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

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 16.09.2018

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0800 UTC OF 16.09.2018 BASED ON 0300 UTC OF 16.09.2018 (Modified).**

### BAY OF BENGAL:

AS PER THE OBSERVATIONS BASED ON 0300 UTC OF TODAY, THE 16$^{TH}$ SEPTEMBER, 2018, THE CYCLONIC CIRCULATION OVER GULF OF MARTABAN & NEIGHBOURHOOD LAY OVER EASTCENTRAL BAY OF BENGAL & NEIGHBOURHOOD AND EXTENDED UPTO 5.8 KM ABOVE MEAN SEA LEVEL. **UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS VERY LIKELY TO DEVELOP OVER CENTRAL & ADJOINING NORTH BAY OF BENGAL AROUND 18TH SEPTEMBER. IT IS LIKELY TO BECOME MORE MARKED SUBSEQUENTLY.**

BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER WESTCENRAL BAY OF BENGAL.
BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LIE OVER NORTHWEST, EASTCENTRAL AND SOUTH BAY OF BENGAL, ANDAMAN SEA AND TENESSERIM COAST.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 120 HRS:**

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

### ARABIAN SEA:

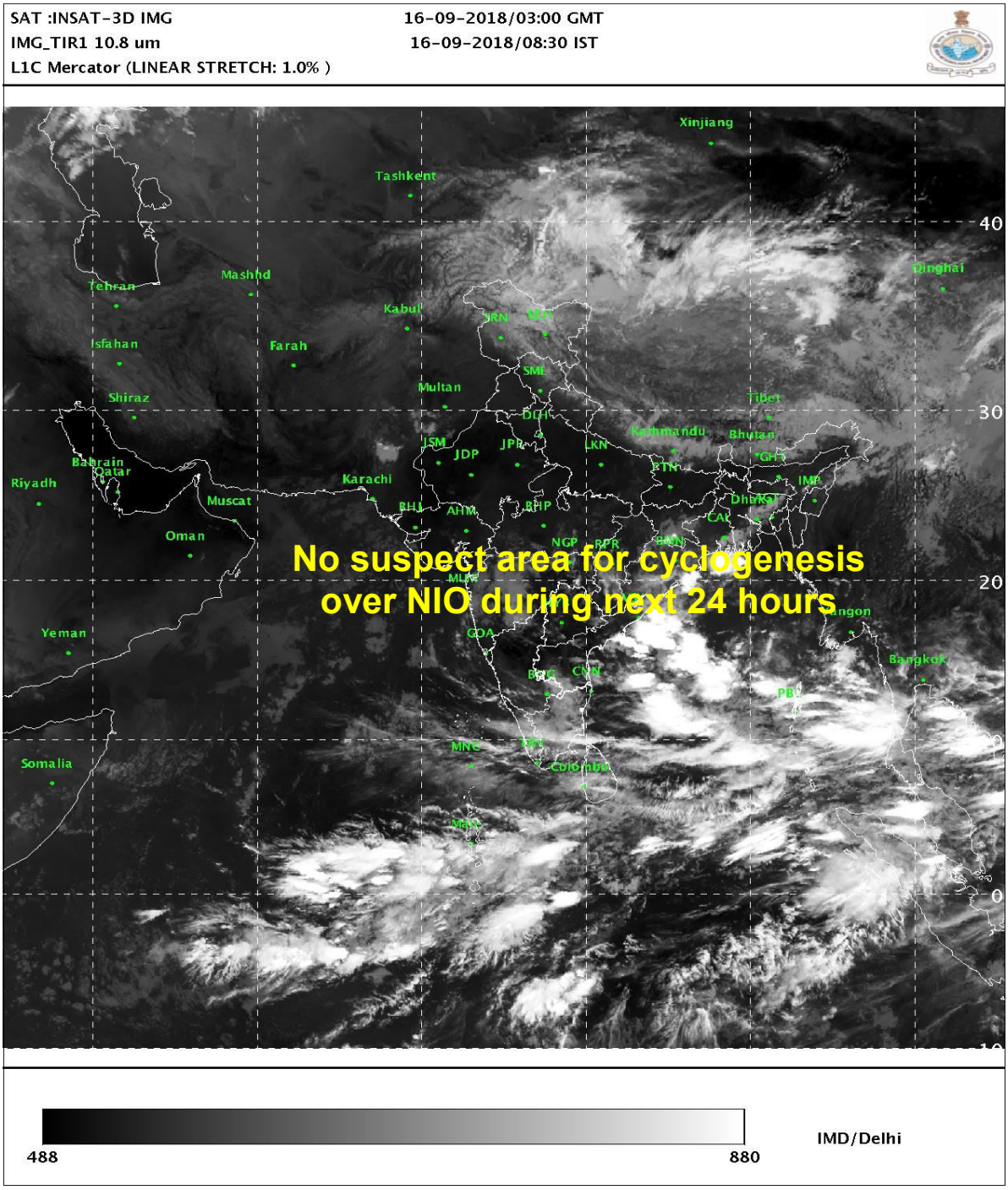
SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LIE OVER SOUTHEAST ARABIAN SEA.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 72 HRS:**

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

**REMARKS: NIL**

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




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

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

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 17.09.2018

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0800 UTC OF 17.09.2018 BASED ON 0300 UTC OF 17.09.2018.**

### BAY OF BENGAL:

THE CYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL AND NEIGHBOURHOOD NOW LIES OVER CENTRAL BAY OF BENGAL AND NEIGHBOURHOOD. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS VERY LIKELY TO DEVELOP OVER CENTRAL & ADJOINING NORTH BAY OF BENGAL DURING NEXT 24 HOURS. IT IS LIKELY TO CONCENTRATE INTO A DEPRESSION AND MOVE WESTNORTHWESTWARDS TOWARDS NORTH ANDHRA PRADESH, SOUTH ODISHA COASTS DURING THE SUBSEQUENT 48 HOURS.

BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER CENRAL BAY OF BENGAL AND ANDAMAN SEA.
SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LIE OVER SOUTH BAY OF BENGAL. ISOLATED LOW/MEDIUM WITH EMBEDDED WEAK TO MODERATE CONVECTION LIE OVER HEAD BAY OF BENGAL.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 120 HRS:**

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

### ARABIAN SEA:

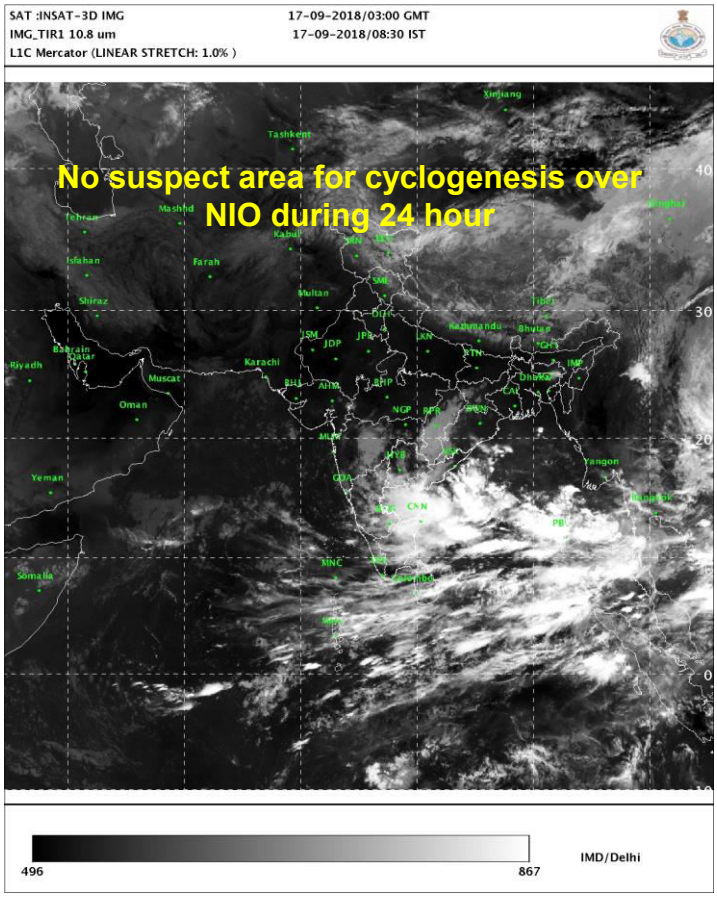
ISOLATED LOW AND MEDIUM CLOUDS WITH EMBEDDED WEAK CONVECTION LIE OVER ARABIAN SEA & LAKSHADWEEP AREA.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 72 HRS:**

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

**REMARKS: NIL**

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




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

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

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 18.09.2018

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0800 UTC OF 18.09.2018 BASED ON 0300 UTC OF 18.09.2018.**

### BAY OF BENGAL:

THE CYCLONIC CIRCULATION OVER CENTRAL BAY OF BENGAL AND NEIGHBOURHOOD PERSISTS. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS VERY LIKELY TO DEVELOP OVER CENTRAL & ADJOINING NORTH BAY OF BENGAL DURING NEXT 24 HOURS. IT IS LIKELY TO CONCENTRATE INTO A DEPRESSION AND MOVE WESTNORTHWESTWARDS TOWARDS NORTH ANDHRA PRADESH, SOUTH ODISHA COASTS DURING THE SUBSEQUENT 48 HOURS.

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED INTENSE TO VERY INTENSE CONVECTION LIE OVER WESTCENRAL AND SOUTHWEST BAY OF BENGAL, ANDAMAN SEA, GULF OF MARTABAN AND TENASSERIM COAST.
BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION LIE OVER THE REST OF BAY OF BENGAL.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 120 HRS:**

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

### ARABIAN SEA:

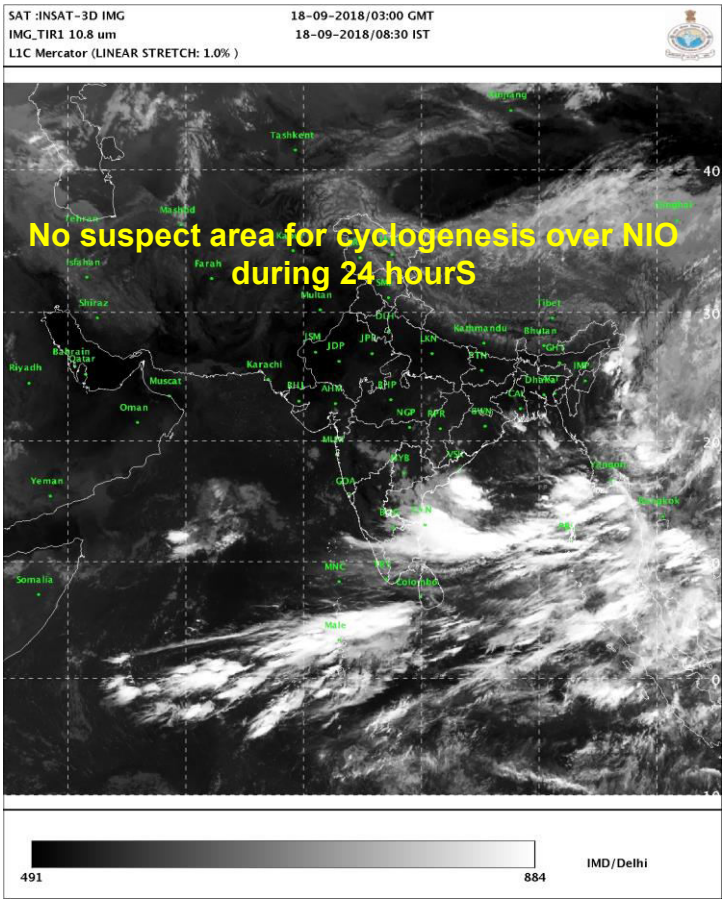
SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED WEAK TO MODERATE CONVECTION LIE OVER SOUTH ARABIAN SEA & COMORIN AREA.

**PROBABILITY OF CYCLOGENESIS DURING NEXT 72 HRS:**

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

**REMARKS: NIL**

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




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

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

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 19.09.2018

**TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 19.09.2018 BASED ON 0300 UTC OF 19.09.2018.**

### BAY OF BENGAL:

A LOW PRESSURE AREA FORMED OVER EASTCENTRAL BAY OF BENGAL AT 0900UTC OF YESTERDAY, THE 18TH SEPTEMBER,2018. IT PERSISTED AND BECAME WELL MARKED OVER THE SAME REGION AT 0300UTC OF TODAY, THE 19TH SEPTEMBER,2018. IT IS VERY LIKELY TO CONCENTRATE INTO A DEPRESSION DURING NEXT 12HOURS AND FURTHER INTENSIFY INTO A DEEP DEPRESSION DURING SUBSEQUENT 12HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH ANDHRA PRADESH & SOUTH ODISHA COASTS BETWEEN KALINGAPATNAM AND PARADIP DURING LATE NIGHT OF 20TH AND EARLY MORNING OF 21ST SEPTEMBER,2018.

ACCORDING TO SATELLITE IMAGERIES, INTENSITY OF THE SYSTEM IS T1.0. THE MAXIMUM SUSTAINED WIND SPEED IS 15-20 KTS GUSTING TO 30 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA. THE SEA CONDITION IS ROUGH OVER THE REGION OF WELL MARKED LOW.

BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER BAY OF BENGAL NORTH OF LATTITUDE $9.0^0$NORTH & ANDAMAN SEA IN ASSOCIATION WITH THE SYSTEM. THE ASSOCIATED CONVECTIVE CLOUDS ARE SHEARED TO WEST OF SYSTEM CENTRE.

