



भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI 23-11-2013

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 23 NOVEMBER, 2013 BASED ON 1200 UTC OF 23 NOVEMBER, 2013.

LATEST SATELLITE IMAGERY AND OBSERVATIONS INDICATE THAT A DEPRESSION HAS FORMED OVER SOUTH ANDAMAN SEA AND LAY CENTRED AT 1730 HRS IST OF TODAY, THE 23RD NOVEMBER 2013 NEAR LATITUDE 8.5⁰N AND LONGITUDE 96.5⁰E, ABOUT 550 KM SOUTH-SOUTHEAST OF PORTBLAIR (43333) AND 200 KM WEST-NORTHWEST OF PHUKET (48565). THE SYSTEM WOULD INTENSIFY INTO A DEEP DEPRESSION DURING NEXT 12 HRS AND FURTHER INTO A CYCLONIC STORM IN SUBSEQUENT 24 HRS. THE SYSTEM WOULD MOVE NORTHWESTWARD AND CROSS ANDAMAN & NICOBAR ISLANDS BETWEEN HUT BAY (43364) AND LONG ISLAND (43310), CLOSE TO PORT BLAIR AS A CYCLONIC STORM AROUND NIGHT OF 24TH NOV. 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER AND CONTINUE TO MOVE NORTHWESTWARDS DURING SUBSEQUENT 48 HRS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 1.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUD EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ANDAMAN SEA, TENASERIM COAST AND NORTH MALAYA PENINSULA. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80⁰C.

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 OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 25-30 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 15-20 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM.

THE DEPRESSION LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13⁰N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29⁰C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 24TH NOVEMBER 2013.

(M.MOHAPATRA)
HEAD RSMC

TOO: 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)
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 'LEHAR' ADVISORY NO. ONE ISSUED AT 0600 UTC OF 24TH NOVEMBER 2013
 BASED ON 0300 UTC CHARTS OF 24TH NOVEMBER 2013.

THE DEPRESSION OVER SOUTH ANDAMAN SEA MOVED NORTHWESTWARDS, INTENSIFIED INTO A CYCLONIC STORM LEHAR AND LAY CENTRED AT 0300 UTC OF TODAY, THE 24TH NOVEMBER 2013 NEAR LATITUDE 10.0°N AND LONGITUDE 95.0°E, ABOUT 300 KM SOUTH-SOUTHEAST OF PORTBLAIR (43333) AND 400 KM NORTHWEST OF PHUKET (48565). THE SYSTEM WOULD MOVE NORTHWESTWARD AND CROSS ANDAMAN & NICOBAR ISLANDS BETWEEN HUT BAY (43364) AND LONG ISLAND (43310), CLOSE TO PORT BLAIR AROUND NIGHT OF TODAY, THE 24TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM (43185) AND KALINGAPATNAM (43105) NEAR KAKINADA (43189) AROUND 28TH NOVEMBER NOON.

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 ANDAMAN SEA BETWEEN LATITUDE 7.5°N TO 14.0°N & LONGITUDE 91.5°N TO 97.0°E AND ANDAMAN & NICOBAR ISLANDS. 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 1000 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
24-11-2013/0300	10.0/95.0	65-75 GUSTING TO 85	CYCLONIC STORM
24-11-2013/0600	10.5/94.5	70-80 GUSTING TO 90	CYCLONIC STORM
24-11-2013/1200	11.0/93.8	80-90 GUSTING TO 100	CYCLONIC STORM
24-11-2013/1800	11.5/93.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0000	12.0/92.2	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
25-11-2013/1200	12.5/90.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
26-11-2013/0000	13.0/89.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.5/87.6	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.4/86.0	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.5/84.5	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.5/83.0	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.5/81.5	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.5/80.5	70-80 GUSTING TO 90	CYCLONIC STORM

REMARKS:

LATEST OCEANSAT-II 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. A BUOY LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1006.3 HPA AND SURFACE WIND OF 320/27 KTS AT 0300 UTC OF TODAY, THE 24TH NOV 2013.

THE CYCLONIC STORM ~~±~~EHARqLIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13⁰N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAVE INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29⁰C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (15-25 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 24TH NONEMBER 2013.

**(M.MOHAPATRA)
HEAD RSMC**

TOO: 24/1200 HRS IST



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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 'LEHAR' ADVISORY NO. TWO ISSUED AT 0900 UTC OF 24TH NOVEMBER 2013
 BASED ON 0600 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED NORTHWESTWARDS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 24 NOVEMBER 2013 NEAR LATITUDE 10.5°N AND LONGITUDE 94.5°E, ABOUT 230 KM EAST-SOUTHEAST OF PORT BLAIR (43333) AND 490KM NORTHWEST OF PHUKET (48565). THE SYSTEM WOULD INTENSIFY FURTHER, MOVE WEST-NORTHWESTWARDS AND CROSS ANDAMAN & NICOBAR ISLANDS, CLOSE TO PORT BLAIR AROUND NIGHT OF TODAY, THE 24TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM (43185) AND KALINGAPATNAM (43105) NEAR KAKINADA (43189) AROUND 28TH NOVEMBER NOON.

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 ANDAMAN SEA BETWEEN LATITUDE 8.0°N TO 14.5°N & LONGITUDE 90.0°N TO 97.0°E AND ANDAMAN & NICOBAR ISLANDS . THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°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 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
24-11-2013/0600	10.5/94.5	70-80 GUSTING TO 90	CYCLONIC STORM
24-11-2013/1200	10.7/93.7	80-90 GUSTING TO 100	CYCLONIC STORM
24-11-2013/1800	11.2/93.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0000	11.8/92.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
25-11-2013/0600	12.2/91.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1800	12.7/90.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	13.2/88.5	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.7/87.1	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.3/85.6	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.4/84.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.5/82.5	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.5/81.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
29-11-2013/0600	18.5/80.0	60-70 GUSTING TO 80	CYCLONIC STORM

REMARKS:

LATEST OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 40 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 30-35 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1003.9 HPA AND SURFACE WIND OF 34/25 KTS AT 0600 UTC OF TODAY, THE 24TH NOV 2013.

THE CYCLONIC STORM ~~±~~EHARqLIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13⁰N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAVE INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29⁰C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (15-25 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 24TH NONEMBER 2013.

**(M.MOHAPATRA)
HEAD RSMC**

TOO: 24/1400 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 'LEHAR' ADVISORY NO. THREE ISSUED AT 1200 UTC OF 24TH NOVEMBER 2013
BASED ON 0900 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 24 NOVEMBER 2013 NEAR LATITUDE 10.5°N AND LONGITUDE 94.0°E, ABOUT 200 KM EAST-SOUTHEAST OF PORT BLAIR (43333) AND 540KM NORTHWEST OF PHUKET (48565). THE SYSTEM WOULD INTENSIFY FURTHER, MOVE WEST-NORTHWESTWARDS AND CROSS ANDAMAN & NICOBAR ISLANDS, CLOSE TO PORT BLAIR AROUND NIGHT OF TODAY, THE 24TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM (43185) AND KALINGAPATNAM (43105) NEAR KAKINADA (43189) AROUND 28TH NOVEMBER NOON.

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 ANDAMAN SEA BETWEEN LATITUDE 7.0°N TO 15.5°N & LONGITUDE 90.0°N TO 97.0°E AND ANDAMAN & NICOBAR ISLANDS . THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80°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 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
24-11-2013/0900	10.5/94.0	70-80 GUSTING TO 90	CYCLONIC STORM
24-11-2013/1200	10.7/93.7	80-90 GUSTING TO 100	CYCLONIC STORM
24-11-2013/1800	11.2/93.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0000	11.8/92.1	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
25-11-2013/0600	12.2/91.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1800	12.7/90.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	13.2/88.5	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.7/87.1	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.3/85.6	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.4/84.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.5/82.5	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.5/81.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
29-11-2013/0600	18.5/80.0	60-70 GUSTING TO 80	CYCLONIC STORM

REMARKS:

LATEST OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 40 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 30-35 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY

LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1003.9 HPA AND SURFACE WIND OF 34/25 KTS AT 0600 UTC OF TODAY, THE 24TH NOV 2013.

