DEMS-RSMC TROPICAL CYCLONES NEW DELHI 29-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0900 UTC OF 29 OCTOBER, 2011 BASED ON 0600 UTC OF 29 OCTOBER, 2011 (.)

LATEST SATELLITE IMAGERY INDICATES THAT A DEPRESSION HAS FORMED OVER WEST CENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA AND LAY CENTRED AT 0600 UTC OF TODAY, THE 29<sup>TH</sup> OCTOBER 2011 NEAR LATITUDE 13.0°N AND LONGITUDE 62.0°E, ABOUT 1400 KM WEST OF MANGALORE (43284), 850 KM EAST OF SOCOTRA ISLAND (41494) AND 950 KM SOUTHEAST OF SALALAH (41316) THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 72 HRS.

SATELLITE IMAGERY INDICATES GRADUAL INCREASE IN CONVECTION AND ORGANISATION OF THE SYSTEM. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ARSEA BET LAT 9.0N TO 18.0N LONG 56.0E TO 72.0E.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -79 $^{\circ}$ C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA.

### **REMARK:**

THE RELATIVE VORTICITY AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE HAVE INCREASED DURING PAST 24 HRS. SEA SURFACE TEMPERATURE (28°-29°C). HOWEVER, OCEAN HEAT CONTENT IS LESS(< 40 KJ/CM²) AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. HOWEVER, VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE (05-10 KNOTS) 24 HOUR TENDENCY OF VERTICAL WIND SHEAR AROUND SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH ROUGHLY RUNS ALONG 15° N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. CONSIDERING ALL THESE, THE SYSTEM WOULD INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 72 HRS.HOWEVER, DUE TO COLDER SEA, THE SYSTEM MAY WEAKEN AGAIN OVER GULF OF ADEN AND ADJOINING ARABIAN SEA.

(M. MOHAPATRA) SCIENTIST-E

TOO:291400 HRS IST

#### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 29-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 29 OCTOBER, 2011 BASED ON 1200 UTC OF 29 OCTOBER, 2011 (.)

THE DEPRESSION OVER WEST CENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA MOVED WESTWARD AND LAY CENTRED AT 1200 UTC OF TODAY, THE 29<sup>TH</sup> OCTOBER 2011 NEAR LATITUDE 13.0°N AND LONGITUDE 61.0°E, ABOUT 1500 KM WEST OF MANGALORE (43284),750 KM EAST OF SOCOTRA ISLAND (41494) AND 850 KM SOUTHEAST OF SALALAH (41316) THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 72 HRS.

SATELLITE IMAGERY INDICATES GRADUAL INCREASE IN CONVECTION AND ORGANISATION OF THE SYSTEM. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 10.0°N TO 20.0°N AND LONG 54.0°E TO 70.0°E.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -75°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA.

#### **REMARK:**

THE RELATIVE VORTICITY AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE HAVE INCREASED DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 28°-29°C. HOWEVER, OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM²) AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE (05-10 KNOTS) 24 HOUR TENDENCY OF VERTICAL WIND SHEAR AROUND SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. CONSIDERING ALL THESE, THE SYSTEM WOULD INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 72 HRS. HOWEVER, DUE TO COLDER SEA, THE SYSTEM MAY WEAKEN AGAIN OVER GULF OF ADEN AND ADJOINING ARABIAN SEA.

(M. MOHAPATRA) SCIENTIST-E

TOO:292000 HRS IST

#### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 30-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 30 OCTOBER, 2011 BASED ON 0300 UTC OF 30 OCTOBER, 2011 (.)

THE DEPRESSION OVER WEST CENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA FURTHER MOVED WESTWARD AND LAY CENTRED AT 0300 UTC OF TODAY, THE 30<sup>TH</sup> OCTOBER 2011 NEAR LATITUDE 13.0°N AND LONGITUDE 60.0°E, ABOUT 1600 KM WEST OF MANGALORE (43284), 650 KM EAST OF SOCOTRA ISLAND (41494) AND 750 KM SOUTHEAST OF SALALAH (41316) THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 48 HRS.

SATELLITE IMAGERY INDICATES GRADUAL INCREASE IN CONVECTION AND ORGANISATION OF THE SYSTEM. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 10.0°N TO 20.0°N AND LONG 54.5°E TO 65.0°E.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -81°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA.

### **REMARK:**

THE RELATIVE VORTICITY AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE HAVE INCREASED DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26°C TO THE WESTERN SIDE OF THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 50 KJ/CM2) OVER WESTERN SIDE OF THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE (05-10 KNOTS) 24 HOUR TENDENCY OF VERTICAL WIND SHEAR TO THE WEST OF SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18<sup>o</sup>N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST. 24 HOURS MAXIMUM PRESSURE FALL OF 5.1 HPA HAS BEEN REPORTED AT THUMRAIT (41314) TO THE NORTH OF SALALAH AT 0300 UTC OF 30<sup>TH</sup> OCTOBER 2011. CONSIDERING ALL THESE, THE SYSTEM WOULD INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING NEXT 48 HRS. HOWEVER, DUE TO COLDER SEA, THE SYSTEM MAY WEAKEN AGAIN OVER GULF OF ADEN AND ADJOINING ARABIAN SEA.

> (M. MOHAPATRA) SCIENTIST-E

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 30-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 30 OCTOBER, 2011 BASED ON 1200 UTC OF 30 OCTOBER, 2011 (.)

THE DEPRESSION OVER WEST CENTRAL AND ADJOINING SOUTHWEST ARABIAN SEA MOVED NORTHWESTWARD AND LAY CENTRED AT 1200 UTC OF TODAY, THE 30<sup>TH</sup> OCTOBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 13.5°N AND LONGITUDE 59.5°E, ABOUT 1650 KM WEST-NORTHWEST OF MANGALORE (43284), 600 KM EAST-NORTHEAST OF SOCOTRA ISLAND (41494) AND 700 KM SOUTHEAST OF SALALAH (41316) THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE NORTHWESTWARDS INITIALLY DURING NEXT 24 HOURS AND THEN WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING SUBSEQUENT 48 HRS.