### PROBABILITY OF CYCLOGENESIS DURING NEXT 120 HRS:

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

### ARABIAN SEA:

SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED WEAK TO MODERATE CONVECTION LIE OVER SOUTHEAST ARABIAN SEA & LAKSADWEEP AREA.

### PROBABILITY OF CYCLOGENESIS DURING NEXT 72 HRS:

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

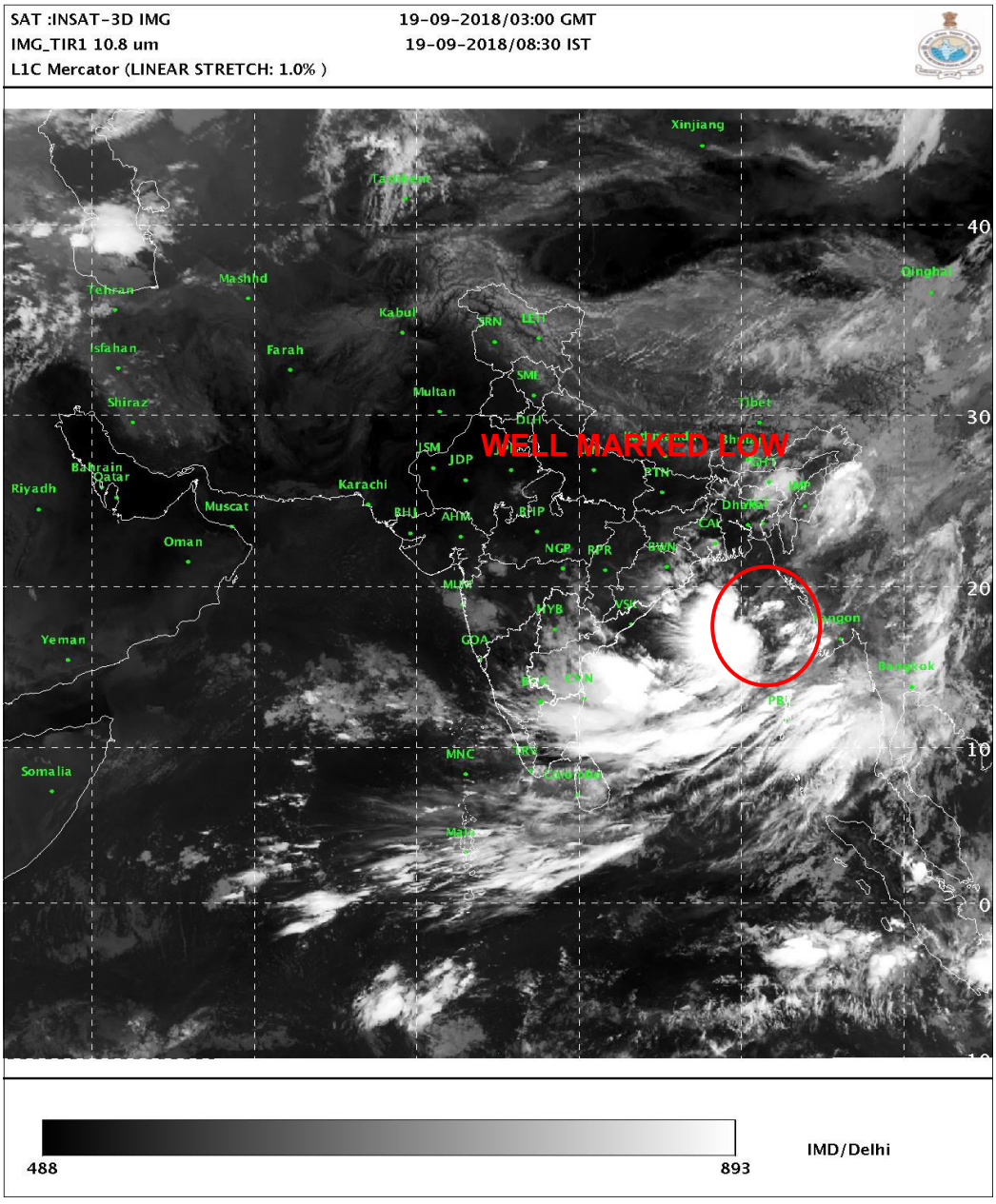
### REMARKS:

MOST OF THE MODELS SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEPRESSION DURING NEXT 12HOURS AND INTO A DEEP DEPRESSION DURING SUBSEQUENT 12HOURS. ALSO, MOST OF THE MODELS ARE UNANIMOUS ABOUT WEST-NORTHWESTWARDS MOVEMENT OF SYSTEM TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA PRADESH COAST AND LANDFALL BY 0000UTC OF 21ST SEPTEMBER, 2018.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS $27\text{-}29^0$C OVER CENTRAL BOB & ADJOINING NORTH BOB. THE TROPICAL

CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM$^2$ OVER THIS REGION. MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE LESS THAN 1 AND WILL REMAIN IN SAME PHASE FOR NEXT 2 DAYS. IT IS FAVOURABLE FOR CYCLOGENESIS.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X10$^{-6}$SEC$^{-1}$TO THE SOUTHWEST OF CENTRE OF WELL MARKED LOW (WML) AND ABOUT 100X10$^{-6}$SEC$^{-1}$ TO THE NORTHEAST OF WELL MARKED LOW (WML). THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF CENTRE OF SYSTEM AND IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE NORTHEAST OF CENTRE OF SYSTEM. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF THE CENTRE OF SYSTEM AND IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE NORTHEAST OF THE CENTRE OF SYSTEM. THE VERTICAL WIND SHEAR IS MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCERASES TOWARDS NORTH ANDHRA AND ODISHA COASTS. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 26$^0$ N. HENCE, THE WINDS ARE EASTSOUTHEASTERLY OVER THE REGION IN UPPER TROPOSPHERE. THUS,THE SYSTEM IS LIKELY TO INTENSIFY AND MOVE WESTNORTHWESTWARDS TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA COAST.




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

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

**SPECIAL TROPICAL WEATHER OUTLOOK**

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 19.09.2018

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 1800 UTC OF 19.09.2018 BASED ON 1500 UTC OF 19.09.2018.**

### BAY OF BENGAL:

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE WELL MARKED LOW PRESSURE AREA OVER EASTCENTRAL BAY OF BENGAL AT 0300UTC OF TODAY, THE 19$^{TH}$ SEPTEMBER, 2018 HAS CONCENTRATED INTO A DEPRESSION OVER THE SAME AREA AND LAY CENTRED AT 1500 UTC OF TODAY, THE 19$^{TH}$ SEPTEMBER, 2018 NEAR LATITUDE 17.2$^{0}$N AND LONGITUDE 89.0$^{0}$E, ABOUT 530 KM EAST-SOUTHEAST OF KALINGAPATNAM (43105) AND ABOUT 440 KM EAST-SOUTHEAST OF PURI (43053). IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS, CONCENTRATE INTO A DEEP DEPRESSION DURING NEXT 12 HOURS AND CROSS ODISHA, NORTH ANDHRA PRADESH COASTS BETWEEN KALINGAPATNAM AND PARADIP(42976) CLOSE TO PURI DURING LATE NIGHT OF 20TH & EARLY MORNING OF 21ST SEPTEMBER.

ACCORDING TO SATELLITE IMAGERIES, INTENSITY OF THE SYSTEM IS T1.5. THE MAXIMUM SUSTAINED WIND SPEED IS 15-20 KTS GUSTING TO 30 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA. THE SEA CONDITION IS ROUGH OVER THE REGION OF THE DEPRESSION.

ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER WEST CENTRAL BAY AND NEIGHBOURHOOD. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

### REMARKS:

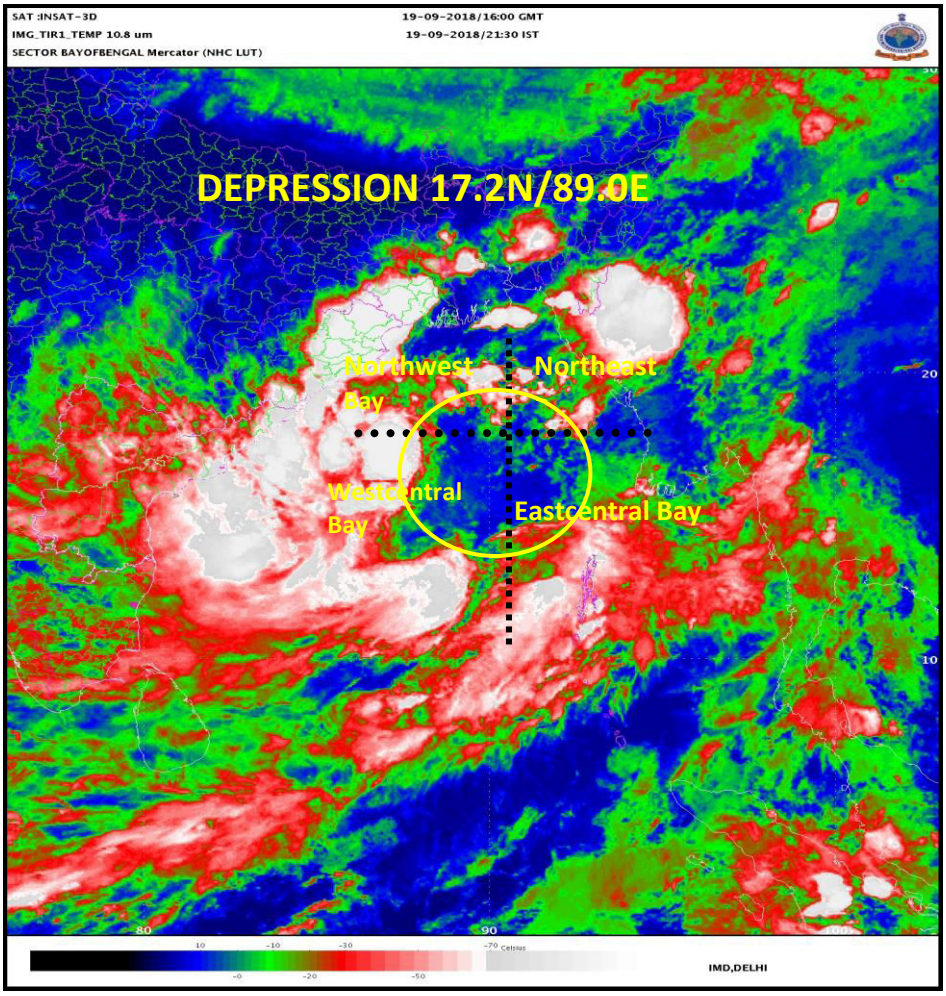
MOST OF THE MODELS SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION DURING SUBSEQUENT 12HOURS. ALSO, MOST OF THE MODELS ARE UNANIMOUS ABOUT NORTHWESTWARDS MOVEMENT OF SYSTEM TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA PRADESH COAST AND LANDFALL BY 0000UTC OF 21$^{ST}$ SEPTEMBER, 2018.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 27-29$^{0}$C OVER CENTRAL BOB & ADJOINING NORTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM$^{2}$ OVER THIS REGION. MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE LESS THAN 1 AND WILL REMAIN IN SAME PHASE FOR NEXT 2 DAYS. IT IS FAVOURABLE FOR CYCLOGENESIS.

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

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X$10^{-6}$$SEC^{-1}$TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X$10^{-5}$$SEC^{-1}$ TO THE SOUTHWEST OF CENTRE OF SYSTEM. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X$10^{-5}$$SEC^{-1}$ TO THE SOUTHWEST OF THE CENTRE OF SYSTEM AND IS ABOUT 20 X$10^{-5}$$SEC^{-1}$ TO THE SOUTHEAST OF THE CENTRE OF SYSTEM. THE VERTICAL WIND SHEAR IS MODERATE (10-25 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCERASES TOWARDS NORTH ANDHRA AND ODISHA COASTS. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG $26^0$ N. HENCE, THE WINDS ARE EASTSOUTHEASTERLY OVER THE REGION IN UPPER TROPOSPHERE. THUS, THE SYSTEM IS LIKELY TO INTENSIFY AND MOVE NORTHWESTWARDS TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA COAST.