THE CYCLONIC STORM LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13°N. THE LOW LEVEL CONVERGENCE ALONG WITH LOW LEVEL RELATIVE VORTICITY HAVE INCREASED DURING PAST 12 HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE TO HIGH (15-25 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 24TH NOVEMBER 2013.

**(M.MOHAPATRA)
HEAD RSMC**

TOO: 24/1400 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 'LEHAR' ADVISORY NO. FOUR ISSUED AT 1500 UTC OF 24TH NOVEMBER 2013
BASED ON 1200 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 17 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 24 NOVEMBER 2013 NEAR LATITUDE 11.0°N AND LONGITUDE 93.5°E, ABOUT 120 KM EAST-SOUTHEAST OF PORT BLAIR (43333) AND 620KM NORTHWEST OF PHUKET (48565). THE SYSTEM WOULD INTENSIFY FURTHER, MOVE WEST-NORTHWESTWARDS AND CROSS ANDAMAN & NICOBAR ISLANDS, CLOSE TO PORT BLAIR AROUND MID NIGHT OF TODAY, THE 24TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM (43185) AND KALINGAPATNAM (43105) NEAR KAKINADA (43189) AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN SEA, ANDAMAN & NICOBAR ISLANDS AND ADJOINING BAY OF BENGAL BETWEEN LATITUDE 7.0°N TO 17.0°N & LONGITUDE 89.0°E TO 97.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85°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 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
24-11-2013/1200	11.0/93.5	80-90 GUSTING TO 100	CYCLONIC STORM
24-11-2013/1800	11.5/92.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0000	12.0/92.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
25-11-2013/0600	12.4/91.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.8/90.6	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.3/89.1	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/87.6	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/86.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.4/84.5	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.2/83.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.2/81.5	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.0/80.5	80-90 GUSTING TO 100	CYCLONIC STORM
29-11-2013/1200	19.0/79.5	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

LATEST OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 40-45 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 35-40 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1000.4 HPA AND SURFACE WIND OF 290/27 KTS AT 1200 UTC OF TODAY, THE 24TH NOV 2013. PORT BLAIR REPORTED MSLP OF 1006.0 AND 020/08KTS AT 1200 UTC AND HUT BAY REPORTED MSLP 1004.4 HPA AND VARIABLE WIND 02 KT

THE CYCLONIC STORM LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13°N. THE LOW LEVEL CONVERGENCE ALONG WITH LOW LEVEL RELATIVE VORTICITY REMAINED SAME DURING PAST SIX HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 24TH NOVEMBER 2013.

**(M.MOHAPATRA)
HEAD RSMC**

TOO: 24/2000 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)
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 'LEHAR' ADVISORY NO. FIVE ISSUED AT 1800 UTC OF 24TH NOVEMBER 2013
BASED ON 1500 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1500 UTC OF TODAY, THE 24 NOVEMBER 2013 NEAR LATITUDE 11.0°N AND LONGITUDE 93.5°E, ABOUT 120 KM EAST-SOUTHEAST OF PORT BLAIR. THE SYSTEM WOULD INTENSIFY FURTHER, MOVE WEST-NORTHWESTWARDS AND CROSS ANDAMAN & NICOBAR ISLANDS, CLOSE TO PORT BLAIR AROUND EARLY MORNING OF TOMORROW, THE 25TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN SEA, ANDAMAN & NICOBAR ISLANDS AND ADJOINING BAY OF BENGAL BETWEEN LATITUDE 7.0°N TO 17.0°N & LONGITUDE 89.0°E TO 97.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85°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 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
24-11-2013/1500	11.0/93.5	80-90 GUSTING TO 100	CYCLONIC STORM
24-11-2013/1800	11.5/92.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0000	12.0/92.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
25-11-2013/0600	12.4/91.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.8/90.6	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.3/89.1	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/87.6	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/86.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.4/84.5	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.2/83.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.2/81.5	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.0/80.5	80-90 GUSTING TO 100	CYCLONIC STORM
29-11-2013/1200	19.0/79.5	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

LATEST OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 40-45 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 35-40 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1000.4 HPA AND SURFACE WIND OF 290/27 KTS AT 1200 UTC OF TODAY, THE 24TH NOV 2013. PORT BLAIR REPORTED MSLP OF 1006.0 AND 020/08KTS AT 1200 UTC AND HUT BAY REPORTED MSLP 1004.4 HPA AND VARIABLE WIND 02 KT

THE CYCLONIC STORM LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13°N. THE LOW LEVEL CONVERGENCE ALONG WITH LOW LEVEL RELATIVE VORTICITY REMAINED SAME DURING PAST SIX HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 24TH NOVEMBER 2013.

**(RANJEET SINGH)
SCIENTIST-E**

TOO: 24/2345 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 'LEHAR' ADVISORY NO. SIX ISSUED AT 2100 UTC OF 24TH NOVEMBER 2013
BASED ON 1800 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED SLIGHTLY NORTH-WESTWARD AND LAY CENTRED AT 1800 UTC OF THE 24TH NOVEMBER 2013 NEAR LATITUDE 11.5°N AND LONGITUDE 93.0°E, ABOUT 40 KM SOUTHEAST OF PORT BLAIR. THE SYSTEM WOULD INTENSIFY FURTHER, MOVE WEST-NORTHWESTWARDS AND CROSS ANDAMAN & NICOBAR ISLANDS, CLOSE TO PORT BLAIR AROUND EARLY MORNING OF TODAY, THE 25TH NOVEMBER 2013. IT WOULD THEN EMERGE INTO SOUTHEAST BAY OF BENGAL, INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM. IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN SEA, ANDAMAN & NICOBAR ISLANDS AND ADJOINING BAY OF BENGAL BETWEEN LATITUDE 9.0°N TO 15.0°N & LONGITUDE 89.0°E TO 97.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -87°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
24-11-2013/1800	11.5/93.0	80-90 GUSTING TO 100	CYCLONIC STORM
25-11-2013/0000	12.0/92.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
25-11-2013/0600	12.4/91.3	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.8/90.6	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
25-11-2013/1800	13.0/89.8	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.3/89.1	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/87.6	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/86.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.4/84.5	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.2/83.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.2/81.5	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.0/80.5	80-90 GUSTING TO 100	CYCLONIC STORM
29-11-2013/1200	19.0/79.5	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

LATEST OCEANSAT-II DATA INDICATES THE CYCLONIC CIRCULATION OVER THE REGION AND ASSOCIATED WIND SPEED TO BE ABOUT 40-45 KNOTS TO THE NORTH AND SOUTHEAST SECTOR AND 35-40 KNOTS TO THE SOUTHWEST SECTOR OF THE SYSTEM. A BUOY

LOCATED NEAR LATITUDE 10.5°N & LONGITUDE 94.0°E REPORTED MSLP OF 1000.4 HPA AND SURFACE WIND OF 290/27 KTS AT 1200 UTC OF TODAY, THE 24TH NOV 2013. PORT BLAIR REPORTED MSLP OF 1006.0 AND 020/08KTS AT 1200 UTC AND HUT BAY REPORTED MSLP 1004.4 HPA AND VARIABLE WIND 02 KT

THE CYCLONIC STORM ~~±~~EHARqLIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 13°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY REMAINED SAME DURING PAST SIX HRS AND ARE FAVOURABLE FOR INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 25TH NOVEMBER 2013.

**(RANJEET SINGH)
SCIENTIST-E**

TOO: 25/0230 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)
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 'LEHAR' ADVISORY NO. SEVEN ISSUED AT 0000 UTC OF 25TH NOVEMBER 2013
BASED ON 2100 UTC CHARTS OF 24TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED NORTHWESTWARD WITH A SPEED OF 15 KM/HR. DURING PAST 6HRS, INTENSIFIED INTO A SEVERE CYCLONIC STORM, CROSSED ANDAMAN AND NICOBAR ISLANDS, CLOSE TO PORT BLAIR IN THE EARLY MORNING AND LAY CENTRED AT 0000 UTC OF TODAY, THE 25TH NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.0°N AND LONGITUDE 92.5°E, CLOSE TO PORT BLAIR, 1300KM EAST-SOUTHEAST OF MACHILLIPATNAM, 1230 KM EAST-SOUTHEAST OF KAKINADA AND 1140KM OF KALINGAPATNAM. THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM(43185) AND KALINGAPATNAM (43105) NEAR KAKINADA(43189) AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS EMBEDDED WITH INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN SEA, ANDAMAN & NICOBAR ISLANDS AND ADJOINING BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 15.5°N & LONGITUDE 90.0°E TO 95.0°E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85°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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND SPEED 110-120 KMPH GUSTING TO 130 KMPH AT THE TIME OF LANDFALL

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
25-11-2013/0000	12.0/92.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/0600	12.4/91.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.7/91.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
25-11-2013/1800	13.0/89.3	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.3/88.6	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/87.2	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/85.6	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.6/84.2	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.6/83.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.6/81.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.8/80.6	80-90 GUSTING TO 100	CYCLONIC STORM
29-11-2013/1200	19.8/80.0	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

THE CYCLONIC STORM \pm EHARqLIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 15⁰N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29⁰C.THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 25TH NONEMBER 2013.

