



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 06-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0600 UTC OF 06 DECEMBER, 2013 BASED ON 0300 UTC OF 06 DECEMBER, 2013

LATEST SATELLITE IMAGERY AND OBSERVATIONS INDICATE THAT A DEPRESSION HAS FORMED OVER SOUTHWEST BAY OF BENGAL AND LAY CENTRED AT 0300 UTC OF TODAY, THE 06 DECEMBER 2013 NEAR LATITUDE 10.0° N AND LONGITUDE 84.0° E, ABOUT 530 KM SOUTHEAST OF CHENNAI(43279) AND 350 KM NORTHEAST OF TRINCOMALEE(43418). IT WOULD INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HRS AND SUBSEQUENTLY INTO A CYCLONIC STORM. IT WOULD MOVE NEARLY NORTHWARDS SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 1.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN BETWEEN LATITUDE 5.0° N TO 15.0° N & LONGITUDE 81.5° E TO 89.0° E THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75° C.

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

REMARKS:

LATEST ASCAT WIND DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 30-35 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 20-25 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY LOCATED NEAR LATITUDE 07.0° N & LONGITUDE 88.0° E REPORTED MSLP OF 1008.1 HPA AND SURFACE WIND OF 110/16 KTS AT 0300 UTC OF TODAY, THE 06TH DEC 2013. THE SHIP OBSERVATION LOCATED NEAR LATITUDE 11.9° N LONGITUDE 85.4° E AT 0300 UTC OF TODAY REPORTED MSLP 1008.2 HPA AND SURFACE WIND OF 080/23 KTS.

THE DEPRESSION LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10° N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT $26-28^{\circ}$ C. THE OCEAN THERMAL ENERGY IS ABOUT $60-80$ KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13° N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13° N. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 06TH DECEMBER 2013.

**M.MOHAPATRA)
HEAD RSMC**



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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 06-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1300 UTC OF 06 DECEMBER, 2013 BASED ON 1200 UTC OF 06 DECEMBER, 2013

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1200 UTC OF TODAY, THE 06 DECEMBER 2013 NEAR LATITUDE 10.0° N AND LONGITUDE 84.0° E, ABOUT 530 KM SOUTHEAST OF CHENNAI(43279) AND 350 KM NORTHEAST OF TRINCOMALEE(43418). IT WOULD INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HRS AND SUBSEQUENTLY INTO A CYCLONIC STORM. IT WOULD MOVE NEARLY NORTHWARDS SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 1.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN BETWEEN LATITUDE 5.0° N TO 16.0° N & LONGITUDE 80.0° N TO 90.0° E THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75° C.

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

REMARKS:

SCATTEROMETRY WIND DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 30-35 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 20-25 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. THE SHIP OBSERVATION LOCATED NEAR LATITUDE 11.0° N LONGITUDE 86.4° E AT 1200 UTC OF 6th December 2013 TODAY. REPORTED MSLP 1005.1 HPA AND SURFACE WIND OF 120/21 KTS.

THE DEPRESSION LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10° N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT $26-28^{\circ}$ C. THE OCEAN THERMAL ENERGY IS ABOUT $60-80$ KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13° N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13° N. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 07TH DECEMBER 2013.

**(M.MOHAPATRA)
HEAD RSMC**



SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 06-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 2000 UTC OF 06 DECEMBER, 2013 BASED ON 1800 UTC OF 06 DECEMBER, 2013

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 1800 UTC OF 06 DECEMBER 2013 NEAR LATITUDE 10.0° N AND LONGITUDE 84.0° E, ABOUT 530 KM SOUTHEAST OF CHENNAI(43279) AND 350 KM NORTHEAST OF TRINCOMALEE(43418). IT WOULD INTENSIFY FURTHER INTO A CYCLONIC STORM DURING NEXT 24 HRS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 2.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN BETWEEN LATITUDE 5.0°N TO 17.0°N & LONGITUDE 80.0°N TO 90.0°E THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH TO HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
06-12-2013/1800	10.0/84.0	50-60 GUSTING TO 70	DEEP DEPRESSION
07-12-2013/0000	10.1/84.0	60-70 GUSTING TO 80	CYCLONIC STORM
07-12-2013/0600	10.3/83.9	60-70 GUSTING TO 80	CYCLONIC STORM
07-12-2013/1200	10.5/83.8	70-80 GUSTING TO 90	CYCLONIC STORM
07-12-2013/1800	10.7/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
08-12-2013/0600	11.1/83.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
08-12-2013/1800	11.5/83.6	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
09-12-2013/0600	11.9/83.8	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
09-12-2013/1800	12.3/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/0600	12.7/84.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1800	13.1/84.6	75-85 GUSTING TO 95	CYCLONIC STORM
11-12-2013/0600	13.6/84.9	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1800	14.1/85.3	60-70 GUSTING TO 80	DEEP DEPRESSION

REMARKS:

SCATTEROMETRY WIND DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 30-35 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 20-25 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. THE SHIP OBSERVATION LOCATED NEAR LATITUDE 10.5°N LONGITUDE 87.1°E AT 1800 UTC OF 6th DECEMBER 2013 TODAY. REPORTED MSLP 1006.8 HPA AND SURFACE WIND OF 100/25 KTS.

THE DEEP DEPRESSION LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS

RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13⁰N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 07TH DECEMBER 2013.

(Duty Officer)
Ph: 011-24631913



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INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. ONE ISSUED AT 0300 UTC OF 07TH DECEMBER 2013 BASED ON 0000 UTC CHARTS OF 07TH DECEMBER 2013.

THE DEEP DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWARD, INTENSIFIED INTO A CYCLONIC STORM, 'MADI' AND LAY CENTRED AT 0000 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 10.5° N AND LONGITUDE 84.0° E, ABOUT 500 KM SOUTHEAST OF CHENNAI (43279) AND 370 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 2.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 5.0°N TO 18.0°N & LONGITUDE 79.0°E TO 90.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS GUSTING TO 45 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	category of cyclonic disturbance
07-12-2013/0000	10.5/84.0	60-70 GUSTING TO 80	CYCLONIC STORM
07-12-2013/0600	10.6/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
07-12-2013/1200	10.7/84.0	80-90 GUSTING TO 100	CYCLONIC STORM
07-12-2013/1800	10.9/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
08-12-2013/0000	11.1/84.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
08-12-2013/1200	11.5/84.0	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
09-12-2013/0000	12.0/84.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
09-12-2013/1200	12.4/84.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
10-12-2013/0000	12.8/84.2	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1200	13.2/84.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	13.6/84.4	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	14.0/84.5	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	14.4/84.6	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

SCATTEROMETRY WIND DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 35-40 KNOTS TO THE NORTH AND SOUTHWEST SECTOR AND 30-35 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0000 UTC OF 7TH DECEMBER 2013 TODAY REPORTED MSLP 1006.2 HPA AND SURFACE WIND OF 070/19 KTS.

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10⁰N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 48 HRS. AFTER THAT THE SYSTEM MAY RECURVE NORTH-NORTHEASTWARD AS IT WILL MOVE TO NORTH OF RIDGE. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION.THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13⁰N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48-60 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 07TH DECEMBER 2013.

(M. Mohapatra)
Head, RSMC
Ph: 011-24631913



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWO ISSUED AT 0600 UTC OF 07TH DECEMBER 2013 BASED ON 0300 UTC CHARTS OF 07TH DECEMBER 2013.

THE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0300 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 10.5° N AND LONGITUDE 84.0° E, ABOUT 500 KM SOUTHEAST OF CHENNAI (43279) AND 370 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 2.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 5.0°N TO 18.0°N & LONGITUDE 80.0°E TO 90.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS GUSTING TO 45 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	category of cyclonic disturbance
07-12-2013/0300	10.5/84.0	60-70 GUSTING TO 80	CYCLONIC STORM
07-12-2013/0600	10.6/84.0	70-80 GUSTING TO 90	CYCLONIC STORM
07-12-2013/1200	10.7/84.0	80-90 GUSTING TO 100	CYCLONIC STORM
07-12-2013/1800	10.9/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
08-12-2013/0000	11.1/84.0	95-105 GUSTING TO 115	SEVERE CYCLONIC STORM
08-12-2013/1200	11.5/84.0	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
09-12-2013/0000	12.0/84.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
09-12-2013/1200	12.4/84.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
10-12-2013/0000	12.8/84.2	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1200	13.2/84.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	13.6/84.4	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	14.0/84.5	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	14.4/84.6	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

SCATTEROMETRY WIND DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 35-40 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 30-35 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0300 UTC OF 7th DECEMBER 2013 TODAY REPORTED MSLP 1008.7 HPA AND SURFACE WIND OF 080/23 KTS.

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 48 HRS. AFTER THAT THE SYSTEM MAY RECURVE NORTH-NORTHEASTWARD AS IT WILL MOVE TO NORTH OF RIDGE. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48-60 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 07TH DECEMBER 2013.

(M. Mohapatra)
Head, RSMC
Ph: 011-24631913



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THREE ISSUED AT 0900 UTC OF 07TH DECEMBER 2013 BASED ON 0600 UTC CHARTS OF 07TH DECEMBER 2013.

THE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0600 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 10.5° N AND LONGITUDE 84.0° E, ABOUT 500 KM SOUTHEAST OF CHENNAI (43279) AND 370 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD INTENSIFY FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.0 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 6.0°N TO 18.5°N & LONGITUDE 80.0°N TO 89.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS GUSTING TO 55 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/0600	10.5/84.0	75-85 GUSTING TO 95	CYCLONIC STORM
07-12-2013/1200	10.7/84.0	80-90 GUSTING TO 100	CYCLONIC STORM
07-12-2013/1800	10.9/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
08-12-2013/0000	11.1/84.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
08-12-2013/0600	11.3/84.0	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/1800	11.7/84.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
09-12-2013/0600	12.1/84.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
09-12-2013/1800	12.5/84.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
10-12-2013/0600	12.9/84.3	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1800	13.2/84.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.6/84.5	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	14.0/84.6	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	14.4/84.7	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0600 UTC OF 7th DECEMBER 2013 TODAY REPORTED MSLP 1007.9 HPA AND SURFACE WIND OF 060/21 KTS.

