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Disaster management, vulnerability and rehabilitation: A case study of Bagapatia resettlement colony in Odisha

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Abstract
Odisha is one of the states in India where the term 'disaster' is quite ubiquitous. Although the Odisha State Disaster Management Authority has taken measures to deal with disasters and is globally recognized, it has, in recent scenarios in some disaster-prone regions of Odisha, succeeded in evacuating people but has somehow failed to rehabilitate them. Poor resilience and rehabilitation lead to increased vulnerability, which remains unresolved. This study examines the vulnerability caused by different types of disasters in rural areas. There are two primary problems that have been identified: vulnerability caused by catastrophes and improper rehabilitation in the post-disaster period, which are increasing the vulnerability of people. In this study, a qualitative method is employed to explore the relationship between disasters, vulnerability, resilience, and rehabilitation. This study is completely based on rural affairs. Through the qualitative method, the life of the *Satabhaya* people after their relocation to *Bagapatia* village is considered the field of investigation.

Keywords: Disaster, vulnerability, resilience, rehabilitation, Kendrapara, Odisha

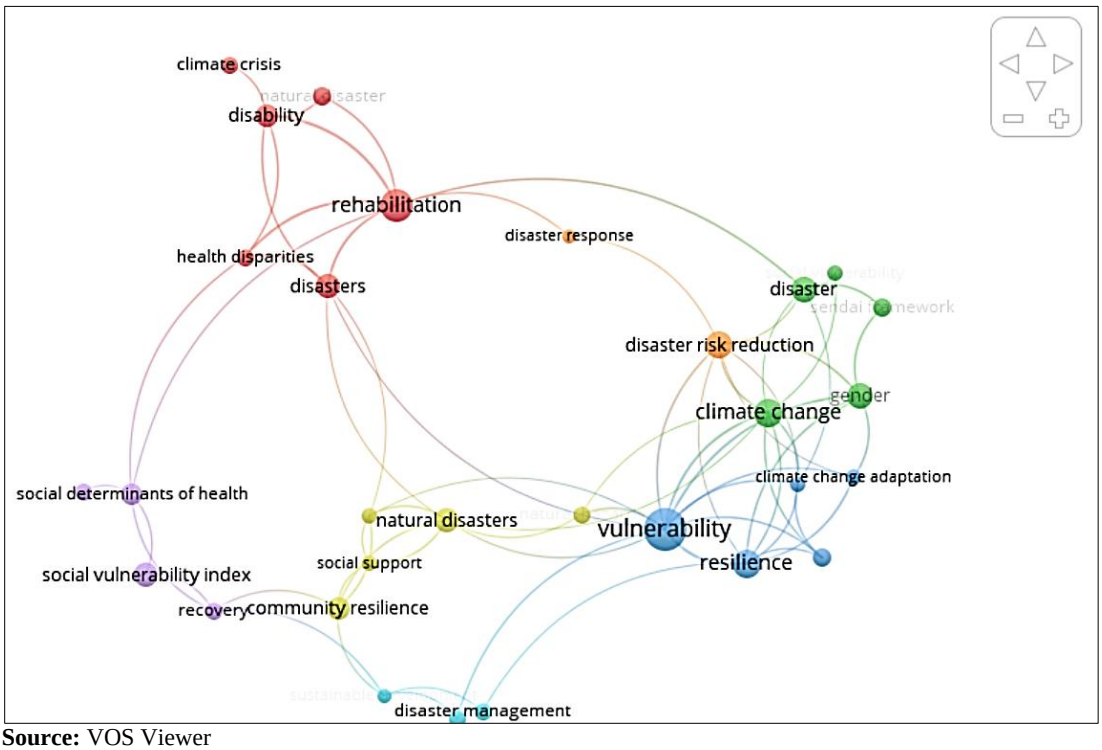
Introduction
Disaster is defined as a severe disruption to normal activities (Perry, 2006) [26]. Traditionally, disasters are defined as the "Act of God", then with the development of science, it was described as the "Act of Nature". However, in recent times, it has been defined as an "Act of Men and Women," as the careless activities of various government officials, businessmen, and corporate sectors are responsible for most disasters. It is said that the Great Tsunami of 2004 occurred due to nuclear testing; nature is not responsible for the occurrence of this disaster. In comparison with the past, people are more vulnerable to disasters in recent times. Disasters occur due to a combination of hazards and vulnerability (Almedom, 2008) [3]. Difficult human experiences during disasters create vulnerability (Furedi, 2007) [15].
Vulnerability refers to exposure to a disaster-like situation. In the past decade, especially in the 1970s, vulnerability was used as a response to disasters. It was initially related to the physical context; in the later period, it was related to social, political, cultural, and economic contexts. In India, vulnerability is created due to various factors, but disasters are the most prominent factors that lead to making people more vulnerable (Panda, 2009) [25].
Resilience is regarded as the ability of a person, family, community, organization, or institution to foresee or resist, or prudently be involved with, cataclysmic circumstances (Almedom, 2008) [3]. In the field of disaster, the concept of "resilience" plays a crucial role. It is regarded as the ability to reinvent and recover. From the past to the present scenario, resilience has been used as a combination of solidity, cubage, flexibility, and growth. Resilience is responsible for eliminating vulnerabilities and managing risks (Dahlberg *et al*., 2015) [12]. Most of the time, the risk of social-ecological foundations is confronted by resilience (Keating *et al*., 2017) [19]. The Intergovernmental Panel on Climate Change (IPCC) should not focus on vulnerability and resilience in the context of climate change, but those concepts should be analysed from a broader perspective by focusing on the development and disaster risk reduction process for a long-term period. (Kelman *et al*., 2016) [20] suggested

that vulnerability and resilience aspects should be used by different organisations in the policy planning process. (Lei *et al*., 2014) [23] suggested that the three concepts of resilience, vulnerability, and adaptation should be emphasized each other rather than only emphasizing on only one aspect in the perspective of disaster. It also suggested that only strategies for reducing vulnerability should not be emphasized, but opportunities should be maximized to promote the adaptation process in disaster-like situations. The South Pacific Applied Geoscience Commission's Environmental Vulnerability Index (SOPAC EVI) Project suggested that there should be a greater focus on resilience rather than disaster management. One should understand resilience and acquire it, along with opportunities for reducing vulnerabilities. (Frankenberg *et al*., 2013) [14] suggested that education played a crucial role in the reduction of vulnerability and building resilience in the post-2004 Indian Ocean tsunami in Indonesia. (Busapathumrong, 2013) [11] recommended the use of five models to minimize vulnerability and build capacity in the disaster period. Those models are the royal project and international cooperation model, the Association of Southeast Asian Nations (ASEAN) Socio-Cultural Blueprint, the rights-based approach, the welfare mix model, and the knowledge management model. (Kelman *et al*., 2015) [21] stated that climate change should not be regarded as the major factor contributing to disaster risk. Still, it should be considered as a subset within disaster risk reduction, conceptualizing vulnerability and resilience by focusing on the goal of human development.

