भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 25-12-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 25 DECEMBER, 2011 BASED ON 1200 UTC OF 25 DECEMBER, 2011 (.)

LATEST SATELLITE IMAGERY INDICATES THAT A DEPRESSION HAS FORMED OVER SOUTHEAST BAY OF BENGAL AND LAY CENTRED AT 1200 UTC OF TODAY, THE 25TH DECEMBER 2011 NEAR LATITUDE 8.5^{0}N AND LONGITUDE 88.5.^{0}E, ABOUT 1000 KM SOUTHEAST OF CHENNAI (43279), 800 KM EAST OF TRINCOMALEE (43418), 600 KM WEST-SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE INITIALLY NORTH-NORTHWESTWARDS, INTENSIFY INTO A DEEP DEPRESSION AND SUBSEQUENTLY INTO A CYCLONIC STORM DURING NEXT 48 HRS. IT MAY THEN MOVE TOWARDS NORTH TAMIL NADU COAST.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T 1.5.. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C.ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL SOUTH OF LAT 15.5^{0}N EAST OF LONG 82.0^{0}E THE ASSOCIATED CONVECTION HAS INCREASED GRADUALLY WITH RESPECT TO HEIGHT AND ORGANISATION.. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 25 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 1000 HPA. THE SHIP (POSITION NEAR 6.0^{0}N AND 89.5^{0}E) REPORTED MSLP OF 1000.0 HPA WITH WIND OF 230/23 KNOTS. THE 24 HRS PRESSURE TENDENCY IS NEGATIVE AND ABOUT 1 HPA; BUOY (POSITION NEAR 8.0^{0}N AND 89.0^{0}E) REPORTED WIND OF 250/29 KNOTS; BUOY (POSITION NEAR 6.0^{0}N AND 86.0^{0}E) REPORTED MSLP OF 1004.3 HPA

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 10 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE HAS INCREASED DURING PAST 24 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS MODERATE (15-20 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA AND INDIA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION AND SUBSEQUENTLY INTO A CYCLONIC STORM BY NEXT 48 HRS. DYNAMICAL-STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST NORTHWARD/NORTH-NORTHWESTWARD MOVEMENT DURING NEXT 48 HRS AND THEN

WESTWARD/WEST-NORTHWESTWARD MOVEMENT TOWARDS TAMIL NADU COAST. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(M. MOHAPATRA)
SCIENTIST-E

TOO:252100 HRS IST

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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 26-12-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0300 UTC OF 26 DECEMBER, 2011 BASED ON 0000 UTC OF 26 DECEMBER, 2011 (.)

THE DEPRESSION OVER SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS, INTENSIFIED INTO DEEP DEPRESSION, AND LAY CENTRED AT 0000 UTC TODAY, THE 26TH DECEMBER 2011 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 9.5^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 900 KM SOUTHEAST OF CHENNAI (43279), 700 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 600 KM SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS, INTENSIFY INTO A CYCLONIC STORM DURING NEXT 24 HRS. IT IS LIKELY TO MOVE NORTHWESTWARD INITIALLY, THEN WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY EARLY MORNING OF 29TH DECEMBER 2011.
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ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -78^{0}C.ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 6.5^{0}N TO 15.0^{0}N EAST OF LONGITUDE 82.0^{0}E, OVER ANDAMAN & NICOBAR ISLANDS AND ADJOINING ANDAMAN SEA THE ASSOCIATED CONVECTION HAS INCREASED GRADUALLY WITH RESPECT TO HEIGHT AND ORGANISATION.. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.. BUOY (POSITION NEAR 11.0^{0}N AND 86.5^{0}E) REPORTED MSLP 1000 HPAWIND OF 030/33 KNOTS; BUOY (POSITION NEAR 12.5^{0}N AND 86.0^{0}E) REPORTED MSLP OF 1003.9 HPA.

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

DATE/TIME(IUTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
26-12-2011/0000	9.5/87.5	55-65 GUSTING TO 75	DEEP DEPRESSION
26-12-2011/0600	10.0/87.0	55-65 GUSTING TO 75	DEEP DEPRESSION
26-12-2011/1200	10.5/86.5	65-75 GUSTING TO 85	CYCLONIC STORM

26-12-2011/1800	11.0/86.0	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0000	11.5/85.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27-12-2011/1200	12.0/84.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-12-2011/0000	12.5/83.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1200	13.0/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
29-12-2011/0000	13.0/80.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 10 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE HAS INCREASED DURING PAST 24 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS MODERATE (15-20 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA AND INDIA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND THEN WESTWARD/WEST-NORTHWESTWARD MOVEMENT CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY EARLY MORNING OF 29TH DECEMBER 2011. . THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(T N JHA)
DIRECTOR

TOO260900 HRS IST

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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 26-12-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 26 DECEMBER, 2011 BASED ON 0300 UTC OF 26 DECEMBER, 2011 (.)

THE DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY DURING PAST 3 HOURS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 26TH DECEMBER 2011 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 9.5^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 900 KM SOUTHEAST OF CHENNAI (43279), 700 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 600 KM SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS, INTENSIFY INTO A CYCLONIC STORM DURING NEXT 24 HRS. THEN IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE(43329) AND NELLORE(43245) BY EARLY MORNING OF 29TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -78^{0}C.ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 6.5^{0}N TO 15.0^{0}N EAST OF LONGITUDE 82.0^{0}E, OVER ANDAMAN & NICOBAR ISLANDS AND ADJOINING ANDAMAN SEA THE ASSOCIATED CONVECTION HAS INCREASED GRADUALLY WITH RESPECT TO HEIGHT AND ORGANISATION.. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.. BUOY (POSITION NEAR 11.0^{0}N AND 86.5^{0}E) REPORTED MSLP 1000 HPAWIND OF 030/33 KNOTS; BUOY (POSITION NEAR 12.5^{0}N AND 86.0^{0}E) REPORTED MSLP OF 1003.9 HPA.

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

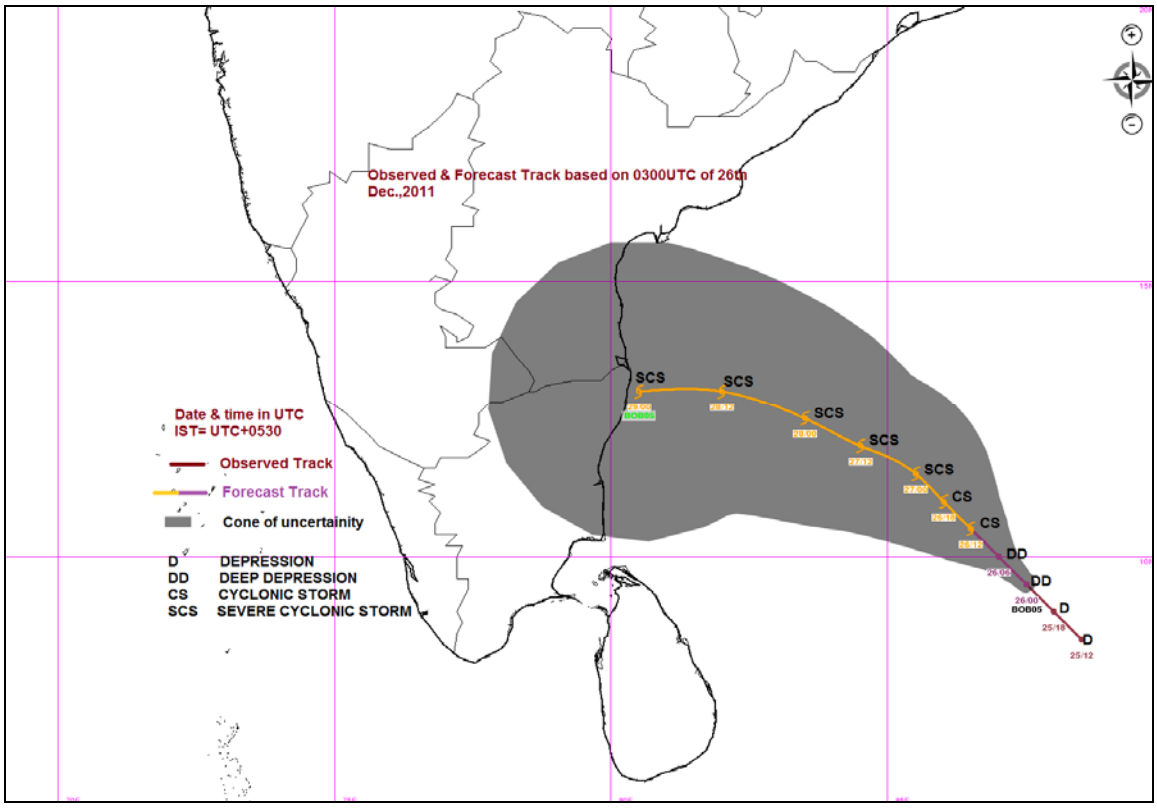
DATE/TIME(IUTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
26-12-2011/0300	9.5/87.5	55-65 GUSTING TO 75	DEEP DEPRESSION
26-12-2011/0600	10.0/87.0	55-65 GUSTING TO 75	DEEP DEPRESSION
26-12-2011/1200	10.5/86.5	65-75 GUSTING TO 85	CYCLONIC STORM
26-12-2011/1800	11.0/86.0	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0000	11.5/85.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27-12-2011/1200	12.0/84.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-12-2011/0000	12.5/83.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1200	13.0/82.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
29-12-2011/0000	13.0/80.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM

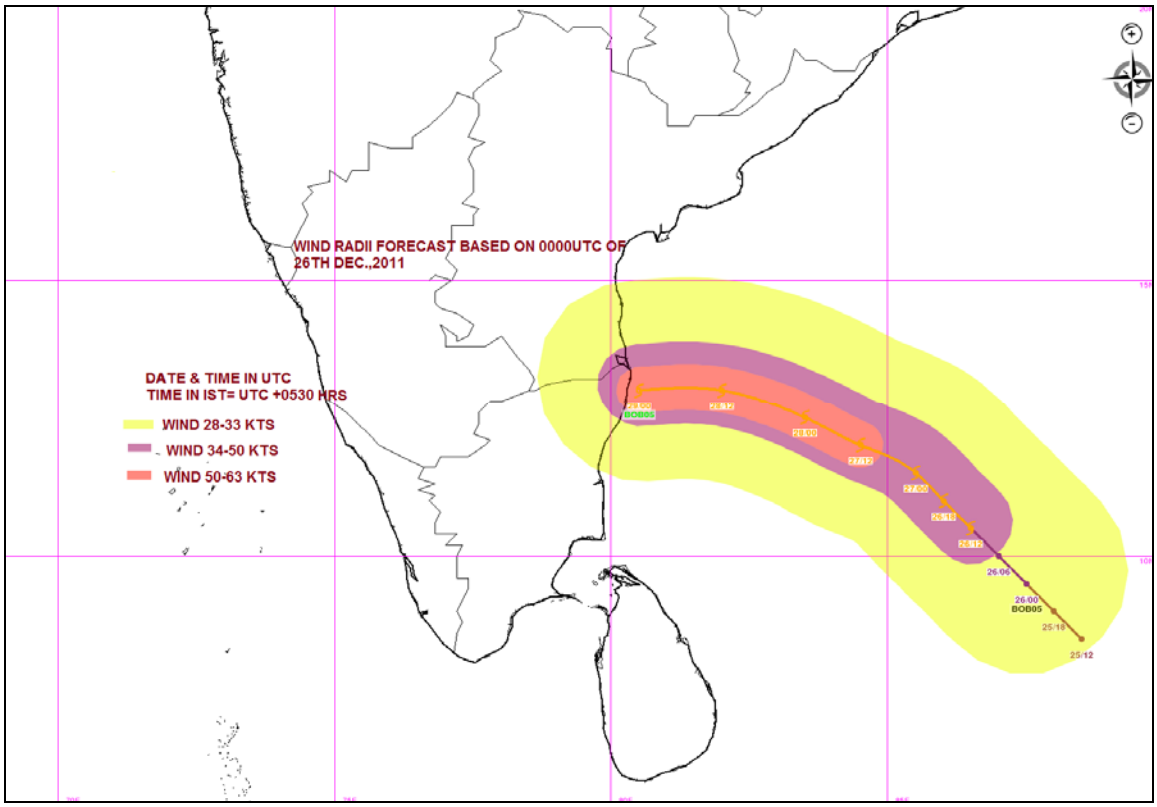
REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 13 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE HAS INCREASED DURING PAST 24 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA AND INDIA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND THEN WESTWARD/WEST-NORTHWESTWARD MOVEMENT CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY EARLY MORNING OF 29TH DECEMBER 2011. . THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO261130 HRS IST


Observed & Forecast Track based on 0300UTC of 26th Dec.,2011
Date & time in UTC
IST= UTC+0530
Observed Track
Forecast Track
Cone of uncertainity
D DEPRESSION
DD DEEP DEPRESSION
CS CYCLONIC STORM
SCS SEVERE CYCLONIC STORM
SCS
SCS
SCS
SCS
SCS
CS
CS
DD
DD
D
D
25/12



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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 26-12-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 26 DECEMBER, 2011 BASED ON 1200 UTC OF 26 DECEMBER, 2011 (.)

THE DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL MOVED FURTHER NORTHWARDS DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 26TH DECEMBER 2011 OVER SOUTHEAST BAY OF BENGAL NEAR LATITUDE 10.5^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 800 KM EAST-SOUTHEAST OF CHENNAI (43279), 700 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 600 KM WEST-SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS, INTENSIFY INTO A CYCLONIC STORM DURING NEXT 24 HRS. THEN IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE(43329) AND NELLORE(43245) BY MORNING OF 30TH DECEMBER 2011.

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ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -80^{0}C.ASSOCIATED BROKEN

LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 7.0^{0}N TO 16.0^{0}N EAST OF LONGITUDE 83.0^{0}E, OVER ANDAMAN & NICOBAR ISLANDS AND ADJOINING ANDAMAN SEA THE ASSOCIATED CONVECTION DOES NOT SHOW ANY SIGNIFICANT CHANGE.. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 30 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 998 HPA.. BUOY (POSITION NEAR 8.0^{0}N AND 89.0^{0}E) REPORTED WIND OF 230/24 KNOTS.

