REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 26.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0700 UTC OF 26.04.2019 BASED ON 0300 UTC OF 26.04.2019.

DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL

LATEST SATELLITE IMAGERIES & SURFACE OBSERVATIONS INDICATE THAT A DEPRESSION HAS FORMED OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL AND LAY CENTRED AT 0300 UTC OF TODAY, THE 26TH APRIL, 2019 NEAR LATITUDE 2.7°N AND LONGITUDE 89.7°E, ABOUT 1140 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1490 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1760 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 24 HOURS AND INTO A CYCLONIC STORM DURING THE SUBSEQUENT 12 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRILANKA COAST DURING NEXT 96 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COAST ON 30TH APRIL 2019 EVENING.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26.04.19/0300	2.7/89.7	40-50 GUSTING TO 65	DEPRESSION
26.04.19/1200	3.8/89.1	45-55 GUSTING TO 65	DEPRESSION
27.04.19/0000	4.9/88.3	50-60 GUSTING TO 70	DEEP DEPRESSION
27.04.19/1200	6.4/87.2	60-70 GUSTING TO 80	CYCLONIC STORM
28.04.19/0000	7.7/86.3	70-80 GUSTING TO 90	CYCLONIC STORM
28.04.19/1200	9.0/85.3	80-90 GUSTING TO 100	CYCLONIC STORM
29.04.19/0000	10.0/84.5	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/1200	11.0/83.5	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
30.04.19/0000	11.7/82.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC ON 26TH APRIL, 2019 THE INTENSITY OF THE VORTEX OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY BETWEEN LATITUDE 1.5°N TO 8.4°N AND LONG 78.0°E TO 92.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93° C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE. IT SHOWED CURVED BAND PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1008 HPA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

AT 0300 UTC OF 26TH APRIL, A BOUY LOCATED AT 6.4°N/82.2°E REPORTED A MEAN SEA LEVEL PRESSURE OF 1009.7 HPA AND MEAN SURFACE WIND SPEED OF 180°/ 05 KNOTS. THE BOUY OBSERVATIONS INDICATE A FALL IN MEAN SEA LEVEL PRESSURE COMPARED TO YESTERDAY AND ALSO A NORTHWESTWARD MOVEMENT OF THE SYSTEM DURING PAST 24 HOURS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

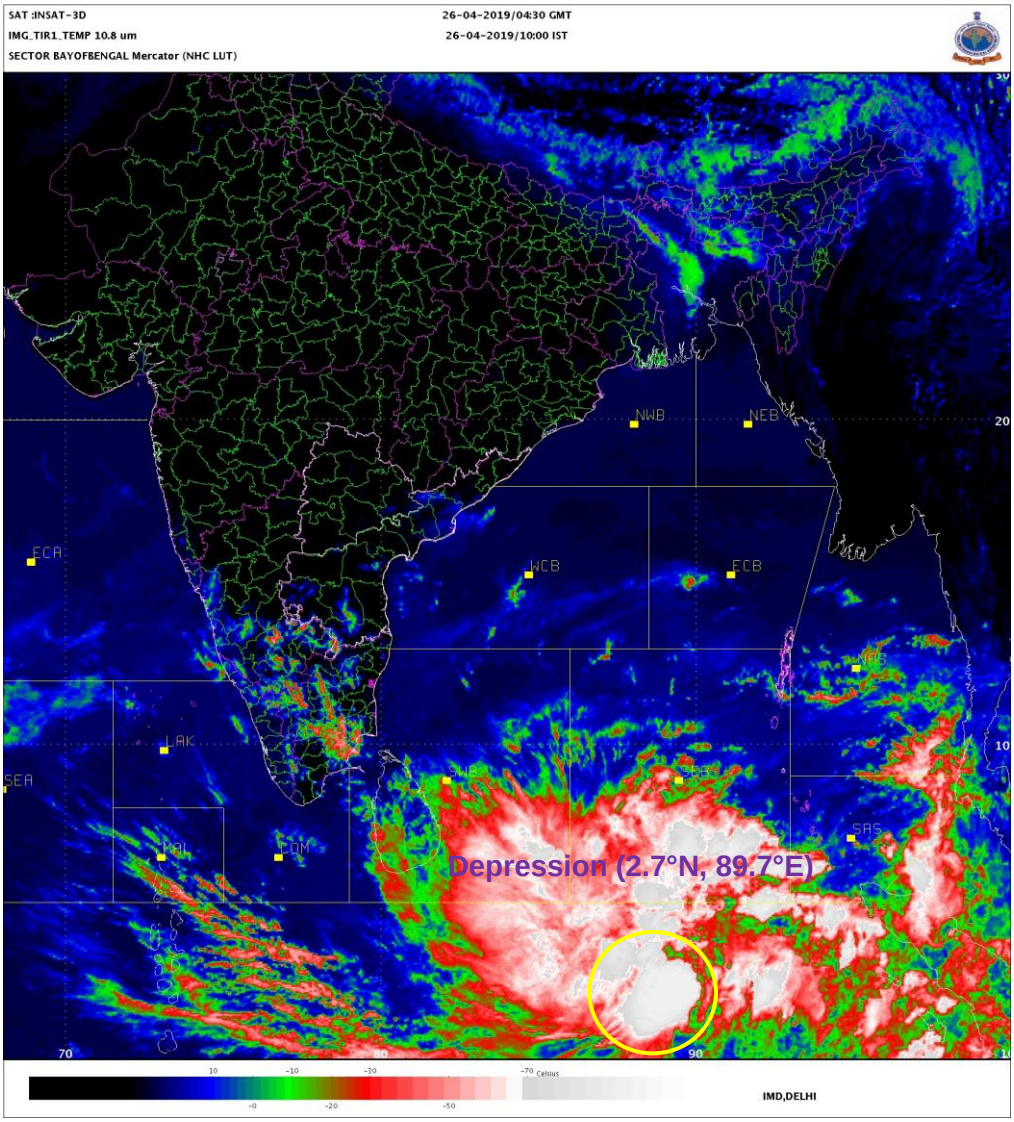
CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN.. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM^2 OVER THE SYSTEM AREA. TOTAL PRECIPITABLE WATER IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 100 X10^{-6}SEC^{-1}. COMPARED TO YESTERDAY, THE LOW LEVEL CONVERGENCE INCREASED AND IS 50 X10^{-5}SEC^{-1} . THE UPPER LEVEL DIVERGENCE ALSO INCRAESED AND IS ABOUT 50 X10^{-5}SEC$^{-1.}$. VERTICAL WIND SHEAR DECREASED AND IS NOW MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION DURING NEXT 24 HOURS AND INTO A CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

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

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



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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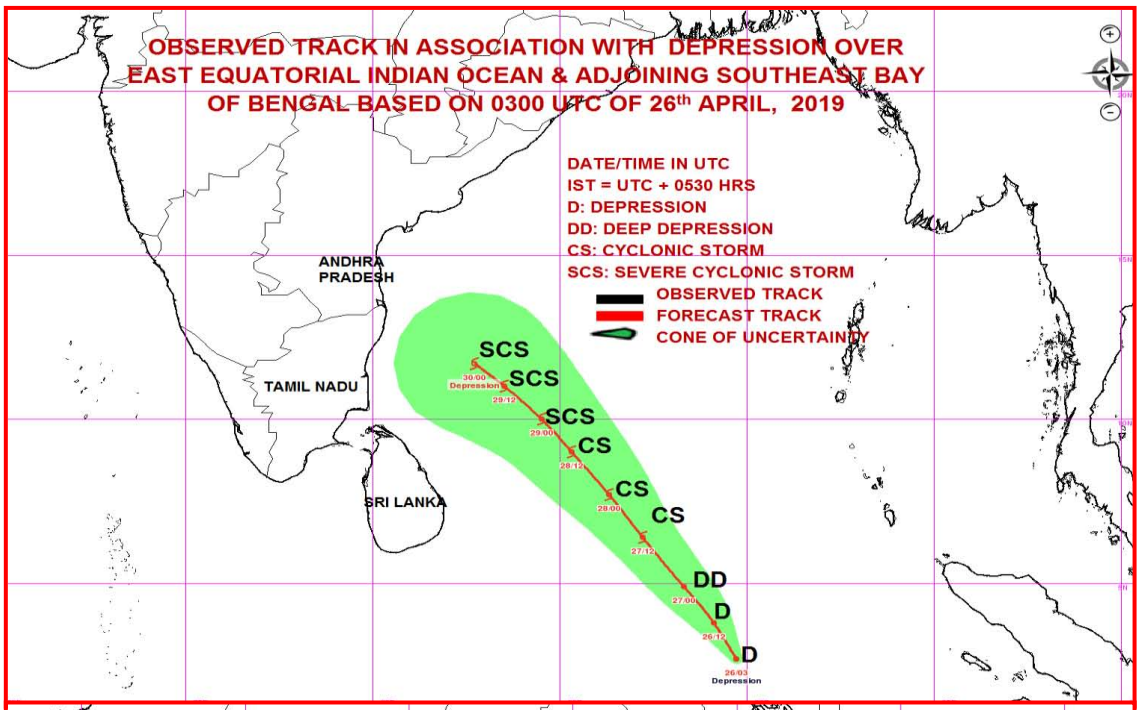

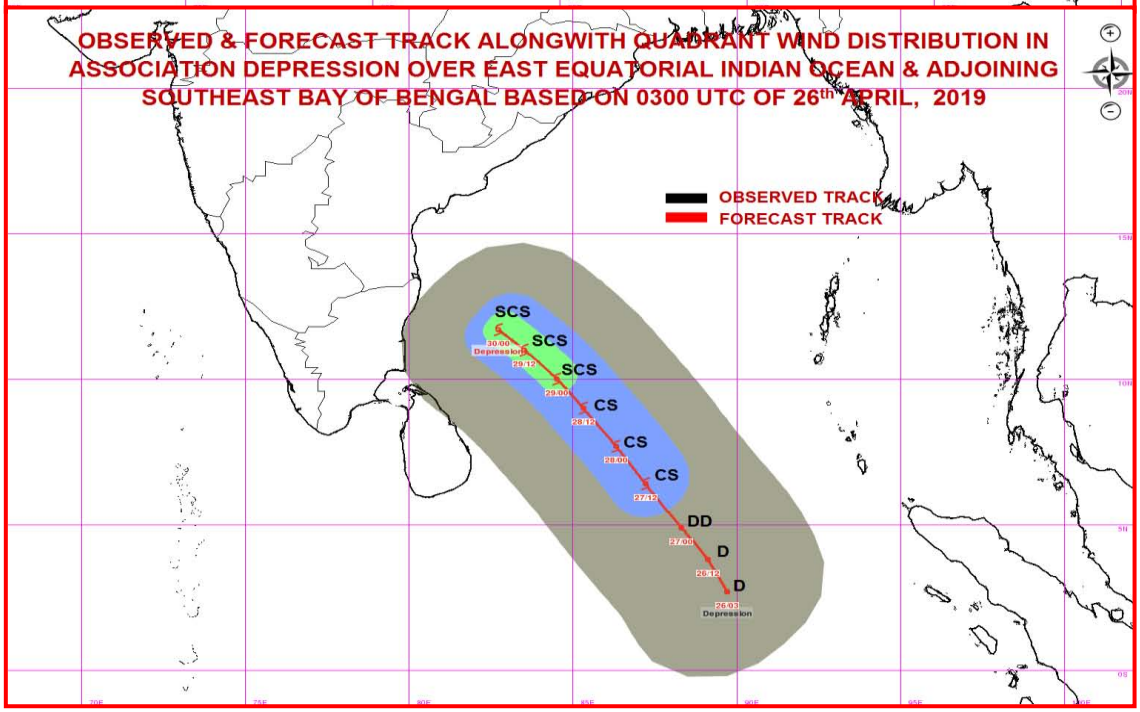

MSW(knot)/kmph)
28-33 /(51–62)
34-49/(63-91)
50-63/(92-168)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 26.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 1500 UTC OF 26.04.2019 BASED ON 1200 UTC OF 26.04.2019.

DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL

THE DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL MOVED FURTHER NORTHWESTWARDS WITH A SPEED OF ABOUT 05 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 26TH APRIL, 2019 NEAR LATITUDE 3.2°N AND LONGITUDE 89.2°E, ABOUT 1060 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1410 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1690 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A DEEP DEPRESSION DURING NEXT 12 HOURS AND INTO A CYCLONIC STORM DURING THE SUBSEQUENT 12 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRILANKA COAST DURING NEXT 96 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COAST AROUND 1200 UTC OF 30TH APRIL 2019.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
26.04.19/1200	3.2/89.2	45-55 GUSTING TO 65	DEPRESSION
27.04.19/0000	4.5/88.5	50-60 GUSTING TO 70	DEEP DEPRESSION
27.04.19/1200	5.5/88.6	60-70 GUSTING TO 80	CYCLONIC STORM
28.04.19/0000	6.9/86.7	70-80 GUSTING TO 90	CYCLONIC STORM
28.04.19/1200	7.7/86.2	80-90 GUSTING TO 100	CYCLONIC STORM
29.04.19/0000	8.8/85.3	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/1200	9.6/84.6	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
30.04.19/0000	10.4/84.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/1200	11.4/83.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC ON 26TH APRIL, 2019 THE INTENSITY OF THE VORTEX OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY IS T1.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE EQUATOR TO 8.0°N AND LONG 82.0°E TO 92.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93° C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE. IT SHOWS CURVED BAND PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1006 HPA.

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN.. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM^2 OVER THE SYSTEM AREA. TOTAL PRECIPITABLE WATER IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 100 $X10^{-6}SEC^{-1}$. THE LOW LEVEL CONVERGENCE AND UPPER LEVEL DIVERGENCE REMAINED SAME DURING PAST 12 HOURS AND IS 50 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR ALSO REMAINED UNCHANGED AND IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A DEEP DEPRESSION DURING NEXT 24 HOURS AND INTO A CYCLONIC STORM DURING SUBSEQUENT 12 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

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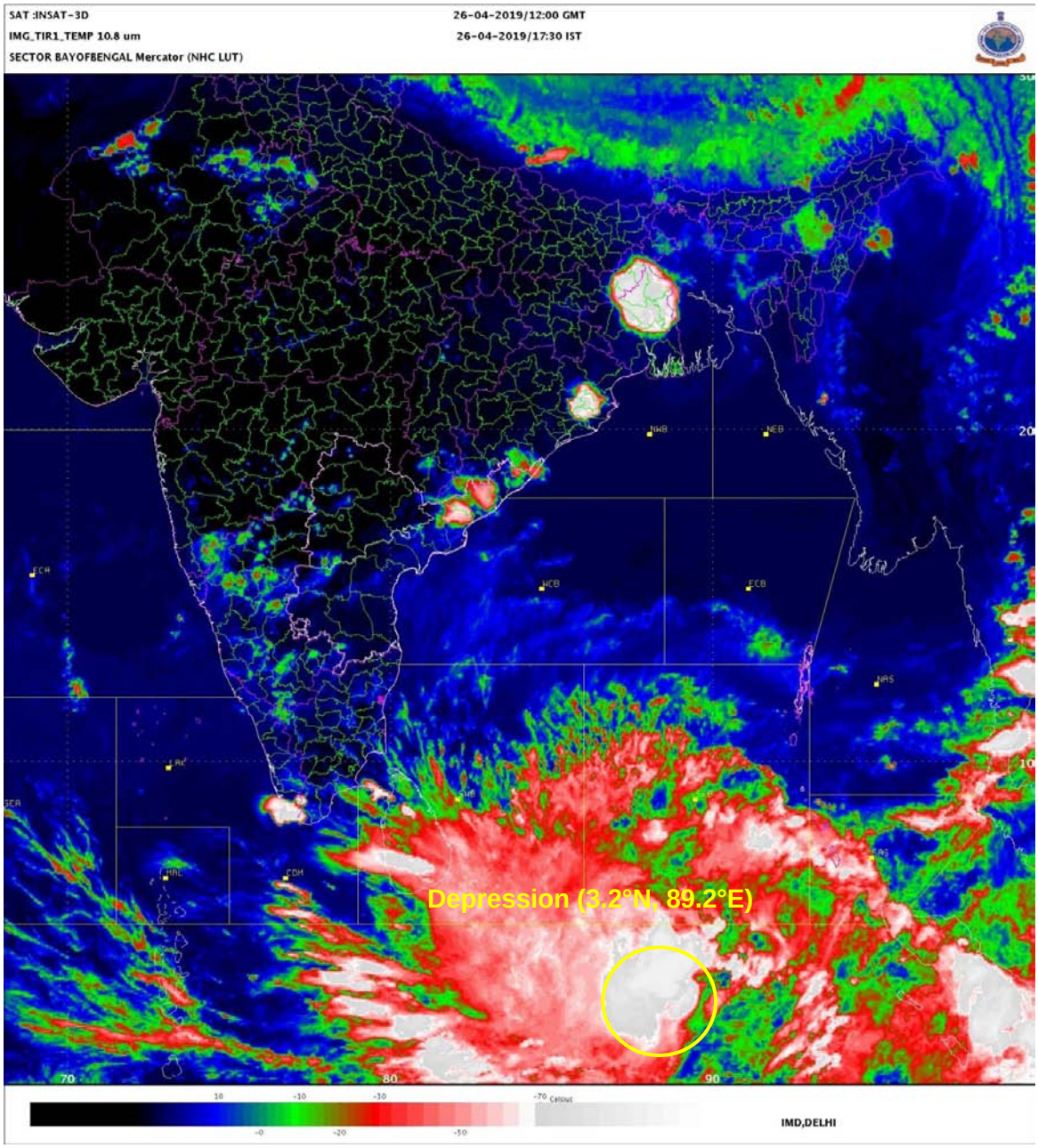
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



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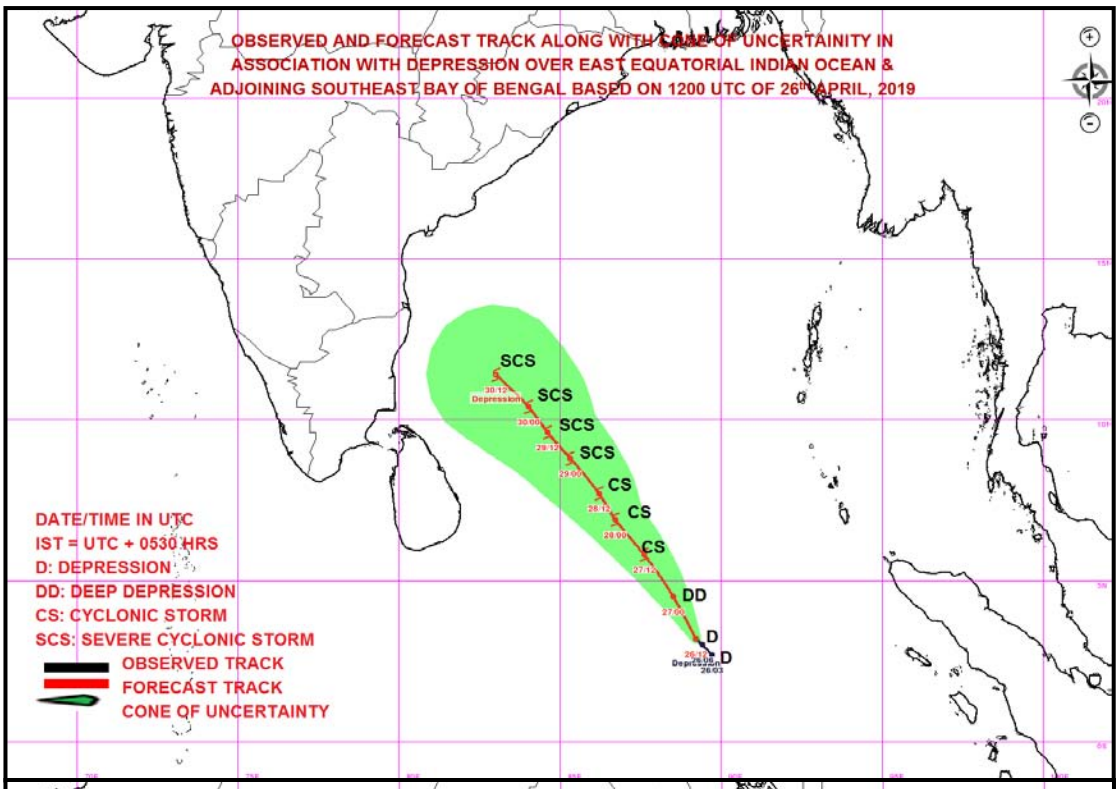
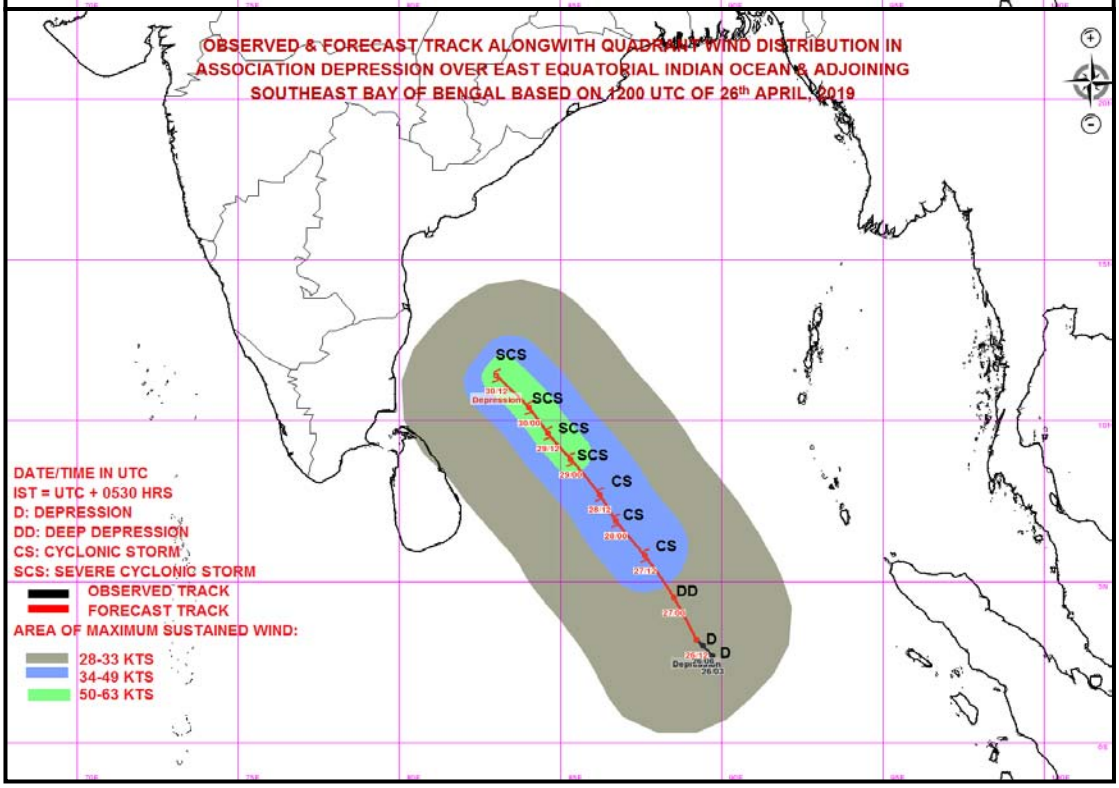




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Fishermen advised not to venture into open seas
34-49/(63-91)	High to very high seas	Total suspension of fishing operations.
50-63/(92-168)	Very High seas	Total suspension of fishing operations.

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 27.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0300 UTC OF 27.04.2019 BASED ON 0000 UTC OF 27.04.2019.

DEEP DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL

THE DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL MOVED FURTHER NORTHWESTWARDS WITH A SPEED OF ABOUT 20 KMPH IN LAST SIX HOURS, INTENSIFIED INTO A DEEP DEPRESSION AND LAY CENTRED AT 0000 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 4.5°N AND LONGITUDE 88.0°E, ABOUT 870 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1210 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1500 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO A CYCLONIC STORM DURING THE SUBSEQUENT 12 HOURS AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRI LANKA COAST DURING NEXT 72 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COAST ON 30TH APRIL 2019 EVENING.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/0000	4.5/88.0	50-60 GUSTING TO 70	DEEP DEPRESSION
27.04.19/0600	5.4/87.5	55-65 GUSTING TO 75	DEEP DEPRESSION
27.04.19/1200	6.2/87.1	60-70 GUSTING TO 80	CYCLONIC STORM
27.04.19/1800	6.8/86.6	70-80 GUSTING TO 90	CYCLONIC STORM
28.04.19/0000	7.5/86.0	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	8.8/85.2	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0000	10.0/84.3	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.9/83.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.5/82.3	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.2/81.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.5/81.3	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE VORTEX OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY CENTERED WITHIN HALF A DEG OF LAT 4.5°N /88.0°E INTENSITY T2.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 2.5N TO 7.5°N AND LONG 85.5°E TO 92.5°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE. IT SHOWS CURVED BAND PATTERN..

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1004 HPA.
A BUOY (23460) LOCATED NEAR LONG 88.6°E AND LAT. 6.5°N REPORTED MEAN SEA LEVEL PRESSURE 1005.5 HPA AND SST 30.2^{0}C.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

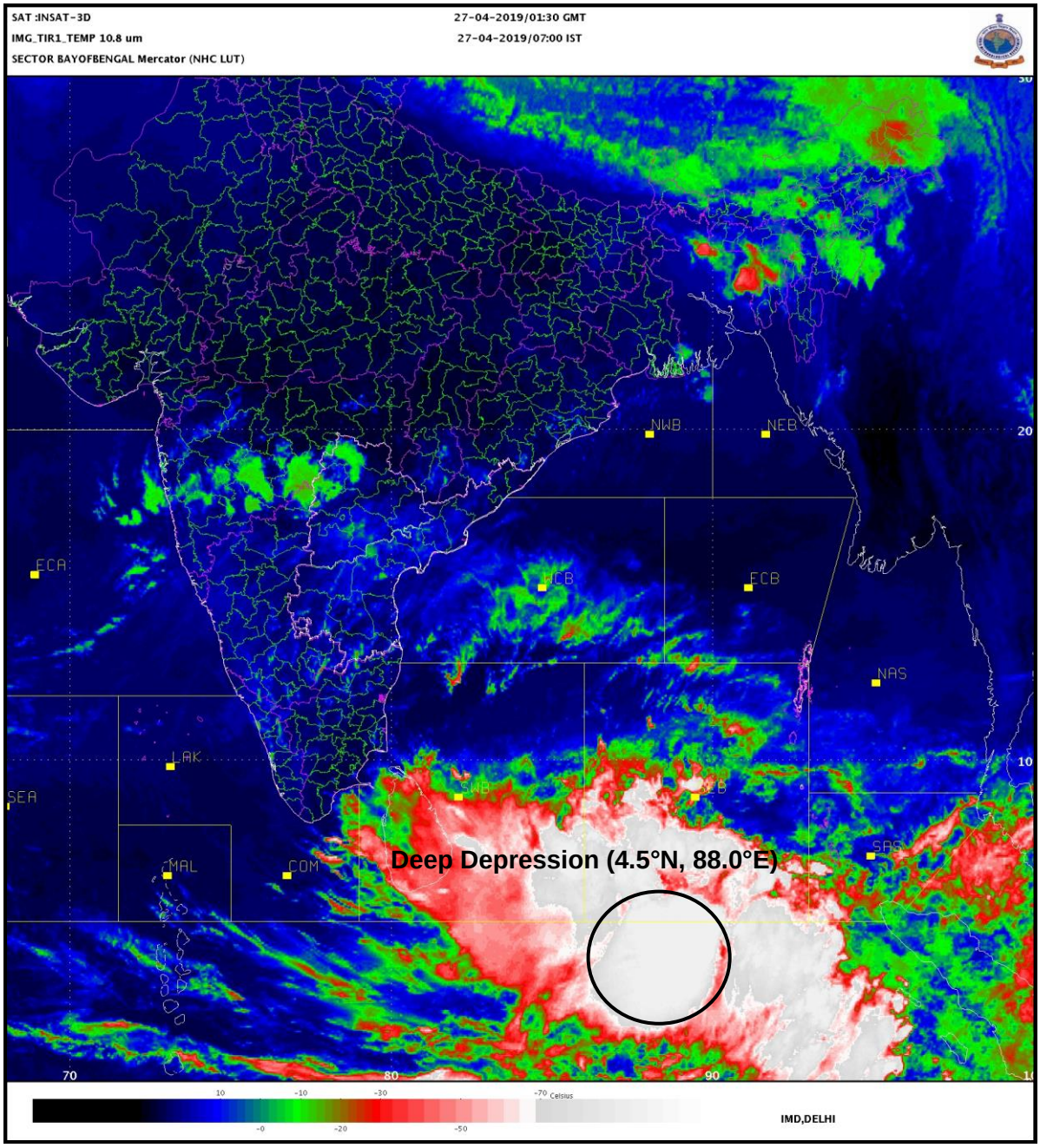
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN.. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 60-80 KJ/CM^2 OVER THE SYSTEM AREA. TOTAL PRECIPITABLE WATER IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SYSTEM IS LIKELY TO INTENSIFY DURING NEXT 4 DAYS.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 130 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 60 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS 50 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM DURING NEXT 12 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

(Ananda Kumar Das)
SCIENTIST-E, RSMC, NEW DELHI

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



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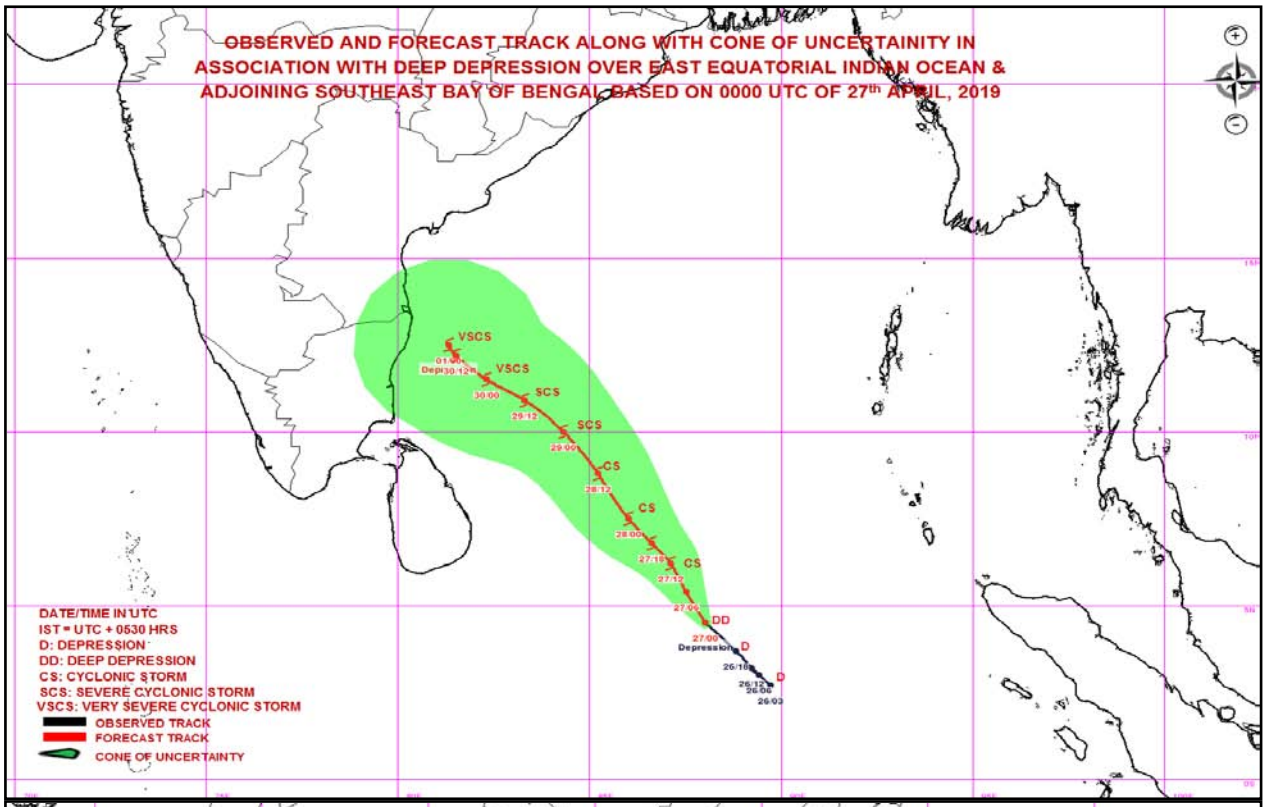
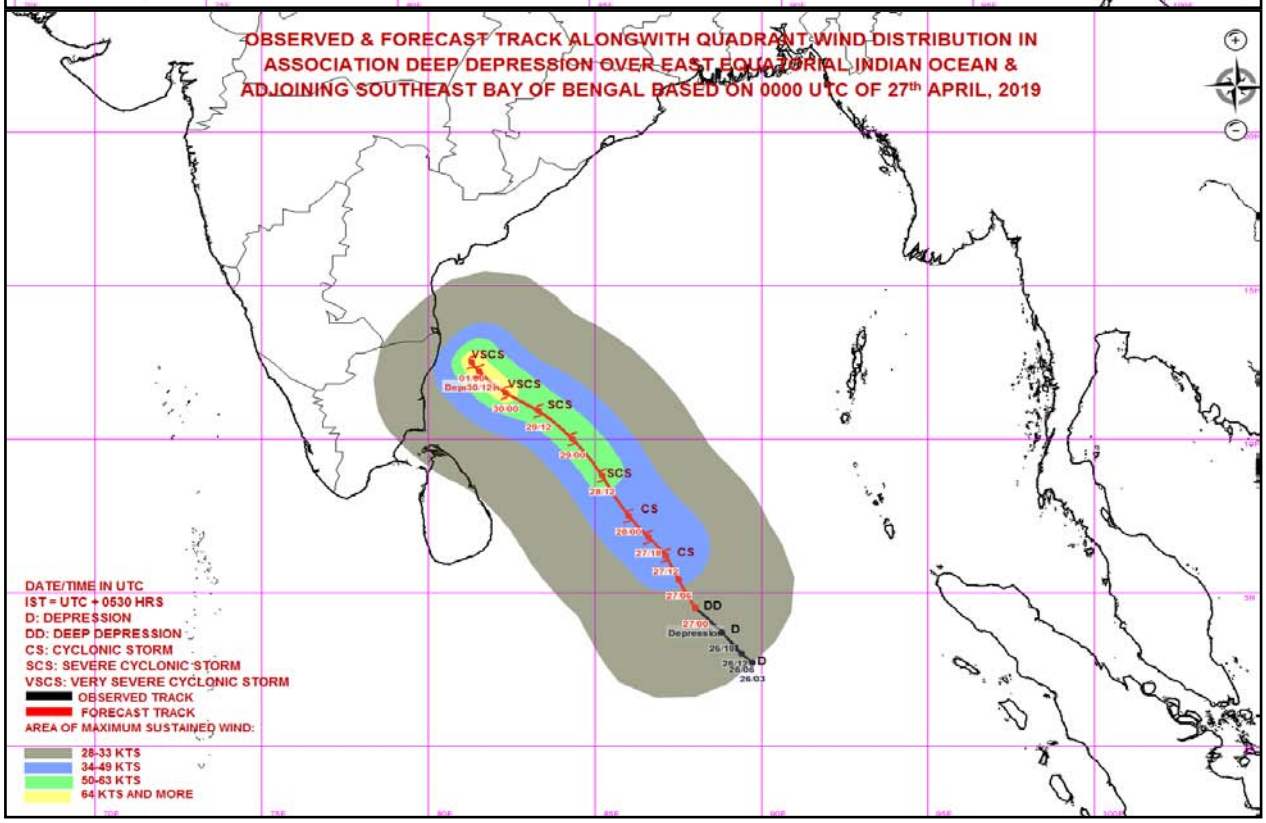




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Fishermen advised not to venture into open seas
34-49/(63-91)	High to very high seas	Total suspension of fishing operations.
50-63/(92-168)	Very High seas	Total suspension of fishing operations.
64-75/(118-138)	Phenomenal seas	Total suspension of fishing operations.

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 27.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0600 UTC OF 27.04.2019 BASED ON 0300 UTC OF 27.04.2019.

DEEP DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL

THE DEEP DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 18 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 4.9°N AND LONGITUDE 88.0°E, ABOUT 850 KM EAST-SOUTHEAST OF TRINCOMALEE (43418), 1180 KM SOUTHEAST OF CHENNAI (43278) AND 1460 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY INTO A CYCLONIC STORM DURING NEXT 06 HOURS AND FURTHER INTO A SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRI LANKA COAST DURING NEXT 72 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COAST BY 1200 UTC ON 30TH APRIL 2019.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/0300	4.9/88.0	55-65 GUSTING TO 75	DEEP DEPRESSION
27.04.19/0600	5.4/87.8	60-70 GUSTING TO 80	CYCLONIC STORM
27.04.19/1200	6.2/87.4	65-75 GUSTING TO 85	CYCLONIC STORM
27.04.19/1800	6.8/86.8	70-80 GUSTING TO 90	CYCLONIC STORM
28.04.19/0000	7.5/86.0	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	8.8/85.2	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0000	10.0/84.3	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.9/83.3	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.5/82.3	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.2/81.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.5/81.3	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE VORTEX OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY CENTERED WITHIN HALF A DEG OF LAT 5.0°N /87.8°E INTENSITY T2.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 2.0°N TO 8.0°N AND LONG 84.0°E TO 92.5°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 30 KNOTS GUSTING TO 40 KNOTS. THE SEA CONDITION IS VERY ROUGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1004 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.4°E REPORTED MEAN SEA

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

LEVEL PRESSURE 1008.7 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

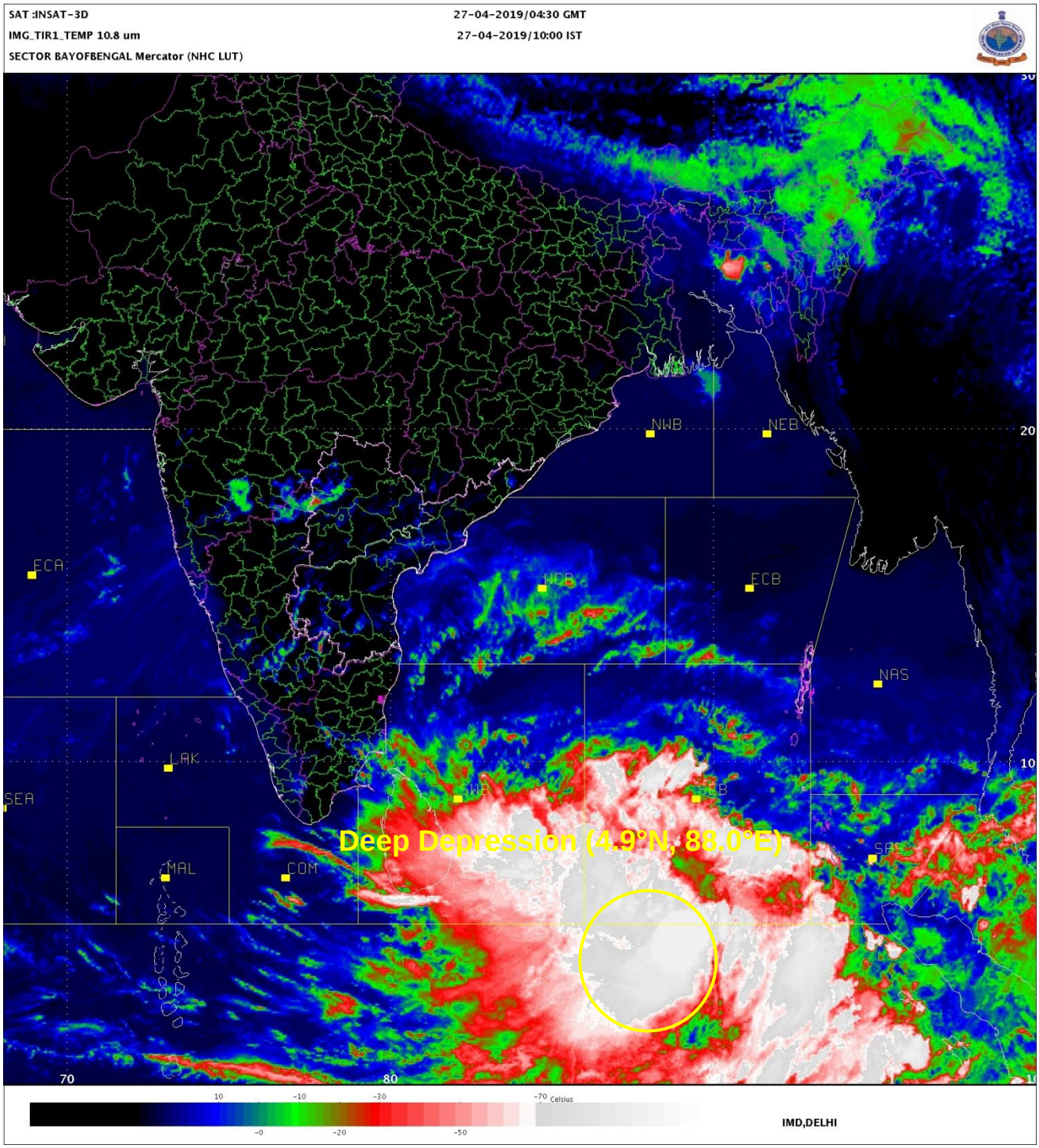
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. CONSIDERING THE ENVIRONMENTAL CONDITIONS, THE SYSTEM IS LIKELY TO INTENSIFY DURING NEXT 4 DAYS.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 $X10^{-6}SEC^{-1}$ TO THE WEST OF THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 40 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS 50 $X10^{-5}SEC^{-1}$ TO THE WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

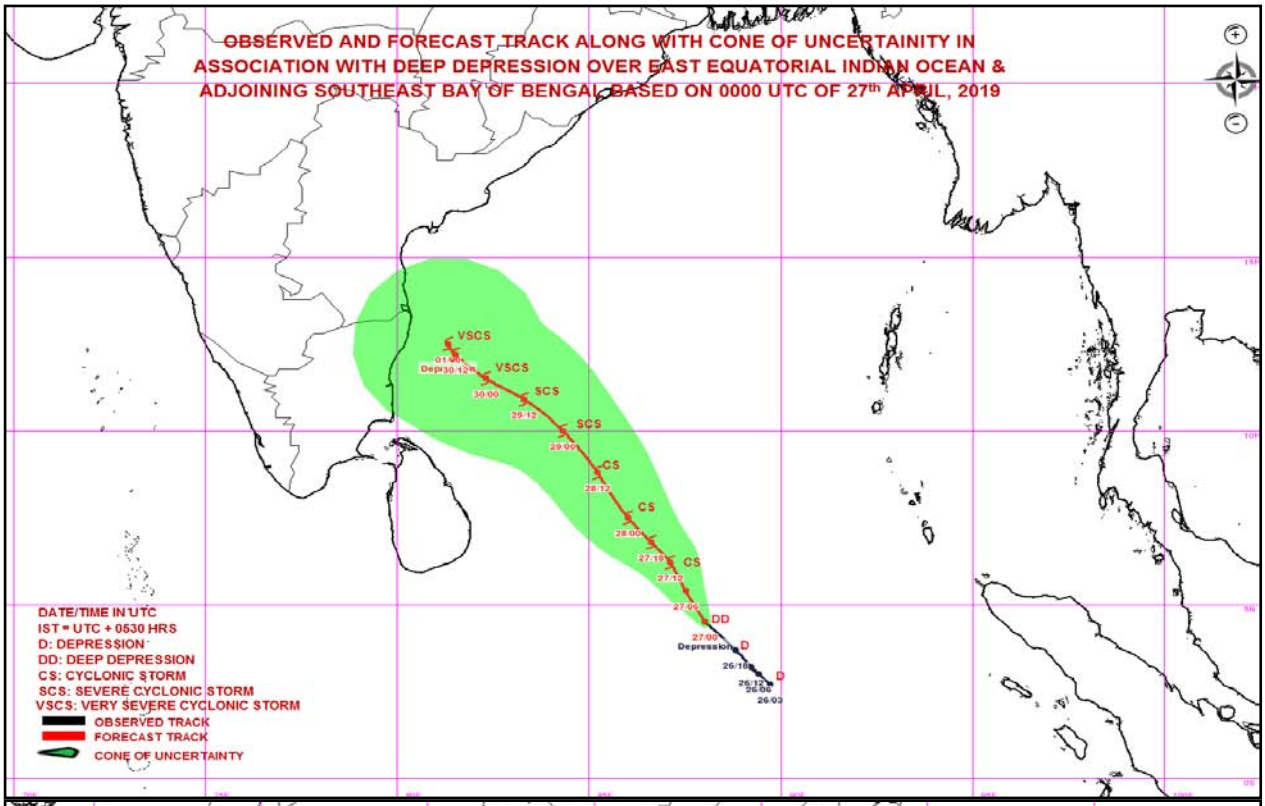
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A CYCLONIC STORM DURING NEXT 12 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

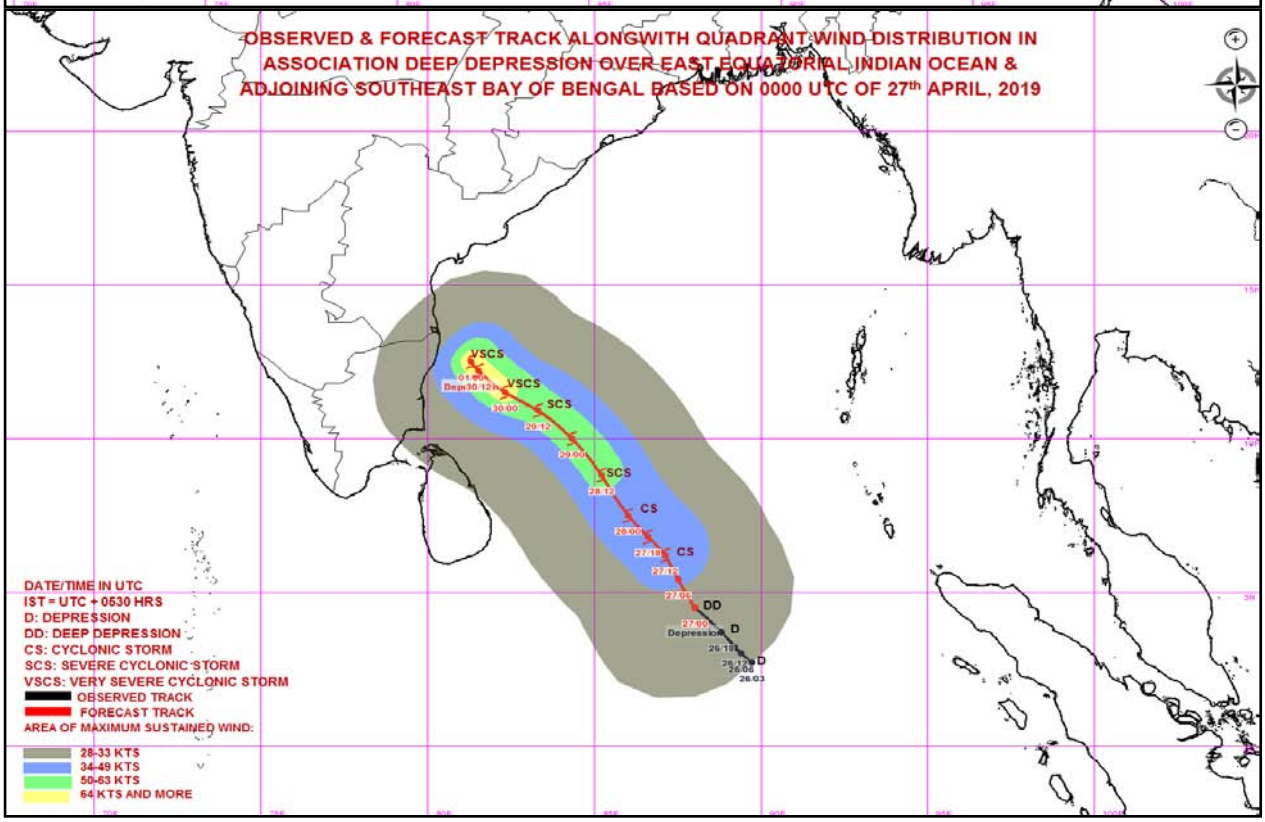
(NEETHA K. GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(KNOT)/KMPH)	IMPACT	ACTION
28-33 /(51–62)	VERY ROUGH SEAS.	TOTAL SUSPENSION OF FISHING OPERATIONS
34-49/(63-91)	HIGH TO VERY HIGH SEAS	TOTAL SUSPENSION OF FISHING OPERATIONS.
50-63/(92-117)	VERY HIGH SEAS	TOTAL SUSPENSION OF FISHING OPERATIONS.
64-75/(118-138)	PHENOMENAL SEAS	TOTAL SUSPENSION OF FISHING OPERATIONS.

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 1

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 1 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1000 UTC OF 27.04.2019 BASED ON 0600 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN

THE DEEP DEPRESSION OVER EAST EQUATORIAL INDIAN OCEAN & ADJOINING SOUTHEAST BAY OF BENGAL INTENSIFIED INTO **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN AND LAY CENTRED AT 0600 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 5.2°N AND LONGITUDE 88.5°E, ABOUT 880 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1250 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1460 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRI LANKA COAST DURING NEXT 72 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COASTS BY 1200 UTC ON 30TH APRIL 2019.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	AXIMUM SUSTAINED SURFAC WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/0600	5.2/88.5	60-70 GUSTING TO 80	CYCLONIC STORM
27.04.19/1200	5.9/88.2	70-80 GUSTING TO 90	CYCLONIC STORM
27.04.19/1800	6.5/87.8	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0000	7.1/87.3	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/86.9	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/1800	8.8/86.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/0600	10.1/85.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.8/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.6/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.9/83.4	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.2/83.4	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02.05.19/0600	13.7/83.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE VORTEX OVER EAST EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTHEAST BAY IS INTENSITY T 2.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 2.0°N TO 9.0°N AND LONG 83.0°E TO 93.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE SEA CONDITION IS HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.4°N AND LONG 88.2°E REPORTED MEAN SEA LEVEL PRESSURE 1007.9 HPA AND MEAN SURFACE WIND SPEED OF 350°/ 08 KNOTS. A SHIP LOCATED NEAR LAT. 6.1°N AND LONG 92.8°E REPORTED MEAN SURFACE WIND SPEED OF 016°/ 27 KNOTS

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

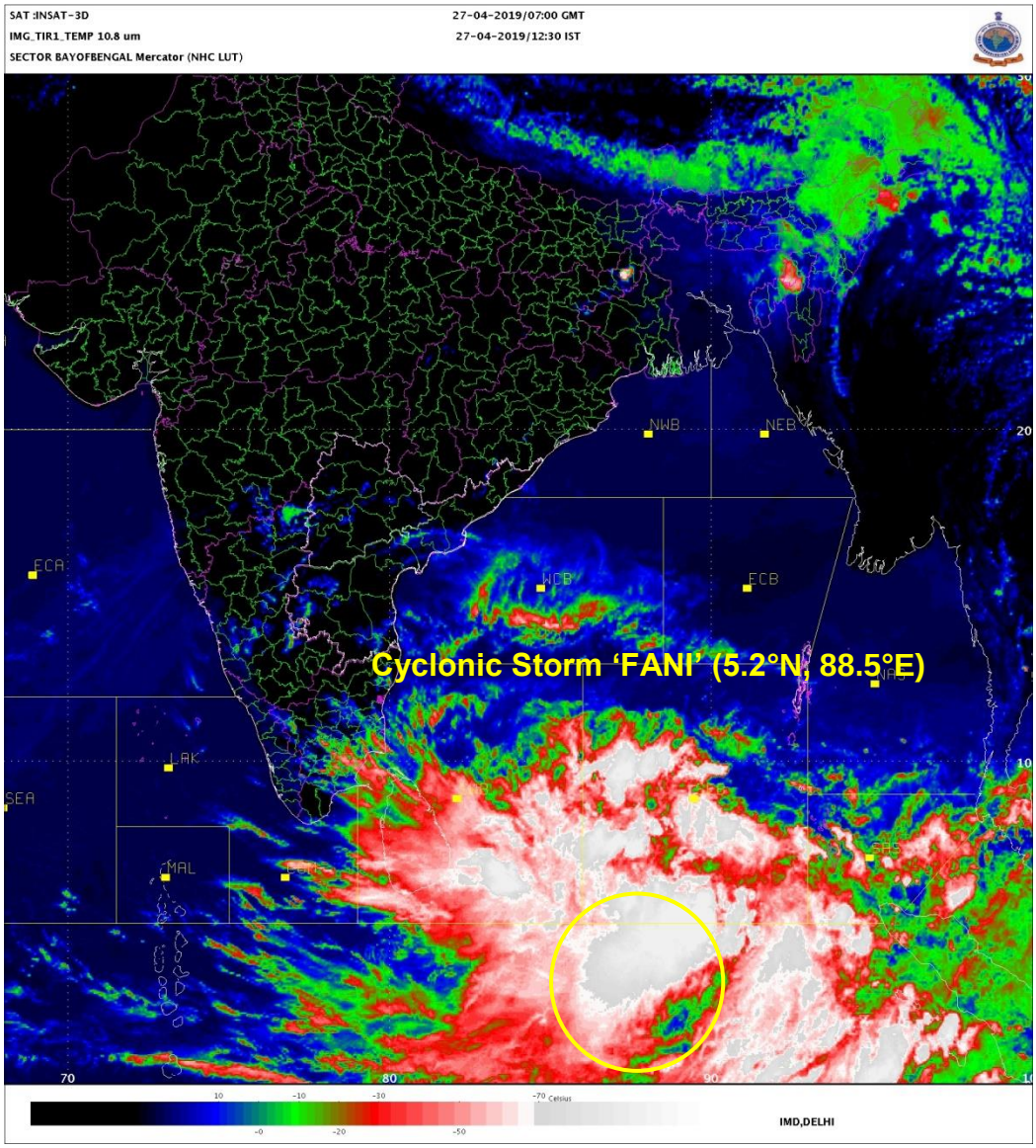
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29 APRIL TO 01 MAY 2019. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE FAST AND IS LEKLY TO WEAKEN SLIGHTLY.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 50 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

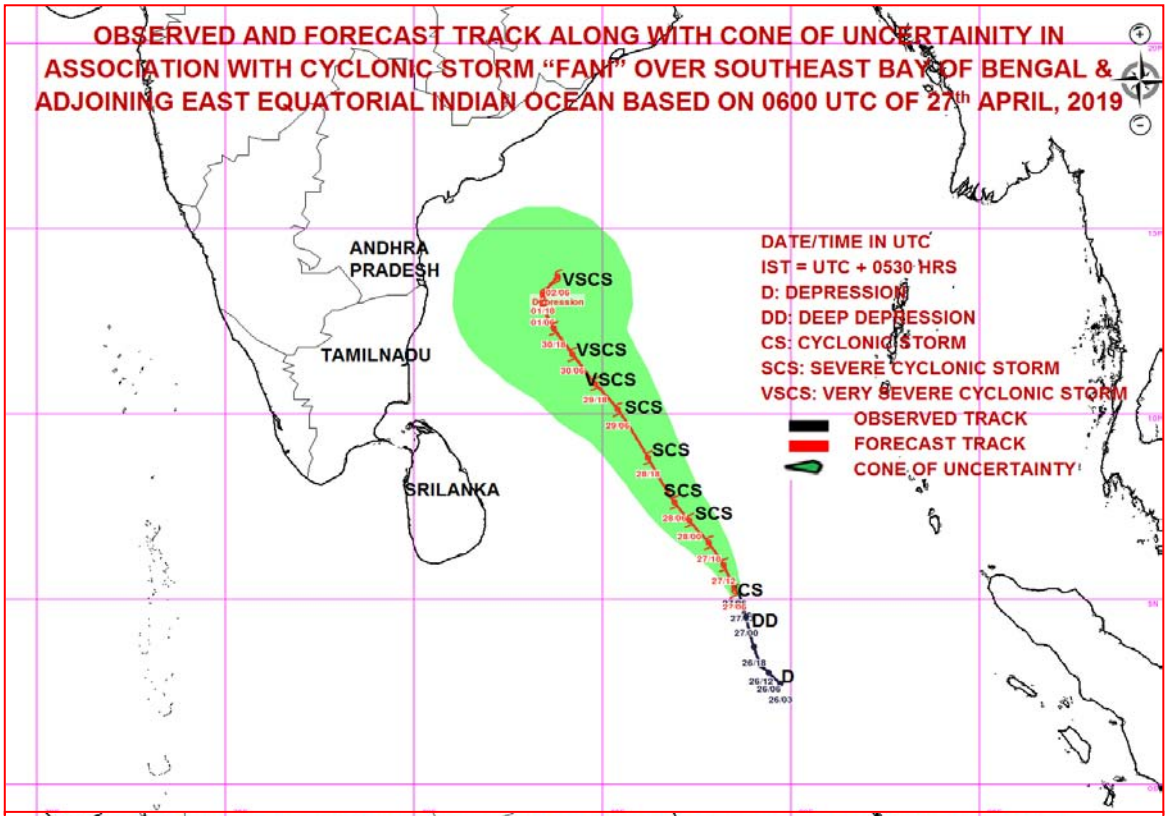
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

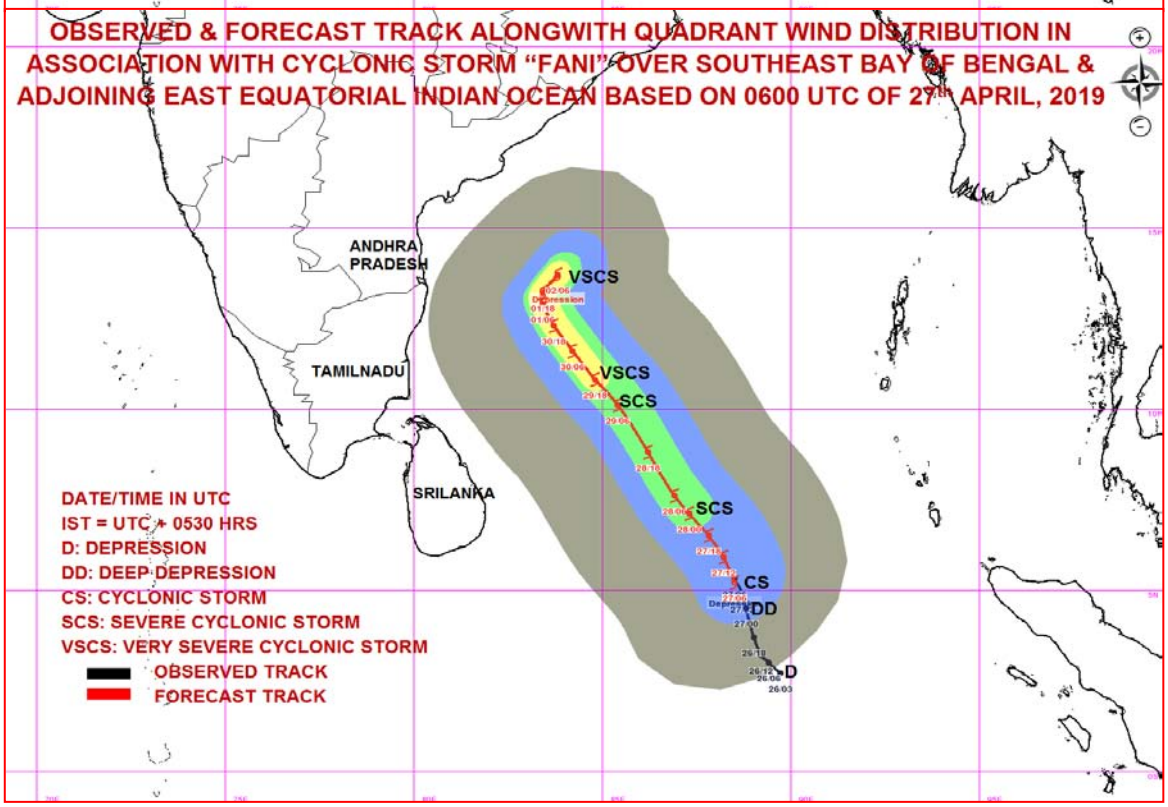
(NEETHA K. GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 2

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 2 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1100 UTC OF 27.04.2019 BASED ON 0900 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN MOVED NORTHWESTWARDS AND LAY CENTRED AT 0900 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 5.4°N AND LONGITUDE 88.5°E OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN, ABOUT 870 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1240 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1440 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

IT IS VERY LIKELY TO MOVE NORTHWESTWARDS OFF SRI LANKA COAST DURING NEXT 72 HOURS AND REACH NEAR NORTH TAMILNADU & SOUTH ANDHRA PRADESH COASTS BY 1200 UTC ON 30TH APRIL 2019.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/0900	5.4/88.5	60-70 GUSTING TO 80	CYCLONIC STORM
27.04.19/1200	5.9/88.2	70-80 GUSTING TO 90	CYCLONIC STORM
27.04.19/1800	6.5/87.8	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0000	7.1/87.3	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/86.9	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/1800	8.8/86.2	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/0600	10.1/85.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.8/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.6/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.9/83.4	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.2/83.4	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02.05.19/0600	13.7/83.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS INTENSITY T 2.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 3.0°N TO 9.0°N AND LONG 84.0°E TO 93.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONVECTION AND INCREASED ORGANISATION OF CLOUDS AROUND THE SYSTEM CENTRE.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE SEA CONDITION IS HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 1002 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1005.5 HPA AND MEAN SURFACE WIND SPEED OF 010°/ 08 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

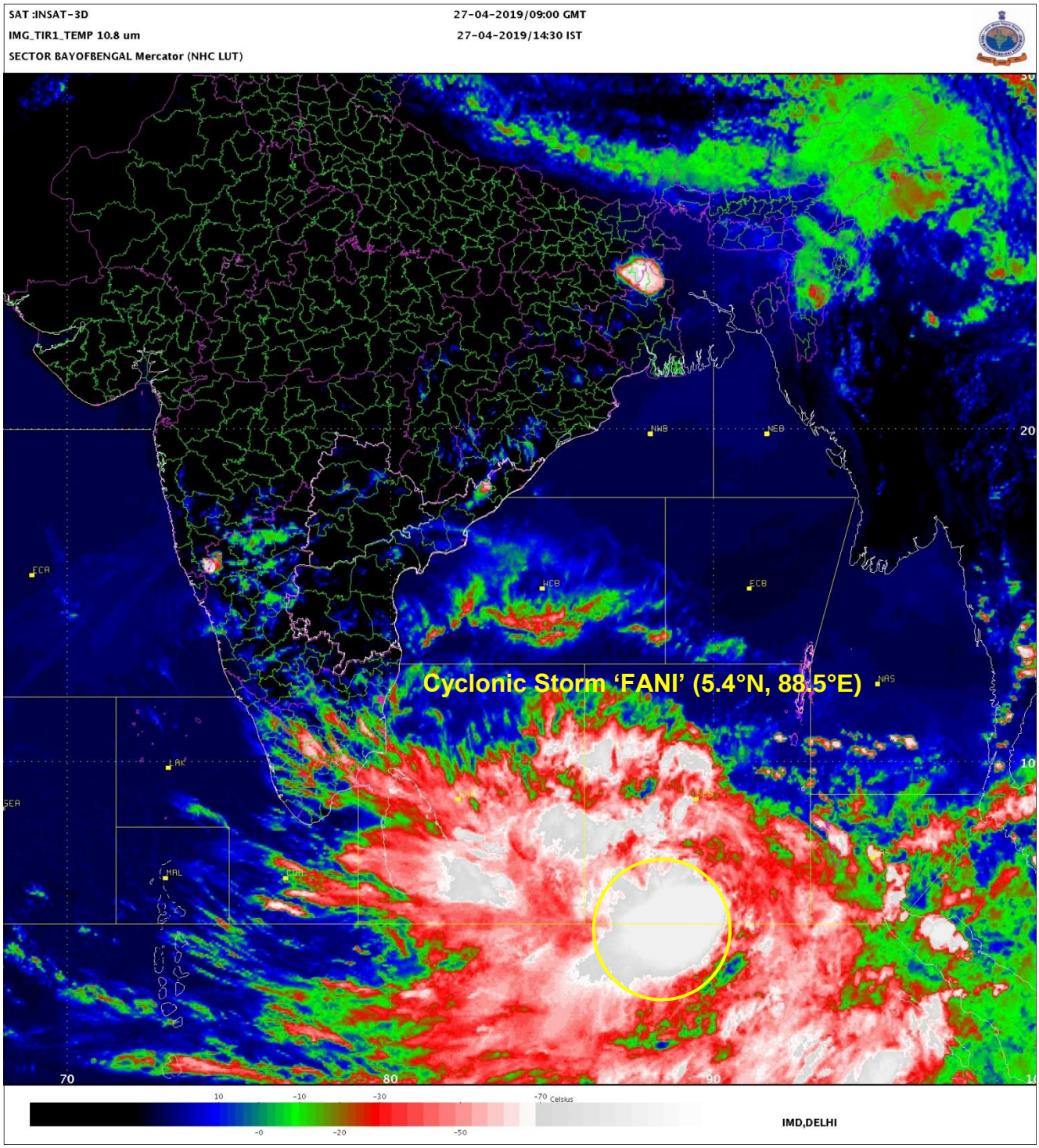
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29 APRIL TO 01 MAY 2019. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE FAST AND IS LEKLY TO WEAKEN SLIGHTLY.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE AND UPPER LEVEL DIVERGENCE IS 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. AN ANTICYCLONIC CIRCULATION LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT DURING NEXT 4 DAYS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, SUGGEST FURTHER INTENSIFICATION OF THE SYSTEM INTO A SEVERE CYCLONIC STORM DURING NEXT 24 HOURS. THESE MODELS ALSO INDICATE INITIAL NORTHWESTWARD MOVEMENT OF THE SYSTEM TOWARDS NORTH TAMILNADU AND SOUTH ANDHRA PRADESH COASTS DURING NEXT 4 DAYS AND NORTHEASTWARD RECURVATURE THEREAFTER. HOWEVER, THERE IS LARGE VARIATION ABOUT THE POINT OF RECURVATURE AND LANDFALL OF THE SYSTEM.

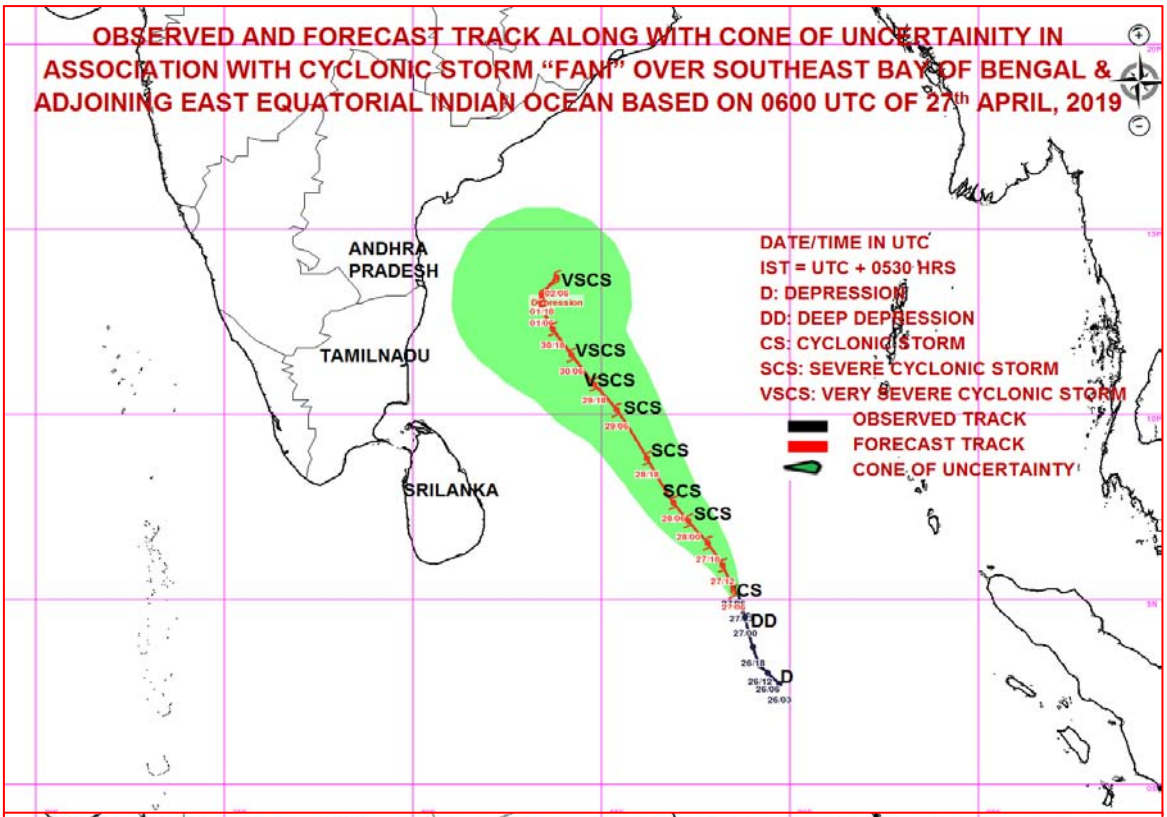
(NEETHA K. GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

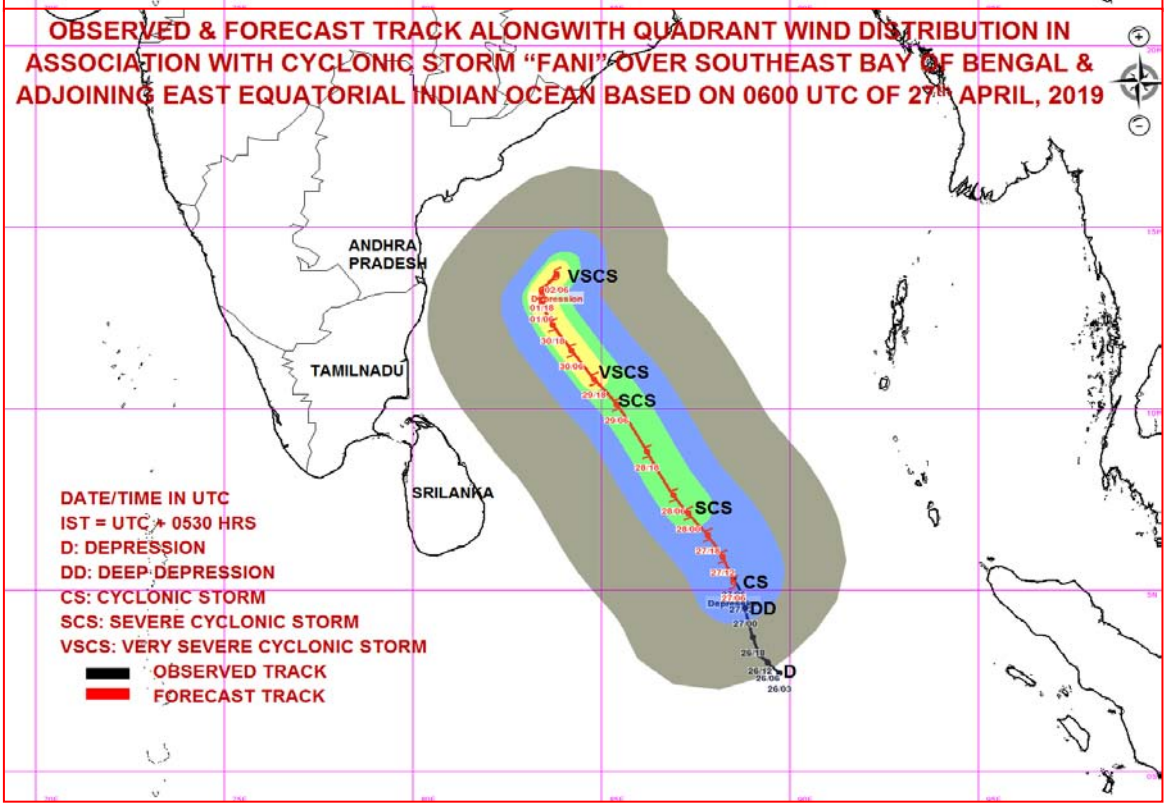
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 3

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 3 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 27.04.2019 BASED ON 1200 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN, SLIGHTLY INTENSIFIED FURTHER AND MOVED NORTHWARDS WITH A SPEED OF ABOUT 09 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 5.9°N AND LONGITUDE 88.5°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 850 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1200 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1390 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 30TH APRIL AND THEREAFTER RECURVE NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/1200	5.9/88.5	80-90 GUSTING TO 100	CYCLONIC STORM
27.04.19/1800	6.5/88.3	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/0000	7.1/87.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/87.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
28.04.19/1200	8.2/86.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/0000	9.4/85.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
29.04.19/1200	10.4/85.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/0000	11.2/84.5	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.0/84.0	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.6/83.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.1/84.0	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02.05.19/0000	13.5/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02.05.19/1200	14.0/84.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 3.0°N TO 8.0°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1005.4 HPA AND MEAN SURFACE WIND SPEED OF 330°/ 12 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE INCREASED AND IS AROUND 60 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. UNDER THESE CONDITIONS THE SYSTEM HAS INTENSIFIED SLIGHTLY FROM A MAXIMUM SUSTAINED WIND SPEED OF 35 KNOTS TO 45 KNOTS.

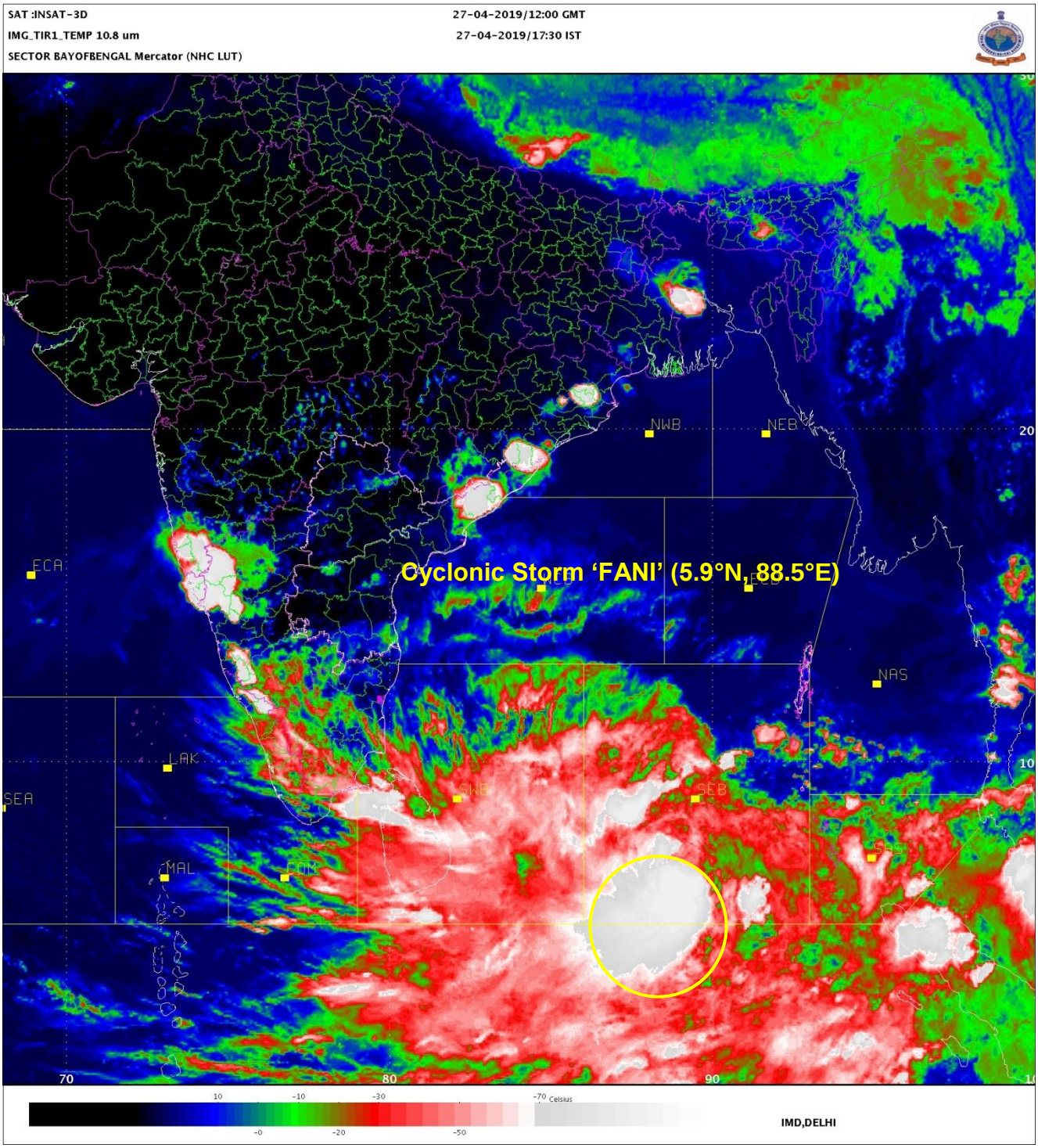
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS COLDER SEA AND INCREASE IN WIND SHEAR.

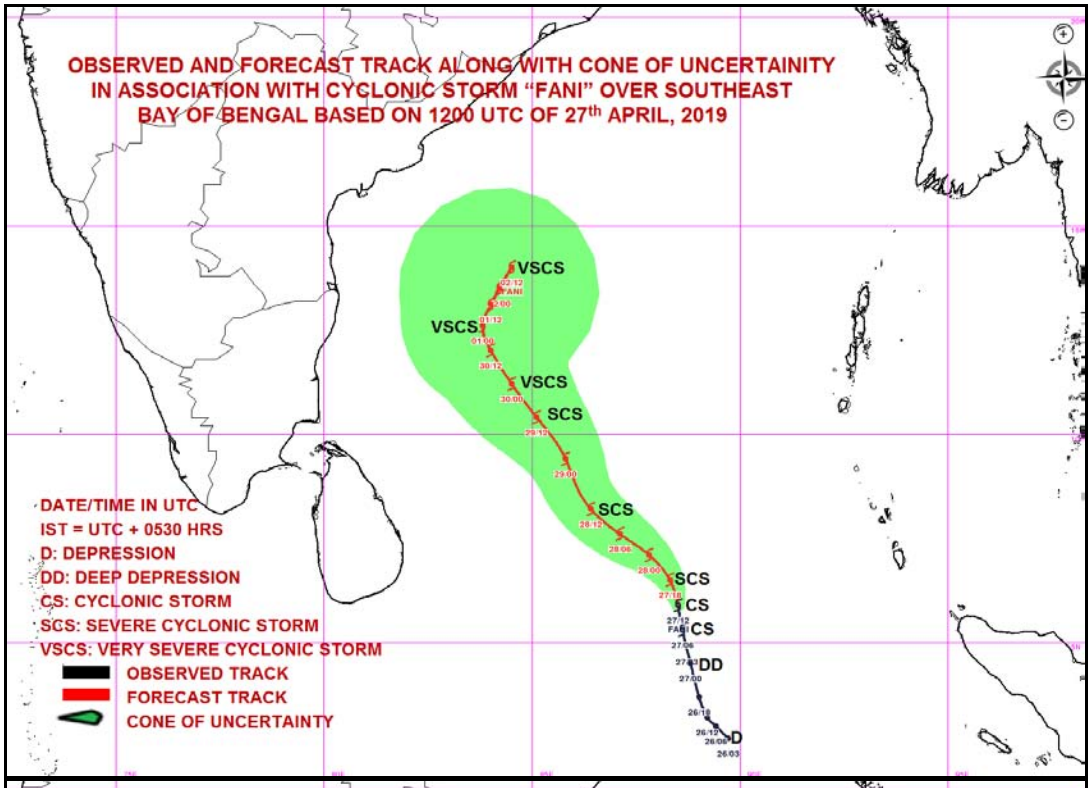
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

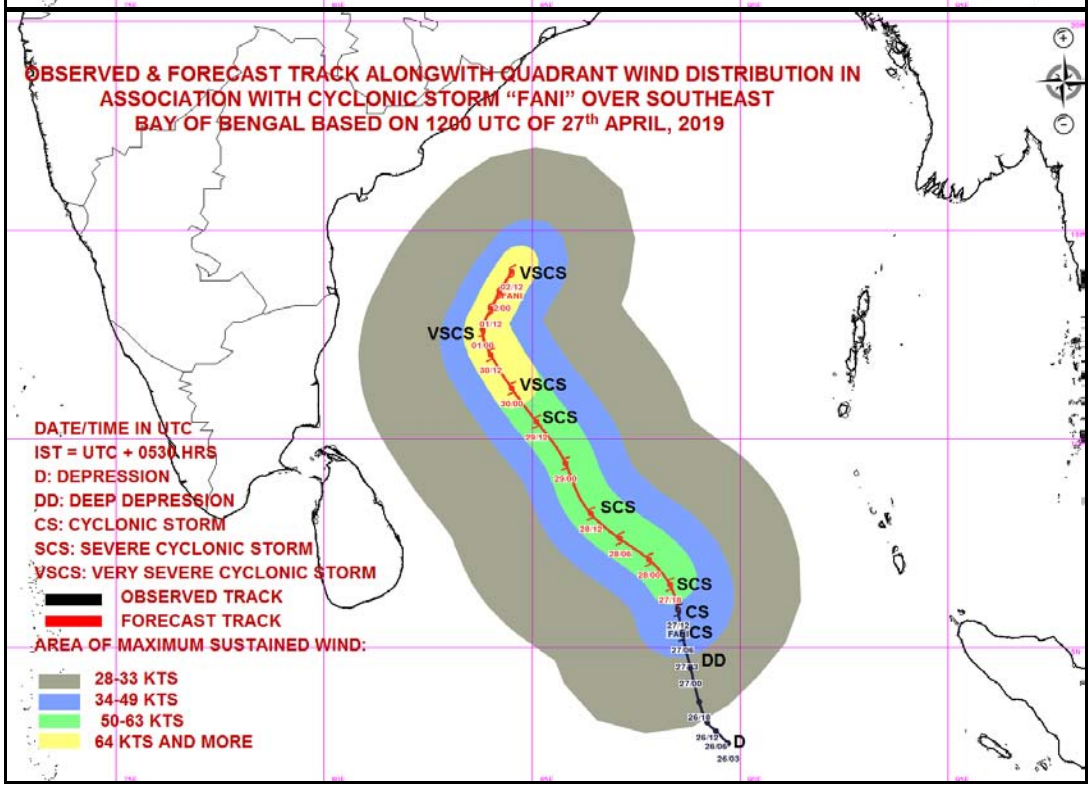
(NEETHA K. GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 4

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 4 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1700 UTC OF 27.04.2019 BASED ON 1500 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN, SLIGHTLY INTENSIFIED FURTHER AND MOVED NORTHWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 6.3°N AND LONGITUDE 88.5°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 840 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1175 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1360 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 30TH APRIL AND THEREAFTER RECURVE NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/1500	6.3/88.5	80-90 GUSTING TO 100	CYCLONIC STORM
27.04.19/1800	6.5/88.3	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/0000	7.1/87.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/87.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
28.04.19/1200	8.2/86.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/0000	9.4/85.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
29.04.19/1200	10.4/85.1	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/0000	11.2/84.5	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.0/84.0	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.6/83.8	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.1/84.0	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
02.05.19/0000	13.5/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
02.05.19/1200	14.0/84.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 4.0°N TO 8.5°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.32°N AND LONG 88.22°E REPORTED MEAN SEA LEVEL PRESSURE 1004.6.HPA AND MEAN SURFACE WIND SPEED OF 330°/ 12 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE INCREASED AND IS AROUND 60 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM. UNDER THESE CONDITIONS THE SYSTEM HAS INTENSIFIED SLIGHTLY FROM A MAXIMUM SUSTAINED WIND SPEED OF 35 KNOTS TO 45 KNOTS.

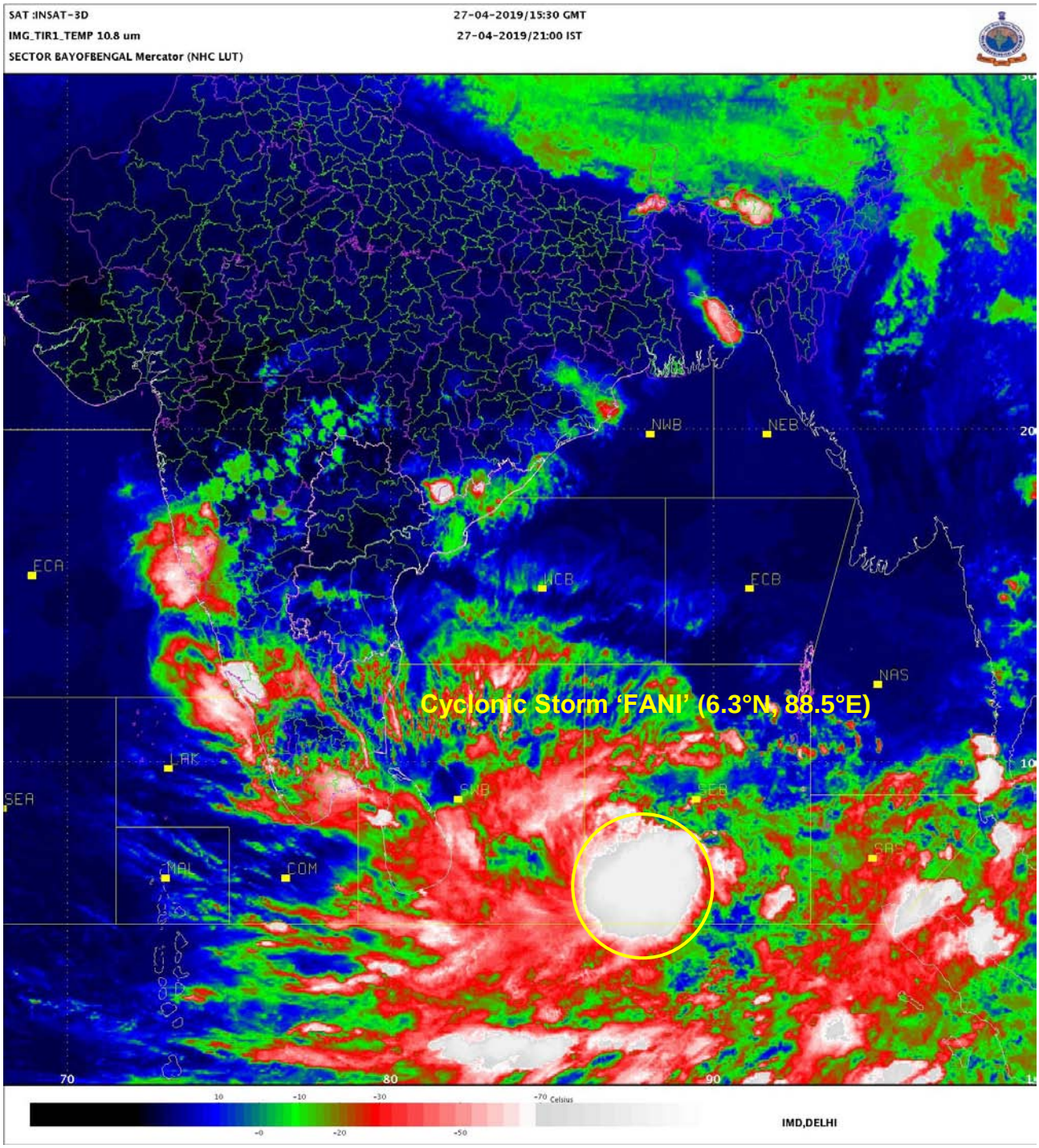
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS COLDER SEA AND INCREASE IN WIND SHEAR.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(V R Durai)
SCIENTIST-E, RSMC, NEW DELHI

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



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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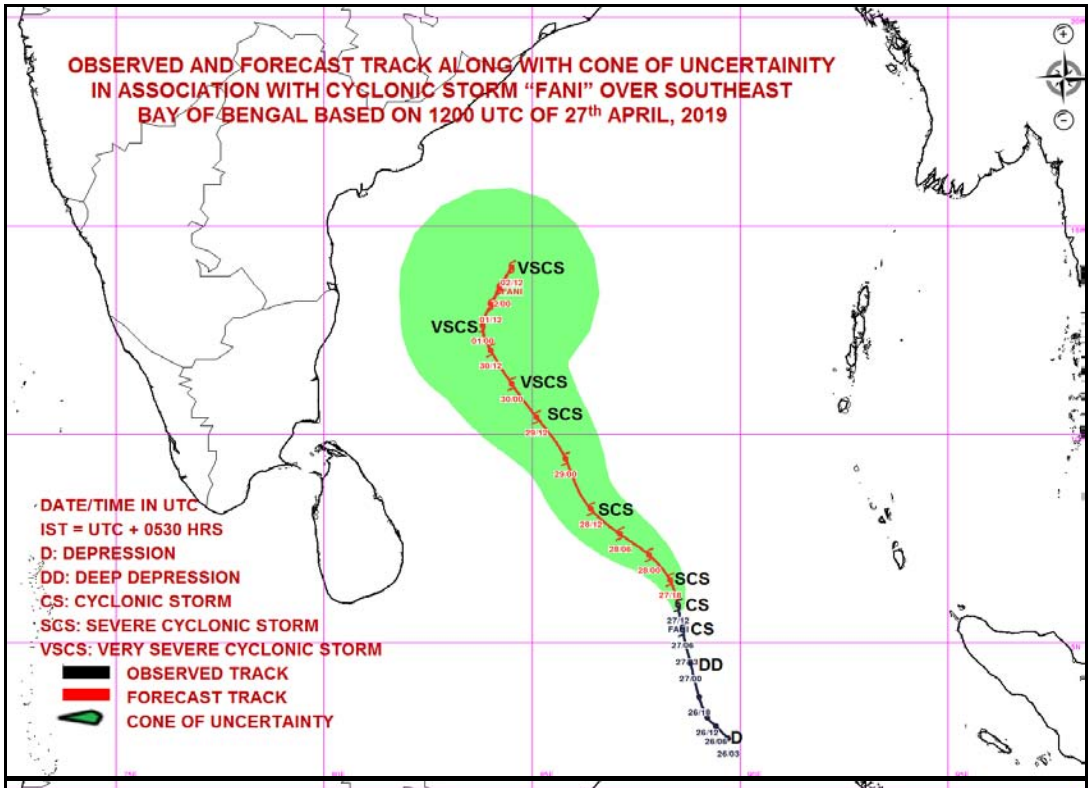
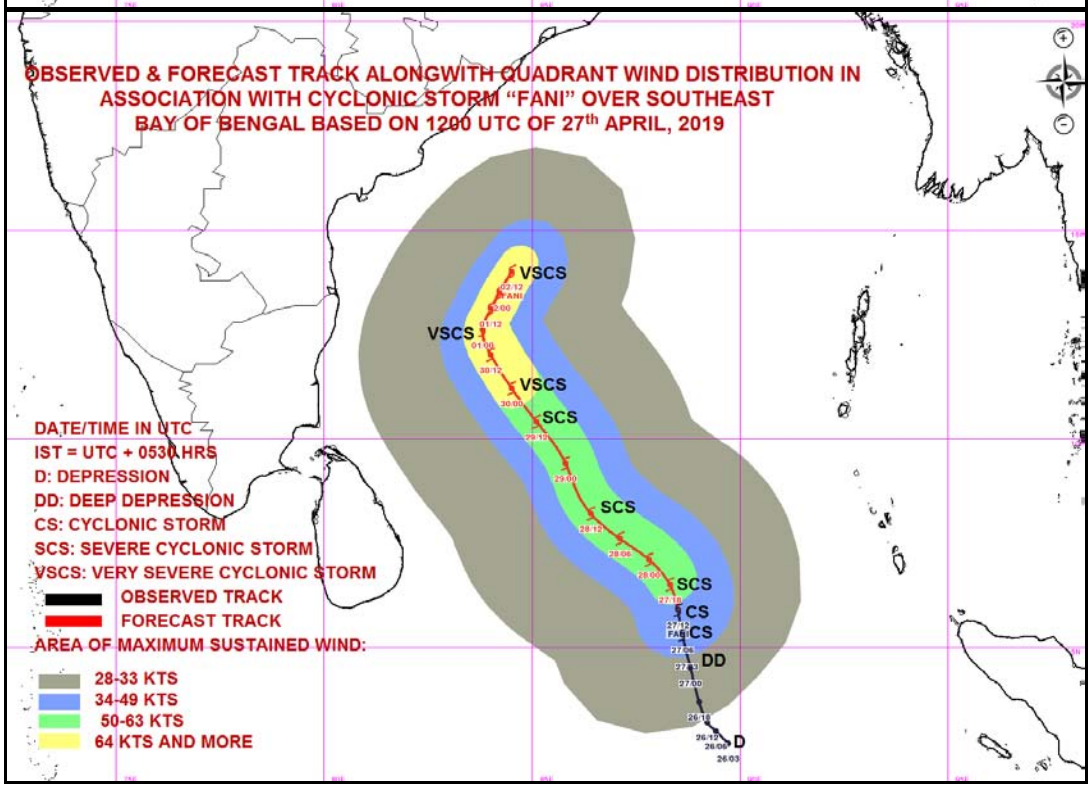




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 5

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 5 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2030 UTC OF 27.04.2019 BASED ON 1800 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN, MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 6.6°N AND LONGITUDE 88.0°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 775 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1110 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1300 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 30TH APRIL AND THEREAFTER RECURVE NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION LAT. ^{0}N/ LONG ^{0}E)	MAXIMUM SUSTAINED SURFAC WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/1800	6.6/88.0	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0000	7.1/87.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/87.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
28.04.19/1200	8.2/86.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
28.04.19/1800	8.8/86.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/0600	9.9/85.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
29.04.19/1800	10.8/84.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.6/84.3	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.3/84.1	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02.05.19/0600	13.7/84.3	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02.05.19/1800	14.3/84.7	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1700 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 4.0°N TO 8.5°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.27°N AND LONG 88.34°E REPORTED MEAN SEA LEVEL PRESSURE 1002.5 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE INCREASED AND IS AROUND 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM.