Review of Literature

Syed Ainuddin, Jayant Kumar Routray & Shabana Ainuddin (Ainuddin, S *et al*., 2015) [2] stated that in Pakistan, the earthquake-prone area of Baluchistan has poor resilience to earthquakes. In that area, structural weaknesses in buildings, poverty, and rapid population growth are promoting the growth of vulnerability. The World Bank Report has stated that "building back better" after any natural catastrophe reduces the number of casualties among human beings. It also stated that to maintain resilience there should be the use of resilient infrastructure, which helps to minimise the loss. Additionally, an inclusive approach should be adopted by the authority, regardless of class, caste, religion, gender, etc., which will help maintain resilience. Blackburn (Blackburn, 2018) [9] stated that people cooperating with NGOs during the rehabilitation process in the post-tsunami period on the Andaman Islands is a great inspiration and a great example to the world of the participation of local people, which helped reduce vulnerability and establish resilience. S. Bhadra (Bhadra, 2020) [8] suggested that for proper rehabilitation, there should be facilities for funding, resources, and rehabilitation professionals. Through rehabilitation, various facilities like housing, livelihood, compensation, and social security will be provided. Local people should be involved in the rehabilitation process for it to be effective. In the rehabilitation process inclusive approach and a community-based rehabilitation model should be used. R. S. Pomeroy, B. D. Ratner, S. J. Hall, J. Pimoljinda, & V. Vivekanandan (Pomeroy *et al*., 2006) [27] suggested that the root causes of vulnerability should be addressed, and preventive measures should be taken for building future resilience to deal with disaster-like situations. The Asian Tsunami of 2004 destroyed the livelihood of coastal people. Hence, the livelihood strategies of coastal people should be understood properly, and facilities should be provided to those poor, vulnerable coastal populations. Dhameja (Dhameja, 2008) [13] has described the disaster as a development opportunity that should be linked with relief, rehabilitation, and development efforts. Amatya & Khan (Amatya et.al., 2023) [4] suggested that, as there is an increase in disasters globally, there should be the use of multidisciplinary rehabilitation methods by including medical rehabilitation, which has great significance in post-disaster for both short-term and long-term periods. I. Zikri, M. Takahashi, M. Salsabila, A. H. Hamid, L. N. Ginting, & Sofyan (Zikri *et al*., 2024) [29] defined economic vulnerability is considered a more important factor than social vulnerability; hence, economic resilience should be emphasized more than social resilience.

Research Gap



Source: VOS Viewer

Fig 1: Bibliometric Map

This bibliometric network visualization delineates the interrelations among principal themes in disaster studies - rehabilitation, vulnerability, resilience, climate change, and disaster management - unveiling significant research deficiencies, especially pertinent to Odisha, a state acutely susceptible to cyclones and coastal hazards. The map illustrates significant connections among "vulnerability," "resilience," and "climate change," indicating a considerable academic emphasis on adaptive capacity and environmental hazards. The cluster of "rehabilitation," mostly associated with disability, health disparities, and disaster response, seems disconnected from the "disaster management" and "vulnerability" clusters.

This disconnection underscores a research deficiency in the integration of post-disaster rehabilitation with vulnerability assessment and management measures. Despite Odisha's progress in disaster preparedness and evacuation systems, scholarly literature remains insufficient in examining how long-term rehabilitation frameworks tackle social vulnerability and livelihood recovery.

Subsequent research should concentrate on integrating rehabilitation and vulnerability frameworks, investigating how community-based rehabilitation, social support networks, and inclusive recovery strategies might improve sustainable disaster management in Odisha's climate-sensitive areas.

Method

The finding of the present paper is based on qualitative data. Generally, in Odisha, specifically in Kendrapara district, and particularly in rural areas, the field visit was conducted. In the Kendrapara district, certain rural areas have been considered which are within the *Rajnagar* Block. The respondents include permanent residents of Bagapatia, those who have relocated from *Satabhaya* to *Bagapatia*, and government officials. Nearly 125 respondents were interviewed using the purposive sampling method. The unstructured questionnaire is used with an in-depth interview for data collection. In this study, there is also the use of "Focus Group Discussion" which helps to identify the collective view.