SATELLITE IMAGERY INDICATES OUT OF TWO MAJOR CONVECTION CLUSTERS IN SOUTHWEST AND NORTHEAST SECTOR OF THE SYSTEM, THE DEPTH OF CONVECTION HAS DECREASED IN FORMER AND INCREASED IN THE LATER DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT  $10.0^{\circ}$ N TO  $20.0^{\circ}$ N AND LONG  $54.5^{\circ}$ E TO  $65.0^{\circ}$ E.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -  $80^{\circ}$ C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA.

### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE HAVE INCREASED DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C TO THE WESTERN SIDE OF THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 50 KJ/CM2) OVER WESTERN SIDE OF THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE (05-10 KNOTS) 24 HOUR TENDENCY OF VERTICAL WIND SHEAR TO THE WEST OF SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 180N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST.SALALAH (41316) HAS REPORTED MEAN SEA LEVEL PRESSURE(MSLP) OF 1003.9 HPA, PRESSURE FALL IN LAST 24 HRS (P<sub>24</sub>P<sub>24</sub>) IS -2.8 HPA, WIND DIRECTION 340 DEGREE AND SPEED 16 KNOTS; YAALONI (41295) REPOTED MSLP OF 1004.5 HPA. WIND DIRECTION 040 AND SPEED 22 JNOTS: MASIRAH (41288) REPORTED MSLP OF 1007.1, WIND DIRECTION 090 AND SPEED 18 KNOTS; BUOY (POSITION: 16.50N/56.20E) REPORTED MSLP 1003.2, (P<sub>24</sub>P<sub>24</sub>) -1.7 HPA. THOUGH MOST OF THE MODELS SUGGEST MOVEMENT TOWARDS GULF OF ADEN/ OMAN COAST, THERE IS LARGE VARIATION IN TRACK FORECAST. ECMWF MODEL SHOWS NEWARDS MOVEMENT DURING NEXT 24 HRS AND THEN NEARLY WESTWARD MOVEMENT. UKMO MODEL SUGGESTS NNWWARD MOVEMENT DURING NEXT 24 HRS. CNSIDERING ALL THESE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE NORTHWESTWARDS INITIALLY DURING NEXT 24 HOURS AND THEN WEST-NORTHWESTWARDS TOWARDS GULF OF ADEN DURING SUBSEQUENT 48 HRS. HOWEVER, DUE TO COLDER SEA, THE SYSTEM MAY WEAKEN AGAIN OVER GULF OF ADEN AND ADJOINING ARABIAN SEA.

> (M. MOHAPATRA) SCIENTIST-E

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 31-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 31 OCTOBER, 2011 BASED ON 0300 UTC OF 31 OCTOBER, 2011 (.)

THE DEPRESSION OVER WEST CENTRAL ARABIAN SEA MOVED NORTHWESTWARD AND LAY CENTRED AT 0300 UTC OF TODAY, THE 31<sup>ST</sup> OCTOBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 15.0°N AND LONGITUDE 58.5°E, ABOUT 1800 KM WEST-NORTHWEST OF MANGALORE (43284), 550 KM NORTHEAST OF SOCOTRA ISLAND (41494) AND 500 KM SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH OMAN AND ADJOINING YEMEN COAST ACROSS GULF OF ADEN DURING NEXT 48 HRS. HOWEVER, THE PROBABILITY OF FURTHER INTENSIFICATION IS LOW AS THE DEPRESSION LIES OVER THE COLDER SEA AND THERE IS COLD DRY AIR ENTRAINMENT OVER THE REGION.

THE DEPTH OF CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 12.5 N TO 20.0 N AND WEST OF LONG 63.0 E AND MODERATE TO INTENSE CONVTN SEEN OVER REST ARSEA BETWEEN LAT 13.5 N TO 22.5 N WEST OF LONG  $66.0^{\circ}$ E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -  $85^{\circ}$ C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA.

#### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL SHOWS SLIGHT INCREASE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27 C TO THE WESTERN SIDE OF THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 50 KJ/CM2) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS POSITIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR TO THE EAST OF SYSTEM CENTRE AND NO SIGNIFICANT CHANGE ON WESTERN SIDE OF THE SYSTEM CENTRE . THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 17°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE(MSLP) HAS BEEN REPORTED BY AL-GHAIDAH (941398) OF 1005.2, PRESSURE CHANGE IN LAST 24 HRS (P24P24) OF -1.8 HPA, WIND DIRECTION/ SPEED (DDD/FF) 270/13 KT FOLLWED BY SALALAH (41316) REPORTED MSLP OF 1005.7, HPA, P<sub>24</sub>P<sub>24</sub> -1.7 HPA, DDD/FF 040/13 KT; BUOY (POSITION: 16.30N/56.00E) REPORTED MSLP 1003.6 HPA; SHIP (POSITION: 14.30N/59.40E) REPORTED MSLP 1000.9, DDD/FF 210/08KT. THOUGH MOST OF THE MODELS SUGGEST MOVEMENT TOWARDS GULF OF ADEN/ OMAN COAST, THERE IS LARGE VARIATION IN TRACK FORECAST. ECMWF MODEL SHOWS WESTWARDS MOVEMENT DURING NEXT 72 HRS. CNSIDERING ALL THESE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS TOWARDS SOUTH OMAN AND ADJOINING YEMEN COAST ACROSS GULF OF ADEN DURING NEXT 48 HRS. HOWEVER, THE PROBABILITY OF FURTHER INTENSIFICATION IS LOW AS THE DEPRESSION LIES OVER THE COLDER SEA AND THERE IS COLD DRY AIR ENTRAINMENT OVER THE REGION.

> (M. MOHAPATRA) SCIENTIST-E

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 31-10-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 31 OCTOBER, 2011 BASED ON 1200 UTC OF 31 OCTOBER, 2011 (.)

THE DEPRESSION OVER WEST CENTRAL ARABIAN SEA MOVED NORTHWESTWARD AND LAY CENTRED AT1200 UTC OF TODAY, THE 31  $^{\rm ST}$  OCTOBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 16.0 N AND LONGITUDE 57.5 E, ABOUT 1900 KM WEST-NORTHWEST OF MANGALORE (43284), 550 KM NORTHEAST OF SOCOTRA ISLAND (41494) AND 400 KM EAST-SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH (41316) AROUND 0000 UTC OF  $2^{\rm ND}$  NOVEMBER 2011.