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

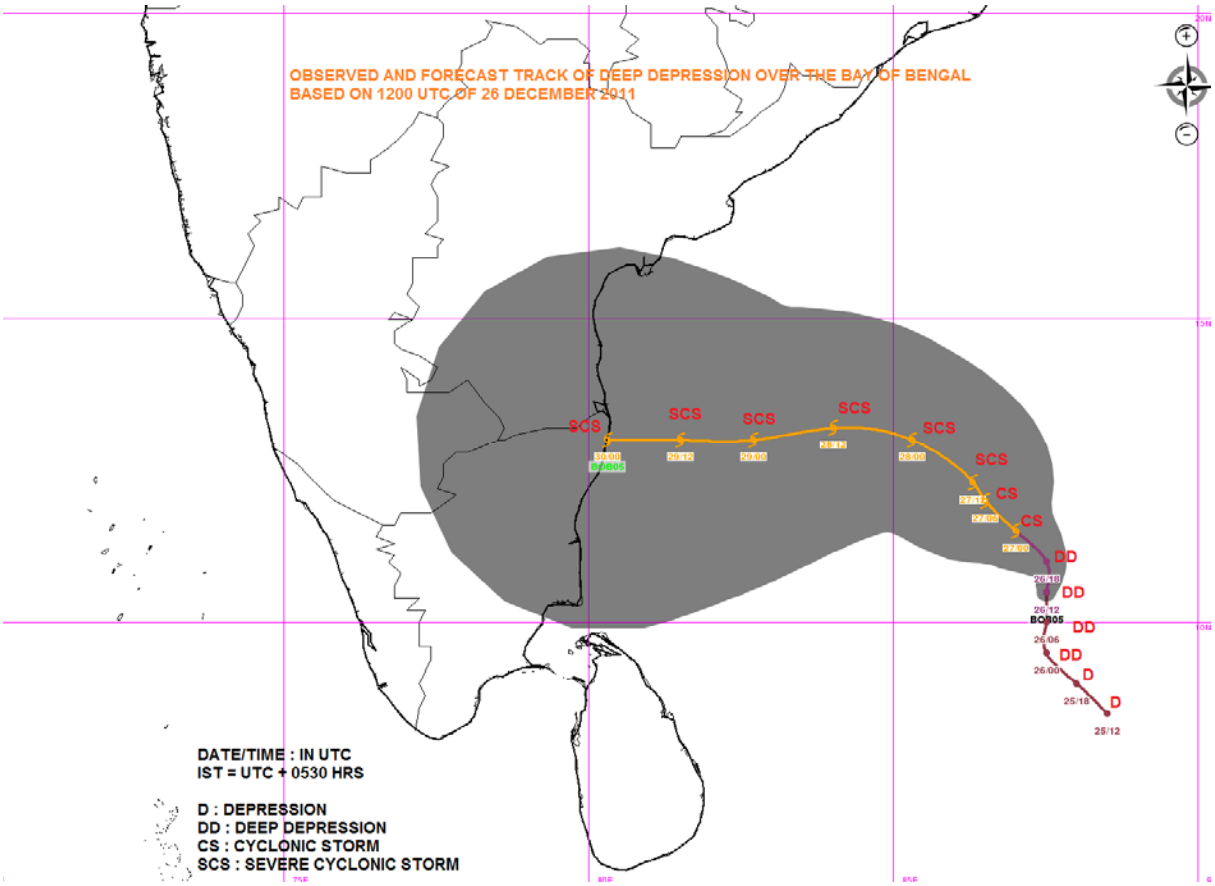
DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
26-12-2011/1200	10.5/87.5	55-65 GUSTING TO 75	DEEP DEPRESSION
26-12-2011/1800	11.0/87.5	55-65 GUSTING TO 75	DEEP DEPRESSION
27-12-2011/0000	11.5/87.0	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0600	12.0/86.5	85-90 GUSTING TO 100	CYCLONIC STORM
27-12-2011/1200	12.3/86.3	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-12-2011/0000	13.0/85.3	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1200	13.2/84.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
29-12-2011/0000	13.0/82.7	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/1200	13.0/81.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

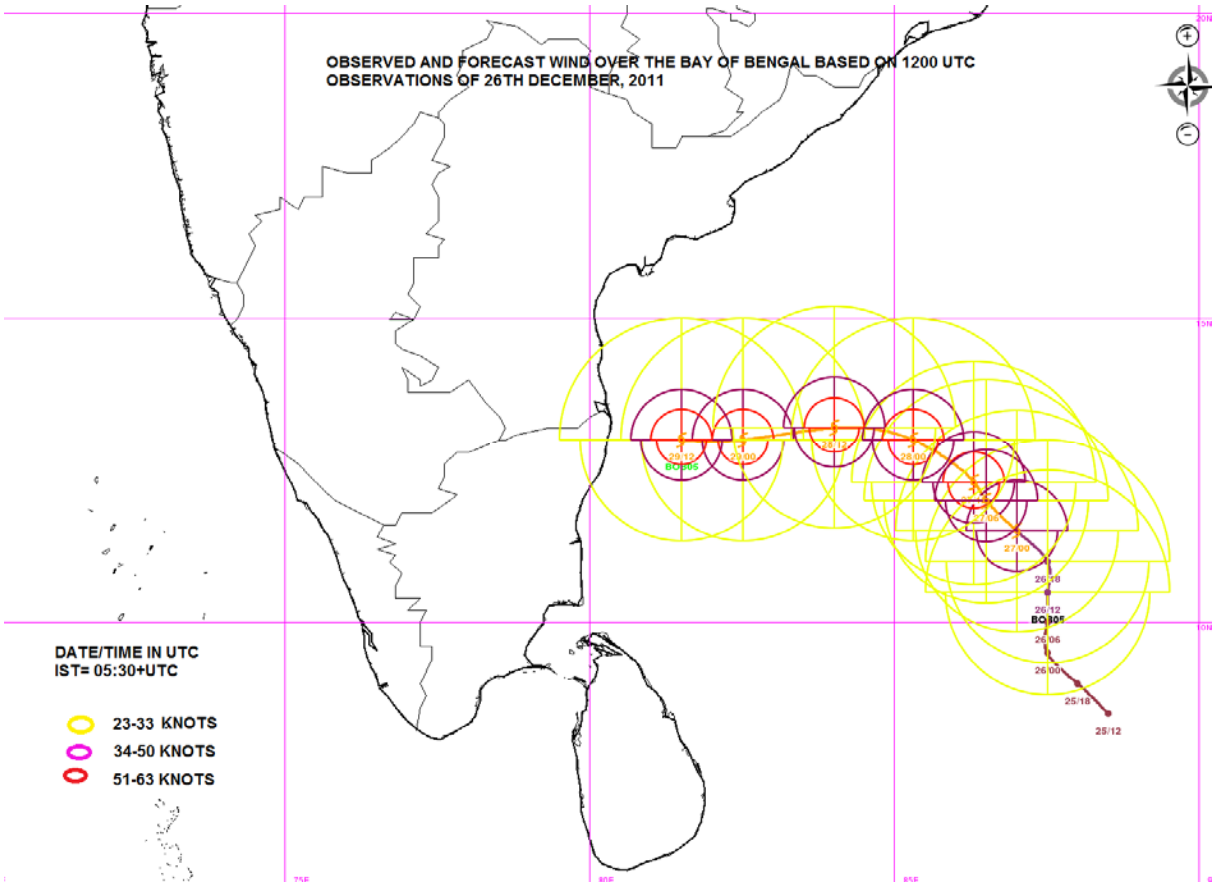
REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 14 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE SHOWS NO CHANGE DURING PAST 12 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA AND INDIA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND THEN WESTWARD/WEST-NORTHWESTWARD MOVEMENT CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY EARLY MORNING OF 30TH DECEMBER 2011. . THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO262030 HRS IST




OBSERVED AND FORECAST WIND OVER THE BAY OF BENGAL BASED ON 1200 UTC
OBSERVATIONS OF 26TH DECEMBER, 2011
DATE/TIME IN UTC
IST= 05:30+UTC
23-33 KNOTS
34-50 KNOTS
51-63 KNOTS
29/12
BOB05
29/00
28/12
28/00
27/18
27/12
27/06
27/00
26/18
26/12
BOB06
26/06
26/00
25/18
25/12

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 27-12-2011 (ADVISORY No.1)

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 2100 UTC OF 26 DECEMBER, 2011 BASED ON 1800 UTC OF 26 DECEMBER, 2011 (.)

THE DEEP DEPRESSION OVER SOUTHEAST BAY OF BENGAL MOVED FURTHER NORTHWARDS AND INTENSIFIED INTO CYCLONIC STORM **'THANE'** AND LAY CENTRED AT 1800 UTC OF YESTERDAY, THE 26TH DECEMBER 2011 NEAR LATITUDE 11.0^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 800 KM EAST-SOUTHEAST OF CHENNAI(43279), 700 KM NORTHEAST OF TRINCOMALEE (43418) AND 550 KM WEST-SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS. THEN IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE(43329) AND NELLORE(43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -90^{0}C.ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 9.0^{0}N TO 16.0^{0}N EAST OF LONGITUDE 82.5^{0}E, OVER ANDAMAN & NICOBAR ISLANDS AND ADJOINING ANDAMAN SEA AND ASSOCIATED CONVECTION HAS INCREASED. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

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

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

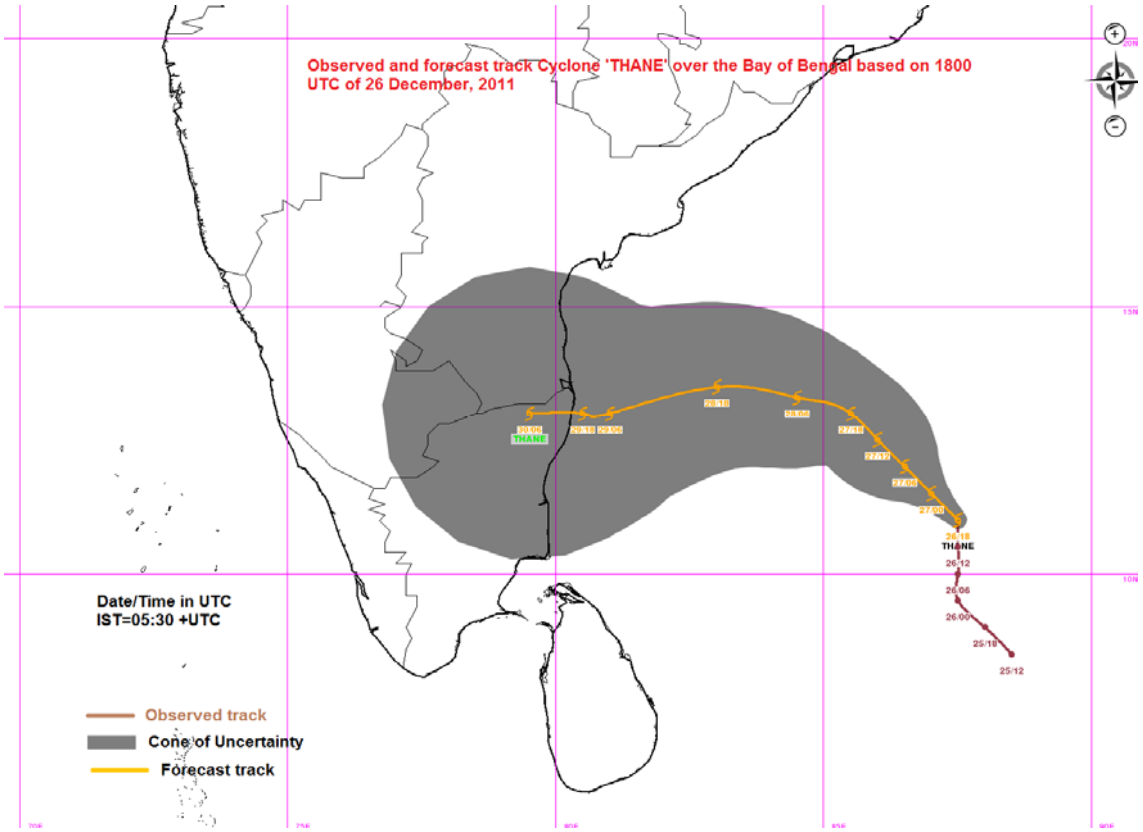
DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
26-12-2011/1800	11.0/87.5	65-75 GUSTING TO 85	CYCLONIC STORM
27-12-2011/0000	11.5/87.0	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0600	12.0/86.5	85-90 GUSTING TO 100	CYCLONIC STORM
27-12-2011/1200	12.5/86.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27-12-2011/1800	13.0/85.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/0600	13.3/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1800	13.5/83.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/0600	13.0/81.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/1800	13.0/80.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

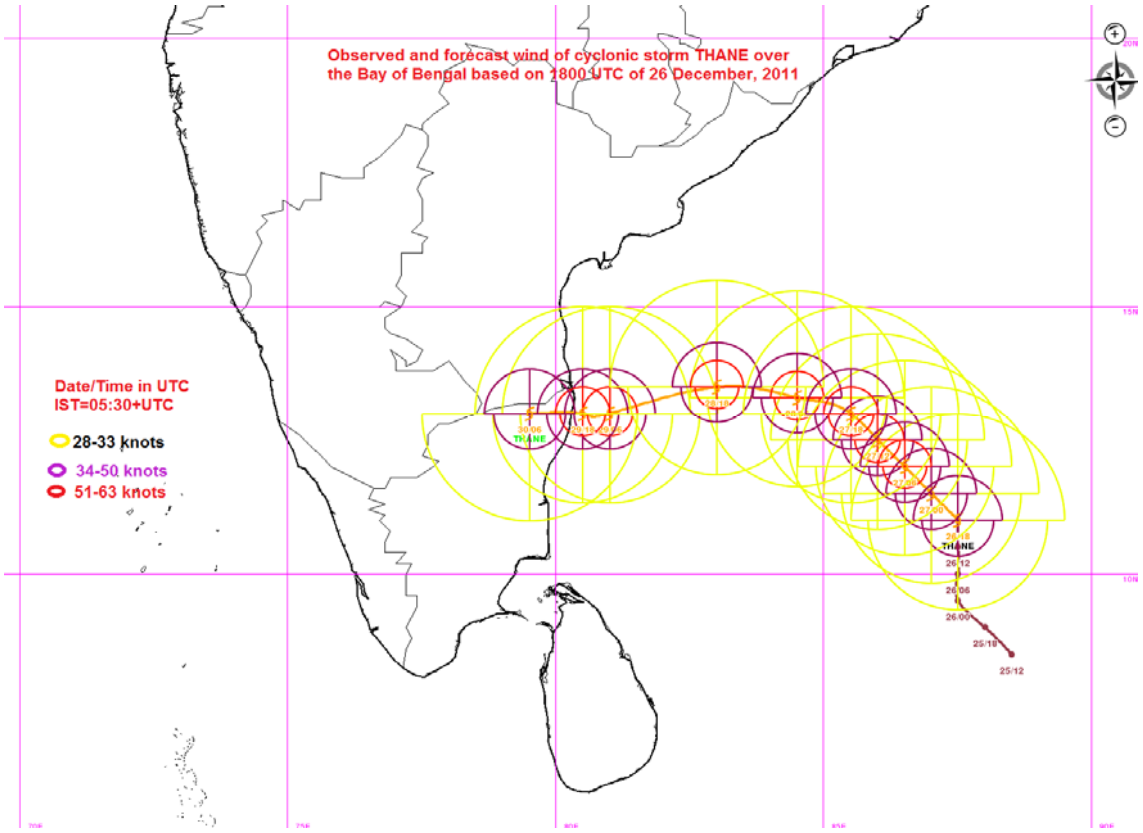
REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND THEN WEST-NORTHWESTWARDS MOVEMENT AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(T. N. JHA)
DIRECTOR

TOO270230 HRS IST


Observed and forecast track Cyclone 'THANE' over the Bay of Bengal based on 1800 UTC of 26 December, 2011
Date/Time in UTC
IST=05:30 +UTC
Observed track
Cone of Uncertainty
Forecast track
THANE
25/12


Observed and forecast wind of cyclonic storm THANE over the Bay of Bengal based on 1800 UTC of 26 December, 2011
Date/Time in UTC
IST=05:30+UTC
28-33 knots
34-50 knots
51-63 knots
THANE
25/12

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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 27-12-2011 (ADVISORY No. 2)

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 2300 UTC OF 26 DECEMBER, 2011 BASED ON 2100 UTC OF 26 DECEMBER, 2011 (.)