Theoretical Perspective of Vulnerability

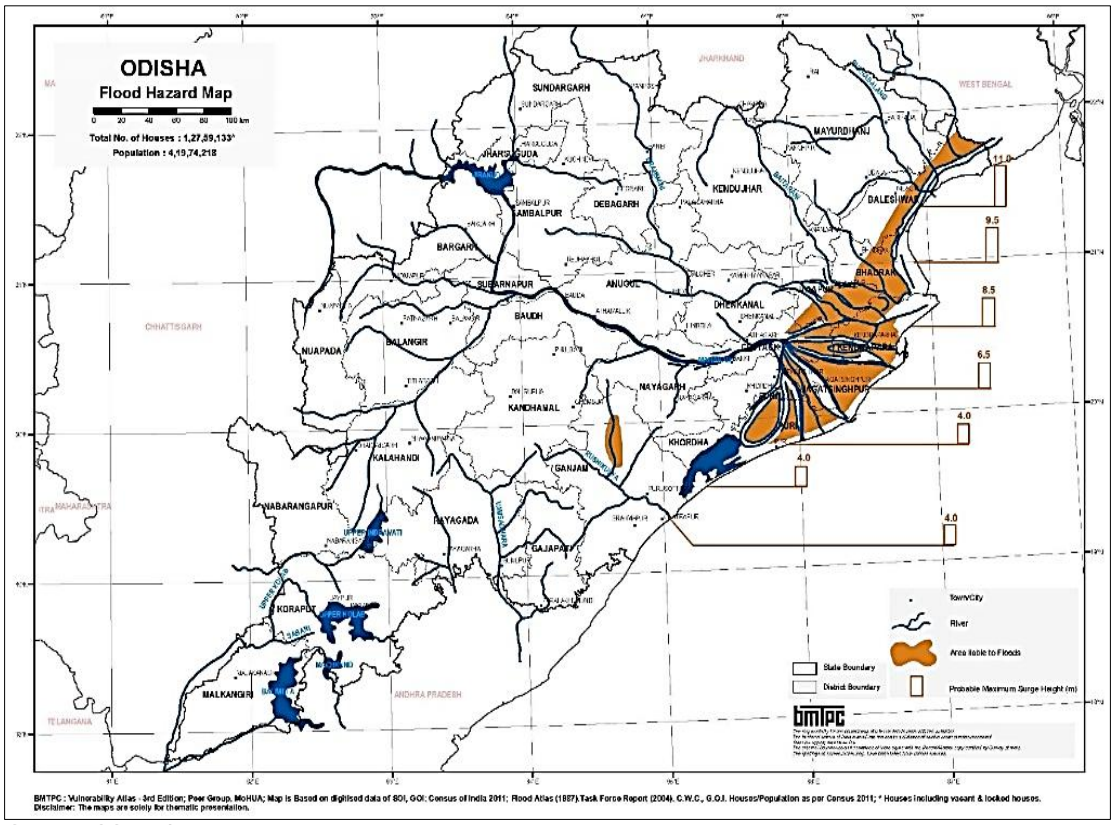
Local governments are critical in identifying vulnerabilities. Vulnerability refers to physical, social, economic, and institutional factors. These aspects interact to determine the impact of risks on various groups and their ability to respond effectively. Physical vulnerability refers to the susceptibility of homes, infrastructure, and other tangible assets to destruction. Hazardous conditions, inadequate infrastructure, and poor urban design increase the risk of disasters. Social vulnerability refers to the qualities of individuals and communities that impact their ability to manage disasters, such as age, gender, ethnicity, and disability. Underprivileged communities are disproportionately affected by disasters due to systemic inequities. Economic vulnerability, such as poverty, unemployment, and limited financial means, is a key factor in assessing the impact of disasters on communities. Impoverished communities frequently lack the necessary resources for repair. Institutional vulnerability refers to the effectiveness of institutions, policies, and governance in disaster management. Poorly executed policies and frail institutions can heighten vulnerabilities during crises, leading to inadequate support. Zakour *et al*. (2013) [30] suggest a community-oriented model that involves residents in disaster management decision-making to reduce vulnerability. According to vulnerability theory, governments must ensure fair access to resource-distribution institutions to alleviate society's inherent vulnerability. The idea proposes a new framework for defining the state's role and advocates for broad social welfare initiatives. Vulnerability theory emphasizes the importance of addressing institutional systems that perpetuate privilege and disadvantage. Vulnerability theory can contribute to a better understanding of social policy through three main approaches. The theory emphasizes that vulnerability is a universal human condition, highlighting the state's responsibility to create and maintain institutions. The term "vulnerability" reduces the related stigma. Vulnerability theory suggests that vulnerability and dependency are natural aspects of the human experience. Vulnerability theory does not provide recommendations for specific social welfare policies or programs. Despite the need for comprehensive programs that provide a dignified quality of life and equitable opportunities, current social welfare policies are both overly and underinclusive. Vulnerability theory offers little assistance for prioritizing at-risk communities when allocating scarce financial and political resources. Emphasizing fragility complicates the differentiation process.

Vulnerability theory explains people's support for social assistance legislation and their concerns about resource distribution based on group identities. Governments can improve population resilience through legal frameworks and practices based on vulnerability theory. The theory of vulnerability can help the government combat fraud by addressing underlying factors such as social isolation, insufficient financial literacy, inadequate business regulation, lack of enforcement, and challenges for victims in accessing legal resources. Vulnerability theory suggests creating care finance models that offer better treatment options for individuals in need. According to vulnerability theory, autonomy should not be prioritized over safety and security, but rather considered equal to them. Vulnerability theory may conflict with policies that promote autonomy, as autonomy plays an important role in safety and security. Vulnerability theory supporters may argue that it opposes rules and regulations that balance autonomy and security. Vulnerability theory could be more effective if it distinguishes between violations targeted at benefiting one individual and those where the compromised individual is the intended beneficiary. Vulnerability theory's emphasis on universal vulnerability complicates the distribution of scarce resources among at-risk individuals, making it difficult to distinguish between competing demands. Vulnerability theory is useful for creating overall policy goals, such as providing universal access to healthcare or income, but less successful for selecting specific policy actions to attain objectives. In resource-scarce societies, vulnerability theory can be used to recommend or evaluate specific legislation (Kohn, 2014) [31].