THE DEPTH OF CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT  $14.0^{\circ}$ N TO  $21.0^{\circ}$ N WEST OF LONG  $65.0^{\circ}$ E ADJOINING SAUDI ARABIA THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVE CTION IS AROUND  $-79^{\circ}$ C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA.

#### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL SHOWS SLIGHT INCREASE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C TO THE WESTERN SIDE OF THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM<sup>2</sup>) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION IS FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS POSITIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR TO THE EAST OF SYSTEM CENTRE AND NO SIGNIFICANT CHANGE ON WESTERN SIDE OF THE SYSTEM CENTRE . THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 17°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE(MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1003.0. PRESSURE CHANGE IN LAST 24 HRS (P<sub>24</sub>P<sub>24</sub>) OF -0.9 HPA; SHIP (POSITION: 13.7<sup>0</sup>N/55.4<sup>0</sup>E) REPORTED MSLP 1003.0, SHIP (POSITION: 14.5°N/56.9°E) REPORTED MSLP 1002.5, WIND DIRECTION 310 AND SPEED 12 KNOT. THOUGH MOST OF THE MODELS SUGGEST MOVEMENT TOWARDS GULF OF ADEN/ OMAN COAST, THERE IS LARGE VARIATION IN TRACK FORECAST. ECMWF MODEL SHOWS WEST-NORTHWARDS MOVEMENT DURING NEXT 72 HRS. CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION AND MOVE WEST-NORTHWESTWARDS CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH (41316) AROUND 0000 UTC OF 2<sup>ND</sup> NOVEMBER 2011.

/T.N. I

(T.N. Jha) Director

TOO: 312000 HRS IST

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 01-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 1<sup>ST</sup> NOVEMBER, 2011 BASED ON 0300 UTC OF 1<sup>ST</sup> NOVEMBER, 2011(.)

THE DEPRESSION OVER WEST CENTRAL ARABIAN SEA MOVED WESTWARD, INTENSIFIED INTO DEEP DEPRESSION AND LAY CENTRED AT 0300 UTC OF TODAY, THE  $1^{\rm ST}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.0^{\rm O}N$  AND LONGITUDE  $56.0^{\rm O}E$ , ABOUT 2000 KM WEST-NORTHWEST OF MANGALORE (43284), 450 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494) AND 230 KM EAST-SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH (41316) AROUND MORNING OF  $2^{\rm ND}$  NOVEMBER 2011

THE DEPTH OF CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 13.0°N TO 18.5°N LONG 51.5°E TO 58.0°E AND BET LAT 18.5°N TO 22.5°N LONG 55.0°E TO 63.0°E ADJ OMAN.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -84°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA.

#### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM<sup>2</sup>) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 05-10 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE(MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1004.0, PRESSURE CHANGE IN LAST 24 HRS (P24P24) OF -1.7 HPA. THOUGH MOST OF THE MODELS SUGGEST MOVEMENT TOWARDS GULF OF ADEN/ OMAN COAST, THERE IS LARGE VARIATION IN TRACK FORECAST. ECMWF MODEL SHOWS WEST-NORTHWARDS MOVEMENT DURING NEXT 48 HRS. CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH (41316) AROUND MORNING OF 2<sup>ND</sup> NOVEMBER 2011

> (T.N. Jha) Director

TOO: 011130 HRS IST

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 01-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 1<sup>ST</sup> NOVEMBER, 2011 BASED ON 1200 UTC OF 1<sup>ST</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER WEST CENTRAL ARABIAN SEA MOVED WESTWARD AND LAY CENTRED AT 1730 HRS IST OF TODAY, THE  $1^{\rm ST}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.0^{\rm O}$ N AND LONGITUDE  $55.5^{\rm O}$ E, ABOUT 2100 KM WESTNORTHWEST OF MANGALORE (43284), 400 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494) AND 200 KM SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM AND MOVE WEST-NORTHWESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF  $2^{\rm ND}$  NOVEMBER 2011.

THE DEPTH OF CONVECTION SHOWS NO CHANGE DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA LAT  $13.5^{\circ}$ N TO  $20.0^{\circ}$ N & LONG  $50.5^{\circ}$ E TO  $57.0^{\circ}$ E SOUTHEAST OMAN AND MODERATE TO INTENSE CONVECTION OVER REST NORTHWEST ARABIAN SEA REST N OMAN BETWEEN LAT  $19.0^{\circ}$ N TO  $24.0^{\circ}$ N & LONG  $55.0^{\circ}$ E TO  $65.0^{\circ}$ E ADJOINING GULF OF OMAN.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVE CTION IS AROUND -82°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA.

## **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM<sup>2</sup>) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 05-10 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR 9-5 TO -10 KNOTS AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18<sup>0</sup>N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS NEGATIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE(MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1001.2, PRESSURE CHANGE IN LAST 24 HRS (P<sub>24</sub>P<sub>24</sub>) OF -1.8 HPA. THOUGH MOST OF THE MODELS SUGGEST MOVEMENT TOWARDS GULF OF ADEN/ OMAN COAST, THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST. ECMWF MODEL SHOWS WEST-NORTHWARDS MOVEMENT DURING NEXT 48 HRS. CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM AND MOVE WEST-NORTHWESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF 2<sup>ND</sup> NOVEMBER 2011.

> (T.N. Jha) Director

TOO: 012030 HRS IST

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)

STORM WARNING CENTRE, YANGAON (MYANMAR)

STORM WARNING CENTRE, BANGKOK (THAILAND)

STORM WARNING CENTRE, COLOMBO (SRILANKA)

STORM WARNING CENTRE, KARACHI (PAKISTAN) METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT

(THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

RSMC - TROPICAL CYCLONES. NEW DELHI

TROPICAL STORM "**KEILA**" ADVISORY NO ONE ISSUED AT 0600UTC OF 2<sup>ND</sup> NOVEMBER 2011 BASED ON 0300 UTC CHARTS OF 2ND NOVEMBER 2011.