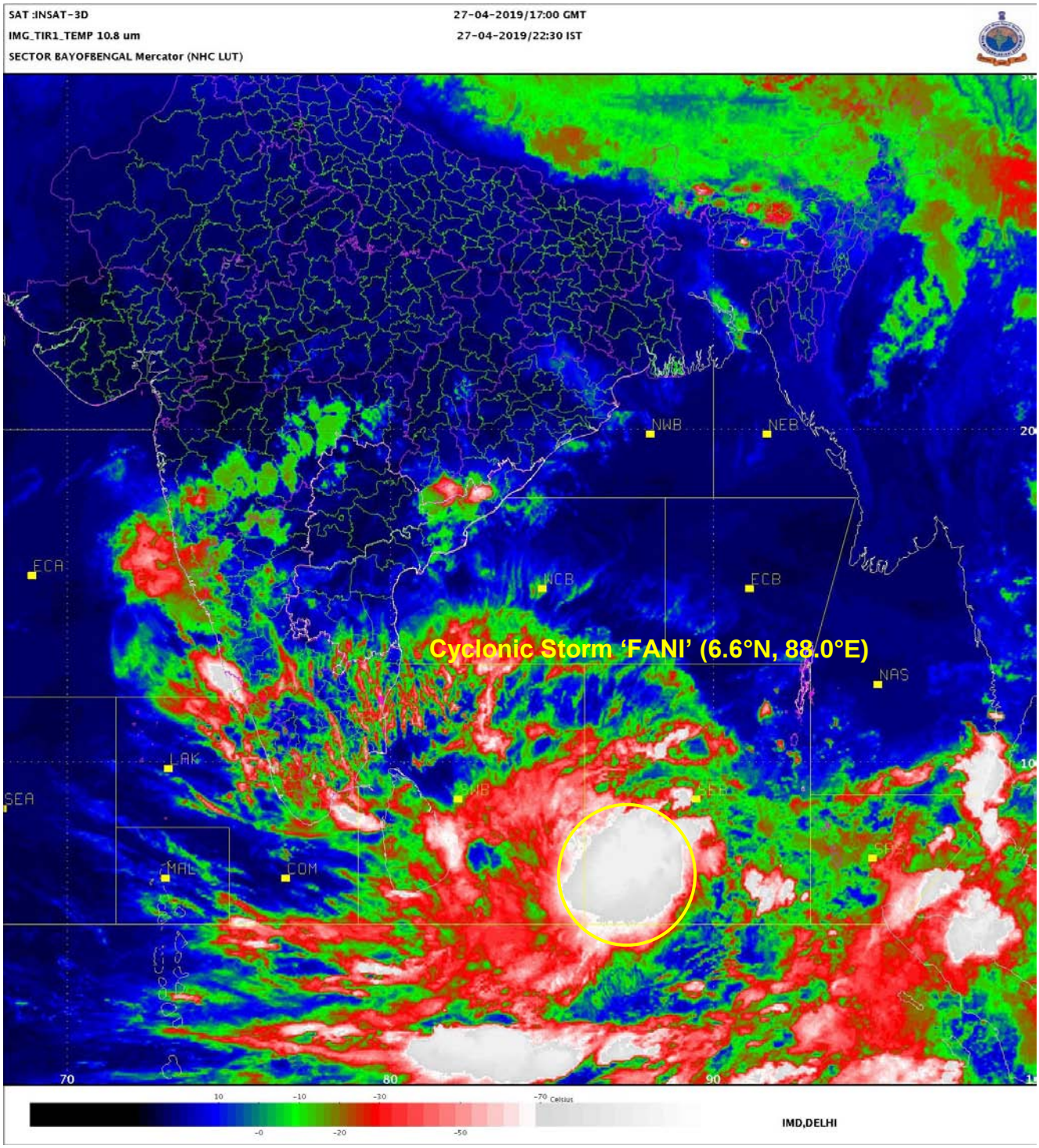
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS COLDER SEA AND INCREASE IN WIND SHEAR.

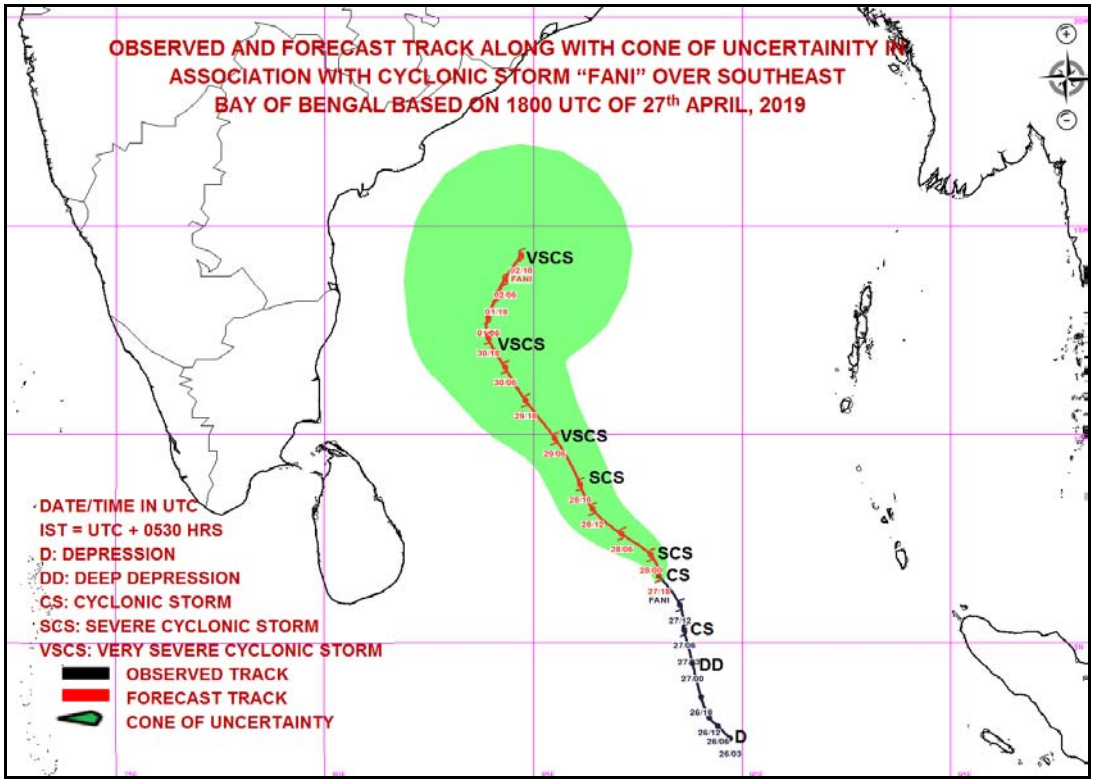
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

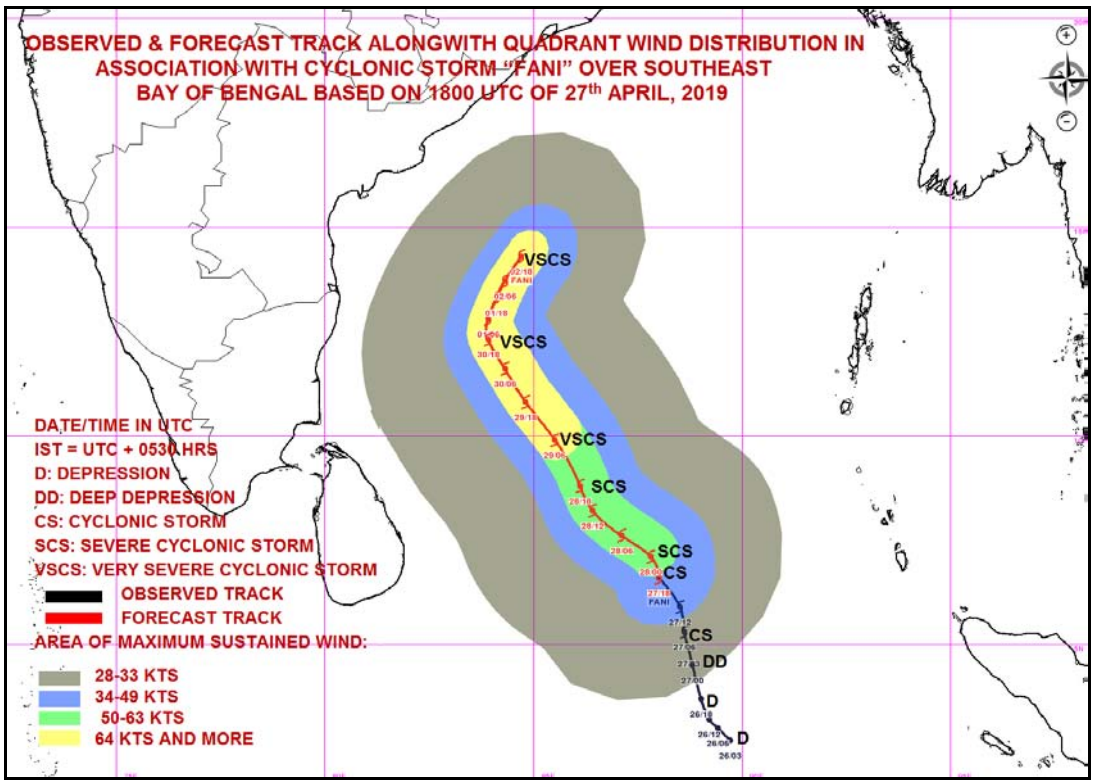
(V R Durai)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 6

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY No. 6 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2300 UTC OF 27.04.2019 BASED ON 2100 UTC OF 27.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & ADJOINING EAST EQUATORIAL INDIAN OCEAN, MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 UTC OF 27TH APRIL, 2019 NEAR LATITUDE 6.9°N AND LONGITUDE 87.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 750 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1080 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1265 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 30TH APRIL AND THEREAFTER RECURVE NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION LAT. ^{0}N/ LONG ^{0}E)	MAXIMUM SUSTAINED SURFAC WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
27.04.19/2100	6.9/87.9	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0000	7.1/87.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
28.04.19/0600	7.6/87.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
28.04.19/1200	8.2/86.4	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
28.04.19/1800	8.8/86.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/0600	9.9/85.5	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
29.04.19/1800	10.8/84.8	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.6/84.3	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.3/84.1	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02.05.19/0600	13.7/84.3	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
02.05.19/1800	14.3/84.7	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC ON 27TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 4.0°N TO 8.5°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.27°N AND LONG 88.34°E REPORTED MEAN SEA LEVEL PRESSURE 1002.5 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE INCREASED AND IS AROUND 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM.

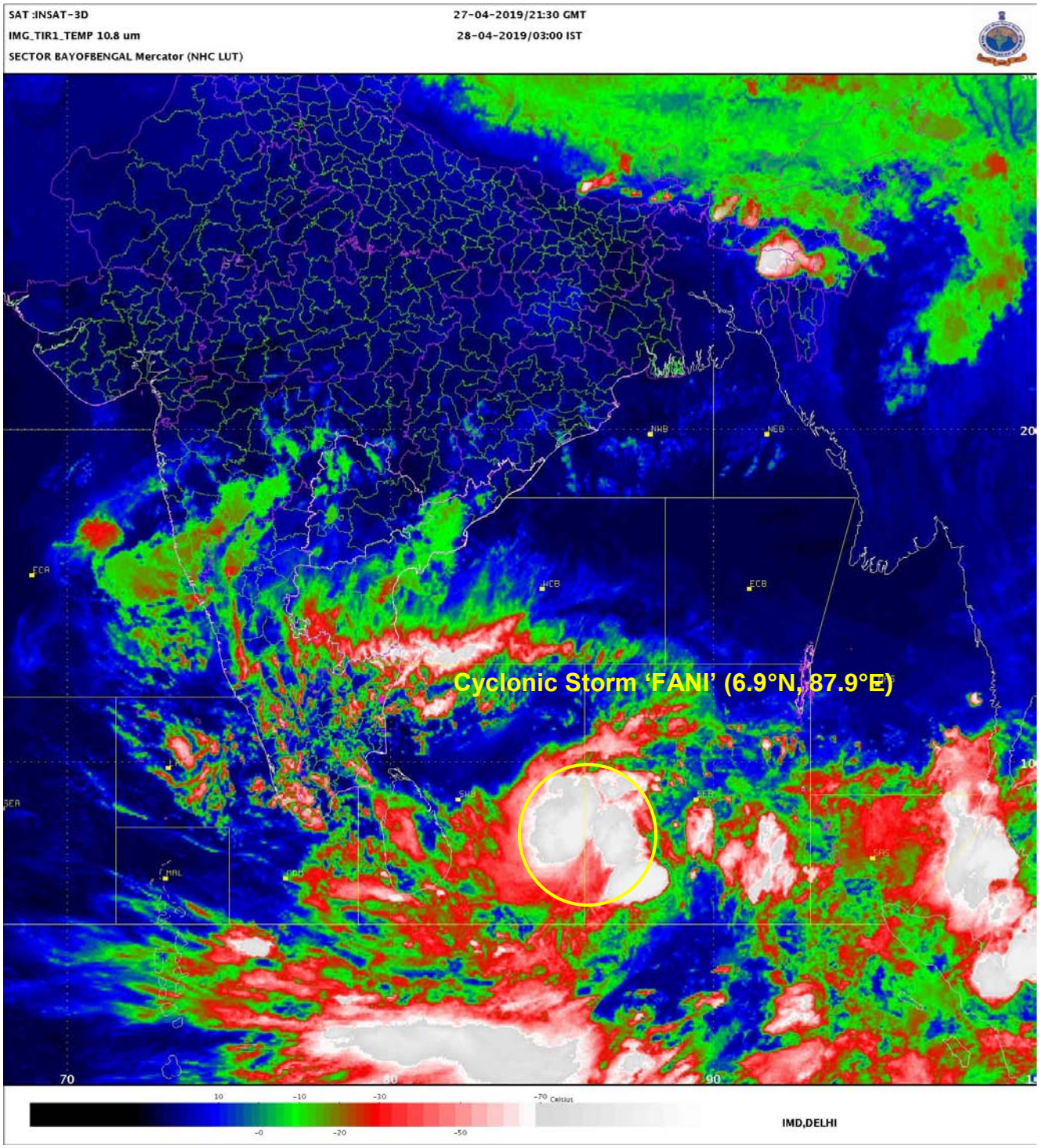
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS COLDER SEA AND INCREASE IN WIND SHEAR.

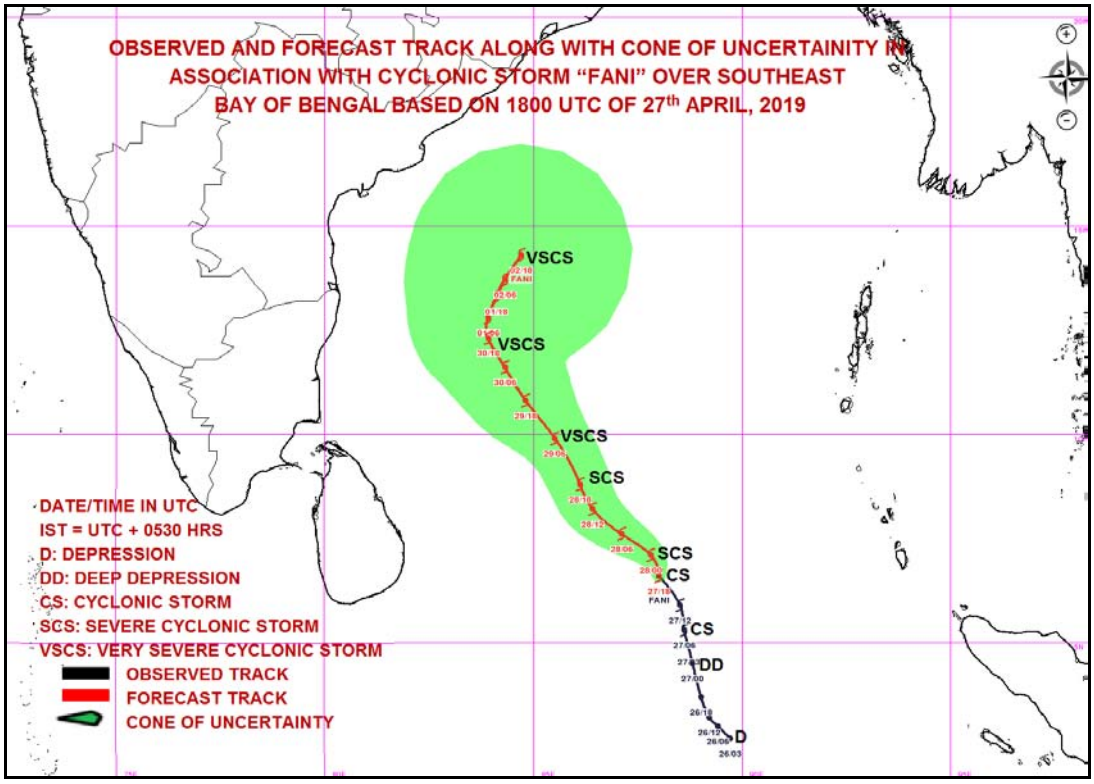
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

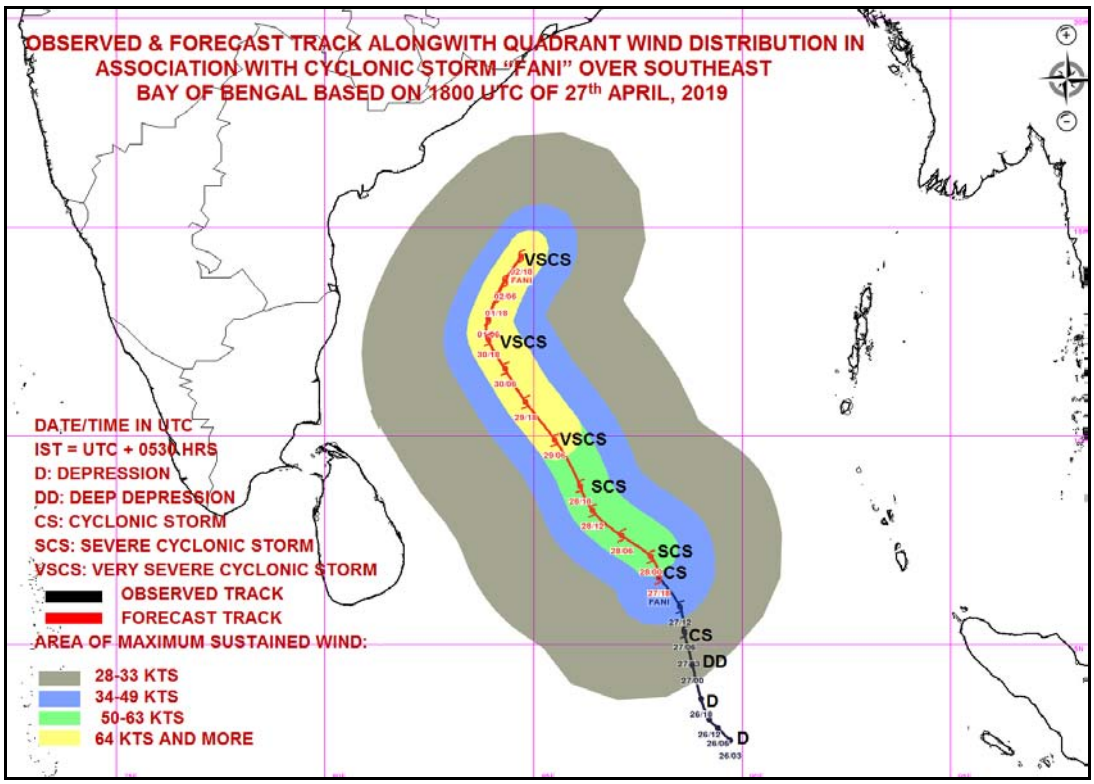
(V R Durai)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 7

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 7 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 28.04.2019 BASED ON 0000 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NIEGHBOURHOOD MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0000 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 7.3°N AND LONGITUDE 87.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 745 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1050 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1230 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY AND THEREAFTER RECURVE NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/0000	7.3/87.9	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0600	7.6/87.6	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	8.6/86.9	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/1800	9.1/86.6	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/0000	9.6/86.3	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.6/85.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.4/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.1/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.7/83.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.4/83.4	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
02.05.19/0000	14.1/83.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
02.05.19/1200	14.8/83.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03.05.19/0000	15.4/84.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC ON 28TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 5.0°N TO 9.5°N AND LONG 83.0°E TO 89.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 999 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.37°N AND LONG 88.25°E REPORTED MEAN SEA LEVEL PRESSURE 1000.1 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 3 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 4 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.
THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 70-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE INCREASED AND IS AROUND 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM.

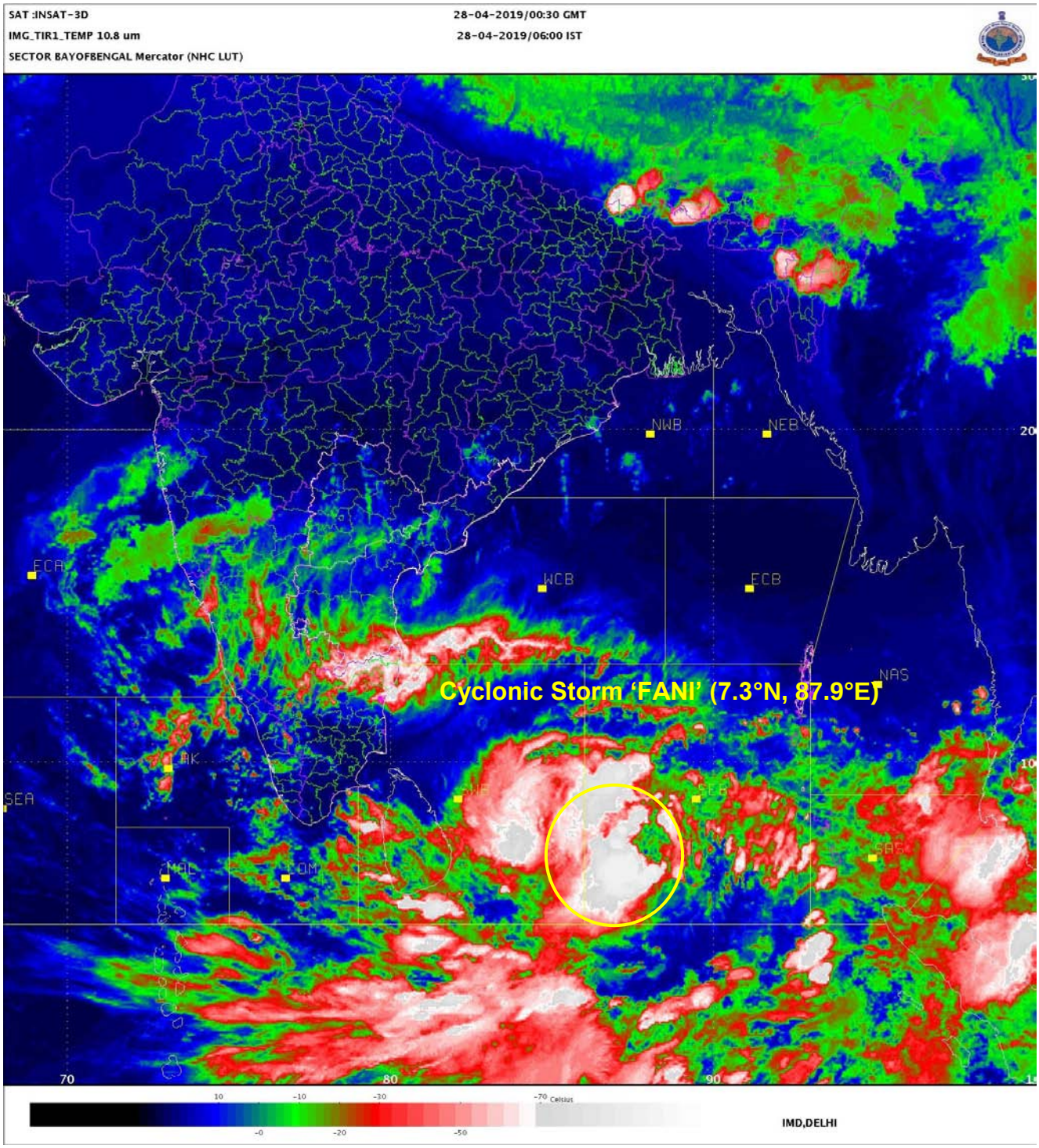
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

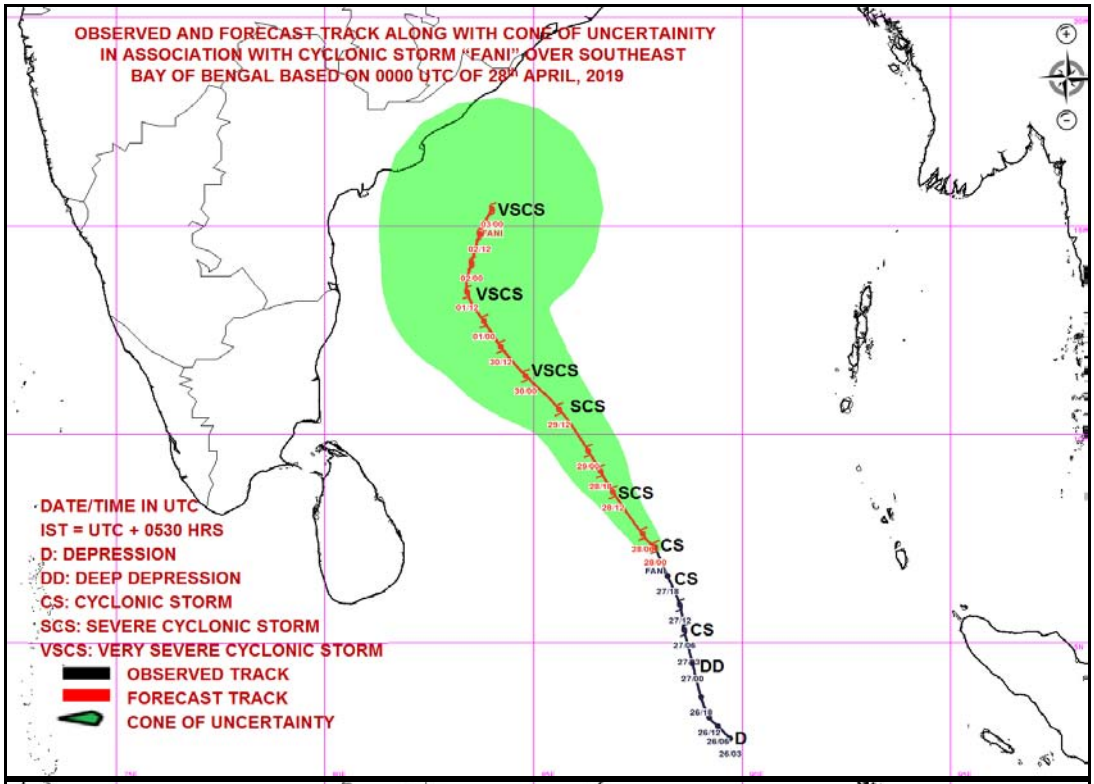
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

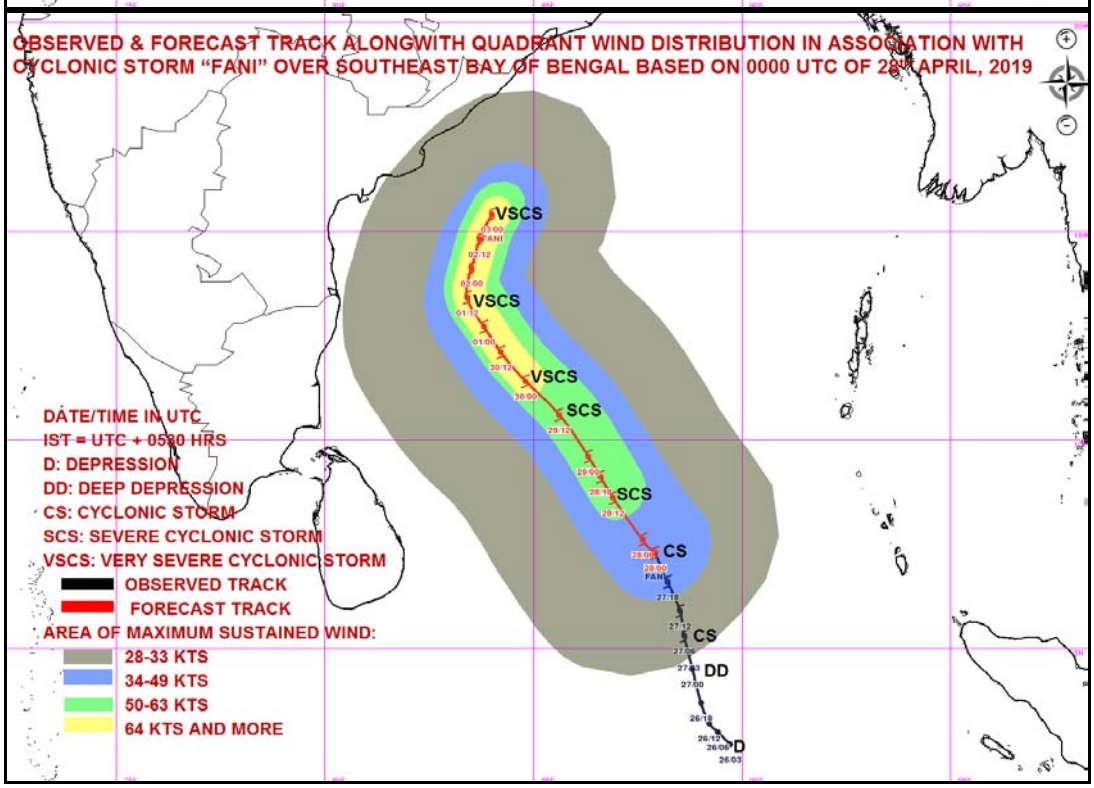
(V R DURAI)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 8

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 8 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0630 UTC OF 28.04.2019 BASED ON 0300 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWARDS WITH A SPEED OF ABOUT 07 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 7.3°N AND LONGITUDE 87.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 745 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1050 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1230 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/0300	7.3/87.9	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/0600	7.6/87.6	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	8.6/86.9	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/1800	9.1/86.6	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/0000	9.6/86.3	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.6/85.6	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.4/84.8	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/1200	12.1/84.2	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.7/83.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.4/83.4	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
02.05.19/0000	14.1/83.5	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
02.05.19/1200	14.8/83.7	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03.05.19/0000	15.4/84.0	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC ON 28TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 5.0°N TO 10.0°N AND LONG 84.0°E TO 89.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE INCREASE IN CONSOLIDATION OF CONVECTION AROUND THE SYSTEM CENTRE LEADING TO CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.6°E REPORTED MEAN SEA LEVEL PRESSURE 1004.2 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE WEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS AROUND 20 X10^{-5}SEC^{-1} TO THE WEST OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-25 KNOTS) AROUND THE SYSTEM AND IS DECREASING ALONG THE FORECAST TRACK.

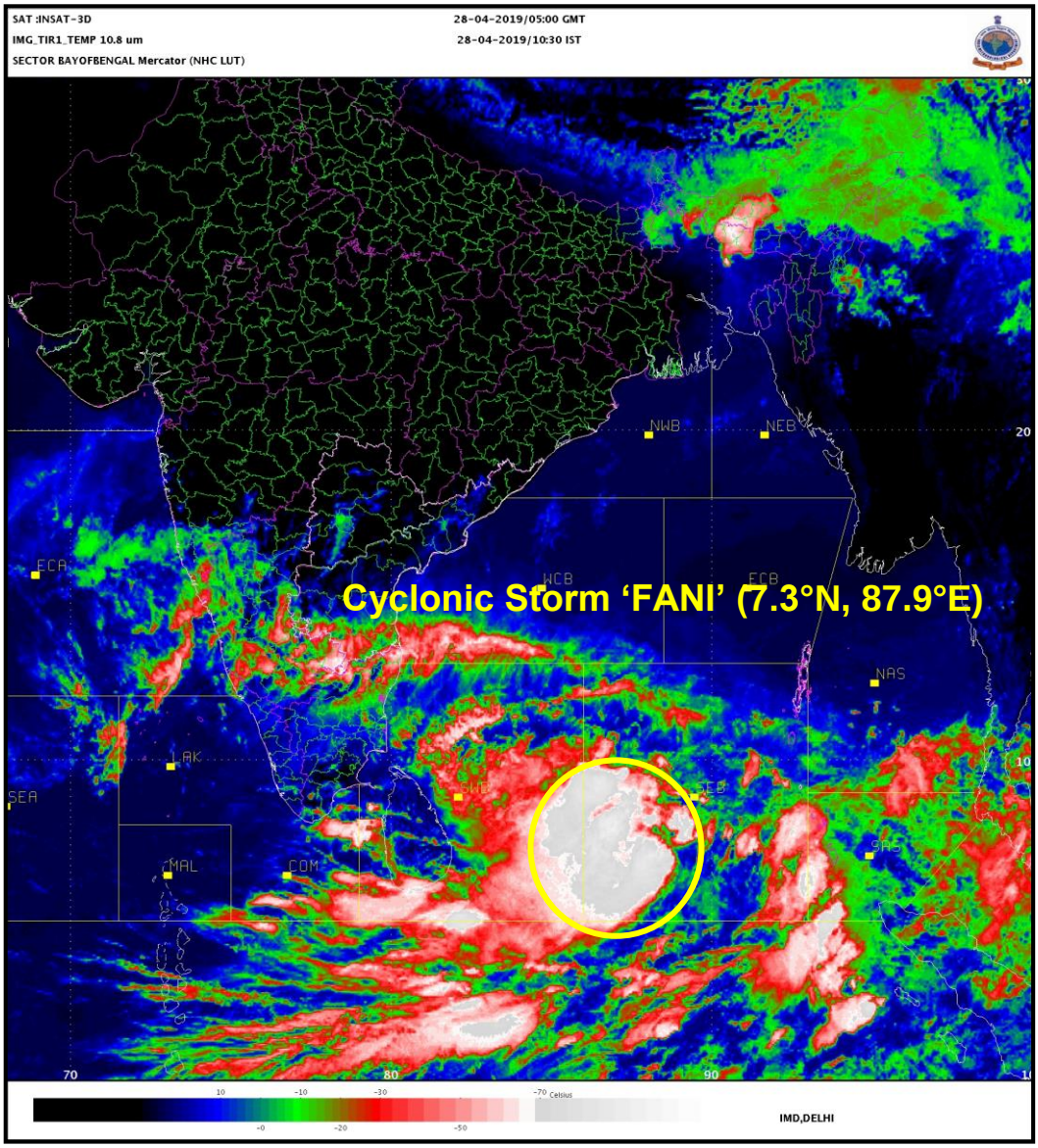
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 30 APRIL AND IT WILL START RECURVING NORTHEASTWARDS FROM 01ST MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN GRADUALLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

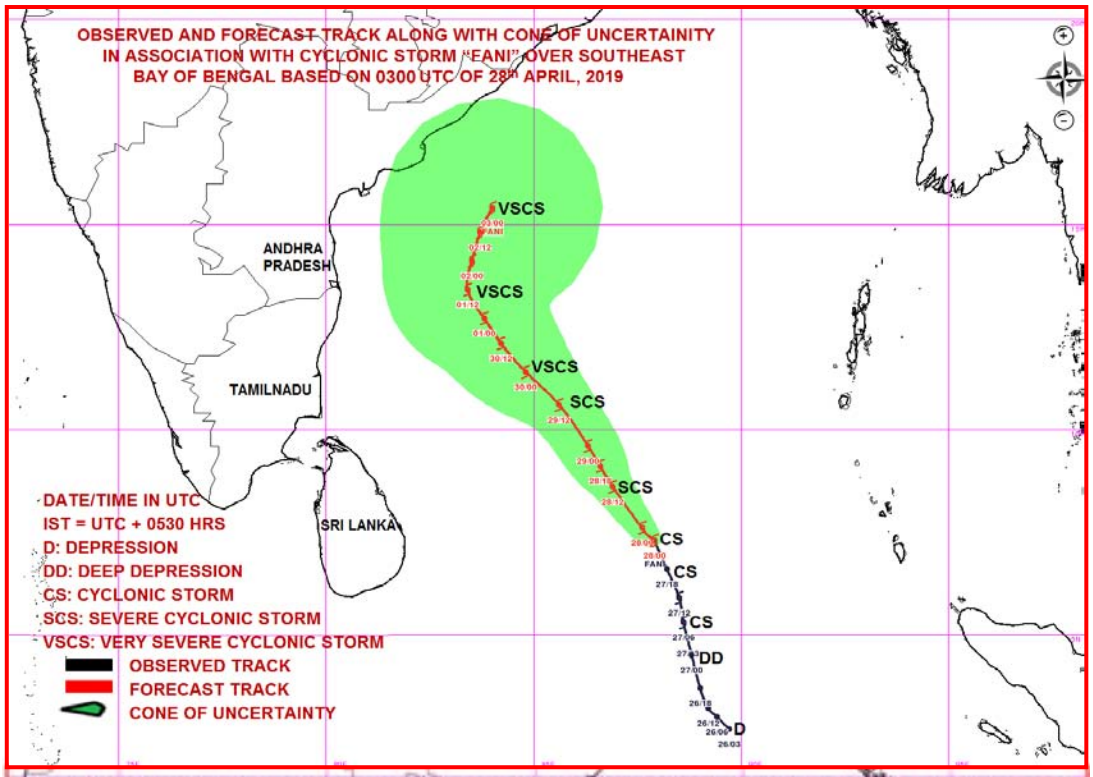
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

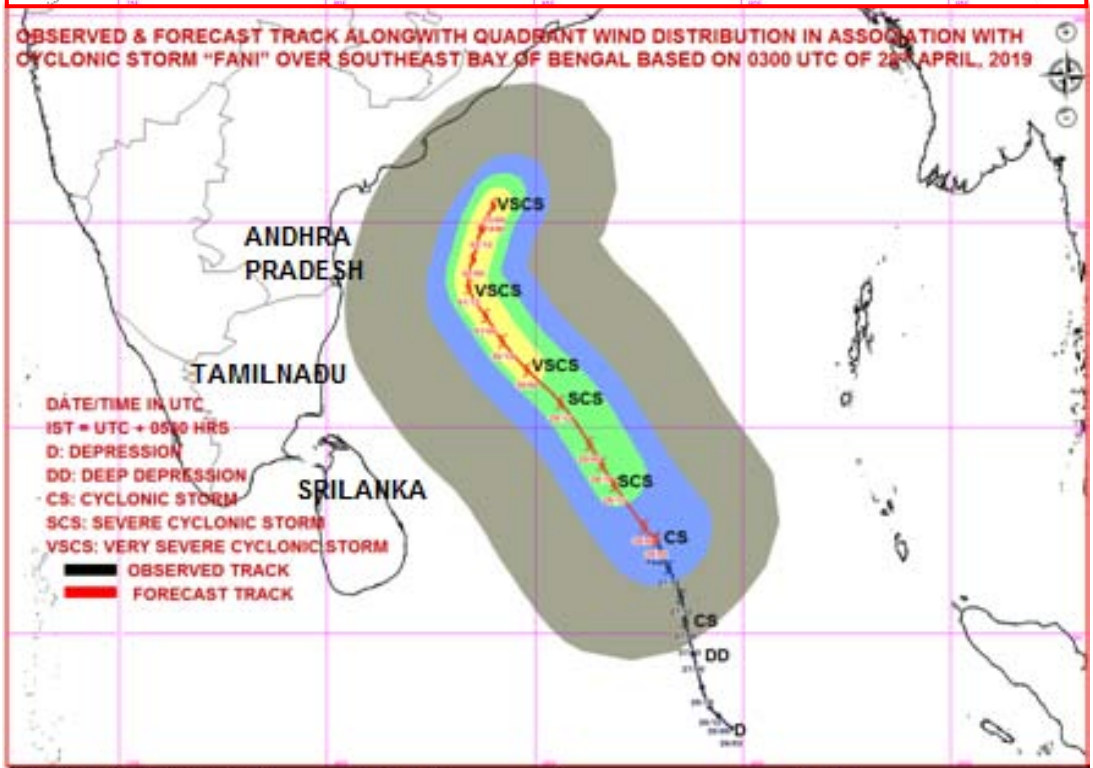
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 9

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 9 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 28.04.2019 BASED ON 0600 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 03 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 7.4°N AND LONGITUDE 87.8°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 730 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 1040 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1210 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/0600	7.4/87.8	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	7.9/87.4	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/1800	8.4/86.9	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/0000	8.9/86.5	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/0600	9.5/86.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.6/85.4	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.5/84.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.2/83.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.4	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.4/83.1	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	14.1/83.2	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	15.2/83.6	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	16.4/84.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC ON 28TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 5.0°N TO 10.3°N AND LONG 83.7°E TO 89.8°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.6°E REPORTED MEAN SEA LEVEL PRESSURE 1005.9 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 40 X10^{-5}SEC^{-1} TO THE WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (15-20 KNOTS) AROUND THE SYSTEM AND IS DECREASING ALONG THE FORECAST TRACK.

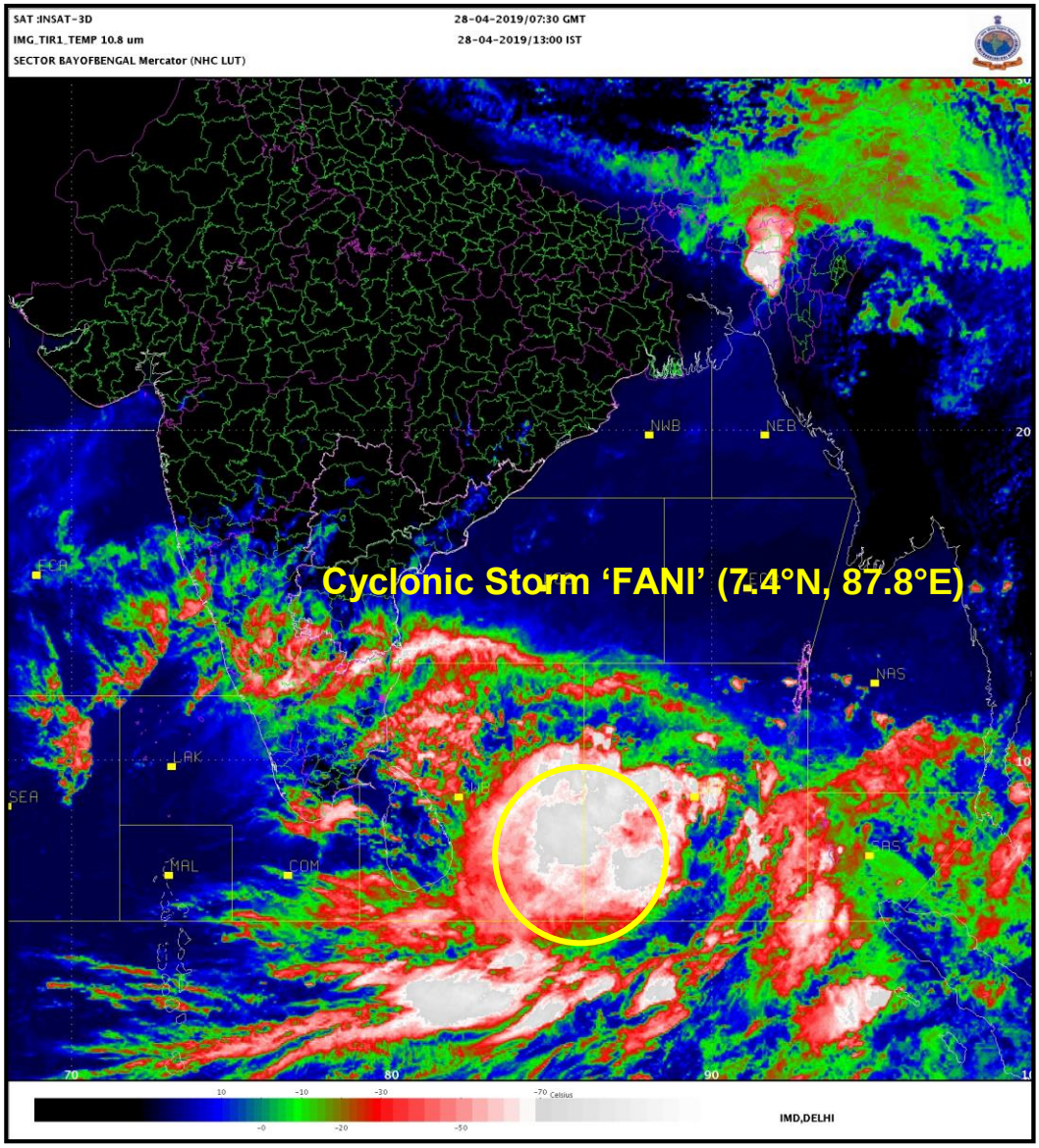
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 02 MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

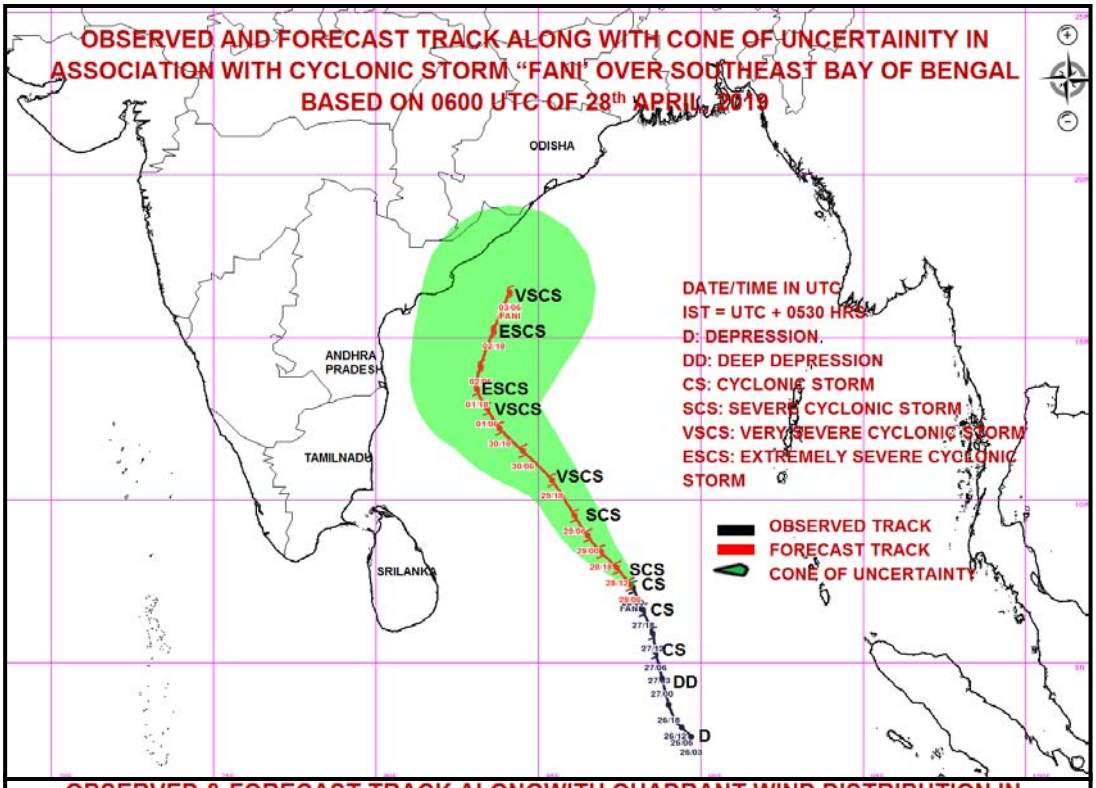
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

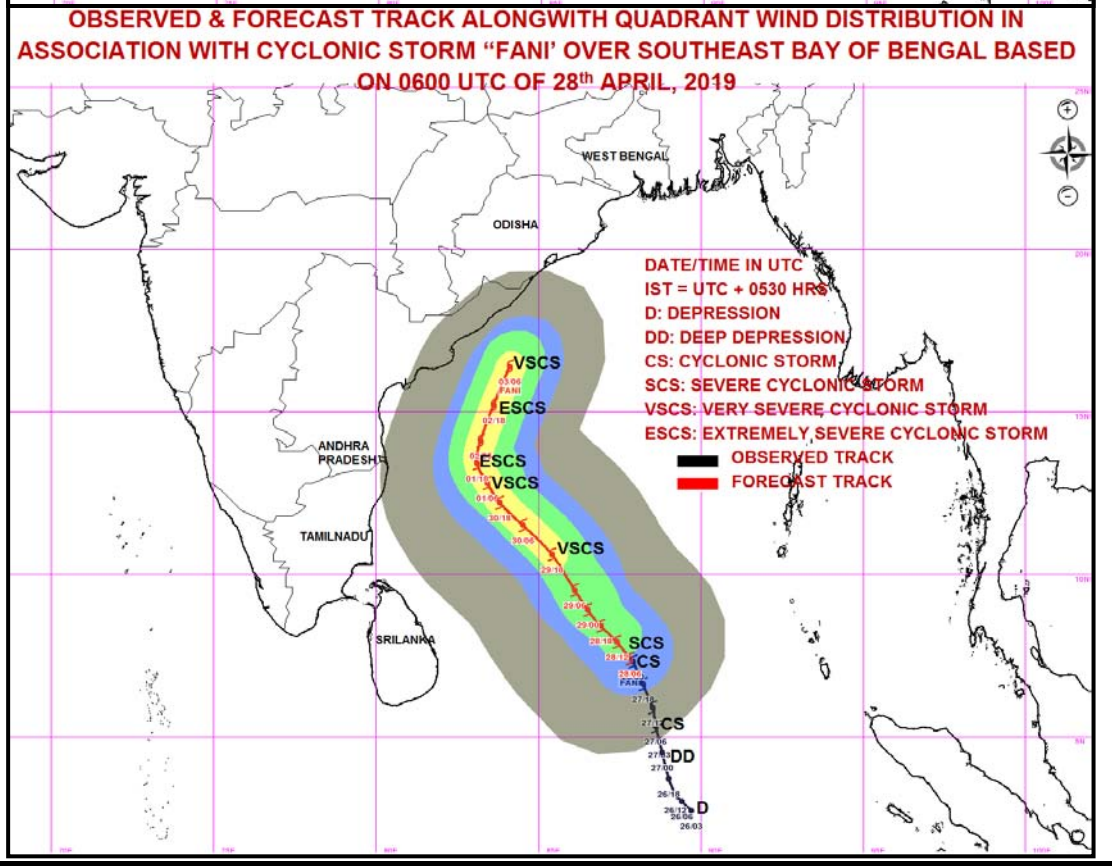
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 10

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 10 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1100 UTC OF 28.04.2019 BASED ON 0900 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 10 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 7.7°N AND LONGITUDE 87.5°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 690 KM EAST-SOUTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 990 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1170 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/0900	7.7/87.5	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1200	7.9/87.4	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
28.04.19/1800	8.4/86.9	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/0000	8.9/86.5	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/0600	9.5/86.1	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.6/85.4	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.5/84.5	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.2/83.8	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.4	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.4/83.1	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	14.1/83.2	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	15.2/83.6	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	16.4/84.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC ON 28TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 5.5°N TO 11.0°N AND LONG 84.0°E TO 90.1°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1002.7 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} TO THE NORTH OF SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE NORTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IS DECREASING ALONG THE FORECAST TRACK.

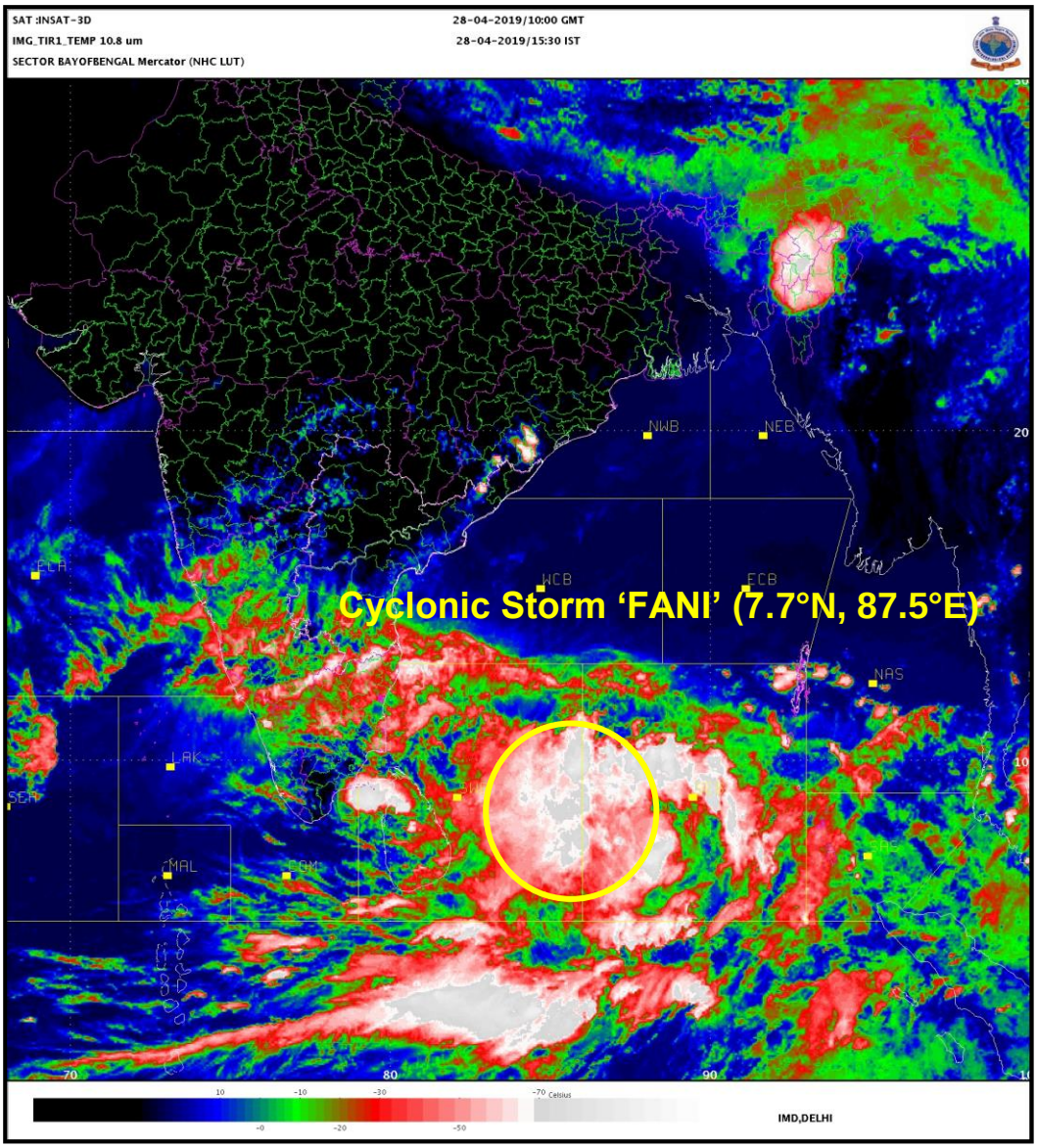
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 02 MAY 2019 ONWARDS.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

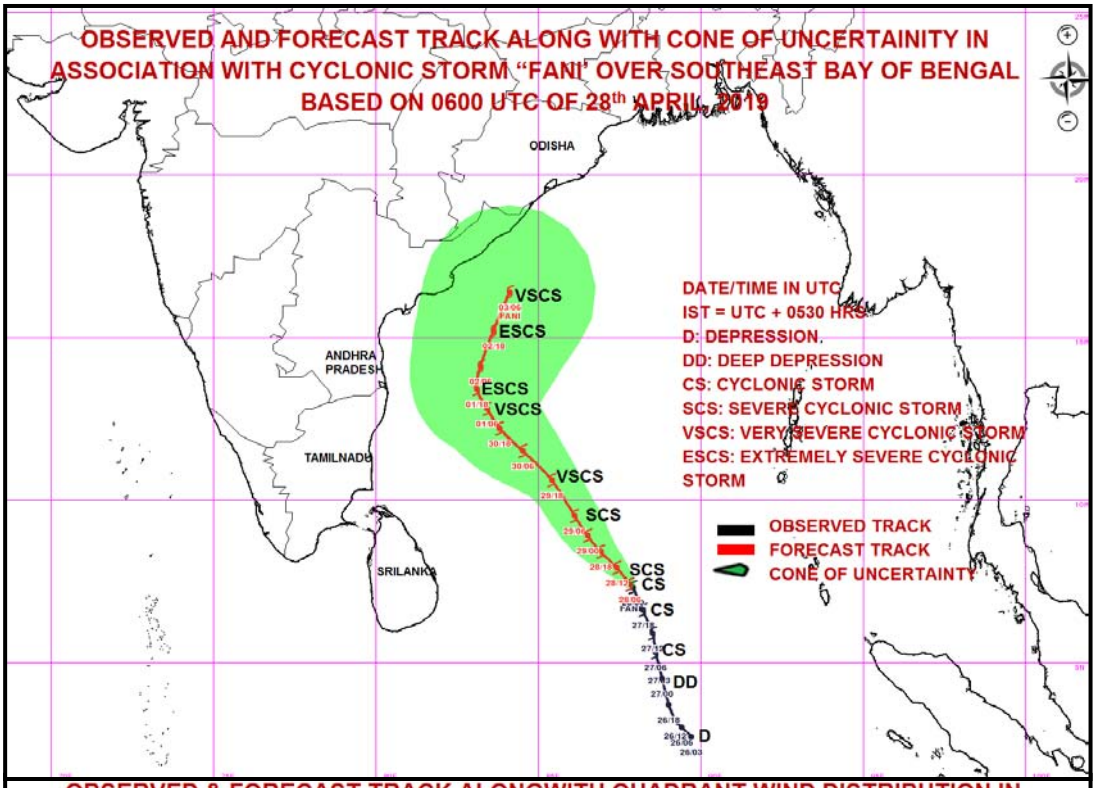
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

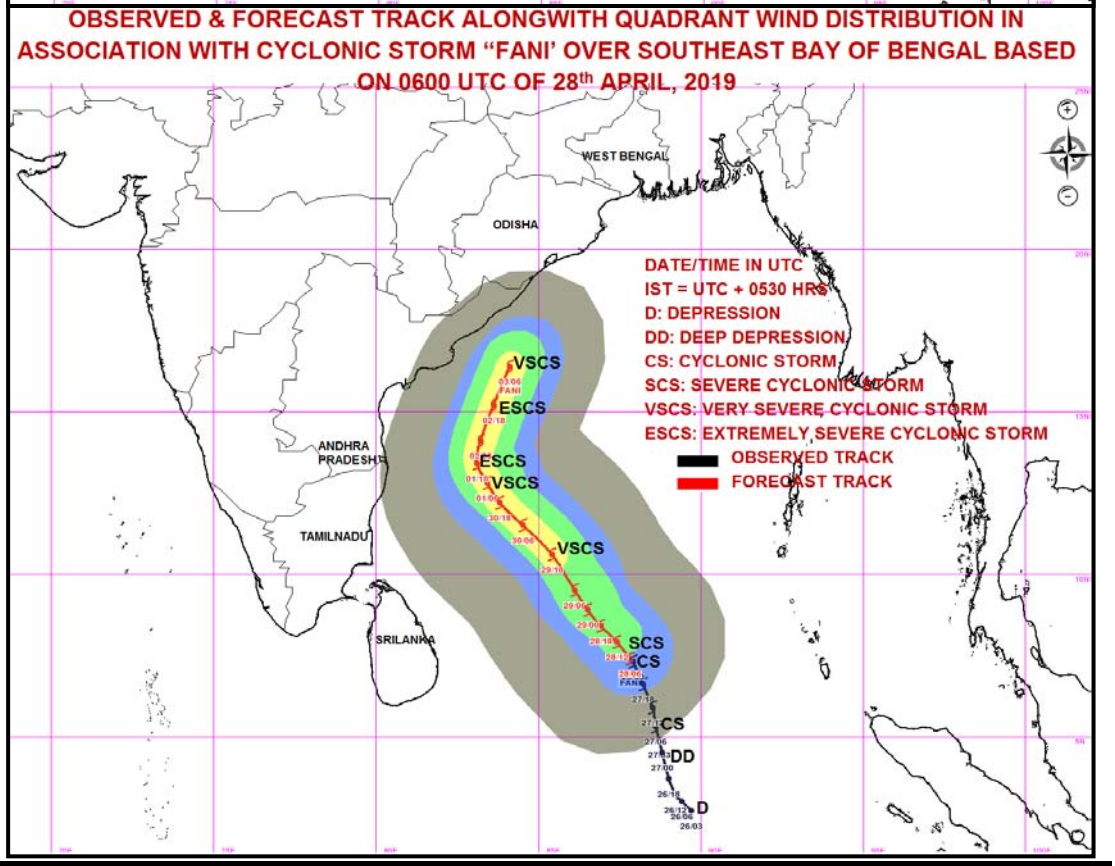
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 11

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 11 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 28.04.2019 BASED ON 1200 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 21 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UCT OF 28TH APRIL, 2019 NEAR LATITUDE 8.2°N AND LONGITUDE 87.0°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 630 KM EAST OF TRINCOMALEE (43418) (SRI LANKA), 910 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1090 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/1200	8.2/87.0	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1800	8.5/86.8	85-95 GUSTING TO 105	CYCLONIC STORM
29.04.19/0000	9.0/86.5	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0600	9.6/86.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.1/85.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.0/84.9	120-130 GUSTING TO 145	SEVERE CYCLONIC STORM
30.04.19/1200	11.9/84.1	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.6/83.6	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.1/83.3	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	13.8/83.3	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	14.6/83.4	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	15.8/83.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03.05.19/1200	17.0/84.3	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC ON 28TH APRIL, 2019 THE INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS T 2.5/3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 6.0°N TO 11.0°N AND LONG 85.0°E TO 90.1°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C. SATELLITE IMAGES INDICATE CENTRAL DENSE OVERCAST (CDO) PATTERN.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.6°E REPORTED MEAN SEA LEVEL PRESSURE 1002.7 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IS DECREASING ALONG THE FORECAST TRACK.

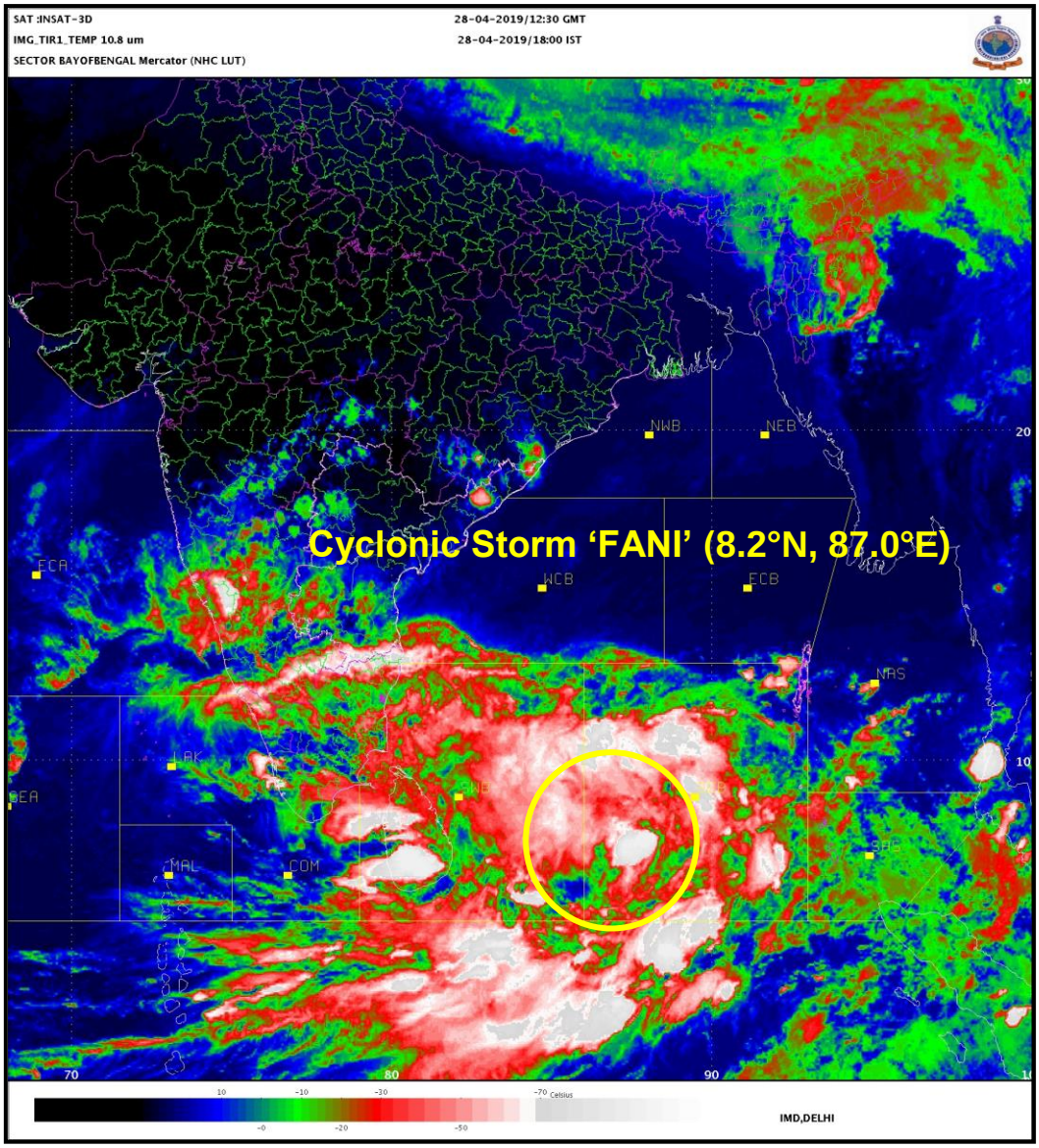
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

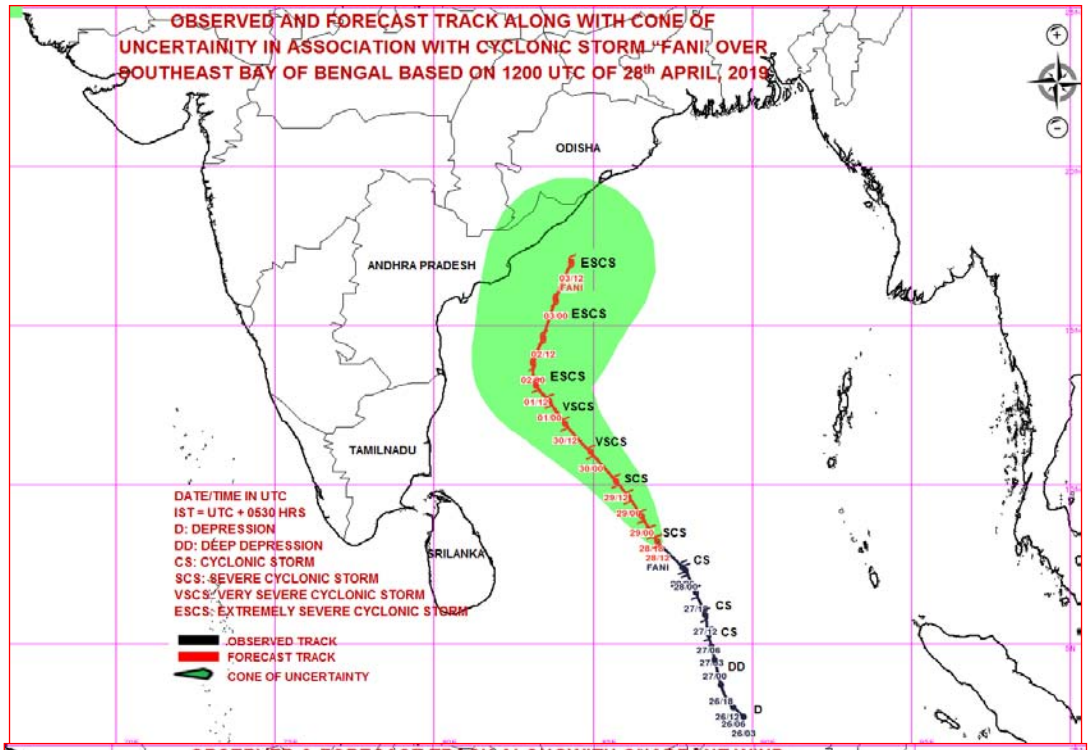
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

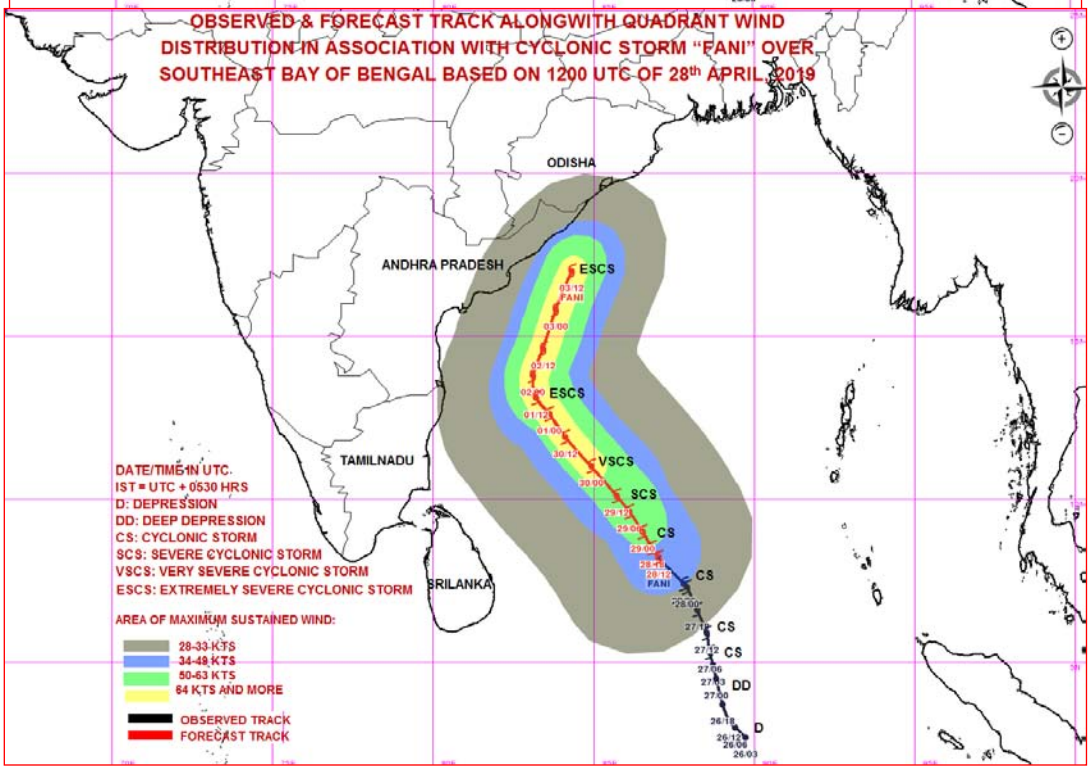
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 12

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 12 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1730 UTC OF 28.04.2019 BASED ON 1500 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 8.3°N AND LONGITUDE 86.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST OF TRINCOMALEE (43418) (SRI LANKA), 900 KM SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1070 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/1500	8.3/86.9	80-90 GUSTING TO 100	CYCLONIC STORM
28.04.19/1800	8.5/86.8	85-95 GUSTING TO 105	CYCLONIC STORM
29.04.19/0000	9.0/86.5	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0600	9.6/86.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.1/85.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.0/84.9	120-130 GUSTING TO 145	SEVERE CYCLONIC STORM
30.04.19/1200	11.9/84.1	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.6/83.6	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.1/83.3	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	13.8/83.3	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	14.6/83.4	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	15.8/83.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03.05.19/1200	17.0/84.3	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC ON 28TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS CI 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EQUATORIAL INDIAN OCEAN AND ADJOINING SOUTH BAY BETWEEN LATITUDE 6.0°N TO 11.0°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A SHIP (DFKM2) LOCATED NEAR LAT. 5.9°N AND LONG 93.1°E REPORTED MEAN SEA LEVEL PRESSURE 1010.4 HPA AND WIND SPEED 14 KNOTS AND WIND DIRECTION 170^{0}. ANOTHER SHIP (VTFG) LOCATED NEAR LAT. 8.9°N AND LONG 92.9°E REPORTED WIND SPEED 06 KNOTS AND WIND DIRECTION 170^{0}.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^{2} OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IS DECREASING ALONG THE FORECAST TRACK.

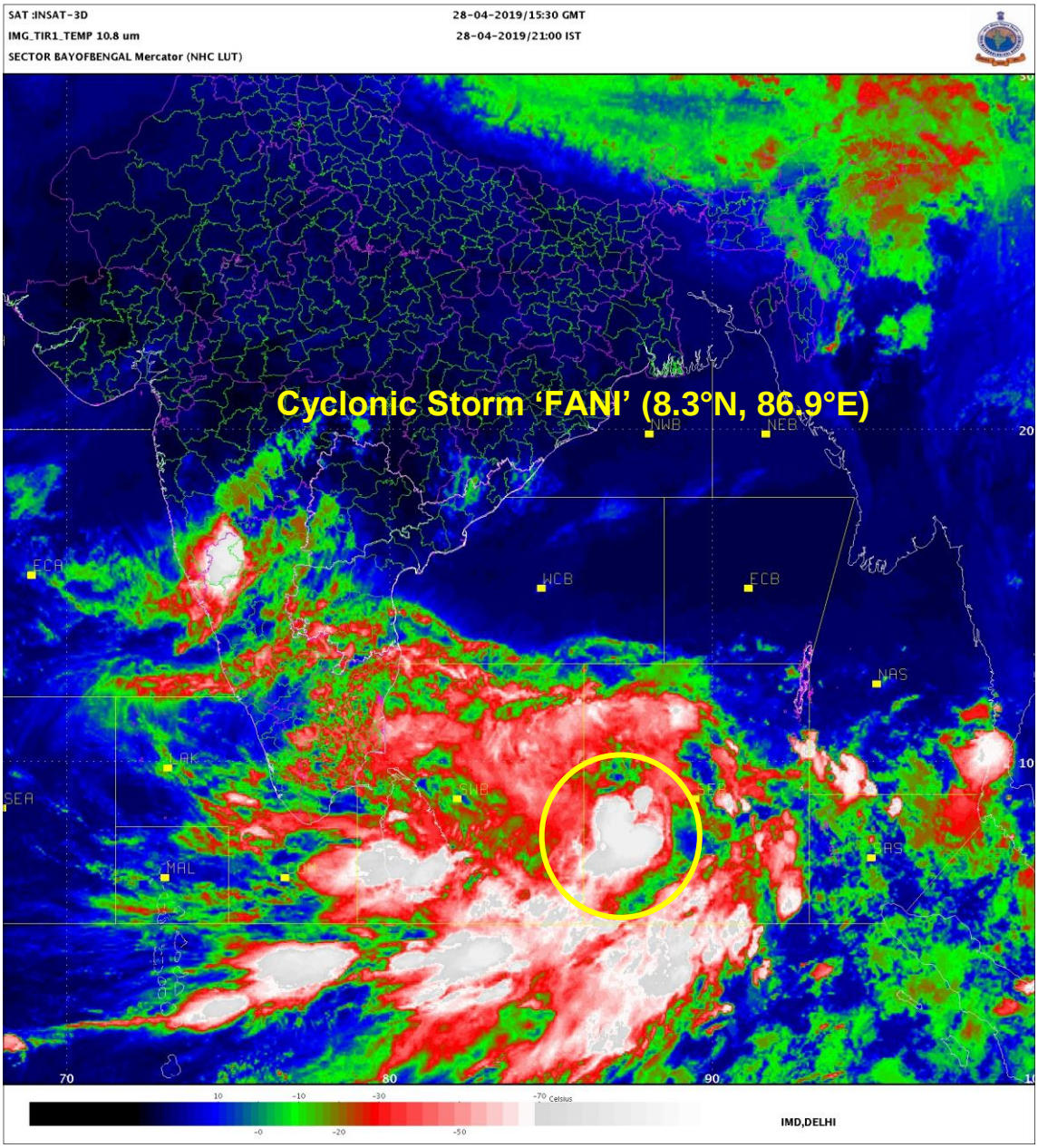
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM WILL ENTER INTO AN AREA OF SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

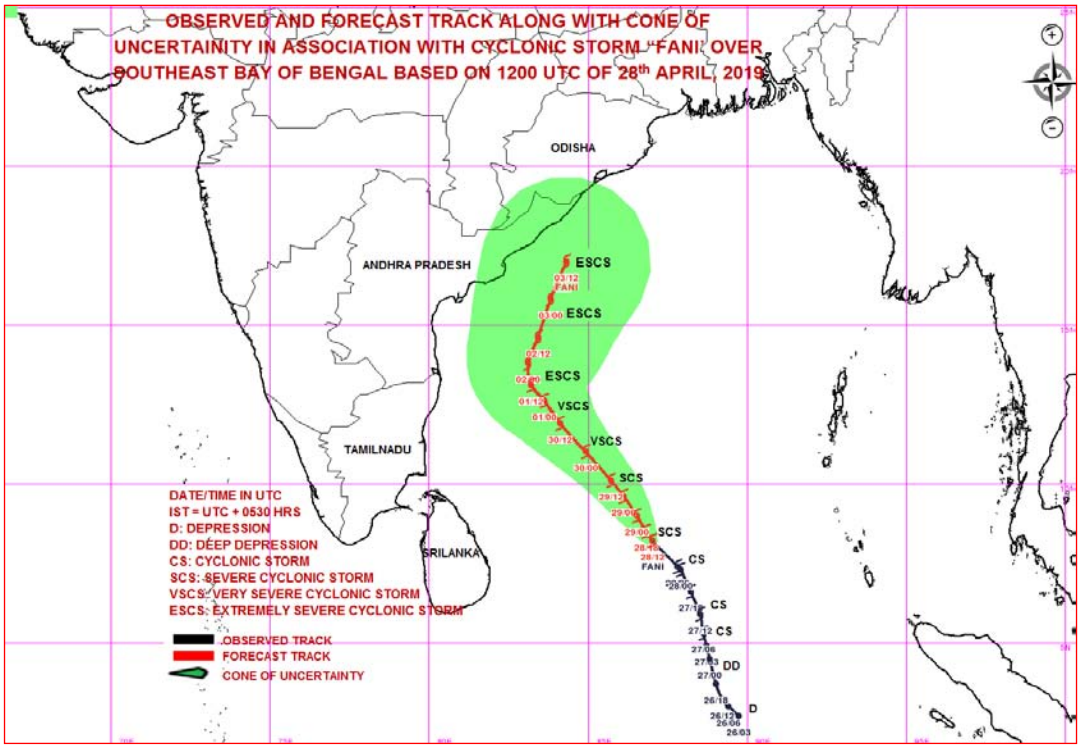
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

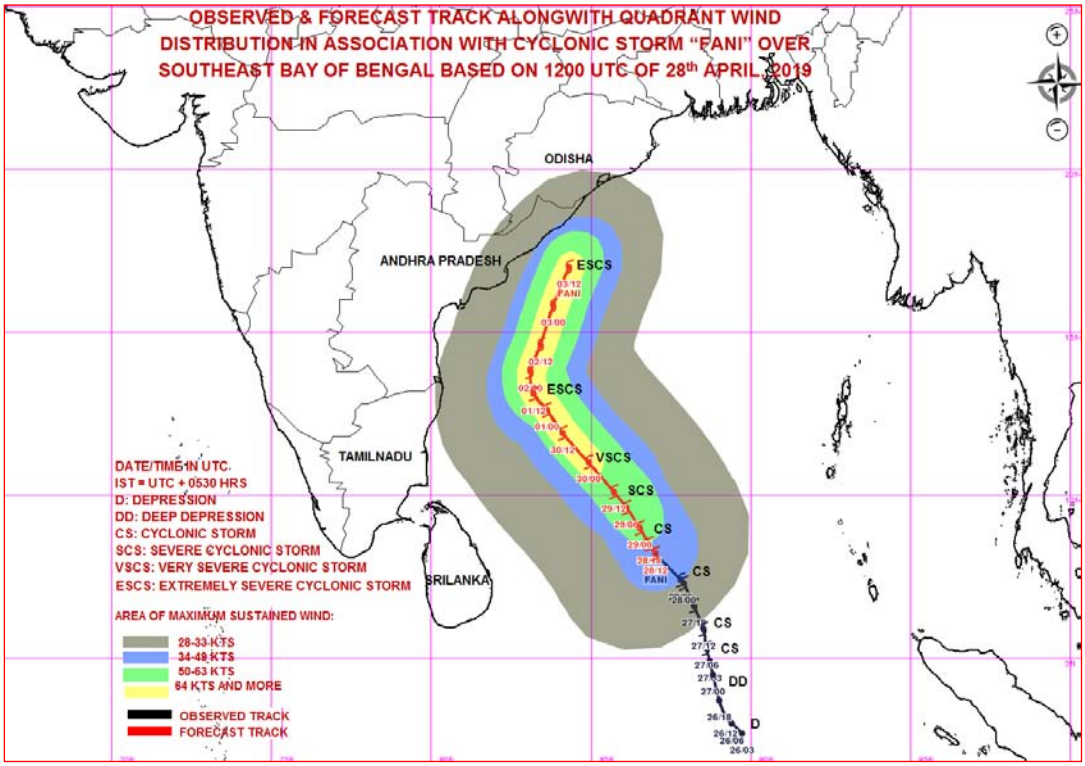
(D. R. PATTANAIK)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 13

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 13 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2030 UTC OF 28.04.2019 BASED ON 1800 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 04 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 8.4°N AND LONGITUDE 86.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST OF TRINCOMALEE (SRI LANKA), 890 KM SOUTHEAST OF CHENNAI (TAMIL NADU) AND 1060 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/1800	8.4/86.9	85-95 GUSTING TO 105	CYCLONIC STORM
29.04.19/0000	9.0/86.5	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0600	9.6/86.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.1/85.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.5/85.3	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
30.04.19/0600	11.5/84.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.5	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.5/83.3	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	14.2/83.4	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	15.2/83.6	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03.05.19/0600	16.4/84.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03.05.19/1800	17.6/84.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1800 UTC ON 28TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS CI 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 6.0°N TO 10.0°N AND LONG 85.0°E TO 89.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A SHIP (ZDNC6) LOCATED NEAR LAT. 5.2°N AND LONG 86.1°E REPORTED MEAN SEA LEVEL PRESSURE 1008.5 HPA AND WIND SPEED 15 KNOTS AND WIND DIRECTION 270^{0}. A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.3°E REPORTED MEAN SEA LEVEL PRESSURE 1005.2 HPA, WIND SPEED 27 KNOTS AND WIND DIRECTION 260^{0}.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^{2} OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 10 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 20 X10^{-5}SEC^{-1} TO THE NORTH OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (05-10 KNOTS) AROUND THE SYSTEM AND ALONG THE FORECAST TRACK.

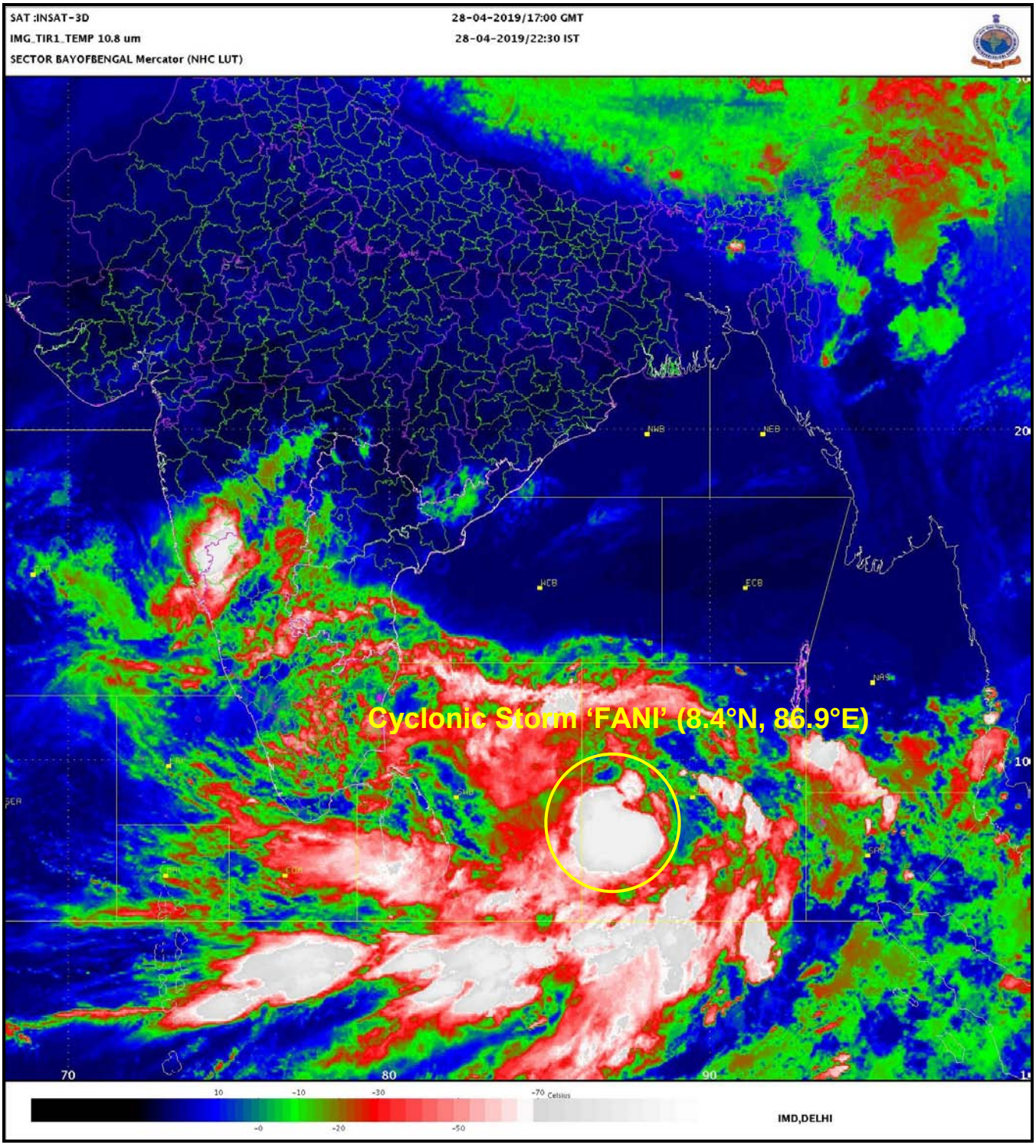
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM WILL ENTER INTO AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

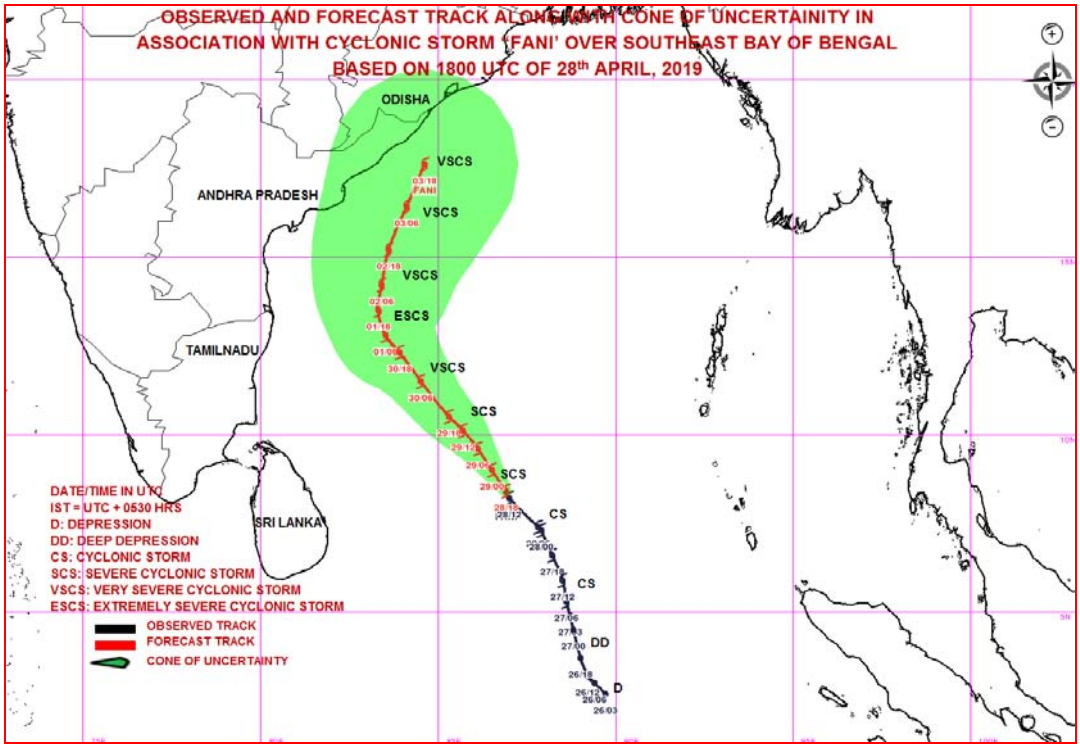
(D. R. PATTANAIK)
SCIENTIST-E, RSMC, NEW DELHI

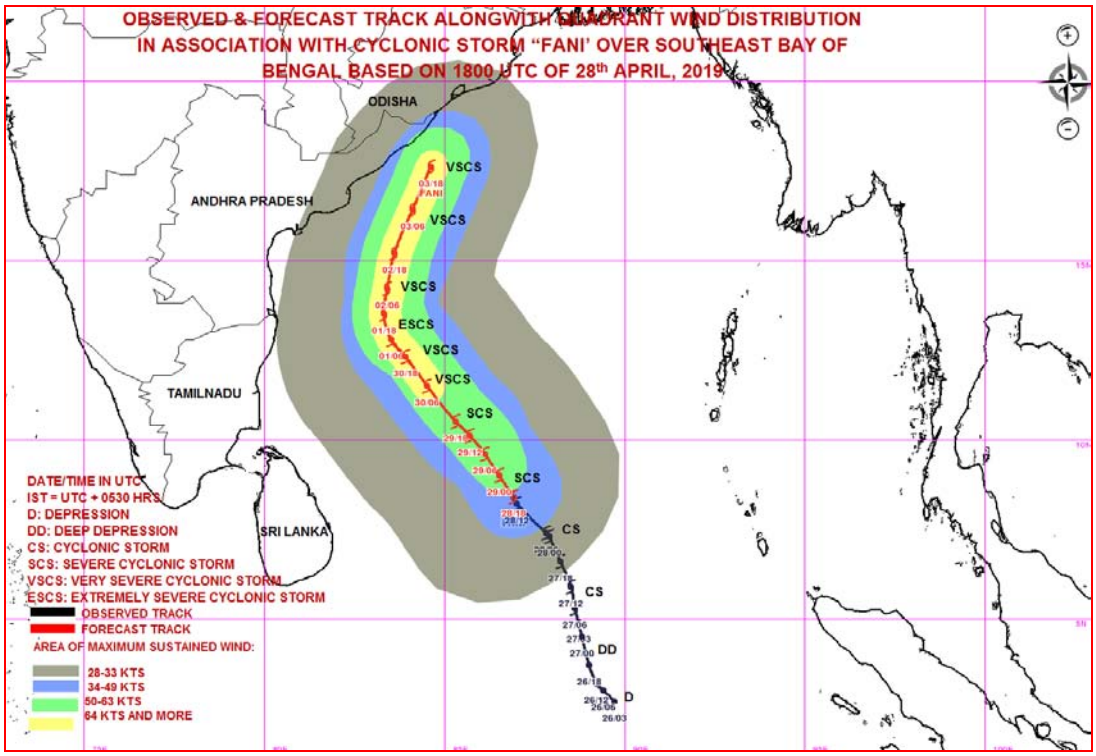
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 14

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 14 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0000 UTC OF 29.04.2019 BASED ON 2100 UTC OF 28.04.2019.

CYCLONIC STORM 'FANI' OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 04 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 UTC OF 28TH APRIL, 2019 NEAR LATITUDE 8.5°N AND LONGITUDE 86.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST OF TRINCOMALEE (SRI LANKA), 880 KM SOUTHEAST OF CHENNAI (TAMIL NADU) AND 1050 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
28.04.19/2100	8.5/86.9	85-95 GUSTING TO 105	CYCLONIC STORM
29.04.19/0000	9.0/86.5	90-100 GUSTING TO 115	SEVERE CYCLONIC STORM
29.04.19/0600	9.6/86.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
29.04.19/1200	10.1/85.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
29.04.19/1800	10.5/85.3	115-125 GUSTING TO 140	SEVERE CYCLONIC STORM
30.04.19/0600	11.5/84.5	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.3/83.9	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	12.8/83.5	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.5/83.3	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	14.2/83.4	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	15.2/83.6	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
03.05.19/0600	16.4/84.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03.05.19/1800	17.6/84.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC ON 28TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS CI 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 5.5°N TO 10.0°N AND LONG 85.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A SHIP (VTWS) LOCATED NEAR LAT. 11.5°N AND LONG 90.7°E REPORTED MEAN SEA LEVEL PRESSURE 1005.4 HPA AND WIND SPEED 20 KNOTS AND WIND DIRECTION 150^{0}. A BUOY (23460) LOCATED NEAR LAT. 6.4°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1004 HPA, WIND SPEED 25 KNOTS AND WIND DIRECTION 240^{0}.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 3-4 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^{2} OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (05-10 KNOTS) AROUND THE SYSTEM AND ALONG THE FORECAST TRACK.