Odisha: Vulnerable to Disasters

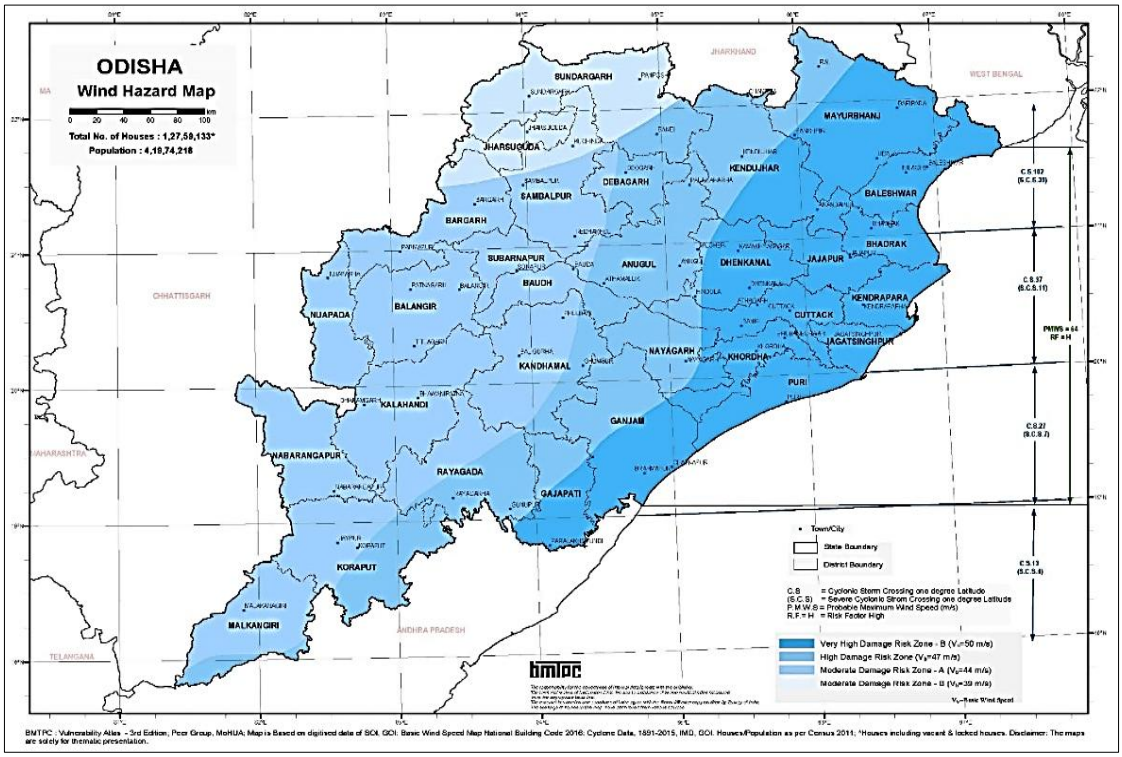
In Odisha, disasters occur frequently every year. Both natural and man-made disasters are witnessed by the state. Disasters like floods and cyclones hit every year in both the coastal and non-coastal areas of Odisha. However, earthquakes, sea level rise, gas leaks, and pandemics do not frequently occur in Odisha. Many districts in Odisha are both cyclone- and flood-prone, including Balasore, Bhadrak,

Kendrapara, Jagatsinghpur, Puri, Ganjam, and Cuttack. Some districts are basically cyclone-prone, including Khurda, Mayurbhanj, Jajpur, Keonjhar, Dhenkanal, Nayagarh, and Gajapati (Bahinipati, 2014) [5]. Additionally, some districts of Odisha are drought-prone, such as Bargarh, Bolangir, Jharsuguda, Kalahandi, Deogarh, Nabarangpur, Nuapada, Sambalpur, Subarnapur, and Sundargarh. It cannot be said that only cyclones and floods are affecting Odisha a lot. However, sea level rise, Earthquakes, and drought are also affecting Odisha, although these are not occurring frequently. Figure 1, Figure 2, and Figure 3 demonstrate the flood-prone, cyclone-prone, and drought-prone districts of Odisha. Table 1 highlights the names of disasters from 1999 to 2024 (as of August 15) that occurred in Odisha.



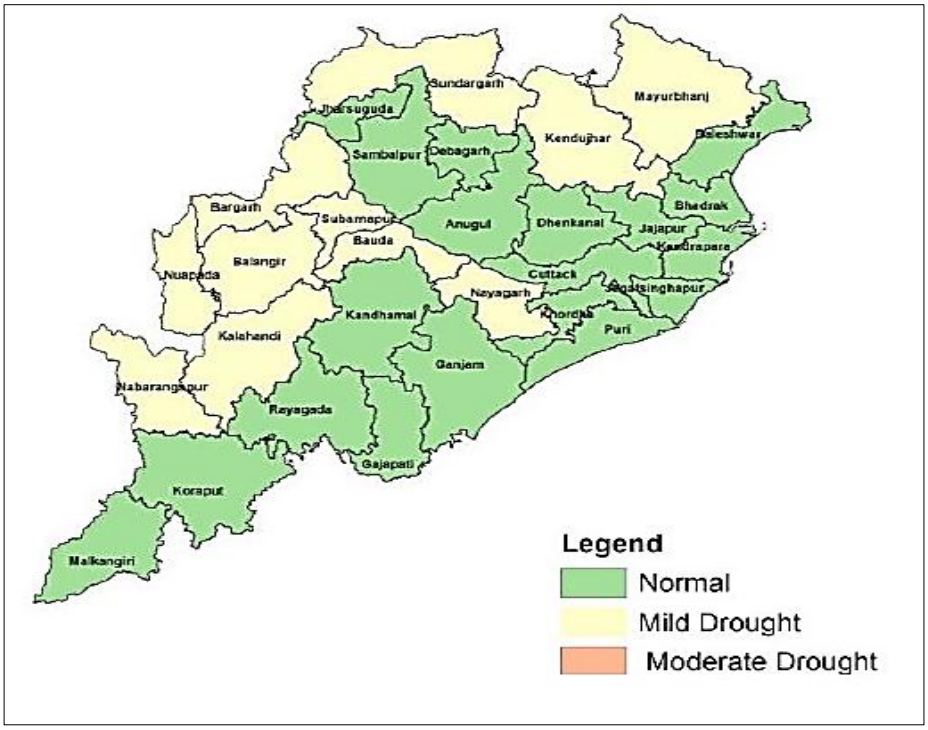
Source: OSDMA

Fig 2: Flood Prone Areas of Odisha



Source: OSDMA

Fig 3: Cyclone Prone Areas



(**Source:** South Asia Network on Dams, Rivers and People (SNDRP), Odisha drought profile)