THE DEEP DEPRESSION OVER WESTCENTRAL ARABIAN SEA MOVED WESTWARD, INTENSIFIED INTO A CYCLONIC STORM "**KEILA**" AND LAY CENTRED AT 0300 UTC OF TODAY, THE  $2^{\rm ND}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.0^{\rm O}$ N AND LONGITUDE  $55.0^{\rm O}$ E, ABOUT 2150 KM WESTNORTHWEST OF MANGALORE (43284), 400 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494) AND 150 KM SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF  $3^{\rm RD}$  NOVEMBER 2011.

BASED ON LATEST ANALYSIS WITH NWP MODELS AND OTHER CONVENTIONAL TECHNIQUES, ESTIMATED TRACK AND INTENSITY OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	SUSTAINED MAXIMUM SURFACE WIND SPEED
		(KMPH)
02-11-2011/0300	16.0/55.0	65-75 GUSTING TO 85
02-11-2011/0600	16.0/54.5	65-75 GUSTING TO 85
02-11-2011/1200	16.0/54.0	65-75 GUSTING TO 85
02-11-2011/1800	16.0/53.5	65-75 GUSTING TO 85
03-11-2011/0000	16.0/53.0	65-75 GUSTING TO 85
03-11-2011/1200	16.0/52.0	65-75 GUSTING TO 85
04-11-2011/0000	15.5/51.0	45-55 GUSTING TO 65

THE CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA SOUTH OMAN ADJOINING YEMEN BET LAT 13.5°N TO 20.0°N LONG 52.5°E TO 58.0°E AND MODERATE TO INTENSE CONVECTION OVER NORTHEAST OMAN ADJOINING NORTHWEST ARSEA.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -85°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.

### STORM SURGE GUIDE:

STORM SURGE OF HEIGHT ONE METRE ABOVE ASTRONOMICAL TIDE IS EXPECTED NEAR THE LANDFALL POINT.

#### REMARK:

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM2) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR (-5 TO -10 KNOTS) AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18<sup>0</sup>N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS POSITIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE(MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1004; BUOY (POSITION: LAT 16.5°N/ LONG 55.1°E) REPORTED MSLP OF 999.2 HPA AND P<sub>24</sub>P<sub>24</sub> OF -1.1 HPA. THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST BY NWP MODELS. WIND IS STRONGER IN EASTERN SIDE THAN IN WESTERN SIDE OF THE SYSTEM.CONSIDERING ALL THESE. THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF 3<sup>RD</sup> NOVEMBER 2011.

> (Charan Singh) Director

TOO: 021130 HRS IST

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)

STORM WARNING CENTRE, YANGAON (MYANMAR)

STORM WARNING CENTRE, BANGKOK (THAILAND)

STORM WARNING CENTRE, COLOMBO (SRILANKA)

STORM WARNING CENTRE, KARACHI (PAKISTAN) METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

RSMC - TROPICAL CYCLONES. NEW DELHI

TROPICAL STORM "**KEILA**" ADVISORY NO TWO ISSUED AT 0900UTC OF 2<sup>ND</sup> NOVEMBER 2011 BASED ON 0600 UTC CHARTS OF 2ND NOVEMBER 2011.

THE CYCLONIC STORM "KEILA" OVER WESTCENTRAL ARABIAN SEA MOVED WESTWARD, AND LAY CENTRED AT 0600 UTC TODAY, THE  $2^{\rm ND}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.0^{\rm O}$ N AND LONGITUDE  $54.5^{\rm O}$ E, ABOUT 2200 KM WEST-NORTHWEST OF MANGALORE (43284), 400 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494) AND 120 KM SOUTH-SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST NEAR LATITUDE  $16.0^{\rm O}$ N (SOUTH OF SALALAH) AROUND NIGHT OF  $3^{\rm RD}$  NOVEMBER 2011.

BASED ON LATEST ANALYSIS WITH NWP MODELS AND OTHER CONVENTIONAL TECHNIQUES, ESTIMATED TRACK AND INTENSITY OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

	LOTIMATED TRACKAND INTERVOLL OF THE GLOTEMAINE GIVEN IN THE TABLE BELOW.			
	DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	SUSTAINED MAXIMUM SURFACE WIND SPEED	
			(KMPH)	
	02-11-2011/10600	16.0/54.5	65-75 GUSTING TO 85	
	02-11-2011/1200	16.0/54.2	65-75 GUSTING TO 85	
	02-11-2011/1800	16.0/53.8	65-75 GUSTING TO 85	
	03-11-2011/0000	16.0/53.5	65-75 GUSTING TO 85	
	03-11-2011/0600	16.0/52.0	65-75 GUSTING TO 85	
Γ	03-11-2011/1800	16.0/51.0	65-75 GUSTING TO 85	
	04-11-2011/0600	15.5/50.0	45-55 GUSTING TO 65	

THE CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA SOUTH OMAN ADJOINING YEMEN BET LAT 13.5°N TO 20.0°N LONG 52.5°E TO 58.0°E AND MODERATE TO INTENSE CONVECTION OVER NORTHEAST OMAN ADJOINING NORTHWEST ARSEA.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -85°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

### STORM SURGE GUIDE:

STORM SURGE OF HEIGHT ONE METRE ABOVE ASTRONOMICAL TIDE IS EXPECTED NEAR THE LANDFALL POINT.

## **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM2) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR (-5 TO -10 KNOTS) AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS POSITIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1005.9, WIND DIRECTON 350 AND SPEED 13 KNOTS; BUOY (POSITION: LAT 16.5°N/ LONG 55.0°E) REPORTED MSLP OF 998.3 HPA AND P24P24 OF -1.0 HPA. THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST BY NWP MODELS. WIND IS STRONGER IN EASTERN SIDE THAN IN WESTERN SIDE OF THE SYSTEM.CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF 31 NOVEMBER 2011.