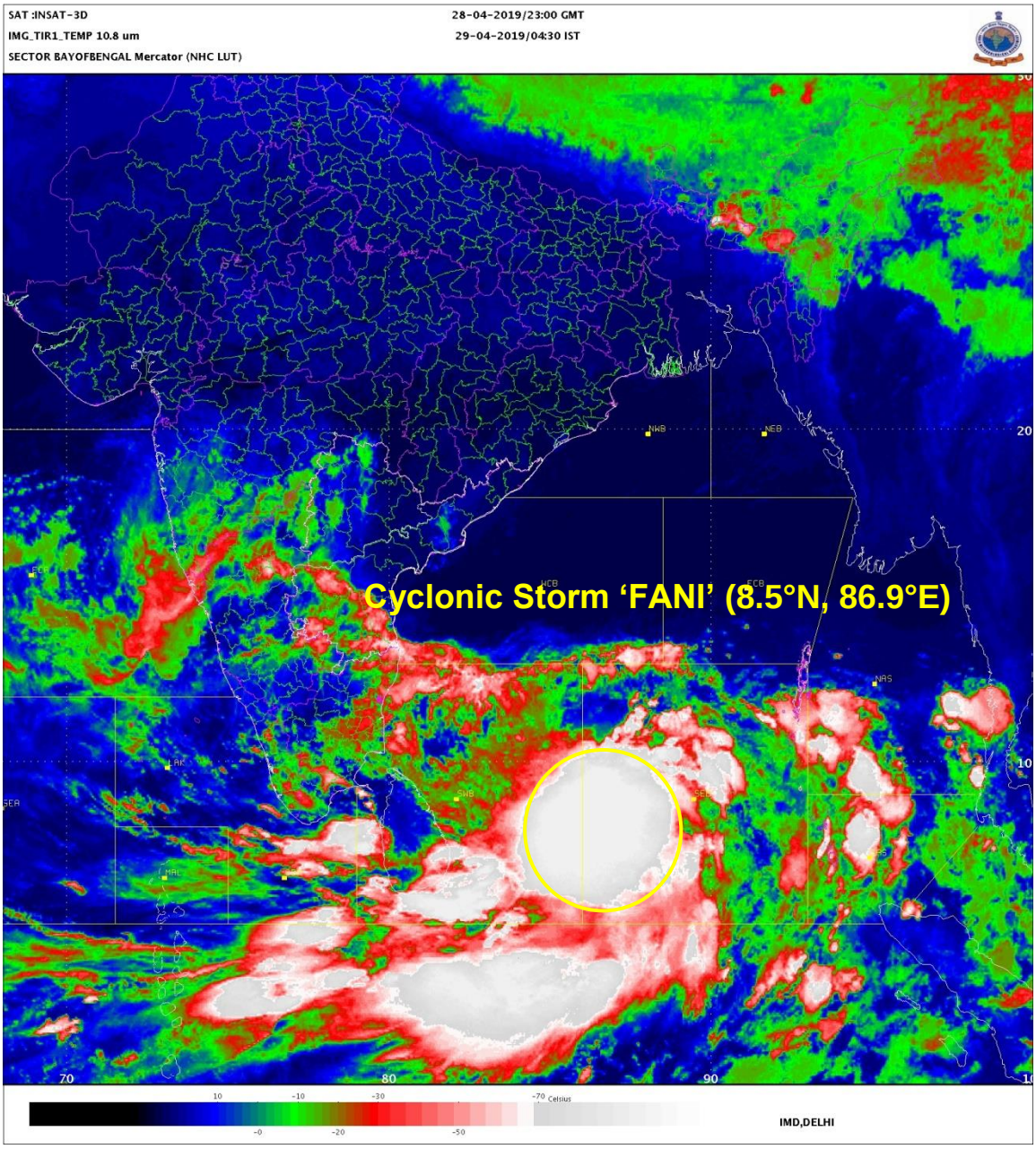
THE CYCLONIC STORM OVER SOUTHEAST BAY AND ADJOINING EAST EQUATORIAL INDIAN OCEAN IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM WILL ENTER INTO AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND INCREASE IN WIND SHEAR.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

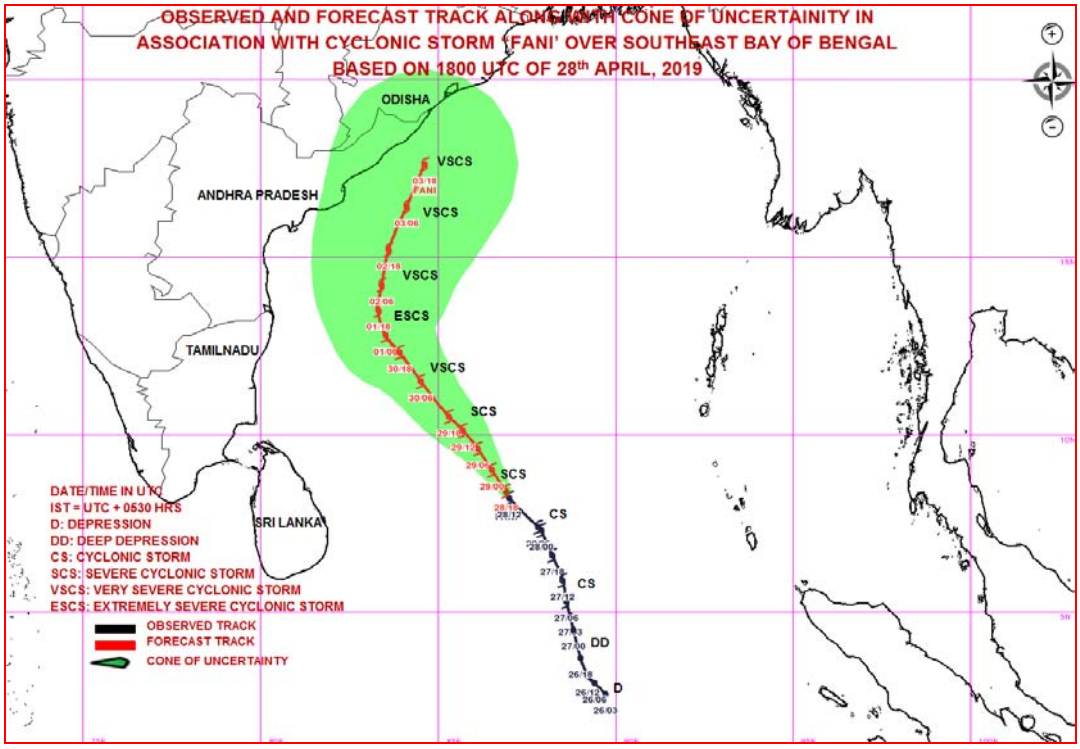
(D. R. PATTANAIK)
SCIENTIST-E, RSMC, NEW DELHI

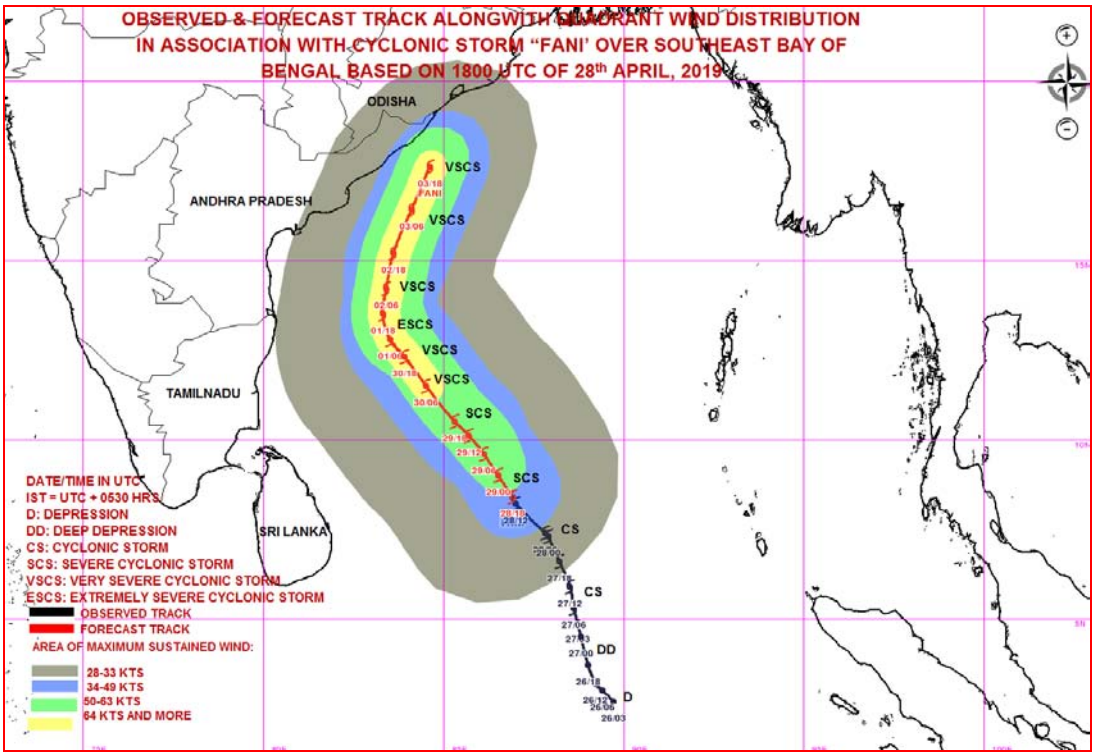
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 15

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 15 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 29.04.2019 BASED ON 0000 UTC OF 29.04.2019.

The **Cyclonic Storm 'FANI'** (pronounced as '**FONI**') over southeast Bay of Bengal & neighbourhood moved northwards with a speed of about 04 kmph in last six hours and lay centred at 0000 UTC of 29th April, 2019 near latitude 8.6°N and longitude 86.9°E over southeast Bay of Bengal & neighbourhood, about 620 km east of Trincomalee (Sri Lanka), 880 km southeast of Chennai (Tamil Nadu) and 1050 km south-southeast of Machilipatnam (Andhra Pradesh). It is very likely to intensify into a **Severe Cyclonic Storm** during next 12 hours and into a **Very Severe Cyclonic Storm** during subsequent 24 hours. **It is very likely to move northwestwards till 01st May evening and thereafter recurve north-northeastwards gradually.**

Forecast track and intensity are given in the following table:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.04.19/0000	8.6/86.9	80-90 gusting to 100	Cyclonic Storm
29.04.19/0600	9.3/86.6	90-100 gusting to 115	Cyclonic Storm
29.04.19/1200	10.0/86.3	100-110 gusting to 125	Severe Cyclonic Storm
29.04.19/1800	10.5/86.0	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0000	11.0/85.6	120-130 gusting to 145	Very Severe Cyclonic Storm
30.04.19/1200	11.9/84.8	130-140 gusting to 155	Very Severe Cyclonic Storm
01.05.19/0000	12.5/84.0	150-160 gusting to 175	Very Severe Cyclonic Storm
01.05.19/1200	13.1/83.7	160-170 gusting to 185	Very Severe Cyclonic Storm
02.05.19/0000	13.7/83.8	170-180 gusting to 195	Extremely Severe Cyclonic Storm
02.05.19/1200	14.5/84.0	170-180 gusting to 195	Extremely Severe Cyclonic Storm
03.05.19/0000	15.5/84.3	165-175 gusting to 190	Extremely Severe Cyclonic Storm
03.05.19/1200	16.5/84.7	160-170 gusting to 185	Extremely Severe Cyclonic Storm
04.05.19/0000	17.5/85.1	155-165 gusting to 180	Very Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS CI 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 5.5°N TO 10.0°N AND LONG 84.0°E TO 90.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A SHIP (DFKM2) LOCATED NEAR LAT. 6.0°N AND LONG 90.6°E REPORTED MEAN SEA LEVEL PRESSURE 1007.1 HPA AND WIND SPEED 35 KNOTS AND WIND DIRECTION 210^{0}. A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1004.8 HPA, WIND SPEED 21 KNOTS AND WIND DIRECTION 230^{0}.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2-3 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BOB AND ALSO OVER EQUATORIAL INDIAN OCEAN. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^{2} OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (05-10 KNOTS) AROUND THE SYSTEM AND ALONG THE FORECAST TRACK.

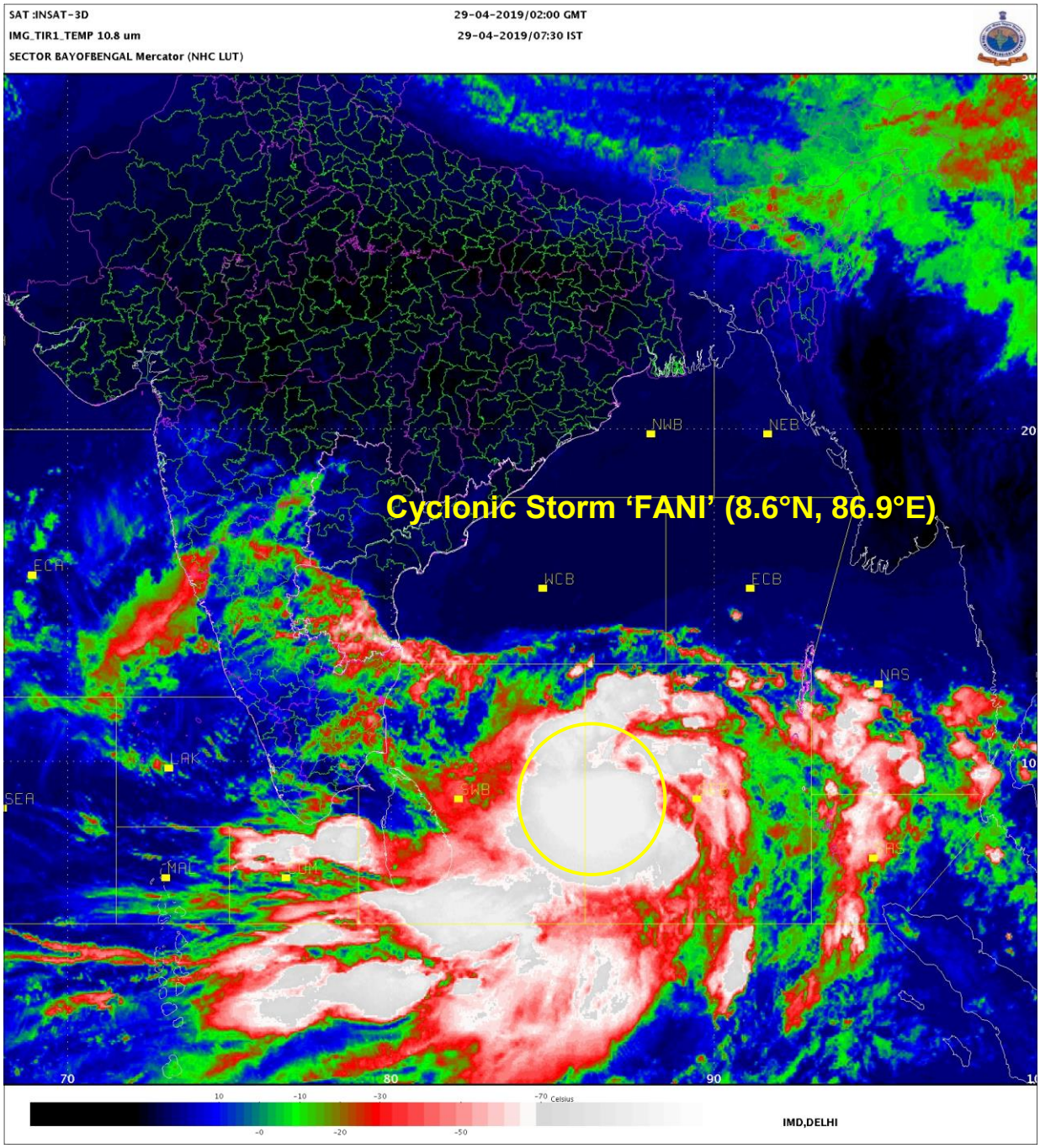
THE CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION WHICH LIES OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM WILL ENTER INTO AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND HIGH WIND SHEAR.

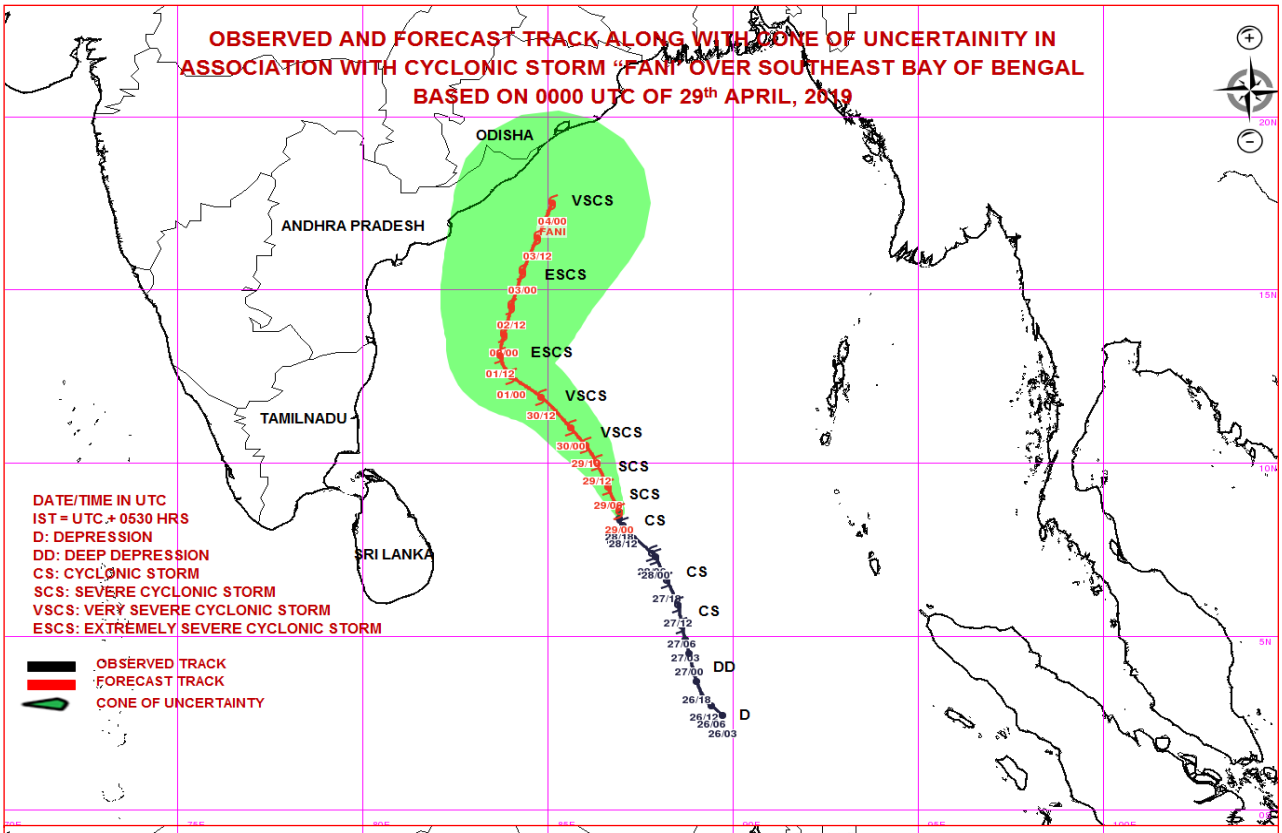
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

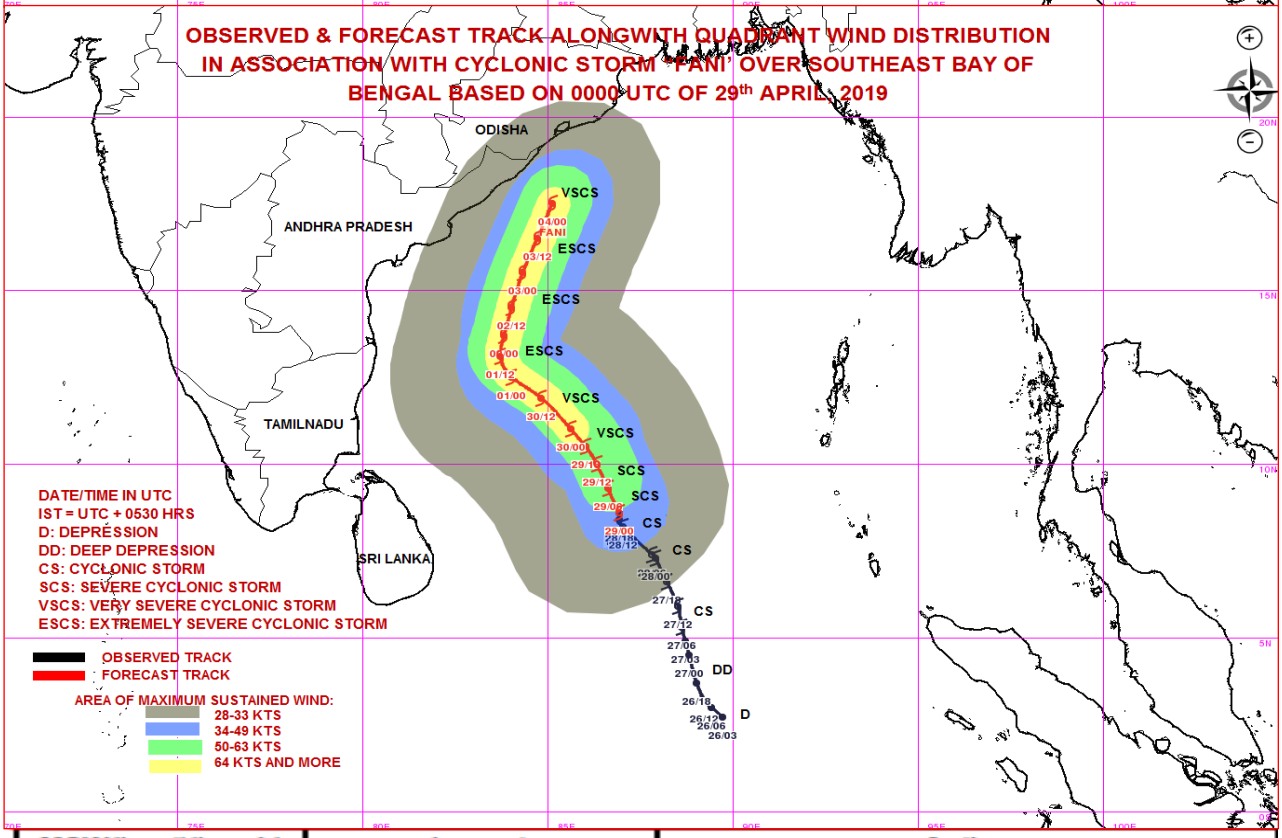
(D. R. PATTANAIK)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 16

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 16 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 29.04.2019 BASED ON 0300 UTC OF 29.04.2019.

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTHWARDS WITH A SPEED OF ABOUT 04 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 8.7°N AND LONGITUDE 86.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST OF TRINCOMALEE (43418) (SRI LANKA), 870 KM EAST-SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 1040 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS GRADUALLY.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
29.04.19/0300	8.7/86.9	80-90 GUSTING TO 100	CYCLONIC STORM
29.04.19/0600	9.3/86.6	85-95 GUSTING TO 110	CYCLONIC STORM
29.04.19/1200	10.0/86.3	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/1800	10.5/86.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.0/85.6	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/1200	11.9/84.8	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
01.05.19/0000	12.5/84.0	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1200	13.1/83.7	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
02.05.19/0000	13.7/83.8	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	14.5/84.0	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	15.5/84.3	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	16.5/84.7	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
04.05.19/0000	17.5/85.1	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 6.0°N TO 13.0°N AND LONG 83.5°E TO 89.5°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 998 HPA.

A SHIP (DFKM2) LOCATED NEAR LAT. 5.9°N AND LONG 89.6°E REPORTED MEAN SEA LEVEL PRESSURE 1009.6 HPA AND WIND SPEED 22 KNOTS AND WIND DIRECTION 200^{0}. A BUOY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1008.2 HPA, WIND SPEED 18 KNOTS AND WIND DIRECTION 250^{0}.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^{2} OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE NORTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 50 X10^{-5}SEC^{-1} TO THE NORTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (05-10 KNOTS) AROUND THE SYSTEM AND ALONG THE FORECAST TRACK.

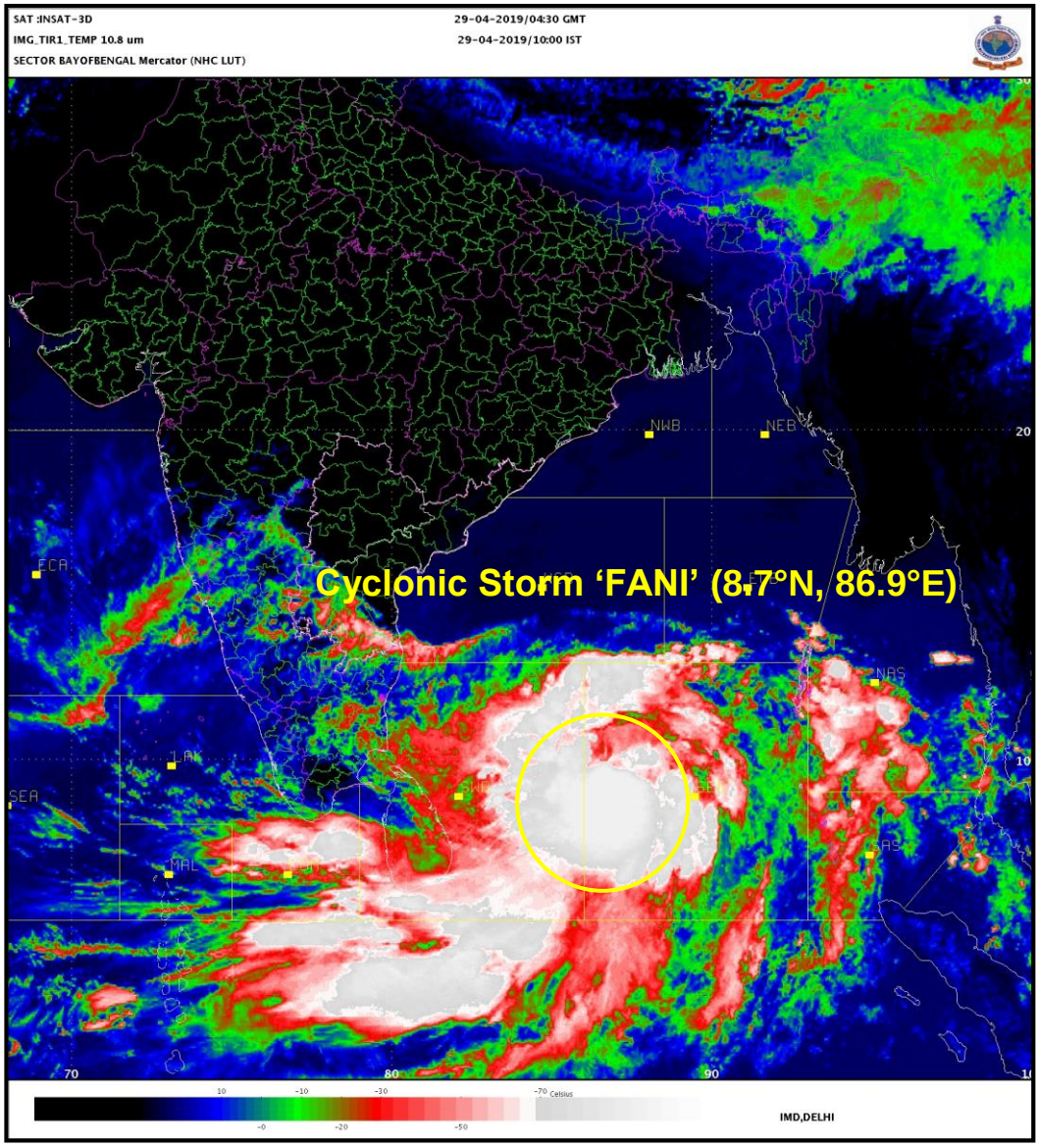
THE CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTH THAILAND AND ADJOINING SOUTH ANDAMAN SEA IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019.

AS THE SYSTEM IS IN AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND HIGH WIND SHEAR.

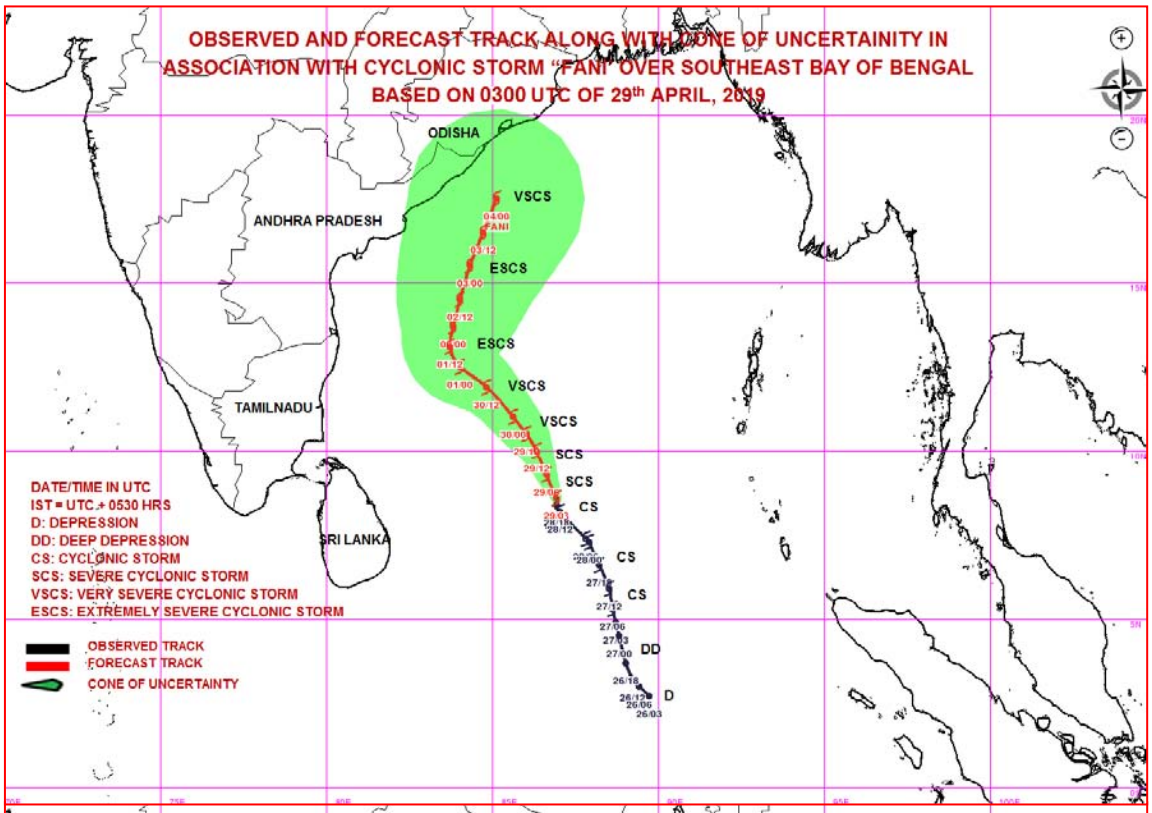
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

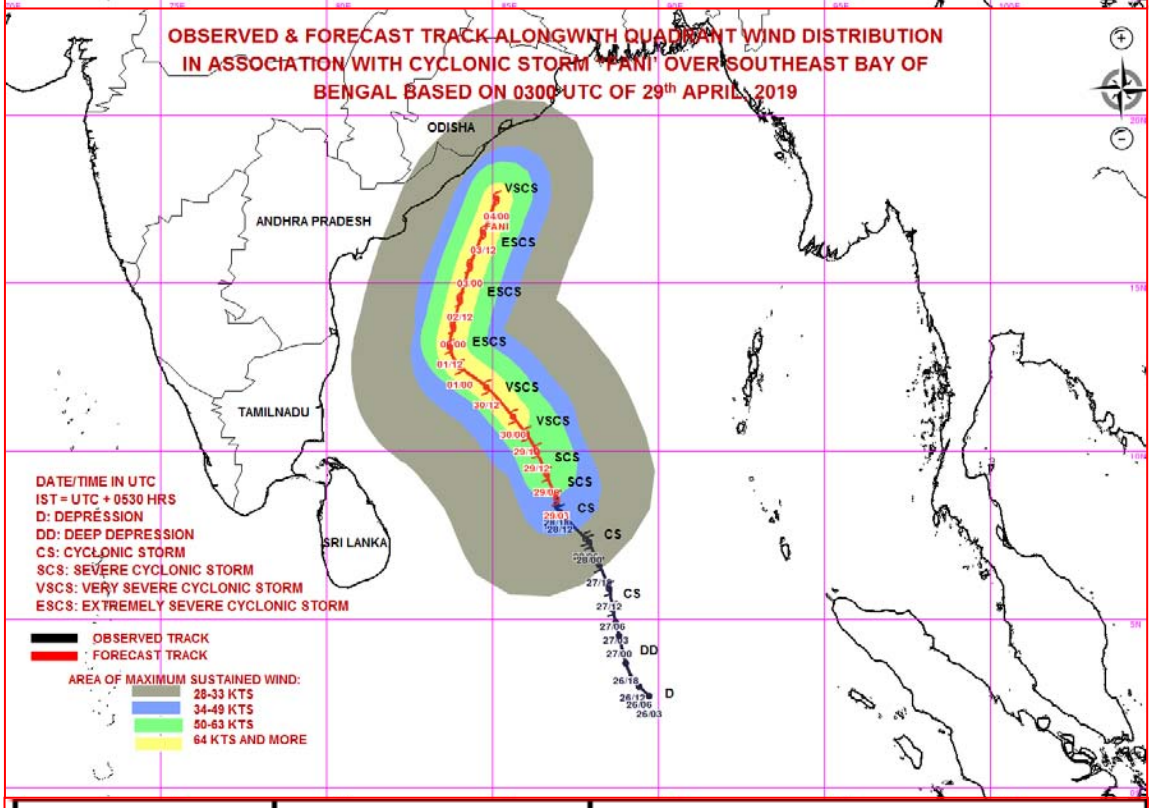
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 17

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 17 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 29.04.2019 BASED ON 0600 UTC OF 29.04.2019.

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED FURTHER NORTHWARDS WITH A SPEED OF ABOUT 11 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 9.2°N AND LONGITUDE 86.9°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST-NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 840 KM EAST-SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 990 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
29.04.19/0600	9.2/86.9	85-95 GUSTING TO 110	CYCLONIC STORM
29.04.19/1200	10.0/86.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/1800	10.6/86.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.2/86.2	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.7/85.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.6/84.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	13.2/84.0	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.8/83.8	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
02.05.19/0600	14.7/83.9	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	16.1/84.1	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	17.2/84.5	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1800	18.3/85.0	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
04.05.19/0600	19.4/85.8	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 6.5°N TO 13.0°N AND LONG 83.0°E TO 89.5°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 996 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.3°E REPORTED MEAN SEA LEVEL PRESSURE 1002.7 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE NORTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

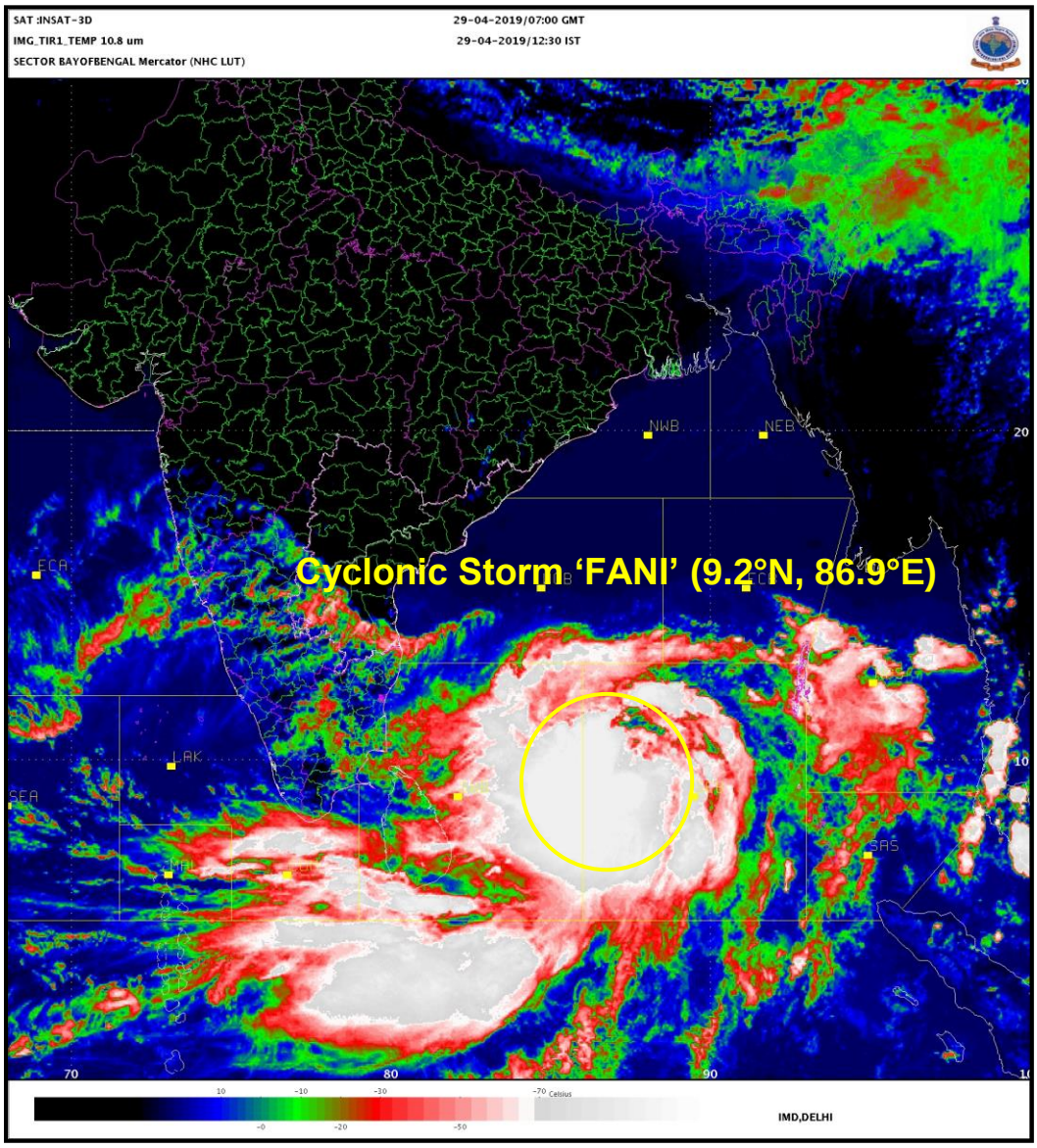
THE CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND HIGH WIND SHEAR.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

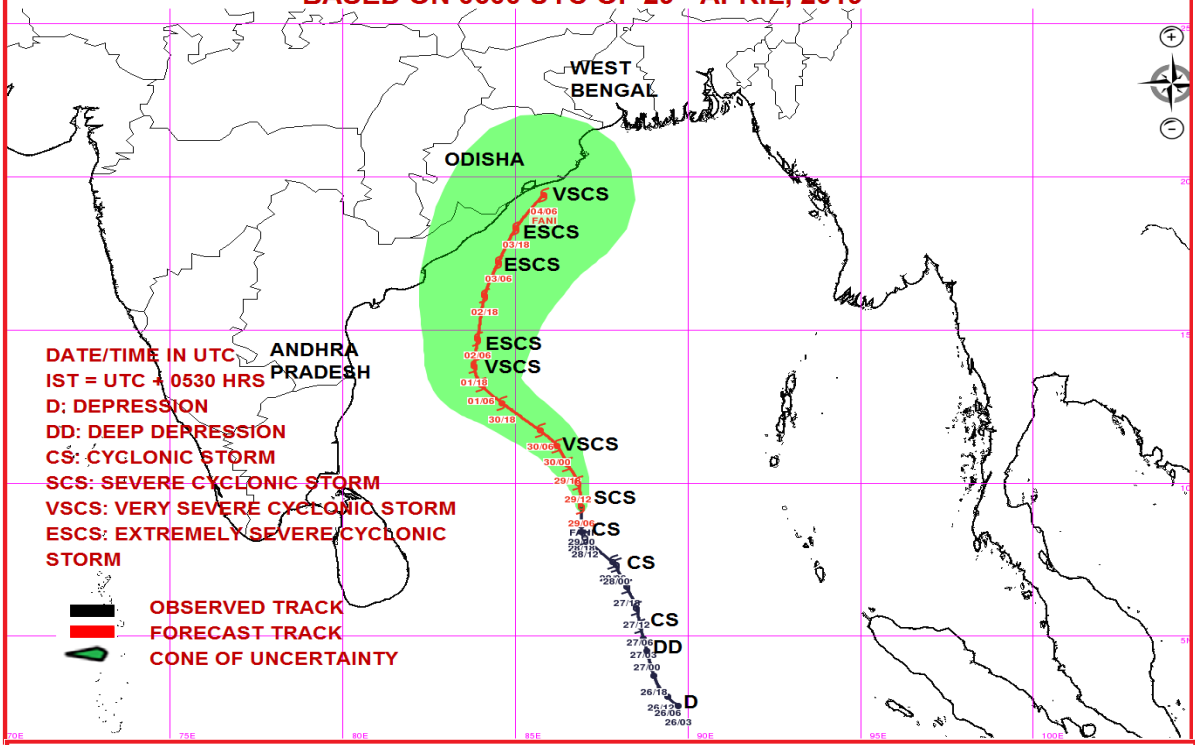
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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

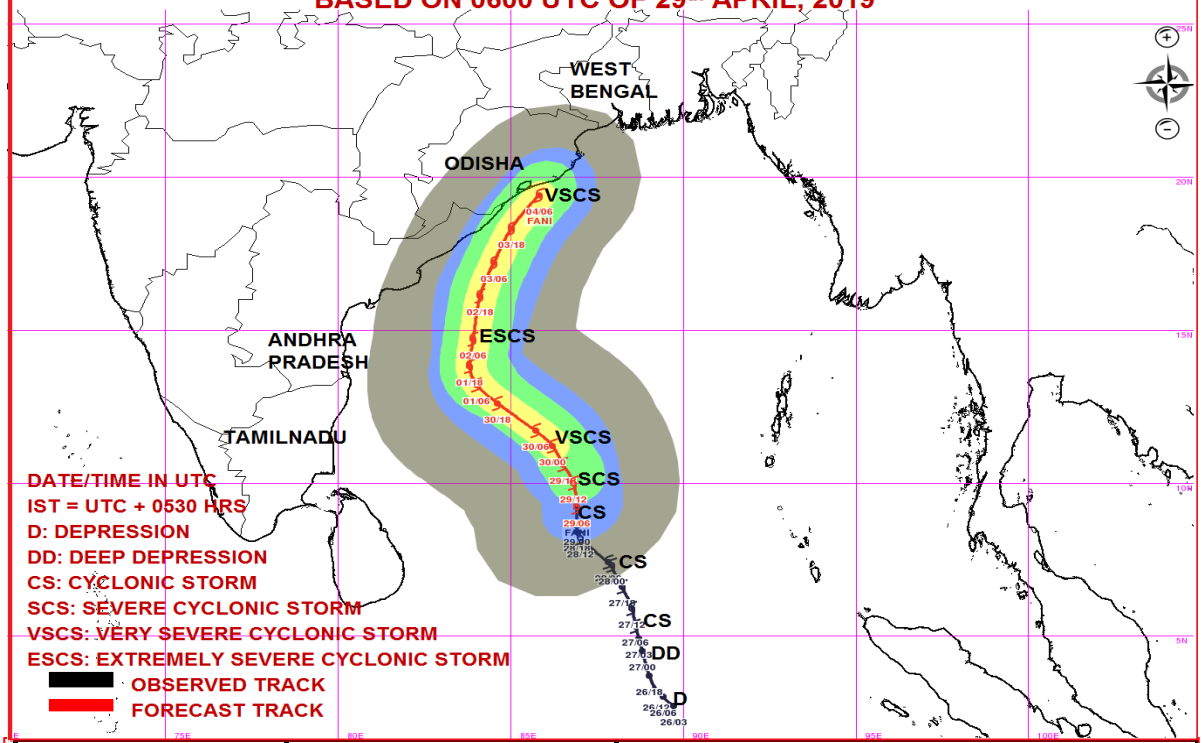


PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINITY IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 29th APRIL, 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 29th APRIL, 2019



MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 18

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 18 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 29.04.2019 BASED ON 0900 UTC OF 29.04.2019.

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 18 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 9.7°N AND LONGITUDE 86.8°E OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD, ABOUT 620 KM EAST-NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA), 810 KM EAST-SOUTHEAST OF CHENNAI (43278) (TAMIL NADU) AND 950 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185) (ANDHRA PRADESH). IT IS VERY LIKELY TO INTENSIFY INTO A **SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS AND INTO A **VERY SEVERE CYCLONIC STORM** DURING SUBSEQUENT 24 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
29.04.19/0900	9.7/86.8	85-95 GUSTING TO 110	CYCLONIC STORM
29.04.19/1200	10.0/86.8	95-105 GUSTING TO 120	SEVERE CYCLONIC STORM
29.04.19/1800	10.6/86.5	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
30.04.19/0000	11.2/86.2	120-130 GUSTING TO 145	VERY SEVERE CYCLONIC STORM
30.04.19/0600	11.7/85.7	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
30.04.19/1800	12.6/84.6	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
01.05.19/0600	13.2/84.0	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
01.05.19/1800	13.8/83.8	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
02.05.19/0600	14.7/83.9	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	16.1/84.1	170-180 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	17.2/84.5	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1800	18.3/85.0	160-170 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
04.05.19/0600	19.4/85.8	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS T 3.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 5.5°N TO 13.0°N AND LONG 82.0°E TO 91.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 45 KNOTS GUSTING TO 55 KNOTS. THE SEA CONDITION IS HIGH TO VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 996 HPA.

A BUOY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE 1005.2 HPA. A SHIP LOCATED NEAR LAT. 6.0°N AND LONG 91.0°E REPORTED MEAN SEA LEVEL PRESSURE 1006.4 HPA AND MEAN WIND DIRECTION 150° AND SPEED OF 24 KNOTS

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20 X10^{-5}SEC^{-1} TO THE WEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW (05-15 KNOTS) AROUND THE SYSTEM AND ALSO ALONG THE FORECAST TRACK.

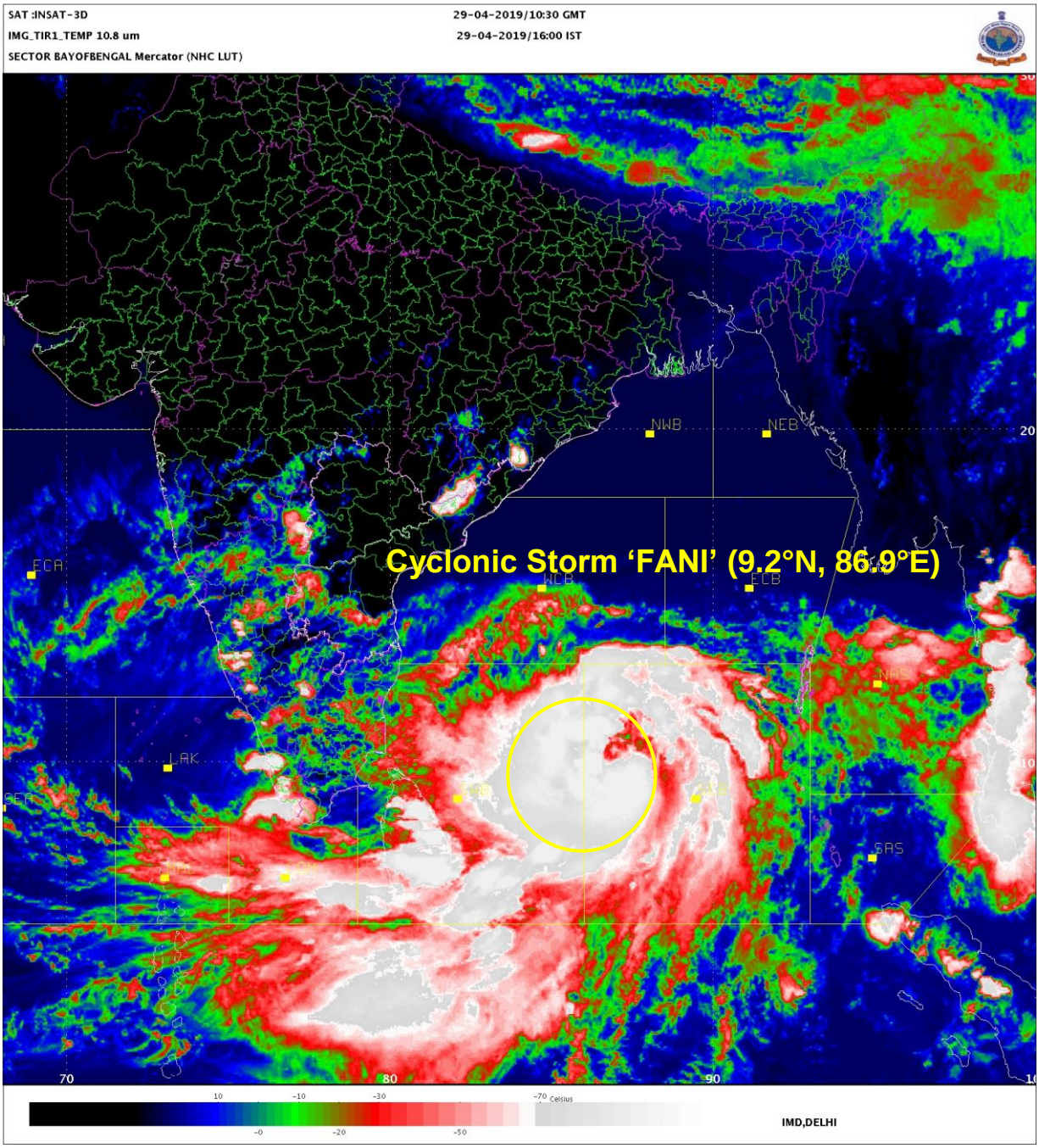
THE CYCLONIC STORM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM IS LIKELY TO INTENSIFY RAPIDLY DURING 29-30 APRIL, 2019. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN SLIGHTLY AS IT WOULD MOVE TO REGIONS OF COLDER SEA AND HIGH WIND SHEAR.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

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

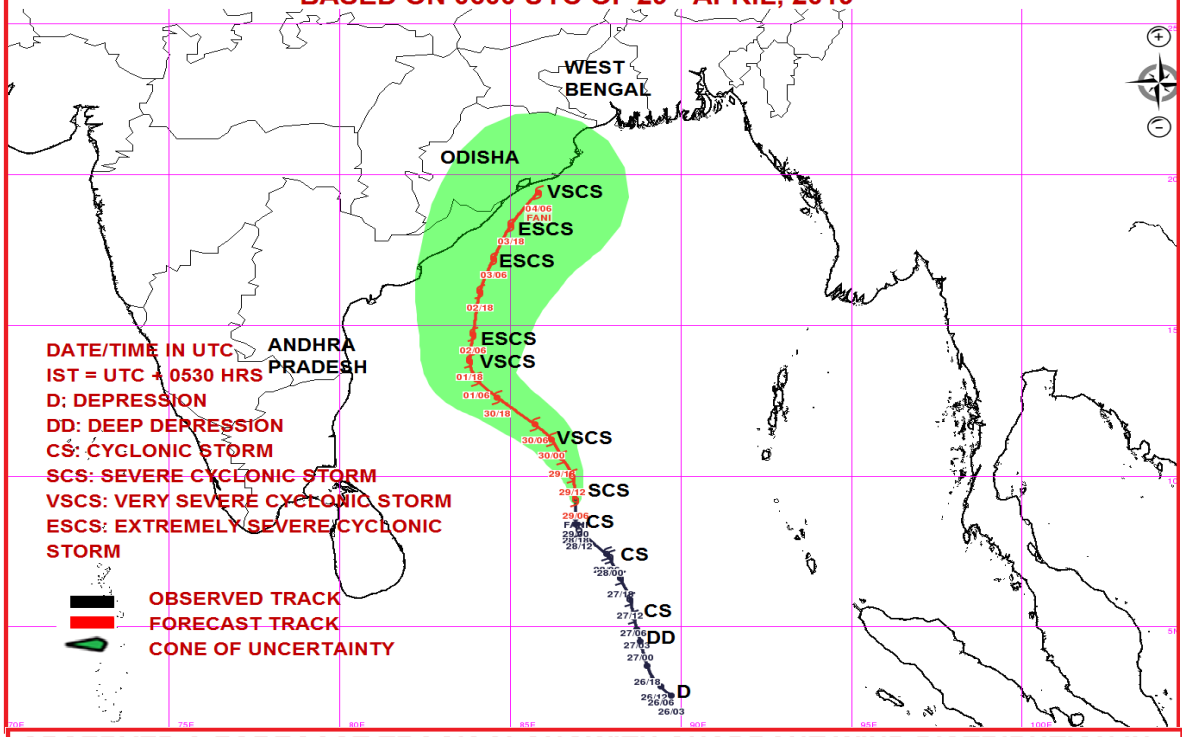
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



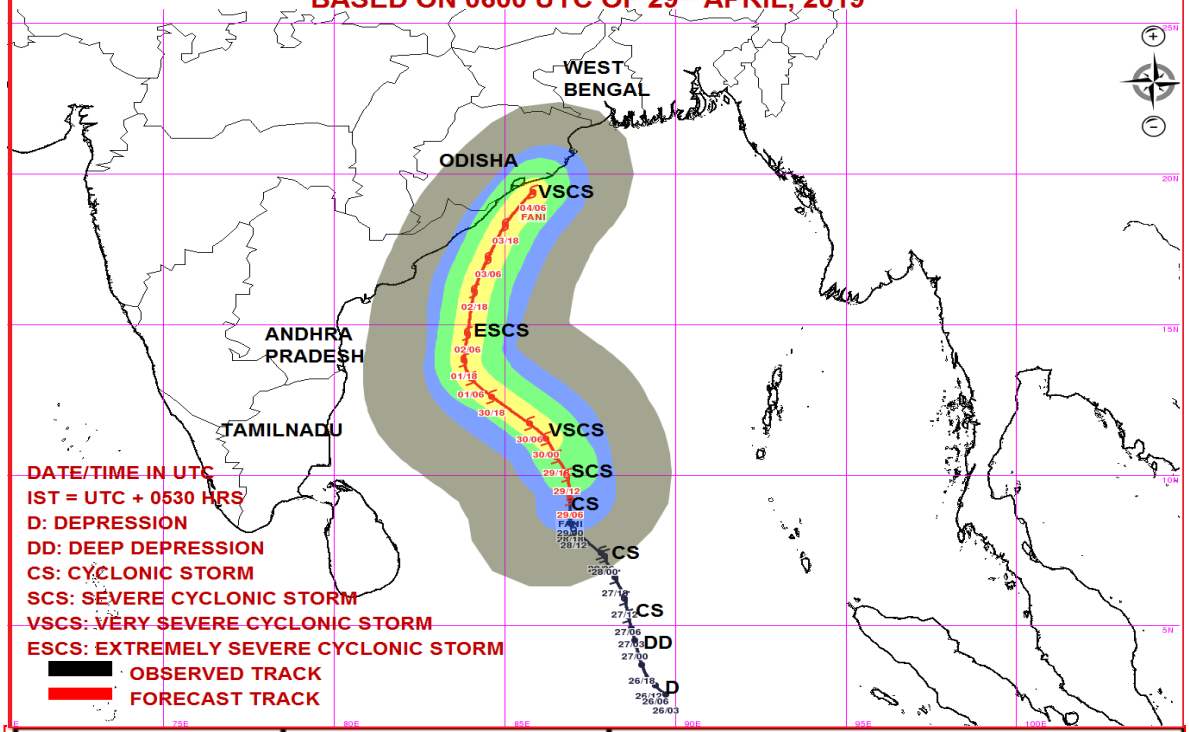
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINITY IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 29th APRIL, 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 0600 UTC OF 29th APRIL, 2019



MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 19

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 19 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 29.04.2019 BASED ON 1200 UTC OF 29.04.2019.

THE CYCLONIC STORM 'FANI' (PRONOUNCED AS 'FONI') OVER SOUTHEAST BAY OF BENGAL & NEIGHBOURHOOD MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS, INTENSIFIED INTO A SEVERE CYCLONIC STORM AND LAY CENTRED AT 1200 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 10.1°N AND LONGITUDE 86.7°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 620 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 770 KM EAST-SOUTHEAST OF CHENNAI (43278) AND 900 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.04.19/1200	10.1/86.7	100-110 gusting to 125	Severe Cyclonic Storm
29.04.19/1800	10.6/86.5	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0000	11.2/86.2	120-130 gusting to 145	Severe Cyclonic Storm
30.04.19/0600	11.7/85.7	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1200	12.2/85.1	135-145 gusting to 160	Very Severe Cyclonic Storm
01.05.19/0000	12.9/84.3	150-160 gusting to 175	Very Severe Cyclonic Storm
01.05.19/1200	13.5/83.6	160-170 gusting to 185	Extremely Severe Cyclonic Storm
02.05.19/0000	14.3/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1200	15.4/83.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0000	16.7/84.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	18.2/84.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
04.05.19/0000	19.8/86.0	160-170 gusting to 185	Extremely Severe Cyclonic Storm
04.05.19/1200	21.0/87.3	150-160 gusting to 175	Very Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS C.I 3.5. THE SYSTEM HAS A CURVED BAND PATTERN. THE CONVECTION WRAP ON 10 DEGREE LOG SPIRAL OF 0.6 OF 0300 UTC INCREASED TO 0.8 YIELDING A DT OF 3.5. MET 3.5 AND PT 3.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 8.0°N TO 14.0°N AND LONG 82.5°E TO 92.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 992 HPA.

A SHIP LOCATED NEAR LAT. 5.7°N AND LONG 87.9°E REPORTED MEAN SEA LEVEL PRESSURE 1006.9 HPA AND MEAN WIND DIRECTION 230° AND SPEED OF 33 KNOTS. ANOTHER SHIP LOCATED NEAR LAT. 7.6°N AND LONG 85.8°E REPORTED MEAN SEA LEVEL PRESSURE 1006.3 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20-30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE INCREASED AND IS NOW 30 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

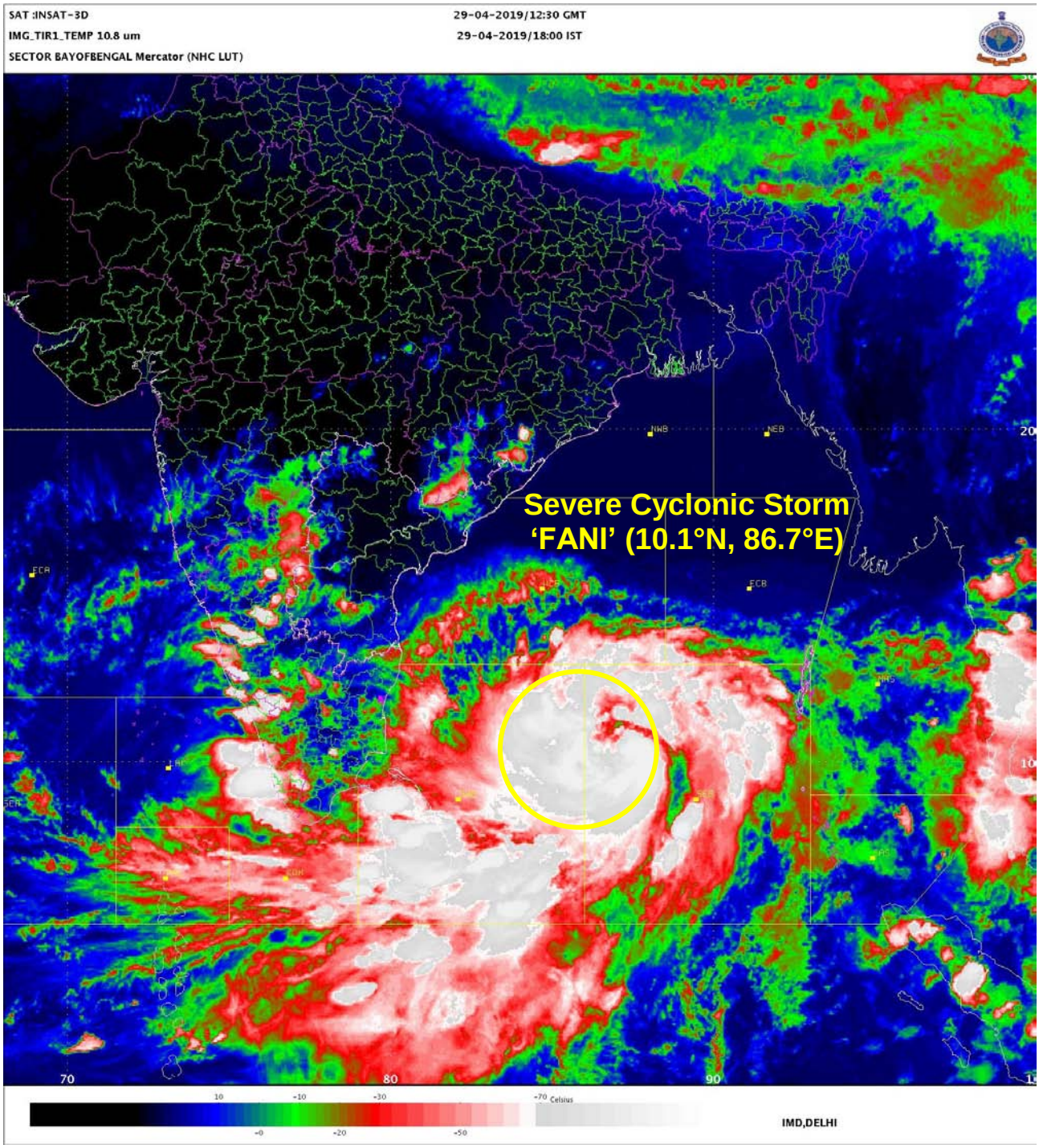
THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW TO MODERATE VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM HAS INTENSIFIED INTO A SEVERE CYCLONIC STORM. IT IS LIKELY TO FURTHER INTENSIFY DURING NEXT 24 HOURS. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS.

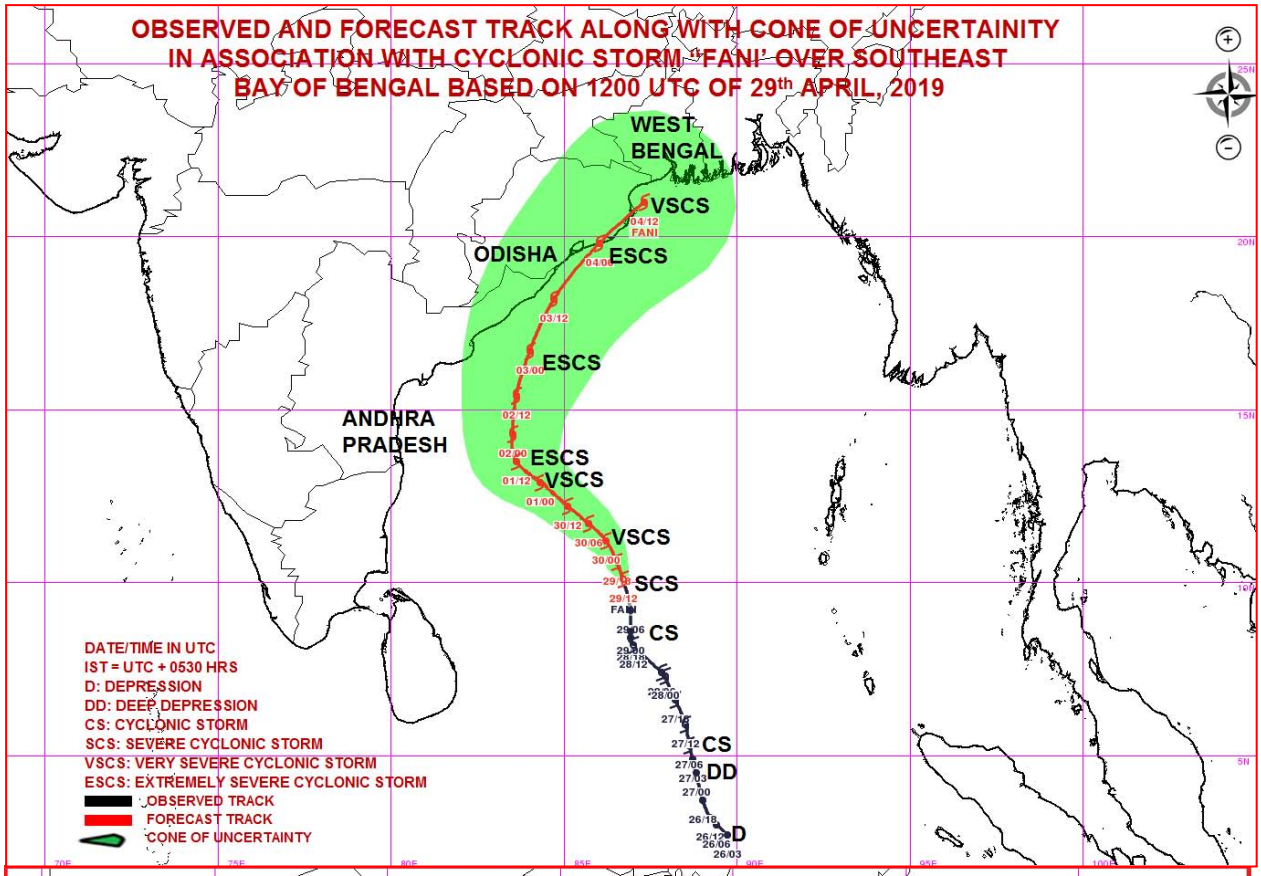
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

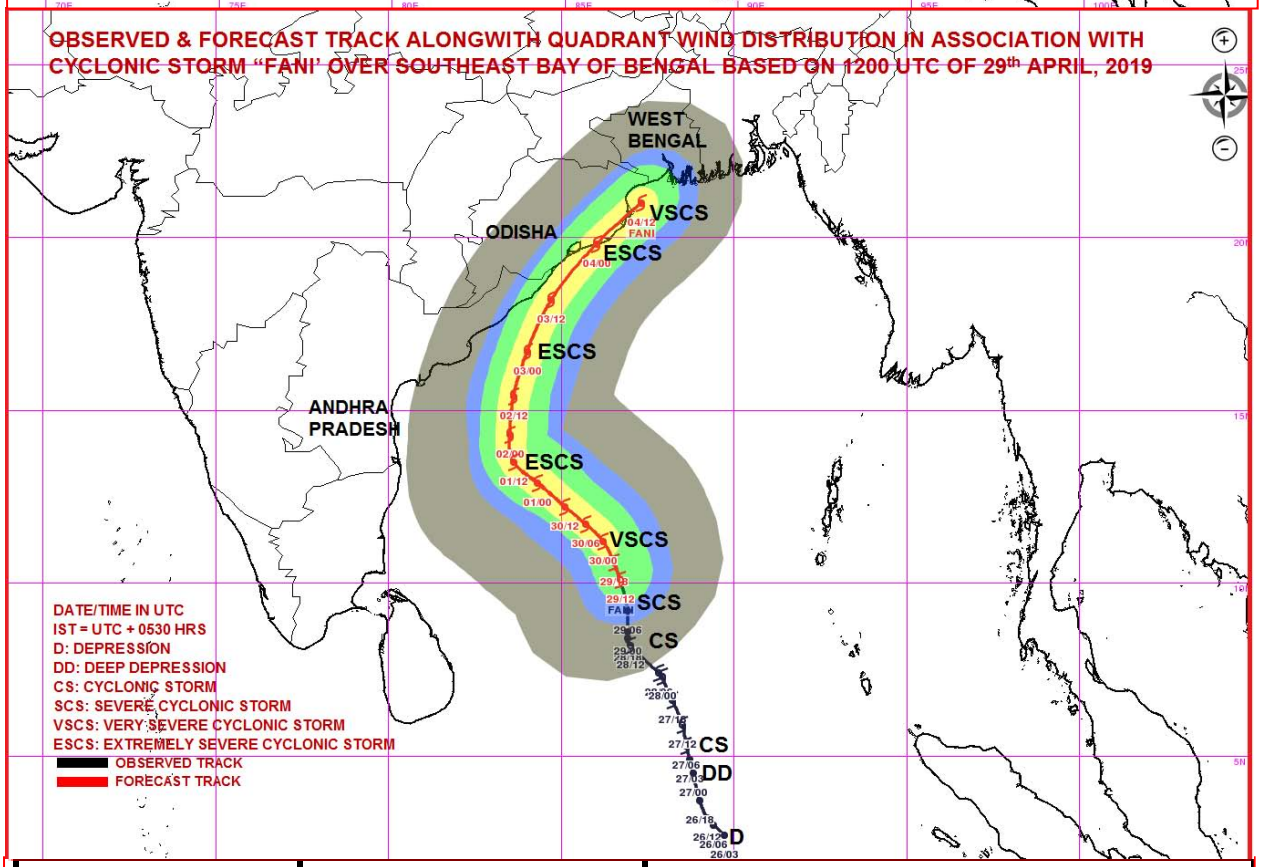
(NARESH KUMAR)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 20

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 20 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1700 UTC OF 29.04.2019 BASED ON 1500 UTC OF 29.04.2019.

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS 'FONI') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NEARLY NORTHWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 10.4°N AND LONGITUDE 86.7°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 630 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 760 KM EAST-SOUTHEAST OF CHENNAI (43278) AND 880 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS AND INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.04.19/1500	10.4/86.7	100-110 gusting to 125	Severe Cyclonic Storm
29.04.19/1800	10.6/86.5	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0000	11.2/86.2	120-130 gusting to 145	Severe Cyclonic Storm
30.04.19/0600	11.7/85.7	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1200	12.2/85.1	135-145 gusting to 160	Very Severe Cyclonic Storm
01.05.19/0000	12.9/84.3	150-160 gusting to 175	Very Severe Cyclonic Storm
01.05.19/1200	13.5/83.6	160-170 gusting to 185	Extremely Severe Cyclonic Storm
02.05.19/0000	14.3/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1200	15.4/83.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0000	16.7/84.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	18.2/84.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
04.05.19/0000	19.8/86.0	160-170 gusting to 185	Extremely Severe Cyclonic Storm
04.05.19/1200	21.0/87.3	150-160 gusting to 175	Very Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST BAY OF BENGAL AND NEIGHBOURHOOD IS C.I 3.5. THE SYSTEM HAS A CURVED BAND PATTERN. THE CONVECTION WRAP ON 10 DEGREE LOG SPIRAL OF 0.6 OF 0300 UTC INCREASED TO 0.8 YIELDING A DT OF 3.5. MET 3.5 AND PT 3.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 8.0°N TO 13.5°N AND LONG 82.5°E TO 92.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 992 HPA.

AT 1500 UTC OF TODAY, A BOUY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.3°E REPORTED MEAN SEA LEVEL PRESSURE 1009.0 HPA & MEAN WIND DIRECTION 240° & SPEED OF 19 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 20-30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE INCREASED AND IS NOW 30 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

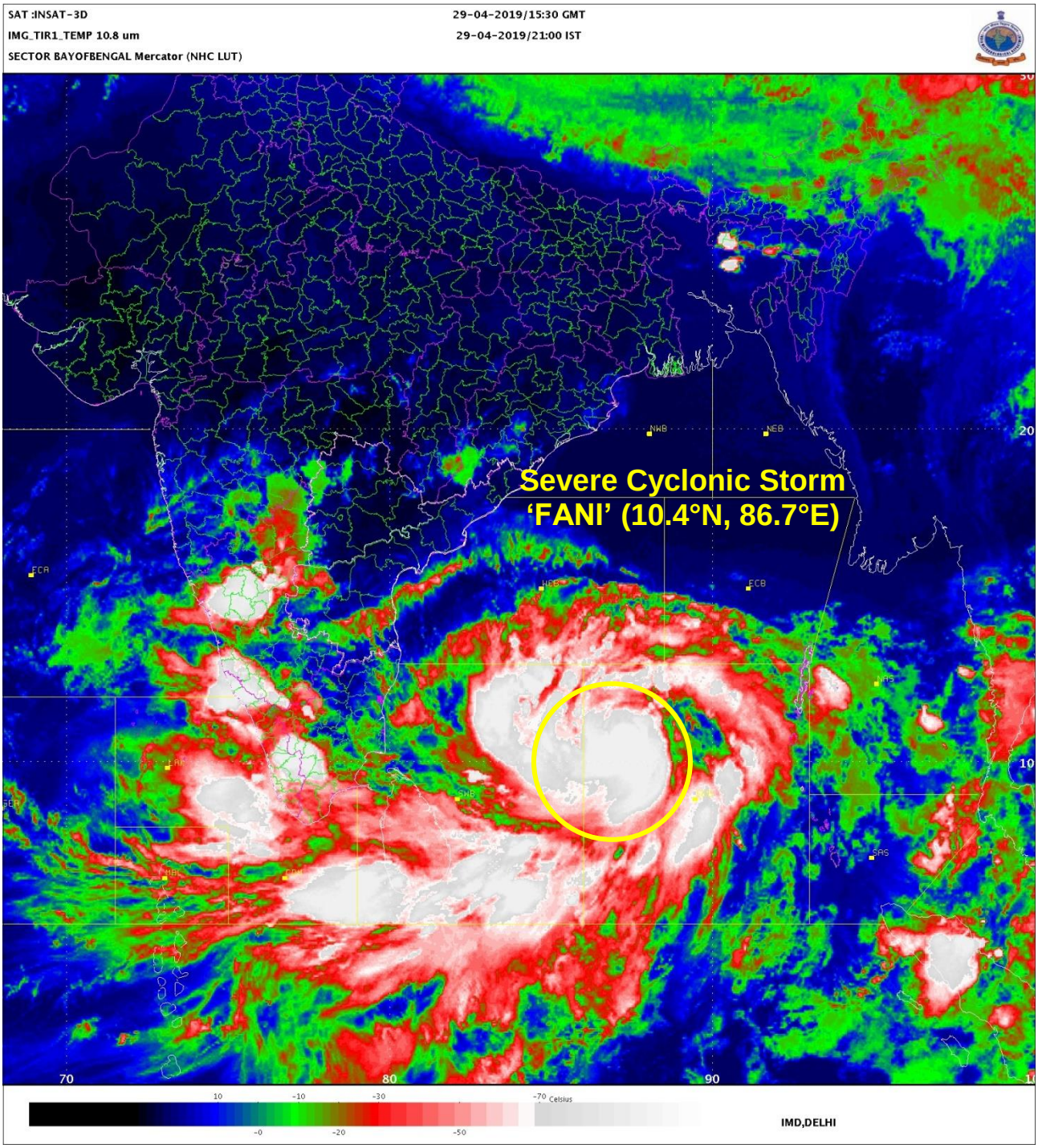
THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW TO MODERATE VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM HAS INTENSIFIED INTO A SEVERE CYCLONIC STORM. IT IS LIKELY TO FURTHER INTENSIFY DURING NEXT 24 HOURS. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

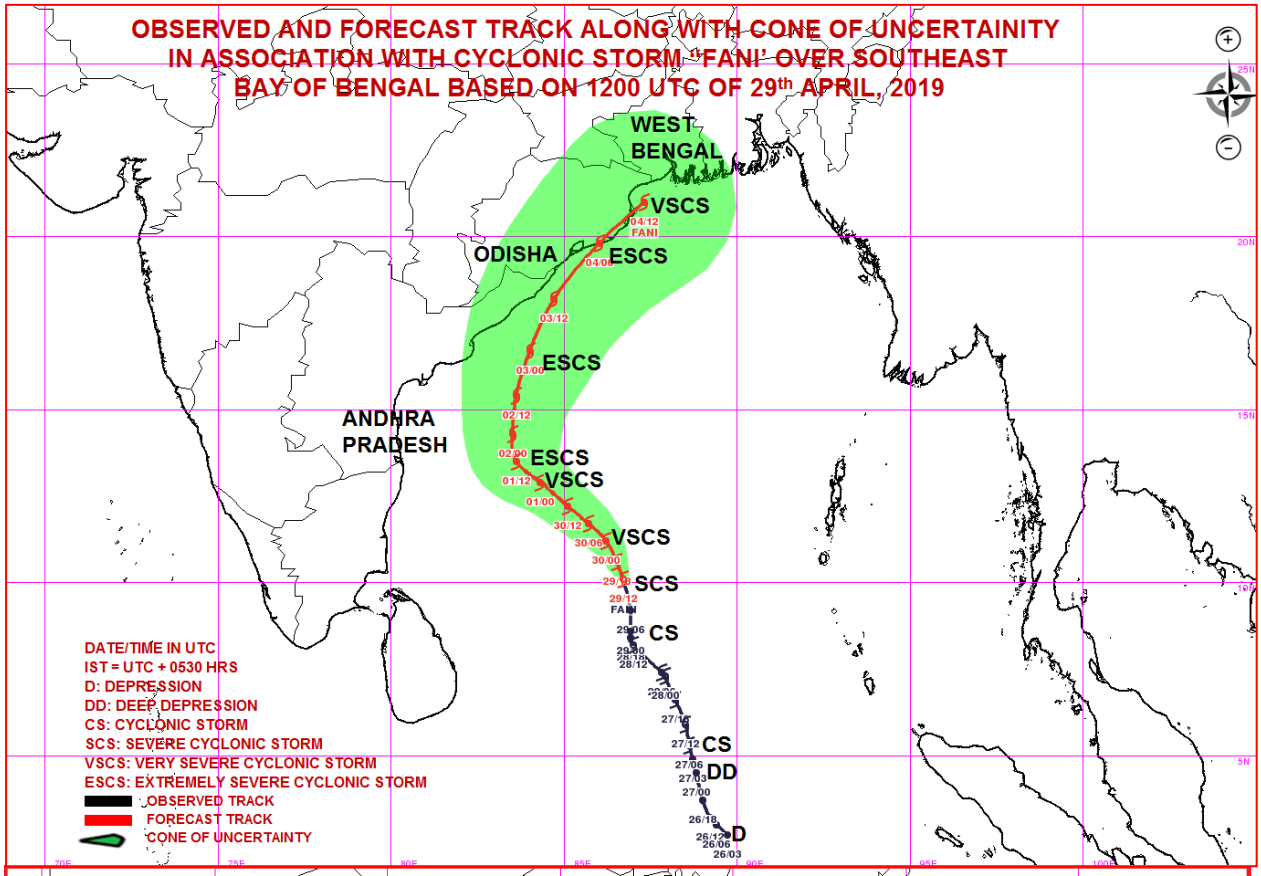
(ANANDA KUMAR DAS)
SCIENTIST-E, RSMC, NEW DELHI

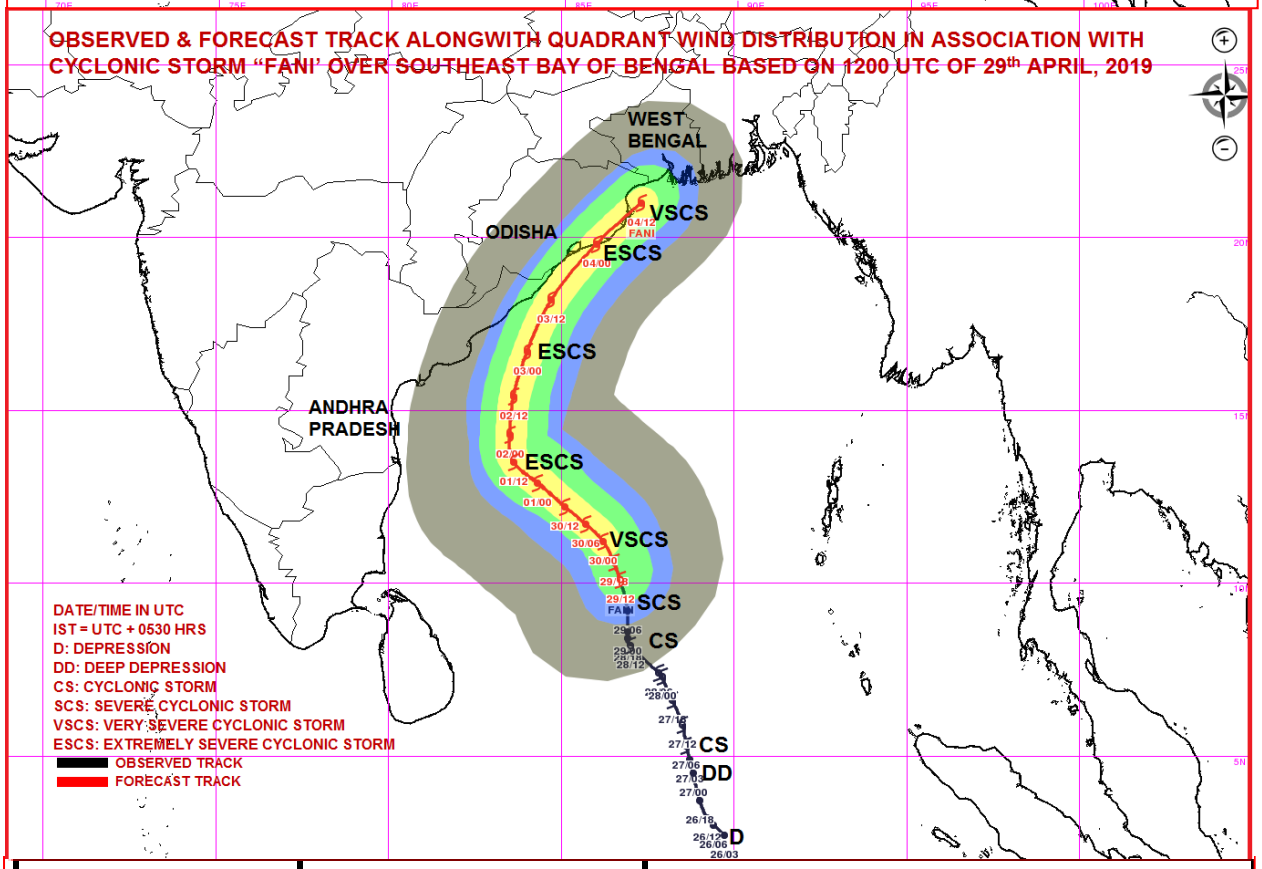
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 21

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 21 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2000 UTC OF 29.04.2019 BASED ON 1800 UTC OF 29.04.2019.

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS 'FONI') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NEARLY NORTHWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 10.8°N AND LONGITUDE 86.6°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 640 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 730 KM EAST-SOUTHEAST OF CHENNAI (43278) AND 840 KM SOUTH-SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.04.19/1800	10.8/86.6	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0000	11.3/86.3	120-130 gusting to 145	Severe Cyclonic Storm
30.04.19/0600	11.8/85.7	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1200	12.2/85.1	135-145 gusting to 160	Very Severe Cyclonic Storm
30.05.19/1800	12.7/84.5	150-160 gusting to 180	Very Severe Cyclonic Storm
01.05.19/0600	13.2/83.9	150-160 gusting to 180	Very Severe Cyclonic Storm
01.05.19/1800	13.9/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/0600	14.8/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1800	16.1/83.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0600	17.8/84.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	19.3/85.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
04.05.19/0600	20.5/86.4	150-160 gusting to 185	Very Severe Cyclonic Storm
04.05.19/1800	21.5/87.0	125-135 gusting to 150	Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1800 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL IS C.I 3.5. THE SYSTEM HAS A CURVED BAND PATTERN. THE CONVECTION WRAP ON 10 DEGREE LOG SPIRAL IS 0.8 YIELDING A DT OF 3.5. MET 3.5 AND PT 3.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 8.0°N TO 14.5°N AND LONG 81.0°E TO 91.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 992 HPA.

AT 1800 UTC OF TODAY, A BOUY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.3°E REPORTED MEAN WIND DIRECTION 250° & SPEED OF 21 KNOTS. A SHIP LOCATED NEAR LAT. 5.9°N AND LONG 92.2°E REPORTED MEAN SEA LEVEL PRESSURE 1011.0 HPA & MEAN WIND DIRECTION 230° & SPEED OF 26 KNOTS AND ANOTHER SHIP LOCATED NEAR LAT. 9.4°N AND LONG 82.5°E REPORTED MEAN SEA LEVEL PRESSURE 1005.0 HPA & MEAN WIND DIRECTION 230° & SPEED OF 05 KNOTS

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 150 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE IS 10-20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (15-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

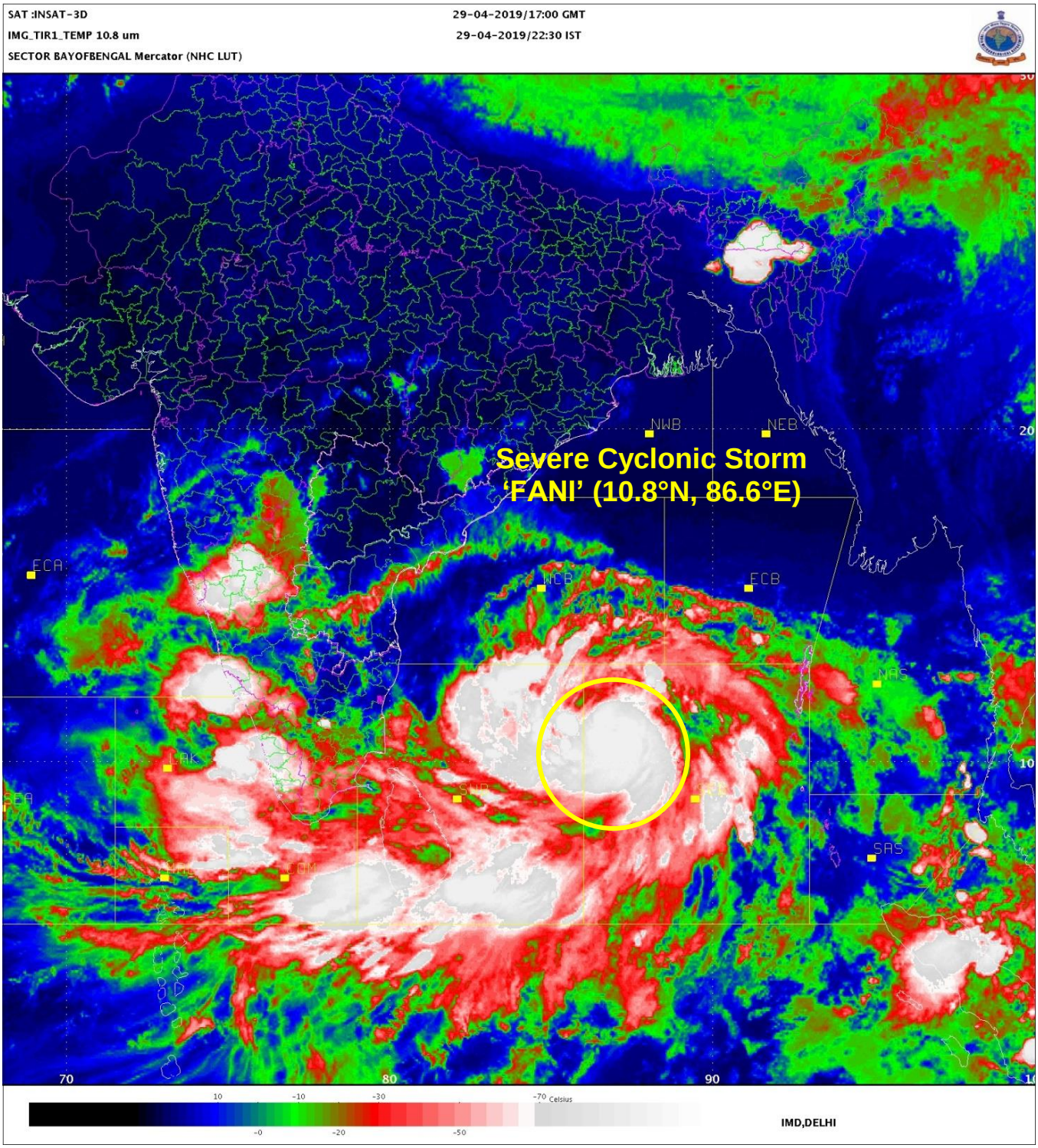
THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW TO MODERATE VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM HAS INTENSIFIED INTO A SEVERE CYCLONIC STORM. IT HAS FURTHER INTENSIFIED DURING LAST 06 HOURS AND IS LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
SCIENTIST-E, RSMC, NEW DELHI

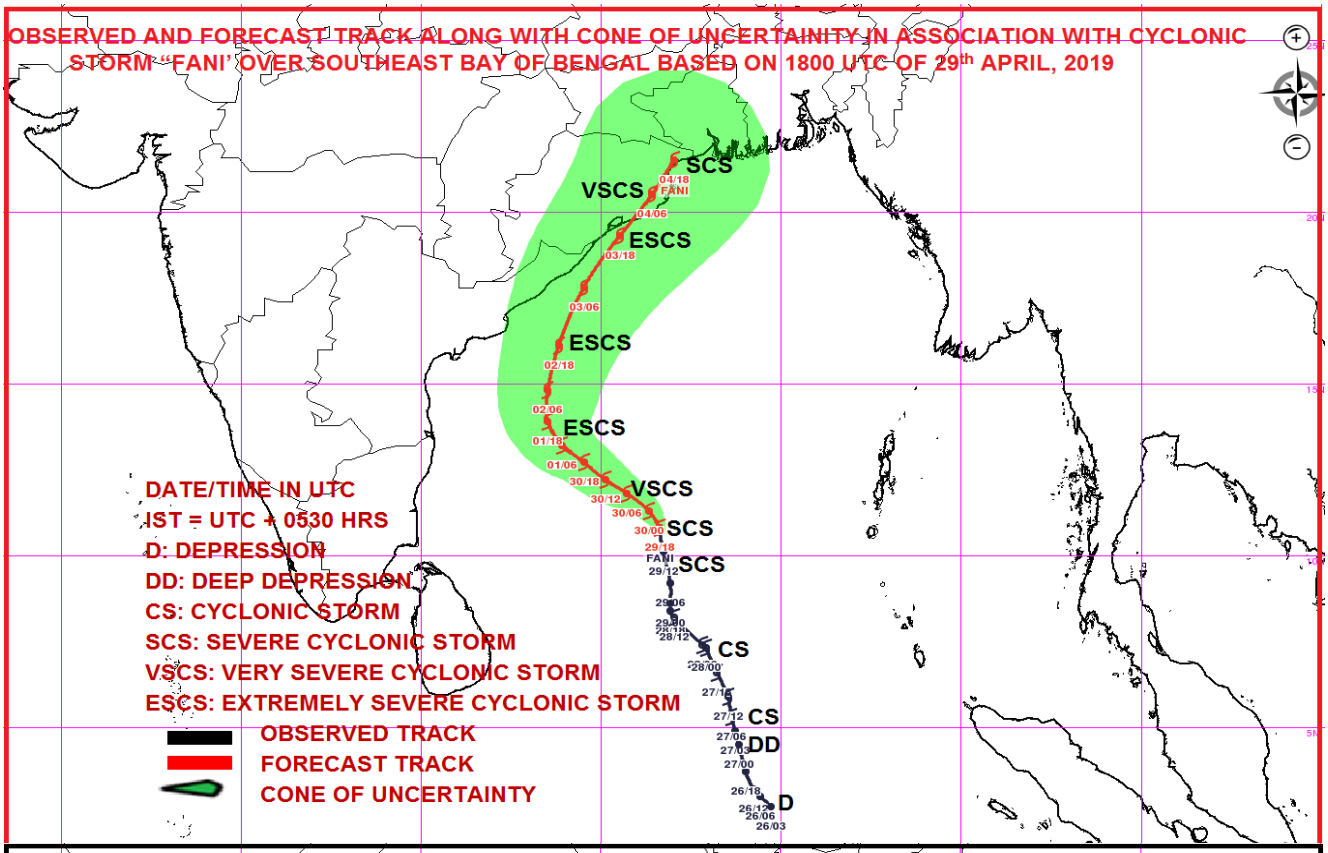
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



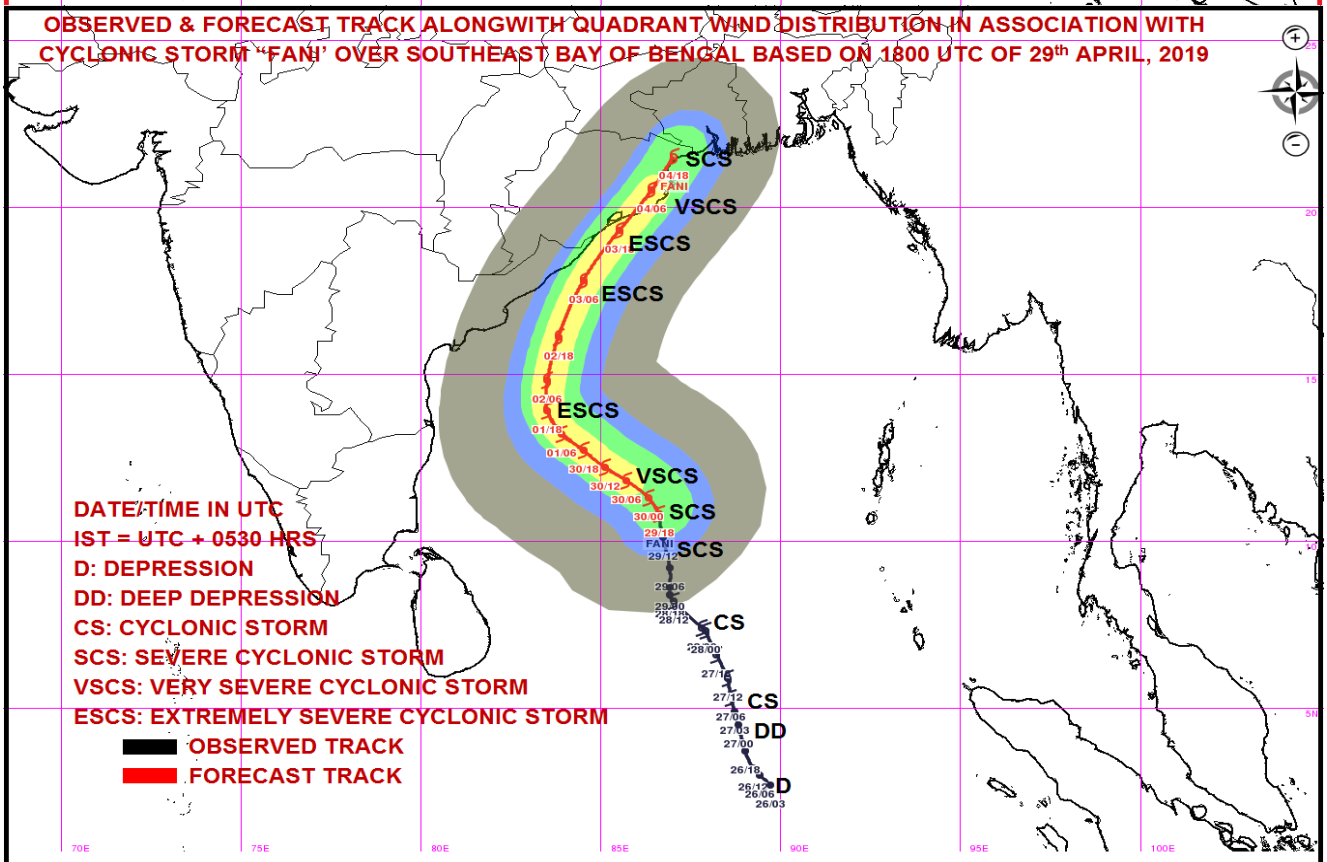
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINITY IN ASSOCIATION WITH CYCLONIC STORM "FANI" OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 29th APRIL, 2019



OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM "FANI" OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 29th APRIL, 2019



MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 22

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 22 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2300 UTC OF 30.04.2019 BASED ON 2100 UTC OF 29.04.2019.

