

# Role of media in disaster preparedness: some case studies from calamity prone Odisha

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**Abstract.** Odisha is a natural disaster prone state. Its geographical location contributes a lot for the disasters. The eastern Indian state has a 480 Kilometre long coastline. The Bay of Bengal which is the house of cyclonic storms is the major contributor for the calamities in the state. From time immemorial till today Odisha has been facing hundreds of calamities in the form of cyclones, floods and famines. It is a regular phenomenon that in the period of September to December every year Odisha faces varieties of cyclones. These affect human life, properties and agriculture to the maximum extent. After the super cyclone of 1999 the government became sensitive so also the media. In these two decades Odisha media has played a vital role in creating awareness about the disasters and helped people in displacement and rehabilitation. In recent pasts media helped the Government in reaching the “Zero Casualty” target. The role of media not only limited to this, even post-disasters it followed the condition of people and their lives. The researcher takes some case studies of different disasters and their handling by media. Also tries to find out the people’s perception about media in disaster preparedness and management.

## 1 Introduction

Odisha is a natural disaster prone state. Its geographical location contributes a lot for the disasters. The eastern Indian state has a 480 Kilometre long coastline. The Bay of Bengal which is the house of cyclonic storms is the major contributor for the calamities in the state. From time immemorial till today Odisha has been facing hundreds of calamities in the form of cyclones, floods and famines. It is a regular phenomenon that in the period of September to December every year Odisha faces varieties of cyclones. These affect human life, properties and agriculture to the maximum extent. After the super cyclone of 1999 the government became sensitive so also the media. In these two decades Odisha media has played a vital role in creating awareness about the disasters and helped people in displacement and rehabilitation. In recent pasts media helped the Government in reaching the “Zero Casualty” target. The role of media not only limited to this, even post-disasters it followed the condition of people and their lives. The researcher takes some case studies of different disasters and their handling by media. Also tries to find out the people’s perception about media in disaster preparedness and management.

## 2 Objectives of the study

1. To understand the role of media in disaster communication in disaster prone Odisha.

2. To know the preparedness of different media houses in order to handle the natural disasters and their coverage.
3. To know the perception of disaster affected people about media and its role in disaster communication.

## 3 Methodology

To measure the role of media in disaster preparedness and disaster communication, the researcher opted for a survey among the cyclone affected people of Ganjam district of Odisha using a questionnaire with a number of close ended questions. The sample size was 100 and responses are analysed. Along with this the researcher talked to different functional heads of media houses of Odisha to know their efforts in disaster communications.

### 3.1 Review of literature

Being in Indian eastern peninsular region Odisha has been a home for the cyclones for centuries together. The geographical location is one of the main reasons of the disasters the state encounters. Particularly when any depression in takes place in the Indian Ocean or Andaman Sea, most of the time it moves towards the Bay of Bengal and hits the eastern coast of India. As Odisha is in the same side with a long 480 Kilometres of coastline, it becomes more prone to cyclonic hits. Cyclones, severe

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cyclones, very severe cyclones and Super cyclones are part of this cycle.

Although disasters cannot be avoided, the risk of disasters can be reduced by mitigation. Mitigation in the form of dialogue and communication has become a tool for society in dealing with life's issues. This study examines the role of government in preventing and mitigating dangers and disasters, such as natural disasters, disasters, and conflicts, through effective communication[3].

In every two years under the banner of United Nations, hundreds of countries meet together in Davos and discuss various methods and techniques to manage crisis during disasters. Researchers come with new data and its interpretation to make the disaster crisis management system more user friendly. International Disaster and Risk Conferences IDRC provide new information which helps in formulating guidelines to manage crisis and reduce risk.

Information and knowledge exchange cannot solve all problems in everyday life. There is need of appropriate and effective communication to manage life, risks, disasters and its related crisis efficiently. If the recipient is provided with correct communication, then it will help in bringing the desired significant change in the decision making and behaviour of the recipient. In return this will help him/her to mitigate risk and crisis during disaster as well as manage the post-disaster situations.

