



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

#### DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.05.2018 SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 1500 UTC OF 21.05.2018 BASED ON 1200 UTC OF 21.05.2018.

LATEST OBSERVATIONS AND SATELLITE IMAGERIES INDICATE THAT THE WELL MARKED LOW PRESSURE AREA (WML) OVER SOUTHWEST ARABIAN SEA HAS CONCENTRATED INTO A DEPRESSION OVER THE SAME REGION AND LAY CENTRED AT 1200 UTC OF TODAY, THE 21TH MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 8.5°N AND LONGITUDE 58.5°E, ABOUT 680 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 1060 KM SOUTH-SOUTHEAST OF SALALAH (OMAN) (41316). IT IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION DURING NEXT 12 HRS AND FURTHER INTO A CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND REACH SOUTH OMAN- SOUTHEAST YEMEN COASTS BY 26<sup>TH</sup> MAY, 2018 MORNING.

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE  $21^{ST}$  MAY 2018, THE INTENSITY OF THE SYSTEM IS T1.5. THE CONVECTION OVER SOUTH ARABIAN SEA HAS FURTHER ORGANISED DURING PAST 12 HOURS AND DEVELOPED CURVED BANDING FEATURES FROM NORTHWEST TO SOUTHEAST SECTOR ACROSS SOUTH SECTOR. BROEKN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ARABIAN SEA BETWEEN LATTITUDE 5.0°N & 12.0°N AND WEST OF LONGITUDE 52.0°E TO 62 °E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25-30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS ROUGH TO VERY ROUGH OVER THE SYSTEM AREA.

## **REMARKS:**

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE DEPRESSION OVER THE SOUTHWEST ARABIAN SEA INTO A DEEP DEPRESSION WITHIN NEXT 12 HRS AND FURTHER INTENSIFICATION INTO A CYCLONIC STORM DURING SUBSEQUENT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING NEXT FIVE DAYS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

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

THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED SIGNIFICANTLY AND IS ABOUT 150X10<sup>-6</sup>SEC<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10<sup>-5</sup>SEC<sup>-1</sup> TO THE SOUTH AND SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) OVER THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(DR Pattanaik) 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%









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

#### DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 21.05.2018 SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 2100 UTC OF 21.05.2018 BASED ON 1800 UTC OF 21.05.2018.

THE DEPRESSION OVER SOUTHWEST ARABIAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 1800 UTC IST OF  $21^{ST}$  MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 8.7°N AND LONGITUDE 58.0°E, ABOUT 620 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 1020 KM SOUTH-SOUTHEAST OF SALALAH (OMAN) (41316). IT IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION DURING NEXT 12 HRS AND FURTHER INTO A CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND REACH SOUTH OMAN- SOUTHEAST YEMEN COASTS BY 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
21/1800	8.7/58.0	45-55 GUSTING TO 65	DEPRESSION
22/0000	9.2/57.5	45-55 GUSTING TO 65	DEPRESSION
22/0600	9.7/57.2	50-60 GUSTING TO 70	DEEP DEPRESSION
22/1200	10.2/56.9	50-60 GUSTING TO 70	DEEP DEPRESSION
22/1800	10.9/56.5	65-75 GUSTING TO 85	CYCLONIC STORM
23/0600	11.5/56.1	70-80 GUSTING TO 90	CYCLONIC STORM
23/1800	12.2/55.7	80-90 GUSTING TO 100	CYCLONIC STORM
24/0600	13.0/55.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
24/1800	13.9/54.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE  $21^{ST}$  MAY 2018, THE INTENSITY OF THE SYSTEM IS T1.5. THE CONVECTION OVER SOUTH ARABIAN SEA HAS ORGANISED DURING PAST 12 HOURS AND DEVELOPED CURVED BANDING FEATURES FROM NORTHWEST TO SOUTHEAST SECTOR ACROSS SOUTH SECTOR. BROEKN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTH ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 13.5°N AND WEST OF LONGITUDE 53.0°E TO 61 °E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25-30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS ROUGH TO VERY ROUGH OVER THE SYSTEM AREA.

## **REMARKS:**

OST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE DEPRESSION OVER THE SOUTHWEST ARABIAN SEA INTO A DEEP DEPRESSION WITHIN NEXT 12 HRS AND FURTHER INTENSIFICATION INTO A CYCLONIC STORM DURING SUBSEQUENT 24 HRS.

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

THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING NEXT FIVE DAYS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED SIGNIFICANTLY AND IS ABOUT 150X10<sup>-6</sup>SEC<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10<sup>-5</sup>SEC<sup>-1</sup> TO THE WEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> TO THE NORTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) NEAR THE SYSTEM CENTRE.

HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(D. R. Pattanaik) 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%







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

#### DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 22.05.2018 SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 0300 UTC OF 22.05.2018 BASED ON 0000 UTC OF 22.05.2018.

THE DEPRESSION OVER SOUTHWEST ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTERED AT 0000 UTC OF 22<sup>ND</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 9.0<sup>0</sup>N AND LONGITUDE 57.5<sup>0</sup>E, ABOUT 560 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 970 KM SOUTH-SOUTHEAST OF SALALAH (41316), OMAN . IT IS VERY LIKELY TO INTENSIFY INTO A DEEP DEPRESSION DURING NEXT 06 HRS AND FURTHER INTO A CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND REACH SOUTH OMAN- SOUTHEAST YEMEN COASTS BY 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/0000	9.0/57.5	45-55 GUSTING TO 65	DEPRESSION
22/0600	9.5/57.0	55-65 GUSTING TO 75	DEEP DEPRESSION
22/1200	10.0/56.7	65-75 GUSTING TO 85	CYCLONIC STORM
22/1800	10.5/56.5	70-80 GUSTING TO 90	CYCLONIC STORM
23/0000	11.0/56.3	80-90 GUSTING TO 100	CYCLONIC STORM
23/1200	11.8/55.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
24/0000	12.6/55.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
24/1200	13.4/55.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
25/0000	14.4/54.7	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/1200	15.5/54.4	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26/0000	16.7/54.1	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
26/1730	17.9/53.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE  $22^{nd}$  MAY 2018, THE INTENSITY OF THE SYSTEM IS T1.5. THE CONVECTION OVER SOUTH ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHEAST SECTOR. BROEKN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 14.5°N AND LONGITUDE 52.0°E TO 60°E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25-30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS ROUGH TO VERY ROUGH OVER THE SYSTEM AREA.

## **REMARKS:**

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE DEPRESSION OVER THE SOUTHWEST ARABIAN SEA INTO A DEEP DEPRESSION WITHIN NEXT 06HRS AND FURTHER INTENSIFICATION INTO A CYCLONIC STORM DURING SUBSEQUENT 12HRS.

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

THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING NEXT FIVE DAYS.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 100 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED SIGNIFICANTLY AND IS ABOUT 150X10<sup>-6</sup>SEC<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10<sup>-5</sup>SEC<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) NEAR THE SYSTEM CENTRE.

HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.



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 22.05.2018 SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) ISSUED AT 0600 UTC OF 22.05.2018 BASED ON 0300 UTC OF 22.05.2018.

OVER THE DEPRESSION SOUTHWEST ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 6 HOURS AND INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTERED AT 0300 UTC OF 22<sup>ND</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 9.2°N AND LONGITUDE 57.2°E, ABOUT 520 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 930 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN) . IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A SEVERE CYCLONIC STORM IN SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND REACH SOUTH OMAN- SOUTHEAST YEMEN COASTS BY 0001 UTC 26<sup>TH</sup> MAY, 2018.

Date/Time(IST)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/0300	9.2/57.2	50-60 GUSTING TO 70	DEEP DEPRESSION
22/0600	9.5/57.0	55-65 GUSTING TO 75	DEEP DEPRESSION
22/1200	10.0/56.7	65-75 GUSTING TO 85	CYCLONIC STORM
22/1800	10.5/56.5	70-80 GUSTING TO 90	CYCLONIC STORM
23/0000	11.0/56.3	80-90 GUSTING TO 100	CYCLONIC STORM
23/1200	11.8/55.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
24/0000	12.6/55.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
24/1200	13.4/55.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
25/0000	14.4/54.7	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/1200	15.5/54.4	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26/0000	16.7/54.1	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
26/1200	17.9/53.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

AS PER THE SATELLITE IMAGERY BASED ON 0300 UTC OF TODAY, THE 22<sup>nd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T2.0. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. BROEKN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 15.3°N AND LONGITUDE 51.0°E TO 62 °E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1001 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. STATE OF SEA IS VERY ROUGH AROUND THE SYSTEM CEMTRE.

# **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE DEEPDEPRESSION OVER THE SOUTHWEST ARABIAN SEA INTO A CYCLONIC STORM DURING 24HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS MORE THAN 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED SIGNIFICANTLY AND IS ABOUT 150X10<sup>-6</sup>SEC<sup>-1</sup> TO THE SOUTH OF SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 20 X10<sup>-5</sup>SEC<sup>-1</sup> TO THE SOUTHWEST OF SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> TO THE WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM.

HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(NEETHA K GOPAL) Scientist-E, RSMC, New Delhi









# 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 'MEKUNU' ADVISORY NO. ONE ISSUED AT 1500 UTC OF 22<sup>ND</sup> MAY 2018 BASED ON 1200 UTC OF 22<sup>ND</sup> MAY 2018

THE DEEP DEPRESSION OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND INTENSIFIED INTO A <u>CYCLONIC STORM 'MEKUNU'</u> AND LAY CENTERED AT 1200 UTC OF 22<sup>ND</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 10.2<sup>o</sup>N AND LONGITUDE 56.8<sup>o</sup>E, ABOUT 410 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 810 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A VERY SEVERE CYCLONIC STORM IN SUBSEQENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN -SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM BETWEEN 53<sup>o</sup>E AND 55<sup>o</sup>E CLOSE TO SALALAH DURING 0000 TO 0400 UTC ON 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/1200	10.2/56.8	65-75 GUSTING TO 85	CYCLONIC STORM
22/1800	10.5/56.7	70-80 GUSTING TO 90	CYCLONIC STORM
23/0000	11.0/56.5	80-90 GUSTING TO 100	CYCLONIC STORM
23/0600	11.5/56.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
23/1200	12.1/56.4	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
24/0000	13.3/56.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/1200	14.4/55.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/0000	15.0/55.1	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1200	15.8/54.6	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	16.8/54.1	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1200	17.9/53.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
27/0000	19.0/53.0	65-75 GUSTING TO 85	CYCLONIC STORM
27/1200	20.1/52.4	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE 22<sup>nd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T2.5. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. BROEKN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER

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

SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 16.5°N AND LONGITUDE 50.0°E TO 60.0 °E. MINIMUM CTT MINUS 93 DEG C.

A SHIP LOCATED AT LATTITUDE 12.2<sup>°</sup>N AND LONGITUDE 58<sup>°</sup> REPORTED MEAN SEA LEVEL PRESSURE OF 1004.4 HPA AND A SURAFACE WIND OF 090/ 25 KTS.

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 THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> SEC<sup>-1</sup> AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(NEETHA K GOPAL) Scientist-E, RSMC, New Delhi









# 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 'MEKUNU' ADVISORY NO. TWO ISSUED AT 1800 UTC OF 22<sup>ND</sup> MAY 2018 BASED ON 1500 UTC OF 22<sup>ND</sup> MAY 2018

THE **CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1500 UTC OF  $22^{ND}$  MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 10.5°N AND LONGITUDE 56.7°E, ABOUT 400 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 780 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A VERY SEVERE CYCLONIC STORM IN SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM BETWEEN 53°E AND 55°E CLOSE TO SALALAH DURING 0000 TO 0400 UTC ON 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/1500	10.5/56.7	65-75 GUSTING TO 85	CYCLONIC STORM
22/1800	10.8/56.6	70-80 GUSTING TO 90	CYCLONIC STORM
23/0000	11.0/56.5	80-90 GUSTING TO 100	CYCLONIC STORM
23/0600	11.5/56.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
23/1200	12.1/56.4	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
24/0000	13.3/56.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/1200	14.4/55.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/0000	15.0/55.1	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1200	15.8/54.6	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	16.8/54.1	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1200	17.9/53.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
27/0000	19.0/53.0	65-75 GUSTING TO 85	CYCLONIC STORM
27/1200	20.1/52.4	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, THE 22<sup>nd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T2.5. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION

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

LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 16.5°N AND LONGITUDE 50.0°E TO 60.0 °E. MINIMUM CTT MINUS 93 DEG C.

A SHIP LOCATED AT LATTITUDE 12.2<sup>°</sup>N AND LONGITUDE 58<sup>°</sup> REPORTED MEAN SEA LEVEL PRESSURE OF 1004.4 HPA AND A SURAFACE WIND OF 090/ 25 KTS.

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 THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> SEC<sup>-1</sup> AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(S.D Kotal) Scientist-E, RSMC, New Delhi









## 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 'MEKUNU' ADVISORY NO. THREE ISSUED AT 2100 UTC OF 22<sup>ND</sup> MAY 2018 BASED ON 1800 UTC OF 22<sup>ND</sup> MAY 2018

THE **CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF  $22^{ND}$  MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 10.8°N AND LONGITUDE 56.6°E, ABOUT 380 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 740 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND INTO A VERY SEVERE CYCLONIC STORM IN SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM BETWEEN 53°E AND 55°E CLOSE TO SALALAH DURING 0000 TO 0400 UTC ON 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/1800	10.8/56.6	70-80 GUSTING TO 90	CYCLONIC STORM
23/0000	11.0/56.5	80-90 GUSTING TO 100	CYCLONIC STORM
23/0600	11.5/56.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
23/1200	12.1/56.4	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
23/1800	12.7/56.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/0600	13.9/55.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/1800	14.7/55.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/0600	15.4/54.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1800	16.3/54.4	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.3/53.8	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1800	18.4/53.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
27/0600	19.5/52.6	65-75 GUSTING TO 85	CYCLONIC STORM

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE 22<sup>nd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T2.5. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION

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

LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 16.5°N AND LONGITUDE 50.0°E TO 60.0 °E. MINIMUM CTT MINUS 93 DEG C.

A SHIP LOCATED AT LATTITUDE 12.2<sup>°</sup>N AND LONGITUDE 58<sup>°</sup> REPORTED MEAN SEA LEVEL PRESSURE OF 1004.4 HPA AND A SURAFACE WIND OF 090/ 25 KTS.

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 THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> SEC<sup>-1</sup> AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(S.D Kotal) Scientist-E, RSMC, New Delhi









## 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 'MEKUNU' ADVISORY NO. FOUR ISSUED AT 0000 UTC OF 23<sup>rd</sup> MAY 2018 BASED ON 2100 UTC OF 22<sup>nd</sup> MAY 2018

THE **CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 2100 UTC OF 22<sup>nd</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 11.0<sup>0</sup>N AND LONGITUDE 56.5<sup>0</sup>E, ABOUT 360 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 720 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND INTO A VERY SEVERE CYCLONIC STORM IN SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM BETWEEN 53<sup>0</sup>E AND 55<sup>0</sup>E CLOSE TO SALALAH DURING 0000 TO 0400 UTC ON 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
22/2100	11.0/56.5		
22/2100	11.0/50.5	80-90 0031110 10 100	CTCLONIC STORM
23/0000	11.2/56.5	80-90 GUSTING TO 100	CYCLONIC STORM
23/0600	11.5/56.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
23/1200	12.1/56.4	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
23/1800	12.7/56.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/0600	13.9/55.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/1800	14.7/55.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25/0600	15.4/54.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1800	16.3/54.4	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.3/53.8	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1800	18.4/53.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
27/0600	19.5/52.6	65-75 GUSTING TO 85	CYCLONIC STORM

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF TODAY, THE 22<sup>nd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T3.0. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION

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

LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0°N & 16.5°N AND LONGITUDE 50.0°E TO 60.0 °E. MINIMUM CTT MINUS 93 DEG C.

A SHIP LOCATED AT LATTITUDE 12.2<sup>°</sup>N AND LONGITUDE 58<sup>°</sup> REPORTED MEAN SEA LEVEL PRESSURE OF 1004.4 HPA AND A SURAFACE WIND OF 090/ 25 KTS.

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 THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> SEC<sup>-1</sup> AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(S.D Kotal) Scientist-E, RSMC, New Delhi

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IMD.DELHI







# 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 'MEKUNU' ADVISORY NO. FIVE ISSUED AT 0300 UTC OF 23<sup>rd</sup> MAY 2018 BASED ON 0000 UTC OF 23<sup>rd</sup> MAY 2018

THE **CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0000 UTC OF 23<sup>rd</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 11.0<sup>0</sup>N AND LONGITUDE 56.0<sup>0</sup>E, ABOUT 310 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 700 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND INTO A VERY SEVERE CYCLONIC STORM IN SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM BETWEEN 53<sup>0</sup>E AND 55<sup>0</sup>E CLOSE TO SALALAH AROUND 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
23/0000	11.0/56.0	80-90 GUSTING TO 100	CYCLONIC STORM
23/0600	11.6/56.7	90-100 GUSTING TO 110	CYCLONIC STORM
23/1200	12.1/55.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23/1800	12.7/55.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/0000	13.3/55.3	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
24/1200	14.1/55.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
25/0000	15.0/54.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1200	15.7/54.2	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	16.4/53.7	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1200	17.1/53.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27/0000	17.8/52.3	65-75 GUSTING TO 85	CYCLONIC STORM
27/1200	18.5/51.6	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T3.0. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE  $7.0^{\circ}$ N & 14.5°N AND LONGITUDE 51.0°E TO 59.0 °E. MINIMUM CTT 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 THE SYSTEM CENTRE.

## **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND FURTHER INTENSIFICATION THEREAFTER. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 60-80 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> OVER THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> SEC<sup>-1</sup> AROUND THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> OVER THE SYSTEM AREA. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (05-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(S.D Kotal) Scientist-E, RSMC, New Delhi











# REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI TROPICAL CYCLONE ADVISORY BULLETIN No. 06

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 NO. SIX ISSUED AT 0600 UTC OF 23<sup>rd</sup> MAY 2018 BASED ON 0300 UTC OF 23<sup>rd</sup> MAY 2018; CYCLONIC STORM 'MEKUNU' INTENSIFIED INTO A SEVERE CYCLONIC STORM

THE **CYCLONIC STORM 'MEKUNU'** OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND INTENSIFIED INTO A **SEVERE CYCLONIC STORM** AND LAY CENTERED AT 0300 UTC OF 23<sup>rd</sup> MAY 2018 OVER SOUTHWEST ARABIAN SEA NEAR LATITUDE 11.2<sup>o</sup>N AND LONGITUDE 55.9<sup>o</sup>E, ABOUT 270 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 670 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A **VERY SEVERE CYCLONIC STORM** DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN 53<sup>o</sup>E AND 55<sup>o</sup>E CLOSE TO SALALAH AROUND 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
23/0300	11.2/55.9	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
23/0600	11.6/55.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23/1200	12.1/55.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23/1800	12.7/55.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
24/0000	13.3/55.3	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
24/1200	14.1/55.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
25/0000	15.0/54.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
25/1200	15.7/54.2	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	16.4/53.7	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1200	17.1/53.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27/0000	17.8/52.3	65-75 GUSTING TO 85	CYCLONIC STORM
27/1200	18.5/51.6	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0300 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T3.5. THE CONVECTION OVER SOUTWEST ARABIAN SEA SHOWS CURVED BANDING FEATURES FROM NORTHEAST TO SOUTHWEST SECTOR ACROSS NORTHWEST SECTOR. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE  $7.0^{\circ}$ N &  $16.5^{\circ}$ N AND LONGITUDE  $51.0^{\circ}$ E TO  $59.0^{\circ}$ E. MINIMUM CTT MINUS 93 DEG C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. STATE OF SEA IS VERY HIGH AROUND THE SYSTEM CENTRE.