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 2100 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 11.0^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 800 KM EAST-SOUTHEAST OF CHENNAI(43279), 700 KM NORTHEAST OF TRINCOMALEE (43418) AND 550 KM WEST-SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS. THEN IT IS LIKELY TO MOVE WEST-NORTHWESTWARDS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE(43329) AND NELLORE(43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -90^{0}C.ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 9.0^{0}N TO 16.0^{0}N EAST OF LONGITUDE 82.5^{0}E, OVER ANDAMAN & NICOBAR ISLANDS AND ADJOINING ANDAMAN SEA AND ASSOCIATED

CONVECTION HAS INCREASED. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION.

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

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

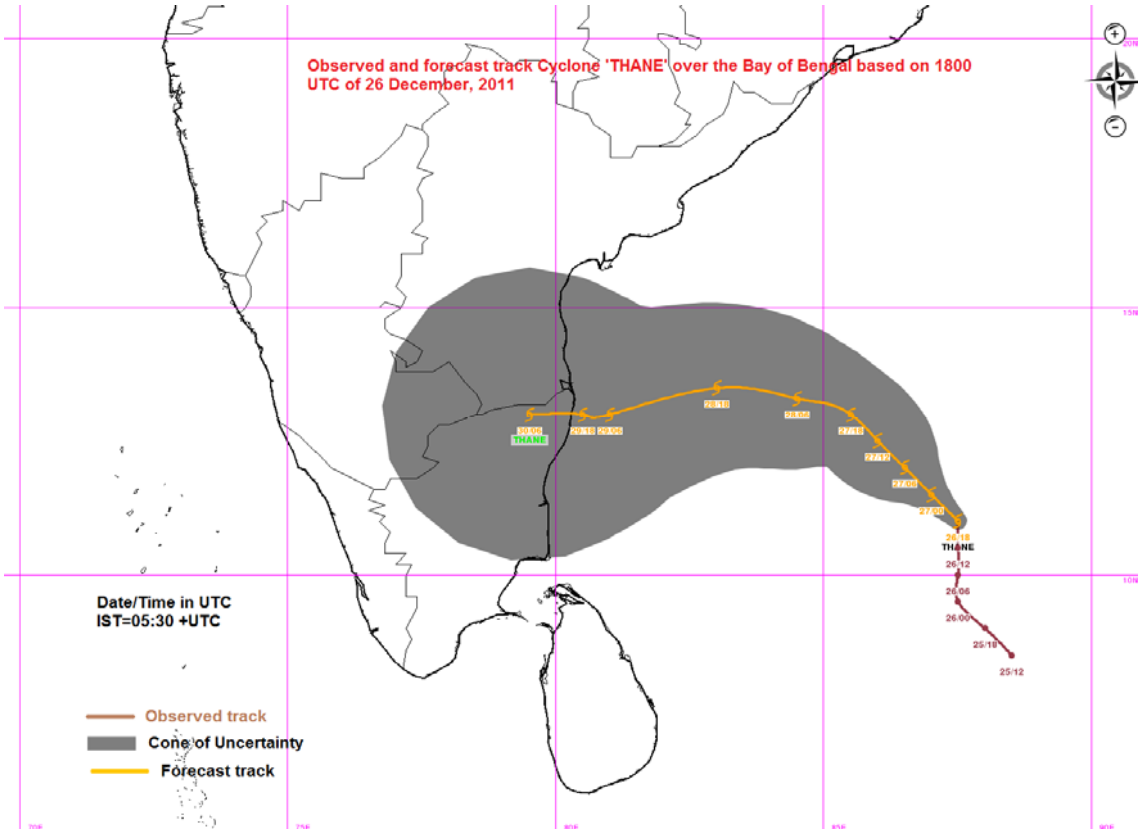
DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
26-12-2011/2100	11.0/87.5	65-75 GUSTING TO 85	CYCLONIC STORM
27-12-2011/0000	11.5/87.0	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0600	12.0/86.5	85-90 GUSTING TO 100	CYCLONIC STORM
27-12-2011/1200	12.5/86.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
27-12-2011/1800	13.0/85.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/0600	13.3/84.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1800	13.5/83.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/0600	13.0/81.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/1800	13.0/80.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

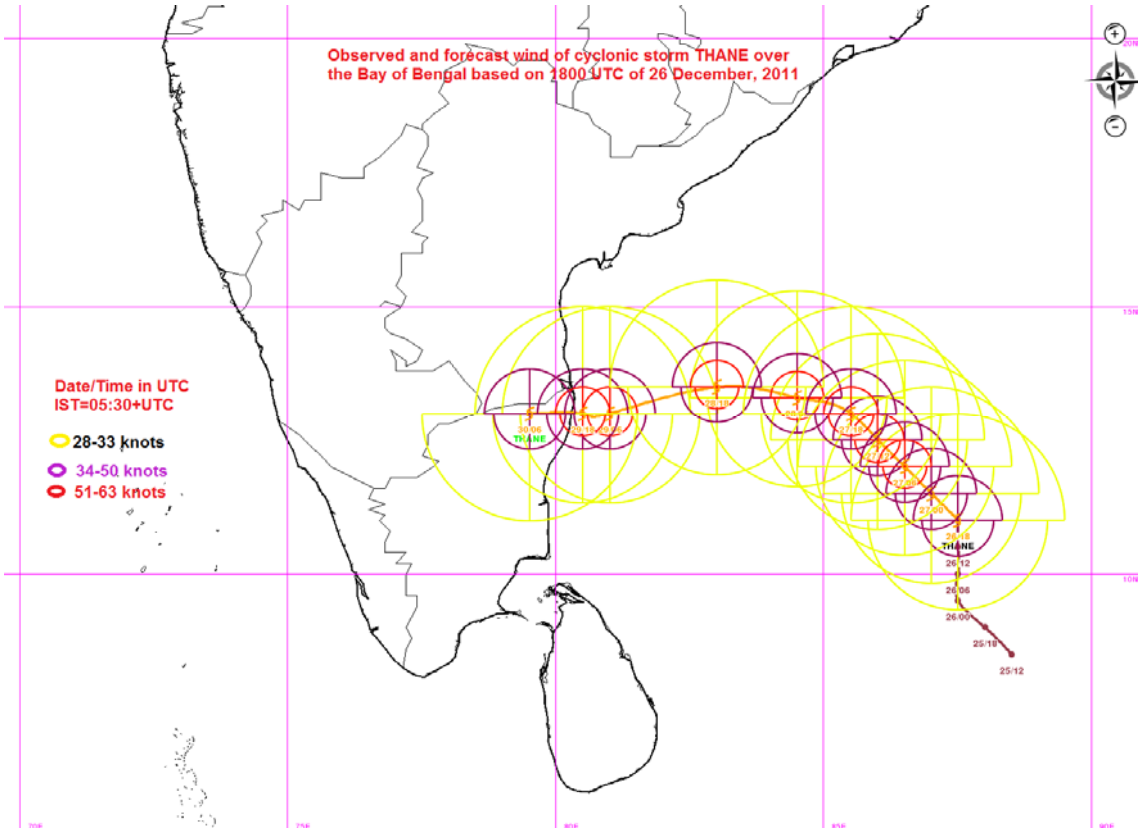
REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND THEN WEST-NORTHWESTWARDS MOVEMENT AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(T. N. JHA)
DIRECTOR

TOO270430 HRS IST




Observed and forecast wind of cyclonic storm THANE over
the Bay of Bengal based on 1800 UTC of 26 December, 2011
Date/Time in UTC
IST=05:30+UTC
28-33 knots
34-50 knots
51-63 knots
THANE
26/12
26/06
26/00
25/18
25/12

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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 27-12-2011 (ADVISORY No. 3)

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0300 UTC OF 27 DECEMBER, 2011 BASED ON 0000 UTC OF 27 DECEMBER, 2011 (.)

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS AND LAY CENTRED AT 0000 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 11.5^{0}N AND LONGITUDE 87.5.^{0}E, ABOUT 800 KM EAST-SOUTHEAST OF CHENNAI (43279), 750 KM NORTHEAST OF TRINCOMALEE (43418) AND 550 KM WEST-SOUTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 8.0^{0}N TO 15.0^{0}N EAST OF LONGITUDE 82.5^{0}E, OVER SOUTH BAY OF BENGAL AND ASSOCIATED CONVECTION HAS INCREASED. THE POLEWARD OUTFLOW IS DISTINCTLY VISIBLE IN THE SATELLITE IMAGERIES, WHICH FAVOURS INTENSIFICATION. SHIP OBSERVATION (LATITUDE 11.5^{0}N/92.7^{0}E) OBSERVED MSLP 1007.5 HPA, WIND PRESSURE TENDENCY 0.8 HPA WIND 250/27 KNOTS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 35 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
27-12-2011/0000	11.5/87.5	75-85 GUSTING TO 95	CYCLONIC STORM
27-12-2011/0600	12.0/87.0	85-90 GUSTING TO 100	CYCLONIC STORM
27-12-2011/1200	12.0/86.5	85-90 GUSTING TO 100	CYCLONIC STORM
27-12-2011/1800	12.5/86.0	85-90 GUSTING TO 100	CYCLONIC STORM
28-12-2011/0000	12.5/85.5	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
28-12-2011/1200	12.8/84.0	100-110 GUSTING TO 120	SEVERE CYCLONIC STORM
29-12-2011/0000	13.0/82.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
29-12-2011/1200	13.0/81.5	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
30-12-2011/0000	13.0/80.5	65-75 GUSTING TO 85	CYCLONIC STORM

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN . 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT ONE WEEK. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD MOVEMENT DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS GUIDANCE.

(T. N. JHA)
DIRECTOR

TOO270830 HRS IST

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INDIA METEOROLOGICAL DEPARTMENT

SPECIAL TROPICAL WEATHER OUTLOOK(Advisory No.4)

DEMS–RSMC TROPICAL CYCLONES NEW DELHI 27-12-2011

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0600 UTC OF 27 DECEMBER, 2011 BASED ON 0300 UTC OF 27 DECEMBER, 2011 (.)

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS AND LAY CENTRED AT 0300 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 87.0.^{0}E, ABOUT 750 KM EAST-SOUTHEAST OF CHENNAI (43279), 750 KM NORTHEAST OF TRINCOMALEE (43418) AND 600 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 82.0^{0}E TO 90.0^{0}E AND ASSOCIATED CONVECTION HAS INCREASED. A BUOY (12.4^{0}N/85.9^{0}E) OBSERVED MSLP 998.7 HPA. ANOTHER BUOY (11.0^{0}N/86.5^{0}E) OBSERVED MSLP 1002.0 HPA AND WIND 280/41 KNOTS

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
27-12-2011/0300	12.0/87.0	75-85 gusting to 95	Cyclonic Storm
27-12-2011/0600	12.2/86.8	85-90 gusting to 100	Cyclonic Storm
27-12-2011/1200	12.3/86.5	85-90 gusting to 100	Cyclonic Storm

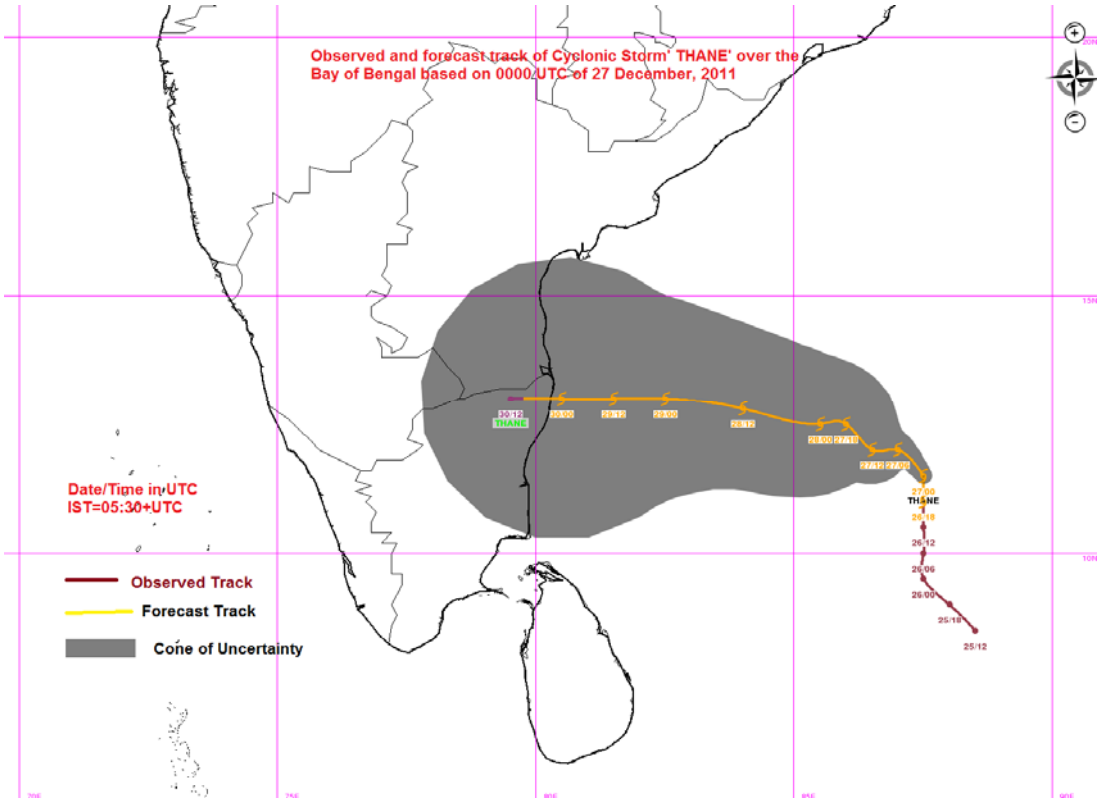
27-12-2011/1800	12.5/86.0	85-90 gusting to 100	Cyclonic Storm
28-12-2011/0000	12.5/85.5	100-110 gusting to 120	Severe Cyclonic Storm
28-12-2011/1200	12.8/84.0	100-110 gusting to 120	Severe Cyclonic Storm
29-12-2011/0000	13.0/82.5	90-100 gusting to 110	Severe Cyclonic Storm
29-12-2011/1200	13.0/81.5	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/0000	13.0/80.5	90-100 gusting to 110	Severe Cyclonic Storm