People are forced to deal with unique emergent challenges as a result of disasters. People need knowledge (about the event, support resources, activities, etc.) and the ability to comprehend and apply that information to deal with a variety of emergent hazard outcomes and demands across time in order to respond effectively. Top-down, uniform methods to disaster communication are ineffectual because of this variability[4].

Social media, Mobile applications, cell phones, Landline phones, Satellite phones (Stat phones), Two-way radio, Amateur radio (HAM radio) and word of mouth can help in communicating people during and before the disasters. Even after the disasters, this communication tools help in affected areas for rehabilitation and restoration.

It is the communication system and procedure which determines the effectiveness of the response during and after the disaster. How best may be your plan if it is not communicated effectively then it won't work. Land Mobile Radio Systems and Mass Notification Systems are some of the vital part of the disaster management and communication systems. Paton and Irons 2016, studied that a sense of community feelings can be created using the social media for disaster communication. During the disasters people face such a situation where they deal with new emergent problems. To manage that, they need concrete information about the disaster, its aftermaths, support system, resources and necessary actions. Social media based communication strategy can help in accommodating affected people from diversified backgrounds. They conclude that, development of sense of community among the affected people influence the communication quality during disaster[4].

### **3.2 Case studies of the role of media in disaster communication**

On October 29, 1999 when the Super Cyclone hit Odisha coast, it was least communicated, ill measured and worst prepared incident of the history. Even after weeks it was not possible for the outer world to know what exactly has happened in the area. More than 30 thousand people died and thousands of homes completely devastated. Even then the weather warning system was not so developed. Only weather forecasting and warning by All India Radio and Doordarshan could not help people much. People could not gauge the severity of the incident. But after the cyclone, the gory picture of devastation could only be communicated to mass by media. Newspaper like Sambad published its special edition by handwritten designs. Reporters covered each and every part of the cyclone affected area and came up with heart wrenching photographs.

After that the communication system gradually developed in the state. Particularly the forecasting by IMD became so pinpointed that, it could be communicated to people in a proper way. During the floods of 2005, 2006 ETV Odia the first private satellite channel of the state played a vital role in disaster communication. In Odisha history, for the first time reporters ventured into the flood water and reported from the ground. Even 24 hours flood control room in the channel continued communication with the state flood control room as well as the viewers and audience through regular updates. This helped the administration in rescue operations, relief distribution, and rehabilitation.

The North Indian Ocean Cyclone Season normally occurs in between the month of May and December. The pick period is October to November. In 2013 October 12, a severe cyclonic storm named "Phailin" hit the Gopampur on sea of Ganjam District. But by this time the state media was so active in disaster communication that, the target of the state government to achieve "Zero Casualty" could be achieved. All television channels OTV, ETV, Kanak TV, Naxatra News, MBC TV went with continuous live coverage and regular updates of the cyclonic storm and its landfall. Earlier communication to people and government's proactive initiatives compelled around one million people to leave their homes and go for safer places and cyclone shelters. Even most of the national channels (English and Hindi) sent their special correspondents to the affected areas prior to the landfall of the cyclone. The coverage became one of the most successfully handled disaster management and communication. The evacuation and disaster management brought laurels to the Chief Minister Mr. Naveen Patnaik. The United Nations felicitated the Chief Minister. The UN representative said, "Today, Odisha is a global leader in disaster management and risk reduction." So in this success story of disaster communication the role of media is clearly evident[5].

Just one year after Phailin, another cyclonic storm "Hud Hud" hit Odisha coast in the same month of October. Almost all TV channels of Odisha continued with 24 hours coverage and live bulletins. On the other hand "The Private FM Station Radio Choklate continued its communication about the cyclone with live programme

throughout the night” said one of the senior broadcasters of private FM channel Subrat Kumar Pati.