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10⁰N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 48 HRS. AFTER THAT THE SYSTEM MAY RECURVE NORTH-NORTHEASTWARD AS IT WILL MOVE TO NORTH OF RIDGE. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION.THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13⁰N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48-60 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 07TH DECEMBER 2013.

(M. Mohapatra)
Head, RSMC
Ph: 011-24631913

TOO: 07/1400 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. FOUR ISSUED AT 1200 UTC OF 07TH DECEMBER 2013 BASED ON 0900 UTC CHARTS OF 07TH DECEMBER 2013.

THE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY, INTENSIFIED INTO A SEVERE CYCLONIC STORM AND LAY CENTRED AT 0900 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 10.5° N AND LONGITUDE 84.0° E, ABOUT 500 KM SOUTHEAST OF CHENNAI AND 370 KM NORTHEAST OF TRINCOMALEE (SRI LANKA) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY DURING NEXT 48 HRS AND THEN RECURVE NORTH-NORTHEASTWARDS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 6.0°N TO 18.5°N & LONGITUDE 80.0°N TO 89.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/0900	10.5/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
07-12-2013/1200	10.8/84.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
07-12-2013/1800	11.1/84.4	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/0000	11.3/84.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	11.5/84.5	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
08-12-2013/1800	12.0/84.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	12.3/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	12.7/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0600	13.0/84.9	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1800	13.2/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.4/85.1	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.6/85.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	13.8/85.3	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0900 UTC OF 7th DECEMBER 2013 TODAY REPORTED MSLP 1005.4 HPA AND SURFACE WIND OF 060/19 KTS.

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 10°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 48 HRS. AFTER THAT THE SYSTEM MAY RECURVE NORTH-NORTHEASTWARD AS IT WILL MOVE TO NORTH OF RIDGE. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED DURING PAST 12 HRS AND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS.

THERE IS GENERAL CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION DURING NEXT 48 HRS. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING THIS PERIOD. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS WHICH IS EXPECTED TO STEER THE SYSTEM NORTH-NORTHEASTWARDS AFTER 48-60 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 07TH DECEMBER 2013.

(M. Mohapatra)
Head, RSMC
Ph: 011-24631913

TOO: 07/1700 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. FIVE ISSUED AT 1500 UTC OF 07TH DECEMBER 2013 BASED ON 1200 UTC CHARTS OF 07TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL MOVED NORTHEASTWARD AND LAY CENTRED AT 1200 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 11.0° N AND LONGITUDE 84.5° E, ABOUT 520 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 440 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 8.5°N TO 18.5°N & LONGITUDE 80.0°E TO 89.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

Track and intensity forecasts of the system are given in the table below:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/1200	11.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
07-12-2013/1800	11.1/84.6	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/0000	11.3/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	11.5/84.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/1200	11.7/84.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	12.2/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	12.6/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0000	12.9/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/1200	13.1/84.9	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	13.3/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1200	13.5/85.1	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0000	13.6/85.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1200	13.7/85.3	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 1200 UTC OF 7th DECEMBER 2013 TODAY REPORTED SURFACE WIND OF 060/23 KTS.

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 11°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 36 HRS. AFTER THAT THE SYSTEM MAY RECURVE SLIGHTLY NORTH-NORTHEASTWARD WITH REDUCTION IN NORTHERLY COMPONENT OF MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HRS. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 07TH DECEMBER 2013.

(M. Mohapatra)
Head, RSMC
Ph: 011-24631913

TOO: 07/1930 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 ‘MADI’ ADVISORY NO. SIX ISSUED AT 1700 UTC OF 07TH DECEMBER 2013 BASED ON 1500 UTC CHARTS OF 07TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1500 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 11.0° N AND LONGITUDE 84.5° E, ABOUT 520 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 440 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 8.5°N TO 18.5°N & LONGITUDE 80.0°N TO 89.0°E, SRILANKA AND GULF OF MANNAR. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/1500	11.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
07-12-2013/1800	11.1/84.6	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/0000	11.3/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	11.5/84.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/1200	11.7/84.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	12.2/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	12.6/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0000	12.9/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/1200	13.1/84.9	100-110 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	13.3/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1200	13.5/85.1	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0000	13.6/85.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1200	13.7/85.3	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 11°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 36 HRS. AFTER THAT THE SYSTEM MAY RECURVE

SLIGHTLY NORTH-NORTHEASTWARD WITH REDUCTION IN NORTHERLY COMPONENT OF MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13⁰N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LIGHT TO MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HRS. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 07TH DECEMBER 2013.

(Naresh Kumar)
Meteorologist
Ph: 011-24631913

TOO: 07/2200 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. SIX ISSUED AT 2000 UTC OF 07TH DECEMBER 2013 BASED ON 1800 UTC CHARTS OF 07TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL MOVED NORTH-NORTHEAST WARDS AND AND LAY CENTRED AT 1800 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 11.2° N AND LONGITUDE 84.6° E, ABOUT 520 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 470 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 9.0°N TO 16.0°N & LONGITUDE 81.0°N TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/1800	11.2/84.6	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/0000	11.3/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	11.5/84.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/1200	11.7/84.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	12.0/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	12.5/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	12.9/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0600	13.1/84.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	13.3/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.6/85.1	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.8/85.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	14.0/85.3	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 11°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT. THIS CONDITION WILL CONTINUE FOR NEXT 36 HRS. AFTER THAT THE SYSTEM MAY RECURVE SLIGHTLY NORTH-NORTHEASTWARD WITH REDUCTION IN NORTHERLY COMPONENT OF MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST FEW HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LIGHT (5-10 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HRS. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 08TH DECEMBER 2013.

(Naresh Kumar)
Meteorologist
Ph: 011-24631913

TOO: 08/0200 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. SEVEN ISSUED AT 2300 UTC OF 07TH DECEMBER 2013 BASED ON 2100 UTC CHARTS OF 07TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL SLIGHTLY MOVED NORTHWARDS AND LAY CENTRED AT 2100 UTC OF 07 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 11.3°N AND LONGITUDE 84.6° E, ABOUT 510 KM SOUTHEAST OF CHENNAI (43279) AND 470 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 9.0°N TO 16.0°N & LONGITUDE 81.0°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
07-12-2013/2100	11.3/84.6	105-115 GUSTING TO 125	SEVERE CYCLONIC STORM
08-12-2013/0000	11.4/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	11.5/84.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/1200	11.7/84.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	12.0/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	12.5/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	12.9/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0600	13.1/84.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	13.3/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.6/85.1	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.8/85.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	14.0/85.3	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 11°N. IT IS LEADING TO VERY SLOW NORTHWARD MOVEMENT.

THIS CONDITION WILL CONTINUE FOR NEXT 36 HRS. AFTER THAT THE SYSTEM MAY RECURVE SLIGHTLY NORTH-NORTHEASTWARD WITH REDUCTION IN NORTHERLY COMPONENT OF MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER INCREASED DURING PAST FEW HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13⁰N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LIGHT (5-10 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HRS. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 08TH DECEMBER 2013.

(Naresh Kumar)
Meteorologist
Ph: 011-24631913

TOO: 08/0430 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. EIGHT ISSUED AT 0300 UTC OF 08TH DECEMBER 2013 BASED ON 0000 UTC CHARTS OF 08TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWARDS AND LAY CENTRED AT 0000 UTC OF 08 DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 11.8⁰ N AND LONGITUDE 84.6⁰ E, ABOUT 490 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 490 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 9.0°N TO 16.0°N & LONGITUDE 81.0°N TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/0000	11.8/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	12.1/84.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/1200	12.3/84.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	12.6/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	12.9/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	13.2/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/0000	13.4/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/1200	13.6/84.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/0000	13.8/84.9	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1200	14.0/84.9	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0000	14.1/84.9	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1200	14.2/84.9	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E AT 0000 UTC OF 8th DECEMBER 2013 TODAY REPORTED SURFACE WIND OF 080/14 KTS

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12°N. IT IS LEADING TO VERY SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE AND ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 60-80 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LIGHT (5-10 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 48-60 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 48 HRS. BEYOND 48 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO MAJORITY OF THE MODELS AND LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 08TH DECEMBER 2013.

(Naresh Kumar)
Meteorologist
Ph: 011-24631913

TOO: 08/0430 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. NINE ISSUED AT 0600 UTC OF 08TH DECEMBER 2013 BASED ON 0300 UTC CHARTS OF 08TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM, **MADI** OVER SOUTHWEST BAY OF BENGAL MOVED NORTHWARDS AND LAY CENTRED AT 0300 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LATITUDE 12.0°N AND LONGITUDE 84.6°E, ABOUT 490 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 530 KM NORTHEAST OF TRINCOMALEE (43418) . IT WOULD INTENSIFY FURTHER INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. IT WOULD MOVE NEARLY NORTHWARDS VERY SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 3.5 ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 10.5°N TO 18.0°N & LONGITUDE 80.5°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/0300	12.0/84.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
08-12-2013/0600	12.1/84.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1200	12.3/84.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	12.6/84.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	12.9/84.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	13.2/84.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
10-12-2013/0000	13.4/84.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
10-12-2013/1200	13.6/84.8	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
11-12-2013/0000	13.8/84.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/1200	13.9/84.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
12-12-2013/0000	14.0/84.8	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/1200	14.1/84.8	70-80 GUSTING TO 90	CYCLONIC STORM
13-12-2013/0000	14.2/84.8	65-75 GUSTING TO 85	CYCLONIC STORM
13-12-2013/1200	14.3/84.8	60-70 GUSTING TO 80	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0300 UTC OF 8th DECEMBER 2013 TODAY REPORTED MSLP OF 1005.4 HPA AND SURFACE WIND OF 050/35 KTS

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12°N. IT IS LEADING TO VERY SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 36 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT.

THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 36 HRS. BEYOND 36 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK, AS A FEW MODELS SUGGEST SOUTHWESTWARD MOVEMENT. CURRENT FORECAST HAS NOT TAKEN INTO CONSIDERATION THESE MODELS SUGGESTING SOUTHWESTWARD MOVEMENT AND WEIGHTAGE HAS BEEN GIVEN TO LARGE SCALE ENVIRONMENTAL CONDITIONS.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 08TH DECEMBER 2013.

(M.MOHAPATRA)
HEAD RSMC
Ph: 011-24631913

TOO: 08/1100 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TEN ISSUED AT 0900 UTC OF 08TH DECEMBER 2013 BASED ON 0600 UTC CHARTS OF 08TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTH-NORTHEASTWARDS, INTENSIFIED INTO VERY SEVERE CYCLONIC STORM AND LAY CENTRED AT 0600 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 12.3⁰ N AND LONGITUDE 84.7⁰ E, ABOUT 490 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 560 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD INTENSIFY FURTHER AND MOVE SLIGHTLY NORTH-NORTHEASTWARDS SLOWLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. IT HAS A RAGGED EYE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 10.0°N TO 18.0°N & LONGITUDE 80.5°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/0600	12.3/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1200	12.7/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	13.1/84.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.4/84.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	13.7/84.9	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	14.0/85.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
10-12-2013/0600	14.4/85.1	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
10-12-2013/1800	14.7/85.2	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
11-12-2013/0600	14.9/85.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/1800	15.0/85.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
12-12-2013/0600	15.1/85.5	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/1800	15.2/85.6	70-80 GUSTING TO 90	CYCLONIC STORM
13-12-2013/0600	15.3/85.7	65-75 GUSTING TO 85	CYCLONIC STORM

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E AT 0600 UTC OF 8th DECEMBER 2013 TODAY REPORTED MSLP OF 1002.4 HPA AND SURFACE WIND OF 030/35 KTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1005.4 HPA AND SURFACE WIND OF 090/25 KTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12°N. IT IS LEADING TO VERY SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE ARE FAVOURABLE FOR INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 3 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 3 DURING NEXT 5 DAYS WITH INCREASING AMPLITUDE. THESE ARE SUPPORTIVE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 36 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT. THE NWP MODELS SUGGEST NEAR NORTHWARD AND SLOW MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING NEXT 36 HRS. BEYOND 36 HRS THERE IS DIVERGENCE IN THE MODEL WITH RESPECT TO TRACK.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 08TH DECEMBER 2013.

(M.MOHAPATRA)
HEAD RSMC
Ph: 011-24631913

TOO: 08/1350 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. ELEVEN ISSUED AT 1100 UTC OF 08TH DECEMBER 2013 BASED ON 0900 UTC CHARTS OF 08TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS AND LAY CENTRED AT 0900 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 12.6° N AND LONGITUDE 84.7° E, ABOUT 490 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 580 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD MOVE SLIGHTLY NORTHWARDS SLOWLY.FOR SOME MORE TIME.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. IT HAS A RAGGED EYE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 10.0°N TO 18.0°N & LONGITUDE 80.5°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/0900	12.6/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1200	12.7/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	13.1/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.4/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	13.7/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1800	14.0/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	14.2/84.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1800	14.4/84.6	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0600	14.2/84.4	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1800	14.0/84.2	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/0600	13.8/84.0	55-65 GUSTING TO 75	DEEP DEPRESSION
12-12-2013/1800	13.6/83.8	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0600	13.4/83.5	45-55 GUSTING TO 65	DEPRESSION

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.3°N LONGITUDE 84.0°E AT 0900 UTC OF 8th DECEMBER 2013 TODAY REPORTED MSLP OF 1001.0 HPA AND SURFACE WIND OF 030/37 KTS.

ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1004.0 HPA AND SURFACE WIND OF 100/19 KTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE INCREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF 13°N. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13°N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR AFTER 12 HRS. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 08TH DECEMBER 2013.

(M.MOHAPATRA)
HEAD RSMC
Ph: 011-24631913

TOO: 08/1700 HRS IST

AFTER 12 HRS. TOTAL PRECIPITABLE WATER IMAGING



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWELVE ISSUED AT 1500 UTC OF 08TH DECEMBER 2013 BASED ON 1200 UTC CHARTS OF 08TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED SLIGHTLY NORTH-WARDS, AND LAY CENTRED AT 1200 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 13.0° N AND LONGITUDE 84.7° E, ABOUT 490 KM EAST OF CHENNAI (43279) AND 620 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY FROM TOMORROW AND MOVE NORTH-WARDS SLOWLY FOR 36 HRS AND THEN WEST-SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 10.0°N TO 18.0°N & WEST OF LONGITUDE 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/1200	13.0/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	13.4/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.8/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.1/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0000	14.6/84.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1200	14.7/84.5	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0000	14.6/84.1	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1200	14.2/83.7	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/0000	13.7/83.2	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/1200	13.3/82.7	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/0000	12.9/82.2	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.3°N LONGITUDE 84.0°E AT 1200 UTC OF 8th DECEMBER 2013 TODAY REPORTED MSLP OF 1004.5 HPA. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1004.9 HPA AND SURFACE WIND OF 100/21 KTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 08TH DECEMBER 2013.

(M.MOHAPATRA)
HEAD RSMC
Ph: 011-24631913

TOO: 08/2000 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THIRTEEN ISSUED AT 1800 UTC OF 08TH DECEMBER 2013 BASED ON 1500 UTC CHARTS OF 08TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED SLIGHTLY NORTH-WARDS, AND LAY CENTRED AT 1500 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 13.2° N AND LONGITUDE 84.7° E, ABOUT 490 KM EAST OF CHENNAI (43279) AND 630 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY FROM TOMORROW AND MOVE NORTH-WARDS SLOWLY FOR 36 HRS AND THEN WEST-SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & WEST OF LONGITUDE 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/1500	13.2/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
08-12-2013/1800	13.4/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.8/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.1/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0000	14.6/84.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1200	14.7/84.5	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0000	14.6/84.1	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1200	14.2/83.7	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/0000	13.7/83.2	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/1200	13.3/82.7	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/0000	12.9/82.2	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.27°N LONGITUDE 84.01°E AT 1500 UTC OF 8th DECEMBER 2013 TODAY REPORTED MSLP OF 1006.3 HPA. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1005.8 HPA.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 08TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 08/2230 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. FOURTEEN ISSUED AT 2100 UTC OF 08TH DECEMBER 2013 BASED ON 1800 UTC CHARTS OF 08TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED SLIGHTLY NORTH-WARDS, AND LAY CENTRED AT 1800 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 13.4° N AND LONGITUDE 84.7° E, ABOUT 490 KM EAST OF CHENNAI (43279) AND 650 KM NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY FROM TOMORROW AND MOVE NORTH-WARDS SLOWLY FOR 36 HRS AND THEN WEST-SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & WEST OF LONGITUDE 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/1800	13.4/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.8/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.1/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
09-12-2013/1800	14.6/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	14.7/84.5	80-90 GUSTING TO 100	CYCLONIC STORM
10-12-2013/1800	14.6/84.2	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/0600	14.4/83.9	60-70 GUSTING TO 80	CYCLONIC STORM
11-12-2013/1800	14.0/83.4	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/0600	13.6/83.0	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1800	13.1/82.5	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/0600	12.5/82.0	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.4°N LONGITUDE 84.0°E Y REPORTED AT 1800 UTC OF 8TH DECEMBER 2013 WIND 340/49 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1004.8 HPA AND WIND 130/21 KNOTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 09TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/0220 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. FIFTEEN ISSUED AT 0000 UTC OF 09TH DECEMBER 2013 BASED ON 2100 UTC CHARTS OF 08TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED SLIGHTLY NORTH-WARDS, AND LAY CENTRED AT 2100 UTC OF 8TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 13.6° N AND LONGITUDE 84.7° E, ABOUT 490 KM EAST-NORTHEAST OF CHENNAI (43279) AND 670 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY FROM TOMORROW AND MOVE NORTH-WARDS SLOWLY FOR 36 HRS AND THEN WEST-SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & WEST OF LONGITUDE 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
08-12-2013/2100	13.6/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0000	13.8/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.1/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
09-12-2013/1800	14.6/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	14.7/84.5	80-90 GUSTING TO 100	CYCLONIC STORM
10-12-2013/1800	14.6/84.2	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/0600	14.4/83.9	60-70 GUSTING TO 80	CYCLONIC STORM
11-12-2013/1800	14.0/83.4	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/0600	13.6/83.0	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1800	13.1/82.5	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/0600	12.5/82.0	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 13.4°N LONGITUDE 84.0°E Y REPORTED AT 2100 UTC OF 8TH DECEMBER 2013 WIND 300/47 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1002.8 HPA AND WIND 130/19 KNOTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 09TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/0530 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. SIXTEEN ISSUED AT 0300 UTC OF 09TH DECEMBER 2013 BASED ON 0000 UTC CHARTS OF 09TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL MOVED NORTH-WARDS, AND LAY CENTRED AT 0000 UTC OF 9TH DECEMBER 2013 OVER SOUTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.0° N AND LONGITUDE 84.7° E, ABOUT 500 KM EAST-NORTHEAST OF CHENNAI (43279) AND 710 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NORTH-WARDS SLOWLY FOR 24 HRS AND THEN RECURVE TOWARDS WEST-SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & WEST OF LONGITUDE 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/0000	14.0/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.2/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
09-12-2013/1800	14.5/84.7	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0000	14.6/84.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
10-12-2013/1200	14.7/84.4	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0000	14.6/84.1	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1200	14.2/83.7	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/0000	13.7/83.2	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/1200	13.3/82.7	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/0000	12.9/82.2	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED AT 0000 UTC OF 9th DECEMBER 2013 MSLP OF 1003.2 HPA AND WIND 140/21 KNOTS.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 12⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS ABOUT 50-70 KJ/CM² AROUND SYSTEM CENTRE. IT IS RELATIVELY LESS (<50 KJ/CM²) OVER CENTRAL BAY OF BENGAL, I.E. TO THE NORTH OF SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS HIGH TO THE NORTH OF 13⁰N. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES BEGINING OF ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE WEST-SOUTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 09TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/0830 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. SEVENTEEN ISSUED AT 0600 UTC OF 09TH DECEMBER 2013 BASED ON 0300 UTC CHARTS OF 09TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0300 UTC OF 9TH DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.0° N AND LONGITUDE 84.7° E, ABOUT 500 KM EAST-NORTHEAST OF CHENNAI (43279) AND 710 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR 12 HRS AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & WEST OF LONGITUDE 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/0300	14.0/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/0600	14.2/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	14.4/84.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	14.5/84.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	14.5/84.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1200	14.4/84.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	14.0/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.5/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	13.0/82.5	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1200	12.5/81.8	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0000	12.0/81.0	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E REPORTED AT 0300 UTC OF 9th DECEMBER 2013 MSLP OF 1001.1 HPA AND WIND 280/41 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1005.4 HPA AND WIND 130/21 KNOTS.

