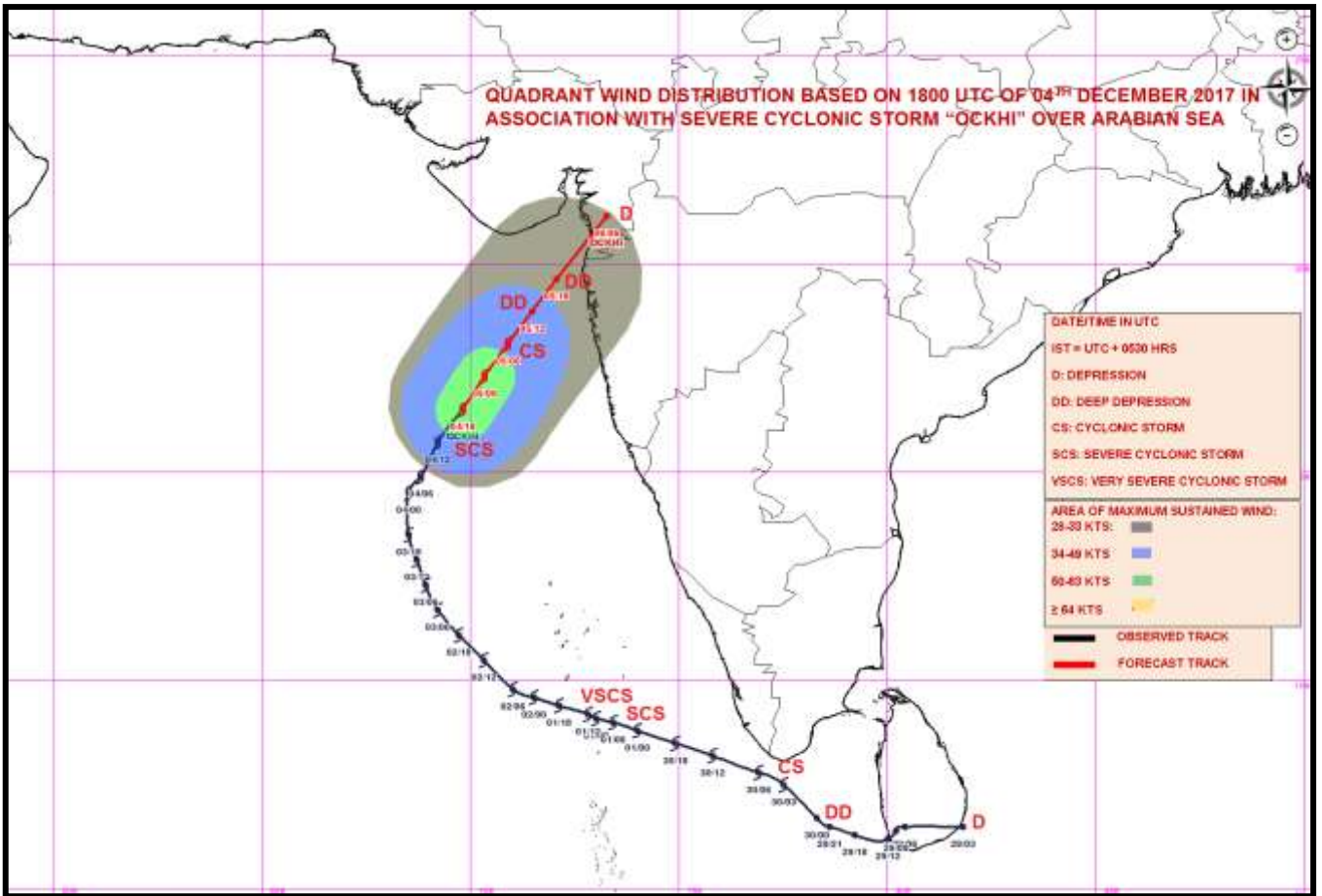
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
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**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. FORTY ISSUED AT 0300 UTC OF 05<sup>th</sup> DECEMBER 2017  
BASED ON 0000 UTC CHARTS OF 05<sup>th</sup> DECEMBER 2017**

**(1) SEVERE CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA**

THE **SEVERE CYCLONIC STORM ‘OCKHI’** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 21 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0000 UTC OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 17.5° N AND LONGITUDE 70.4° E, ABOUT 480 KM SOUTH-SOUTHWEST OF SURAT AND 300 KM WEST-SOUTHWEST OF MUMBAI. IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
05/0000	17.5/70.4	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
05/0600	18.4/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1200	19.5/71.8	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.4/72.4	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.3/73.0	35-45 GUSTING TO 55	DEPRESSION
06/1200	23.1/74.2	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92 DEG C. SATELLITE IMEGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE.

AT 0000 UTC OF 05<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.2 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.0 HPA AND SURFACE WIND SPEED OF 10<sup>0</sup>/19 KNOTS AND A SHIP LOCATED NEAR LATITUDE 18.2 °N/ LONGITUDE 66.2 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.4 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/20 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH TO VERY (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 26-27 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY. THE SYSTEM HAS WEAKENED DUE TO THE ABOVE UNFAVORABLE CONDITIONS AND WILL CONTINUE TO WEAKEN FURTHER.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE 32.0 DEGREE NORTH AND LONGITUDE 71.0 DEGREE EAST TO THE NORTH OF 17.0 DEGREE NORTH AND LONGITUDE 64.0 DEGREE. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA LIES OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER SOUTHEAST BAY OF BENGAL DURING NEXT 24 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMILNADU - SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(SHOBHIT KATIYAR)  
SCIENTIST 'B'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

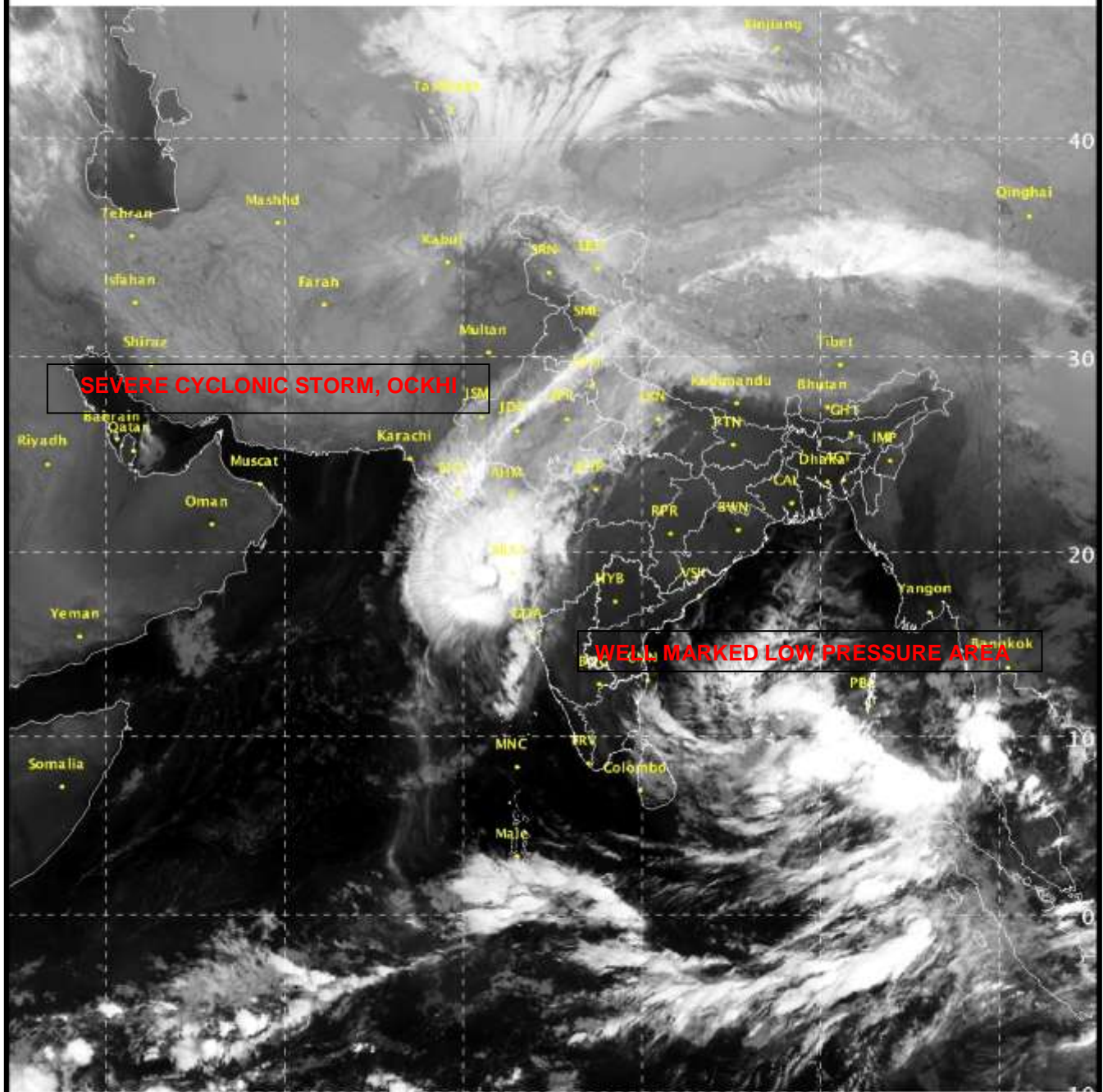
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IMG\_TIR1 10.8 um

LIC Mercator (LINEAR STRETCH: 1.0% )

05-12-2017/01:30 GMT

05-12-2017/07:00 IST



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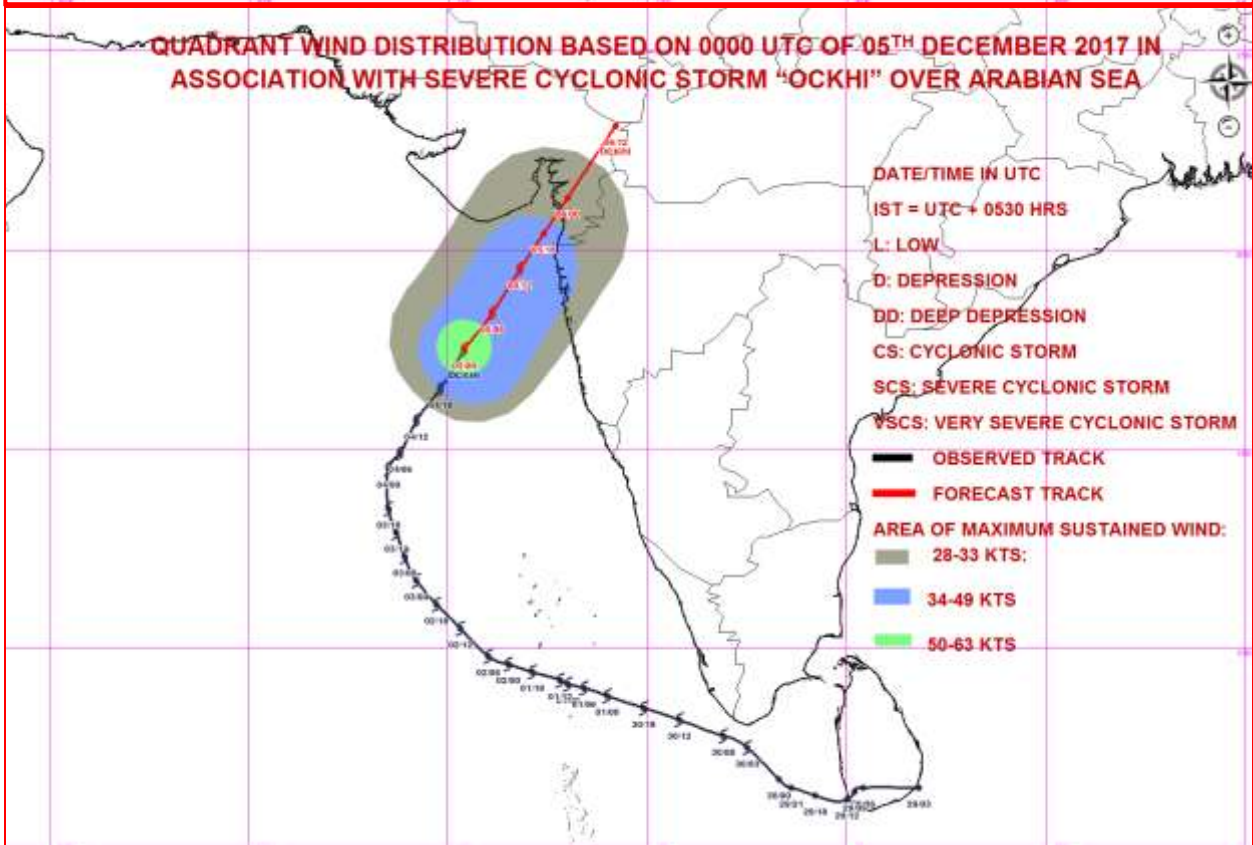
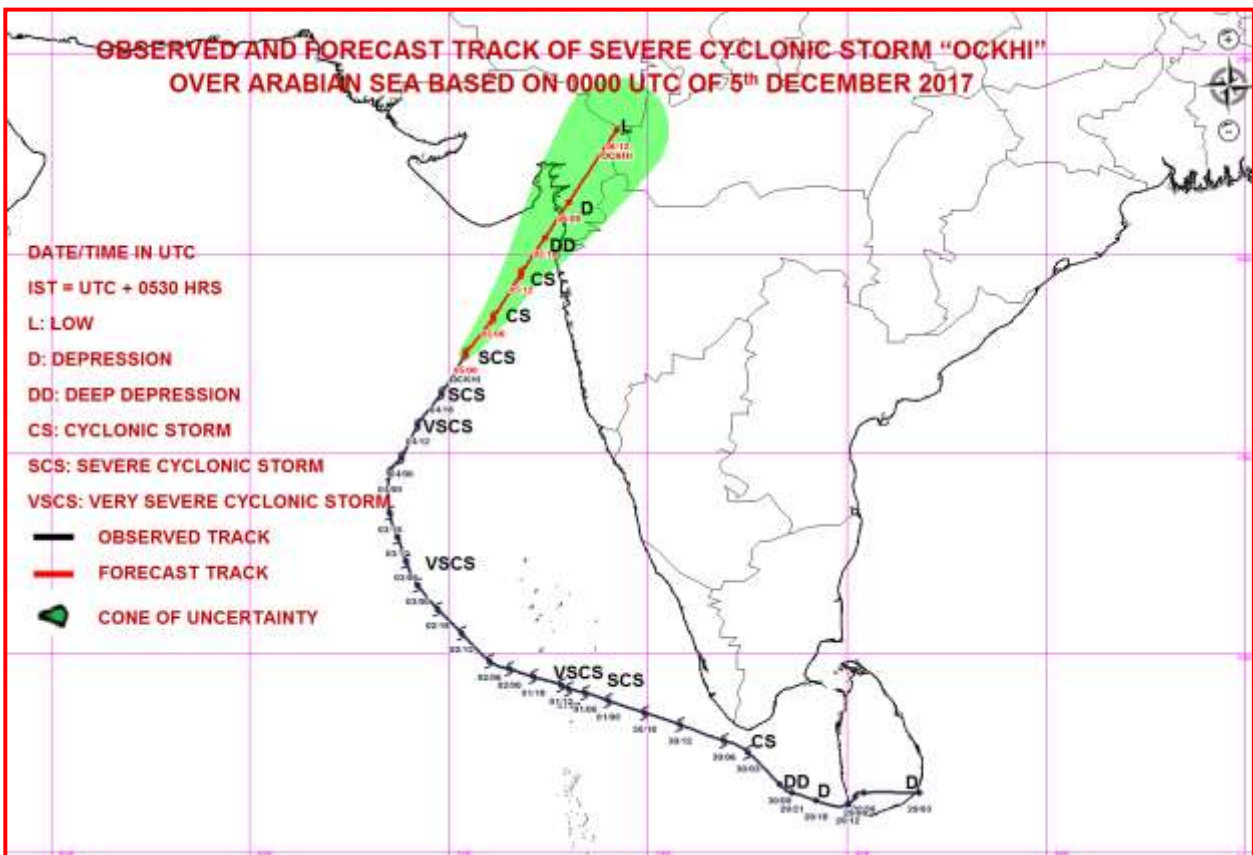
898

IMD/Delhi

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FORTYONE ISSUED AT 0600 UTC OF 05<sup>TH</sup> DECEMBER 2017  
BASED ON 0300 UTC CHARTS OF 05<sup>TH</sup> DECEMBER 2017**

**(1) CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **SEVERE CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 25 KMPH DURING PAST 6 HOURS, WEAKENED INTO A **CYCLONIC STORM** AND LAY CENTRED AT 0300 HRS IST OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 18.2° N AND LONGITUDE 70.8° E, ABOUT 390 KM SOUTH-SOUTHWEST OF SURAT (42840) AND 230 KM WEST-SOUTHWEST OF MUMBAI (43311). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A DEEP DEPRESSION BY THE NIGHT OF 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

<b>DATE/TIME(UTC)</b>	<b>POSITION LAT. °N/ LONG. °E</b>	<b>AXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)</b>	<b>CATEGORY OF CYCLONIC DISTURBANCE</b>
05/0300	18.2/70.8	80-90 GUSTING TO 100	CYCLONIC STORM
05/0600	18.7/71.2	75-85 GUSTING TO 95	CYCLONIC STORM
05/1200	19.7/71.8	65-75 GUSTING TO 85	CYCLONIC STORM
05/1800	20.8/72.5	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.9/73.2	35-45 GUSTING TO 55	DEPRESSION
06/1200	23.8/74.5	20-30 GUSTING TO 40	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T3.5/4.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92 DEG C. SATELLITE IMAGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. STATE OF SEA IS VERY HIGH AROUND SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

AT 0000 UTC OF 05<sup>th</sup> DECEMBER, A BUOY LOCATED NEAR LATITUDE 18.5 °N/ LONGITUDE 67.2 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.0 HPA AND SURFACE WIND SPEED OF 10<sup>0</sup>/19 KNOTS AND A SHIP LOCATED NEAR LATITUDE 18.2 °N/ LONGITUDE 66.2 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1008.4 HPA AND SURFACE WIND SPEED OF 20<sup>0</sup>/20 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH TO VERY (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 26-27 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES COLD AND DRY AIR ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY. THE SYSTEM HAS WEAKENED DUE TO THE ABOVE UNFAVORABLE CONDITIONS AND WILL CONTINUE TO WEAKEN FURTHER.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE 32.0 DEGREE NORTH AND LONGITUDE 71.0 DEGREE EAST TO THE NORTH OF 17.0 DEGREE NORTH AND LONGITUDE 64.0 DEGREE. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU- SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

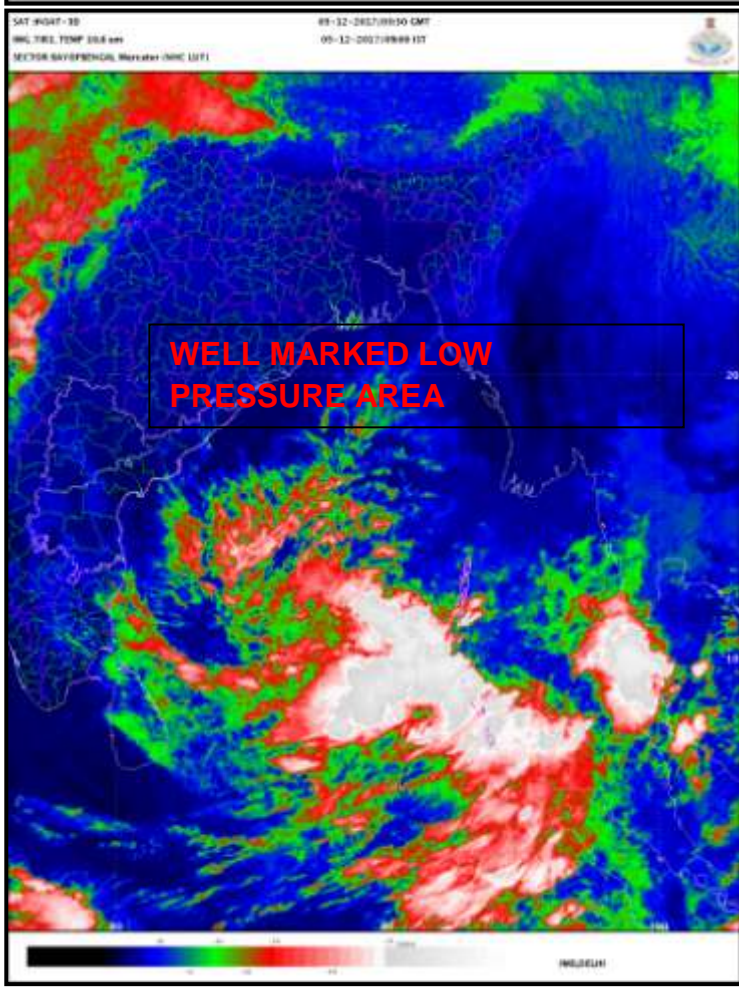
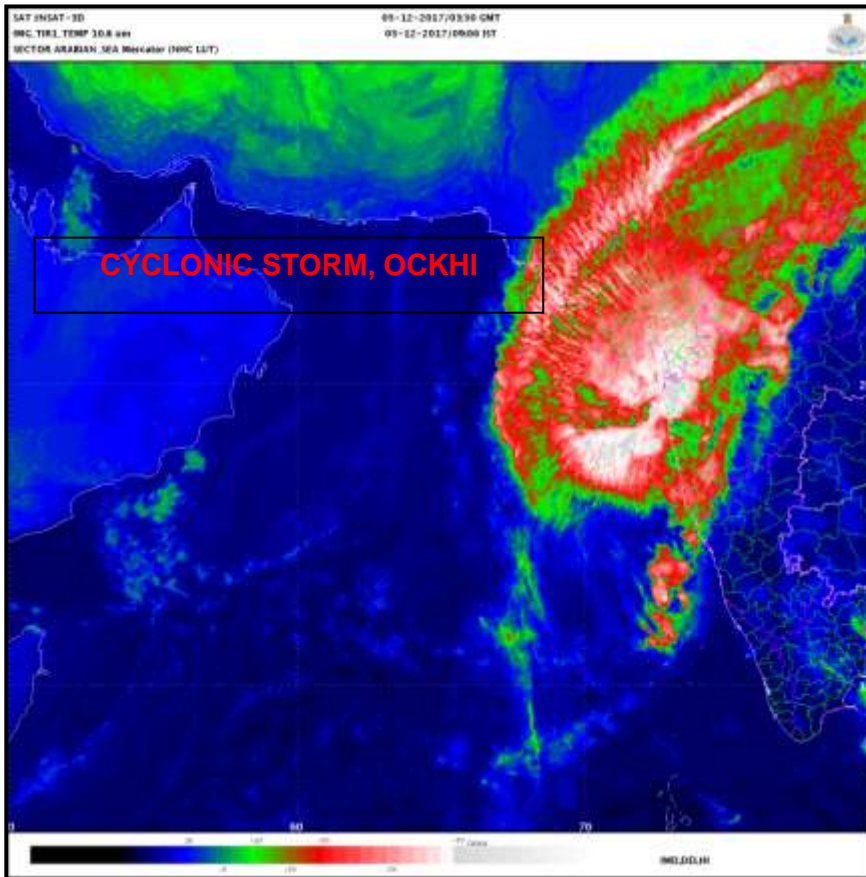
AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