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS 'FONI') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NEARLY NORTHWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 UTC OF 29TH APRIL, 2019 NEAR LATITUDE 11.1°N AND LONGITUDE 86.5°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 640 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 710 KM EAST-SOUTHEAST OF CHENNAI (43278) AND 810 KM SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING SUBSEQUENT 24 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
29.04.19/2100	11.1/86.5	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0000	11.3/86.3	120-130 gusting to 145	Severe Cyclonic Storm
30.04.19/0600	11.8/85.7	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1200	12.2/85.1	135-145 gusting to 160	Very Severe Cyclonic Storm
30.05.19/1800	12.7/84.5	150-160 gusting to 180	Very Severe Cyclonic Storm
01.05.19/0600	13.2/83.9	150-160 gusting to 180	Very Severe Cyclonic Storm
01.05.19/1800	13.9/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/0600	14.8/83.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1800	16.1/83.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0600	17.8/84.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	19.3/85.5	160-170 gusting to 190	Extremely Severe Cyclonic Storm
04.05.19/0600	20.5/86.4	150-160 gusting to 185	Very Severe Cyclonic Storm
04.05.19/1800	21.5/87.0	125-135 gusting to 150	Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC ON 29TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL IS C.I 3.5. THE SYSTEM HAS A CURVED BAND PATTERN. THE CONVECTION WRAP ON 10 DEGREE LOG SPIRAL IS 0.8 YIELDING A DT OF 3.5. MET 3.5 AND PT 3.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 8.0°N TO 14.5°N AND LONG 81.0°E TO 89.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 55 KNOTS GUSTING TO 65 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 992 HPA.

AT 2100 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.5°N AND LONG 84.1°E REPORTED MEAN SEA LEVEL PRESSURE 1003.5 HPA & MEAN WIND DIRECTION 80° & SPEED OF 10 KNOTS AND ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.1°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE 1003.0 HPA & MEAN WIND DIRECTION 120° & SPEED OF 22 KNOTS. A SHIP LOCATED NEAR LAT. 5.8°N AND LONG 85.4°E REPORTED MEAN SEA LEVEL PRESSURE 1007.0 HPA & MEAN WIND DIRECTION 230° & SPEED OF 20 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BOB. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY HAS INCREASED AND IS ABOUT 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTER. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO INCREASED AND IS 40 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (15-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

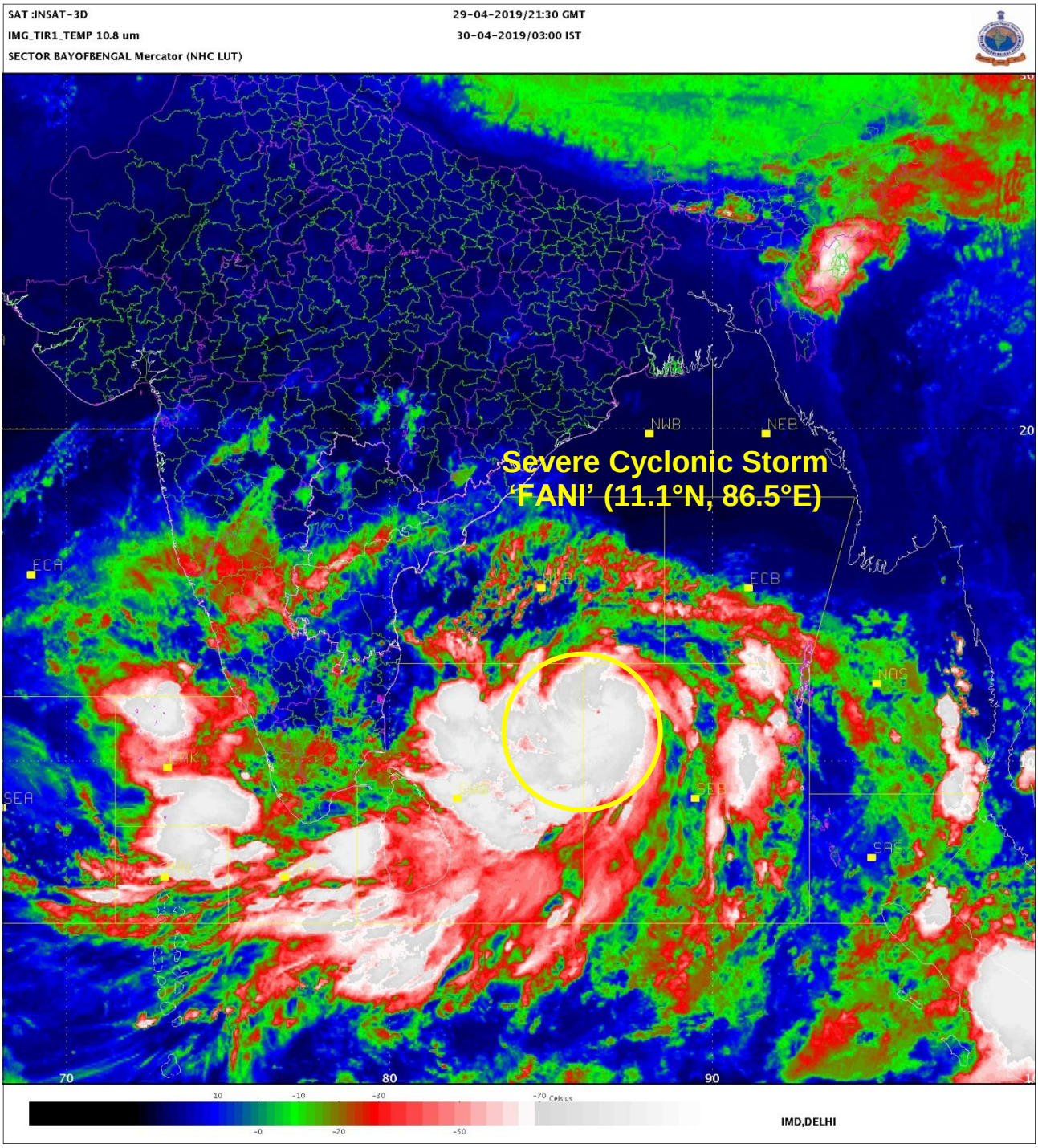
THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM IS IN AN AREA OF LOW TO MODERATE VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM HAS INTENSIFIED INTO A SEVERE CYCLONIC STORM. IT IS LIKELY TO INTENSIFY INTO A VERY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS. THEREAFTER WITH THE EXPECTED RECURVATURE OF THE SYSTEM, IT IS LIKELY TO MOVE NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
SCIENTIST-E, RSMC, NEW DELHI

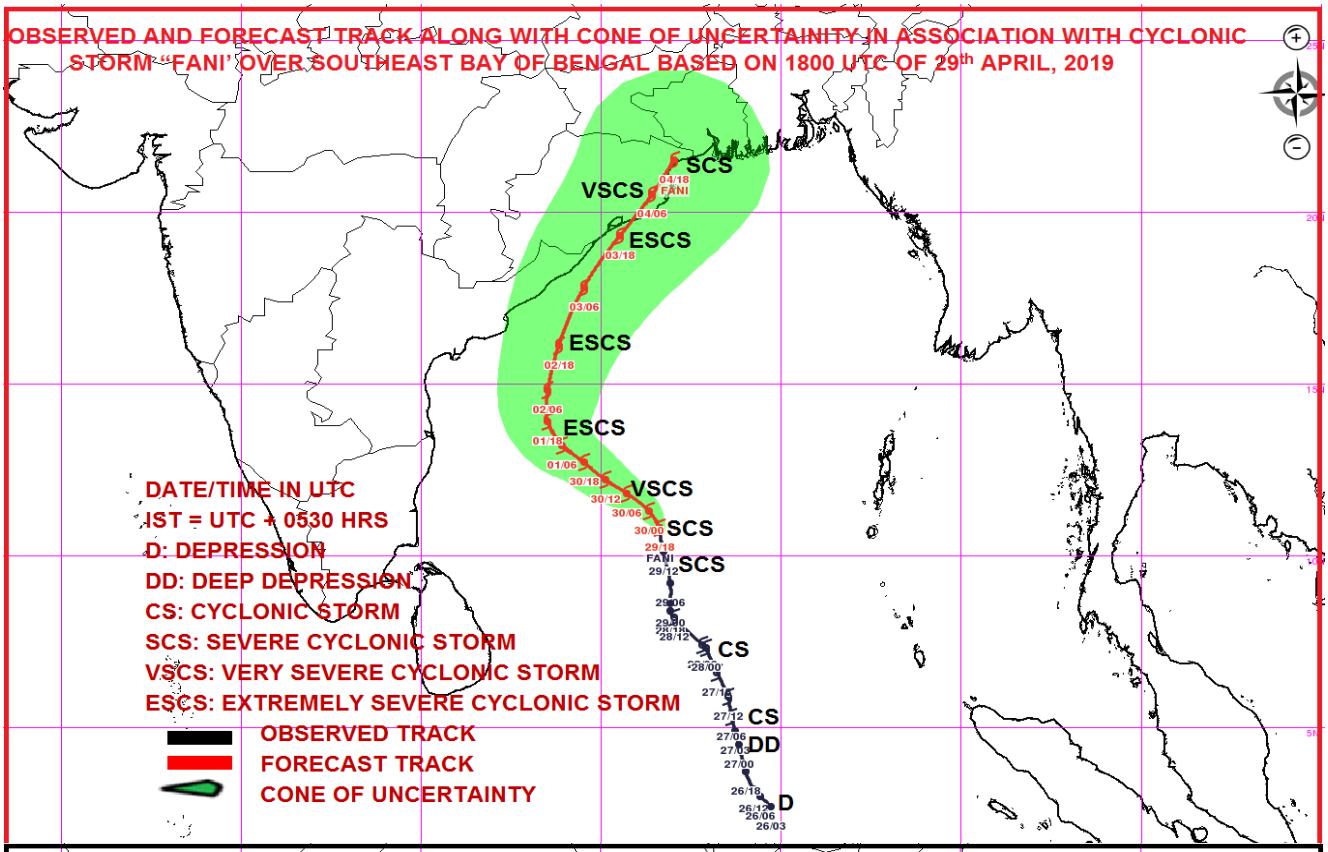
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

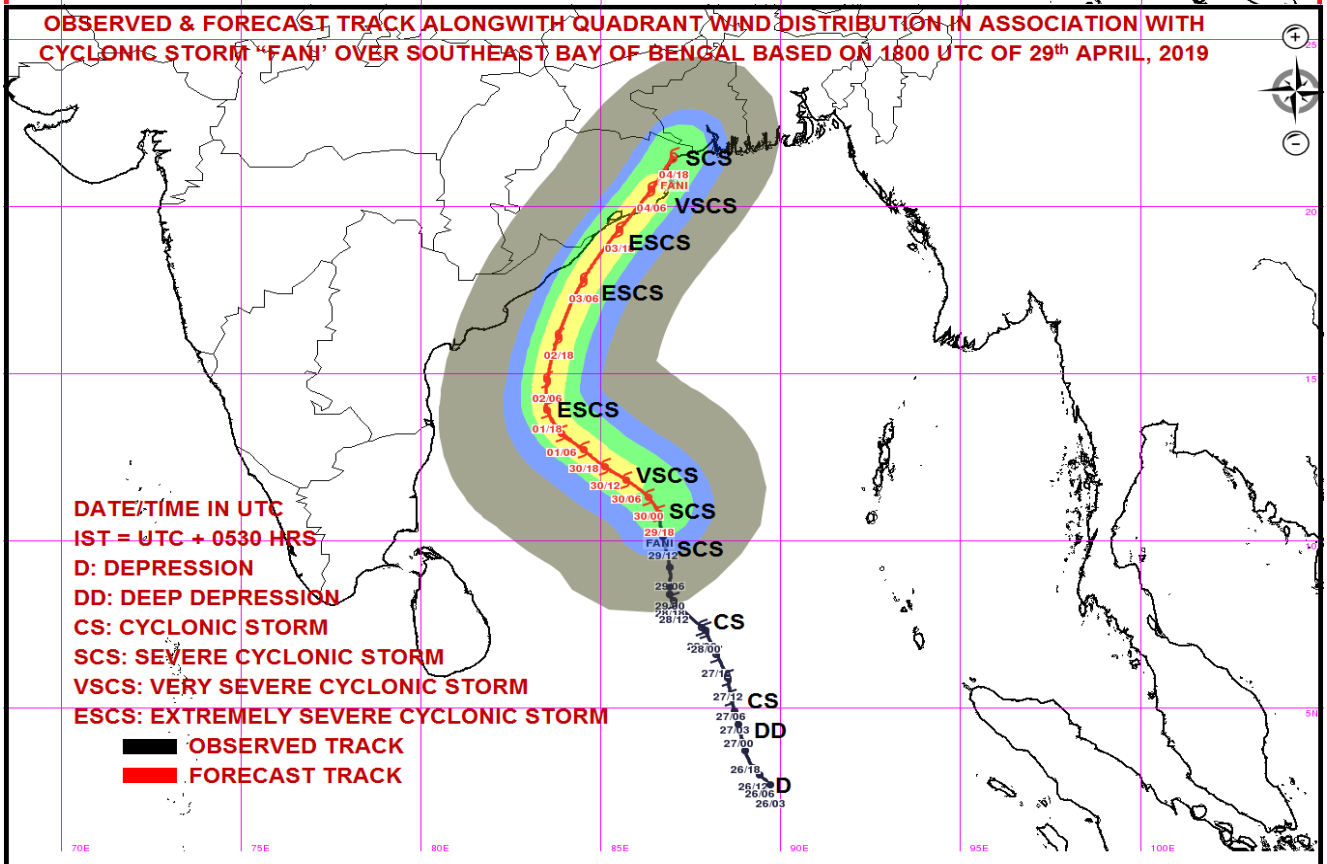
OBSERVED AND FORECAST TRACK ALONG WITH CONE OF UNCERTAINITY IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 29th APRIL, 2019



DATE/TIME IN UTC
IST = UTC + 0530 HRS
D: DEPRESSION
DD: DEEP DEPRESSION
CS: CYCLONIC STORM
SCS: SEVERE CYCLONIC STORM
VSCS: VERY SEVERE CYCLONIC STORM
ESCS: EXTREMELY SEVERE CYCLONIC STORM

OBSERVED TRACK
FORECAST TRACK
CONE OF UNCERTAINTY

OBSERVED & FORECAST TRACK ALONGWITH QUADRANT WIND DISTRIBUTION IN ASSOCIATION WITH CYCLONIC STORM "FANI' OVER SOUTHEAST BAY OF BENGAL BASED ON 1800 UTC OF 29th APRIL, 2019



DATE/TIME IN UTC
IST = UTC + 0530 HRS
D: DEPRESSION
DD: DEEP DEPRESSION
CS: CYCLONIC STORM
SCS: SEVERE CYCLONIC STORM
VSCS: VERY SEVERE CYCLONIC STORM
ESCS: EXTREMELY SEVERE CYCLONIC STORM

OBSERVED TRACK
FORECAST TRACK

MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 23

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 23 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 30.04.2019 BASED ON 0000 UTC OF 30.04.2019.

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS 'FONI') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS, INTENSIFIED INTO A **VERY SEVERE CYCLONIC STORM** AND LAY CENTRED AT 0000 UTC OF 30TH APRIL, 2019 NEAR LATITUDE 11.7°N AND LONGITUDE 86.5°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 670 KM EAST-NORTHEAST OF TRINCOMALEE (43418), 690 KM EAST-SOUTHEAST OF CHENNAI (43278) AND 760 KM SOUTHEAST OF MACHILIPATNAM (43185). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 36 HOURS. IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS TOWARDS ODISHA COAST.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.04.19/0000	11.7/86.5	120-130 gusting to 145	Very Severe Cyclonic Storm
30.04.19/0600	12.5/85.9	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1200	13.1/85.3	140-150 gusting to 165	Very Severe Cyclonic Storm
30.05.19/1800	13.5/84.7	150-160 gusting to 175	Very Severe Cyclonic Storm
01.05.19/0000	13.8/84.3	160-170 gusting to 185	Very Severe Cyclonic Storm
01.05.19/1200	14.4/84.0	165-175 gusting to 190	Extremely Severe Cyclonic Storm
02.05.19/0000	15.4/84.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1200	16.7/84.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0000	18.0/84.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	19.2/85.4	160-170 gusting to 190	Extremely Severe Cyclonic Storm
04.05.19/0000	20.3/86.3	140-150 gusting to 165	Very Severe Cyclonic Storm
04.05.19/1200	21.4/87.3	125-135 gusting to 150	Severe Cyclonic Storm
05.05.19/0000	22.5/88.4	90-100 gusting to 110	Severe Cyclonic Storm

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC ON 30TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL IS C.I 4.0. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 7.0°N TO 14.9°N AND LONG 81.0°E TO 99.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 65 KNOTS GUSTING TO 75 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 986 HPA.

AT 0000 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.5°N AND LONG 84.1°E REPORTED MEAN SEA LEVEL PRESSURE 1003.0 HPA & MEAN WIND DIRECTION 80° & SPEED OF 15 KNOTS AND ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN WIND DIRECTION 120° & SPEED OF 25 KNOTS. A SHIP LOCATED NEAR LAT. 5.8°N AND LONG 85.7°E REPORTED MEAN SEA LEVEL PRESSURE 1011.0 HPA & MEAN WIND DIRECTION 230° & SPEED OF 20 KNOTS AND ANOTHER SHIP LOCATED NEAR LAT. 7.2°N AND LONG 88.3°E REPORTED MEAN SEA LEVEL PRESSURE 1007.0 HPA & MEAN WIND DIRECTION 230° & SPEED OF 20 KNOTS.

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THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 250 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND TO SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS 40 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK.

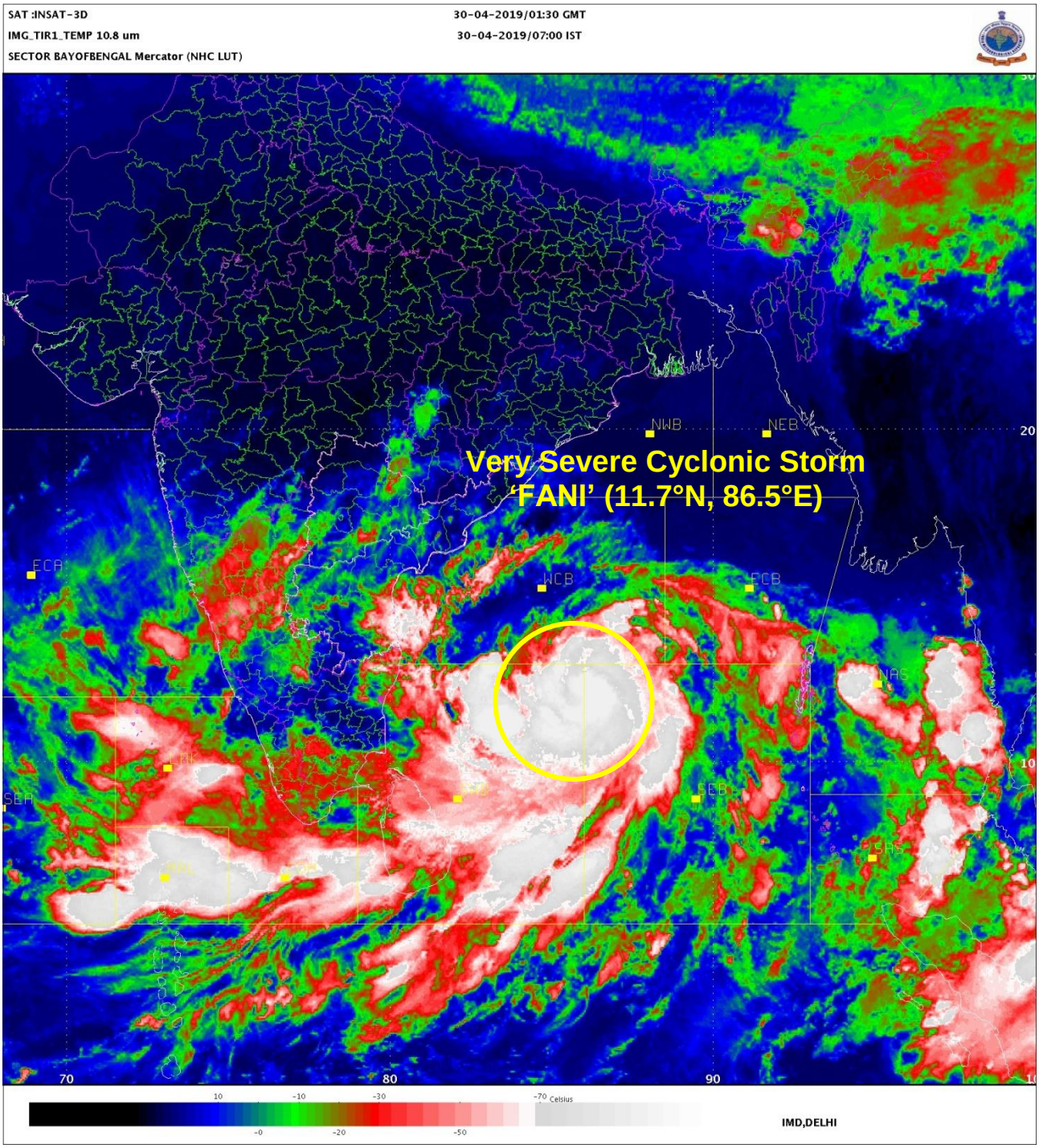
THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL EVENING OF 01ST MAY AND IT WILL START RECURVING NORTHEASTWARDS FROM 0000 UTC OF 02 MAY 2019 TOWARDS ODISHA COAST.

AS THE SYSTEM HAS BEEN IN AN AREA OF LOW TO MODERATE VERTICAL SHEAR AND SIGNIFICANTLY HIGH VALUES OF TROPICAL CYCLONE HEAT POTENTIAL, SYSTEM HAS INTENSIFIED INTO A VERY SEVERE CYCLONIC STORM. IT IS LIKELY TO INTENSIFY FURTHER INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 24 HOURS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

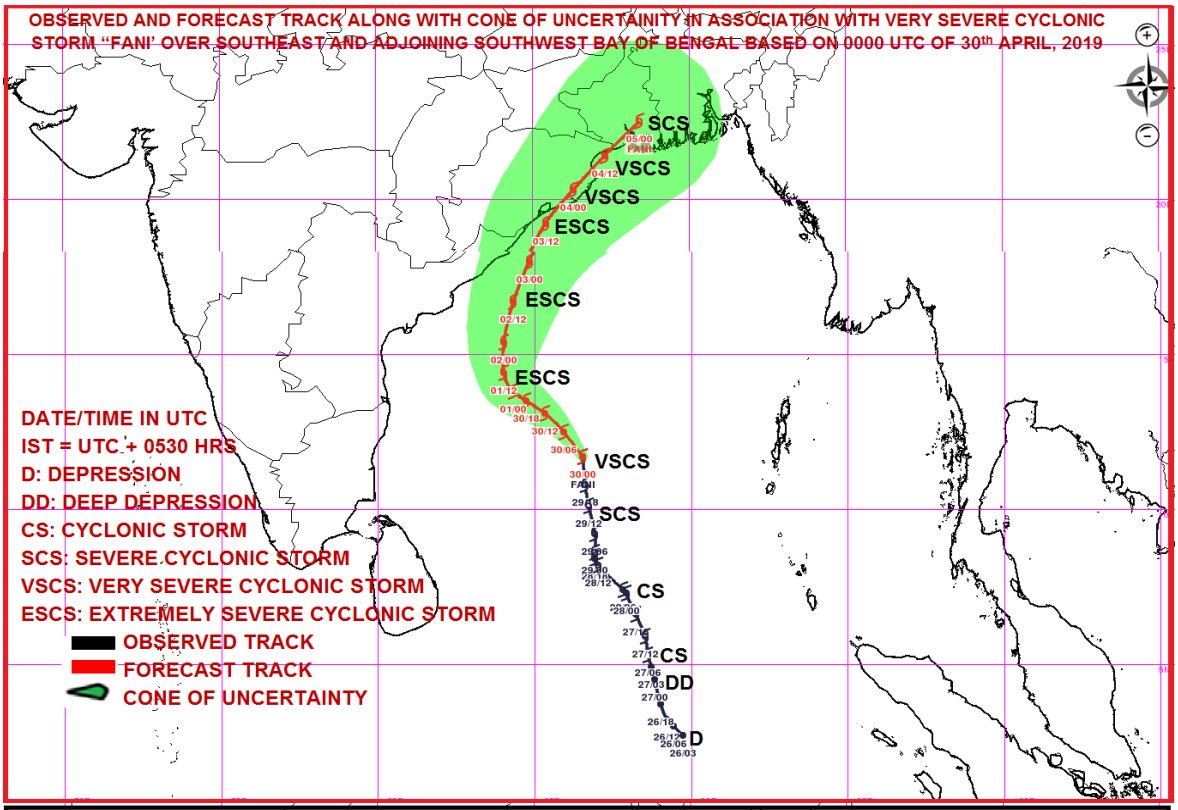
(ANANDA KUMAR DAS)
SCIENTIST-E, RSMC, NEW DELHI

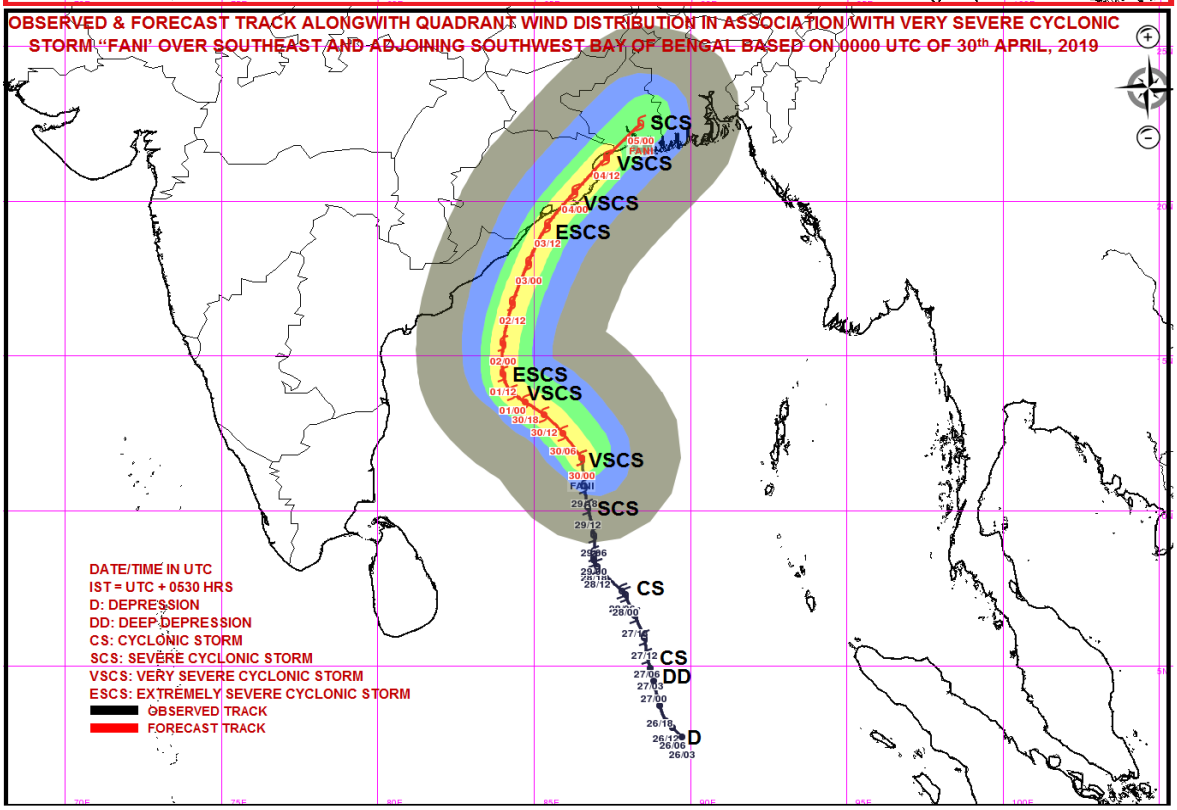
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 24

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 24 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 30.04.2019 BASED ON 0300 UTC OF 30.04.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 12 KNOTS IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 30TH APRIL, 2019 NEAR LATITUDE 12.3°N AND LONGITUDE 86.2°E OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL, ABOUT 830 KM NEARLY SOUTH OF PURI (43053) (ODISHA) AND 670 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND ABOUT 680 KM NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN **EXTREMELY SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND REACH ODISHA COAST BY 3RD MAY BETWEEN 0900 UTC AND 1200 UTC, WITH MAXIMUM SUSTAINED WIND SPEED OF 170 KMPH-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.04.19/0300	12.3/86.2	135-145 GUSTING TO 160	VERY SEVERE CYCLONIC STORM
30.04.19/0600	12.5/85.9	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
30.04.19/1200	13.1/85.3	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
30.04.19/1800	13.5/84.7	165-175 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0000	13.8/84.3	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1200	14.4/84.0	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	15.4/84.0	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	16.7/84.3	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	18.0/84.8	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	19.2/85.4	160-170 GUSTING TO 190	EXTREMELY SEVERE CYCLONIC STORM
04.05.19/0000	20.3/86.3	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
04.05.19/1200	21.4/87.3	125-135 GUSTING TO 150	SEVERE CYCLONIC STORM
05.05.19/0000	22.5/88.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC ON 30TH APRIL, 2019 THE SYSTEM HAS CURVED BAND PATTERN. THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL IS C.I 4.5. TIGHTLY WRAPPED CURVED BANDS 1.5 ON 10 DEGREE LOG SPIRAL YIELDS A DT OF 4.5. MET 4.5. PT 5.0. FINAL T BASED ON DT. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 9.5°N TO 15.2°N AND LONG 81.5°E TO 89.0°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 75 KNOTS GUSTING TO 85 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 974 HPA.

AT 0300 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.5°N AND LONG 84.1°E REPORTED MEAN SEA LEVEL PRESSURE 1003.2 HPA, MEAN WIND DIRECTION 040° AND A WIND SPEED OF 18 KNOTS. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 86.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.2 HPA, MEAN WIND DIRECTION OF 160° AND A SPEED OF 21 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

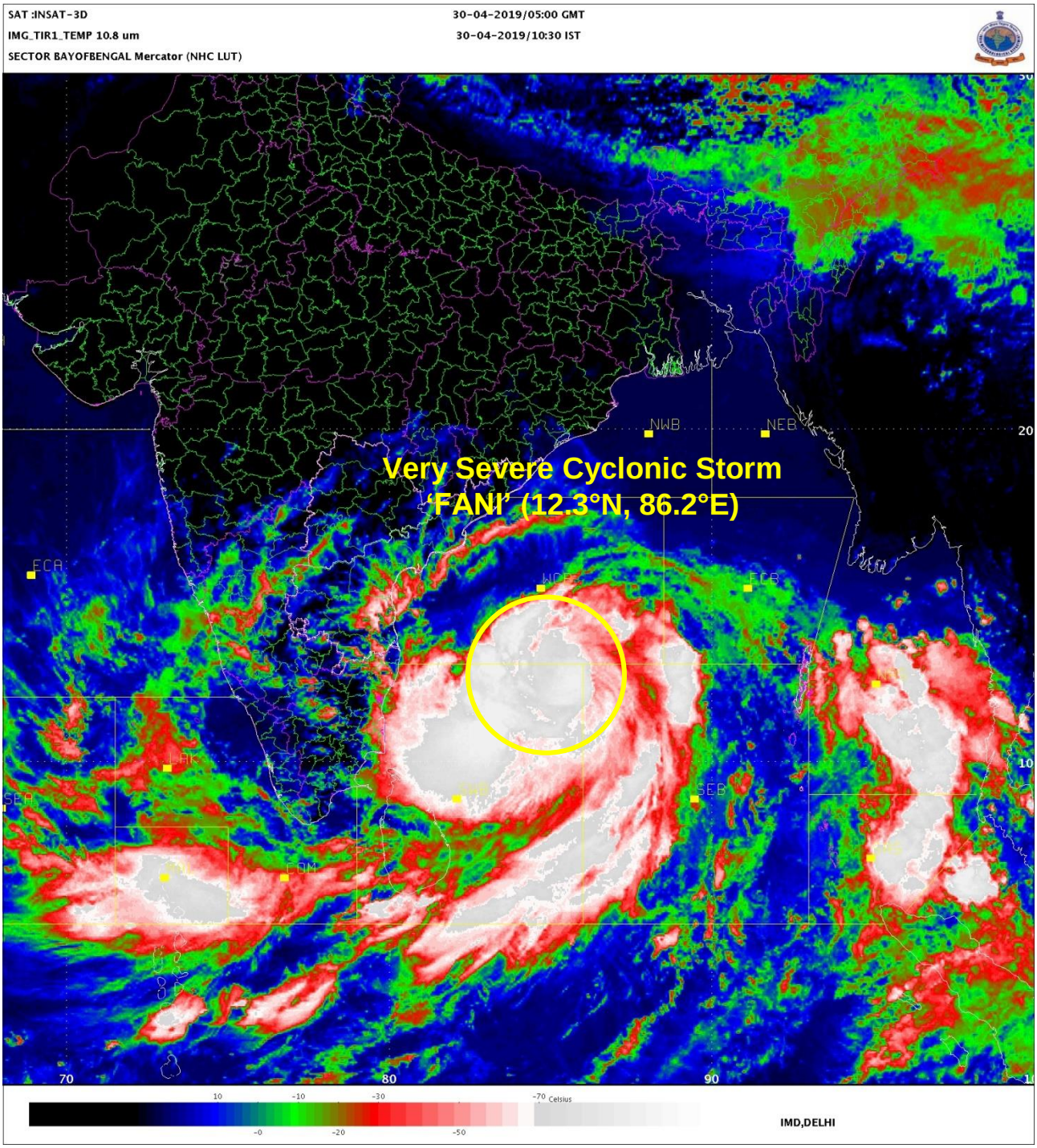
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 50 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE INCREASED AND IS ABOUT 70 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. THIS FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO THE INTENSIFICATION OF THE SYSTEM INTO A VERY SEVERE CYCLONIC STORM AND IS EXPECTED TO FURTHER INTENSIFY INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND THEREAFTER IT WILL START RECURVING NORTHEASTWARDS TOWARDS ODISHA COAST.

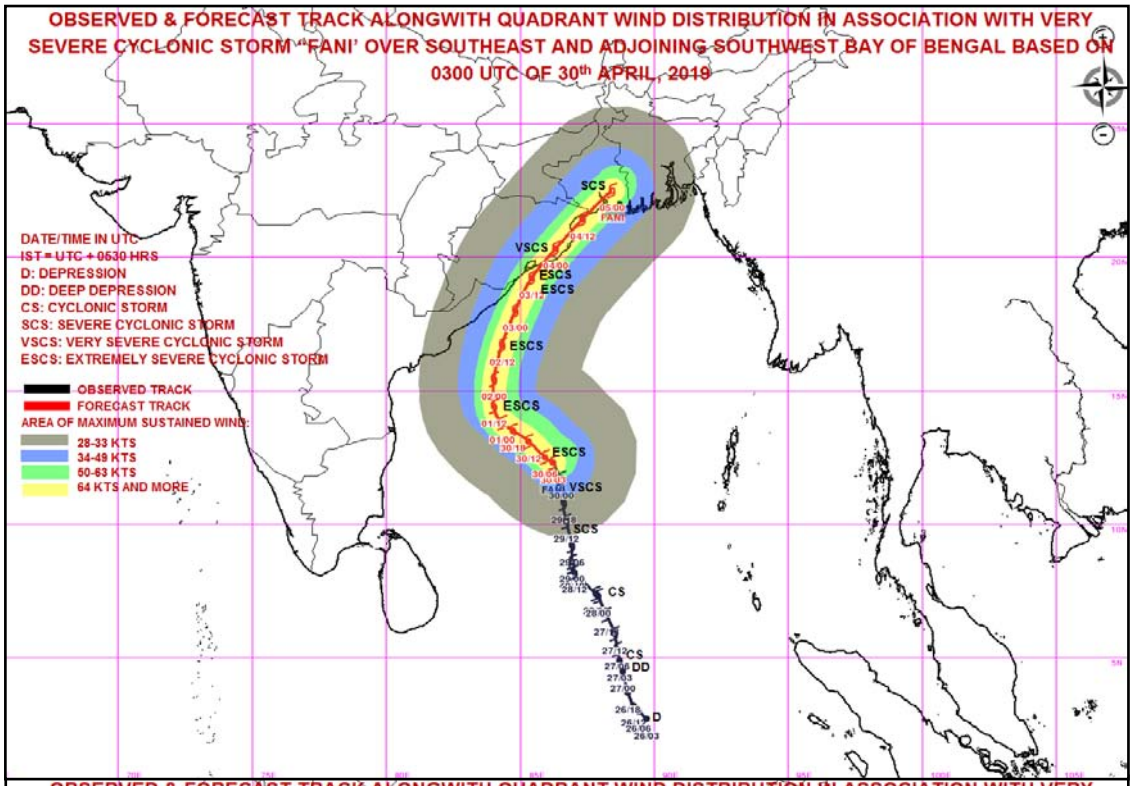
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

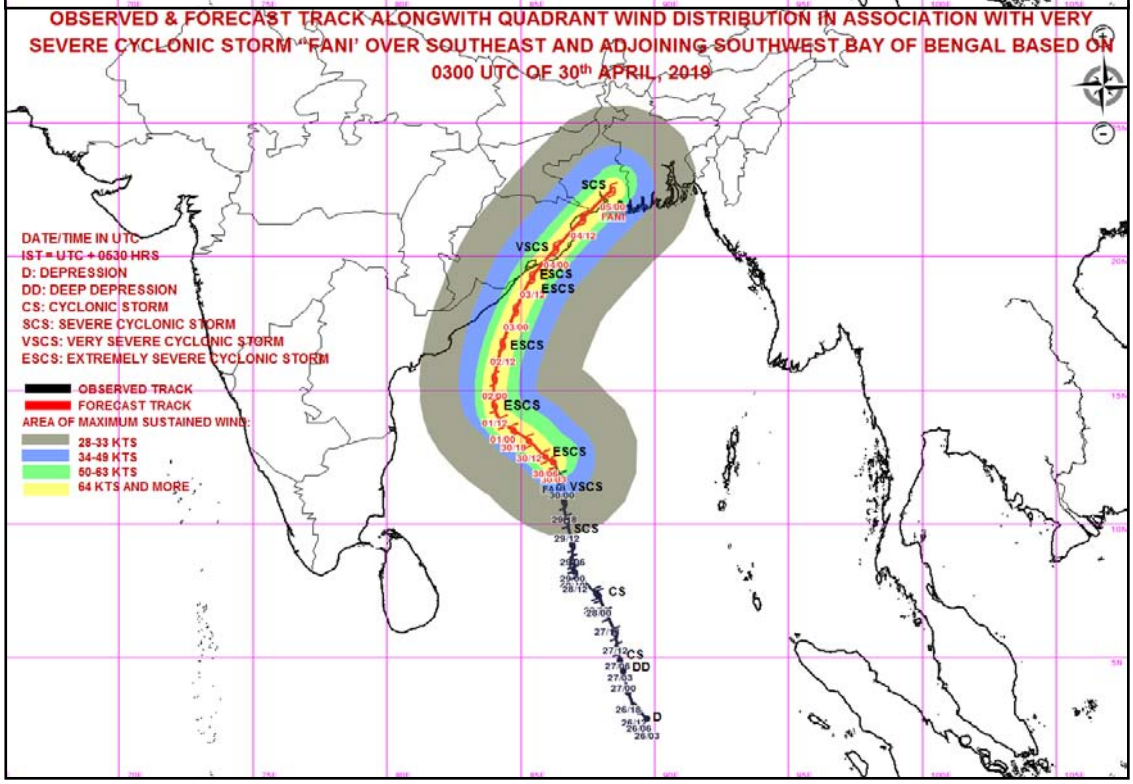
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 25

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 25 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 30.04.2019 BASED ON 0600 UTC OF 30.04.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" OVER SOUTHWEST BAY & ADJOINING SOUTHEAST OF BENGAL

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHEAST & ADJOINING SOUTHWEST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 22 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF 30TH APRIL, 2019 NEAR LATITUDE 12.6°N AND LONGITUDE 85.7°E OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL, ABOUT 800 KM NEARLY SOUTH OF PURI (43053) (ODISHA) AND 620 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND ABOUT 660 KM NORTH-NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN **EXTREMELY SEVERE CYCLONIC STORM** DURING NEXT 12 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR ((43049) AND CHANDBALI (42973), CLOSE TO SOUTH OF PURI (43053) BETWEEN 0900 UTC AND 1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND OF SPEED 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.04.19/0600	12.6/85.7	145-155 GUSTING TO 170	VERY SEVERE CYCLONIC STORM
30.04.19/1200	13.1/85.3	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
30.04.19/1800	13.5/84.7	165-175 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0000	13.8/84.3	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.4/84.0	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1800	15.4/84.0	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	16.7/84.2	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	18.0/84.7	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	19.2/85.3	160-170 GUSTING TO 185	VERY SEVERE CYCLONIC STORM
03.05.19/1800	20.3/86.2	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0600	21.4/87.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04.05.19/1800	22.5/88.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05.05.19/1600	23.5/89.6	50-60 gusting to 70	DEEP DEPRESSION

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC ON 30TH APRIL, 2019 THE SYSTEM HAS CURVED BAND PATTERN. THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 4.5. CENTRE IS CLEAR IN INSAT 3D VIS IMAGERY. CURVED BAND PATTERN WITH DT 4.5 MET 4.5 PT 5.0 FINAL T BASED ON DT. THE CENTRAL FEATURE HAS BECOME MORE COMPACT IN LAST 3 HOURS WITH VIGOUROUS CONVECTION BAND IN THE WAST OF CENTRAL. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 4.2°N TO 16.0°N AND LONG 79.5°E TO 89.9°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 80 KNOTS GUSTING TO 90m KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 972 HPA.

AT 0600 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.4°N AND LONG 84.1°E REPORTED MEAN SEA LEVEL PRESSURE 1001.9 HPA, MEAN WIND DIRECTION 060° AND A WIND SPEED OF 25 KNOTS. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.3 HPA, MEAN WIND DIRECTION OF 150° AND A SPEED OF 23 KNOTS. A SHIP (AUYR) LOCATED NEAR LAT. 11.6°N AND LONG 82.8°E REPORTED MEAN SEA LEVEL PRESSURE 1003.2 HPA, MEAN WIND DIRECTION 270° AND A WIND SPEED OF 25 KNOTS

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

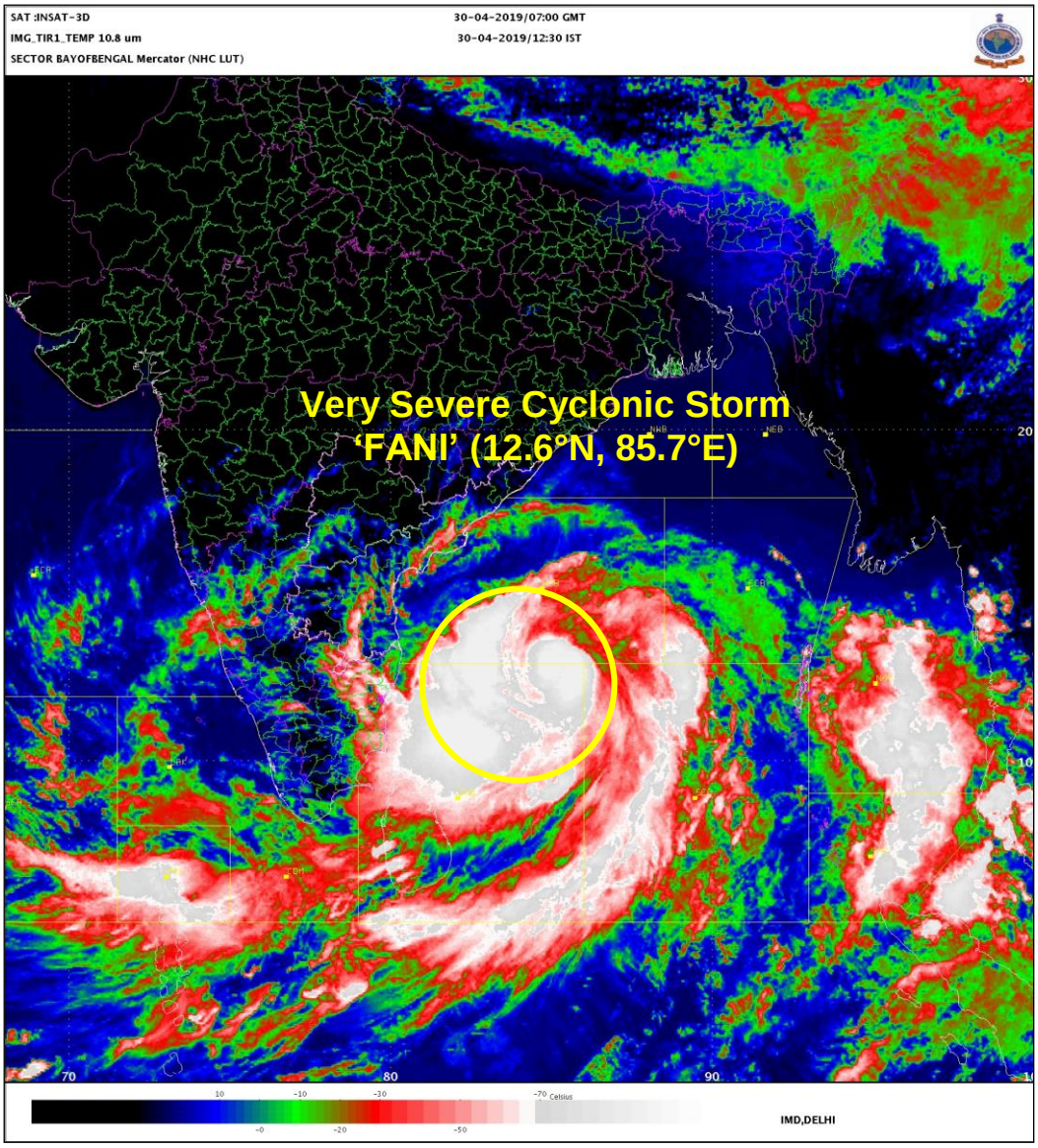
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS ABOUT 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 50 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE INCREASED AND IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THIS FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO FURTHER INTENSIFY INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 01ST MAY EVENING AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

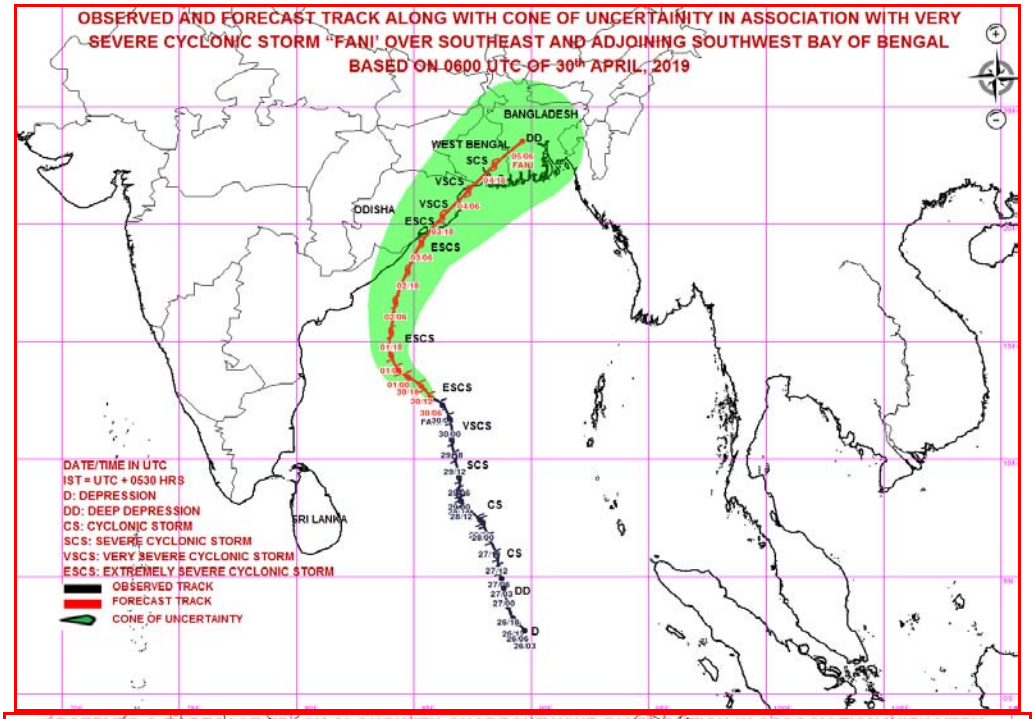
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

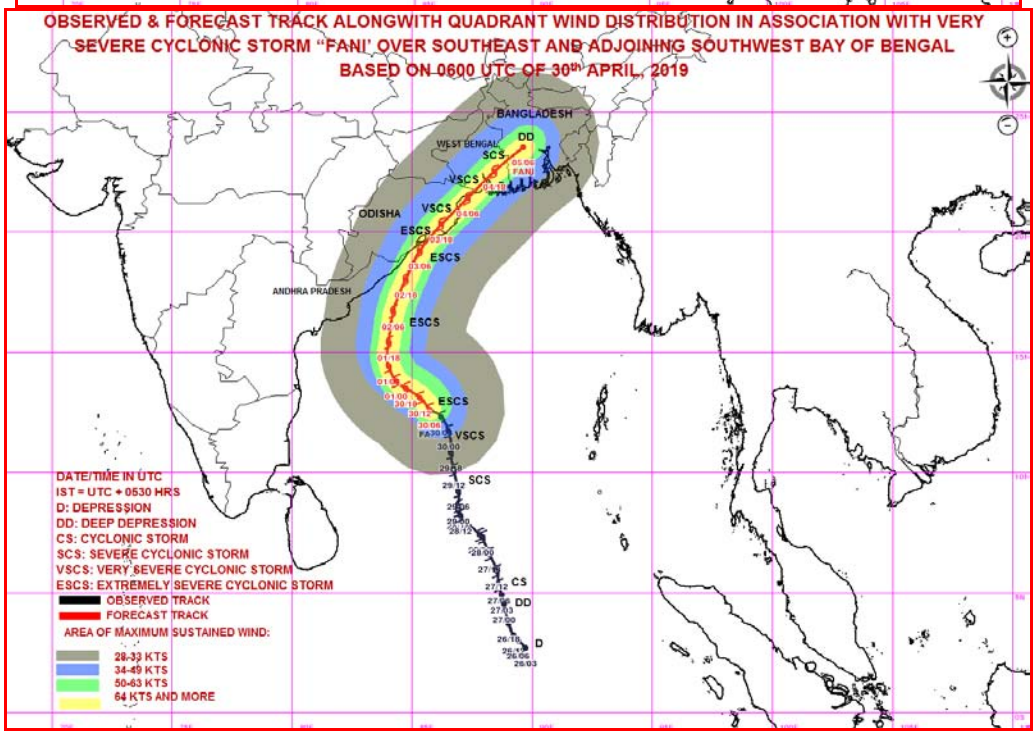
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 26

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 26 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 30.04.2019 BASED ON 0900 UTC OF 30.04.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 21 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 30TH APRIL, 2019 OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL NEAR LATITUDE 13.0°N AND LONGITUDE 85.3°E, ABOUT 760 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA) AND 560 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND ABOUT 660 KM NORTH-NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA). IT IS VERY LIKELY TO INTENSIFY FURTHER INTO AN **EXTREMELY SEVERE CYCLONIC STORM** DURING NEXT 06 HOURS. **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), TO THE SOUTH OF PURI** (43053) **BETWEEN 0900 UTC AND 1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND OF SPEED 175-185 KMPH GUSTING TO 205 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.04.19/0900	13.0/85.3	155-165 GUSTING TO 180	VERY SEVERE CYCLONIC STORM
30.04.19/1200	13.2/85.0	165-175 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
30.04.19/1800	13.5/84.7	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0000	13.8/84.3	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.4/84.0	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1800	15.4/84.0	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0600	16.7/84.2	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1800	18.0/84.7	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	19.2/85.3	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1800	20.3/86.2	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0600	21.4/87.3	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04.05.19/1800	22.5/88.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05.05.19/0600	23.5/89.6	50-60 GUSTING TO 70	DEEP DEPRESSION

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC ON 30TH APRIL, 2019 THE SYSTEM HAS CENTRAL DENSE OVERCAST. THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 4.5. RUGGED EYE IS CLEAR IN INSAT 3D VIS IMAGERY. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 9°N TO 16.0°N AND LONG 81.0°E TO 90.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 85 KNOTS GUSTING TO 90 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 970 HPA.

AT 0900 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.5°N AND LONG 84.2°E REPORTED MEAN SEA LEVEL PRESSURE 996.8 HPA, MEAN WIND DIRECTION 060° AND A WIND SPEED OF 27 KNOTS. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.5 HPA, MEAN WIND DIRECTION OF 160° AND A SPEED OF 19 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

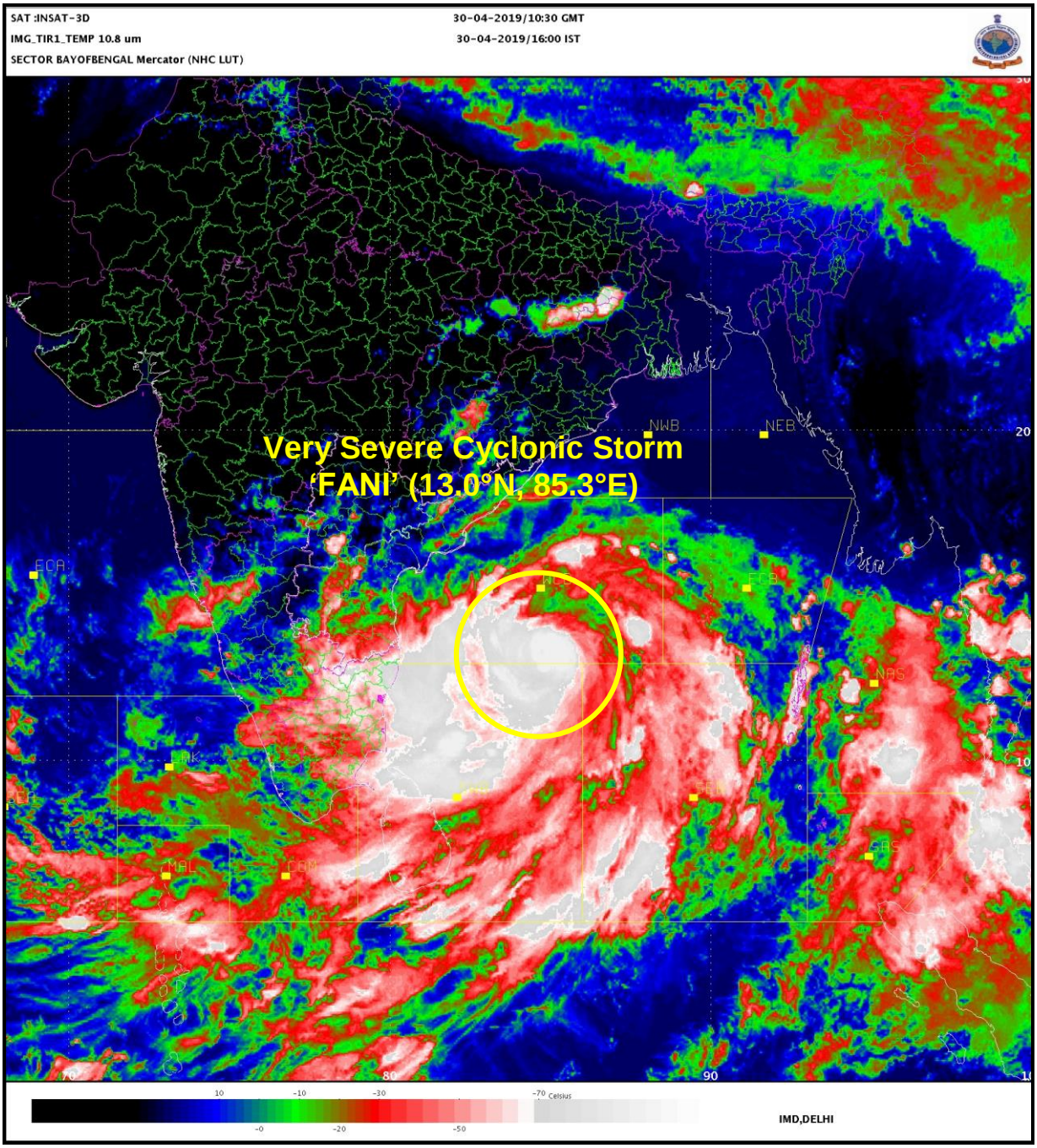
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 250 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 60 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THIS FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO FURTHER INTENSIFY INTO AN EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 06 HOURS

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 01ST MAY EVENING AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

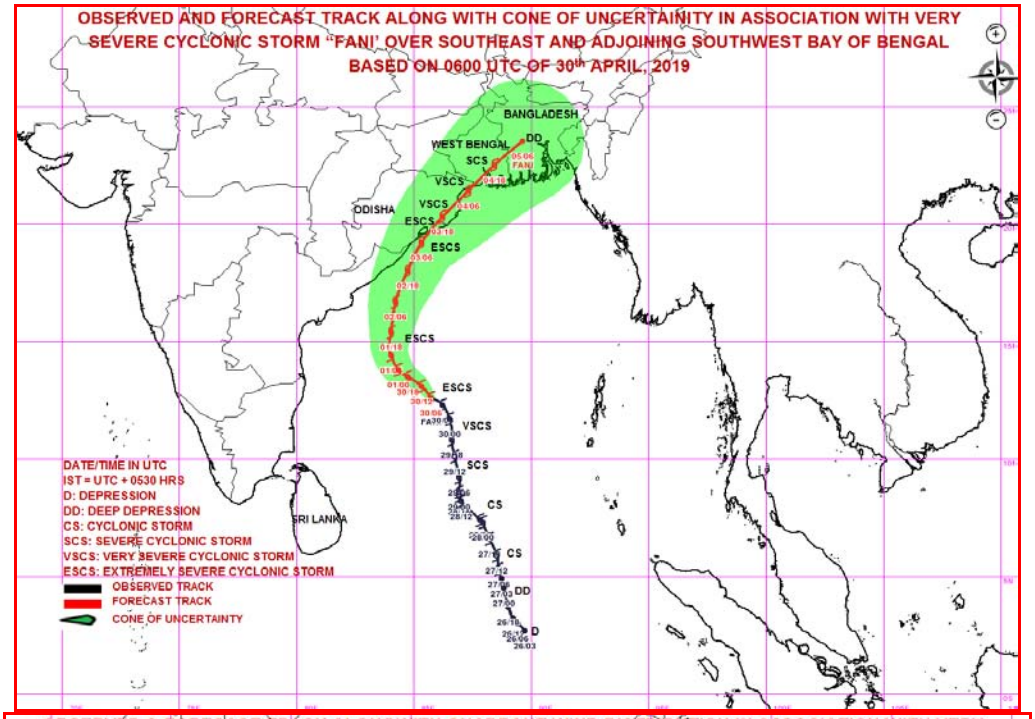
(NEETHA K GOPAL)
SCIENTIST-E, RSMC, NEW DELHI

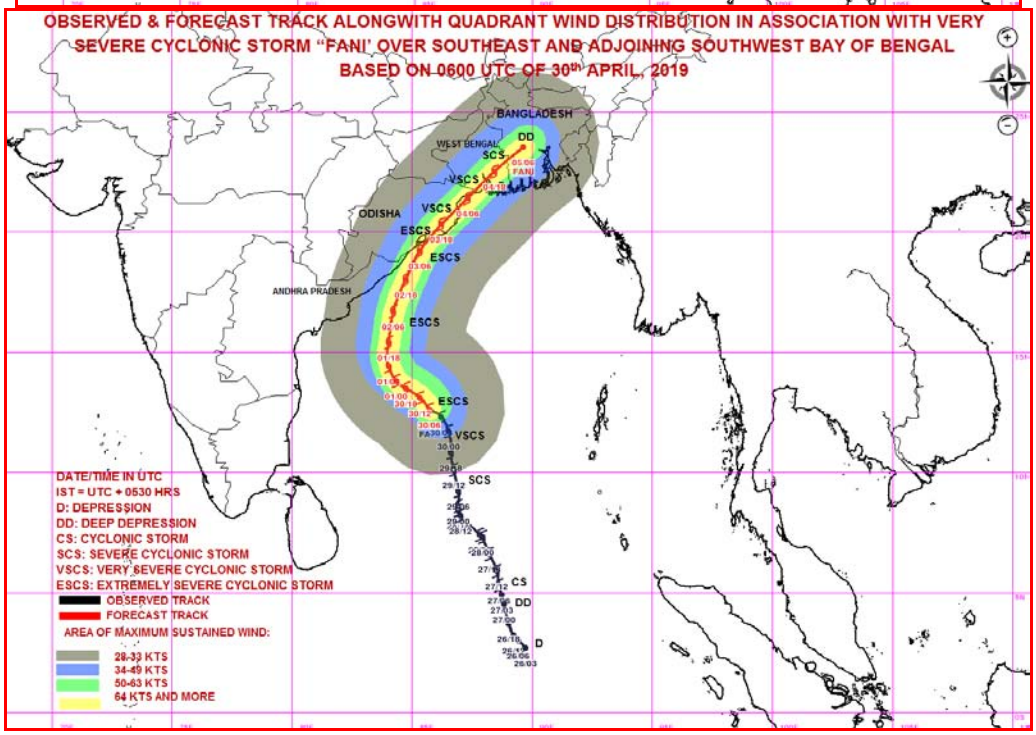
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 27

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 27 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 30.04.2019 BASED ON 1200 UTC OF 30.04.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" INTENSIFIED INTO EXTREMELY SEVERE CYCLONIC STORM OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL, MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 22 KMPH IN LAST SIX HOURS, INTENSIFIED INTO AN **EXTREMELY SEVERE CYCLONIC STORM** AND LAY CENTRED AT 1200 UTC OF 30TH APRIL, 2019 OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL NEAR LATITUDE 13.3°N AND LONGITUDE 84.7°E, ABOUT 730 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA) AND 510 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND ABOUT 640 KM NORTH-NORTHEAST OF TRINCOMALEE (43418) (SRI LANKA). **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS TILL 1200 UTC OF 01ST MAY EVENING AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), TO THE SOUTH OF PURI** (43053) **BETWEEN 0900 UTC AND 1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 175-185 KMPH GUSTING TO 205 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.04.19/1200	13.3/84.7	165-175 GUSTING TO 195	EXTREMELY SEVERE CYCLONIC STORM
30.04.19/1800	13.6/84.2	165-175 GUSTING TO 185	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0000	13.9/83.8	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.5/83.6	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1200	15.0/83.6	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	16.1/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	17.4/84.2	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	18.7/84.9	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	20.0/85.9	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0000	21.0/86.9	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04.05.19/1200	22.0/88.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05.05.19/0000	23.1/89.7	50-60 GUSTING TO 70	DEEP DEPRESSION

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC ON 30TH APRIL, 2019 THE SYSTEM HAS AGAIN INTENSIFIED AND THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10°N TO 16.0°N AND LONG 80.0°E TO 90.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 85 KNOTS GUSTING TO 95 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 964 HPA.

AT 1200 UTC OF TODAY, A BUOY (23094) LOCATED NEAR LAT. 13.5°N AND LONG 84.2°E REPORTED MEAN SEA LEVEL PRESSURE 990.0 HPA, MEAN WIND DIRECTION 034° . ANOTHER BUOY (23459) LOCATED NEAR LAT. 13.1°N AND LONG 80.3°E REPORTED MEAN SEA LEVEL PRESSURE OF 1001.9 HPA, MEAN WIND SPEED OF 04 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

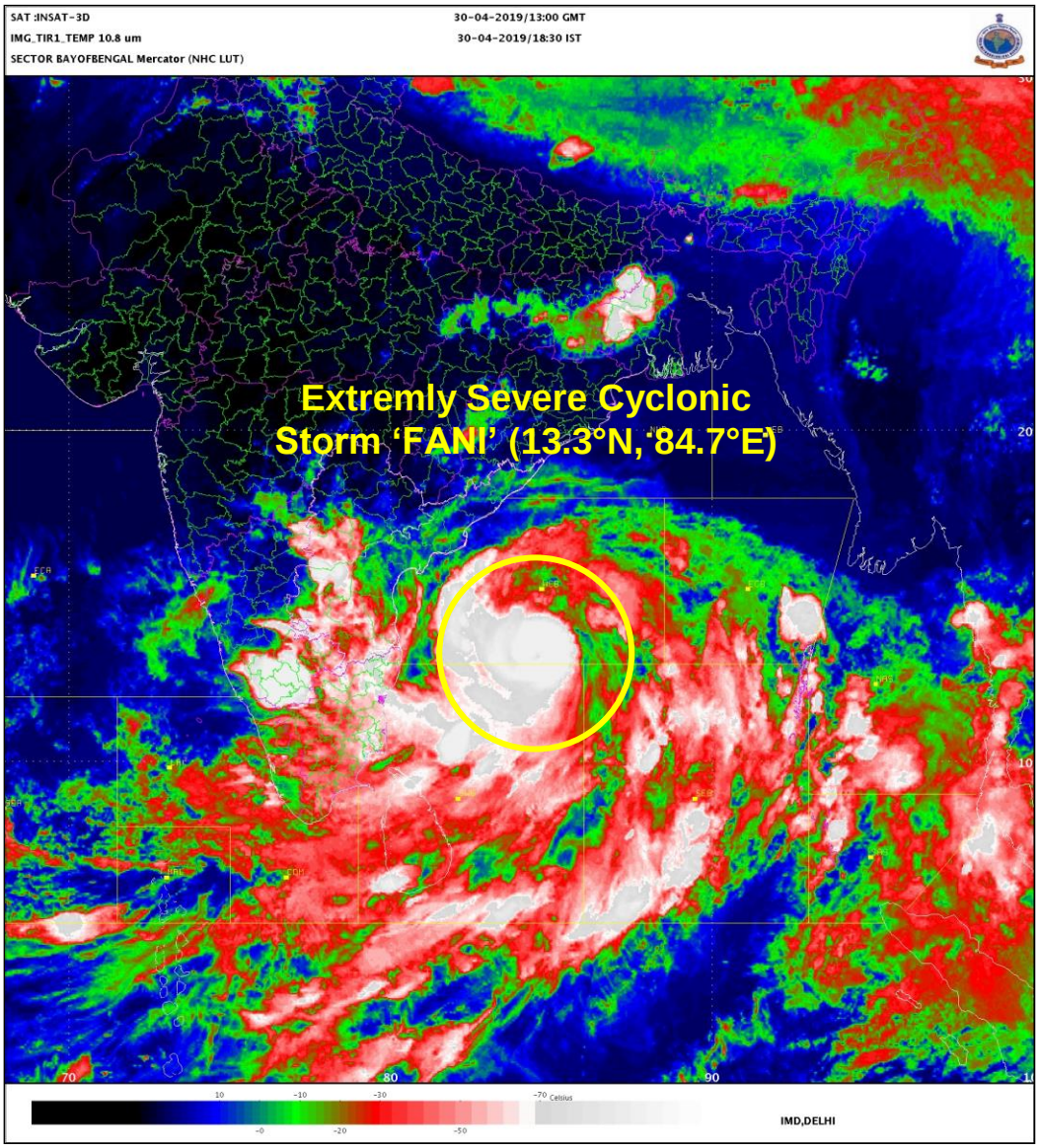
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 60 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THIS FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY.

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

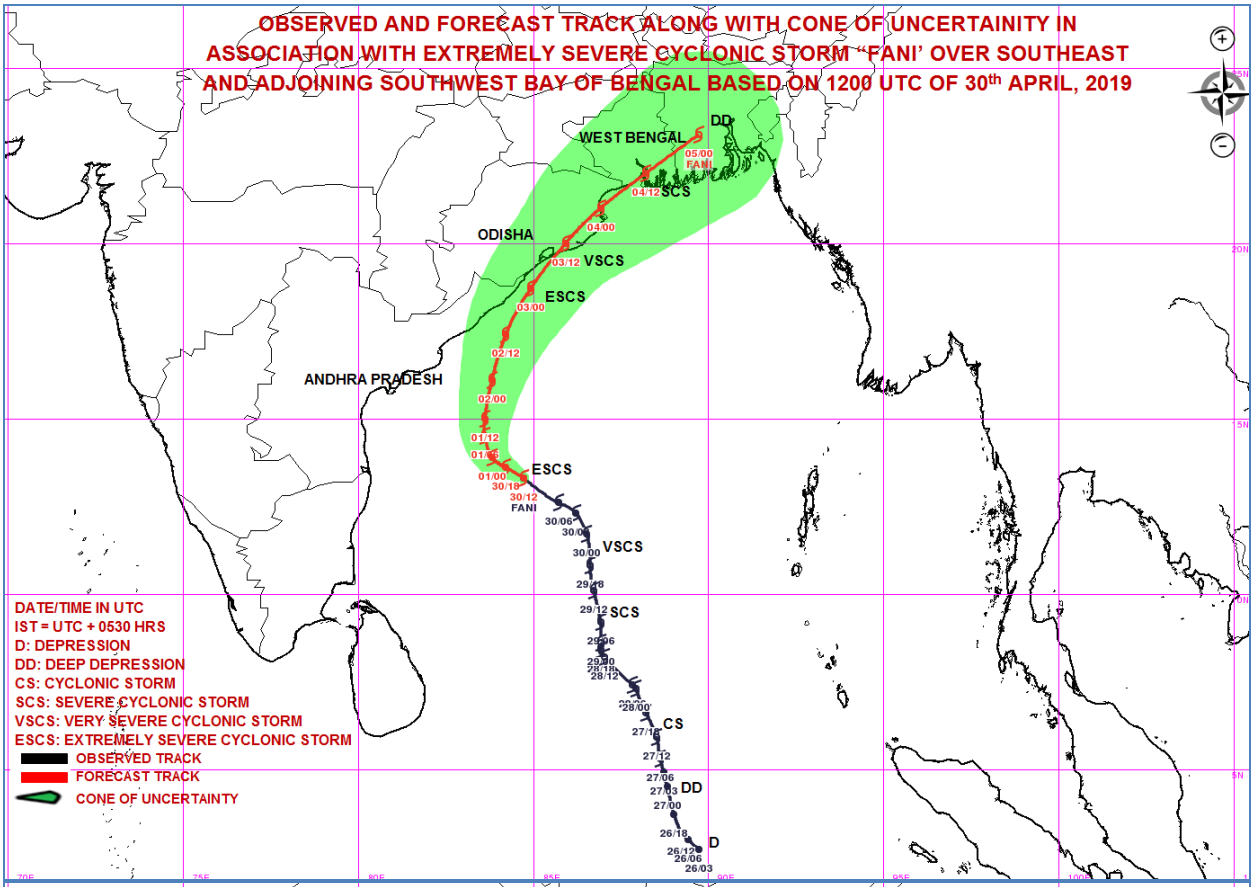
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

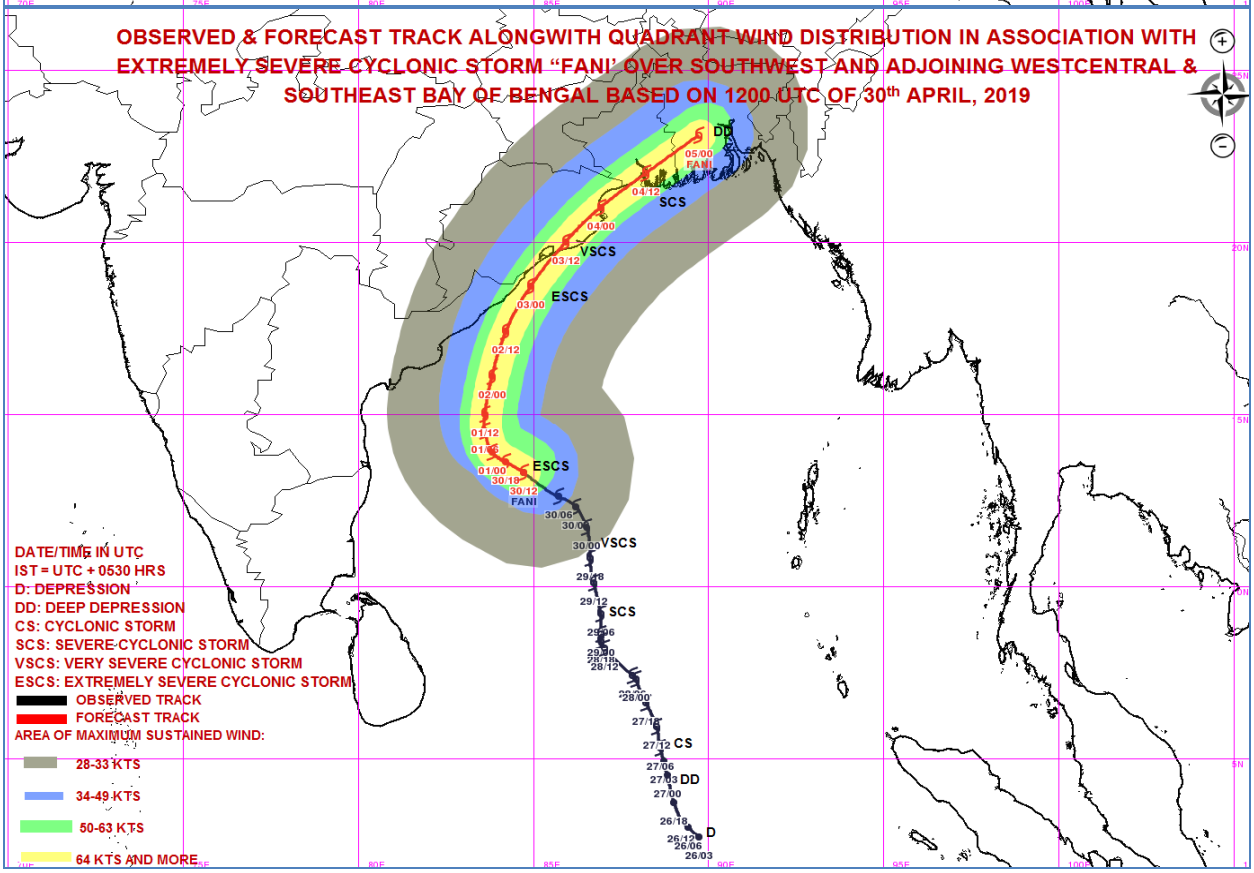
(V. R. DURAI)
(SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 28

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 28 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1700 UTC OF 30.04.2019 BASED ON 1500 UTC OF 30.04.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL: CYCLONE ALERT FOR ODISHA, WEST BENGAL AND SRIKAKULAM, VIJAYANAGARAM & VISAKHAPATNAM DISTRICTS OF ANDHRA PRADESH COASTS

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER SOUTHWEST AND ADJOINING WESTCENTRAL & SOUTHEAST BAY OF BENGAL, MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 HRS UTC OF 30TH APRIL, 2019 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 13.4°N AND LONGITUDE 84.5°E, ABOUT 720 KM SOUTH-SOUTHWEST OF PURI (ODISHA) AND 490 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH). **IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE NORTHWESTWARDS TILL 01ST MAY NOON AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, TO THE SOUTH OF PURI AROUND 3RD MAY AFTERNOON WITH MAXIMUM SUSTAINED WIND OF SPEED 175-185 KMPH GUSTING TO 205 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
30.04.19/1500	13.4/84.5	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
30.04.19/1800	13.6/84.2	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0000	13.9/83.8	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.5/83.6	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1200	15.0/83.6	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	16.1/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	17.4/84.2	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	18.7/84.9	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	20.0/85.9	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0000	21.0/86.9	125-135 GUSTING TO 150	VERY SEVERE CYCLONIC STORM
04.05.19/1200	22.0/88.2	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
05.05.19/0000	23.1/89.7	50-60 GUSTING TO 70	DEEP DEPRESSION

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC ON 30TH APRIL, 2019 THE SYSTEM HAS AGAIN INTENSIFIED AND THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 12°N TO 15.0°N AND LONG 83.0°E TO 85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 962 HPA.

AT 1500 UTC OF TODAY, A BUOY (23460) LOCATED NEAR LAT. 6.6°N AND LONG 88.3°E REPORTED MEAN SEA LEVEL PRESSURE 1010.4 HPA, MEAN WIND DIRECTION 260°,MEAN WIND SPEED 10 KT . ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 86.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA, MEAN WIND SPEED OF 24 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

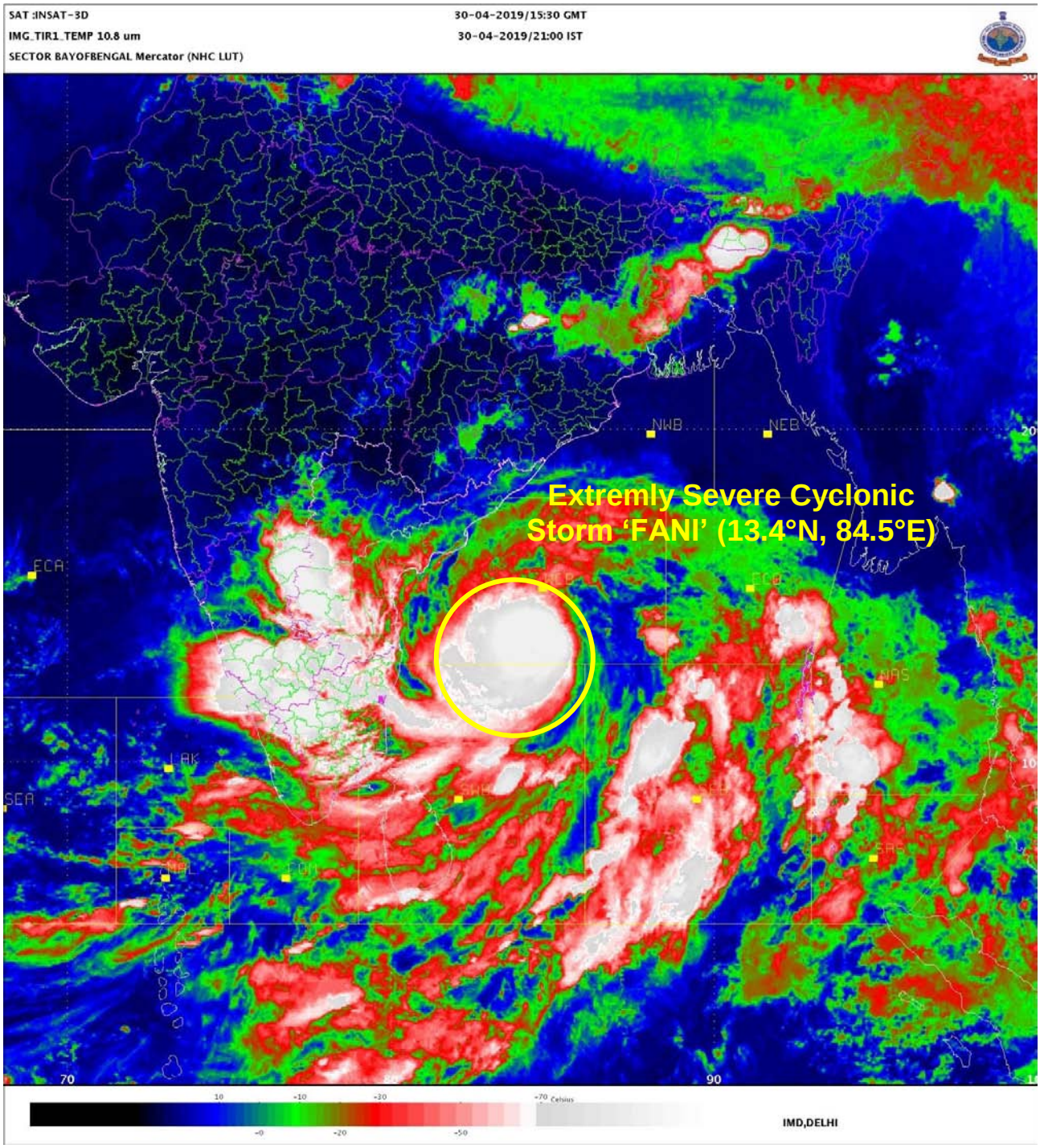
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 200 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 60 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THIS FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY.

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF THE ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

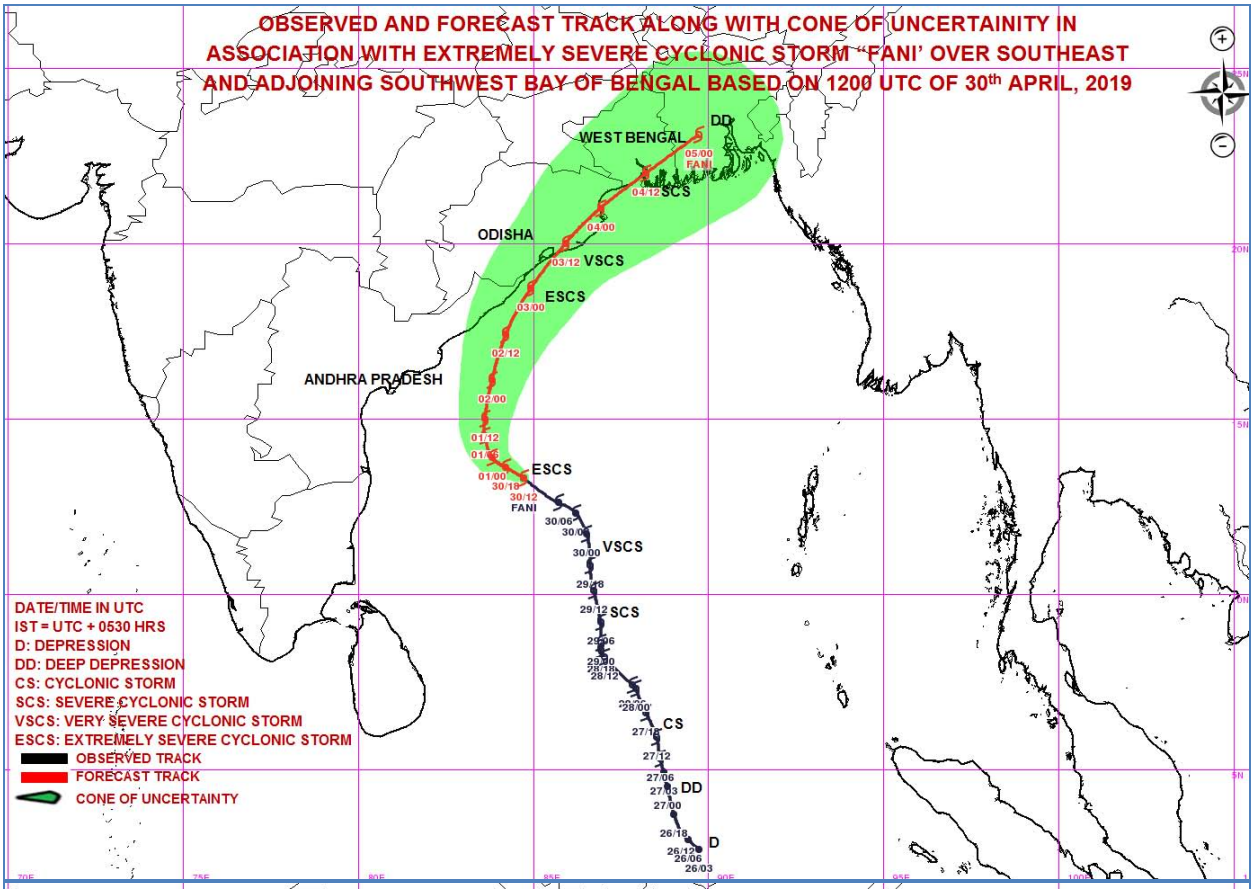
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

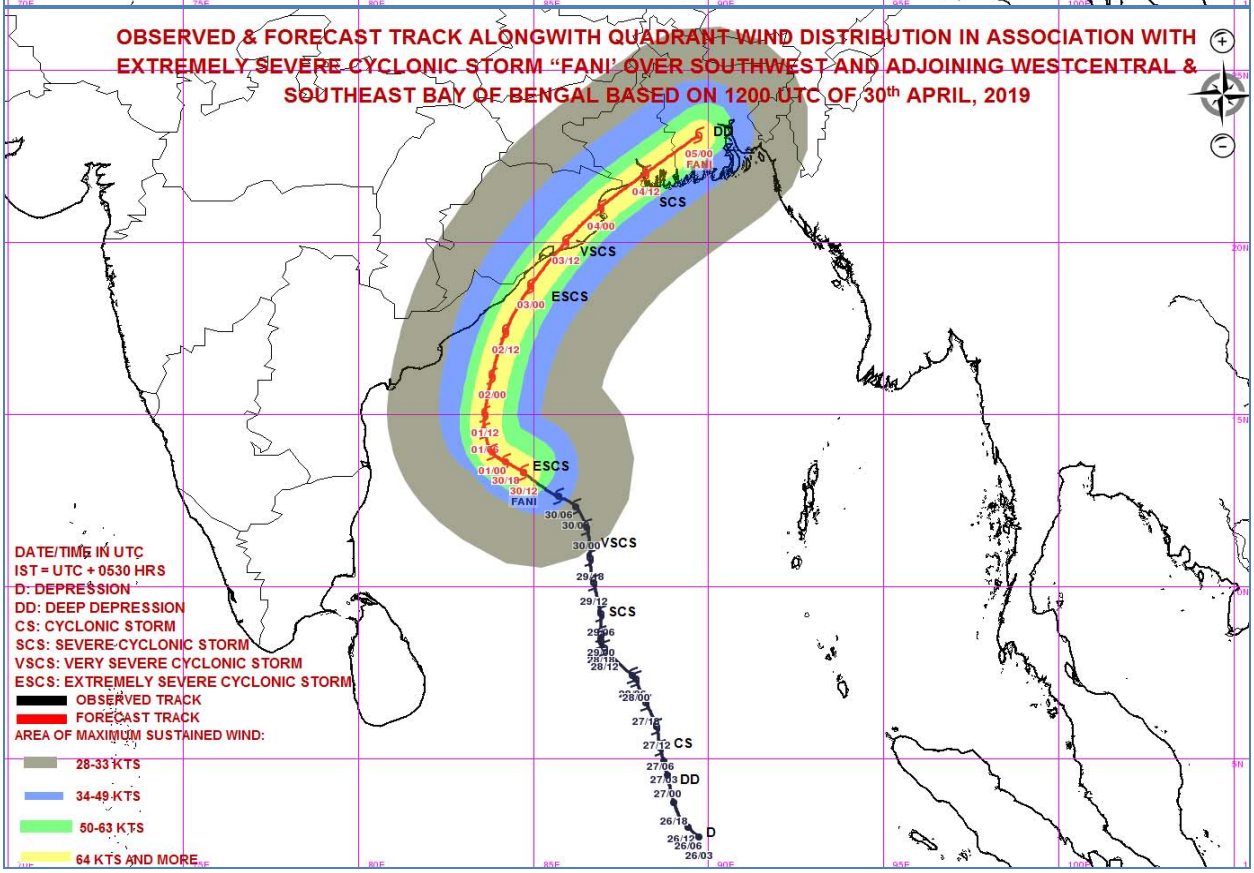
(V. R. DURAI)
(SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 29

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 29 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2100 UTC OF 30.04.2019 BASED ON 1800 UTC OF 30.04.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL: CYCLONE ALERT FOR ODISHA, WEST BENGAL AND SRIKAKULAM, VIJAYANAGARAM & VISAKHAPATNAM DISTRICTS OF ANDHRA PRADESH COASTS

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL, MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 07 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 30TH APRIL, 2019 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 13.5°N AND LONGITUDE 84.4°E, ABOUT 710 KM SOUTH-SOUTHWEST OF PURI (ODISHA) AND 480 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH). **IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE NORTHWESTWARDS TILL 01ST MAY NOON AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, TO THE SOUTH OF PURI AROUND 3RD MAY AFTERNOON WITH MAXIMUM SUSTAINED WIND OF SPEED 175-185 KMPH GUSTING TO 205 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.04.19/1800	13.5/84.4	170-180 gusting to 200	Extremely Severe Cyclonic Storm
01.05.19/0000	13.9/83.8	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/0600	14.5/83.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1200	15.0/83.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.6/83.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.7/84.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1800	18.1/84.5	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.0/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/1800	21.0/86.5	125-135 gusting to 150	Very Severe Cyclonic Storm
04.05.19/0600	22.6/88.4	90-100 gusting to 110	Severe Cyclonic Storm
04.05.19/1800	23.8/90.1	70-80 gusting to 90	Cyclonic Storm
05.05.19/0600	24.0/90.5	50-60 gusting to 70	Deep Depression

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1800 UTC ON 30TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 12°N TO 15.0°N AND LONG 82.0°E TO 85.3 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 962 HPA.

AT 1800 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.4°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1006.0 HPA, MEAN WIND DIRECTION 170°,MEAN WIND SPEED 18 KT . ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 86.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA, MEAN WIND SPEED OF 23 KNOTS AND DIRECTION 180°. A SHIP LOCATED NEAR LAT. 13.2°N AND LONG 82.8°E REPORTED MEAN SEA LEVEL PRESSURE 1002.0 HPA, MEAN WIND DIRECTION 290°,MEAN WIND SPEED 36 KT

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

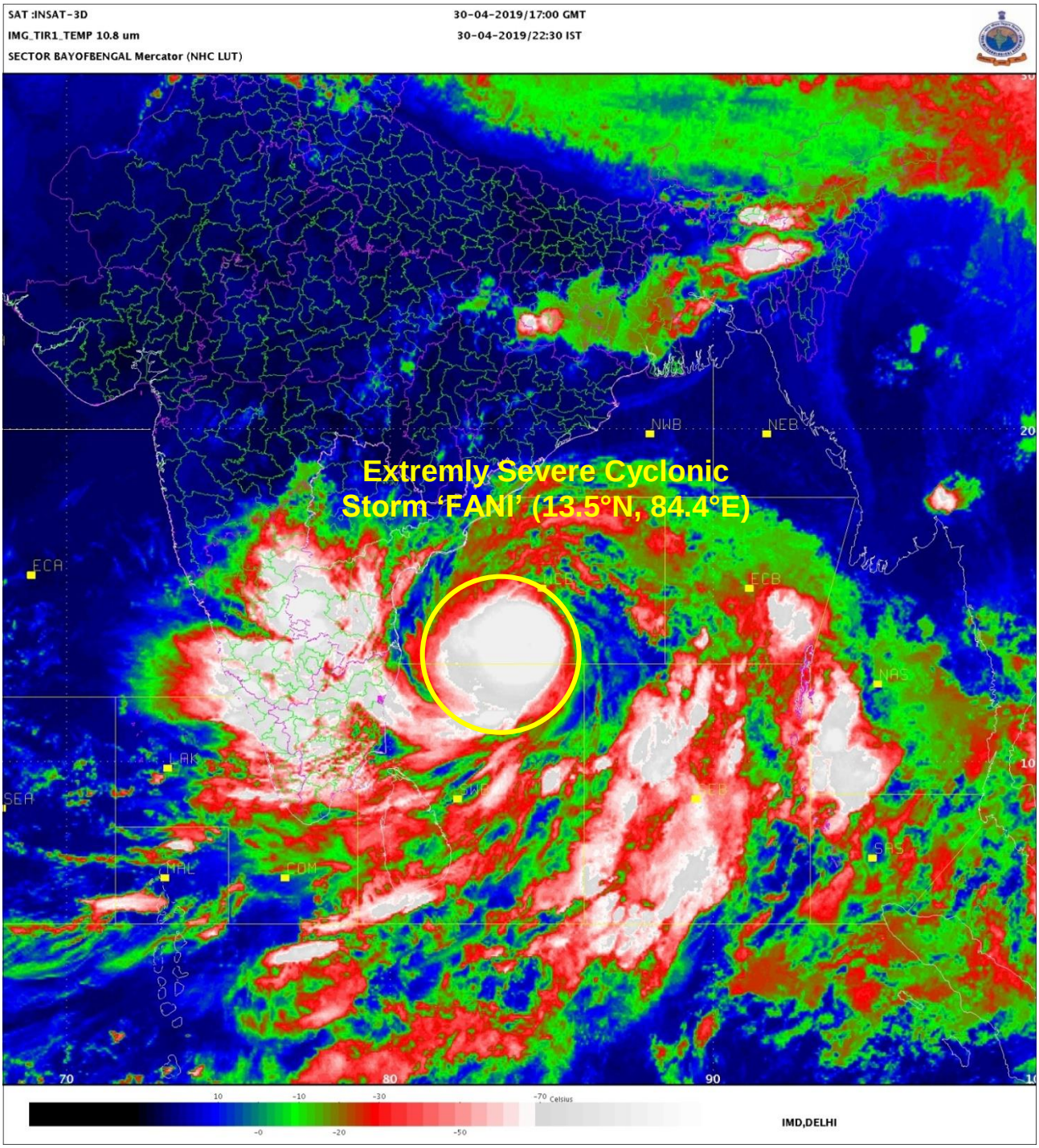
THE LOWER LEVEL POSITIVE VORTICITY HAS INCREASED AND IS ABOUT 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY.