THE VERY SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 09TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/1100 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. EIGHTEEN ISSUED AT 0900 UTC OF 09TH DECEMBER 2013 BASED ON 0600 UTC CHARTS OF 09TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS AND LAY CENTRED AT 0600 UTC OF 9TH DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.3° N AND LONGITUDE 84.7° E, ABOUT 500 KM EAST-NORTHEAST OF CHENNAI (43279) AND 740 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & BETWEEN LONGITUDE 82.0°E TO 89.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH TO PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

REMARKS:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/0600	14.3/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	14.5/84.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	14.6/84.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	14.7/84.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	14.5/84.4	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.2/84.2	90-100 GUSTING TO 110	CYCLONIC STORM
11-12-2013/0600	14.0/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.5/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	13.0/82.5	60-70 GUSTING TO 80	DEEP DEPRESSION
12-12-2013/1800	12.5/81.8	50-60 GUSTING TO 70	DEPRESSION
13-12-2013/0600	12.0/81.0	40-50 GUSTING TO 60	LOW

A BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E REPORTED AT 0600 UTC OF 9TH DECEMBER 2013 MSLP OF 1001.2 HPA AND WIND 280/36 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1004.4 HPA

THE VERY SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 13.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY

AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (15-25 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE AS THE SYSTEM WOULD MOVE NORTHWARD, IT WOULD EXPERIENCE RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER VERY SLOW MOVEMENT OF THE SYSTEM WILL HELP IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM AFTER 12 HRS. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDENCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 09TH DECEMBER 2013.

(CHARAN SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/1400 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. NINETEEN ISSUED AT 1200 UTC OF 09TH DECEMBER 2013 BASED ON 0900 UTC CHARTS OF 09TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 9TH DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.4° N AND LONGITUDE 84.7° E, ABOUT 510 KM EAST-NORTHEAST OF CHENNAI (43279) AND 750 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.0°N TO 18.0°N & BETWEEN LONGITUDE 82.0°E TO 87.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 75 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH TO PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/0900	14.4/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1200	14.5/84.7	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
09-12-2013/1800	14.7/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	14.7/84.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	14.6/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.3/84.2	90-100 GUSTING TO 110	CYCLONIC STORM
11-12-2013/0600	13.8/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.2/83.1	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	12.7/82.5	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1800	12.1/81.8	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0600	11.5/81.0	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR LATITUDE 13.5°N LONGITUDE 84.0°E REPORTED AT 0900 UTC OF 9TH DECEMBER 2013 MSLP OF 1002.0 HPA AND WIND 270/33 KNOTS. ANOTHER BUOY LOCATED NEAR LATITUDE 14.0°N LONGITUDE 87.0°E REPORTED MSLP OF 1001.8 HPA

THE VERY SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH 20 KNOTS AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY. WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE CURRENT FORECAST IS BASED ON CONSENSUS NWP GUIDANCE AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 09TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/1700 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

**FROM: RSMC –TROPICAL
CYCLONES, NEW DELHI**

**TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY ISSUED AT 1500 UTC OF 09TH DECEMBER 2013 BASED ON 1200 UTC CHARTS OF 09TH DECEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS, WEAKENED INTO A SEVERE CYCLONIC STORM AND LAY CENTRED AT 1200 UTC OF 9TH DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.6° N AND LONGITUDE 84.7° E, ABOUT 520 KM EAST-NORTHEAST OF CHENNAI (43279) AND 770 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN FURTHER GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 12.0°N TO 18.0°N & BETWEEN LONGITUDE 82.0°E TO 86.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/1200	14.6/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1800	14.8/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	15.0/84.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	15.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1200	14.8/84.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	14.3/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.8/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	13.2/82.6	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1200	12.5/81.9	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0000	11.8/81.2	45-55 GUSTING TO 65	DEPRESSION
14-12-2013/1200	11.1/80.5	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-

30 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. FURTHER THE REGION OF VORTICITY MAXIMA HAS SHIFTED TO THE SOUTH OF THE SYSTEM CENTRE. SIMILARLY THE REGION OF LOWER LEVEL CONVERGENCE MAXIMA AND UPPER LEVEL DIVERGENCE MAXIMA HAVE CHANGED THEIR EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWEST WARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 09TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/2030 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY ONE ISSUED AT 1700 UTC OF 09TH DECEMBER 2013 BASED ON 1500 UTC CHARTS OF 09TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1500 UTC OF 9 DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.6° N AND LONGITUDE 84.7° E, ABOUT 520 KM EAST-NORTHEAST OF CHENNAI (43279) AND 770 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN FURTHER GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 12.0°N TO 18.0°N & BETWEEN LONGITUDE 82.0°E TO 86.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/1500	14.6/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
09-12-2013/1800	14.8/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	15.0/84.6	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/0600	15.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1200	14.8/84.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	14.3/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.8/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	13.2/82.6	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1200	12.5/81.9	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0000	11.8/81.2	45-55 GUSTING TO 65	DEPRESSION
14-12-2013/1200	11.1/80.5	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH

VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. FURTHER THE REGION OF VORTICITY MAXIMA HAS SHIFTED TO THE SOUTH OF THE SYSTEM CENTRE. SIMILARLY THE REGION OF LOWER LEVEL CONVERGENCE MAXIMA AND UPPER LEVEL DIVERGENCE MAXIMA HAVE CHANGED THEIR EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWEST WARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 09 DECEMBER 2013.

(CHARAN SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 09/2300 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY TWO ISSUED AT 2100 UTC OF 09TH DECEMBER 2013 BASED ON 1800 UTC CHARTS OF 09TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS AND LAY CENTRED AT 1800 UTC OF 9 DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.8° N AND LONGITUDE 84.7° E, ABOUT 530 KM EAST-NORTHEAST OF CHENNAI (43279) AND 780 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 12.0°N TO 18.0°N & BETWEEN LONGITUDE 82.0°E TO 86.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/1800	14.8/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	15.0/84.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0600	15.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1200	14.8/84.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.5/83.9	90-100 GUSTING TO 110	CYCLONIC STORM
11-12-2013/0600	14.2/83.6	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.8/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	13.2/82.6	60-70 GUSTING TO 80	DEEP DEPRESSION
12-12-2013/1800	12.5/81.9	50-60 GUSTING TO 70	DEPRESSION
13-12-2013/0600	11.8/81.2	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/1800	11.0/80.5	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH

VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. FURTHER THE REGION OF VORTICITY MAXIMA HAS SHIFTED TO THE SOUTH OF THE SYSTEM CENTRE. SIMILARLY THE REGION OF LOWER LEVEL CONVERGENCE MAXIMA AND UPPER LEVEL DIVERGENCE MAXIMA HAVE CHANGED THEIR EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWEST WARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 10 DECEMBER 2013.

(CHARAN SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/0230 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY THREE ISSUED AT 2300 UTC OF 09TH DECEMBER 2013 BASED ON 2100 UTC CHARTS OF 09TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS AND LAY CENTRED AT 2100 UTC OF 9 DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 14.8° N AND LONGITUDE 84.7° E, ABOUT 530 KM EAST-NORTHEAST OF CHENNAI (43279) AND 780 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 13.0°N TO 17.0°N & BETWEEN LONGITUDE 83.0°E TO 86.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
09-12-2013/1800	14.8/84.7	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0000	15.0/84.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0600	15.0/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1200	14.8/84.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.5/83.9	90-100 GUSTING TO 110	CYCLONIC STORM
11-12-2013/0600	14.2/83.6	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1800	13.8/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0600	13.2/82.6	60-70 GUSTING TO 80	DEEP DEPRESSION
12-12-2013/1800	12.5/81.9	50-60 GUSTING TO 70	DEPRESSION
13-12-2013/0600	11.8/81.2	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/1800	11.0/80.5	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM²

AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. FURTHER THE REGION OF VORTICITY MAXIMA HAS SHIFTED TO THE SOUTH OF THE SYSTEM CENTRE. SIMILARLY THE REGION OF LOWER LEVEL CONVERGENCE MAXIMA AND UPPER LEVEL DIVERGENCE MAXIMA HAVE CHANGED THEIR EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWEST WARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 10 DECEMBER 2013.

