

Impact of Disaster ‘YAAS’: A case study of the coastal areas in Odisha

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Abstract

The coastal region of Odisha encounters disaster almost every year. The recent cyclone disaster hit the coastal area of Odisha in the last week of May 2021. Due to the heavy cyclone, the lives of the people residing in the area faced tremendous challenges. In the present paper, the researchers have outlined the economic impact of disaster Yaas. The Government of Odisha evacuated the coastal area of Odisha before the cyclone. But the post-disaster period for the people of coastal districts was very challenging. The present study helps outline the economic impact of disaster Yaas on people residing in the coastal areas in Odisha. The disaster has affected both the mental health and physical health condition of the affected people. The study's findings reveal that the cyclone, along with the ongoing pandemic, created havoc among the local dwellers of the coastal region of Odisha.

Keywords: Yaas, disaster, cyclone, post-disaster

Introduction

As Covid – 19, second wave cases decline, the Indian economy saw another catastrophe of

super cyclone Yaas wrecking Eastern India in the 4th week of May 2021. The cyclone has been named Yaas by Oman. The word Yaas has originated

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from the Persian language and means 'Jasmin' in English. Recently, cyclone Yaas made landfall south of Balasore in Odisha.

A week after a very severe cyclonic storm, Yaas struck Odisha coast, the State government said 60 lakh people in 11,000 villages were affected. At the same time, the natural disaster caused a loss of ₹610 crores. Chief Minister Naveen Patnaik reviewed the loss incurred due to Cyclone Yaas and post-cyclone restoration activities here. The cyclone had made landfall in the Balasore district, affecting many northern and coastal districts on May 26 and 27. The government had then announced to complete damage assessment within a week. As far as power restoration is concerned, 99.8% of 30 lakh affected consumers have been supplied electricity. As many as 230 transformers had to be replaced.

The total loss to energy infrastructure was ₹150 crore. Similarly, 246 roads were damaged in the cyclone. Prime Minister Narendra Modi had announced ₹500 crores as immediate relief assistance for the State after reviewing the impact of the cyclone in Odisha (The Hindu, 2021). The three affected states of West Bengal, Odisha, and Jharkhand will see estimated economic losses of \$ 7-8 bn in India this fiscal year. Insurance companies' losses will be mounting with innumerable redemptions, and premiums will see an unpleasant rise. As tens of thousands of people are impoverished by broken homes and lost livelihoods, poverty rates and poverty gap ratios will be increased in India. And as for drinking water, food supplies are dwindling the basic goods prices will increase, thus increasing inflation. In Demographics, it is well-known that food production grows linearly while population grows exponentially, according to renowned economist Thomas Malthus.

About 150,000 people die in the world every hour, and one baby is born every second in India. So, central and local governments are fraught with high decibel tensions in these tumultuous times and are emerging with consensus answers of experts each day to overcome people's hardships because life is about being sunny. The high correlation between development levels, types of disasters, and regional growth in India challenges our understanding of the disaster management behaviors of local governments. In particular, the iden-

tified need based on our findings is in sharp contrast to the low transfer-income level of households in the central region. Furthermore, considering that the central region mainly experiences slow-onset but long-lasting disasters, the actual responses to natural hazard-induced disasters in the region indicate that socioeconomic development and the type of disasters affect the region's development.

From a policy perspective, people who manage disaster responses should understand that higher disaster losses do not necessarily imply that a province would grow in the following year. However, our empirical results show such tendencies in certain provinces. Loss compensation is the driving force of the post-disaster recovery, and social productivity and sustainable economic development are the economic basis of compensation for disaster losses. To this end, economic development is the most effective way to compensate for disaster losses. Note that government behavior objectively adjusts or restricts the relationship between natural hazard-induced disasters and macroeconomic development, even under market-economy conditions. Based on such an understanding, the government is required to take two measures to achieve a healthy relationship between natural hazard-induced disasters and economic development.

One measure is to consider short- and long-term benefits while maintaining sustainable development. The other measure is to consider the benefits of affected provinces and the region/nation as a whole when considering multi-hazard compensation. (Tang, R., Wu, J., Ye,

M. et al., 2019). The congenitally devastating and disorderly nature of natural disasters may result in serious economic losses. Although largely, the disaster literature remains inconclusive, offering limited systematic evidence on how natural disasters affect economic growth (Cavallo & Noy, 2011; Fiala, 2017; Noy & DuPont, 2016). The loss and damages caused by natural disasters are expected to rise further in the future, largely due to climate change and the increased disaster exposure and vulnerability of our modern societies (IPCC, 2012).

