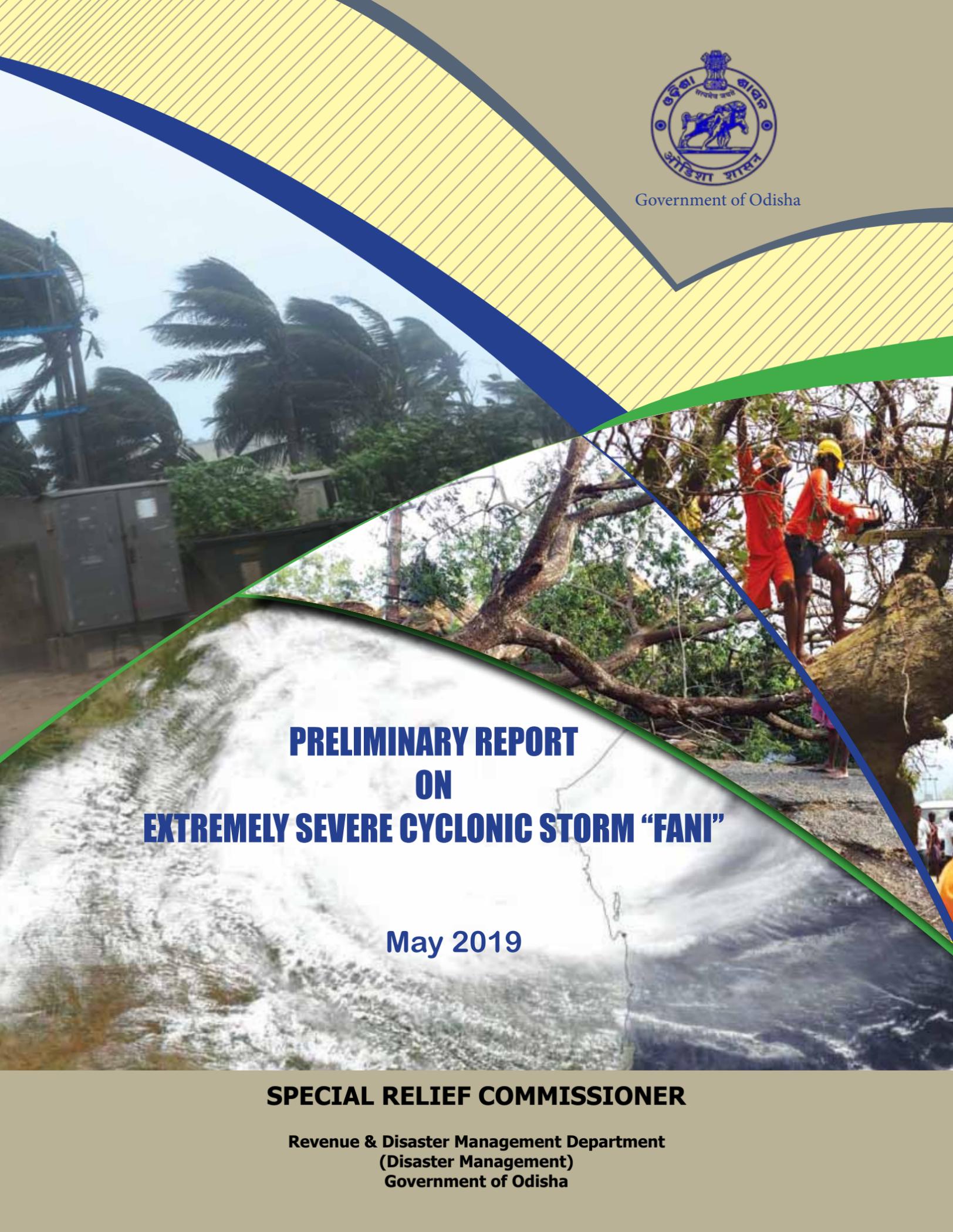




Government of Odisha



**PRELIMINARY REPORT  
ON  
EXTREMELY SEVERE CYCLONIC STORM “FANI”**

**May 2019**

**SPECIAL RELIEF COMMISSIONER**

**Revenue & Disaster Management Department  
(Disaster Management)  
Government of Odisha**

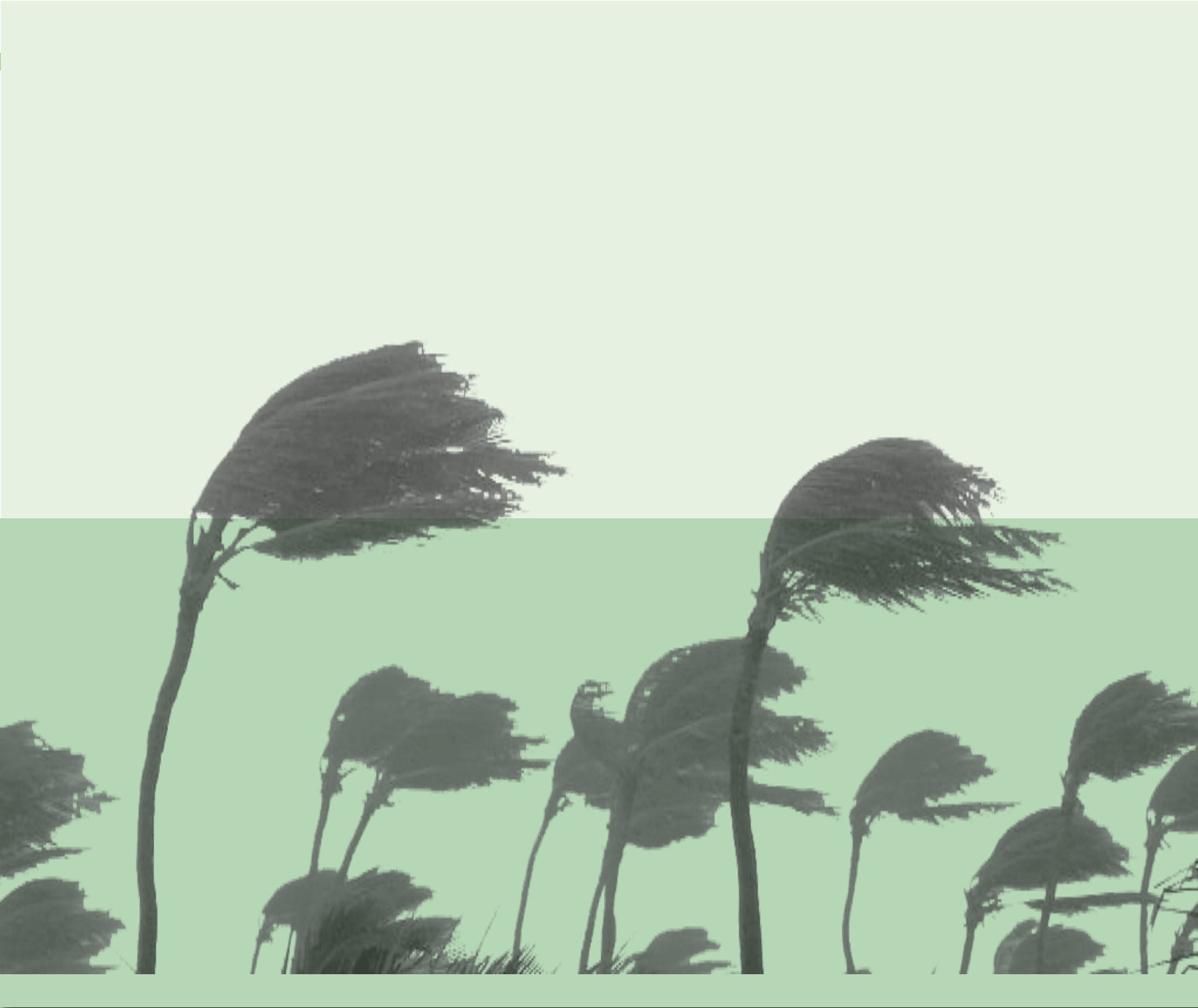




Government of Odisha

# **PRELIMINARY REPORT ON EXTREMELY SEVERE CYCLONIC STORM “FANI”**

**May 2019**



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# INTRODUCTION

The geographical location and physical environment make Odisha Coastal Zone vulnerable to frequent cyclonic disturbances. The high wind speed together with torrential rain and storm surges associated with the cyclones bring damage to the coastal settlements. Generally, two cyclone seasons i.e., one during pre-monsoon period (April, May & June up to onset of monsoon) and another post monsoon (October to December) prevail over the Odisha. If the disturbances are grouped in terms of pre- and post- monsoon season, they are more in the post-monsoon season. The cyclones which had affected Odisha coast normally originate in the sea and dissipate in the land. The cyclones of land origin and land dissipation or sea dissipation are negligible. There are some cyclones which originate in the sea adjacent to the Odisha coast and dissipate in the sea. Such events had not much impact on the Odisha Coastal Zone.

The East Coast of India is one of the six most cyclone-prone areas in the world. Although the North Indian Ocean (the Bay of Bengal and Arabian Sea) generates only about 7% of the World's cyclones (5 to 6 TCs per year) their impact is comparatively high and devastating, especially when they strike the coasts bordering the North Bay of Bengal. In the last century, the Indian subcontinent has experienced 1019 cyclonic disturbances, of which 890 were along the eastern coast and 129 were along the western coast and 260 cyclonic disturbances had their landfall along the Odisha coast. Out of the 260 disturbances there were 180 depressions (69%), 57 storms (22%) and 23 severe storms (9%). In comparison to all the coastal states of India, the Odisha coast has the highest vulnerability in terms of landfall. With 29% of the total disturbances affecting Odisha coast the vulnerability of the Odisha Coastal Zone is relatively high in comparison to other states like West Bengal (14%), Andhra Pradesh (13%) and Tamil Nadu (7%). Although the total number of cyclonic disturbances is more along the Odisha coast but however, as a natural hazard the severe storms are of greater public concern in view of their large scale damage potentiality, loss of life and property. By taking together the figures of the storms and severe storms which mostly create havoc and incur greater amount

of damage, the Odisha Coastal Zone is twice more vulnerable in comparison to the other eastern states. The revisit or recurrence time of a severe storm to the Odisha coast is around four years; for West Bengal coast it is 5 years. As far as cyclones are concerned, the revisit time for the Odisha coast is nearly 2 years which is much shorter than that of the other states indicating that Odisha is the most frequently cyclone affected coastal state in the country.

During the last decade, the State has faced one or other forms of disasters like flood, cyclone, tornado or drought every year. From 1891 to 2000, 98 nos. of cyclones/ severe cyclones had crossed the Odisha coast. This is more than that of the coast of West Bengal, Andhra Pradesh, Tamil Nadu, Karnataka, Maharashtra, Goa, Gujrat & Kerala. Most of the cyclones cross coast of Odisha, followed by Andhra Pradesh and Tamil Nadu and then West Bengal.

**Total number of Cyclonic crossing different coasts (1891-2000)**

State	Total No.
West Bengal	69
Odisha	98
Andhra Pradesh	79
Tamil Nadu	62
Karnataka	02
Maharashtra & Goa	18
Gujarat	28
Kerala	03

[Source: IMD]

The distribution of the cyclonic disturbances in the Indian Ocean region is confined between the months of May and November. The depressions are evenly distributed between June to September, i.e. in the monsoon period but in the post monsoon season their frequency decreases up to December. The disturbances which develop in the pre and post monsoon period intensify into severe storms of devastating nature. The most vulnerable months for the occurrence of a severe cyclone is October followed by the month of September.

The Building Material Technology Promotion Council (BMTPC) of Ministry of Urban Development, based on Hazard Vulnerability identified cyclone prone districts of Odisha taking into consideration cyclone hazards of the coastal area. As per wind and cyclone hazard Zones map of Odisha, out of 30 districts of the state, 14 districts are categorized as high damage risk zone either fully or partially.



## Cyclone Occurrences in the recent past

The coastline of Odisha is only about 17% of the Indian east coast, it has been affected by nearly 35% of all cyclonic and severe cyclonic storms that have crossed the east coast and associated storm surges that have often inundated large tracts of coastal districts. On an average, about five to six tropical cyclones form in the Bay of Bengal every year, of which two to three are within the mild to severe range. Taking together the storms and severe storms, coastal Odisha is about twice as vulnerable as compared to the other eastern states. The 480 Km coastline exposes the state to cyclones and storm surges. During the period from 1993-2018, the state has experienced 8 years of cyclone including super cyclone of 1999. The severe cyclonic events in the Bay of Bengal which have impacts on the Odisha coast are given in following Table.

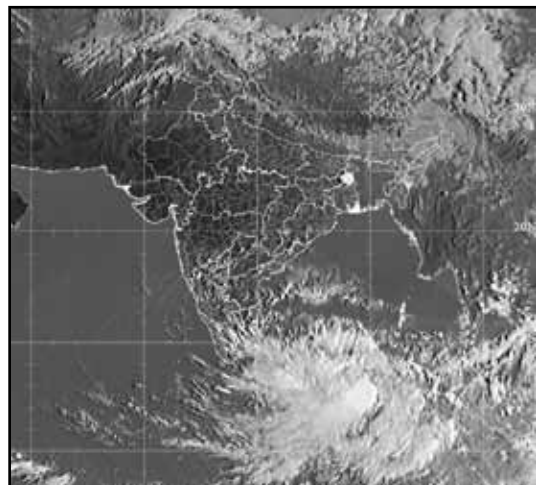
Sl.No	Date/Year	Category of Cyclone	Landfall and loss
1	7-12 October, 1737	Super Cyclone	Crossed West Bengal Coast over Sunderbans and had impact over Odisha
2	31 October, 1831	Very Severe Cyclonic Storm	Crossed Odisha Coast near Balasore, Loss of life-50,000
3	2-5 October, 1864	Very Severe Cyclonic Storm	Crossed West Bengal Coast near Contai and had impact over Odisha
4	1-2 November, 1864	Very Severe Cyclonic Storm	Crossed Andhra Pradesh near Machilipatnam and had impact over Odisha
5	22 September, 1885	Super Cyclone	Crossed Odisha Coast at False Point, Loss of life- 5000
6	14-16 October, 1942	Very Severe Cyclonic Storm	Crossed West Bengal Coast near Contai and had impact over Odisha
7	8-11 October, 1967	Very Severe Cyclonic Storm	Crossed Odisha Coast between Puri and Paradeep
8	26-30 October, 1971	Very Severe Cyclonic Storm	Crossed Odisha Coast near Paradeep, Loss of life- 10,000
9	14-20 November, 1977	Super Cyclone	Crossed Andhra Coast near Nizampatnam and had impact over Odisha
10	4-11 May, 1990	Super Cyclone	Crossed Andhra Pradesh Coast about 40 Km S-W of Machilipatnam and had impact over Odisha
11	25-31 October, 1999	Super Cyclone	Crossed Odisha Coast near Paradeep at noon of 29 October
12	12-14 October, 2013	Very Severe Cyclonic Storm, Phailin	Crossed Odisha Coast near Gopalpur at evening of 12 October
13	12-14 October, 2014	Very Severe Cyclonic Storm 'Hudhud'	Crossed Andhra Pradesh Coast at Vishakapatnam and impact on south Odisha
14	10-12 October, 2018	Very Severe Cyclonic Storm Titli	Crossed Andhra Pradesh Coast at palasa and severe impact on south Odisha

# CYCLONE TRACKING

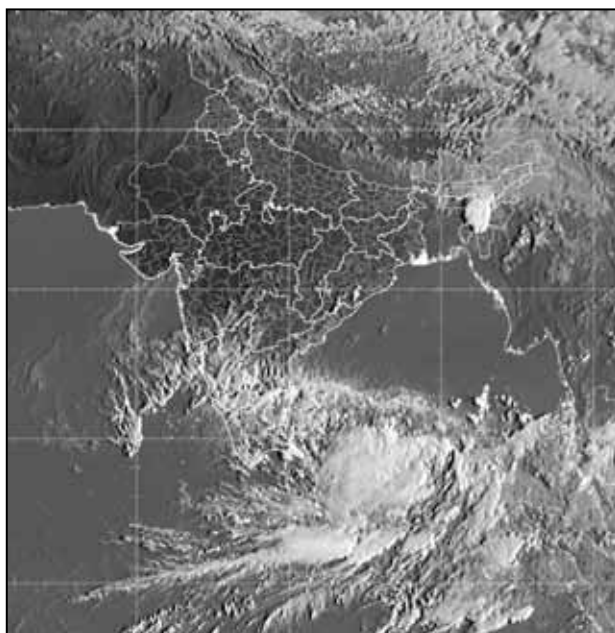
India Meteorological Department (IMD) reported on 25.4.2019 that a well low pressure area was formed and centered over East Equatorial Indian Ocean & adjoining southeast Bay of Bengal. It would very likely to intensify into a depression during next 24 hours over East Equatorial Indian Ocean & adjoining central parts of south Bay of Bengal and into a Cyclonic Storm during subsequent 24 hours over southwest Bay of Bengal & adjoining Equatorial Indian Ocean. It would very likely to move northwestwards along & off east coast of Srilanka near north Tamilnadu coast on 30th April 2019.

On 26.4.2019, IMD informed that the well marked low pressure area over east Equatorial Indian Ocean & adjoining southeast Bay of Bengal concentrated into a depression over the same region and lay centered at 0830 hrs IST of 26th April 2019 near Lat.  $2.7^{\circ}\text{N}$  and Long.  $89.7^{\circ}\text{E}$ , about 1140 KM east southeast of Trincomalee (Sri Lanka), 1490 KM southeast of Chennai and 1760 KM south southeast of Machilipatnam. It would very likely to intensify further into a deep depression during next 24 hours and into a Cyclonic Storm during subsequent 12 hours. It would very likely to move northwestwards off Srilanka coast during next 96 hours and reach near north Tamilnadu & south Andhra Pradesh coasts on 30th April 2019 evening. **No warning was issued for the Odisha coast.**

Further, IMD issued a bulletin on 27.4.2019, mentioning that the Depression over East Equatorial Indian Ocean & adjoining southeast Bay of Bengal intensified into a Deep Depression at 0530 hours IST of 27th April, 2019 near latitude  $4.5^{\circ}\text{N}$  and longitude  $88.0^{\circ}\text{E}$  about 870 km east-southeast of Trincomalee (Sri Lanka), 1210 KM southeast of Chennai (Tamil Nadu) and 1500 KM south-southeast of Machilipatnam (Andhra Pradesh). 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 0830 hrs IST of 27th April, 2019 near latitude  $4.9^{\circ}\text{N}$  and longitude  $88.0^{\circ}\text{E}$ , about 850 KM east-southeast of Trincomalee (Sri Lanka), 1180 KM southeast of Chennai (Tamil Nadu) and 1460 KM south-southeast of Machilipatnam (Andhra Pradesh). On the same day IMD issued bulletin and mentioned that the deep depression over East Equatorial Indian Ocean & adjoining southeast Bay of Bengal intensified into Cyclonic Storm and named as 'FANI' (pronounced as 'FONI') over southeast Bay of Bengal & adjoining East Equatorial Indian Ocean and lay centred at 1130 hrs IST of 27th April, 2019 near latitude  $5.2^{\circ}\text{N}$  and longitude  $88.5^{\circ}\text{E}$ , about 880 KM east-southeast of Trincomalee (Sri Lanka), 1190 KM southeast of Chennai (Tamil Nadu) and 1460 KM south-southeast of Machilipatnam (Andhra Pradesh). It would very likely to intensify into a Severe Cyclonic Storm during next 24 hours. It would very likely to move northwestwards off Sri Lanka coast during next 72 hours and reach near north Tamilnadu & south Andhra Pradesh coasts on 30th April 2019 evening. **Again, no weather warning was issued by IMD for the Odisha coast.**

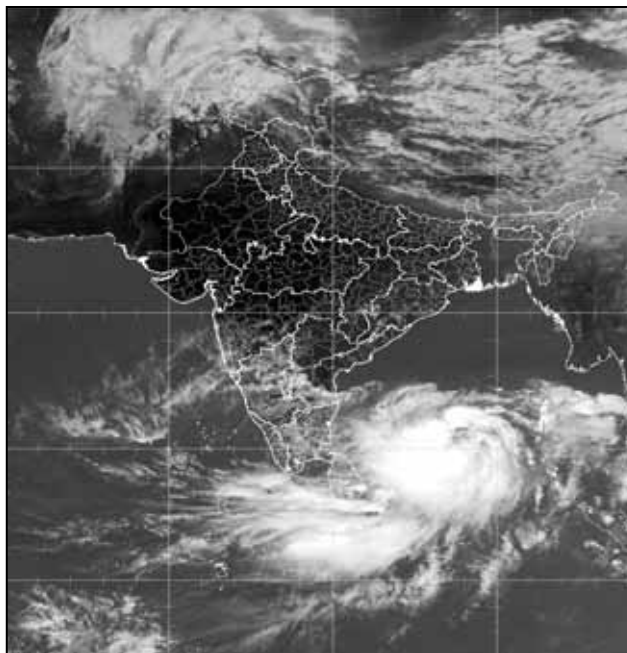


On 28.4.2019, IMD reported that the Cyclonic Storm 'FANI' over southeast Bay of Bengal & neighbourhood moved northwards with a speed of about 07 KMPH in last 06 hours and lay centred at 0830 hrs IST of 28th April, 2019 near Lat.  $7.3^{\circ}\text{N}$  and Long.  $87.9^{\circ}\text{E}$  over southeast Bay of Bengal & neighbourhood, about 745 km east-southeast of Trincomalee (Sri Lanka), 1050 KM southeast of Chennai (Tamil Nadu) and 1230 KM south-southeast of Machilipatnam (Andhra Pradesh). It would 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 would very likely to move northwestwards till 01<sup>st</sup> May evening and thereafter re-curve north-northeastwards gradually. There was also forecast and warnings for Odisha that Light to moderate rainfall very likely to occur at a few places over the districts of south coastal and adjoining districts of interior Odisha on 2<sup>nd</sup> May, 2019. Heavy rainfall likely to occur at one or two places over

Koraput, Rayagada, Gajapati & Ganjam districts of Odisha on 2<sup>nd</sup> May, 2019. It would likely to increase in intensity with heavy rainfall over coastal Odisha from 3<sup>rd</sup> May, 2019.