## **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31<sup>0</sup> C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/CM<sup>2</sup> OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup>SEC<sup>-1</sup> CLOSE TO EAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 40 X10<sup>-5</sup>SEC<sup>-1</sup> CLOSE TO WEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> SEC<sup>-1</sup> CLOSE TO WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS HIGH (20-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

(NEETHA K. GOPAL) Scientist-E, RSMC, New Delhi




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





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)

SEVERE CYCLONIC STORM 'MEKUNU' OVER SOUTHWEST AND ADJOINING WEST CENTRAL ARABIAN SEA - ADVISORY NO. SEVEN ISSUED AT 0900 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 0600 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **SEVERE CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF 23<sup>rd</sup> MAY 2018 OVER SOUTHWEST AND ADJOINING WEST CENTRAL ARABIAN SEA NEAR LATITUDE 11.4 DEG. N AND LONGITUDE 55.9 DEG. E, ABOUT 250 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 650 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A **VERY SEVERE CYCLONIC STORM** DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED SURFACE WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN 53 DEG. E AND 55 DEG. E CLOSE TO SALALAH AROUND 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. Deg. N/ long. Deg. E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
23/0600	11.4/55.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
23/1200	11.8/55.8	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
23/1800	12.2/55.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
24/0000	12.8/55.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0600	13.4/55.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1800	14.0/55.1	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
25/0600	14.9/54.6	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1800	15.9/54.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.1/53.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26/1800	18.0/52.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0600	18.9/51.5	55-65 GUSTING TO 75	CYCLONIC STORM
27/1800	19.8/50.7	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T3.5. THE CONVECTION HAS INCREASED OVER WESTERN AND SOUTHERN SECTOR. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST, SATELLITE IMAGERY INDICATES APPEARANCES OF EYE .IT INDICATE INTENSIFICATION OF THE SYSTEM. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 7.0 DEG. N & 16.0 DEG. N AND LONGITUDE 50.0 DEG. E TO 60.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 984 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. STATE OF SEA IS VERY HIGH AROUND THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST INTENSIFICATION OF THE CYCLONIC STORM OVER THE SOUTHWEST ARABIAN SEA INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> PER SEC. CLOSE TO SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. CLOSE TO WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN – SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(NEETHA K. GOPAL) Scientist-E, RSMC, New Delhi









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)

SEVERE CYCLONIC STORM 'MEKUNU' INTENSIFIED INTO VERY SEVERE CYCLONIC STORM (VSCS) OVER SOUTHWEST AND ADJOINING WEST CENTRAL ARABIAN SEA - ADVISORY NO. EIGHT ISSUED AT 1200 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 0900 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **SEVERE CYCLONIC STORM** '**MEKUNU**' OVER SOUTHWEST ARABIAN SEA MOVED NORTHWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND INTENISFIED INTO A VERY SEVERE CYCLONIC STORM AND LAY CENTERED AT 0900 UTC OF 23<sup>rd</sup> MAY 2018 OVER SOUTHWEST AND ADJOINING WEST CENTRAL ARABIAN SEA NEAR LATITUDE 11.8 DEG. N AND LONGITUDE 55.9 DEG. E, ABOUT 230 KM SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 610 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN -SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED SURFACE WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN 53 DEG. E AND 55 DEG. E CLOSE TO SALALAH AROUND 26<sup>TH</sup> MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. Deg. N/ long. Deg. E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
23/0900	11.8/55.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
23/1200	12.0/55.9	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
23/1800	12.2/55.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0000	12.8/55.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0600	13.4/55.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1800	14.0/55.1	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
25/0600	14.9/54.6	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1800	15.9/54.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.1/53.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26/1800	18.0/52.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0600	18.9/51.5	55-65 GUSTING TO 75	CYCLONIC STORM
27/1800	19.8/50.7	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0900 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION HAS INCREASED OVER WESTERN AND SOUTHERN SECTOR. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST, SATELLITE IMAGERY INDICATES APPEARANCES OF EYE .IT INDICATES INTENSIFICATION OF THE SYSTEM. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 6.0 DEG. N & 16.0 DEG. N AND LONGITUDE 50.0 DEG. E TO 60.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 60 KNOTS GUSTING TO 70 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER THE SOUTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 5 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR CYCLOGENESIS OVER THE SOUTHWEST ARABIAN SEA AND ITS FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER SOUTHWEST ARABIAN SEA AND ADJOINING WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER THE ABOVE REGION.

THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10<sup>-5</sup> PER SEC. CLOSE TO SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. CLOSE TO WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN – SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(NEETHA K. GOPAL) Scientist-E, RSMC, New Delhi









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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. NINE ISSUED AT 1500 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 1200 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER SOUTHWEST AND ADJOINING WEST CENTRAL ARABIAN SEA MOVED NORTHWARDS WITH A SPEED OF 09 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1200 UTC OF 23<sup>rd</sup> MAY 2018 OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 12.0 DEG. N AND LONGITUDE 55.9 DEG. E, ABOUT 220 KM EAST-SOUTHEAST OF SOCOTRA ISLANDS (41494) AND 590 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS BETWEEN 53 DEG. E AND 55 DEG. E CLOSE TO SALALAH AROUND 26<sup>TH</sup> MAY, 2018 MORNING, AS A VERY SEVERE CYCLONIC STORM WITH MAXIMUM SUSTAINED SURFACE WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH.

Date/Time(IST)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
23/1730	12.0/55.9	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
23/2330	12.5/55.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0530	12.9/55.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
24/1130	13.3/55.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1730	13.8/55.6	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
25/0530	14.7/55.3	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1730	15.7/54.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0530	16.6/54.1	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1730	17.6/53.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0530	18.5/52.6	55-65 GUSTING TO 75	CYCLONIC STORM
27/1730	19.4/51.8	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE

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

5.0 DEG. N & 17.5 DEG. N AND LONGITUDE 49.0 DEG. E TO 61.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10<sup>-5</sup> PER SEC. CLOSE TO WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM WITHIN THE VERY SEVERE CYCLONIC STORM CATEGORY. INTENSIFICATION BEYOND THIS CATEGORY OF VERY SEVERE CYCLONIC STORM IS EXPECTED TO BE RESTRICTED DUE TO EXPECTED LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND MODERATE TO HIGH VERTICAL WIND SHEAR, GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN - SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (NEETHA K. GOPAL) Scientist-E, RSMC, New Delhi









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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. TEN ISSUED AT 1730 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 1500 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER SOUTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTHWARDS WITH A SPEED OF 9 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1500 HRS IST OF  $23^{RD}$  MAY 2018 OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 12.3°N AND LONGITUDE 55.9°E, ABOUT 220 KM EAST OF SOCOTRA ISLANDS AND 560 KM SOUTH-SOUTHEAST OF SALALAH (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN  $53^{\circ}E$  AND  $55^{\circ}E$  CLOSE TO SALALAH, AROUND  $26^{TH}$  MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
23/1500	12.3/55.9	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
23/1800	12.5/55.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0000	12.9/55.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
24/0600	13.3/55.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1200	13.8/55.6	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
25/0000	14.7/55.3	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1200	15.7/54.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	16.6/54.1	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/1200	17.6/53.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0000	18.5/52.6	55-65 GUSTING TO 75	CYCLONIC STORM
27/1200	19.4/51.8	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE

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

TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 5.0 DEG. N & 17.5 DEG. N AND LONGITUDE 50.0 DEG. E TO 60.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. CLOSE TO SOUTH OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10<sup>-5</sup> PER SEC. CLOSE TO WEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM, HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM WITHIN THE VERY SEVERE CYCLONIC STORM CATEGORY. INTENSIFICATION BEYOND THIS CATEGORY OF VERY SEVERE CYCLONIC STORM IS EXPECTED TO BE RESTRICTED DUE TO EXPECTED LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND MODERATE TO HIGH VERTICAL WIND SHEAR, GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN - SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (V.R. Durai) Scientist-E, RSMC, New Delhi









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VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. ELEVEN ISSUED AT 2100 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 1800 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER SOUTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 18000 HRS UTC OF  $23^{RD}$  MAY 2018 OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 12.5°N AND LONGITUDE 55.8°E, ABOUT 200 KM EAST OF SOCOTRA ISLANDS AND 530 KM SOUTH-SOUTHEAST OF SALALAH (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN  $53^{\circ}E$  AND  $55^{\circ}E$  CLOSE TO SALALAH, AROUND  $26^{TH}$  MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
23/1800	12.5/55.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0000	12.9/55.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
24/0600	13.3/55.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1200	13.8/55.6	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
24/1800	14.2/55.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/0600	15.2/55.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1800	16.2/54.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.1/53.7	130-140 GUSTING TO 150	SEVERE CYCLONIC STORM
26/1800	18.0/53.0	65-75 GUSTING TO 85	CYCLONIC STORM
27/0600	19.0/52.2	45-55 GUSTING TO 65	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE

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

5.0 DEG. N & 16 DEG. N AND LONGITUDE 51.0 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

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> (V.R. Durai) Scientist-E, RSMC, New Delhi