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF AN ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

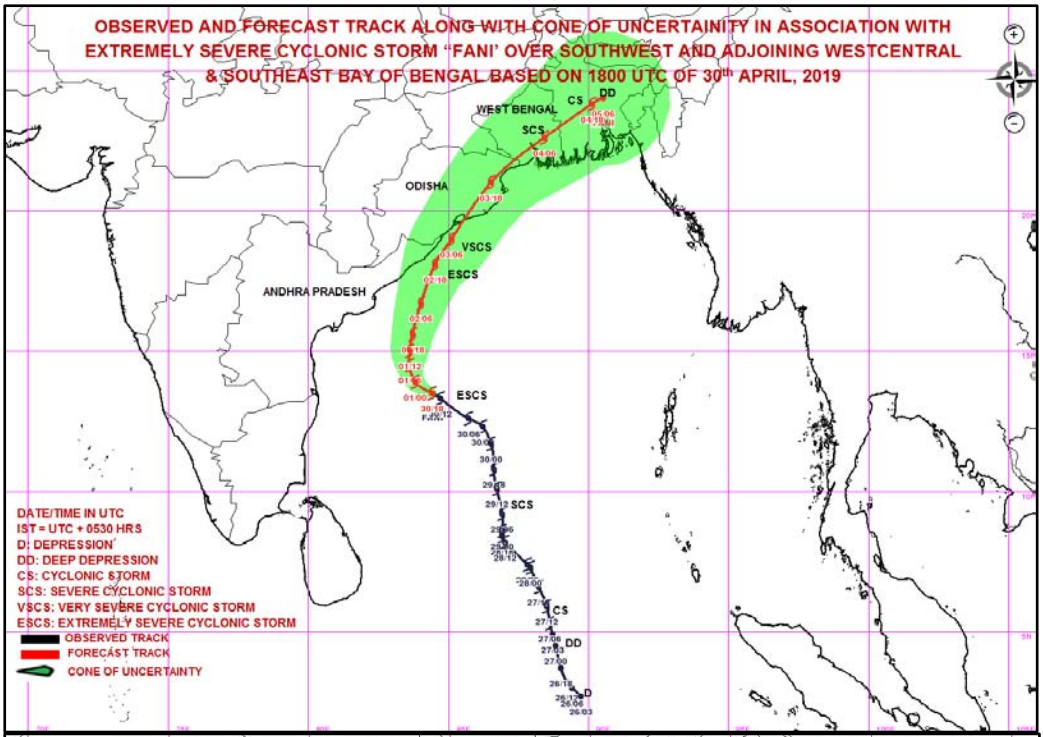
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

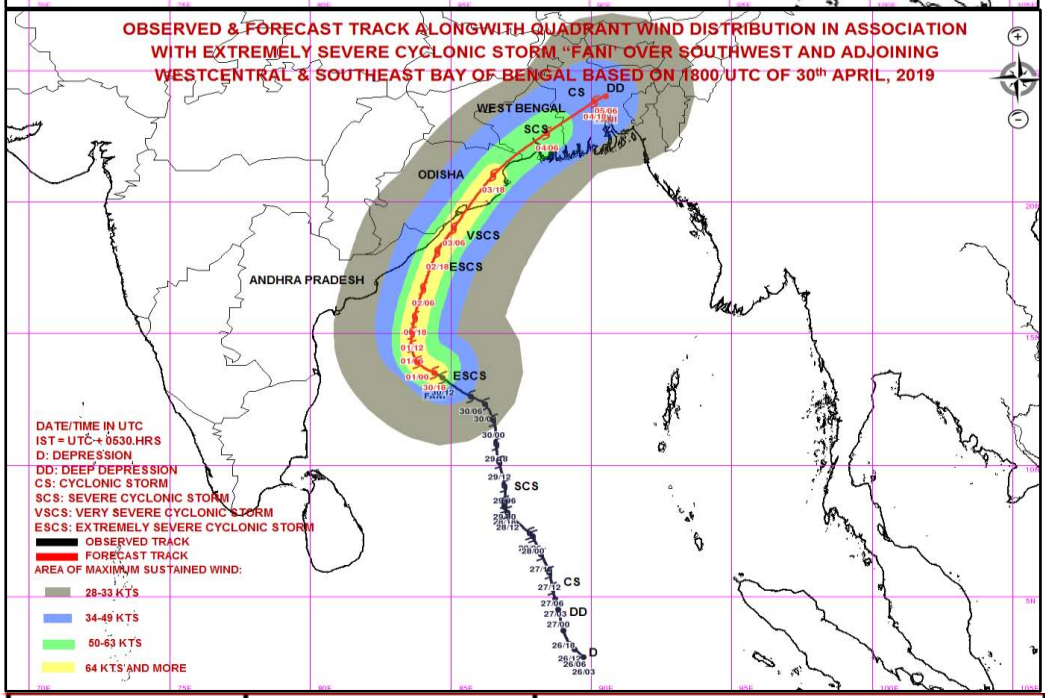
(V. R. DURAI)
(SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 30

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 30 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0000 UTC OF 01.05.2019 BASED ON 2100 UTC OF 30.04.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL: CYCLONE ALERT FOR ODISHA, WEST BENGAL AND SRIKAKULAM, VIJAYANAGARAM & VISAKHAPATNAM DISTRICTS OF ANDHRA PRADESH COASTS

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL, MOVED WEST-NORTHWESTWARDS WITH A SPEED OF ABOUT 07 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 UTC OF 30TH APRIL, 2019 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 13.6°N AND LONGITUDE 84.2°E, ABOUT 710 KM SOUTH-SOUTHWEST OF PURI (ODISHA) AND 460 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH). **IT IS VERY LIKELY TO INTENSIFY FURTHER AND MOVE NORTHWESTWARDS TILL 01ST MAY NOON AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, TO THE SOUTH OF PURI AROUND 3RD MAY AFTERNOON WITH MAXIMUM SUSTAINED WIND OF SPEED 175-185 KMPH GUSTING TO 205 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
30.04.19/2100	13.6/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/0000	13.9/83.8	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/0600	14.5/83.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1200	15.0/83.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.6/83.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.7/84.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1800	18.1/84.5	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.0/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/1800	21.0/86.5	125-135 gusting to 150	Very Severe Cyclonic Storm
04.05.19/0600	22.6/88.4	90-100 gusting to 110	Severe Cyclonic Storm
04.05.19/1800	23.8/90.1	70-80 gusting to 90	Cyclonic Storm
05.05.19/0600	24.0/90.5	50-60 gusting to 70	Deep Depression

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC ON 30TH APRIL, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.5°N TO 15.0°N AND LONG 81.5°E TO 85.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 962 HPA.

AT 2100 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.4°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1004.0 HPA, MEAN WIND DIRECTION 180°,MEAN WIND SPEED 18 KT . ANOTHER BUOY (23460) LOCATED NEAR LAT. 6.5°N AND LONG 88.4°E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.0 HPA, MEAN WIND SPEED OF 15 KNOTS AND DIRECTION 200°.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

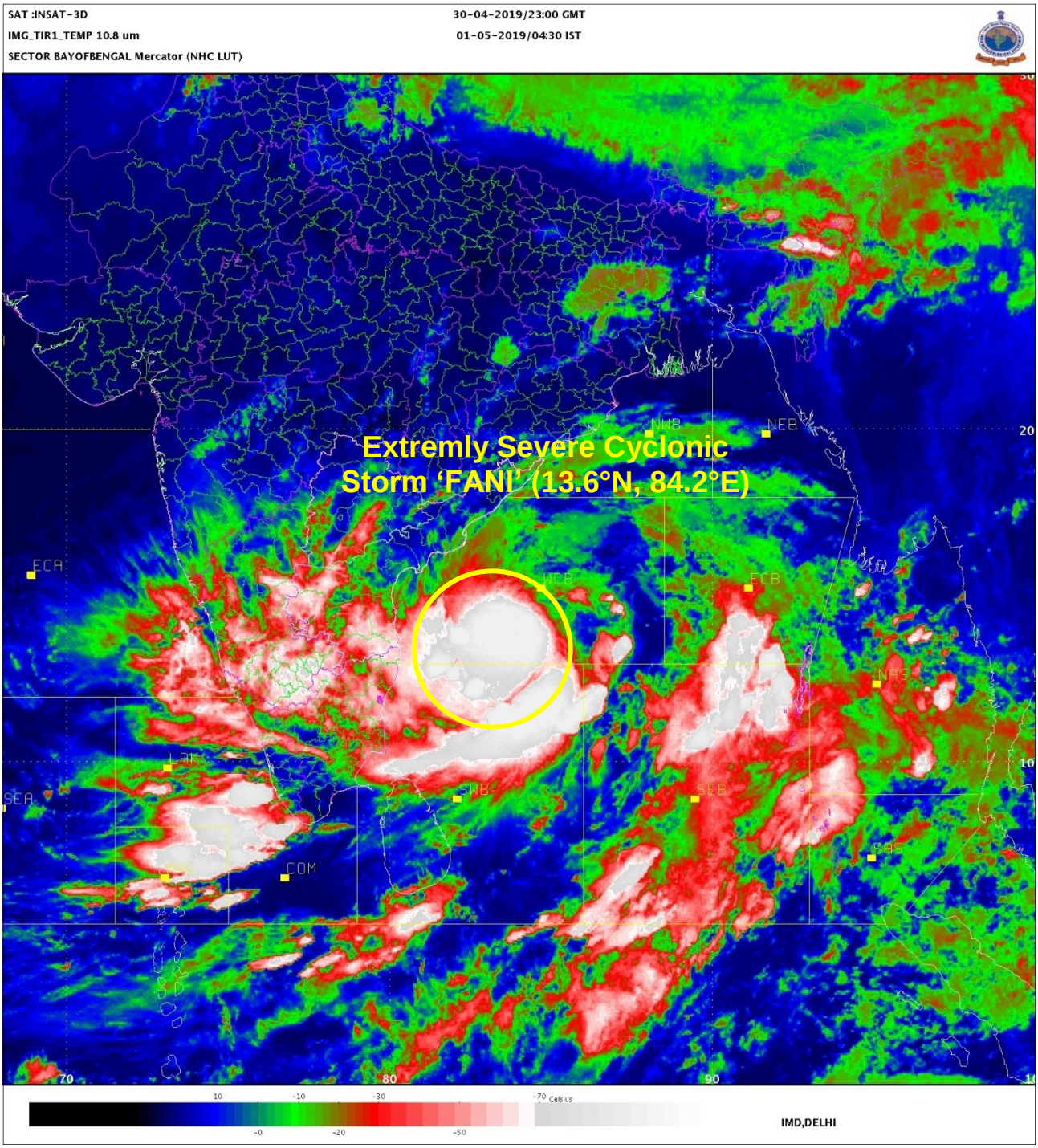
THE LOWER LEVEL POSITIVE VORTICITY HAS INCREASED AND IS ABOUT 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-25 KNOTS) AROUND THE SYSTEM AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY.

THE SYSTEM OVER SOUTHEAST AND ADJOINING BAY OF BENGAL IS LYING IN THE PERIPHERY OF AN ANTICYCLONIC CIRCULATION OVER SOUTHEAST BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. THE SYSTEM WOULD BE STEERED BY THIS ANTICYCLONIC CIRCULATION LEADING TO NORTHWESTAWRD MOVEMENT TILL 1200 UTC OF 01ST MAY AND THEREAFTER IT WILL START RECURVING NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO SOUTH OF PURI AROUND 3RD MAY AFTERNOON.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

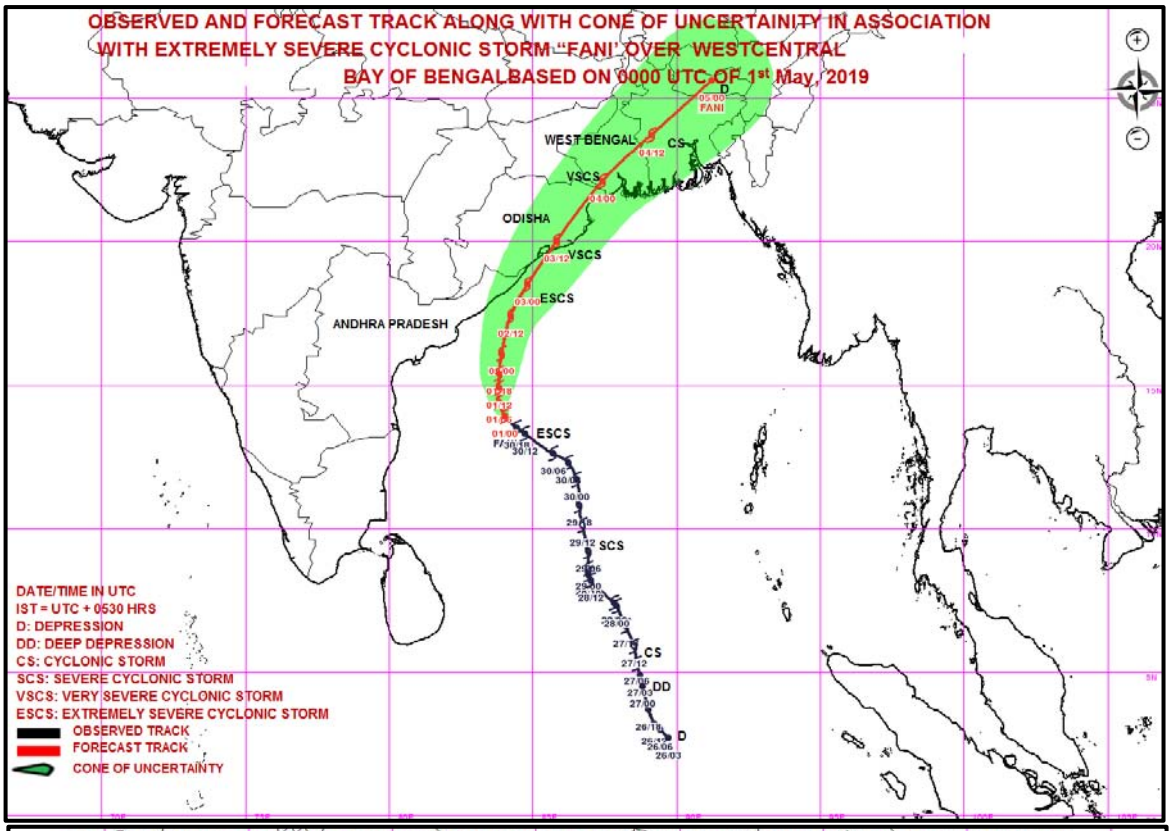
(V. R. DURAI)
(SCIENTIST-E, RSMC, NEW DELHI

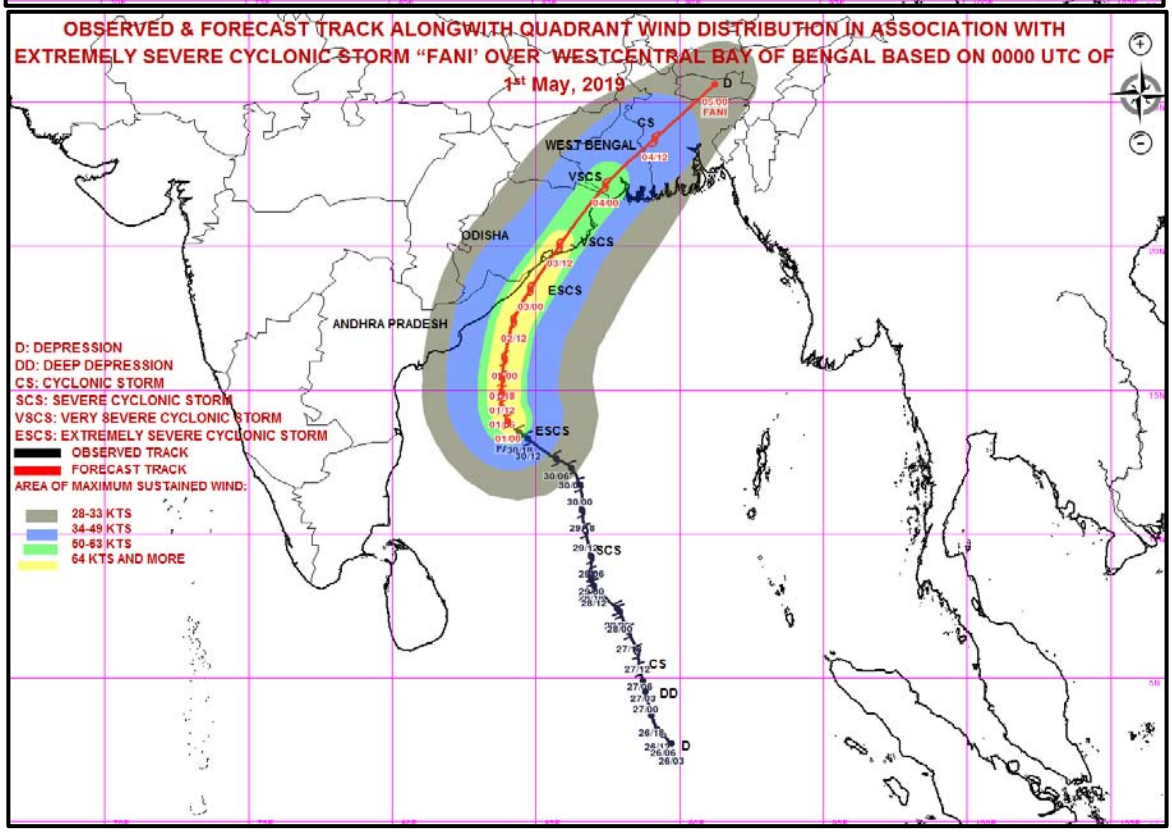
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 31

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 31 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 01.05.2019 BASED ON 0000 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL: CYCLONE ALERT FOR ODISHA, WEST BENGAL AND SRIKAKULAM, VIJAYANAGARAM & VISAKHAPATNAM DISTRICTS OF ANDHRA PRADESH COASTS

THE EXTREMELY SEVERE CYCLONIC STORM 'FANI' (PRONOUNCED AS 'FONI') OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL, MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 10 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0000 UTC OF 1st May, 2019 OVER WESTCENTRAL AND ADJOINING SOUTHWEST BAY OF BENGAL NEAR LATITUDE 13.9°N AND LONGITUDE 84.0°E, ABOUT 680 KM SOUTH-SOUTHWEST OF PURI (ODISHA) AND 430 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH). IT WILL MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND RECURVE NORTH-NORTHEASTWARDS THEREAFTER DURING SUBSEQUENT 72 HOURS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, TO THE SOUTH OF PURI AROUND 03RD MAY AFTERNOON WITH MAXIMUM SUSTAINED WIND OF SPEED 175-185 KMPH GUSTING TO 205 KMPH.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
01.05.19/0000	13.9/84.0	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.4/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1200	14.9/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1800	15.4/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	16.1/83.9	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	17.4/84.2	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	18.5/84.8	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	20.0/85.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0000	22.1/87.4	120-130 GUSTING TO 145	SEVERE CYCLONIC STORM
04.05.19/1200	23.7/89.1	80-90 GUSTING TO 100	CYCLONIC STORM
05.05.19/0000	25.6/91.2	45-55 GUSTING TO 65	DEEP DEPRESSION

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER SOUTHWEST & ADJOINING SOUTHEAST BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.5°N TO 15.0°N AND LONG 81.0°E TO 85.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS VERY HIGH AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 960 HPA.

AT 0000 UTC OF TODAY, A BUOY (23092) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE 1006.0 HPA, MEAN WIND DIRECTION 200°,MEAN WIND SPEED 19 KT . ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1007.0 HPA, MEAN WIND SPEED OF 21 KNOTS AND DIRECTION 200°.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL CONTINUE IN SAME PHASE WITH AMPLITUDE GREATER THAN 1 FOR NEXT 2 DAYS. THEREAFTER IT WILL MOVE TO PHASE 5 WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO WILL BE FAVOURABLE FOR ENHANCEMENT OF CONVECTION & INTENSIFICATION OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-32˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 80-90 KJ/CM^2 OVER THE SYSTEM AREA AND INCREASES ALONG THE FORECAST TRACK. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE.

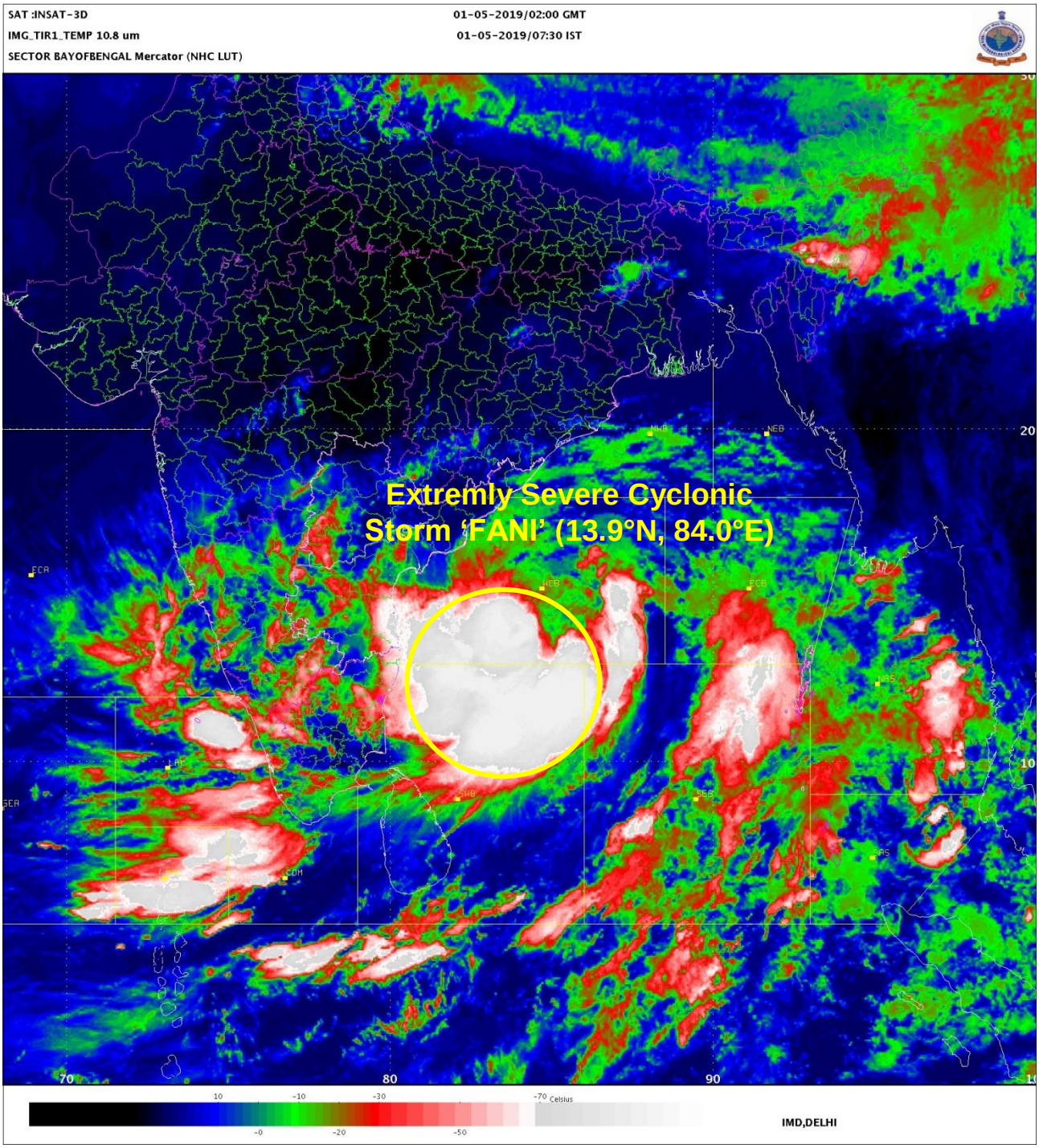
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE WILL CAUSE NORTH-NORTHEASTWARD CURVATURE OF THE SYSTEM. IT WILL MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND RECURVE NORTH-NORTHEASTWARDS THEREAFTER DURING SUBSEQUENT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARD. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING HE NORTH-NORTHEASTWARD MOVEMENT.

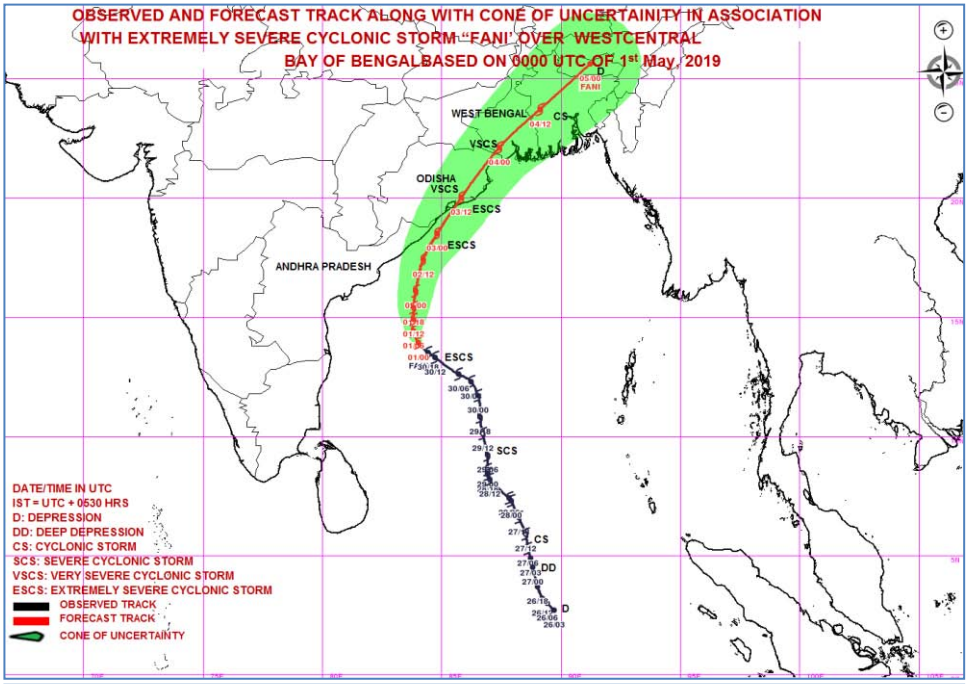
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

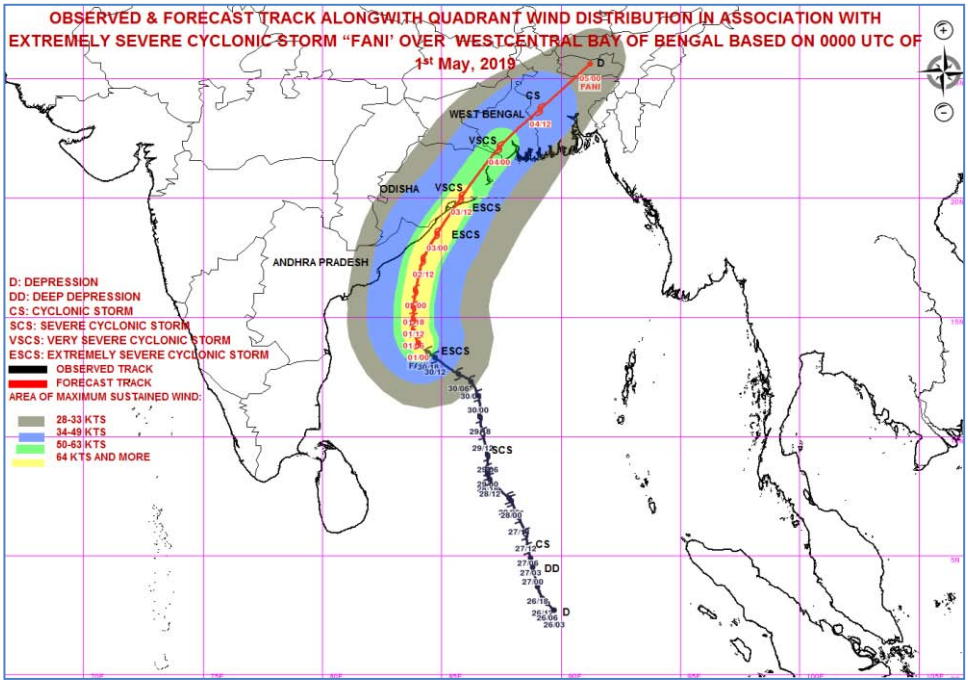
(V. R. DURAI)
(SCIENTIST-E, RSMC, NEW DELHI

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 32

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 32 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 01.05.2019 BASED ON 0300 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL & ADJOINING SOUTHWEST BAY OF BENGAL, MOVED NORTHWESTWARDS WITH A SPEED OF ABOUT 14 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.1°N AND LONGITUDE 83.9°E, ABOUT 660 KM SOUTH-SOUTHWEST OF PURI (4353)(ODISHA) AND 400 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150)(ANDHRA PRADESH). **IT IS VERY LIKELY TO MOVE NORTHWESTWARDS DURING NEXT 12 HOURS AND THEREAFTER RECURVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI (43053) DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND OF SPEED 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
01.05.19/0300	14.1/83.9	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/0600	14.4/83.9	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1200	14.9/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
01.05.19/1800	15.4/83.8	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/0000	16.1/83.9	180-190 GUSTING TO 210	EXTREMELY SEVERE CYCLONIC STORM
02.05.19/1200	17.4/84.2	175-185 GUSTING TO 205	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	18.5/84.8	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	20.0/85.8	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
04.05.19/0000	22.1/87.4	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04.05.19/1200	23.7/89.1	70-80 GUSTING TO 90	CYCLONIC STORM
05.05.19/0000	25.6/91.2	45-55 GUSTING TO 65	DEEP DEPRESSION

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. THE EMBEDDED CENTRE WITH CLOUD MASS HAS A DIAMETER OF ABOUT 2 DEGREE YEIELDING A CF OF 4.0, BANDING FEATURE 1.0, YEILDING A DT OF 5.0. MAXIMUM

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

CONVECTION IS SEEN IN THE SW AND SE SECTORS OF THE CENTRE. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.0°N AND LONG 80.0°E TO 88.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 960 HPA.

AT 0300 UTC OF TODAY, A BUOY (23092) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1006.4 HPA, MEAN WIND DIRECTION 180°, MEAN WIND SPEED 18 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.5 HPA, MEAN WIND SPEED OF 14 KNOTS AND DIRECTION 190°.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

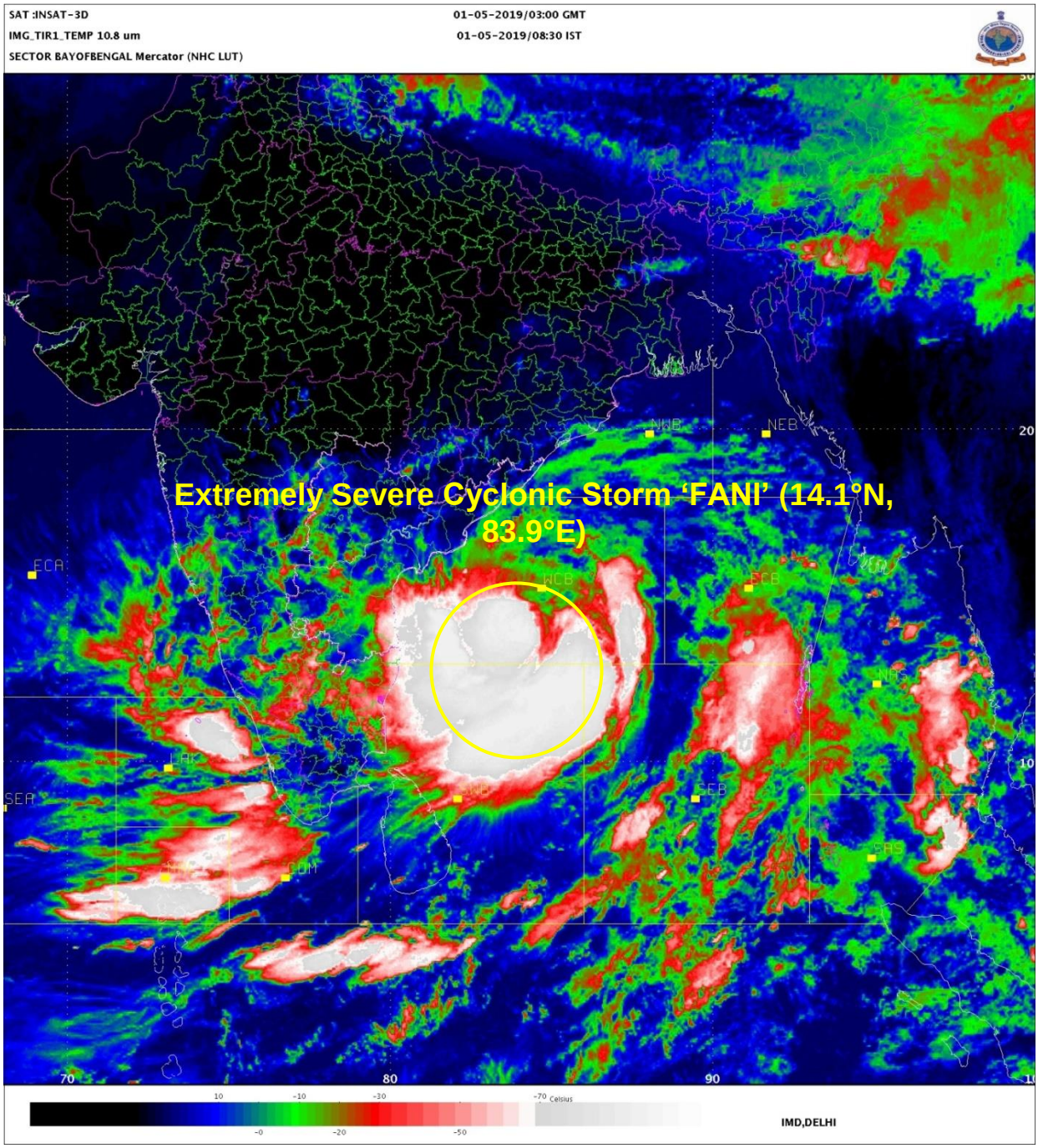
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 60 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (20-30 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY BEFORE LANDFALL.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE WILL CAUSE NORTH-NORTHEASTWARD RECURVATURE OF THE SYSTEM. IT WILL MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND RECURVE NORTH-NORTHEASTWARDS THEREAFTER DURING SUBSEQUENT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARD. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AS IT HAS CHANGED THE DIRECTION OF MOVEMENT FROM NORTHWEST TO NORTH-NORTHWEST DURING PAST 6 HOURS AND HENCE IT IS MOVING SLOW. IT WILL CONTINUE TO MOVE SLOW FOR NEXT 12 HOURS DURING THE PROCESS OF RECURVATURE. THEREAFTER IT WILL MOVE NORTH-NORTHEASTWARDS WITH GRADUAL INCREASE IN SPEED.

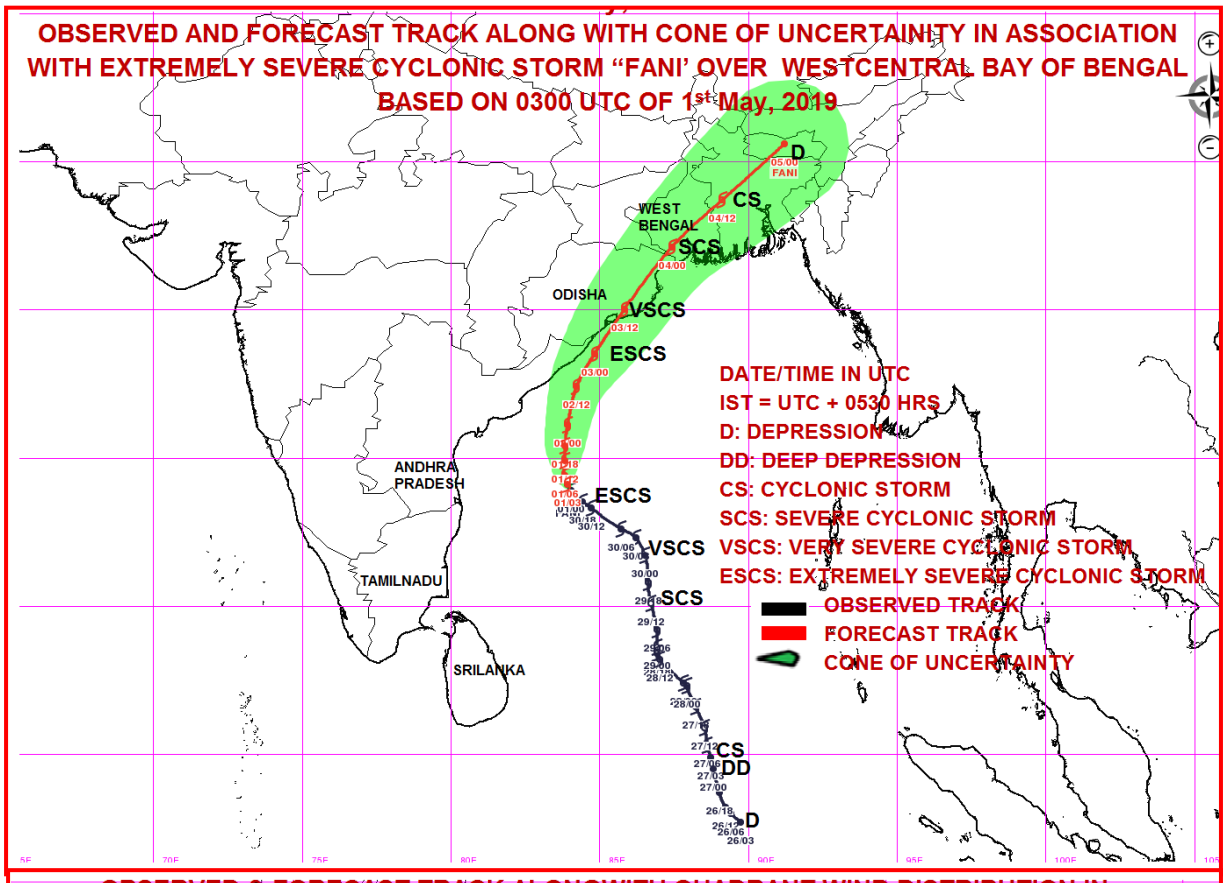
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

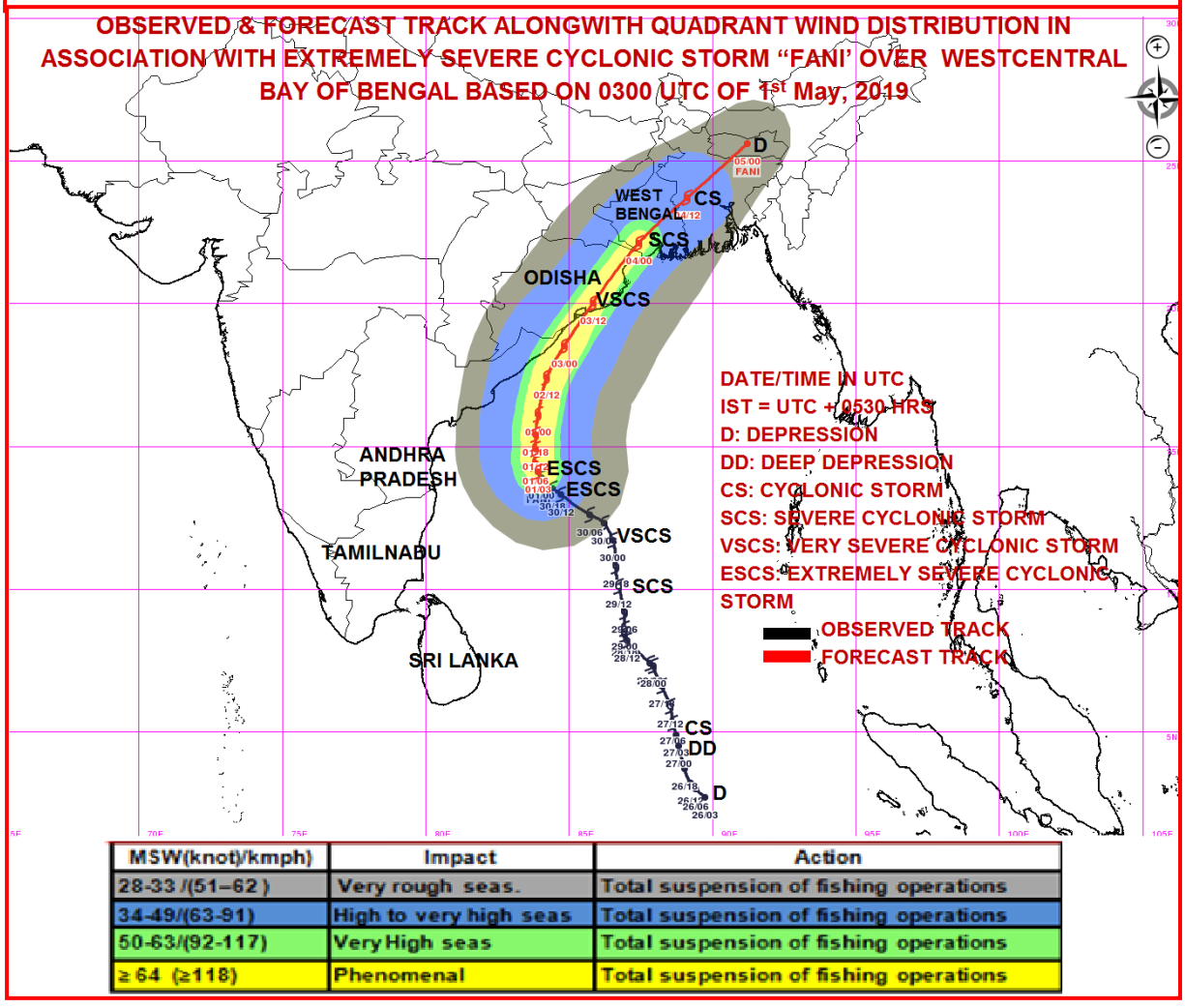
(NEETHA K GOPAL)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 33

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 33 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 01.05.2019 BASED ON 0600 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED SLOWLY NORTH-NORTHWESTWARDS WITH A SPEED OF ABOUT 06 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.2°N AND LONGITUDE 83.9°E, ABOUT 650 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 390 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 840 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NEARLY NORTHWARDS DURING NEXT 06 HOURS AND NORTH-NORTHEASTWARDS THEREAFTER AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.05.19/0600	14.2/83.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1200	14.7/83.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.3/84.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.9/84.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.2	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1800	17.7/84.6	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0600	19.2/85.3	150-160 gusting to 175	Very Severe Cyclonic Storm
03.05.19/1800	20.9/86.4	100-110 gusting to 125	Severe Cyclonic Storm
04.05.19/0600	22.9/87.9	70-80 gusting to 90	Cyclonic Storm
04.05.19/1800	24.8/89.9	40-50 gusting to 60	Depression
05.05.19/0600	26.8/91.9	20-30 gusting to 40	Well Marked Low

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.0. IT HAS CENTRAL DENSE OVERCAST PATTERN. MAXIMUM CONVECTION IS SEEN IN THE SOUTHWEST SECTOR OF THE SYSTEM. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.0°N AND LONG 80.0°E TO 88.0 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 960 HPA.

AT 0300 UTC OF TODAY, A BUOY (23092) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1006.0 HPA, MEAN WIND DIRECTION 170°, MEAN WIND SPEED 16 KT. A SHIP (AUYR) LOCATED NEAR LAT. 14.1°N AND LONG 83.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 995.2 HPA, MEAN WIND DIRECTION 330° AND WIND SPEED OF 28 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

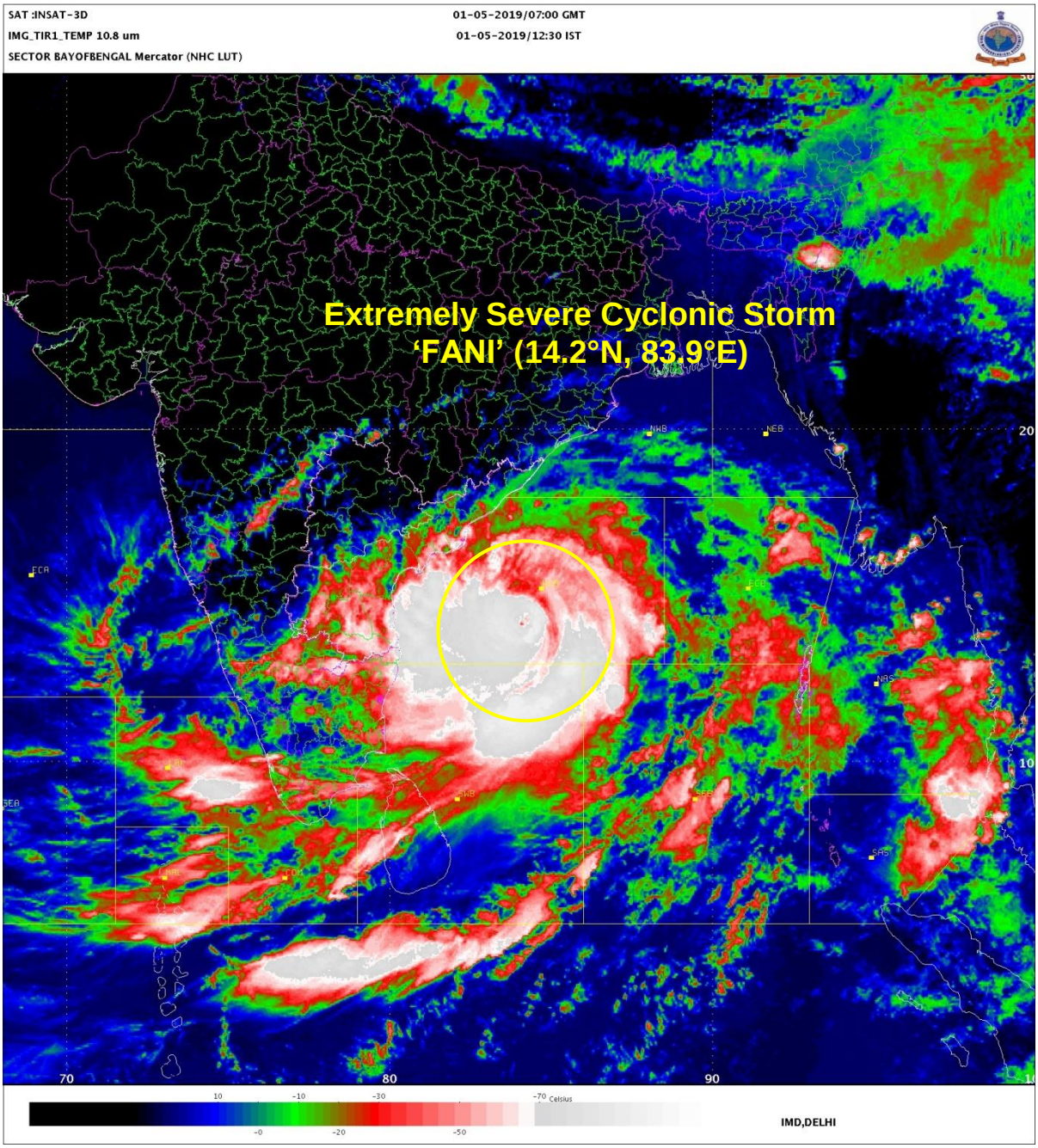
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 250 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 1800 UTC OF 02ND MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE WILL CAUSE NORTH-NORTHEASTWARD RECURVATURE OF THE SYSTEM. IT WILL MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND RECURVE NORTH-NORTHEASTWARDS THEREAFTER DURING SUBSEQUENT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARD. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AS IT HAS CHANGED THE DIRECTION OF MOVEMENT FROM NORTHWEST TO NORTH-NORTHWEST DURING PAST 6 HOURS AND HENCE IT IS MOVING SLOW. IT WILL CONTINUE TO MOVE SLOW FOR NEXT 12 HOURS DURING THE PROCESS OF RECURVATURE. THEREAFTER IT WILL MOVE NORTH-NORTHEASTWARDS WITH GRADUAL INCREASE IN SPEED.

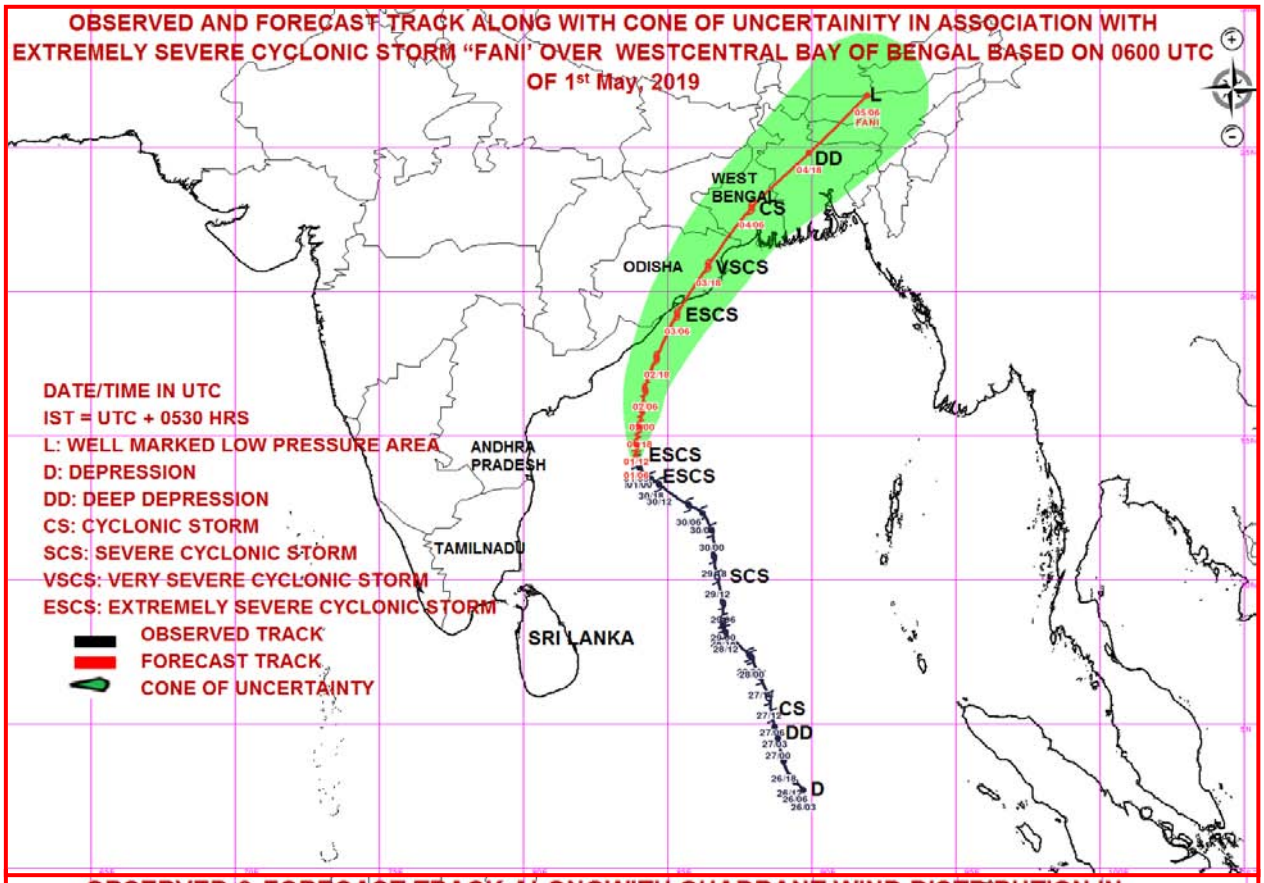
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

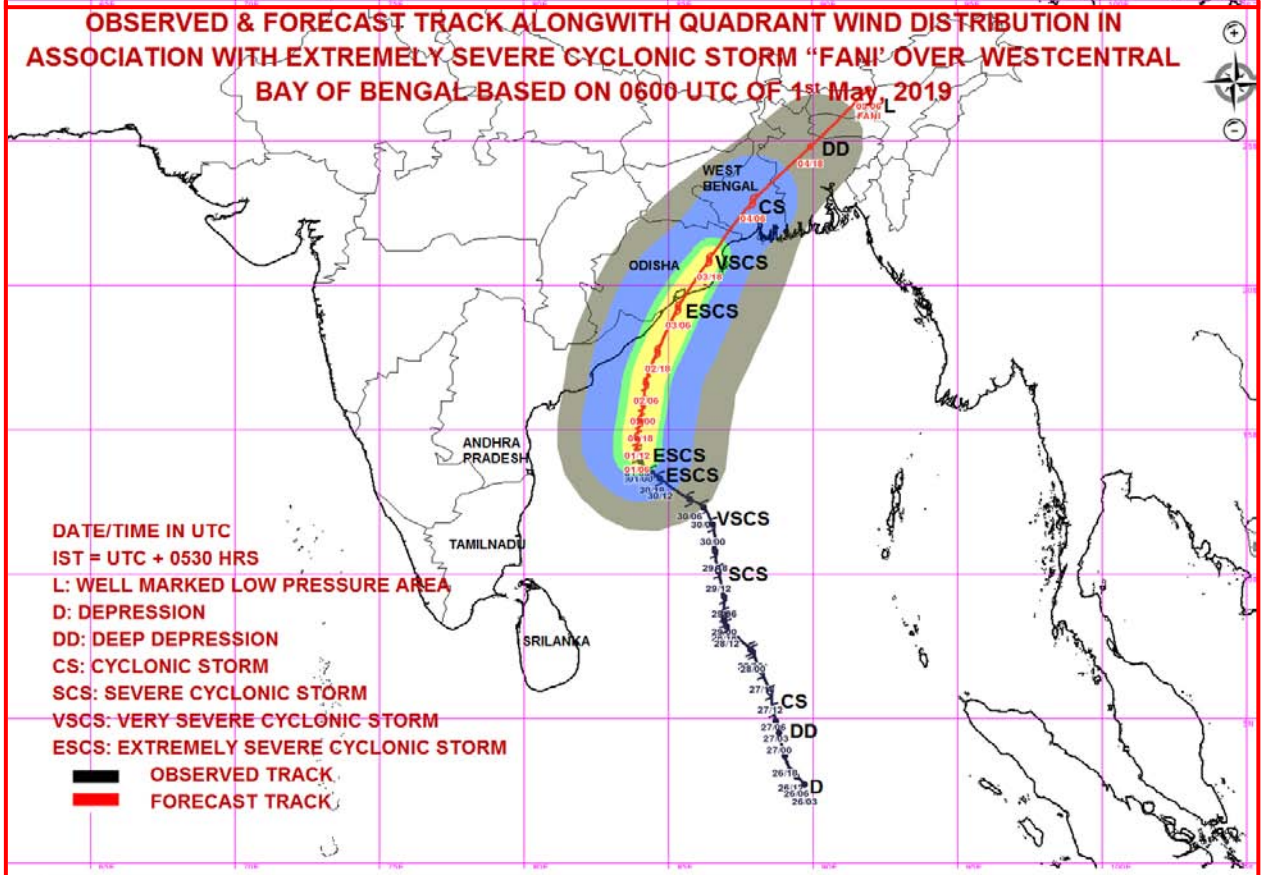
(NEETHA K GOPAL)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 34

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 34 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 01.05.2019 BASED ON 0900 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 06 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.5°N AND LONGITUDE 84.1°E, ABOUT 610 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 360 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 800 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic dis turbance
01.05.19/0900	14.5/84.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1200	14.7/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.3/84.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.9/84.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.7	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1800	17.7/85.1	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0600	19.2/85.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	20.9/86.5	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	22.9/87.9	80-90 gusting to 100	Cyclonic Storm
04.05.19/1800	24.8/89.9	50-60 gusting to 70	Deep Depression
05.05.19/0600	26.8/91.9	25-35 gusting to 45	Well Marked Low

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.0. RAGGED EYE IS VISIBLE. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE

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

CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 17.5°N AND LONG 82.5°E TO 88.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 960 HPA.

AT 0900 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1003.2 HPA, MEAN WIND DIRECTION 200°, MEAN WIND SPEED 25 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.7 HPA, MEAN WIND DIRECTION 240° AND WIND SPEED OF 18 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

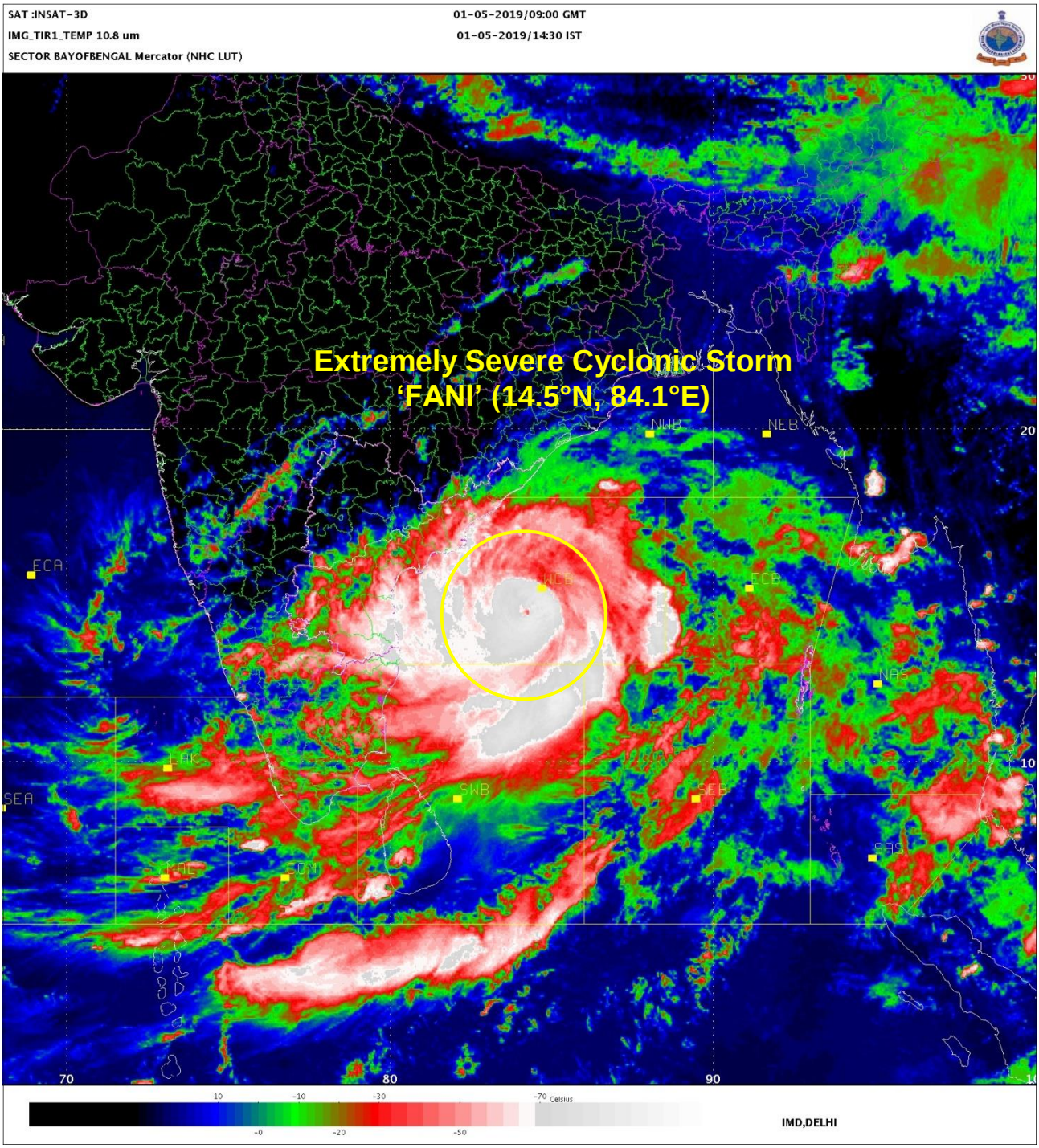
THE LOWER LEVEL POSITIVE VORTICITY IS ABOUT 250 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 1800 UTC OF 02ND MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE WILL CAUSE NORTH-NORTHEASTWARD RECURVATURE OF THE SYSTEM. IT WILL MOVE NORTHWESTWARD DURING NEXT 12 HOURS AND RECURVE NORTH-NORTHEASTWARDS THEREAFTER DURING SUBSEQUENT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARD. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AS IT HAS CHANGED THE DIRECTION OF MOVEMENT FROM NORTHWEST TO NORTH-NORTHWEST DURING PAST 6 HOURS AND HENCE IT IS MOVING SLOW. IT WILL CONTINUE TO MOVE SLOW FOR NEXT 12 HOURS DURING THE PROCESS OF RECURVATURE. THEREAFTER IT WILL MOVE NORTH-NORTHEASTWARDS WITH GRADUAL INCREASE IN SPEED.

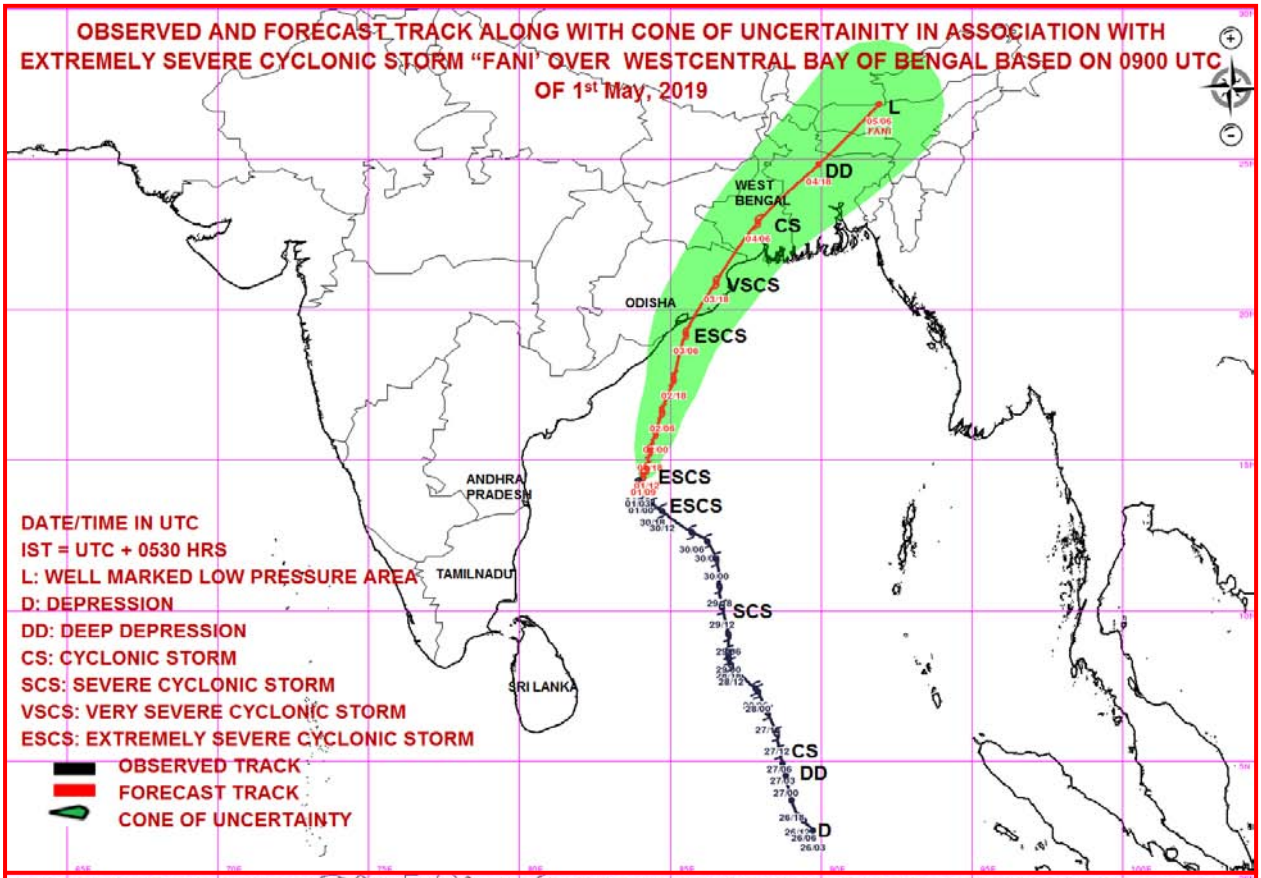
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

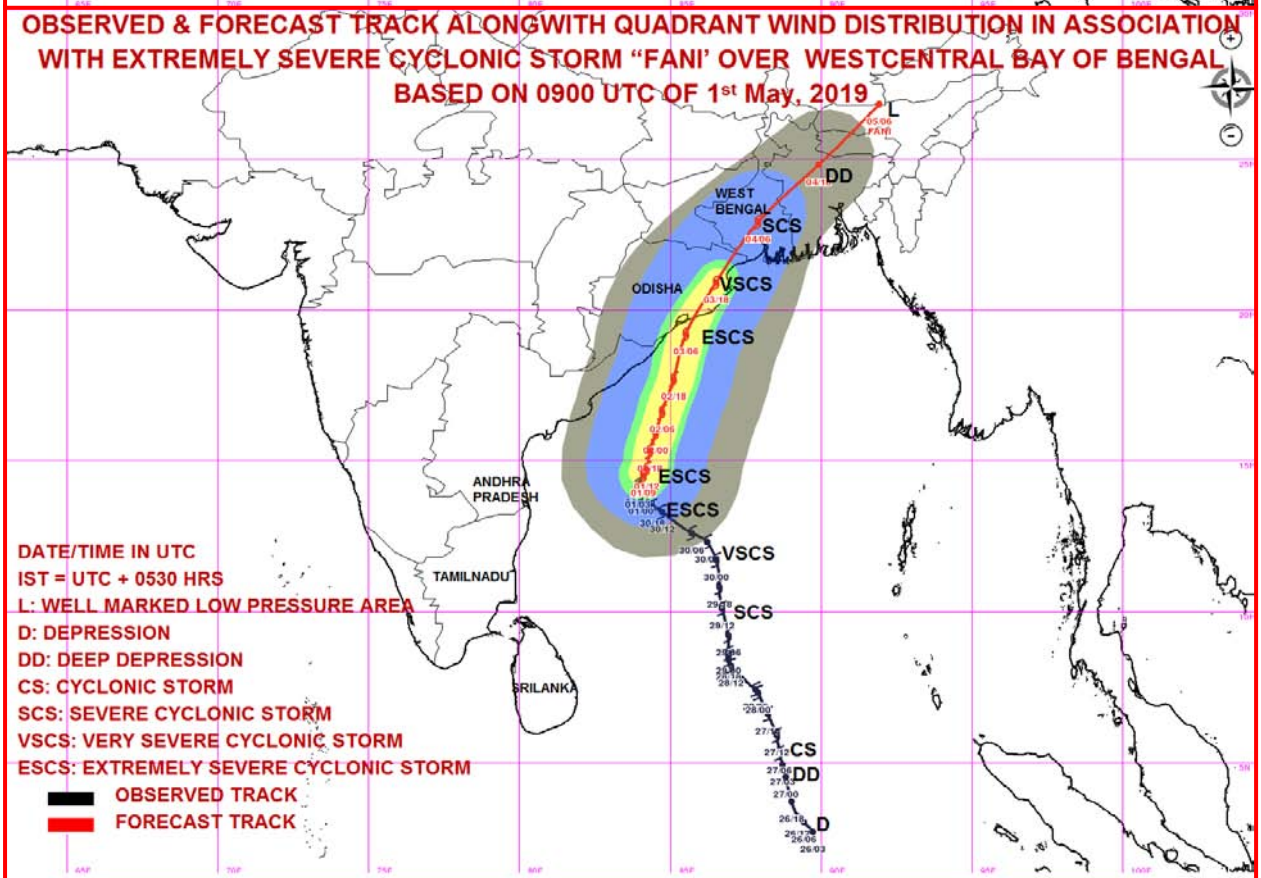
(NEETHA K GOPAL)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 35

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 35 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 01.05.2019 BASED ON 1200 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 14.9°N AND LONGITUDE 84.1°E, ABOUT 570 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 320 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 760 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic dis turbance
01.05.19/1200	14.9/84.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.3/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.9/84.4	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.6	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.9	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0000	18.4/85.2	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.0/85.9	150-160 gusting to 175	Very Severe Cyclonic Storm
04.05.19/0000	21.9/87.2	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1200	23.8/88.9	65-75 gusting to 85	Cyclonic Storm
05.05.19/0000	25.8/90.9	40-50 gusting to 60	Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. CIRCULAR EYE IS VISIBLE WITH DIAMETER 20 KM AS PER SATELLITE IMAGERY AND ABOUT 31 KM AS PER DWR VISAKHAPATNAM. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 10.0°N TO 18.0°N AND LONG 82.5°E TO 88.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 1200 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1003.7 HPA, MEAN WIND DIRECTION 180°, MEAN WIND SPEED 18 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.7 HPA, MEAN WIND DIRECTION 190° AND WIND SPEED OF 16 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

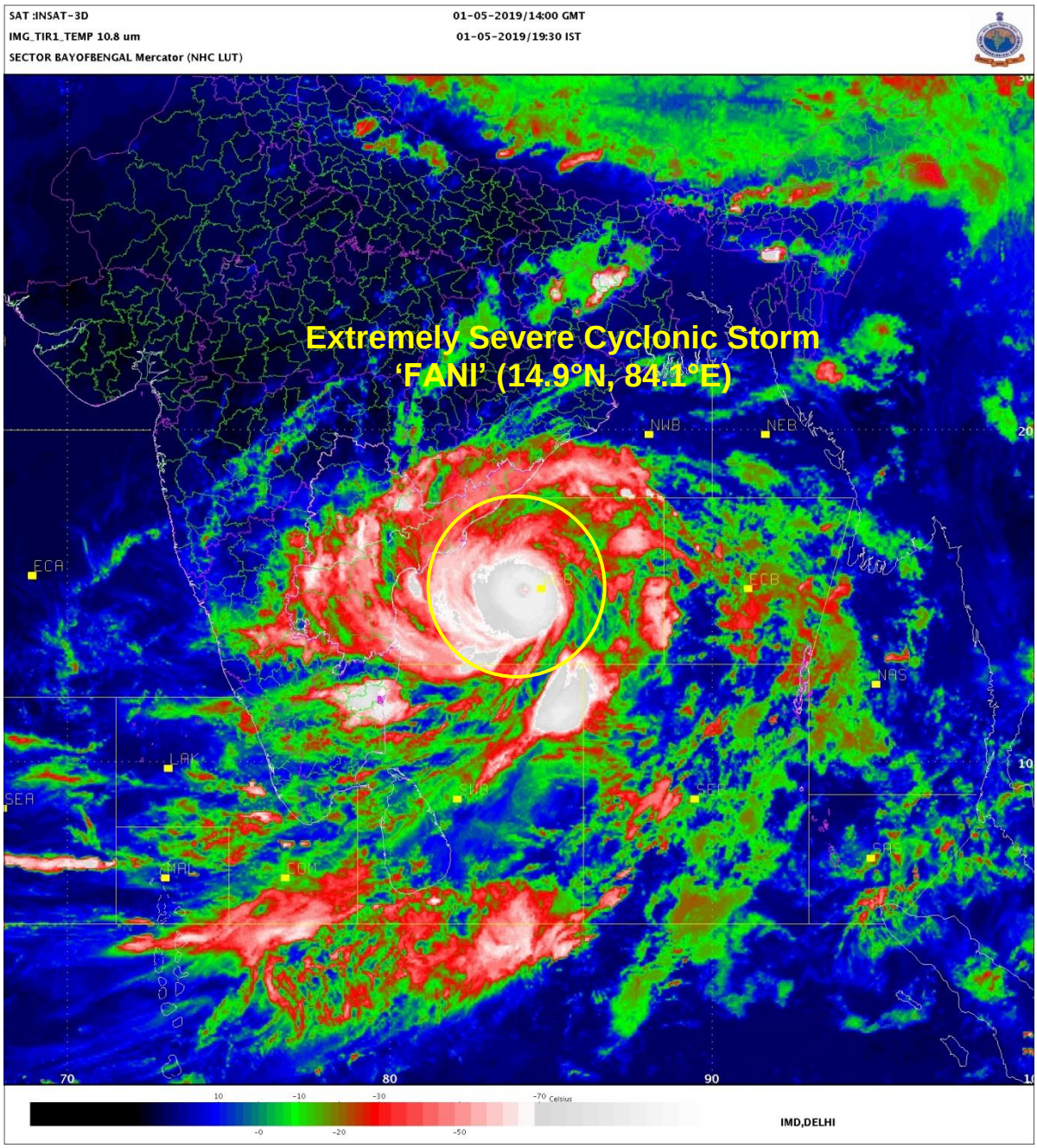
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO FURTHER INTENSIFICATION OF THE SYSTEM AND IT IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE IS CAUSING RECURVATURE OF THE SYSTEM. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AND IS MOVING SLOW. IT WILL MOVE NORTH-NORTHEASTWARDS DURING NEXT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

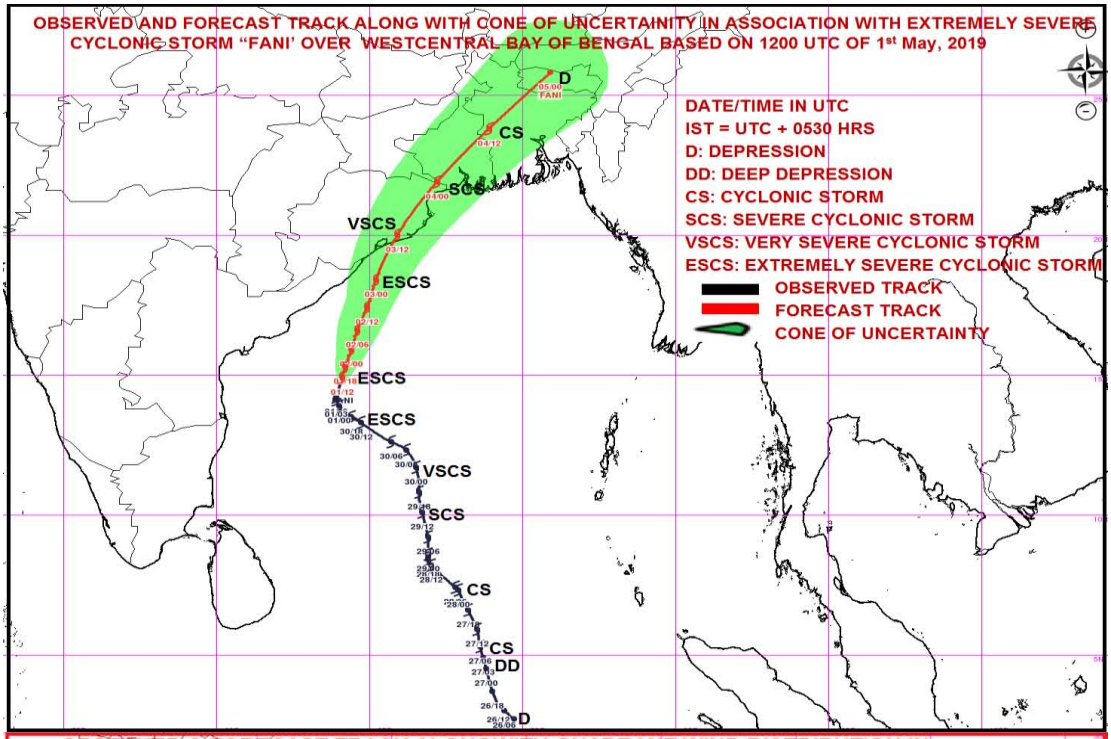
(NEETHA K GOPAL)
(SCIENTIST-E, RSMC, NEW DELHI)

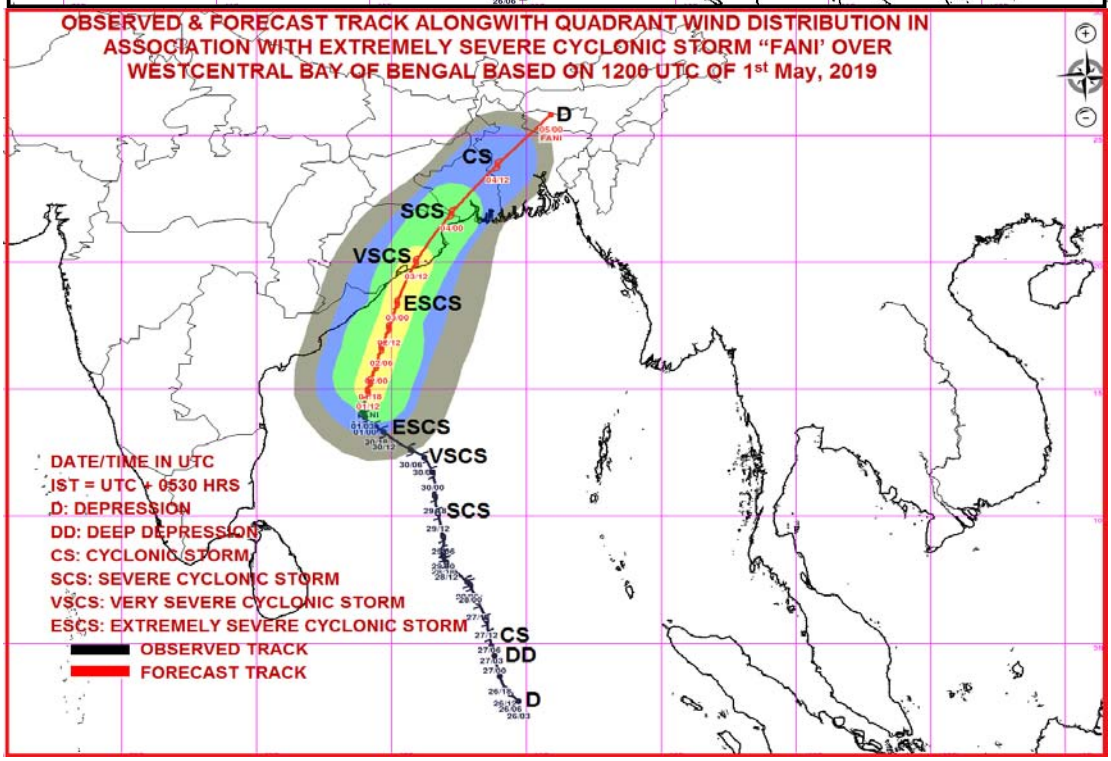
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 36

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 36 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1800 UTC OF 01.05.2019 BASED ON 1500 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWARDS WITH A SPEED OF ABOUT 11 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.1°N AND LONGITUDE 84.1°E, ABOUT 550 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 300 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 740 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.05.19/1500	15.1/84.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
01.05.19/1800	15.3/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.9/84.4	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.6	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.9	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0000	18.4/85.2	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.0/85.9	150-160 gusting to 175	Very Severe Cyclonic Storm
04.05.19/0000	21.9/87.2	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1200	23.8/88.9	65-75 gusting to 85	Cyclonic Storm
05.05.19/0000	25.8/90.9	40-50 gusting to 60	Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. CIRCULAR EYE IS VISIBLE WITH DIAMETER 20 KM AS PER SATELLITE IMAGERY AND ABOUT 30 KM AS PER DWR MACHILIPATNAM. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 12.0°N TO 17.0°N AND LONG 81.0°E TO 85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 1500 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.4°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE 1005 HPA, MEAN WIND DIRECTION 190°, MEAN WIND SPEED 16 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.8 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

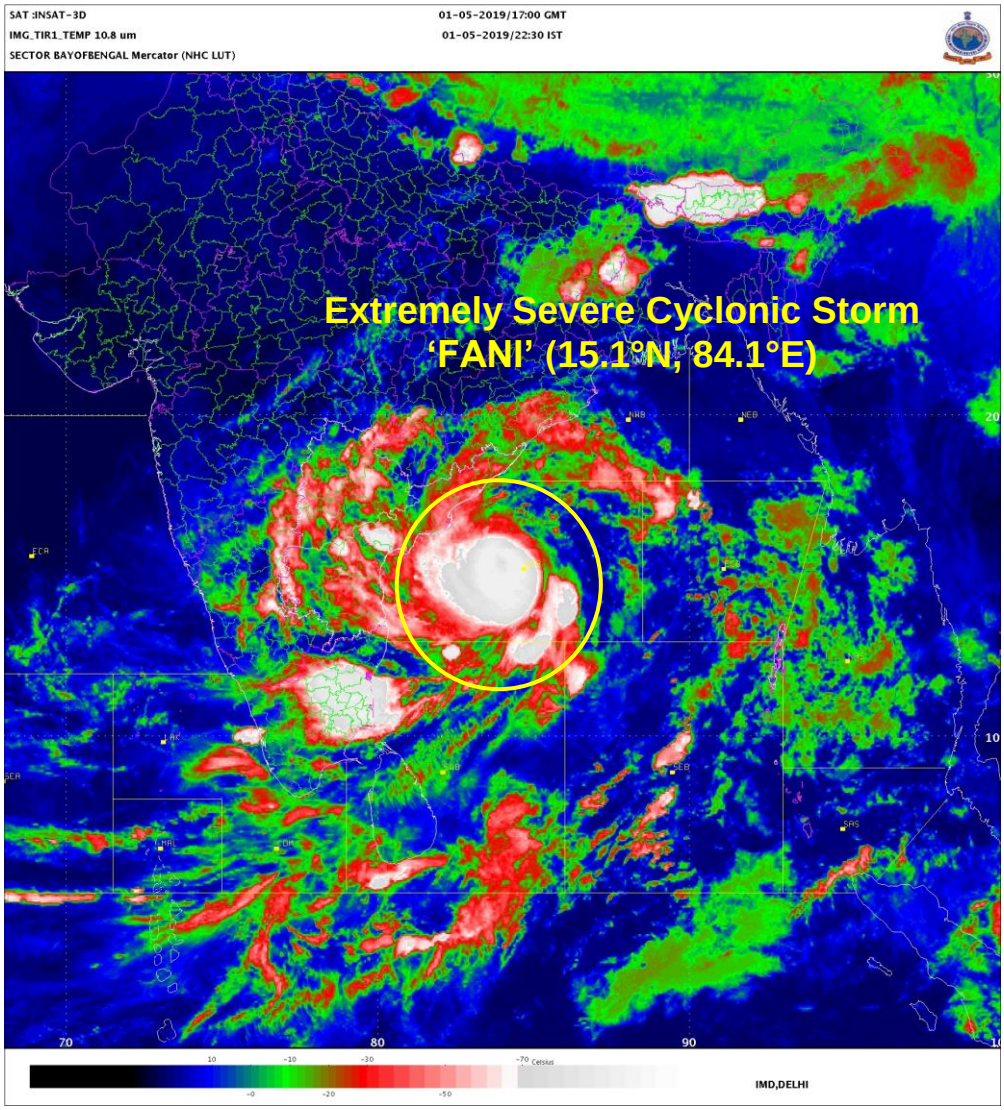
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO FURTHER INTENSIFICATION OF THE SYSTEM AND IT IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE IS CAUSING RECURVATURE OF THE SYSTEM. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AND IS MOVING SLOW. IT WILL MOVE NORTH-NORTHEASTWARDS DURING NEXT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT.

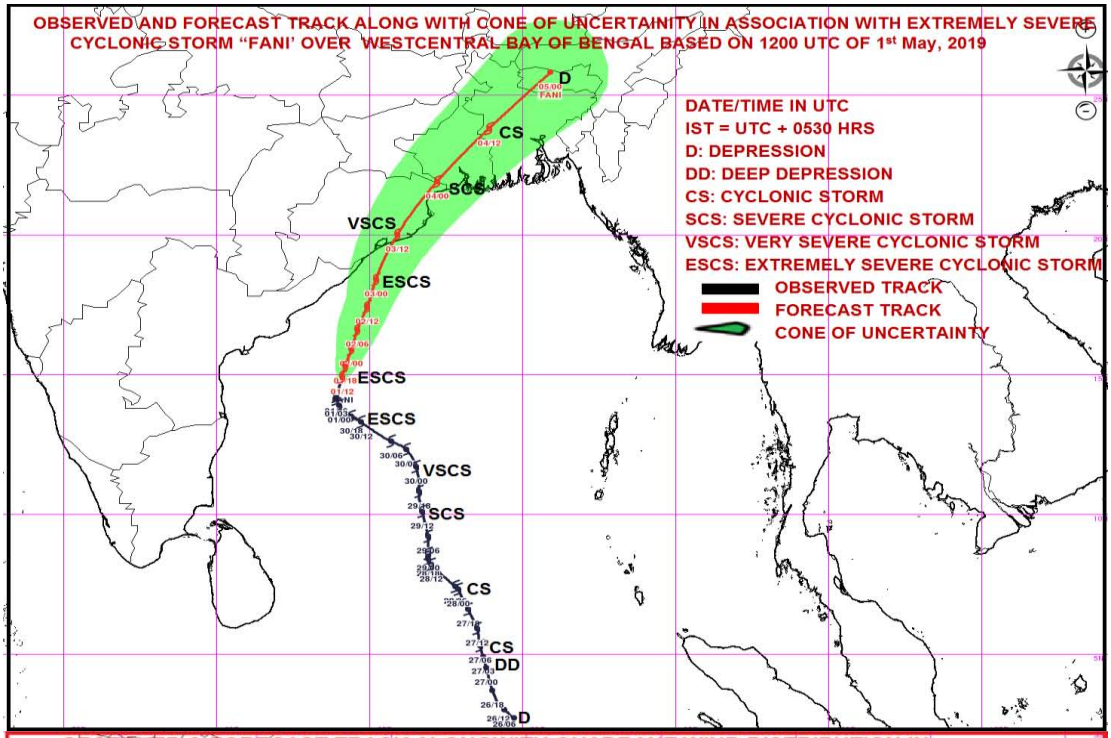
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

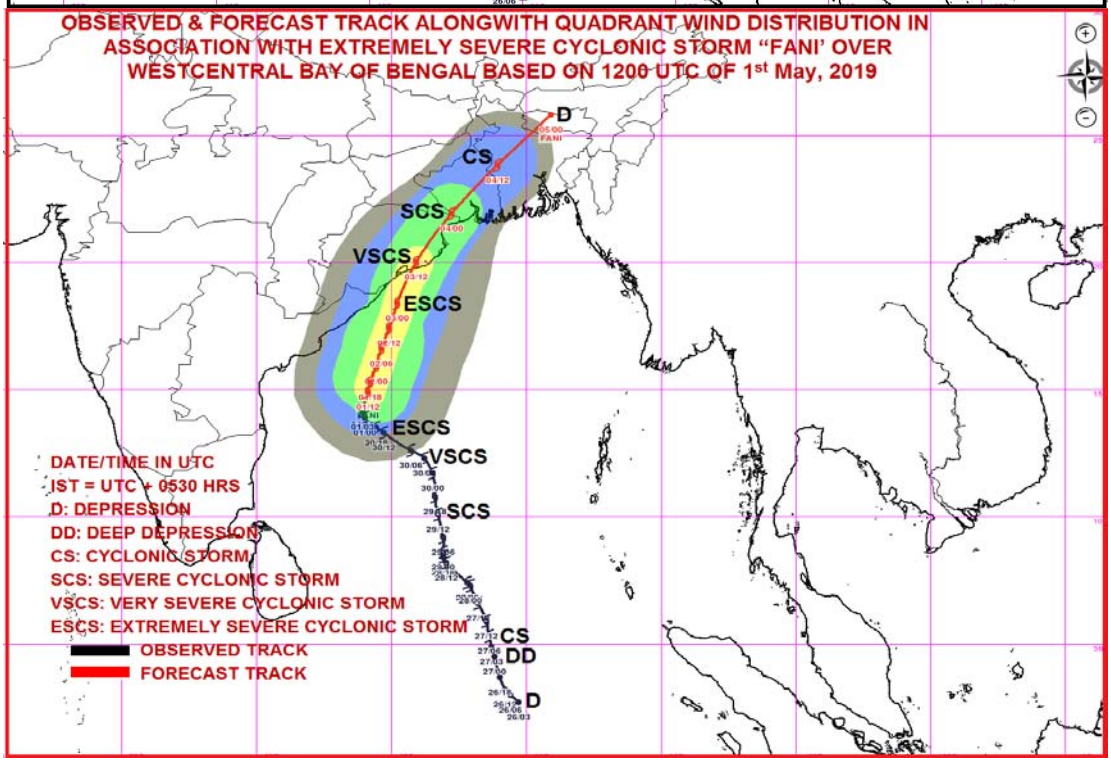
(D R PATTANAIK)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 37

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 37 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2030 UTC OF 01.05.2019 BASED ON 1800 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWARDS WITH A SPEED OF ABOUT 05 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.2°N AND LONGITUDE 84.1°E, ABOUT 540 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 290 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 730 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.05.19/1800	15.2/84.1	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.8/84.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.6	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.9	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1800	18.2/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.2/85.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	20.9/86.5	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	22.8/88.0	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1800	24.8/89.4	65-75 gusting to 85	Cyclonic Storm
05.05.19/0600	26.3/90.8	40-50 gusting to 60	Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1700 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. RAGGED EYE IS VISIBLE AS PER SATELLITE IMAGERY. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 13.5°N TO 16.5°N AND LONG 81.5°E TO 85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 1800 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.4°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.1 HPA, MEAN WIND DIRECTION 190°, MEAN WIND SPEED 19 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA, , MEAN WIND DIRECTION 190°, MEAN WIND SPEED OF 18 KT.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH- ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

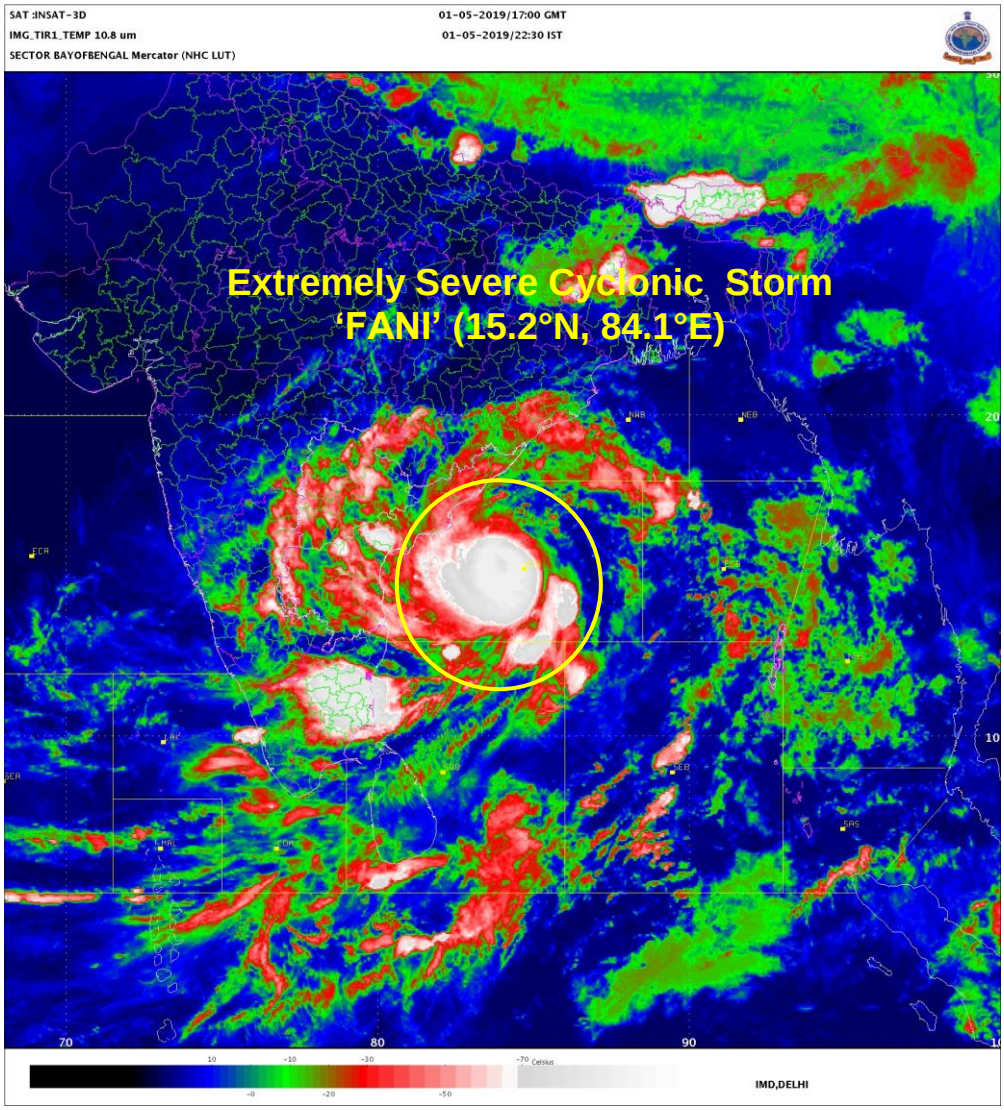
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 40 X10^{-5}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-20 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO FURTHER INTENSIFICATION OF THE SYSTEM AND IT IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE IS CAUSING RECURVATURE OF THE SYSTEM. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AND IS MOVING SLOW. IT WILL MOVE NORTH-NORTHEASTWARDS DURING NEXT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT.