(CHARAN SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/0430 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY FOUR ISSUED AT 0200 UTC OF 10TH DECEMBER 2013 BASED ON 0000 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORT-NORTHEASTWARDS DURING PAST SIX HOURS AND LAY CENTRED AT 0000 UTC OF 10 DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 15.0° N AND LONGITUDE 85.0° E, ABOUT 560 KM EAST-NORTHEAST OF CHENNAI (43279) AND 820 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD WEAKEN GRADUALLY AND MOVE NEARLY NORTHWARDS SLOWLY FOR SOME MORE TIME AND THEN RECURVE SOUTHWESTWARD.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 13.0°N TO 17.0°N & BETWEEN LONGITUDE 83.0°E TO 86.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/0000	15.0/85.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0600	15.2/84.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1200	14.9/84.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.6/83.9	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/0000	14.2/83.5	90-100 GUSTING TO 110	CYCLONIC STORM
11-12-2013/1200	13.7/83.0	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0000	13.2/82.5	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1200	12.5/81.9	60-70 GUSTING TO 80	DEEP DEPRESSION
13-12-2013/0000	11.8/81.2	40-50 GUSTING TO 60	DEPRESSION
13-12-2013/1200	11.0/80.5	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE SHOW NO SIGNIFICANT CHANGE IN PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS

HIGH (15-25 KNOTS) AROUND SYSTEM CENTRE AND NEGATIVE TENDANCY SOUTHWEST OF THE SYSTEM. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE UPPER TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 14.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. FURTHER THE REGION OF VORTICITY MAXIMA HAS SHIFTED TO THE SOUTH OF THE SYSTEM CENTRE. SIMILARLY THE REGION OF LOWER LEVEL CONVERGENCE MAXIMA AND UPPER LEVEL DIVERGENCE MAXIMA HAVE CHANGED THEIR EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWEST WARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 10 DECEMBER 2013.

(CHARAN SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/0730 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY FIVE ISSUED AT 0600 UTC OF 10TH DECEMBER 2013 BASED ON 0300 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NORTHEASTWARDS DURING PAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 10TH DECEMBER 2013 OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL NEAR LAT.15.3⁰ N AND LONG. 85.3⁰ E, ABOUT 600 KM EAST-NORTHEAST OF CHENNAI AND 860 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE NEARLY NORTHWARDS SLOWLY FOR SOME TIME AND THEN RECURVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE SYSTEM IS ASSOCIATED WITH RAGGED EYE AND SAME IS VISIBLE IN INFRARED, VISIBLE AND MICROWAVE IMAGERIES. HOWEVER THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAS DECREASED DURING PAST SIX HRS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 13.5°N TO 19.0°N & BETWEEN LONGITUDE 82.5°E TO 87.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75⁰C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/0300	15.3/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/0600	15.4/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1200	15.5/85.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1800	15.3/85.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/0000	15.0/84.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1200	14.2/83.8	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0000	13.3/83.0	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1200	12.4/82.2	60-70 GUSTING TO 80	CYCLONIC STORM
13-12-2013/0000	11.5/81.3	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/1200	10.6/80.4	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR 13.24°N/83.55°E REPORTED MSLP OF 1004.6 HPA AND SURFACE WINDS OF 270/27 KNOTS AT 0300 UTC OF 10TH DECEMBER 2013. ANOTHER BUOY LOCATED NEAR 14.0°N/87.0°E REPORTED MSLP OF 1005.8 HPA.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE SHOW NO SIGNIFICANT CHANGE IN PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50

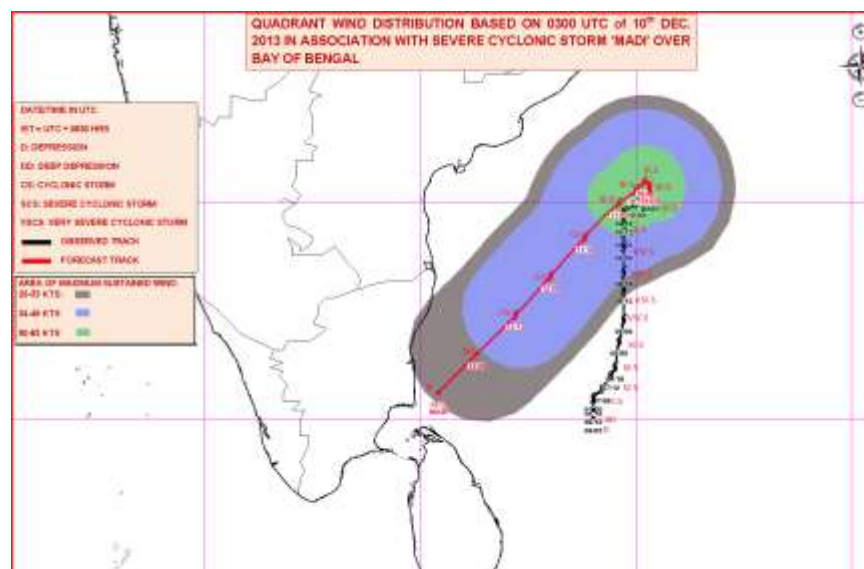
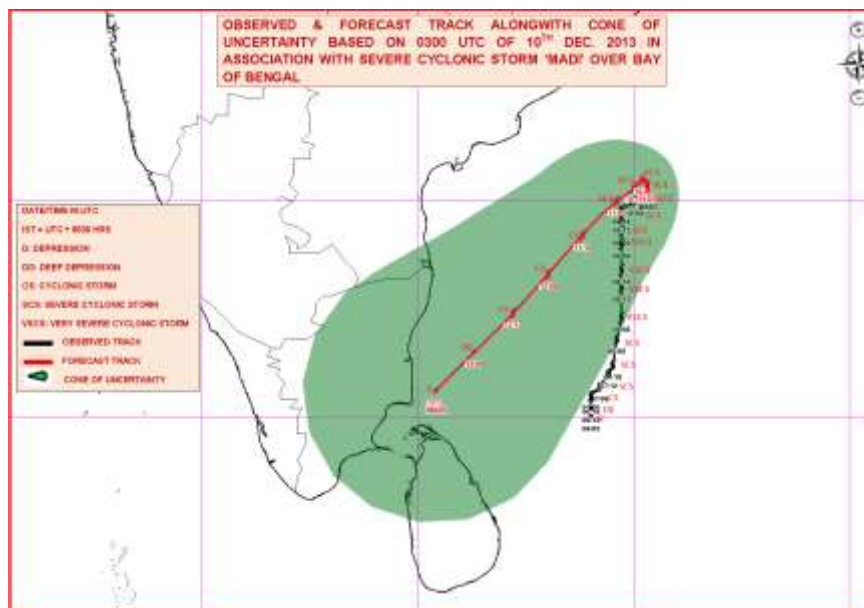
KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE AND NEGATIVE TENDANCY SOUTHWEST OF THE SYSTEM. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 16.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE CENTRE OF VORTICITY MAXIMA LIES TO THE SOUTH OF THE SYSTEM CENTRE LIKE LOWER LEVEL CONVERGENCE MAXIMA. UPPER LEVEL DIVERGENCE MAXIMA HAS CHANGED ITS EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWESTWARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 10TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/1130 HRS IST





भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY SIX ISSUED AT 0900 UTC OF 10TH DECEMBER 2013 BASED ON 0600 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTH-NORTHEASTWARDS DURING PAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 10TH DECEMBER 2013 OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL NEAR LAT.15.4⁰ N AND LONG. 85.3⁰ E, ABOUT 610 KM EAST-NORTHEAST OF CHENNAI (43279) AND 880 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD MOVE NEARLY NORTHWARDS SLOWLY FOR SOME TIME AND THEN RECURVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE SYSTEM IS ASSOCIATED WITH RAGGED EYE AND SAME IS VISIBLE IN INFRARED, VISIBLE AND MICROWAVE IMAGERIES. HOWEVER THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAS DECREASED DURING PAST SIX HRS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 13.5°N TO 19.0°N & BETWEEN LONGITUDE 82.5°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75⁰C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/0600	15.4/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1200	15.6/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1800	15.6/85.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
11-12-2013/0000	15.2/85.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
11-12-2013/0600	14.8/84.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1800	14.0/83.6	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0600	13.2/82.8	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1800	12.4/82.0	60-70 GUSTING TO 80	CYCLONIC STORM
13-12-2013/0600	11.5/81.2	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/1800	10.6/80.3	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR 13.24°N/83.55°E REPORTED MSLP OF 1004.6 HPA AND SURFACE WINDS OF 270/27 KNOTS AT 0300 UTC OF 10TH DECEMBER 2013. ANOTHER BUOY LOCATED NEAR 14.0°N/87.0°E REPORTED MSLP OF 1005.8 HPA.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE SHOW NO SIGNIFICANT CHANGE IN PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE AND NEGATIVE TENDANCY SOUTHWEST OF THE SYSTEM. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 16.0⁰N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE CENTRE OF VORTICITY MAXIMA LIES TO THE SOUTH OF THE SYSTEM CENTRE LIKE LOWER LEVEL CONVERGENCE MAXIMA. UPPER LEVEL DIVERGENCE MAXIMA HAS CHANGED ITS EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWESTWARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 10TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/1300 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY SEVEN ISSUED AT 1200 UTC OF 10TH DECEMBER 2013 BASED ON 0900 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL MOVED SLIGHTLY NORTHWARDS DURING PAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 10TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.15.7⁰ N AND LONG. 85.3⁰ E, ABOUT 450 KM EAST-SOUTHEAST.OF MACHILLIPATNAM (43185), 630 KM NORTHEAST OF CHENNAI (43279) AND 900 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD MOVE NEARLY NORTHWARDS SLOWLY FOR SOME TIME AND THEN RECURVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE SYSTEM IS ASSOCIATED WITH RAGGED EYE AND SAME IS VISIBLE IN INFRARED, VISIBLE AND MICROWAVE IMAGERIES. HOWEVER THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAS DECREASED DURING PAST SIX HRS. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 14.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 87.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75⁰C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 60 KNOTS GUSTING TO 70 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 988 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/0900	15.7/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1200	15.9/85.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
10-12-2013/1800	15.9/85.2	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
11-12-2013/0000	15.4/85.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
11-12-2013/0600	14.9/84.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/1800	14.0/83.6	80-90 GUSTING TO 100	CYCLONIC STORM
12-12-2013/0600	13.2/82.8	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/1800	12.4/82.0	60-70 GUSTING TO 80	CYCLONIC STORM
13-12-2013/1130	11.5/81.2	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0600	10.6/80.3	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR 13.27°N/84.0°E REPORTED MSLP OF 1002.6 HPA AND SURFACE WINDS OF 280/23 KNOTS AT 0900 UTC OF 10TH DECEMBER 2013. ANOTHER BUOY LOCATED NEAR 14.0°N/87.0°E REPORTED MSLP OF 1002.7 HPA AND SURFACE WINDS OF 190/09 KTS.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE SHOW NO SIGNIFICANT CHANGE IN PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-28⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50

KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE AND NEGATIVE TENDANCY SOUTHWEST OF THE SYSTEM. IT IS FURTHER HIGH TO THE NORTH OF THE SYSTEM CENTRE. HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHWESTERN PERIPHERY OF CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM IS HELPING IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM GRADUALLY.

WITH POSSIBLE WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD STEER THE SYSTEM LEADING TO RESTRICTION OF FURTHER NORTHWARD MOVEMENT AND CAUSE RECURVATURE TOWARDS SOUTHWEST. THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 16.0°N. IT IS LEADING TO SLOW NEARLY NORTHWARD MOVEMENT. THE CENTRE OF VORTICITY MAXIMA LIES TO THE SOUTH OF THE SYSTEM CENTRE LIKE LOWER LEVEL CONVERGENCE MAXIMA. UPPER LEVEL DIVERGENCE MAXIMA HAS CHANGED ITS EARLIER ORIENTATION AND SHIFTED TO SOUTHWEST OF ITS EARLIER POSITION. ALL THESE FURTHER INDICATE THAT NORTHERLY MOVEMENT OF THE CYCLONE WILL BE RESTRICTED AND IT WOULD RECURVE SOUTHWESTWARD AFTER SOME TIME.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 10TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/1630 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY EIGHT ISSUED AT 1500 UTC OF 10TH DECEMBER 2013 BASED ON 1200 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SOUTHWESTWARD DURING PAST THREE HOURS AND LAY CENTRED AT 1730 HOURS IST OF TODAY, THE 10TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.15.4⁰ N AND LONG. 85.0⁰ E, ABOUT 430 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 580 KM NORTHEAST OF CHENNAI AND 860 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAS DECREASED DURING PAST SIX HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 14.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 87.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -75⁰C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/1200	15.4/85.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.9/84.5	100-100 GUSTING TO 120	SEVERE CYCLONIC STORM
11-12-2013/0000	14.4/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.9/83.5	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.4/83.0	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	12.4/82.0	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1200	11.5/81.0	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0000	10.6/80.0	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR 13.27°N/84.0°E REPORTED MSLP OF 1003.5 HPA AND SURFACE WINDS OF 280/19 KNOTS AT 1200 UTC OF 10TH DECEMBER 2013.

ANOTHER BUOY LOCATED NEAR 14.0°N/87.0°E REPORTED MSLP OF 1003.7 HPA AND SURFACE WINDS OF 190/16 KTS.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE DECREASED CONSIDERABLY DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN SEMI-CIRCLE OF CYCLONE. IT WILL LEAD TO DEPRIVAL OF SUPPLY OF WARM MOIST AIR FROM SOUTH TO THE CORE OF THE CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM HELPED IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM FURTHER.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE,WHICH RUNS ALONG 16° N. WITH WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD CONTINUE TO STEER THE SYSTEM SOUTHWESTWARD DURING NEXT 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 10TH DECEMBER 2013.

(T.N.JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/2030 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. TWENTY NINE ISSUED AT 1800 UTC OF 10TH DECEMBER 2013 BASED ON 1500 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SOUTHWESTWARD DURING PAST THREE HOURS AND LAY CENTRED AT 1500UTC OF TODAY, THE 10TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.15.0° N AND LONG. 84.8° E, ABOUT 420 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 530 KM NORTHEAST OF CHENNAI AND 810 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAS DECREASED DURING PAST SIX HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 15.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -60°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 55 KNOTS GUSTING TO 65 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 990 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/1500	15.0/84.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
10-12-2013/1800	14.8/84.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	14.4/84.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.9/83.5	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.4/83.0	70-80 GUSTING TO 90	CYCLONIC STORM
12-12-2013/0000	12.4/82.0	60-70 GUSTING TO 80	CYCLONIC STORM
12-12-2013/1200	11.5/81.0	50-60 GUSTING TO 70	DEEP DEPRESSION
13-12-2013/0000	10.6/80.0	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

A BUOY LOCATED NEAR 13.27°N/84.0°E REPORTED MSLP OF 1005.5 HPA AND SURFACE WINDS OF 270/18 KNOTS AT 1500 UTC OF 10TH DECEMBER 2013. ANOTHER BUOY LOCATED NEAR 14.0°N/87.0°E REPORTED MSLP OF 1006.5 HPA AND SURFACE WINDS OF 170/14 KTS.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE DECREASED CONSIDERABLY DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN SEMI-CIRCLE OF CYCLONE. IT WILL LEAD TO DEPRIVAL OF SUPPLY OF WARM MOIST AIR FROM SOUTH TO THE CORE OF THE CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM HELPED IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE ARE EXPECTED TO WEAKEN THE SYSTEM FURTHER.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE,WHICH RUNS ALONG 16⁰ N. WITH WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD CONTINUE TO STEER THE SYSTEM SOUTHWESTWARD DURING NEXT 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 10TH DECEMBER 2013.

(T.N.JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 10/2330 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THIRTY ISSUED AT 2100 UTC OF 10TH DECEMBER 2013 BASED ON 1800 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SLIGHTLY SOUTHWESTWARD DURING PAST THREE HOURS AND LAY CENTRED AT 1800 UTC OF 10TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.14.9° N AND LONG. 84.7° E, ABOUT 410 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 530 KM NORTHEAST OF CHENNAI AND 790 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAVE FURTHER DECREASED DURING PAST THREE HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 15.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT - 50°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 50 KNOTS GUSTING TO 60 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/1800	14.9/84.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0000	14.4/84.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
11-12-2013/0600	13.9/83.7	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/1200	13.4/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1800	12.9/82.7	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/0600	12.0/81.7	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1800	11.0/80.5	25-35 GUSTING TO 45	WELL MARKED LOW

REMARKS:

A BUOY LOCATED NEAR 14.9°N/89.9°E REPORTED MSLP OF 1008.0 HPA AND SURFACE WINDS OF 090/16 KNOTS AT 1800 UTC OF 10TH DECEMBER 2013. PRESSURE FIELD HAS BEEN INCREASING CONTINUOUSLY DURING PAST 12 HOURS OVER THE CYCLONE AREA OF OCEANIC BASIN.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE DECREASED CONSIDERABLY DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN SEMI-CIRCLE OF CYCLONE. IT WILL LEAD TO LACK OF SUFFICIENT SUPPLY OF WARM MOIST AIR FROM SOUTH TO THE CORE OF THE CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM HELPED IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 16⁰ N. WITH WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD CONTINUE TO STEER THE SYSTEM SOUTHWESTWARD DURING NEXT 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 11TH DECEMBER 2013.

(T.N.JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 11/0230 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THIRTY ONE ISSUED AT 0000 UTC OF 11TH DECEMBER 2013 BASED ON 2100 UTC CHARTS OF 10TH DECEMBER 2013.

THE SEVERE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SOUTHWESTWARD WEAKENED INTO CYCLONIC STORM AND LAY CENTRED AT 2100 UTC OF 10TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.14.6° N AND LONG. 84.6° E, ABOUT 400 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 500 KM NORTHEAST OF CHENNAI AND 750 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE FURTHER SOUTHWESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAVE FURTHER DECREASED DURING PAST THREE HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 15.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 88.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT - 45° C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS GUSTING TO 55 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
10-12-2013/2100	14.6/84.6	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0000	14.4/84.2	80-90 GUSTING TO 100	CYCLONIC STORM
11-12-2013/0600	13.9/83.7	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1200	13.4/83.2	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/1800	12.9/82.7	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/0600	12.0/81.7	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1800	11.0/80.5	25-35 GUSTING TO 45	WELL MARKED LOW

REMARKS:

A BUOY LOCATED NEAR 13.5°N/84.0°E REPORTED MSLP OF 1002.4 HPA AND SURFACE WINDS OF 270/21 KNOTS AND ANOTHER BUOY LOCATED NEAR LATITUDE 15.0° N / 89.8° E REPORTED MSLP 1007.0 AND WIND SPEED OF 090/16

KNOTS AT 2100 UTC OF 10TH DECEMBER 2013. PRESSURE FIELD HAS BEEN INCREASING CONTINUOUSLY DURING PAST 12 HOURS OVER THE CYCLONE AREA OF OCEANIC BASIN.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE DECREASED CONSIDERABLY DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH (20-30 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING RELATIVELY COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE SOUTHERN SEMI-CIRCLE OF CYCLONE. IT WILL LEAD TO LACK OF SUFFICIENT SUPPLY OF WARM MOIST AIR FROM SOUTH TO THE CORE OF THE CYCLONE. FURTHER SLOW MOVEMENT OF THE SYSTEM HELPED IN COOLING OF SEA SURFACE DUE TO UPWELLING. ALL THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER.