Though there was no warning issued by IMD for the Odisha Coast, the State Government started closely monitoring the situation. Based on the forecast issued from IMD and other international Agencies like Regional Integrated Multihazard Early Warning Systems (RIMES), Thailand, Joint Typhoon Warning Center (JTWC), USA, the tracking of the system was thoroughly done by the Experts of Odisha State Disaster Management Authority (OSDMA) in GIS platform, possibility of its likely impact over the Odisha.

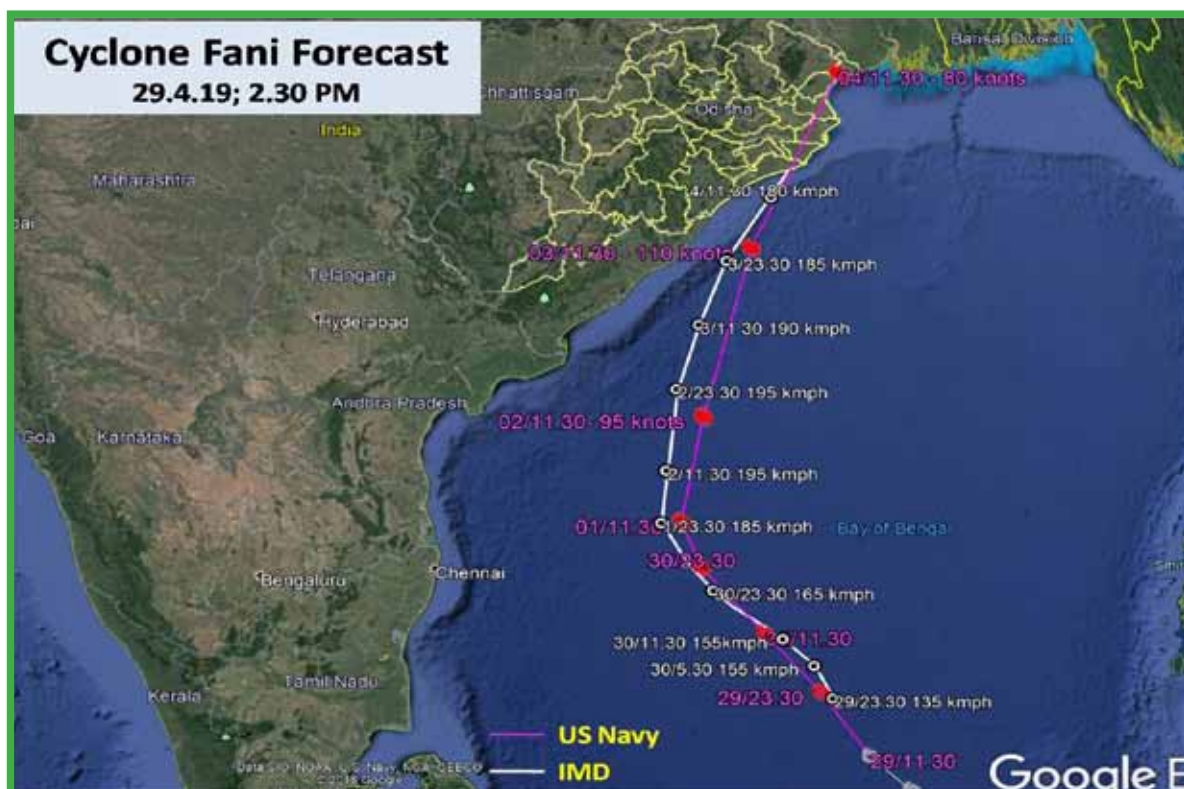
On 29.4.2019, IMD reported that the Cyclonic Storm 'FANI' over Southeast Bay of Bengal & neighbourhood moved north-north-westwards with a speed of about 16 KMPH in last six hours, intensified into a Severe Cyclonic Storm and lay centred at 1730 hrs IST of 29<sup>th</sup> April, 2019 near latitude 10.1°N and longitude 86.7°E over Southeast & adjoining Southwest Bay of Bengal, about 620 KM east-northeast of Trincomalee (Sri Lanka), 770 KM east-southeast of Chennai (Tamil Nadu) and 900 KM south-southeast of Machilipatnam (Andhra Pradesh). It would very likely to intensify into a Very



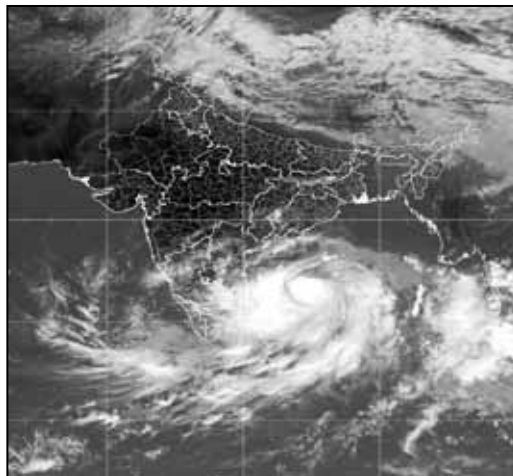
Severe Cyclonic Storm during next 24 hours and into an Extremely Severe Cyclonic Storm during subsequent 24 hours. It would very likely to move northwestwards till 01<sup>st</sup> May evening and thereafter recurve north-northeastwards towards Odisha Coast. Light to moderate rainfall at few places very likely over the districts of south coastal Odisha and adjoining districts of interior Odisha on 2<sup>nd</sup> May. Heavy to very heavy rainfall likely to occur at one or two places over Coastal Odisha on 3<sup>rd</sup> May, 2019. Thundersquall with speed reaching 50-60 KMPH gusting to 60 KMPH and lightning activities likely to occur at one or two places over the districts of coastal Odisha on 2<sup>nd</sup> and 3<sup>rd</sup> May. IMD issued the forecast track and intensity as per the following table.

Date/Time(IST)	Maximum sustained surface wind speed (KMPH)	Category of cyclonic disturbance
29.04.19/1730	100-110 gusting to 125	Severe Cyclonic Storm
29.04.19/2330	110-120 gusting to 135	Severe Cyclonic Storm
30.04.19/0530	120-130 gusting to 145	Severe Cyclonic Storm
30.04.19/1130	130-140 gusting to 155	Very Severe Cyclonic Storm
30.04.19/1730	135-145 gusting to 160	Very Severe Cyclonic Storm
01.05.19/0530	150-160 gusting to 180	Very Severe Cyclonic Storm
01.05.19/1730	160-170 gusting to 190	Extremely Severe Cyclonic Storm
02.05.19/0530	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1730	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0530	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1730	170-180 gusting to 200	Extremely Severe Cyclonic Storm
04.05.19/0530	160-170 gusting to 190	Extremely Severe Cyclonic Storm
04.05.19/1730	150-160 gusting to 185	Very Severe Cyclonic Storm

On the same day, Forecast of other met Agencies were analysed. It was observed from the Joint Typhoon Warning Center of USA that the cyclone would cross Odisha coast on 3<sup>rd</sup> May late evening/night. A comparative forecast between IMD and JTWC is shown in the following figure.



On 30.4.2019, IMD reported that, the Severe Cyclonic Storm 'FANI' 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 0530 hrs IST 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 (Sri Lanka), 690 KM east-southeast of



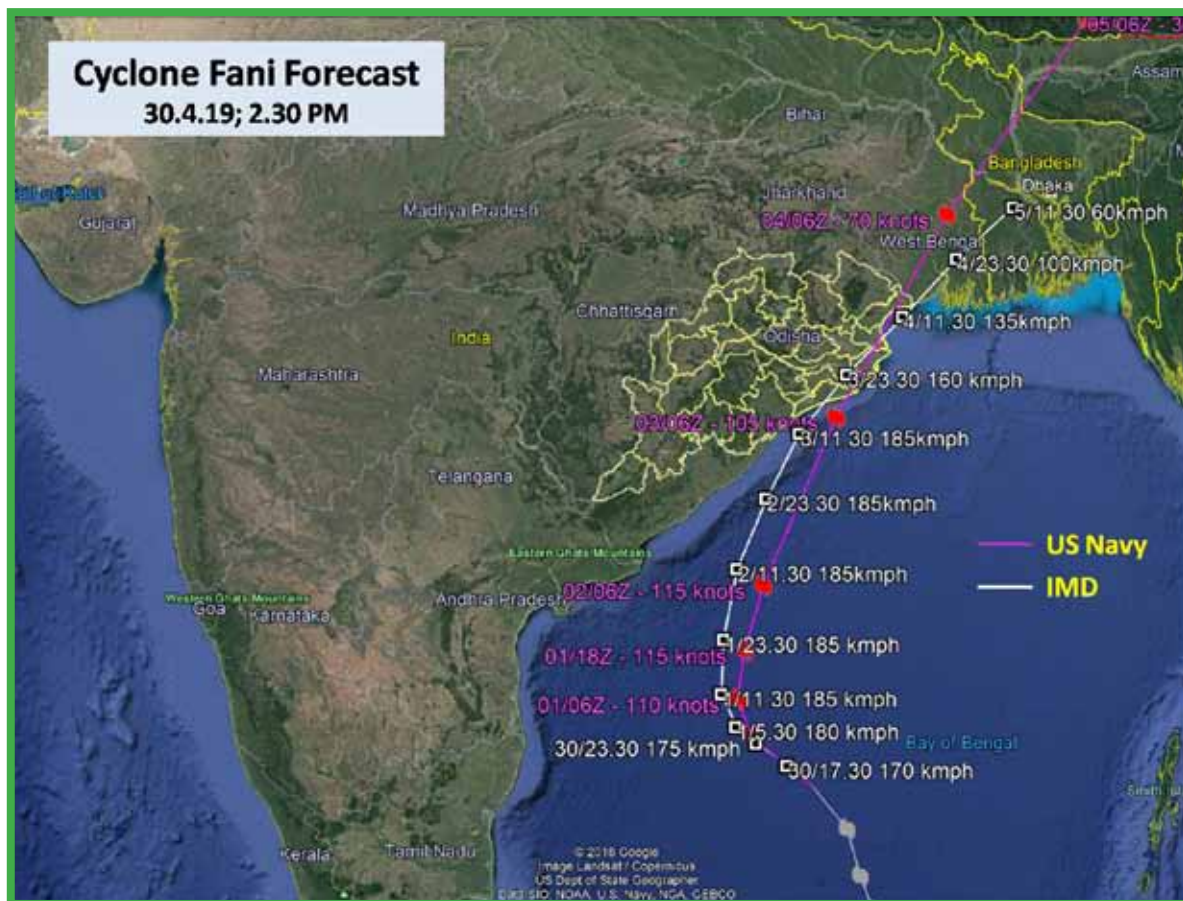
Chennai (Tamil Nadu) and 760 KM southeast of Machilipatnam (Andhra Pradesh). It would very likely to intensify further into an Extremely Severe Cyclonic Storm during next 36 hours. It would very likely to move northwestwards till 01<sup>st</sup> May evening and thereafter recurve north-northeastwards towards Odisha Coast.

IMD issued the rainfall warning over Odisha as light to moderate rainfall at few places with isolated heavy rainfall very likely over the districts of south coastal Odisha and adjoining districts of Interior Odisha on 2<sup>nd</sup> May. Light to moderate rainfall at most places with Heavy to very heavy rainfall likely to occur at one or two places over Coastal Odisha on 3<sup>rd</sup> May, 2019.

Further, IMD issued a cyclone watch message for Odisha coast at 1.00 PM on 30.4.19 and reported that the Very Severe Cyclonic Storm "FANI" over Southeast & adjoining Southwest Bay of Bengal moved north-northwestwards with a speed of about 23 KMPH in last six hours and lay centred at 0830 hrs IST 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 (Odisha) and 670 KM south-southeast of Vishakhapatnam (Andhra Pradesh) and about 680 KM northeast of Trincomalee (Sri Lanka). It would very likely to intensify further into an Extremely Severe Cyclonic Storm during next 12 hours. It would very likely to move northwestwards till 01<sup>st</sup> May evening and thereafter recurve north-northeastwards and reach Odisha Coast by 3<sup>rd</sup> May afternoon with maximum sustained wind of speed 170-180 gusting to 200 KMPH. The Forecast track and intensity are given in the following table:

Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (KMPH)	Category of cyclonic disturbance
30.04.19/0830	12.3/86.2	135-145 gusting to 160	Very Severe Cyclonic Storm
30.04.19/1130	12.5/85.9	145-155 gusting to 170	Very Severe Cyclonic Storm
30.04.19/1730	13.1/85.3	160-170 gusting to 185	Very Severe Cyclonic Storm
30.04.19/2330	13.5/84.7	165-175 gusting to 195	Extremely Severe Cyclonic Storm
01.05.19/0530	13.8/84.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
01.05.19/1730	14.4/84.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/0530	15.4/84.0	170-180 gusting to 200	Extremely Severe Cyclonic Storm
02.05.19/1730	16.7/84.3	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/0530	18.0/84.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
03.05.19/1730	19.2/85.4	160-170 gusting to 190	Extremely Severe Cyclonic Storm
04.05.19/0530	20.3/86.3	140-150 gusting to 165	Very Severe Cyclonic Storm
04.05.19/1730	21.4/87.3	125-135 gusting to 150	Severe Cyclonic Storm
05.05.19/0530	22.5/88.4	90-100 gusting to 110	Severe Cyclonic Storm

The track and intensity were closely monitored by OSDMA and compared with other Met Agencies' forecast. The analysis map is given in the following Figure.



IMD mentioned that the gale wind speed reaching 145-155 kmph gusting to 170 KMPH was prevailing over Southwest Bay & adjoining Southeast of Bengal. It was very likely to increase gradually becoming 175-185 KMPH gusting to 205 KMPH over Westcentral & adjoining Southwest Bay of Bengal off north Tamilnadu, Puducherry and south Andhra Pradesh Coast from 1<sup>st</sup> May morning onwards.

Squally wind speed reaching 40-50 KMPH gusting to 60 KMPH is very likely to commence along & off Odisha Coasts from 2<sup>nd</sup> May and very likely to become gale wind, speed reaching 60-70 KMPH gusting to 85 KMPH from 3<sup>rd</sup> May morning and become 175-185 gusting 205 KMPH over Odisha Coast by 3<sup>rd</sup> May evening.

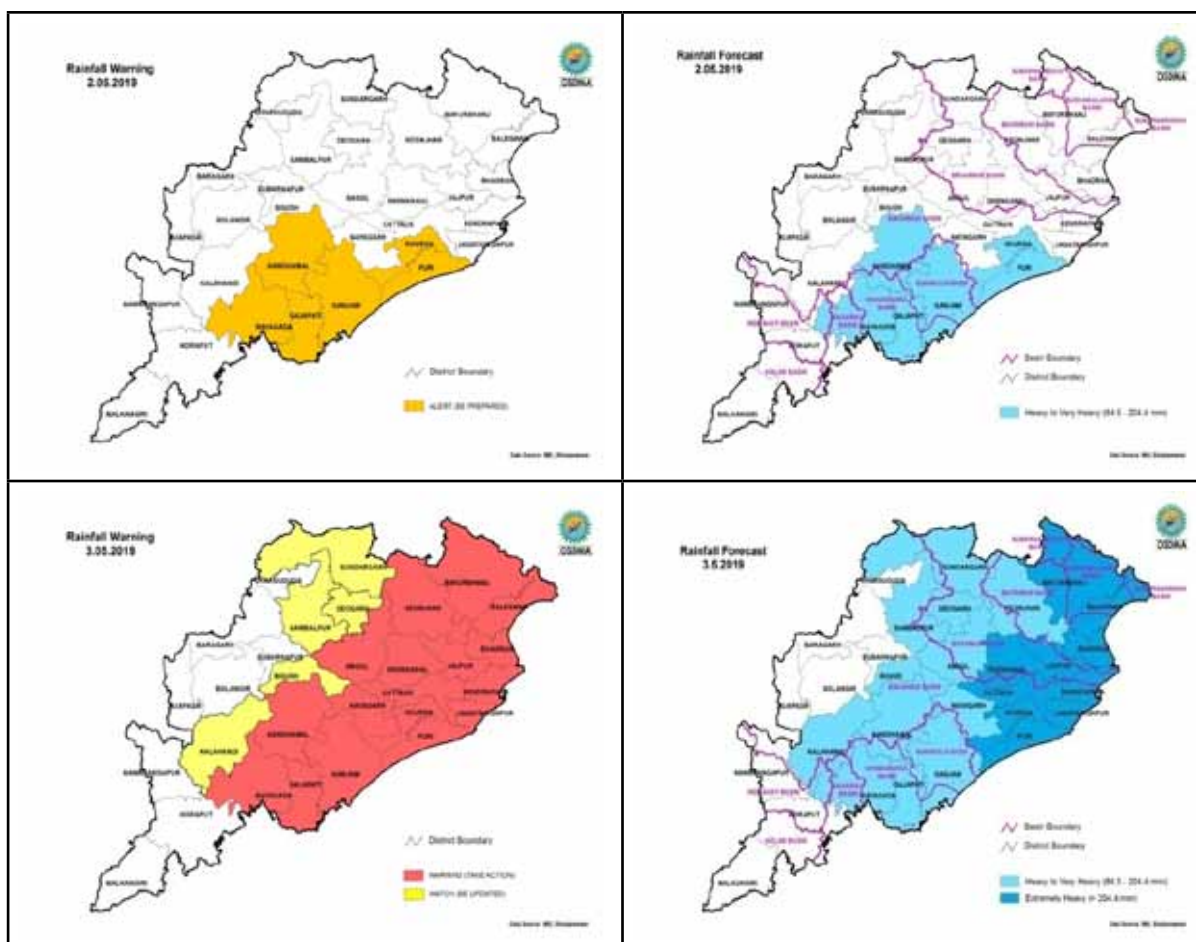
At 10.00 PM on 30.4.2019, IMD reported that the Very Severe Cyclonic Storm 'FANI' over Southwest and adjoining westcentral & Southeast Bay of Bengal, moved west-northwestwards with a speed of about 22 KMPH in last six hours, intensified into an Extremely Severe Cyclonic Storm and lay centred at 1730 hrs IST 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 (Odisha) and 510 KM south-southeast of Vishakhapatnam (Andhra Pradesh). It would very likely to move northwestwards till 1<sup>st</sup> May noon and thereafter recurve north-northeastwards and cross Odisha Coast between Gopalpur and Chandbali, to the south of Puri around 3<sup>rd</sup> May afternoon with maximum sustained wind of speed 175-185 KMPH gusting to 205 kmph. Squally wind speed reaching 40-50 KMPH gusting to 60 KMPH is very likely to commence along & off Odisha Coasts from 2<sup>nd</sup> May and very likely to become gale wind speed reaching 60-70 KMPH gusting to 85 KMPH from 3<sup>rd</sup> May morning and become 175-185 KMPH gusting 205 KMPH over Odisha Coast around landfall area by 3<sup>rd</sup> May evening. The forecast track was also indicated by IMD.