Fig 4: Drought-Prone Areas of Odisha

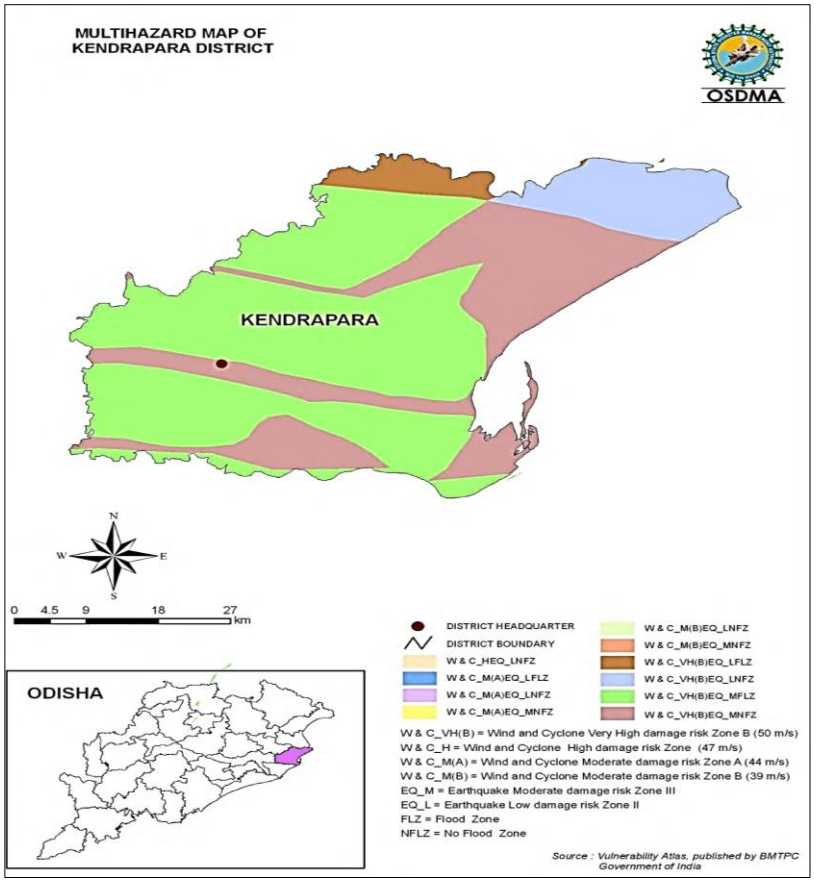
Table 1: Types of Natural Disasters with Years

Year	Disasters (Cyclone/Flood/Drought)
1999	Super Cyclone, Flood
2000	Drought
2001	Flood
2003	Flood
2006	Flood
2007	flood
2008	Flood
2009	Flood,
2009	Drought,
2010	Flood
2010	drought
2010	Unseasonal cyclone
2011	Flood
2011	Drought
2012	Flood
2012	Drought
2013	Flood, Cyclone (Helen, Phalin)
2014	Cyclone (Hudhud), Flood
2015	Flood
2017	Flood
2018	Flood, Cyclone (Titli, Pethei, Daye)
2019	Flood, Cyclone (Bulbul, Fani)
2020	Flood, Cyclone (Amphan)
2021	Flood, Cyclone (Yass, Gulab, Jawad)
2022	Flood
2023	Flood, Cyclone (Michaung)
2024(Till August)	Flood, Cyclone (Remal)

(**Source:** From various literature)

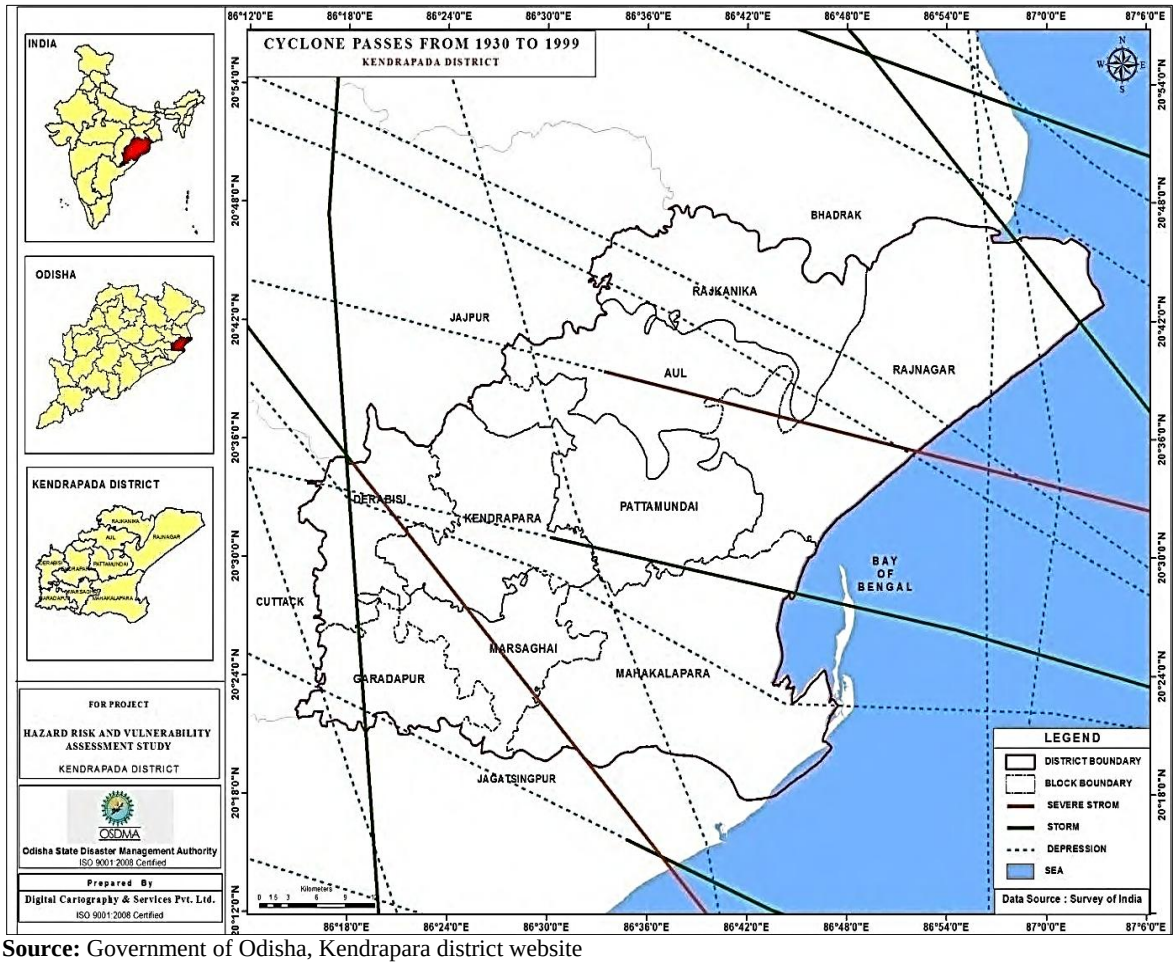
Kendrapara: A Vulnerable District to Disaster