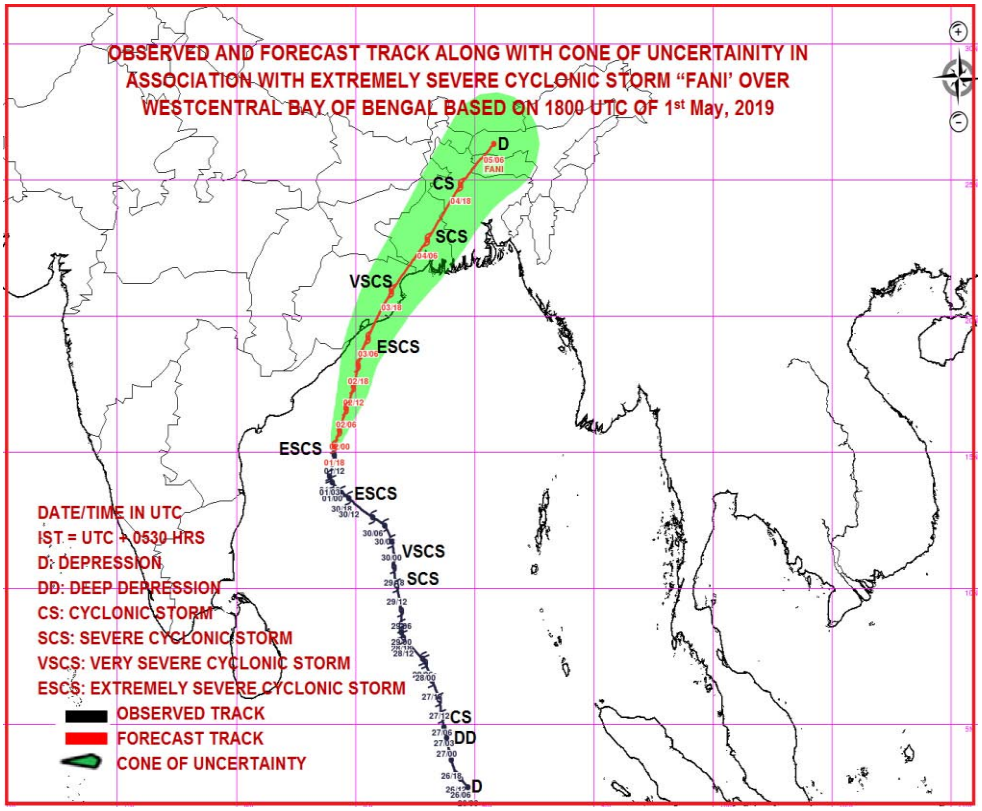
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

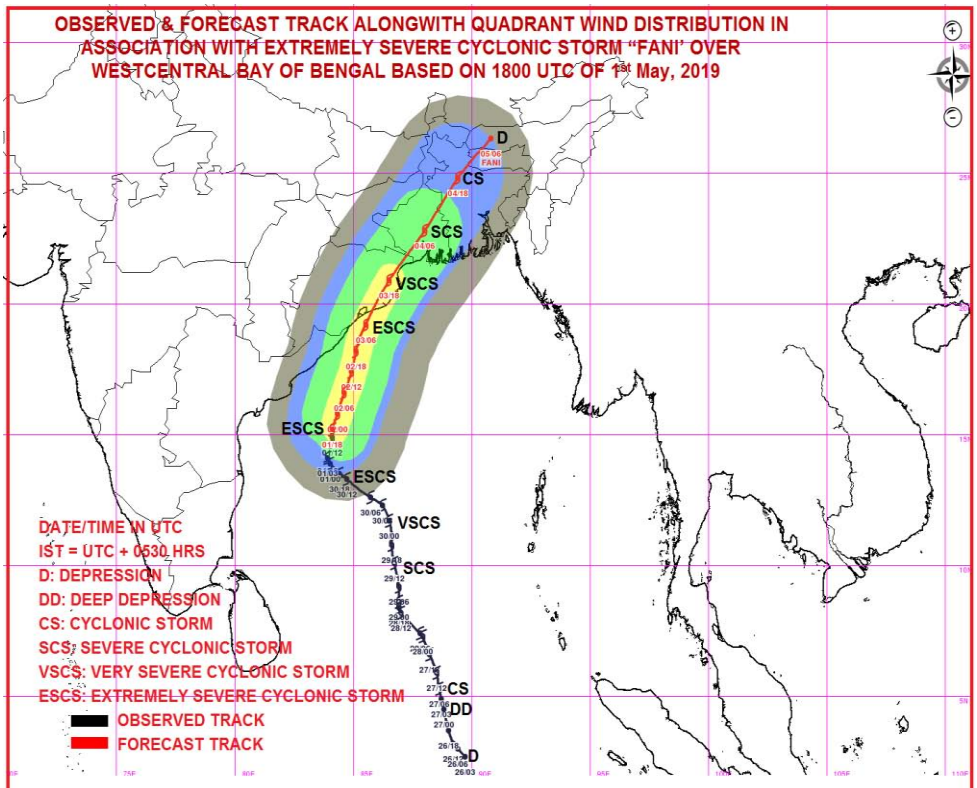
(D R PATTANAIK)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 38

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 38 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0000 UTC OF 02.05.2019 BASED ON 2100 UTC OF 01.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 07 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 UTC OF 01ST MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.5°N AND LONGITUDE 84.2°E, ABOUT 510 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 260 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 700 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **DURING 0900-1200 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
01.05.19/2100	15.5/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0000	15.8/84.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.6	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.9	175-185 gusting to 205	Extremely Severe Cyclonic Storm
02.05.19/1800	18.2/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.2/85.5	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	20.9/86.5	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	22.8/88.0	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1800	24.8/89.4	65-75 gusting to 85	Cyclonic Storm
05.05.19/0600	26.3/90.8	40-50 gusting to 60	Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC OF 01ST MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. RAGGED EYE IS VISIBLE AS PER SATELLITE IMAGERY. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 13.0°N TO 17.0°N AND LONG 80.0°E TO 85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 2100 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 87.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1001.0 HPA, MEAN WIND DIRECTION 190°, MEAN WIND SPEED 19 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 86.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1001.1 HPA, , MEAN WIND DIRECTION 190°, MEAN WIND SPEED OF 16 KT.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GRETAER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH-ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

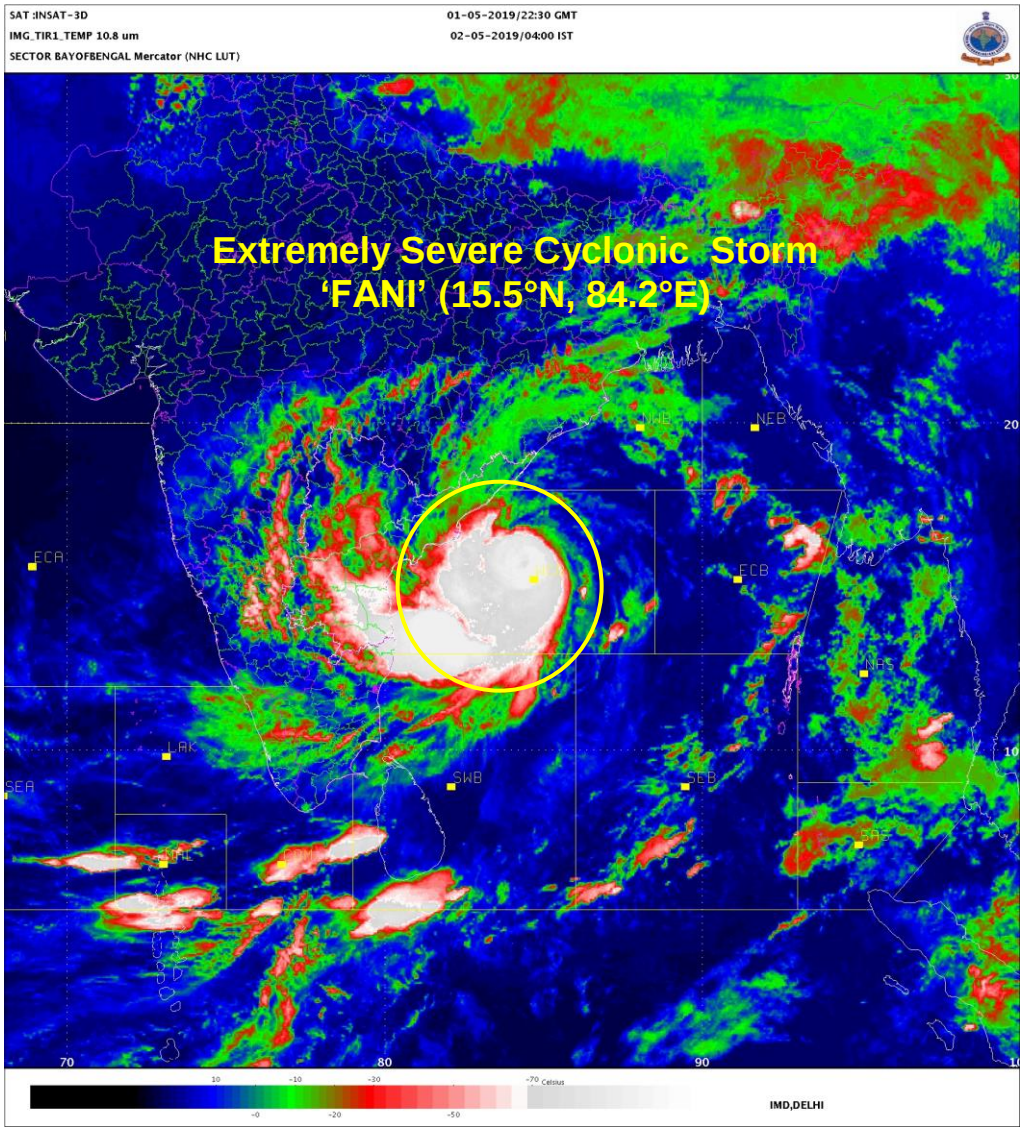
THE LOWER LEVEL POSITIVE VORTICITY INCREASED AND IS 300 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO FURTHER INTENSIFICATION OF THE SYSTEM AND IT IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE IS CAUSING RECURVATURE OF THE SYSTEM. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AND IS MOVING SLOW. IT WILL MOVE NORTH-NORTHEASTWARDS DURING NEXT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT.

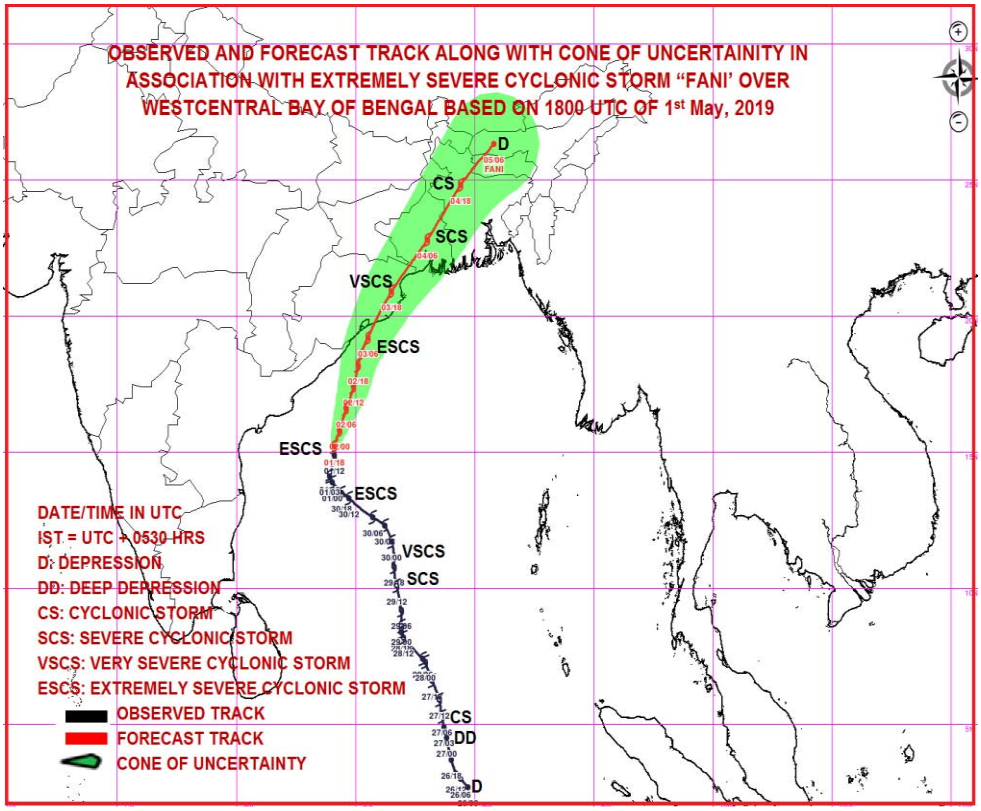
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

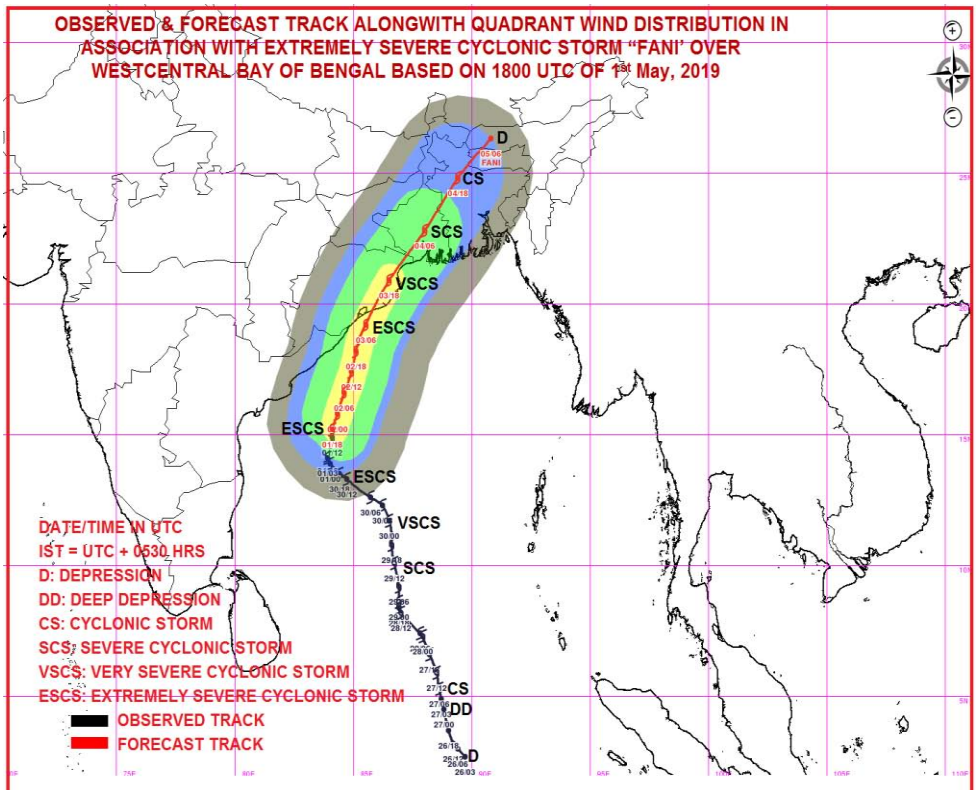
(D R PATTANAIK)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 39

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 39 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0300 UTC OF 02.05.2019 BASED ON 0000 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0000 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 15.9°N AND LONGITUDE 84.5°E, ABOUT 450 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 230 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 650 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **AROUND 0900 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.05.19/0000	15.9/84.5	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.8	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1800	18.2/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0000	19.2/85.4	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/1200	20.3/86.0	145-155 gusting to 170	Very Severe Cyclonic Storm
04.05.19/0000	22.1/87.3	110-120 gusting to 130	Severe Cyclonic Storm
04.05.19/1200	23.8/88.7	70-80 gusting to 90	Cyclonic Storm
05.05.19/0000	25.4/90.3	40-50 gusting to 60	Depression
05.05.19/1200	27.0/92.6	20-30 gusting to 40	Well Marked Low

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF

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

ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 14.0°N TO 17.0°N AND WEST OF LONG.85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT CHENNAI (43278), VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 0000 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1001.5 HPA, MEAN WIND DIRECTION 190°, MEAN WIND SPEED 20 KT. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1000.8 HPA, , MEAN WIND DIRECTION 200°, MEAN WIND SPEED OF 21 KT.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 FROM TOMORROW WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 48 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF NORTH ANDHRA PRADESH-ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

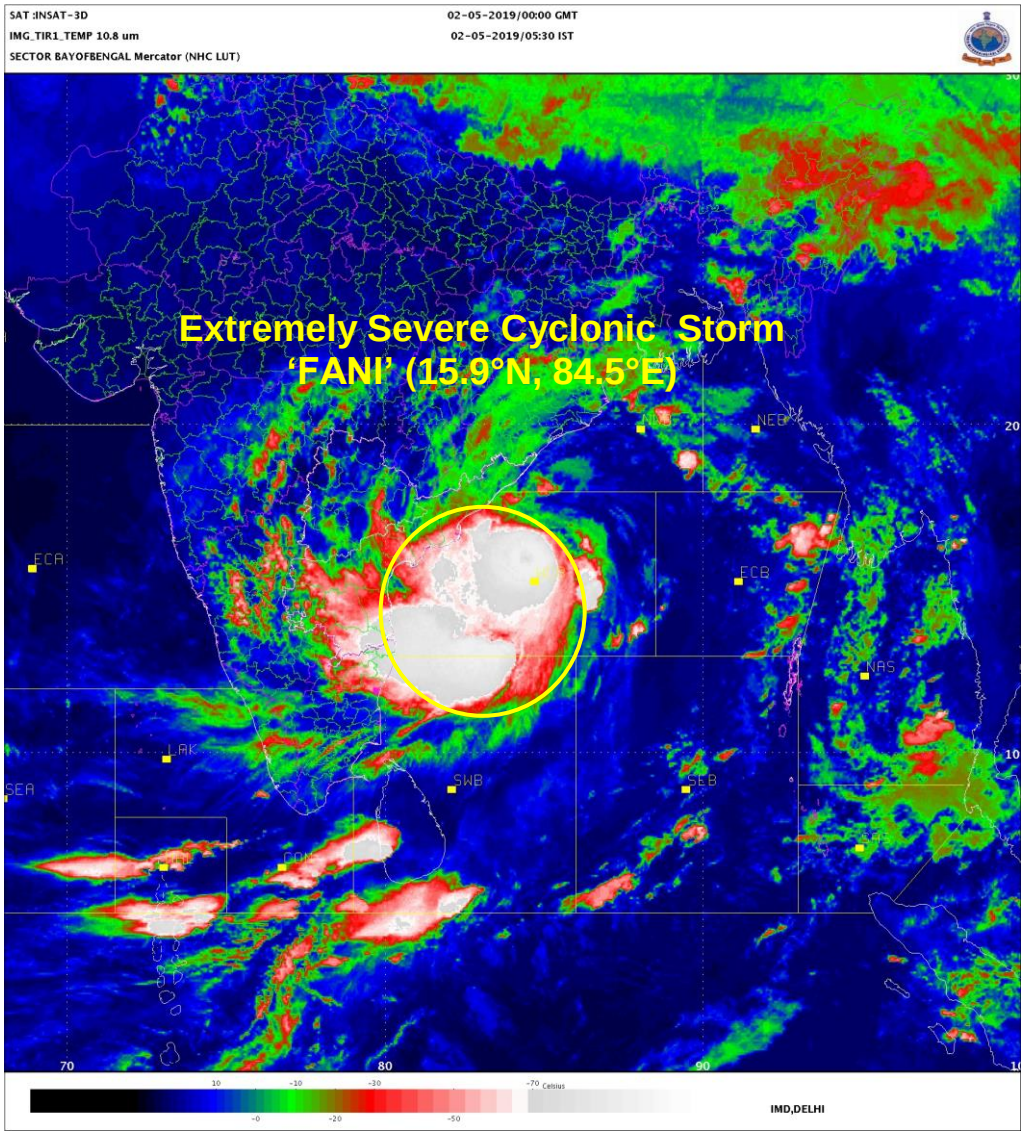
THE LOWER LEVEL POSITIVE VORTICITY IS 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 30 X10^{-5}SEC^{-1} AROUND THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} AROUND SOUTH WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS LEAD TO FURTHER INTENSIFICATION OF THE SYSTEM AND IT IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0000 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE IS CAUSING RECURVATURE OF THE SYSTEM. CURRENTLY THE SYSTEM IS IN THE PROCESS OF RECURVATURE AND IS MOVING SLOW. IT WILL MOVE NORTH-NORTHEASTWARDS DURING NEXT 72 HOURS. THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS WOULD ALSO STEER THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS VERY LIKELY TO INCREASE GRADUALLY DURING THE NORTH-NORTHEASTWARD MOVEMENT.

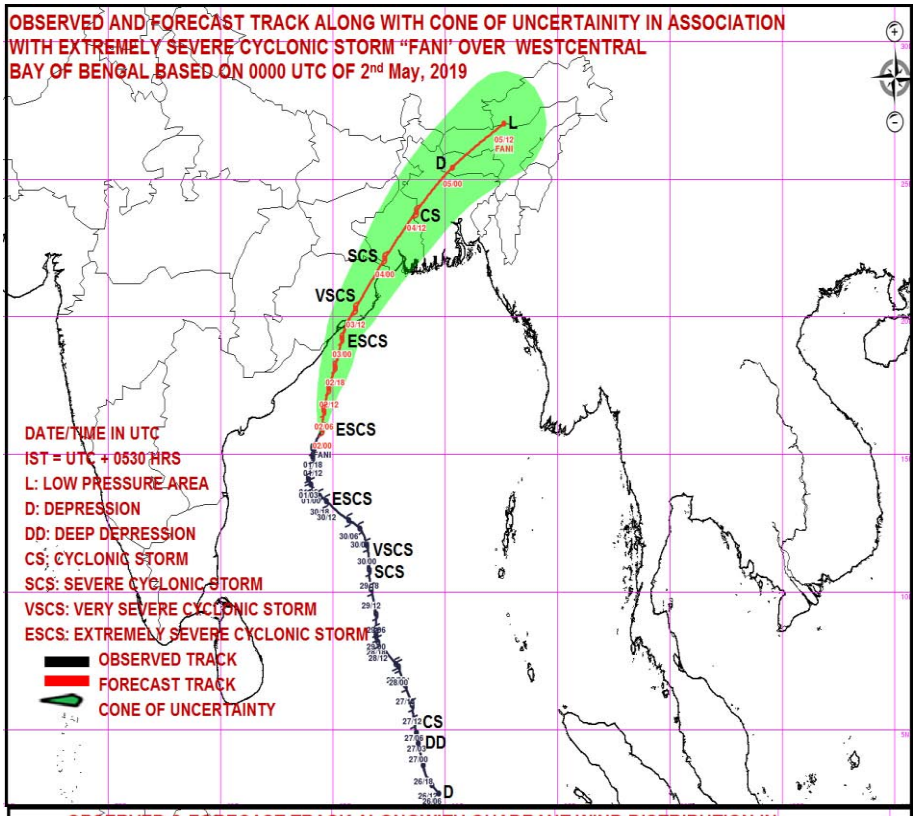
MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

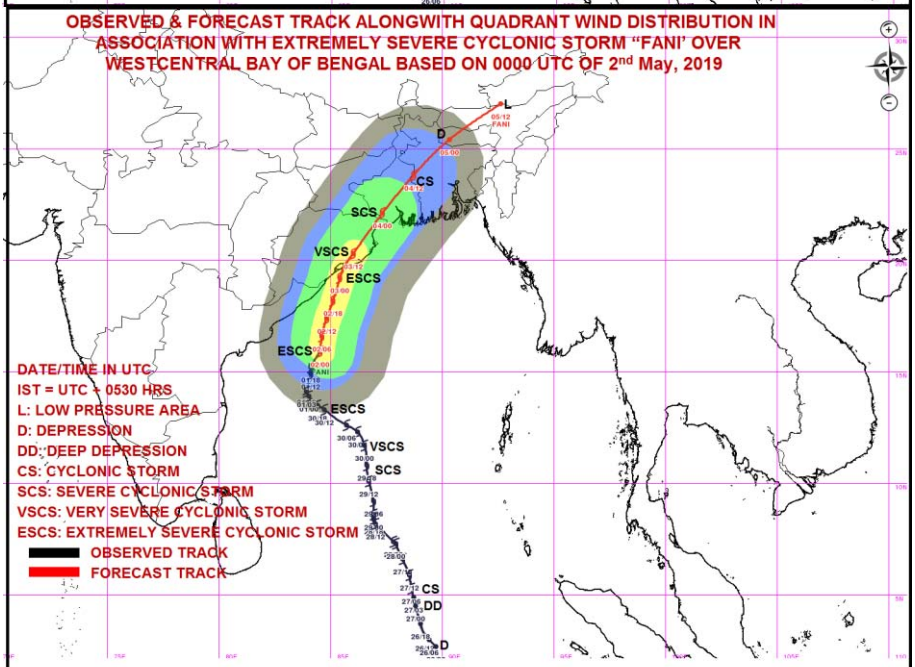
(D R PATTANAIK)
(SCIENTIST-E, RSMC, NEW DELHI)

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



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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 40

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 40 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0600 UTC OF 02.05.2019 BASED ON 0300 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 16.2°N AND LONGITUDE 84.6°E, ABOUT 420 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 210 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 610 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) **AROUND 0900 UTC OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

THE SYSTEM IS BEING TRACKED BY THE DOPPLER WEATHER RADARS AT VISAKHAPATNAM (43150), AND MACHILIPATNAM (43185).

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.05.19/0300	16.2/84.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0600	16.6/84.7	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1200	17.4/84.9	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1800	18.2/85.1	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0000	18.9/85.4	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.6/85.7	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/1800	21.2/86.6	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	22.9/88.0	90-100 gusting to 115	Severe Cyclonic Storm
04.05.19/1800	24.6/89.3	50-60 gusting to 70	Deep Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. RAGGED EYE IS VISIBLE. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 15.0°N TO 17.0°N AND WEST OF LONG.85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 0300 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.2 HPA. ANOTHER BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.8 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

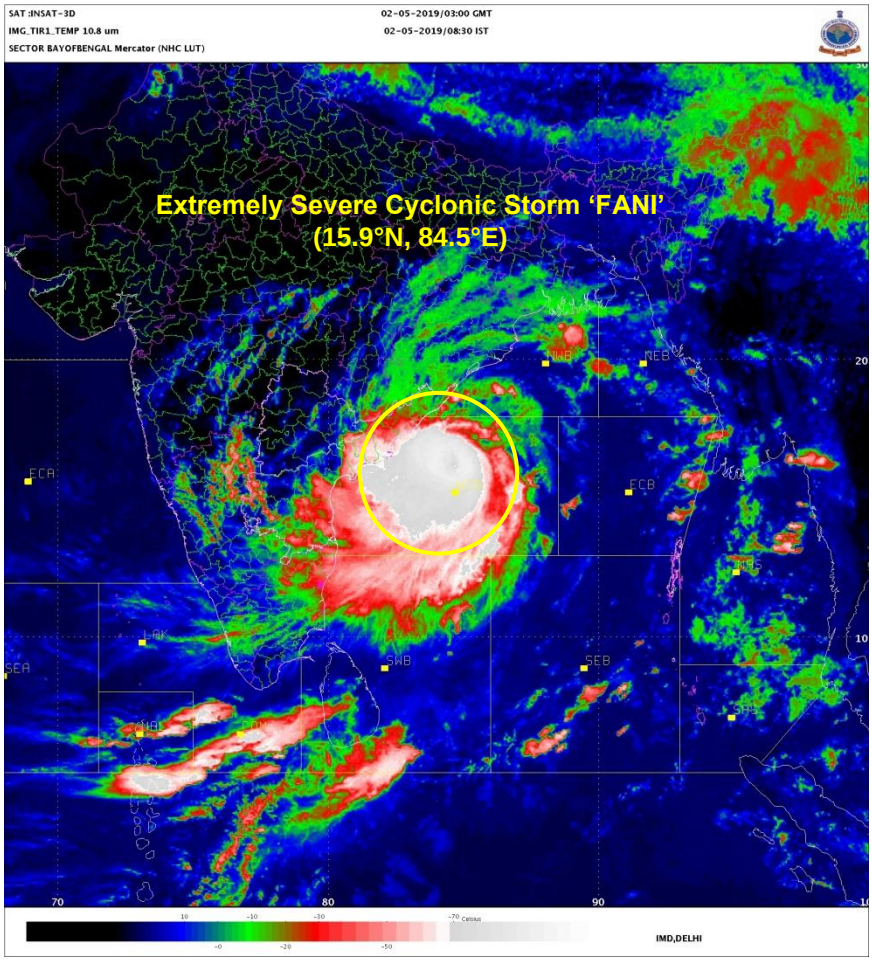
THE LOWER LEVEL POSITIVE VORTICITY IS 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND SOUTH WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER.

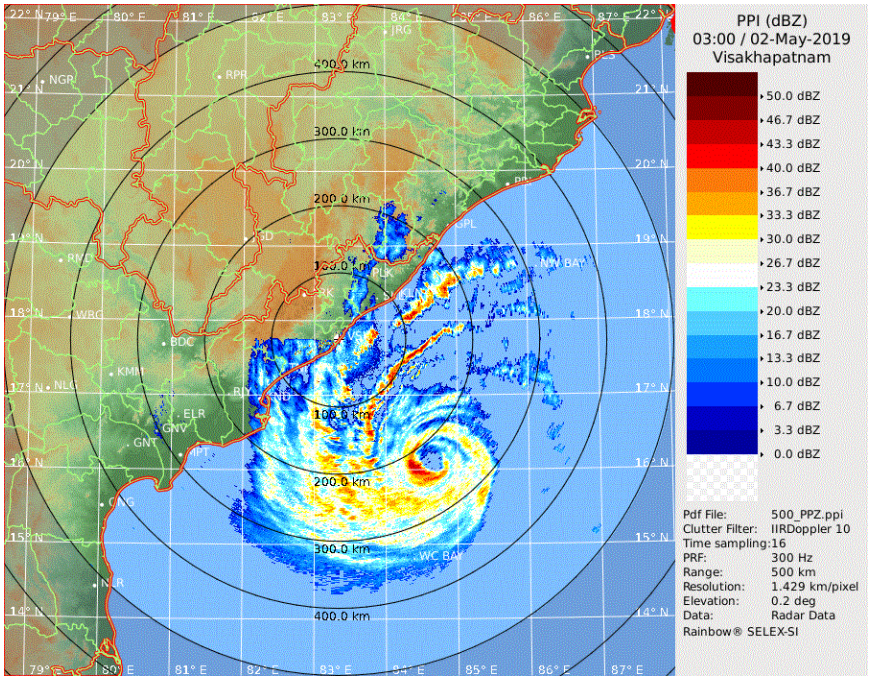
POSITION OF A WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS IS STEERING THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS INCREASING GRADUALLY.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

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

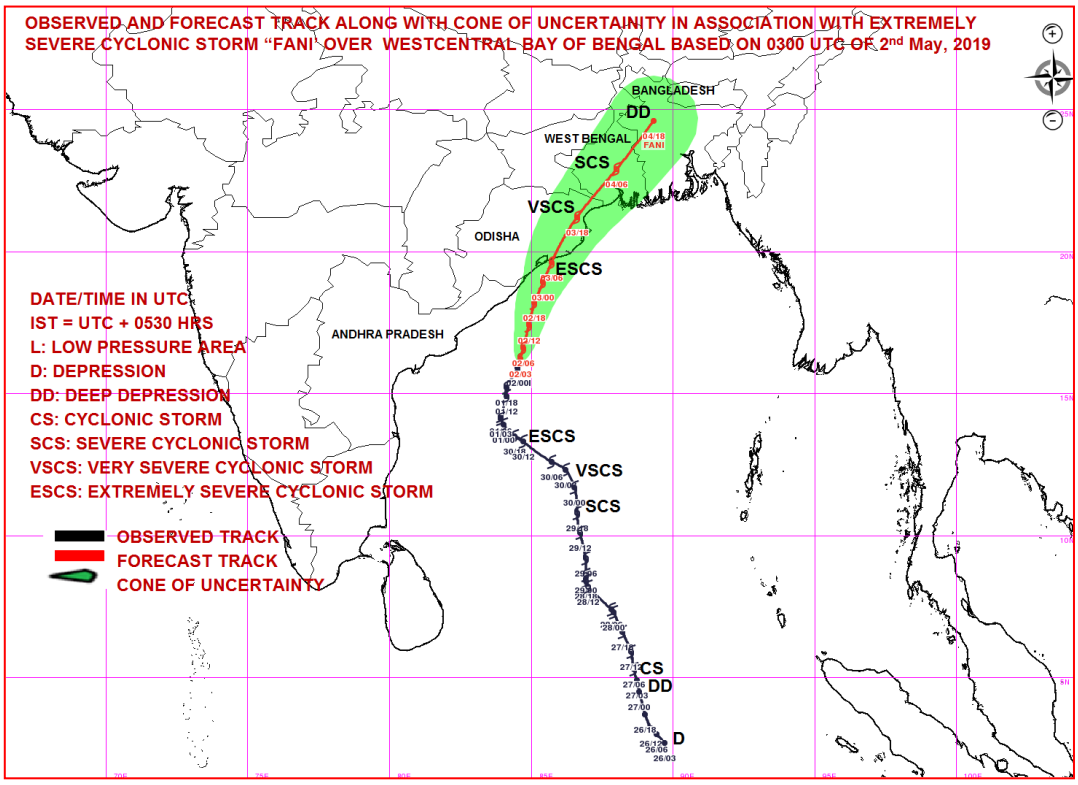
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

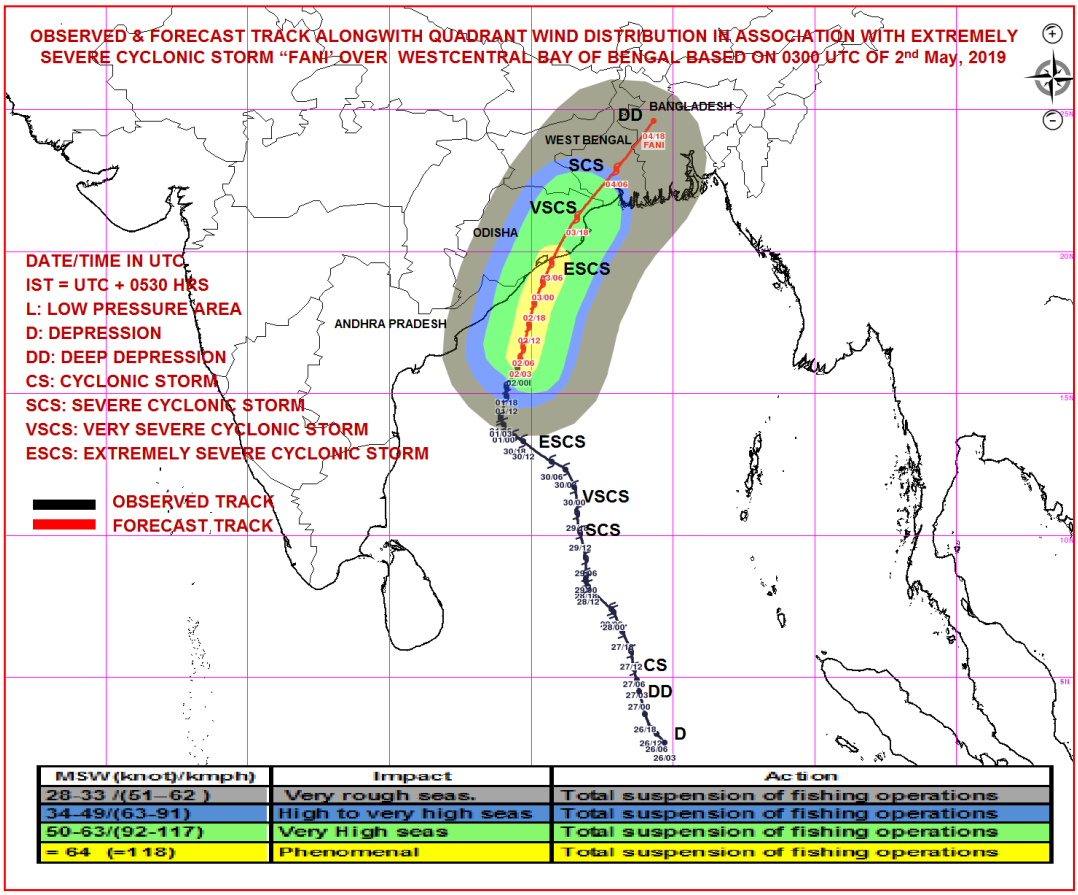




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 41

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 41 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0900 UTC OF 02.05.2019 BASED ON 0600 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0600 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 16.7°N AND LONGITUDE 84.8°E, ABOUT 360 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 190 KM SOUTH-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 550 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). **IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR (43049) AND CHANDBALI (42973), AROUND PURI** (43053) BETWEEN 0600-0900 UTC **OF 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM & MACHILIPATNAM.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic disturbance
02.05.19/0600	16.7/84.8	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1200	17.5/85.0	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1800	18.3/85.2	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0000	19.0/85.5	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.7/85.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	21.3/86.7	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	23.0/88.1	90-100 gusting to 115	Severe Cyclonic Storm
04.05.19/1800	24.7/89.4	50-60 gusting to 70	Deep Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 5.5. EYE IS VISIBLE IN SATELLITE IMAGERY. DWR GOPLAPUR INDICTAE CIRCULAR EYE WITH A DIAMETER OF 28 KM AND DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 26 KM. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 15.0°N TO 17.0°N AND WEST OF LONG.85.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 958 HPA.

AT 0300 UTC OF TODAY, A BUOY (23092) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.5 HPA AND MEAN SURFACE WIND DIRECTION 180° AND WIND SPEED 18 KNOTS. ANOTHER BUOY (23093) LOCATED NEAR LAT. 16.2°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.2 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

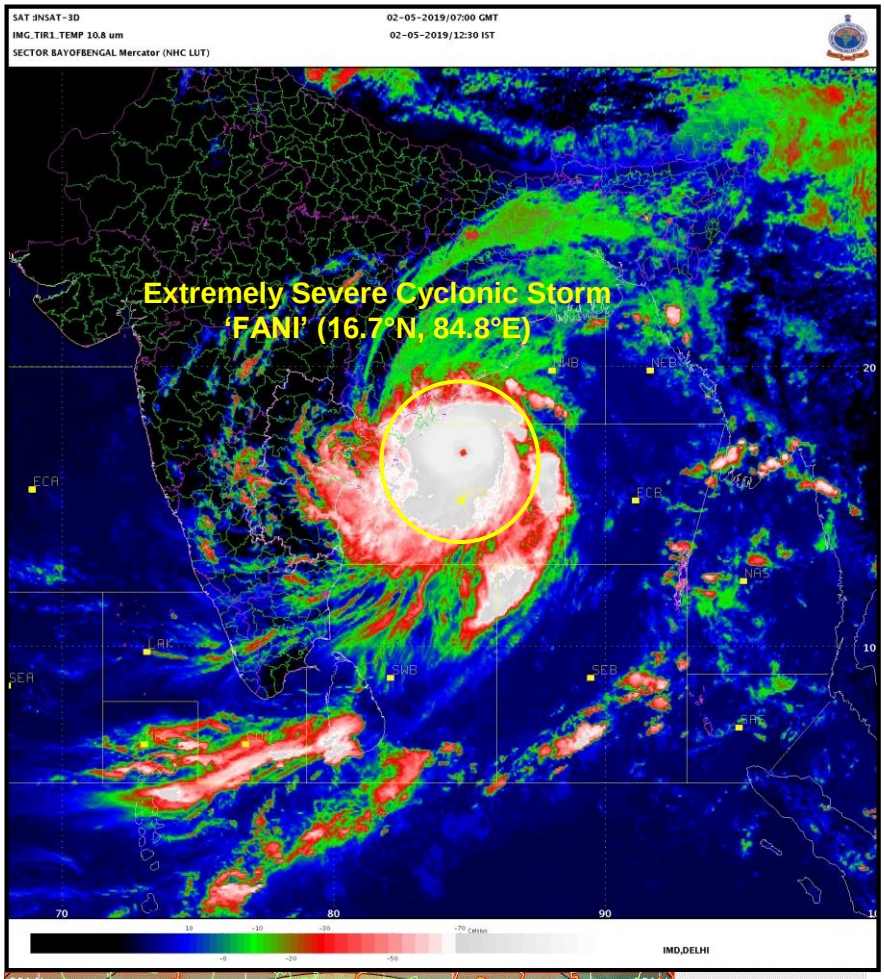
THE LOWER LEVEL POSITIVE VORTICITY IS 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE ALSO INCREASED AND IS ABOUT 50 X10^{-5}SEC^{-1} AROUND SOUTH WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

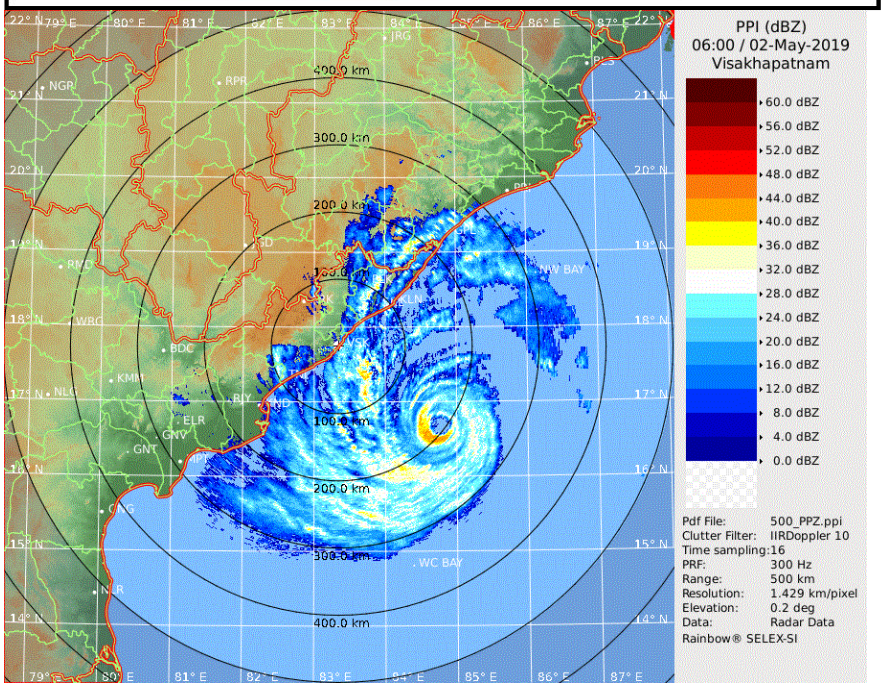
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS INCREASING GRADUALLY.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

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

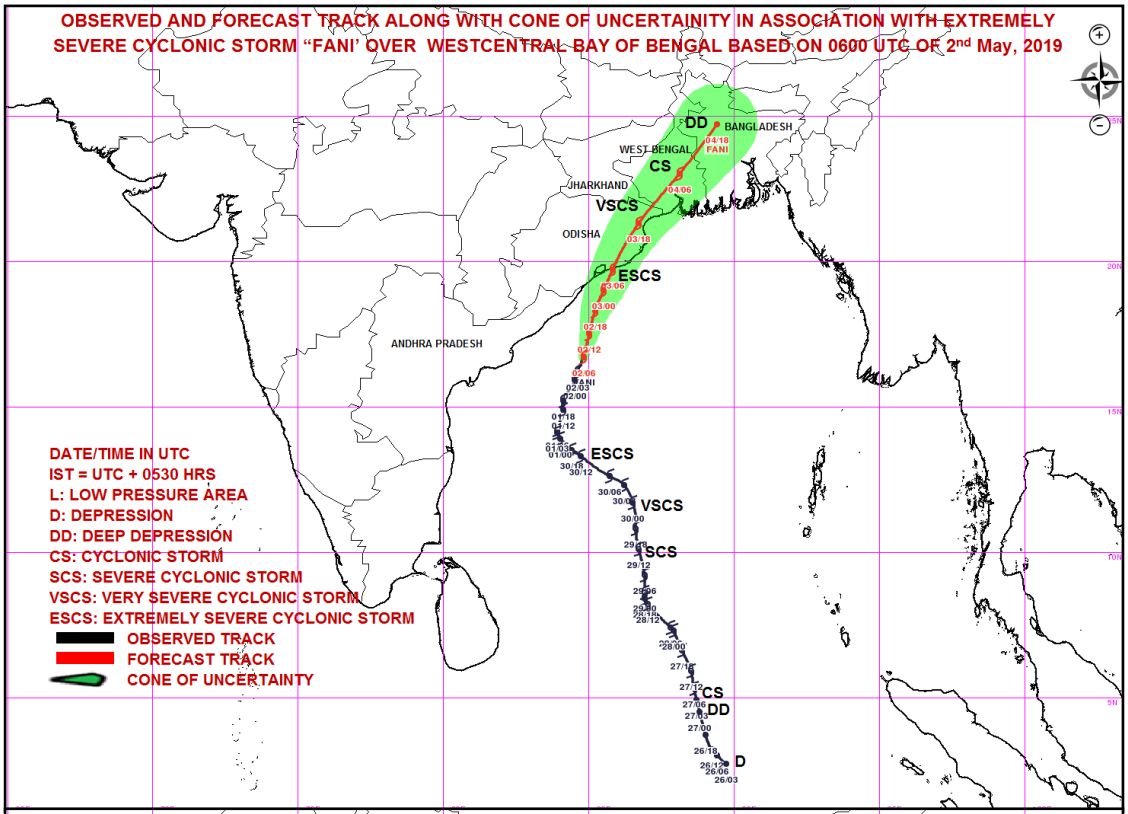
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

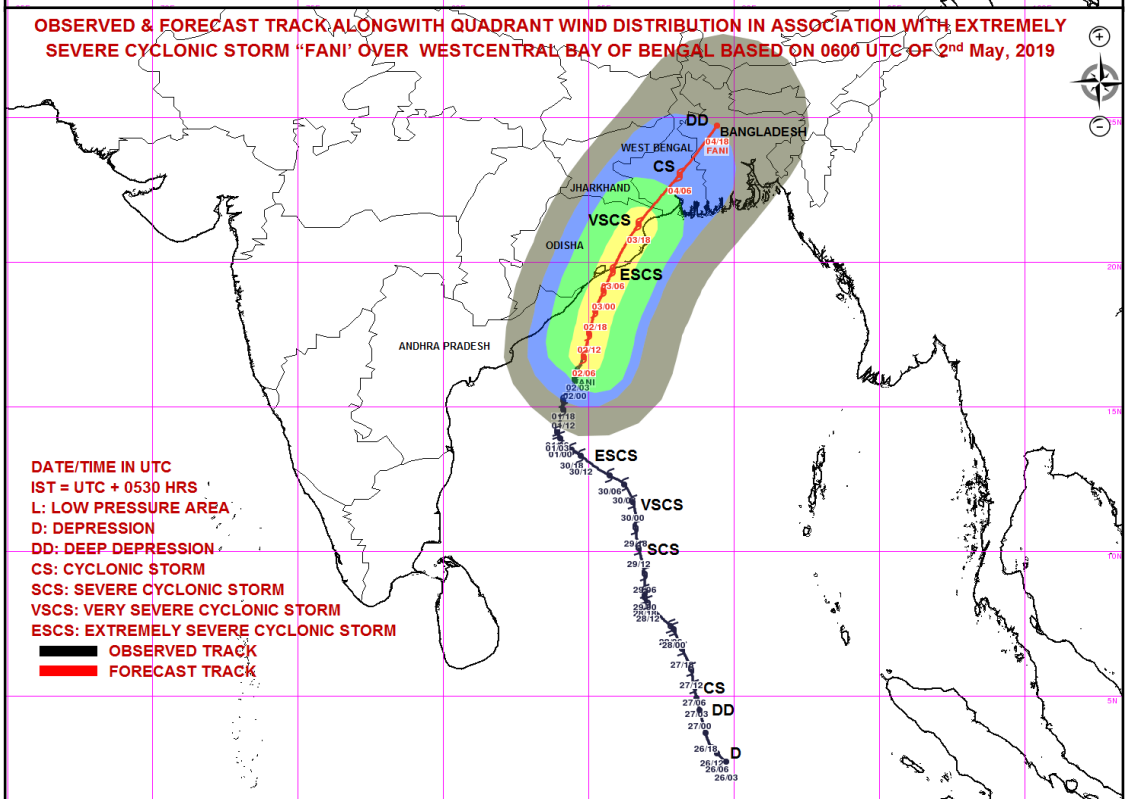




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 42

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 42 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1200 UTC OF 02.05.2019 BASED ON 0900 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 17 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 17.1°N AND LONGITUDE 84.8°E, ABOUT 320 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 170 KM EAST-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 610 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR **(43049)** AND CHANDBALI **(42973)**, AROUND PURI (43053) DURING 0300-0600 UTC TOMORROW THE 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL 0900 UTC OF TOMORROW THE 3RD MAY.

AFTER THE LANDFALL THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND ENTER INTO WEST BENGAL AS A SEVERE CYCLONIC STORM WITH A WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH APRIL EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM & MACHILIPATNAM.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(IST)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
02.05.19/0900	17.1/84.8	190-200 gusting to 220	Extremely Severe Cyclonic Storm
02.05.19/1200	17.5/85.0	190-200 gusting to 220	Extremely Severe Cyclonic Storm
02.05.19/1800	18.3/85.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm
03.05.19/0000	19.0/85.5	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	19.8/85.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1800	21.3/86.7	130-140 gusting to 155	Very Severe Cyclonic Storm
04.05.19/0600	23.0/88.1	90-100 gusting to 115	Severe Cyclonic Storm
04.05.19/1800	24.7/89.4	50-60 gusting to 70	Deep Depression
05.05.19/0600	26.3/90.8	20-30 gusting to 40	Well Marked Low Pressure Area

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE IS VISIBLE IN SATELLITE IMAGERY. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 15.5°N TO 19.0°N TO THE WEST OF LONG.86.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR GOPLAPUR INDICTAE CIRCULAR EYE WITH A DIAMETER OF 25 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 29 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 115 KNOTS GUSTING TO 125 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 939 HPA.

AT 0900 UTC OF TODAY, A BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003 HPA AND MEAN SURFACE WIND DIRECTION 210° AND WIND SPEED 20 KNOTS. ANOTHER BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.4 HPA. YET ANOTHER BUOY (23092) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA AND MEAN SURFACE WIND DIRECTION 180° AND WIND SPEED 20 KNOTS

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

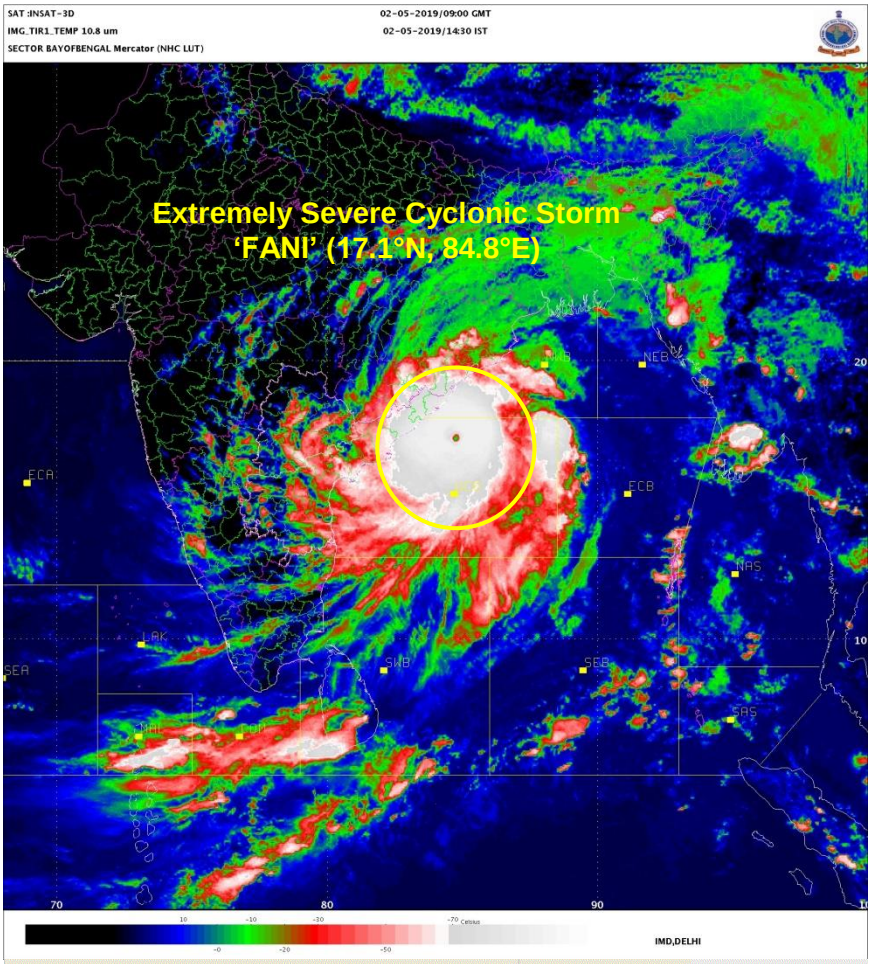
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS FURTHER INCREASED AND IS ABOUT 60 X10^{-5}SEC^{-1} AROUND THE SOUTH OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS DECREASED AND IS ABOUT 20 X10^{-5}SEC^{-1} TO THE SOUTH WEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) TO THE SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

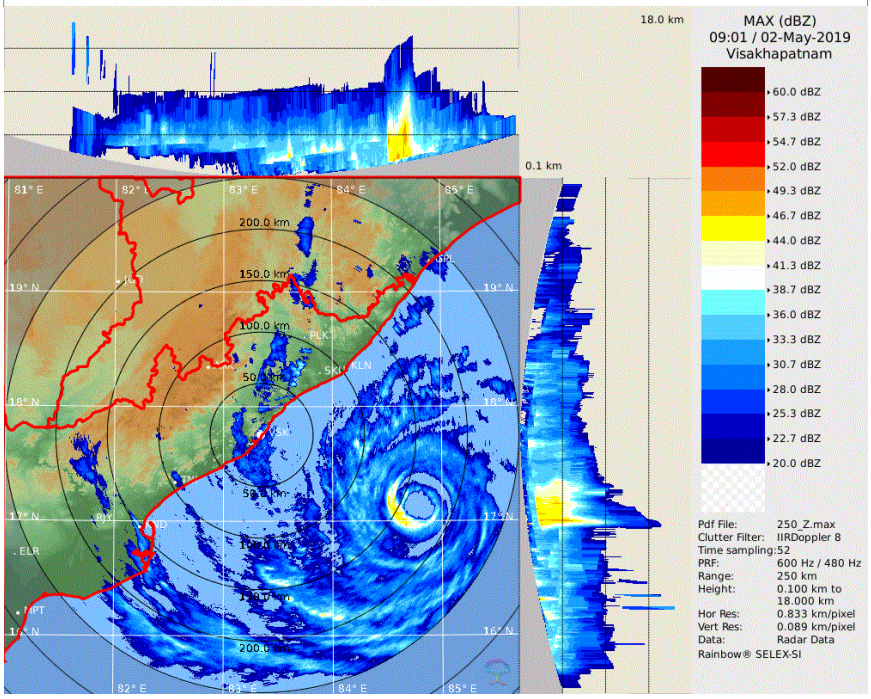
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS INCREASING GRADUALLY.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

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

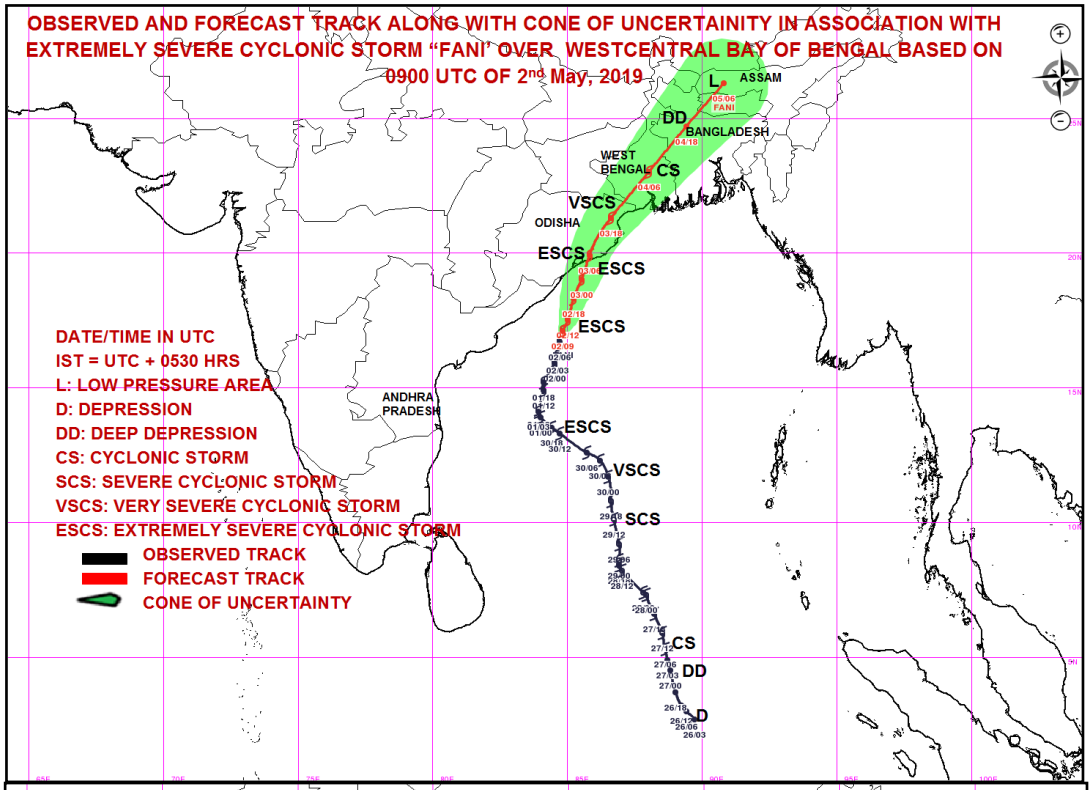
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

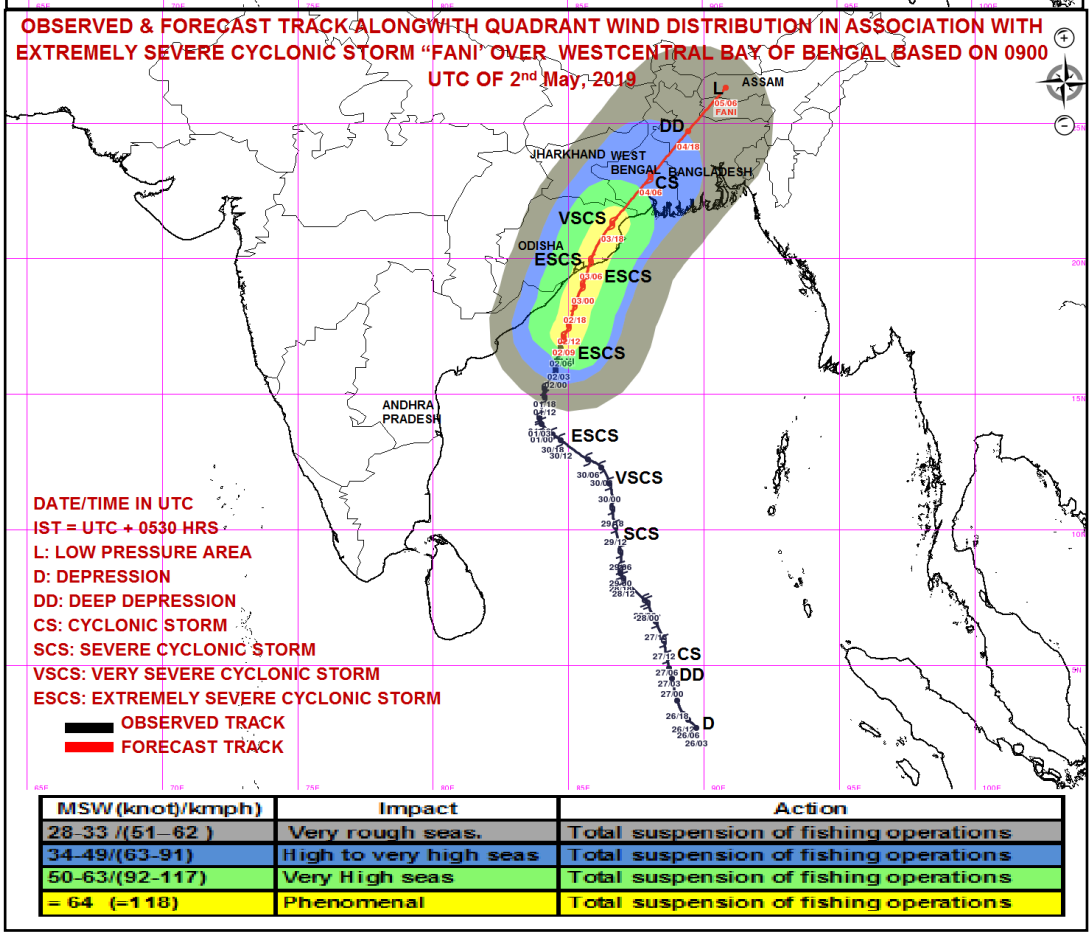




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 43

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 43 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1500 UTC OF 02.05.2019 BASED ON 1200 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWARDS WITH A SPEED OF ABOUT 15 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 17.5°N AND LONGITUDE 84.8°E, ABOUT 275 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 160 KM EAST-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 570 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR **(43049)** AND CHANDBALI **(42973)**, SOUTH OF PURI (43053) DURING 0300-0600 UTC TOMORROW THE 3RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL 0900 UTC OF TOMORROW THE 3RD MAY.

AFTER THE LANDFALL THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM & MACHILIPATNAM.
FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
02.05.19/1200	17.5/84.8	200-210 gusting to 230	Extremely Severe Cyclonic Storm
02.05.19/1800	18.3/85.0	190-200 gusting to 220	Extremely Severe Cyclonic Storm
03.05.19/0000	19.0/85.3	180-190 gusting to 210	Extremely Severe Cyclonic Storm
03.05.19/0600	19.9/85.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.6/86.1	150-160 gusting to 175	Very Severe Cyclonic Storm
04.05.19/0000	22.1/87.3	100-110 gusting to 125	Severe Cyclonic Storm
04.05.19/1200	23.8/88.7	60-70 gusting to 80	Cyclonic Storm
05.05.19/0000	25.5/90.1	40-50 gusting to 60	Depression
05.05.19/1200	27.1/91.5	20-30 gusting to 40	Well Marked Low

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE WITH A DIAMETER OF ABOUT 20 KMS IS VISIBLE IN SATELLITE IMAGERY. DT IS 6.0. PT AND MET ALSO AGREE WITH THIS. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 16.2°N TO 19.4°N TO THE WEST OF LONG.86.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR MACHILIPATNAM INDICTAE CIRCULAR EYE WITH A DIAMETER OF 24 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 30 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 105 KNOTS GUSTING TO 115 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 937 HPA.

AT 1200 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1001.9 HPA AND MEAN SURFACE WIND DIRECTION 190° AND WIND SPEED 17 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 17.4°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.8 HPA AND MEAN SURFACE WIND DIRECTION 210° AND WIND SPEED 18 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

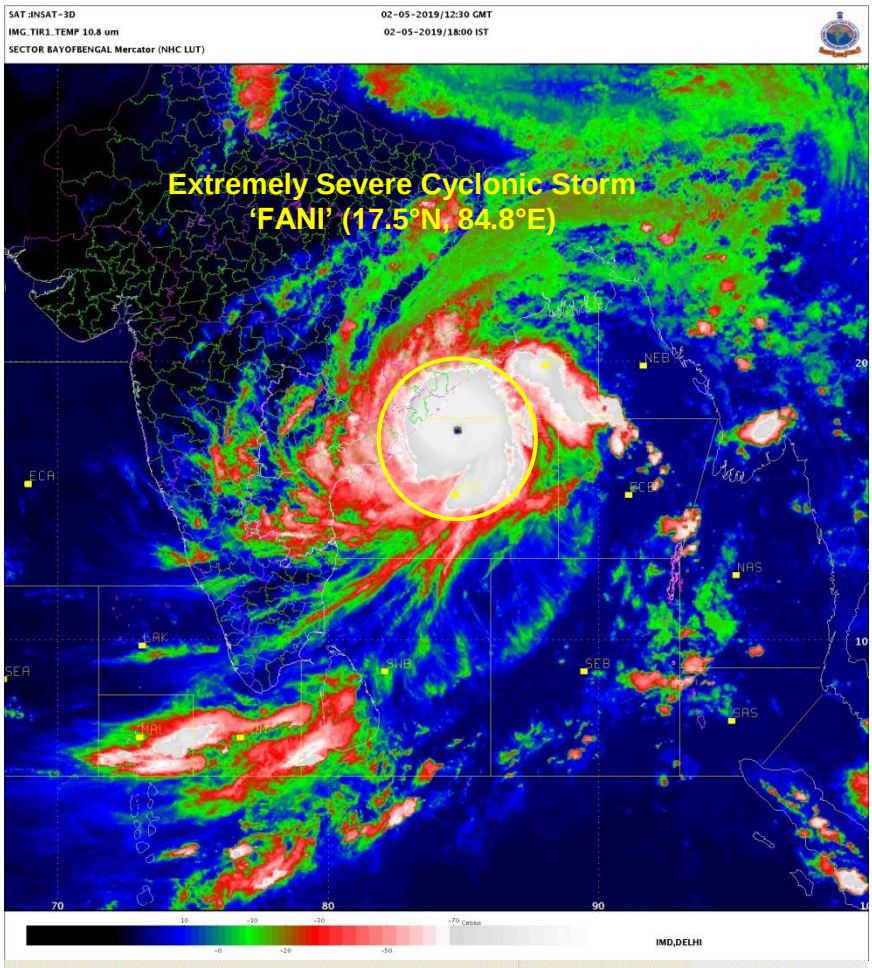
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) TO THE SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

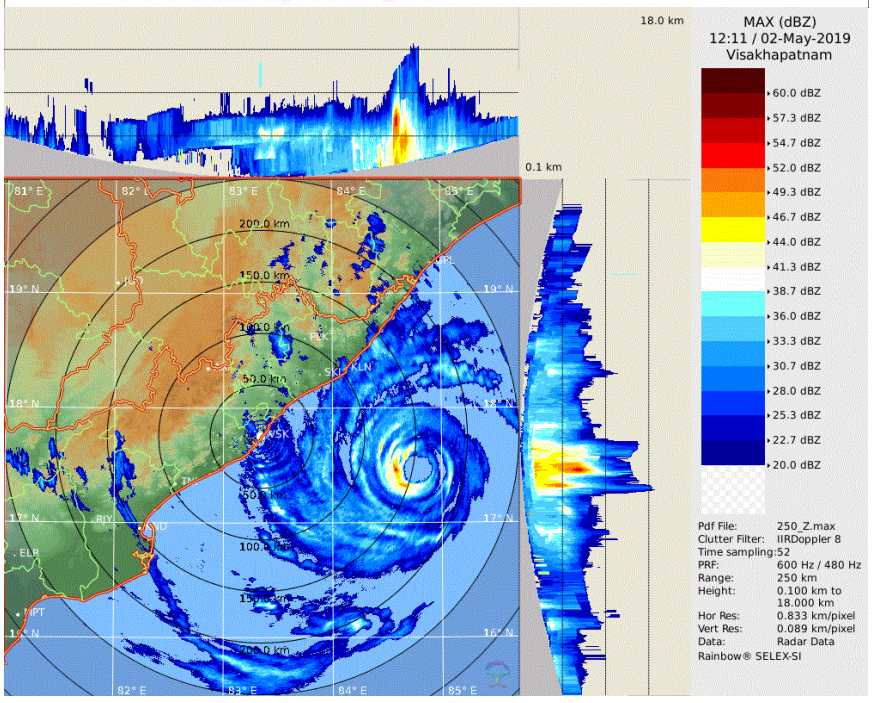
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS INCREASING GRADUALLY.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

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

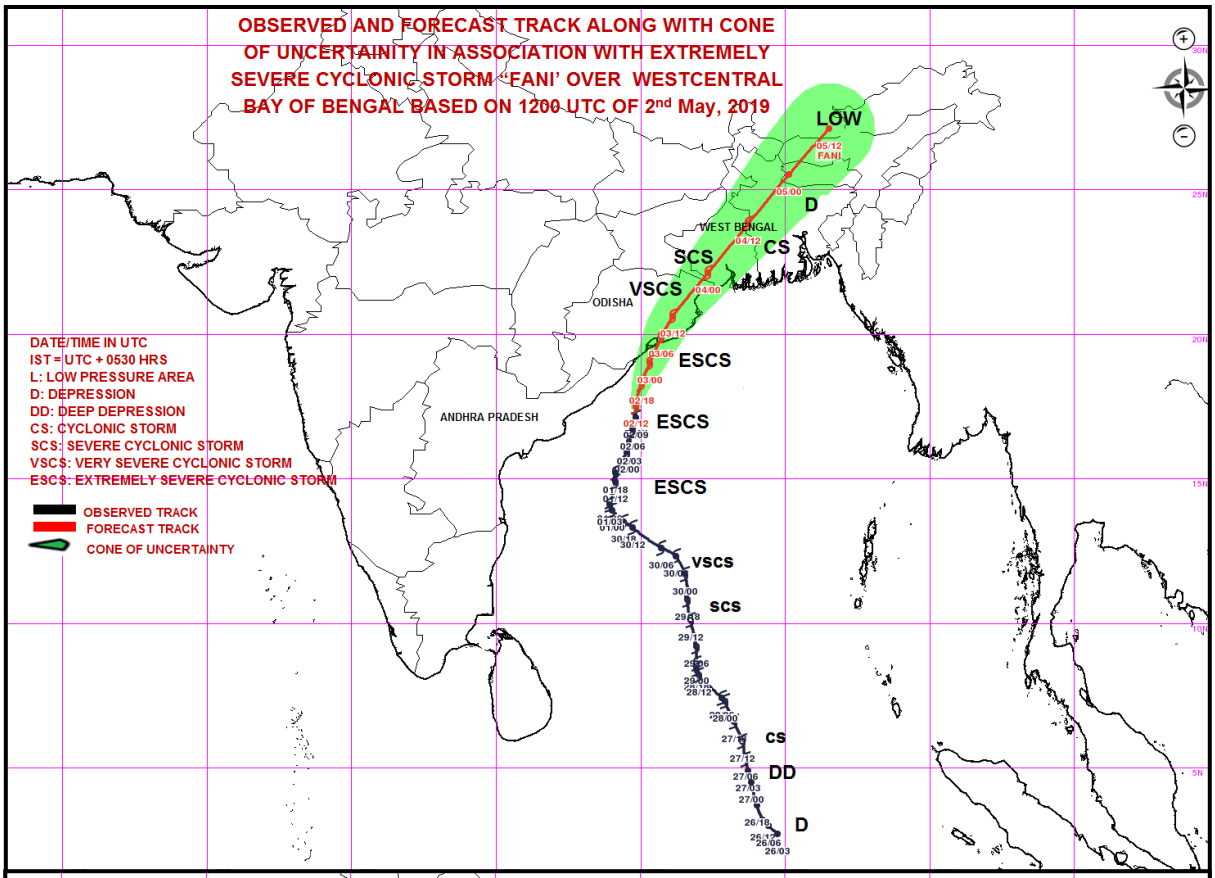
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

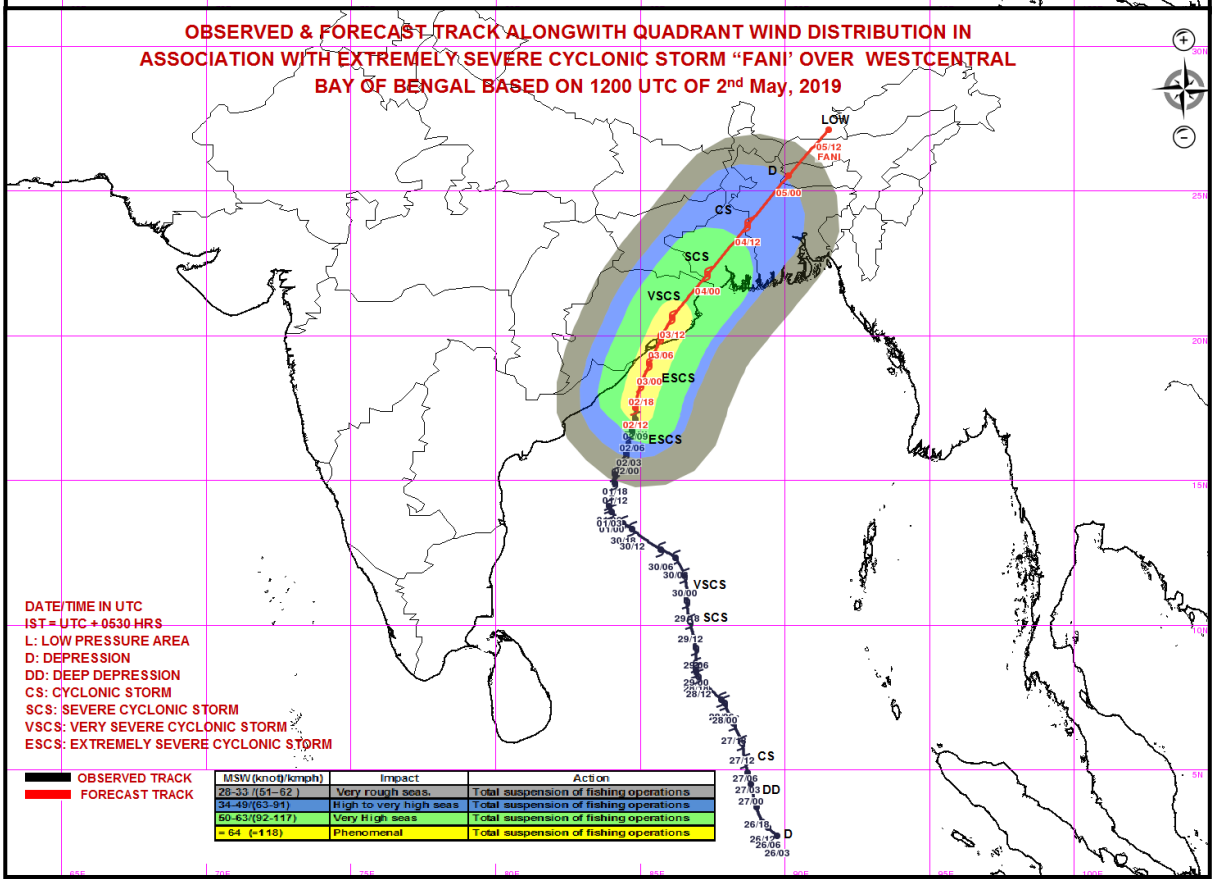




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 44

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 44 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 1730 UTC OF 02.05.2019 BASED ON 1500 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTHWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1500 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL NEAR LATITUDE 17.8°N AND LONGITUDE 84.9°E, ABOUT 240 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 170 KM EAST-SOUTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 540 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR **(43049)** AND CHANDBALI **(42973)**, SOUTH OF PURI (43053) DURING 0300-0600 UTC TOMORROW THE 03RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL 0900 UTC OF TOMORROW THE 3RD MAY.

AFTER THE LANDFALL THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 04TH. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 04TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM & MACHILIPATNAM.
FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of Cyclonic Disturbance
02.05.19/1500	17.8/84.9	210-220 gusting to 240	Extremely Severe Cyclonic Storm
02.05.19/1800	18.3/85.0	200-210 gusting to 230	Extremely Severe Cyclonic Storm
03.05.19/0000	19.0/85.3	190-200 gusting to 220	Extremely Severe Cyclonic Storm
03.05.19/0600	19.9/85.7	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.6/86.1	150-160 gusting to 175	Very Severe Cyclonic Storm
04.05.19/0000	22.1/87.3	100-110 gusting to 125	Severe Cyclonic Storm
04.05.19/1200	23.8/88.7	60-70 gusting to 80	Cyclonic Storm
05.05.19/0000	25.5/90.1	40-50 gusting to 60	Depression
05.05.19/1200	27.1/91.5	20-30 gusting to 40	Well Marked Low

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE WITH A DIAMETER OF ABOUT 20 KMS IS VISIBLE IN SATELLITE IMAGERY. DT IS 6.0. PT AND MET ALSO AGREE WITH THIS. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 16.2°N TO 19.4°N TO THE WEST OF LONG.86.5 °E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR MACHILIPATNAM INDICTAE CIRCULAR EYE WITH A DIAMETER OF 24 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 30 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 115 KNOTS GUSTING TO 130 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 937 HPA.

AT 1500 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.7 HPA AND MEAN SURFACE WIND DIRECTION 210° AND WIND SPEED 18 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 17.4°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1005.2 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

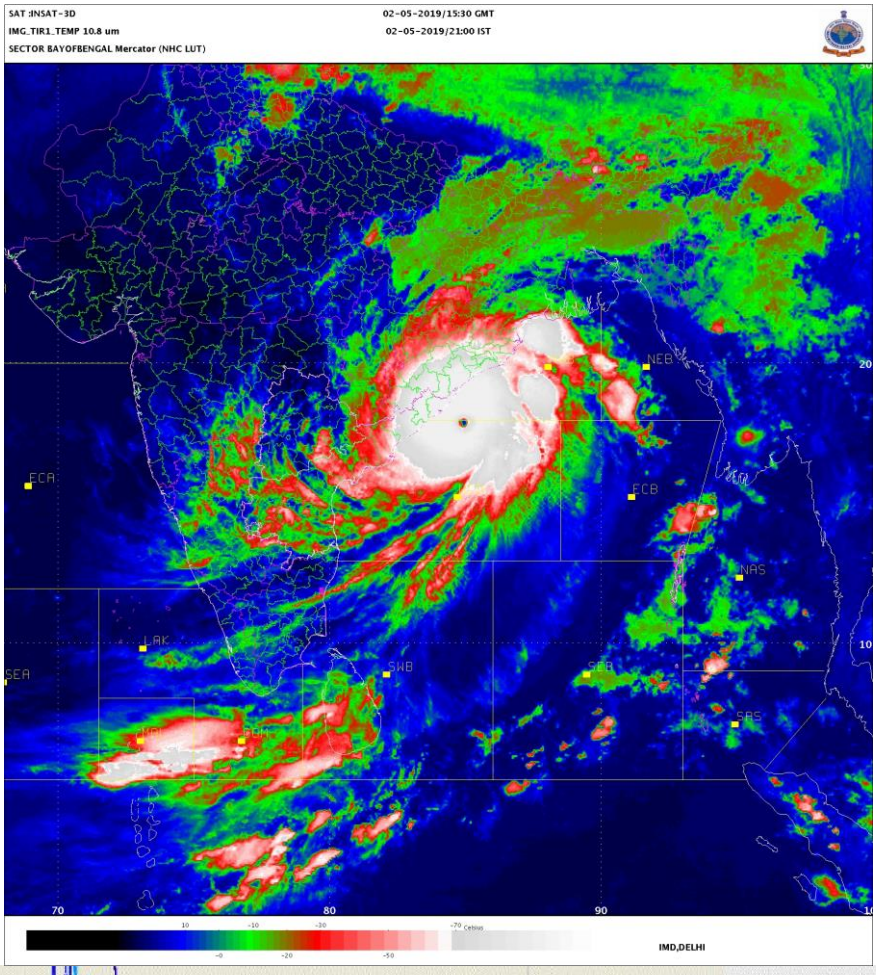
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) TO THE SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

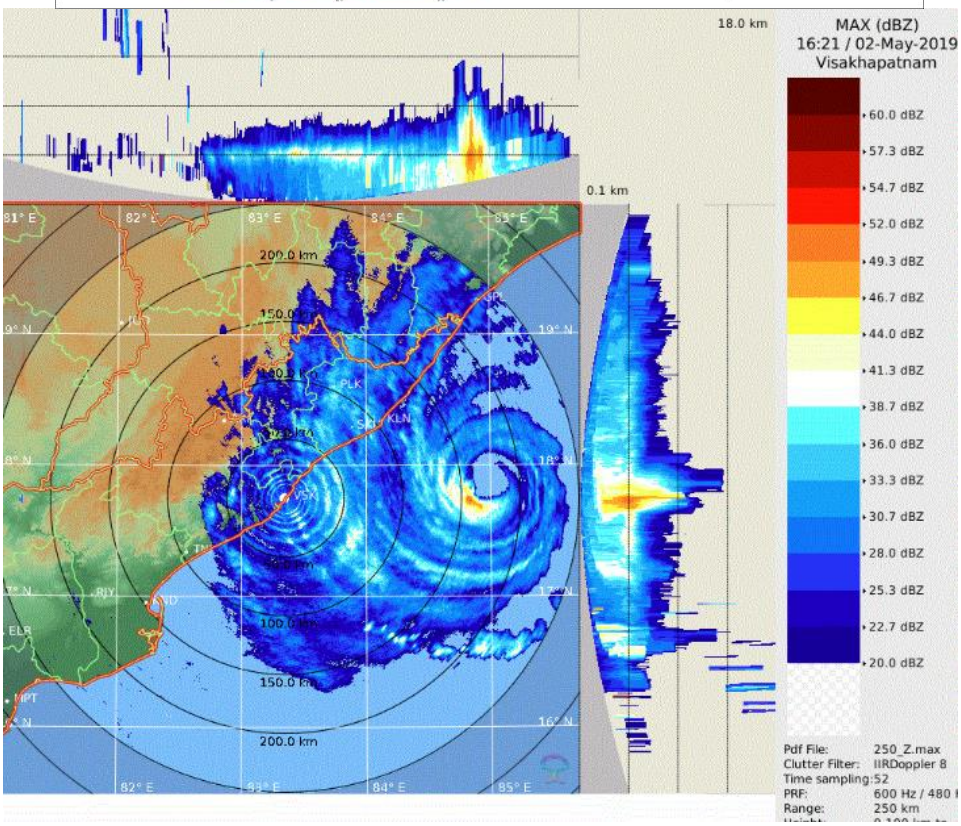
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. DUE TO COMBINED IMPACT OF THESE TWO STEERING FORCES THE SPEED OF MOVEMENT OF THE SYSTEM IS INCREASING GRADUALLY.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
(SCIENTIST-E, RSMC, NEW DELHI)

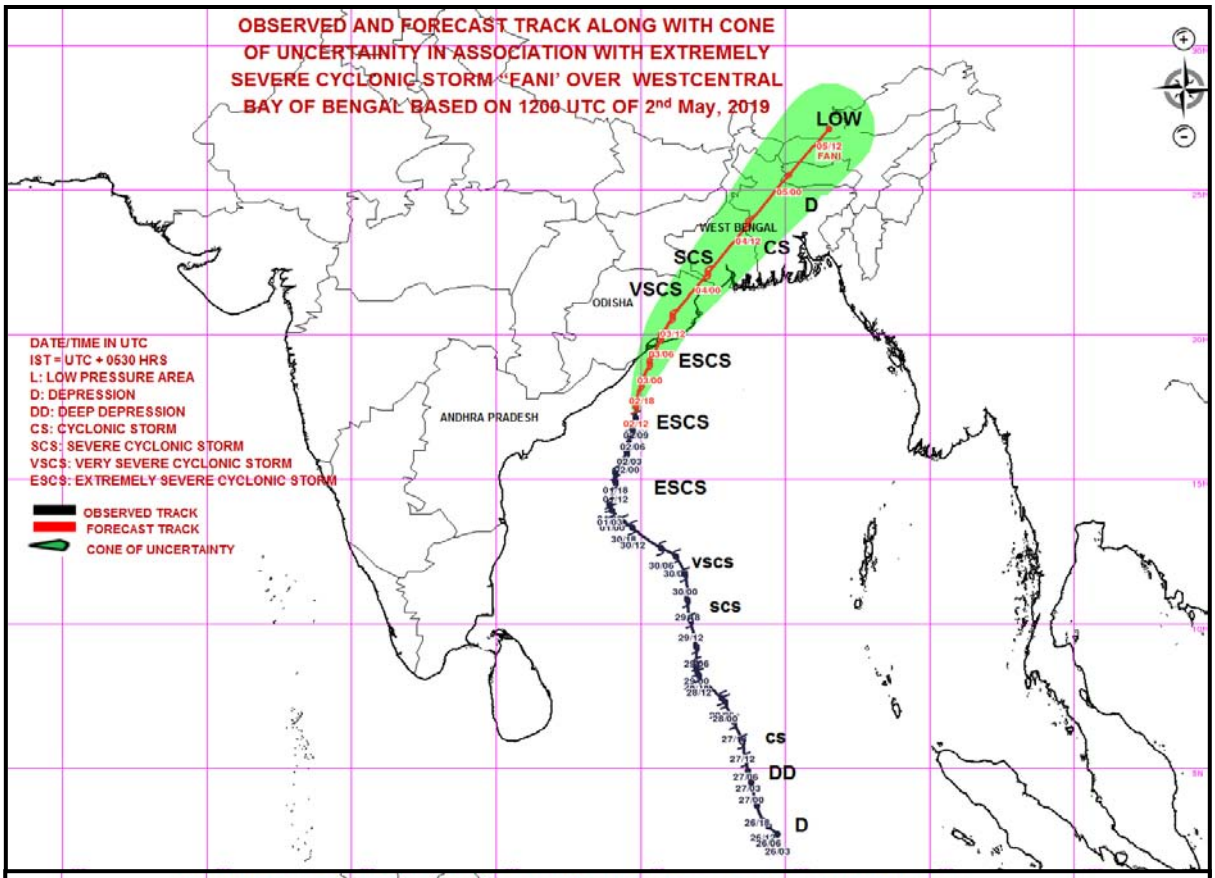
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

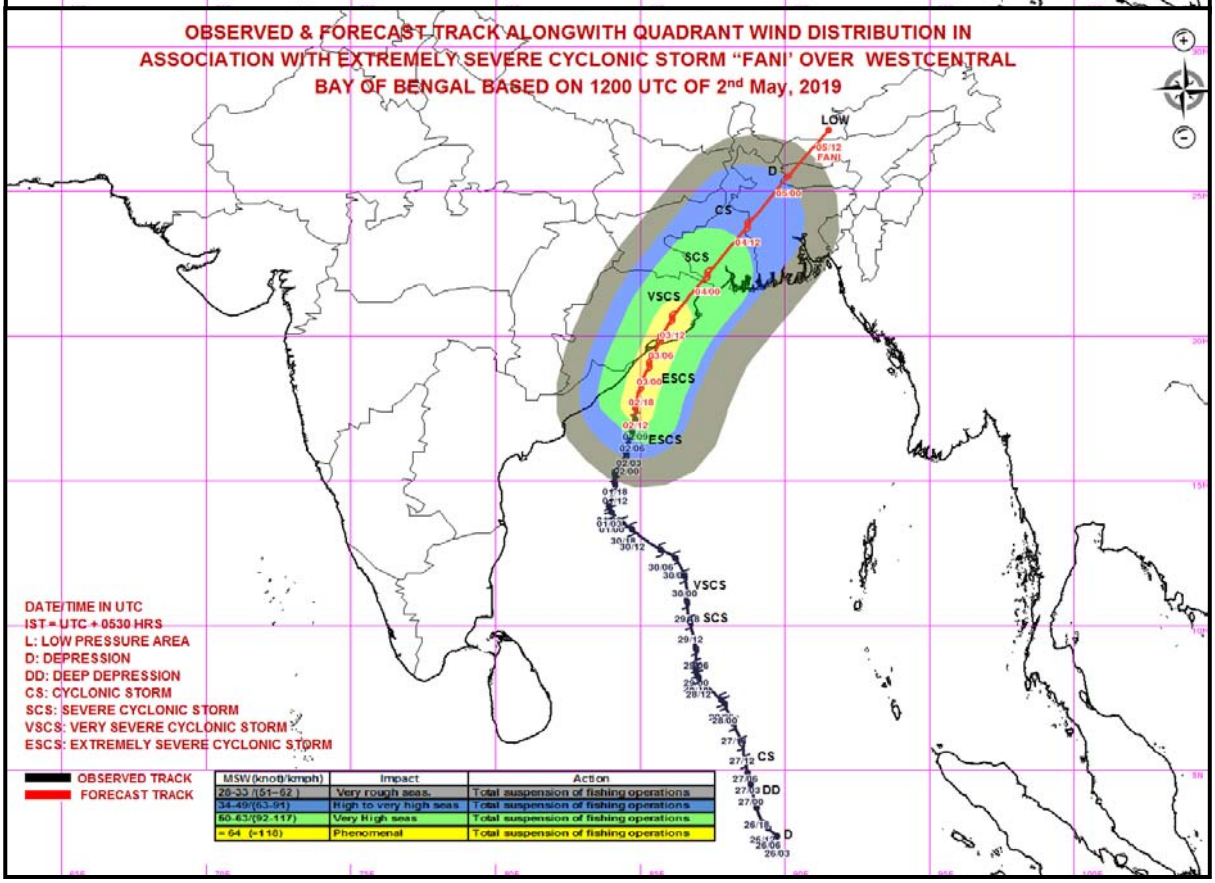




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 45

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 45 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2100 UTC OF 02.05.2019 BASED ON 1800 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 13 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 UTC OF 02ND MAY, 2019 OVER WESTCENTRAL & ADJOINING NORTHWEST BAY OF BENGAL NEAR LATITUDE 18.2°N AND LONGITUDE 85.0°E, ABOUT 200 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), 190 KM NEARLY EAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH) AND 500 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL). IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR **(43049)** AND CHANDBALI **(42973)**, SOUTH OF PURI (43053) DURING 0300-0600 UTC OF 03RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL 0900 UTC OF 3RD MAY.

AFTER THE LANDFALL THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 04TH. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 04TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM, GOPALPUR & MACHILIPATNAM.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(IST)	POSITION (LAT. ^{0}N/ LONG. ^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
02.05.19/1800	18.2/85.0	200-210 GUSTING TO 230	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0000	19.0/85.3	190-200 GUSTING TO 220	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/0600	19.9/85.7	170-180 GUSTING TO 200	EXTREMELY SEVERE CYCLONIC STORM
03.05.19/1200	20.6/86.1	150-160 GUSTING TO 175	VERY SEVERE CYCLONIC STORM
03.05.19/1800	21.3/86.7	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04.05.19/0600	22.9/88.0	70-80 GUSTING TO 90	CYCLONIC STORM
04.05.19/1800	24.6/89.3	50-60 GUSTING TO 70	DEEP DEPRESSION
05.05.19/0600	26.2/90.6	30-40 GUSTING TO 50	WELL MARKED LOW

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1800 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE WITH A DIAMETER OF ABOUT 30 KMS IS VISIBLE IN SATELLITE IMAGERY. DT IS 6.0. PT AND MET ALSO AGREE WITH THIS. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 16.3°N TO 20.0°N TO THE WEST OF LONG.86.1°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR GOPALPUR INDICTAE CIRCULAR EYE WITH A DIAMETER OF 30 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 38 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 115 KNOTS GUSTING TO 130 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 937 HPA.