**Fig.1.** Disaster reporting by television media Courtesy: OTV.

In 2018, once again October became a curse for the people of Ganjam district. The severe cyclonic storm “Titili” hit the Ganjam and Gajapati districts of south Odisha. This time most of the channels continued with the same practice. 24 hours live coverage or live bulletin and continuous update about the cyclonic storm helped people in evacuation. This is not the end, the channels used their social media pages extensively for disaster communication. This time the researcher has personally listened the All India Radio, Cuttack. The AIR carried different live phone-in programmes on the cyclone “Titili” to aware the fishermen folks, farmers and affected people. This two way communication helped people in getting the expert advice as well as disaster preparedness. The kith and kin of disaster affected people staying beyond the territories of Odisha (Non-Resident Odias) get information about the disaster and overall situation in their homeland only through media. Some television channels of the state run late night shows keeping in view the timings of overseas people. In the subsequent years a number of other cyclones hit Odisha and the adjacent territories that caused a huge loss to life and property.

**Cyclone Fani – 2019:** Cyclonic Storm of Extreme Severity Fani was the first major cyclone of the year, as well as the fiercest tropical cyclone to impact Odisha since 1999. Fani peaked as a high-end Category 4 major hurricane on May 2, 2019, with maximum sustained wind speeds of 209-251 kmph. It made landfall in Puri, Odisha, a day later, and quickly weakened into a Category 1-equivalent ‘very severe’ cyclonic storm[6]. **Cyclone Bulbul – 2019:** Bulbul caused agricultural damage in Odisha, with 490,000 acres of crops lost across the state. It moved northward in the Bay of Bengal, eventually making landfall as a Very Severe Cyclonic Storm at Sagar Island in West Bengal on November 9, dumping torrential rain and winds of up to 135 km/h throughout southern West Bengal. Bulbul impacted 35 lakh people in West Bengal directly[6].

**Cyclone Amphan – 2020:** In Odisha and West Bengal, the severe tropical cyclone wreaked havoc on people and property. Storm Amphan was the first pre-monsoon super cyclone to emerge from the Bay of Bengal this century. **Cyclone BOB 03 – 2020:** The Indian Meteorological Department designated a depression in the Bay of Bengal as BOB 03[6]. The BOB 03 slammed the north Odisha-

West Bengal coastline the day after it was identified, causing massive loss of life and property. Cyclonic Storm of Extreme Strength Yaas was a relatively strong and very severe tropical storm that made landfall in Odisha in late May 2021 and caused significant damage in West Bengal. The second cyclonic storm of the 2021 North Indian Ocean cyclone season, the second severe cyclonic storm, and the second extremely severe cyclonic storm of the year so far[7][8].

In all these cyclones, severe cyclones and very severe cyclonic storms the media played a proactive role in making people aware about the cyclonic storms and their severity. Basically almost all media informed and educated people to leave homes and go for the safe cyclone shelter centres. The contribution of all media is significant and cleanly visible during the cyclone coverage, evacuation, reliefs and rehabilitations. Not only this, the media play a vital role in the post-disaster management. Particularly media helps people in providing the pictures of affected areas. In post-disaster management media play the role of connecting link between affected people and the local and state administration. Rehabilitation of people, restoration of road transport, power supply, drinking water supply, health aids, sanitation and relief everything reported by media. There is no doubt the “Revenue and Disaster Management” department of the state works in the grass root level to assess the damages in the agriculture, livestock, housing, but media reports help in dissemination of information to the mass. Basing on media reports philanthropic and volunteer organisations extend their help to affected people.

During the disasters all media house make special efforts by deploying their special correspondents and reporters in the affected areas. Particularly television channels of the state go for special presentations with customized graphics, and data. They make all efforts to drag the attention of the viewers. During disasters the team of reporters work in a war footing manner



**Fig. 2.** Special coverage of disaster by the army of reporters in OTV Courtesy: OTV.

Majority of the television channels of the state of Odisha continued their live broadcasting throughout the day during the cyclones of high severity and scale. In order to be in the race and to meet the expectation of the viewers, the competition among different media houses was cleanly visible .