**(ANANDA K. DAS)**
**SCIENTIST-E**
**RMSC**

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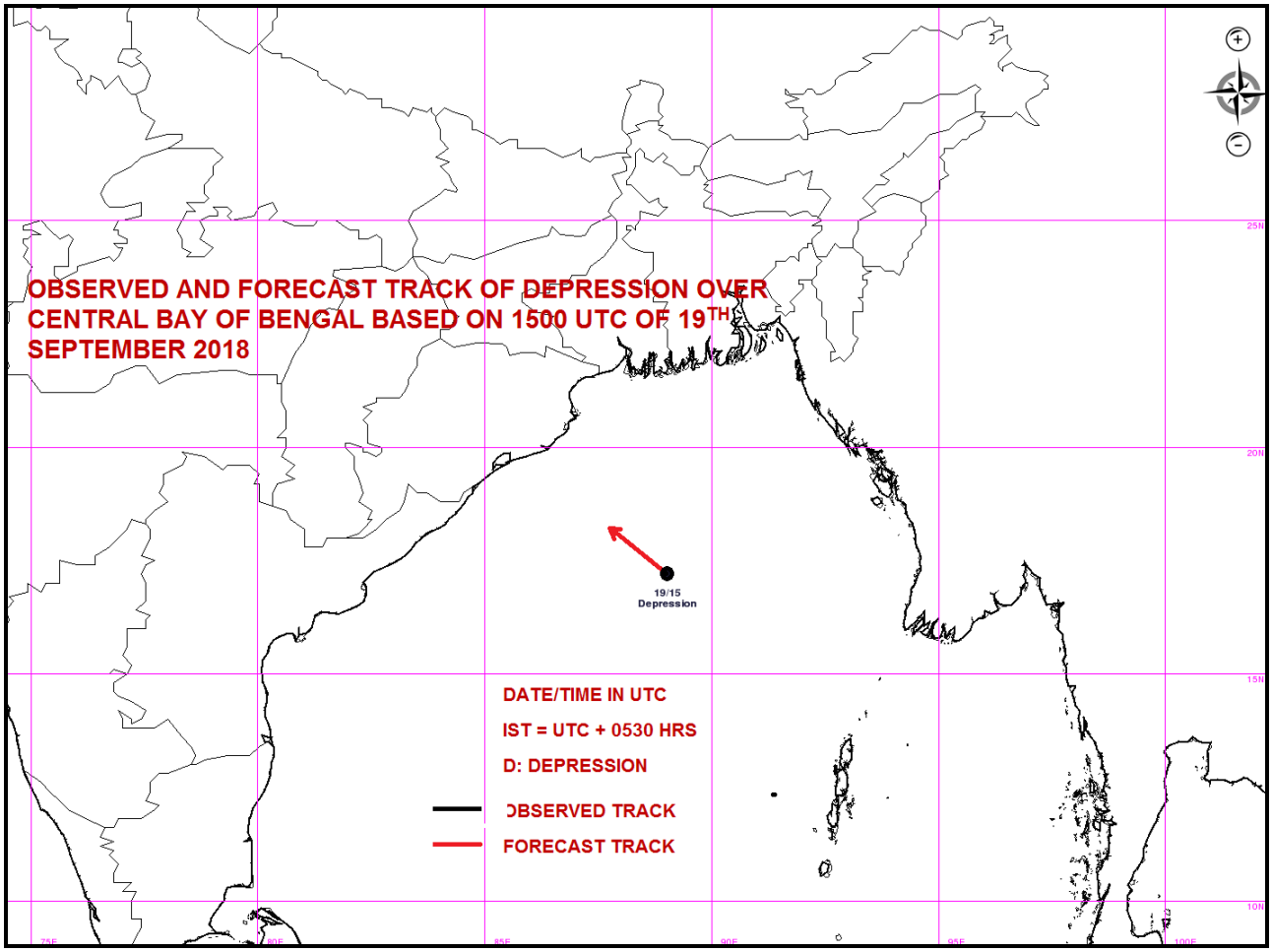


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## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 20.09.2018

## SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 2100 UTC OF 19.09.2018 BASED ON 1800 UTC OF 19.09.2018.

### BAY OF BENGAL:

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE DEPRESSION OVER EASTCENTRAL BAY OF BENGAL AT 1500UTC OF THE 19$^{TH}$ SEPTEMBER, 2018 HAS MOVED NORTHWESTWARDS AND LAY CENTRED AT 1800 UTC OF THE 19$^{TH}$ SEPTEMBER, 2018 NEAR LATITUDE 17.4$^{0}$N AND LONGITUDE 88.8$^{0}$E, ABOUT 490 KM EAST-SOUTHEAST OF KALINGAPATNAM (43105) AND ABOUT 400 KM EAST-SOUTHEAST OF PURI (43053). IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS, CONCENTRATE INTO A DEEP DEPRESSION DURING NEXT 12 HOURS AND CROSS ODISHA, NORTH ANDHRA PRADESH COASTS BETWEEN KALINGAPATNAM AND PARADIP(42976) CLOSE TO PURI DURING LATE NIGHT OF 20TH & EARLY MORNING OF 21ST SEPTEMBER.

ACCORDING TO SATELLITE IMAGERIES, INTENSITY OF THE SYSTEM IS T1.5. THE MAXIMUM SUSTAINED WIND SPEED IS 15-20 KTS GUSTING TO 30 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA. THE SEA CONDITION IS ROUGH OVER THE REGION OF THE DEPRESSION.

ASSOCIATED BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER WEST CENTRAL BAY AND NEIGHBOURHOOD. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

### REMARKS:

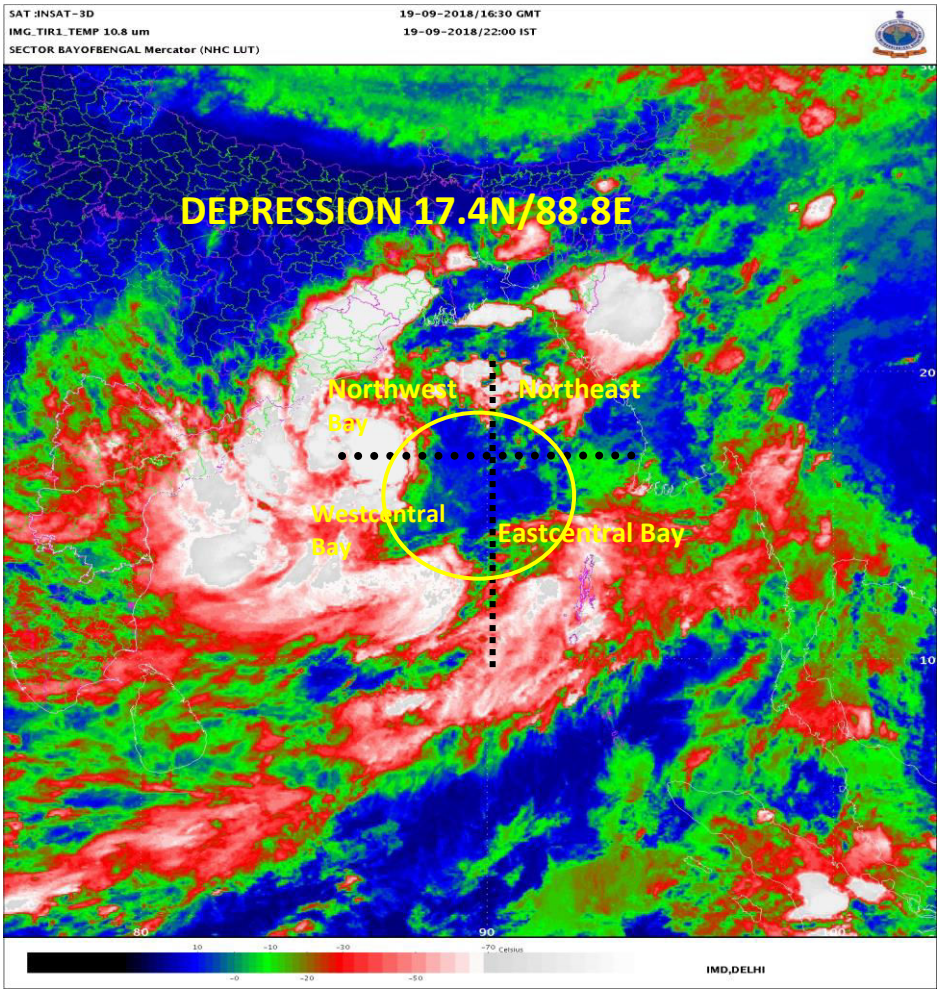
MOST OF THE MODELS SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION DURING SUBSEQUENT 12HOURS. ALSO, MOST OF THE MODELS ARE UNANIMOUS ABOUT WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA PRADESH COAST AND LANDFALL BY 0000UTC OF 21$^{ST}$ SEPTEMBER, 2018.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 27-29$^{0}$C OVER CENTRAL BOB & ADJOINING NORTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM$^{2}$ OVER THIS REGION. MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE LESS THAN 1 AND WILL REMAIN IN SAME PHASE FOR NEXT 2 DAYS. IT IS FAVOURABLE FOR CYCLOGENESIS.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X10$^{-6}$SEC$^{-1}$TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE WEST OF SYSTEM CENTRE. THE

UPPER LEVEL DIVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE CENTRE OF SYSTEM. THE VERTICAL WIND SHEAR IS MODERATE (10-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT INCERASES TOWARDS NORTH ANDHRA AND ODISHA COASTS. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG $26^{0}$ N. HENCE, THE WINDS ARE EASTSOUTHEASTERLY OVER THE REGION IN UPPER TROPOSPHERE. THUS, THE SYSTEM IS LIKELY TO INTENSIFY AND MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA COAST.

**(ANANDA K. DAS)**
**SCIENTIST-E**
**RMSC**

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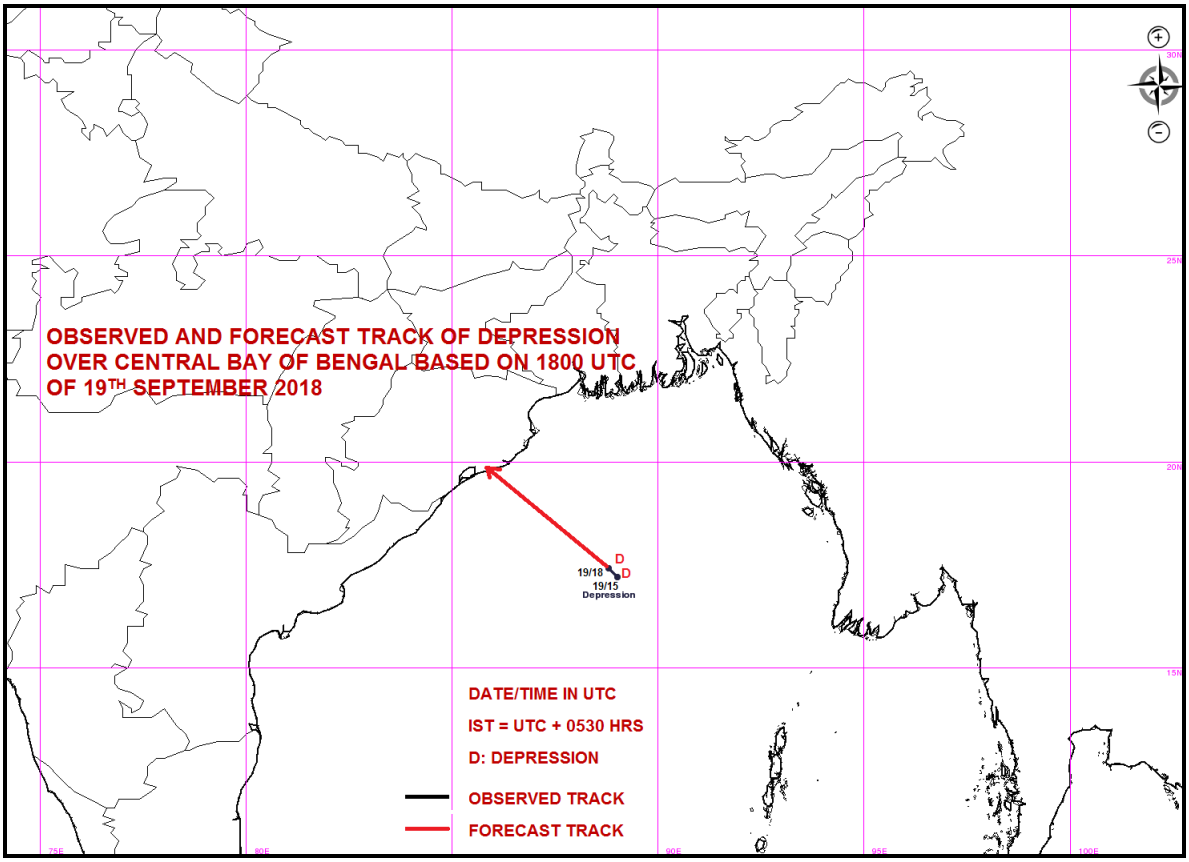


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**SPECIAL TROPICAL WEATHER OUTLOOK**

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 20.09.2018

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 0700 UTC OF 20.09.2018 BASED ON 0300 UTC OF 20.09.2018.**

### BAY OF BENGAL:

THE DEPRESSION OVER WESTCENTRAL & ADJOINING EASTCENTRAL BAY OF BENGAL MOVED NEARLY WESTWARDS WITH A SPEED ABOUT 15 KMPH IN PAST SIX HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0300 UTC OF TODAY, THE 20$^{TH}$ SEPTEMBER, 2018 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 17.5$^{0}$N AND LONGITUDE 87.0$^{0}$E, ABOUT 310 KM EAST-SOUTHEAST OF KALINGAPATNAM (43105) AND ABOUT 300 KM EAST-SOUTHEAST OF GOPALPUR (43049). IT IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS SOUTH ODISHA - NORTH ANDHRA PRADESH COASTS BETWEEN KALINGAPATNAM (43105) AND PURI (43053), CLOSE TO GOPALPUR (43049) AROUND 1500-2100 UTC OF TODAY, THE 20$^{TH}$ SEPTEMBER AS A **CYCLONIC STORM** WITH WIND SPEED OF 60-70 KMPH GUSTING TO 80 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

| DATE/ TIME (UTC) | POSITION (LAT. $^{0}$N/ LONG. $^{0}$E) | MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH) | CATEGORY OF CYCLONIC DISTURBANCE |
|---|---|---|---|
| 20.09.18/0300 | 17.5/87.0 | 50-60 GUSTING TO 70 | DEEP DEPRESSION |
| 20.09.18/0600 | 17.9/86.3 | 55-65 GUSTING TO 75 | DEEP DEPRESSION |
| 20.09.18/1200 | 18.5/85.4 | 60-70 GUSTING TO 80 | CYCLONIC STORM |
| 20.09.18/1800 | 19.1/84.5 | 60-70 GUSTING TO 80 | CYCLONIC STORM |
| 21.09.18/0000 | 19.9/82.6 | 50-60 GUSTING TO 70 | DEEP DEPRESSION |
| 21.09.18/1200 | 21.5/80.0 | 40-50 GUSTING TO 60 | DEPRESSION |
| 22.09.18/0000 | 22.8/77.5 | 30-40 GUSTING TO 50 | DEPRESSION |

ACCORDING TO SATELLITE IMAGERIES, INTENSITY OF THE SYSTEM IS C.I 2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION ARE SEEN OVER WEST CENTRAL BOB AND NEIGHBOURHOOD. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

THE MAXIMUM SUSTAINED WIND SPEED IS 25-30 KTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 996 HPA. THE SEA CONDITION IS VERY ROUGH OVER THE REGION OF THE DEEP DEPRESSION.