**(M. MOHAPATRA)
SCIENTIST-E**

TOO: 25/0900 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

(MODIFIED)

TROPICAL STORM 'LEHAR' ADVISORY NO. EIGHT ISSUED AT 0300 UTC OF 25TH NOVEMBER 2013
BASED ON 0000 UTC CHARTS OF 25TH NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER ANDAMAN SEA MOVED NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST 6HRS, INTENSIFIED INTO A SEVERE CYCLONIC STORM, CROSSED ANDAMAN AND NICOBAR ISLANDS, CLOSE TO PORT BLAIR IN THE EARLY MORNING AND LAY CENTRED AT 0000 UTC OF TODAY, THE 25TH NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.0°N AND LONGITUDE 92.5°E, CLOSE TO PORT BLAIR, 1300KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 1230 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 1140KM OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM (43185) AND KALINGAPATNAM (43105) NEAR KAKINADA (43189) AROUND 28TH NOVEMBER NOON.

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 ANDAMAN SEA, ANDAMAN & NICOBAR ISLANDS AND ADJOINING BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 15.5°N & LONGITUDE 90.0°E TO 95.0°E AND ANDAMAN 7 NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85°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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND SPEED OF 110-120 KMPH GUSTING TO 130 KMPH AT THE TIME OF LANDFALL.

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
25-11-2013/0000	12.0/92.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/0600	12.4/91.8	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.7/91.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
25-11-2013/1800	13.0/89.3	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.3/88.6	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/87.2	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/85.6	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.6/84.2	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.6/83.0	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.6/81.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.8/80.6	80-90 GUSTING TO 100	CYCLONIC STORM
29-11-2013/1200	19.8/80.0	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

THE CYCLONIC STORM ~~±EHAR~~LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 15°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C.THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. CURRENT FORECAST IS BASED ON CONSENSUS NWP AND SYNOPTIC ANALYSIS.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 25TH NONEMBER 2013.

**(M.MOHAPATRA)
SCIENTIST-E**

TOO: 25/1020 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 'LEHAR' ADVISORY NO. ELEVEN ISSUED AT 1200 UTC OF 25TH NOVEMBER 2013
BASED ON 0900 UTC CHARTS OF 25TH NOVEMBER 2013.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY DURING PAST 3 HRS AND LAY CENTRED AT 0900 HRS UTC OF TODAY, THE 25TH NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.0°N AND LONGITUDE 91.5°E, ABOUT 205 KM WEST-NORTHWEST OF PORT BLAIR, 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 1060 KM EAST-SOUTHEAST OF KAKINADA AND 980 KM SOUTHEAST OF KALINGAPATNAM. THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 18.0°N & LONGITUDE 88.0°E TO 95.0°E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85°C. THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST(CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND SPEED OF 22 KNOTS AND MSLP OF 996.5HPA.

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
25-11-2013/0900	12.0/91.5	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1200	12.8/90.1	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
25-11-2013/1800	13.2/89.3	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/0000	13.6/88.6	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	14.2/87.0	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	14.8/85.5	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	15.8/83.8	170-180 GUSTING TO 195	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	16.6/82.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	17.6/81.1	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	18.8/80.0	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/0600	19.8/79.9	50-60 GUSTING TO 70	DEEP DEPRESSION
29-11-2013/1800	21.0/80.0	30-40 GUSTING TO 50	LOW

REMARKS:

THE CYCLONIC STORM ~~±EHAR~~LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 15°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THERE IS LARGE CONSENSUS AMONG THE NWP MODELS WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 72 HOURS. AFTER 72 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MIDLATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH, EXCLUDING THE GUIDENCE FROM THOSSE MODELS SUGGESTING SHARP RECURVATURE. HOWEVER CONSEDERING THE POSSIBLE IMPACT OF MIDLATITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 58°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 72 HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 25TH NOVEMBER 2013.

(M.MOHAPATRA)

SCIENTIST-E

TOO: 25/1730 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 'LEHAR' ADVISORY NO.TWELVE ISSUED AT 1500 UTC OF 25TH NOVEMBER 2013
BASED ON 0900 UTC CHARTS of 25TH NOVEMBER 2013.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS DURING PAST 6 HRS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 25TH NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 9.0°N AND LONGITUDE 88.0°E, ABOUT 200 KM WEST-NORTHWEST OF PORT BLAIR, 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM, 1050 KM EAST-SOUTHEAST OF KAKINADA AND 980 KM SOUTHEAST OF KALINGAPATNAM. THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28TH NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.0°N & LONGITUDE 88.0°E TO 94.0°E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -90°C. THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST(CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND OF 200/17 KNOTS AND MSLP OF 998.8 HPA at 1200 UTC OF 25TH NOVEMBER 2013.

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
25-11-2013/1200	12.5/91.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
25-11-2013/1800	12.8/90.3	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
26-11-2013/0000	13.1/89.6	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	13.4/88.8	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.8/88.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	14.6/86.2	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	15.4/84.6	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	16.4/83.2	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	17.4/81.8	160-170 GUSTING TO 190	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	18.4/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1200	19.4/80.6	50-60 GUSTING TO 70	DEEP DEPRESSION
30-11-2013/0000	20.6/80.8	30-40 GUSTING TO 50	LOW

REMARKS:

THE CYCLONIC STORM ~~±~~EHAR~~q~~LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 72 HOURS. AFTER 72 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MIDLATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH.HOWEVER CONSEDERING THE POSSIBLE IMPACT OF MIDLATTITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 60°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 72 HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 26TH NOVEMBER 2013.

**(M.MOHAPATRA)
SCIENTIST-E**

TOO: 25/2030 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)
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 'LEHAR' ADVISORY NO.FOURTEEN ISSUED AT 2100 UTC OF **25 NOVEMBER 2013** BASED ON 1800 UTC CHARTS of **25 NOVEMBER 2013**.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1800 UTC OF TODAY, THE 25 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 91.0° E, ABOUT 200 KM WEST-NORTHWEST OF PORT BLAIR (43333), 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 1050 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 980 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.5°N & LONGITUDE 87.5° N TO 93.5° E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -90°C.THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST (CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTH OF SYSTEM CENTRE.

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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND OF 200/17 KNOTS AND MSLP OF 1003.7 HPA at 1800 UTC OF 25 NOVEMBER 2013.

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
25-11-2013/1800	12.5/91.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
26-11-2013/0000	13.0/89.9	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
26-11-2013/0600	13.5/88.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	14.0/87.6	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	14.6/86.2	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	15.3/84.9	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	16.0/83.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.7/82.7	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.5/81.2	160-170 GUSTING TO 190	VERY SEVERE CYCLONIC STORM
29-11-2013/0600	18.9/80.2	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1800	19.0/80.0	50-60 GUSTING TO 70	DEEP DEPRESSION
30-11-2013/0600	20.8/79.3	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

THE CYCLONIC STORM LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 72 HOURS. AFTER 72 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSEDERING THE POSSIBLE IMPACT OF MID LATTITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 60°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 72 HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 26 NOVEMBER 2013.