### 4 Data Analysis

The researcher has taken a random sample of 100 from the disaster affected Ganjam district of Odisha. All respondents were given a questionnaire with close ended questions. Each response was analysed thereafter to understand the people’s perception about media and their role in disaster communication.

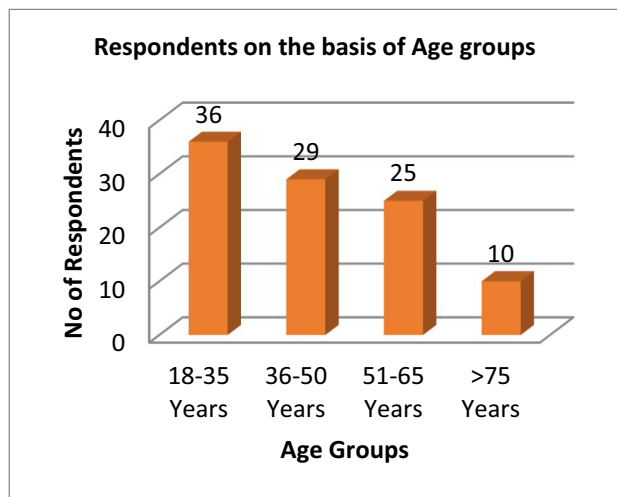


Fig. 3. Distribution of respondents based on Age groups.

From total 100 respondents 36 were from 18-35 years age group. In 36-50 years age group there were 29 respondents. 25 respondents from 51-65 years group and rest 10 were from more than 65 years age group. The age group distribution of respondents are described in figure-3.

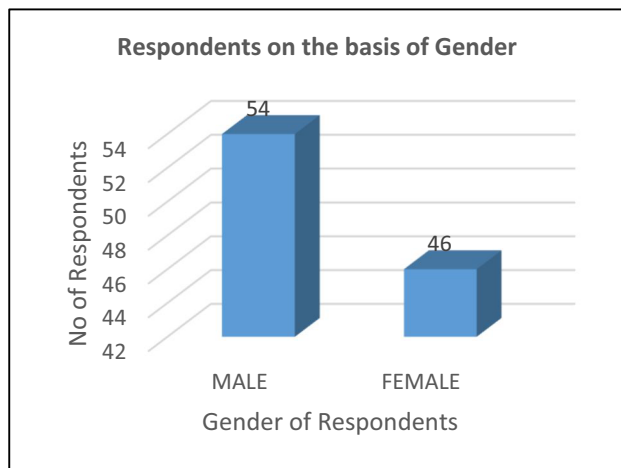


Fig. 4. Distribution of respondents based on gender.

Similarly there were 54 male and 46 female respondents in the sample. They gave their opinion about the role of media in disaster communication. Gender-based distribution is presented in the Figure-4. Figure-5 explains that, 64% respondents have a fear for natural disasters. But 36% people don’t have fear for it.

In the previous figure it is explained that 36% people do not fear disaster. The reason behind this may be the development of an attitude towards disaster over a long period of time. Because Figure-6 clearly explains that,

89% respondents feel and accept that disaster has become a part of life. It has become a regular affair for them. But 11% do not feel like that.

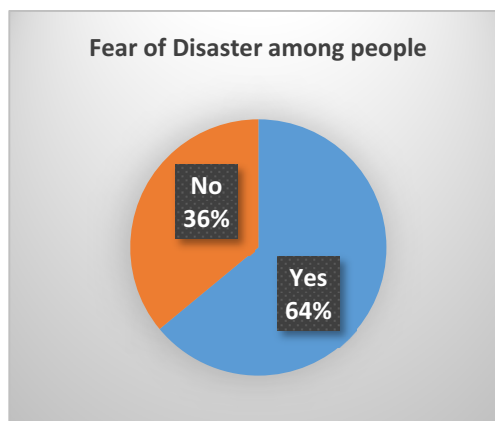


Fig. 5. Fear of disaster among respondents.