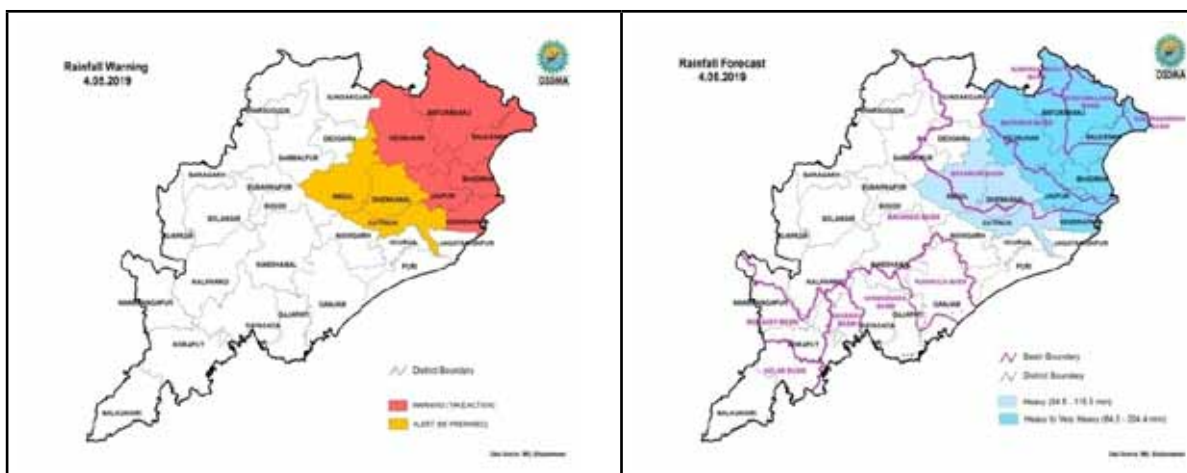
Date/Time(IST)	Position (Lat. °N/ long. °E)	Maximum sustained surface wind speed (KMPH)	Category of cyclonic disturbance
30.04.19/1730	13.3/84.7	165-175 gusting to 195	Extremely Severe Cyclonic Storm
30.04.19/2330	13.6/84.2	165-175 gusting to 185	Extremely Severe Cyclonic Storm
01.05.19/0530	13.9/83.8	170-180 gusting to 200	Extremely Severe Cyclonic Storm
01.05.19/1130	14.5/83.6	175-185 gusting to 205	Extremely Severe Cyclonic Storm
01.05.19/1730	15.0/83.6	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/0530	16.1/83.8	180-190 gusting to 210	Extremely Severe Cyclonic Storm
02.05.19/1730	17.4/84.2	180-190 gusting to 210	Extremely Severe Cyclonic Storm

03.05.19/0530	18.7/84.9	175-185 gusting to 205	Extremely Severe Cyclonic Storm
03.05.19/1730	20.0/85.9	150-160 gusting to 175	Very Severe Cyclonic Storm
04.05.19/0530	21.0/86.9	125-135 gusting to 150	Very Severe Cyclonic Storm
04.05.19/1730	22.0/88.2	90-100 gusting to 110	Severe Cyclonic Storm
05.05.19/0530	23.1/89.7	50-60 gusting to 70	Deep Depression

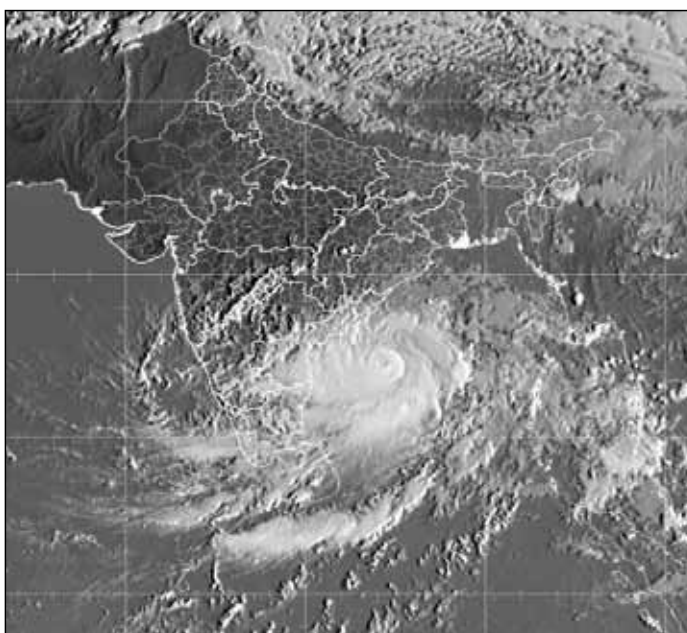
Gale wind with speed 150 -160 KMPH gusting to 170 KMPH was also likely over the districts of Ganjam, Puri, Jagatsinghpur, Kendrapara, and gale wind speed reaching 110-120 KMPH gusting to 130 KMPH was also likely over the districts of Gajapati, Khurda, Cuttack, Jajpur, Bhadrak, Balasore, and 80-90 kmph over the districts of Nayagarh, Angul, Keonjhar, Mayurbhanj, Dhenkanal and squally wind speed 30-40 KMPH gust to 50 KMPH over the rest districts of Odisha by 3<sup>rd</sup> May, 2019 evening.

IMD issued the rainfall warnings for the Odisha. The rainfall prediction with colour code was given by IMD in its bulletin. Maps were prepared in GIS platform and shared to the districts for taking further action.

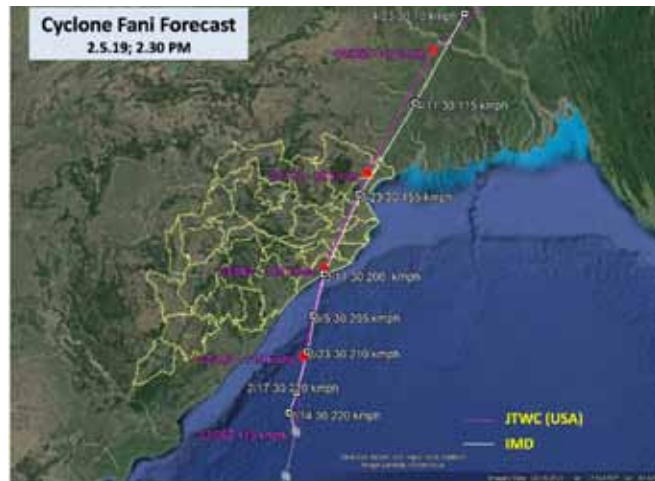




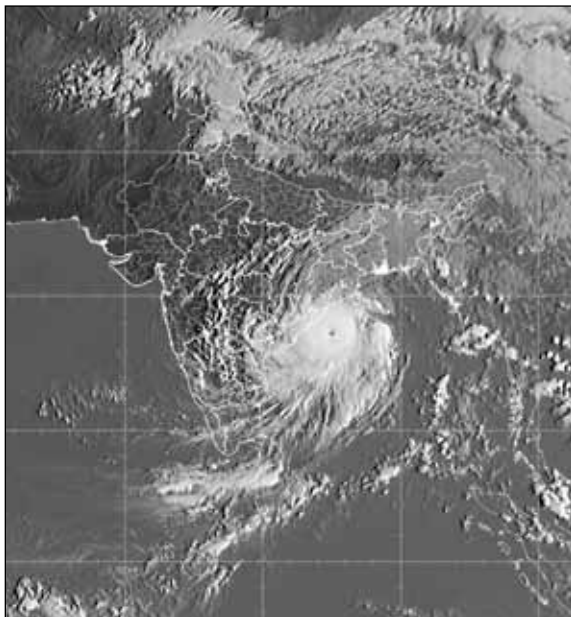
IMD issued yellow message for the Odisha coast on 1.5.2019 at 6.30 hrs. At that time, the Extremely Severe Cyclonic Storm 'FANI' over Westcentral & adjoining Southwest Bay of Bengal, moved west-northwestwards with a speed of about 07 KMPH in last six hours and lay centred at 0230 hrs IST of 01<sup>st</sup> May, 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 was very likely to intensify further and move northwestwards till 01<sup>st</sup> May noon and thereafter recurve north-northeastwards and cross Odisha Coast between Gopalpur and Chandbali, to the south of Puri around 3<sup>rd</sup> May afternoon with maximum sustained wind of speed 175-185 KMPH gusting to 205 KMPH. IMD forecasted that Gale wind with speed 150 -160 KMPH gusting to 170 is also likely over the districts of Ganjam, Puri, Jagatsinghpur, Kendrapara, and gale wind speed reaching 110-120 KMPH gusting to 130 KMPH was also likely over the districts of Gajapati, Khurda, Cuttack, Jajpur, Bhadrak, Balasore, and 80-90 KMPH over the districts of Nayagarh, Angul, Keonjhar, Mayurbhanj, Dhenkanal and squally wind speed 30-40 KMPH gust to 50 KMPH over the rest districts of Odisha by 3<sup>rd</sup> May, 2019 evening.



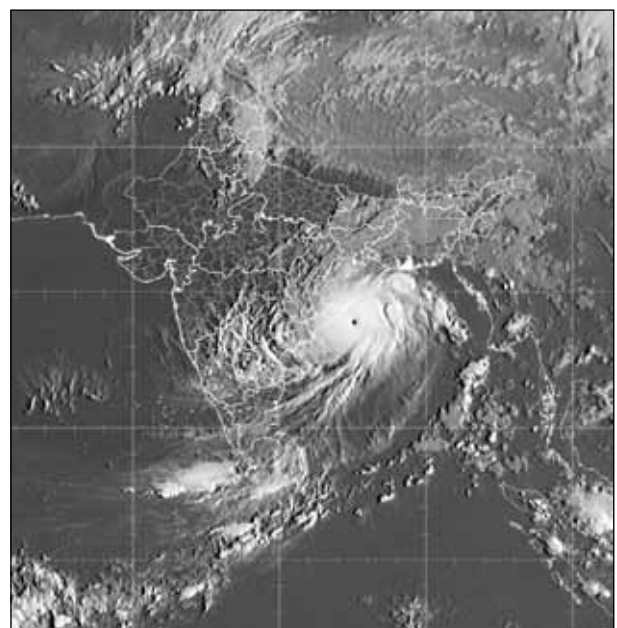
On 2<sup>nd</sup> May, 2019, IMD reported that the Extremely Severe Cyclonic Storm 'FANI' over Westcentral Bay of Bengal moved further north-northeastwards with a speed of about 16 KMPH in last six hours and lay centred at 1130 hrs IST of 2<sup>nd</sup> May, 2019 over Westcentral Bay of Bengal near latitude 16.7°N and longitude 84.8°E, about 360 KM south-southwest of Puri (Odisha), 190 KM



south-southeast of Vishakhapatnam (Andhra Pradesh) and 550 KM south-southwest of Digha (West Bengal). It would very likely to move north-northeastwards and cross Odisha Coast between Gopalpur and Chandbali, around Puri by the afternoon of 3<sup>rd</sup> May with maximum sustained wind speed of 170-180 KMPH gusting to 200 KMPH.



02.05.2019: 14.30 IST



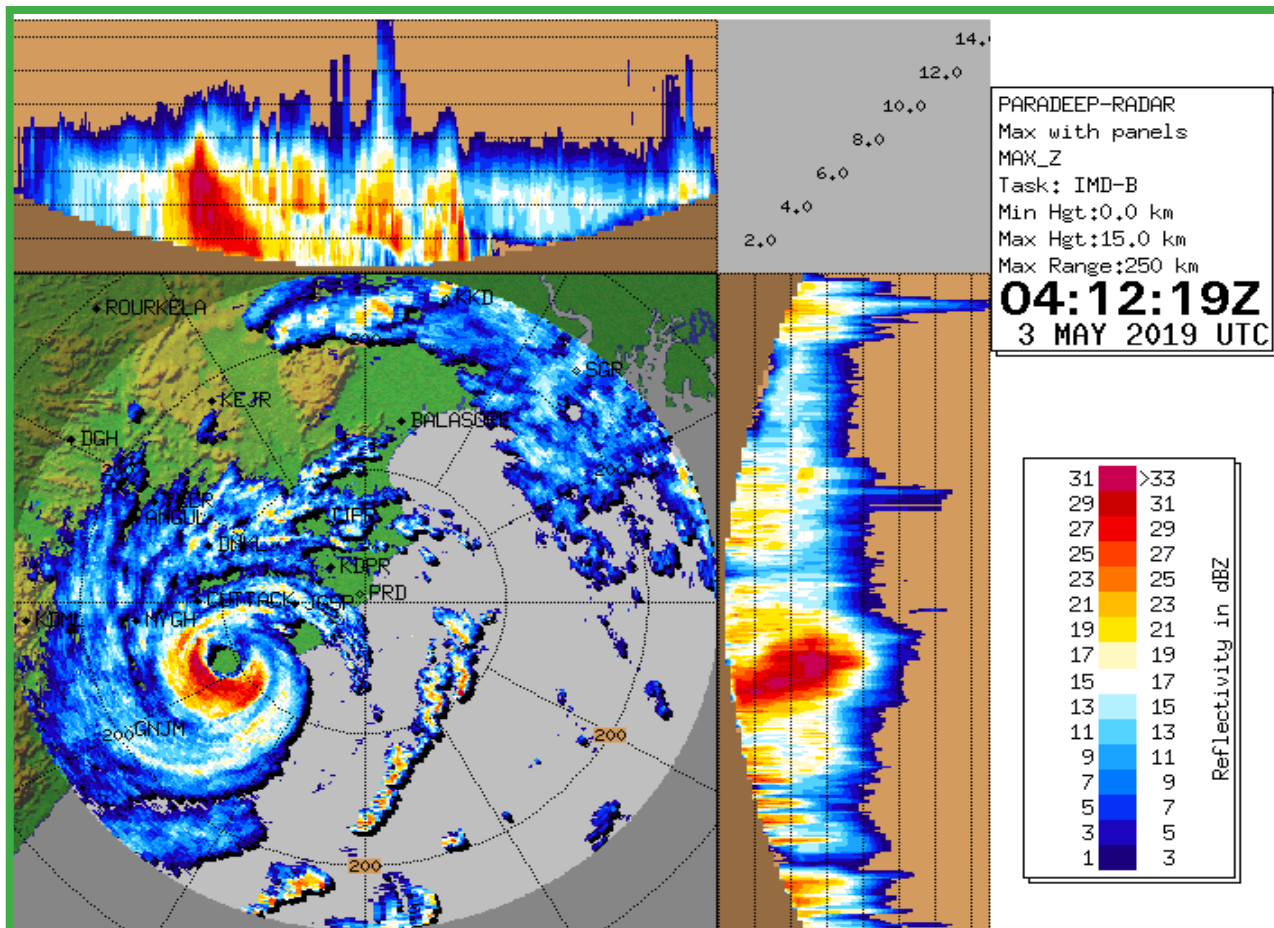
02.05.2019: 20.30 IST

On 3.5.2019, the cyclone made landfall near Puri. The landfall process had started at 0800 hours IST and continued for next 03 hours. The entire process of eye entering into land took 02 hours of time.

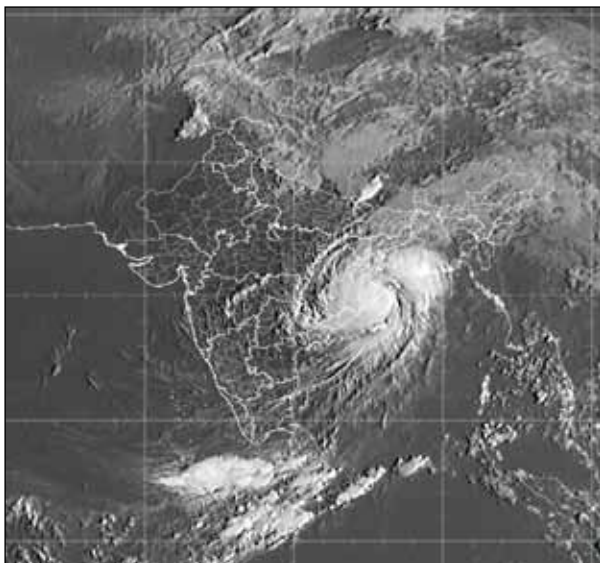
## OCCURRENCE & INTENSITY

### Landfall & Wind Speed

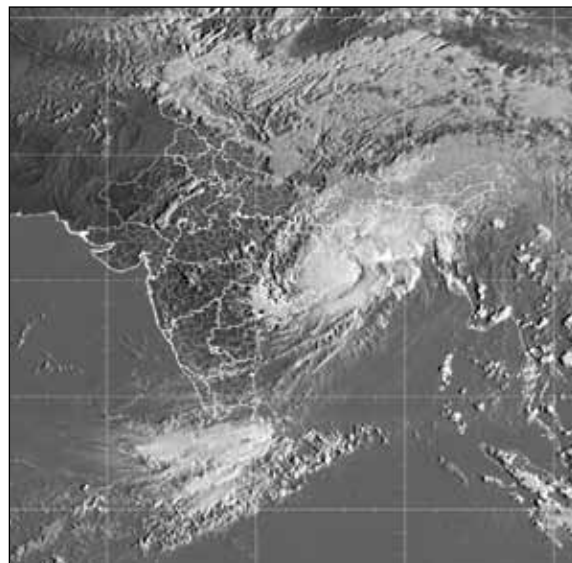
The Cyclone “Fani” made landfall at about 8.30 AM on 3<sup>rd</sup> May 2019 between Satapada and Puri as an Extremely Severe Cyclonic Storm. As reported by IMD, the maximum sustained surface wind speed of 170-180 kmph gusting to 205 kmph was observed during landfall. After the landfall and it continued for 06 hours then it decreased thereafter. The Doppler radar image at Paradeep shows that the cyclone completely made landfall at 9.42 AM on 3<sup>rd</sup> May 2019.



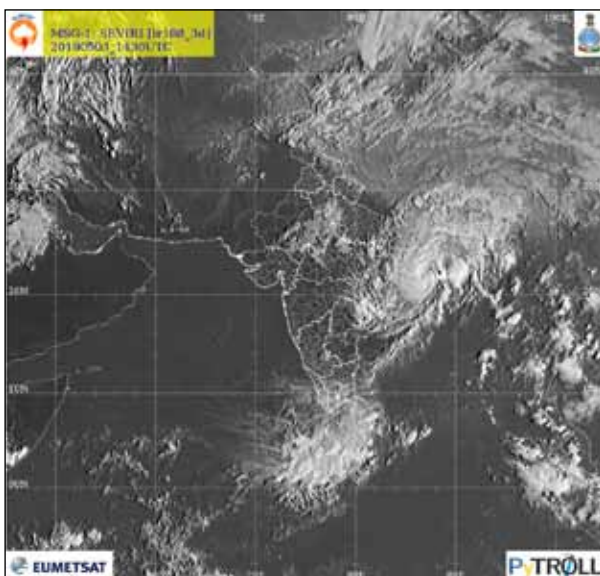
After the landfall, the system continued to move north-northeastwards, weakened gradually and emerged into Gangetic West Bengal as a Severe Cyclonic Storm with wind speed of 90-100 KMPH gusting to 115 KMPH by early morning of 4th May. Then it moved further north-northeastwards and emerged into Bangladesh on 4th May evening as a Cyclonic Storm with wind speed 60-70 KMPH gusting to 80 KMPH. After crossing the Odisha coast it entered the Khurda district around Bhubaneswar. Then it passed over Cuttack, Jagatsinghpur, Kendrapara, Jajpur, Bhadrak, Balasore and Mayurbhanj then entered to the Gangetic West Bengal.