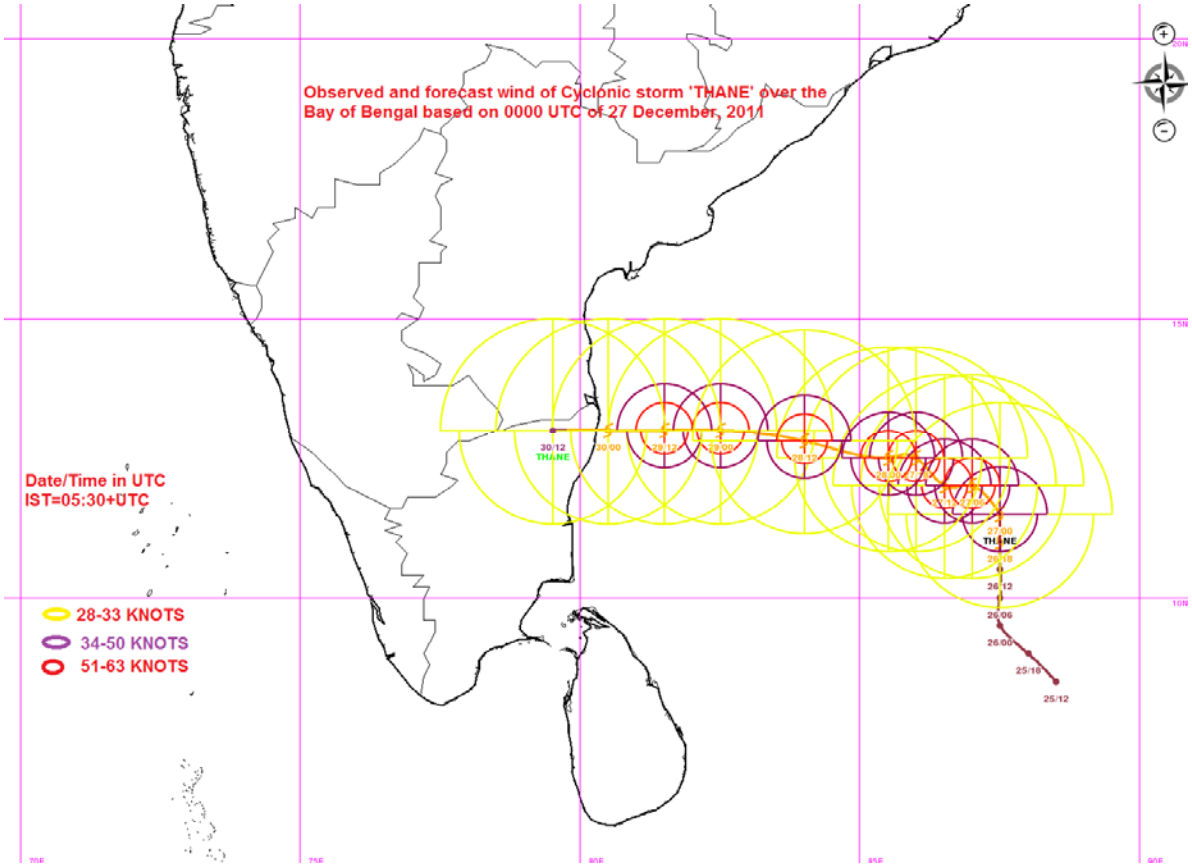
REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. HOWEVER, THE POLEWARD OUTFLOW HAS DECREASED DURING PAST 24 HRS. HENCE THE INTENSIFICATION IS EXPECTED TO BE SLOW. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, TAMIL NADU AND ANDHRA PRADESH BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMENT. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 271130HRS IST


Observed and forecast track of Cyclonic Storm' THANE' over the Bay of Bengal based on 0000 UTC of 27 December, 2011
Date/Time in UTC
IST=05:30+UTC
Observed Track
Forecast Track
Cone of Uncertainty
30/12
THANE
27/00
THANE
26/18
26/12
26/06
26/00
25/18
25/12


Observed and forecast wind of Cyclonic storm 'THANE' over the Bay of Bengal based on 0000 UTC of 27 December, 2011
Date/Time in UTC
IST=05:30+UTC
28-33 KNOTS
34-50 KNOTS
51-63 KNOTS
30/12
THANE
27/00
THANE
26/18
26/12
26/06
26/00
25/18
25/12

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY

RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO FIVE ISSUED AT 0900UTC OF 27TH DECEMBER 2011 BASED ON 0600 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY DURING PAST 3 HOURS AND LAY CENTRED AT 0600 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 87.0.^{0}E, ABOUT 750 KM EAST-SOUTHEAST OF CHENNAI (43279), 750 KM NORTHEAST OF TRINCOMALEE (43418) AND 600 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 82.0^{0}E TO 90.0^{0}E AND ASSOCIATED CONVECTION HAS INCREASED.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 994 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
27-12-2011/0600	12.0/87.0	75-85 gusting to 95	Cyclonic Storm
27-12-2011/1200	12.3/86.5	80-90 gusting to 100	Cyclonic Storm
27-12-2011/1800	12.5/86.0	85-95 gusting to 105	Cyclonic Storm
28-12-2011/0000	12.6/85.5	95-105 gusting to 115	Severe Cyclonic Storm
28-12-2011/0600	12.7/85.0	100-110 gusting to 120	Severe Cyclonic Storm
28-12-2011/1800	12.8/83.8	100-110 gusting to 120	Severe Cyclonic Storm
29-12-2011/0600	13.0/82.5	90-100 gusting to 110	Severe Cyclonic Storm
29-12-2011/1800	13.0/81.2	90-100 gusting to 110	Severe Cyclonic Storm

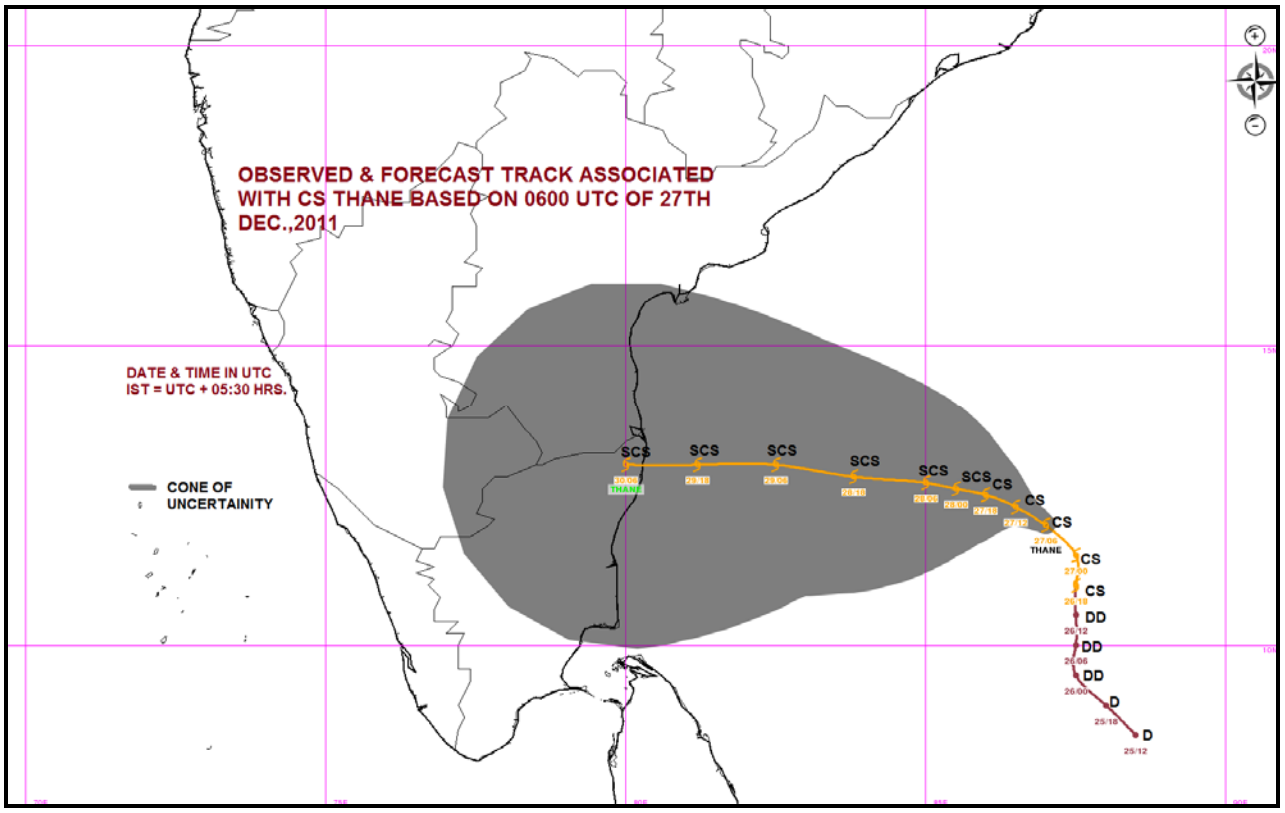
30-12-2011/0600	13.0/80.0	90-100 gusting to 110	Severe Cyclonic Storm

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. HOWEVER, THE POLEWARD OUTFLOW HAS DECREASED DURING PAST 24 HRS. HENCE THE INTENSIFICATION IS EXPECTED TO BE SLOW. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, TAMIL NADU AND ANDHRA PRADESH BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMENT. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 271330HRS IST


OBSERVED & FORECAST TRACK ASSOCIATED WITH CS THANE BASED ON 0600 UTC OF 27TH DEC.,2011
DATE & TIME IN UTC
IST = UTC + 05:30 HRS.
CONE OF UNCERTAINITY
SCS
SCS
SCS
SCS
SCS
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CS
CS
THANE
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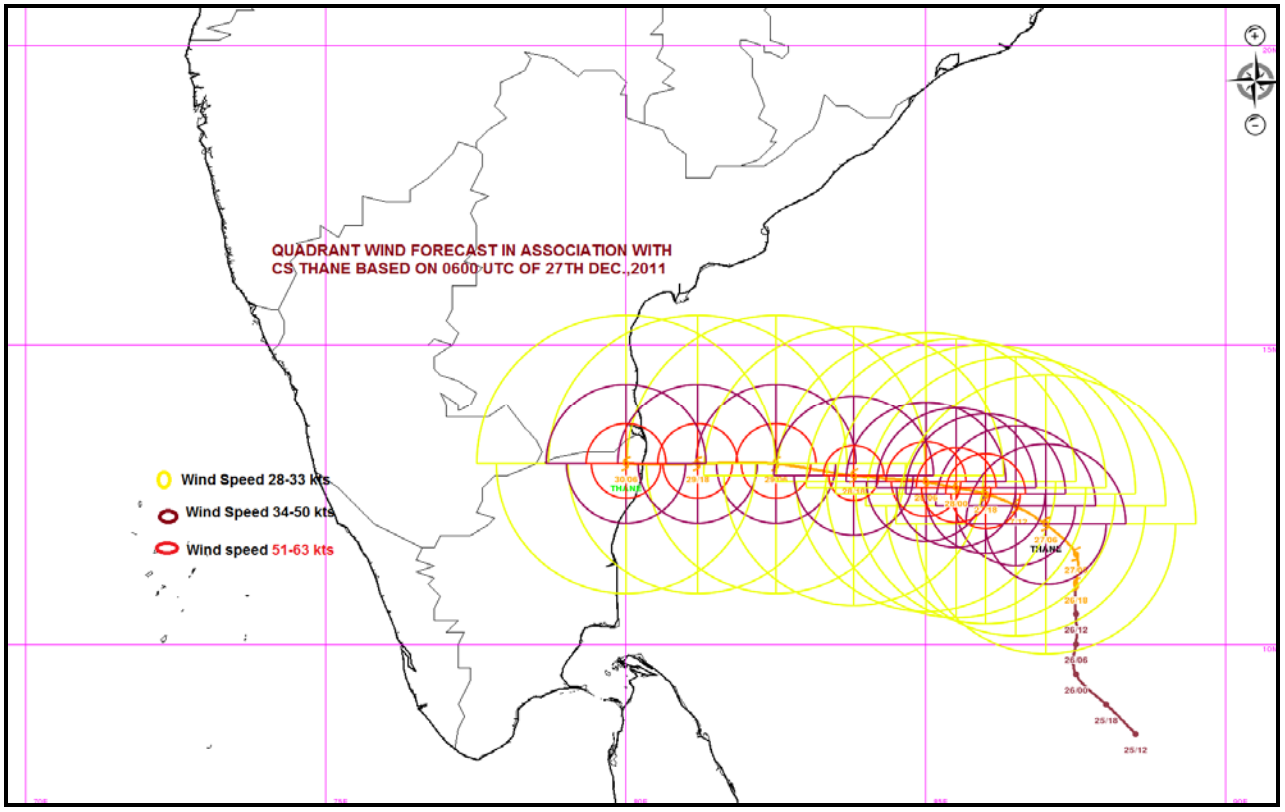

QUADRANT WIND FORECAST IN ASSOCIATION WITH CS THANE BASED ON 0600 UTC OF 27TH DEC.,2011
Wind Speed 28-33 kts
Wind Speed 34-50 kts
Wind speed 51-63 kts
THANE

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO SIX ISSUED AT 1200UTC OF 27TH DECEMBER 2011 BASED ON 0900 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL SLIGHLY MOVED WEST-NORTHWESTWARDS AND LAY CENTRED AT 0900 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.2^{0}N AND LONGITUDE 86.7^{0}E, ABOUT 700 KM EAST-SOUTHEAST OF CHENNAI (43279), 750 KM NORTHEAST OF TRINCOMALEE (43418) AND 650 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T2.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 82.0^{0}E TO 90.0^{0}E AND ASSOCIATED CONVECTION HAS INCREASED.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 40 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
27-12-2011/0900	12.2/86.7	80-90 gusting to 100	Cyclonic Storm
27-12-2011/1200	12.3/86.5	85-95 gusting to 100	Cyclonic Storm
27-12-2011/1800	12.5/86.0	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/0000	12.6/85.5	95-105 gusting to 120	Severe Cyclonic Storm
28-12-2011/0600	12.7/85.0	100-110 gusting to 125	Severe Cyclonic Storm
28-12-2011/1800	12.8/83.8	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0600	13.0/82.5	95-105 gusting to 120	Severe Cyclonic Storm
29-12-2011/1800	13.0/81.2	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/0600	13.0/80.0	90-100 gusting to 110	Severe Cyclonic Storm