Economic losses from natural disasters have been increasing in recent decades. This has been attributed mainly to population and economic growth in disaster-prone areas. Future natural disaster losses are expected to increase due to continued economic exposure and climate change.

This highlights the importance of designing policies that can mitigate the impacts of these disasters on the economy and society. A rapidly expanding literature has estimated the direct (e.g., property damage) and indirect (e.g., gross domestic product growth, trade) economic impacts of natural disasters (W J Wouter Botzen & Olivier Deschenes & Mark Sanders, 2019). Natural hazard events provide opportunities for policy change to enhance disaster risk reduction (DRR), yet it remains unclear whether these events fulfill this transformative role worldwide.

Methodology

Aim & Objective of the study

To study the economic impact of disaster Yaas on people's lives in the coastal areas in Odisha. The researchers also have some specific objectives of this study, i.e., to know the overall impact of disaster Yaas on the people's lives, rehabilitation of the people residing in the coastal areas, and understand the magnitude of the Covid-19 pandemic over the disaster Yaas in the study area.

Research Methodology

This section includes the particulars about the methodology that has been acquired to carry out the present study. It encloses details on research design, study area, selection of sample and size, study variables, research tools, the conduct of the study, data collection, and statistical analysis.

Research Design

Following the study's objectives, it was essential and crucial to assess the economic impact of disaster Yaas on the lives of people residing in the coastal areas in the study area. The people of coastal regions are a distinct population group with particular needs and capacities.

To fulfill the research aim and objectives, the researchers have adopted and conducted a cross-sectional study.

One of the most usual research designs is the cross-sectional study design. In this type of research study, either the entire population or a subset thereof is selected, and from these individuals, data are collected to help answer research questions of interest (Olsen and St. George, 2004). Cross-sectional studies are beneficial from the current research point of view. This study design can provide a picture of the economic impact of disaster Yaas on the lives of people residing in the coastal areas in Odisha and measure the risk factors associated with it to the lives of the people living in the study area. The researchers analyzed the study through qualitative data only. Thus, the researcher adopted the exploratory method of research design to fulfill the research objective of this particular study.

Study Area

The researchers selected four coastal districts of Odisha, i.e., Balasore, Bhadrak, Kendrapara, and Jagatsinghpur, as the study area.

Balasore is one of the coastal districts of Odisha. It lies in the northernmost part of the State. It was a part of the ancient Kalinga, which later became a territory of Toshal or Utkal, till the death of Mukunda Dev. Balasore as a separate District was created in October 1828. Originally it was in the Bengal presidency.

Bhadrak district is a district in Odisha state in eastern India. Bhadrak city is the headquarter and the largest city of the district. It came into existence on 1st April 1993. This district has a rich heritage and history, and according to legends, it also derives its name from the goddess Bhadrakali, whose temple stands on the banks of the river Salandi.

Kendrapara district is an administrative district of Odisha state in eastern India. It is situated central coastal plain zone of Odisha. This district is bounded by Bhadrak district at its north, Jajpur at its northwest, Jagatsinghpur district at its south, Cuttack at its west, and Bay of Bengal at its east. On 1st April 1993, Kendrapara district was created from the mother district Cuttack.

Jagatsinghpur became a new district on 1st April 1993 being separated

from Cuttack district.

Sample of the Study

The population of Balasore, Bhadrak, Kendrapara, and Jagatsinghpur districts is 23.2 lakhs, 15.1 lakhs, 14.4 lakhs, and 11.4 lakhs, respectively. (Census, 2011). Hence, the universe of the study is 64.1 lakhs population in studied coastal districts of Odisha. The present study is qualitative; the researchers have taken one case study from each district to fulfill the research aims and objectives. Sample who are from the domicile of the studied area, easily reachable and interested in taking part in the study only were included. Sample was taken using purposive sampling method. Four cases were taken for the study.

Research Tools used for data collection

- Case study
- Unstructured interview schedule (telephonic)

Analysis

As many villages across the State of Odisha have been affected due to the Cyclone 'Yaas' while the standing crops of land suffered damage, according to a government official report. As per the statement from the Odisha government, apprising the team about the damage, Development Commissioner and Special Relief Commissioner (SRC) Pradeep K Jena said, "According to preliminary assessment 10,644 villages in 2,138-gram panchayats in 11 districts of Odisha have been faced damage, besides 425 wards in 30 urban areas were also affected by the Cyclonic storm Yaas." "More than 75 lakh people have been affected due to the cyclone, 26,781 houses were damaged while 12.77 lakh livestock were affected.