THE SEVERE CYCLONIC STORM LIES CLOSE TO THE MIDDLE TROPOSPHERIC STEERING RIDGE, WHICH RUNS ALONG 16⁰ N. WITH WEAKENING OF THE SYSTEM THE LOWER AND MIDDLE TROPOSPHERIC WINDS WOULD CONTINUE TO STEER THE SYSTEM SOUTHWESTWARD DURING NEXT 48 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 11TH DECEMBER 2013.

(T.N.JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 11/0530 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THIRTY TWO ISSUED AT 0300 UTC OF 11TH DECEMBER 2013 BASED ON 0000 UTC CHARTS OF 11TH DECEMBER 2013.

THE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SOUTH-SOUTHWESTWARD AND LAY CENTRED AT 0000 UTC OF 11TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.14.5⁰N AND LONG. 84.4⁰E, ABOUT 400 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 480 KM NORTHEAST OF CHENNAI AND 740 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE FURTHER SOUTH-SOUTHWESTWARDS AND WEAKEN INTO DEPRESSION DURING NEXT 24 HOURS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAVE FURTHER DECREASED DURING PAST THREE HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH MODERATE TO INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 14.0°N TO 20.0°N & BETWEEN LONGITUDE 82.0°E TO 87.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -50°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 40 KNOTS GUSTING TO 50 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 996 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
11-12-2013/0000	14.5/84.4	70-80 GUSTING TO 90	CYCLONIC STORM
11-12-2013/0600	14.0/84.0	50-60 GUSTING TO 70	DEEP DEPRESSION
11-12-2013/1200	13.5/83.6	40-50 GUSTING TO 60	DEPRESSION
11-12-2013/1800	13.0/83.2	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/0000	12.5/82.7	20-30 GUSTING TO 40	LOW

REMARKS:

A BUOY LOCATED NEAR 14.8°N/84.2°E REPORTED MSLP OF 1001.5 HPA AND SURFACE WINDS OF 260/23 KNOTS.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS HIGH

(20-30 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING COLDER WATER AND HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE CYCLONE. IT IS HELPING IN WEAKENING OF THE SYSTEM ALL THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER INTO A DEPRESSION DURING NEXT 12 HOURS.

THE CYCLONIC STORM IS MOVING SOUTH-SOUTHWESTWARDS WITH A SPEED OF ABOUT 5 KNOTS AND WOULD CONTINUE TO DO SO DURING NEXT 24 HOURS UNDER THE INFLUENCE OF LOWER AND MIDDLE TROPOSPHERIC STEERING WINDS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 11TH DECEMBER 2013.

(T.N.JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 11/0830 HRS IST



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM 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 'MADI' ADVISORY NO. THIRTY THREE ISSUED AT 0600 UTC OF 11TH DECEMBER 2013 BASED ON 0300 UTC CHARTS OF 11TH DECEMBER 2013.

THE CYCLONIC STORM 'MADI' OVER WESTCENTRAL BAY OF BENGAL MOVED SOUTHWESTWARD, WEAKENED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0300 UTC OF 11TH DECEMBER 2013 OVER WESTCENTRAL BAY OF BENGAL NEAR LAT.14.0°N AND LONG. 83.8° E, ABOUT 380 KM SOUTHEAST OF MACHILLIPATNAM (43185), 400 KM EAST-NORTHEAST OF CHENNAI (43279) AND 660 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD MOVE FURTHER SOUTHWESTWARDS AND WEAKEN INTO DEPRESSION DURING NEXT 12 HOURS

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.0. THE ASSOCIATED CONVECTION DEPTH AND INTENSITY HAVE FURTHER DECREASED DURING PAST THREE HRS. CONVECTION IS BEING SHEARED FROM THE LOW LEVEL CIRCULATION CENTRE. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH ISOLATED MODERATE TO INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 12.5°N TO 18.5°N & BETWEEN LONGITUDE 81.0°E TO 86.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -50°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 997 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
11-12-2013/0300	14.0/83.8	55-65 GUSTING TO 75	DEEP DEPRESSION
11-12-2013/0600	13.8/83.5	50-60 GUSTING TO 70	DEEP DEPRESSION
11-12-2013/1200	13.3/83.0	45-55 GUSTING TO 65	DEPRESSION
11-12-2013/1800	12.8/82.4	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/0000	12.3/81.8	25-35 GUSTING TO 45	WELL MARKED LOW

REMARKS:

A BUOY LOCATED NEAR 13.5°N/84.0°E REPORTED MSLP OF 1002.4 HPA AND SURFACE WINDS OF 240/25 KNOTS AT 0300 UTC OF 11TH December 2013.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE FURTHER DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (10-20 KNOTS) AROUND SYSTEM CENTRE HENCE THE SYSTEM IS EXPERIENCING COLDER WATER AND MODERATE TO HIGH VERTICAL WIND SHEAR. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE CYCLONE. ALL

THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER INTO A DEPRESSION DURING NEXT 12 HOURS.

THE DEEP DEPRESSION IS MOVING SOUTHWESTWARDS WITH A SPEED OF ABOUT 5 KNOTS AND WOULD CONTINUE TO DO SO DURING NEXT 24 HOURS UNDER THE INFLUENCE OF LOWER AND MIDDLE TROPOSPHERIC STEERING WINDS.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 11TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 11/1130 HRS IST

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 11-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 11 DECEMBER, 2013 BASED ON 1200 UTC OF 11 DECEMBER, 2013

THE DEEP DEPRESSION OVER WESTCENTRAL BAY AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SOUTH-SOUTHWESTWARD AT A SPEED OF ABOUT 10 KMPH DURING PAST 6 HRS, AND LAY CENTRED AT 1200 UTC OF 11TH DECEMBER 2013 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LAT.13.3⁰N AND LONG. 83.3⁰E, ABOUT 400 KM SOUTHEAST OF MACHILLIPATNAM (43185), 340 KM EAST-NORTHEAST OF CHENNAI (43279) AND 570 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). IT WOULD MOVE SOUTHWESTWARDS AND WEAKEN INTO A DEPRESSION DURING NEXT 12 HOURS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.0. THE ASSOCIATED CONVECTION HAS FLARED UP TEMPORARILY DURING PAST 3 HOURS AS A PART OF DIURNAL VARIATION . ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH ISOLATED MODERATE TO INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.5°N TO 16.0°N & BETWEEN LONGITUDE 81.0°E TO 85.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -50°C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS GUSTING TO 40 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
11-12-2013/1200	13.3/83.3	50-60 GUSTING TO 70	DEEP DEPRESSION
11-12-2013/1800	12.8/82.7	50-60 GUSTING TO 70	DEEP DEPRESSION
12-12-2013/0000	12.3/82.0	45-55 GUSTING TO 65	DEPRESSION
12-12-2013/0600	11.8/81.2	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1200	11.3/80.3	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

A BUOY LOCATED NEAR 13.5°N/84.0°E REPORTED MSLP OF 1002.1 HPA AND SURFACE WINDS OF 120/25 KNOTS AT 1200 UTC OF 11TH DECEMBER 2013.

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE REMAINED SAME DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27°C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. TOTAL PRECIPITABLE WATER IMAGERY ANIMATION ALSO INDICATES CONTINUOUS ENTRAINMENT OF COLD AND DRY AIR INTO THE CYCLONE. ALL THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER INTO A DEPRESSION DURING NEXT 12 HOURS.THE DEEP DEPRESSION WOULD MOVE SOUTHWESTWARD DURING NEXT 24 HOURS UNDER THE INFLUENCE OF LOWER AND MIDDLE TROPOSPHERIC STEERING WINDS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 11TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E

Ph: 011-24631913

TOO: 11/1930 HRS IST

**SPECIAL TROPICAL WEATHER OUTLOOK
DEMS-RSMC TROPICAL CYCLONES NEW DELHI 11-12-2013**

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 2000 UTC OF 11 DECEMBER, 2013 BASED ON 1800 UTC OF 11 DECEMBER, 2013

THE DEEP DEPRESSION OVER WESTCENTRAL BAY AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SOUTHWESTWARD AT A SPEED OF ABOUT 10 KMPH DURING PAST 6 HRS, WEAKENED INTO A DEPRESSION AND LAY CENTRED AT 2330 HOURS IST OF 11TH DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LAT.12.9⁰N AND LONG. 82.7⁰E, ABOUT, 270 KM EAST-NORTHEAST OF CHENNAI AND 500 KM NORTH-NORTHEAST OF TRINCOMALEE (SRI LANKA). IT WOULD MOVE FURTHER SOUTHWESTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 18 HOURS

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T1.5. THE ASSOCIATED CONVECTION HAS FLARED UP TEMPORARILY DURING PAST 3 HOURS AS A PART OF DIURNAL VARIATION . ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH MODERATE TO INTENSE CONVECTION IS SEEN OVER THE AREA BETWEEN LATITUDE 11.5°N TO 14.5°N & BETWEEN LONGITUDE 82.0°E TO 84.5°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -45⁰C. MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS GUSTING TO 35 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.