A BOUY LOCATED AT 17.7 DEG N/89.2 DEG E REPORTED A MEAN SEA LEVEL PRESSURE OF 1000.2 HPA AND MAXIMUM SUSTAINED WIND 140 DEG/21 KTS.

**REMARKS:**

MOST OF THE MODELS SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A TROPICAL CYCLONE DURING NEXT 12 HOURS. ALSO, MOST OF THE MODELS ARE UNANIMOUS ABOUT WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH ODISHA AND

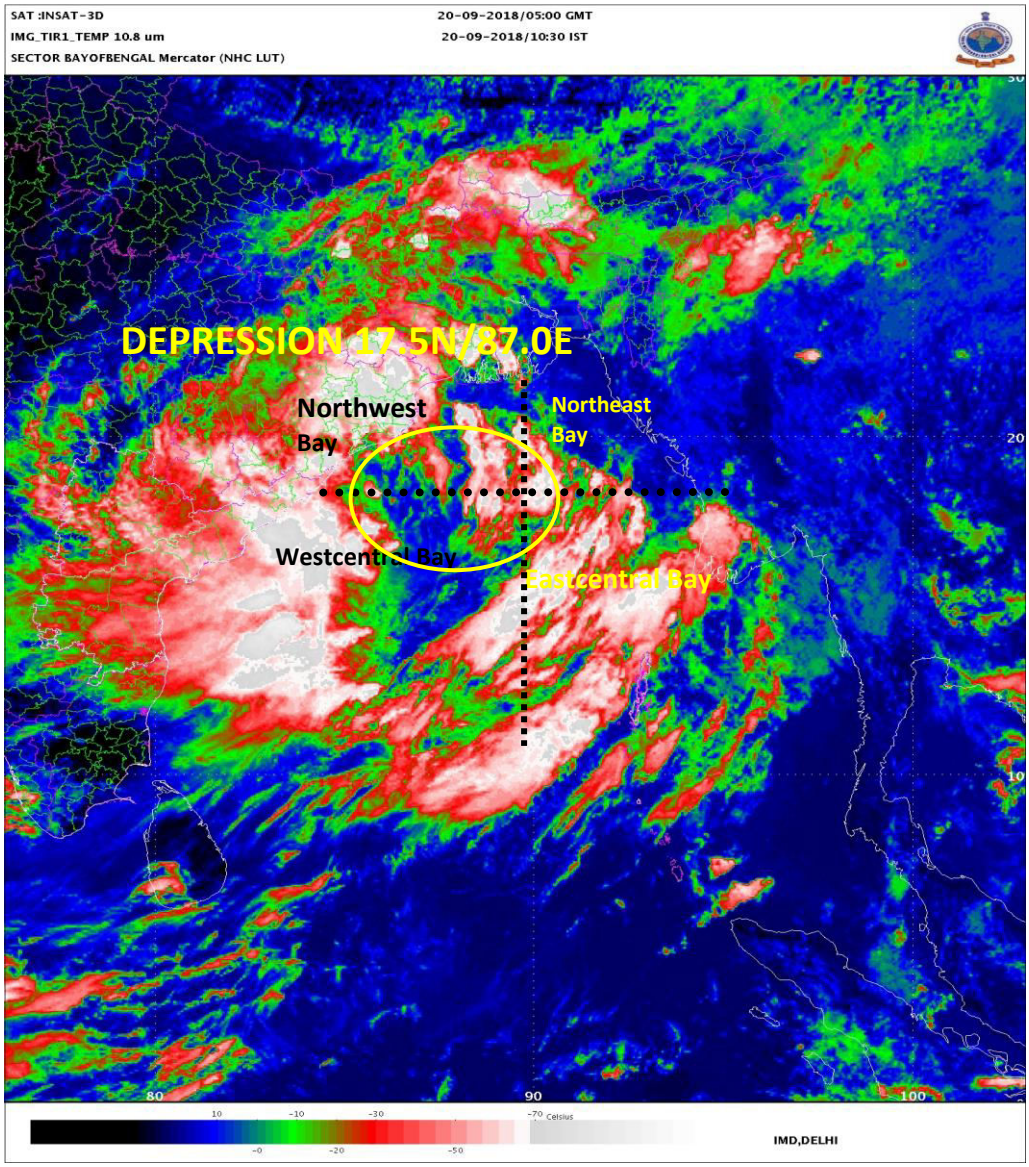
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

ADJOINING NORTH ANDHRA PRADESH COAST AND LAND FALL AROUND MIDNIGHT OF 20TH SEPTEMBER, 2018.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 28-30$^0$C OVER NORTH BOB & ADJOINING WEST CENTRAL BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 50-80 KJ/CM$^2$ OVER THIS REGION. MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE LESS THAN 1. IT IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X10$^{-6}$SEC$^{-1}$TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 30 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF THE CENTRE OF SYSTEM. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE AND IS HIGH ELSEWHERE. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 26$^0$ N. HENCE, THE UPPER TROPOSPHERE WINDS ARE PREDOMINENTLY EAST-NORTHEASTERLIES BECOMING EASTSOUTHEASTERLY TOWARDS THE COAST. THUS, THE SYSTEM IS LIKELY TO INTENSIFY AND MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA COAST.

**(NEETHA K GOPAL)**
**SCIENTIST-E**
**RMSC, NEW DELHI**

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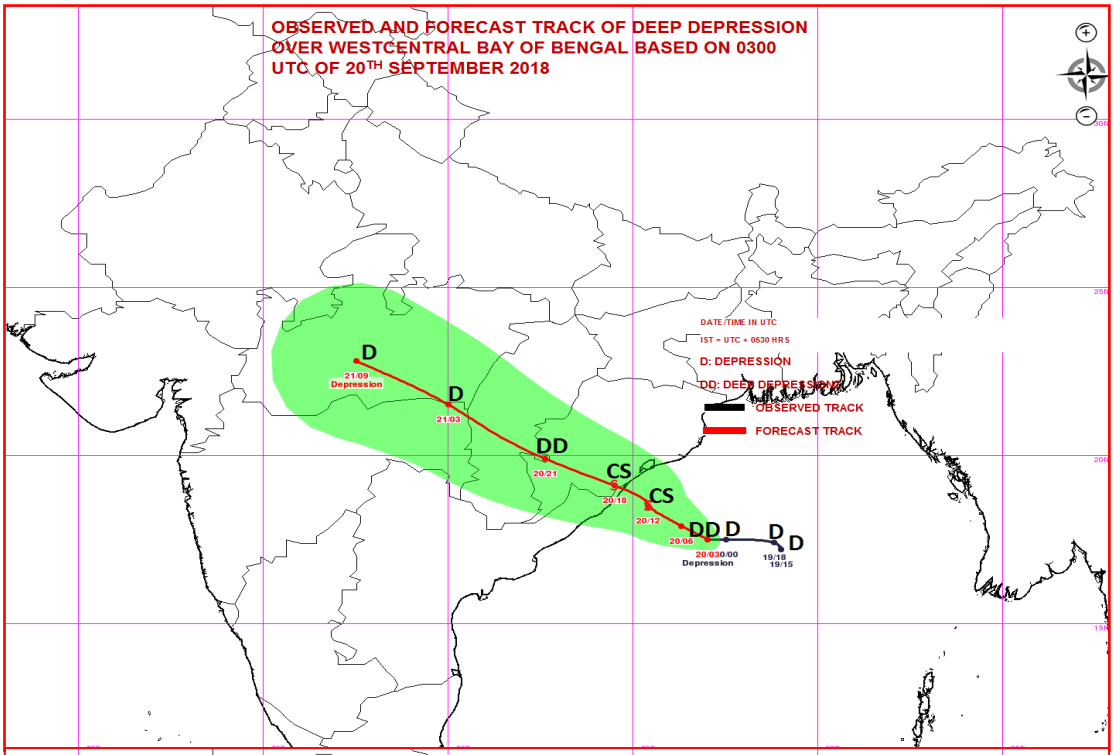


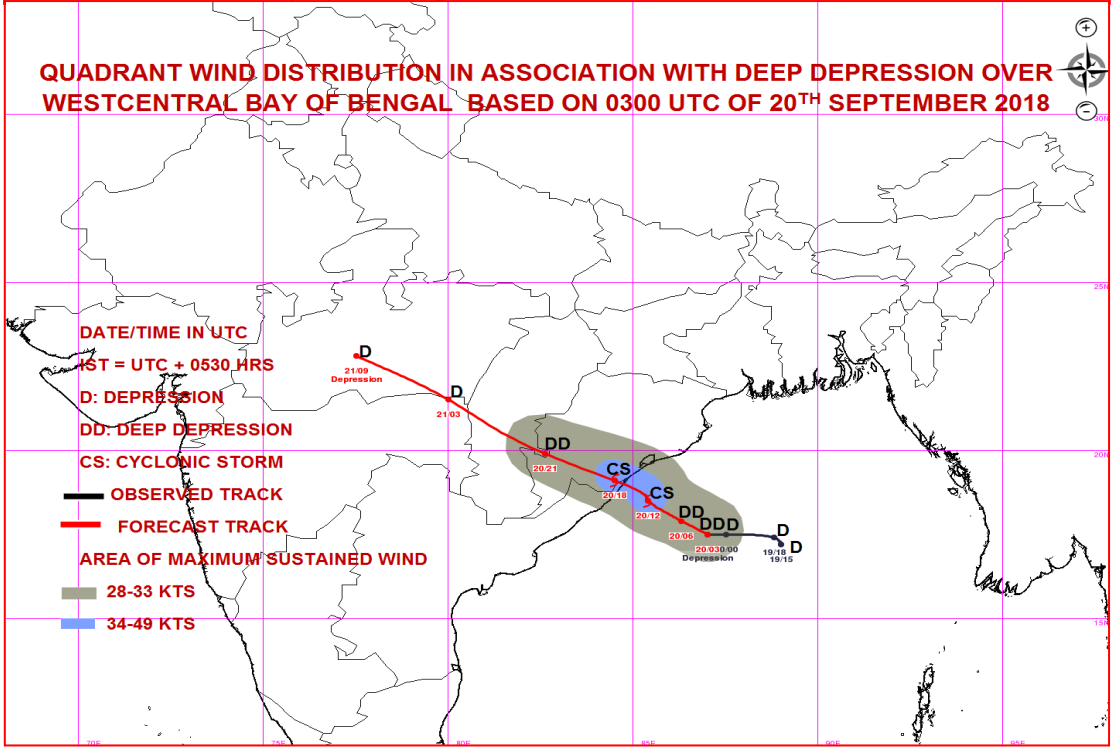


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**SPECIAL TROPICAL WEATHER OUTLOOK**

## DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 20.09.2018

**SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 1430 UTC OF 20.09.2018 BASED ON 1200 UTC OF 20.09.2018.**

### BAY OF BENGAL:

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARDS IN PAST SIX HOURS WITH A SPEED ABOUT 23 KMPH. IT LAY CENTRED AT 1200 UTC OF TODAY, THE 20TH SEPTEMBER, 2018 OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL NEAR LATITUDE 18.4°N AND LONGITUDE 85.8°E, ABOUT 170 KM EAST OF KALINGAPATNAM (43105) AND ABOUT 130 KM SOUTHEAST OF GOPALPUR (43049).

IT IS LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 06 HOURS. IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS SOUTH ODISHA - NORTH ANDHRA PRADESH COASTS BETWEEN KALINGAPATNAM & PURI(43053), CLOSE TO GOPALPUR AROUND MID-NIGHT OF TODAY, THE 20TH SEPTEMBER AS A CYCLONIC STORM WITH WIND SPEED OF 60-70 KMPH GUSTING TO 80 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

| DATE/ TIME (UTC) | POSITION (LAT.°N/ LONG.°E) | MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH) | CATEGORY OF CYCLONIC DISTURBANCE |
|---|---|---|---|
| 20.09.18/1200 | 18.4/85.8 | 50-60 GUSTING TO 70 | DEEP DEPRESSION |
| 20.09.18/1800 | 19.2/84.5 | 60-70 GUSTING TO 80 | CYCLONIC STORM |
| 21.09.18/0000 | 19.9/82.9 | 50-60 GUSTING TO 70 | DEEP DEPRESSION |
| 21.09.18/0600 | 20.5/81.4 | 40-50 GUSTING TO 60 | DEPRESSION |
| 21.09.18/1200 | 21.1/80.1 | 40-50 GUSTING TO 60 | DEPRESSION |
| 22.09.18/0000 | 22.4/77.7 | 30-40 GUSTING TO 50 | DEPRESSION |
| 22.09.18/1200 | 23.7/75.3 | 30-40 GUSTING TO 50 | DEPRESSION |

ACCORDING TO SATELLITE IMAGERIES, INTENSITY OF THE SYSTEM IS C.I 2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION ARE SEEN OVER WEST CENTRAL BOB AND NEIGHBOURHOOD. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C.