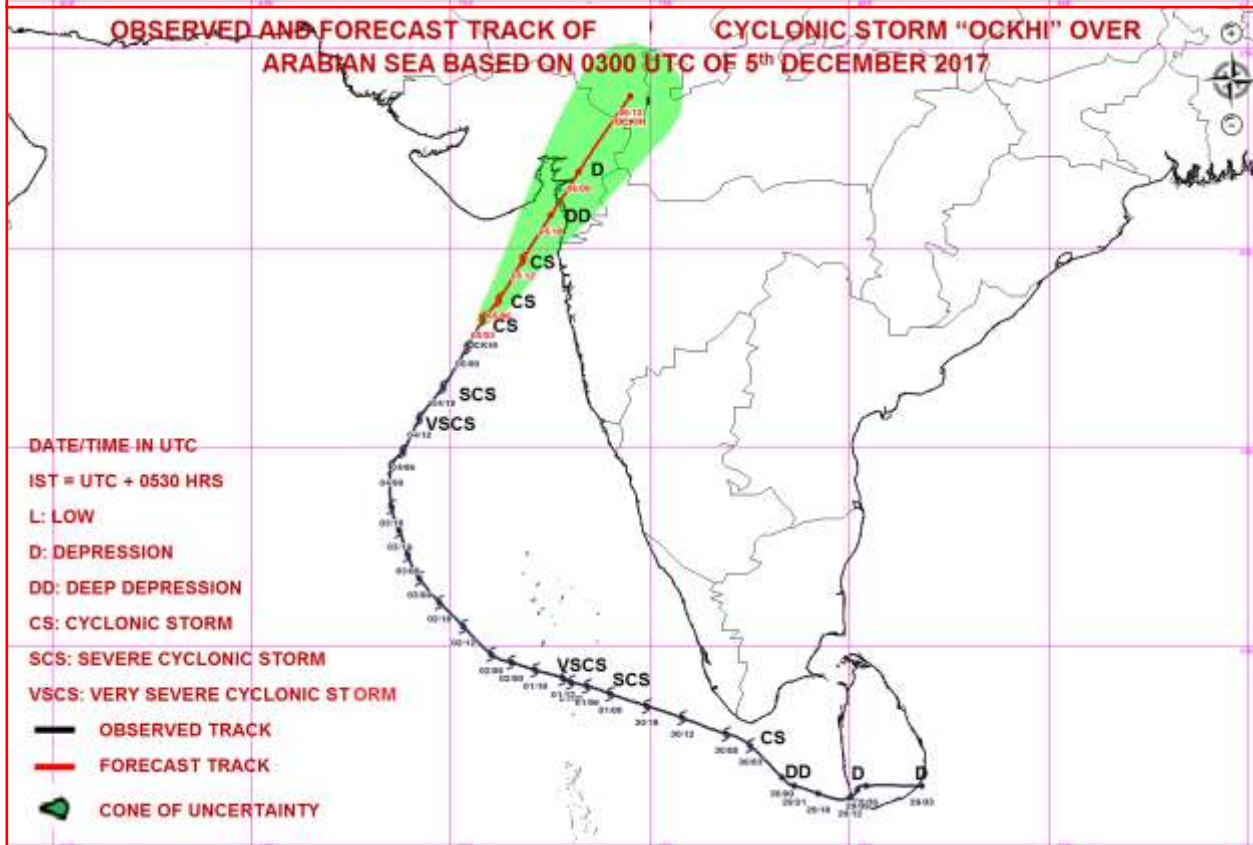
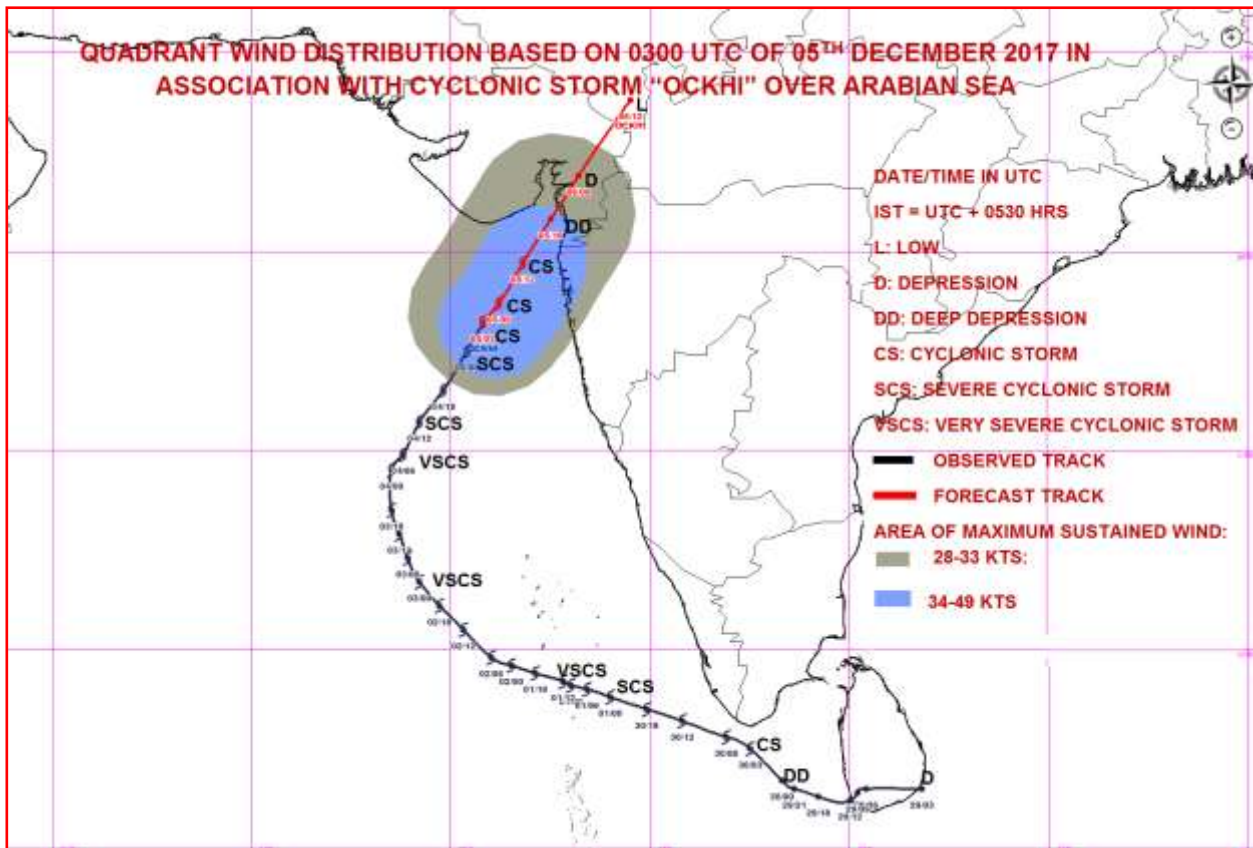
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM 'OCKHI' ADVISORY NO. FORTYTWO ISSUED AT 0900 UTC OF 05<sup>th</sup> DECEMBER 2017**  
**BASED ON 0600 UTC CHARTS OF 05<sup>th</sup> DECEMBER 2017**

**(1) CYCLONIC STORM 'OCKHI' OVER EASTCENTRAL ARABIAN SEA**

THE **CYCLONIC STORM 'OCKHI'** OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 21 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 06 UTC OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 18.5° N AND LONGITUDE 71.0° E, ABOUT 350 KM SOUTH-SOUTHWEST OF SURAT (42840) AND 200 KM WEST-SOUTHWEST OF MUMBAI (43311). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT (42840) AS A DEEP DEPRESSION BY TONIGHT, THE 5<sup>TH</sup> DECEMBER 2017.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

<b>DATE/TIME(IST)</b>	<b>POSITION LAT. °N/ LONG. °E</b>	<b>AXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)</b>	<b>CATEGORY OF CYCLONIC DISTURBANCE</b>
05/0600	18.5/71.0	70-80 GUSTING TO 90	CYCLONIC STORM
05/1200	19.5/71.7	60-70 GUSTING TO 80	CYCLONIC STORM
05/1800	20.6/72.4	50-60 GUSTING TO 70	DEEP DEPRESSION
06/0000	21.7/73.1	40-50 GUSTING TO 60	DEPRESSION
06/0600	22.6/73.7	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.5/3.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E, SOUTH GUJARAT, NORTH MAHARASHTRA AND ADJOINING GULF OF CAMBAY. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92 DEG C. SATELLITE IMAGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 40 KNOTS GUSTING TO 50 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



AT 0600 UTC OF 05<sup>th</sup> DECEMBER, A SHIP LOCATED NEAR LATITUDE 18.6 °N/ LONGITUDE 72.5 °E REPORTED SURFACE WIND SPEED OF 160<sup>0</sup>/35 KNOTS AND ANOTHER SHIP LOCATED NEAR LATITUDE 17 °N/ LONGITUDE 66.4 °E REPORTED MEAN SEA LEVEL PRESSURE OF 1010.3 HPA AND SURFACE WIND SPEED OF 010<sup>0</sup>/31 KNOTS.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $200 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40-50 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 26-27 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26 °C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES THAT COLD AND DRY AIR HAS ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE ENVIRONMENTAL CONDITIONS IT IS VERY LIKELY TO WEAKEN GRADUALLY. THE SYSTEM HAS WEAKENED DUE TO THE ABOVE UNFAVORABLE CONDITIONS AND WILL CONTINUE TO WEAKEN FURTHER.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE 32.0 DEGREE NORTH AND LONGITUDE 71.0 DEGREE EAST TO THE NORTH OF 17.0 DEGREE NORTH AND LONGITUDE 64.0 DEGREE. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND ADJOINING SOUTH ANDAMAN SEA NOW LIES OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS TOWARDS NORTH TAMIL NADU- SOUTH ANDHRA PRADESH COASTS DURING NEXT 3 DAYS.

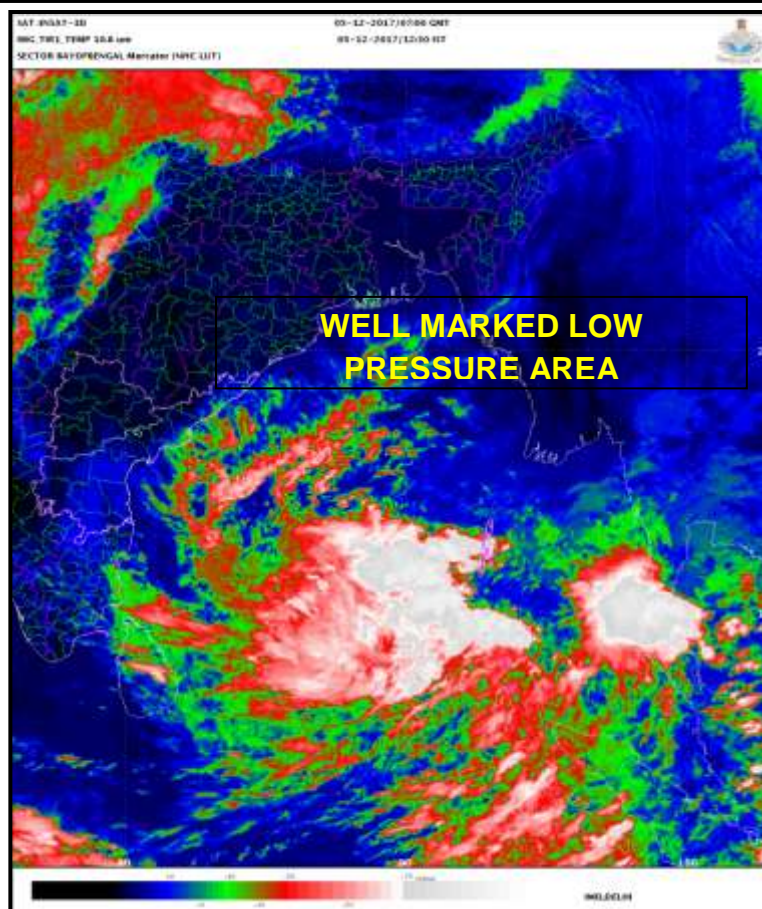
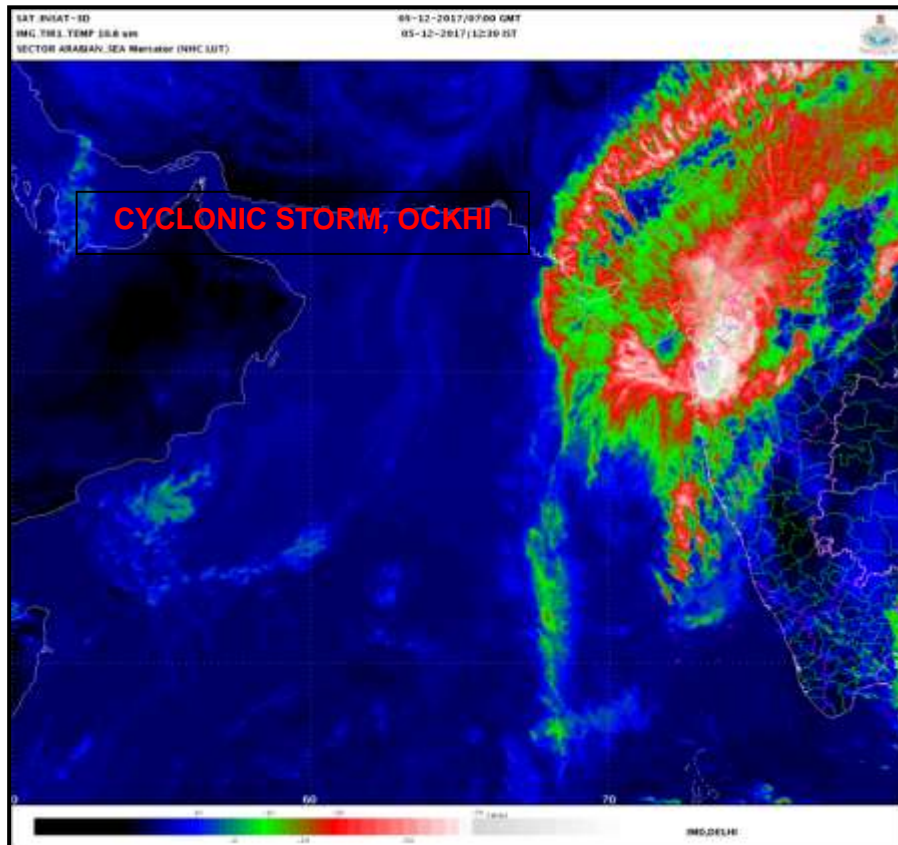
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(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

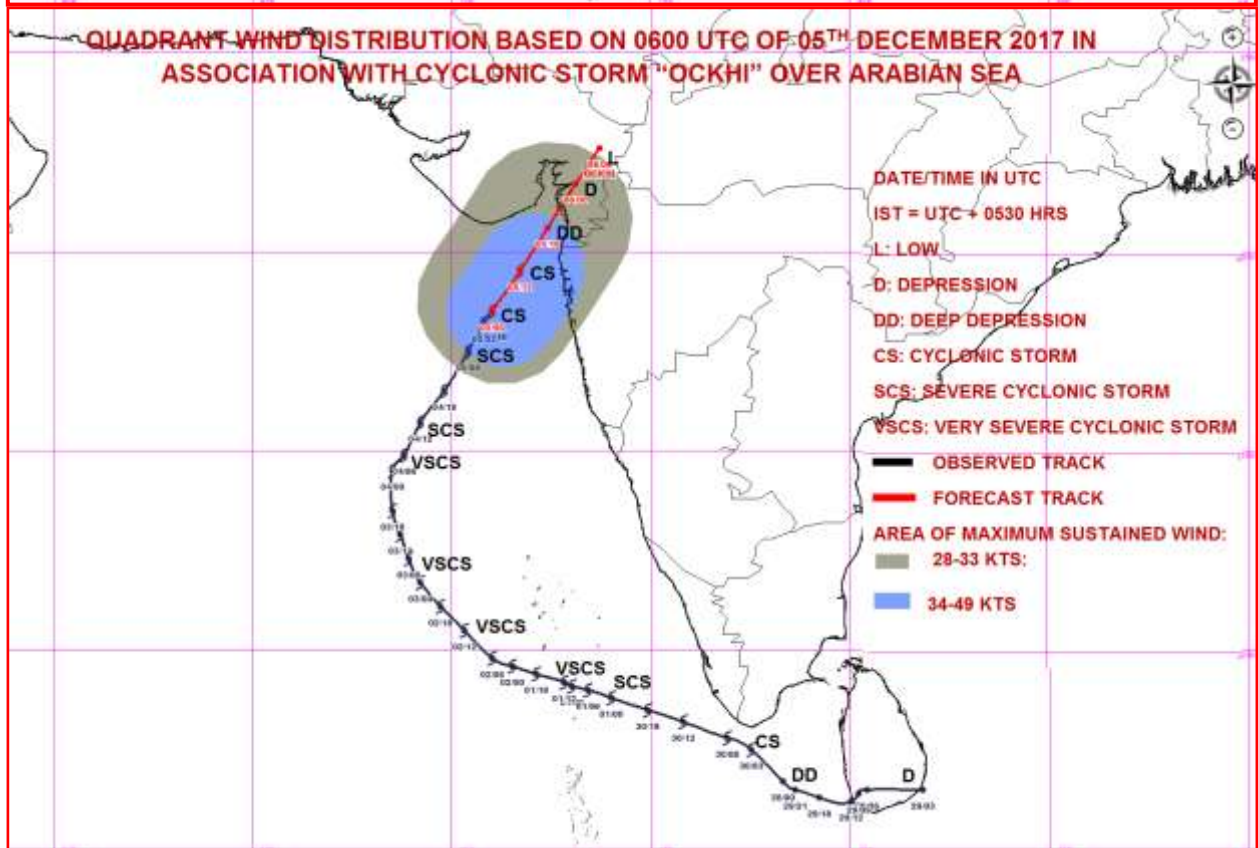
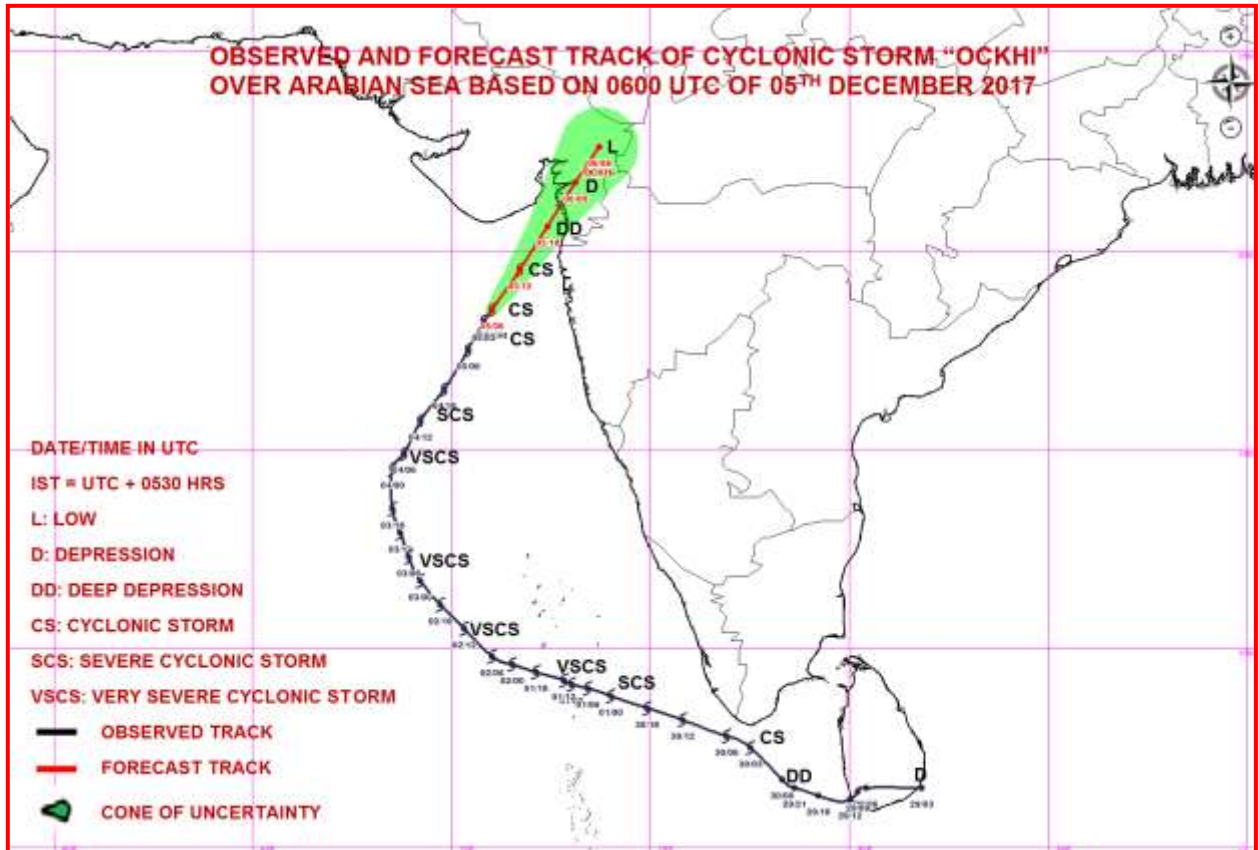
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**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**  
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**TROPICAL CYCLONE ADVISORY BULLETIN**

**FROM: RSMC –TROPICAL CYCLONES, NEW DELHI**  
**TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)**  
**STORM WARNING CENTRE, BANGKOK (THAILAND)**  
**STORM WARNING CENTRE, COLOMBO (SRILANKA)**  
**STORM WARNING CENTRE, DHAKA (BANGLADESH)**  
**STORM WARNING CENTRE, KARACHI (PAKISTAN)**  
**METEOROLOGICAL OFFICE, MALE (MALDIVES)**  
**OMAN METEOROLOGICAL DEPARTMENT, MUSCAT(THROUGH RTH JEDDAH)**  
**YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)**

**TROPICAL CYCLONE ADVISORY**

**RSMC – TROPICAL CYCLONES, NEW DELHI**

**TROPICAL STORM ‘OCKHI’ ADVISORY NO. FORTYTHREE ISSUED AT 1200 UTC OF 05<sup>th</sup> DECEMBER 2017 BASED ON 0900 UTC CHARTS OF 05<sup>th</sup> DECEMBER 2017**

**(1) CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA WEAKENED INTO A DEEP DEPRESSION**

THE CYCLONIC STORM ‘OCKHI’ OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 17 KMPH DURING PAST 6 HOURS AND WEAKENED INTO A **DEEP DEPRESSION** AND LAY CENTRED AT 0900 OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 19.0° N AND LONGITUDE 71.3° E, ABOUT 290 KM SOUTH-SOUTHWEST OF SURAT AND 160 KM WEST OF MUMBAI (43311). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN FURTHER AND CROSS SOUTH GUJARAT AND ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT (42840) AS A **DEPRESSION** BY TONIGHT, THE 5<sup>TH</sup> DECEMBER 2017. HOWEVER, THERE IS ALSO A PROBABILITY OF DISSIPATION OF THE SYSTEM OVER THE SEA BEFORE THE LANDFALL DUE TO UNFAVOURABLE ENVIRONMENTAL CONDITIONS, LIKE HIGH WIND SHEAR AND COLDER SEA SURFACE TEMPERATURES NEAR THE COAST.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. °N/ LONG. °E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
05/0900	19.0/71.3	55-65 GUSTING TO 75	DEEP DEPRESSION
05/1200	19.5/71.7	50-60 GUSTING TO 70	DEEP DEPRESSION
05/1800	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0000	21.7/73.1	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS **T2.0**. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E, SOUTH GUJARAT, NORTH MAHARSHTRA AND ADJOINING GULF OF CAMBAY. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 71 DEG C. SATELLITE IMEGERIES INDICATE DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS HIGH AROUND SYSTEM CENTRE.