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VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. TWELVE ISSUED AT 2300 UTC OF 23<sup>rd</sup> MAY, 2018 BASED ON 2100 UTC OF 23<sup>rd</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER SOUTHWEST AND ADJOINING WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 2100 UTC OF  $23^{RD}$  MAY 2018 OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 12.8°N AND LONGITUDE 55.7°E, ABOUT 190 KM EAST OF SOCOTRA ISLANDS AND 500 KM SOUTH-SOUTHEAST OF SALALAH (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH WIND SPEED OF 150-160 KMPH GUSTING TO 180 KMPH BETWEEN  $53^{\circ}E$  AND  $55^{\circ}E$  CLOSE TO SALALAH, AROUND  $26^{TH}$  MAY, 2018 MORNING.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
23/2100	12.8/55.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0000	12.9/55.8	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
24/0600	13.3/55.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1200	13.8/55.6	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
24/1800	14.2/55.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/0600	15.2/55.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1800	16.2/54.4	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.1/53.7	130-140 GUSTING TO 150	SEVERE CYCLONIC STORM
26/1800	18.0/53.0	65-75 GUSTING TO 85	CYCLONIC STORM
27/0600	19.0/52.2	45-55 GUSTING TO 65	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF TODAY, THE 23<sup>rd</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. WITH THE CONSOLIDATION OF CENTRAL DENSE OVERCAST. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)** NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

8.0 DEG. N & 16 DEG. N AND LONGITUDE 51.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 978 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

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VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. THIRTEEN ISSUED AT 0300 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 0000 UTC OF 24<sup>TH</sup> MAY, 2018.

THE VERY SEVERE CYCLONIC STORM 'MEKUNU' OVER WESTCENTRAL AND ADJOONING SOUTHWESTARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0000 UTC OF 24TH MAY 2018 OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 13.0°N AND LONGITUDE 55.6°E, ABOUT 190 KM EAST-NORTHEAST OF SOCOTRA ISLANDS AND 475 KM SOUTH-SOUTHEAST OF SALALAH (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH WIND SPEED OF 155-165 KMPH GUSTING TO 180 KMPH BETWEEN 53°E AND 55°E CLOSE TO SALALAH, AROUND 0000UTC OF 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/0000	13.0/55.6	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
24/0600	13.5/55.5	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
24/1200	14.0/55.4	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
24/1800	14.5/55.3	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/0000	15.0/55.2	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
25/1200	16.0/54.6	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
26/0000	16.9/53.9	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
26/1200	17.7/53.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0000	18.5/52.5	70-80 GUSTING TO 90	CYCLONIC STORM
27/1200	19.1/51.7	50-60 GUSTING TO 70	DEEP DEPRESSION
28/0000	19.5/50.9	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)** NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 8.0 DEG. N & 16 DEG. N AND LONGITUDE 51.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 70 KNOTS GUSTING TO 80 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 300X10<sup>-6</sup> PER SEC. TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>5</sup> PER SEC. TO THE SOUTH-SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. TO THE SOUTH SOUTHEAST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM DURING NEXT 24 HOURS. THIS MAY NOT BE RAPID INTENSIFICATION OF VERY SEVERE CYCLONIC STORM DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND MODERATE TO HIGH VERTICAL WIND SHEAR. GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN -SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (V.R. Durai) Scientist-E, RSMC, New Delhi







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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. FOURTEEN ISSUED AT 0600 UTC OF  $24^{TH}$  MAY, 2018 BASED ON 0300 UTC OF  $24^{TH}$  MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL AND SOUTHWEST ADJOINING ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0300 UTC OF  $24^{TH}$  MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 13.3 DEG N AND LONGITUDE 55.4 DEG E, ABOUT 180 KM EAST-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 440 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO INTENSIFY FURTHER DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS A VERY SEVERE CYCLONIC STORM WITH WIND SPEED OF 160-170 KMPH GUSTING TO 190 KMPH BETWEEN 53°E AND 55°E CLOSE TO SALALAH, AROUND  $26^{TH}$  MAY, 2018 MORNING.

Date/Time(IST)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/0830	13 3/55 /	135 145 CUSTING TO 160	Voru Sovoro Cyclonic Storm
24/0030	13.3/33.4	155-145 6031116 10 100	
24/1130	13.5/55.3	140-150 GUSTING TO 165	Very Severe Cyclonic Storm
24/1730	14.0/55.1	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
24/2330	14.5/55.0	150-160 GUSTING TO 180	Very Severe Cyclonic Storm
25/0530	15.0/54.8	155-165 GUSTING TO 185	Very Severe Cyclonic Storm
25/1730	16.0/54.4	160-170 GUSTING TO 190	Extremely Severe Cyclonic Storm
26/0530	16.9/53.8	160-170 GUSTING TO 190	Extremely Severe Cyclonic Storm
26/1730	17.7/53.2	100-110 GUSTING TO 120	Severe Cyclonic Storm
27/0530	18.5/52.5	70-80 GUSTING TO 90	Cyclonic Storm
27/1730	19.1/51.7	50-60 GUSTING TO 70	Deep Depression
28/0530	19.5/50.9	40-50 GUSTING TO 60	Depression

AS PER THE SATELLITE IMAGERY BASED ON 0300 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 8.0 DEG. N & 16 DEG. N AND LONGITUDE 51.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 972 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

#### STROM SURGE GUIDANCE:

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG. C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC. TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM DURING NEXT 24 HOURS. THIS MAY NOT BE RAPID INTENSIFICATION OF VERY SEVERE CYCLONIC STORM DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND MODERATE TO HIGH VERTICAL WIND SHEAR. GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN - SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (NEETHA K GOPAL) SCIENTIST-E, RSMC, NEW DELHI







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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. FIFTEEN ISSUED AT 0900 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 0600 UTC OF 24<sup>TH</sup> MAY, 2018.

THE VERY SEVERE CYCLONIC STORM 'MEKUNU' OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 14 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF 24<sup>TH</sup> MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 13.7 DEG N AND LONGITUDE 55.3 DEG E, ABOUT 190 KM EAST-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 390 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN) . IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS AS AN EXTREMELY SEVERE CYCLONIC STORM WITH WIND SPEED OF 160-170 KMPH GUSTING TO 190 KMPH BETWEEN 53 DEG E AND 55 DEG E CLOSE TO SALALAH. AROUND 0000 UTC 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/0600	13.7/55.3	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
24/1200	14.0/55.1	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
24/1800	14.5/55.0	155-165 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
25/0000	15.0/54.8	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/0600	15.5/54.6	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1800	16.4/54.1	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
26/0600	17.3/53.5	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
26/1800	18.1/52.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0600	18.5/52.1	70-80 GUSTING TO 90	CYCLONIC STORM
27/1800	19.3/51.3	50-60 GUSTING TO 70	DEEP DEPRESSION
28/0600	19.5/50.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS **PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)** NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 8.0 DEG N & 16 DEG N AND LONGITUDE 51.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 970 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

#### STROM SURGE GUIDANCE:

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM DURING NEXT 24 HOURS. THERE MAY NOT BE RAPID INTENSIFICATION OF VERY SEVERE CYCLONIC STORM DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN - SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

#### (NEETHA K GOPAL) SCIENTIST-E, RSMC, NEW DELHI









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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. SIXTEEN ISSUED AT 1200 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 0900 UTC OF 24<sup>TH</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0900 UTC OF 24TH MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 13.9°N AND LONGITUDE 55.3°E, ABOUT 200 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 370 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 55°E CLOSE TO SALALAH, AROUND 0000 UTC OF 26<sup>TH</sup> MAY, 2018.

DATE/TIME(UTC)	POSITION		CATEGORY OF CYCLONIC DISTURBANCE
	(LAT. N/LONG. E)	WIND SPEED (KMPH)	
24/0900	13.9/55.3	145-155 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
24/1200	14.0/55.1	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
24/1800	14.5/55.0	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/0000	15.0/54.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/0600	15.5/54.6	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
25/1800	16.4/54.1	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0600	17.3/53.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26/1800	18.1/52.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27/0600	18.5/52.1	70-80 GUSTING TO 90	CYCLONIC STORM
27/1800	19.3/51.3	50-60 GUSTING TO 70	DEEP DEPRESSION
28/0600	19.5/50.8	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0900 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 8.0 DEG N & 16 DEG N AND LONGITUDE 51.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT 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%
THE ESTIMATED CENTRAL PRESSURE IS ABOUT 970 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

### STROM SURGE GUIDANCE:

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

### **REMARKS**:

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE. THE TOTAL PRECIPITABLE WATER (TPW) IMAGERY INDICATES CONTINOUS WARM AND MOIST AIR INCURSION INTO THE CORE OF THE SYSTEM. HOWEVER, THE RATE OF INCURSION SHOWS DECREASING TREND. HENCE THE ENVIRONMENTAL CONDITIONS ARE FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM DURING NEXT 24 HOURS. THERE MAY NOT BE RAPID INTENSIFICATION OF VERY SEVERE CYCLONIC STORM DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND GRADUAL DECREASE IN RATE OF WARM MOIST AIR INCURSION. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN - SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (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%



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%





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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. SEVENTEEN ISSUED AT 1500 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 1200 UTC OF 24<sup>TH</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 11 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1200 UTC OF 24TH MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 14.3°N AND LONGITUDE 55.2°E, ABOUT 230 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 320 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN - SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 55°E CLOSE TO SALALAH, BY 0000 UTC OF 26<sup>TH</sup> MAY, 2018.