(CHARAN SINGH)
SCIENTIST-E

TOO: 26/0200 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 'LEHAR' ADVISORY NO.FOURTEEN ISSUED AT 2100 UTC OF **25 NOVEMBER 2013** BASED ON 1800 UTC CHARTS of **25 NOVEMBER 2013**.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1800 UTC OF TODAY, THE 25 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 91.0° E, ABOUT 200 KM WEST-NORTHWEST OF PORT BLAIR (43333), 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 1050 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 980 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY INTO A VERY SEVERE CYCLONIC STORM AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 095°N TO 15.5°N & LONGITUDE 88.0° N TO 935° E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -91°C.THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST (CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTH OF SYSTEM CENTRE.

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. PORT BLAIR REPORTED MAXIMUM SUSTAINED WIND OF 200/17 KNOTS AND MSLP OF 1003.7 HPA at 1800 UTC OF 25 NOVEMBER 2013.

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
25-11-2013/1800	12.5/91.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
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26-11-2013/0600	13.5/88.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
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26-11-2013/1800	14.6/86.2	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	15.3/84.9	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	16.0/83.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.7/82.7	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.5/81.2	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
29-11-2013/0600	18.9/80.2	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1800	19.0/80.0	50-60 GUSTING TO 70	DEEP DEPRESSION
30-11-2013/0600	20.2/79.3	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

THE CYCLONIC STORM ~~±~~EHAR~~q~~LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16⁰N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29⁰C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 72 HOURS. AFTER 72 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONESDERING THE POSSIBLE IMPACT OF MID LATTITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 60°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 72 HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 26 NOVEMBER 2013.

(CHARAN SINGH)
SCIENTIST-E

TOO: 26/0200 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)
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METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM 'LEHAR' ADVISORY NO. FIFTEEN ISSUED AT 0000 UTC OF **26 NOVEMBER 2013**
BASED ON 2100 UTC CHARTS of **25 NOVEMBER 2013**.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND INTENSIFIED INTO A VERY SEVERE CYCLONIC STORM, LAY CENTRED AT 2100 UTC OF THE 25 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 91.0° E, ABOUT 200 KM WEST-NORTHWEST OF PORT BLAIR (43333), 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 1050 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 980 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.5°N & LONGITUDE 87.5° N TO 93.5° E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST (CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTH OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS GUSTING TO 70 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 984 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
25-11-2013/2100	12.5/91.0	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0300	13.0/89.9	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0900	13.5/88.7	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/1500	14.0/87.6	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/2100	14.6/86.2	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0900	15.2/84.9	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/2100	15.8/83.6	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0900	16.7/82.4	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/2100	17.3/81.6	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
29-11-2013/0900	18.1/80.8	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/2100	18.9/80.0	50-60 GUSTING TO 70	DEEP DEPRESSION
30-11-2013/0300	19.6/80.0	40-50 GUSTING TO 60	DEPRESSION

REMARKS:

THE CYCLONIC STORM LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 60 HOURS. AFTER 60 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONESDERING THE POSSIBLE IMPACT OF MID LATTITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 60°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 60HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 26 NOVEMBER 2013.

(CHARAN SINGH)
SCIENTIST-E

TOO: 26/0500 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 'LEHAR' ADVISORY NO. SIXTEEN ISSUED AT 0300 UTC OF **26 NOVEMBER 2013**
BASED ON 0000 UTC CHARTS of **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED WESTWARD, LAY CENTRED AT 0000 UTC OF THE 26 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 90.5° E, ABOUT 240 KM WEST-NORTHWEST OF PORT BLAIR (43333), 1100 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 1000 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 940 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER GRADUALLY AND WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER ANDAMAN & NICOBAR ISLANDS, ADJOINING BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.5°N & LONGITUDE 87.5° N TO 93.5° E AND ANDAMAN & NICOBAR ISLANDS. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. THE CONVECTION HAS ORGANIZED INTO A CENTRAL DENSE OVERCAST (CDO) PATTERN. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTH OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 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 982 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
26-11-2013/0000	12.5/90.5	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	12.6/89.5	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.0/88.8	130-140 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.5/87.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.9/87.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.7/85.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/83.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.4/81.4	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
29-11-2013/0000	17.3/80.5	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1200	18.4/80.7	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND

SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION OVER WESTCENTRAL BAY AND ADJOINING INDIA THE CYCLONE HAS TRACKED SLOWLY MORE WESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 24 HRS AND AFTER THAT THE NORTHERLY COMPONENT WOULD INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 60 HOURS. AFTER 60 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSEDERING THE POSSIBLE IMPACT OF MID LATTITUDE WESTERLY TROUGH WHICH ROUGHLY RUNS ALONG LAT 60°N TO THE NORTH OF 25°N, THE FORECAST TRACK BEYOND 60HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 26 NOVEMBER 2013.

(CHARAN SINGH)
SCIENTIST-E

TOO: 26/0830 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)
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 'LEHAR' ADVISORY NO. SEVENTEEN ISSUED AT 0600 UTC OF **26 NOVEMBER 2013** BASED ON 0300 UTC CHARTS OF **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED WESTWARDS WITH A SPEED OF 15 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 0300 HOURS UTC OF TODAY, THE 26 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 90.0° E, ABOUT 300 KM WEST-NORTHWEST OF PORT BLAIR, 1030 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 970 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 900 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.0°N & LONGITUDE 86.0° E TO 92.5° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS AND HAS FURTHER ORGANISED. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/0300	12.5/90.0	125-135 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
26-11-2013/0600	12.6/89.5	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.0/88.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.5/87.9	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.9/87.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.7/85.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/83.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.4/81.4	115-125 GUSTING TO 135	SEVERE CYCLONIC STORM
29-11-2013/0000	17.3/80.5	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1200	18.4/80.7	50-60 GUSTING TO 70	DEEP DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL

RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION OVER WESTCENTRAL BAY AND ADJOINING INDIA THE CYCLONE HAS TRACKED SLOWLY MORE WESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 24 HRS AND AFTER THAT THE NORTHERLY COMPONENT WOULD INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 60 HOURS. AFTER 60 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 26 NOVEMBER 2013.

(M.MOHAPATRA)
SCIENTIST-E

TOO: 26/1200 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 'LEHAR' ADVISORY NO. EIGHTEEN ISSUED AT 0900 UTC OF **26 NOVEMBER 2013** BASED ON 0600 UTC CHARTS of **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED WESTWARDS WITH A SPEED OF 15 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 26 NOVEMBER 2013 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 12.5° N AND LONGITUDE 89.5° E, ABOUT 360 KM WEST-NORTHWEST OF PORT BLAIR (4333), 990 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 920 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 870 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 09.0°N TO 15.0°N & LONGITUDE 86.0° E TO 92.5° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS AND HAS FURTHER ORGANISED. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/0600	12.5/89.5	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.0/88.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.5/87.9	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.9/87.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.3/86.2	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.1/84.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.0/82.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	16.9/80.9	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
29-11-2013/0600	17.8/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1800	18.9/80.7	40-50 GUSTING TO 70	DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE

VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION OVER WESTCENTRAL BAY AND ADJOINING INDIA THE CYCLONE HAS TRACKED MORE WESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 24 HRS AND AFTER THAT THE NORTHERLY COMPONENT WOULD INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 60 HOURS. AFTER 60 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDANCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 26 NOVEMBER 2013.

(M.MOHAPATRA)

SCIENTIST-E

TOO: 26/1430 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 'LEHAR' ADVISORY NO. NINETEEN ISSUED AT 1130 UTC OF **26 NOVEMBER 2013** BASED ON 0900 UTC CHARTS of **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 16 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 26 NOVEMBER 2013 OVER SOUTHEAST & ADJOINING WEST CENTRAL BAY OF BENGAL NEAR LATITUDE 13.0°N AND LONGITUDE 89.0° E, ABOUT 430 KM WEST-NORTHWEST OF PORT BLAIR(43333), 920 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 850 KM EAST-SOUTHEAST OF KAKINADA(43189) AND 780 KM SOUTHEAST OF KALINGAPATNAM(43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 16.0°N & LONGITUDE 86.0° N TO 91.5° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS AND HAS FURTHER ORGANISED. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/0900	13.0/89.0	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26-11-2013/1200	13.2/88.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.5/87.9	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.9/87.1	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.3/86.2	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.1/84.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.0/82.3	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	16.9/80.9	115-125 GUSTING TO 135	VERY SEVERE CYCLONIC STORM
29-11-2013/0600	17.8/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1800	18.9/80.7	40-50 GUSTING TO 70	DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND

SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. 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 AND 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION OVER WESTCENTRAL BAY AND ADJOINING INDIA THE CYCLONE HAS TRACKED MORE WESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 24 HRS AND AFTER THAT THE NORTHERLY COMPONENT WOULD INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 60 HOURS. AFTER 60 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDANCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 26 NOVEMBER 2013.