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE PROVIDES REQUIRED POLEWARD OUTFLOW FOR INTENSIFICATION OF THE SYSTEM. HOWEVER, THE POLEWARD OUTFLOW HAS DECREASED DURING PAST 24 HRS. HENCE THE INTENSIFICATION IS EXPECTED TO BE SLOW. THE LOW LEVEL CONVERGENCE INCREASED DURING PAST 6 HRS AS WELL AS UPPER LEVEL DIVERGENCE. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, IT INCREASES TOWARDS THE COAST OF SRI LANKA, TAMIL NADU AND ANDHRA PRADESH BECOMING 20-30 KNOTS (MODERATE TO HIGH). WIND SHEAR TENDENCY AROUND THE SYSTEM IS NEGATIVE OF THE ORDER OF 10-20 KNOTS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. DYNAMICAL- STATISTICAL MODEL OF IMD ALSO SUGGESTS THE SYSTEM TO INTENSIFY INTO A SEVERE CYCLONIC STORM. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMENT. THE CURRENT FORECAST IS IN AGREEMENT WITH MOST OF THE NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 271700HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO SEVEN ISSUED AT 1500UTC OF 27TH DECEMBER 2011 BASED ON 1200 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL SLIGHLY MOVED NORTHWESTWARDS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 86.5^{0}E, ABOUT 650 KM EAST-SOUTHEAST OF CHENNAI (43279), 700 KM NORTHEAST OF TRINCOMALEE (43418) AND 670 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) BY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 82.0^{0}E TO 90.0^{0}E AND ASSOCIATED CONVECTION AND ORGANISATION HAVE INCREASED.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
27-12-2011/1200	12.5/86.5	80-90 gusting to 100	Cyclonic Storm
27-12-2011/1800	12.7/86.0	85-95 gusting to 100	Severe Cyclonic Storm
28-12-2011/0000	12.9/85.5	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/0600	13.1/85.0	95-105 gusting to 120	Severe Cyclonic Storm
28-12-2011/1200	13.3/84.5	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0000	13.3/83.2	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1200	13.3/81.9	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/0000	13.2/80.6	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/1200	13.1/79.3	90-100 gusting to 110	Severe Cyclonic Storm

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO LIE IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW TO MODERATE (10-15 KNOTS) AROUND SYSTEM CENTRE. THERE IS NO SIGNIFICANT CHANGE IN WIND SHEAR DURING PAST 24 HRS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF

THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMENT. A FEW MODELS SUGGEST NORTH-NORTHWESTWARD/ NORTHWESTWARD MOVEMENT. THE CURRENT FORECAST IS IN AGREEMENT WITH THE NWP MODELS OF FIRST CATEGORY AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 271930HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)

OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO EIGHT ISSUED AT 1700UTC OF 27TH DECEMBER 2011 BASED ON 1500 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 1500 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 86.5^{0}E, ABOUT 650 KM EAST-SOUTHEAST OF CHENNAI (43279), 700 KM NORTHEAST OF TRINCOMALEE (43418) AND 670 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) AROUND MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 82.0^{0}E TO 90.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
27-12-2011/1500	12.5/86.5	80-90 gusting to 100	Cyclonic Storm
27-12-2011/1800	12.7/86.0	85-95 gusting to 100	Severe Cyclonic Storm
28-12-2011/0000	12.9/85.5	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/0600	13.1/85.0	95-105 gusting to 120	Severe Cyclonic Storm
28-12-2011/1200	13.3/84.5	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0000	13.3/83.2	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1200	13.3/81.9	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/0000	13.2/80.6	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/1200	13.1/79.3	80-90 gusting to 100	Cyclonic Storm

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (10-15 KNOTS) AROUND SYSTEM CENTRE. THERE IS NO SIGNIFICANT CHANGE IN WIND SHEAR DURING PAST 24 HRS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH

RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMEN, SYNOPTIC CONDITIONS ALSO IN AGREEMENT.

(CHARAN SINGH)
DIRECTOR

TOO 272300HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. NINE ISSUED AT 2000 UTC OF 27TH DECEMBER 2011 BASED ON 1800 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHEAST BAY OF BENGAL MOVED WESTWARDS AND LAY CENTRED AT 1800 UTC OF TODAY, THE 27TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 86.0^{0}E, ABOUT 600 KM EAST-SOUTHEAST OF CHENNAI (43279), 650 KM NORTHEAST OF TRINCOMALEE (43418) AND 700 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COAST BETWEEN CUDDALORE (43329) AND NELLORE (43245) AROUND MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN LOW/MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 7.5^{0}N TO 15.0^{0}N AND LONGITUDE 81.0^{0}E TO 88.5^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
27-12-2011/1800	12.5/86.0	80-90 gusting to 100	Cyclonic Storm
28-12-2011/0000	12.7/85.5	85-95 gusting to 100	Severe Cyclonic Storm
28-12-2011/0600	12.9/85.0	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/1200	13.1/84.5	95-105 gusting to 120	Severe Cyclonic Storm
28-12-2011/1800	13.3/84.0	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0600	13.3/83.0	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1800	13.3/81.5	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/0600	13.2/79.5	80-90 gusting to 100	Cyclonic Storm
30-12-2011/1800	13.0/78.5	45-55 gusting to 65	Deep Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (10-15 KNOTS) AROUND SYSTEM CENTRE. THERE IS NO SIGNIFICANT CHANGE IN WIND SHEAR DURING PAST 24 HRS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMEN, SYNOPTIC CONDITIONS ALSO IN AGREEMENT.

(CHARAN SINGH)
DIRECTOR

TOO 280130 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. TEN ISSUED AT 0000 UTC OF 28TH DECEMBER 2011 BASED ON 2100 UTC CHARTS OF 27TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 2100 UTC OF THE 27TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 86.0^{0}E, ABOUT 600 KM EAST-SOUTHEAST OF CHENNAI (43279), 650 KM NORTHEAST OF TRINCOMALEE (43418) AND 700 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COASTS BETWEEN CUDDALORE (43329) AND NELLORE (43245) AROUND MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 8.0^{0}N TO 16.0^{0}N AND LONGITUDE 81.0^{0}E TO 88.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
27-12-2011/2100	12.5/86.0	80-90 gusting to 100	Cyclonic Storm
28-12-2011/0000	12.7/85.5	85-95 gusting to 100	Severe Cyclonic Storm
28-12-2011/0600	12.9/85.0	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/1200	13.1/84.5	95-105 gusting to 120	Severe Cyclonic Storm
28-12-2011/1800	13.3/84.0	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0600	13.3/83.0	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1800	13.3/81.5	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/0600	13.2/79.5	80-90 gusting to 100	Cyclonic Storm
30-12-2011/1800	13.0/78.5	45-55 gusting to 65	Deep Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE. THERE IS SLIGHT DECREASE IN WIND SHEAR DURING PAST 24 HRS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMEN, SYNOPTIC CONDITIONS ALSO IN AGREEMENT.

(CHARAN SINGH)
DIRECTOR

TOO 280530 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. ELEVEN ISSUED AT 0300 UTC OF 28TH DECEMBER 2011 BASED ON 0000 UTC CHARTS OF 28TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTRED AT 0000 UTC OF THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 86.0^{0}E, ABOUT 600 KM EAST-SOUTHEAST OF CHENNAI (43279), 650 KM NORTHEAST OF TRINCOMALEE (43418) AND 700 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS SLOWLY, INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COASTS BETWEEN CUDDALORE (43329) AND NELLORE (43245) AROUND MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 8.0^{0}N TO 15.0^{0}N AND LONGITUDE 81.0^{0}E TO 88.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 992 HPA.

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

DATE/TIME(UTC))	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
28-12-2011/0000	12.5/86.0	80-90 GUSTING TO 100	CYCLONIC STORM
28-12-2011/0600	12.7/85.5	85-95 GUSTING TO 100	SEVERE CYCLONIC STORM
28-12-2011/1200	12.9/85.0	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
28-12-2011/1800	13.1/84.5	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29-12-2011/0000	13.3/84.0	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29-12-2011/1200	13.3/83.0	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
30-12-2011/0000	13.3/81.5	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
30-12-2011/1200	13.2/79.5	80-90 GUSTING TO 100	CYCLONIC STORM
31-12-2011/0000	13.0/78.5	45-55 GUSTING TO 65	DEEP DEPRESSION

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE. IT IS 50-80 KJ/CM SQUARE TO THE WEST AND WEST-NORTHWEST OF SYSTEM AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FIVE DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 14.0 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE. THERE IS SLIGHT DECREASE IN WIND SHEAR DURING PAST 24 HRS. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM BY NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WEST-NORTHWESTWARD AND THEN WESTWARD MOVEMENT, SYNOPTIC CONDITIONS ALSO IN AGREEMENT.

(CHARAN SINGH)
DIRECTOR

TOO 280830 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. TWELVE ISSUED AT 0600 UTC OF 28TH DECEMBER 2011 BASED ON 0300 UTC CHARTS OF 28TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL MOVED WESTWARDS AND LAY CENTERED AT 0300 UTC OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 85.5^{0}E, ABOUT 550 KM EAST-SOUTHEAST OF CHENNAI (43279), 600 KM NORTHEAST OF TRINCOMALEE (43418) AND 750 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY FURTHER DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COASTS BETWEEN CUDDALORE (43329) AND NELLORE (43245) CLOSE TO SOUTH OF CHENNAI AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -85^{0}C. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 14.0^{0}N AND LONGITUDE 81.0^{0}E TO 88.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 987 HPA.

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

DATE/TIME(UTC))	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
28-12-2011/0300	12.5/85.5	80-90 gusting to 100	Cyclonic Storm
28-12-2011/0600	12.5/85.0	80-90 gusting to 100	Cyclonic Storm
28-12-2011/1200	12.7/84.3	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/1800	12.7/83.7	95-105 gusting to 120	Severe Cyclonic Storm
29-12-2011/0000	12.8/83.1	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1200	12.8/81.7	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/0000	12.7/80.3	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/1200	12.7/78.9	80-90 gusting to 100	Cyclonic Storm
31-12-2011/0000	12.5/77.5	45-55 gusting to 65	Deep Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS 50 - 80 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND LESS THAN 50 KJ/CM SQUARE NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DOES NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE. AS THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST THE SYSTEM IS LIKELY TO WEAKEN SLIGHTLY BEFORE LANDFALL. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE SYSTEM FOR NEXT 24 HRS. HOWEVER THEY SUGGEST SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(M.MOHAPATRA)
SCIENTIST-E

TOO 281230 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. THIRTEEN ISSUED AT 0900 UTC OF 28TH DECEMBER 2011 BASED ON 0600 UTC CHARTS OF 28TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL MOVED WESTWARDS AND LAY CENTERED AT 1130 HRS IST OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 85.0^{0}E, ABOUT 500 KM EAST-SOUTHEAST OF CHENNAI (43279), 600 KM NORTHEAST OF TRINCOMALEE (43418) AND 800 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY FURTHER DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COASTS BETWEEN CUDDALORE (43329) AND NELLORE (43245), CLOSE TO SOUTH OF CHENNAI AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -79^{0}C. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 14.0^{0}N AND LONGITUDE 81.0^{0}E TO 87.5^{0}E. CONVECTION SHOWS INCREASE IN ORGANISATION WHICH MAY LEAD TO CDO PATTERN.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 986 HPA. A BUOY (12.1^{0}N/ 85.4^{0}E) REPORTED MSLP OF 990.8 HPA.

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

DATE/TIME(UTC))	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
28-12-2011/0600	12.5/85.0	80-90 gusting to 100	Cyclonic Storm
28-12-2011/1200	12.5/84.3	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/1800	12.7/83.7	95-105 gusting to 120	Severe Cyclonic Storm
29-12-2011/0000	12.8/83.1	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/0600	12.8/82.5	100-110 gusting to 125	Severe Cyclonic Storm
29-12-2011/1800	12.8/81.3	95-105 gusting to 120	Severe Cyclonic Storm
30-12-2011/0600	12.7/79.9	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/1800	12.7/78.5	70-80 gusting to 90	Cyclonic Storm
31-12-2011/0600	12.5/77.0	45-55 gusting to 65	Deep Depression

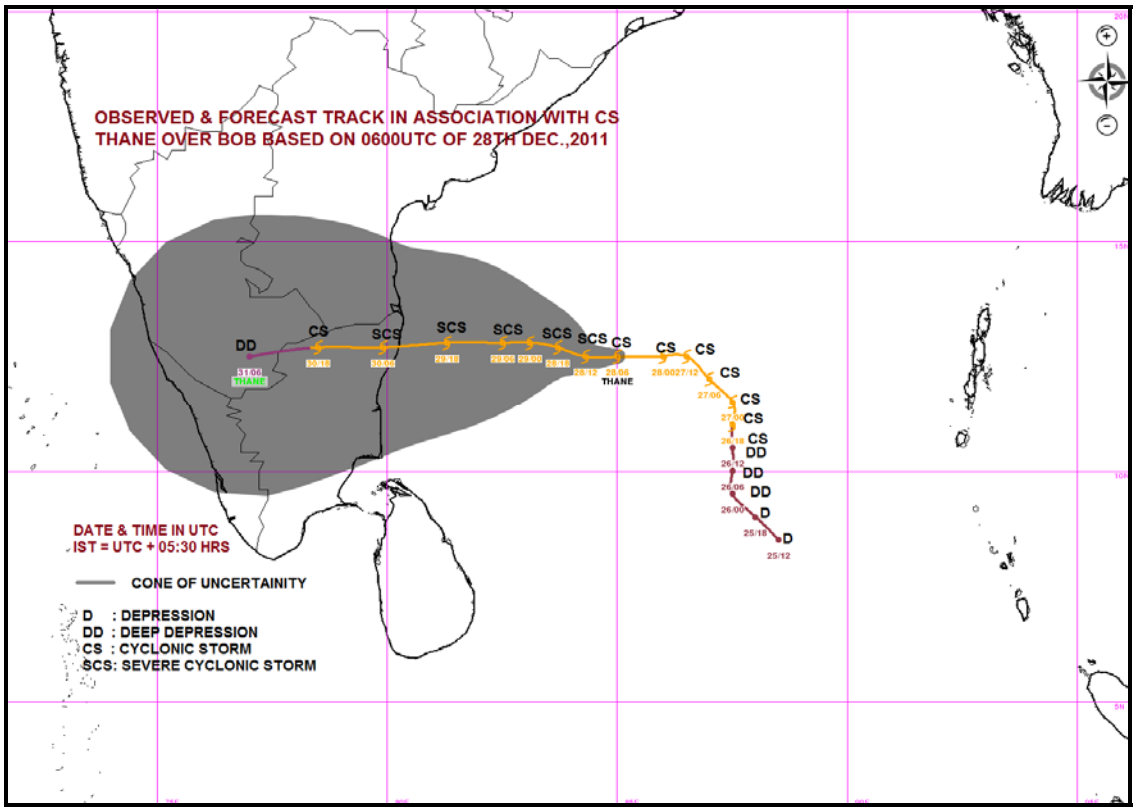
REMARK:

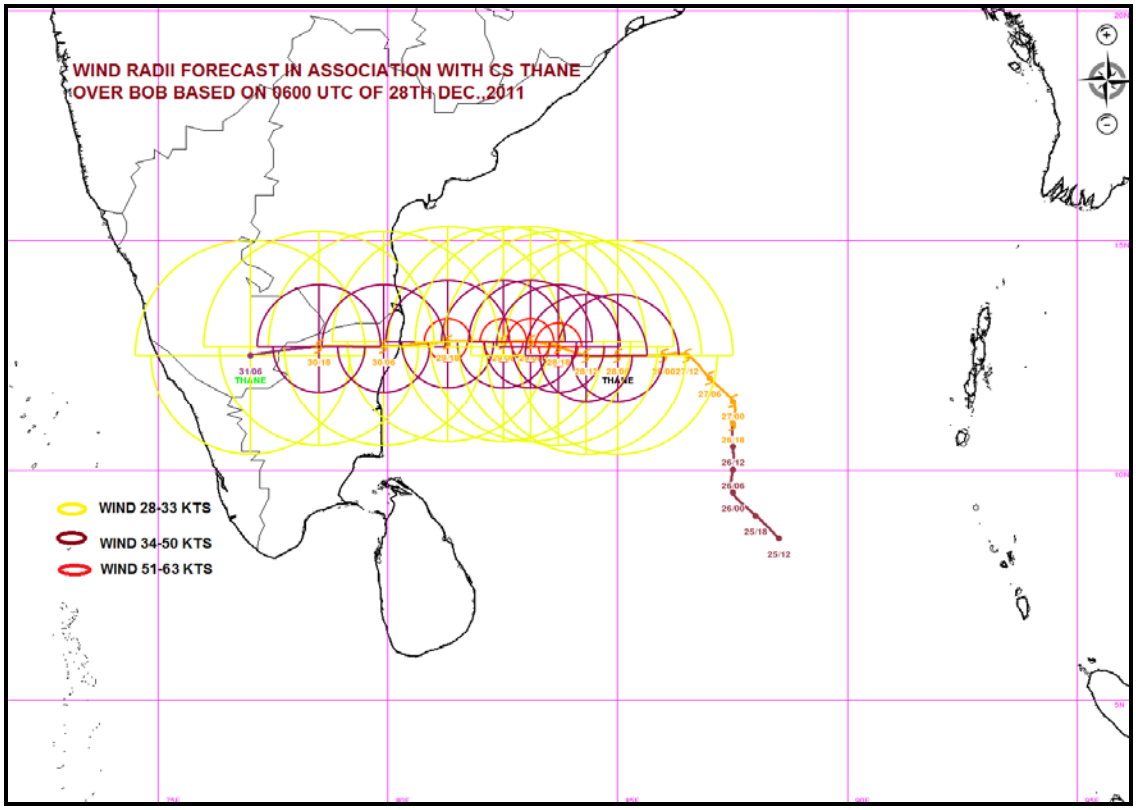
CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 16.0 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DO NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE AND ALONG TAMILNADU AND SRI LANKA COAST. HOWEVER, THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST FROM TOMORROW. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 24 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(M.MOHAPATRA)
SCIENTIST-E

TOO 281400 HRS IST


OBSERVED & FORECAST TRACK IN ASSOCIATION WITH CS
THANE OVER BOB BASED ON 0600UTC OF 28TH DEC.,2011
DD
CS
SCS
THANE
DATE & TIME IN UTC
IST = UTC + 05:30 HRS
CONE OF UNCERTAINITY
D : DEPRESSION
DD : DEEP DEPRESSION
CS : CYCLONIC STORM
SCS: SEVERE CYCLONIC STORM


WIND RADII FORECAST IN ASSOCIATION WITH CS THANE
OVER BOB BASED ON 0600 UTC OF 28TH DEC.,2011
THANE
WIND 28-33 KTS
WIND 34-50 KTS
WIND 51-63 KTS

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. FOURTEEN ISSUED AT 1200 UTC OF 28TH DECEMBER 2011 BASED ON 0900 UTC CHARTS OF 28TH DECEMBER 2011.

THE CYCLONIC STORM **'THANE'** OVER SOUTHWEST AND ADJOINING SOUTHEAST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY, LAY CENTERED AT 1130 HRS IST OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 85.0^{0}E, ABOUT 500 KM EAST-SOUTHEAST OF CHENNAI (43279), 600 KM NORTHEAST OF TRINCOMALEE (43418) AND 800 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-NORTHWESTWARDS, INTENSIFY FURTHER DURING NEXT 24 HRS AND CROSS NORTH TAMIL NADU AND SOUTH ANDHRA PRADESH COASTS BETWEEN CUDDALORE (43329) AND SRIHARIKOTA, CLOSE TO SOUTH OF CHENNAI AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T3.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -86^{0}C. ASSOCIATED BROKEN INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 14.5^{0}N AND LONGITUDE 81.0^{0}E TO 87.0^{0}E. CONVECTION SHOWS CDO PATTERN.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 45 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 984 HPA. A BUOY (12.1^{0}N/ 85.4^{0}E) REPORTED MSLP OF 993.1 HPA.

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

DATE/TIME(UTC))	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
28-12-2011/0900	12.5/85.0	90-100 gusting to 110	Severe Cyclonic Storm
28-12-2011/1200	12.5/84.3	100-110 gusting to 125	Severe Cyclonic Storm
28-12-2011/1800	12.5/83.6	110-120 gusting to 135	Severe Cyclonic Storm
29-12-2011/0000	12.5/82.9	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0600	12.5/82.2	110-120 gusting to 135	Severe Cyclonic Storm
29-12-2011/1800	12.5/80.4	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/0600	12.7/79.5	90-100 gusting to 110	Severe Cyclonic Storm
30-12-2011/1800	12.7/78.1	65-75 gusting to 85	Cyclonic Storm
31-12-2011/10600	12.5/76.7	45-55 gusting to 65	Deep Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION, AS PER OUR PAST STUDIES.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 16.0 DEG. N AND HENCE HELPS IN WEST-NORTHWESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE DO NOT SHOW ANY CHANGE DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE AND ALONG TAMILNADU AND SRI LANKA COAST. HOWEVER, THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST FROM TOMORROW. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 24 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(M.MOHAPATRA)
SCIENTIST-E

TOO 281730 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. FIFTEEN ISSUED AT 1500 UTC OF 28TH DECEMBER 2011 BASED ON 1200 UTC CHARTS OF 28TH DECEMBER 2011.

THE SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED FURTHER WESTWARD, INTENSIFIED INTO A VERY SEVERE CYCLONIC STORM AND LAY CENTERED AT 1200 UTC OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 84.5^{0}E, ABOUT 450 KM EAST-SOUTHEAST OF CHENNAI (43279), 550 KM NORTHEAST OF TRINCOMALEE (43418) AND 900 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WEST-WESTWARDS, INTENSIFY FURTHER DURING NEXT 12 HRS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0.THE SYSTEM SHOWS REGULAR CDO PATTERN. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -86^{0}C. ASSOCIATED NTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 15.0^{0}N AND LONGITUDE 80.5^{0}E TO 87.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
28-12-2011/1200	12.5/84.5	120-130 gusting to 145	VerySevere Cyclonic Storm
28-12-2011/1800	12.5/83.8	130-140 gusting to 155	VerySevere Cyclonic Storm
29-12-2011/0000	12.5/83.1	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/0600	12.5/82.4	120-130 gusting to 145	VerySevere Cyclonic Storm
29-12-2011/1200	12.5/81.7	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0000	12.5/80.3	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/1200	12.5/78.9	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.5/77.5	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.5/76.1	45-55 gusting to 65	Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 16.0 DEG. N AND HENCE HELPS IN WESTTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE HAS INCREASED DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE AND ALONG TAMILNADU AND SRI LANKA COAST. HOWEVER, THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST FROM TOMORROW. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(M.MOHAPATRA)
SCIENTIST-E

TOO 282030 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. SIXTEEN ISSUED AT 1800 UTC OF 28TH DECEMBER 2011 BASED ON 1500 UTC CHARTS OF 28TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED FURTHER WESTWARD AND LAY CENTERED AT 1500 UTC OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 84.0^{0}E, ABOUT 400 KM EAST-SOUTHEAST OF CHENNAI (43279), 520 KM NORTHEAST OF TRINCOMALEE (43418) AND 950 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WESTWARDS, INTENSIFY FURTHER DURING NEXT 12 HRS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0.THE SYSTEM SHOWS REGULAR CDO PATTERN. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -86^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 15.0^{0}N AND LONGITUDE 80.5^{0}E TO 86.0^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
28-12-2011/1500	12.5/84.0	120-130 gusting to 145	Very Severe Cyclonic Storm
28-12-2011/1800	12.5/83.7	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/0000	12.5/83.1	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/0600	12.5/82.4	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/1200	12.5/81.7	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0000	12.5/80.3	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/1200	12.5/78.9	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.5/77.5	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.5/76.1	45-55 gusting to 65	Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 16.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE LOW LEVEL CONVERGENCE AS WELL AS UPPER LEVEL DIVERGENCE HAS INCREASED DURING PAST SIX HOURS. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (5-10 KNOTS) AROUND SYSTEM CENTRE AND ALONG TAMILNADU AND SRI LANKA COAST. HOWEVER, THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST FROM TOMORROW. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(NARESH KUMAR)
METEOROLOGIST

TOO 282230 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO. SEVENTEEN ISSUED AT 2100 UTC OF 29th DECEMBER 2011 BASED ON 1800 UTC CHARTS OF 28TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL REMAINED PRACTICALLY STATIONARY AND LAY CENTERED AT 1800 UTC OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^0N AND LONGITUDE 84.0^0E, ABOUT 400 KM EAST-SOUTHEAST OF CHENNAI (43279), 520 KM NORTHEAST OF TRINCOMALEE (43418) AND 950 KM WEST-NORTHWEST OF PORT BLAIR (43333). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. THE SYSTEM SHOWS REGULAR CDO PATTERN. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -84^0C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^0N TO 15.0^0N AND LONGITUDE 81.0^0E TO 86.0^0E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA.

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

Date/Time(IST)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
28-12-2011/1800	12.5/84.0	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0000	12.5/83.2	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0600	12.5/82.4	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/1200	12.5/81.7	110-120 gusting to 135	Severe Cyclonic Storm
29-12-2011/1800	12.5/81.0	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0000	12.5/80.3	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/1200	12.5/78.9	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.5/77.5	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.5/76.1	45-55 gusting to 65	Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 16.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS LOW (OF ORDER 10 KNOTS) AROUND SYSTEM CENTRE. HOWEVER, THE VERTICAL WIND SHEAR IS EXPECTED TO INCREASE NEAR THE COAST FROM TOMORROW. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(NARESH KUMAR)
METEOROLOGIST

TOO 290230 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO EIGHTEEN ISSUED AT 2300 UTC OF 28^{h} DECEMBER 2011 BASED ON 2100 UTC CHARTS OF 28TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY CENTERED AT 2100UTC OF TODAY, THE 28TH DECEMBER 2011 NEAR LATITUDE 12.5^{0}N AND LONGITUDE 84.5^{0}E, ABOUT 350 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 500 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST AFTER 24 HOURS, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -84^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.5^{0}N TO 15.0^{0}N AND LONGITUDE 81.0^{0}E TO 85.7^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA.

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

Date/Time(IST)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
29-12-2011/2100	12.5/83.5	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0000	12.5/83.1	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0600	12.5/82.4	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/1200	12.5/81.7	110-120 gusting to 135	Severe Cyclonic Storm
29-12-2011/1800	12.5/81.0	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0000	12.5/80.3	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/1200	12.5/78.9	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.5/77.5	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.5/76.1	45-55 gusting to 65	Depression

REMARK:

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS INCREASED DURING LAST 6 HOURS AND PRESENTLY BETWEEN 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(NARESH KUMAR)
METEOROLOGIST

TOO 290430 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO NINETEEN ISSUED AT 0300 UTC OF 29th DECEMBER 2011 BASED ON 0000 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARD AND LAY CENTERED AT 0000 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.3^{0}N AND LONGITUDE 83.0^{0}E, ABOUT 300 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 480 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND MORNING OF 30TH DECEMBER 2011. HOWEVER, AS THE CYCLONIC STORM WILL COME FURTHER CLOSE TO COAST, THERE IS PROBABILITY OF SLIGHT WEAKENING BEFORE LANDFALL.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -86^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 13.5^{0}N AND WEST OF LONGITUDE84.5^{0}E.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 65 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 980 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
29-12-2011/0000	12.3/83.0	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/0600	12.0/82.3	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/1200	12.0/81.5	110-120 gusting to 135	Severe Cyclonic Storm
29-12-2011/1800	12.0/80.7	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0000	12.0/80.0	100-110 gusting to 125	Severe Cyclonic Storm
30-12-2011/1200	12.0/78.6	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.0/77.2	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.0/75.8	45-55 gusting to 65	Depression

REMARK:

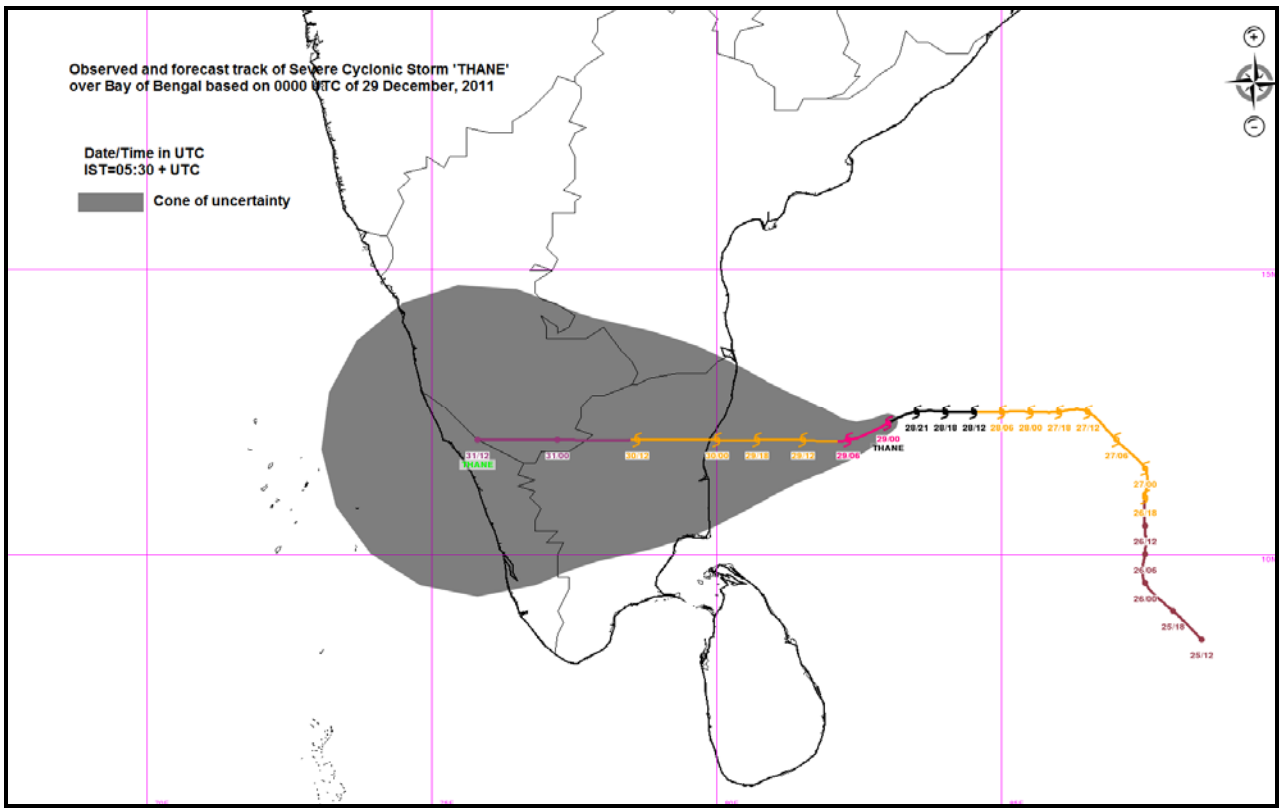
THE SYSTEM IS BEING TRACK BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECENBER 2011. HENCE DETERMINATION OF LOCATION AND INTENSITY IS OF HIGH CONFIDENCE.