TRACK AND INTENSITY FORECASTS OF THE SYSTEM ARE GIVEN IN THE TABLE BELOW:

Date/Time(UTC)	Position (Lat. ⁰N/ long. ⁰E)	Maximum sustained surface wind speed (kmph)	Category of cyclonic disturbance
11-12-2013/1800	12.8/82.7	45-55 GUSTING TO 65	DEPRESSION
12-12-2013/0000	12.5/82.0	45-55 GUSTING TO 65	DEPRESSION
12-12-2013/0600	11.9/81.2	40-50 GUSTING TO 60	DEPRESSION
12-12-2013/1200	11.3/80.3	30-40 GUSTING TO 50	WELL MARKED LOW

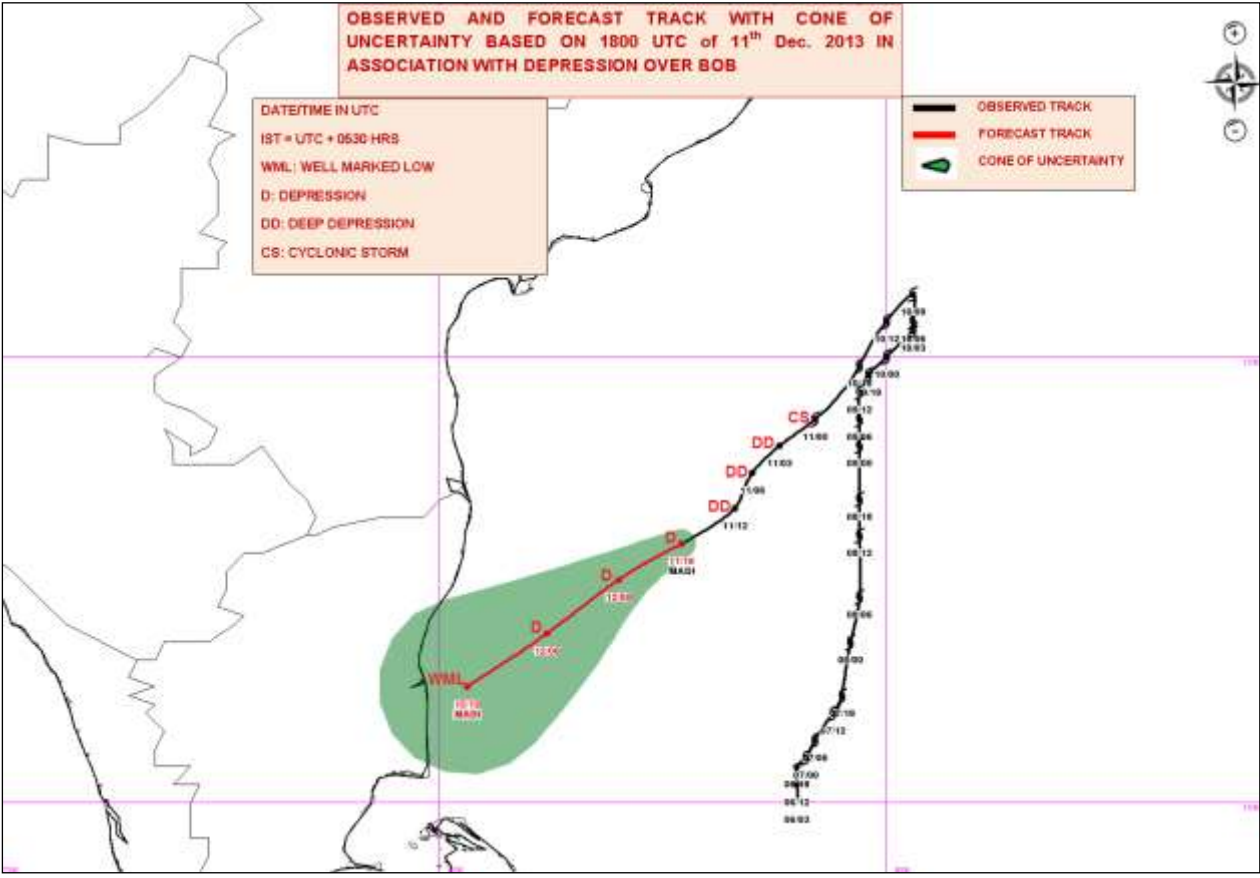
REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY AND UPPER LEVEL DIVERGENCE HAVE DECREASED DURING PAST SIX HOURS. THE SEA SURFACE TEMPERATURE IS ABOUT 26-27⁰C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM² AROUND THE SYSTEM CENTRE. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (10-20 KNOTS) AROUND SYSTEM CENTRE. ALL THESE CONDITIONS WOULD WEAKEN THE SYSTEM FURTHER INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 18 HOURS.THE DEPRESSION WOULD MOVE SOUTHWESTWARD DURING NEXT 12 HOURS UNDER THE INFLUENCE OF LOWER AND MIDDLE TROPOSPHERIC STEERING WINDS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 12TH DECEMBER 2013.

(RANJEET SINGH)
SCIENTIST - E
Ph: 011-24631913

TOO: 11/0130 HRS IST



SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 12-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 12 DECEMBER, 2013 BASED ON 0000 UTC OF 12 DECEMBER, 2013

THE DEPRESSION OVER WESTCENTRAL BAY AND ADJOINING SOUTHWEST BAY OF BENGAL MOVED SOUTHWESTWARD, WEAKENED FURTHER AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER SOUTHWEST BAY OF BENGAL AT 0000 UTC OF TODAY, THE 12TH DECEMBER 2013.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T1.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER SOUTHWEST BAY OF BENGAL, CLOSE TO NORTH TAMILNADU COAST.

THIS IS THE LAST BULLETIN FOR THIS SYSTEM.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 12/0830 HRS IST

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 12-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1200 UTC OF 12 DECEMBER, 2013 BASED ON 0900 UTC OF 12 DECEMBER, 2013

LATEST SATELLITE IMAGERY AND COASTAL & RADAR OBSERVATIONS INDICATE THAT THE WELL MARKED LOW PRESSURE AREA LAY AS A DEPRESSION AT 0900 UTC OF TODAY, THE 12TH DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LAT. 10.7°N AND LONG. 80.7°E, ABOUT 90 KM EAST OF NAGAPATTINAM. IT WOULD MOVE WEST-SOUTHWESTWARDS AND CROSS TAMIL NADU COAST BETWEEN VEDARANNIYAM AND PAMBAN BY MIDNIGHT OF TODAY OR TOMORROW MORNING.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER SOUTHWEST BAY OF BENGAL BETWEEN LATITUDE 8.0°N AND 13.0°N WEST OF LONGITUDE 82.0°E, COASTAL TAMIL NADU, PALK STRAIT AND ADJOINING SRILANKA.

MAXIMUM SUSTAINED WIND SPEED IS 25 KTS GUSTING TO 35 KTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE.

NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF TODAY, THE 12TH DECEMBER 2013.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 12/1730 HRS IST

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 12-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 1500 UTC OF 12 DECEMBER, 2013 BASED ON 1200 UTC OF 12 DECEMBER, 2013

THE DEPRESSION OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARDS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 12TH DECEMBER 2013 OVER SOUTHWEST BAY OF BENGAL NEAR LAT. 10.5°N AND LONG. 80.0°E, ABOUT 20 KM EAST OF VEDARANYAM. IT WOULD MOVE WEST-SOUTHWESTWARDS AND CROSS TAMIL NADU COAST CLOSE TO VEDARANYAM WITHIN A FEW HOURS. IT WOULD THEN EMERGE INTO THE PALK STRAIT AND MOVE WEST-SOUTHWESTWARDS AND CROSS AGAIN TAMILNADU COAST BETWEEN ATIRAMAPATTINAM AND PAMBAN CLOSE TO TONDI BY MIDNIGHT OF TODAY/EARLY MORNING OF TOMORROW.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T1.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER SOUTHWEST BAY OF BENGAL BETWEEN LATITUDE 8.0°N AND 13.0°N WEST OF LONGITUDE 81.5°E, COASTAL TAMIL NADU, PALK STRAIT AND ADJOINING SRILANKA. THE CLOUD TOP TEMPARATURE IS OBSERVED -55°C AROUND THE SYSTEM CENTRE.

MAXIMUM SUSTAINED WIND SPEED IS 25 KTS GUSTING TO 35 KTS. SEA CONDITION IS ROUGH TO VERY ROUGH AROUND SYSTEM CENTRE.

NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF TODAY, THE 12TH DECEMBER 2013.

(T.N JHA)
SCIENTIST - E
Ph: 011-24631913

TOO: 12/2030 HRS IST

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 13-12-2013

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 72 HOURS ISSUED AT 0300 UTC OF 13 DECEMBER, 2013 BASED ON 0000 UTC OF 13 DECEMBER, 2013

THE DEPRESSION OVER TAMIL NADU MOVED WESTWARDS, WEAKENED INTO A WELL MARKED LOW PRESSURE AREA OVER SOUTHEAST ARABIAN SEA AND ADJOINING KERALA AT 0000 UTC OF TODAY, THE 13TH DECEMBER. THE SYSTEM WOULD MOVE FURTHER WESTWARDS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, MODERATE TO INTENSE CONVECTION IS SEEN OVER SOUTHEAST ARABIAN SEA AND LAKSHADWEEP BETWEEN LATITUDE 6.0°N AND 10.0°N AND BETWEEN LONGITUDE 72.0°E AND 76.0°E.

THIS IS THE LAST BULLETIN FOR THIS SYSTEM.

(M.MOHAPATRA)
SCIENTIST - E
Ph: 011-24631913

TOO: 13/1000 HRS IST