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

THE LOW LEVEL RELATIVE VORTICITY HAS DECREASED AND IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS  $26-27 \text{ }^{\circ}\text{C}$ . IT DECREASES TO THE NORTH AND BECOMES  $25-26 \text{ }^{\circ}\text{C}$  OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT  $30-50 \text{ KJ/CM}^2$  OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES THAT COLD AND DRY AIR HAS ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE UNFAVORABLE ENVIRONMENTAL CONDITIONS THE SYSTEM HAS WEAKENED AND WILL CONTINUE TO WEAKEN FURTHER.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE  $32.0 \text{ DEGREE NORTH}$  AND LONGITUDE  $71.0 \text{ DEGREE EAST}$  TO THE NORTH OF  $17.0 \text{ DEGREE NORTH}$  AND LONGITUDE  $64.0 \text{ DEGREE}$ . HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE TOWARDS NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS DURING NEXT 48 HOURS AND SUBSEQUENTLY TO NORTH ANDHRA PRADESH COAST.

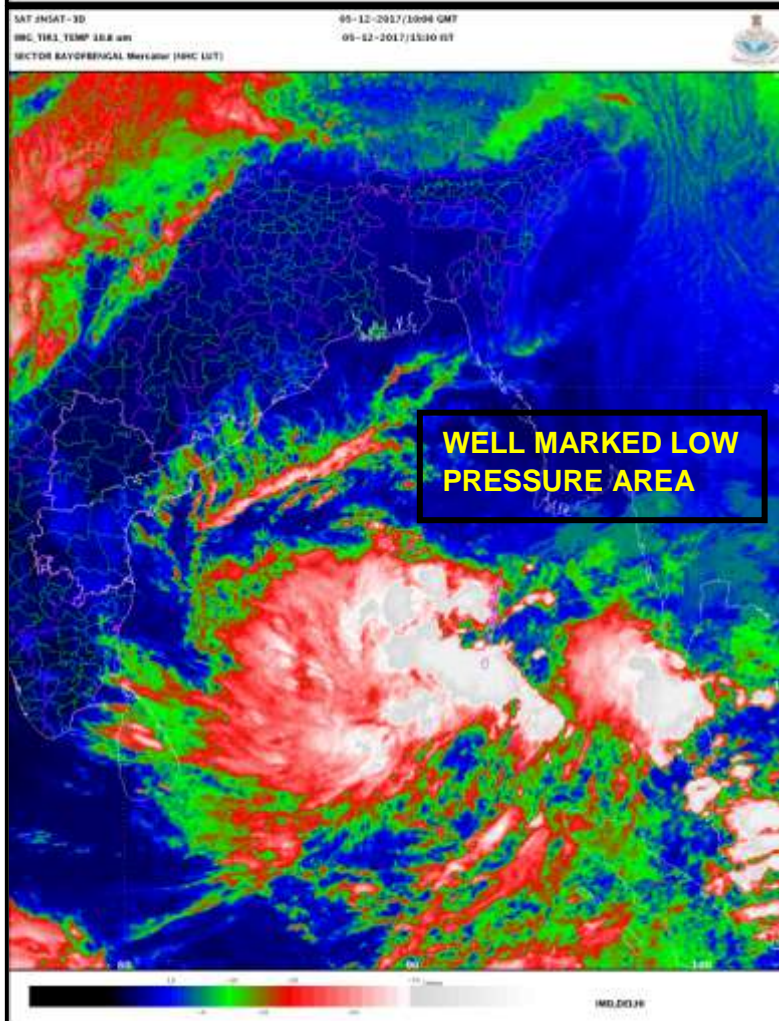
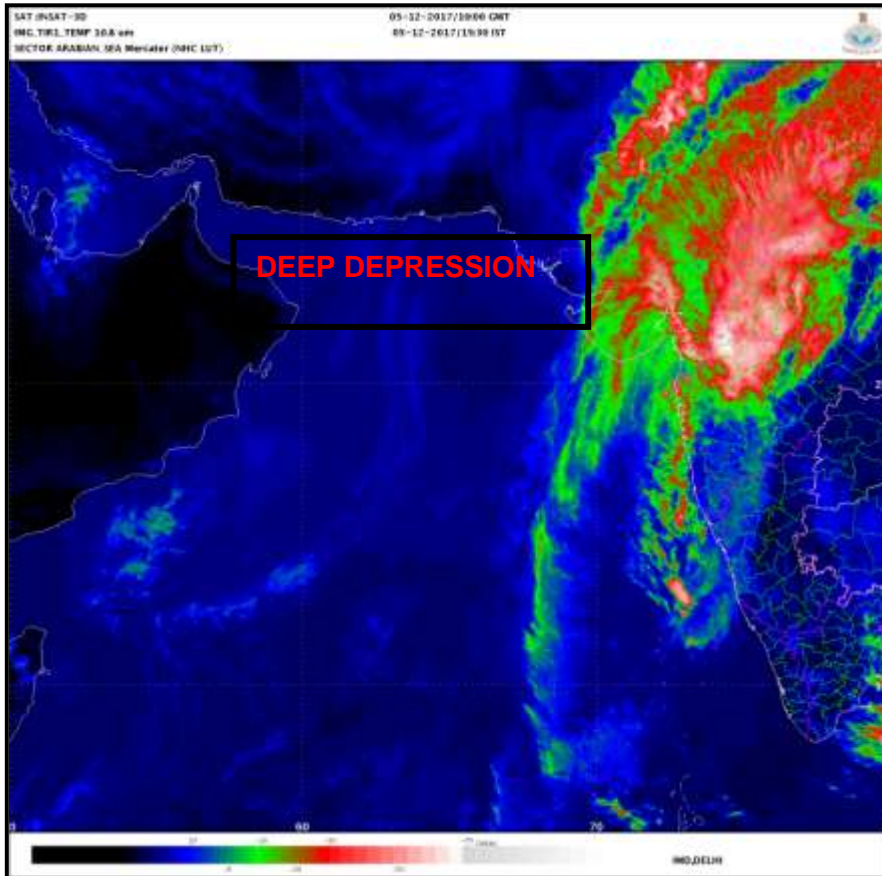
AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NEETHA K GOPAL)  
SCIENTIST 'E'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

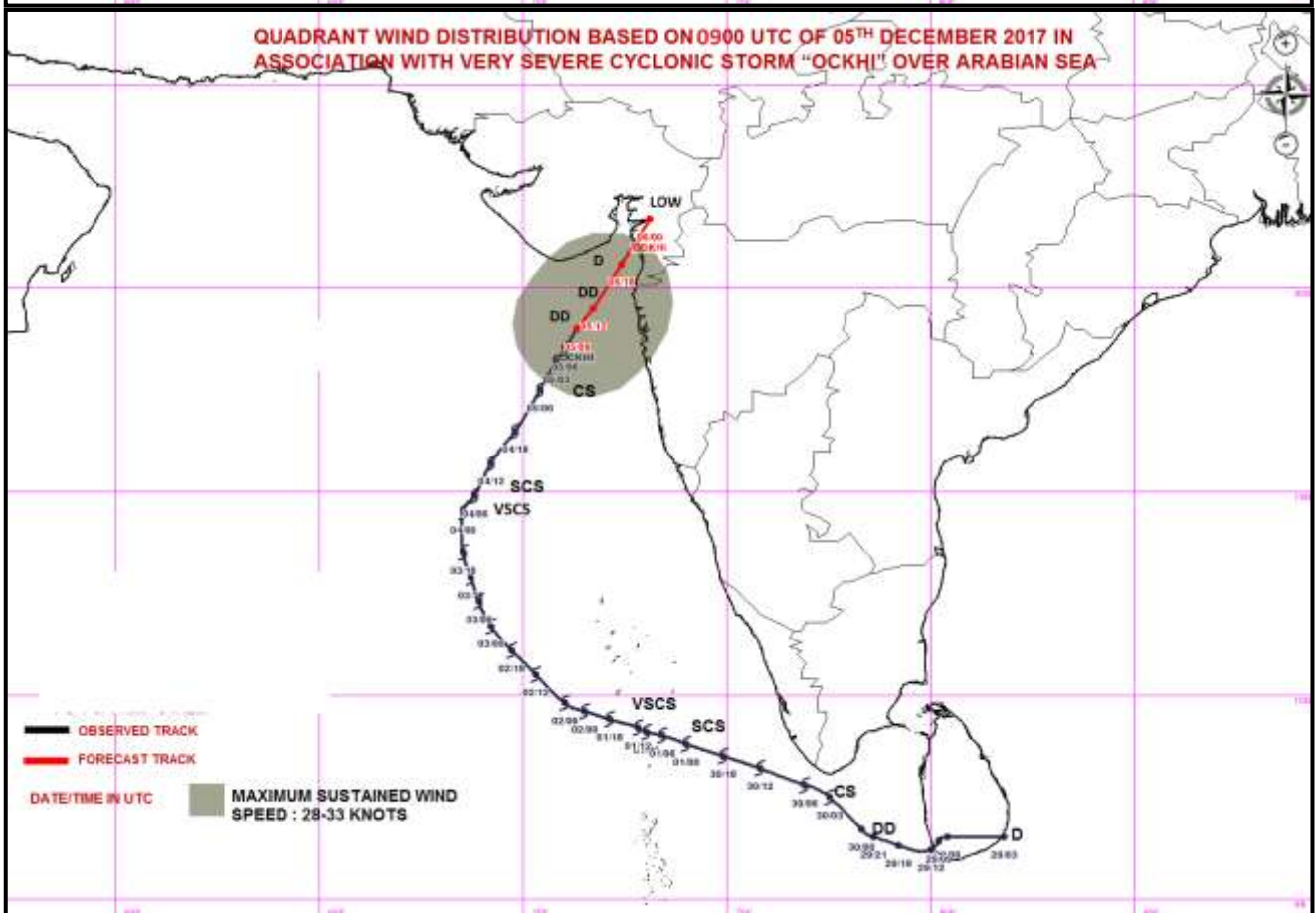
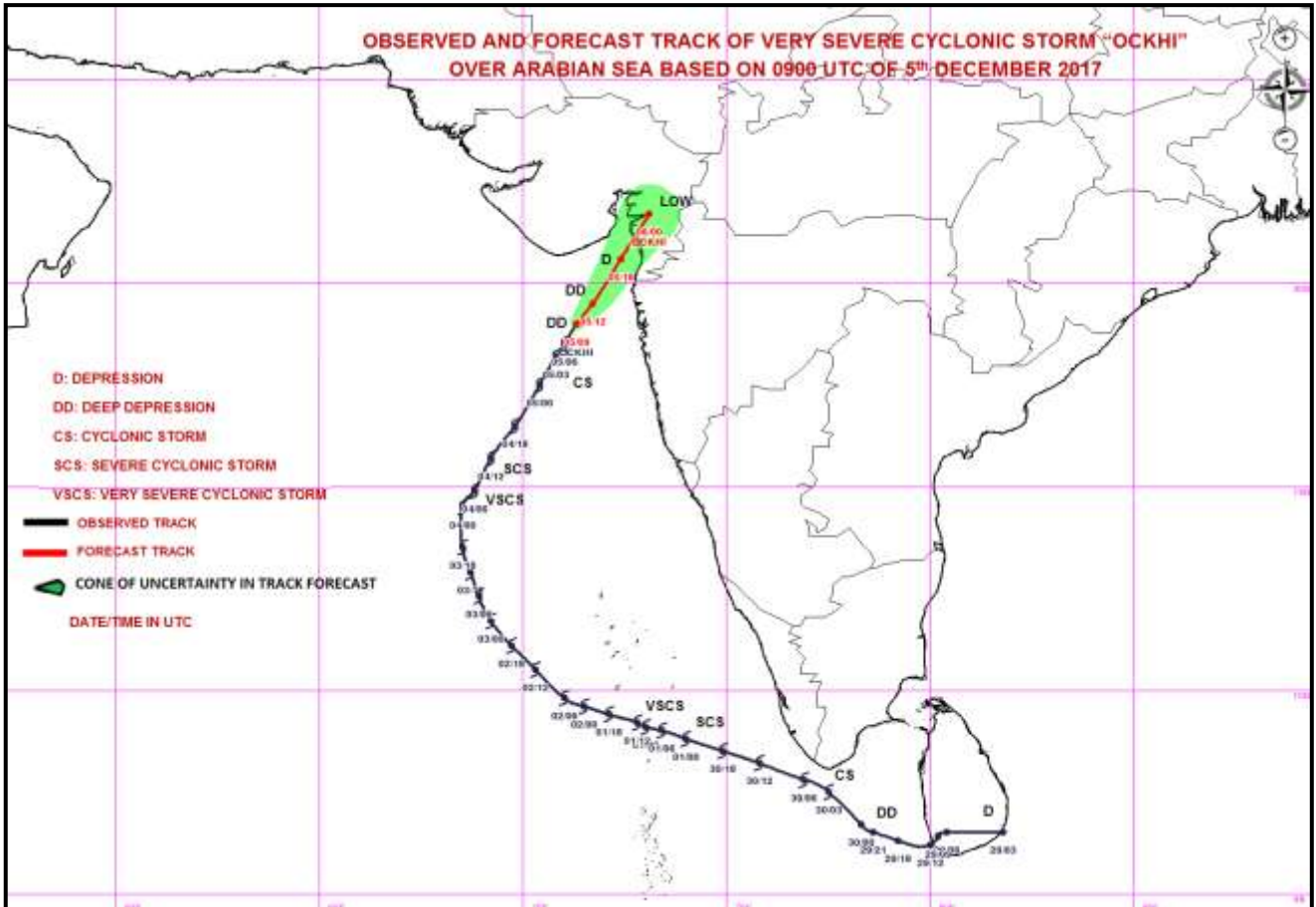
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 29.11.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 05.12.2017 BASED ON 1200 UTC OF 05.12.2017.**

**(1) DEEP DEPRESSION OVER EASTCENTRAL ARABIAN SEA**

THE DEEP DEPRESSION OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 18 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL ARABIAN SEA NEAR LATITUDE 19.4° N AND LONGITUDE 71.5° E, ABOUT 240 KM SOUTH-SOUTHWEST OF SURAT(42840) AND 150 KM WEST-NORTHWEST OF MUMBAI(43311). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN FURTHER AND CROSS SOUTH GUJARAT & ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A **DEPRESSION** BY TONIGHT, THE 5<sup>TH</sup> DECEMBER 2017. HOWEVER, THERE IS ALSO A PROBABILITY OF DISSIPATION OF THE SYSTEM OVER THE SEA BEFORE THE LANDFALL DUE TO UNFAVOURABLE ENVIRONMENTAL CONDITIONS, LIKE HIGH WIND SHEAR AND COLDER SEA SURFACE TEMPERATURES NEAR THE COAST.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION LAT. °N/ LONG. °E	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
05/1200	19.4/71.5	50-60 GUSTING TO 70	DEEP DEPRESSION
05/1800	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0000	21.7/73.1	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS **T2.0**. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E, SOUTH GUJARAT, NORTH KONKAN AND ADJOINING GULF OF CAMBAY. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 71 DEG C. SATELLITE IMAGERIES INDICATES DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS VERY ROUGH AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED IN PAST 06 HOURS AND IS ABOUT  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 26-27 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26°C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES THAT COLD AND DRY AIR HAS ENTERED INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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DECREASING. DUE TO THESE UNFAVORABLE ENVIRONMENTAL CONDITIONS THE SYSTEM WILL WEAKEN FURTHER AND BECOME INSIGNIFICANT AFTER 12 HOURS.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE 32.0 DEGREE NORTH AND LONGITUDE 71.0 DEGREE EAST TO THE NORTH OF 17.0 DEGREE NORTH AND LONGITUDE 64.0 DEGREE. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE TOWARDS NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS DURING NEXT 48 HOURS AND SUBSEQUENTLY TO NORTH ANDHRA PRADESH COAST.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(NARESH KUMAR )  
SCIENTIST 'D'  
RSMC NEW DELHI

## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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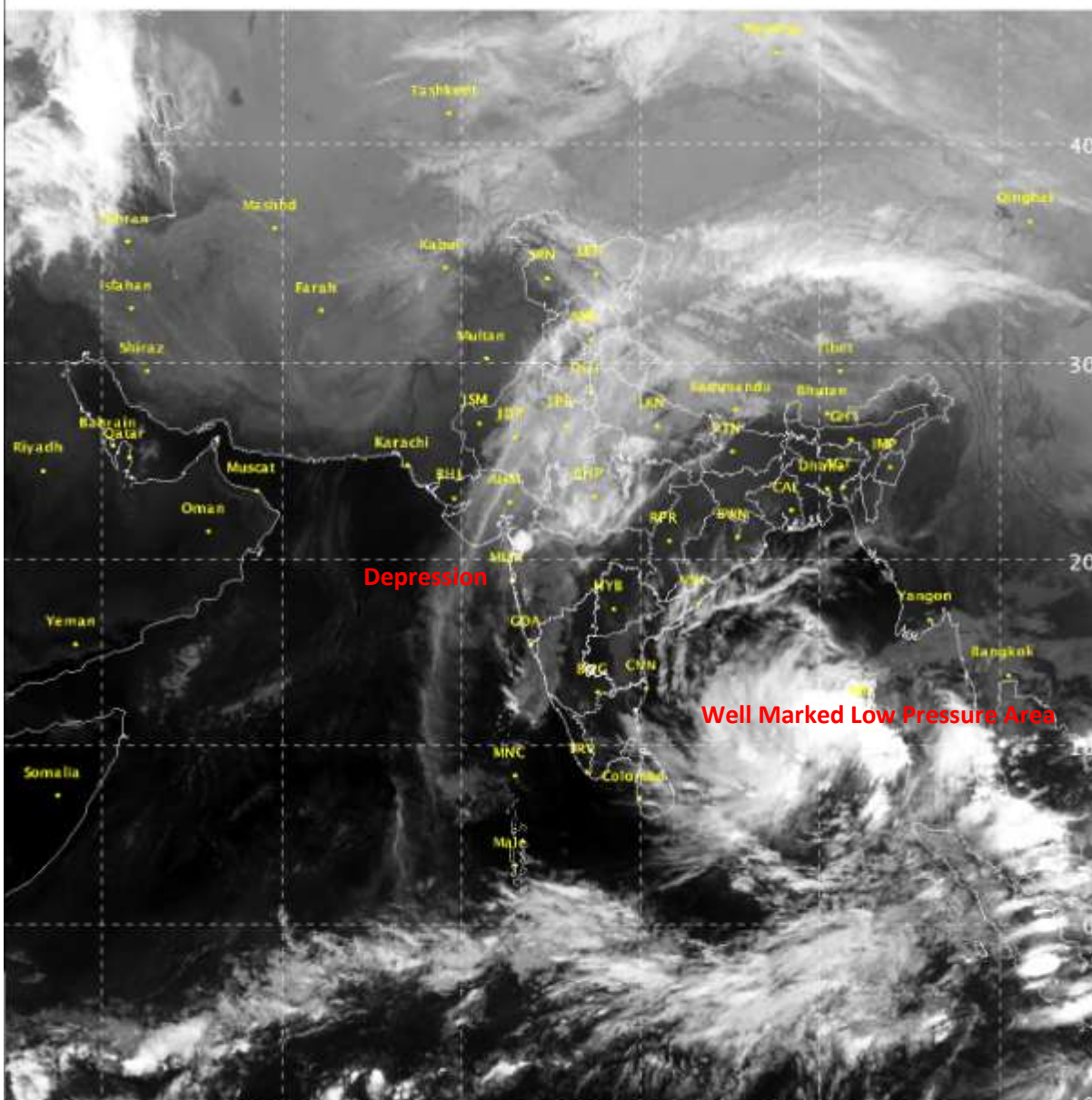
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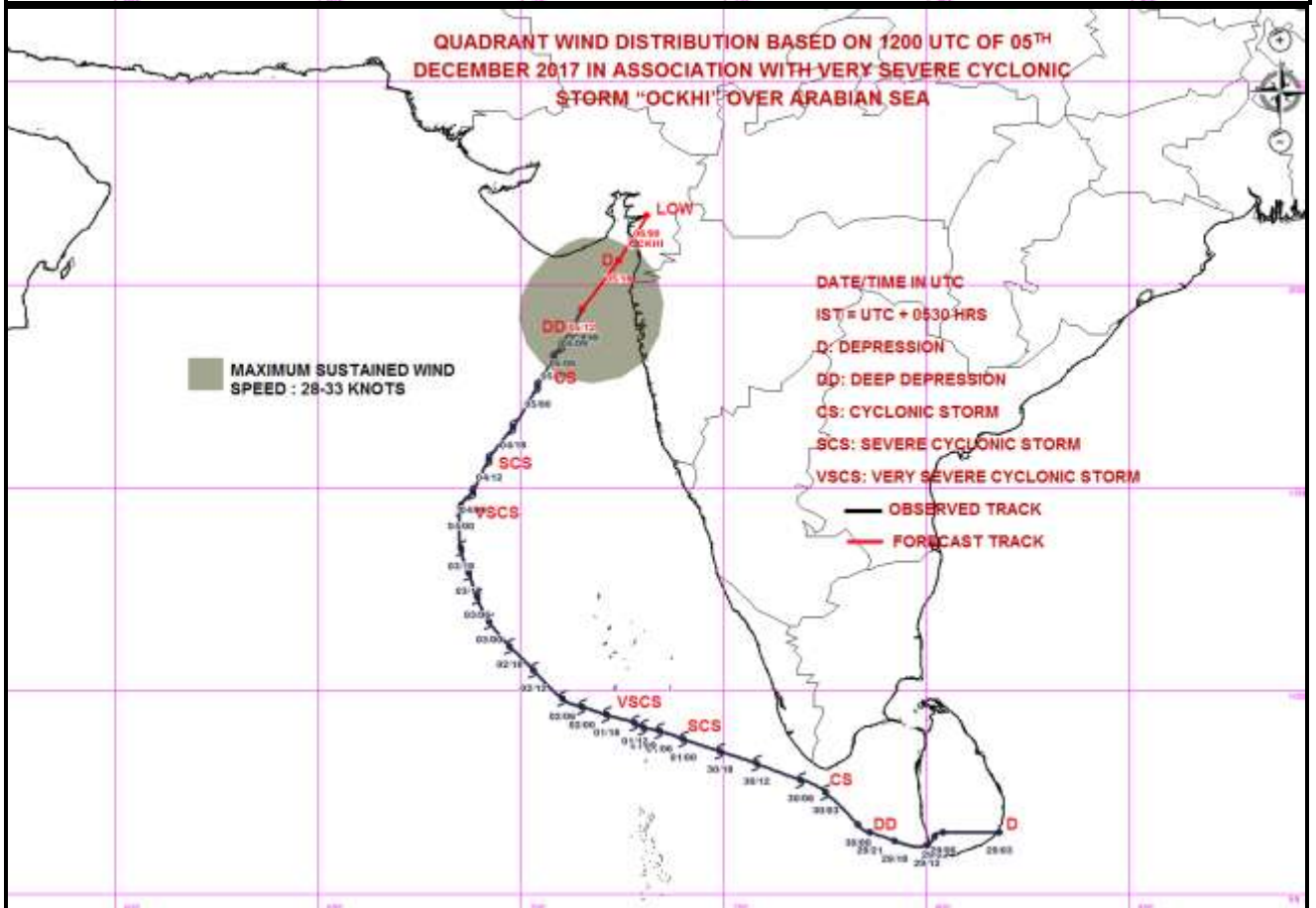
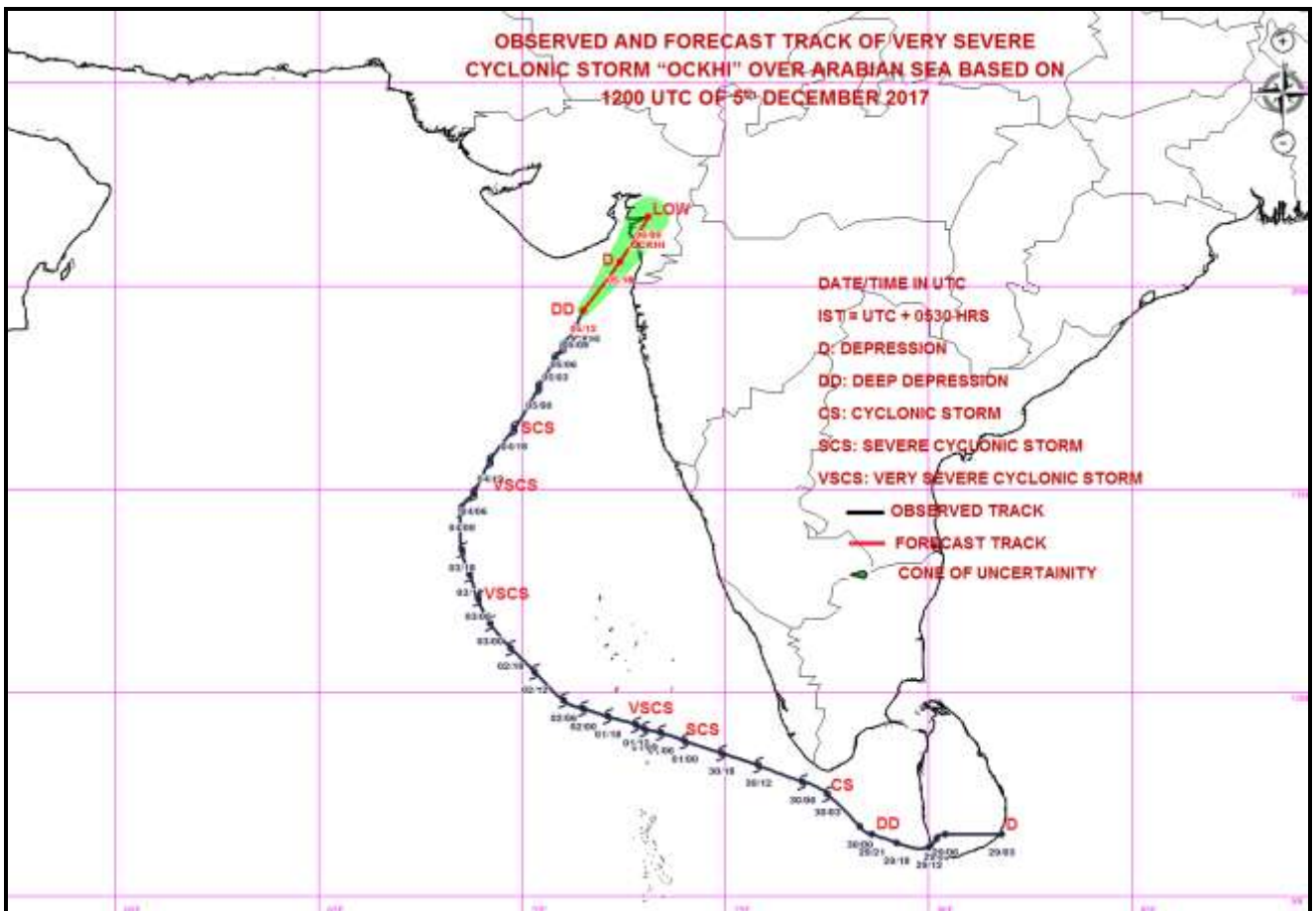
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IMD/Delhi

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 05.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1800 UTC OF 05.12.2017 BASED ON 1500 UTC OF 05.12.2017.**

**(1) DEEP DEPRESSION OVER EASTCENTRAL ARABIAN SEA**

THE DEEP DEPRESSION OVER EASTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF 22 KMPH DURING PAST 6 HOURS, WEAKENED INTO A DEPRESSION AND LAY CENTRED AT 1500 UTC OF 05<sup>TH</sup> DECEMBER, 2017 OVER EASTCENTRAL AND NORTHEAST ARABIAN SEA NEAR LATITUDE 20.0° N AND LONGITUDE 72.0° E, ABOUT 160 KM SOUTH-SOUTHWEST OF SURAT(42840) AND 130 KM NORTHWEST OF MUMBAI(43311). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND CROSS SOUTH GUJARAT & ADJOINING NORTH MAHARASHTRA COASTS NEAR SURAT AS A **DEPRESSION** BY TONIGHT, THE 5<sup>TH</sup> DECEMBER 2017. THE SYSTEM IS VERY LIKELY TO WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS. HOWEVER, THERE IS ALSO A PROBABILITY OF DISSIPATION OF THE SYSTEM OVER THE SEA BEFORE THE LANDFALL DUE TO UNFAVOURABLE ENVIRONMENTAL CONDITIONS, LIKE HIGH WIND SHEAR AND COLDER SEA SURFACE TEMPERATURES NEAR THE COAST.

TRACK AND INTENSITY FORECAST OF THE SYSTEM IS GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION LAT. °N/ LONG. °E	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
05/1500	20.0/72.0	45-55 GUSTING TO 65	DEPRESSION
05/1800	20.6/72.4	40-50 GUSTING TO 60	DEPRESSION
06/0000	21.7/73.1	25-35 GUSTING TO 45	LOW

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS **T2.0**. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATITUDE 16.0 °N AND 20.5 °N AND LONGITUDE 67.0 °E TO 73.0 °E, SOUTH GUJARAT, NORTH KONKAN AND ADJOINING GULF OF CAMBAY. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 71 DEG C. SATELLITE IMAGERIES INDICATES DISORGANISATION OF THE CLOUD SYSTEM.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1003 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS VERY ROUGH AROUND SYSTEM CENTRE.

THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE EAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED IN PAST 06 HOURS AND IS ABOUT  $10 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (30-40 KNOTS) AROUND THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE REGION IS 26-27 °C. IT DECREASES TO THE NORTH AND BECOMES 25-26°C OFF GUJARAT COAST. THE OCEAN THERMAL ENERGY IS ABOUT 30-50 KJ/CM<sup>2</sup> OVER THE AREA. IT FURTHER DECREASES TOWARDS THE NORTH. HENCE, AS PER PREDICTED TRACK, THE SYSTEM WOULD ENTER OVER THE REGION WITH FURTHER LOWER OCEAN THERMAL ENERGY. LATEST TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES THAT COLD AND DRY AIR HAS ENTERED

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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INTO THE SYSTEM. THE WARM AND MOIST AIR ADVECTION TO THE SYSTEM CENTRE IS DECREASING. DUE TO THESE UNFAVORABLE ENVIRONMENTAL CONDITIONS THE SYSTEM WILL WEAKEN FURTHER AND BECOME INSIGNIFICANT AFTER 12 HOURS.

THE SYSTEM IS BEING STEERED BY WINDS AT THE PERIPHERY OF THE ANTI CYCLONE OVER BAY OF BENGAL AND A DEEP TROUGH IN MIDDLE AND UPPER TROPOSPHERIC LEVELS RUNNING FROM LATITUDE 32.0 DEGREE NORTH AND LONGITUDE 71.0 DEGREE EAST TO THE NORTH OF 17.0 DEGREE NORTH AND LONGITUDE 64.0 DEGREE. HENCE THE SYSTEM IS EXPECTED TO MOVE NORTH-NORTHEAST. THE NWP MODELS ARE ALSO IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

## **2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE TOWARDS NORTH TAMIL NADU-SOUTH ANDHRA PRADESH COASTS DURING NEXT 48 HOURS AND SUBSEQUENTLY TO NORTH ANDHRA PRADESH COAST.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

(SHIBIN B )  
SCIENTIST 'B'  
RSMC NEW DELHI

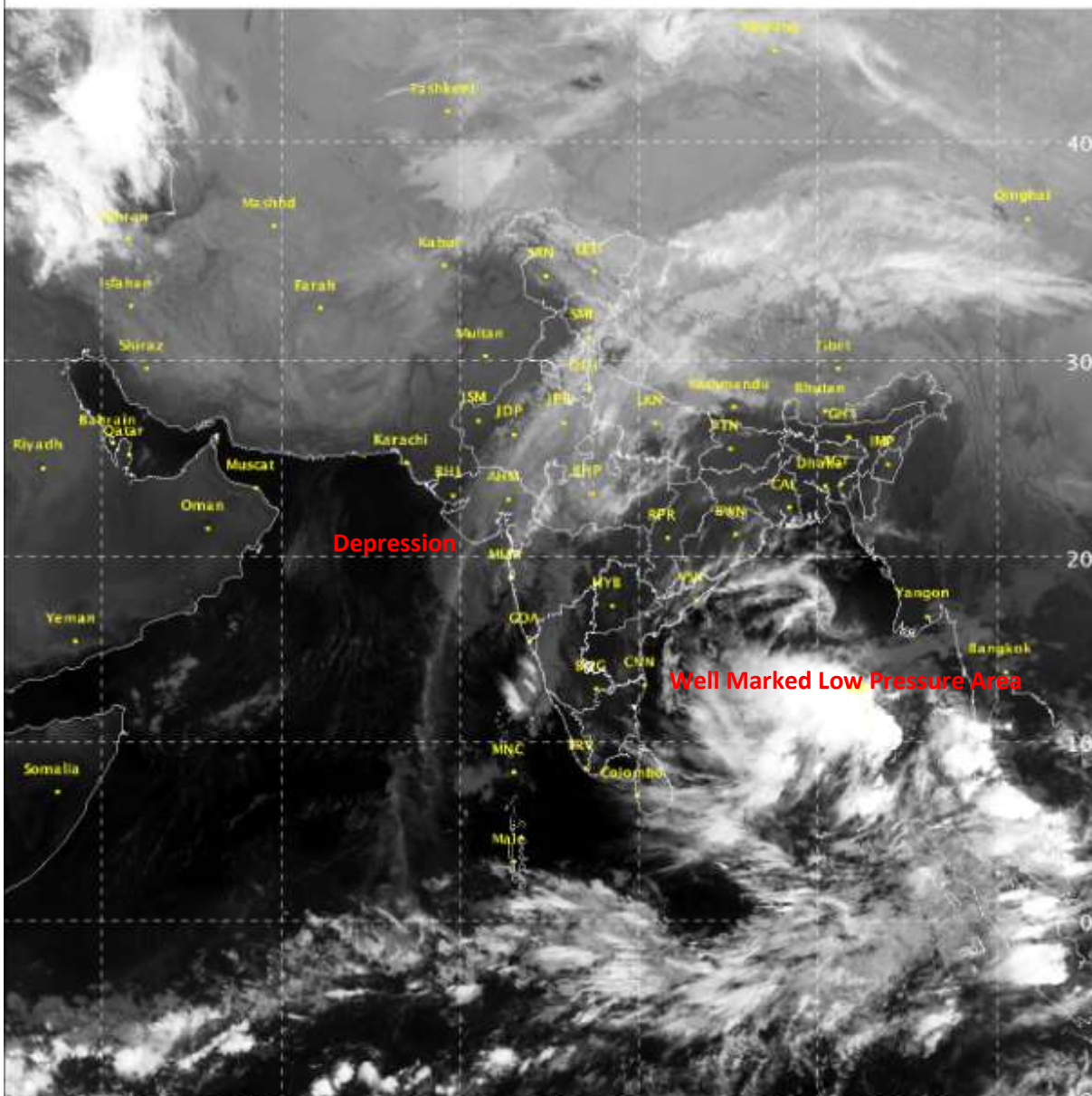
## **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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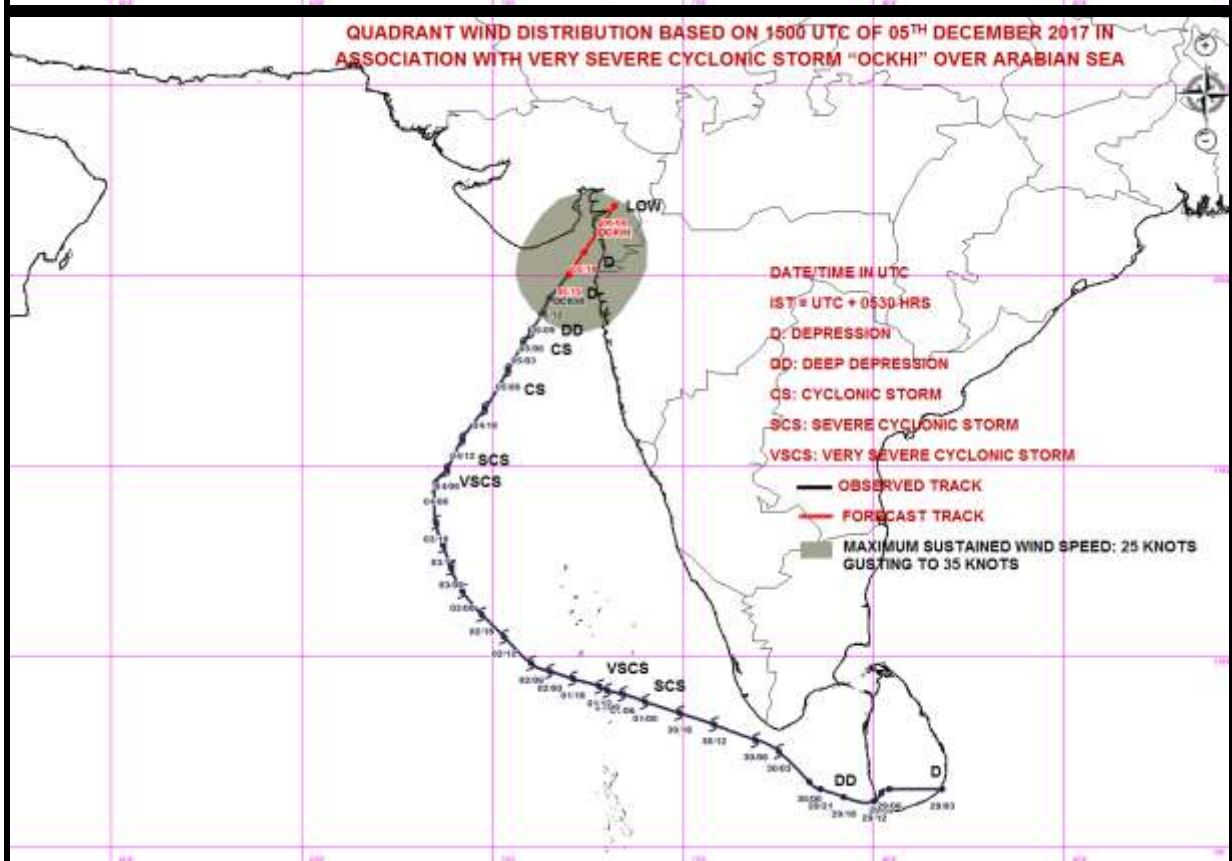
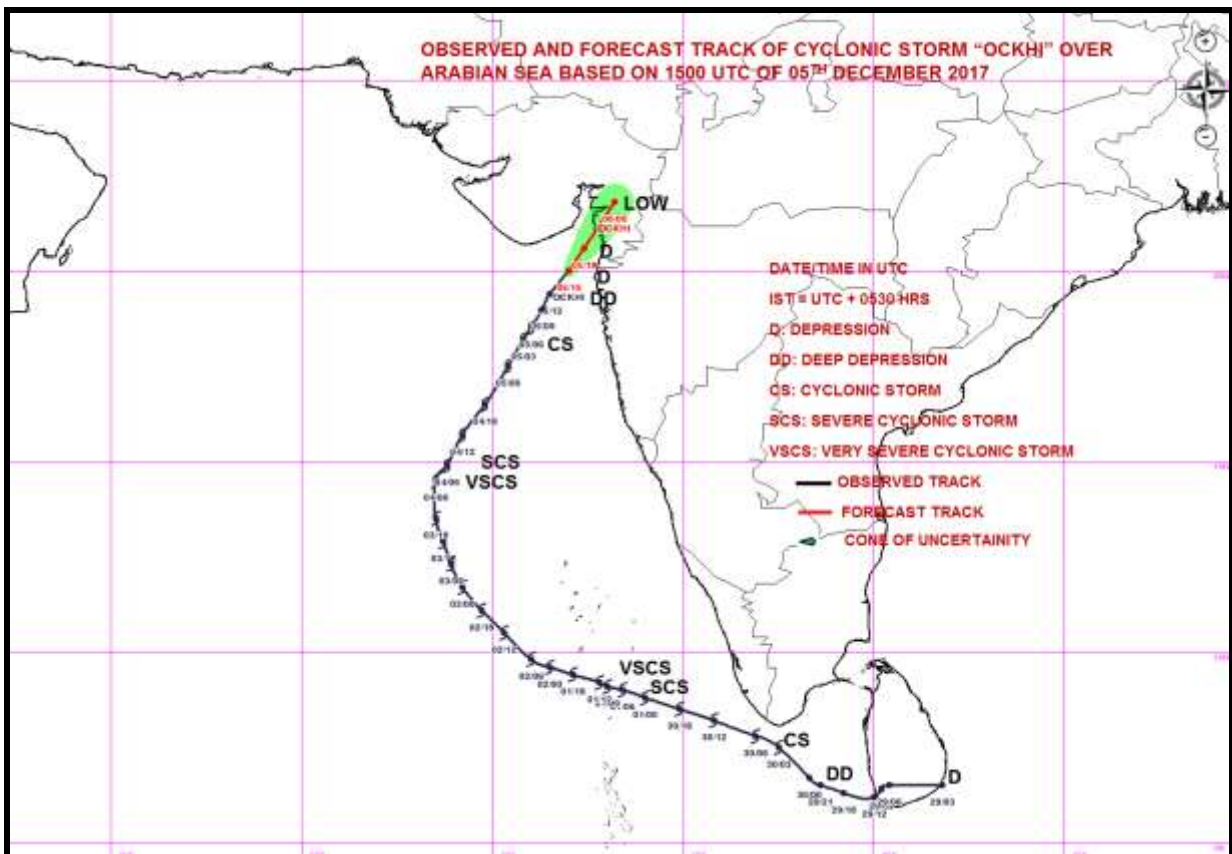
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 06.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 2100 UTC OF 05.12.2017 BASED ON 1800 UTC OF 05.12.2017.**

**(1) DEPRESSION WEAKENED INTO A WELL MARKED LOW OVER EASTCENTRAL & ADJOINING NORTHEAST ARABIAN SEA**

THE DEPRESSION OVER EASTCENTRAL AND ADJOINING NORTHEAST ARABIAN SEA HAS WEAKENED INTO WELL MARKED LOW PRESSURE AREA OVER EAST CENTRAL ARABIAN SEA AND ADJOINING AREAS OF NORTHEAST ARABIAN SEA, NORTH COASTAL MAHARASHTRA AND SOUTH COASTAL GUJARAT AT 1800 UTC OF THE 05<sup>th</sup> DECEMBER 2017.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK CONVECTION LAY OVER AREA BETWEEN LATITUDE 18.0 °N AND 21 °N AND LONGITUDE 69.0 °E SOUTHEAST GUJARAT, NORTH KONKAN AND ADJOINING GULF OF CAMBAY.

**THIS IS THE LAST BULLETIN FOR THIS SYTEM**

**2) WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL:**

THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD PERSISTS. IT IS VERY LIKELY TO BECOME A DEPRESSION OVER THE SAME AREA DURING NEXT 12 HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING THE SUBSEQUENT 48 HOURS. IT IS VERY LIKELY TO MOVE TOWARDS NORTH TAMIL NADU- SOUTH ANDHRA PRADESH COASTS DURING NEXT 48 HOURS AND SUBSEQUENTLY TO NORTH ANDHRA PRADESH COAST.

AS PER THE LATEST SATELLITE IMAGERY THE INTENSITY IS T 1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ANDAMAN SEA AND ADJOINING NORTH SUMATRA AND SOUTHEAST BAY.