> (M. Mohapatra) Scientist-E

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)

STORM WARNING CENTRE, YANGAON (MYANMAR)

STORM WARNING CENTRE, BANGKOK (THAILAND)

STORM WARNING CENTRE, COLOMBO (SRILANKA)

STORM WARNING CENTRE, KARACHI (PAKISTAN) METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

**RSMC - TROPICAL CYCLONES. NEW DELHI** 

TROPICAL STORM "**KEILA**" ADVISORY NO THREE ISSUED AT 1200UTC OF 2<sup>ND</sup> NOVEMBER 2011 BASED ON 0900 UTC CHARTS OF 2ND NOVEMBER 2011.

THE CYCLONIC STORM "KEILA" OVER WESTCENTRAL ARABIAN SEA REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0900 UTC TODAY, THE  $2^{\rm ND}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.0^{\rm O}$ N AND LONGITUDE  $54.5^{\rm O}$ E, ABOUT 2200 KM WEST-NORTHWEST OF MANGALORE (43284), 400 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494) AND 120 KM SOUTH-SOUTHEAST OF SALALAH (41316). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST NEAR LATITUDE  $16.0^{\rm O}$ N (SOUTH OF SALALAH) AROUND NIGHT OF  $3^{\rm RD}$  NOVEMBER 2011.

BASED ON LATEST ANALYSIS WITH NWP MODELS AND OTHER CONVENTIONAL TECHNIQUES, ESTIMATED TRACK AND INTENSITY OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

	STIMATED TRACK AND INTERIOR FOR THE STOTEM ARE GIVEN IN THE TABLE BELOW.			
	DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	SUSTAINED MAXIMUM SURFACE WIND SPEED	
			(KMPH)	
	02-11-2011/0900	16.0/54.5	65-75 GUSTING TO 85	
I	02-11-2011/1200	16.0/54.2	65-75 GUSTING TO 85	
I	02-11-2011/1800	16.0/53.8	65-75 GUSTING TO 85	
	03-11-2011/0000	16.0/53.5	65-75 GUSTING TO 85	
	03-11-2011/0600	16.0/52.0	65-75 GUSTING TO 85	
Ī	03-11-2011/1800	16.0/51.0	65-75 GUSTING TO 85	
I	04-11-2011/0600	15.5/50.0	45-55 GUSTING TO 65	

THE CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER AREA SOUTH OMAN ADJOINING YEMEN BET LAT 13.5°N TO 20.0°N LONG 52.5°E TO 58.0°E AND MODERATE TO INTENSE CONVECTION OVER NORTHEAST OMAN ADJOINING NORTHWEST ARSEA.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -85°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

### **STORM SURGE GUIDE:**

STORM SURGE OF HEIGHT ONE METRE ABOVE ASTRONOMICAL TIDE IS EXPECTED NEAR THE LANDFALL POINT.

#### REMARK.

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM2) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR (-5 TO -10 KNOTS) AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18<sup>0</sup>N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS POSITIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1005.9, WIND DIRECTON 350 AND SPEED 13 KNOTS; BUOY (POSITION: LAT 16.5 N/ LONG 55.0 E) REPORTED MSLP OF 998.3 HPA AND  $P_{24}P_{24}$  OF -1.0 HPA. THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST BY NWP MODELS. WIND IS STRONGER IN EASTERN SIDE THAN IN WESTERN SIDE OF THE SYSTEM.CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF  $3^{\mathsf{RD}}$ NOVEMBER 2011.

> (M. Mohapatra) Scientist-E

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)

STORM WARNING CENTRE, COLOMBO (SRILANKA) STORM WARNING CENTRE, KARACHI (PAKISTAN) METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

**RSMC - TROPICAL CYCLONES, NEW DELHI** 

TROPICAL STORM "**KEILA**" ADVISORY NO FOUR ISSUED AT 1500UTC OF 2<sup>ND</sup> NOVEMBER 2011 BASED ON 1200 UTC CHARTS OF 2ND NOVEMBER 2011.

THE CYCLONIC STORM "KEILA" OVER WESTCENTRAL ARABIAN SEA MOVED SLIGHTLY NORTHWARD AND LAY CENTRED AT 1200 UTC TODAY, THE  $2^{\rm ND}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE 16.5°N AND LONGITUDE 54.5°E, ABOUT 70 KM SOUTHEAST OF SALALAH (41316) AND 450 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494). THE SYSTEM IS LIKELY TO MOVE WEST-NORTH-WESTWARDS FOR SOME TIME AND THEN WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST NEAR LATITUDE 16.5°N (SOUTH OF SALALAH) AROUND EVENING OF  $3^{\rm RD}$  NOVEMBER 2011.

BASED ON LATEST ANALYSIS WITH NWP MODELS AND OTHER CONVENTIONAL TECHNIQUES, ESTIMATED TRACK AND INTENSITY OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	SUSTAINED MAXIMUM SURFACE	CATEGORY
02-11-2011/1200	16.5/54.5	WIND SPEED (KMPH) 65-75 GUSTING TO 85	CS
02-11-2011/1800	16.7/54.3	65-75 GUSTING TO 85	CS
03-11-2011/0000	16.7/54.0	65-75 GUSTING TO 85	CS
03-11-2011/0600	16.7/53.5	65-75 GUSTING TO 85	CS
03-11-2011/1200	16.5/52.5	50-60 GUSTING TO 70	DD
04-11-2011/0000	16.0/51.5	45-55 GUSTING TO 65	D

THE CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ARABIAN SEA OMAN ADJOINING YEMEN BET LAT  $13.5^{\circ}$ N TO  $20.0^{\circ}$ N LONG  $52.5^{\circ}$ E TO  $58.0^{\circ}$ E AND GULF OF OMAN ADJOING REST NORTHWEST ARABIAN SEA.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVECTION IS AROUND -67°C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

### **STORM SURGE GUIDE:**

STORM SURGE OF HEIGHT ONE METRE ABOVE ASTRONOMICAL TIDE IS EXPECTED NEAR THE LANDFALL POINT.