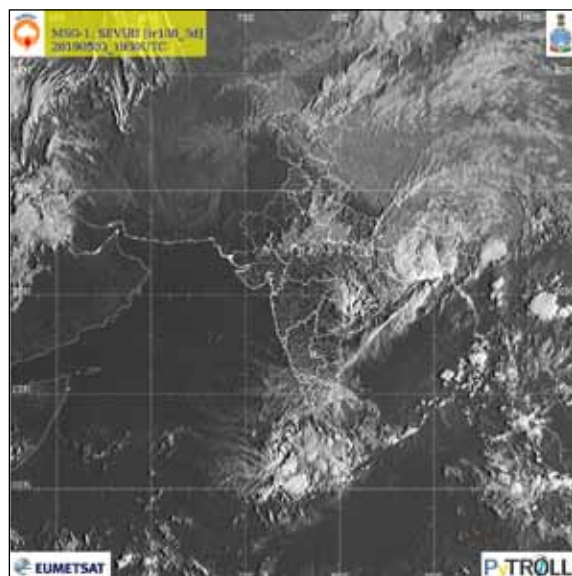
03.05.2019: 8.30 IST



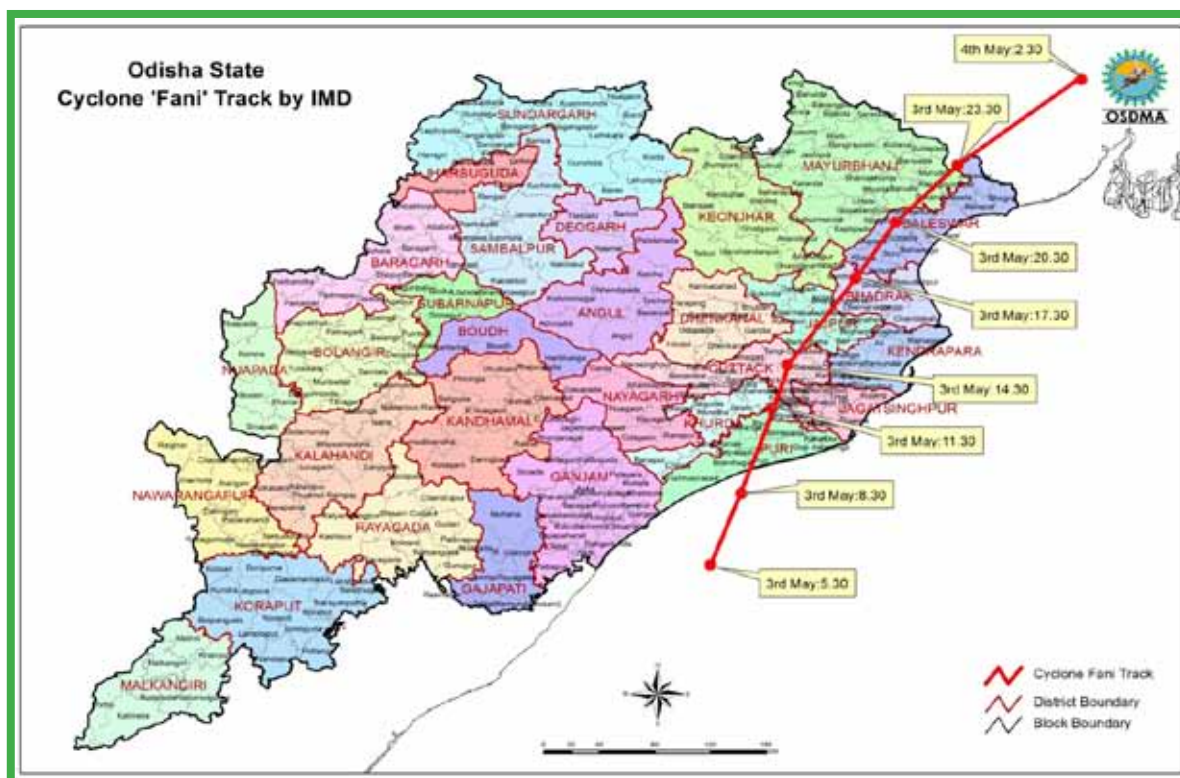
03.05.2019: 14.30 IST



03.05.2019: 21.00 IST



04.05.2019: 02.00 IST



## Rainfall

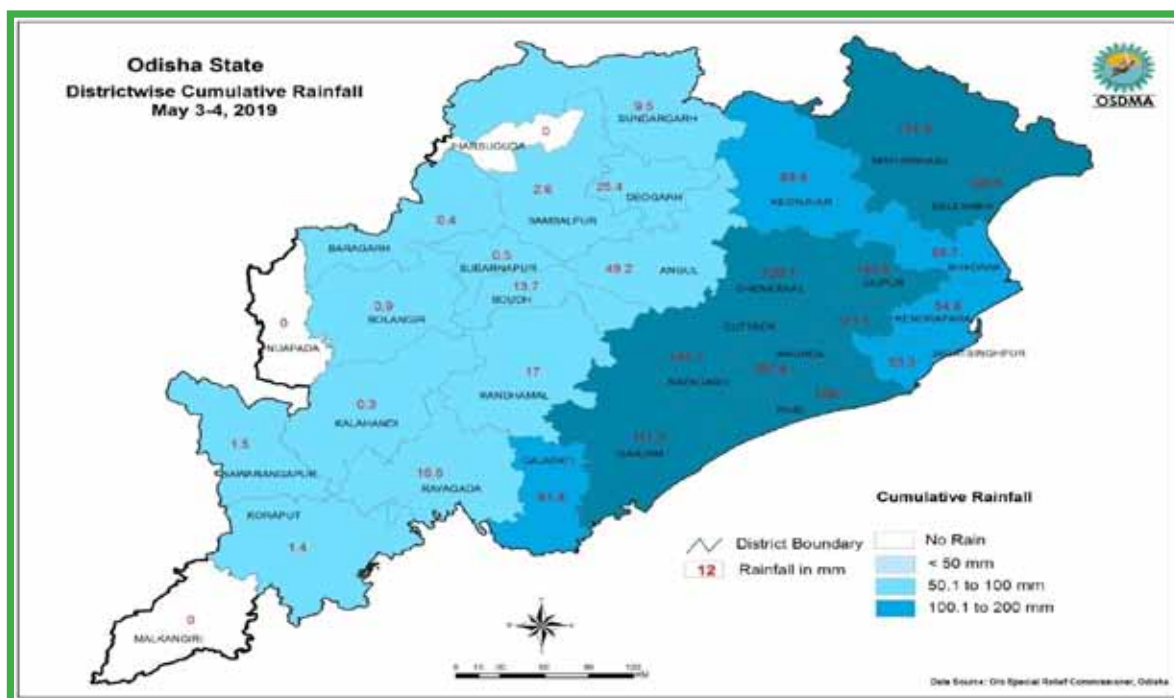
Under the influence of the cyclone, very heavy rainfall occurred in many parts of the state on 3rd and 4th May, 2019. Nine districts have recorded average rainfall of more than 100 mm. The Khordha districts recorded highest 187.8 mm rainfall followed by Cuttack- 171.1 mm, Jaipur- 143.9 mm and Nayagarh- 141.7 mm. Five more districts have received average rainfall between 50 mm and 100 mm. The average rainfall of the affected districts recorded is indicated below:

### DISTRICT AVERAGE RAINFALL

(Rainfall in mm)

Sl. No.	District	3.5.2019	4.5.2019	Total
1	Khordha	50.8	137.0	187.8
2	Cuttack	55.9	115.2	171.1
3	Jaipur	25.5	118.4	143.9
4	Nayagarh	69.5	72.2	141.7
5	Mayurbhanj	18.2	113.6	131.8
6	Dhenkanal	29.4	98.7	128.1
7	Puri*	52.0	76.1	128.1
8	Balasore	39.9	80.6	120.5
9	Ganjam	92.2	19.1	111.3

Sl. No.	District	3.5.2019	4.5.2019	Total
10	Jagatsinghpur	39.4	53.9	93.3
11	Keonjhar	17.2	72.6	89.8
12	Bhadrak	28.7	41.0	69.7
13	Gajapati	57.9	3.9	61.8
14	Kendrapara	19.7	34.9	54.6
15	Angul	16.5	32.7	49.2
16	Deogarh	4.7	20.7	25.4
17	Kandhamal	17.0	0.0	17.0
18	Rayagada	16.1	0.5	16.6
19	Boudh	7.0	6.7	13.7
20	Sundargarh	1.4	8.1	9.5
21	Sambalpur	1.6	1.0	2.6
22	Nawarangpur	0.0	1.5	1.5
23	Koraput	0.0	1.4	1.4
24	Balangir	0.0	0.9	0.9
25	Subarnapur	0.5	0.0	0.5
26	Bargarh	0.0	0.4	0.4
27	Kalahandi	0.3	0.0	0.3
28	Jharsuguda	0.0	0.0	0.0
29	Malkangiri	0.0	0.0	0.0
30	Nuapada	0.0	0.0	0.0
State Average		22.0	37.0	59.0



## Rainfall of Different Blocks

Banki-Dampada Block in Cuttack district has recorded rainfall of more than 300 mm on 3<sup>rd</sup> and 4<sup>th</sup> May 2019. Similarly, 10 Blocks have recorded rainfall between 200 mm and 300 mm, 85 Blocks have recorded rainfall between 100 mm and 200 mm, 58 Blocks have recorded rainfall between 50 mm and 100 mm and 76 Blocks have recorded rainfall below 50 mm during 3<sup>rd</sup> - 4<sup>th</sup> May 2019. The Block-wise rainfall status is given below:

(Rainfall in mm.)

Sl.	District	Block	3.5.2019	4.5.2019	Total
<i>Rainfall above 300 mm</i>					
1	Cuttack	Banki-Dampada	165.0	190.0	355.0
<i>Rainfall between 200 mm and 300 mm</i>					
1	Jaipur	Dharmasala	15.0	276.0	291.0
2	Nayagarh	Ranpur	106.0	175.0	281.0
3	Khordha	Khordha	46.0	206.0	252.0
4	Khordha	Balipatna	39.4	186.0	225.4
5	Dhenkanal	Gondia	26.0	199.0	225.0
6	Cuttack	Kantapada	62.0	160.0	222.0
7	Ganjam	Chikiti	213.0	7.0	220.0
8	Khordha	Bhubaneswar	55.0	161.2	216.2
9	Khordha	Balianta	42.0	173.0	215.0
10	Puri	Krushnaprasad	143.5	70.0	213.5
<i>Rainfall between 100 mm and 200 mm</i>					
1	Mayurbhanj	Khunta	39.4	160.5	199.9
2	Mayurbhanj	Gopabandhunaragar	39.4	160.5	199.9
3	Jaipur	Badachana	20.0	179.0	199.0
4	Balasore	Khaira	55.0	142.0	197.0
5	Puri	Puri	52.0	145.0	197.0
6	Cuttack	Badamba	63.0	131.0	194.0
7	Cuttack	Niali	66.0	126.0	192.0
8	Mayurbhanj	Besoi	13.0	177.0	190.0
9	Ganjam	Ganjam	160.0	28.4	188.4
10	Puri	Satyabadi	46.0	140.0	186.0
11	Ganjam	Rangeilunda	176.0	9.0	185.0
12	Cuttack	Tangi-Choudwar	34.0	150.0	184.0
13	Khordha	Tangi	64.2	115.0	179.2

Sl.	District	Block	3.5.2019	4.5.2019	Total
14	Dhenkanal	Bhuban	14.0	163.0	177.0
15	Jagatsinghpur	Biridi	53.0	124.0	177.0
16	Khordha	Chilika	76.0	101.0	177.0
17	Ganjam	Chhatrapur	155.3	21.0	176.3
18	Jaipur	Binjharpur	33.4	139.8	173.2
19	Mayurbhanj	Suliapada	30.0	142.3	172.3
20	Cuttack	Athagarh	39.0	132.0	171.0
21	Cuttack	Narasinghpur	67.0	102.0	169.0
22	Mayurbhanj	Kuliana	12.3	155.4	167.7
23	Dhenkanal	Hindol	46.3	120.4	166.7
24	Khordha	Begunia	36.0	130.0	166.0
25	Mayurbhanj	Bangriposi	9.3	155.8	165.1
26	Mayurbhanj	Betanati	32.0	133.0	165.0
27	Mayurbhanj	Badasahi	27.0	137.0	164.0
28	Mayurbhanj	Udala	16.2	145.2	161.4
29	Ganjam	Patrapur	127.0	33.0	160.0
30	Jagatsinghpur	Raghunathpur	32.0	127.0	159.0
31	Khordha	Jatani	24.0	133.0	157.0
32	Nayagarh	Nuagaon	53.0	102.6	155.6
33	Mayurbhanj	Baripada	15.0	140.0	155.0
34	Mayurbhanj	Kaptipada	43.0	112.0	155.0
35	Puri	Nimapara	36.0	118.0	154.0
36	Ganjam	Kukudakhandi	118.0	35.0	153.0
37	Kendrapara	Garadapur	32.0	120.0	152.0
38	Mayurbhanj	Samakhunta	14.0	138.0	152.0
39	Cuttack	Cuttack Sadar	35.0	116.0	151.0
40	Jaipur	Jaipur	25.0	125.0	150.0
41	Mayurbhanj	Sarasakana	6.0	144.0	150.0
42	Jaipur	Korei	36.6	112.4	149.0
43	Khordha	Bolagarh	53.0	96.0	149.0
44	Cuttack	Barang	90.0	55.0	145.0
45	Balasore	Nilagiri	48.0	95.0	143.0
46	Ganjam	Purusottampur	120.0	22.0	142.0
47	Puri	Pipili	39.0	103.0	142.0
48	Khordha	Banapur	72.0	69.0	141.0

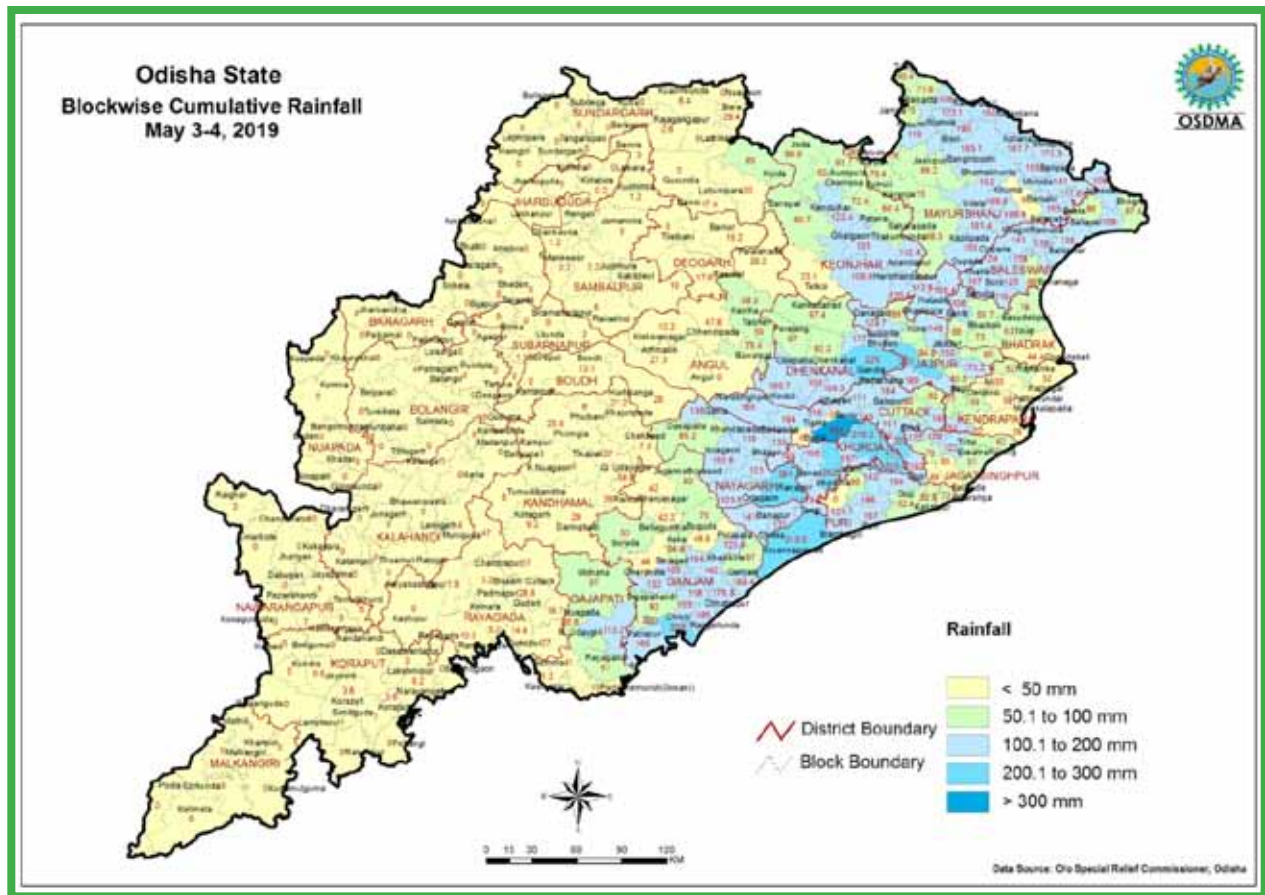
Sl.	District	Block	3.5.2019	4.5.2019	Total
49	Mayurbhanj	Morda	25.0	116.0	141.0
50	Cuttack	Nischintakoili	18.0	122.0	140.0
51	Balasore	Remuna	22.0	117.0	139.0
52	Balasore	Balasore	68.0	70.0	138.0
53	Nayagarh	Gania	78.0	58.0	136.0
54	Keonjhar	Ghatgaon	37.6	97.4	135.0
55	Ganjam	Sanakhemundi	125.0	7.0	132.0
56	Nayagarh	Bhapur	70.0	60.0	130.0
57	Jaipur	Sukinda	31.2	98.5	129.7
58	Balasore	Oupada	33.0	95.0	128.0
59	Balasore	Soro	46.0	79.0	125.0
60	Keonjhar	Keonjhar	13.2	110.2	123.4
61	Mayurbhanj	Bijatala	4.0	119.1	123.1
62	Nayagarh	Nayagarh	75.0	48.0	123.0
63	Jagatsinghpur	Tirtol	82.0	40.0	122.0
64	Puri	Brahmagiri	54.7	67.0	121.7
65	Keonjhar	Ghasipura	23.3	97.5	120.8
66	Ganjam	Kodala	86.2	34.4	120.6
67	Balasore	Simulia	66.0	53.0	119.0
68	Cuttack	Tigiria	42.0	77.0	119.0
69	Mayurbhanj	Kusumi	10.0	109.0	119.0
70	Nayagarh	Khandapara	67.0	52.0	119.0
71	Ganjam	Hinjilicut	111.0	7.0	118.0
72	Mayurbhanj	Rasgovindapur	31.4	86.2	117.6
73	Gajapati	R.Udaygiri	105.8	7.4	113.2
74	Keonjhar	Anandapur	23.5	89.3	112.8
75	Keonjhar	Harichandanpur	35.4	74.2	109.6
76	Keonjhar	Hatadihi	29.1	80.3	109.4
77	Balasore	Baliapal	26.0	83.0	109.0
78	Balasore	Jaleswar	19.0	89.0	108.0
79	Bhadrak	Bonth	22.0	84.0	106.0
80	Ganjam	Sheragada	100.0	6.0	106.0
81	Mayurbhanj	Rairangapur	10.0	96.0	106.0
82	Dhenkanal	Odapada	31.0	74.0	105.0
83	Dhenkanal	Dhenkanal	29.1	75.2	104.3