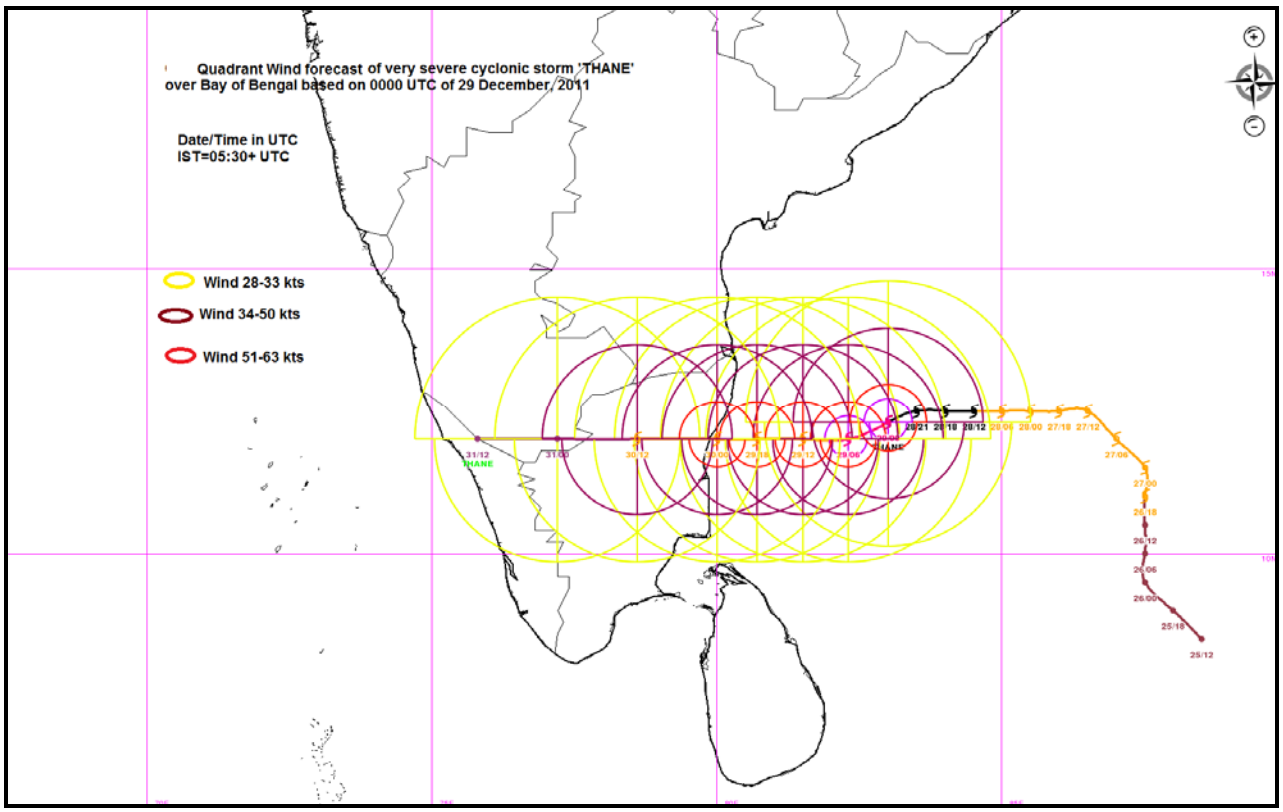
CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 13.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS INCREASED DURING LAST 6 HOURS AND PRESENTLY BETWEEN 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE

(NARESH KUMAR)
METEOROLOGIST

TOO 290730 HRS IST


Observed and forecast track of Severe Cyclonic Storm 'THANE'
over Bay of Bengal based on 0000 UTC of 29 December, 2011
Date/Time in UTC
IST=05:30 + UTC
Cone of uncertainty
31/12
THANE
31/00
30/12
30/00
29/18
29/12
29/06
29/00
THANE
28/21 28/18 28/12 28/06 28/00 27/18 27/12
27/06
27/00
26/18
26/12
26/06
26/00
25/18
25/12


Quadrant Wind forecast of very severe cyclonic storm 'THANE'
over Bay of Bengal based on 0000 UTC of 29 December, 2011
Date/Time in UTC
IST=05:30+ UTC
Wind 28-33 kts
Wind 34-50 kts
Wind 51-63 kts
31/12
THANE
31/00
30/12
30/00
29/18
29/12
29/06
29/00
THANE
28/21 28/18 28/12 28/06 28/00 27/18 27/12
27/06
27/00
26/18
26/12
26/06
26/00
25/18
25/12

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO TWENTY ISSUED AT 0600 UTC OF 29th DECEMBER 2011 BASED ON 0300 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WEST-SOUTHWESTWARD AND LAY CENTERED AT 0300 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 82.5^{0}E, ABOUT 270 KM EAST OF PUDUCHERRY, 250 KM EAST-SOUTHEAST OF CHENNAI (43279) AND 420 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMILNADU COAST BETWEEN NAGAPATTINAM(43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND EARLY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -84^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 14.0^{0}N AND WEST OF LONGITUDE84.5^{0}E. THE IMAGERY SHOWS IRREGULAR EYE PATTERN.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
29-12-2011/0300	12.0/82.5	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/0600	12.0/82.0	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/1200	12.0/81.3	120-130 gusting to 145	Very Severe Cyclonic Storm
29-12-2011/1800	12.0/80.6	120-130 gusting to 145	Very Severe Cyclonic Storm
30-12-2011/0000	12.0/79.9	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/1200	12.0/78.5	65-75 gusting to 85	Cyclonic Storm
31-12-2011/0000	12.0/77.1	55-65 gusting to 75	Deep Depression
31-12-2011/1200	12.0/75.7	45-55 gusting to 65	Depression

REMARK:

THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECENBER 2011. HENCE DETERMINATION OF LOCATION AND INTENSITY IS OF **HIGH CONFIDENCE.** THE DWR CHENNAI INDICATES ALMOST CLOSED EYE WITH DIAMETER OF 70 KM AND SUPPORTING SPIRAL BANDS. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.9^{0}.N AND LONG.82.3^{0} E

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 291200 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY ONE** ISSUED AT 0900 UTC OF 29th DECEMBER 2011 BASED ON 0600 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY CENTERED AT 0600 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 82.0^{0}E, ABOUT 220 KM EAST OF PUDUCHERRY (43331), 200 KM SOUTHEAST OF CHENNAI (43279) AND 400 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMILNADU COAST BETWEEN NAGAPATTINAM (43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND EARLY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -83^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 14.5^{0}N AND WEST OF LONGITUDE 84.5^{0}E. THE IMAGERY SHOWS IRREGULAR EYE PATTERN.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
29-12-20110600	12.0/82.0	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/1200	12.0/81.3	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/1800	12.0/80.6	120-130 gusting to 145	Very Severe Cyclonic Storm
30-12-2011/0000	12.0/79.9	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0600	12.0/79.2	80-90 gusting to 100	Cyclonic Storm
30-12-2011/1800	12.0/77.8	55-65 gusting to 75	Cyclonic Storm
31-12-2011/0600	12.0/76.4	45-55 gusting to 65	Deep Depression
31-12-2011/1800	12.0/75.0	30-40 gusting to 50	Low pressure area

REMARK:

THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECENBER 2011. HENCE DETERMINATION OF LOCATION AND INTENSITY IS OF **HIGH CONFIDENCE.** THE DWR CHENNAI INDICATES CLOSED CIRCULAR EYE WITH DIAMETER OF 50 KM AND SUPPORTING SPIRAL BANDS. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.8^0.N AND LONG.82.1^0 E

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 291400 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY TWO** ISSUED AT 0900 UTC OF 29th DECEMBER 2011 BASED ON 0600 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL SLIGHTLY MOVED WESTWARD AND LAY CENTERED AT 0900 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 81.7^{0}E, ABOUT 180 KM EAST OF PUDUCHERRY (43331), 180 KM SOUTHEAST OF CHENNAI (43279) AND 400 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMILNADU COAST BETWEEN NAGAPATTINAM (43347) AND CHENNAI, CLOSE TO PUDUCHERRY(43331) AROUND EARLY MORNING OF 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -83^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^{0}N TO 15.0^{0}N AND WEST OF LONGITUDE 84.0^{0}E. THE IMAGERY SHOWS IRREGULAR EYE PATTERN.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

Date/Time(UTC)	Position (lat. ^{0}N/ long. ^{0}E)	Sustained maximum surface wind speed (kmph)	Intensity
29-12-20110900	12.0/81.7	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/1200	12.0/81.3	130-140 gusting to 155	Very Severe Cyclonic Storm
29-12-2011/1800	12.0/80.6	120-130 gusting to 145	Very Severe Cyclonic Storm
30-12-2011/0000	12.0/79.9	110-120 gusting to 135	Severe Cyclonic Storm
30-12-2011/0600	12.0/79.2	80-90 gusting to 100	Cyclonic Storm
30-12-2011/1800	12.0/77.8	55-65 gusting to 75	Cyclonic Storm
31-12-2011/0600	12.0/76.4	45-55 gusting to 65	Deep Depression
31-12-2011/1800	12.0/75.0	30-40 gusting to 50	Low pressure area

REMARK:

THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECENBER 2011. THE DWR CHENNAI INDICATES OPEN EYE WITH MORE THAN 180 DEGREE ARC SUPPORTING SPIRAL BANDS. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.8^0.N AND LONG.81.7^{0}E. PUDUCHERRY REPORTED LOWEST MEAN SEA LEVEL PRESSURE 1004.3 HPA WITH WIND NORTHWESTERLY 10 KNOTS AND PRESSURE FALL IN PAST 24 HOURS OF -2.8 HPA.

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(M.MOHAPATRA)
SCIENTIST-E

TOO 291700 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC – TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY THREE** ISSUED AT 1500 UTC OF 29th DECEMBER 2011 BASED ON 1200 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY CENTERED AT 1200 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.0^0N AND LONGITUDE 81.3^0E, ABOUT 160 KM EAST OF PUDUCHERRY (43331), 160 KM SOUTHEAST OF CHENNAI (43279) AND 380 KM NORTH-NORTHEAST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM AND CHENNAI, CLOSE TO PUDUCHERRY AROUND EARLY MORNING OF TOMORROW, THE 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -83^0C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 9.0^0N TO 15.5^0N AND WEST OF LONGITUDE 84.0^0E. THE EYE TEMPARATURE IS -63^0C.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
29-12-2011/1200	12.0/81.3	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
29-12-2011/1800	12.0/80.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0000	12.0/79.9	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30-12-2011/0600	12.0/79.2	80-90 GUSTING TO 100	CYCLONIC STORM
30-12-2011/1200	12.0/78.5	50-60 GUSTING TO 70	DEEP DEPRESSION
31-12-2011/0000	12.0/77.0	40-50 GUSTING TO 60	DEPRESSION

REMARK:

THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECEMBER 2011. THE DWR CHENNAI INDICATES OPEN EYE ALONG WITH SUPPORTING SPIRAL BANDS WITH REDUCED EYE- WALL REGION VISIBLE. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.77^0.N AND LONG.81.15^{0}E. PUDUCHERRY REPORTED LOWEST MEAN SEA LEVEL PRESSURE 1003.7 HPA WITH WIND NORTH-NORTHWESTERLY 10 KNOTS AND PRESSURE FALL IN PAST 24 HOURS OF -4.0 HPA.

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(T. N. JHA)
DRECTOR

TOO 292330 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –
TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY FOUR** ISSUED AT 1800 UTC OF 29th DECEMBER 2011 BASED ON 1500 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY CENTERED AT 1500 UTC OF TODAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 11.0^{0}N AND LONGITUDE 81.0^{0}E, ABOUT 130 KM EAST OF PUDUCHERRY (43331), 150 KM SOUTHEAST OF CHENNAI (43279) AND 375 KM NORTH OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST BETWEEN NAGAPATTINAM AND CHENNAI, CLOSE TO PUDUCHERRY AROUND EARLY MORNING OF TOMORROW, THE 30TH DECEMBER 2011.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.5^{0}N TO 13.5^{0}N AND WEST OF LONGITUDE 83.0^{0}E. THE EYE TEMPARATURE IS -50^{0}C. THE LOWEST PRESSURE CHANGE -4.8 HPA REPORTED AT CUDDALORE (43329) AND WIND 320/15 KNOTS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
29-12-2011/1500	12.0/81.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
29-12-2011/1800	12.0/80.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0000	12.0/79.9	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30-12-2011/0600	12.0/79.2	80-90 GUSTING TO 100	CYCLONIC STORM
30-12-2011/1200	12.0/78.5	50-60 GUSTING TO 70	DEEP DEPRESSION
31-12-2011/0000	12.0/77.0	40-50 GUSTING TO 60	DEPRESSION

REMARK:

THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECEMBER 2011. THE DWR CHENNAI INDICATES OPEN EYE ALONG WITH SUPPORTING SPIRAL BANDS WITH REDUCED EYE- WALL REGION VISIBLE. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.77^0.N AND LONG.81.15^{0}E. PUDUCHERRY REPORTED LOWEST MEAN SEA LEVEL PRESSURE 1003.7 HPA WITH WIND NORTH-NORTHWESTERLY 10 KNOTS AND PRESSURE FALL IN PAST 24 HOURS OF -4.0 HPA.

CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(T. N. JHA)
DRECTOR

TOO 292330 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –
TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY FIVE** ISSUED AT 2100 UTC OF 29th DECEMBER 2011 BASED ON 1800 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY AT CENTERED AT 1800 UTC OF YESTERDAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 12.0^{0}N AND LONGITUDE 80.6^{0}E, ABOUT 90 KM EAST OF PUDUCHERRY (43331), 125 KM SOUTH-SOUTHEAST OF CHENNAI (43279) AND 380 KM NORTHWEST OF TRINCOMALEE (43418). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST CLOSE TO PUDUCHERRY AROUND EARLY MORNING OF TODAY, THE 30TH DECEMBER 2011

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.5. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -77^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.5^{0}N TO 14.0^{0}N AND WEST OF LONGITUDE 81.5^{0}E. THE EYE TEMPARATURE IS -50^{0}C. PUDUCHERRY REPORTED LOWEST MSLP OF 1005.5 HPA, P24P24 -7.6 HPA AND WIND DIRECTION NORTHERLY SPEED 24 KNOTS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
29-12-2011/1800	12.0/80.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0000	12.0/79.9	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30-12-2011/0600	12.0/79.2	70-80 GUSTING TO 90	CYCLONIC STORM
30-12-2011/1200	12.0/79.0	50-60 GUSTING TO 70	DEEP DEPRESSION
30-12-2011/1800	12.0/78.5	40-50 GUSTING TO 60	DEPRESSION
31-12-2011/0600	12.0/77.0	20-30 GUSTING TO 40	LOW PRESSURE AREA

REMARK:

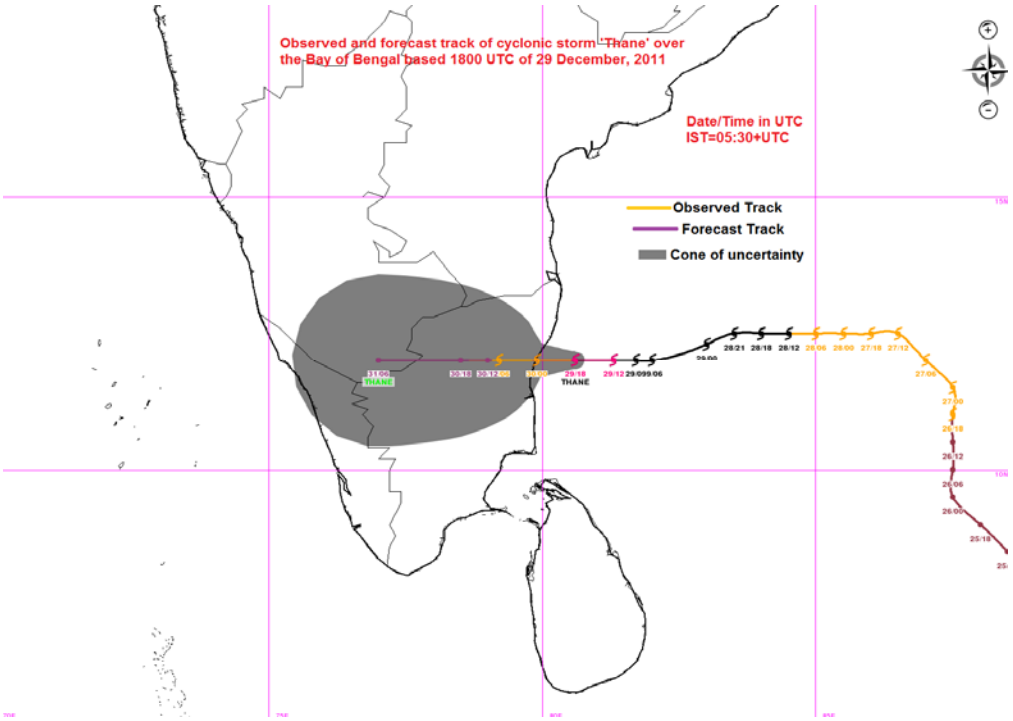
THE SYSTEM IS BEING TRACKED BY DWR CHENNAI SINCE 1000 UTC OF YESTERDAY, THE 28TH DECEMBER 2011. THE DWR CHENNAI INDICATES OPEN EYE ALONG WITH SUPPORTING SPIRAL BANDS WITH REDUCED EYE- WALL REGION VISIBLE. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.8^0.N AND LONG. 80.8^{0}E. PUDUCHERRY REPORTED LOWEST MEAN SEA LEVEL PRESSURE 1005.5 HPA WITH WIND NORTHERLY 25 KNOTS AND PRESSURE FALL IN PAST 24 HOURS OF -7.6 HPA.

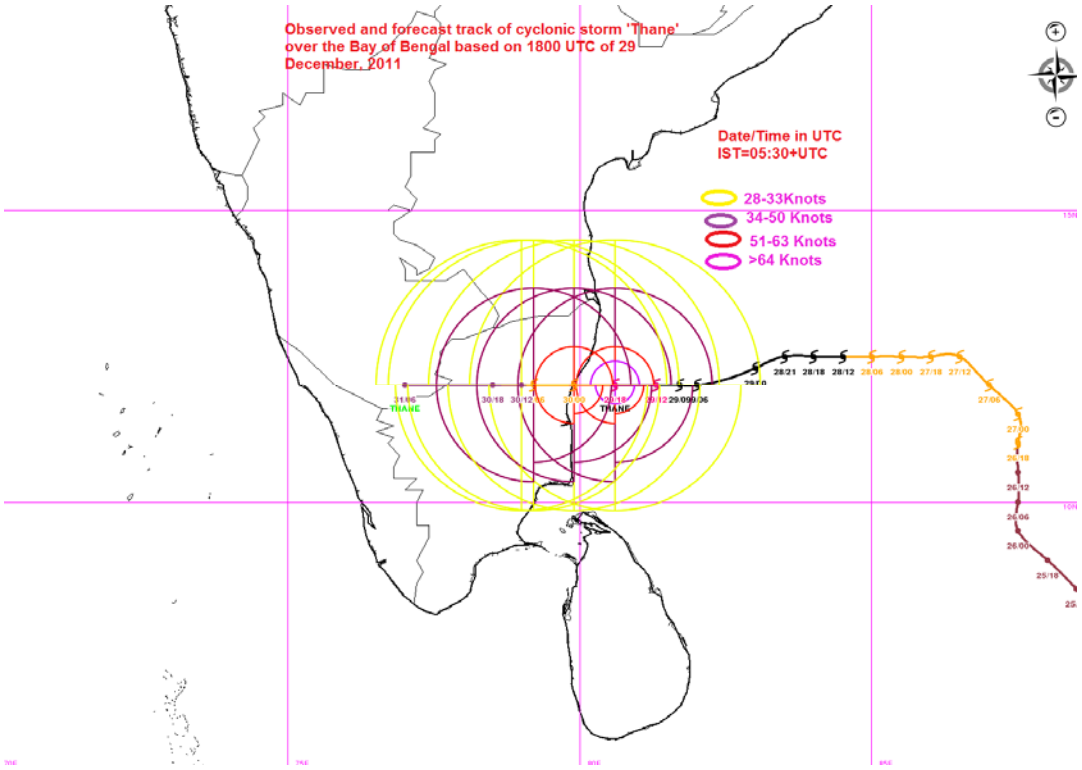
CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST THE MAINTENANCE OF THE INTENSITY OF THE SYSTEM FOR NEXT 12 HRS. AND SLIGHT WEAKENING BEFORE LANDFALL. WITH RESPECT TO TRACK, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(T. N. JHA)
DRECTOR

TOO 300130 HRS IST


Observed and forecast track of cyclonic storm 'Thane' over the Bay of Bengal based 1800 UTC of 29 December, 2011
Date/Time in UTC
IST=05:30+UTC
Observed Track
Forecast Track
Cone of uncertainty
THANE
THANE


Observed and forecast track of cyclonic storm 'Thane' over the Bay of Bengal based on 1800 UTC of 29 December, 2011
Date/Time in UTC
IST=05:30+UTC
28-33Knots
34-50 Knots
51-63 Knots
>64 Knots
THANE
THANE

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –
TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY SIX** ISSUED AT 0000 UTC OF 30th DECEMBER 2011 BASED ON 2100 UTC CHARTS OF 29TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED WESTWARD AND LAY AT CENTERED AT 2100 UTC OF YESTERDAY, THE 29TH DECEMBER 2011 NEAR LATITUDE 11.8^{0}N AND LONGITUDE 80.3^{0}E, ABOUT 50 KM EAST OF PUDUCHERRY (43331) AND 125 KM SOUTH OF CHENNAI (43279). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST CLOSE TO SOUTH OF PUDUCHERRY WITHIN A FEW HOURS.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -74^{0}C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.0^{0}N TO 13.0^{0}N AND WEST OF LONGITUDE 81.0^{0}E. PUDUCHERRY (43331) REPORTED MSLP OF 997.8 HPA, P24P24 -9.4 HPA AND WIND 340/35 KNOTS AND CUDDALORE (43329) REPORTED LOWEST MSLP 996.6 HPA, P24P24 -10.8, WIND 340/23 KNOTS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
29-12-2011/2100	11.8/80.3	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0000	11.8/79.9	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0600	11.8/79.2	80-90 GUSTING TO 100	CYCLONIC STORM
30-12-2011/1200	11.8/79.0	55-65 GUSTING TO 75	DEEP DEPRESSION
30-12-2011/1800	11.8/78.3	45-55 GUSTING TO 65	DEPRESSION
31-12-2011/0600	11.8/77.0	25-35 GUSTING TO 45	LOW PRESSURE AREA

REMARK:

THE DWR CHENNAI INDICATES OPEN EYE ALONG WITH SUPPORTING SPIRAL BANDS. DWR ESTIMATED VORTEX CENTRE IS AT LAT.11.6^0.N AND LONG. 80.3^{0}E. CONSIDERING THE ENVIRONMENTAL FEATURES, THE SEA SURFACE TEMPERATURE IS ABOUT 27-28 DEG. C. OVER THE REGION. IT IS RELATIVELY LESS TOWARDS TAMIL NADU AND SRI LANKA COAST BECOMING 26-27 DEG. C. THE OCEAN THERMAL ENERGY IS LESS THAN 50 KJ/CM SQUARE AROUND THE SYSTEM CENTRE AND NEAR TAMILNADU AND NORTH SRILANKA COAST. THE MADDEN JULIAN OSCILLATION INDEX CURRENTLY LIES OVER PHASE 5. AS PER STATISTICAL AND NWP MODEL PREDICTIONS, IT IS EXPECTED TO REMAIN IN PHASE 5 DURING NEXT FOUR DAYS. THE PHASE 5 IS FAVOURABLE FOR INTENSIFICATION. THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT.THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(T. N. JHA)
DRECTOR

TOO 300530 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –
TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY SEVEN** ISSUED AT 0300 UTC OF 30th DECEMBER 2011 BASED ON 0000 UTC CHARTS OF 30TH DECEMBER 2011.

THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED FURTHER WESTWARD AND LAY AT CENTERED AT 0000 UTC OF TODAY, THE 30TH DECEMBER 2011 NEAR LATITUDE 11.8^0N AND LONGITUDE 79.9^0E, VERY CLOSE TO SOUTHEAST OF PUDUCHERRY (43331) THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND CROSS NORTH TAMIL NADU COAST CLOSE TO SOUTH OF PUDUCHERRY(43331) WITHIN A FEW HOURS AND WEAKEN GRADUALLY.

ACCORDING TO SATELLITE IMAGERIES, THE INTENSITY OF THE SYSTEM IS T4.0. THE LOWEST CLOUD TOP TEMPERATURE (CTT) IS ABOUT -72^0C. ASSOCIATED INTENSE TO VERY INTENSE CONVECTION SEEN OVER BAY OF BENGAL BETWEEN LATITUDE 10.5^0N TO 13.5^0N AND WEST OF LONGITUDE 80.5^0E. THE CONVECTION SHOWS SIGN OF WEAKENING DUE TO INTERACTION WITH LAND SURFACE. PUDUCHERRY (43331) REPORTED MSLP OF 991.7 HPA, P24P24 –15.2 HPA AND WIND 020/68 KNOTS AND CUDDALORE (43329) REPORTED LOWEST MSLP 997.6 HPA, P24P24 -32.9, WIND 340/62 KNOTS.

SUSTAINED MAXIMUM SURFACE WIND SPEED IS ESTIMATED TO BE ABOUT 75 KNOTS AROUND SYSTEM CENTRE. THE STATE OF THE SEA IS PHENOMENAL AROUND THE SYSTEM CENTRE. THE ESTIMATED CENTRAL PRESSURE IS ABOUT 976 HPA.

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

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	SUSTAINED MAXIMUM SURFACE WIND SPEED (KMPH)	INTENSITY
30-12-2011/0000	11.8/79.9	115-125 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30-12-2011/0600	11.8/79.2	80-90 GUSTING TO 110	CYCLONIC STORM
30-12-2011/1200	11.8/78.5	55-65 GUSTING TO 75	DEEP DEPRESSION
30-12-2011/1800	11.8/77.8	40-50 GUSTING TO 60	DEPRESSION
31-12-2011/0000	11.8/77.0	25-35 GUSTING TO 45	LOW PRESSURE AREA

REMARK:

THE DWR CHENNAI INDICATES ILL DEFINED EYE (SOUTHWEST TO NORTHEAST MORE THAN 180 DEGREE ARC) ALONG WITH SUPPORTING SPIRAL BANDS. DWR ESTIMATED VISIBLE VORTEX CENTRE IS AT LAT.11.6^0.N AND LONG. 79.9^{0}E, EYE DIAMETER DECREASED TO ABOUT 40 KM.

THE UPPER TROPOSPHERIC RIDGE LIES ALONG 15.0 DEG. N AND HENCE HELPS IN WESTWARD MOVEMENT OF THE SYSTEM. THE VERTICAL WIND SHEAR BETWEEN 200 AND 850 HPA LEVELS IS ABOUT 10-15 KNOTS AROUND THE SYSTEM CENTRE TODAY. LOWER LEVEL COVERGENCE AND UPPER LEVEL DIVERGENCE ARE DECREASING. THE SYSTEM IS INTERACTING WITH LAND SURFACE AND HENCE LIKELY TO WEAKEN GRADUALLY. CONSIDERING THE NWP MODEL GUIDANCE, MOST OF THE MODELS SUGGEST WESTWARD/ WEST-SOUTHWESTWARD MOVEMENT AND GRADUAL WEAKENING OF THE SYSTEM .THE CURRENT FORECAST IS IN AGREEMENT WITH MAJORITY OF NWP MODELS AND SYNOPTIC GUIDANCE.

(T. N. JHA)
DRECTOR

TOO 300830 HRS IST

भारत मौसम विज्ञान विभाग
INDIA METEOROLOGICAL DEPARTMENT

FROM: RSMC –
TROPICAL CYCLONES, NEW DELHI
TO: STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, YANGAON (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
TROPICAL CYCLONE ADVISORY
RSMC – TROPICAL CYCLONES, NEW DELHI

TROPICAL STORM **"THANE"** ADVISORY NO **TWENTY EIGHT** ISSUED AT 0500 UTC OF 30th DECEMBER 2011 BASED ON 0300 UTC CHARTS OF 30TH DECEMBER 2011.

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THE VERY SEVERE CYCLONIC STORM **'THANE'** OVER SOUTHWEST BAY OF BENGAL MOVED FURTHER WESTWARD AND CROSSED NORTH TAMILNADU COAST BETWEEN CUDDALORE (43329) AND PUDUCHERRY (43331) BETWEEN 0100 UTC AND 0200 UTC OF TODAY. IT THEN CONTINUED TO MOVE WESTWARDS AND WEAKENED INTO A SEVERE CYCLONIC STORM LAY CENTERED AT 0300 UTC OF TODAY, THE 30TH DECEMBER 2011 NEAR LATITUDE 11.8^0N AND LONGITUDE 79.5^0E ABOUT 30 KM WEST OF CUDDALORE (43329) AND 35 KM SOUTHWEST OF PUDUCHERRY (43331). THE SYSTEM IS LIKELY TO MOVE WESTWARDS AND WEAKEN FURTHER

THIS IS THE LAST BULLETIN FOR THIS SYSTEM

(CHARAN SINGH)
DRECTOR

TOO 3001100HRS IST