AT 1800 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 16.3°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA AND MEAN SURFACE WIND DIRECTION 210° AND WIND SPEED 21 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1004.6 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

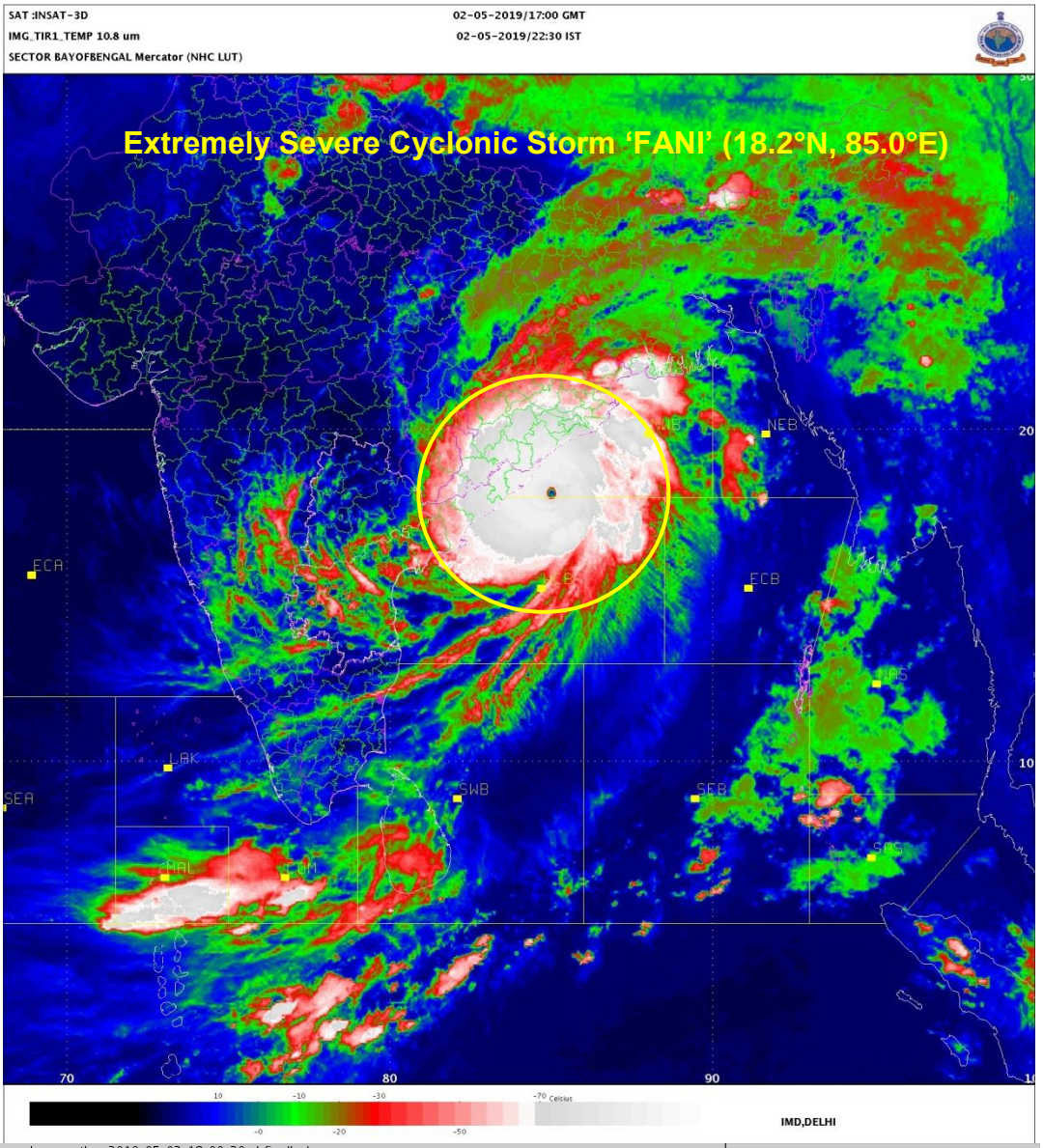
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE NORTHEAST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (05-10 KNOTS) TO THE SOUTH OF THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

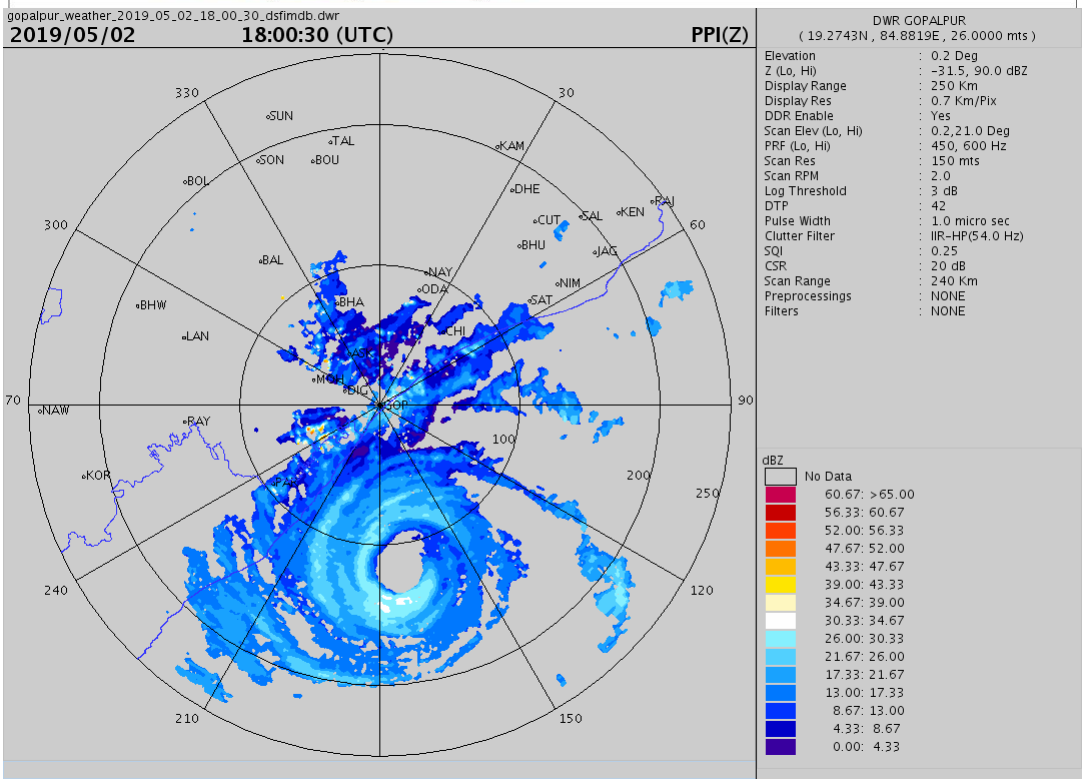
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
(SCIENTIST-E, RSMC, NEW DELHI)

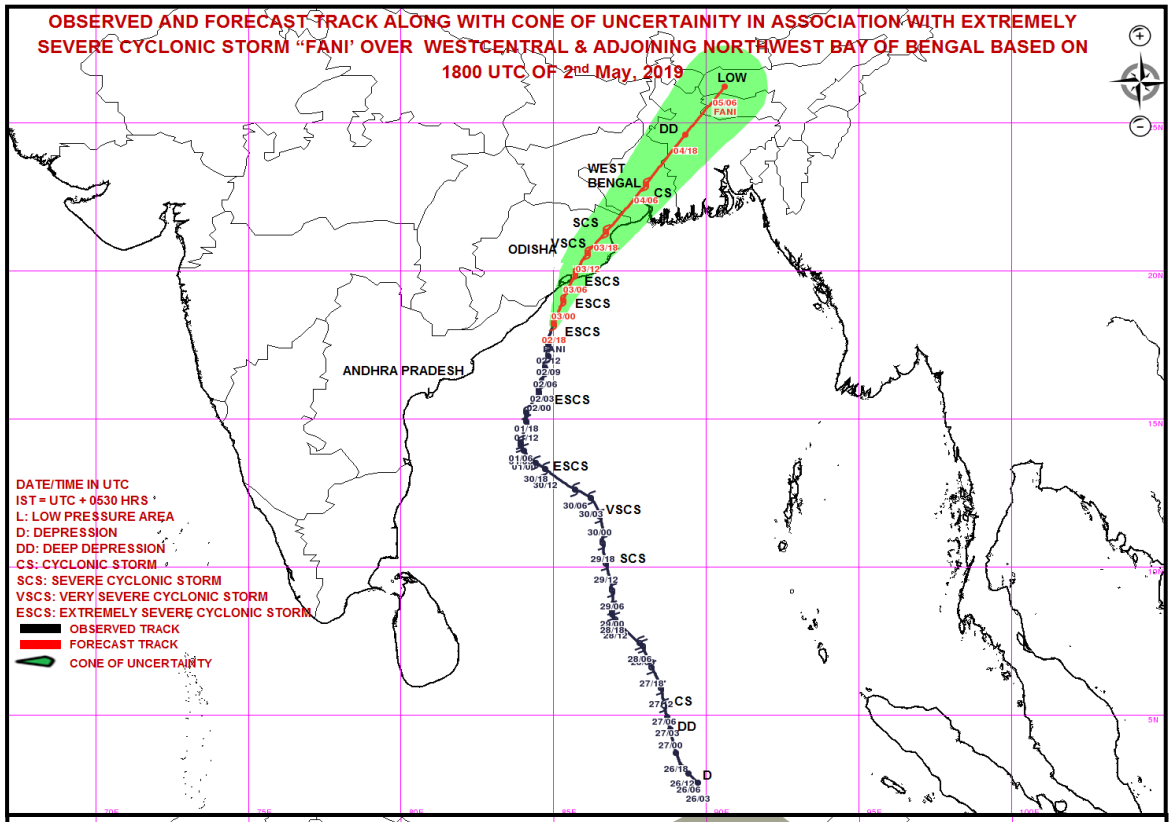
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

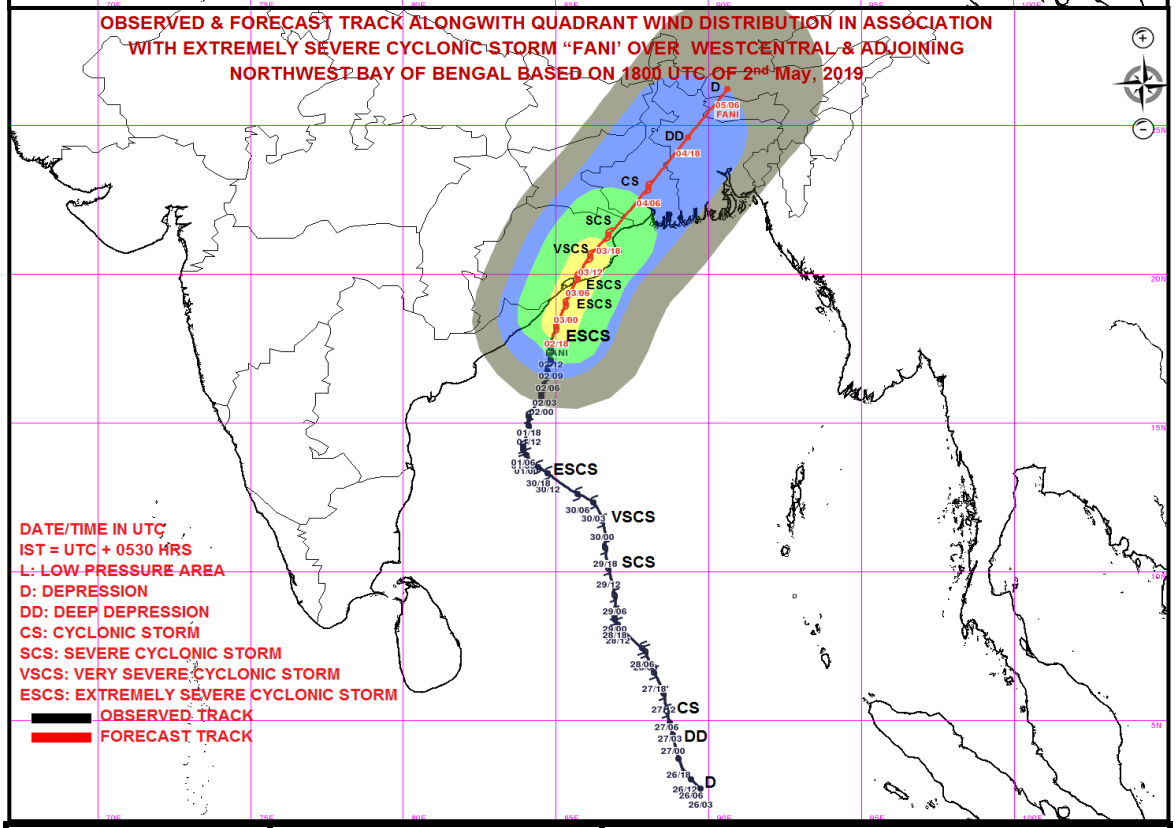




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 46

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 46 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 2230 UTC OF 02.05.2019 BASED ON 2100 UTC OF 02.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER WESTCENTRAL **&** ADJOINING NORTHWEST BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 16 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 21 UTC OF 02ND MAY, 2019 OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 18.6°N AND LONGITUDE 85.2°E, ABOUT 150 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), ABOUT 80 KM SOUTHEAST OF GOPALPUR (43049) (ODISHA), ABOUT 225 KM NORTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH), AND 450 KM SOUTH-SOUTHWEST OF DIGHA (42901) (WEST BENGAL).

IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR **(43049)** AND CHANDBALI **(42973)**, SOUTH OF PURI (43053) DURING 0300-0600 UTC OF 03RD MAY WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL 0900 UTC OF 3RD MAY.
AFTER THE LANDFALL THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 04TH. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 04TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.
THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM, GOPALPUR & MACHILIPATNAM.
FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
03.05.19/2100	18.6/85.2	200-210 gusting to 230	Extremely Severe Cyclonic Storm
03.05.19/0000	19.0/85.4	190-200 gusting to 220	Extremely Severe Cyclonic Storm
03.05.19/0600	19.9/85.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.6/86.2	150-160 gusting to 175	Very Severe Cyclonic Storm
03.05.19/1800	21.3/86.6	100-110 gusting to 125	Severe Cyclonic Storm
04.05.19/0600	22.9/88.0	70-80 gusting to 90	Cyclonic Storm
04.05.19/1800	24.6/89.3	50-60 gusting to 70	Deep Depression
05.05.19/0600	26.2/90.6	30-40 gusting to 50	Well Marked Low

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1800 UTC OF 02ND MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE WITH A DIAMETER OF ABOUT 30 KMS IS VISIBLE IN SATELLITE IMAGERY. DT IS 6.0. PT AND MET ALSO AGREE WITH THIS. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 16.3°N TO 20.0°N TO THE WEST OF LONG.86.1°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR GOPALPUR INDICTAE CIRCULAR EYE WITH A DIAMETER OF 28 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 42 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 115 KNOTS GUSTING TO 130 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 937 HPA.

AT 2100 UTC OF TODAY, A BUOY (23459) LOCATED NEAR LAT. 14.0°N AND LONG 87.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA AND MEAN SURFACE WIND DIRECTION 220° AND WIND SPEED 20 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 17.3°N AND LONG 89.2°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.2 HPA.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 4 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 5 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 100-120 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER REGIONS OF HIGH HEAT POTENTIAL FOR NEXT 24 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 60 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

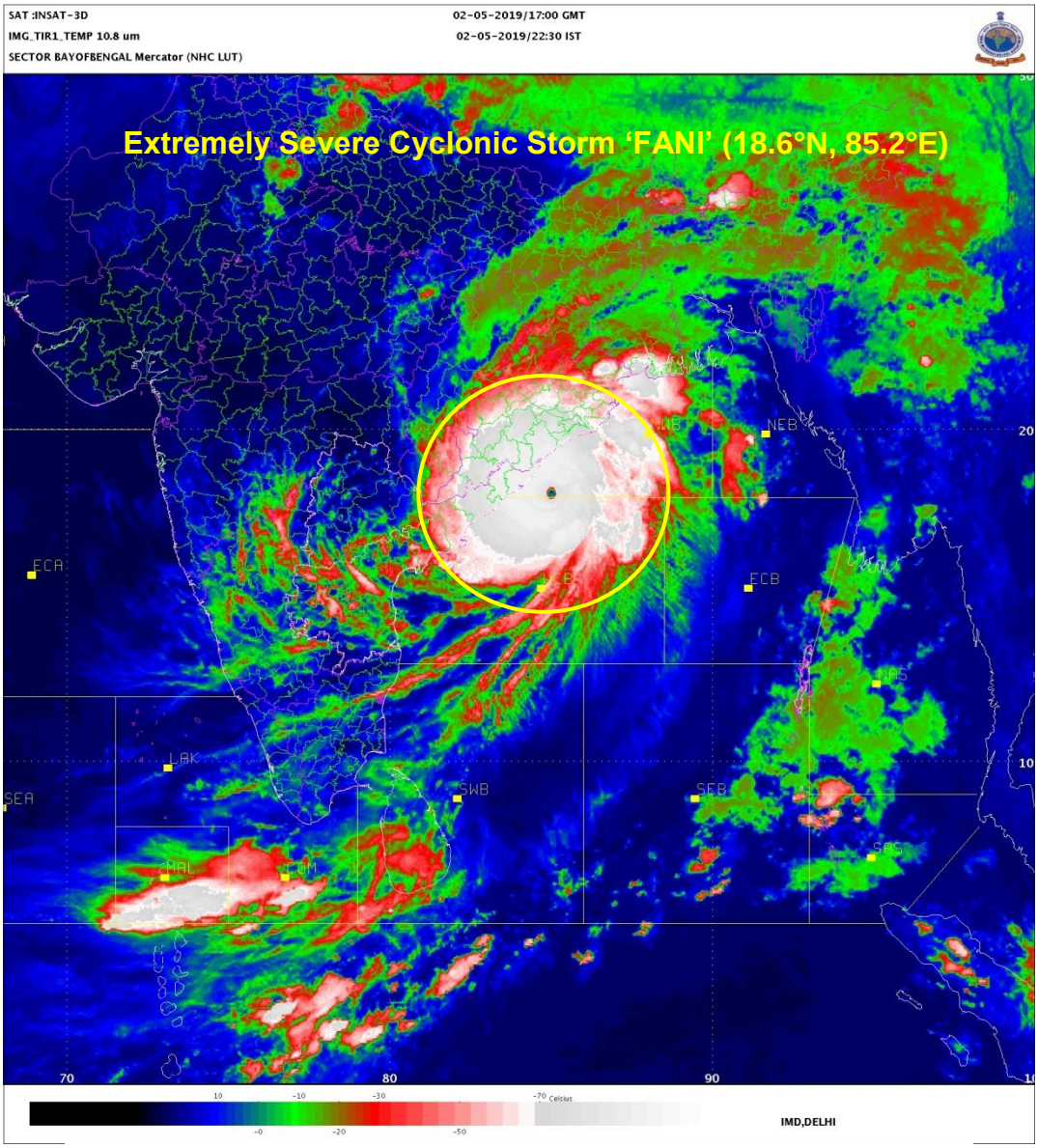
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE AND IT DECREASES ALONG THE FORECAST TRACK. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM TILL 0600 UTC OF 03RD MAY AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

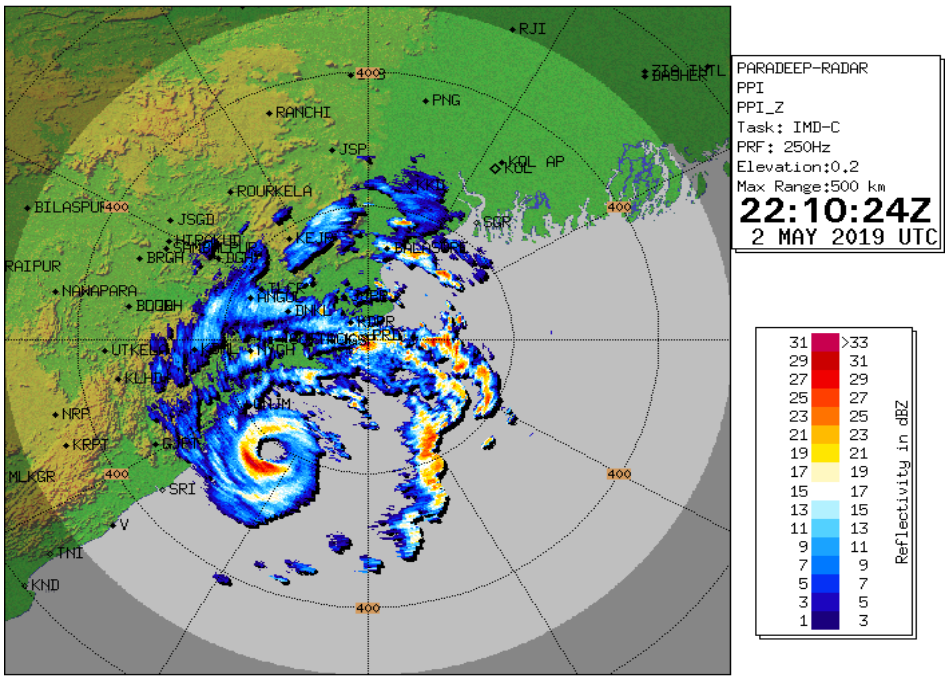
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
(SCIENTIST-E, RSMC, NEW DELHI)

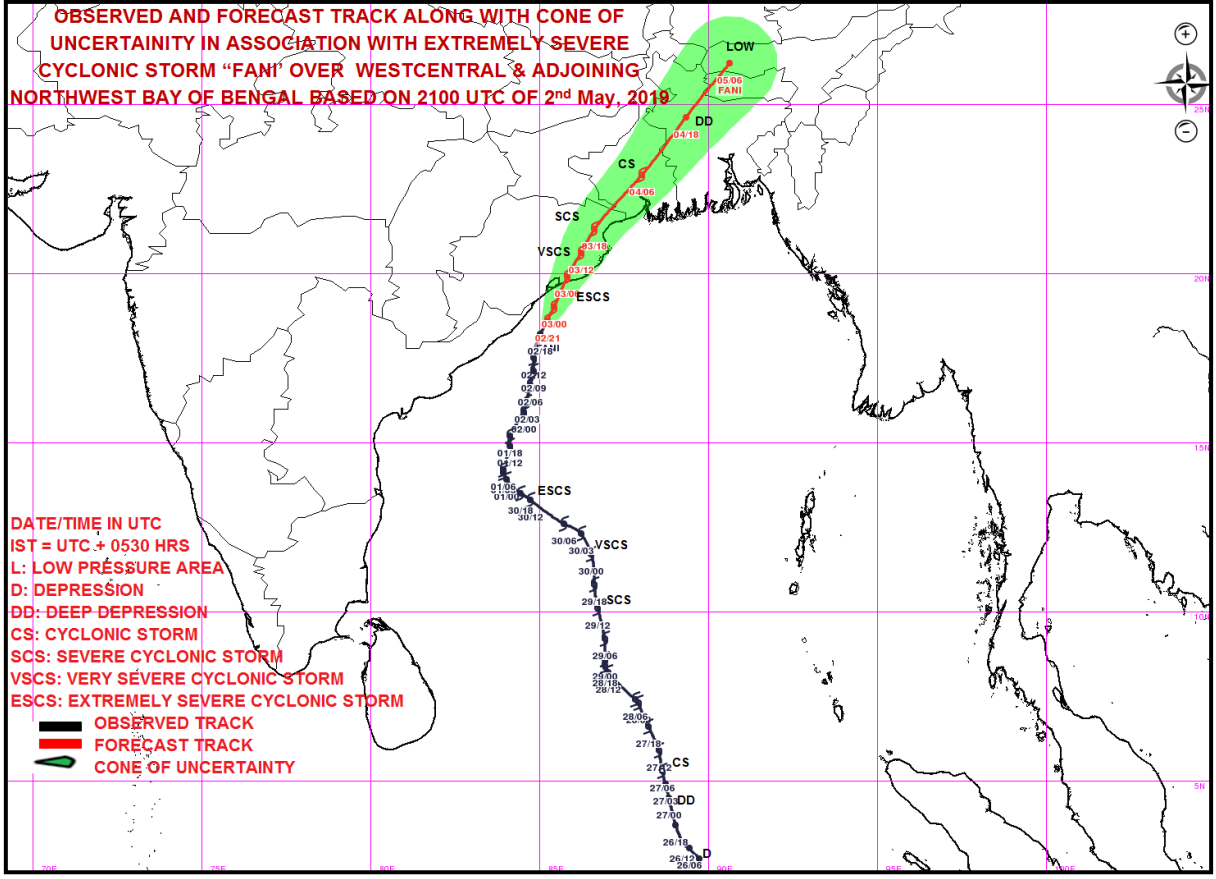
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

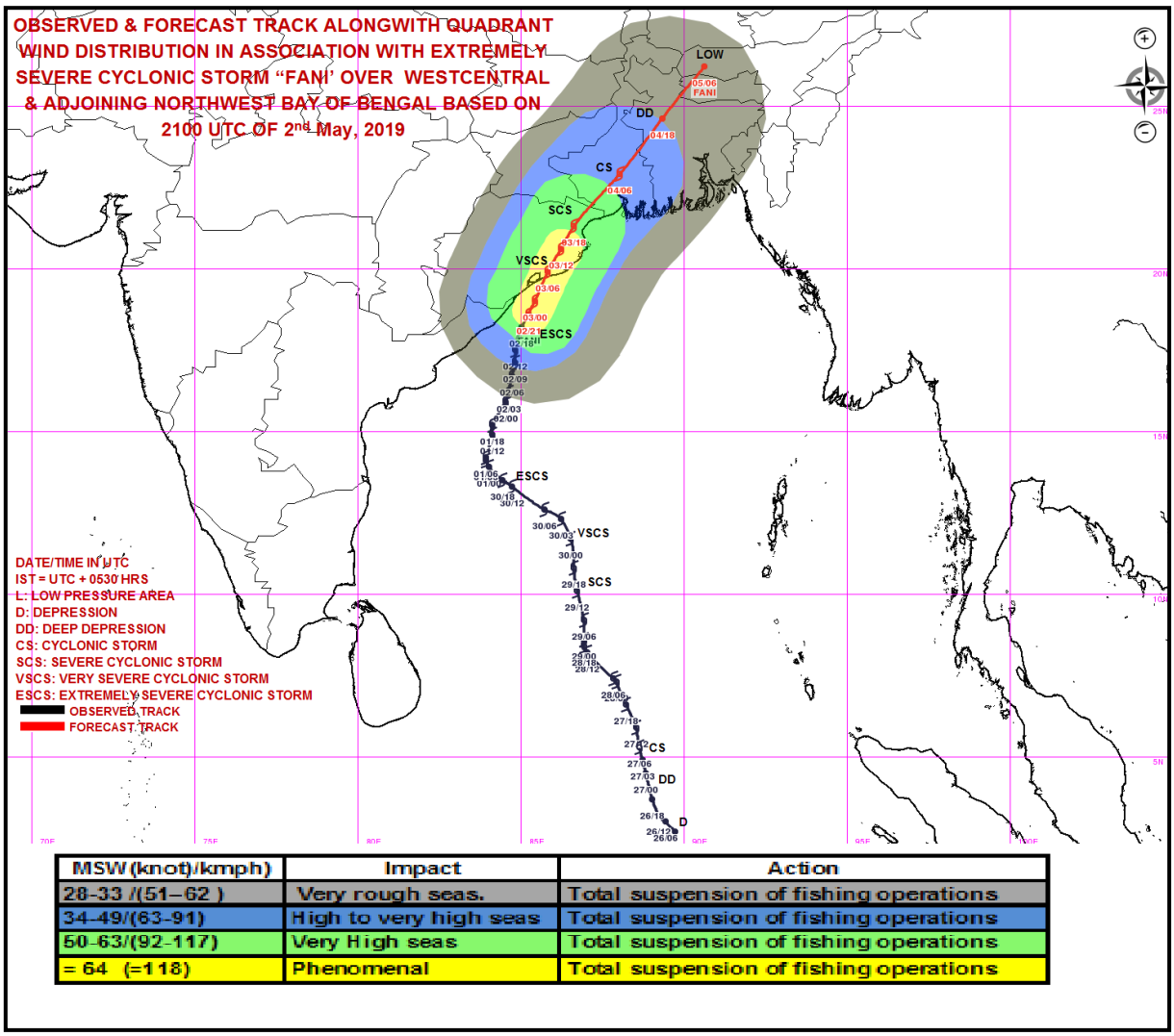




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 47

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 47 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 120 HOURS ISSUED AT 0200 UTC OF 03.05.2019 BASED ON 0000 UTC OF 03.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER NORTHWEST **&** ADJOINING WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 17 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0000UTC OF 03RD MAY, 2019 OVER NORTHWEST & ADJOINING WESTCENTRAL BAY OF BENGAL NEAR LATITUDE 19.1°N AND LONGITUDE 85.5°E, ABOUT 85 KM SOUTH-SOUTHWEST OF PURI (ODISHA), ABOUT 70 KM EAST-SOUTHEAST OF GOPALPUR (ODISHA), ABOUT 280 KM NORTHEAST OF VISHAKHAPATNAM (ANDHRA PRADESH), AND 390 KM SOUTH-SOUTHWEST OF DIGHA (WEST BENGAL).
IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS AND CROSS ODISHA COAST BETWEEN GOPALPUR AND CHANDBALI, CLOSE TO PURI DURING 3RD MAY FORENOON (0230-0530 UTC) WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH. LANDFALL PROCESS IS VERY LIKELY TO CONTINUE TILL NOON/AFTERNOON OF 3RD MAY.

AFTER THE LANDFALL, THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS VISHAKHAPATNAM, GOPALPUR & PARADEEP.
FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
03.05.19/0000	19.1/85.5	185-195 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/0600	20.0/85.9	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.8/86.4	150-160 gusting to 175	Very Severe Cyclonic Storm
03.05.19/1800	21.6/86.9	130-140 gusting to 150	Very Severe Cyclonic Storm
04.05.19/0000	22.4/87.4	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1200	24.0/88.4	70-80 gusting to 90	Cyclonic Storm
05.05.19/0000	25.6/90.0	40-50 gusting to 60	Deep Depression

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

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC OF 03rd MAY, 2019 THE CURRENT INTENSITY OF THE SYSTEM OVER WEST CENTRAL BAY OF BENGAL IS C.I 6.0. EYE WITH A DIAMETER OF ABOUT 10 KMS IS VISIBLE IN SATELLITE IMAGERY. THE ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER SOUTH BAY OF BENGAL BETWEEN LATITUDE 17°N TO 21.0°N TO THE WEST OF LONG.83°E TO 89°E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 93°C.

DWR PARADEEP INDICTAE CIRCULAR EYE WITH A DIAMETER OF 30 KM. DWR VISAKHAPATNAM ALSO REPORTS CIRCULAR EYE, BUT WITH A DIAMETER OF 36 KM.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 100 KNOTS GUSTING TO 110 KNOTS. THE SEA CONDITION IS PHENEOMENAL AROUND THE SYSTEM CENTER. THE ESTIMATED CENTRAL PRESSURE IS 939 HPA.

AT 0000 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1003.5 HPA AND MEAN SURFACE WIND DIRECTION 210° AND WIND SPEED 23 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 16.3°N AND LONG 87.9°E REPORTED MEAN SEA LEVEL PRESSURE OF 1002.7 HPA AND WIND SPEED 23 KNOTS.

THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 5 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 6 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

THE SEA SURFACE TEMPERATURE (SST) IS 30-31˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL. IT DECREASE TO 29˚C OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 50-75 KJ/CM^2 OVER THE SYSTEM AREA AND THE SYSTEM WILL CONTINUE TO BE OVER THESE REGIONS DURING NEXT 06 HOURS. THE TROPICAL CYCLONE HEAT POTENTIAL REDUCES TO LESS THAN 50 KJ/CM^2 OFF ODISHA COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

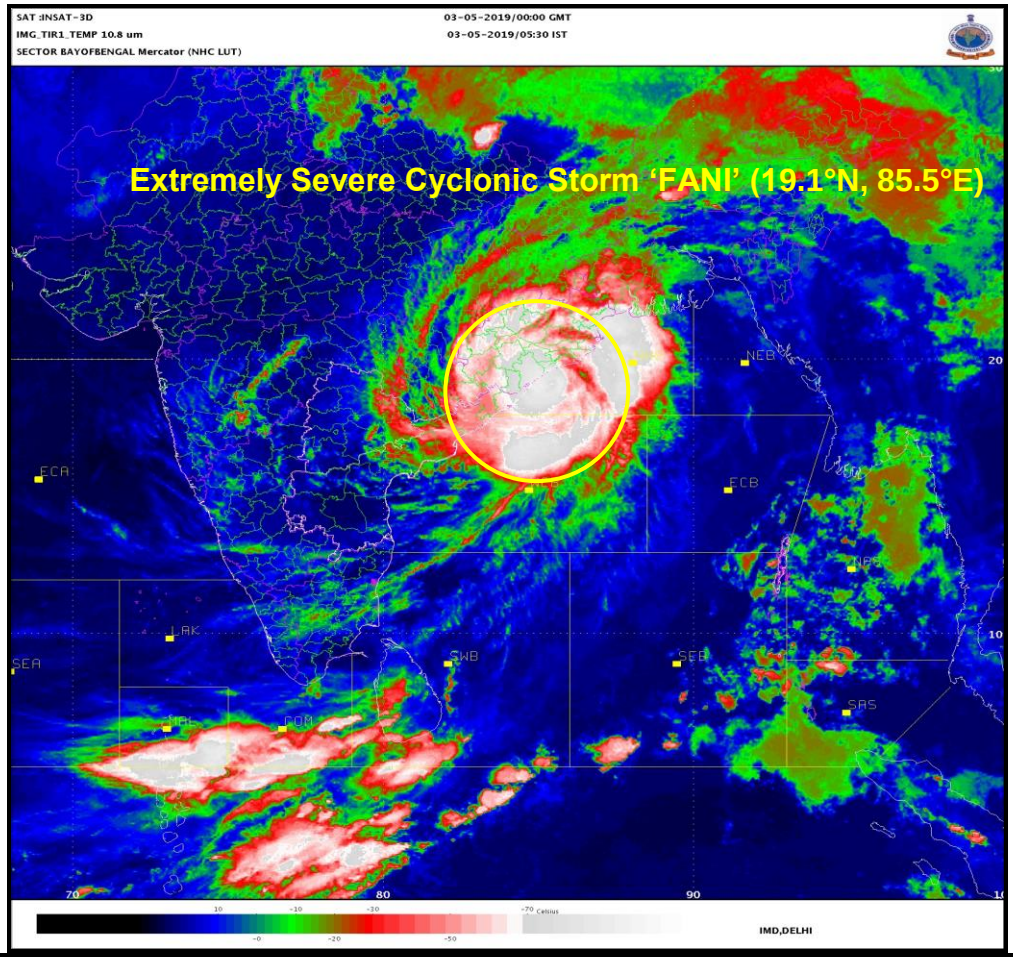
THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} TO THE SOUTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. DUE TO THESE FAVOURABLE ENVIRONMENTAL CONDITIONS THE SYSTEM IS EXPECTED TO MAINTAIN THE INTENSITY OF EXTREMELY SEVERE CYCLONIC STORM DURING NEXT 12 HOURS AND WEAKEN SLIGHTLY THEREAFTER AS THE SYSTEM WILL ENCOUNTER COLDER WATERS AND INTERACT WITH LAND.

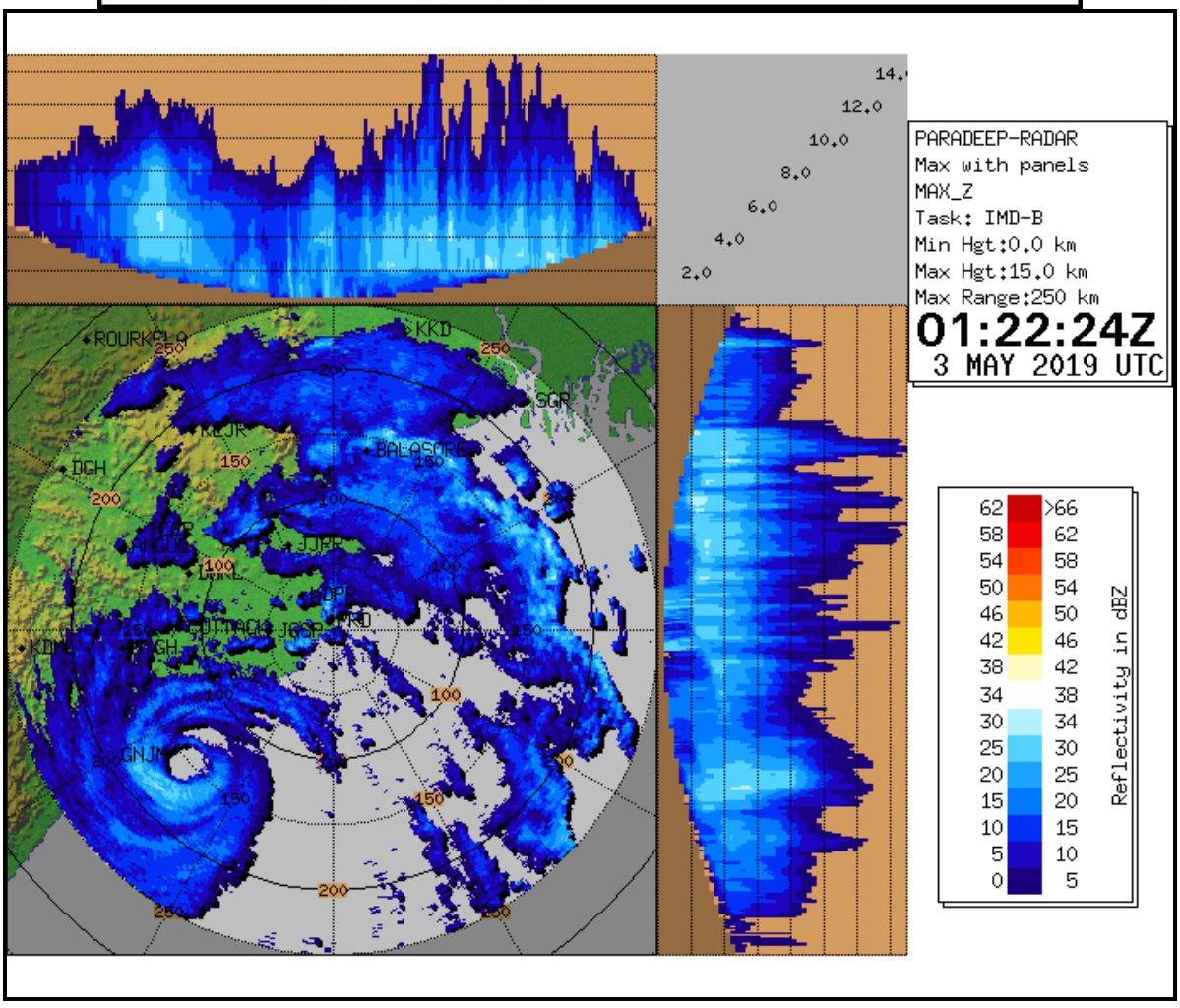
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS.

MOST OF THE NUMERICAL MODELS INCLUDING ECMWF, IMD GLOBAL FORECAST SYSTEM (GFS), AND NCEP GFS, ARE IN AGREEMENT WITH THE ABOVE.

(ANANDA KUMAR DAS)
(SCIENTIST-E, RSMC, NEW DELHI)

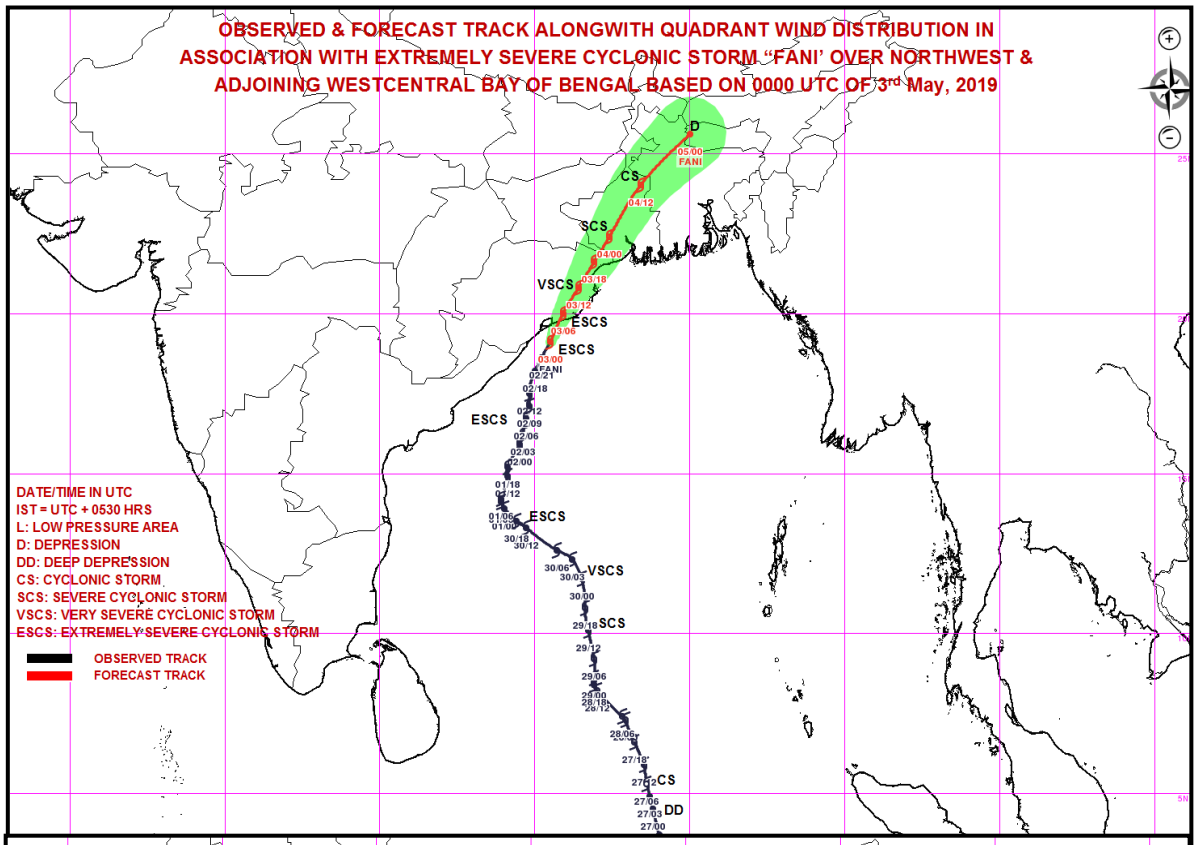
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

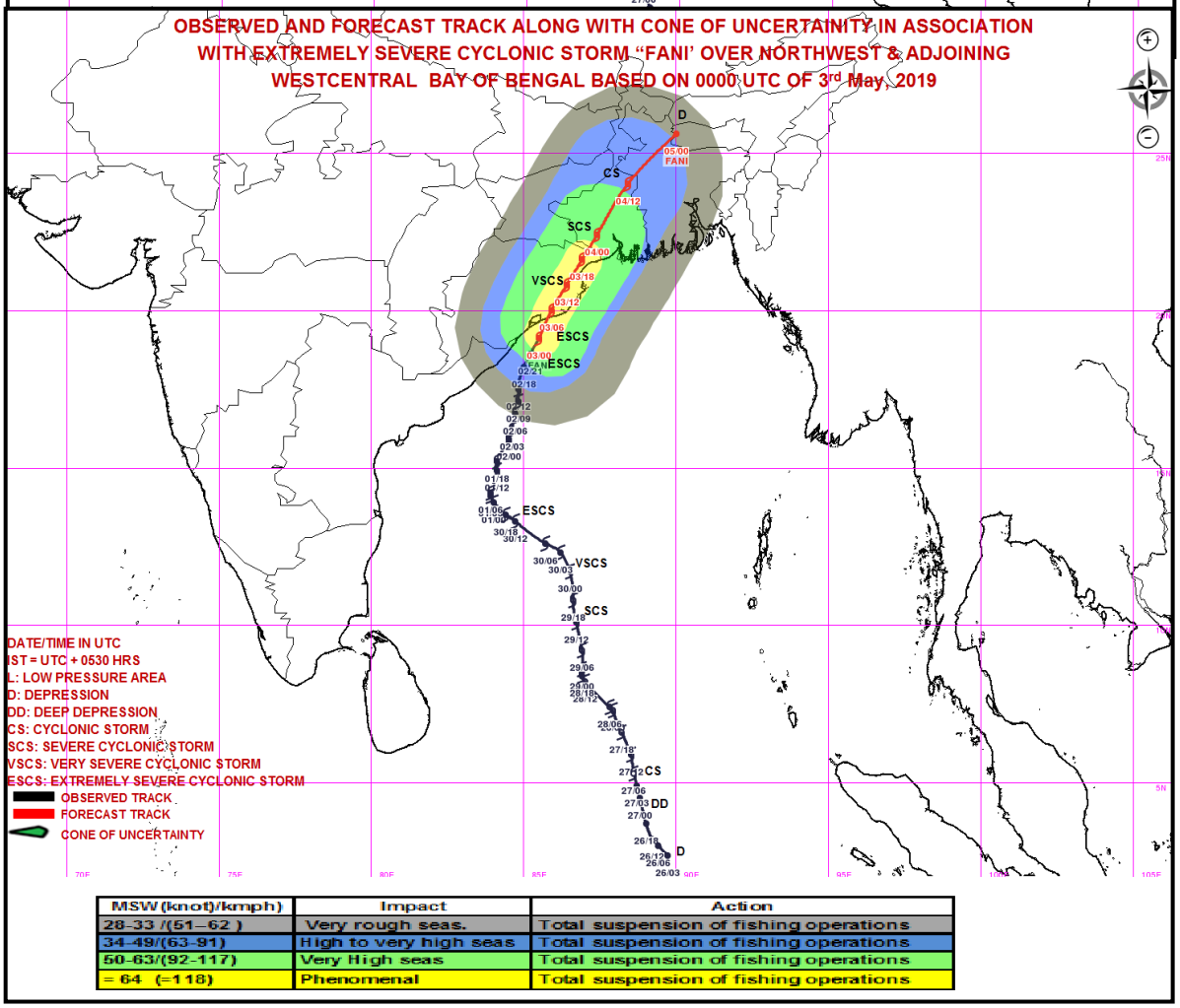




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 48

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 48 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0530 UTC OF 03.05.2019 BASED ON 0300 UTC OF 03.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER NORTHWEST WESTCENTRAL BAY OF BENGAL

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER NORTHWEST **&** ADJOINING WESTCENTRAL BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 20 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0300 UTC OF 03RD MAY, 2019 OVER NORTHWEST BAY OF BENGAL NEAR LATITUDE 19.6°N AND LONGITUDE 85.7°E, ABOUT 25 KM SOUTH-SOUTHWEST OF PURI (43053) (ODISHA), ABOUT 90 KM EAST-NORTHEAST OF GOPALPUR **(43049)** (ODISHA), ABOUT 300 KM EAST-NORTHEAST OF VISHAKHAPATNAM (43150) (ANDHRA PRADESH), AND 330 KM SOUTHWEST OF DIGHA (42901) (WEST BENGAL).

IT IS VERY LIKELY TO MOVE NORTH-NORTHEASTWARDS CLOSE TO PURI DURING NEXT 02 HOURS WITH MAXIMUM SUSTAINED WIND SPEED OF 170-180 KMPH GUSTING TO 200 KMPH.

THE LANDFALL PROCESS HAS STARTED AT 0230 UTC AND WILL CONTINUE FOR NEXT 03 HOURS. PART OF THE EYE LIES OVER THE LAND AT 0300 UTC. ENTIRE PROCESS OF EYE ENTERING INTO LAND WILL BE COMPLETED DURING NEXT 02 HOURS.

AFTER THE LANDFALL, THE SYSTEM IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS, WEAKEN GRADUALLY AND EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH DURING 0000 – 1200 UTC OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH BY 1200 UTC OF 4TH MAY AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

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

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
03.05.19/0300	19.6/85.7	180-190 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0600	20.0/85.9	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1200	20.8/86.4	150-160 gusting to 175	Very Severe Cyclonic Storm
03.05.19/1800	21.6/86.9	130-140 gusting to 150	Very Severe Cyclonic Storm
04.05.19/0000	22.4/87.4	100-110 gusting to 120	Severe Cyclonic Storm
04.05.19/1200	24.0/88.4	70-80 gusting to 90	Cyclonic Storm
05.05.19/0000	25.6/90.0	40-50 gusting to 60	Depression

STORM SURGE GUIDANCE:
STORM SURGE OF ABOUT 1.5 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF GANJAM, KHURDA, PURI & JAGATSINGHPUR DISTRICTS OF ODISHA STATE AT THE TIME OF LANDFALL.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC OF 03rd MAY, 2019 THE SYSTEM IS CROSSING ODISHA COAST WITH AN INTENSITY OF C.I 6.0. EYE NOT VISIBLE IN SATELLITE IMAGERY.

DWR PARADEEP INDICTAE CIRCULAR EYE WITH A DIAMETER OF 30 KM. THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 95 KNOTS GUSTING TO 105 KNOTS. THE SEA CONDITION IS PHENEOMENAL OVER NORTHWEST AND ADJOINING WESTCENTRAL BAY OF BENGAL, OFF NORTH ANDHRA PRADESH- SOUTH ODISHA COASTS DURING NEXT 6 HOURS AND IS LIKELY TO BECOME HIGH TO VERY HIGH SUBSEQUENTLY FOR THE NEXT 24 HOURS. VERY ROUGH TO HIGH SEAS ARE LIKELY TO PREVAIL OVER NORTHWEST BAY OF BENGAL ALONG AND OFF ODISHA & WEST BENGAL COASTS TILL 04 MAY. THE ESTIMATED CENTRAL PRESSURE IS 968 HPA.

AT 0300 UTC OF TODAY, A BUOY (23093) LOCATED NEAR LAT. 17.5°N AND LONG 89.1°E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.0 HPA AND MEAN SURFACE WIND DIRECTION 220° AND WIND SPEED 21 KNOTS. ANOTHER BUOY (23092) LOCATED NEAR LAT. 16.2°N AND LONG 88.0°E REPORTED MEAN SEA LEVEL PRESSURE OF 1006.0 HPA AND WIND DIRECTION OF 230° AND WIND SPEED 21 KNOTS. GOPALPUR (43049) REPORTED MEAN SEA LEVEL PRESSURE OF 994.1 HPA AND MEAN SURFACE WIND DIRECTION 270° AND WIND SPEED 38 KNOTS. PARADIP (42976) REPORTED MEAN SEA LEVEL PRESSURE OF 998.8 HPA AND MEAN SURFACE WIND DIRECTION 160° AND WIND SPEED 15 KNOTS.

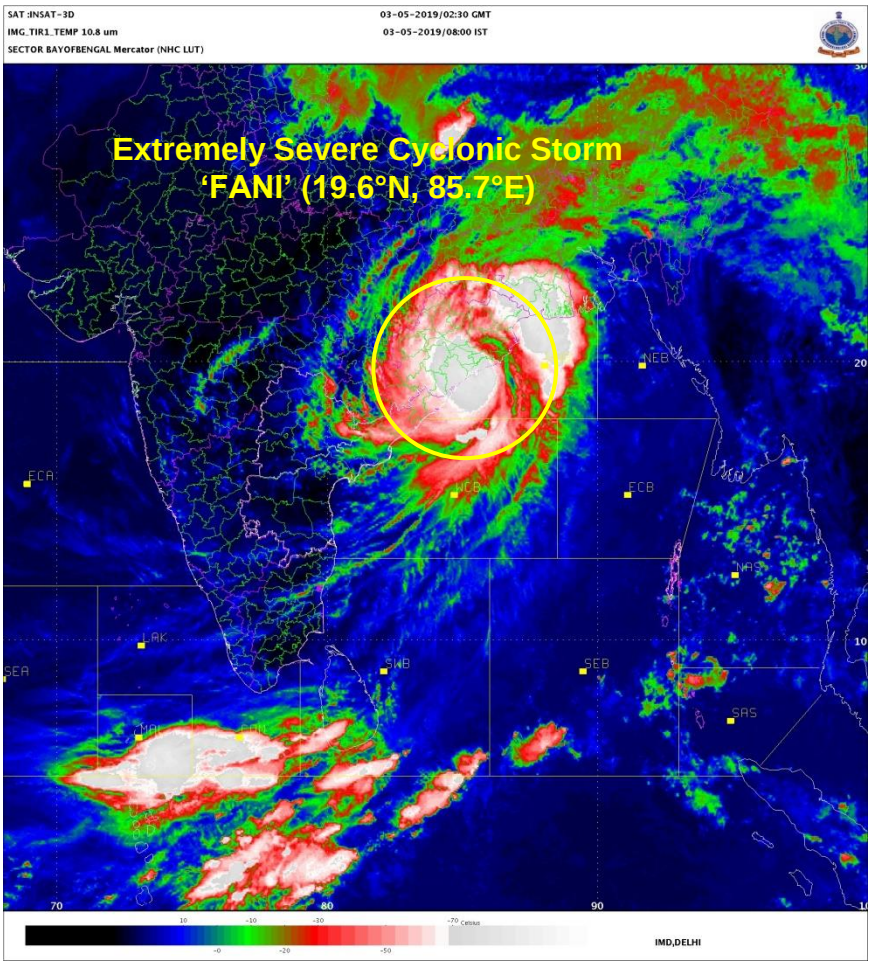
THE MADDEN JULIAN OSCILLATION (MJO) INDEX LIES CURRENTLY IN PHASE 5 WITH AMPLITUDE MORE THAN 1. IT WILL MOVE TO PHASE 6 AFTER 2 DAYS WITH AMPLITUDE GREATER THAN 1. HENCE, MJO IS FAVOURABLE FOR ENHANCEMENT OF CONVECTION & MAINTAINENCE OF INTENSITY OF THE SYSTEM OVER BAY OF BENGAL.

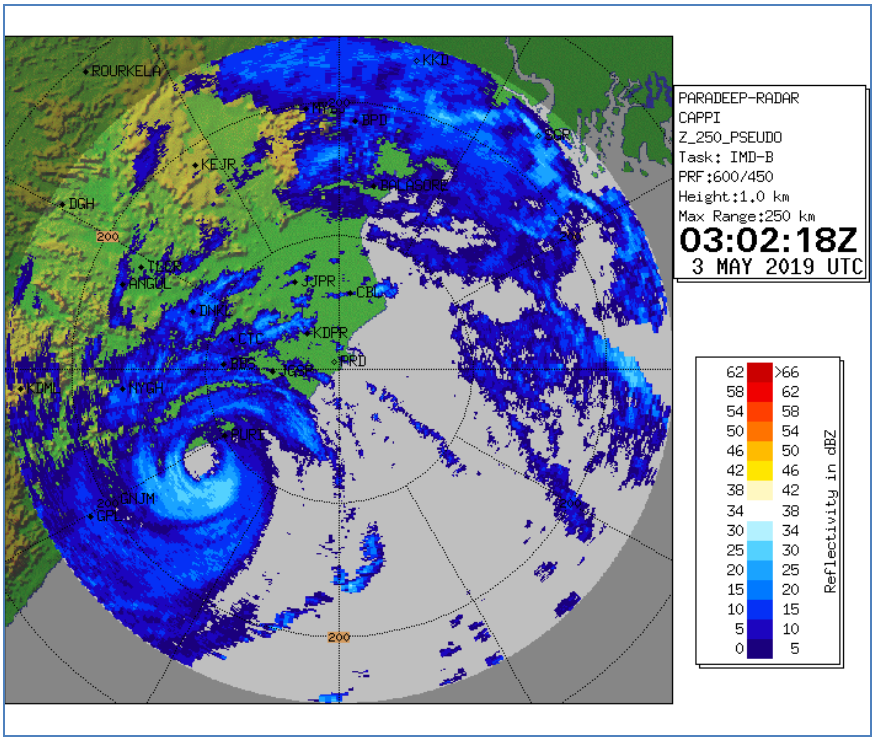
THE SEA SURFACE TEMPERATURE (SST) IS 28-30˚C OVER WESTCENTRAL AND SOUTH BAY OF BENGAL OFF ANDHRA PRADESH AND ODISHA COASTS. THE TROPICAL CYCLONE HEAT POTENTIAL IS AROUND 50-75 KJ/CM^2 OVER WEST CENTRAL AND ADJOINING NORTHWEST BAY OF BENGAL OFF ODISHA- WESTBENGAL COASTS. TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM FROM SOUTH PENINSULAR INDIA.

THE LOWER LEVEL POSITIVE VORTICITY IS 300 X10^{-6}SEC^{-1} TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE SOUTH-SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 X10^{-5}SEC^{-1} TO THE SOUTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE.
THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER EASTCENTRAL BAY OF BENGAL IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION AND INCREASED WIND SHEAR THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

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

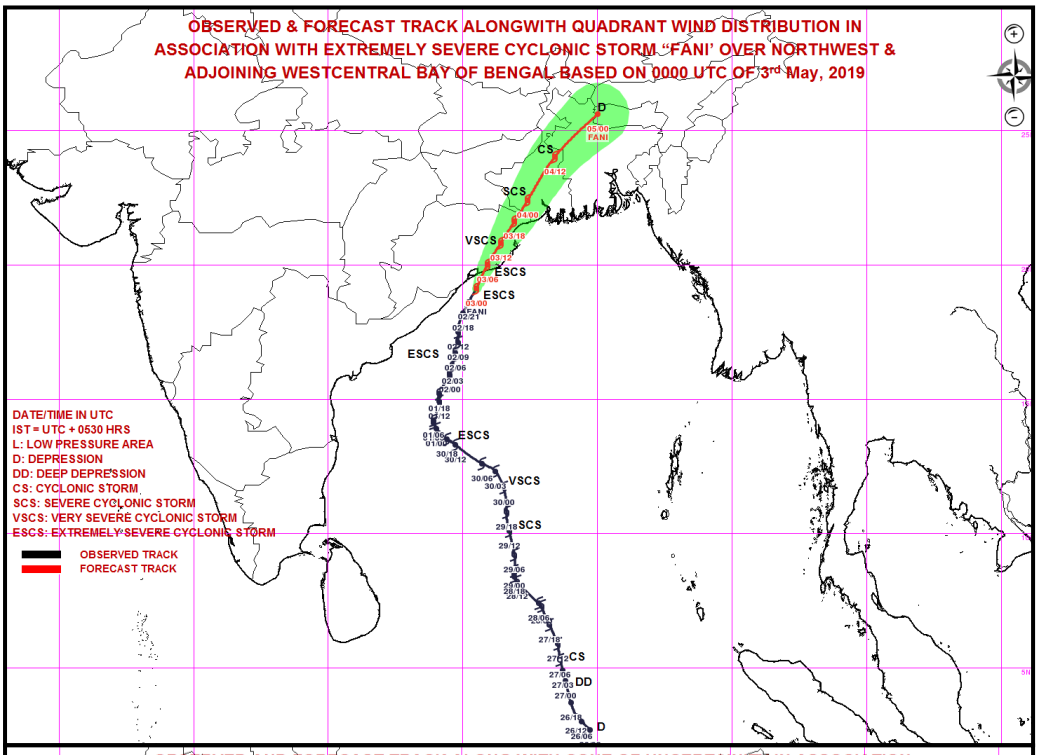
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

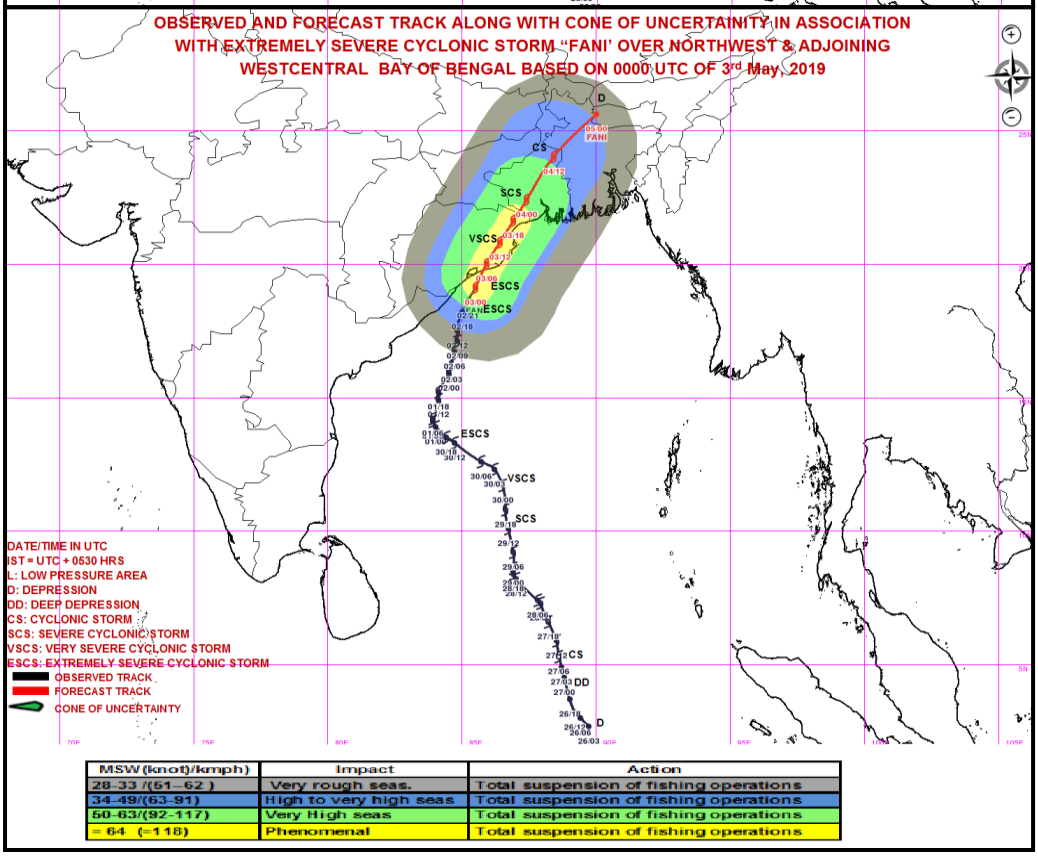




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW (knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
= 64 (=118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 49

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 49 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0930 UTC OF 03.05.2019 BASED ON 0600 UTC OF 03.05.2019.

SUB: EXTREMELY SEVERE CYCLONIC STORM "FANI" OVER NORTHWEST BAY OF BENGAL CROSSED ODISHA COAST CLOSE TO PURI BETWEEN 0230 TO 0430 UTC OF TODAY

THE **EXTREMELY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER NORTHWEST BAY OF BENGAL MOVED NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 22 KMPH IN LAST SIX HOURS AND CROSSED ODISHA COAST CLOSE TO PURI (43053) WITH SUSTAINED WIND SPEED OF 175-185 KMPH GUSTING TO 205 KMPH BETWEEN 0230 TO 0430 UTC OF TODAY, THE 03RD MAY, 2019. IT WEAKENED INTO A VERY SEVERE CYCLONIC STORM AND LAY CENTRED AT 0600 UTC OF 03RD MAY, 2019 OVER COASTAL ODISHA NEAR LATITUDE 20.2°N AND LONGITUDE 85.9°E, ABOUT 10 KM EAST OF BHUBANESWAR (42971) (ODISHA) AND 30 KM SOUTH OF CUTTACK (42970) (ODISHA).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT SIX HOURS. IT IS VERY LIKELY TO **EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH DURING 0000 UTC TO 0200 UTC OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH BY 1200 UTC ON 4TH MAY AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat. ^{0}N/ long. ^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
03.05.19/0600	20.2/85.9	150-160 gusting to 175	Very Severe Cyclonic Storm
03.05.19/1200	20.8/86.3	130-140 gusting to 155	Very Severe Cyclonic Storm
03.05.19/1800	21.6/86.8	110-120 gusting to 135	Severe Cyclonic Storm
04.05.19/0000	22.4/87.4	90-100 gusting to 110	Severe Cyclonic Storm
04.05.19/0600	23.2/88.1	70-80 gusting to 90	Cyclonic Storm
04.05.19/1800	24.8/89.5	40-50 gusting 60	Depression
05.05.19/0600	26.4/91.0	20-30 gusting to 40	Well Marked Low

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5-1.0 M ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA DURING NEXT 12 HOURS; NORTH AND SOUTH 24 PARGANAS DISTRICTS OF WEST BENGAL DURING MIDNIGHT OF 03RD MAY TO FORENOON OF 04TH MAY.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC OF 03rd MAY, 2019 THE SYSTEM IS OVER COASTAL ODISHA. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTH COASTAL ODISHA AND GANGETIC WEST BENGAL, NORTH BAY BETWEEN LATITUDE 18.0˚N TO 22.0˚N WEST OF LONGITUDE 85.8˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 84˚C. DWR PARADEEP INDICTAE CIRCULAR DIFFUSED EYE WITH A DIAMETER OF 17 KM.

THE SEA CONDITION WILL BE PHENOMENAL OVER NORTHWEST BAY OF BENGAL OFF ODISHA COAST DURING NEXT 06 HOURS AND IS LIKELY TO BECOME HIGH TO VERY HIGH SUBSEQUENTLY FOR THE NEXT 18 HOURS AND ROUGH TO VERY ROUGH DURING SUBSEQUENT 06 HOURS.

AT 0600 UTC OF TODAY, BHUBANESWAR (42971) REPORTED MEAN SEA LEVEL PRESSURE OF 953.2 HPA AND MEAN SURFACE WIND DIRECTION 070° AND WIND SPEED 53 KNOTS; PARADIP (42976) REPORTED MEAN SEA LEVEL PRESSURE OF 996.3 HPA AND MEAN SURFACE WIND DIRECTION 160° AND WIND SPEED 32 KNOTS; GOPALPUR (43049) REPORTED MEAN SEA LEVEL PRESSURE OF 998.8 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 22 KNOTS.

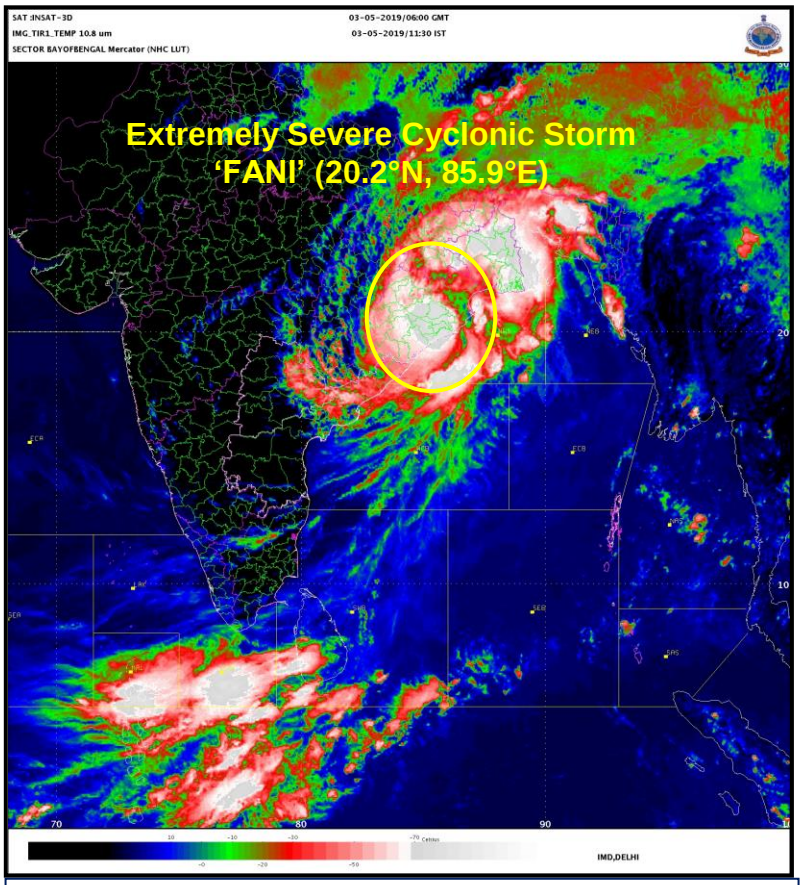
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM.

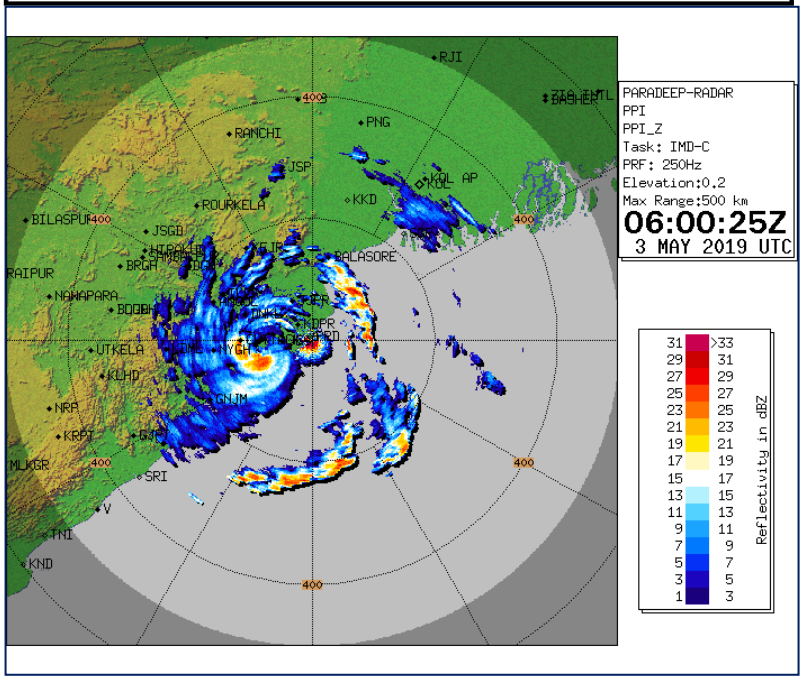
THE LOWER LEVEL POSITIVE VORTICITY IS 300 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 50 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHEAST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION AND INCREASED WIND SHEAR THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

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

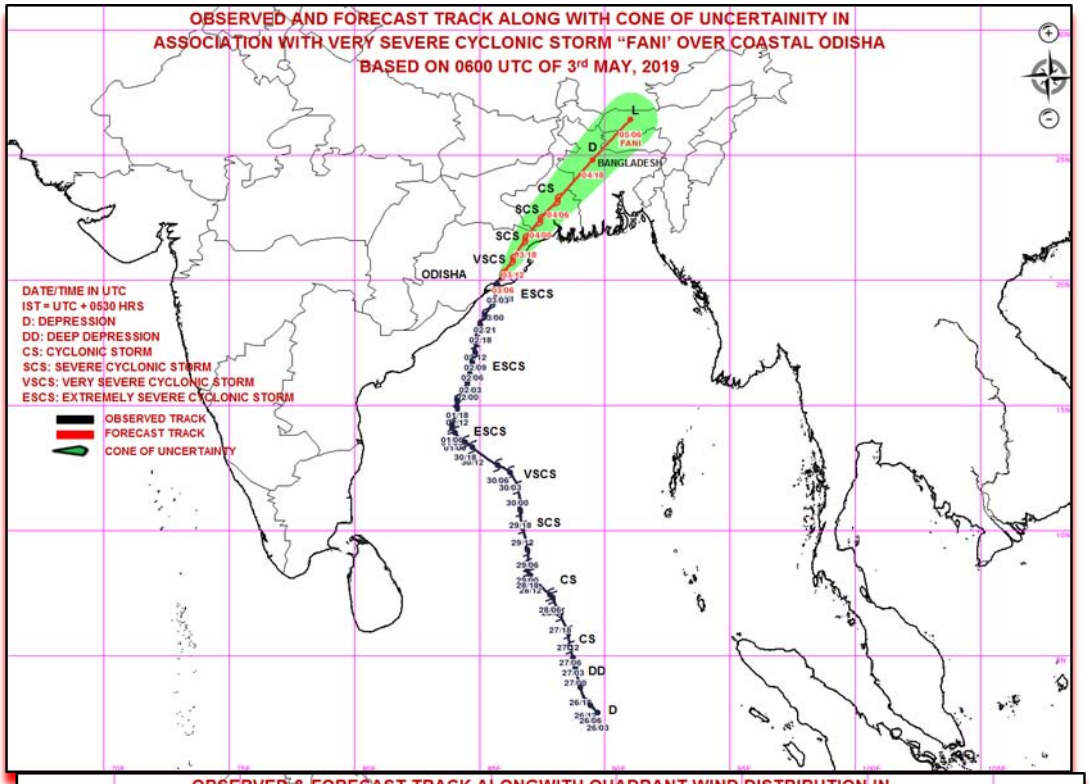
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

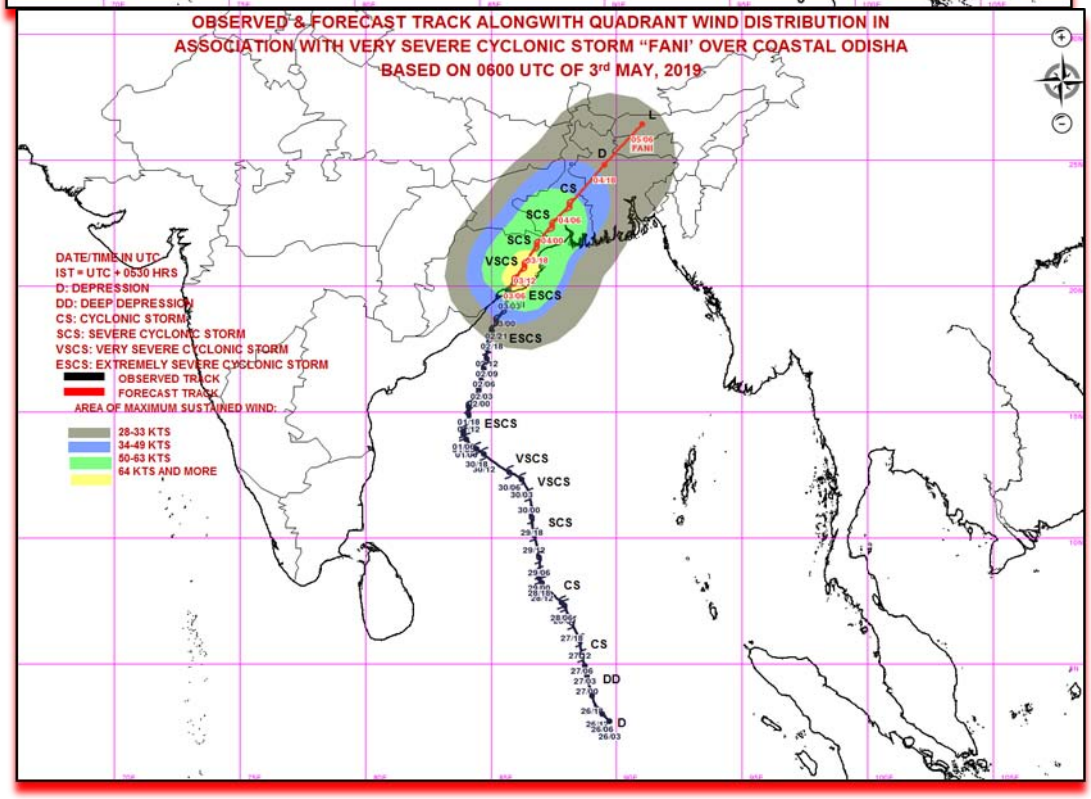




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 50

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 50 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 1200 UTC OF 03.05.2019 BASED ON 0900 UTC OF 03.05.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" OVER COASTAL ODISHA

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS 'FONI') OVER COASTAL ODISHA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 17 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 0900 UTC OF 03RD MAY, 2019 OVER COASTAL ODISHA NEAR LATITUDE 20.5°N AND LONGITUDE 86.0°E, CLOSE TO CUTTACK (42970), ABOUT 25 KM NORTHEAST OF BHUBANESWAR (42971) AND 170 KM SOUTH-SOUTHWEST OF BARIPADA (42894).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT SIX HOURS. IT IS VERY LIKELY TO EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.05.19/0900	20.5/86.0	140-150 GUSTING TO 165	VERY SEVERE CYCLONIC STORM
03.05.19/1200	20.8/86.3	130-140 GUSTING TO 155	VERY SEVERE CYCLONIC STORM
03.05.19/1800	21.6/86.8	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04.05.19/0000	22.4/87.4	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.05.19/0600	23.2/88.1	70-80 GUSTING TO 90	CYCLONIC STORM
04.05.19/1800	24.8/89.5	40-50 GUSTING 60	DEPRESSION
05.05.19/0600	26.4/91.0	20-30 GUSTING TO 40	WELL MARKED LOW

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

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

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0900 UTC OF 03rd MAY, 2019 THE SYSTEM IS OVER COASTAL ODISHA. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTH COASTAL ODISHA AND GANGETIC WEST BENGAL, NORTH BAY BETWEEN LATITUDE 20.0˚N TO 21.5˚N TO THE WEST OF LONGITUDE 86.8˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 88˚C. DWR PARADEEP INDICTAE CIRCULAR DIFFUSED EYE WITH A DIAMETER OF 17 KM.

THE SEA CONDITION WILL BE PHENOMENAL OVER NORTHWEST BAY OF BENGAL OFF ODISHA COAST DURING NEXT 06 HOURS AND IS LIKELY TO BECOME HIGH TO VERY HIGH SUBSEQUENTLY FOR THE NEXT 18 HOURS AND ROUGH TO VERY ROUGH DURING SUBSEQUENT 06 HOURS.

AT 0900 UTC OF TODAY, BHUBANESWAR (42971) REPORTED MEAN SEA LEVEL PRESSURE OF 987.3 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 53 KNOTS; PARADIP (42976) REPORTED MEAN SEA LEVEL PRESSURE OF 992.7 HPA AND MEAN SURFACE WIND DIRECTION 180° AND WIND SPEED 56 KNOTS; CHANDBALI (42973) REPORTED MEAN SEA LEVEL PRESSURE OF 990.9 HPA AND MEAN SURFACE WIND DIRECTION 180° AND WIND SPEED 27 KNOTS.

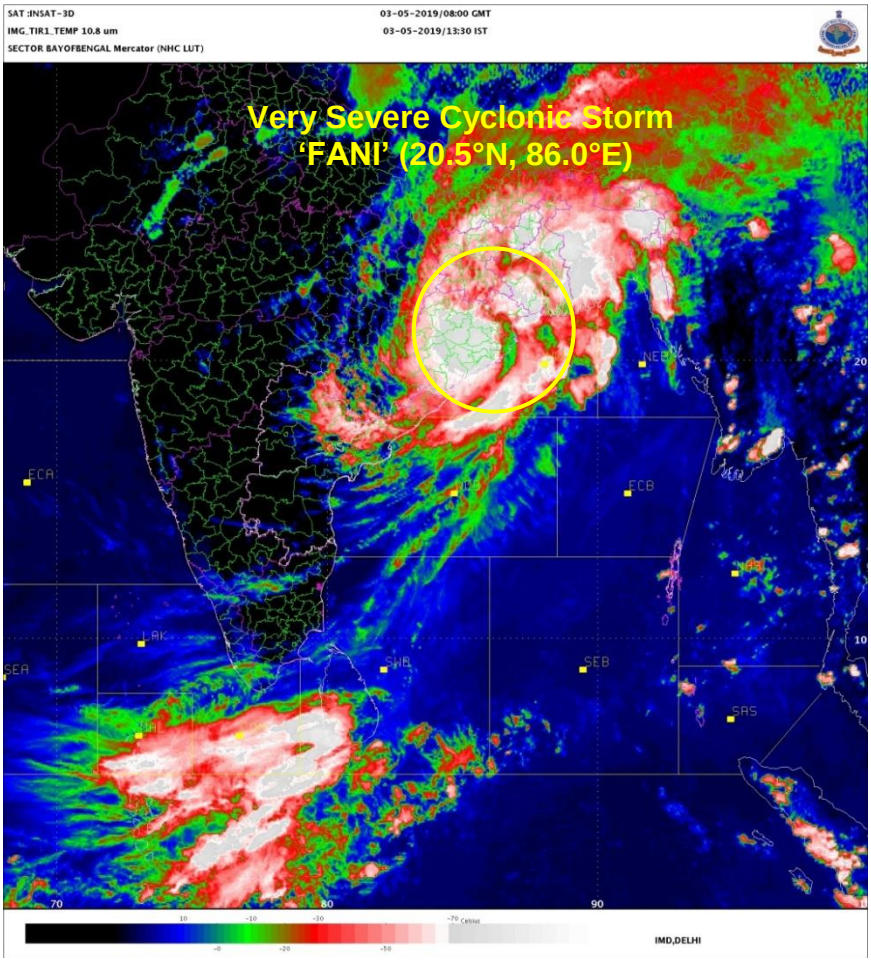
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE. HOWEVER, DRY AIR INCURSION IS SEEN TO BE TAKING PLACE IN THE WESTERN PERIPHERY OF THE SYSTEM.

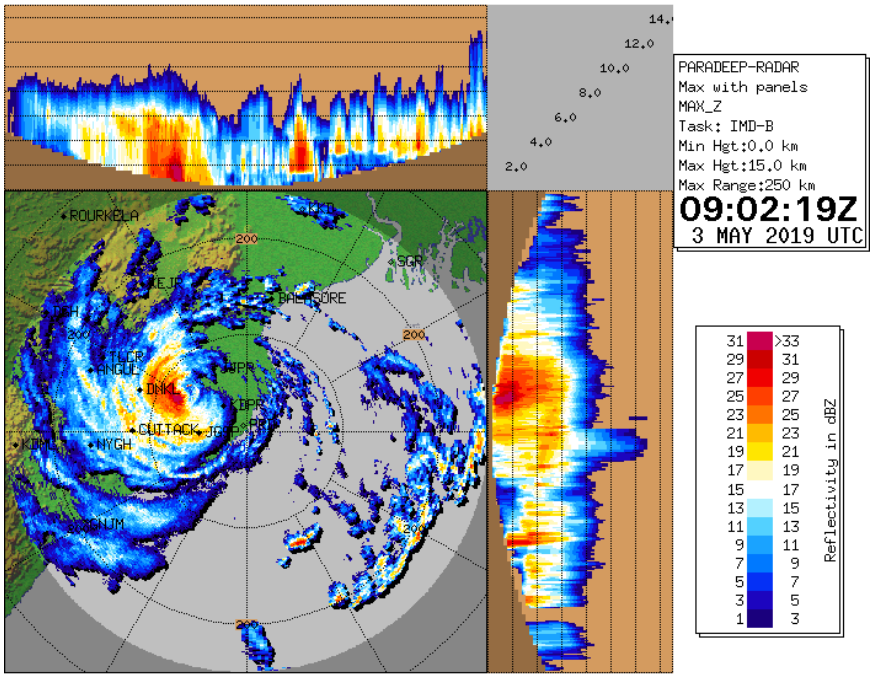
THE LOWER LEVEL POSITIVE VORTICITY IS 300 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 50 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT IS INCREASING ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION AND INCREASED WIND SHEAR THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

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

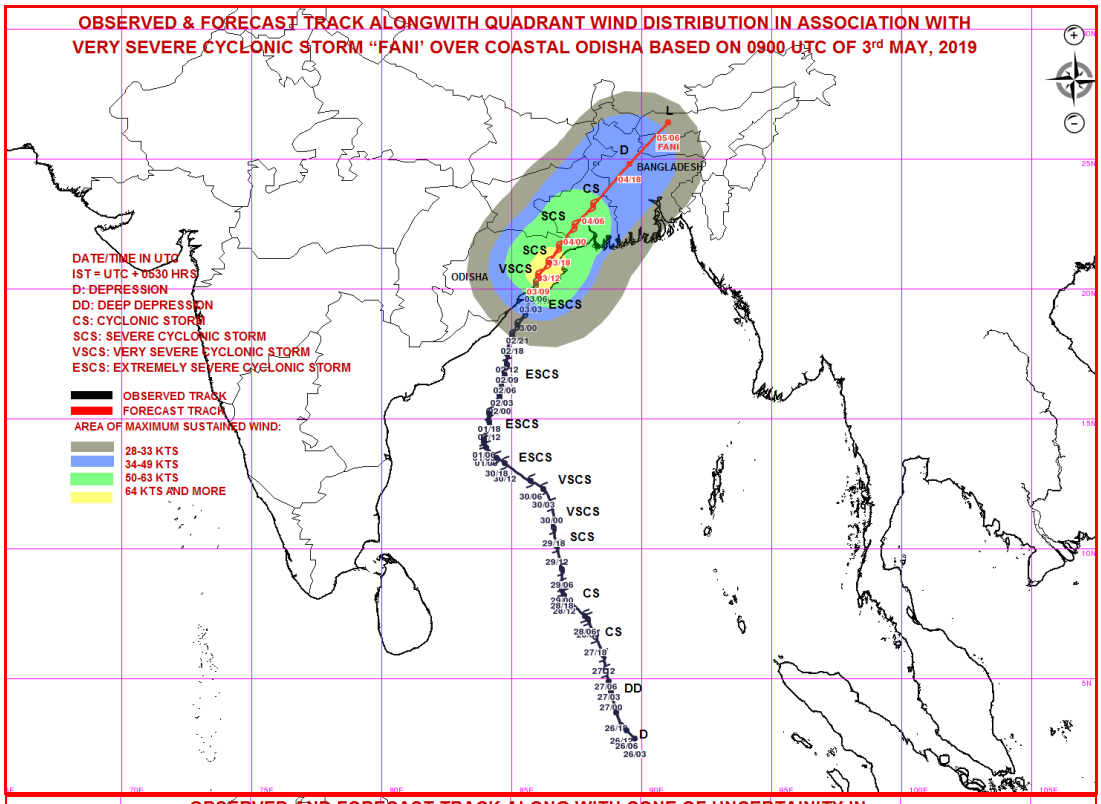
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

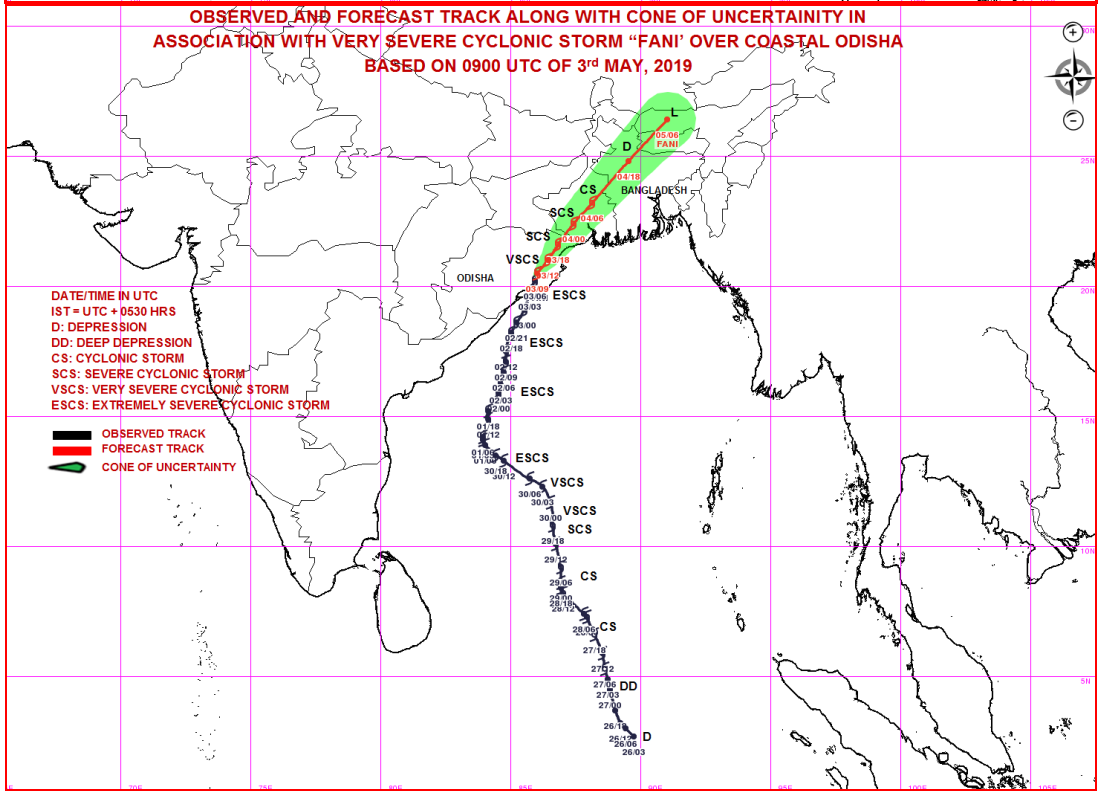




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 51

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 51 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 1500 UTC OF 03.05.2019 BASED ON 1200 UTC OF 03.05.2019.

SUB: VERY SEVERE CYCLONIC STORM "FANI" OVER COASTAL ODISHA

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER COASTAL ODISHA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 20 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF 03RD MAY, 2019 OVER COASTAL ODISHA NEAR LATITUDE 21.1°N AND LONGITUDE 86.5°E, ABOUT 60 KM SOUTHWEST OF BALASORE (ODISHA) AND 160 KM SOUTHWEST OF MIDNAPORE (WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A SEVERE CYCLONIC STORM DURING NEXT SIX HOURS. IT IS VERY LIKELY TO **EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 60-70 KMPH GUSTING TO 80 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time(UTC)	Position (Lat.^{0}N/ long.^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
03.05.19/1200	21.1/86.5	125-135 gusting to 150	Very Severe Cyclonic Storm
03.05.19/1800	21.9/87.0	110-120 gusting to 135	Severe Cyclonic Storm
04.05.19/0000	22.7/87.6	90-100 gusting to 110	Severe Cyclonic Storm
04.05.19/0600	23.5/88.3	70-80 gusting to 90	Cyclonic Storm
04.05.19/1200	25.0/89.7	50-60 gusting 70	Deep Depression
05.05.19/0000	26.4/91.4	35-45 gusting to 55	Depression

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

STORM SURGE WARNING:

STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC OF 03rd MAY, 2019 THE SYSTEM IS OVER COASTAL ODISHA. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER SOUTH COASTAL ODISHA AND GANGETIC WEST BENGAL, NORTH BAY BETWEEN LATITUDE 20.0˚N TO 21.5˚N TO THE WEST OF LONGITUDE 86.8˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 88˚C. DWR PARADEEP INDICTAE CIRCULAR DIFFUSED EYE WITH A DIAMETER OF 17 KM.

THE SEA CONDITION IS PHENOMENAL OVER NORTHWEST BAY OF BENGAL ALONG AND OFF NORTH ODISHA & WEST BENGAL COASTS DURING NEXT 03 HOURS AND IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 18 HOURS.

AT 1200 UTC OF TODAY, BALASORE (42895) REPORTED MEAN SEA LEVEL PRESSURE OF 989.5 HPA AND MEAN SURFACE WIND DIRECTION 50° AND WIND SPEED 24 KNOTS; PARADIP (42976) REPORTED MEAN SEA LEVEL PRESSURE OF 993.4 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 50 KNOTS; CHANDBALI (42973) REPORTED MEAN SEA LEVEL PRESSURE OF 984.1 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 40 KNOTS.

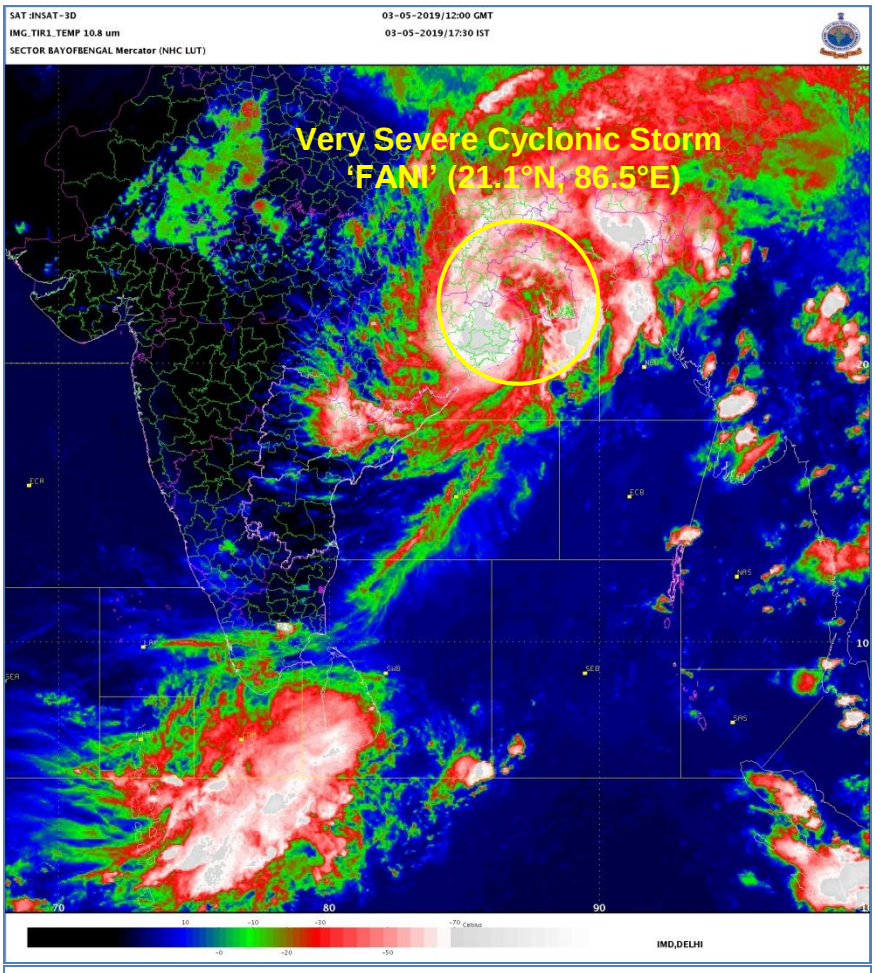
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

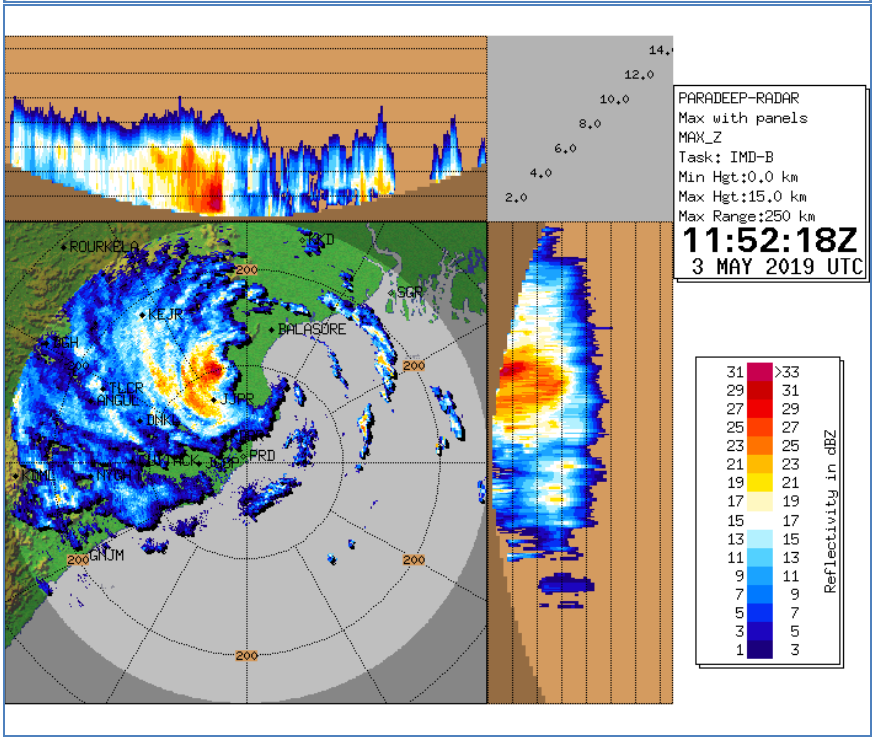
THE LOWER LEVEL POSITIVE VORTICITY IS 250 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO DECRESED AND IS ABOUT 10 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT REMAINS LOW ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

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

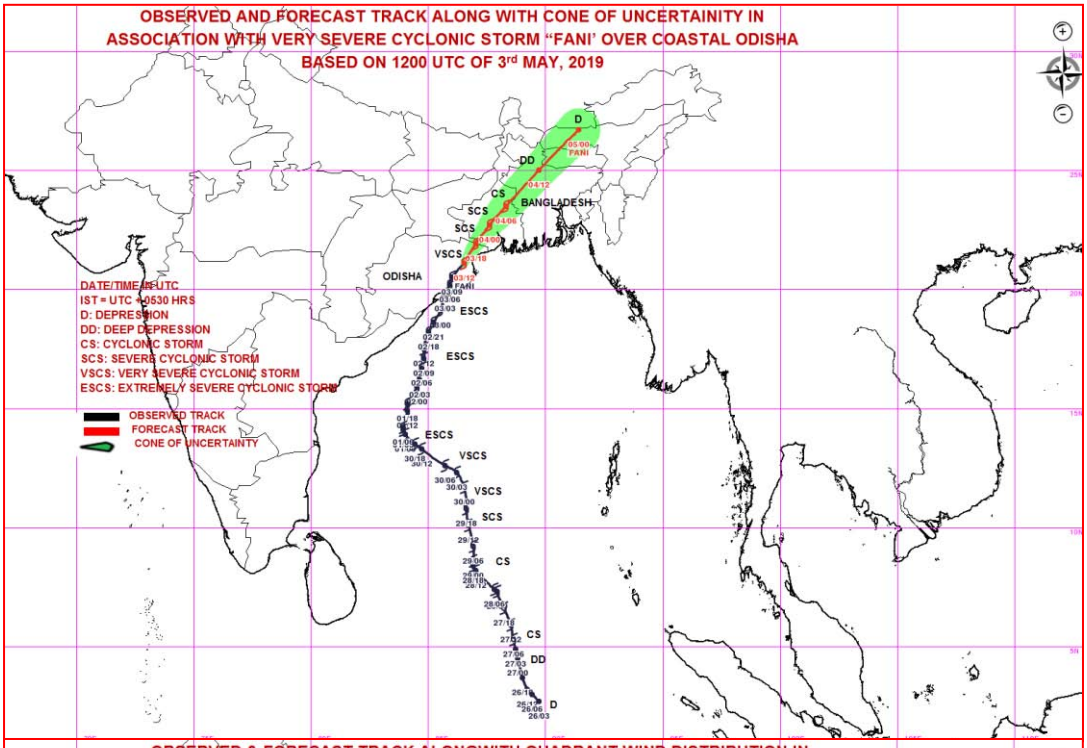
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

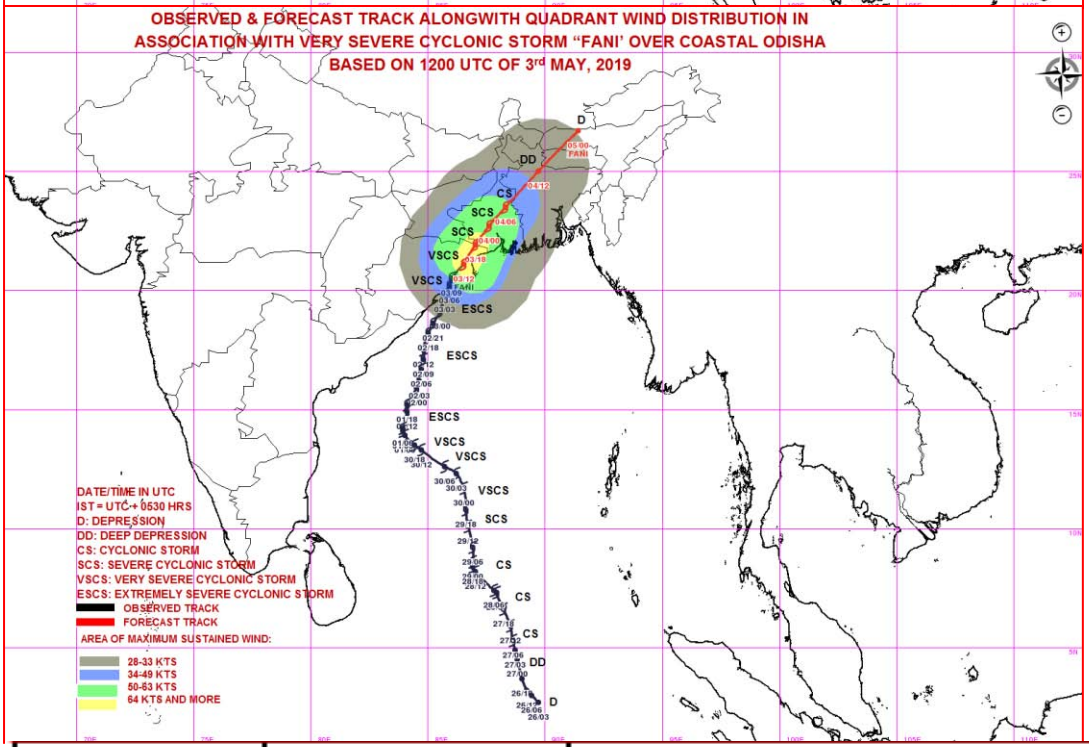




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 52

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 52 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 1700 UTC OF 03.05.2019 BASED ON 1500 UTC OF 03.05.2019.