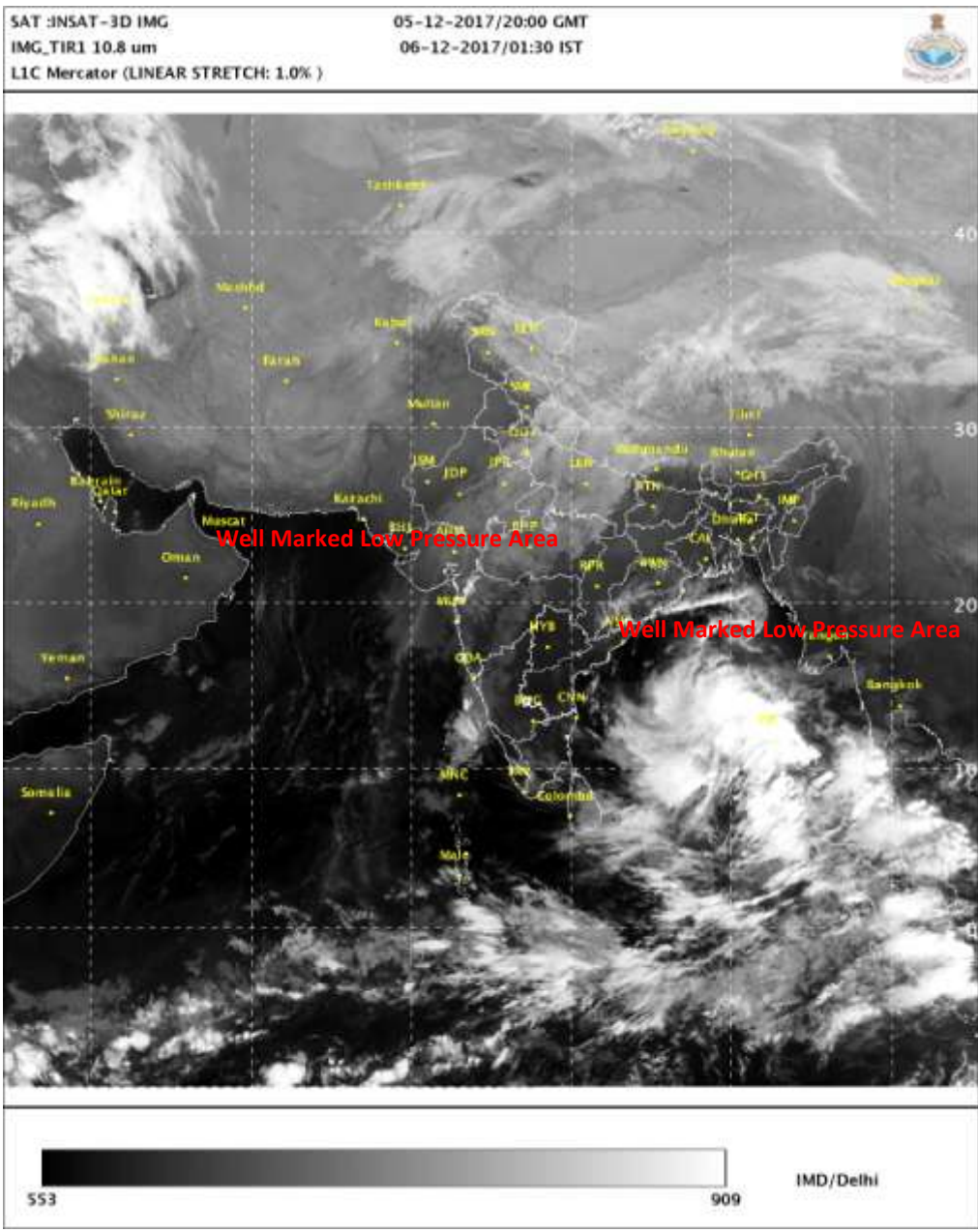
(SHIBIN B)  
SCIENTIST 'B'  
RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

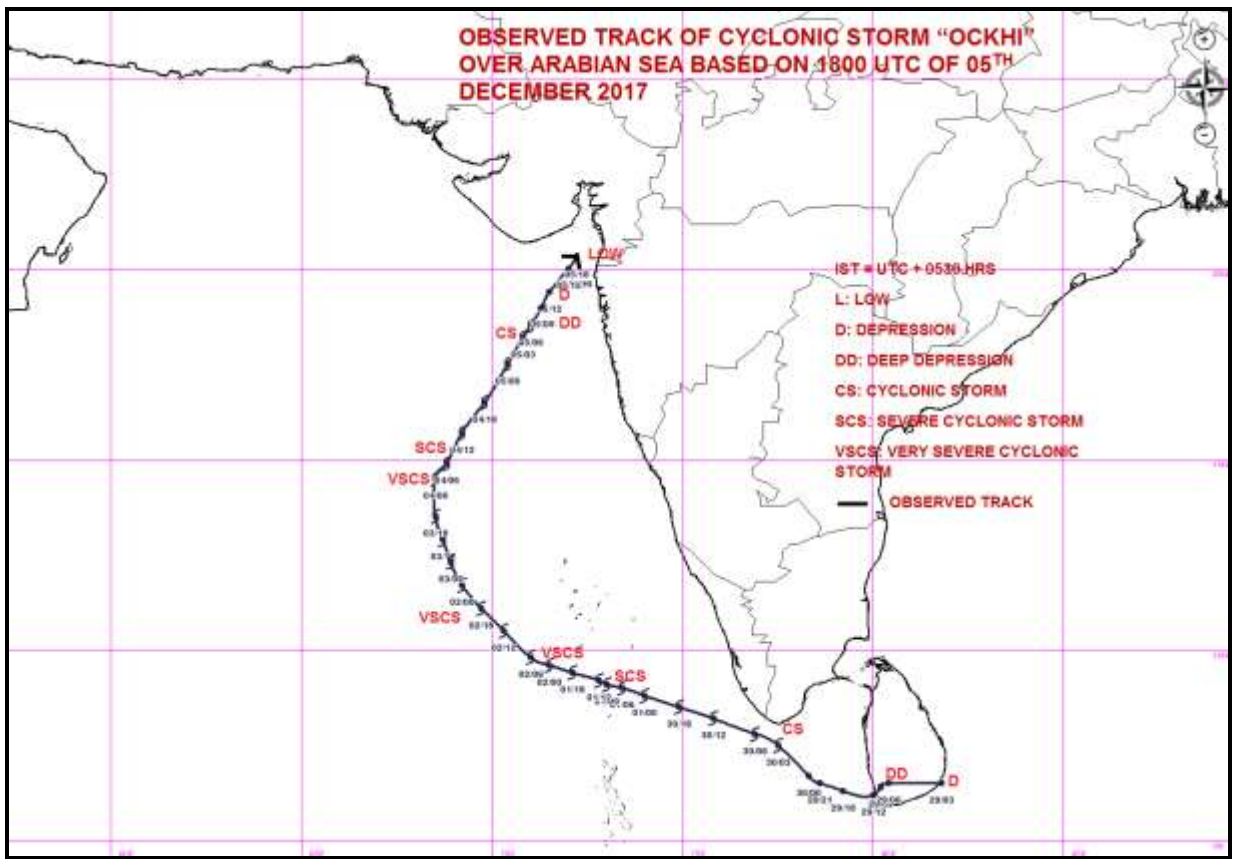




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**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 06.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0600 UTC OF 06.12.2017 BASED ON 0300 UTC OF 06.12.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**DEPRESSION OVER SOUTHEAST BAY OF BENGAL:**

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD CONCENTRATED INTO A **DEPRESSION** AND LAY CENTRED AT 0300 UTC OF TODAY, THE 06 DECEMBER, 2017 NEAR LATITUDE 8.5° N AND LONGITUDE 88.5 °E, ABOUT 1160 KM TO THE SOUTHEAST OF MACHILLIPATNAM (43185) AND 1250 KM SOUTH-SOUTHEAST OF GOPALPUR (43049). THE SYSTEM IS VERY LIKELY TO MOVE NORTHWESTWARDS AND REACH ANDHRA PRADESH COAST AROUND 8<sup>TH</sup> DECEMBER EVENING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 48 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR ANDHRA PRADESH COAST.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.0. ASSOCIATED MODERATE TO INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING ANDAMAN SEA. THE MAXIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. SCATTEROMETER WIND OBSERVATIONS INDICATE MAXIMUM SUSTAINED WINDS OF ABOUT 25 KNOTS.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING TO THE NORTH. THE VERTICAL WIND SHEAR IS HIGH AROUND THE SYSTEM. IT IS INCREASING TO NORTH, SOUTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH-NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS.

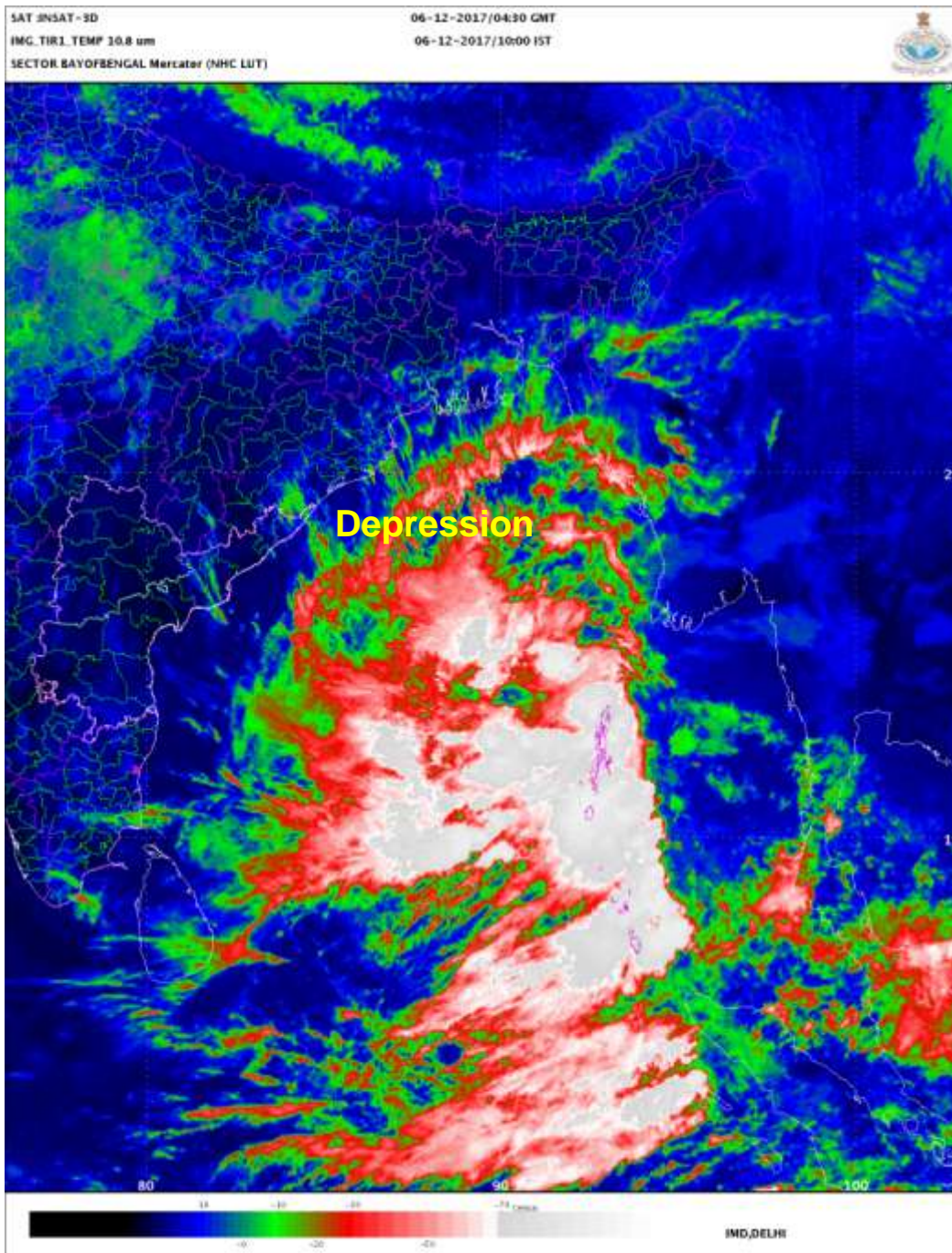
EVEN THOUGH THE SYSTEM PRESENTLY LIES OVER FAVOURABLE OCEAN THERMAL CONDITIONS, IT IS EMBEDDED IN A HIGH WIND SHEAR REGIME. HENCE, THE SYSTEM IS NOT EXPECTED TO INTENSIFY RAPIDLY AND ITS INTENSIFICATION WILL BE LIMITED UP TO DEEP DEPRESSION. FURTHER, WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. AS A RESULT THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR THE COAST. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

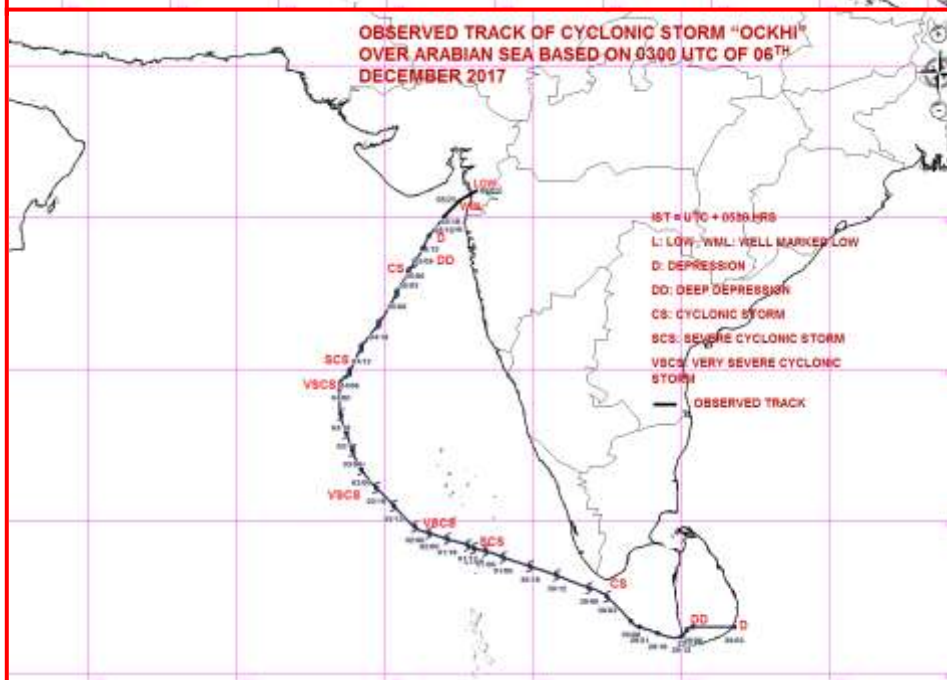
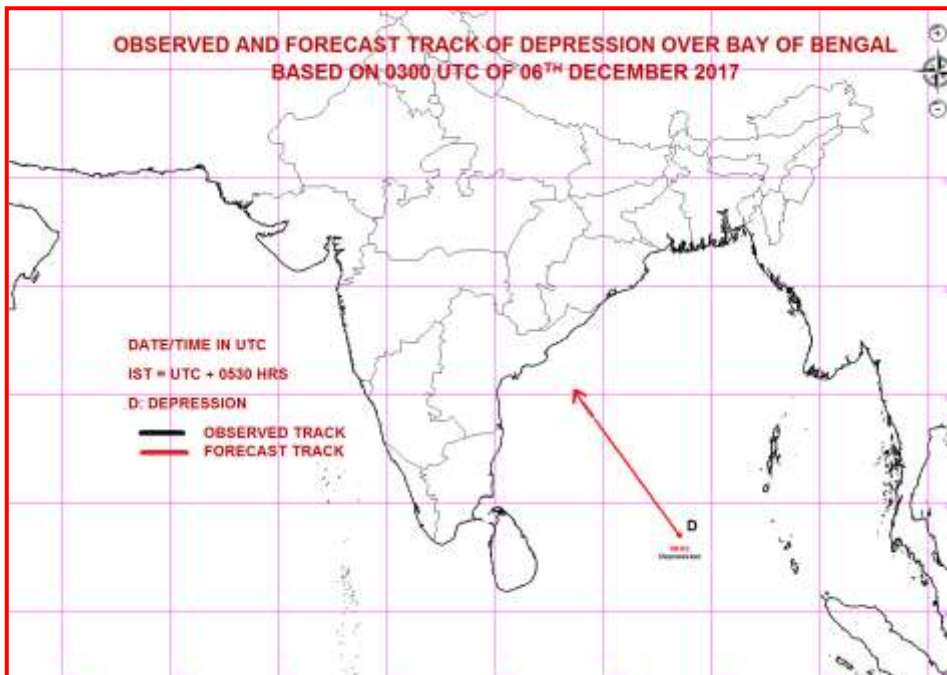
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 06.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 06.12.2017 BASED ON 1200 UTC OF 06.12.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**DEPRESSION OVER SOUTHEAST BAY OF BENGAL:**

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTH-NORTHWESTWARDS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 06 DECEMBER, 2017 NEAR LATITUDE 9.8° N AND LONGITUDE 88.0 °E, ABOUT 1020 KM TO THE EAST-SOUTHEAST OF MACHILLIPATNAM (43185) AND 1100 KM SOUTH-SOUTHEAST OF GOPALPUR (43049). THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 8<sup>TH</sup> DECEMBER EVENING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 36 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING CENTRAL BAY, SOUTHWEST BAY AND ANDAMAN SEA. THE MAXIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. SCATTEROMETER WIND OBSERVATIONS INDICATE MAXIMUM SUSTAINED WINDS OF ABOUT 25 KNOTS.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING TO THE NORTH. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH AROUND THE SYSTEM. IT IS INCREASING TO NORTH, SOUTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS.

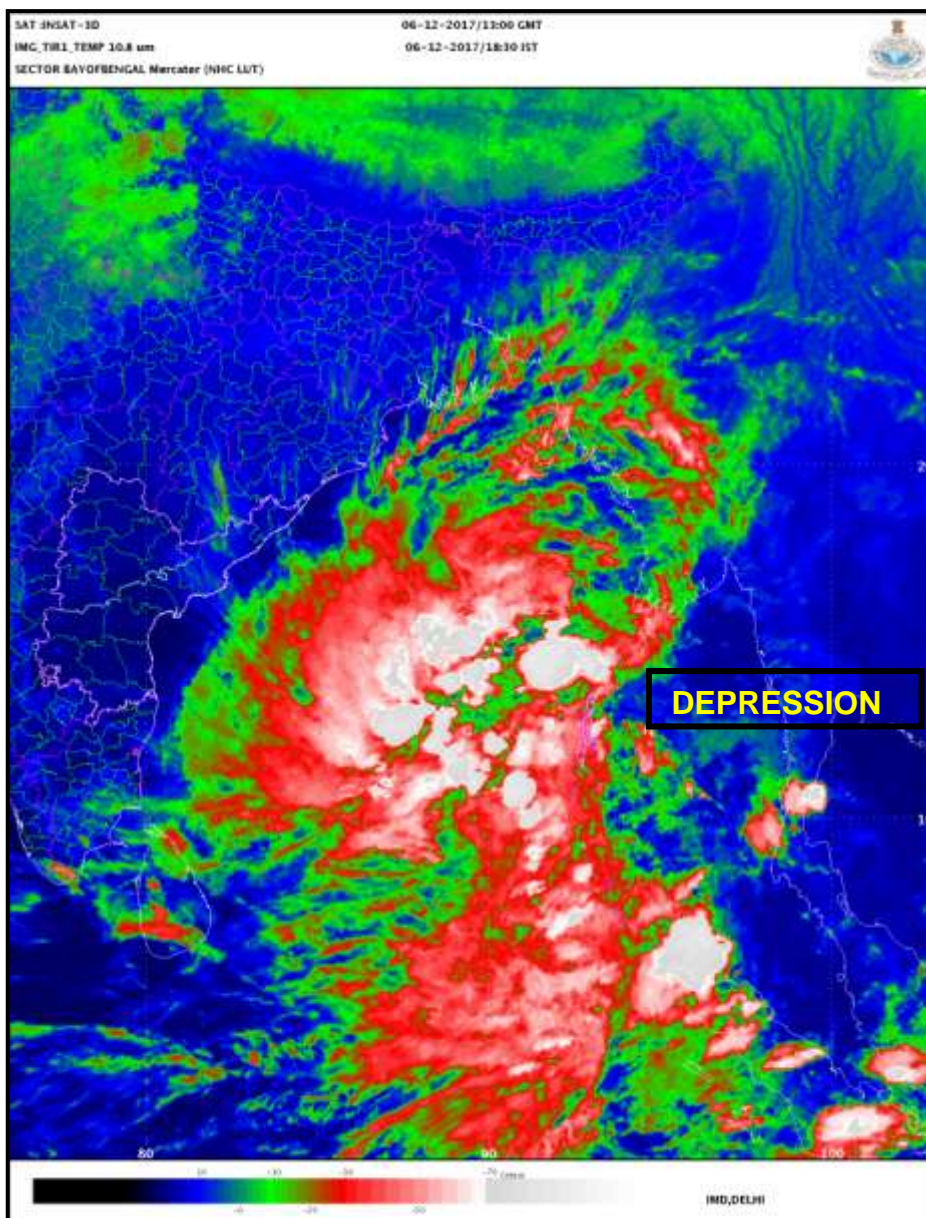
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(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

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**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

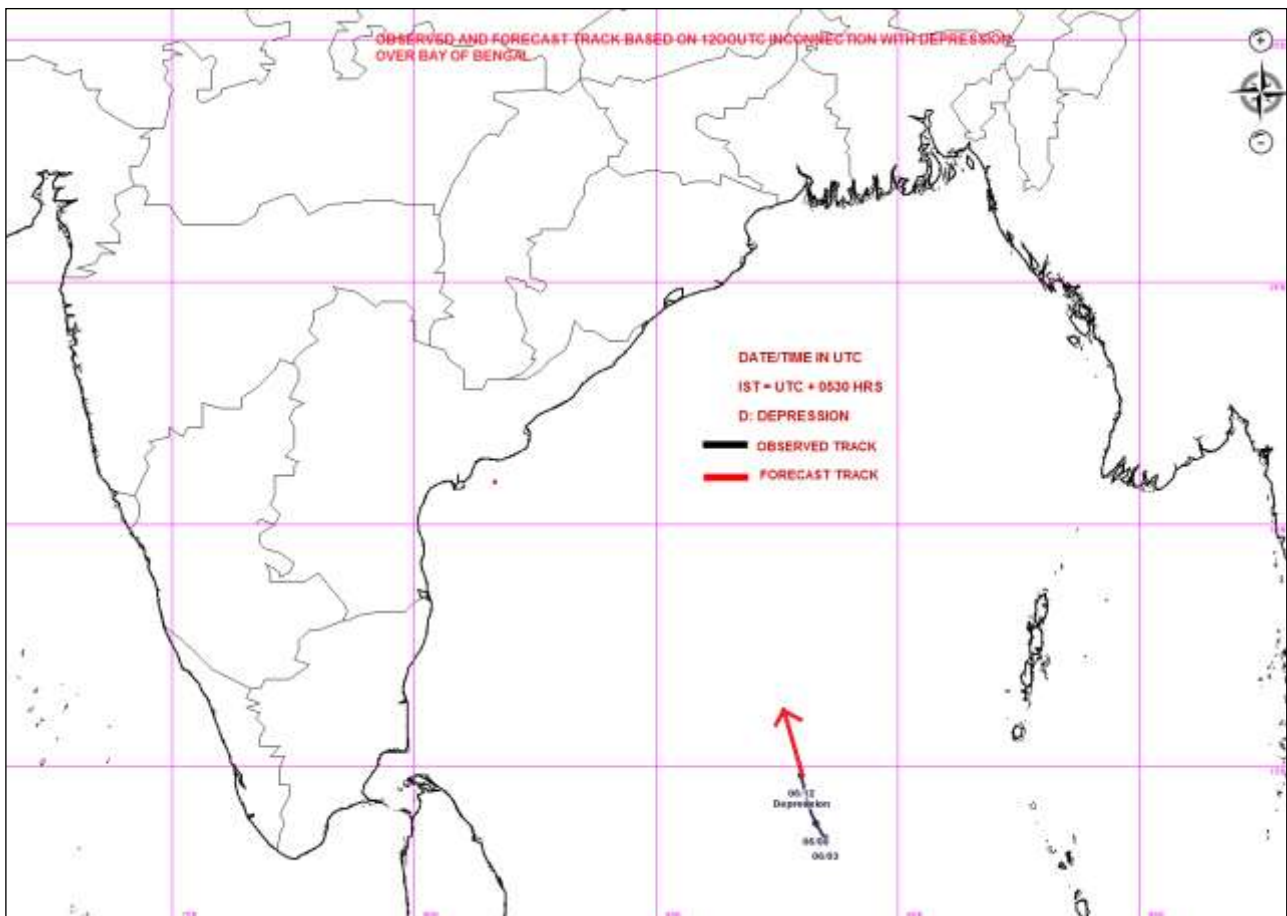
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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI  
SPECIAL TROPICAL WEATHER OUTLOOK**

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 07.12.2017 BASED ON 0000 UTC OF 07.12.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

**DEPRESSION OVER SOUTHEAST BAY OF BENGAL:**

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED LIKELY NORTHWARDS WITH A SPEED OF ABOUT 20 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0000 UTC OF TODAY, THE 07 DECEMBER, 2017 NEAR LATITUDE 11.1° N AND LONGITUDE 88.0 °E, ABOUT 930 KM TO THE EAST-SOUTHEAST OF MACHILLIPATNAM AND 970 KM SOUTH-SOUTHEAST OF GOPALPUR. THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING CENTRAL BAY, SOUTHWEST BAY AND ANDAMAN SEA. THE MAXIMUM CLOUD TOP TEMPERATURE IS MINUS 80 °C. SATELLITE IMAGERIE INDICATES THE CONVECTIVE CLOUDS HAVE ORGANISED DURING PAST 6 HOURS AND DURING PAST 24 HOURS THE CONVECTIVE CLOUD OF COSOLIDATIVE. HOWEVER THE MAJORITY OF CONVECTION IS DISPLACED NORTHWARD FROM LOW LEVEL CIRCULATION CENTER.