THE MAXIMUM SUSTAINED WIND SPEED IS 25-30 KTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 996 HPA. THE SEA CONDITION IS VERY ROUGH OVER THE REGION OF THE DEEP DEPRESSION.

A BOUY LOCATED AT 17.7 DEG N/89.2 DEG E REPORTED A MEAN SEA LEVEL PRESSURE OF 1000.2 HPA AND MAXIMUM SUSTAINED WIND 140 DEG/21 KTS.

**REMARKS:**

MOST OF THE MODELS SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A TROPICAL CYCLONE DURING NEXT 06 HOURS. ALSO, MOST OF THE MODELS ARE UNANIMOUS ABOUT WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH ODISHA AND

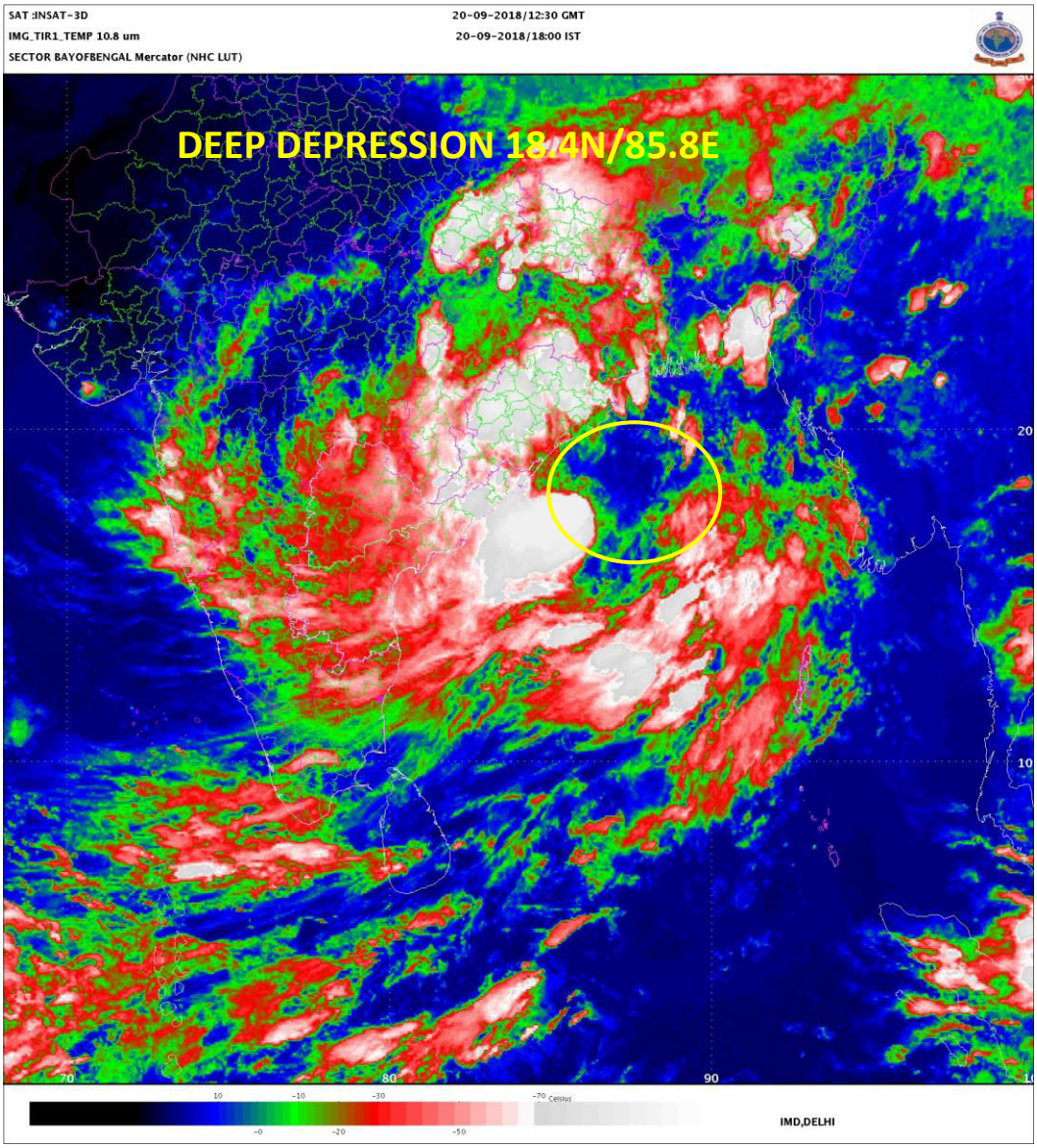
**Contact: Phone: (91) 11-24652484 FAX: (91) 11-24623220 e-mail :cwdhq2008@gmail.com**

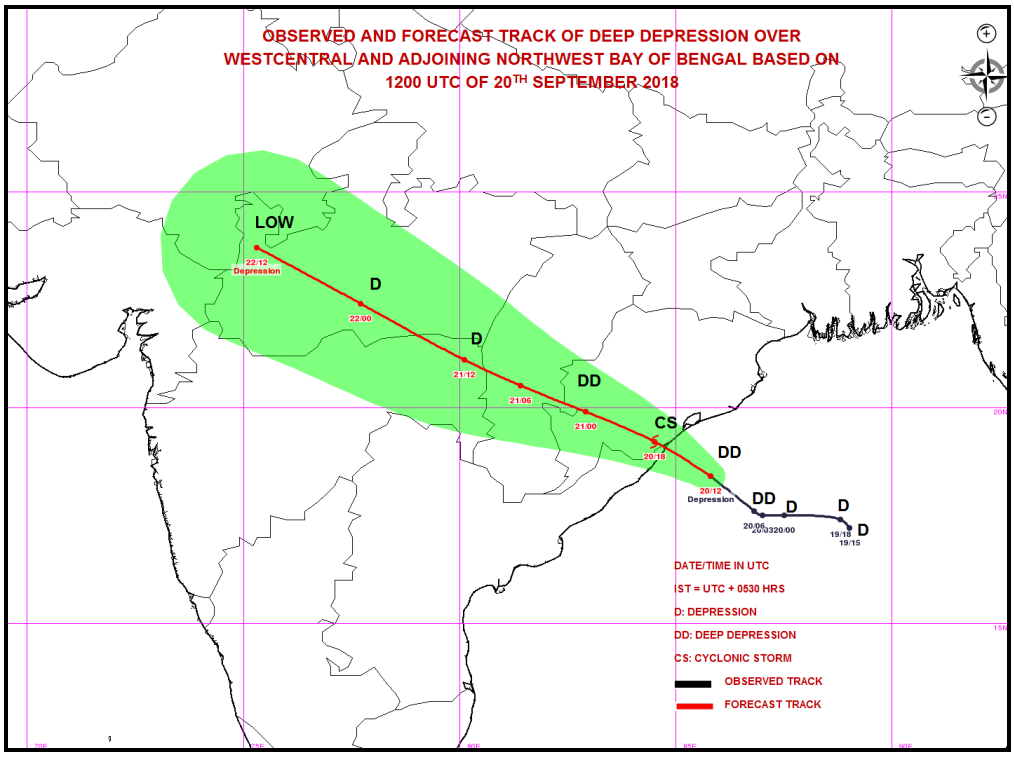
ADJOINING NORTH ANDHRA PRADESH COAST AND LAND FALL AROUND MIDNIGHT OF 20TH SEPTEMBER, 2018.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 28-30$^0$C OVER NORTH BOB & ADJOINING WEST CENTRAL BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 50-80 KJ/CM$^2$ OVER THIS REGION. MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES IN PHASE 3 WITH AMPLITUDE LESS THAN 1. IT IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 200X10$^{-6}$SEC$^{-1}$TO THE NORTH OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 30 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT 10 X10$^{-5}$SEC$^{-1}$ TO THE WEST OF THE CENTRE OF SYSTEM. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) TO THE NORTHWEST OF THE SYSTEM CENTRE AND IS HIGH ELSEWHERE. THE UPPER TROPOSPHERIC RIDGE RUNS ALONG 26$^0$ N. HENCE, THE UPPER TROPOSPHERE WINDS ARE PREDOMINENTLY EAST-NORTHEASTERLIES BECOMING EASTSOUTHEASTERLY TOWARDS THE COAST. THUS, THE SYSTEM IS LIKELY TO INTENSIFY AND MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH ODISHA AND ADJOINING NORTH ANDHRA COAST.

**(SUNITHA DEVI)**
**SCIENTIST-E**
**RMSC, NEW DELHI**

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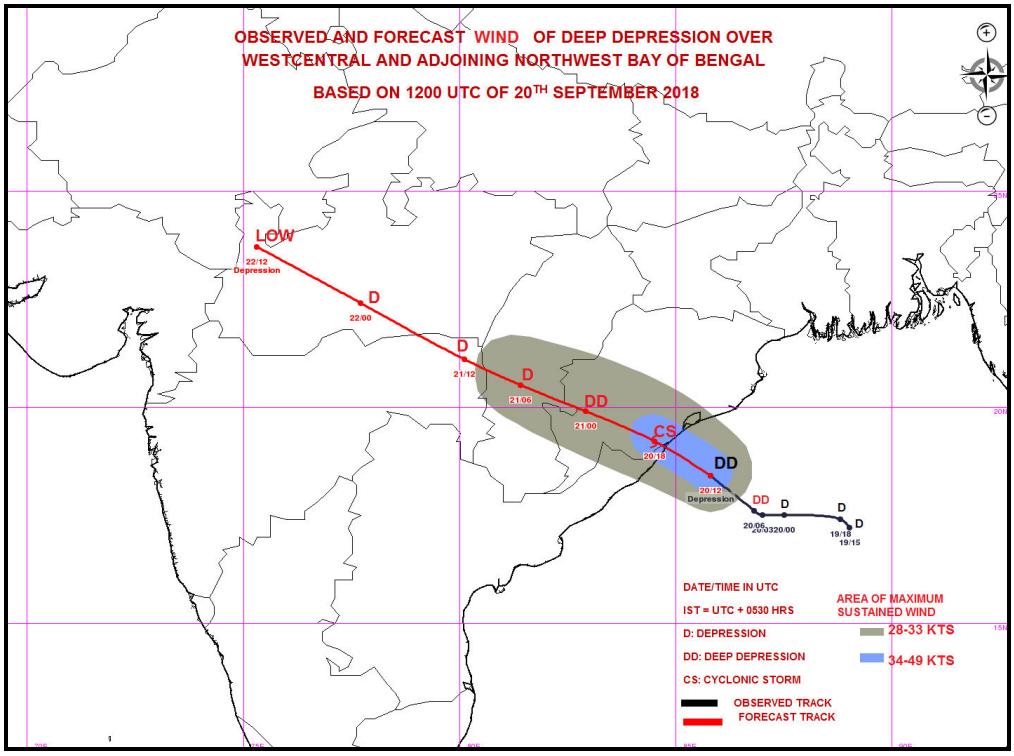


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**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 STORM 'DAYE' ADVISORY NO. ONE ISSUED AT 1700 UTC OF 20$^{TH}$ SEP 2018 BASED ON 1500 UTC OF 20$^{TH}$ SEP 2018**

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWESTWARDS DURING PAST SIX HOURS WITH A SPEED ABOUT 20 KMPH, INTENSIFIED INTO A CYCLONIC STORM "**DAYE**" AND LAY CENTRED AT 1500 UTC OF TODAY, THE 20$^{TH}$ SEPTEMBER, 2018 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 18.8$^{0}$N AND LONGITUDE 85.6$^{0}$E, ABOUT 90 KM SOUTHEAST OF GOPALPUR (ODISHA) AND ABOUT 160 KM NORTHEAST OF KALINGAPATNAM (COASTAL ANDHRA PRADESH).

IT IS VERY LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS SOUTH ODISHA - NORTH ANDHRA PRADESH COASTS BETWEEN KALINGAPATNAM & PURI (ODISHA), CLOSE TO GOPALPUR AROUND MID-NIGHT OF TODAY, THE 20$^{TH}$ SEPTEMBER AS A **CYCLONIC STORM** WITH WIND SPEED OF 60-70 KMPH GUSTING TO 80 KMPH.

| Date/TimeUTC) | Position (Lat. $^{0}$N/ long. $^{0}$E) | Maximum sustained surface wind speed (Kmph) | Category of cyclonic disturbance |
|---|---|---|---|
| 20.09.18/1500 | 18.8/85.6 | 60-70 gusting to 80 | Cyclonic Storm |
| 20.09.18/1800 | 19.2/84.5 | 60-70 gusting to 80 | Cyclonic Storm |
| 21.09.18/0000 | 19.9/82.9 | 55-65 gusting to 75 | Deep Depression |
| 21.09.18/0600 | 20.5/81.4 | 45-55 gusting to 65 | Depression |
| 21.09.18/1200 | 21.1/80.1 | 40-50 gusting to 60 | Depression |
| 22.09.18/0000 | 22.4/77.7 | 40-50 gusting to 60 | Depression |
| 22.09.18/1200 | 23.7/75.3 | 30-40 gusting to 50 | Depression |

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH COASTAL ANDHRA PRADESH, WESTCENTRAL BAY OF BRNGAL BETBEETN LATITUDE 16.0$^{0}$N TO 18.5$^{0}$N WEST OF LONGITUDE 86.5$^{0}$E. MINIMUM CTT MINUS 93 DEG C.