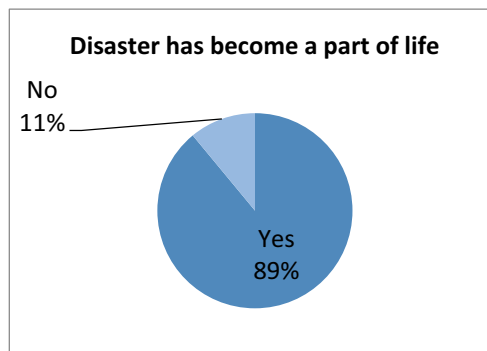


Fig. 6. Feeling of respondents about disaster becoming a part of life.

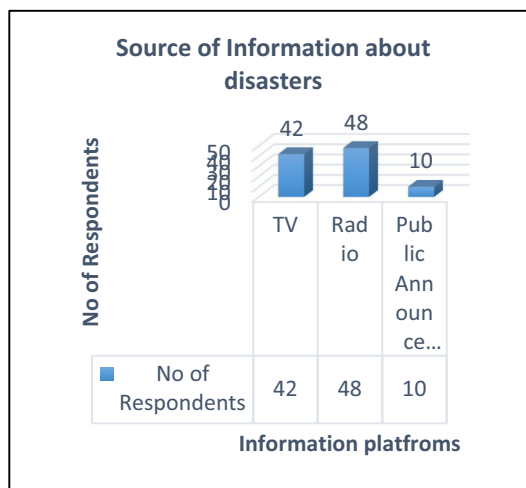
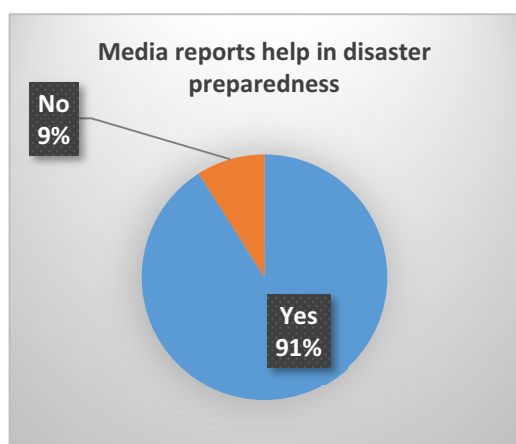


Fig.7. Respondent's source of information about disasters.

About the disaster and information related to it is normally disseminated by media. But as per the respondents 42% people depend on Television for information regarding disaster. Whereas Radio is in an advantageous position with 48% respondents depend on it. The mobility of radio gives an added edge to it over television. It is easier for people to carry a radio set anywhere. But television is fixed. On the other hand there is no need of uninterrupted power supply for radio. 10%

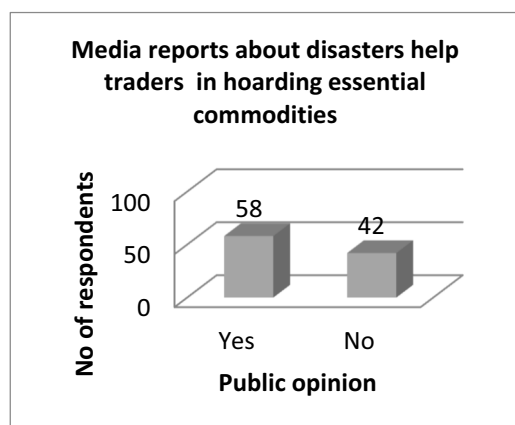


respondents depend on public announcement system for information about the disaster.



**Fig. 8.** Media reports help people in disaster preparedness.

As per Figure-8, 91% respondents feel that media reports help them in disaster preparedness. But 9% respondents do not feel there is any role of media in disaster preparedness. Majority of respondents make themselves alert and prepared to face the disaster. Media reports make them aware of the situation and developments. Accordingly they act to tackle the situation.