(M.MOHAPATRA)
SCIENTIST-E

TOO: 26/1500 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 'LEHAR' ADVISORY NO. TWENTY ISSUED AT 1500 UTC OF **26 NOVEMBER 2013**
BASED ON 1200 UTC CHARTS of **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 26 NOVEMBER 2013 OVER SOUTHEAST & ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 13.0° N AND LONGITUDE 88.5° E, ABOUT 480 KM WEST-NORTHWEST OF PORT BLAIR(43333), 860 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 800 KM EAST-SOUTHEAST OF KAKINADA(43189) AND 750 KM SOUTHEAST OF KALINGAPATNAM(43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 16.0°N & LONGITUDE 86.0° N TO 91.5° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/1200	13.0/88.5	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.3/87.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.6/86.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.0/85.8	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.5/84.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/82.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.5/80.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	17.7/79.3	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1200	18.9/78.0	40-50 GUSTING TO 70	DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE

VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 4 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 12 HRS AND AFTER THAT THE NORTHERLY COMPONENT MAY INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO SLIGHT NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 48 HOURS. AFTER 48 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDANCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 26 NOVEMBER 2013.

(M.MOHAPATRA)
SCIENTIST-E

TOO: 26/2030 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)
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 'LEHAR' ADVISORY NO. TWENTYONE ISSUED AT 1800 UTC OF **26 NOVEMBER 2013** BASED ON 1500 UTC CHARTS OF **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1500 UTC OF TODAY, THE 26 NOVEMBER 2013 OVER SOUTHEAST & ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 13.0° N AND LONGITUDE 88.5° E, ABOUT 480 KM WEST-NORTHWEST OF PORT BLAIR(43333), 860 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43815), 800 KM EAST-SOUTHEAST OF KAKINADA(43189) AND 750 KM SOUTHEAST OF KALINGAPATNAM(43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0°N TO 16.0°N & LONGITUDE 86.0° N TO 90.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -89°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM.THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS. THERE IS ALSO A DEEP CONVECTIVE BANDING TO THE NORTHEAST OF SYSTEM CENTRE.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/1500	13.0/88.5	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
26-11-2013/1800	13.3/87.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.6/86.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.0/85.8	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.5/84.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/82.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.5/80.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
29-11-2013/0000	17.7/79.3	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/1200	18.9/78.0	40-50 GUSTING TO 70	DEPRESSION

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND

SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING INTENSIFICATION OF THE SYSTEM. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 4 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 12 HRS AND AFTER THAT THE NORTHERLY COMPONENT MAY INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO SLIGHT NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 48 HOURS. AFTER 48 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDANCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 26 NOVEMBER 2013.

(T.N.Jha)
SCIENTIST-E

TOO: 26/2310 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 'LEHAR' ADVISORY NO. TWENTYTWO ISSUED AT 2100 UTC OF **26 NOVEMBER 2013** BASED ON 1800 UTC CHARTS OF **26 NOVEMBER 2013**.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL MOVED WESTWARD AND LAY CENTRED AT 1800 UTC OF 26 NOVEMBER 2013 OVER THE SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 13.0° N AND LONGITUDE 88.0° E, ABOUT 510 KM WEST-NORTHWEST OF PORT BLAIR(43333), 810 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 750 KM EAST-SOUTHEAST OF KAKINADA(43189) AND 720 KM SOUTHEAST OF KALINGAPATNAM(43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 11.0°N TO 17.0°N & LONGITUDE 85.0° E TO 89.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -87°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 70 KNOTS GUSTING TO 80 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/1800	13.0/88.0	135-145 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.5/87.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.0/86.0	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.5/85.0	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.0/83.9	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.0/81.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.1/80.1	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/0600	18.3/78.6	40-50 GUSTING TO 70	DEPRESSION
29-11-2013/1800	19.5/78.2	20-30 GUSTING TO 40	low

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KNOTS). THE WIND SHEAR IS LIKELY TO FURTHER REDUCE OVER SOUTH AND CENTRAL BAY HELPING

INTENSIFICATION OF THE SYSTEM. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 4 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 12 HRS AND AFTER THAT THE NORTHERLY COMPONENT MAY INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO SLIGHT NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 48 HOURS. AFTER 48 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDANCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 27 NOVEMBER 2013.

(T.N.Jha)
SCIENTIST-E

TOO: 27/0230 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)
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 'LEHAR' ADVISORY NO. TWENTYTHREE ISSUED AT 0000 UTC OF 27 NOVEMBER 2013 BASED ON 2100 UTC CHARTS of 26 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL MOVED WESTWARD AND LAY CENTRED AT 2100 UTC OF 26 NOVEMBER 2013 OVER THE SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL NEAR LATITUDE 13.2° N AND LONGITUDE 87.5° E, ABOUT 590 KM WEST-NORTHWEST OF PORT BLAIR(43333), 760 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185), 700 KM EAST-SOUTHEAST OF KAKINADA(43189) AND 670 KM SOUTHEAST OF KALINGAPATNAM(43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST BETWEEN MACHILLIPATNAM AND KALINGAPATNAM NEAR KAKINADA AROUND 28 NOVEMBER NOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 11.5°N TO 16.0°N & LONGITUDE 84.0° N TO 89.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -93°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS GUSTING TO 85 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
26-11-2013/2100	13.2/87.5	140-150 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
27-11-2013/0000	13.5/87.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	14.0/86.0	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.5/85.0	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	15.0/83.9	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/0600	16.0/81.8	170-180 GUSTING TO 200	VERY SEVERE CYCLONIC STORM
28-11-2013/1800	17.1/80.1	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/0600	18.3/78.6	40-50 GUSTING TO 70	DEPRESSION
29-11-2013/1800	19.5/78.2	20-30 GUSTING TO 40	low

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED TO 5-10 KNOT (LOW) DURING PAST SIX HOURS WHICH IS FAVOURABLE FOR FURTHER INTENSIFICATION. THE MADDEN

JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 4 WITH AMPLITUDE LESS THAN 1. NWP MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 12 HRS AND AFTER THAT THE NORTHERLY COMPONENT MAY INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO SLIGHT NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 48 HOURS. AFTER 48 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 27 NOVEMBER 2013.

(T.N.Jha)
SCIENTIST-E

TOO: 27/0500 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 'LEHAR' ADVISORY NO. TWENTYFOUR ISSUED AT 0300 UTC OF 27 NOVEMBER 2013 BASED ON 0000 UTC CHARTS of 27 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER SOUTHEAST AND ADJOINING CENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 0000 UTC OF TODAY, THE 27 NOVEMBER 2013 OVER THE WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL NEAR LATITUDE 13.5° N AND LONGITUDE 87.0° E, ABOUT 650 KM WEST-NORTHWEST OF PORT BLAIR (43333), 700 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185), 640 KM EAST-SOUTHEAST OF KAKINADA (43189) AND 620 KM SOUTHEAST OF KALINGAPATNAM (43105). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AROUND 28 NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 11.0°N TO 16.5°N & LONGITUDE 82.5° N TO 89.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -88°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS GUSTING TO 85 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
27-11-2013/0000	13.5/87.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	13.8/86.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.2/84.8	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	14.7/83.8	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.2/82.6	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.4/80.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
29-11-2013/0000	17.6/78.8	50-60 GUSTING TO 70	DEEP DEPRESSION
29-11-2013/1200	18.8/77.0	20-30 GUSTING TO 40	low

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS INCREASED DURING PAST SIX HRS AND ARE FAVOURABLE FOR FURTHER INTENSIFICATION. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS DECREASED TO 5-10 KNOT (LOW) DURING PAST SIX HOURS WHICH IS FAVOURABLE FOR FURTHER INTENSIFICATION. THE MADDEN JULLIAN OSCILLATION (MJO) INDEX LIES OVER PHASE 4 WITH AMPLITUDE LESS THAN 1. NWP

MODELS SUGGEST THAT MJO WOULD CONTINUE IN PHASE 4 DURING NEXT 5 DAYS WITH AMPLITUDE LESS THAN 1. THESE ARE SUPPORTIVE FOR INTENSIFICATION.