THE SEA SURFACE TEMPERATURE OVER THE REGION IS 29-30 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 100 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING TO THE NORTH. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTHEAST OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS.

EVEN THOUGH THE SYSTEM PRESENTLY LIES OVER FAVOURABLE OCEAN THERMAL CONDITIONS, IT IS EMBEDDED IN A HIGH WIND SHEAR REGIME. HENCE, THE SYSTEM IS NOT EXPECTED TO INTENSIFY RAPIDLY AND ITS INTENSIFICATION WILL BE LIMITED UP TO DEEP DEPRESSION. FURTHER, WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. AS A RESULT THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT

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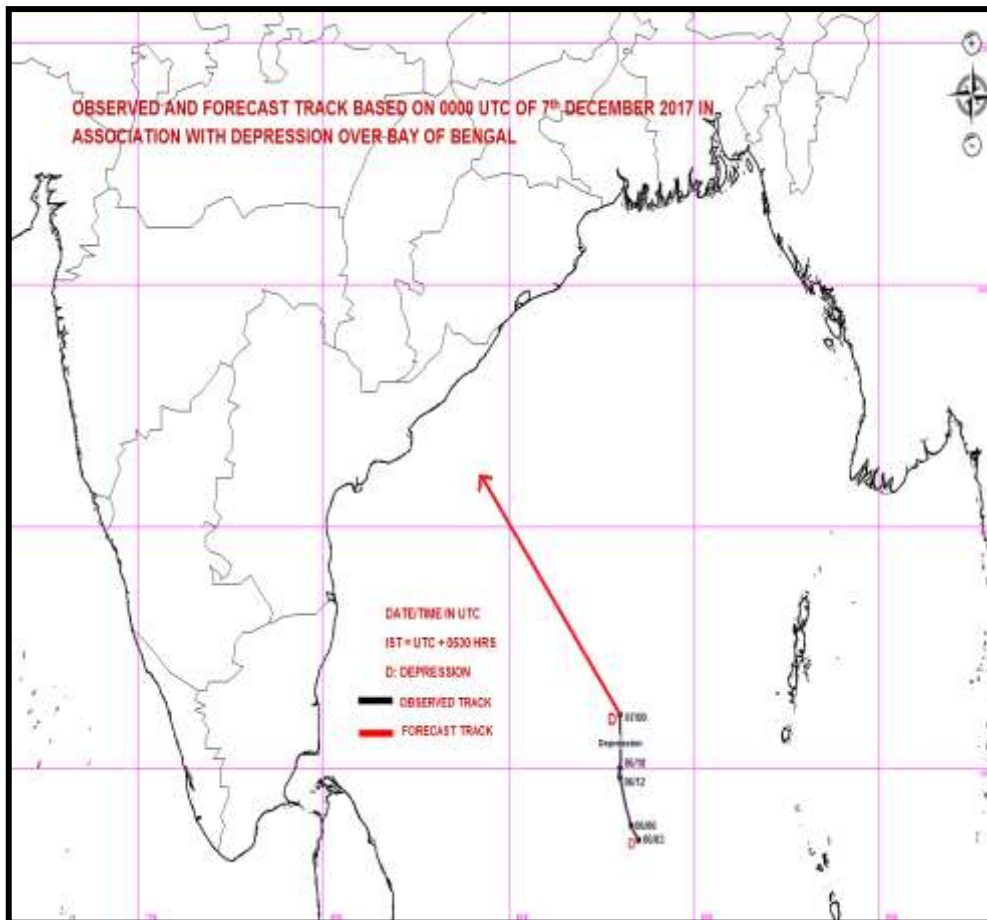
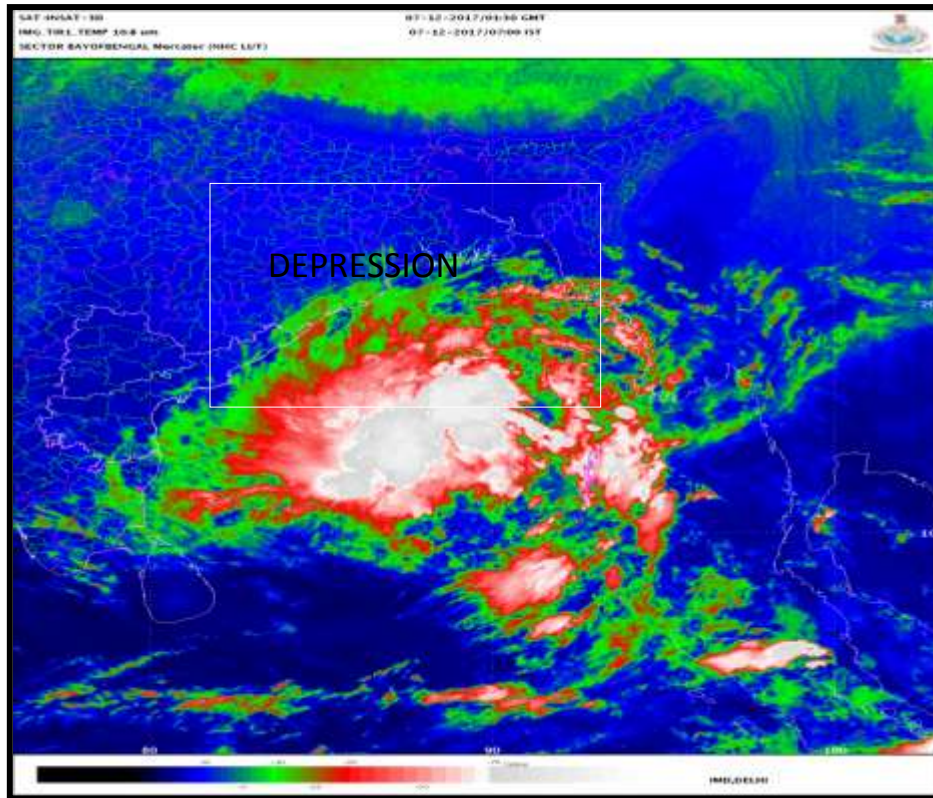
REACHES NEAR THE COAST. UNDER THE INFLUNCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BVENGAL, THE NORTHWESTERLY TO NORTH-NORTHWESTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM AND DEEP LAYER MEAN ALSO SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0600 UTC OF 07.12.2017 BASED ON 0300 UTC OF 07.12.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWARDS WITH A SPEED OF ABOUT 35 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 07 DECEMBER, 2017 NEAR LATITUDE 12.0° N AND LONGITUDE 88.0 °E, ABOUT 870 KM SOUTHEAST OF GOPALPUR (43049) AND 875 KM TO THE EAST-SOUTHEAST OF MACHILLIPATNAM (43185). THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS 09<sup>TH</sup> DECEMBER.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHEAST BAY OF BENGAL AND ADJOINING CENTRAL BAY, SOUTHWEST BAY AND SOUTH ANDAMAN SEA. SATELLITE IMAGERY INDICATES THE CONVECTIVE CLOUDS HAVE ORGANISED DURING PAST 6 HOURS. HOWEVER THE MAJORITY OF CONVECTION IS DISPLACED NORTHWARD FROM LOW LEVEL CIRCULATION CENTER.

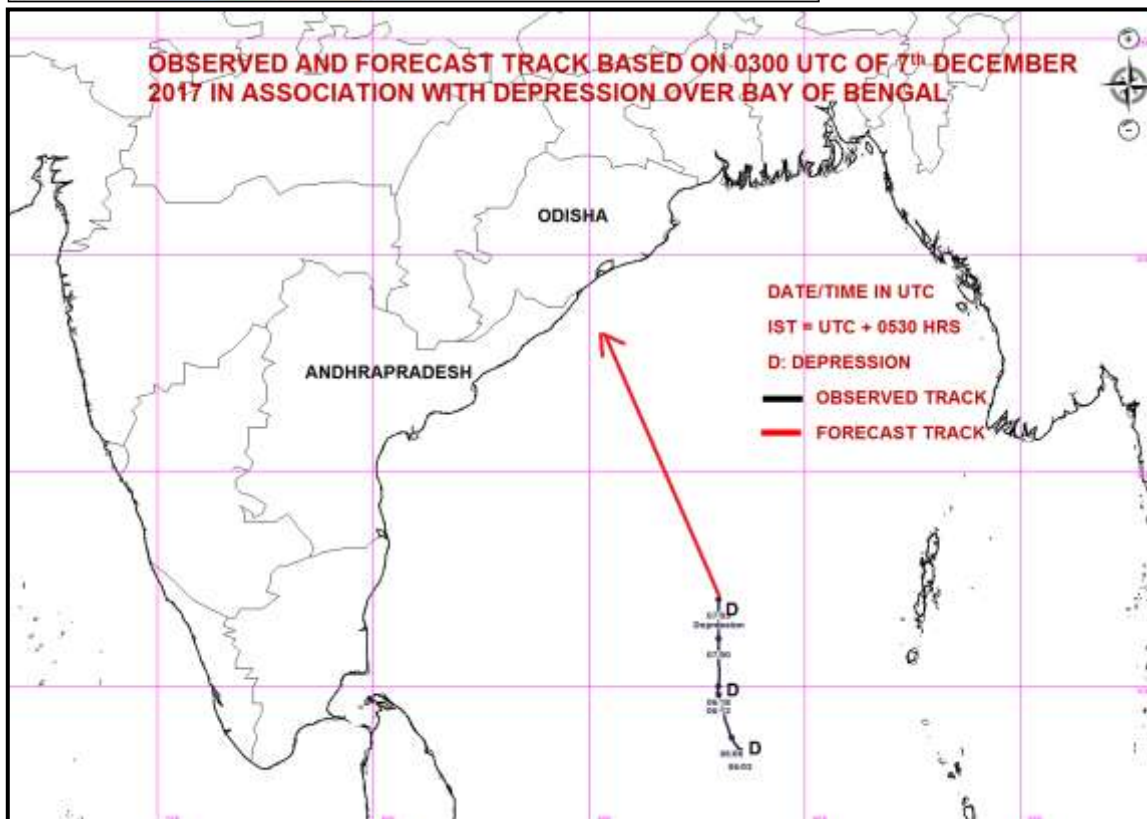
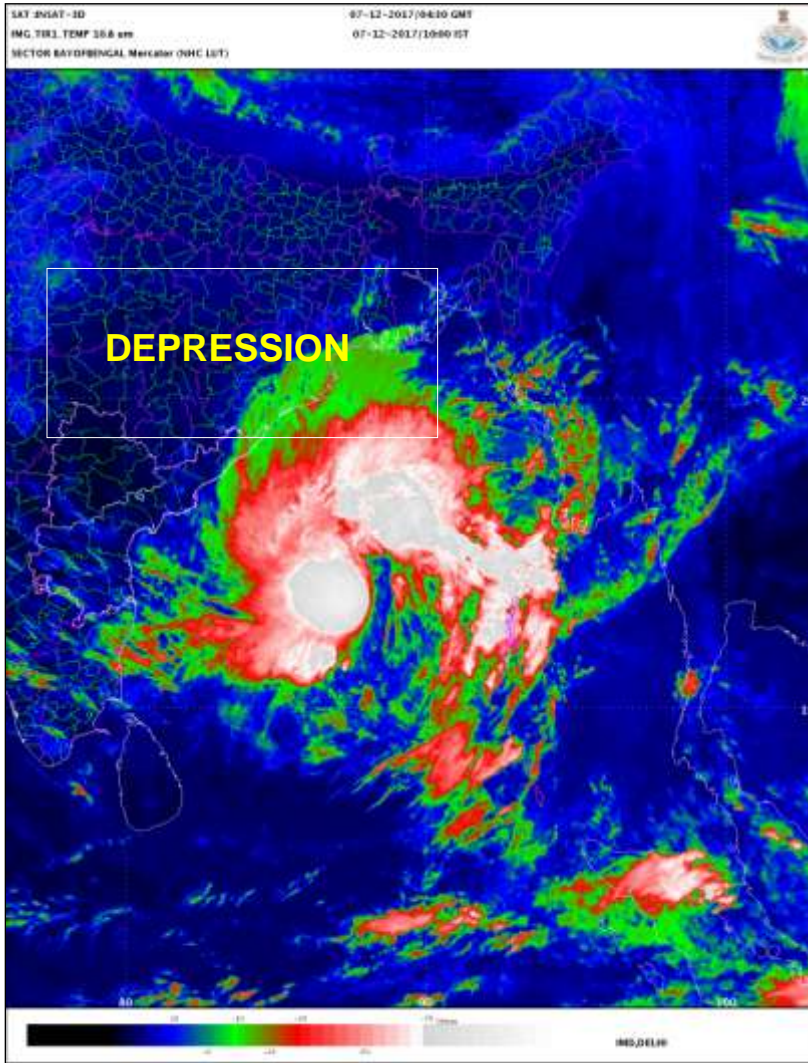
THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 28-29 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS. CONSIDERING ALL THESE, INTENSIFICATION OF THE SYSTEM WILL BE LIMITED UPTO DEEP DEPRESSION. THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR THE COAST. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL, THE SOUTHEASTERLY TO SOUTH-SOUTHEASTLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. DEEP LAYER MEAN WIND ALSO SUGGEST SIMILAR MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(NEETHA K GOPAL)  
SCIENTIST 'B', RSMC NEW DELHI

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**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 07.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 07.12.2017 BASED ON 1200 UTC OF 07.12.2017.**

**BAY OF BENGAL & ANDAMAN SEA:**

THE **DEPRESSION** OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 11 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 07 DECEMBER, 2017 OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 12.8° N AND LONGITUDE 87.7 °E, ABOUT 770 KM SOUTH-SOUTHEAST OF GOPALPUR (43049) AND 800 KM TO THE EAST-SOUTHEAST OF MACHILIPATNAM (43185). THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING. THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS. HOWEVER, THERE IS A PROBABILITY OF SLIGHT WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE. ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH INTENSE TO VERY INTENSE CONVECTION LIE OVER WEST CENTRAL AND ADJOINING SOUTH EAST BAY OF BENGAL. SATELLITE IMAGERY INDICATES THE MAJORITY OF CONVECTION LIES TO THE NORTH OF LOW LEVEL CIRCULATION CENTER.

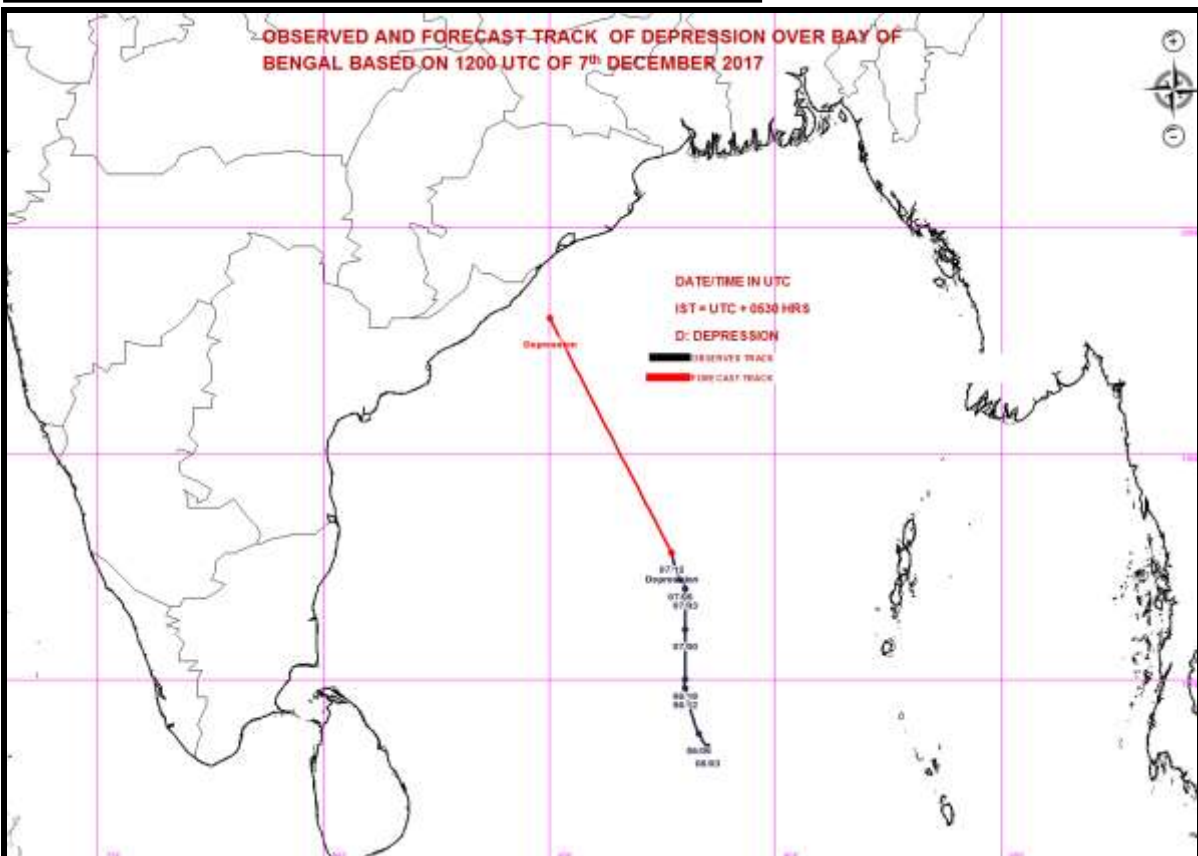
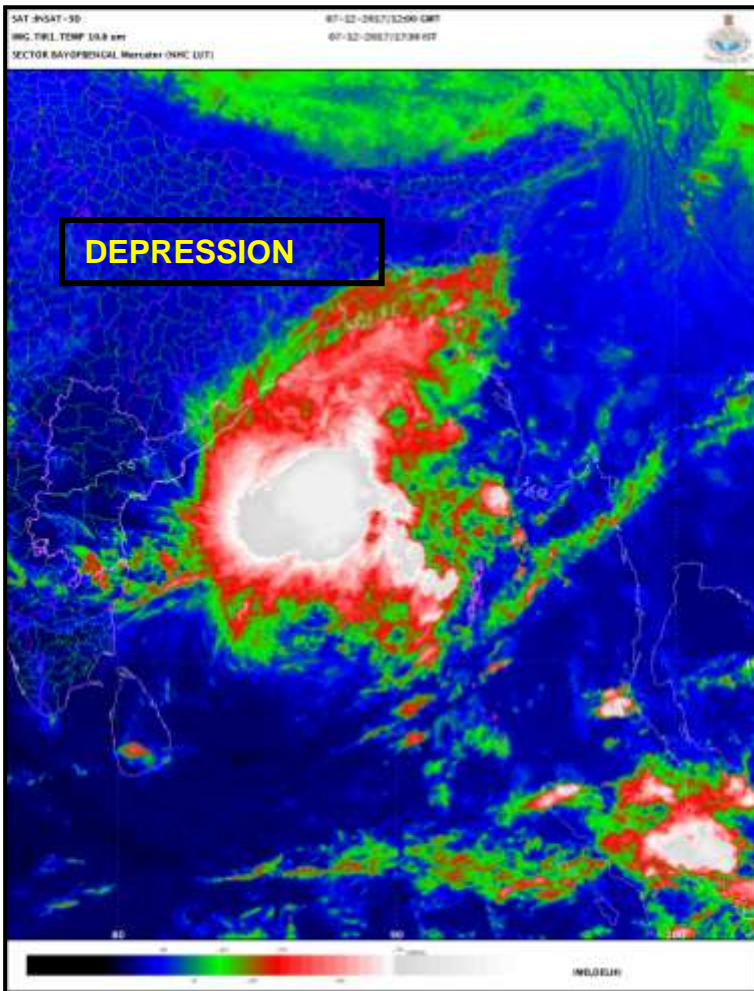
THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 28-29 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. MADDEN JULIAN OSCILLATION (MJO) LIES IN PHASE 5 WITH AMPLITUDE MORE THAN 1 AND IS LIKELY TO MOVE TO PHASE 6 IN NEXT TWO DAYS. CONSIDERING ALL THESE, INTENSIFICATION OF THE SYSTEM WILL BE LIMITED UPTO DEEP DEPRESSION. THERE IS POSSIBILITY OF WEAKENING OF THE SYSTEM WHEN IT REACHES NEAR THE COAST. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL, THE SOUTH-SOUTHEASTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. DEEP LAYER MEAN WIND ALSO SUGGEST SIMILAR MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHIBIN B)  
SCIENTIST 'B'  
RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 08.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 08.12.2017 BASED ON 0000 UTC OF 08.12.2017.**

THE **DEPRESSION** OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 20 KMPH DURING PAST 6 HOURS, INTENSIFIED INTO A **DEEP DEPRESSION** AND LAY CENTRED AT 0000 UTC OF TODAY, THE 08<sup>TH</sup> DECEMBER, 2017 OVER CENTRAL BAY OF BENGAL NEAR LATITUDE 14.3 °N AND LONGITUDE 87.0 °E, ABOUT 590 KM SOUTH-SOUTHEAST OF GOPALPUR (43049) AND 660 KM EAST-SOUTHEAST OF MACHILIPATNAM(43185). IT IS LIKELY TO MAINTAIN INTENSITY OF DEEP DEPRESSION FOR ABOUT 12 HRS AND WEAKEN GRADUALLY INTO A DEPRESSION DURING SUBSEQUENT 12 HRS. THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING AS A DEPRESSION.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. SEA CONDITION IS VERY ROUGH AROUND SYSTEM CENTRE. A BUOY LOCATED NEAR 16.5 N AND 88.0 E REPORTED A MEAN SEA LEVEL PRESSURE OF 1003.0 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 27.2 KNOTS AT 00 UTC OF 08<sup>TH</sup> DECEMBER 2017.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER BAY BETWEEN LATTITUDE 13.0N AND 21.0N EAST OF LONGITUDE 83.0 E. THE MAJORITY OF CONVECTION LIES TO THE NORTH OF LOW LEVEL CIRCULATION CENTER.

THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 28-29 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. CONSIDERING ALL THESE, SYSTEM WILL MAINTAIN THE INTENSITY OF DEEP DEPRESSION FOR ABOUT NEXT 12 HOURS AND GRADUALLY WEAKEN INTO A DEPRESSION DURING SUBSEQUENT 12 HOURS. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL, THE SOUTH-SOUTHEASTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL, WHICH SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM. DEEP LAYER MEAN WIND ALSO SUGGEST SIMILAR MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHIBIN B)  
SCIENTIST 'B'  
RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

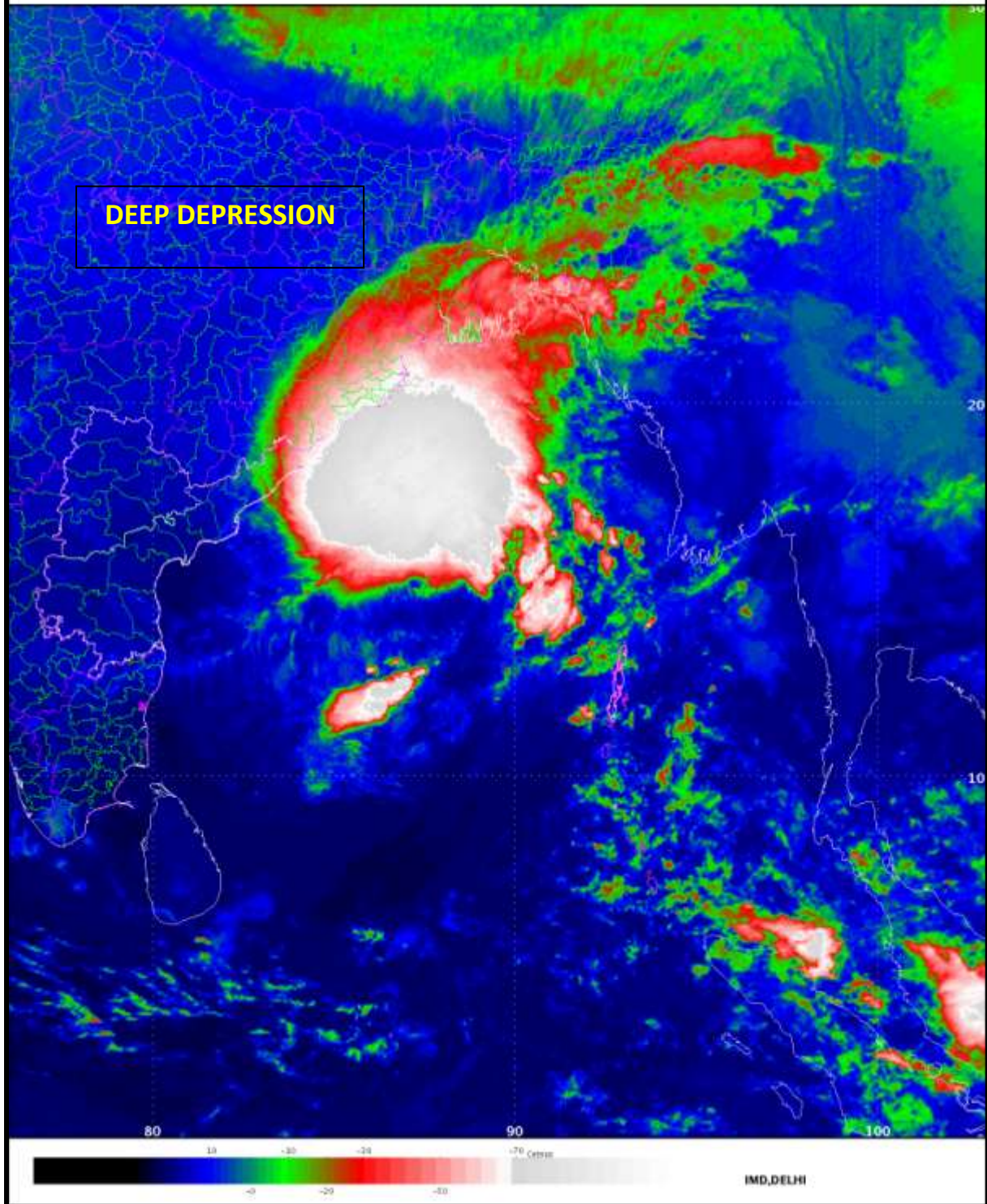
**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



SAT INSAT-3D  
IMG\_TIR1\_TEMP 10.8 um  
SECTOR BAYOFBENGAL Mercator (NHC LUT)

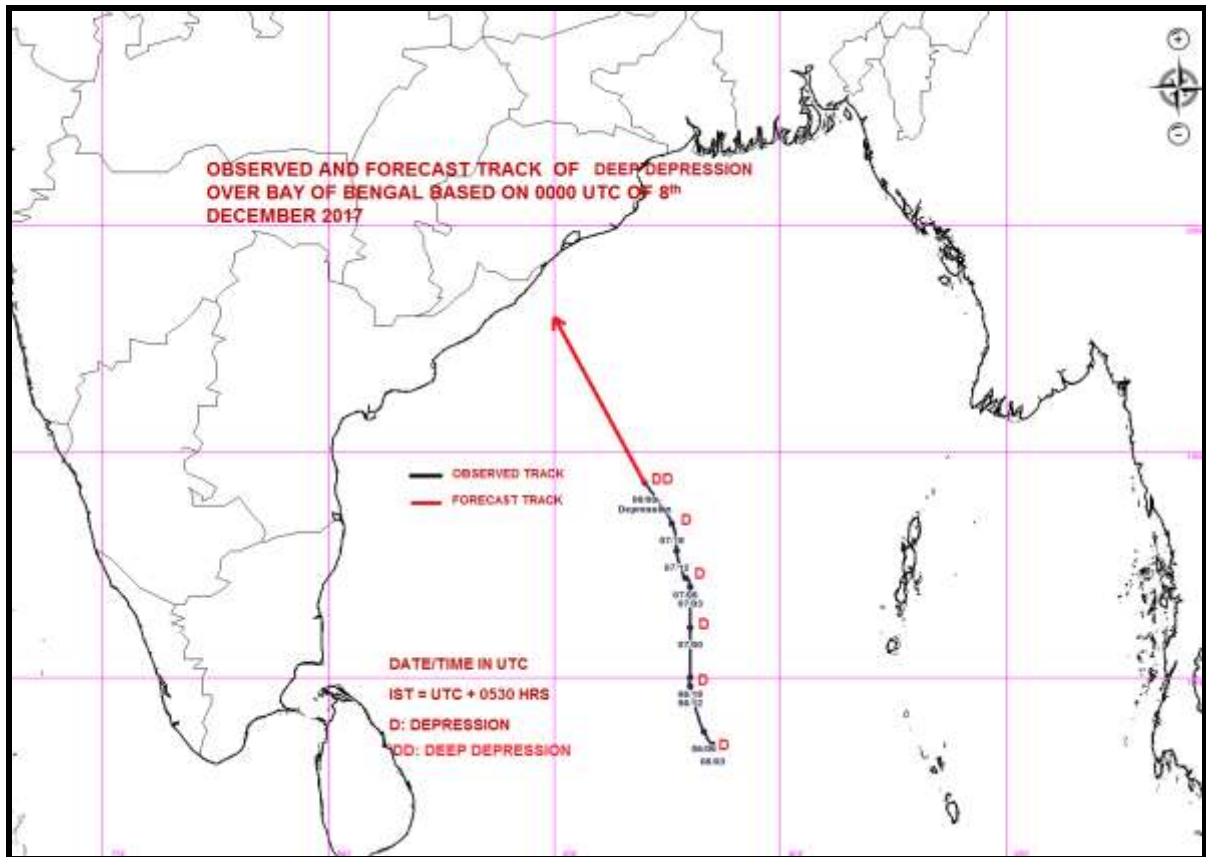
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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 08.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0600 UTC OF 08.12.2017 BASED ON 0300 UTC OF 08.12.2017.**

THE **DEEP DEPRESSION** OVER CENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 33 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 0300 UTC OF TODAY, THE 08<sup>TH</sup> DECEMBER, 2017 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.0 °N AND LONGITUDE 86.8 °E, ABOUT 510 KM SOUTH-SOUTHEAST OF GOPALPUR (43049) AND 610 KM EAST-SOUTHEAST OF MACHILIPATNAM (43185). IT IS LIKELY TO MAINTAIN INTENSITY OF DEEP DEPRESSION FOR ABOUT 12 HRS AND WEAKEN GRADUALLY INTO A DEPRESSION DURING SUBSEQUENT 12 HRS. THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND REACH NORTH ANDHRA PRADESH AND SOUTH ODISHA COASTS AROUND 9<sup>TH</sup> DECEMBER MORNING AS A DEPRESSION.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. SEA CONDITION IS VERY ROUGH AROUND SYSTEM CENTRE. A BUOY LOCATED NEAR 16.5 °N AND 87.8 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1005.9 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 150 °/19 KNOTS AT 00 UTC OF 08<sup>TH</sup> DECEMBER 2017. ANOTHER BUOY LOCATED NEAR 17.7 °N AND 87.8 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1009.5 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 110 °/21 KNOTS. A THIRD BUOY LOCATED NEAR 13.5 °N AND 84.2 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1009.3 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 340 °/16 KNOTS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER BAY BETWEEN LATITUDE 15.0N TO 21.5N AND LONGITUDES 83.5 E TO 91.0 EAST. MINIMUM CTT IS MINUS 92 DEG C. THE MAJORITY OF CONVECTION LIES TO THE NORTH OF LOW LEVEL CIRCULATION CENTER.

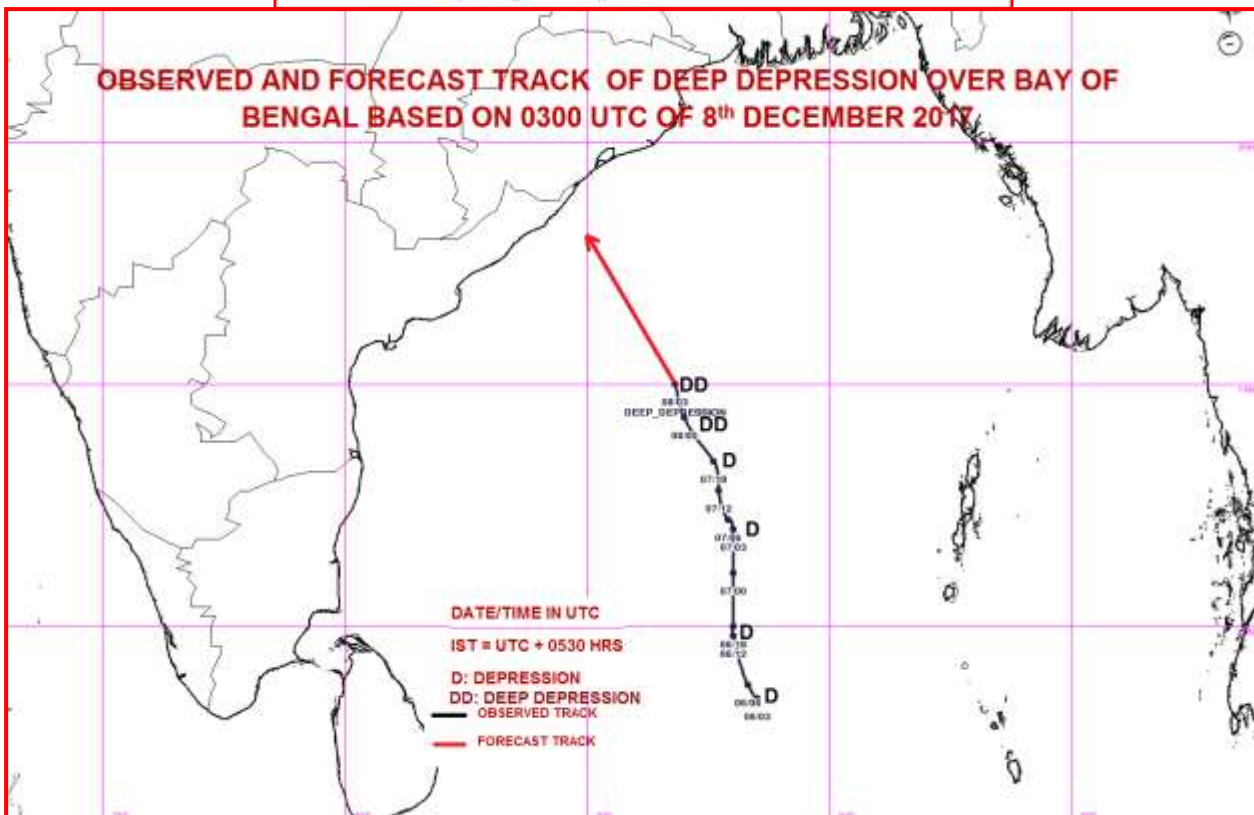
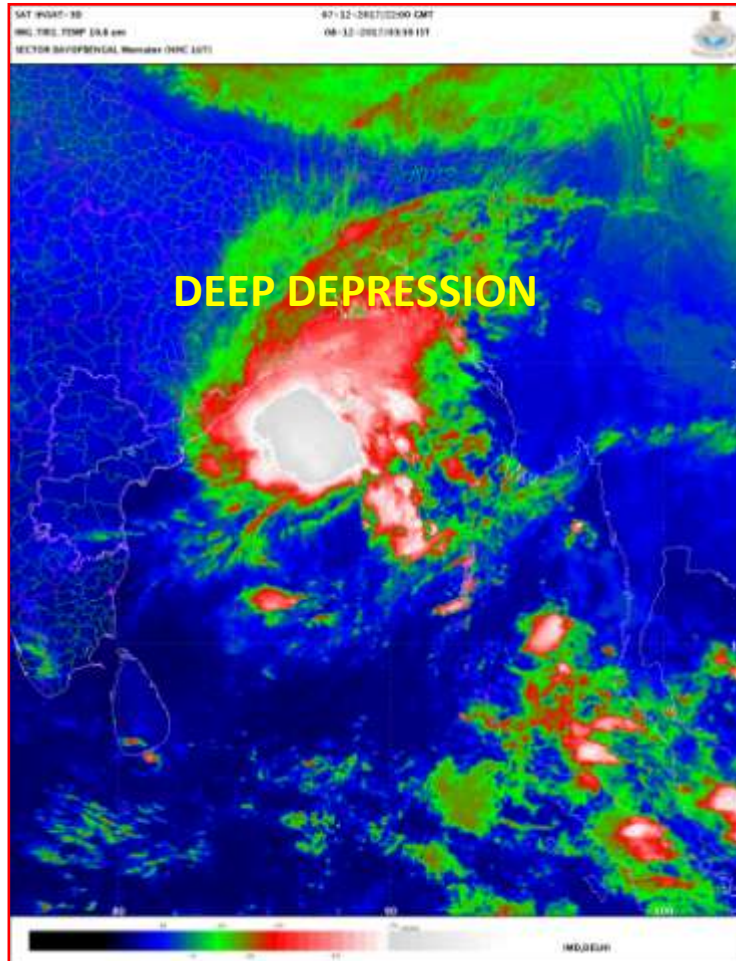
THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 28-29 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. THE VERTICAL WIND SHEAR IS LOW TO MODERATE AROUND THE SYSTEM CENTER AND IT IS INCREASING TO NORTH, SOUTH AND TO THE WEST. THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  TO THE SOUTH OF THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHWEST OF THE SYSTEM CENTER. CONSIDERING ALL THESE, SYSTEM WILL MAINTAIN THE INTENSITY OF DEEP DEPRESSION FOR ABOUT NEXT 12 HOURS AND GRADUALLY WEAKEN INTO A DEPRESSION DURING SUBSEQUENT 12 HOURS. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL AND THE SOUTH-SOUTHEASTERLY WINDS PREVAIL OVER THE SYSTEM AT UPPER LEVEL SUGGEST THE NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TILL THE MORNING OF 9<sup>TH</sup> DECEMBER AND THEN NORTHEASTWARD RECURVATURE. DEEP LAYER MEAN WIND ALSO SUGGEST SIMILAR MOVEMENT OF THE SYSTEM. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(NEETHA K GOPAL)  
SCIENTIST 'E', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 08.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 08.12.2017 BASED ON 1200 UTC OF 08.12.2017.**

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 20 KMPH DURING PAST 6 HOURS, AND LAY CENTRED AT 1200 UTC OF TODAY, THE 08<sup>TH</sup> DECEMBER, 2017 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 16.5 °N AND LONGITUDE 86.3 °E, ABOUT 330 KM SOUTHEAST OF GOPALPUR AND 550 KM EAST-NORTHEAST OF MACHILIPATNAM. THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND WEAKEN GRADUALLY AND REACH ODISHA COAST AROUND 9<sup>TH</sup> DECEMBER MORNING AS A DEPRESSION. THEREAFTER IT IS LIKELY TO MOVE NORTH-NORTHEASTWARDS ALONG AND OFF ODISHA COAST AND WEAKEN FURTHER INTO A LOW PRESSURE AREA DURING SUBSEQUENT 24 HOURS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE LATEST ASCAT PASS INDICATES HIGHER WINDS IN NORTHERN SECTOR. SEA CONDITION IS VERY ROUGH AROUND SYSTEM CENTRE. A BUOY LOCATED NEAR 17.8 °N AND 89.2 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1006.3 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 130 °/16 KNOTS AT 12 UTC OF 08<sup>TH</sup> DECEMBER 2017. ANOTHER BUOY LOCATED NEAR 16.5 °N AND 88.0 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1004.9 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 180 °/16 KNOTS. A THIRD BUOY LOCATED NEAR 13.9 °N AND 86.9 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1006.7 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 260 °/8 KNOTS. A FOURTH BUOY LOCATED NEAR 13.5 °N AND 84.0 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1007.6 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 350 °/14 KNOTS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER BAY BETWEEN LATITUDE 15.0N TO 21.5N AND LONGITUDES 83.5 E TO 91.0 EAST. MINIMUM CTT IS MINUS 84 DEG C.