Kendrapara district is vulnerable to both cyclones and floods along with sea level rise. Cyclones like Super Cyclone (1999), Phailin (2013), Hudhud (2014), Fani (2019), Bulbul (2019), Amphan (2020), Yass (2021), and Jawad (2021) had a disastrous impact on this district. It also faced floods in the years 1999, 2001, 2003, 2006, 2007, 2008, 2009, 2011, 2014, 2020, 2022, 2023 respectively (Kendrapara District Report).



Source: Government of Odisha, Kendrapara district website

Fig 5: Mult hazard map of Kendrapara district



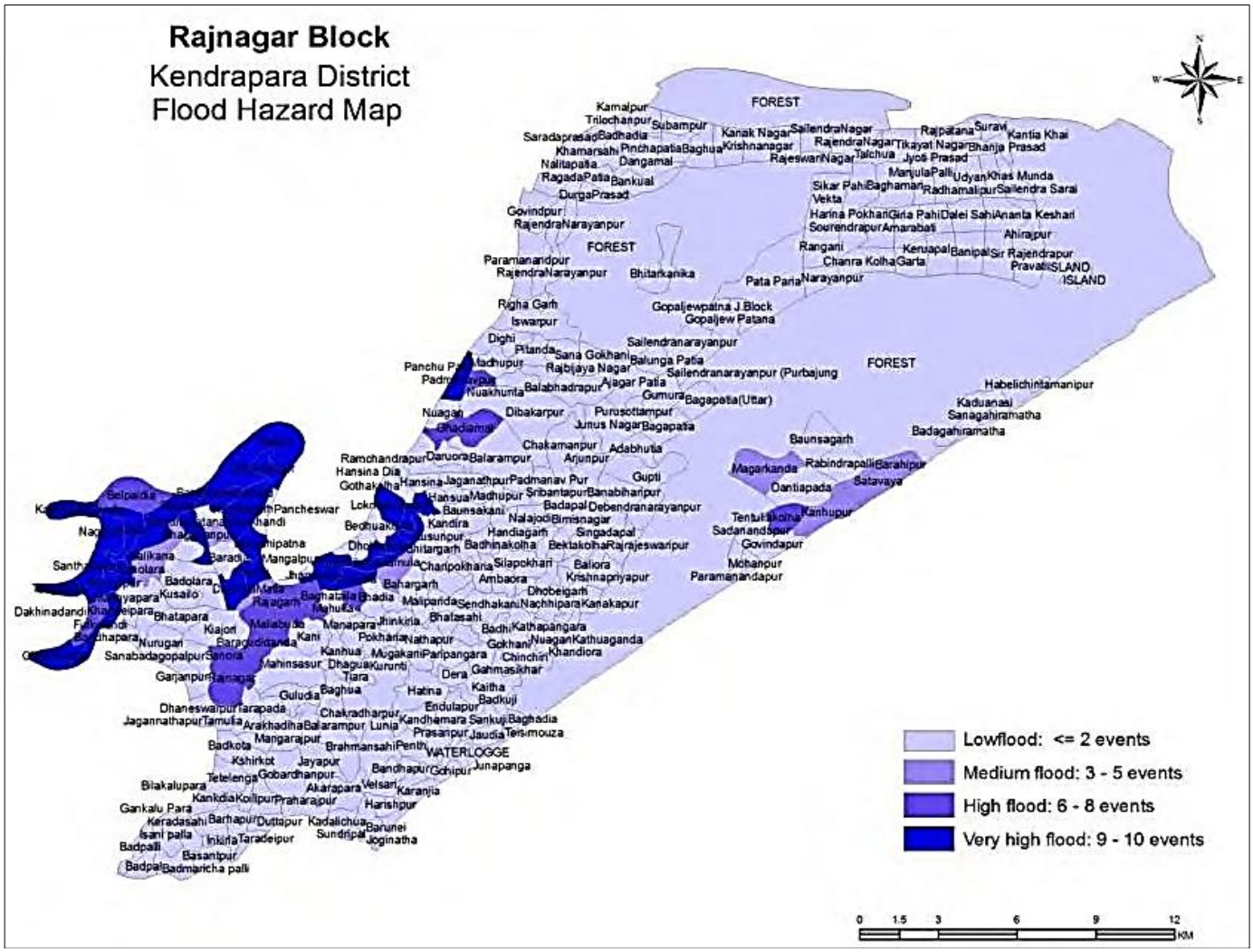
Source: Government of Odisha, Kendrapara district website