UNDER THE INFLUENCE OF UPPER LEVEL ANTICYCLONIC CIRCULATION THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARD. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS FOR NEXT 12 HRS AND AFTER THAT THE NORTHERLY COMPONENT MAY INCREASE AND THE DIRECTION OF MOVEMENT WOULD GRADUALLY SHIFT FROM WEST-NORTHWEST TO SLIGHT NORTHWEST.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK AND INTENSIFICATION UPTO 48 HOURS. AFTER 48 HOURS THERE IS DIVERGENCE IN THE NWP MODELS TRACK FORECAST GUIDENCE AS A FEW MODELS SUGGEST RECURVATURE OF THE SYSTEM TOWARDS NORTHEAST DIRECTION, UNDER THE INFLUENCE OF THE EXPECTED MID LATITUDE WESTERLY TROUGH OVER NORTH INDIA. THE NWP MODELS SUGGEST WEST-NORTHWESTWARD TO NORTHWESTWARD MOVEMENT AND INTENSIFICATION OF THE SYSTEM DURING THIS PERIOD. HOWEVER SOME MODELS SUGGEST SLIGHT WEAKENING OF SYSTEM BEFORE LANDFALL OVER ANDHRA PRADESH. HOWEVER CONSIDERING THE POSSIBLE IMPACT OF MID-LATTITUDE WESTERLY TROUGH, THE FORECAST TRACK BEYOND 48-HOURS INCREASES THE NORTHERLY COMPONENT.

THE NEXT BULLETIN WILL BE ISSUED AT 0600 UTC OF 27 NOVEMBER 2013.

(T.N.Jha)
SCIENTIST-E

TOO: 27/0930 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 'LEHAR' ADVISORY NO. TWENTYFIVE ISSUED AT 0600 UTC OF 27 NOVEMBER 2013 BASED ON 0300 UTC CHARTS OF 27 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 27TH NOVEMBER 2013 OVER THE WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL NEAR LATITUDE 13.5° N AND LONGITUDE 86.5° E, ABOUT 650 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185) AND 600 KM EAST-SOUTHEAST OF KAKINADA (43189). THE SYSTEM WOULD INTENSIFY FURTHER AND MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM (43185) AROUND 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 11.0°N TO 16.5°N & LONGITUDE 82.5° N TO 89.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -88°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS GUSTING TO 85 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
27-11-2013/0300	13.5/86.5	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/0600	13.8/86.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.2/84.8	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	14.7/83.8	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.2/82.6	150-160 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.4/80.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
29-11-2013/0000	17.6/78.8	50-60 GUSTING TO 70	DEEP DEPRESSION
29-11-2013/1200	18.8/77.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS REMAINED SAME DURING PAST SIX HRS. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KTS). UNDER THE INFLUENCE OF UPPER LEVEL RIDGE TO THE NORTH OF

THE SYSTEM. THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARDS. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS TILL LANDFALL.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK. THE FORECAST TRACK AND INTENSITY IS BASED ON CONSENSUS NWP AND SYNOPTIC GUIDANCE.

THE NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 27 NOVEMBER 2013.

(M.Mohapatra)
SCIENTIST-E

TOO: 27/1200 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
(MODIFIED)

TROPICAL STORM 'LEHAR' ADVISORY NO. TWENTYSIX ISSUED AT 0900 UTC OF 27 NOVEMBER 2013 BASED ON 0600 UTC CHARTS OF 27 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 27TH NOVEMBER 2013 OVER THE WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL NEAR LATITUDE 14.0° N AND LONGITUDE 86.0° E, ABOUT 570 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185) AND 510 KM SOUTHEAST OF KAKINADA (43189). IT WOULD MOVE WEST-NORTHWESTWARDS AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM (43185) AROUND 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.0°N & LONGITUDE 81.5° E TO 88.0° E. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -88°C. CONVECTION HAS INCREASED OVER SOUTH OF THE SYSTEM. THE CENTRAL DENSE OVERCAST (CDO) PATTERN PERSISTS.

MAXIMUM SUSTAINED SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS GUSTING TO 85 KNOTS AROUND THE SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 982 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
27-11-2013/0600	14.0/86.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.3/85.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
27-11-2013/1800	14.7/83.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
28-11-2013/0000	15.2/82.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
28-11-2013/1200	16.4/80.6	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
29-11-2013/0000	17.6/78.8	50-60 GUSTING TO 70	DEEP DEPRESSION
29-11-2013/1200	18.8/77.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS REMAINED SAME DURING PAST SIX HRS. THE SEA SURFACE TEMPERATURE IS ABOUT 28-29°C. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS LOW TO MODERATE (10-20 KTS). UNDER THE INFLUENCE OF UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM. THE CYCLONE HAS TRACKED MORE WESTNORTHWESTWARDS. THE SYSTEM WOULD MOVE WEST-NORTHWESTWARDS TILL LANDFALL.

AS THE SYSTEM WOULD COME NEARER ON 28TH NOVEMBER NEAR ANDHRAPRADESH COAST, IT WOULD EXPERIENCE COLDER SST AND ALSO THERE IS A

POSSIBILITY OF INCREASE IN WIND SHEAR. ALL THESE MAY LEAD TO SLIGHT WEAKENING OF THE SYSTEM BEFORE LANDFALL AND RAPID WEAKENING AFTER THE LANDFALL.

THE CONSENSUS AMONG THE NWP MODELS HAS INCREASED WITH RESPECT TO TRACK. THE FORECAST TRACK AND INTENSITY IS BASED ON CONSENSUS NWP AND SYNOPTIC GUIDANCE.

THE NEXT BULLETIN WILL BE ISSUED AT 1200 UTC OF 27TH NOVEMBER 2013.

(M.Mohapatra)

SCIENTIST-E

TOO: 27/1400 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 'LEHAR' ADVISORY NO. TWENTYSEVEN ISSUED AT 1200 UTC OF 27 NOVEMBER 2013 BASED ON 0900 UTC CHARTS OF 27 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 27TH NOVEMBER 2013 OVER THE WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL NEAR LATITUDE 14.0° N AND LONGITUDE 85.5° E, ABOUT 520 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185) AND 470 KM SOUTHEAST OF KAKINADA (43189). IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN GRADUALLY AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM (43185) AS A CYCLONIC STORM AROUND 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 4.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.0°N & LONGITUDE 81.0° N TO 88.0° E. CONVECTION HAS DECREASED RAPIDLY DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -65°C. THE LATEST SCATTEROMETRY OBSERVATIONS ALSO INDICATE WEAKENING IN THE WIND FIELD.

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
27-11-2013/0900	14.0/85.5	120-130 GUSTING TO 140	VERY SEVERE CYCLONIC STORM
27-11-2013/1200	14.5/85.0	110-120 GUSTING TO 130	SEVERE CYCLONIC STORM
27-11-2013/1800	15.0/83.8	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/82.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-11-2013/0600	16.1/81.6	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/1800	17.4/79.6	55-65 GUSTING TO 75	DEEP DEPRESSION
29-11-2013/0600	18.7/77.6	20-30 GUSTING TO 40	LOW

REMARKS:

THE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS SIGNIFICANTLY DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS ALSO INCREASED MARGINALLY BECOMING

MODERATE (15-20 KTS). THE CYCLONE HAS ENTERED INTO A RELATIVELY COLDER SEA AREA, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM INDIA INTO THE PERIPHERY OF THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE VERY SEVERE CYCLONE SHOWS DEGENERATION IN INTENSITY. AS THE SYSTEM IS EXPECTED TO MOVE OVER THE COLDER AREA FURTHER NEARER TO THE COAST AND THERE IS POSSIBILITY OF INCREASE IN VERTICAL WIND SHEAR AND ENTRAINING DRY AND COLD AIR, THE SYSTEM WOULD WEAKEN GRADUALLY. DUE TO STRENGTHENING OF THE UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM, THE NORTHERLY COMPONENT OF THE MOVEMENT IS EXPECTED TO INCREASE DURING NEXT 24 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1500 UTC OF 27TH NOVEMBER 2013.