About 7.10 lakh people from coastal villages and sensitive areas were evacuated to safer shelters. In addition, the standing crop on about 6348.4 hectares of land have damaged in cyclone," Jena further informed the Central team. Chief Secretary Mohapatra stated that the cost of the postCyclone rehabilitation and restoration work would be borne by the state government from the State Disaster Management Fund. "But since as Odisha is a flood and Cyclone-prone state, it needs a sustainable and disaster-resilient infrastructure," he asserted. (Business Standard, 2021)

Results

Table 1: Socio-demographic details of participants

Case no	Gender	Age	Education	Occupation
Case 1	Male	45	12th standard	Vegetable vendor
Case 2	Male	52	Graduation	Hotel owner
Case 3	Female	32	Graduation	Teacher
Case 4	Male	58	8 th standard	Agricultural farmer

Source: Author`s compilation

Table 2:

The critical impacts faced

Case 1

- Housebroken
- Shop structure broken
- Loss of hope
- Mentally broken

Case 2

- Loss in the hotel property
- Many plants in the hotel area just fell down
- Affected the business
- Plan not working

Case 3

- Community people faced that disaster and mentally broken
- Many houses loss
- Much agricultural material loss
- Fear of death by a snake biting

Case 4

- Agricultural loss
- Self-confidence broken

- Fear of repaying the loan
- Mentally broken

Source: Author's compilation

Case summary

• **Case 1** described that the cyclone had made a significant loss to his life as he began his vegetable shop a few days ago. He spent all his savings on this. He is in the mental trauma of what to do next. Very heartbreaking, and this natural disaster influenced so much the economic status of the people.

• **Case 2** pointed out that his hotel infrastructure is in the processing stage, but the disaster just smashed out all the beauties of this structure. There were many plants on his property, but all the trees fell. He was emotionally and mentally unstable. He had a massive loan for this setup but figuring out to have a new start.

• **Case 3** mentioned that she expressed heartbrokenness to all the community people in her surroundings. The Yaas disaster makes helpless all the community people in these coastal areas.

• **Case 4** said that "The cyclone and floods have already washed away standing crops. Large numbers of farmers fear more losses if rainwater is not flushed out from their lands within a week." He was mentally and physically becoming weak after that dangerous disaster.

Outcome from the interview

- The disaster has disturbed the economic condition as well as mental wellbeing
- The post-disaster situation for the people was quite challenging
- Everyone wishes to have a normal and happy life
- A lot of financial instability among the community
- Struggling to adjust in their normal life
- Stressed of thinking about the future
- The entire family structure has been disturbed
- Facing problems while performing daily activities after the disaster
- Sometimes health conditions became worse

- Hope and belief in God are the only key factor
- Career growth became stagnant

So, it can be said that the disaster is impacting the wellness of economic condition, and it's also influencing livelihood. This disaster has affected both the mental health and physical health condition of the affected people. The post-disaster period for the people is bothersome. Overall, there are many challenges faced by the people in the post-disaster.

Discussion and Conclusion

In the face of the global COVID-19 pandemic, everyone was struggling to adapt to the new normal. In the meantime, Odisha encountered cyclone Yaas on May 26 and 27.

Due to the heavy cyclone, the lives of the people residing in the coastal districts of Odisha faced tremendous challenges. The impact of cyclone Yaas was very devastating.

In the present paper, the researchers have outlined the economic impact of disaster Yaas in the coastal region of Odisha. The Government of Odisha evacuated the coastal area of Odisha before the cyclone.

But the post-disaster period for the people of coastal districts was very challenging. Due to the cyclone outbreak, the local people lost their livelihood. Many dwellers also lost their homes, and the basic survival of these districts came to a halt. Almost every year, Odisha faces these types of cyclones hit. The state government handled the situation very effectively. But the disturbances caused by the cyclone are not easily compensated. The present paper wanted to say that the post-disaster period for the local dwellers was very challenging to rehabilitate back into their everyday lives.

As we are in the middle of a pandemic outbreak, it is challenging to estimate its long-term effects. And in the meantime, disaster Yaas hit the coastal region of Odisha, which eventually disturbed the everyday day-to-day lives of the local dwellers of the coastal areas.

Although several disasters have hit the coastal people in the past, it isn't

easy to estimate the long-term economic, behavioral, or societal consequences as these aspects have not been studied to a great extent. The limited studies that do exist indicate that the significant historical disasters of the last millennium have typically been associated with subsequent low returns on assets. After a pandemic, we tend to become less interested in investing and more interested in saving our capital, resulting in reduced economic growth. This cyclone, along with the ongoing pandemic, created havoc among the local dwellers of the coastal region of Odisha.

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