Fig 6: Map of Cyclonic path through Kendrapara district

Study Area

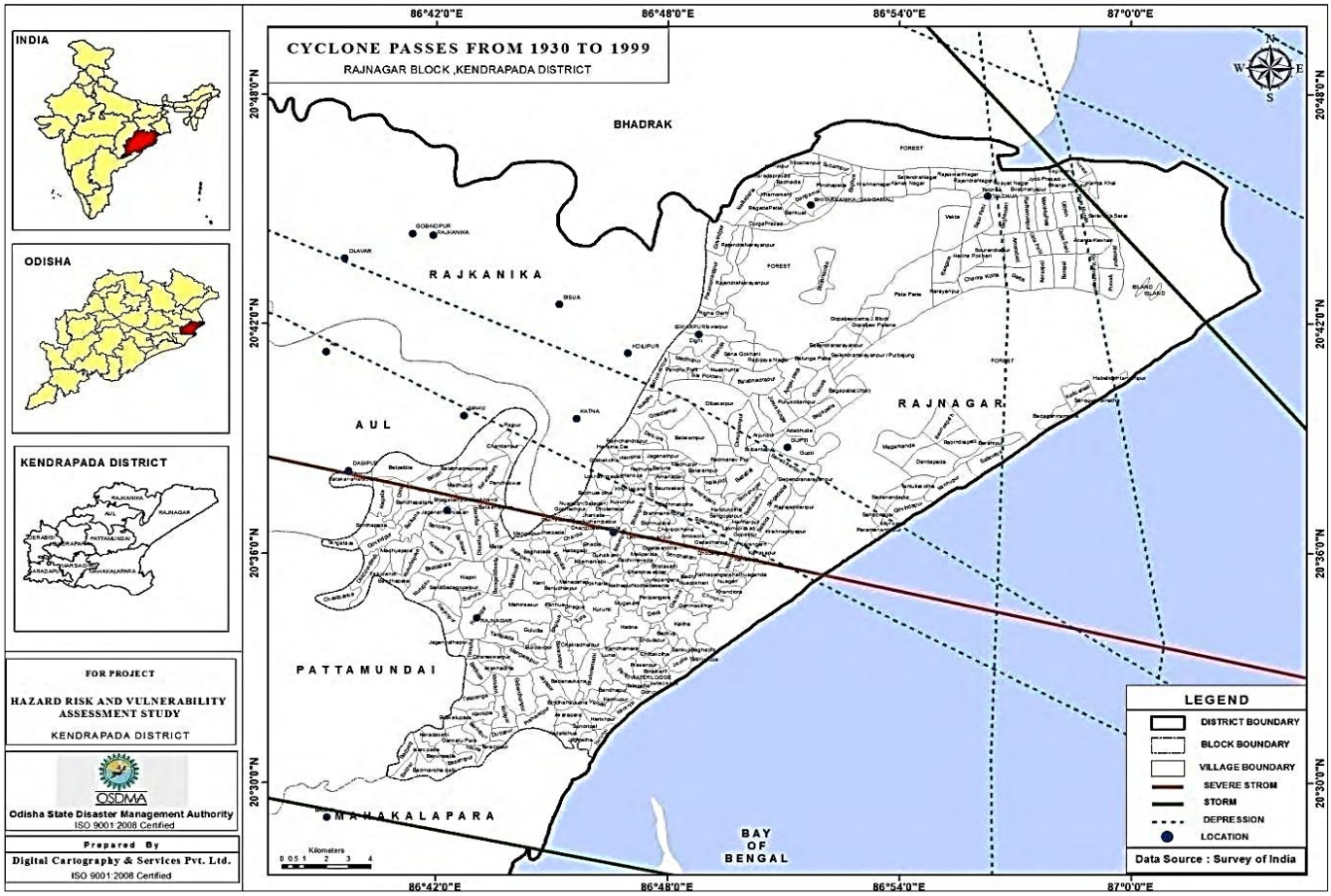
Satabhaya village is located within Rajnagar block in the Kendrapara district. This village is vulnerable to both cyclones and floods. Along with these two disasters, it is also vulnerable to sea level rise. In 2013 and 2014, this area was affected by both "Phailin" and "Hudhud" cyclones. In 2015, the area was reduced by 350 sq km due to the rise of sea level which wiped out 50% of the area of this village. In Satabhaya, there was a total area of 738 acres. The total household number was 140 and the total population was 247; the primary health facility was zero and the primary educational facility was 01. People depended upon rainwater for harvesting paddy. People migrated to nearby villages or to Gujarat and Kerala for their proper livelihood. The agricultural sector was based on partnerships between landowners and landless labourers. Due to the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), people preferred to be daily wage labourers. Through this scheme, they got job cards but did not get any job facilities. With the help of the "MO Kudia (My Hut)" scheme under the then Chief Minister Sri Nabin Pattanaik, a rehabilitation method was used for rehabilitating them to Bagapatia. The government promised people to build a school and temple after rehabilitation in Bagapatia (Banerjee, 2016) [6].

According to the 2011 census, Bagapatia village is also located within Rajnagar Block in the Kendrapara district. Satabhaya was regarded as a gram panchayat of Bagaptia according to 2009 statistical data. The total population in Bagapatia was 85. The literacy rate was 47.06%, and the total number of households was 19. The government of Odisha rehabilitated the people of Satabhaya to Bagapatia in 2018. However, according to the secretary of the panchayat, the total number of households in the panchayat is 611 and it has a population of nearly 4000.



Source: Government of Odisha, Kendrapara district website

Fig 7: Satabhaya and Bagapatia villages in Rajnagar Block of Kendrapara



Source: Government of Odisha, Kendrapara district website

Fig 8: Map of Cyclonic path through Rajnagar Block

Impact of Disasters on Bagapatia

Though the people of *Satabhaya* rehabilitated to *Bagapatia* they are still affected by various disasters. The people of Bagapatia are facing disasters like cyclones, floods, heat waves, lightning, etc. A total number of 577 families (*The New Indian Express, 2022*) [28] are rehabilitated in Bagapatia, but till now, the same fear is within them related to disasters.

During the Focus Group Discussion, they opined as follows: "*We are not able to sleep at night as we have a fear of floods and cyclones. We got home to stay but we feared of destruction of our homes due to high winds during cyclones or waterlogged situations during the flood. There are cyclone shelters but we fear to go to the cyclone shelters due to the low capacity of the shelters. As a result, we preferred to stay at our home."*

According to the people who relocated and those who are permanent residents said that *"the number of shelters is less in proportion to the population of the village. Due to this, we are not preferring to go to the shelters during disasters. So, we prefer to stay back by knowing the fact that the disaster can affect our lives due to inadequate cyclone shelters."*

The statements of the respondents signify that the psychology of the people is so much affected that they cannot get out of it. As there is overcrowding at a shelter whose capacity is not like that of population, people prefer to stay back by knowing the fact that the disaster can affect their lives because of inadequate cyclone shelters.