Date/Time(IST)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
	(		
24/1730	14.3/55.2	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
24/2330	14.8/55.0	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0530	15.3/54.8	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1130	15.8/54.6	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1730	16.3/54.3	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
26/0530	17.0/53.8	130-140 GUSTING TO 155	Very Severe Cyclonic Storm
26/1730	17.8/53.1	100-110 GUSTING TO 120	Severe Cyclonic Storm
27/0530	18.5/52.3	55-65 GUSTING TO 75	Deep Depression
27/1730	19.1/51.5	35-45 GUSTING TO 55	Depression

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH WELL DEFINED SPIRAL BANDS. HOWEVER, THE CDO TENDS TO LOOSE COMPACTNESS INDICATING SLIGHT WEAKENING TREND. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 10.5 DEG N & 16.2 DEG N AND LONGITUDE 50.5 DEG. E TO 56.9 DEG. E. MINIMUM CTT 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%

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 970 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

### STROM SURGE GUIDANCE:

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

### **REMARKS**:

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1. HENCE THE MJO IS FAVOURABLE FOR FURTHER INTENSIFICATION OF THE SYSTEM.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC. TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE. DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND GRADUAL DECREASE IN RATE OF WARM AND MOIST AIR INCURSION,

THERE IS POSSIBILITY OF SLIGHT WEAKENING TREND. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN – SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(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%



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%





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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. EIGHTEEN ISSUED AT 1800 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 1500 UTC OF 24<sup>TH</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1500 UTC OF 24TH MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 14.6°N AND LONGITUDE 55.1°E, ABOUT 250 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 290 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 55°E CLOSE TO SALALAH, BY 0000 UTC OF 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/1500	14.6/55.1	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
24/1800	14.8/55.0	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0000	15.3/54.8	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0600	15.8/54.6	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1200	16.3/54.3	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
26/0000	17.0/53.8	130-140 GUSTING TO 155	Very Severe Cyclonic Storm
26/1200	17.8/53.1	100-110 GUSTING TO 120	Severe Cyclonic Storm
27/0000	18.5/52.3	55-65 GUSTING TO 75	Deep Depression
27/1200	19.1/51.5	35-45 GUSTING TO 55	Depression

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH SPIRAL BANDS. HOWEVER, THE CDO TENDS TO LOOSE COMPACTNESS INDICATING SLIGHT WEAKENING TREND. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER SOUTHWEST AND WEST CENTRAL ARABIAN SEA BETWEEN LATTITUDE 10.5 DEG N & 17.0 DEG N AND LONGITUDE 50.5 DEG. E TO 57.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 970 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE HAS ALSO DECREASED AND NOW IS ABOUT 20 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE.

DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND GRADUAL DECREASE IN RATE OF WARM AND MOIST AIR INCURSION, THERE IS POSSIBILITY OF SLIGHT WEAKENING TREND. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(CHARAN SINGH) SCIENTIST-F, RSMC, NEW DELHI









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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. NINTEEN ISSUED AT 2000 UTC OF 24<sup>TH</sup> MAY, 2018 BASED ON 1800 UTC OF 24<sup>TH</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF 24TH MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 14.9°N AND LONGITUDE 54.9°E, ABOUT 270 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 250 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 24 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 55°E CLOSE TO SALALAH, BY 0000 UTC OF 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/1800	14.9/54.9	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0000	15.3/54.8	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0600	15.8/54.6	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1200	16.3/54.3	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1800	16.6/54.0	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
26/0000	17.0/53.8	130-140 GUSTING TO 155	Very Severe Cyclonic Storm
26/1200	17.8/53.1	100-110 GUSTING TO 120	Severe Cyclonic Storm
27/0000	18.5/52.3	55-65 GUSTING TO 75	Deep Depression
27/1200	19.1/51.5	35-45 GUSTING TO 55	Depression

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH SPIRAL BANDS. HOWEVER, THE SYSTEM IS CDO PATTERN WITH COMPACTNESS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER WEST CENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 10.3 DEG N & 16.6 DEG N AND LONGITUDE 50.5 DEG. E TO 58.5 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 970 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 24 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX NOW LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 4 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE.

DUE TO EXPECTED RELATIVELY LOWER TROPICAL CYCLONE HEAT POTENTIAL ALONG THE PREDICTED TRACK AND GRADUAL DECREASE IN RATE OF WARM AND MOIST AIR INCURSION, THERE IS POSSIBILITY OF SLIGHT WEAKENING TREND. THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 TO 24 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(CHARAN SINGH) SCIENTIST-F, RSMC, NEW DELHI









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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA - ADVISORY NO. TWENTY ISSUED AT 0000 UTC OF 25<sup>TH</sup> MAY, 2018 BASED ON 2100 UTC OF 24<sup>TH</sup> MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 2100 UTC OF 24TH MAY 2018 OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA NEAR LATITUDE 15.1°N AND LONGITUDE 54.7°E, ABOUT 290 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 220 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 12 HOURS AND THEN NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 55°E CLOSE TO SALALAH, BY 0000 UTC OF 26<sup>TH</sup> MAY, 2018.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
24/2100	15.1/54.7	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0000	15.3/54.6	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/0600	15.8/54.5	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1200	16.3/54.3	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
25/1800	16.6/54.0	145-155 GUSTING TO 175	Very Severe Cyclonic Storm
26/0000	17.0/53.8	130-140 GUSTING TO 155	Very Severe Cyclonic Storm
26/1200	17.8/53.1	100-110 GUSTING TO 120	Severe Cyclonic Storm
27/0000	18.5/52.3	55-65 GUSTING TO 75	Deep Depression
27/1200	19.1/51.5	35-45 GUSTING TO 55	Depression

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF YESTERDAY, THE 24<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T4.5. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH SPIRAL BANDS. THE SYSTEM IS CDO PATTERN WITH COMPACTNESS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 10.5 DEG N & 17.0 DEG N AND LONGITUDE 50.5 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 974 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 12 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 29-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE.

THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NEARLY NORTHWARDS FOR NEXT 12 HOURS. THEN IT WILL BE STEERED TO MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(CHARAN SINGH) SCIENTIST-F, RSMC, NEW DELHI











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)

VERY SEVERE CYCLONIC STORM (VSCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY ONE ISSUED AT 0300 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 0000 UTC OF  $25^{TH}$  MAY, 2018.

THE **VERY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL & ADJOINING SOUTHWEST ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 09 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0000 UTC OF 25TH MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 15.2°N AND LONGITUDE 54.5°E, ABOUT 290 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 210 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 54°E CLOSE TO SOUTHWEST OF SALALAH, BY AROUND MIDNIGHT OF TODAY, THE 25<sup>TH</sup> MAY, 2018.

DATE/TIME(UTC)	POSITION	MAXIMUM SUSTAINED SURFACE	ATEGORY OF CYCLONIC DISTURBANC
	(LAT. °N/ LONG. °E)	WIND SPEED (KMPH)	
25/0000	15.2/54.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
25/0600	15.7/54.2	160-170 GUSTING TO 180	EXTREMELY SEVERE CYCLONIC STORM
25/1200	16.3/53.9	160-170 GUSTING TO 180	EXTREMELY SEVERE CYCLONIC STORM
25/1800	16.6/53.6	160-170 GUSTING TO 180	EXTREMELY SEVERE CYCLONIC STORM
26/0000	17.0/53.3	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
26/1200	17.8/52.5	75-85 GUSTING TO 95	SEVERE CYCLONIC STORM
27/0000	18.5/51.7	50-60 GUSTING TO 70	DEEP DEPRESSION
27/1200	19.2/50.9	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 10.5 DEG N & 18.5 DEG N AND LONGITUDE 51.0 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 968 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 0600 UTC OF 26<sup>TH</sup> MAY.

### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM TO EXTREMELY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 12 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 80-100 KJ/SQ. CM OVER CORE REGION. HOWEVER, IT IS RELATIVELY LOW ALONG THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED AND IS ABOUT 300X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTH-SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) NEAR THE SYSTEM CENTRE.

THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

(DR. M. MOHAPATRA) SCIENTIST-G & HEAD(SERVICES), NEW DELHI









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY TWO ISSUED AT 0600 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 0300 UTC OF  $25^{TH}$  MAY, 2018.

THE VERY SEVERE CYCLONIC STORM 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 07 KMPH DURING PAST 06 HOURS AND INTENSIFIED INTO AN **EXTREMELY SEVERE CYCLONIC STORM** AND LAY CENTERED AT 0300 UTC OF 25TH MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 15.4°N AND LONGITUDE 54.5°E, ABOUT 310 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 180 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NEARLY NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 54°E CLOSE TO SOUTHWEST OF SALALAH, BETWEEN 1800 UTC AND 2100 UTC OF TODAY, THE 25<sup>TH</sup> MAY, 2018 AS AN EXTREMELY SEVERE CYCLONIC STORM WITH WIND SPEED 160-170 KMPH GUSTING TO 190 KMPH.

DATE/ TIME (UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
25/0300	15.4/54.5	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/0600	15.7/54.3	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1200	16.3/53.9	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1800	16.6/53.6	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
26/0000	17.0/53.3	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
26/1200	17.8/52.5	75-85 GUSTING TO 95	SEVERE CYCLONIC STORM
27/0000	18.5/51.7	50-60 GUSTING TO 70	DEEP DEPRESSION
27/1200	19.2/50.9	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0300 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. THE CONVECTION SHOWS CENTRAL DENSE OVERCAST PATTERN WITH SPIRAL BANDS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER WESTCENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA BETWEEN LATTITUDE 10.5 DEG N & 18.5 DEG N AND LONGITUDE 51.0 DEG. E TO 58.0 DEG. E. MINIMUM CTT MINUS 93 DEG. C.

A SHIP LOCATED AT LAT. 15.6 DEG N AND LONG 58.0 DEG E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.2 HPA AND MEANS SURFACE WIND OF 26 KNOTS.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 964 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 90 KNOTS GUSTING TO 100 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

### STROM SURGE GUIDANCE:

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 2100 UTC OF 26<sup>TH</sup> MAY.