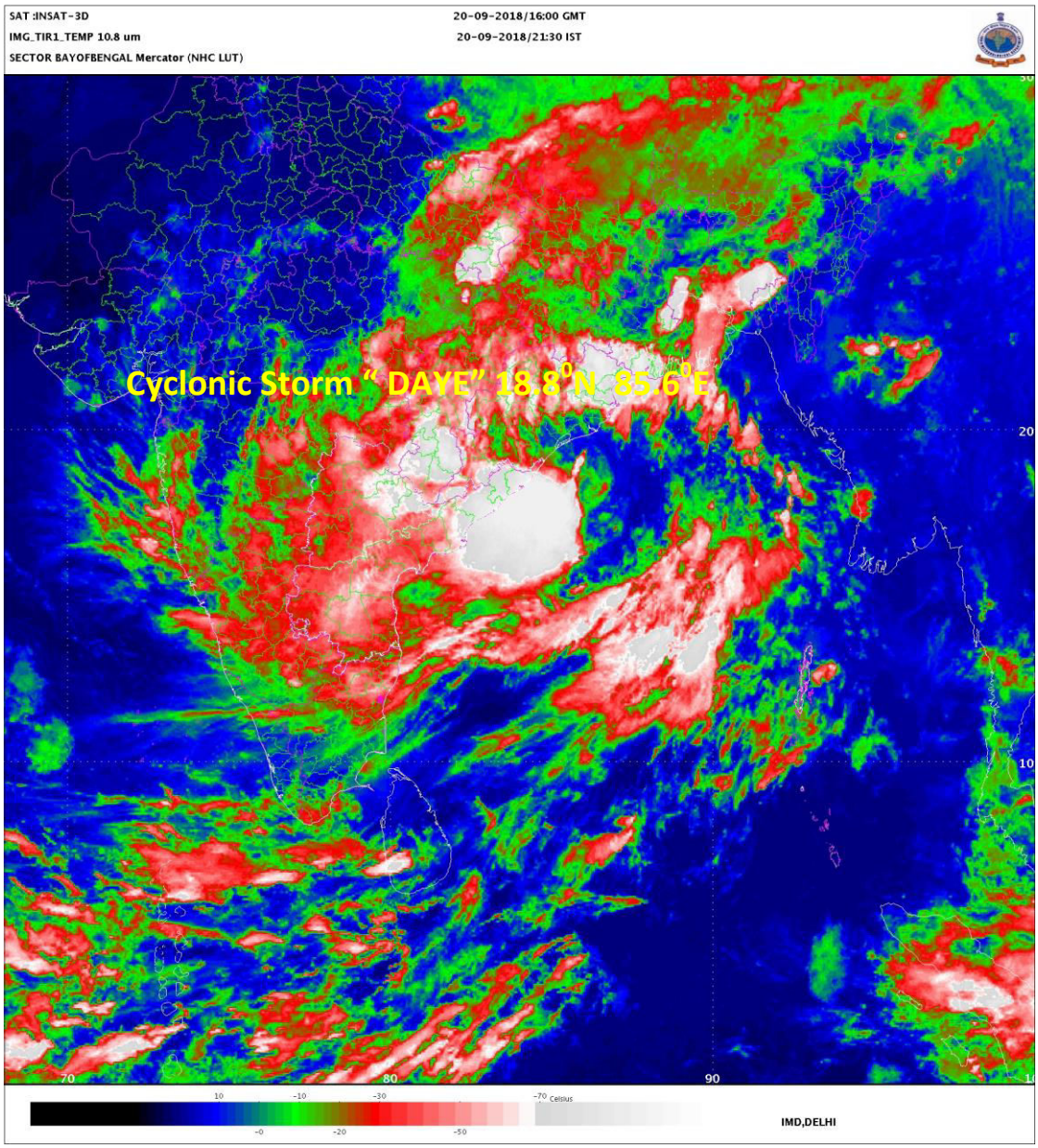
THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. STATE OF SEA IS HIGH OVER THE NORTHWEST BAY OF BENGAL AND ALONG AND OFF ODISHA AND NORTH ANDHRA PRADESH COAST.

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

**REMARKS:**

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES OVER PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1. THE SEA SURFACE TEMPERATURE (SST) IS 28-$30^0$ C OVER NORTH BAY OF BENGAL. UPPER LEVEL RIDGE RUNS ALONG 29°N. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT $150X10^{-6}$ $SEC^{-1}$ IN THE SOUTHWEST SECTOR OF THE SYSTEM CENTRE AND SHOWS DECREASE IN AREAL COVERAGE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT 10 $X10^{-5}$ $SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE (10-20 KNOTS) OVER NORTHWEST BOB BETWEEN LOWER AND MIDDLE TROPOSPHERIC LEVELS AND HIGH (> 20 KNOTS) BETWEEN LOWER AND UPPER TROPOSPHERIC LEVELS. HENCE THE ENVIRONMENTAL CONDITIONS LIKE WIND SHEAR & MJO ALONGWITH LAND INTERACTION ARE NOT SUPPORTIVE FOR FURTHER INTENSIFICATION. HOWEVER, AS THE SYSTEM LIES CLOSE TO SEA AND THERE IS MOISTURE INCURSION, THE SYSTEM WILL MAINTAIN ITS INTENSITY UPTO NEXT 12 HOURS AND GRADUALLY WEAKEN THEREAFTER. THE STEERING FLOW SUGGESTS THE SYSTEM TO MOVE NORTHWESTWARDS FOR SOME MORE TIME AND WEST-NORTHWESTWARDS THEREAFTER. MOST OF THE NWP MODELS ALSO SUGGEST THE ABOVE.

**(DR PATTANAIK)**
**SCIENTIST-E**
**RSMC, NEW DELHI**

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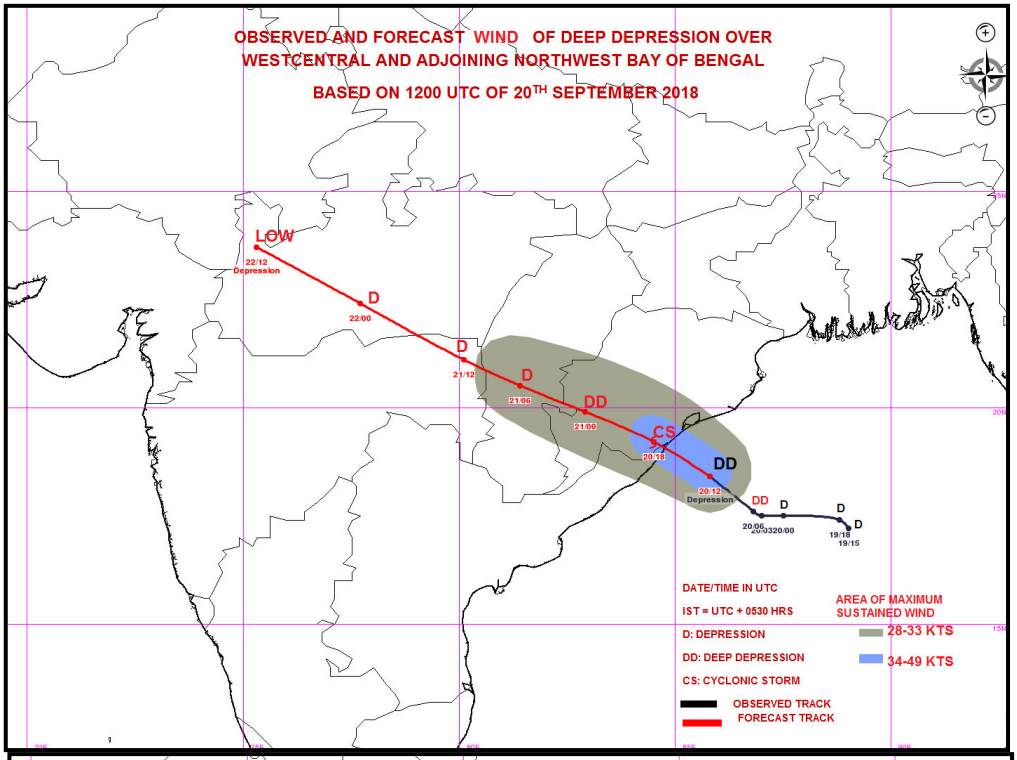


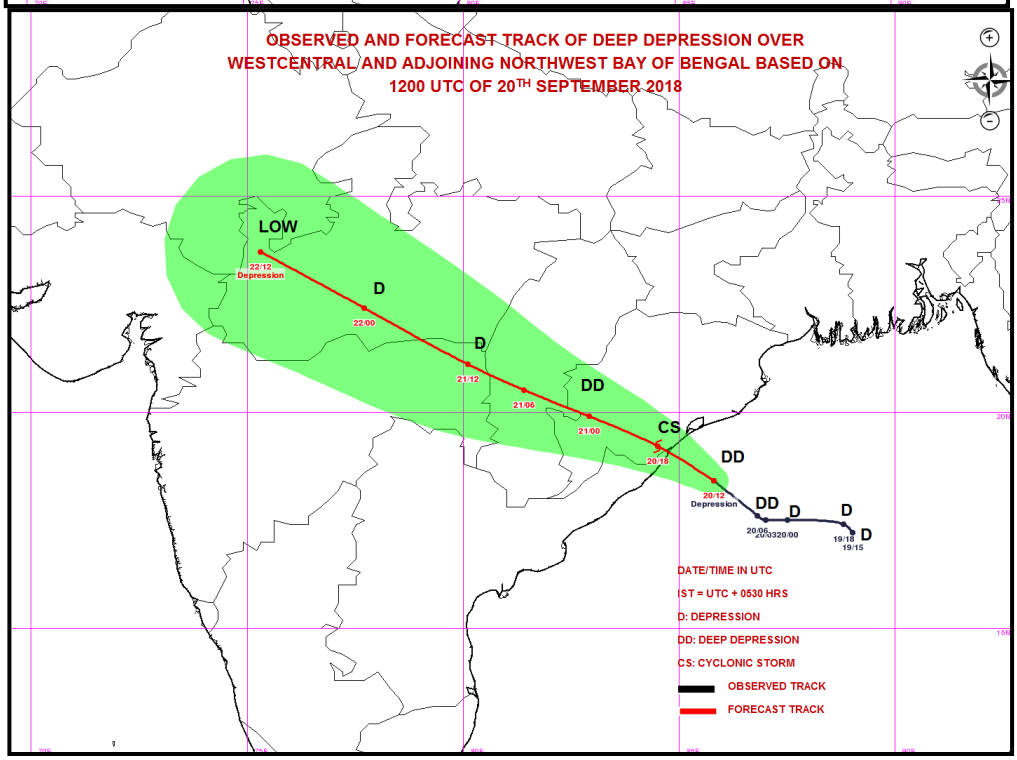


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**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 STORM 'DAYE' ADVISORY NO. TWO ISSUED AT 2000 UTC OF 20$^{TH}$ SEP 2018 BASED ON 1800 UTC OF 20$^{TH}$ SEP 2018**

THE CYCLONIC STORM "**DAYE**" OVER NORTHWEST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS DURING PAST SIX HOURS WITH A SPEED ABOUT 20 KMPH AND LAY CENTRED AT 1800 UTC OF 20$^{TH}$ SEPTEMBER, 2018 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.2$^0$N AND LONGITUDE 85.0$^0$E, ABOUT 15 KM EAST-SOUTHEAST OF GOPALPUR (ODISHA) AND ABOUT 130 KM NORTHEAST OF KALINGAPATNAM (COASTAL ANDHRA PRADESH).

LATEST COASTAL OBSERVATIONS INDICATE THAT THE CYCLONIC STORM "**DAYE**" IS CROSSING THE COAST NEAR GOPALPUR.

| Date/Time(UTC) | Position (Lat. $^0$N/ long. $^0$E) | Maximum sustained surface wind speed (Kmph) | Category of cyclonic disturbance |
|---|---|---|---|
| 20.09.18/1800 | 19.2/85.0 | 60-70 gusting to 80 | Cyclonic Storm |
| 21.09.18/0000 | 19.9/83.5 | 55-65 gusting to 75 | Deep Depression |
| 21.09.18/0600 | 20.6/82.0 | 45-55 gusting to 65 | Depression |
| 21.09.18/1200 | 21.1/80.5 | 40-50 gusting to 60 | Depression |
| 21.09.18/1800 | 21.7/79.0 | 30-40 gusting to 50 | Depression |
| 22.09.18/0600 | 22.4/76.5 | 20-30 gusting to 40 | Well Marked Low |

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH COASTAL ANDHRA PRADESH, WESTCENTRAL BAY OF BRNGAL BETBEETN LATITUDE 15.5$^0$N TO 20.0$^0$N WEST OF LONGITUDE 86.0$^0$E. MINIMUM CTT MINUS 93 DEG C.