Sl.	District	Block	3.5.2019	4.5.2019	Total
84	Ganjam	Kabisuryanagar	82.0	22.0	104.0
85	Nayagarh	Odagaon	55.8	47.7	103.5
<i>Rainfall between 50 mm and 100 mm</i>					
1	Dhenkanal	Parjang	35.0	62.0	97.0
2	Gajapati	Mohana	89.2	7.8	97.0
3	Ganjam	Khalikot	71.0	26.0	97.0
4	Ganjam	Aska	69.0	27.6	96.6
5	Gajapati	Nuagada	86.6	9.0	95.6
6	Balasore	Bahanaga	41.0	54.0	95.0
7	Jaipur	Rasulpur	33.6	61.2	94.8
8	Cuttack	Mahanga	20.0	72.0	92.0
9	Keonjhar	Jhumpura	6.8	85.2	92.0
10	Mayurbhanj	Tiring	0.0	90.4	90.4
11	Cuttack	Salepur	25.0	65.0	90.0
12	Mayurbhanj	Joshipur	17.0	72.2	89.2
13	Jaipur	Danagadi	27.0	62.0	89.0
14	Puri	Delang	52.3	36.7	89.0
15	Balasore	Basta	35.0	53.0	88.0
16	Keonjhar	Joda	3.2	83.4	86.6
17	Nayagarh	Daspalla	51.0	34.2	85.2
18	Jaipur	Bari	15.5	68.0	83.5
19	Dhenkanal	Kamakhyanagar	39.2	43.0	82.2
20	Ganjam	Digapahandi	82.0	0.0	82.0
21	Angul	Angul	27.8	53.2	81.0
22	Jaipur	Dasarathpur	18.0	62.0	80.0
23	Angul	Banarpal	30.8	48.6	79.4
24	Bhadrak	Basudevpur	38.0	40.0	78.0
25	Mayurbhanj	Raruana	20.0	58.0	78.0
26	Kendrapara	Derabis	25.0	52.0	77.0
27	Mayurbhanj	Sukuruli	22.0	54.4	76.4
28	Ganjam	Buguda	36.0	39.0	75.0
29	Mayurbhanj	Jamda	4.0	71.0	75.0
30	Mayurbhanj	Karanjia	17.0	58.0	75.0
31	Bhadrak	Dhamnagar	35.0	38.0	73.0
32	Keonjhar	Patna	22.2	50.2	72.4

Sl.	District	Block	3.5.2019	4.5.2019	Total
33	Puri	Astarang	34.0	38.0	72.0
34	Mayurbhanj	Bahalda	0.0	71.6	71.6
35	Jagatsinghpur	Jagatsinghpur	10.0	60.0	70.0
36	Mayurbhanj	Thakurmunda	17.3	51.0	68.3
37	Bhadrak	Bhandaripokhari	30.0	38.0	68.0
38	Dhenkanal	Kankadahad	14.2	53.2	67.4
39	Sundargarh	Koira	22.0	43.0	65.0
40	Bhadrak	Tihidi	35.0	28.0	63.0
41	Jagatsinghpur	Kujanga	39.0	23.0	62.0
42	Keonjhar	Champua	3.1	58.0	61.1
43	Keonjhar	Banspal	6.2	54.5	60.7
44	Keonjhar	Saharpada	12.2	48.2	60.4
45	Gajapati	Gosani	59.4	1.0	60.4
46	Ganjam	Jagannathprasad	28.0	32.0	60.0
47	Angul	Talcher	22.0	37.0	59.0
48	Kendrapara	Kendrapara	22.0	37.0	59.0
49	Angul	Kaniha	15.3	43.0	58.3
50	Balasore	Bhograi	20.2	37.3	57.5
51	Jagatsinghpur	Erasama	30.0	27.0	57.0
52	Bhadrak	Bhadrak	6.4	49.3	55.7
53	Ganjam	Sorada	38.0	15.0	53.0
54	Puri	Kakatpur	32.0	20.9	52.9
55	Puri	Gop	30.2	22.2	52.4
56	Kendrapara	Rajkanika	36.0	16.0	52.0
57	Gajapati	Rayagada	45.0	6.0	51.0
58	Jagatsinghpur	Balikuda	20.0	30.0	50.0
<i>Rainfall below 50 mm</i>					
1	Jagatsinghpur	Naugaon	49.0	0.0	49.0
2	Ganjam	Polasara	48.8	0.0	48.8
3	Angul	Chhendipada	13.4	34.4	47.8
4	Rayagada	Muniguda	47.0	0.0	47.0
5	Ganjam	Dharakote	10.0	36.0	46.0
6	Bhadrak	Chandbali	34.7	9.7	44.4
7	Ganjam	Belaguntha	41.2	1.0	42.2
8	Ganjam	Bhanjanagar	30.0	12.0	42.0

Sl.	District	Block	3.5.2019	4.5.2019	Total
9	Gajapati	Gumma	41.0	0.0	41.0
10	Deogarh	Barkote	4.6	35.0	39.6
11	Kendrapara	Pattamundai	12.0	26.0	38.0
12	Kandhamal	Tikabali	37.0	0.0	37.0
13	Kandhamal	G.Udayagiri	34.8	0.0	34.8
14	Kendrapara	Rajnagar	21.0	11.0	32.0
15	Kendrapara	Aul	3.0	27.0	30.0
16	Sundargarh	Bisra	0.0	29.4	29.4
17	Kendrapara	Mohakalpara	18.0	11.0	29.0
18	Rayagada	Gudari	28.6	0.0	28.6
19	Angul	Pallahara	7.0	21.2	28.2
20	Boudh	Harabhanga	15.0	13.0	28.0
21	Kandhamal	Raikia	28.0	0.0	28.0
22	Angul	Athamalik	9.3	18.0	27.3
23	Rayagada	Gunupur	27.0	0.0	27.0
24	Rayagada	Chandrapur	22.0	5.0	27.0
25	Kandhamal	Daringibadi	26.0	0.0	26.0
26	Kandhamal	Phiringia	25.8	0.0	25.8
27	Keonjhar	Telkoi	8.2	14.9	23.1
28	Kendrapara	Marshaghai	8.0	14.0	22.0
29	Gajapati	Kasinagar	21.2	0.0	21.2
30	Kandhamal	Khajuripada	21.2	0.0	21.2
31	Sundargarh	Lahunipara	0.0	20.0	20.0
32	Deogarh	Deogarh	5.2	14.0	19.2
33	Rayagada	Padmapur	18.7	0.0	18.7
34	Deogarh	Reamal	4.4	13.2	17.6
35	Sundargarh	Bonai	0.4	17.0	17.4
36	Gajapati	Paralakhemundi	15.0	0.0	15.0
37	Rayagada	Ramanaguda	14.4	0.0	14.4
38	Boudh	Boudh	6.1	7.0	13.1
39	Angul	Kishorenagar	6.2	6.0	12.2
40	Rayagada	Rayagada	9.5	0.8	10.3
41	Sambalpur	Naktideul	4.0	6.0	10.0
42	Kandhamal	Kotagarh	9.2	0.0	9.2

Sl.	District	Block	3.5.2019	4.5.2019	Total
43	Sundargarh	Kuarmunda	1.0	7.4	8.4
44	Koraput	Narayanpatna	0.0	8.2	8.2
45	Bolangir	Khaprakhol	0.0	8.0	8.0
46	Sundargarh	Lathikata	0.0	8.0	8.0
47	Kandhamal	Chakapad	7.3	0.0	7.3
48	Koraput	Similiguda	0.0	7.0	7.0
49	Nawarangpur	Nawarangpur	0.0	7.0	7.0
50	Kandhamal	Phulbani	6.0	0.0	6.0
51	Kandhamal	Tumudibandh	6.0	0.0	6.0
52	Rayagada	Kolnara	5.2	0.0	5.2
53	Nawarangpur	Tentulikhunti	0.0	5.0	5.0
54	Sambalpur	Rairakhol	3.0	2.0	5.0
55	Sundargarh	Nuagaon	0.0	5.0	5.0
56	Sundargarh	Gurundia	0.0	5.0	5.0
57	Baragarh	Jharbandh	0.0	4.0	4.0
58	Bolangir	Patnagarh	0.0	4.0	4.0
59	Kalahandi	Lanjigarh	4.0	0.0	4.0
60	Koraput	Koraput	0.0	3.6	3.6
61	Rayagada	Bissam Cuttack	3.2	0.0	3.2
62	Kandhamal	Baliguda	3.0	0.0	3.0
63	Nawarangpur	Nandahandi	0.0	3.0	3.0
64	Sambalpur	Jamankira	2.5	0.5	3.0
65	Sundargarh	Rajgangpur	0.0	2.8	2.8
66	Sambalpur	Jujumura	2.2	0.0	2.2
67	Subarnapur	Birmaharajpur	2.0	0.0	2.0
68	Rayagada	Kalyansingpur	1.8	0.0	1.8
69	Sambalpur	Dhankauda	1.2	0.0	1.2
70	Sambalpur	Kuchinda	1.2	0.0	1.2
71	Subarnapur	Sonepur	1.1	0.0	1.1
72	Baragarh	Ambabhona	0.0	1.0	1.0
73	Koraput	Lamataput	0.0	1.0	1.0
74	Koraput	Jeypore	0.5	0.0	0.5
75	Jharsuguda	Kolabira	0.2	0.0	0.2
76	Sambalpur	Maneswar	0.0	0.2	0.2



## PREPAREDNESS

The massive preparedness measures had been undertaken by the Government soon after receipt of warning from IMD and analysis of forecast from different Meteorological Agencies. The districts were alerted based on the probable cyclone track and impact area. All the collectors of the state were specifically instructed by Special Relief Commissioner to carry out the followings:

- Identifying all vulnerable people and shifting them to safe shelters is the 1<sup>st</sup> priority. For that purpose, all people living in kutcha houses or living near the coast or in low lying areas in the above coastal and adjoining districts must be evacuated and placed in Multipurpose cyclone/ flood shelters and other safe shelters.
- INCOIS has issued bulletins relating to storm surges associated with cyclone. It may be necessary to evacuate people living in even two-storied buildings in the coastline to the nearby cyclone shelter since high wind speed 200 KMPH associated with storm surge could be very fatal. We have requested IMD to give us location specific forecast on storm surge.
- Other district authorities may also assess the situation in their respective districts and take steps to evacuate the people living in vulnerable conditions to safe shelters.
- Special care must be taken to shift the old, physically challenged, women and children to shelters much before the cyclone approaches.
- Safety of residential schools, child care institutions, old age homes and similar institutions may also be checked and if necessary, shifted to safe shelters. Availability of sufficient food stuff, drinking water, essential medicines, etc. for the inmates of such institutions may be checked and ensured.
- Cooked food through free kitchen, safe drinking water, lighting, health & sanitation facilities must be arranged at the shelters.
- All cyclone and flood shelters should be immediately checked and made ready to house the people. Water supply system, generator, inflatable tower light, mechanical

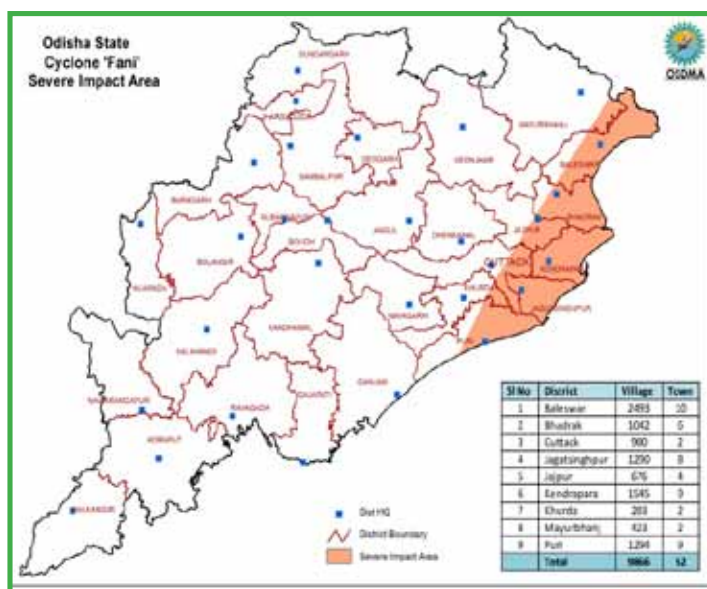
cutters and other equipment available in shelters should be put to test run and the defective ones got immediately repaired. Fuel arrangements for the generators and other equipment may also be made. Meeting of the CSMMC/ FSMMC should be organised and proper preparedness ensured at the shelter level.

- Responsibility may be assigned to specific officers and teams to undertake the above tasks in seamless manner.
- The livestock and domestic animals in vulnerable areas should also be evacuated to safer places. No cattle should be left tied in kutcha house.
- Soon after the cyclone is abated, required food assistance in shape of rice, chuda, gur, etc. and other essential items are to be provided to the affected people. Please make prior arrangement for the same so that there is no delay in providing assistance to the cyclone victims. This is very important.
- The households whose houses are damaged in the cyclone/ heavy rain need to be provided with temporary shelter materials (polythene sheet) without delay. Please check the stock in advance and make necessary arrangements for the same.
- The District Emergency Operation Centre and Control Rooms of other offices must operate round the clock. Please see that all communication equipment like phone, fax, etc are in working condition. Adequate manpower may be deployed in DEOC and Control rooms.
- Satellite phones have been provided to all the Collectors. Hope, you have already checked it and made test calls. In case. The terrestrial communication systems fail, please contact with us and others through the satellite phone. Besides, satellite phone, digital mobile radio communication systems have been established in six coastal districts under the EWDS project. Please make use of those communication systems also.
- Flood is always associated with cyclone. Hence, necessary arrangement to address the flood situation, if any, may also be made.
- As many as 300 power boats of Special Relief Organisation are prepositioned in different districts. Please check such boats in your district and make arrangements for their deployment, if required for transportation of relief and relief parties to inaccessible areas. Temporary crew who were engaged in previous years could be temporarily engaged for the purpose, if so required. Adequate quantity of POL should be kept for the purpose. POL stock may also be made for supply to NDRF/ ODRAF/ Fire Services for operation of their boats and other equipment.

- As the power supply is likely to be cut off during peak period of cyclone, all offices should make their back-up power arrangement for that period. Generators available in the different offices including health institutions should be immediately checked and adequate fuel stored.
- Immediate restoration of road communication for movement of relief materials to the affected areas is very important. Necessary advance arrangements may be made through the concerned departments for restoration of the damaged roads immediately after the cyclone subsides.
- Similar arrangement may also be made for immediate restoration of electricity and telecommunication including internet services.
- Steps should be taken to disseminate correct information about the upcoming cyclone among the people and with advice not to panic.
- I believe fishermen have already been informed about the cyclone and no fisherman has ventured into the sea. This is to continue till the dewarning is issued by the IMD.
- Mobile health and veterinary teams may be organised in advance and kept in readiness for deployment in the affected areas. Feed & fodder should be arranged for the animal population.

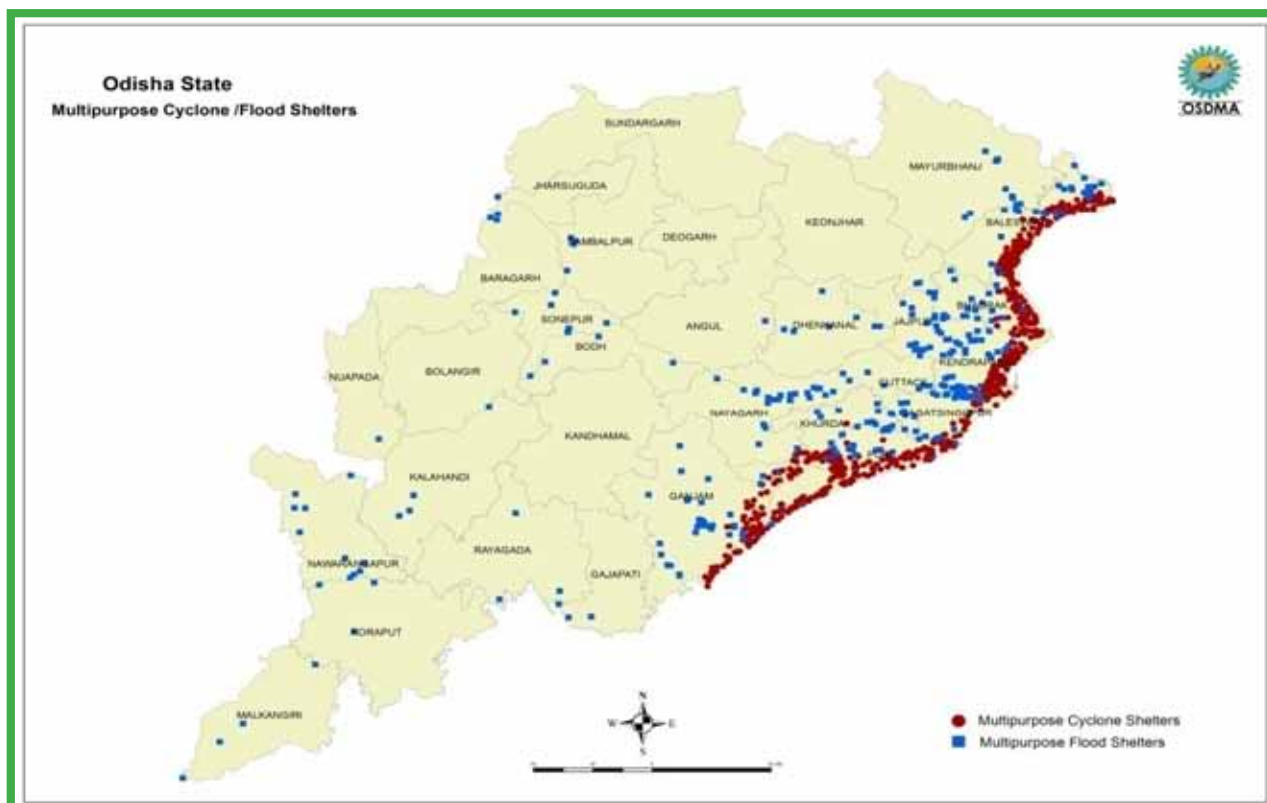
## Identification of most severe impact area

Most vulnerable villages in the coastal area had been identified in GIS platform based on forecast track. The severe impact areas had been taken from 10 km buffer area on the landward side and entire area of the seaward side of the forecast track. Total 9886 villages and 52 towns in 9 districts were identified as severe impact area and the Collectors of the respective districts were intimated for taking up the preparedness measures.



## Shelter Readiness

Odisha State Disaster Management Authority (OSDMA) has constructed 879 Multipurpose Cyclone and Flood Shelters in 25 districts. All cyclone and flood shelters were kept ready to house the people. Water supply system, generator, inflatable tower light, mechanical cutters and other equipment available in shelters were put to test run and the defective ones got immediately repaired. Fuel arrangements for the generators and other equipment had been made. An emergency meeting of the shelter management committees was organised at the shelter level. The shelter level taskforce volunteers were kept on alert to meet any eventuality due the cyclone. Adequate food material and free kitchen were ensured at the shelters. Specific instructions had been issued to the shelters in Odia language for better understanding of the information.



## Evacuation

Taking a cue of the huge casualties of about 10,000 in 1999 Super Cyclone, the state government had done a massive evacuation. The collectors of Angul, Balasore, Bhadrak, Boudh, Cuttack, Dhenkanal, Gajapati, Ganjam, Jajpur, Jagatsinghpur, Kandhamal, Khordha, Koraput, Mayurbhanj, Nayagarh, Puri, Rayagada districts were instructed to evacuate people living in kutcha houses, near the coast or in low lying areas in coastal and adjacent districts and also people who were in vulnerable conditions to cyclone/ flood shelters and other safe pucca buildings.



The evacuation process started on 1<sup>st</sup> May, 2019. A total number of 15,57,170 people have been evacuated from vulnerable areas in 19 districts of the state to cyclone shelters, schools and other buildings. Almost 9000 shelters have been created in the likely affected area including existing cyclone and flood shelter buildings. Special care had been taken to shift the old, differently abled, women and children to shelters much before the cyclone approaches. Safety of residential schools, child care institutions, old age homes and similar institutions had been checked and the boarders were shifted to safe shelters, wherever necessary. Cooked food through free kitchen, health and sanitation facilities had been arranged at the shelters. Basic amenities like Lighting arrangement, safe drinking water had also been ensured at shelters.

Sl. No	Name of the districts	No. of Person evacuated	Sl. No	Name of the districts	No. of Person evacuated
1	Angul	5587	11	Khordha	84987
2	Balasore	238520	12	Mayurbhanj	84687
3	Bhadrak	62475	13	Nayagarh	52850
4	Cuttack	197744	14	Puri	129800
5	Dhenkanal	6147	15	Kandhamal	15255
6	Ganjam	301460	16	Gajapati	48975
7	Jagatsinghpur	92326	17	Rayagada	15375
8	Jaipur	96156	18	Koraput	691
9	Kendrapara	116693	19	Boudh	1090
10	Keonjhar	6352		Total	1557170

As a precautionary measure, 24,889 nos. of tourists were evacuated from Puri, Ganjam, Cuttack and Balasore in 23 number of train and 18 busses. More than 600 Pregnant women were shifted to MaaGruha. Free Kitchen centres were opened from 02.05.2019 for the evacuated people. The cattle population was also shifted to safer places and cattle feed/ fodder arrangement was made.

