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Research paper

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FANI Cyclone & Community Shekher Chaturvedi¹, Prof. Rashmi Nigam²

¹ Assistant Professor, National Institute of Disaster Management, Delhi, India. ² Professor, Assistant Professor, Department of Applied Mathematics, UIT, RGPV, Bhopal, India.

ABSTRACT:

Fani was a severe cyclone which formed in Summer and went on to give Odisha a new experience after 1976. It had certain peculiar aspects attached to it such as no storm surge was generated, it stopped for a while and again started and travelled in a zigzag path. However, Odisha and the Central Government were being updated with real time information for every movement of the cyclone by India Meteorological Department (IMD). This also reaffirmed the mitigation and response measures taken by Odisha Government and also level of awareness which the community had gathered over a period of time. It was a well coordinated effort from all stakeholders including community which led to reduction in loss of lives. Massive evacuation process was carried out with the help of community, who also led the management of relief camps during the disaster period.

Keywords: Fani, Severe Cyclone, Community, Evacuation, Relief Camp.

INTRODUCTION:

Odisha at a Glance

Odisha, located on the east coast of India, is the 9th largest state in India. It has varying climate types and cultures across diverse communities. Odisha, with an area of 1, 55,707 square km., has a total population 4, 19, 47,358 out of which about 2, 12, 01,678 are men and 2, 07, 45,680 are women according to the 2011 census. Odisha is divided into 30 districts. All the rivers of Odisha are primarily peninsular rivers and non-perennial in character. There are six coastal districts Puri, Bhadrak, Ganjam, Jagatsinghpur, Kendrapara and Bhaleswar. The East Coast of India is one of the six most cyclone-prone areas in the world. Cyclones mostly strike during September to November, however, there has been history of summer cyclones as well striking between April and May. There has been dramatical increase in cyclonic storms which are hitting Odisha due to climatic reasons.

Impact of Fani cyclone

Odisha was stuck by cyclone Titli during 2018. It was still to recover from the impact of cyclone Titli, that Cyclone Fani struck Odisha in May 2019. It was an unusual strike as it made a landfall during summer season. The major impacted district was city of Lord Jagannath, Puri. As reported by IMD, the maximum sustained surface wind speed of 170-180 kmph gusting to 205 kmph was observed during landfall of Fani.



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The damages caused by the cyclone were mainly due to gusting action of wind of high velocity and torrential rainfall. Thousands of trees were uprooted in the affected area. As per report received from Odisha government, 165.56 lakh people in 159 Blocks and 52 Urban Local Bodies in 14 Districts were affected. 64 persons lost their lives due to cyclone. The standing crops including horticulture crops and orchards of 1.43 lakh hectares were damaged. The fishing communities were one of the worst affected community due to huge loss to their boats and nets.

The artisans had lost their looms, equipment, accessories and raw materials. There was also substantial loss to livestock and sericulture farms. Massive damage had 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.

Odisha State Government's initiatives

Odisha Government had made developments to make itself resilient to cyclones. The steps taken were creation of Disaster Management Authority (OSDMA) dedicatedly working for mitigation and strengthening of response to disasters. It created its own disaster response force known as Odisha Disaster Rapid Action Force (ODRAF). Construction of Multipurpose Cyclone shelters under the National Cyclone Risk Mitigation Project (NCRMP) for providing shelter from multi disasters to the community led to identified places for evacuating effected persons. The state government also developed mobile based information dissemination system for effective and timely dissemination of information.

After the lessons learnt in the super cyclone of 1999, Odisha has never looked back and proved its capacity and strength in successful management of ESCS Phailin in the year 2014 with the vision of Mission Zero casualty followed by Hudhud in the year 2014 and ESCS (Extremely Serve Cyclone Storm) Titli of 2018. Though Odisha has suffered a lot with regards to property loss, it has shown its state of art preparedness in securing lives. The following is a broad detail of the major cyclones that hit Odisha after Super cyclone 1999.

Sl. No.	Items	Phailin Cyclone October 2013	Hudhud Cyclone October 2014	Titli Cyclone October 2018	Fani Cyclone May 2019
1.	No. of affected Districts	19	15	17	14
2.	No. of affected Blocks	159	136	163	159
3.	Affected population (in Lakhs)	134.5	33.43	60.11	165.56
4.	Damaged crop (in lakh Ha.)	6.51	2.47	2.73	1.43
5.	No. of human deaths	21	3	57	64

(Source: Cyclone Fani: Lessons Learnt published by NIDM and OSDMA)



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The above table provides an idea about the effectiveness of community awareness, early warning dissemination and coordination between all stakeholders including community. We see that the percentage of deaths with respect to per lakh of affected population was 15.61% in Phailin, 8.97% in Hudhud, 94.83% in Titli and 38.66% in Fani. Percentage of deaths in Titli cyclone denote the fact that the early warning dissemination could not take place effectively and to all concerned. Further in Fani Cyclone, it was after a long gap that cyclone had struck in summer. Despite this fact, percentage of deaths with respect to population affected was low in comparison to Titli. Increase in deaths in Fani cyclone could be attributed to the fact that less time of preparation was left with Government and community between Titli and Fani cyclones.