SUB: SEVERE CYCLONIC STORM "FANI" OVER COASTAL ODISHA

THE **VERY SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER COASTAL ODISHA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 22 KMPH IN LAST SIX HOURS, WEAKENED INTO A **SEVERE CYCLONIC STORM** AND LAY CENTRED AT 1500 HRS UTC OF 03RD MAY, 2019 OVER COASTAL ODISHA NEAR LATITUDE 21.5°N AND LONGITUDE 86.7°E, ABOUT 20 KM WEST OF BALASORE (ODISHA), 120 KM WEST-SOUTHWEST OF MIDNAPORE (WEST BENGAL) AND 200 KM WEST-SOUTHWEST OF KOLKATA (WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO **EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 70-80 KMPH GUSTING TO 90 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.05.19/1500	21.5/86.7	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
03.05.19/1800	21.9/87.0	110-120 GUSTING TO 135	SEVERE CYCLONIC STORM
04.05.19/0000	22.7/87.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.05.19/0600	23.5/88.3	70-80 GUSTING TO 90	CYCLONIC STORM
04.05.19/1200	25.0/89.7	50-60 GUSTING 70	DEEP DEPRESSION
05.05.19/0000	26.4/91.4	35-45 GUSTING TO 55	DEPRESSION

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

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1500 UTC OF 03rd MAY, 2019 THE SYSTEM IS OVER COASTAL ODISHA. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER ODISHA, JHARKHAND, SOUTH GANGETIC WEST BENGAL NORTH BAY BETWEEN LATITUDE 20.0˚N TO 24.0˚N TO THE WEST OF LONGITUDE 87.5˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92˚C.

THE SEA CONDITION IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 18 HOURS.

AT 1500 UTC OF TODAY, BALASORE (42895) REPORTED MEAN SEA LEVEL PRESSURE OF 981.6 HPA CHANDBALI (42973) REPORTED MEAN SEA LEVEL PRESSURE OF 994.3 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 30 KNOTS AND KOLKATAA(42807) REPORTED MEAN SEA LEVEL PRESSURE OF 1000.2 HPA AND MEAN SURFACE WIND DIRECTION 90° AND WIND SPEED 10 KNOTS .

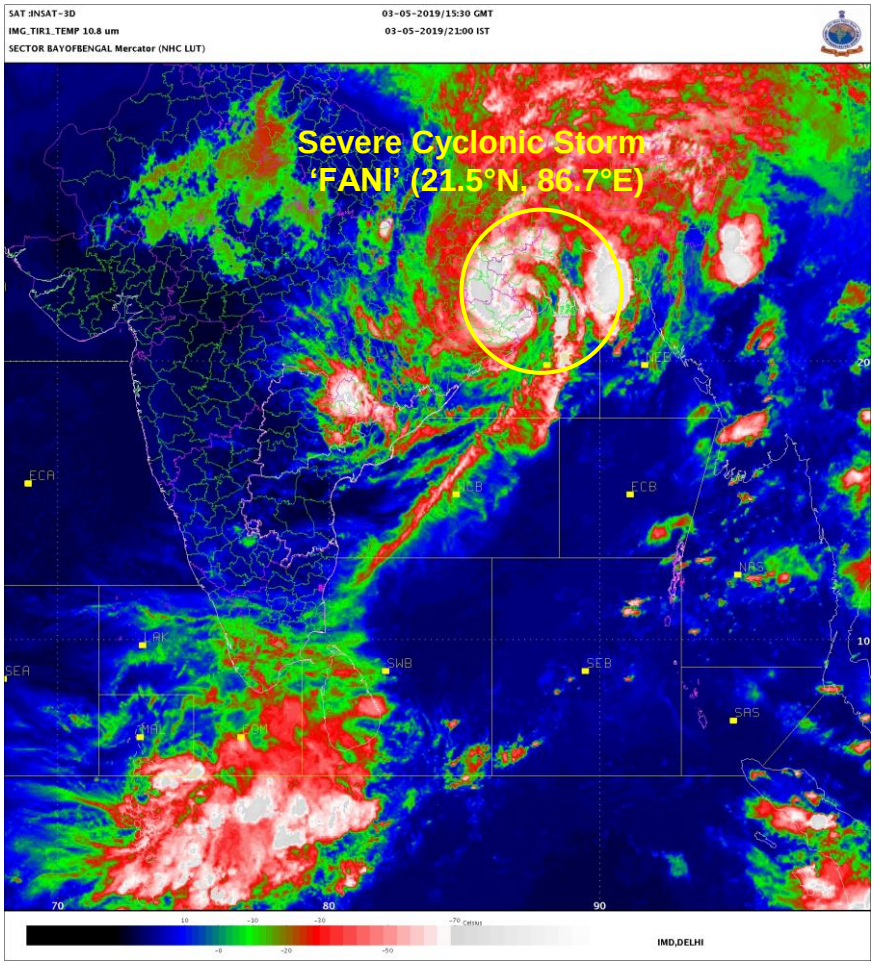
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

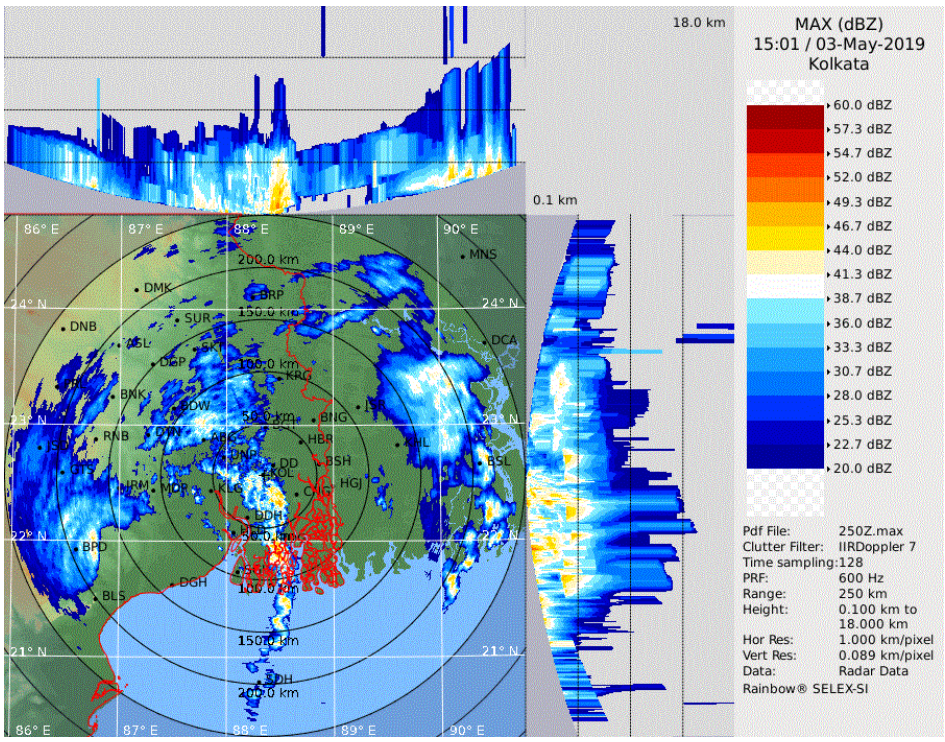
THE LOWER LEVEL POSITIVE VORTICITY IS 250 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO DECRESED AND IS ABOUT 10 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT REMAINS LOW ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

(V R DURAI)
(SCIENTIST-E, RSMC, NEW DELHI)

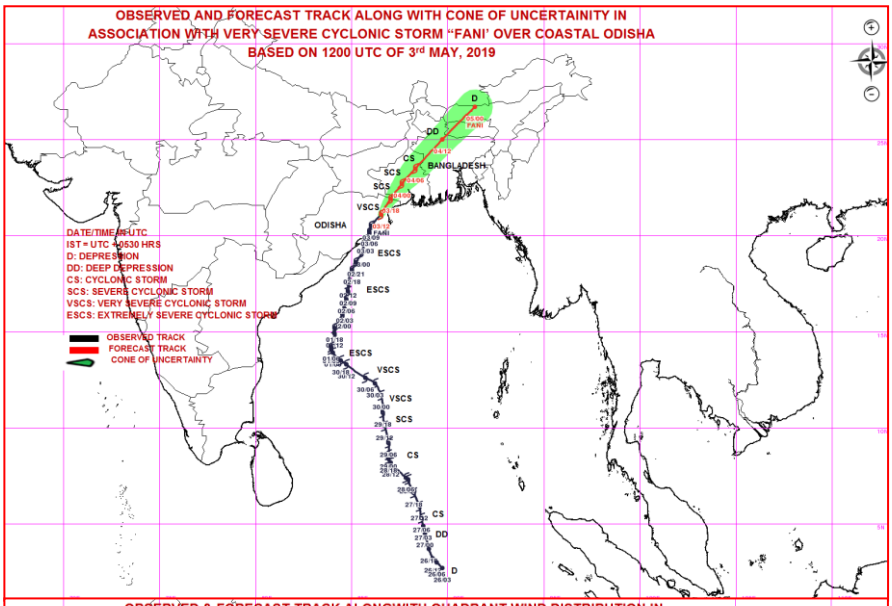
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

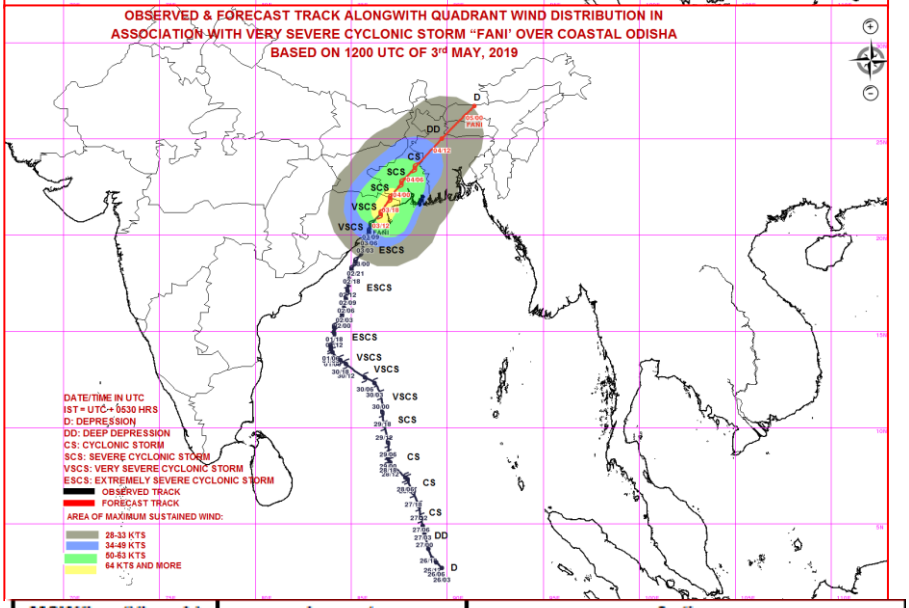




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 53

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 53 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 2000 UTC OF 03.05.2019 BASED ON 1800 UTC OF 03.05.2019.

SUB: SEVERE CYCLONIC STORM "FANI" OVER COASTAL ODISHA

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER COASTAL ODISHA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 18 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1800 HRS UTC OF 03RD MAY, 2019 OVER COASTAL ODISHA NEAR LATITUDE 21.9°N AND LONGITUDE 87.1°E, ABOUT 45 KM – NORTH-NORTHEAST OF BALASORE (ODISHA), 60 KM SOUTHWEST OF MIDNAPORE (WEST BENGAL) AND 140 KM WEST-SOUTHWEST OF KOLKATA (WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A CYCLONIC STORM DURING NEXT 12 HOURS. IT IS VERY LIKELY TO **EMERGE INTO GANGETIC WEST BENGAL AS A SEVERE CYCLONIC STORM WITH WIND SPEED OF 90-100 KMPH GUSTING TO 115 KMPH BY EARLY MORNING OF 4TH MAY. IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 70-80 KMPH GUSTING TO 90 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT GOPALPUR & PARADIP.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.05.19/1800	21.9/87.1	100-110 GUSTING TO 125	SEVERE CYCLONIC STORM
04.05.19/0000	22.7/87.6	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.05.19/0600	23.5/88.3	70-80 GUSTING TO 90	CYCLONIC STORM
04.05.19/1200	25.0/89.7	50-60 GUSTING 70	DEEP DEPRESSION
04.05.19/1800	25.7/90.6	50-60 GUSTING 70	DEEP DEPRESSION
05.05.19/0600	26.9/92.4	35-45 GUSTING TO 55	DEPRESSION

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

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 1700 UTC OF 03rd MAY, 2019 THE SYSTEM IS OVER COASTAL ODISHA. ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER ODISHA, JHARKHAND, SOUTH GANGETIC WEST BENGAL AND NORTH BAY BETWEEN LATITUDE 21.0˚N TO 24.0˚N AND LONGITUDE 84.5 ˚E TO 87.5˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92˚C.

THE SEA CONDITION IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 18 HOURS.

AT 1800 UTC OF TODAY, BALASORE (42895) REPORTED MEAN SEA LEVEL PRESSURE OF 994.1 HPA AND MEAN SURFACE WIND DIRECTION 270° AND WIND SPEED 10 KNOTS. CHANDBALI (42973) REPORTED MEAN SEA LEVEL PRESSURE OF 999.5 HPA AND MEAN SURFACE WIND DIRECTION 230° AND WIND SPEED 10 KNOTS. KOLKATA(42807) REPORTED MEAN SEA LEVEL PRESSURE OF 996.2 HPA AND MEAN SURFACE WIND DIRECTION 90° AND WIND SPEED 08 KNOTS .

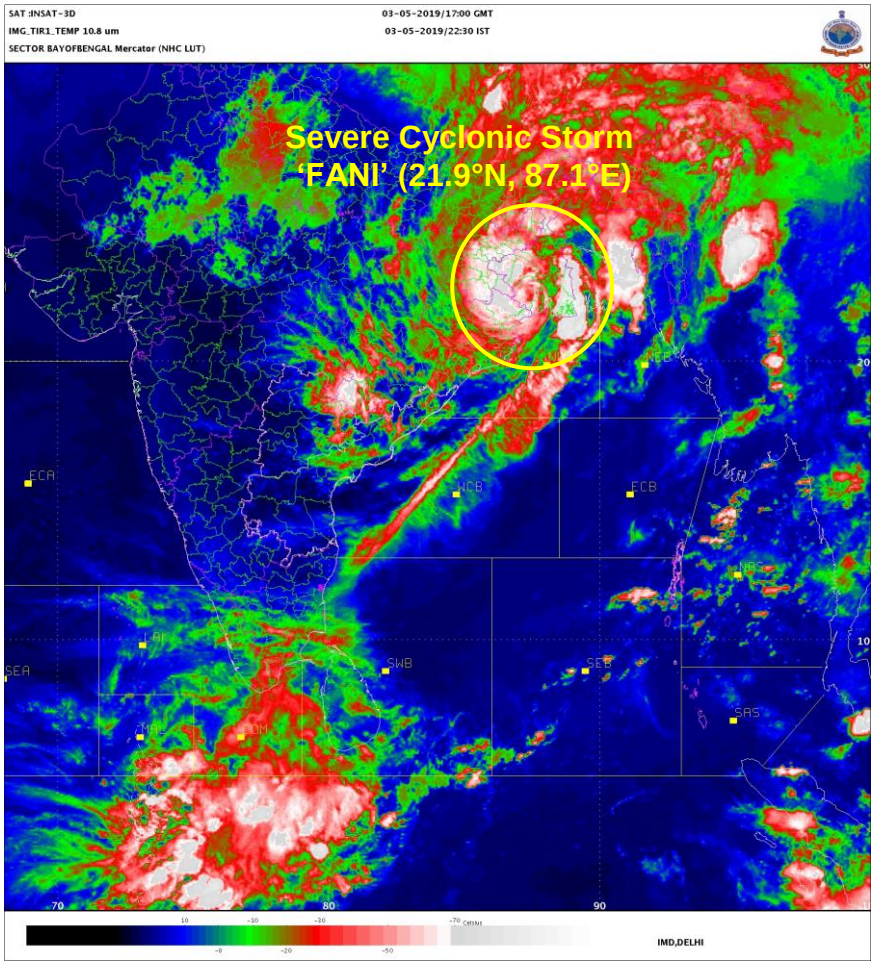
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

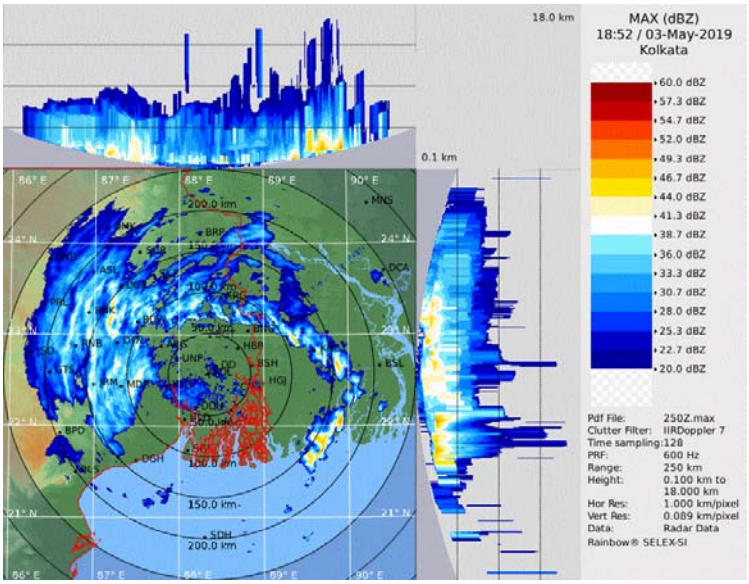
THE LOWER LEVEL POSITIVE VORTICITY IS 250 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO DECRESED AND IS ABOUT 10 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT REMAINS LOW ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

(V R DURAI)
(SCIENTIST-E, RSMC, NEW DELHI)

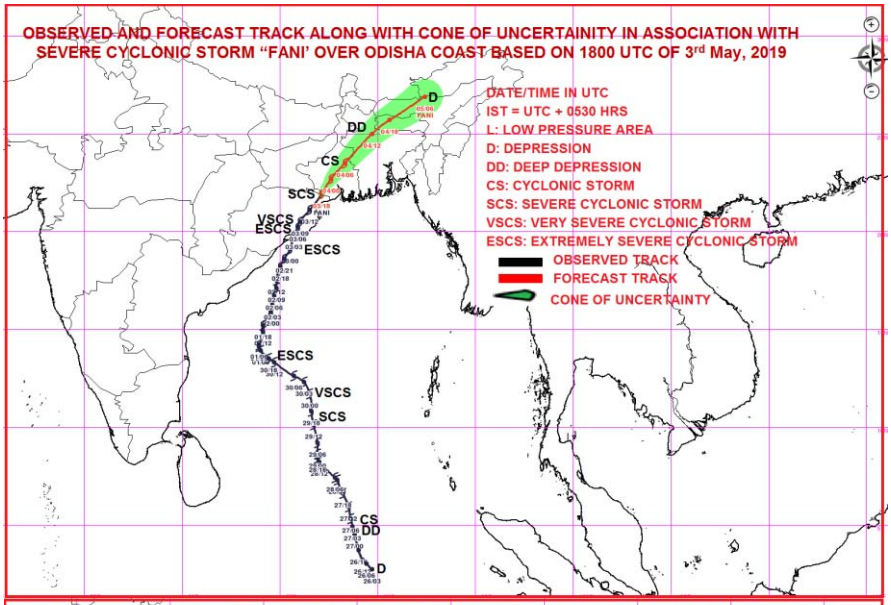
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

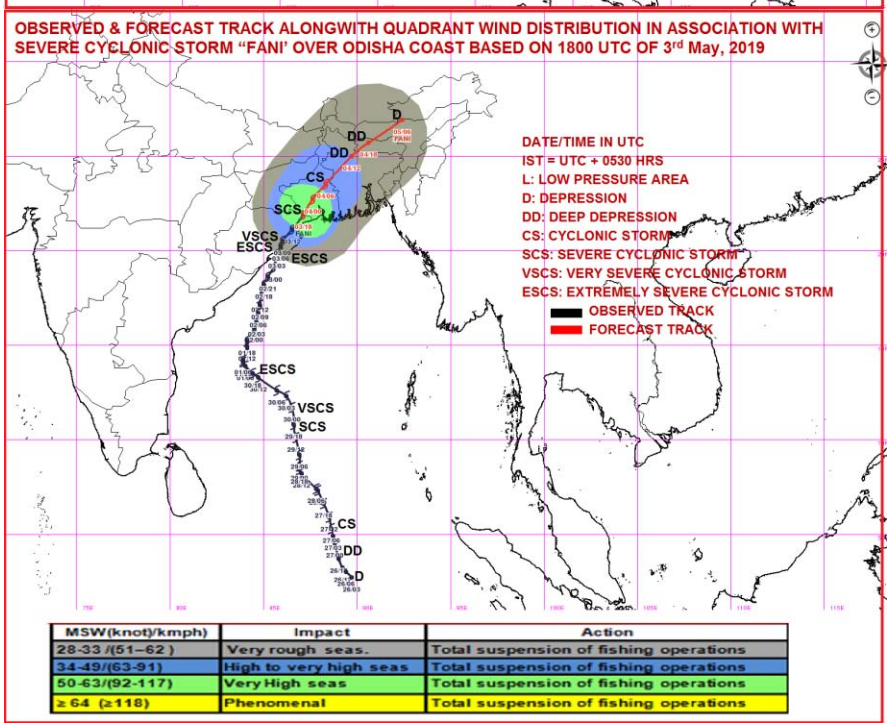




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 54

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 54 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0000 UTC OF 04.05.2019 BASED ON 2100 UTC OF 03.05.2019.

SUB: SEVERE CYCLONIC STORM "FANI" OVER WEST BENGAL

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER COASTAL ODISHA MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 27 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 2100 HRS UTC OF 03RD MAY, 2019 OVER GANGETIC WEST BENGAL NEAR LATITUDE 22.5°N AND LONGITUDE 87.9°E, ABOUT 130 KM NORTH-NORTHEAST OF BALASORE (ODISHA), 60 KM NORTH-NORTHEAST OF MIDNAPORE (WEST BENGAL), 50 KM WEST OF KOLKATA (WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A CYCLONIC STORM DURING NEXT 06 HOURS. **IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 70-80 KMPH GUSTING TO 90 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADARS AT KOLKATA..

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
03.05.19/2100	22.5/87.9	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.05.19/0000	22.7/88.1	90-100 GUSTING TO 110	SEVERE CYCLONIC STORM
04.05.19/0600	23.5/88.3	70-80 GUSTING TO 90	CYCLONIC STORM
04.05.19/1200	25.0/89.7	50-60 GUSTING 70	DEEP DEPRESSION
04.05.19/1800	25.7/90.6	50-60 GUSTING 70	DEEP DEPRESSION
05.05.19/0600	26.9/92.4	35-45 GUSTING TO 55	DEPRESSION

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

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 2100 UTC OF 03rd MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTH COASTAL ODISHA, JHARKHAND, SOUTH GANGETIC WEST BENGAL AND NORTH BAY BETWEEN LATITUDE 22.0˚N TO 25.0˚N AND LONGITUDE 86.5 ˚E TO 91.0˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92˚C.

THE SEA CONDITION IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 18 HOURS.

AT 2100 UTC OF TODAY, KOLKATA(42807) REPORTED MEAN SEA LEVEL PRESSURE OF 987.3 HPA AND MEAN SURFACE WIND DIRECTION 90° AND WIND SPEED 12 KNOTS. DIGHA (42901) REPORTED MEAN SEA LEVEL PRESSURE OF 997.2 HPA AND MEAN SURFACE WIND DIRECTION 250° AND WIND SPEED 08 KNOTS. CHANDBALI (42706) REPORTED MEAN SEA LEVEL PRESSURE OF 998.1 HPA AND MEAN SURFACE WIND DIRECTION 360° AND WIND SPEED 08 KNOTS .

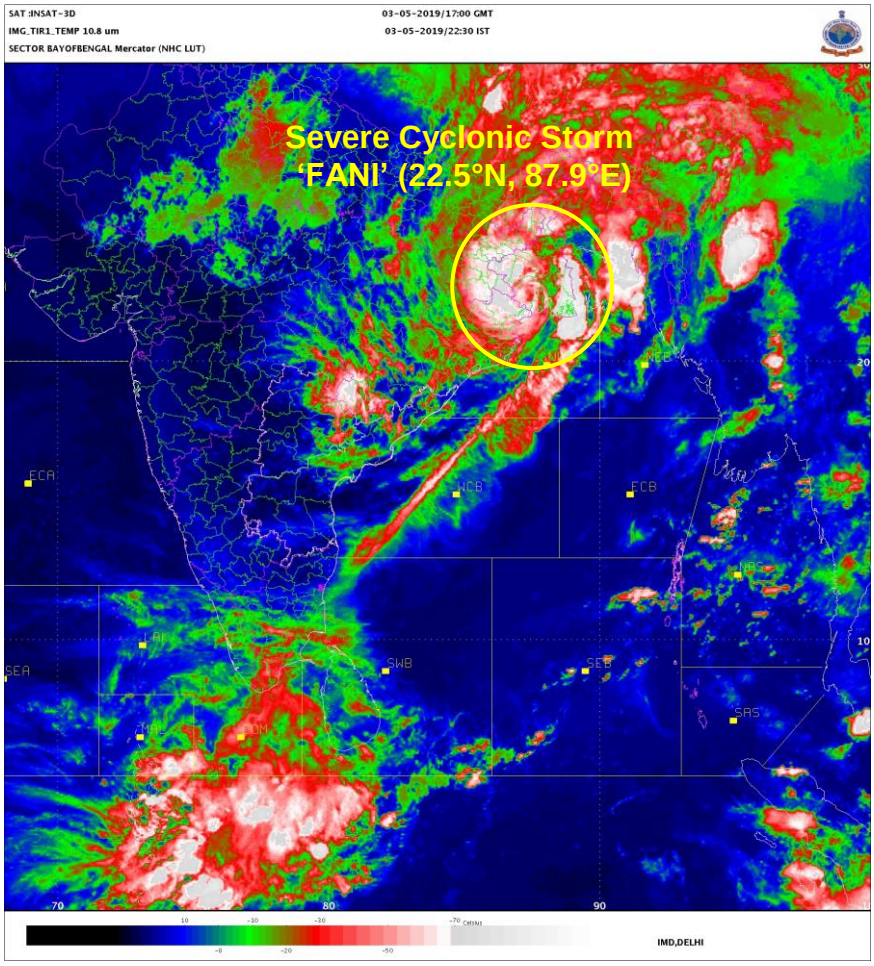
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

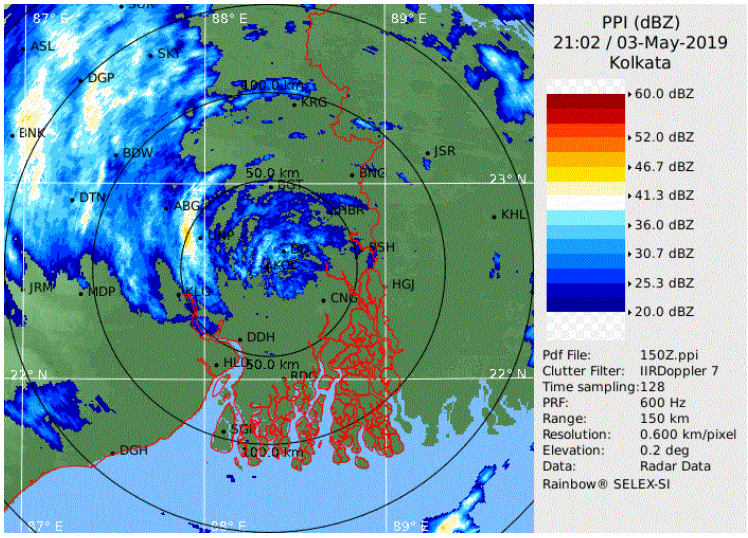
THE LOWER LEVEL POSITIVE VORTICITY IS 250 $X10^{-6}SEC^{-1}$ TO THE SOUTH OF THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE HAS DECREASED AND IS ABOUT 20 $X10^{-5}SEC^{-1}$ TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE HAS ALSO DECRESED AND IS ABOUT 10 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS LOW TO MODERATE (10-15 KNOTS) AROUND THE SYSTEM CENTRE. IT REMAINS LOW ALONG THE FORECAST TRACK.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, DUE TO INCREASED LAND INTERACTION THE SYSTEM WILL GRADUALLY WEAKEN AS IT MOVES NORTHEASTWARDS.

(V R DURAI)
(SCIENTIST-E, RSMC, NEW DELHI)

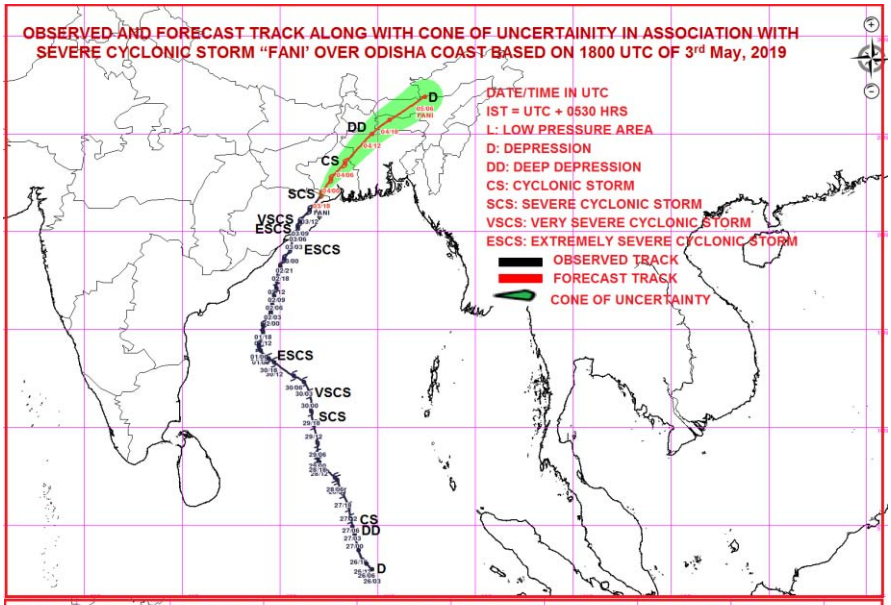
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

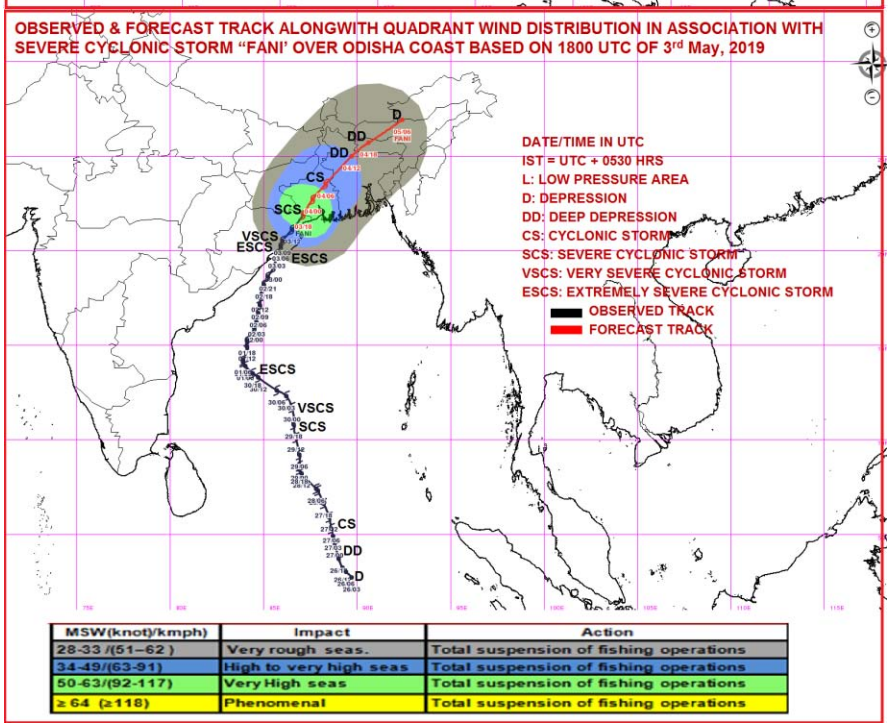




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

TROPICAL CYCLONE ADVISORY BULLETIN NO. 55

FROM: RSMC –TROPICAL CYCLONES, NEW DELHI

TO: STORM WARNING CENTRE, NAYPYI TAW (MYANMAR)
STORM WARNING CENTRE, BANGKOK (THAILAND)
STORM WARNING CENTRE, COLOMBO (SRILANKA)
STORM WARNING CENTRE, DHAKA (BANGLADESH)
STORM WARNING CENTRE, KARACHI (PAKISTAN)
METEOROLOGICAL OFFICE, MALE (MALDIVES)
OMAN METEOROLOGICAL DEPARTMENT, MUSCAT (THROUGH RTH JEDDAH)
YEMEN METEOROLOGICAL SERVICES, REPUBLIC OF YEMEN (THROUGH RTH JEDDAH)
NATIONAL CENTRE FOR METEOROLOGY, UAE (THROUGH RTH JEDDAH)
PRESIDENCY OF METEOROLOGY AND ENVIRONMENT, SAUDI ARABIA (THROUGH RTH JEDDAH)
IRAN METEOROLOGICAL ORGANISATION, (THROUGH RTH JEDDAH)
QATAR METEOROLOGICAL DEPARTMENT (THROUGH RTH JEDDAH)

TROPICAL CYCLONE ADVISORY NO. 55 FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 48 HOURS ISSUED AT 0300 UTC OF 04.05.2019 BASED ON 0000 UTC OF 04.05.2019.

SUB: CYCLONIC STORM "FANI" OVER WEST BENGAL

THE **SEVERE CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER GANGETIC WEST BENGAL MOVED FURTHER NORTH-NORTHEASTWARDS WITH A SPEED OF ABOUT 30 KMPH IN LAST SIX HOURS, WEAKENED INTO A CYCLONIC STORM AND LAY CENTERED AT 0000 HRS UTC OF 04TH MAY, 2019 OVER GANGETIC WEST BENGAL NEAR LATITUDE 22.5°N AND LONGITUDE 87.9°E, ABOUT 130 KM NORTH-NORTHEAST OF BALASORE (ODISHA), 60 KM NORTH-NORTHEAST OF MIDNAPORE (WEST BENGAL), 50 KM WEST OF KOLKATA (WEST BENGAL).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTH-NORTHEASTWARDS AND WEAKEN FURTHER INTO A CYCLONIC STORM DURING NEXT 06 HOURS. **IT IS VERY LIKELY TO MOVE FURTHER NORTH-NORTHEASTWARDS AND EMERGE INTO BANGLADESH ON 4TH MAY EVENING AS A CYCLONIC STORM WITH WIND SPEED 70-80 KMPH GUSTING TO 90 KMPH.**

THE CYCLONE IS BEING TRACKED BY DOPPLER WEATHER RADAR AT KOLKATA..

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
04.05.19/0000	23.1/88.2	60-70 GUSTING TO 80	CYCLONIC STORM
04.05.19/0600	24.3/89.3	50-60 GUSTING TO 70	CYCLONIC STORM
04.05.19/1200	25.5/90.4	40-50 GUSTING TO 60	DEEP DEPRESSION
04.05.19/1800	26.7/91.5	30-40 GUSTINGTO 50	DEEP DEPRESSION

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

STORM SURGE WARNING:
STORM SURGE OF ABOUT 0.5 TO 1 METER HEIGHT ABOVE ASTRONOMICAL TIDE IS VERY LIKELY TO INUNDATE LOW LYING AREAS OF KENDRAPARA, BALASORE AND BHADRAK DISTRICTS OF ODISHA AND EAST MEDINIPUR DISTRICT OF WEST BENGAL DURING NEXT 12 HOURS.

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0000 UTC OF 04TH MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTH EAST JHARKHAND, SOUTH GANGETIC WEST BENGAL AND NORTH BAY BETWEEN LATITUDE 22.0˚N TO 25.5˚N AND WEST OF LONGITUDE 91.8 ˚E TO 93.0˚E. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 92˚C.

THE SEA CONDITION IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 06 HOURS.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 35 KNOTS GUSTING TO 45 KNOTS. THE SEA CONDITION IS ROUGH TO VERY ROUGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS. THE ESTIMATED CENTRAL PRESSURE IS 990 HPA.

AT 0000 UTC OF TODAY, KOLKATA(42807) REPORTED MEAN SEA LEVEL PRESSURE OF 994.7 HPA AND MEAN SURFACE WIND DIRECTION 270° AND WIND SPEED 08 KNOTS. DIGHA (42901) REPORTED MEAN SEA LEVEL PRESSURE OF 1002.2 HPA AND MEAN SURFACE WIND DIRECTION 270° AND WIND SPEED 05 KNOTS.

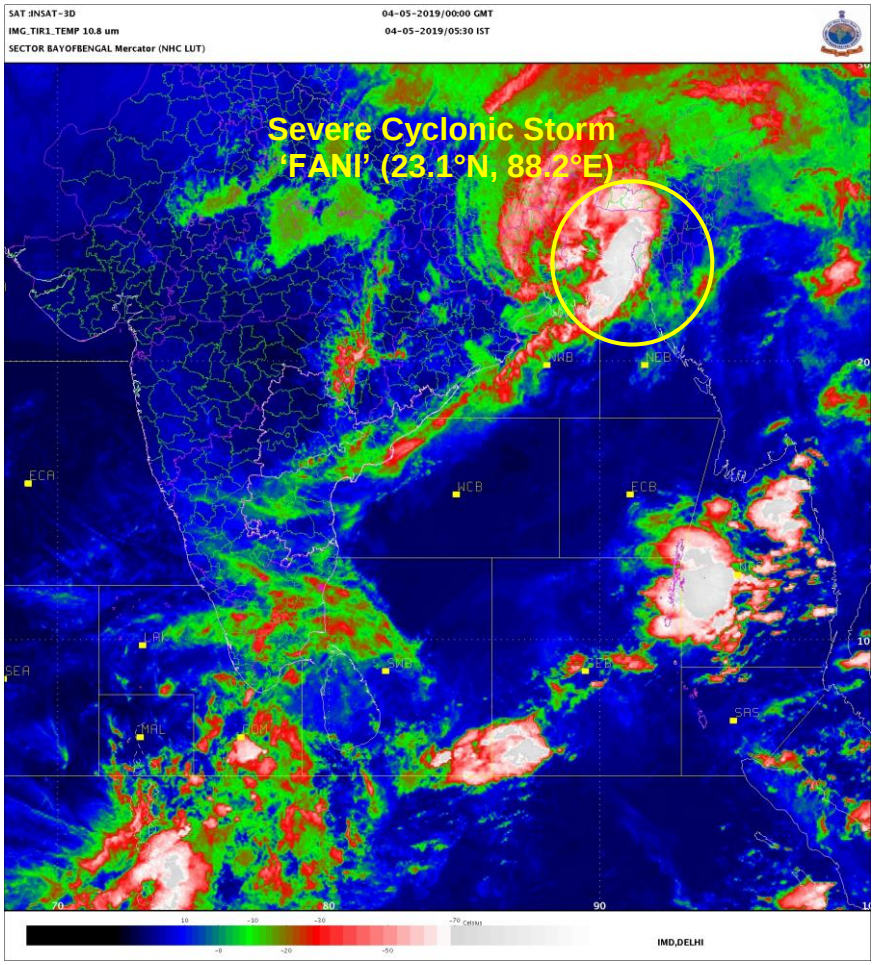
TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

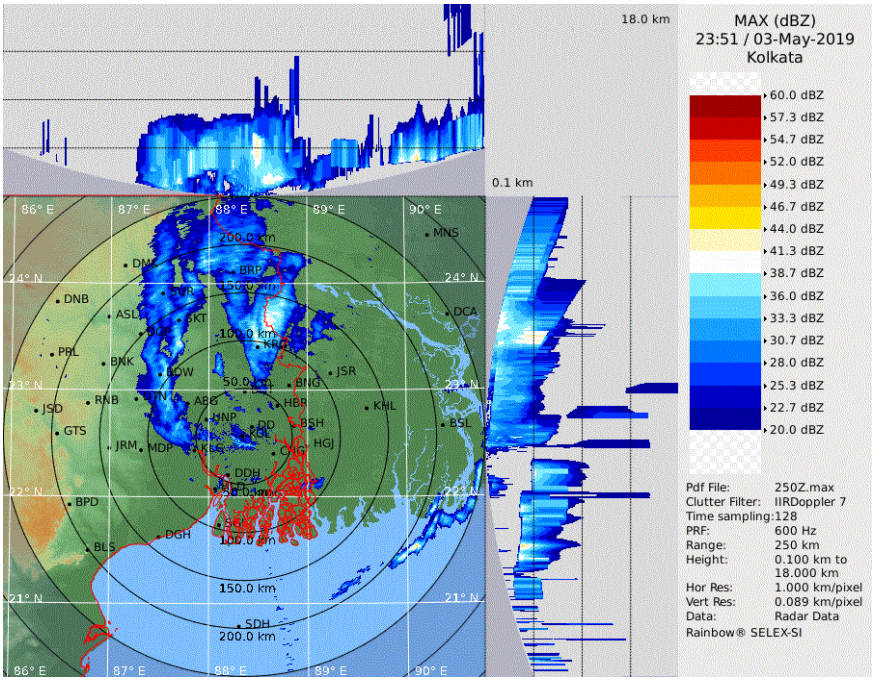
THE LOWER LEVEL POSITIVE VORTICITY IS 250 $X10^{-6}SEC^{-1}$ AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 $X10^{-5}SEC^{-}$ AROUND THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-20 KNOTS). THE SYSTEM HAS SHOWN RAPID MOVEMENT DURING THE LAST 12 HOURS. HIGH SHEAR AND LAND INTERACTION HAS ALSO RESULTED IN THE WEAKENING OF THE SYSTEM.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, THE LAND INTERACTION AND REDUCTION OF MOISTURE INCURSION TO THE SYSTEM FROM BAY OF BENGAL HAS RESULTED IN THE FURTHER WEAKENING OF THE SYSTEM DURING PAST 06 HOURS. THE SYSTEM WILL FURTHER WEAKEN AS IT MOVES NORTHEASTWARDS.

(V R DURAI)
(SCIENTIST-E, RSMC, NEW DELHI)

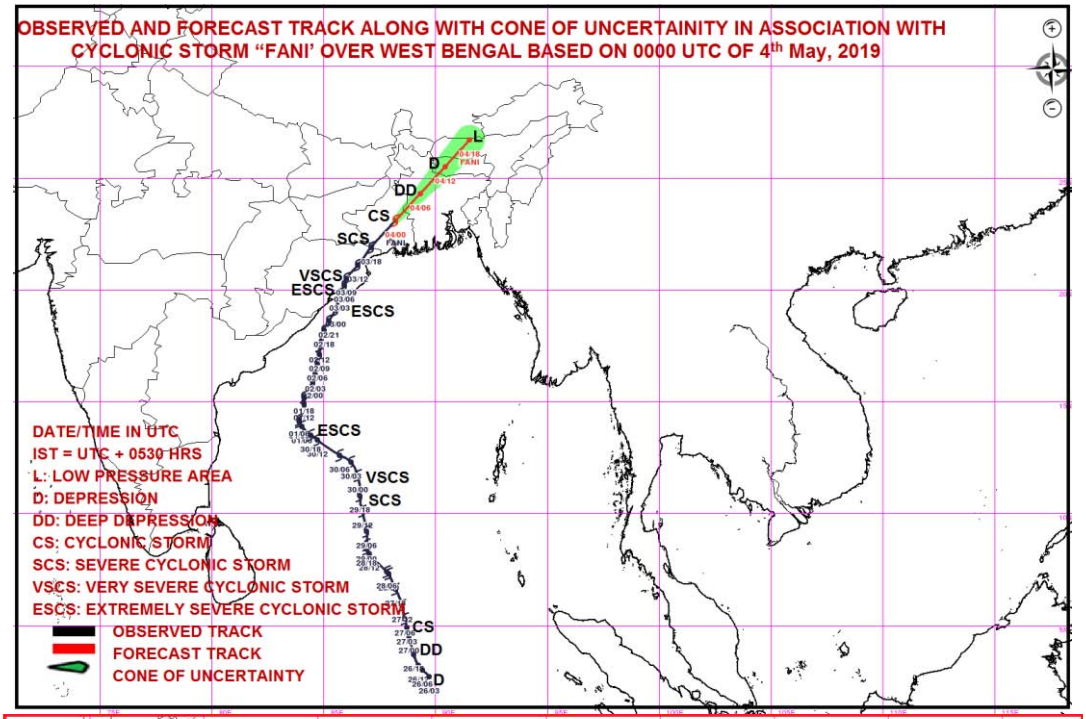
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

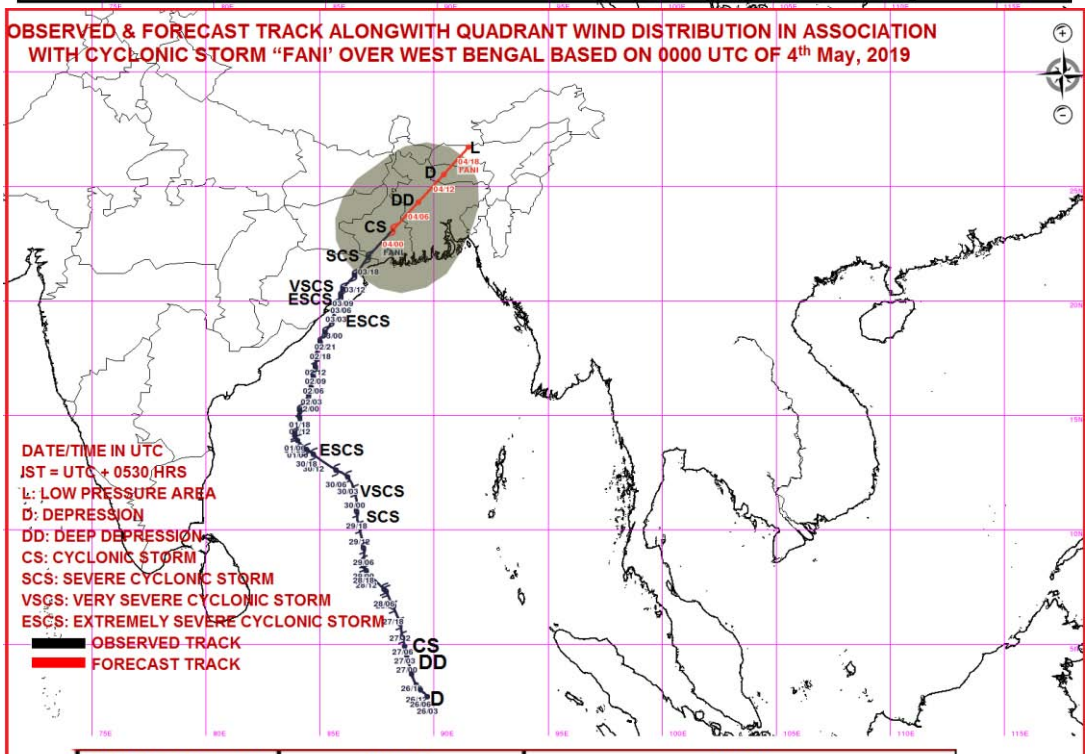




PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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





MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 27.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 96 HOURS ISSUED AT 0600 UTC OF 04.05.2019 BASED ON 0300 UTC OF 04.05.2019.

CYCLONIC STORM "FANI" OVER WEST BENGAL WEAKENED INTO A DEEP DEPRESSION OVER BANGLADESH AND ADJOINING GANGETIC WEST BENGAL

THE **CYCLONIC STORM 'FANI'** (PRONOUNCED AS '**FONI**') OVER GANGETIC WEST BENGAL MOVED EAST NORTHEASTWARDS WITH A SPEED OF ABOUT 25 KMPH IN LAST SIX HOURS, WEAKENED INTO A **DEEP DEPRESSION** AND LAY CENTRED AT 0300 UTC OF 04TH MAY, 2019 OVER BANGLADESH AND ADJOINING GANGETIC WEST BENGAL NEAR LATITUDE 23.6°N AND LONGITUDE 88.8°E, ABOUT 40 KM EAST-NORTHEAST OF KRISHNANAGAR (42711) (WEST BENGAL).

IT IS VERY LIKELY TO MOVE NORTHEASTWARDS, WEAKEN FURTHER INTO A DEPRESSION OVER BANGLADESH DURING NEXT 06 HOURS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME (UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
04.05.19/0300	23.6/88.8	50-60 GUSTING TO 70	DEEP DEPRESSION
04.05.19/0600	24.2/89.4	45-55 GUSTING TO 65	DEPRESSION
04.05.19/1200	25.4/90.7	40-50 GUSTING TO 60	DEPRESSION
04.05.19/1800	26.6/92.0	30-40 GUSTING TO 50	WELL MARKED LOW

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0300 UTC OF 04TH MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTH BANGLADESH, SUB HIMALAYAN GANGETIC WEST BENGAL, WEST ASSAM, MEGHALAYA, TRIPURA, AND ADJOINING NORTH MIZORAM AND MODERATE TO INTENSE CONVENTION OVER EAST BIHAR, NORTHEAST JHARKHAND,AND NORTH GANGETIC WEST BENGAL.

THE SEA CONDITION IS LIKELY TO BECOME VERY ROUGH TO HIGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING SUBSEQUENT 06 HOURS.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 994 HPA.

TOTAL PRECIPITABLE WATER VAPOUR IMAGERIES INDICATE WARM & MOIST AIR ADVECTION TO THE SYSTEM CENTRE.

THE LOWER LEVEL POSITIVE VORTICITY IS 250 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 30 X10^{-5}SEC^{-} TO THE NORTHEAST

PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)

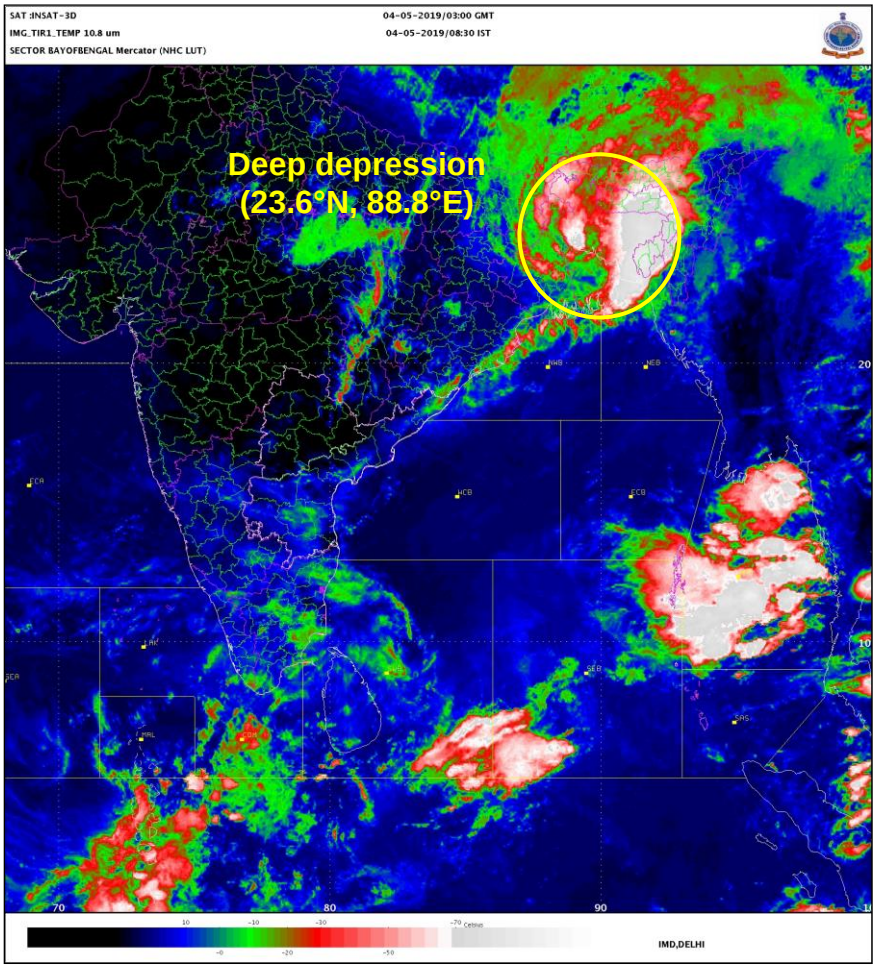
NIL: 0%, LOW: 1-25%, FAIR: 26-50%, MODERATE: 51-75% AND HIGH: 76-100%

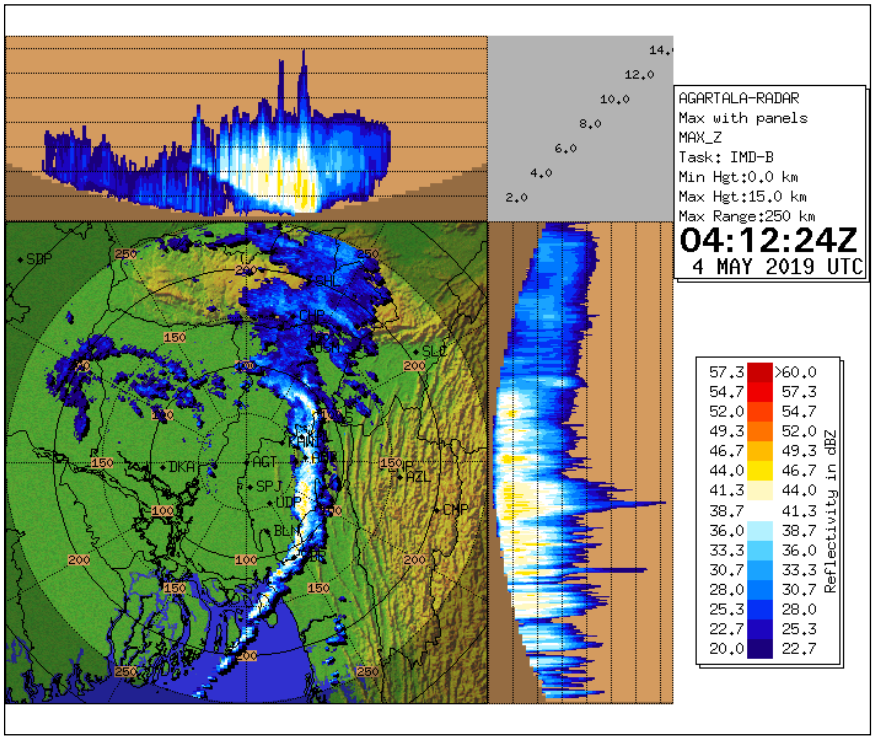
OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 20 $X10^{-5}SEC^{-1}$ AROUND THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-20 KNOTS). THE SYSTEM HAS SHOWN RAPID MOVEMENT DURING THE LAST 12 HOURS. HIGH SHEAR AND LAND INTERACTION HAS ALSO RESULTED IN THE WEAKENING OF THE SYSTEM.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTH-NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, THE LAND INTERACTION AND REDUCTION OF MOISTURE INCURSION TO THE SYSTEM FROM BAY OF BENGAL HAS RESULTED IN THE FURTHER WEAKENING OF THE SYSTEM DURING PAST 06 HOURS. THE SYSTEM WILL FURTHER WEAKEN AS IT MOVES NORTHEASTWARDS.

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

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





PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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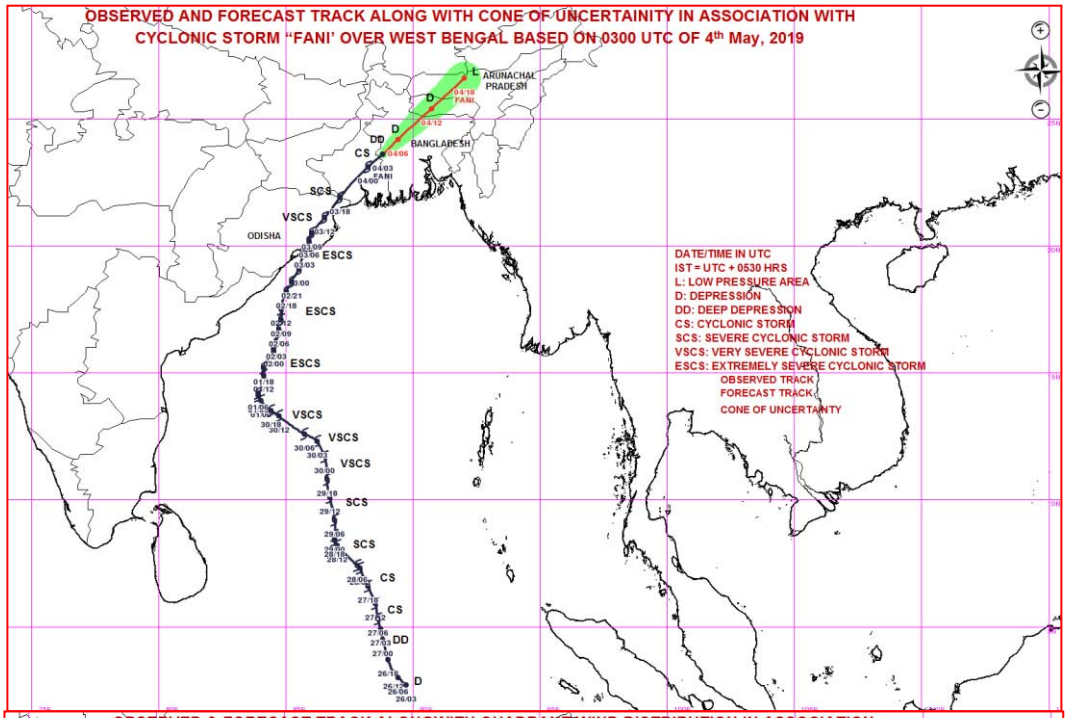
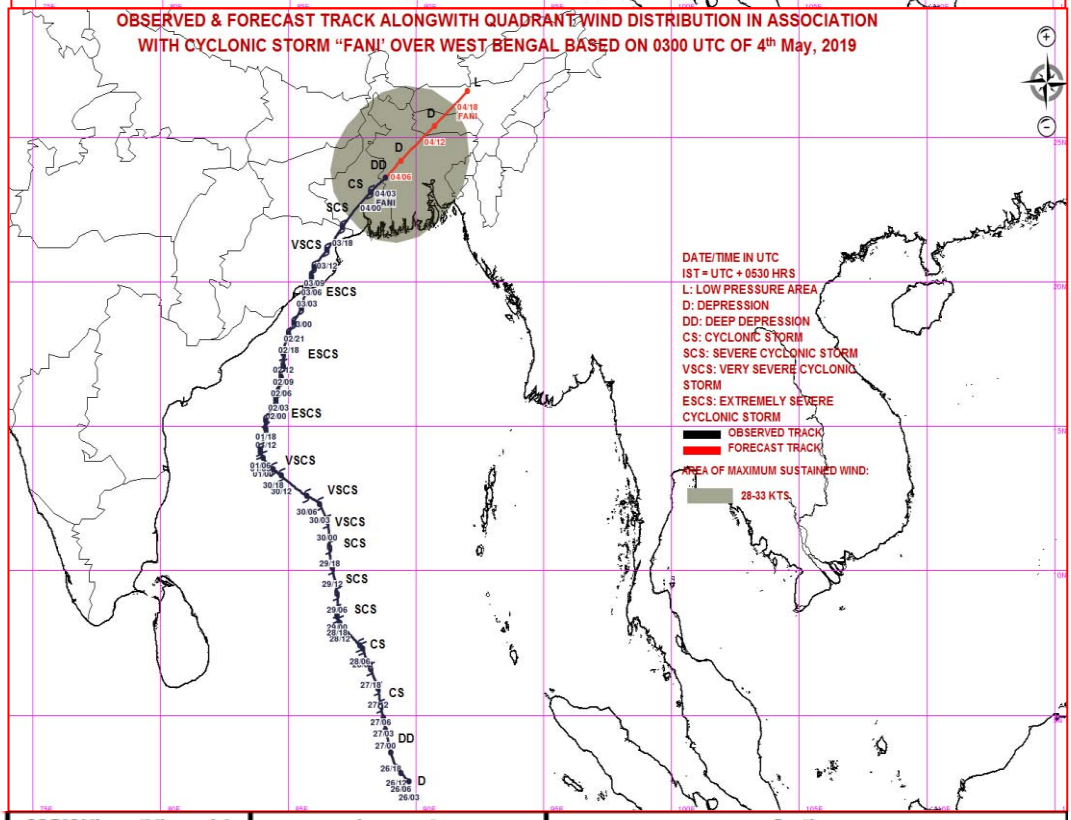




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 27.04.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 0900 UTC OF 04.05.2019 BASED ON 0600 UTC OF 04.05.2019.

DEEP DEPRESSION OVER BANGLADESH AND ADJOINING GANGETIC WEST BENGAL WEAKENED INTO A DEPRESSION

THE DEEP DEPRESSION OVER BANGLADESH AND ADJOINING GANGETIC WEST BENGAL MOVED FURTHER NORTHEASTWARDS WITH A SPEED OF ABOUT 29 KMPH IN LAST SIX HOURS, WEAKENED INTO A **DEPRESSION** AND LAY CENTRED AT 0600 UTC OF 04TH MAY, 2019 OVER BANGLADESH NEAR LATITUDE 24.3°N AND LONGITUDE 89.3°E, ABOUT 120 KM NORTH-NORTHWEST OF DHAKA (BANGLADESH) AND 200 KM SOUTH-SOUTHWEST OF DHUBRI (ASSAM).

IT IS VERY LIKELY TO CONTINUE TO MOVE NORTHEASTWARDS AND WEAKEN FURTHER INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

Date/Time (UTC)	Position (Lat.^{0}N/ long.^{0}E)	Maximum sustained surface wind speed (Kmph)	Category of cyclonic Disturbance
04.05.19/0600	24.3/89.3	45-55 gusting to 65	Depression
04.05.19/1200	25.6/90.5	40-50 gusting to 60	Depression
04.05.19/1800	26.4/91.8	30-40 gusting to 50	Well Marked Low

REMARKS:

AS PER THE SATELLITE IMAGERY OF 0600 UTC OF 04TH MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER BANGLADESH, SUB HIMALAYAN WEST BENGAL, ASSAM, MEGHALAYA, TRIPURA, AND ADJOINING NORTH MIZORAM. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 81C AND MODERATE TO INTENSE CONVECTION OVER EAST BIHAR, NORTHEAST JHARKHAND AND NORTH GANGETIC WEST BENGAL.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 995 HPA.

THE SEA CONDITION IS LIKELY TO REMAIN ROUGH TO VERY ROUGH ALONG AND OFF WEST BENGAL AND ADJOINING BANGLADESH COASTS DURING NEXT 06 HOURS.

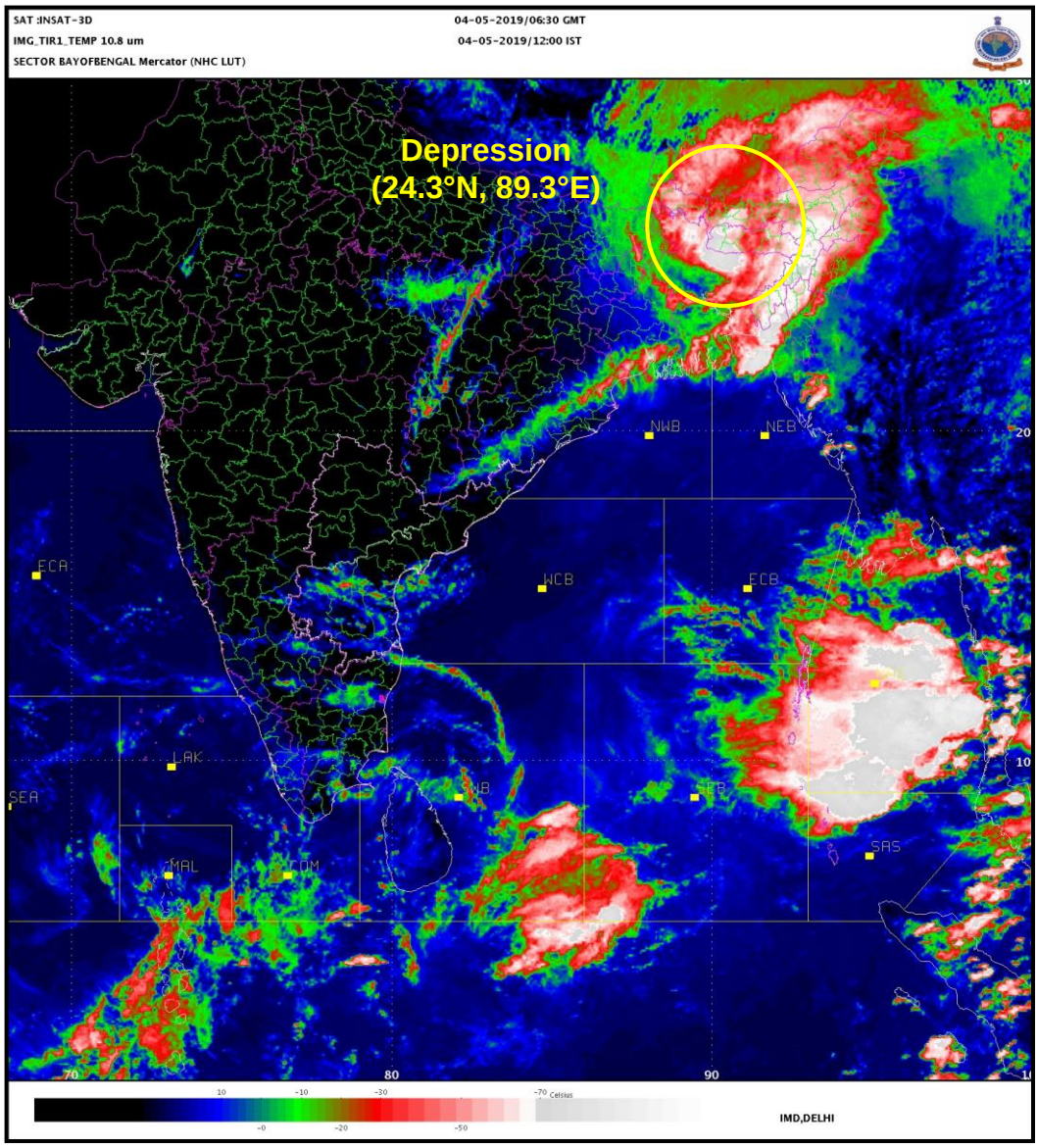
THE LOWER LEVEL POSITIVE VORTICITY IS 200 X10^{-6}SEC^{-1} AROUND THE SYSTEM CENTRE. THE LOW LEVEL CONVERGENCE IS ABOUT 40 X10^{-5}SEC^{-} TO THE SOUTHWEST OF THE SYSTEM CENTRE. UPPER LEVEL DIVERGENCE IS ABOUT 30 X10^{-5}SEC^{-1} TO THE NORTHWEST OF THE SYSTEM CENTRE. VERTICAL WIND SHEAR IS MODERATE TO HIGH (15-20 KNOTS)TO THE NORTHEAST OF THE SYSTEM CENTRE. THE SYSTEM HAS SHOWN RAPID MOVEMENT DURING THE LAST 12 HOURS. HIGH SHEAR AND LAND INTERACTION

HAS ALSO RESULTED IN THE WEAKENING OF THE SYSTEM.

THE WESTERLY TROUGH IN THE DEEP LAYER MEAN WIND LYING TO THE WEST OF THE SYSTEM CENTRE AND THE ANTICYCLONIC CIRCULATION OVER MYANMAR AND NEIGHBOURHOOD IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS ARE STEERING THE SYSTEM NORTHEASTWARDS. AS THE SYSTEM IS OVER LAND, THE LAND INTERACTION AND REDUCTION OF MOISTURE INCURSION TO THE SYSTEM FROM BAY OF BENGAL HAS RESULTED IN THE FURTHER WEAKENING OF THE SYSTEM DURING PAST 06 HOURS. THE SYSTEM WILL FURTHER WEAKEN AS IT MOVES NORTHEASTWARDS.

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

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



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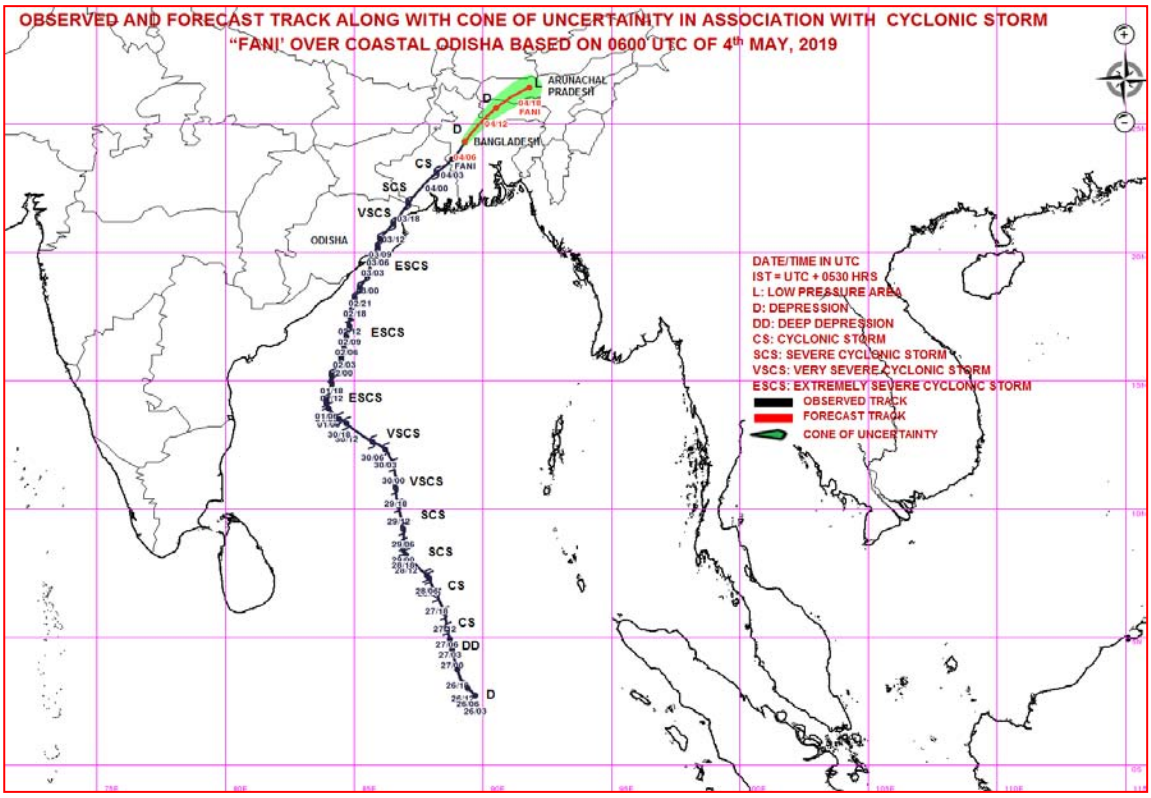
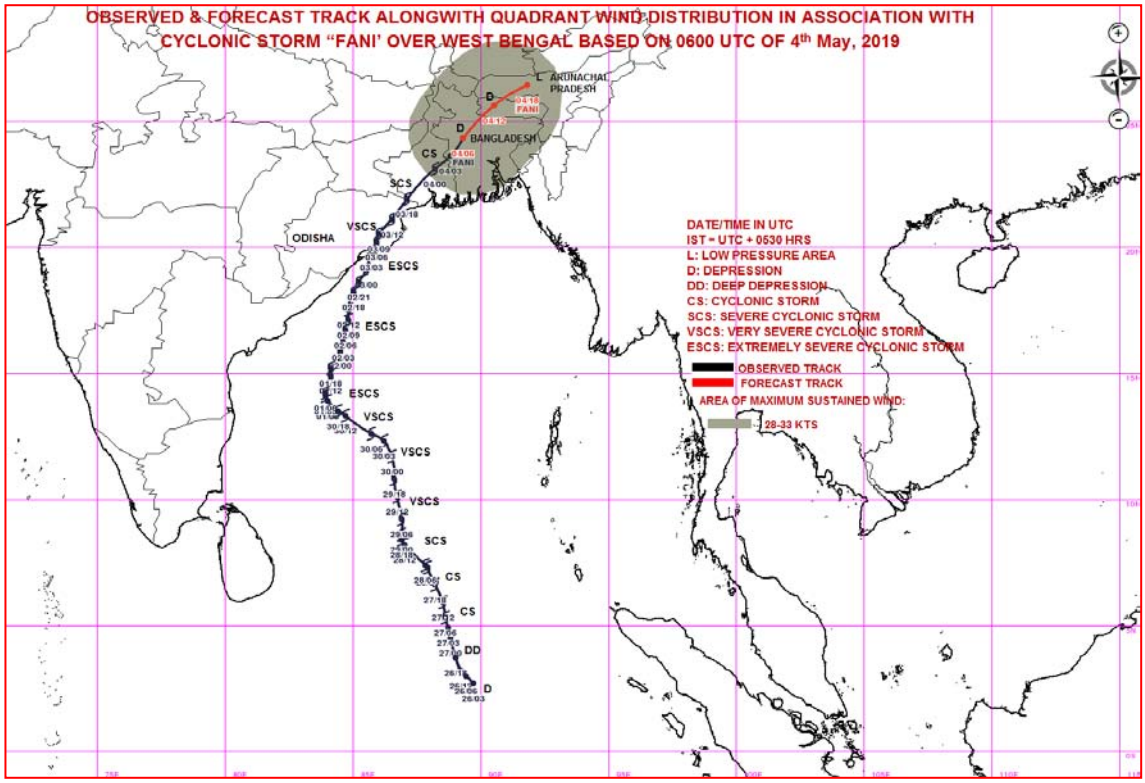




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 04.05.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 1500 UTC OF 04.05.2019 BASED ON 1200 UTC OF 04.05.2019.

DEPRESSION OVER WESTERN MEGHALAYA & ADJOINING BANGLADESH

THE DEPRESSION OVER BANGLADESH MOVED EAST-NORTHEASTWARDS WITH A SPEED OF ABOUT 29 KMPH IN LAST SIX HOURS AND LAY CENTRED AT 1200 UTC OF 04TH MAY, 2019 OVER WESTERN MEGHALAYA & ADJOINING BANGLADESH NEAR LATITUDE 25.2°N AND LONGITUDE 90.7°E, ABOUT 110 KM SOUTHEAST OF DHUBRI (42404), 130 KM WEST-SOUTHWEST OF GUWAHATI (42410) AND 120 KM WEST-SOUTHWEST OF SHILLONG (42516). IT IS VERY LIKELY TO MOVE NORTHEASTWARDS AND WEAKEN INTO A WELL MARKED LOW PRESSURE AREA DURING NEXT 12 HOURS.

FORECAST TRACK AND INTENSITY ARE GIVEN IN THE FOLLOWING TABLE:

DATE/TIME(UTC)	POSITION (LAT.^{0}N/ LONG.^{0}E)	MAXIMUM SUSTAINED SURFACE WIND SPEED (KMPH)	CATEGORY OF CYCLONIC DISTURBANCE
04.05.19/1200	25.2/90.7	40-50 GUSTING TO 60	DEPRESSION
04.05.19/1800	26.1/92.0	35-45 GUSTING TO 55	DEPRESSION
05.05.19/0000	27.0/93.3	25-35 GUSTING TO 45	WELL MARKED LOW

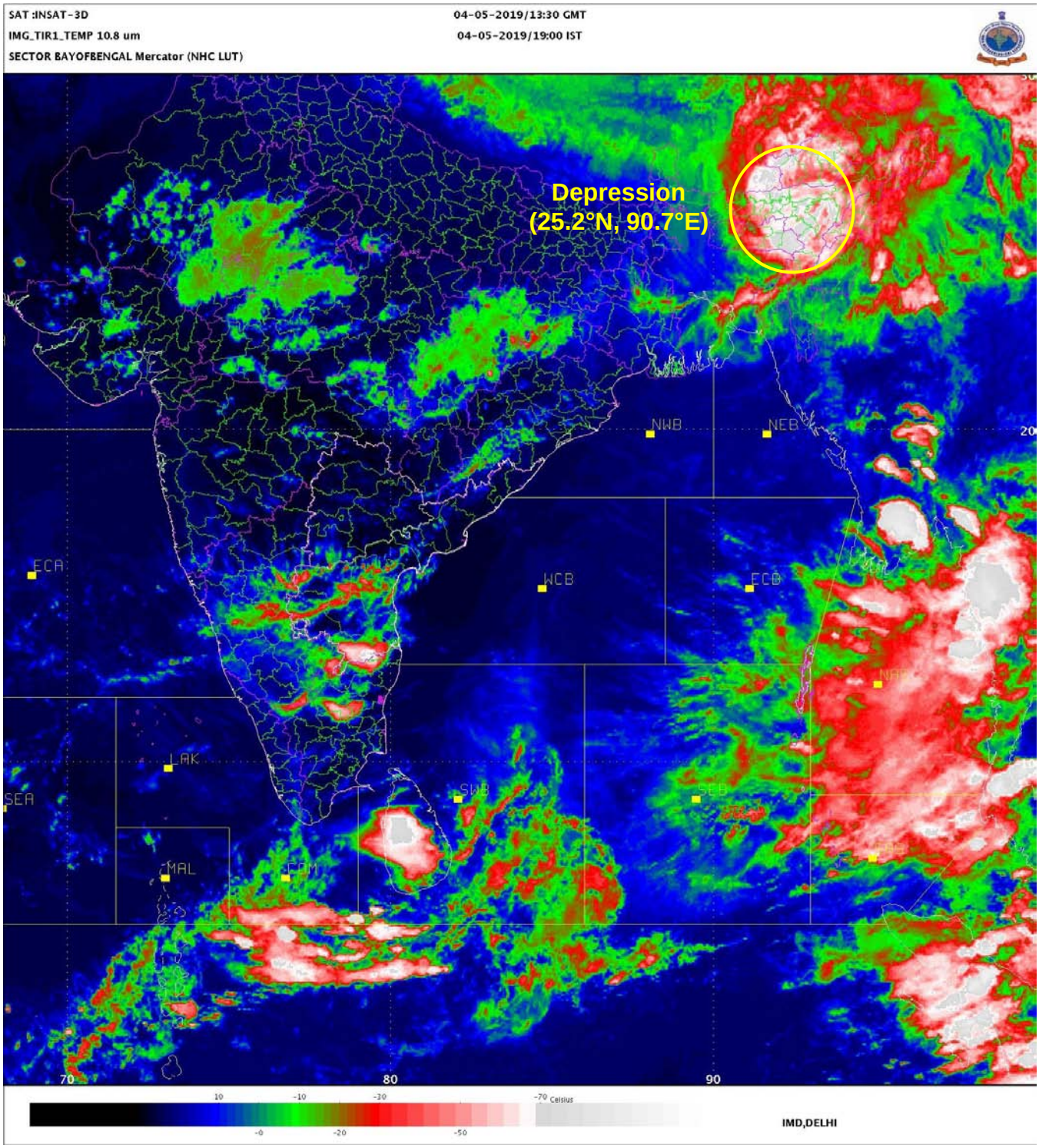
REMARKS:

AS PER THE SATELLITE IMAGERY OF 1200 UTC OF 04TH MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER EAST BANGLADESH, ASSAM, WEST ARUNACHAL PRADESH AND MEGHALAYA. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 66°C.

THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 25 KNOTS GUSTING TO 35 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 997 HPA.

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

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



PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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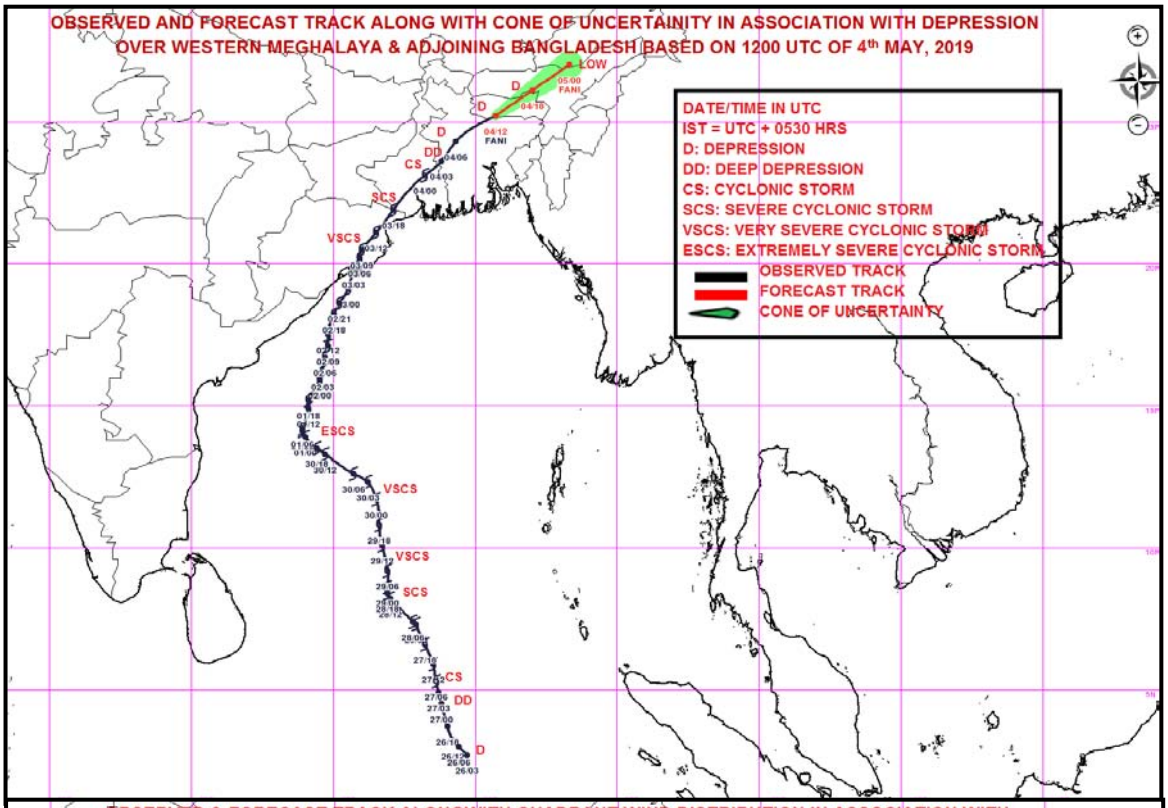
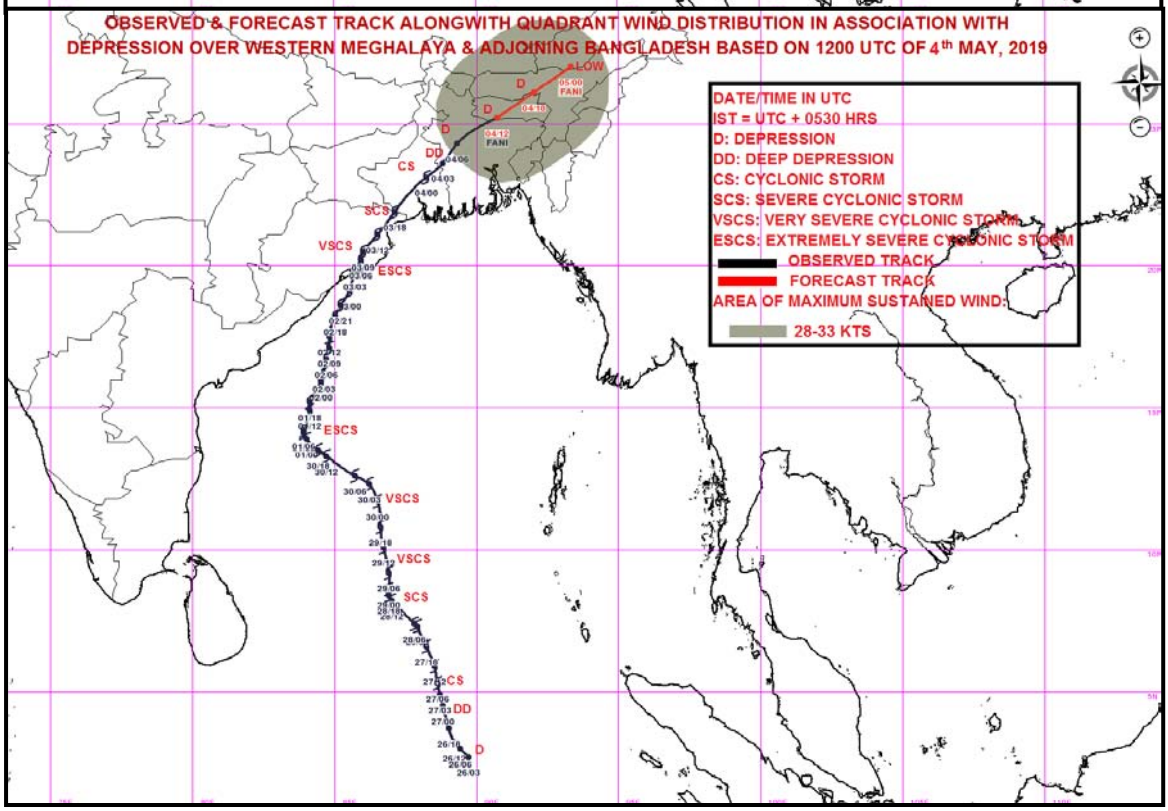




MSW(knot)/kmph)	Impact	Action
28-33 /(51–62)	Very rough seas.	Total suspension of fishing operations
34-49/(63-91)	High to very high seas	Total suspension of fishing operations
50-63/(92-117)	Very High seas	Total suspension of fishing operations
≥ 64 (≥118)	Phenomenal	Total suspension of fishing operations

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

REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI

SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 04.05.2019

TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND ARABIAN SEA) VALID FOR NEXT 24 HOURS ISSUED AT 2100 UTC OF 04.05.2019 BASED ON 1800 UTC OF 04.05.2019.

DEPRESSION WEAKENED INTO A WELL MARKED LOW PRESSURE AREA OVER CENTRAL ASSAM & NEIGHBOURHOOD

THE DEPRESSION OVER WESTERN MEGHALAYA & ADJOINING BANGLADESH MOVED NORTHEASTWARDS DURING PAST 06 HOURS, WEAKENED FURTHER AND LAY AS A WELL MARKED LOW PRESSURE AREA OVER CENTRAL ASSAM & NEIGHBOURHOOD AT 1800 UTC OF 04TH MAY, 2019. IT IS VERY LIKELY TO MOVE NORTHEASTWARDS AND BECOME INSIGNIFICANT DURING NEXT 24 HOURS.

REMARKS:

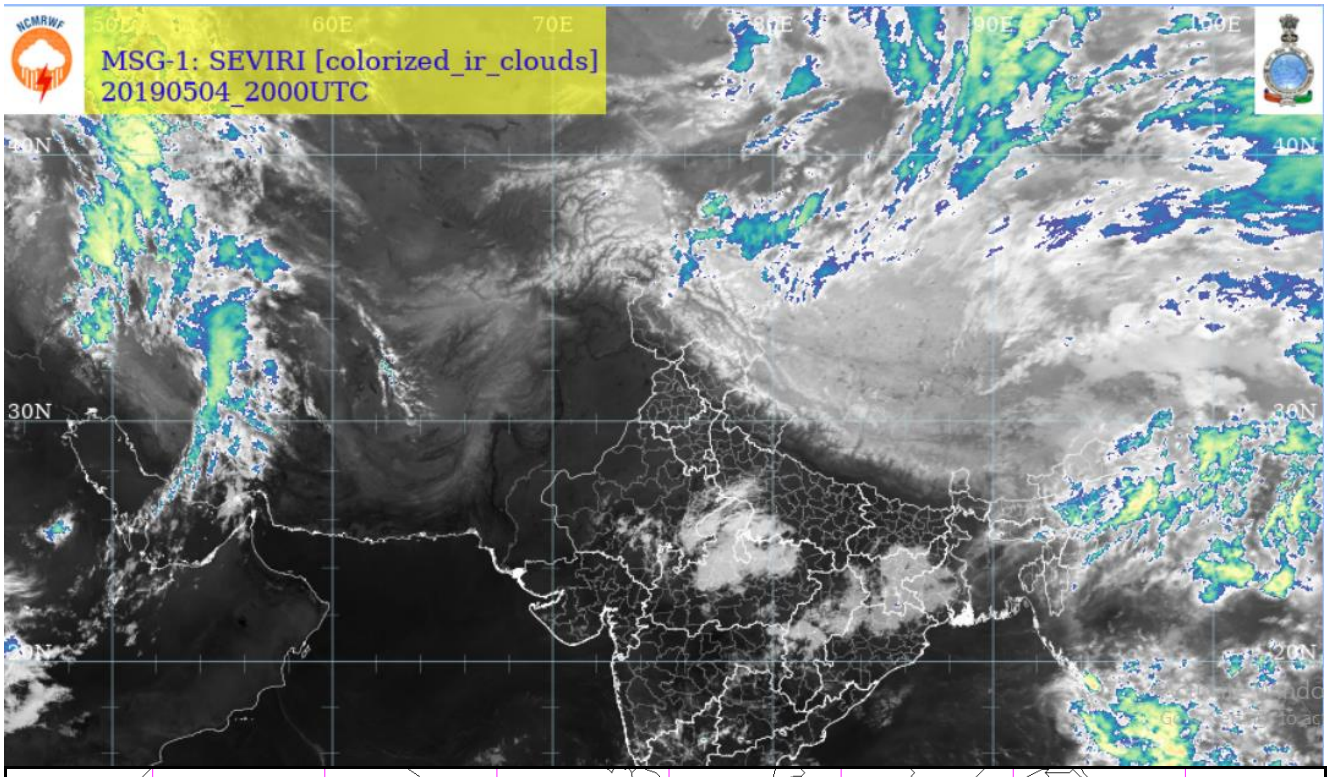
AS PER THE SATELLITE IMAGERY OF 1800 UTC OF 04TH MAY, 2019, ASSOCIATED BROKEN LOW TO MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER EAST ASSAM AND NEIGHBOURHOOD. MINIMUM CLOUD TOP TEMPERATURE IS MINUS 74°C.

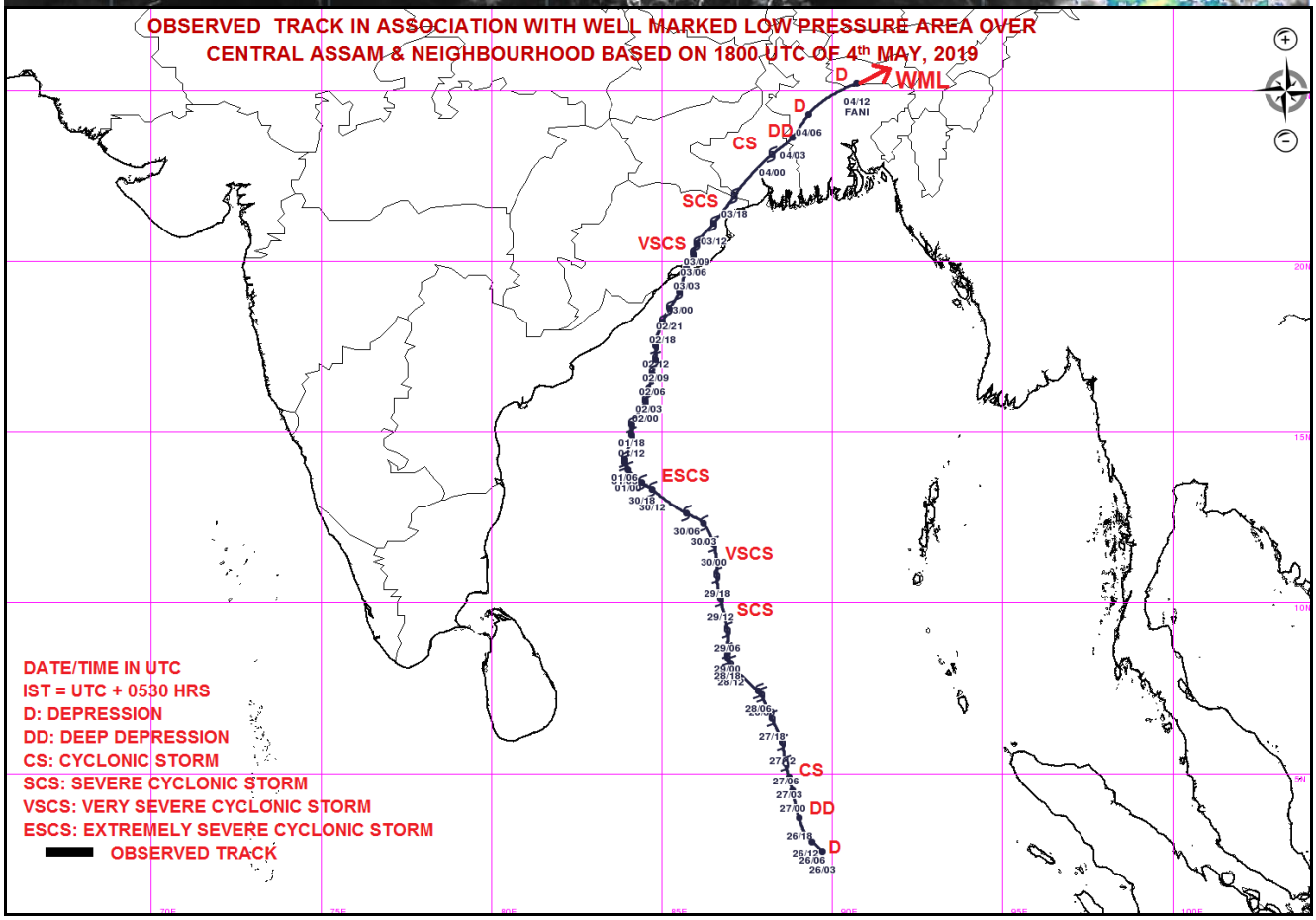
THE ESTIMATED MAXIMUM SUSTAINED WIND SPEED IS 15 KNOTS GUSTING TO 25 KNOTS. THE ESTIMATED CENTRAL PRESSURE IS 997 HPA.

(D R Pattanaik)
SCIENTIST-E, RSMC, NEW DELHI

THIS IS THE LAST BULLETIN FOR THIS SYSTEM.

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





PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION)
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