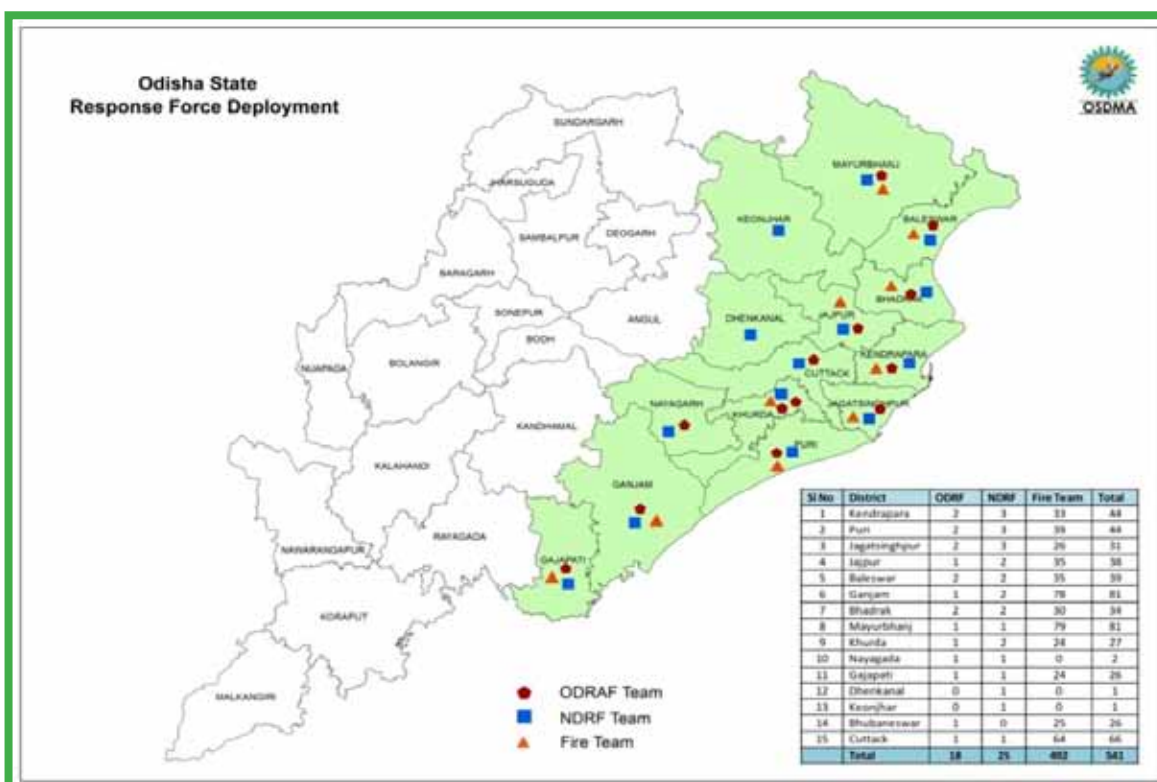


## Deployment of Disaster Response Force

20 Teams of ODRAF, 28 Teams of NDRF and 525 Fire service teams with emergency equipment were deployed in 14 districts and in Bhubaneswar city for search, rescue & relief operations in the areas affected by cyclone and flood. 16 additional NDRFs were deployed in 10 most affected districts and 6 NDRF teams from Ganjam, Gajapati, Khordha and Dhenkanal were mobilised to other districts for expediting for response. The district wise deployment is given below.

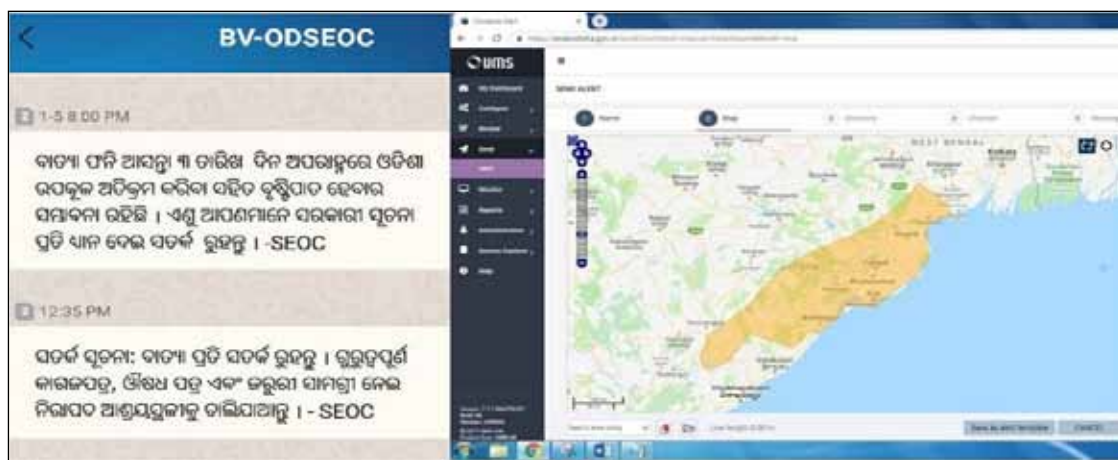
Sl. No.	District	ODRAF Units Deployed	NDRF Teams Deployed	Fire Teams Deployed
1	Puri	02	03	39
2	Jagatsinghpur	02	03	26
3	Kendrapada	02	03	33
4	Balasore	02	02	35
5	Bhadrak	02	02	30
6	Ganjam	02	01	78
7	Khordha	02	03	24
8	Jajpur	01	02	35
9	Nayagarh	01	01	-
10	Cuttack	02	01	64
11	Gajapati	00	01	24
12	Mayurbhanj	01	01	79
13	Dhenkanal	-	01	-
14	Keonjhar	-	01	-
15	Bhubaneswar	01	03	25
	<b>Total</b>	<b>20</b>	<b>28</b>	<b>525</b>

Besides the above deployment, AapdaMitra volunteers, MCS/MFS Task Force team members and community level volunteers in Gajapati were kept in readiness for any eventuality.



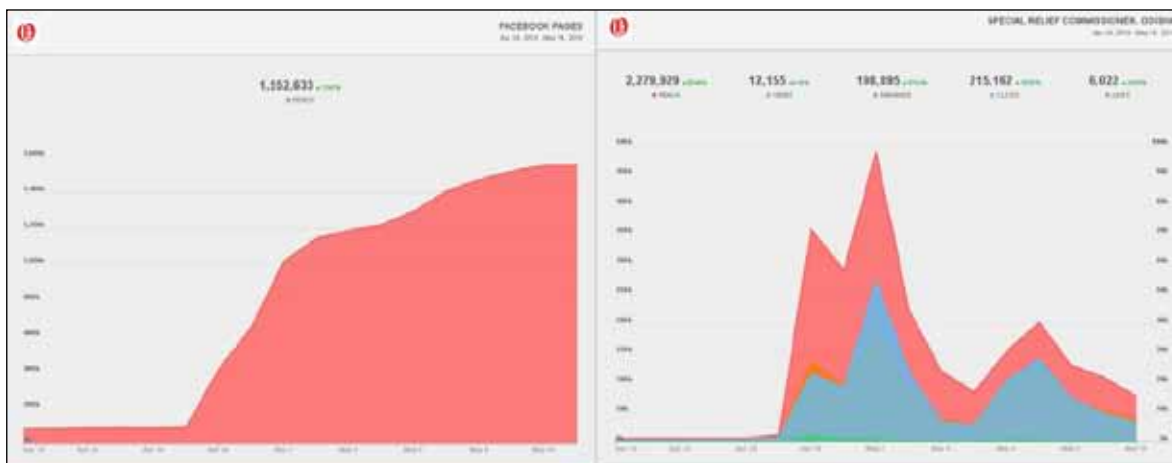
## Dissemination of Warnings

Cyclone related alert and action suggested had been delivered through Location Based Alert System (LBAS) SMS to 1.8 crore nos. of BSNL subscribers of the likely affected districts. Group based alert messages had also been disseminated based on threat status to a particular area. All messages were in Odia language of different categories. Early warning sirens were activated and voice messages disseminated every hour in the coastal area. 14 SBMDVT under EWDS had also been activated for emergency communication. All cyclone bulletins and warning messages of IMD were disseminated with Key State Level Officers, Collectors and Media.



Cyclone Preparedness videos, safety tips broadcasted in major TV channels. Safety & preparedness voice messages have also been broadcasted in AIR, FM radios & community radios. Aapda Mitra volunteers, MCS/MFS Task Force team members were utilised for public preparedness, warning dissemination and expediting evacuation. District Administration disseminated the warning through official channels and PRI members. Public address systems were used for dissemination at local level. Fisheries and ARD Department communicated the warning messages to marine fishermen.

Social Medias have been effectively used for awareness generation at all levels. WhatsApp, Facebook, Twitter and other social media have been used not only for dissemination of warning but sending information as well. The social media hits increased suddenly after the cyclone warning.



## Stockpile of relief materials

Soon after the cyclone abated, required food assistance in shape of rice, chuda (flattened rice), gur (jaggery), etc. and other essential items needed to be provided to the affected people. Prior arrangement for the same had been ensured to avoid delay in providing assistance to the cyclone victims. To provide shelter materials for the households whose houses were expected to be damaged in the cyclone/ heavy rain, 5,97,006 Polythene Stocks were kept ready at the state and Districts level for emergency requirement. 1,00,000 food packets were made ready for air dropping. Adequate dry food stocks at the district and state level had also been kept ready for emergent relief.

## Other preparedness measures

- District Emergency Operation Centres and control rooms of other offices have been activated and were functioning round the clock.
- Two helicopters were requisitioned for air dropping Operations.
- 1 lakh food packets had been prepared for the air dropping.
- Boat operation was stopped in Chilikalake.
- Traditional fishing boats were banned in the coastal area.
- All Educational Institutions were closed from 02.05.2019 until further orders.
- Collectors were directed to evacuate the tourists by 01.05.2019 evening.
- Senior IAS officers had been deputed to districts likely to be affected.
- 81 Trains were cancelled.
- Air services in Bhubaneswar were suspended for 24 Hours.

## Preparedness at the Department Level.

### i. PR & DW Department (Rural Drinking Water)

- ☛ 734 numbers of PVC tanks and 668 numbers of vehicles were kept ready.
- ☛ 337 numbers of DG sets with fuel were arranged for PWS.
- ☛ 3840 numbers of overhead tanks were filled up with water.
- ☛ 3201100 numbers of water pouches were kept ready for distribution.
- ☛ 203 numbers of electrician kept ready for immediate deployment.
- ☛ 373 number of mobile repairing units were kept ready.

### ii. W & CD and Mission Shakti Department

- ☛ Adequate stocking of THR and Food Stuff in all AWCs, NGO run institutions such as Child Care Institutions, Swadhar and Ujjwala Homes ensured.
- ☛ THR (Chhatua & dry provisions) and eggs for children of the age group between 6 month and 3 years and pregnant & lactating mother provided in advance for 7 days.

### iii. Department of Energy

- ☛ Skilled manpower and materials like steel poles, cement concrete poles, conductors, cross arms and distribution transformers and other accessories were kept ready for quick restoration of power supply in case of any eventuality.

### iv. Department of Rural Development

- ☛ All Rural Works Divisions were kept in readiness with men, material and machineries for immediate closure of breaches and resolve dislocation of traffic during the cyclone/ flood in respective divisions.

### v. Works Department

- ☛ All the field Executive Engineers had been sensitized for water-tightness of the EVM strong rooms and post cyclone restoration works of all PWD road and Govt. buildings.
- ☛ Materials, manpower and machineries arranged and deployed in vulnerable locations.

### vi. Department of Health and Family Welfare

- ☛ 604 numbers of pregnant women were shifted to MaaGruhas/ Delivery points.
- ☛ 302 numbers of RRTs/ mobile teams were made ready.
- ☛ 936 numbers of MRCs planned.
- ☛ 242 numbers of power back up arrangement and 494 numbers of ambulance have been kept ready.

**vii. Fisheries and ARD Department**

- ☛ Field veterinarians were engaged to make aware the dairy farmers and small animal owners to take immediate measures by shifting their animals to safe places to avoid livestock loss.
- ☛ Animal health care services, measures for carcass disposal ensured.
- ☛ All necessary medicines and quick response teams kept ready.

**viii. Industries Department**

- ☛ All companies were instructed to extend all necessary cooperation as regards to supply of earth movers, fire extinguishers and other necessary rescue equipment available with organisations to the district administration as well as to other response agencies.
- ☛ Industries and other chemical companies were instructed for safety storage of the hazardous materials within industry/ factory campus to avoid spilling or leakage.

**ix. Agriculture and Farmers' Empowerment Department**

- ☛ Agro based crop advisory prepared by OUAT and Directorate of Agriculture on crop management during and before the cyclonic storm issued to the district level officers for wide circulation among the field functionaries and farmers.
- ☛ The crop advisory was also broadcasted through All India Radio, 15 Community Radio Stations across the state and Door Darshan Kendras.
- ☛ Farmer awareness was also created through PADIF and m-Kissan by delivering the voice response and SMSs since 01.05.2019 to 26.88 lakh farmers.
- ☛ A detailed crop management programme was telecasted through "Palishree" Programme of DD Odia.

**x. ST & SC Development Department:**

- ☛ Closure of all educational institutions including Higher Secondary Schools, EMRS and Teacher Training Schools w.e.f. 2<sup>nd</sup> May 2019.
- ☛ Safety and security of the student boarders staying in residential schools, including urban hostels, post-matric hostels and hostels of higher secondary schools, EMRS and teacher training schools ensured in each district.

**xi. Housing and Urban Development Department**

- ☛ All logistics, chemicals required for smooth management of Water Supply to ULBs arranged.
- ☛ 166 Tankers available and another 42 have been arranged.
- ☛ Along with 101 DG sets, 69 nos. more have been arranged with POL

- ☛ Control room for drinking water issues functioning in all ULBs round the clock.
- ☛ WATSAN committee members have been sensitized for required assistance.

#### xii. Department of Tourism

- ☛ Advisory for tourists issued by the department to evacuate from the coastal destination of Odisha from 02.05.2019 till situation normalizes.
- ☛ District and Department level control rooms set up to assist the tourists.

#### xiii. Forest and Environment Department

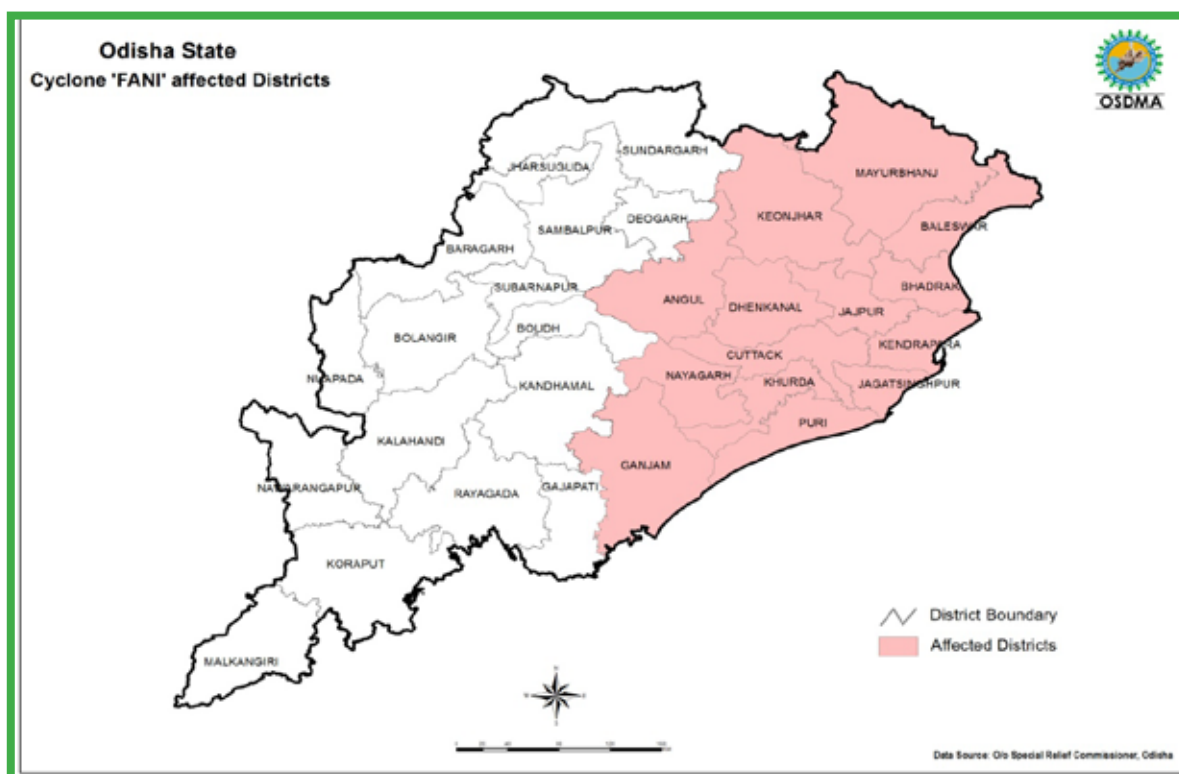
- ☛ Control Rooms were opened in the division offices of the vulnerable districts as well as in the office of the PCCF, Odisha and PCCF (Wild Life) on 24X7 basis.
- ☛ Villagers located in and around the Balukhand- Konark sanctuary area of Puri Wild Life Division were sensitised for protection and rescue of Wild animals and special squads in vulnerable areas were deployed for the purpose.
- ☛ Adequate quantity of feed and fodder, medicines, storage of drinking water, provision of Gen-set were ensured in Nandankanan and other captive facilities. The Nandankanan Zoo has been closed from 2<sup>nd</sup> May to 4<sup>th</sup> May 2019.
- ☛ The DFO, Rajnagar Wildlife Division and Puri Wildlife Division were instructed to ensure safety of the Wild animals and also to take prompt action for rescue and rehabilitation of wild animals coming towards human habitations.
- ☛ The accommodation in Nature Camps/ Eco-tourism destinations in the coastal divisions have closed for tourists from 1<sup>st</sup> to 6<sup>th</sup> May 2019.
- ☛ All power chain saws were made ready for cutting of uprooted trees for road clearance.
- ☛ Cutters with manpower of Odisha Forest Development Corporation were kept ready for immediate deployment in the cyclone affected areas for clearance of roads.