#### REMARK

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM2) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR (-5 TO -10 KNOTS) AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18 N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. 24 HOURS PRESSURE TENDENCY IS POSITIVE ALONG OMAN COAST.THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1000.5, P<sub>24</sub>P<sub>24-0.7</sub> WIND DIRECTON 320 AND SPEED 16 KNOTS; SHIP (POSITION: LAT 15.6<sup>0</sup>N/ LONG 54.5<sup>0</sup>E) REPORTED MSLP OF 1003.5 HPA AND P24P24 OF -4.0 HPA. THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST BY NWP MODELS. WIND IS STRONGER IN EASTERN SIDE THAN IN WESTERN SIDE OF THE SYSTEM.CONSIDERING ALL THESE, THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST TO SOUTH OF SALALAH AROUND EVENING/NIGHT OF  $3^{\rm RD}$ NOVEMBER 2011.

> (M. Mohapatra) Scientist-E

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)

STORM WARNING CENTRE, YANGAON (MYANMAR)

STORM WARNING CENTRE, BANGKOK (THAILAND)

STORM WARNING CENTRE, COLOMBO (SRILANKA)

STORM WARNING CENTRE, KARACHI (PAKISTAN)

METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

**RSMC - TROPICAL CYCLONES, NEW DELHI** 

TROPICAL STORM "KEILA" ADVISORY NO FIVE ISSUED AT 1800UTC OF  $2^{\rm ND}$  NOVEMBER 2011 BASED ON 1500 UTC CHARTS OF 2ND NOVEMBER 2011.

THE CYCLONIC STORM "KEILA" OVER WESTCENTRAL ARABIAN SEA MOVED SLIGHTLY NORTH-NORTHWESTWARDS AND LAY CENTRED AT 1200 UTC TODAY, THE  $2^{\rm ND}$  NOVEMBER 2011 OVER WESTCENTRAL ARABIAN SEA NEAR LATITUDE  $16.8^{\rm O}N$  AND LONGITUDE  $54.3^{\rm O}E$ , ABOUT 30 KM SOUTH-SOUTHEAST OF SALALAH (41316) AND 470 KM NORTH-NORTHEAST OF SOCOTRA ISLAND (41494). THE SYSTEM IS LIKELY TO MOVE WEST-NORTH-WESTWARDS FOR SOME TIME AND THEN WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SALALAH AROUND EVENING OF  $3^{\rm RD}$  NOVEMBER 2011.

BASED ON LATEST ANALYSIS WITH NWP MODELS AND OTHER CONVENTIONAL TECHNIQUES, ESTIMATED TRACK AND INTENSITY OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

DATE/TIME(UTC)	POSITION (LAT. <sup>0</sup> N/ LONG. <sup>0</sup> E)	SUSTAINED MAXIMUM SURFACE	CATEGORY
		WIND SPEED (KMPH)	
02-11-2011/1500	16.8/54.3	65-75 GUSTING TO 85	CS
02-11-2011/1800	16.7/54.3	65-75 GUSTING TO 85	CS
03-11-2011/0000	16.7/54.0	65-75 GUSTING TO 85	CS
03-11-2011/0600	16.7/53.5	65-75 GUSTING TO 85	CS
03-11-2011/1200	16.5/52.5	50-60 GUSTING TO 70	DD
04-11-2011/0000	16.0/51.5	45-55 GUSTING TO 65	D

THE CONVECTION HAS INCREASED DURING PAST 12 HRS. THE INTENSITY OF THE SYSTEM IS T2.5. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ARABIAN SEA OMAN ADJOINING YEMEN BET LAT  $13.5^{\circ}$ N TO  $20.0^{\circ}$ N LONG  $52.5^{\circ}$ E TO  $58.0^{\circ}$ E AND GULF OF OMAN ADJOING REST NORTHWEST ARABIAN SEA.THE LOWEST CLOUD TOP TEMPERATURE (CTT) DUE TO CONVE CTION IS AROUND  $-67^{\circ}$ C IN ASSOCIATION WITH THE SYSTEM.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

#### **STORM SURGE GUIDE:**

STORM SURGE OF HEIGHT ONE METRE ABOVE ASTRONOMICAL TIDE IS EXPECTED NEAR THE LANDFALL POINT.

#### REMARK:

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. SEA SURFACE TEMPERATURE IS AROUND 26-27°C AROUND THE SYSTEM CENTRE. THE OCEAN HEAT CONTENT IS LESS (< 40 KJ/CM²) AROUND THE SYSTEM CENTRE AND NOT FAVOURABLE FOR INTENSIFICATION OVER GULF OF ADEN AND ADJOINING ARABIAN SEA. VERTICAL WIND SHEAR OF HORIZONTAL WIND OVER THE REGION HAS DECREASED AND FAVOURABLE AS IT IS LOW TO MODERATE (BETWEEN 10-20 KNOTS). THERE IS NEGATIVE 24 HOUR TENDENCY OF VERTICAL WIND SHEAR (-5 TO -10 KNOTS) AROUND THE SYSTEM CENTRE. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18°N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1001.5, WIND DIRECTON 320 AND SPEED 23 KNOTS; SHIP (POSITION: LAT 16.5°N/ LONG 54.9°E) REPORTED MSLP OF 1002.5 HPA. THERE IS LARGE VARIATION IN TRACK AND INTENSITY FORECAST BY NWP MODELS. WIND IS STRONGER IN EASTERN SIDE THAN IN WESTERN SIDE OF THE SYSTEM.CONSIDERING ALL THESE; THE SYSTEM IS LIKELY TO MOVE WEST-NORTH-WESTWARDS FOR SOME TIME AND THEN WESTWARDS AND CROSS SOUTH OMAN AND ADJOINING YEMEN COAST CLOSE TO SALALAH AROUND EVENING OF 3<sup>RD</sup> NOVEMBER 2011.

(T.N.Jha)

Director

TO: STORM WARNING CENTRE, DHAKA ( BANGLADESH )
STORM WARNING CENTRE, YANGAON (MYANMAR)

STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

**RSMC - TROPICAL CYCLONES. NEW DELHI** 

TROPICAL STORM "KEILA" ADVISORY NO SIX ISSUED AT 2100UTC OF  $2^{ND}$  NOVEMBER 2011 BASED ON 1800 UTC CHARTS OF 2ND NOVEMBER 2011.