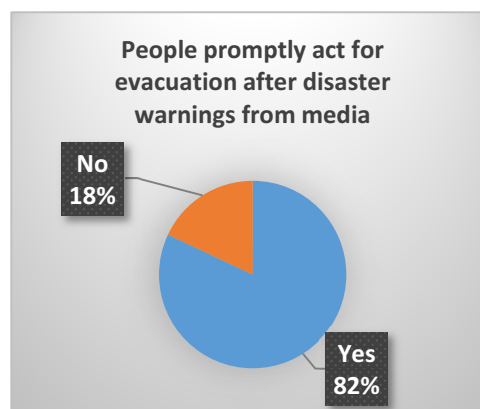


**Fig. 9.** Respondent's perception about media reports and illegal hoarding of commodities by traders.

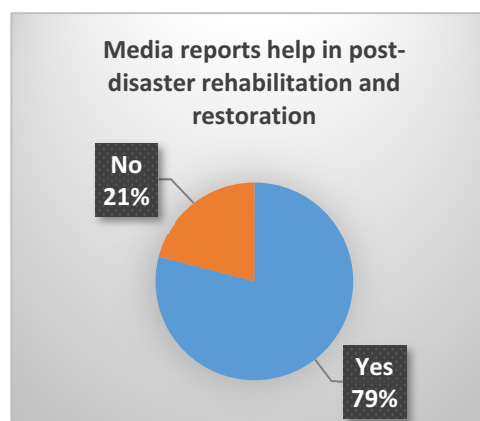
Whenever there arises any disaster like situation, then it brings a golden opportunity for the illegal traders. They hoard the essential commodities and create a crisis in the consumer market. As per Figure-9, 58% respondents feel that it is the media report which help and encourage the traders for hoarding and black marketing of essential commodities. On the other hand 42% respondents do not make media responsible for this ugly situation and intentionally created crisis

Pre-emptive strategies help to an extent in saving lives during disaster. If people are stubborn, then it becomes difficult for the administration to evacuate them from their homes. This causes severe damage both property and lives. That is the reason why the tone of media and administration is always polite, because no one wants any casualty due to any disaster. As per Figure-10, majority of

the respondents i.e. 82% feel that, yes they act promptly for evacuation when there is a weather warning presented in any media report. But 18% respondents are casuals. They do not act promptly after listening any warning in any media..



**Fig. 10.** Media alerts people to evacuate homes before disasters.



**Fig. 11.** Media reports help in post-disaster rehabilitation and restoration

The most important thing is that, even after disasters or natural calamities it becomes very difficult to restore and rehabilitate people. According to the Figure-11 there are around 79% respondents those who feel that, yes, media reports help a lot in disaster hit areas particularly in post-disaster rehabilitation and restoration. Whereas 21% respondents feel that, there is no role of media in post-disaster rehabilitation and restoration.

## 5 Findings and conclusion

This is peoples' perception about media in disaster communication. Whereas on the other side of the table is the media. Those who lead different television channels in the state say that, they act smartly as well as in a pinpointed focus for handling disasters. They make different strategies in covering disasters. Starting from deployment of reporters to movement of DSNG vans they plan everything.

From above data analysis it can be said that, people accept that media play a vital role in disaster communication. Media plays significantly alerting

people, encouraging people for speedy evacuation, making people prepared for facing the crisis. Most importantly media contributes to a maximum extent in post-disaster situation for rehabilitation and restoration. Media awareness make people ready to face any exigencies during disasters.

From this study this can be concluded that, in last two decades since 1999 super cyclone, a number of natural disasters have occurred here. But the development in media sector has also played a vital role in the handling the calamities. Competitive attitude of editorial staff and dedicated work of team of reporters made it easy to handle communication during disasters. No doubt that the state administration always work in coordination with media during disasters. But it can be suggested that, there is need of more integrated approach in handling crisis during disasters. There is need of more cooperation and strategic communication between the state machinery and media, so that they work together for the benefit of people in critical conditions.

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