(M.Mohapatra)
SCIENTIST-E

TOO: 27/1700 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 'LEHAR' ADVISORY NO. TWENTYEIGHT ISSUED AT 1500 UTC OF 27 NOVEMBER 2013 BASED ON 1200 UTC CHARTS OF 27 NOVEMBER 2013.

THE VERY SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL AND ADJOINING SOUTH BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS, WEAKENED INTO A SEVERE CYCLONIC STORM AND LAY CENTRED AT 1200 UTC OF TODAY, THE 27TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.5° N AND LONGITUDE 85.0° E, ABOUT 450 KM EAST-SOUTHEAST OF MACHILLIPATNAM AND 400 KM SOUTHEAST OF KAKINADA. IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AS A CYCLONIC STORM AROUND 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.0°N & LONGITUDE 81.0° N TO 88.0° E. CONVECTION HAS FURTHER DECREASED DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -65°C. THE LATEST SCATTEROMETRY OBSERVATIONS AND BUOYS ALSO INDICATE WEAKENING IN THE WIND FIELD. 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
27-11-2013/1200	14.5/85.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27-11-2013/1800	15.0/83.8	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-11-2013/0000	15.5/82.6	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0600	16.1/81.6	70-80 GUSTING TO 90	CYCLONIC STORM
28-11-2013/1200	16.6/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/0000	17.9/78.6	45-50 GUSTING TO 60	DEPRESSION
29-11-2013/1200	19.2/77.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE SEVERE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS SIGNIFICANTLY DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS ALSO INCREASED MARGINALLY BECOMING MODERATE (15-20 KTS). THE CYCLONE HAS ENTERED INTO A RELATIVELY COLDER SEA AREA, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM

INDIA INTO THE PERIPHERY OF THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE SYSTEM SHOWS DEGENERATION IN INTENSITY. AS THE SYSTEM IS EXPECTED TO MOVE OVER THE COLDER AREA FURTHER NEARER TO THE COAST AND THERE IS POSSIBILITY OF INCREASE IN VERTICAL WIND SHEAR AND ENTRAINING DRY AND COLD AIR, THE SYSTEM WOULD WEAKEN GRADUALLY. DUE TO STRENGTHENING OF THE UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM, THE NORTHERLY COMPONENT OF THE MOVEMENT IS EXPECTED TO INCREASE DURING NEXT 24 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 1800 UTC OF 27TH NOVEMBER 2013.

(M.Mohapatra)
SCIENTIST-E

TOO: 27/2000 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)
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 'LEHAR' ADVISORY NO. TWENTYNINE ISSUED AT 1800 UTC OF **27 NOVEMBER 2013** BASED ON 1500 UTC CHARTS of **27 NOVEMBER 2013**.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 1500 UTC OF TODAY, THE 27TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.5° N AND LONGITUDE 84.5° E, ABOUT 400 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185) AND 360 KM SOUTHEAST OF KAKINADA(43189). IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AS A CYCLONIC STORM AROUND 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 3.5. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 11.0°N TO 17.5°N & LONGITUDE 81.0° N TO 88.0° E. CONVECTION HAS FURTHER DECREASED DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -70°C. THE LATEST SCATTEROMETRY OBSERVATIONS AND BUOYS ALSO INDICATE WEAKENING IN THE WIND FIELD. 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
27-11-2013/1500	14.5/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
27-11-2013/1800	15.0/83.8	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0000	15.5/82.6	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0600	16.1/81.6	70-80 GUSTING TO 90	CYCLONIC STORM
28-11-2013/1200	16.6/80.6	70-80 GUSTING TO 90	CYCLONIC STORM
29-11-2013/0000	17.9/78.6	45-50 GUSTING TO 60	DEPRESSION
29-11-2013/1200	19.2/77.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE SEVERE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS SIGNIFICANTLY DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS ALSO INCREASED MARGINALLY BECOMING MODERATE (15-20 KTS). THE CYCLONE HAS ENTERED INTO A

RELATIVELY COLDER SEA AREA, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM INDIA INTO THE PERIPHERY OF THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE SYSTEM SHOWS DEGENERATION IN INTENSITY. AS THE SYSTEM IS EXPECTED TO MOVE OVER THE COLDER AREA FURTHER NEARER TO THE COAST AND THERE IS POSSIBILITY OF INCREASE IN VERTICAL WIND SHEAR AND ENTRAINING DRY AND COLD AIR, THE SYSTEM WOULD WEAKEN GRADUALLY. DUE TO STRENGTHENING OF THE UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM, THE NORTHERLY COMPONENT OF THE MOVEMENT IS EXPECTED TO INCREASE DURING NEXT 24 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 2100 UTC OF 27TH NOVEMBER 2013.

(Naresh Kumar)
SCIENTIST-C

TOO: 27/2230 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)
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 'LEHAR' ADVISORY NO. THIRTY ISSUED AT 2100 UTC OF 27 NOVEMBER 2013
BASED ON 1800 UTC CHARTS OF 27 NOVEMBER 2013.

THE SEVERE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS, WEAKENED INTO A CYCLONIC STORM AND LAY CENTRED AT 1800 HOURS IST OF 27TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.0° N AND LONGITUDE 84.0° E, ABOUT 330 KM EAST-SOUTHEAST OF MACHILLIPATNAM AND 280 KM SOUTHEAST OF KAKINADA. IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AS A CYCLONIC STORM AROUND 28TH NOVEMBER AFTERNOON

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 14.0°N TO 17.5°N & LONGITUDE 81.0° E TO 85.0° E. CONVECTION HAS FURTHER DECREASED DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -60°C. THE LATEST SCATTEROMETRY OBSERVATIONS AND BUOYS ALSO INDICATE WEAKENING IN THE WIND FIELD. 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
27-11-2013/1800	15.0/84.0	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0000	15.5/82.6	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0600	16.1/81.6	70-80 GUSTING TO 90	CYCLONIC STORM
28-11-2013/1200	16.6/80.6	60-70 GUSTING TO 90	CYCLONIC STORM
28-11-2013/1800	17.2/79.6	40-50 GUSTING TO 60	DEPRESSION
29-11-2013/0600	18.5/78.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE SEVERE CYCLONIC STORM 'LEHAR' LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 17°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS SIGNIFICANTLY DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS ALSO INCREASED MARGINALLY BECOMING MODERATE (15-20 KTS). THE CYCLONE HAS ENTERED INTO A RELATIVELY COLDER SEA AREA, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM INDIA INTO THE PERIPHERY OF THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE SYSTEM SHOWS DEGENERATION IN INTENSITY. AS THE SYSTEM IS EXPECTED TO MOVE OVER THE COLDER AREA FURTHER NEARER TO THE COAST AND THERE IS POSSIBILITY OF INCREASE

IN VERTICAL WIND SHEAR AND ENTRAINING DRY AND COLD AIR, THE SYSTEM WOULD WEAKEN GRADUALLY. DUE TO STRENGTHENING OF THE UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM, THE NORTHERLY COMPONENT OF THE MOVEMENT IS EXPECTED TO INCREASE DURING NEXT 24 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0000 UTC OF 28TH NOVEMBER 2013.

(Naresh Kumar)
SCIENTIST-C

TOO: 28/0230 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)
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 'LEHAR' ADVISORY NO. THIRTY ONE ISSUED AT 2300 UTC OF 27 NOVEMBER 2013 BASED ON 2100 UTC CHARTS OF 27 NOVEMBER 2013 (MODIFIED).