### **REMARKS:**

MOST GLOBAL MODELS SUGGEST FURTHER INTENSIFICATION OF THE VERY SEVERE CYCLONIC STORM TO EXTREMELY SEVERE CYCLONIC STORM OVER WESTCENTRAL ARABIAN SEA DURING NEXT 12 HRS. THERE IS ALSO A CONSENUS AMONG THE MODELS ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY HAS INCREASED AND IS ABOUT 300X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 20 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SOUTHWEST OF THE SYSTEM CENTRE. THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) OVER THE SYSTEM AREA.

THE STEERING WIND INDICATES THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTH EAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (NEETHA K GOPAL) SCIENTIST-E, RSMC NEW DELHI









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY THREE ISSUED AT 0900 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 0600 UTC OF  $25^{TH}$  MAY, 2018.

THE **EXTREMELY SEVERE CYCLONIC STORM** 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 07 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0600 UTC OF 25TH MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 15.8°N AND LONGITUDE 54.4°E, ABOUT 350 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 140 KM SOUTH-SOUTHEAST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN- SOUTHEAST YEMEN COASTS BETWEEN 53°E AND 54°E CLOSE TO SOUTHWEST OF SALALAH, BETWEEN 1800 UTC AND 2100 UTC OF TODAY, THE 25<sup>TH</sup> MAY, 2018 AS AN EXTREMELY SEVERE CYCLONIC STORM WITH WIND SPEED 160-170 KMPH GUSTING TO 190 KMPH.

Date/Time(UTC)	Position (Lat. <sup>0</sup> N/ long. <sup>0</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25/0600	15.8/54.4	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1200	16.3/54.1	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1800	16.6/53.8	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
26/0000	17.0/53.4	130-140 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26/0600	17.4/53.0	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
26/1800	18.2/52.1	60-70 GUSTING TO 80	CYCLONIC STORM
27/0600	18.9/51.3	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. RAGGED EYE IS SEEN WITH WELL DEFINED CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 10.5 DEG N & 18.5 DEG N AND LONGITUDE 51.0 DEG. E TO 58.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 964 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 90 KNOTS GUSTING TO 100 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 2100 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS**:

MOST GLOBAL MODELS SUGGEST ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC TO THE SYSTEM CENTRE (10-15 KNOTS) OVER THE SYSTEM AREA.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTHEAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

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









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY FOUR ISSUED AT 1200 UTC OF 25<sup>TH</sup> MAY, 2018 BASED ON 0900 UTC OF 25<sup>TH</sup> MAY, 2018.

THE **EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 0900 UTC OF TODAY, 25<sup>TH</sup> MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 16.2<sup>0</sup>N AND LONGITUDE 54.4<sup>0</sup>E, ABOUT 400 KM NORTH-NORTHEAST OF SOCOTRA ISLANDS (41494) AND 100 KM SOUTH-SOUTHEAST OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN-SOUTHEAST YEMEN COASTS BETWEEN 53<sup>0</sup>E AND 54<sup>0</sup>E **CLOSE TO SALALAH** (41316), BETWEEN 1800 UTC AND 2100 UTC OF TODAY, THE 25<sup>TH</sup> MAY, 2018 AS AN EXTREMELY SEVERE CYCLONIC STORM WITH WIND SPEED 160-170 KMPH GUSTING TO 190 KMPH.

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	ATEGORY OF CYCLONIC DISTURBANC
25/0900	16.2/54.4	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1200	16.4/54.2	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
25/1800	16.8/54.0	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
26/0000	17.2/53.7	130-140 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26/0600	17.7/53.3	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
26/1800	18.3/52.7	60-70 GUSTING TO 80	CYCLONIC STORM
27/0600	18.9/52.2	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0900 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 10.5 DEG N & 18.5 DEG N AND LONGITUDE 51.0 DEG. E TO 58.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 964 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 90 KNOTS GUSTING TO 100 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING 1800 UTC OF 25<sup>TH</sup> MAY TO 2100 UTC OF 26<sup>TH</sup> MAY.

#### **REMARKS:**

MOST GLOBAL MODELS SUGGEST ABOUT NORTH-NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS SOUTH OMAN AND SOUTHEAST YEMEN COASTS DURING THE FORECAST PERIOD.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 2 WITH AMPLITUDE MORE THAN 1. IT IS EXPECTED TO REMAIN IN PHASE 2 DURING NEXT 3 DAYS WITH AMPLITUDE MORE THAN 1.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 60 X10<sup>-5</sup> PER SEC TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC TO THE SYSTEM CENTRE (10-15 KNOTS) OVER THE SYSTEM AREA.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN–SOUTHEAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (NEETHA K GOPAL) SCIENTIST-E, RSMC NEW DELHI









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY FIVE ISSUED AT 1500 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 1200 UTC OF  $25^{TH}$  MAY, 2018.

THE **EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL ARABIAN SEA MOVED FURTHER NORTH-NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS, INTENSIFIED SLIGHTLY FURTHER AND LAY CENTERED AT 1200 HRS IST OF TODAY, 25<sup>TH</sup> MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 16.4<sup>0</sup>N AND LONGITUDE 54.1<sup>0</sup>E, ABOUT 420 KM NEARLY NORTH OF SOCOTRA ISLANDS (41494) AND 70 KM SOUTH OF SALALAH (41316) (OMAN). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN-SOUTHEAST YEMEN COASTS CLOSE TO SALALAH (41316) DURING NEXT 3 TO 4 HOURS AS AN EXTREMELY SEVERE CYCLONIC STORM WITH WIND SPEED 170-180 GUSTING TO 200 KMPH.

DATE/TIME(UTC)	POSITION	MAXIMUM SUSTAINED SURFACE	ATEGORY OF CYCLONIC DISTURBANC
	(LAT. <sup>°</sup> N/ LONG. <sup>°</sup> E)	WIND SPEED (KMPH)	
25/1200	16.4/54.1	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC
			STORM
25/1800	17.0/53.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	17.5/53.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26/0600	18.0/53.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
26/1200	18.6/52.7	55-65 GUSTING TO 75	DEEP DEPRESSION
27/0000	19.4/52.0	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. THE CLOUD SHOWS EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 12.5 DEG N & 19.0 DEG N AND LONGITUDE 51.0 DEG. E TO 57.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 962 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.
STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING NEXT SIX HOURS.

#### **REMARKS:**

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTH OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC TO THE SOUTH OF THE SYSTEM AREA DURING PAST 6 HOURS LEADING TO SLIGHT INTENSIFICATION EVEN THOUGH THERE IS DECRESE IN RATE OF WARM AND MOIST AIR INCURSION TO THE CORE OF THE SYSTEM. HOWEVER, SYSTEM WILL WEAKEN GRADUALLY AFTER LANDFALL DUE TO LAND INTERATION.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN-SOUTHEAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.

> (NEETHA K GOPAL) SCIENTIST-E, RSMC NEW DELHI









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' OVER WESTCENTRAL ARABIAN SEA - ADVISORY NO. TWENTY SIX ISSUED AT 1700 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 1500 UTC OF  $25^{TH}$  MAY, 2018.

THE **EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1500 UTC OF TODAY, 25<sup>TH</sup> MAY 2018 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 16.6<sup>0</sup>N AND LONGITUDE 54.0<sup>0</sup>E, CLOSE TO SOUTH OMAN-SOUTHEAST YEMEN COASTS (ABOUT 50 KM SOUTH OF SALALAH (41316)). IT IS VERY LIKELY TO MOVE NORTH-NORTHWESTWARDS AND CROSS SOUTH OMAN-SOUTHEAST YEMEN COASTS CLOSE TO SALALAH DURING NEXT FEW HOURS WITH WIND SPEED 170-180 GUSTING TO 200 KMPH. LATEST SATELLITE IMAGERIES INDICATE THAT UPPER HALF OF THE EYE WALL REGION IS ENTERING INTO LAND.

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	ATEGORY OF CYCLONIC DISTURBANC
25/1500	16.6/54.0	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
25/1800	17.0/53.8	150-160 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
26/0000	17.5/53.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26/0600	18.0/53.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
26/1200	18.6/52.7	55-65 GUSTING TO 75	DEEP DEPRESSION
27/0000	19.4/52.0	35-45 GUSTING TO 55	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.0. THE CLOUD SHOWS EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 13.0 DEG N & 20.0 DEG N AND LONGITUDE 50.0 DEG. E TO 57.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 962 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING NEXT SIX HOURS.

#### **REMARKS:**

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 250X10<sup>-6</sup> PER SEC TO THE SOUTH OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTH OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 30 X10<sup>-5</sup> PER SEC TO THE SOUTH OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR HAS BECOME LOW (5-10 KNOTS) OVER THE SYSTEM AREA DURING PAST 6 HOURS LEADING TO SLIGHT INTENSIFICATION EVEN THOUGH THERE IS DECRESE IN RATE OF WARM AND MOIST AIR INCURSION TO THE CORE OF THE SYSTEM. HOWEVER, SYSTEM WILL WEAKEN GRADUALLY AFTER LANDFALL DUE TO LAND INTERATION.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTH-NORTHWESTWARDS TOWARDS SOUTH OMAN-SOUTHEAST YEMEN COAST UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.











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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' CROSSED SOUTH OMAN COAST AND SOUTHEAST YEMEN - ADVISORY NO. TWENTY SEVEN ISSUED AT 2100 UTC OF  $25^{TH}$  MAY, 2018 BASED ON 1800 UTC OF  $25^{TH}$  MAY, 2018.