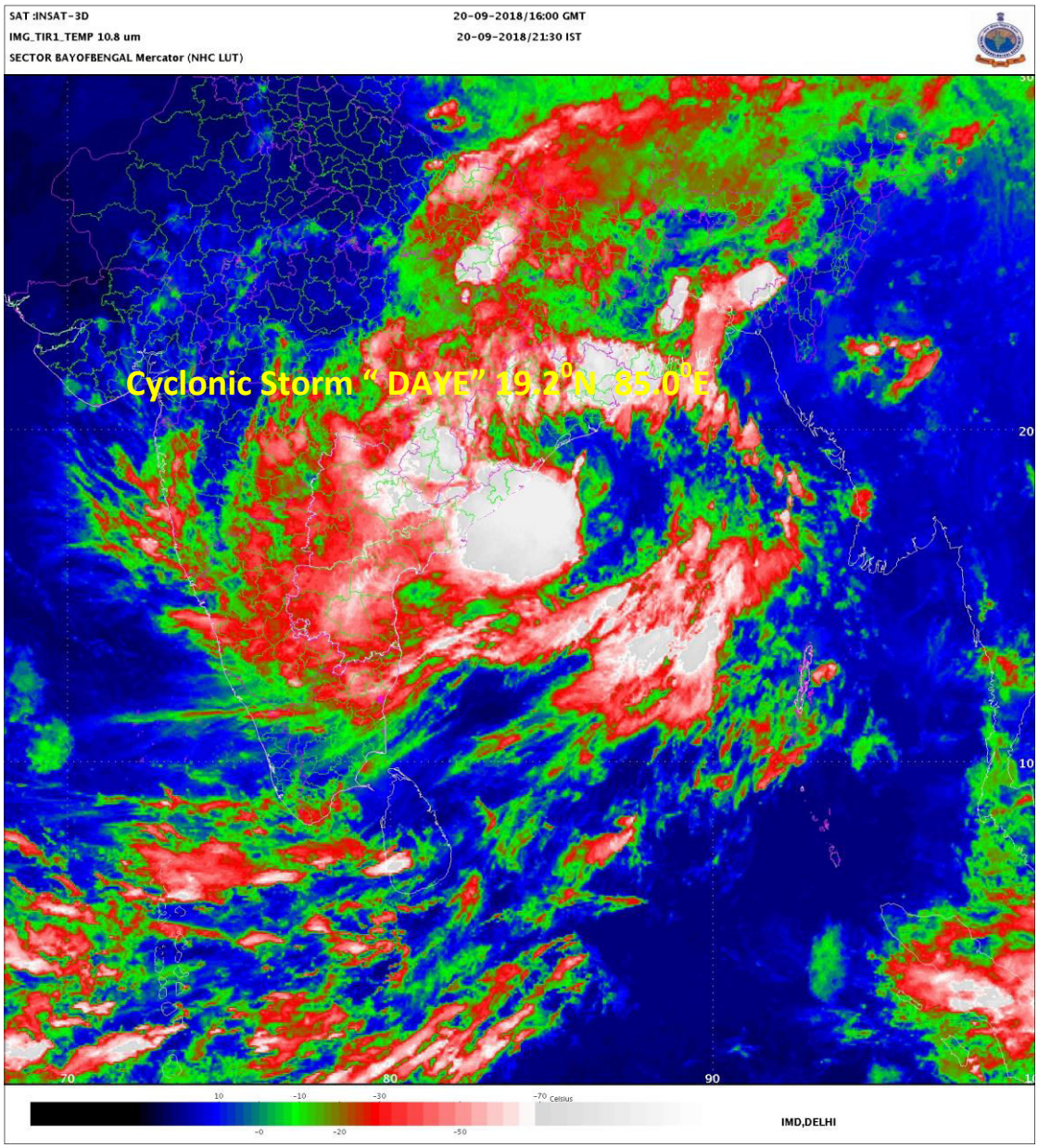
THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. STATE OF SEA IS HIGH OVER THE NORTHWEST BAY OF BENGAL AND ALONG AND OFF ODISHA AND NORTH ANDHRA PRADESH COAST.

**REMARKS:**

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

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES OVER PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1. THE SEA SURFACE TEMPERATURE (SST) IS 28-30$^{0}$ C OVER NORTH BAY OF BENGAL. UPPER LEVEL RIDGE RUNS ALONG 29°N. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X10$^{-6}$ SEC$^{-1}$ IN THE SOUTH SECTOR OF THE SYSTEM CENTRE AND SHOWS DECREASE IN AREAL COVERAGE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20-30 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT 10 X10$^{-5}$ SEC$^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE (10-20 KNOTS) OVER NORTHWEST BOB BETWEEN LOWER AND MIDDLE TROPOSPHERIC LEVELS AND HIGH (> 20 KNOTS) BETWEEN LOWER AND UPPER TROPOSPHERIC LEVELS. HENCE THE ENVIRONMENTAL CONDITIONS LIKE WIND SHEAR & MJO ALONGWITH LAND INTERACTION ARE NOT SUPPORTIVE FOR FURTHER INTENSIFICATION. HOWEVER, AS THE SYSTEM LIES CLOSE TO SEA AND THERE IS MOISTURE INCURSION, THE SYSTEM WILL MAINTAIN ITS INTENSITY UPTO NEXT 06 HOURS AND GRADUALLY WEAKEN THEREAFTER. THE STEERING FLOW SUGGESTS THE SYSTEM TO MOVE WEST-NORTHWESTWARDS. MOST OF THE NWP MODELS ALSO SUGGEST THE ABOVE.

**(DR PATTANAIK)**
**SCIENTIST-E**
**RSMC, NEW DELHI**

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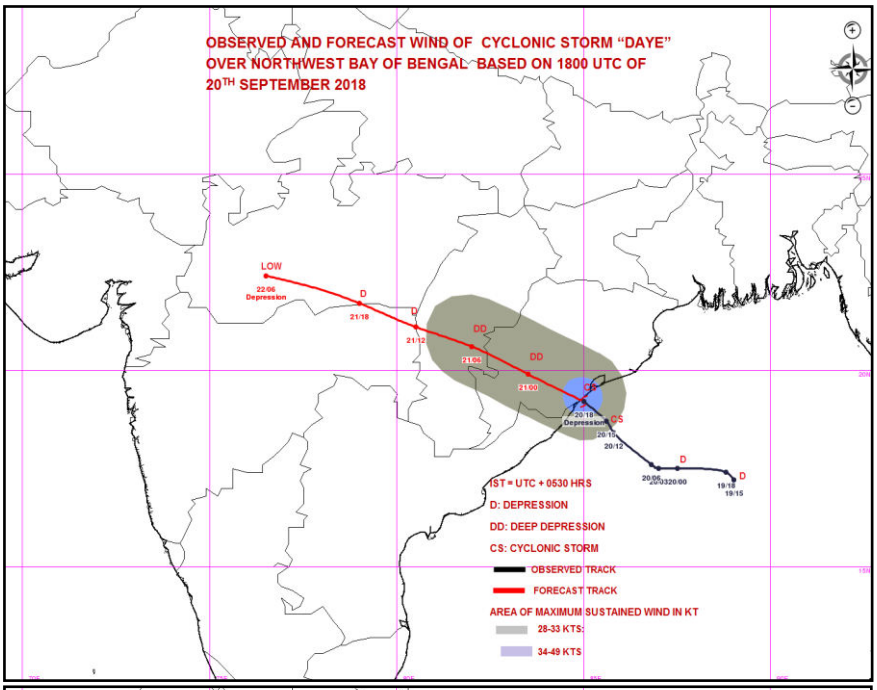


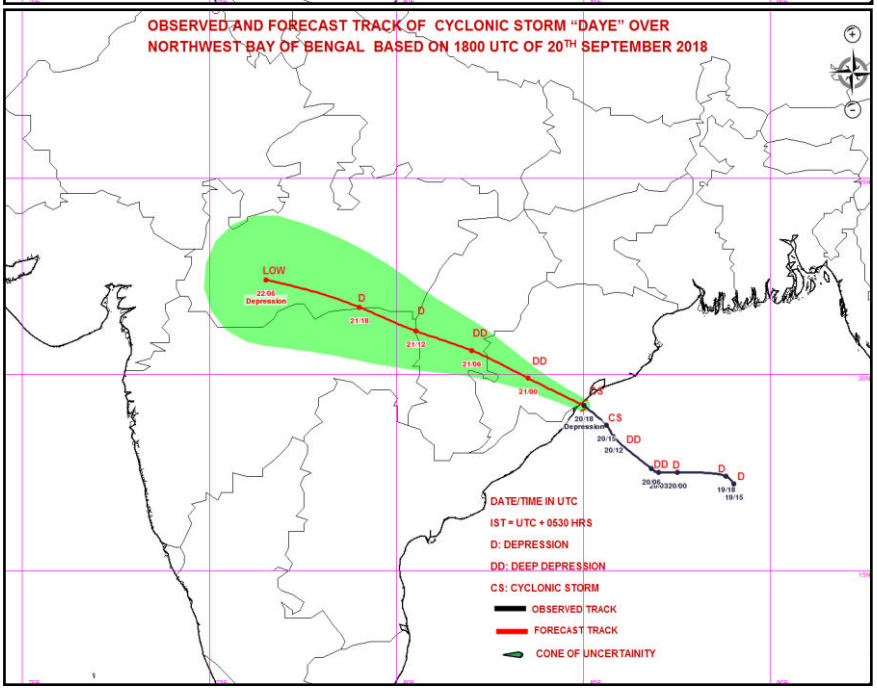


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**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 STORM 'DAYE' ADVISORY NO. THREE ISSUED AT 2130 UTC OF 20$^{TH}$ SEP 2018 BASED ON 2100 UTC OF 20$^{TH}$ SEP 2018**

THE CYCLONIC STORM "**DAYE**" OVER NORTHWEST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS DURING PAST SIX HOURS WITH A SPEED ABOUT 23 KMPH AND CROSSED SOUTH ODISHA AND ADJOINING NORTH ANDHRA PRADESH COAST CLOSE TO GOPALPUR DURING 1900 TO 2000 UTC OF 21$^{ST}$ SEPTEMBER, 2018 AND LAY CENTRED AT 2100 UTC OF 20TTH SEPTEMBER, 2018 OVER SOUTH ODISHA NEAR LATITUDE 19.5$^0$N AND LONGITUDE 84.5$^0$E, ABOUT 40 KM WEST-NORTHWEST OF GOPALPUR (ODISHA) AND ABOUT 150 KM EAST-SOUTHEAST OF BHAWANIPATNA (ODISHA). IT WOULD CONTINUE TO MOVE WEST-NORTHWESTWARDS AND WEAKEN GRADUALLY INTO A DEEP DEPRESSION DURING NEXT 06 HOURS.

| Date/Time(UTC) | Position (Lat. $^0$N/ long. $^0$E) | Maximum sustained surface wind speed (Kmph) | Category of cyclonic disturbance |
|---|---|---|---|
| 20.09.18/2100 | 19.5/84.5 | 60-70 gusting to 80 | Cyclonic Storm |
| 21.09.18/0000 | 19.9/83.5 | 55-65 gusting to 75 | Deep Depression |
| 21.09.18/0600 | 20.6/82.0 | 45-55 gusting to 65 | Depression |
| 21.09.18/1200 | 21.1/80.5 | 40-50 gusting to 60 | Depression |
| 21.09.18/1800 | 21.7/79.0 | 30-40 gusting to 50 | Depression |
| 22.09.18/0600 | 22.4/76.5 | 20-30 gusting to 40 | Well Marked Low |

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF TODAY, BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER NORTH COASTAL ANDHRA PRADESH, WESTCENTRAL BAY OF BRNGAL BETBEETN LATITUDE 15.5$^0$N TO 20.0$^0$N WEST OF LONGITUDE 86.0$^0$E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. STATE OF SEA IS HIGH OVER THE NORTHWEST BAY OF BENGAL AND ALONG AND OFF ODISHA AND NORTH ANDHRA PRADESH COAST.

**REMARKS:**

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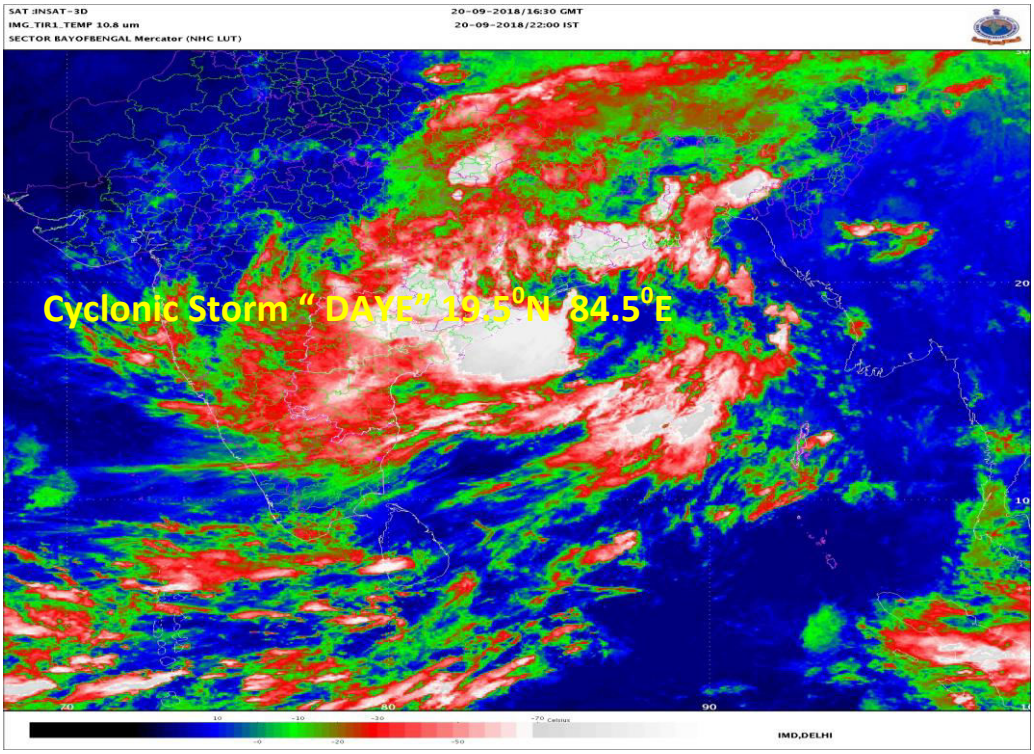
CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX CURRENTLY LIES OVER PHASE 6 WITH AMPLITUDE GREATER THAN 1. IT WILL CONTINUE IN SAME PHASE FOR NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1. THE SEA SURFACE TEMPERATURE (SST) IS 28-30$^0$ C OVER NORTH BAY OF BENGAL. UPPER LEVEL RIDGE RUNS ALONG 29°N. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 150X10$^{-6}$ SEC$^{-1}$ IN THE SOUTH SECTOR OF THE SYSTEM CENTRE AND SHOWS DECREASE IN AREAL COVERAGE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20-30 X10$^{-5}$SEC$^{-1}$ TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT 10 X10$^{-5}$ SEC$^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE (10-20 KNOTS) OVER NORTHWEST BOB BETWEEN LOWER AND MIDDLE TROPOSPHERIC LEVELS AND HIGH (> 20 KNOTS) BETWEEN LOWER AND UPPER TROPOSPHERIC LEVELS. HENCE THE ENVIRONMENTAL CONDITIONS LIKE WIND SHEAR & MJO ALONGWITH LAND INTERACTION ARE NOT SUPPORTIVE FOR FURTHER INTENSIFICATION. HOWEVER, AS THE SYSTEM LIES CLOSE TO SEA AND THERE IS MOISTURE INCURSION, THE SYSTEM WILL MAINTAIN ITS INTENSITY UPTO NEXT 06 HOURS AND GRADUALLY WEAKEN THEREAFTER. THE STEERING FLOW SUGGESTS THE SYSTEM TO MOVE WEST-NORTHWESTWARDS. MOST OF THE NWP MODELS ALSO SUGGEST THE ABOVE.