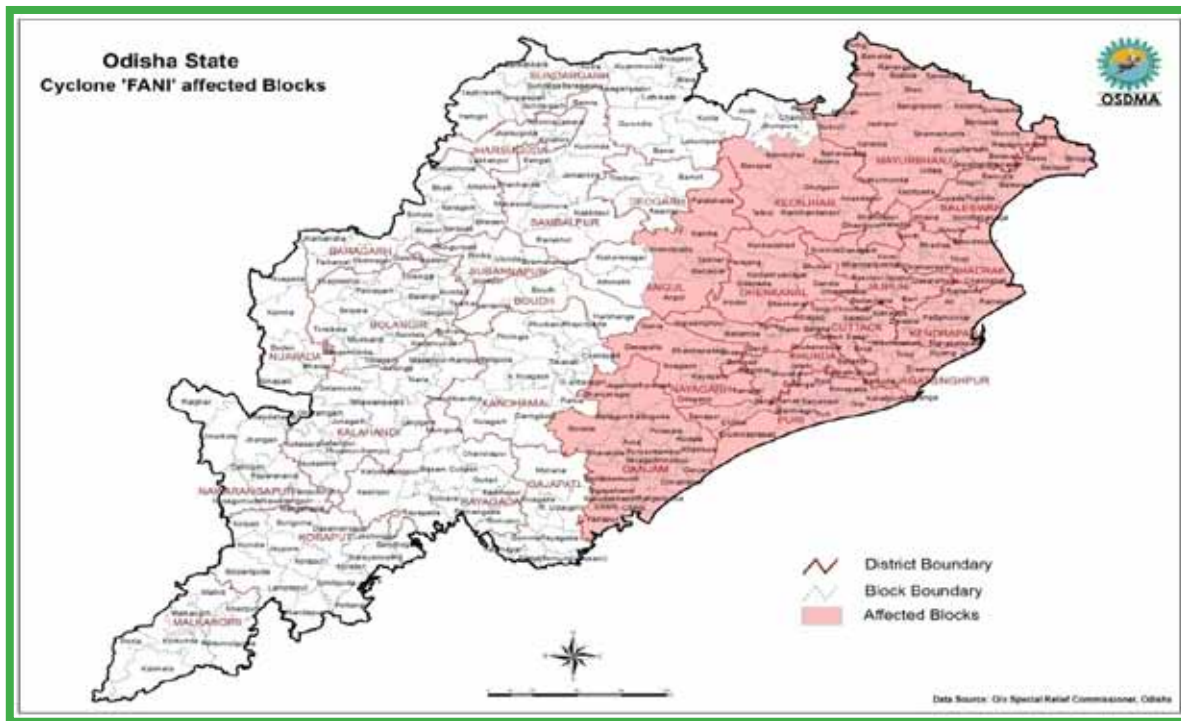
### Review of Preparedness

- ☛ Honourable Chief Minister reviewed the preparedness of the departments for impending cyclone on 02.05.2019 and preparedness in the likely affected districts on 01.05.2019.
- ☛ Inter departmental coordination meeting was held regularly from 1<sup>st</sup> May 2019 onwards.
- ☛ The Chief Secretary took review of preparedness of the departments and likely to be affected districts regularly from 29<sup>th</sup> April 2019 onwards.
- ☛ GO-NGO coordination meeting are being held regularly from 1<sup>st</sup> May 2019 to create massive public awareness and early warning dissemination, expediting evacuation, extend support in relief distribution and search and rescue activities.

## IMPACT & DAMAGES (PRELIMINARY)

The damages caused by the cyclone were mainly due to gusting action of wind of high velocity and torrential rainfall on 03.05.2019. Thousands of trees have been uprooted in the affected area. As per preliminary report received from Collectors, 165.56 lakh people in 159 Blocks and 52 Urban Local Bodies in 14 Districts have been affected. 64 persons have lost their lives due to cyclone. The standing crops including horticulture crops and orchards of 1.43 lakh hectares have been damaged. The fishing communities have been severely affected due to huge loss to their boats and nets. The artisans have lost their looms, equipment, accessories and raw materials. There is also substantial loss to livestock and sericulture farms. Massive damage has been caused to public properties like canal / river embankments, roads, bridges, culverts, drains, water works, tube wells, LI points, electrical installations, telecommunications infrastructure, Government buildings, etc.





## Extent of Damages

Abstract of extent of damages in different districts due to cyclone is indicated below:

Sl.	Name of the districts	Blocks Affected (Nos.)	Villages Affected (Nos.)	ULB Affected (Nos.)	Population Affected (Nos.) due to flood & cyclone	Human Casualty due to cyclone
1	Angul	5	67	0	5709	0
2	Balasore	12	2535	4	1133374	0
3	Bhadrak	7	910	4	1015742	0
4	Cuttack	14	2095	4	3096874	6
5	Dhenkanal	8	652	4	93699	0
6	Ganjam	22	2673	12	2000000	0
7	Jagatsinghpur	8	256	2	500000	0
8	Jaipur	10	1865	2	2192630	3
9	Kendrapara	9	1592	2	1522902	3
10	Keonjhar	9	163	1	7160	0
11	Khordha	10	1669	5	2502008	9
12	Mayurbhanj	26	1126	2	173095	4
13	Nayagarh	8	1013	5	344086	0
14	Puri	11	1772	4	1968228	39
TOTAL		159	18388	51	16555507	64

## House Damage

As per preliminary estimation, nearly 5.00 lakh dwelling units, mostly kutcha houses, have been fully damaged. Besides, substantial number of houses have suffered either severe or partial damage. The detailed assessment of house damage is under progress.



## Crop Damage

About 1.43 lakh hectare of agriculture crops and 2638 hectares of horticulture crops have sustained crop-loss of more than 33% due to cyclonic storms & heavy rain.

Sl. No.	Name of affected District	No of blocks affected	Total agricultural area affected (In ha)	Total area where crop loss > 33% (in Hect.)	Crop loss 33% & above		
					Rainfed (in ha.)	Irrigated (in ha.)	Perennial (in ha)
1	PURI	11	60339	51379	0	34228	17151
2	KHURDHA	10	12385	10743	1601	6394	2748
3	CUTTACK	14	15868	13469	7449	4245	1775
4	JAGATS-INGHPUR	8	31959	23020	20529	2472	19
5	JAJPUR	10	23961	23961	3949	19588	424
6	BALASORE	6	17775	7743	0	7743	0
7	BHADRAK	5	5907	4451	439	4012	0
8	MAYURBHANJ	3	62.4	62.4	0	62.4	0
9	GANJAM	1	15	15	0	15	0
10	KENDRAPADA	9	11060	6570.5	2931	3619.5	20.02
11	NAYAGARH	7	317	182	0	72	110
12	DHENKANAL	5	2063	1778	0	200	1578
TOTAL		89	181711.4	143373.9	36898	82650.9	23825.02

## Livestock Affected

As per preliminary assessment, 34.31 Lakh livestock and 53.52 lakh poultry birds have been affected due to cyclone. As many as 2587 large animals, 2628 small animals and 40.69 lakh poultry birds have perished. The district-wise figures of livestock and livestock affected/perished are given in following tables.

Sl. No.	District	Livestock affected			Poultry affected
		Large	Small	Total	
1	Balasore	46355	15913	62268	0
2	Bhadrak	2235	1570	3805	1203
3	Cuttack	326515	151397	477912	1178217
4	Ganjam	64715	56224	120939	52770
5	Jagatsinghpur	302800	130466	433266	426016
6	Jajpur	508600	197050	705650	196166
7	Kendrapada	365590	123587	489177	61023
8	Khordha	359440	111749	471189	650000
9	Nayagarh	66869	25287	92156	374611
10	Puri	398521	176054	574575	2408000
11	Dhenkanal	16	21	37	4400
12	Mayurbhanj	0	1	1	0
<b>Total</b>		<b>2441656</b>	<b>989319</b>	<b>3430975</b>	<b>5352406</b>

## Livestock Perished

Sl. No.	District	Livestock			Poultry
		Large	Small	Total	
1	Balasore	3	12	15	15
2	Bhadrak	16	12	28	1400
3	Cuttack	267	718	985	729315
4	Ganjam	37	23	60	4897
5	Jagatsinghpur	21	8	29	14463
6	Jajpur	16	9	25	15423
7	Kendrapada	50	17	67	14480
8	Khordha	365	440	805	857048
9	Nayagarh	8	5	13	20000
10	Puri	1788	1560	3348	2407700
11	Dhenkanal	16	21	37	4400
12	Mayurbhanj	0	1	1	0
<b>Total</b>		<b>2587</b>	<b>2826</b>	<b>5413</b>	<b>4069141</b>

## Damage to Nets and Boats of Fishermen

- 6753 boats and 7680 fishing nets have been damaged either lost or fully/ partially due to cyclone.

## Damage in Handlooms and Handcrafts Sector

- As many as 71,060 handicraft artisans have suffered loss in terms of damage to their equipment and raw materials/ goods under process and finished products in 14 affected districts. Damage to cause to the handloom artisans/ weavers is going on.

## Roads and bridges

- 210.35 km of National Highway with 3 Nos. of bridge/ culvert, 5596 km of PWD roads (SH, MDR & ODR) with 326 Nos. of bridge/ culvert and 6091.73 km of Village Roads of RD Department with 222 nos. of bridge/ culvert have been damaged due to the cyclone and heavy rain. Damage to Gram Panchayat and village roads of Panchayati Raj and Drinking Water Department is going on.

## Rural Water Supply / Urban Water Supply: (Repair/restoration of drinking water sources)

- 2048 nos. of Rural Pipe Water Supply System and a number of Tube wells in the rural areas have been damaged due to the cyclone & heavy rain. Similarly, damages have also been caused to the Urban Pipe Water System and Tube wells in Urban area. The detailed assessment is going on.

## Irrigation

- 785.28 km of river/ saline embankment, 1524.16 km of river/ canal roads, 3290 nos. of lift irrigation projects and other irrigation infrastructure have been damaged by the instant calamity.

## Community Assets owned by Panchayat

- 3039 Anganwadi Centre buildings, 7783 Primary School Buildings, 2721 nos. of Panchayat Ghar/ other Community Buildings have been badly damaged due to this cyclone & heavy rain. Assessment of damage to multipurpose cyclone shelters and community assets is going.

## Primary Health Centres

- 1031 nos. of health Institutions (PHCs, CHCs, etc.) have been damaged by cyclone & heavy rain.

## College and University Buildings

- Due to cyclone & flood 388 nos. of College/ University Buildings have been extensively damaged.

## Repair and restoration of power supply

No. of Primary Sub-station/ Power Transformer damaged	26 Nos.
33 KV line damaged	6078 Kms.
11KV line damaged	34814.44 Kms
Damage to Distribution Transformer	12042 Nos.
LT line damaged	72141.6 Kms.
Damage also occurred to 220KV/ 132 KV towers & lines, Poles, Insulators, switches & breakers, etc.	

## Tentative Loss to Public Properties due to Extremely Severe Cyclonic Storm "FANI"-2019

Sl.	Departments	Quantity	Loss (Rs. in lakh)
1	Water Resources Department		
	Loss to rivers & saline embankment	785.28 Kms	17423.72
	Clearance of drainage channels & other cannels	509.20 Kms.	673.96
	Damage to CDs/ Bridges & Breaches	232 Nos.	120.40
	Damage to other infrastructure of Drainage Sector	43 Nos.	144.00
	Loss Repair to Minor Irrigation Project		50.00
	Loss to Lift Irrigation Projects	3290 Nos.	5100.00
	Loss to damaged Buildings of Lift Irrigation sector	4 Nos.	47.50
	Loss to river & canal embankment roads	1524.16	6862.00
	Loss to damaged buildings of Major, Medium & Minor irrigation		6879.62
	Total		37301.20
2	Works Department		
	Damage to Roads of PWD	5596 Kms.	55960.00
	Damage to Culverts of PWD	326 Nos.	1630.00
	Damage to breaches of PWD	227 Nos.	113.50

	No. of road blocked due to uprooted trees, electric poles etc.	556 Nos.	1000.80
	Damage to NHs maintained by State	210.35 Kms.	1022.00
	Damage to Culverts of NHs division	3 Nos.	6.00
	Total		59732.30
3	Rural Development Department		
	Damage to Roads & breaches	6091.73 Kms	21222.18
	Damage to CD/ bridges	222 Nos.	1019.85
	Damage to buildings	3485 Nos.	21275.65
	Total		43517.68
4	Housing & Urban Development Department		
	Road damaged	750.44 Kms.	16275.93
	Drain damaged	291.124 Kms.	2964.04
	Culverts damaged	267 Nos.	906.4
	Damage to water supply system in Urban areas	337 Projects	12413.09
	Damage to infrastructure of H&UD dept.	110051 Nos.	19875.41
	Total		52434.87
5	Panchayati Raj & DW Department		
	Repair of GP/ PS Roads		
	Repair of Drinking water supply system	2048 Nos.	4154.09
	Loss to Gp/ PS Building & Community hall	2635 Nos.	5144.80
	Repair of School Buildings	7783 Nos.	49187.44
	Repair of RWSS Buildings	86 Nos.	217.00
	Total		58703.33
6	Agriculture Department		
	Damage to infrastructures	210 Nos.	10230.53
	Total		10230.53
7	Energy Department		
	Damage to 220KV/ 132 KV tower & lines		9100.00
	No. of Primary Sub-station/ Power Transformer damaged	26 Nos.	1780.00
	33 KV line damaged	6078 Kms.	2450.00
	11KV line damaged	34814.44 Kms	17360.00
	Damage to Distribution Transformer	12042 Nos.	11680.00
	LT line damaged	72141.6 Kms.	38330.00
	Damage to Poles, Insulators, switches & breakers etc.		35280.00
	Total		115980.00
8	Fisheries & Animal Resources Department		
	Loss of cattle feed	1898.00 MT	607.36

	Loss of Medicines		1029.00
	Loss of net and boats	14433	695.06
	Animal/ livestock Loss (Replacement of animal)	LA-2571, SA-2804 Poultry-4064741	845.23
	Disposal of Carcasses	LA-2571, SA-2804 Poultry-4064741	427.74
	Damage to Veterinary Institutions like VD, LAC etc.		894.50
	Repair of damaged fish pond	65.92 Ha.	8.04
	Repair of fish seed farm	0.5 Ha.	0.04
	Loss to Govt. Fish farms & fish fed ice plant		1037.00
	Total		5543.97
9	ST & SC Dev., Minorities & Backward Classes Department		
	Repair of School/ Hostel Buildings, Staff Quarters, boundary wall and over head water tanks		592.24
	Total		592.24
10	Women & Child Dev. Dept.		
	Repair of Anganwadi Centres& other buildings	3039 Nos.	7248.50
	Total		7248.50
11	Textile & Handloom Dept.		
	Loss to Rural Artisans (Handicraft Sector) & infrastructure		6530.86
	Loss to Handloom Sector (Weavers) including infrastructure		544.50
	Loss to Sericulture Sector including infrastructure		356.00
	Total		7431.36
12	Cooperation Department		
	Damage to Buildings & other infrastructure of Primary societies		1458.57
	Damage to Buildings & other infrastructure of Central & apex Cooperative Institutions		282.87
	Total		1741.44
13	Higher Education (Govt./ Aided Colleges & University Buildings)	388 Nos.	29600.00
14	Health & FW (MC&H/DHH/SDH/CHCs/PHCs/ SCs)	1031 Nos.	1276.25
15	SSEPD (Dwelling House, Hospital, Spl. School & Hostel Building, Leprosy Home, Old Age Home and Training Centres)		1825.00
16	Labour& ESI (Office/ Hospital/ Staff Quarters)		78.00
17	Forest & Env. Dept.		
	Damage to Infrastructure		7830.00

	Damage to uprooting trees inside forest area	9 lakhs.	27000.00
	Damage to trees outside forest area	5 lakhs	15000.00
	Damage to Plantation, avenue plantation, urban plantation	7.90 lakhs	3950.00
	Total		53780.00
18	Tourism (Buildings & other properties)		1917.00
19	School & ME		
	Secondary School Buildings (547 Nos.)	547 Nos.	1094.00
	Total		1094.00
20	Skill Development & Technical Education Dept.		
	Govt. ITI	22 Nos.	1221.00
	Govt. Polytechnic/ eng. Schools	18 Nos.	1371.00
	Govt. Eng. & Management Colleges	04 Nos.	345.00
	Directorate of Employment	01 No.	50.00
	Directorate of Employment Exchange	01 No.	10.00
	Skill Development Centre	05 Nos.	60.00
	Total		3057.00
21	Damage to properties of E & IT Dept.		
	Damage to SHQ, DHQ & BHQ infrastructure & building		1374.39
	Total		1374.39
22	Industries Department		
	IDCOL		35.37
	IDCO		15233.70
	Total		15269.07
23	Odia Language Literature and Culture Dept.		7274.00
24	Damage to properties of Shree Jagannath Temple, Puri		510.00
	Grand Total		517512.13
25	Relief and Response		
	HB Assistance		500000.00
	Clothing & Utensils		19000.00
	Ex-gratia for loss of lives		256.00
	Emergent Relief (Gratuitous Relief)		100000.00
	Search & Rescue		10000.00
	Provision of input subsidy to farmers		20000.00
	Provision of Temporary accommodation, food, clothing & medical care		10000.00
	Emergency Supply of Drinking Water		15000.00
	Clearing of Debris		2500.00
	Total		676756.00
	Grand Total		1194268.13

## State Disaster Response Fund

**Status of Expenditure from State Disaster Response Fund (SDRF) Account for Odisha for the year 2019-20 (as on 11.05.2019)**

		(Rs. in crore)
Sl.	Item	Amount
	(I) Receipts	
1	Opening balance in SDRF account as on 1.4.2019 (Provisional figures)	318.040
	SDRF Releases made during instant financial year ( Central and State share)	
	(i) First instalment	
	(ii) Central share	340.875
	(iii) State share	37.875
2	(a) Second instalment	
	(iv) Central share	211.125
	(v) State share	23.459
	(b) Total	613.334
3	NDRF releases during the instant financial year, if any	788.875
4	Interest received on investments made as per the CRF scheme	0.000
5	Total funds available in the SDRF account(1+2+3+4)	1720.249
	(II) Expenditure	
	Expenditure incurred as per norms on approved natural calamities as per the scheme of SDRF/NDRF(indicate calamity-wise expenditure)	
	(a) Cyclone (Instant Calamity)	212.031
	(b) Flood	0.000
6	(c) Fire	5.050
	(d) Hailstorm	0.120
	(e) Landslides	0.000
	(f) State Specific disasters	5.210
	(g) Total	222.411
7	Funds reserved on training to specialized Teams of the State personnel (5% of the corpus)	45.450
8	Funds reserved on procurement of search and rescue equipment etc.(as per extant approved items)(10% of the corpus)	90.900
9	Funds reserved for State Specific Disasters (as per extant approved items) (10% of the corpus)	85.690
10	Total expenditure incurred/reserved (6+7+8+9)	444.451
11	Balance available in the SDRF account of the instant calamity	1275.798



**Damage to livestock**



**Damage to Common Property**



**Damage to Energy Sector**



**Damage to Fishery & ARD sector**



**Damage to Dwelling House**



**Damage to School Buildings**



**Damage to the structure of Street vendors**



**Damage to Road network**



**Piped Water supply affected**



**Crop & orchards affected**



**Damage to Public building (Health)**



**Damage to Telecom Sector**

## Media Reports

**BBC NEWS**

# India Cyclone Fani evacuation efforts hailed a success

🕒 04 May 2019 | Asia



EPA

Efforts to reduce loss of human life have been called a success

Mami Mizutori Retweeted



**UNDRR** @unisdr · 24h

India's 'zero casualty' policy, pinpoint warnings minimised #CycloneFani deaths  
#ResilienceForAll [ecoti.in/71ku9Z](https://ecoti.in/71ku9Z) via @economictimes



**India's 'zero casualty' policy, pinpoint warnings minimised Fani deaths**

"IMD seem to have done a very good job in terms of minimising the possibility for loss of life," Denis McClean, a spokesperson for the ODRR  
[economictimes.indiatimes.com](https://economictimes.indiatimes.com)

21 345 749

The New York Times

*How Do You Save a Million  
People From a Cyclone?  
Ask a Poor State in India*







# ବିପର୍ଯ୍ୟୟ ପାଇଁ ସରକାରଙ୍କ ତ୍ୱରିତ ପୂର୍ବ ପ୍ରସ୍ତୁତି ବୈଠକ



ନୂଆଦିଲ୍ଲୀରେ ବାମ୍ୟା ଯୋଗିର ମୁକାବିଲା ସଂସ୍ଥାରେ ସମାଧାନ କରୁଥିବା ପ୍ରଧାନମନ୍ତ୍ରୀ ନରେନ୍ଦ୍ର ମୋଦି

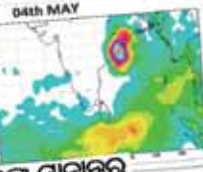
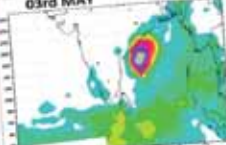


- ଆଜି ଦଶାବେଳୁ ଶୁଣିବାକୁ ମିଳୁଥିବା ପ୍ରକାରର ଗପ
- ପରଦା ଦେଖ ୦୦ଟିର, ଘର ବାହାରକୁ ଆସ
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**ପଦକ୍ଷେପ**

જાણીએ છીએ કે આજે સર્વિસ સેક્ટરમાં સ્ત્રીઓની  
 સ્થિતિ સુધારવામાં આવેલી છે. સ્ત્રીઓને  
 મજાદુર તરીકે જોવાને બદલે સર્વિસ સેક્ટરમાં  
 સ્ત્રીઓને સ્વયં-સંચાલિત કરવાનો પ્રયત્ન કરવામાં  
 આવેલો છે. આવા પ્રયત્નને આગળ વધારવા  
 માટે સરકારે અને સરકારી સંસ્થાઓએ  
 સ્ત્રીઓને સ્વયં-સંચાલિત કરવામાં મદદ  
 કરવાનો પ્રયત્ન કરવાનો છે. આવા પ્રયત્નને  
 આગળ વધારવા માટે સરકારે અને સરકારી  
 સંસ્થાઓએ સ્ત્રીઓને સ્વયં-સંચાલિત  
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**THE**



your group, discuss the results – do  
you feel the research will benefit  
children and young adults aged  
16-25?