THE **EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU'** OVER WESTCENTRAL ARABIAN SEA MOVED NORTHWESTWARDS WITH A SPEED OF 07 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1800 UTC OF 25<sup>TH</sup> MAY, 2018 OVER WESTCENTRAL ARABAIN SEA OFF SOUTH OMAN AND ADJOINING SOUTHEAST YEMEN COAST NEAR LATITUDE 16.7<sup>°</sup>N AND LONGITUDE 53.9E, ABOUT 40 KM WEST SOUTHWEST OF SALALAH. IT CROSSED SOUTH OMAN COAST NEAR LATITUDE 16.85<sup>°</sup>N AND LONGITUDE 53.75<sup>°</sup>E, ABOUT 40 KMPH WEST-SOUTHWEST OF SALALAH DURING 1830 TO 1930 UTC OF 25<sup>TH</sup> MAY, 2018. IT LAY CENTERED AT 1930 UTC OF 25<sup>TH</sup> MAY OVER SOUTH OMAN AND ADJOINING AREAS OF SOUTHEAST OMAN NEAR LATITUDE 17.0<sup>°</sup>N AND LONGITUDE 53.6<sup>°</sup>E, ABOUT 50 KM WEST OF SALALAH.

DATE/TIME(UTC)	POSITION		ATEGORY OF CYCLONIC DISTURBANC
	(LAT. N/LONG. E)	WIND SPEED (KWPH)	
25/1800	16.8/53.9	160-170 gusting to 190	EXTREMELY SEVERE CYCLONIC STORM
26/0000	17.2/53.5	130-140 gusting to 155	VERY SEVERE CYCLONIC STORM
26/0600	17.6/53.1	90-100 gusting to 110	SEVERE CYCLONIC STORM
26/1200	18.1/52.6	55-65 gusting to 75	DEEP DEPRESSION
27/1800	18.6/52.0	40-50 gusting to 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018, THE INTENSITY OF THE SYSTEM IS T5.5. THE CLOUD SHOWS EYE PATTERN. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 14.0 DEG N & 20.5 DEG N AND LONGITUDE 50.0 DEG. E TO 57.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 964 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 90 KNOTS GUSTING TO 100 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING NEXT SIX HOURS.

#### **REMARKS:**

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 300X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS. UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.











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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' WEAKENED INTO VERY SEVERE CYCLONIC STORM - ADVISORY NO. TWENTY EIGHT ISSUED AT 0000 UTC OF  $26^{TH}$  MAY, 2018 BASED ON 2100 UTC OF  $25^{TH}$  MAY, 2018.

THE EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED FURTHER NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS, WEAKENED INTO A **VERY SEVERE CYCLONIC STORM** AND LAY CENTERED AT 2100 UTC, 26<sup>TH</sup> MAY, 2018 OVER OMAN NEAR LATITUDE 17.1°N AND LONGITUDE 53.5E, ABOUT 60 KM WEST SOUTHWEST OF SALALAH.

Date/Time(UTC)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25/2100	17.1/53.5	140-150 gusting to 170	VERY SEVERE CYCLONIC STORM
26/0000	17.3/53.2	130-140 gusting to 155	VERY SEVERE CYCLONIC STORM
26/0600	17.6/52.7	90-100 gusting to 110	SEVERE CYCLONIC STORM
26/1200	18.1/52.2	55-65 gusting to 75	DEEP DEPRESSION
27/1800	18.6/51.7	40-50 gusting to 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 14.0 DEG N & 21.0 DEG N AND LONGITUDE 50.0 DEG. E TO 57.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 966 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING NEXT SIX HOURS.

## **REMARKS**:

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 300X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS. UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.









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)

EXTREMELY SEVERE CYCLONIC STORM (ESCS) 'MEKUNU' WEAKENED INTO VERY SEVERE CYCLONIC STORM - ADVISORY NO. TWENTY EIGHT ISSUED AT 0000 UTC OF  $26^{TH}$  MAY, 2018 BASED ON 2100 UTC OF  $25^{TH}$  MAY, 2018.

THE EXTREMELY SEVERE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED FURTHER NORTHWESTWARDS WITH A SPEED OF 12 KMPH DURING PAST 06 HOURS, WEAKENED INTO A **VERY SEVERE CYCLONIC STORM** AND LAY CENTERED AT 2100 UTC, 26<sup>TH</sup> MAY, 2018 OVER OMAN NEAR LATITUDE 17.1°N AND LONGITUDE 53.5E, ABOUT 60 KM WEST SOUTHWEST OF SALALAH.

Date/Time(UTC)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
25/2100	17.1/53.5	140-150 gusting to 170	VERY SEVERE CYCLONIC STORM
26/0000	17.3/53.2	130-140 gusting to 155	VERY SEVERE CYCLONIC STORM
26/0600	17.6/52.7	90-100 gusting to 110	SEVERE CYCLONIC STORM
26/1200	18.1/52.2	55-65 gusting to 75	DEEP DEPRESSION
27/1800	18.6/51.7	40-50 gusting to 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 2100 UTC OF TODAY, THE 25<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIE OVER AREA BETWEEN LATTITUDE 14.0 DEG N & 21.0 DEG N AND LONGITUDE 50.0 DEG. E TO 57.0 DEG. E. MINIMUM CTT IS MINUS 93 DEG. C.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 966 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 80 KNOTS GUSTING TO 90 KNOTS. STATE OF SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE.

STROM SURGE OF ABOUT 1.5 TO 2 METERS HEIGHT ABOVE THE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE THE LOW LYING AREAS NEAR THE LANDFALL POINT DURING NEXT SIX HOURS.

## **REMARKS**:

THE SEA SURFACE TEMPERATURE (SST) IS 30-31 DEG C OVER WESTCENTRAL ARABIAN SEA. THERE IS POSITIVE SST ANOMALY OVER WESTCENTRAL ARABIAN SEA. THE TROPICAL CYCLONE HEAT POTENTIAL IS ABOUT 70-90 KJ/SQ. CM TO THE LEFT FORWARD SECTOR OF THE PREDICTED TRACK. HOWEVER, IT IS RELATIVELY LOW, AROUND 60-70 KJ/SQ. CM TO THE RIGHT OF THE PREDICTED TRACK. UPPER LEVEL RIDGE RUNS ALONG 20<sup>0</sup>N TO THE NORTHEAST OF THE SYSTEM AND HENCE THE SYSTEM IS IN THE PERIPHERY OF THE ANTICYCLONE TO ITS NORTHEAST. THE LOW LEVEL RELATIVE VORTICITY IS ABOUT 300X10<sup>-6</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE LOWER LEVEL CONVERGENCE IS ABOUT 50 X10<sup>-5</sup> PER SEC TO THE SOUTHEAST OF THE SYSTEM CENTRE. THE UPPER LEVEL DIVERGENCE IS ABOUT 40 X10<sup>-5</sup> PER SEC TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS. UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER.









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)

SEVERE CYCLONIC STORM (SCS) 'MEKUNU' OVER OMAN - ADVISORY NO. THIRTY ISSUED AT 0600 UTC OF 26<sup>TH</sup> MAY, 2018 BASED ON 0300 UTC OF 26<sup>TH</sup> MAY, 2018.

THE VERY SEVERE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED FURTHER NORTHWESTWARDS WITH A SPEED OF 8 KMPH DURING PAST 06 HOURS, WEAKENED INTO A SEVERE CYCLONIC STORM AND LAY CENTERED AT 0300 UTC OF TODAY, 26TH MAY, 2018 OVER OMAN NEAR LATITUDE 17.4°N AND LONGITUDE 53.2°E, ABOUT 100 KM WEST-NORTHWEST OF SALALAH(41316). IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHWESTWARDS AND WEAKEN INTO A CYCLONIC STROM DURING NEXT 6 HOURS AND INTO A DEPRESSION DURING SUBSEQUENT 6 HOURS.

DATE/TIME(UTC)	POSITION (LAT. <sup>®</sup> N/ LONG. <sup>®</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26/0300	17.4/53.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
26/0600	17.6/52.9	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
26/1200	18.1/52.2	60-70 GUSTING TO 80	CYCLONIC STORM
26/1800	18.6/51.6	40-50 GUSTING TO 60	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 0300 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.5° N & 21.0° N AND LONGITUDE 51.0° E TO 57.0° E WITH MINIMUM CTT IS MINUS 89°

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. SEA CONDITION WILL BE HIGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-SOUTHEAST YEMEN COASTS DURING NEXT 3 HOURS AND WILL IMPROVE GRADUALLY THEREAFTER.

## **REMARKS**:

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS. UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

(NARESH KUMAR) SCIENTIST-E, RSMC NEW DELHI









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)

SEVERE CYCLONIC STORM (SCS) 'MEKUNU' OVER OMAN - ADVISORY NO. THIRTY ONE ISSUED AT 0900 UTC OF 26<sup>TH</sup> MAY, 2018 BASED ON 0600 UTC OF 26<sup>TH</sup> MAY, 2018.

THE SEVERE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 14 KMPH DURING PAST 06 HOURS, AND LAY CENTERED AT 0600 UTC OF TODAY, 26TH MAY, 2018 OVER OMAN NEAR LATITUDE 17.8°N AND LONGITUDE 53.2°E, ABOUT 120 KM WEST-NORTHWEST OF SALALAH (41316). IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN INTO A CYCLONIC STROM DURING NEXT 3 HOURS AND INTO A DEPRESSION DURING SUBSEQUENT 6 HOURS.