**(DR PATTANAIK)**
**SCIENTIST-E**
**RSMC, NEW DELHI**

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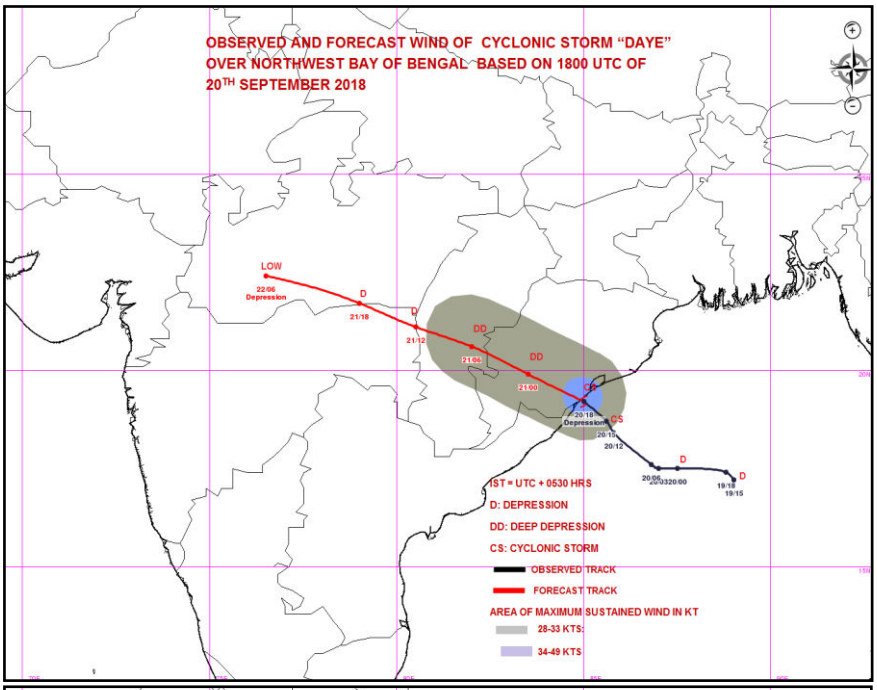


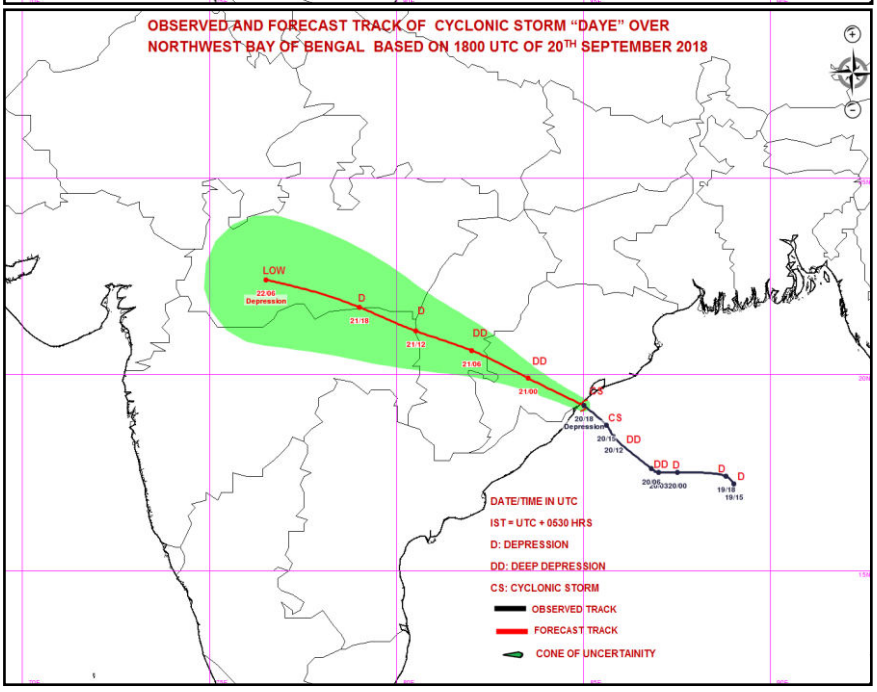


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**REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI**

**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 STORM 'DAYE' ADVISORY NO. FOUR ISSUED AT 0300 UTC OF 21ST SEP 2018 BASED ON 0000 UTC OF 21ST SEP 2018**

THE CYCLONIC STORM "**DAYE**" OVER SOUTH ODISHA AND NEIGHBOURHOOD MOVED WEST-NORTHWESTWARDS DURING PAST SIX HOURS WITH A SPEED ABOUT 26 KMPH AND WEAKENED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0000 UTC OF TODAY, THE 21st SEPTEMBER, 2018 OVER SOUTH INTERIOR ODISHA AND NEIGHBOURHOOD NEAR LATITUDE 20.0$^0$N AND LONGITUDE 83.7$^0$E, ABOUT 65 KM EAST-SOUTHEAST OF TITLAGARH (ODISHA). IT WOULD CONTINUE TO MOVE WEST-NORTHWESTWARDS AND WEAKEN GRADUALLY INTO A DEPRESSION DURING NEXT 12 HOURS.

| Date/Time(UTC) | Position (Lat. $^0$N/ long. $^0$E) | Maximum sustained surface wind speed (Kmph) | Category of cyclonic disturbance |
|---|---|---|---|
| 21.09.18/0000 | 20.0/83.7 | 55-65 gusting to 75 | Deep Depression |
| 21.09.18/0600 | 20.2/83.0 | 50-60 gusting to 70 | Deep Depression |
| 21.09.18/1200 | 21.0/80.0 | 40-50 gusting to 60 | Depression |

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER ODISHA, NORTH COASTAL ANDHRA PRADESH, EAST TELANGANA AND CHHATTISGARH. THE MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93 DEG C (.)

**(D R PATTANAIK)**
**SCIENTIST-E**
**RSMC, NEW DELHI**

**This is the last bulletin for this system**

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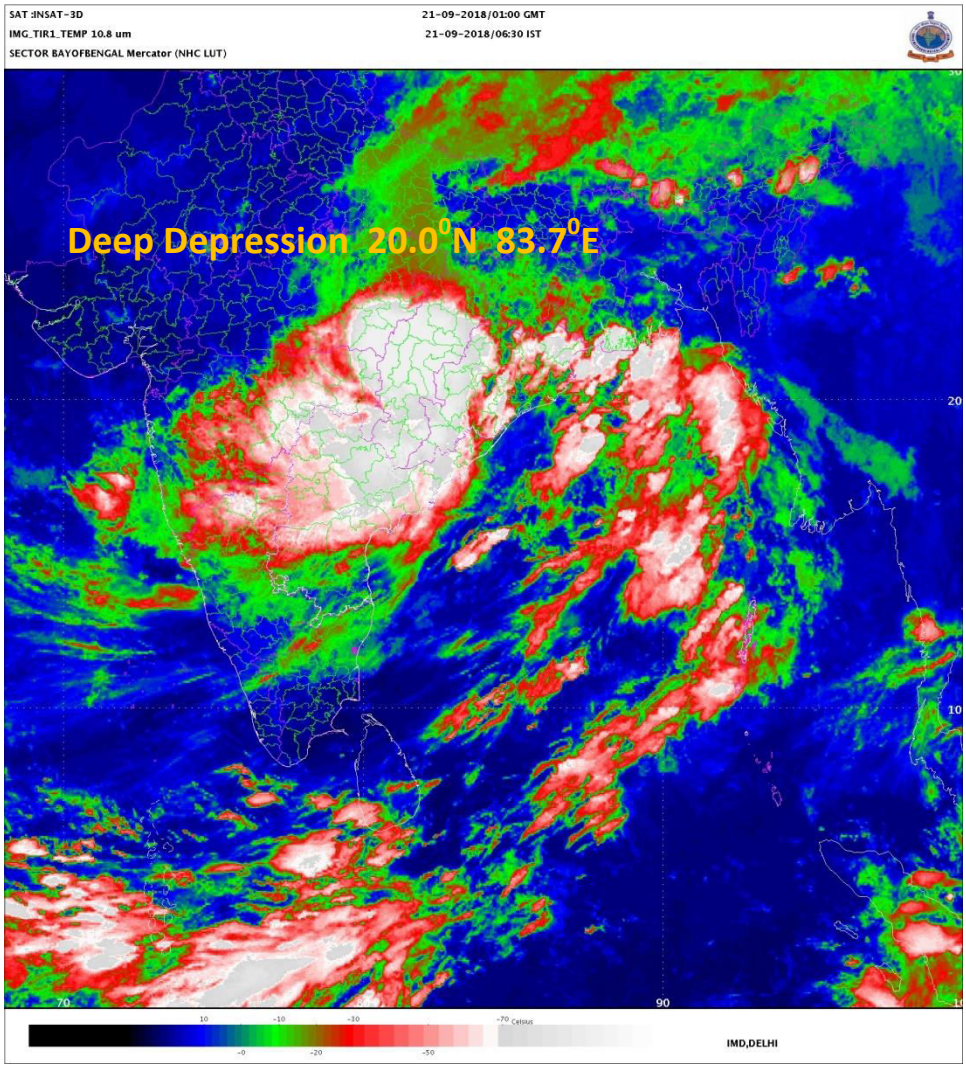


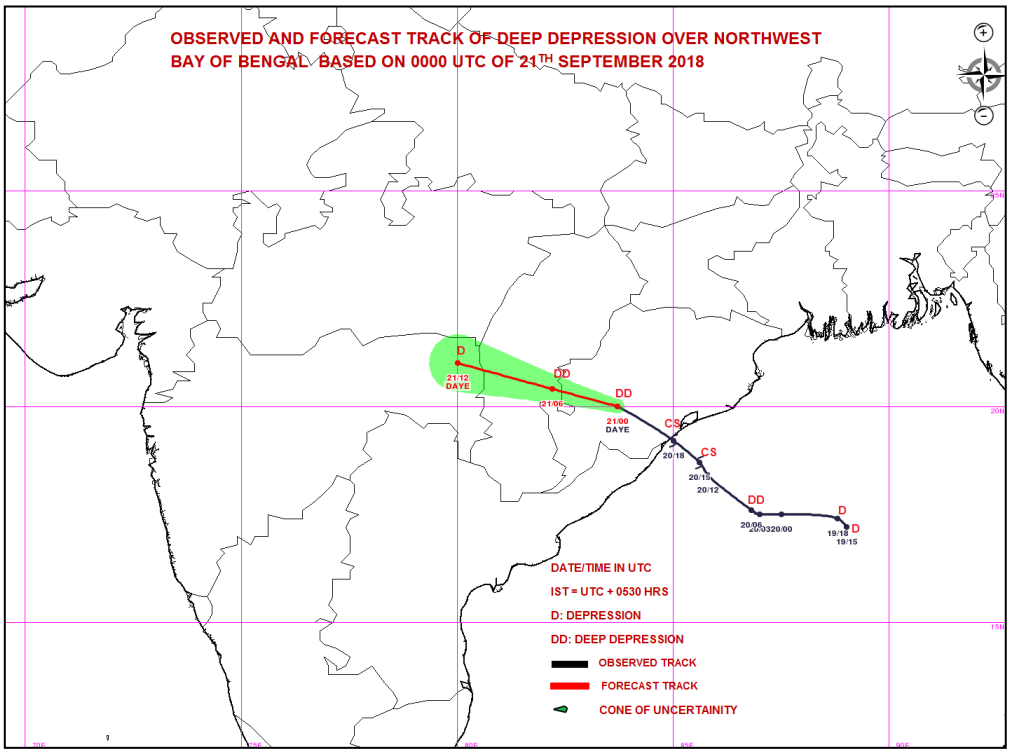


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