THE CYCLONIC STORM LEHAR OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARD WITH A SPEED OF 15 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 2100 UTC OF 27TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.0° N AND LONGITUDE 83.5° E, ABOUT 280 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185) AND 250 KM SOUTH-SOUTHEAST OF KAKINADA (43189). IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AS A DEEP DEPRESSION AROUND TODAY, THE 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 3.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 14.0°N TO 17.5°N WEST OF LONGITUDE 84.0° E. CONVECTION HAS FURTHER DECREASED DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -60°C. THE LATEST SCATTEROMETRY OBSERVATIONS AND BUOYS ALSO INDICATE WEAKENING IN THE WIND FIELD. 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
27-11-2013/2100	15.0/83.5	80-90 GUSTING TO 100	CYCLONIC STORM
28-11-2013/0000	15.5/82.6	70-80 GUSTING TO 90	CYCLONIC STORM
28-11-2013/0600	16.1/81.6	65-75 GUSTING TO 85	CYCLONIC STORM
28-11-2013/1200	16.6/80.6	50-60 GUSTING TO 70	DEEP DEPRESSION
28-11-2013/1800	17.2/79.6	40-50 GUSTING TO 60	DEPRESSION
29-11-2013/0600	18.5/78.0	20-30 GUSTING TO 40	LOW

REMARKS:

THE CYCLONIC STORM LEHAR LIES TO THE SOUTH OF THE UPPER TROPOSPHERIC RIDGE WHICH RUNS ALONG 16°N. THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS FURTHER DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS MODERATE (15-20 KTS). THE CYCLONE HAS ENTERED INTO A RELATIVELY COLDER SEA AREA, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM INDIA INTO THE PERIPHERY OF THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE

SYSTEM SHOWS DEGENERATION IN INTENSITY. AS THE SYSTEM IS EXPECTED TO MOVE OVER THE COLDER AREA FURTHER NEARER TO THE COAST AND THERE IS POSSIBILITY OF INCREASE IN VERTICAL WIND SHEAR AND ENTRAINING DRY AND COLD AIR, THE SYSTEM WOULD WEAKEN GRADUALLY. DUE TO STRENGTHENING OF THE UPPER LEVEL RIDGE TO THE NORTH OF THE SYSTEM, THE NORTHERLY COMPONENT OF THE MOVEMENT IS EXPECTED TO INCREASE DURING NEXT 24 HRS.

THE NEXT BULLETIN WILL BE ISSUED AT 0300 UTC OF 28TH NOVEMBER 2013.

(Naresh Kumar)
SCIENTIST-C

TOO: 28/0430 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 'LEHAR' ADVISORY NO. THIRTY TWO ISSUED AT 0300 UTC OF 28 NOVEMBER 2013
BASED ON 0000 UTC CHARTS OF 28 NOVEMBER 2013.

THE CYCLONIC STORM 'LEHAR' OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST SIX HRS AND WEAKENED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0530 HOURS IST OF TODAY, THE 28TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.5° N AND LONGITUDE 82.0° E, ABOUT 120 KM EAST-SOUTHEAST OF MACHILLIPATNAM(43185) AND 160 KM SOUTH OF KAKINADA(43189). IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM AS A DEPRESSION BY TODAY, THE 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 2.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 14.0°N TO 17.5°N WEST OF LONGITUDE 84.0° E. THE CLOUD CONVECTION IS MAINLY CONCENTRATED AROUND THE SYSTEM CENTRE. THE CONVECTION HAS FURTHER DECREASED DURING PAST THREE HOURS WITH RESPECT TO ITS ORGANISATION AND INTENSITY. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -60°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 1000HPA.

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
28-11-2013/0000	15.5/82.0	55-65 GUSTING TO 75	DEEP DEPRESSION
28-11-2013/0600	15.9/81.3	45-55 GUSTING TO 65	DEPRESSION
28-11-2013/1200	16.3/80.3	20-30 GUSTING TO 40	LOW

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY HAS FURTHER DECREASED DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND HAS INCREASED (20 KTS). THE DEEP DEPRESSION LIES OVER COLDER SEA AREA AND CLOSE TO THE COAST, ALSO THERE IS ENTRAINMENT OF DRY AND COLD AIR FROM INDIA INTO THE CYCLONE FIELD. UNDER THESE CIRCUMSTANCES, THE SYSTEM WOULD WEAKEN FURTHER INTO A DEPRESSION DURING NEXT SIX HOURS AND BECOME INSIGNIFICANT DURING SUBSEQUENT 12 HRS.

NEXT BULLETIN WILL BE ISSUED 0600 UTC OF 28 NOVEMBER, 2013.

(M. MOHAPATRA)
SCIENTIST-E

TOO: 28/0830 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)
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 'LEHAR' ADVISORY NO. THIRTY THREE ISSUED AT 0600 UTC OF 28 NOVEMBER 2013 BASED ON 0300 UTC CHARTS OF 28 NOVEMBER 2013.

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED WEST-NORTHWESTWARDS WITH A SPEED OF 20 KMPH DURING PAST SIX HRS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 28TH NOVEMBER 2013 OVER THE WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.7⁰ N AND LONGITUDE 81.7⁰ E, ABOUT 80 KM EAST-SOUTHEAST OF MACHILLIPATNAM (43185). IT WOULD MOVE WEST-NORTHWESTWARDS, WEAKEN FURTHER AND CROSS ANDHRA PRADESH COAST NEAR MACHILLIPATNAM BY TODAY, THE 28TH NOVEMBER AFTERNOON.

ACCORDING TO SATELLITE IMAGERIES, THE CURRENT INTENSITY OF THE SYSTEM IS 2.0. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER WEST CENTRAL BAY OF BENGAL BETWEEN LATITUDE 13.0°N TO 17.0°N & WEST OF LONGITUDE 84.5° E AND COASTAL ANDHRA PRADESH. THE CLOUD CONVECTION IS MAINLY CONCENTRATED IN THE NORTHEAST SECTOR COVERING COASTAL ANDHRA PRADESH. 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 1000HPA.

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
28-11-2013/0300	15.7/81.7	55-65 GUSTING TO 75	DEEP DEPRESSION
28-11-2013/0600	15.9/81.3	50-60 GUSTING TO 70	DEEP DEPRESSION
28-11-2013/1200	16.3/80.3	35-45 GUSTING TO 55	DEPRESSION

REMARKS:

THE LOW LEVEL CONVERGENCE ALONGWITH LOW LEVEL RELATIVE VORTICITY REMAINED SAME DURING PAST SIX HRS. THE VERTICAL WIND SHEAR OF HORIZONTAL WIND IS ABOUT 20 KTS. THE DEEP DEPRESSION LIES OVER COLDER SEA AREA AND CLOSE TO THE COAST. UNDER THESE CIRCUMSTANCES, THE SYSTEM WOULD WEAKEN GRADUALLY AND BECOME INSIGNIFICANT DURING NEXT 24 HRS.

NEXT BULLETIN WILL BE ISSUED AT 0900 UTC OF 28 NOVEMBER, 2013.

(M. MOHAPATRA)
SCIENTIST-E

TOO: 28/1130 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)
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 'LEHAR' ADVISORY NO. THIRTY FOUR ISSUED AT 1200 UTC OF **28 NOVEMBER 2013** BASED ON 0900 UTC CHARTS of **28 NOVEMBER 2013**.

THE DEEP DEPRESSION OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWESTWARDS, WEAKENED INTO A DEPRESSION AND CROSSED ANDHRA PRADESH COAST NEAR LATITUDE 15.9°N AND LONGITUDE 81.1°E (CLOSE TO SOUTH OF MACHILLIPATNAM (43185)) AROUND 0830 UTC OF TODAY. IT LAY CENTRED AT 0900 UTC OF TODAY, THE 28TH NOVEMBER 2013 OVER COASTAL ANDHRA PRADESH NEAR LATITUDE 15.9° N AND LONGITUDE 81.0° E. IT WOULD MOVE WEST-NORTHWESTWARDS AND WEAKEN FURTHER INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS.

ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED MODERATE TO INTENSE CONVECTION IS SEEN OVER WEST CENTRAL BAY OF BENGAL BETWEEN LATITUDE 12.0°N TO 17.5°N & WEST OF LONGITUDE 84.0° E AND COASTAL ANDHRA PRADESH. 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 ALONG AND OFF ANDHRA PRADESH COAST. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1002HPA.

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
28-11-2013/0900	15.9/81.0	45-55 GUSTING TO 65	DEPRESSION
28-11-2013/1200	16.2/80.7	40-50 GUSTING TO 60	DEPRESSION
28-11-2013/1800	16.5/79.6	20-30 GUSTING TO 40	LOW

THIS IS THE LAST BULLETIN IN ASSOCIATION WITH THIS SYSTEM.

(M. MOHAPATRA)
SCIENTIST-E

TOO: 28/1630 HRS IST