DATE/TIME(UTC)	POSITION (LAT. <sup>®</sup> N/ LONG. <sup>®</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26/0600	17.8/53.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
26/1200	18.5/52.7	60-70 GUSTING TO 80	CYCLONIC STORM
26/1800	19.0/52.2	40-50 GUSTING TO 60	DEPRESSION
27/0000	19.3/51.7	25-35 GUSTING TO 45	LOW

AS PER THE SATELLITE IMAGERY BASED ON 0600 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.0° N & 22.0° N AND LONGITUDE 49.0° E TO 56.0° E WITH MINIMUM CTT IS MINUS 89°.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 50 KNOTS GUSTING TO 60 KNOTS. SEA CONDITION WILL BE VERY ROUGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-SOUTHEAST YEMEN COASTS DURING NEXT 6 HOURS AND WILL IMPROVE GRADUALLY THEREAFTER.

## **REMARKS:**

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION. AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

#### (NEETHA K GOPAL) SCIENTIST-E, RSMC NEW DELHI







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)

CYCLONIC STORM 'MEKUNU' OVER OMAN - ADVISORY NO. THIRTY TWO ISSUED AT 1200 UTC OF 26<sup>TH</sup> MAY, 2018 BASED ON 0900 UTC OF 26<sup>TH</sup> MAY, 2018.

THE SEVERE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED NORTHWARDS WITH A SPEED OF 15 KMPH DURING PAST 06 HOURS, WEAKENED INTO A CYCLONIC STORM AND LAY CENTERED AT 0900 UTC OF TODAY, 26TH MAY, 2018 OVER OMAN NEAR LATITUDE 18.2°N AND LONGITUDE 53.2°E, ABOUT 160 KM NORTHWEST OF SALALAH(41316). IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN FURTHER INTO A DEPRESSION DURING NEXT 09 HOURS.

Date/Time(UTC)	Position (Lat. <sup>⁰</sup> N/ long. <sup>⁰</sup> E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
26/0900	18.2/53.2	70-80 gusting to 90	Cyclonic Storm
26/1200	18.5/53.0	60-70 gusting to 80	Cyclonic Storm
26/1800	19.0/52.7	40-50 gusting to 60	Depression
27/0000	19.3/52.4	25-35 gusting to 45	Low

AS PER THE SATELLITE IMAGERY BASED ON 0900 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.0° N & 22.0° N AND LONGITUDE 49.0° E TO 56.0°E.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 40 KNOTS GUSTING TO 50 KNOTS. SEA CONDITION WILL BE VERY ROUGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-SOUTHEAST YEMEN COASTS DURING NEXT 03 HOURS AND WILL IMPROVE GRADUALLY THEREAFTER.

## **REMARKS**:

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR IS LOW (5-10 KNOTS) AROUND SYSTEM CENTER. IT WILL RESTRICT THE RATE OF WEAKNING DUE TO LAND INTERACTION. AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

#### (NARESH KUMAR) SCIENTIST-E, RSMC NEW DELHI







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)

CYCLONIC STORM 'MEKUNU' OVER OMAN - ADVISORY NO. THIRTY THREE ISSUED AT 1500 UTC OF 26<sup>TH</sup> MAY, 2018 BASED ON 1200 UTC OF 26<sup>TH</sup> MAY, 2018.

THE CYCLONIC STORM '**MEKUNU**' OVER OMAN MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 10 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1730 HOURS IST OF TODAY, 26TH MAY, 2018 OVER OMAN NEAR LATITUDE 18.3°N AND LONGITUDE 53.0° E, ABOUT 180 KM NORTHWEST OF SALALAH(41316). IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN INTO A DEEP DEPRESSION DURING NEXT 03 HOURS AND FURTHER INTO A DEPRESSION DURING SUBSEQUENT 03 HOURS.

DATE/TIME(UTC)	POSITION (LAT. ⁰N/ LONG. ⁰E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26/1200	18.3/53.0	60-70 GUSTING TO 80	CYCLONIC STORM
26/1800	19.0/52.7	40-50 GUSTING TO 60	DEPRESSION
27/0000	19.3/52.4	25-35 GUSTING TO 45	LOW

AS PER THE SATELLITE IMAGERY BASED ON 1200 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.5°N & 23.0°N AND LONGITUDE 49.5°E TO 56.5°E.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. SEA CONDITION WILL BE ROUGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-SOUTHEAST YEMEN COASTS DURING NEXT SIX HOURS.

## **REMARKS:**

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR HAS INCREASED IN PAST SIX HOURS AND IS MODERATE TO HIGH (20-30 KNOTS) AROUND SYSTEM CENTER. AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

#### (NARESH KUMAR) SCIENTIST-E, RSMC NEW DELHI









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)

CYCLONIC STORM 'MEKUNU' OVER OMAN - ADVISORY NO. THIRTY FOUR ISSUED AT 1800 UTC OF 26<sup>TH</sup> MAY, 2018 BASED ON 1500 UTC OF 26<sup>TH</sup> MAY, 2018.

THE CYCLONIC STORM '**MEKUNU**' OVER OMAN MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 07 KMPH DURING PAST 06 HOURS AND LAY CENTERED AT 1500 UTC OF TODAY, 26TH MAY, 2018 OVER OMAN NEAR LATITUDE 18.5°N AND LONGITUDE 53.0° E, ABOUT 200 KM NORTHWEST OF SALALAH(41316). IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN INTO A DEEP DEPRESSION DURING NEXT 03 HOURS AND FURTHER INTO A DEPRESSION DURING SUBSEQUENT 03 HOURS.

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26/1500	18.5/53.0	60-70 GUSTING TO 80	CYCLONIC STORM
26/1800	19.0/52.7	50-60 GUSTING TO 70	DEEP DEPRESSION
27/0000	19.3/52.4	30-40 GUSTING TO 50	DEPRESSION

AS PER THE SATELLITE IMAGERY BASED ON 1500 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.5°N & 24.5°N AND LONGITUDE 49.5°E TO 56.5°E.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. SEA CONDITION WILL BE ROUGH OVER WESTCENTRAL ARABIAN SEA ALONG & OFF SOUTH OMAN-SOUTHEAST YEMEN COASTS DURING NEXT SIX HOURS.

## **REMARKS:**

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR HAS INCREASED IN PAST SIX HOURS AND IS MODERATE TO HIGH (20-30 KNOTS) AROUND SYSTEM CENTER. AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

(D JOARDAR) SCIENTIST-E, RSMC NEW DELHI





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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)

CYCLONIC STORM 'MEKUNU' WEAKENED INTO DEEP DEPRESSION OVER OMAN – ADVISORY NO. THIRTY FIVE ISSUED AT 2100 UTC OF  $26^{th}$  MAY, 2018 BASED ON 1800 UTC OF  $26^{TH}$  MAY, 2018.

THE CYCLONIC STORM 'MEKUNU' OVER OMAN MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF 13 KMPH DURING PAST 06 HOURS AND WEAKENED INTO A DEEP DEPRESSION AND LAY CENTERED AT 1800 UTC OF 26<sup>TH</sup> MAY, 2018 OVER OMAN NEAR LATITUDE 19.0°N AND LONGITUDE 52.8° E, ABOUT 250 KM NORTHWEST OF SALALAH(41316). IT IS VERY LIKELY TO MOVE NORTHWESTWARDS AND WEAKEN INTO A DEPRESSION DURING NEXT 03 HOURS AND FURTHER INTO A WELL MARKED LOW DURING SUBSEQUENT 03 HOURS.

DATE/TIME(UTC)	POSITION (LAT. ⁰N/ LONG. ⁰E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26/1800	19.0/52.8	50-60 GUSTING TO 70	DEEP DEPRESSION
26/2100	19.3/52.6	40-50 GUSTING TO 60	DEPRESSION
27/0000	19.3/52.6	20-30 GUSTING TO 40	WELL MARKED LOW

AS PER THE SATELLITE IMAGERY BASED ON 1800 UTC OF TODAY, THE 26<sup>TH</sup> MAY 2018. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 15.5°N & 24.5°N AND LONGITUDE 49.5°E TO 56.5°E.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS.

## **REMARKS:**

THE STEERING WINDS INDICATE THE SYSTEM WOULD MOVE NORTHWESTWARDS UNDER THE INFLUENCE OF ANTICYCLONIC CIRCULATION AT MIDDLE AND UPPER TROPOSHPERIC LEVEL LOCATED TO THE NORTHEAST OF THE SYSTEM CENTER. THE VERTICAL WIND SHEAR HAS INCREASED IN PAST SIX HOURS AND IS MODERATE TO HIGH (20-30 KNOTS) AROUND SYSTEM CENTER. AS A RESULT THERE WILL BE GRADUAL WEAKNING OF THE SYSTEM OVER LAND.

(D JOARDAR) SCIENTIST-E, RSMC NEW DELHI









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)

# DEEP DEPRESSION OVER OMAN WEAKENED INTO DEPRESSION-ADVISORY NO. THIRTY SIX ISSUED AT 0300 UTC OF 27<sup>th</sup> MAY, 2018 BASED ON 0000 UTC OF 27<sup>th</sup> MAY, 2018.

THE DEEP DEPRESSION OVER OMAN FURTHER WEAKENED INTO DEPRESSION OVER THE SAME AREA AND LAY CENTERED AT 0000 UTC OF 27<sup>th</sup> MAY, 2018 NEAR LATITUDE 19.0°N AND LONGITUDE 52.8° E, ABOUT 250 KM NORTHWEST OF SALALAH (41316). IT IS LIKELY TO BE WEAKENED FURTHER INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 03 HOURS.

AS PER THE SATELLITE IMAGERY BASED ON 0000 UTC OF TODAY, THE 27<sup>th</sup> MAY 2018, ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LIES OVER AREA BETWEEN LATTITUDE 16.3°N & 28.0°N AND LONGITUDE 48.3°E TO 55.5°E.

THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA AND THE MAXIMUM SUSTAINED SURFACE WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS.

(CHARAN SINGH) SCIENTIST-F, RSMC NEW DELHI