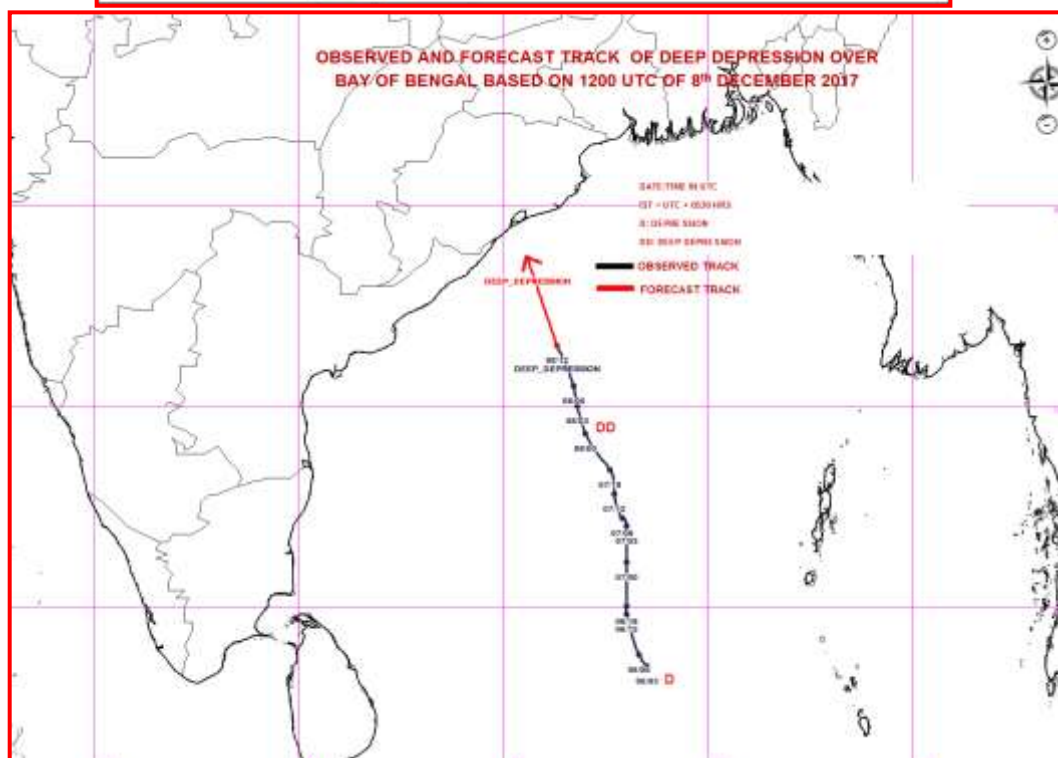
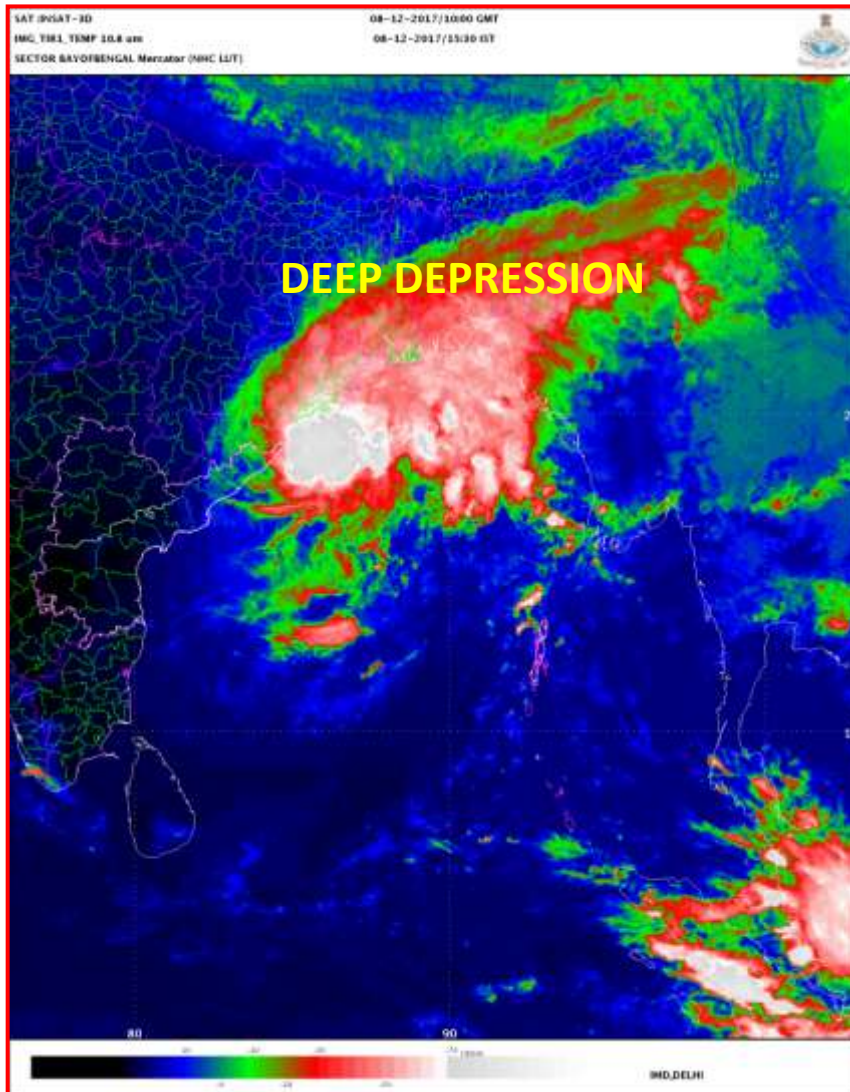
THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $100 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $20 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE AND IT IS EAST-WEST ORIENTED. UPPER LEVEL DIVERGENCE IS ABOUT  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTH-NORTHEAST OF THE SYSTEM CENTER AND IT IS EAST-WEST ORIENTED. THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 27-28 °C. SST IS DECREASING TO THE NORTH AND TO THE WEST. THE OCEAN THERMAL ENERGY IS ABOUT 50-60 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. IT IS DECREASING FURTHER TO THE NORTH AND WEST. WHEN THE SYSTEM REACHES NEAR TO THE COAST IT WILL ENCOUNTER COLDER SEA, LOWER OCEAN THERMAL ENERGY AND INCREASED SHEAR DUE TO THE STRONG UPPER LEVEL WINDS IN ASSOCIATION WITH A DEEP TROUGH IN WESTERLIES. CONSIDERING ALL THESE, SYSTEM WILL GRADUALLY WEAKEN INTO A DEPRESSION DURING NEXT 12 HOURS. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL AND ADJOINING MYANMAR, THE SYSTEM WILL CONTINUE TO MOVE NORTH-NORTHWESTWARD TILL THE MORNING OF 9<sup>TH</sup> DECEMBER AND THEN NORTH-NORTHEASTWARD RECURVATURE ALONG AND OFF ODISHA COAST. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(SHOBHIT KATIYAR)  
SCIENTIST 'B', RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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

**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 09.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0600 UTC OF 09.12.2017 BASED ON 0300 UTC OF 09.12.2017.**

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS AND WEAKENED INTO A DEPRESSION AT 1800 UTC OF 8<sup>TH</sup> DECEMBER OVER NORTHWEST BAY OF BENGAL AND ADJOINING NORTHWEST BAY OF BENGAL. IT FURTHER MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 15 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 09<sup>TH</sup> DECEMBER, 2017 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.2 °N AND LONGITUDE 86.5 °E, ABOUT 170 KM EAST OF GOPALPUR (43049), 120 KM SOUTH-SOUTHWEST OF PARADIP (42976) AND 320 KM SOUTH-SOUTHWEST OF DIGHA (42901). THE SYSTEM IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS ALONG & OFF ODISHA COAST TOWARDS WEST BENGAL AND ADJOINING BANGLADESH COAST. IT IS VERY LIKELY TO MAINTAIN ITS INTENSITY DURING 24 HOURS & WEAKEN GRADUALLY INTO A WELL MARKED LOW DURING SUBSEQUENT 12 HOURS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE LATEST MULTISAT WIND ANALYSIS INDICATES HIGHER WINDS IN NORTHERN SECTOR. SEA CONDITION IS VERY ROUGH AROUND SYSTEM CENTRE. A BUOY LOCATED NEAR 17.7°N AND 89.2 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1010.1 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 180<sup>0</sup>/18 KNOTS AT 0300 UTC OF 09<sup>TH</sup> DECEMBER 2017. ANOTHER BUOY LOCATED NEAR 16.4 °N AND 88.0 °E REPORTED A MEAN SEA LEVEL PRESSURE OF 1010.6 HPA AND MAXIMUM SUSTAINED WIND SPEED OF 220<sup>0</sup>/16 KNOTS.

ACCORDING TO THE LATEST SATELLITE IMAGERY THE INTENSITY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER BAY BETWEEN LATTITUDE 15.0N TO 21.5N AND LONGITUDES 83.5 E TO 91.0 EAST, COASTAL ODISHA, SOUTH WEST BENGAL AND SOUTH BANGLADESH. MINIMUM CTT IS MINUS 72 DEG C. ACCORDING TO DOPPLER WEATHER RADAR, KOLKATA, MAXIMUM CONVECTION LIES OVER COASTAL BANGLADESH AND ADJOINING BAY. THERE ARE SCATTERED MODERATE CONVECTIVE CLOUDS OVER GANGETIC WEST BENGAL AND INTERIOR BANGLADESH.

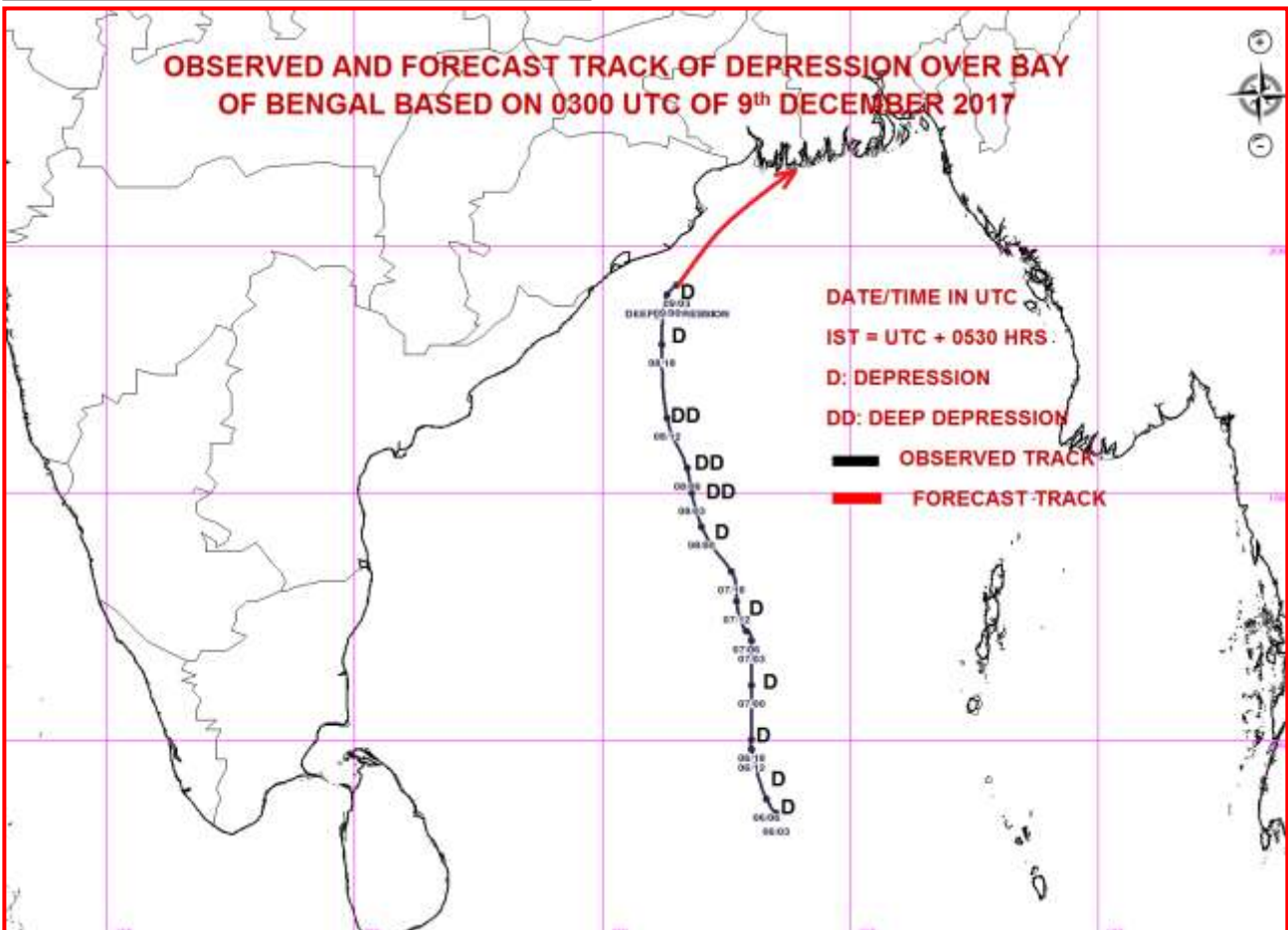
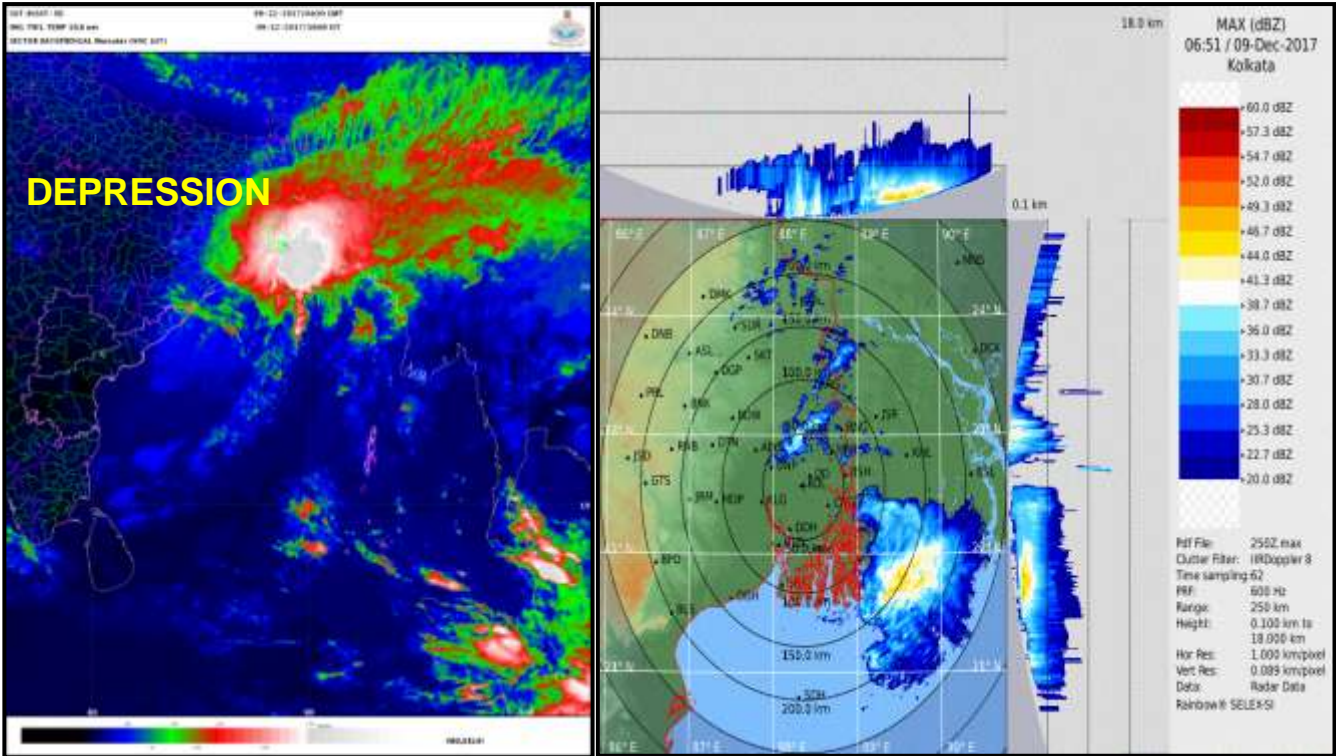
THE LOW LEVEL RELATIVE VORTICITY IS AROUND  $150 \times 10^{-6} \text{ S}^{-1}$  AROUND THE SYSTEM CENTRE. LOW LEVEL CONVERGENCE IS AROUND  $30 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT  $40 \times 10^{-5} \text{ S}^{-1}$  TO THE NORTHEAST OF THE SYSTEM CENTER. THE SEA SURFACE TEMPERATURE OVER THE SYSTEM REGION IS 25-26 °C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM<sup>2</sup> OVER THE SYSTEM AREA. THE SYSTEM IS ALREADY ENCOUNTERING COLDER SEA AND LOWER OCEAN THERMAL ENERGY. HOWEVER, DUE TO INCREASE IN LOW LEVEL RELATIVE VORTICITY, CONVERGENCE AND UPPER LEVEL DIVERGENCE AND CONTINUANCE OF MODERATE SHEAR OVER THE REGION, THE DEPRESSION IS EXPECTED TO MAINTAIN THE INTENSITY DURING NEXT 24 HOURS. THEREAFTER, DUE TO INCREASE IN WIND SHEAR AND INTERACTION WITH LAND SURFACE IT WOULD WEAKEN GRADUALLY. UNDER THE INFLUENCE OF ANTI CYCLONIC CIRCULATION OVER THE CENTRAL BAY OF BENGAL, THE SYSTEM HAS COMMENCED TO MOVE NORTH-NORTHEASTWARDS. IT WILL CONTINUE TO MOVE NORTH-NORTHWESTWARDS TOWARDS WEST BENGAL AND ADJOINING BANGLADESH COAST. ALL THE NWP MODELS ARE IN AGREEMENT WITH THE ABOVE CONCLUSIONS.

(NEETHA K GOPAL)  
SCIENTIST 'E' , RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

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**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

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

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**DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 09.12.2017**

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 09.12.2017 BASED ON 1200 UTC OF 09.12.2017.**

THE **DEPRESSION** OVER NORTHWEST BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS AND WEAKENED INTO A WELL MARKED LOW PRESSURE AREA OVER NORTHWEST BAY OF BENGAL AT 1200 UTC OF TODAY, THE 09<sup>TH</sup> DECEMBER, 2017. IT IS VERY LIKELY TO MOVE NORTHEASTWARDS TOWARDS WEST BENGAL AND ADJOINING BANGLADESH COASTS AND WEAKEN FURTHER.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1006 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 15 KNOTS GUSTING TO 25 KNOTS.

ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LIE OVER NORTH BAY, SOUTH BANGLADESH, MIZORAM, TRIPURA AND ADJOINING AREAS OF MYANMAR. MINIMUM CTT IS MINUS 72 DEG C. ACCORDING TO DOPPLER WEATHER RADAR, THERE ARE SCATTERED MODERATE TO INTENSE CONVECTIVE CLOUDS OVER BANGLADESH, MIZORAM AND TRIPURA AND NORTHERN PARTS OF BAY OF BENGAL.

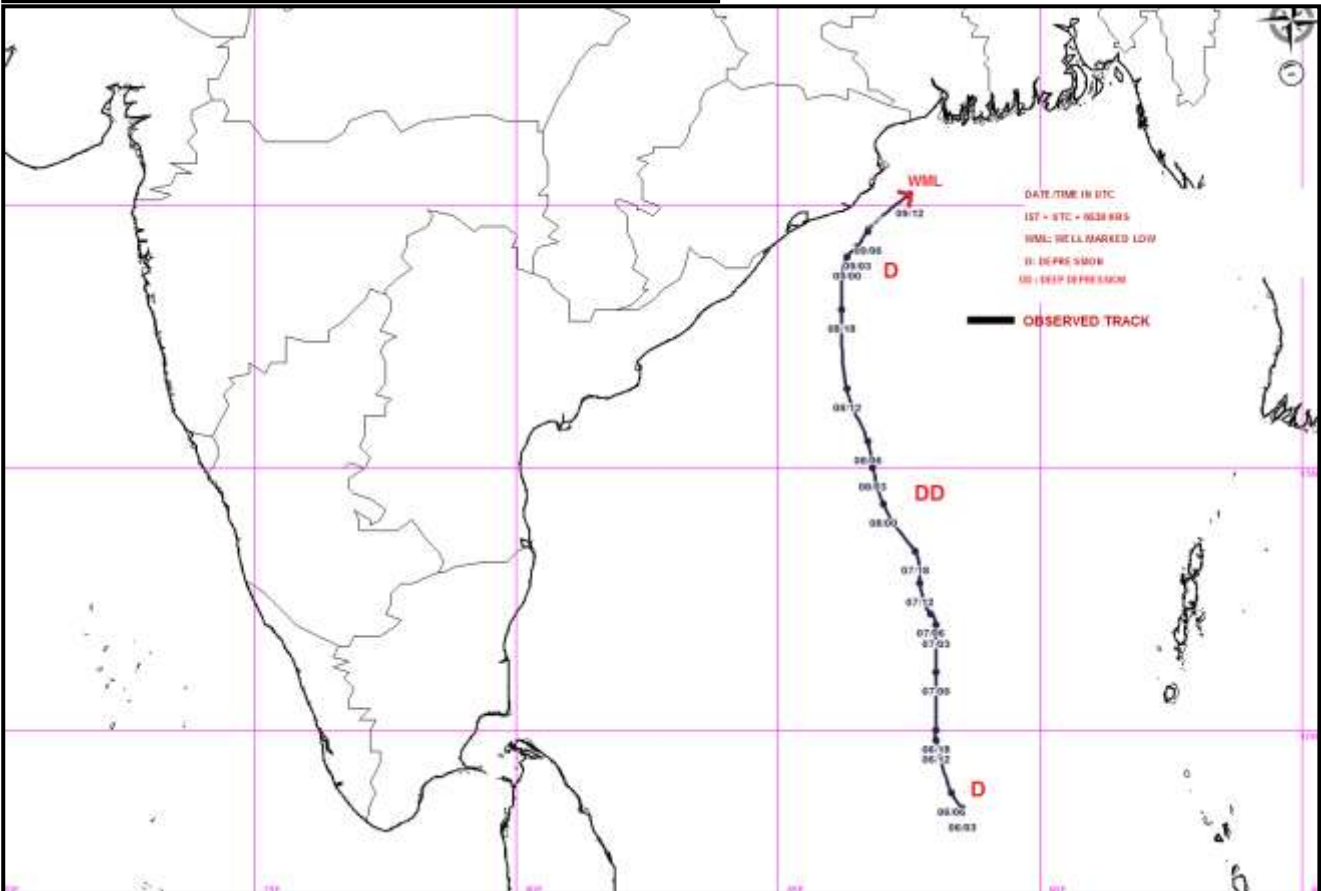
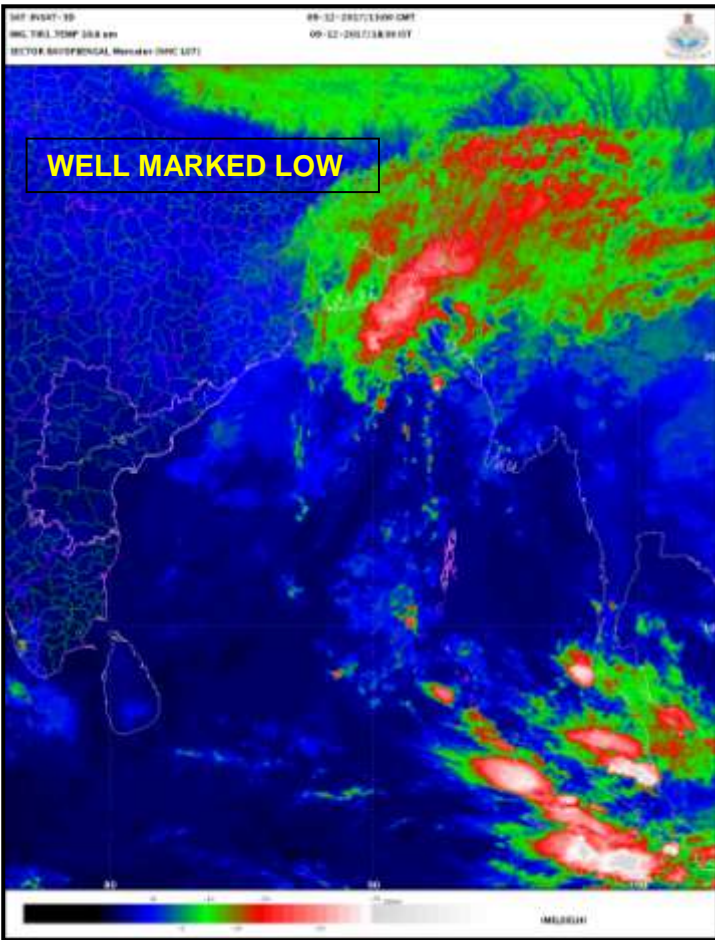
**THIS IS THE LAST BULLETIN FOR THIS SYSTEM.**

(NEETHA K GOPAL)  
SCIENTIST 'E' , RSMC NEW DELHI

**PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)**

**NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%**

**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**



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