THE CYCLONIC STORM "KEILA" OVER WESTCENTRAL ARABIAN SEA MOVED NORTHWESTWARDS AND CROSSED NEAR SALALAH LAY CENTRED AT 1800 UTC OF THE 2<sup>ND</sup> NOVEMBER 2011 OVER COASTAL OMAN CLOSE TO SALALAH AS DEEP DEPRESSION. IT IS LIKELY TO MOVE WEST-NORTHWESTWARD AND WEAKEN FURTHER. HOWEVER SOME NWP MODEL SUGGEST REEMERGENCE OF THE SYSTEM INTO ARABIAN SEA. HENCE. THE SYSTEM WILL BE MONITORED FOR FURTHER DEVELOPMENT.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT1000 HPA.

#### PEMARK

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG  $18^{\rm 0}N$  IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1003.4,  $P_{\rm 24}P_{\rm 24}$  -1.0, WIND DIRECTON 330 AND SPEED 16 KNOTS; SHIP (POSITION: LAT 16.2 $^{\rm 0}N$ ) LONG 55.3 $^{\rm 0}E$ ) REPORTED MSLP OF 1009.1 HPA,  $P_{\rm 24}P_{\rm 24}$  4.3, WIND DIRECTON 190 AND SPEED 23 KNOTS .

(T.N.Jha) Director

TOO: 030230 HRS IST

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 03-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0300 UTC OF 3<sup>RD</sup> NOVEMBER, 2011 BASED ON 0000 UTC OF 3<sup>RD</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER COASTAL OMAN REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0000 UTC OF THE  $3^{\rm RD}$  NOVEMBER 2011 OVER THE SAME AREA CLOSE TO SALALAH. IT IS LIKELY TO MOVE WEST-NORTHWESTWARD AND WEAKEN FURTHER. HOWEVER SOME NWP MODELSL SUGGEST REEMERGENCE OF THE SYSTEM INTO ARABIAN SEA. HENCE. THE SYSTEM WILL BE MONITORED FOR FURTHER DEVELOPMENT.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGHALONG AND OFF COAST OF OMAN AND YEMEN. THE ESTIMATED CENTRAL PRESSURE IS ABOUT1000 HPA.

#### RFMARK.

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANE DURING PAST 12 HRS. THE SYSTEM LIES TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE, WHICH RUNS ROUGHLY ALONG 18<sup>0</sup>N IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE NORTHEAST OF SYSTEM CENTRE. THE LOWEST MEAN SEA LEVEL PRESSURE (MSLP) HAS BEEN REPORTED BY SALALAH (41316) OF 1002.2, P<sub>24</sub>P<sub>24</sub> -1.2, WIND DIRECTON 310 AND SPEED 17 KNOTS.

(T.N.Jha) Director

TOO: 030830 HRS IST

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 03-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 3<sup>RD</sup> NOVEMBER, 2011 BASED ON 0300 UTC OF 3<sup>RD</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER COASTAL OMAN REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0300 UTC OF THE 3<sup>RD</sup> NOVEMBER 2011 OVER THE SAME AREA CLOSE TO EAST OF SALALAH. IT IS LIKELY TO REMAIN OVER THE SAME AREA FOR SOME TIME AND REEMERGE INTO ARABIAN SEA BY NEXT 12 HRS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH ALONG AND OFF COAST OF OMAN AND YEMEN. THE ESTIMATED CENTRAL PRESSURE IS ABOUT1000 HPA.

ASSOCIATED INTENSE TO VERY INTENSE CONVECTION LIES OVER THE ARABIAN SEA BETWEEN LAT. 15.0N TO 20.0N WEST OF LONG 57.5E, SOUTH OMAN ADJOINING YEMEN (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 75 DEG C).

### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 6 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANGE DURING PAST 6 HRS. THE SYSTEM LIES CLOSE TO THE NORTH OF UPPER TROPOSPHERIC RIDGE IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION TO THE EASTSOUTHEAST OF SYSTEM CENTRE. SALALAH (41316) REPORTED SURFACE WIND OF 330/21 KNOTS AT O300 UTC OF TODAY.

A LOW PRESSURE AREA LIES OVER SOUTHEAST AND ADJOINING EAST CENTRAL ARABIAN SEA.

(M.MOHAPATRA) Director

TOO: 031100 HRS IST

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 03-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 3<sup>RD</sup> NOVEMBER, 2011 BASED ON 1200 UTC OF 3<sup>RD</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER COASTAL OMAN MOVED EASTWARDS AND LAY CENTRED AT 1200 UTC OF THE 3<sup>RD</sup> NOVEMBER 2011 OVER OMAN COAST NEAR LAT.17.0°N AND LONG.55.0°E, ABOUT 100 KILOMETER EAST OF SALALAH (41316). IT IS LIKELY TO MEANDER OVER THE SAME REGION WITH SAME INTENSITY FOR SOMETIME.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH ALONG AND OFF SOUTH OMAN AND NORTH YEMEN COAST. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA.

THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED MODERATE TO INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 15.5°N TO 18.5°N WEST OF LONG. 57.5°E, SOUTH OMAN AND ADJOINING YEMEN (MINIMUM CLOUD TOP TEMPERATURE IS MINUS 65 DEG C). IT INDICATES DECREASE IN CONVECTION

#### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANGE DURING PAST 12 HRS.THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-30 KNOTS). THERE IS INCREASE IN VERTICAL WIND SHEAR BY 5 – 10 KNOTS DURING PAST 24 HRS. THE SYSTEM LIES CLOSE TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION NEAR TO THE EAST OF SYSTEM CENTRE. SALALAH (41316) REPORTED SURFACE MSLP 1003.6 HPA, WIND 340/24 KNOTS. THE P24P24 IS POSITIVE (3.1 HPA).

(M.MOHAPATRA)
Director

TOO: 031930 HRS IST

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 03-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 2000 UTC OF 3<sup>RD</sup> NOVEMBER, 2011 BASED ON 1800 UTC OF 3<sup>RD</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER COASTAL OMAN MOVED FURTHER EASTWARDS AND LAY CENTRED AT 1800 UTC OF THE 3<sup>RD</sup> NOVEMBER 2011 OVER OMAN COAST NEAR LAT. 17.0°N AND LONG. 55.5°E, ABOUT 150 KILOMETER EAST OF SALALAH (41316). IT IS LIKELY TO MEANDER OVER THE SAME REGION WITH SAME INTENSITY FOR SOMETIME.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH ALONG AND OFF SOUTH OMAN AND NORTH YEMEN COAST. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1001HPA.

THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED MODERATE TO INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT  $15.5^{\circ}$ N TO  $18.5^{\circ}$ N WEST OF LONG.  $58.0^{\circ}$ E, SOUTH OMAN AND ADJOINING YEMEN (MINIMUM CLOUD TOP TEMPERATURE IS -57° C). IT INDICATES DECREASE IN CONVECTION

#### **REMARK:**

THE RELATIVE VORTICITY AND LOW LEVEL CONVERGENCE AT 850 HPA LEVEL DO NOT SHOW SIGNIFICANT CHANGE IN PAST 12 HRS AND UPPER LEVEL DIVERGENCE SHOWS NO CHANGE DURING PAST 12 HRS.THE VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-30 KNOTS). THE SYSTEM LIES VERY CLOSE TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE IN ASSOCIATION WITH AN ANTICYCLONIC CIRCULATION NEAR TO THE EAST OF SYSTEM CENTRE.

(NARESH KUMAR) METEOROLOGIST

TOO: 040130 HRS IST

DEMS-

TROPICAL CYCLONES NEW DELHI

04-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0200 UTC OF 4<sup>th</sup> NOVEMBER, 2011 BASED ON 0000 UTC OF 4<sup>th</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER COASTAL OMAN REMAINED PRACTICALLY STATIONARY DURING PAST SIX HOURS AND LAY CENTRED AT 0000 UTC OF THE 4<sup>TH</sup> NOVEMBER 2011 OVER OMAN COAST NEAR LAT. 17.0<sup>0</sup>N AND LONG. 55.5<sup>0</sup>E, ABOUT 150 KILOMETER EAST OF SALALAH (41316). IT IS LIKELY TO MEANDER OVER THE SAME REGION AND WEAKEN GRADUALLY.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH ALONG AND OFF SOUTH OMAN AND NORTH YEMEN COAST. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1001HPA.

THE INTENSITY OF THE SYSTEM IS T2.0. ASSOCIATED MODERATE TO INTENSE CONVECTION IS SEEN OVER AREA BETWEEN LAT 15.0°N TO 19.5°N WEST OF LONG. 58.0°E, SOUTH OMAN AND ADJOINING YEMEN (MINIMUM CLOUD TOP TEMPERATURE IS -55°C).

### **REMARK:**

THE RELATIVE VORTICITY AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE SHOWS NO SIGNIFICANT CHANGE DURING PAST 24 HRS.THE VERTICAL WIND SHEAR IS MODERATE (15-20 KNOTS). THE SYSTEM LIES CLOSE TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG LAT. 17.5° N.

(NARESH KUMAR) METEOROLOGIST

TOO: 040730 HRS IST

**RSMC** 

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 04-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 4<sup>th</sup> NOVEMBER, 2011 BASED ON 0300 UTC OF 4<sup>th</sup> NOVEMBER, 2011(.)

THE DEEP DEPRESSION OVER WEST CENTRAL ARABIAN SEA NEAR OMAN COAST MOVED SLIGHTLY SOUTHWESTWARDS, WEAKENED INTO A DEPRESSION AND LAY CENTRED AT 0300 UTC OF THE 4<sup>TH</sup> NOVEMBER 2011 OVER WEST CENTRAL ARABIAN SEA CLOSE TO OMAN COAST, NEAR LAT. 16.5°N AND LONG. 55.0°E, ABOUT 100 KILOMETER SOUTHEAST OF SALALAH (41316). IT IS LIKELY TO MEANDER OVER THE SAME REGION AND WEAKEN INTO A LOW PRESSURE AREA DURING NEXT 12 HOURS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS GUSTING TO 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH ALONG AND OFF SOUTH OMAN AND NORTH YEMEN COAST. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1004 HPA.

THE INTENSITY OF THE SYSTEM IS T1.5. THE CONVECTION HAS GRADUALLY DISORGANISED DURING PAST 12 HOURS AND DEPTH OF CONVECTION HAS DECREASED. ASSOCIATED MODERATE TO INTENSE CONVECTION OVER WESTCENTRAL ARABIAN SEA SOUTHEAST OMAN ADJOINING YEMEN BETWEEN LAT 14.5°N TO 19.0°N WEST OF LONG 57.5°E. MIMUM CLOUD TOP TEMPERATURE (CTT) IS -57°C.

### **REMARK:**

THE RELATIVE VORTICITY AND LOWER LEVEL CONVERGENCE AT 850 HPA LEVEL AND UPPER LEVEL DIVERGENCE AT 200 HPA LEVEL HAVE DECREASED DURING PAST 12 HRS.THE VERTICAL WIND SHEAR IS MODERATE (15-20 KNOTS). THE SYSTEM LIES CLOSE TO THE SOUTH OF UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG LAT. 17.5° N. SALALAH REPORTED MSLP 1008.3,  $P_{24}P_{24}$  3.0 HPA, WIND DIRECTION AND SPEED 360/12 KNOTS; BUOY (POSITION: 16.0°N /54.8°E) REPORTED MSLP 1008.0 HPA

ANOTHER LOW PRESSURE AREA LIES OVER SOUTHEAST AND ADJOINING EAST CENTRAL ARABIAN SEA.

(M. Mohapatra) Scientist-E

TOO: 041030 HRS IST

### DEMS-RSMC TROPICAL CYCLONES NEW DELHI 04-11-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0900 UTC OF 4<sup>th</sup> NOVEMBER, 2011 BASED ON 0600 UTC OF 4<sup>th</sup> NOVEMBER, 2011(.)

THE DEPRESSION OVER WEST CENTRAL ARABIAN SEA CLOSE TO OMAN COAST WEAKENED INTO LOW PRESSURE AREA OVER SAME REGION. IT WII WEAKEN FURTHER AND BECOME LESS MARKED DURING NEXT 24 HOURS.

THIS IS THE LAST BULLETIN FOR THIS SYSTEM.

(M. Mohapatra) Scientist-E

TOO: 041330 HRS IST