RESPONSE BY COMMUNITY:

Evacuation

The evacuation process started as soon as an early warning was issued about the possible landfall area of the cyclone. A total number of 15,57,170 people were evacuated from vulnerable areas of the State to cyclone shelters, schools and other safe places.

Community also acted upon the advice given by authorities as they were aware about the possible fallouts of cyclone. This coordination has been enabled through regular mock drills being conducted at vulnerable areas.

Assistance to Uniformed forces

Odisha Government also activated the response through the uniformed forces such as NDRF, ODRAF, Fire & Emergency Services, Police and Civil Defence. All the response forces were pre positioned at vulnerable points to facilitate the evacuation and also response during the cyclone impact. These forces worked in close coordination with other stakeholders and also the OSDMA and disaster management department and effected an applaudable response. The activities such as search & rescue, shifting of injured to hospitals, survivors to relief camps and keeping a close watch on behaviour of survivors and impact areas of cyclone were carried out by the forces in coordination with the community.

COMMUNITY PREPAREDNESS:

Odisha had been witness to many cyclones which had disrupted normal life many times and also impacted the election results. 1999 Super cyclone triggered the community response and proactiveness both. Creation of NGO committee i.e. Inter Action Group (IAG) was one of the major outcomes of the 1999 cyclone. Loss of many lives and issues in the aftermath of cyclone such as dead body disposal, carcass disposal, post disaster health issues, issues related to orphans and single mothers and management of relief camps. With the help of government, community came up in a big way. Few have been discussed below



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Awareness

Community, seeing the impact of super cyclone, assisted the government initiatives of awareness campaigns. Various awareness drives were carried out in the form of pamphlets, posters, lectures which were well accepted by the community who also participated whole heartedly in every endeavour.

Mock drill

Preparedness drills were carried out jointly by response agencies and government and community. Simulated scenarios were created for monitoring the response. Live situations such as evacuation in rainy seasons were also carried out which gave rich experience to the community.

Management of Cyclone Shelters

OSDMA facilitated the construction of a total of 879 Multi-purpose Cyclone Shelters (MCS) and Multi-purpose Flood Shelters (MFS) in 25 districts of Odisha. As Odisha faces at least 1 or 2 cyclones and flooding disaster each year, these shelters are utilized to shift the people.

The evacuated people during the Fani Cyclone were also stationed at these shelters. The management of these shelters was done by local community themselves. Materials were provided by government and preparation of food items, its distribution was done by the local community. Community was also empowered to make head count and prepare for safety of children in the shelters.

Self Help Groups (SHGs)

The SHGs are the small groups of locals to manage the needs of people of the area. They can be all women SHG or men and women SHG. These SHGs came in a big way to identify the needs of people in terms of finance, livelihood etc. and helped the needy. These could collect money from the people themselves during the normal days, get grant from Government and then utilize the same for help of affected community.

RECOMMENDATIONS:

Institutional Preparedness: A rhobust institutional setup for early warning dissemination to the last mile and giving it sustainability by involving community in it will help in reduction in the risk. Further to it drills of implementation of disaster management plan will also help community to prepare.

Early Warning dissemination: In addition to IMD's early warning and mechanism for its dissemination, community methods of communication must also be given due attention. These methods have acceptance in community and they are used to it.



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Multi-Purpose Cyclone Shelters (MPCS): After creation of MPCS at almost every vulnerable area, their management was handed over to local community. After the massive evacuation that took place before and during the Fani Cyclone, the people reached one of the such centres. They were taken care of by the local community with the help of Government agencies.

Positive Response: Community responded to the evacuation calls from the government agencies in a very positive way. They immediately collected their valuable and important items and shifted to the MPCS. This could only be possible as the awareness drive had created ample awareness amongst the community.

Alternate Livelihood: Community led innovations and recommendation for creating alternate livelihood for likely affected community will help reduce dependency of community on single source of income and thus reducing the rate of psychological disorders.

CONCLUSION:

Fani cyclone despite being managed successfully gave few lessons as well. Capacity of the community must be enhanced through use of local available resources and better coordination facilities. Community has always been the first responder and largest sufferer, keeping it at the centre of almost all the preparedness activities will inculcate sense of ownership in them and also provide mental strength to them.

With these recommendations, we feel that the reduction in risk would be strengthened and reduction in loss of lives would be achieved. Thus, community preparedness is must and for measuring the same, preparedness indicators must be designed.

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