ଏହିପ୍ରକାର କେହି ଖର୍ଚ୍ଚିପ୍ରତି କେହିକି ପ୍ରକାଶ  
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medical chief, public health



**ထွက် ဖုန်းနံပါတ်များ**၊ အမှတ်အသားများ၊ မိမိတို့၏ အကျိုးခံစားခွင့်များကို ထိန်းသိမ်းရန်

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**संस्कृत-विभाग**

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- **सुखानुसुखः** - सुखानुसुखः सुखस्य अनुसुखः।
- **सुखानुसुखः** - सुखानुसुखः सुखस्य अनुसुखः।

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ଆଚଙ୍କିତ ହୁଅନ୍ତି: ମୁଖ୍ୟମନ୍ତ୍ରୀ

■ ଭୁବନେଶ୍ୱର, ୨୪ (ନି.ସ୍ଥ): ସରକାରୀ କାର୍ଯ୍ୟ ପରିଚ୍ଛେଦରେ ଆରମ୍ଭିତ ନିର୍ଦ୍ଦେଶକୁ ପୁରୁଷାରା ନିବାରଣ ପଦକ୍ଷେପ ଗ୍ରହଣ କରିବାକୁ ଉପଦେଶ ଦିଆଯାଇଛି।

ବାଦ୍ୟର ମୁକାବିଲା  
 ପାଇଁ ପ୍ରସ୍ତୁତ ଅଛନ୍ତି ।  
 ପ୍ରତିଟି ଜୀବନ ଆମ  
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ତଦୈଷା ଓ ବାଟ୍ୟ ପ୍ରକାଶିତ ଅଞ୍ଚଳର  
କେବଳାଞ୍ଚଳ ଉପ ତଥା ବୃତ୍ତାନ୍ତର ସ୍ଥାନ  
ଯଥା ବାଟ୍ୟ ଆକ୍ରମଣରୁ, ଶୁଦ୍ଧ ଉପ ଓ  
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କାର୍ଯ୍ୟ କରିବାକୁ ନିର୍ଦ୍ଦେଶ ଦିଆଯାଇଛି।  
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କାର୍ଯ୍ୟ କରିବାକୁ ନିର୍ଦ୍ଦେଶ ଦିଆଯାଇଛି।  
ନିର୍ବାଚନ ପ୍ରକଳ୍ପରେ  
କାର୍ଯ୍ୟ କରିବାକୁ ନିର୍ଦ୍ଦେଶ ଦିଆଯାଇଛି।

**‘ଫନି’ ମୁକାବିଲା ପାଇଁ  
ଓଡ଼ିଶାକୁ ଜାତିସଂଘର ପ୍ରଶଂସା**

[illegible][illegible]

ବିଜ୍ଞାନ ଚଳାଚଳ  
ଆରମ୍ଭ

1. The first step is to identify the problem. This involves understanding the symptoms and the context in which they are occurring.

**ପ୍ରମୁଖ ଆକର୍ଷଣ:** ସରକାର ପ୍ରସ୍ତୁତ, ପ୍ରଶାସନ ସଜାଗ

[illegible]

විවිධ ප්‍රවේශන මගින් ප්‍රතිපත්ති සකස් කිරීමේදී ප්‍රධාන අරමුණ වන්නේ සමස්ත ජාතික ආර්ථිකයේ ස්ථාවර වර්ධනය සහතික කිරීමයි. එමෙන්ම සමස්ත ජාතික ආර්ථිකයේ ස්ථාවර වර්ධනය සහතික කිරීම සඳහා අවශ්‍ය වන ප්‍රතිපත්ති සකස් කිරීමේදී ප්‍රධාන අරමුණ වන්නේ සමස්ත ජාතික ආර්ථිකයේ ස්ථාවර වර්ධනය සහතික කිරීමයි.

[illegible]

1. **প্রশ্ন:** একটি বৃত্তের ব্যাসের দৈর্ঘ্য 10 cm হলে, এর ক্ষেত্রফল কত?

2. **প্রশ্ন:** একটি ত্রিভুজের দুটি বাহুর দৈর্ঘ্য 5 cm ও 7 cm হলে, তৃতীয় বাহুর দৈর্ঘ্যের সম্ভাব্য মান কত?

3. **প্রশ্ন:** একটি বৃত্তের পরিধি 31.4 cm হলে, এর ব্যাসের দৈর্ঘ্য কত?

4. **প্রশ্ন:** একটি বৃত্তের ক্ষেত্রফল 78.5 cm<sup>2</sup> হলে, এর ব্যাসের দৈর্ঘ্য কত?

5. **প্রশ্ন:** একটি বৃত্তের ব্যাসের দৈর্ঘ্য 10 cm হলে, এর ক্ষেত্রফল কত?

[illegible][illegible]

# ଓଡ଼ିଶା ରେଡ଼କ୍ରସର ପ୍ରସ୍ତୁତି



ଆଜ୍ଞା ପାଇଁ ପ୍ରାବଲ୍ଲିତ ପାଇଁ ପିଣ୍ଡା ଘରପୁର ପାଞ୍ଚ ଗଣା ବରପୁରବରପୁର ପାଞ୍ଚ ଗଣା	କରାବିଦ୍ୟାପୁର କରାବିଦ୍ୟାପୁର ପ୍ରାୟ ୫୦୦ ବରପୁର ବରପୁର ପିଣ୍ଡା	ପାଞ୍ଚଗଣ ବରପୁର ପାଞ୍ଚଗଣ ପ୍ରାୟପୁର ପିଣ୍ଡା ପ୍ରାୟ ୫୦୦ ପିଣ୍ଡା ପିଣ୍ଡା
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Cyclone Fani ramping up as extremely severe cyclonic storm may hit Odisha coast on Friday

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All use subject to <http://about.jstor.org/terms>

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ପୁରୀ ଜିଲ୍ଲାରେ ଥିବା ଆଶ୍ରୟସ୍ଥଳୀରେ ବାତ୍ୟା “ଫନି” ଆସିବା ପୂର୍ବରୁ ଆଶ୍ରୟ ନେଇଛନ୍ତି ଜନସାଧାରଣ ଓ ସରକାରଙ୍କ ତରଫରୁ ସମସ୍ତ ବ୍ୟବସ୍ଥା କରାଯାଇଛି



astarang black  
keutajanga shelter



ଜଗତସିଂହପୁର ଜିଲ୍ଲାରେ ଥିବା ଆଶ୍ରୟସ୍ଥଳୀରେ ବାତ୍ୟା "ଫନି" ଆସିବା ପୂର୍ବରୁ ଆଶ୍ରୟ ନେଇଛନ୍ତି ଜନସାଧାରଣ ଓ ସରକାରଙ୍କ ତରଫରୁ ସମସ୍ତ ବ୍ୟବସ୍ଥା କରାଯାଇଛି



କେନ୍ଦ୍ରାପଡ଼ା ଜିଲ୍ଲାରେ ଥିବା ଆଶ୍ରୟସ୍ଥଳୀରେ ବାତ୍ୟା "ଫନି" ଆସିବା ପୂର୍ବରୁ ଆଶ୍ରୟ ନେଇଛନ୍ତି ଜନସାଧାରଣ ଓ ସରକାରଙ୍କ ତରଫରୁ ସମସ୍ତ ବ୍ୟବସ୍ଥା କରାଯାଇଛି



# PEOPLE ADVISED TO STAY INDOORS

May 2 (Hindustan Times) - People are advised to stay indoors as cyclone Fani approaches the coast of Odisha. The state government has issued a warning to people to stay indoors and avoid going to the beach. The cyclone is expected to hit the coast of Odisha in the next 24 hours.

# PURI TO SHUT DOWN AS FANI NEARS

May 2 (Hindustan Times) - Puri is set to be shut down as cyclone Fani nears the coast. The state government has issued a warning to people to stay indoors and avoid going to the beach. The cyclone is expected to hit the coast of Odisha in the next 24 hours.

# PANIC IN KENDRAPARA AS 'FANI' CLOSES IN

May 2 (Hindustan Times) - Panic is spreading in Kendrapara as cyclone Fani closes in. The state government has issued a warning to people to stay indoors and avoid going to the beach. The cyclone is expected to hit the coast of Odisha in the next 24 hours.



# What Media Says on

# PURI TO SHUT DOWN AS FANI NEARS

REUTERS/REUTERS/UP

Puri, May 2: The Holy city of Puri is set for a shutdown as cyclone Fani is fast approaching the coast. A large group of people congregating tourists from outside the state and pilgrims were in panic on the day due to lack of information on the emergency made by the district when many people are aware of the shift.



# Sabko sahi Odisha dikhaya!



# Five special buses carry WB tourists leave for Kolkata

FOOT NEWS NETWORK

Puri: With Cyclone Fani inching towards the state's coast, OSHTC deployed five buses to aid the evacuation efforts Thursday. These vehicles have been deployed to carry tourists from West Bengal.

Government of Odisha has arranged for five special buses to carry tourists from West Bengal to Kolkata. The buses are expected to leave Puri on May 2 evening.

**hindustan times**



THE TIMES OF INDIA  
THE ECONOMIC TIMES



THE HINDU

DECCAN  
Chronicle

The Statesman

The Telegraph

THE NEW  
INDIAN  
EXPRESS

OrissaPOST

the pioneer



# PM declares ₹1,000cr aid for Fani-hit state



Modi being greeted by Governor Ganesh Lal and Chief Minister Naveen Patnaik at airport

**CONDITION REVIEWS**

- CM sends ₹1,000-crore, special category help
- Official toll up to 36; final report yet
- Emergency services officers get praise

**PM COMPLIMENTS NAVEEN**

**Bhubaneswar:** Prime Minister Narendra Modi, on his way to the United States, took time to praise the Odisha government for its effective handling of cyclone Fani. He also announced ₹1,000 crore in special category assistance for the state.

The PM arrived here at 8.45 am Monday and then went on an aerial survey of the affected areas in Puri and Khurda districts. He also held a high-level review meeting in presence of Chief Minister Naveen Patnaik at the airport here. Modi was accompanied by Governor Ganesh Lal, Chief Minister Naveen Patnaik, and Union Minister Piyush Garg.

Speaking to the media, Modi commended the Odisha government for its effective handling of cyclone Fani. He also announced ₹1,000 crore in special category assistance for the state.

**Word of praise for Naveen**

PM on his way to the US, took time to praise the Odisha government for its effective handling of cyclone Fani. He also announced ₹1,000 crore in special category assistance for the state.

# Centre releases ₹1,000 crore; official toll 37



PM in a meeting

**Life limping back to normal in cities**

**Chief Secy reviews cyclone relief work**

**CONTRAST EFFORTS TO REACH TO OTHER COMMUNITIES:** The government has announced ₹1,000 crore in special category assistance for the state. The official toll is 37.

**Word of praise for Naveen**

PM on his way to the US, took time to praise the Odisha government for its effective handling of cyclone Fani. He also announced ₹1,000 crore in special category assistance for the state.

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**Word of praise for Naveen**

PM on his way to the US, took time to praise the Odisha government for its effective handling of cyclone Fani. He also announced ₹1,000 crore in special category assistance for the state.

# FANI-HIT GRAPPLE WITH WATER, POWER WOES

**Water supply in Puri**

**Power supply in Puri**

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# TOURISM SECTOR IN PURI BEARS THE BRUNT

**Sakhigopal grapples with water woes**

**Water supply in Puri**

**Power supply in Puri**

**Sakhigopal grapples with water woes**

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Children playing on the beach

**Unsung heroes place before family to rebuild**

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## HAM operators to help Odisha communicate

Odisha State Disaster Response Force (OSDRF) has requested the help of amateur radio operators to assist in communication during the cyclone Fani. The request was made to the Odisha State Amateur Radio Society (OSARS) and the Odisha State Emergency Response Team (OSERT).



Ham operators are being trained to help in communication during the cyclone Fani.

## NUMBED TO SILENCE, ODISHA FACES GIGANTIC TASK

ODisha's communication system is almost non-existent, CM Nara Chandrababu Naidu said on Monday to take stock.

## Fani takes a toll on State's green cover



A large tree uprooted by the cyclone Fani.

The cyclone Fani has caused significant damage to the green cover of Odisha. The state government has ordered a survey to assess the damage and take necessary steps to restore the green cover.



People standing in front of a damaged building.

## Global pat on Govt for record evacuation

The world has applauded the Odisha government for its record evacuation of people during the cyclone Fani. The government has received praise from various international organizations for its efficient and timely response.

## CM ANNOUNCES RELIEF PACKAGE

Over 1.07 crore people of 11 districts affected by the worst ever tropical storm that hit Odisha.



A group of people sitting on the ground, looking distressed.

The Chief Minister of Odisha, Nara Chandrababu Naidu, has announced a relief package for the people affected by the cyclone Fani. The package includes financial aid, food, and medical supplies.

## STATE SEEKS HELP FROM ANDHRA, BENGAL

Energy dept requests Central PSUs for deployment of additional manpower for speedy restoration of power supply.



A group of people standing in front of a damaged power line.

The Odisha government has requested the Central Public Sector Enterprises (CPSEs) for deployment of additional manpower to help in the restoration of power supply.

## Toll 34, Puri tops with 21



A group of people standing in front of a damaged building.

## INSIDE



A group of people standing in front of a damaged building.

## CESTO told to restore power by Friday



A group of people standing in front of a damaged power line.

## WITH 200-KMPH HISS, FANI RIPS THROUGH ODISHA

The cyclone Fani has ripped through Odisha with a hissing sound of 200 kmph. The state government has ordered a survey to assess the damage and take necessary steps to restore the green cover.

## CM ANNOUNCES RELIEF PACKAGE

Over 1.07 crore people of 11 districts affected by the worst ever tropical storm that hit Odisha.



A group of people sitting on the ground, looking distressed.

## GOVT PACKAGE FOR FANI-HIT FARMERS

The government has announced a relief package for the farmers affected by the cyclone Fani. The package includes financial aid, food, and medical supplies.



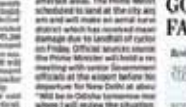
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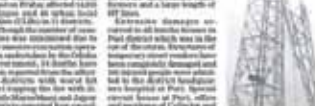
## Relief supply: NHRC notice to Chief Secy

The National Human Rights Commission (NHRC) has issued a notice to the Chief Secretary of Odisha regarding the relief supply to the people affected by the cyclone Fani.



A group of people standing in front of a damaged building.

## Toll 34, Puri tops with 21



A group of people standing in front of a damaged building.

## INSIDE



A group of people standing in front of a damaged building.

## Cyclone Fani ramping up as extremely severe cyclonic storm may hit Odisha coast on Friday

The cyclone Fani is ramping up as an extremely severe cyclonic storm and may hit the Odisha coast on Friday. The state government has ordered a survey to assess the damage and take necessary steps to restore the green cover.



A group of people standing in front of a damaged building.

## HAM operators to help Odisha communicate



Ham operators are expected to help Odisha communicate with the world after the cyclone.

## NUMBED TO SILENCE, ODISHA FACES GIGANTIC TASK

170 lakh members of Odisha's population are expected to be affected by the cyclone, CM Nara Chandrababu Naidu said on Monday to take stock of the situation.

### Fani takes a toll on State's green cover



The cyclone has caused significant damage to the state's green cover, with many trees uprooted.

### Global pat on Govt for record evacuation



The government's record evacuation of people from the coastal areas has earned global praise.

## CM ANNOUNCES RELIEF PACKAGE

Over 1.07 crore people of 11 districts affected by the worst ever tropical storm that hit Odisha



The relief package includes financial aid and other support for the affected population.

## STATE SEEKS HELP FROM ANDHRA, BENGAL

Energy dept requests Central PSUs for deployment of additional manpower for speedy restoration of power supply



The state government is seeking assistance from neighboring states for power restoration.

### Toll 34, Puri tops with 21



The toll has risen to 34, with Puri district reporting the highest number of deaths.

### Govt package for Fani-hit farmers



The government has announced a relief package for farmers affected by the cyclone.

### PM visit today



Prime Minister Narendra Modi is expected to visit the affected areas today.

### Govt seeks Centre help as men and machines fall short



The state government is requesting central assistance for relief work.

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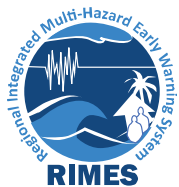
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Regional Integrated Multi-Hazard Early Warning System

Program Unit/ Early Warning Facility

2<sup>nd</sup> Fl. Outreach Bldg., Asian Institute of Technology Campus, P.O. Box 4 Klong Luang, Pathumthani 12120, Thailand

(t) +66 2516 5900 to 01 (f) +66 2516 5902 (e) rimes@rimes.int (w) <http://www.rimes.int>

PU/RIMES/2019/024

9 May 2019

Sri Bishnupada Sethi  
Managing Director  
Odisha State Disaster Management Authority  
Rajiv bhawan, Unit 5, Bhubaneswar  
Odisha, India 751001  
Email: [md@osdma.org](mailto:md@osdma.org)

Subject: Appreciation of OSDMA's excellent performance in managing Cyclone Fani

Dear Sri Bishnupada Sethi,

Kind greetings from RIMES!

Please accept our warmest congratulations to Odisha State Disaster Management Authority (OSDMA), on excellent management of hazard risks from potentially destructive Cyclone Fani.

Cyclone Fani's strength was similar to the intensities of very severe cyclones across the globe. We note, with heartfelt appreciation, the proactive use by OSDMA of IMD forecasts, particularly in the evaluation of potential secondary hazards, analysis of likely impacts, and assessment of risks, the findings from which informed OSDMA's preparedness planning days before cyclone impact, pre-positioning of human and material resources for rescue and relief, vigorous warnings to populations at risk, and the gargantuan task of evacuating about 1.2 million people.

Our profound appreciation goes to the strong leadership of OSDMA and its dedicated staff and selfless volunteers in the very successful management of Cyclone Fani. Documentation of successes and lessons from this extreme weather event would be a noteworthy undertaking, for dissemination/ sharing to countries in the region and beyond. Indeed, OSDMA has set an exemplary model on hazard impact forecast-informed preparedness.

We look forward to deepen and broaden our collaboration with OSDMA to replicate lessons learned from your experience with all RIMES Countries.

Yours sincerely,

A.R. Subbiah  
Director



UNITED NATIONS RESIDENT COORDINATOR INDIA

7 May, 2019

Honourable Chief Secretary,

Please allow me to take this opportunity to present our compliments to the Government of Odisha, and our expression of solidarity, on behalf of the United Nations in India, with the people of Odisha in the context of the devastating Cyclone Fani.

We extend our condolences for the loss of 38 lives and express our deep concern for the impact the cyclone has had on 10 million people. We would also like to take this opportunity to commend the efforts of the Government of Odisha in evacuating 1.2 million people and reaching out to affected populations to address their immediate lifesaving needs. Your preparedness and pace of response have been critical in saving lives.

The United Nations in India stands ready to offer assistance and support to the Government of Odisha in post disaster response, needs assessment and recovery planning. The UN team in Odisha is closely coordinating with the State Emergency Operation Centre and Odisha State Disaster Management Authority to extend support across the sectors.

The UN focal point in the state of Odisha is Ms. Monika Nielsen, the Chief of Odisha Field Office, UNICEF. Please find her contact details below:

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Please accept assurances of our highest consideration.

Yours sincerely,



Yasmin Ali Haque  
UN Resident Coordinator a.i.

Mr. Aditya Prasad Padhi, IAS  
Chief Secretary,  
General Administration Department  
Odisha Secretariat  
Bhubaneswar - 751001  
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Cc: Mr. Sanjeev Kumar Jindal, Joint secretary MHA, DM Division, 3<sup>rd</sup> Floor NDCC (II) building, Jaisingh Road, New Delhi

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