Resilience

The State government of Odisha facilitated people with the "Mo Kudia" (My Hut) scheme. Through this scheme, each family was given 10 decimals of land for building their houses. But no step was taken by the authorities to make the houses resilient to cyclones and floods. The houses are affected by the dampness when there are no disasters. Then one can imagine what will happen during the disaster. The awareness campaigns are organised by various authorities and institutions to spread the ideas about resilience, but practically, people are not getting any clear ideas related to resilient houses. At the local level, there are no policies formulated for building a resilient house. When there are no disasters, and when there are disasters in both situations, people are not getting sufficient food for their families. Through "Pradhan Mantri Ujjwala Yojana" (PMUY), people are getting the benefits of LPG, and through the "Rajiv Gandhi Grameen Vidyutikaran Yojana" (RGGVY), people are getting electricity benefits. But due to a lack of proper livelihood, 80% of their earning are dedicated to paying the electricity bill and buying the LPG cylinder. According to them, in *Satabhaya*, they used fishing as their livelihood and earned money, which was sufficient for them before relocation. But after relocation, the scenario is the opposite, according to them. These are the challenges to the resilience of people living within the area. In pre-disaster or post-disaster situations, the price of commodities is very high, and due to low earnings, they are not able to afford the food in the specified situations. There are various challenges to resilience in the specific area that will not help people but will make people more vulnerable.

Vulnerability

Recently, the people of Bagapatia have been facing various types of vulnerabilities like psychological vulnerability, social vulnerability, economic vulnerability, cultural

vulnerability, gender-specific vulnerability, and educational vulnerability etc.

Psychological Vulnerability

People have a fear of cyclones and floods. They have faced many cyclones like the 1999 Super cyclones, Hudhud, Fani, and Yass. They are facing many floods almost every year. They are living in houses which have dampness. Hence, there is the possibility of demolition of their houses due to flooding. They have a fear of the cyclone as they are thinking that their roof will blow off due to the heavy wind. Bagapatia is nearer to the canal where crocodiles live. People are dying from attacks by crocodiles. They have kept cattle, hens, cock, and goats for their livelihood but those animals are attacked by the crocodile. Hence, they have the fear of losing their domestic livelihood. Many people, along with some children, are attacked by the crocodile many times.

They sometimes feel that they are staying in hell because of the regular cyclones and floods. The cyclone and flood are always trying to mould them to leave *Bagapatia*, but people have no way to leave this place. They are mentally fully disturbed by the cyclone, but they never gave up their life. Still, they are struggling in that place for a better future. People believe that one day their goddess *"Maa Panchuborai"* will listen to their words and all the problems will be eradicated soon. Psychologically, they believe in a goddess, when the cyclones, *"Maa Panchuborai,"* will protect them. According to them, their hope and aspirations are completely in the hands of *"Maa Panchuborai"*.

Social Vulnerability

According to the 2011 census in Bagapatia, the total population is 861, among them the population of the Scheduled Tribe is 146, the Scheduled Caste is 04, and the rest people belong to other castes. In this area, they are not facing much discrimination in relation to caste, as they are living in the village according to their caste. For example, in a particular area, only Other Backward Caste people live, in another particular area, only Scheduled Tribe people live, and in another specific area, only Scheduled Caste people live.

In social vulnerability, both the roles of male and female are emphasized. In the cyclonic period, women faced many problems. Not only females the children are facing problems during cyclone time. At the time of Cyclone, people were facing a lot of problems regarding communication and marketing. The road in this village is not good. People are facing problems in transportation from one place to another. The most important thing is that due to the social vulnerability, the rich and poor gap is very large at the time of the Cyclone.

Economic Vulnerability

They are facing class discrimination in pre-disaster and post-disaster periods. They are not able to have sufficient quality food as a relief due to their economic condition. The people who are earning much than others are getting sufficient amounts of food as relief in disaster-like situations. The people who are in a specified and reputed position always hide relief food for those who are regarded as rich in their village. They are not getting the facilities of the MGNREGA Act though they have job cards. The rich people are able to afford something for the better of their life but the poor people have to face a lot of problems. For financial security, they prefer to go to other areas along with other states like Kerala, Gujarat, and Tamil Nadu for work. According to the views of the people, poor section people are struggling for their livelihood at the time of the Cyclones and floods. The relief work is also not functioning well at the time of the cyclones and floods. The situation of the common people at the time of ridiculous. They are living in that village with only hope and nothing else in the future. They are hardworking people but they do not have a single penny of land to farming. Once their livelihood was fishing and farming but now they have to wait for the public distribution system. In that area not, a single hope to do better. The government agencies try to reach that place at the time of the cyclone but that is not enough for them for a happy life. Still, their precarious condition shows that the cyclone takes everything from them.

Cultural vulnerability

They respect their culture. They believe in God and Goddesses. Hence, they were not ready to leave Satabhaya by leaving their Goddesses. As the government promised to build a temple of the Goddesses in Bagapatia people became ready to be relocated. After relocation due to their belief in the Goddess *"Maa Panchuborai"* for proper livelihood, the men of the village are leaving their families and going to Kerala or Gujarat. They think that *"Maa Panchuborai"* will protect their families from any disaster-like situation. But they are feeling suffocating at the time of cyclones. They think that when a cyclone comes at that time, they have to adjust themselves with the other. They are based on religion and are very optimistic. At the time of the Cyclone, they think they have to challenge the cyclone. They want to follow the culture of their castes but it's not possible in the time of cyclones. That's why they are facing cultural vulnerability in the cyclone. Not only like that but the village surroundings are also completely on a cultural basis. People feel very sad at the time of cyclones for their culture.

Gender-Specific Vulnerability

Women are living with courage and fear in the village. According to them, no men are living in that village. The men are leaving the women in that village with the belief in the Goddesses. The Children, elderly persons, and Goddesses are protecting those women from any type of problems. In times of disasters, gender vulnerability comes to the forefront. From their problem to group Problems. Female members sacrifice much more than the male in disaster times. The gender gap between males and females shows gender vulnerability. During the disaster, the teenage girls along with the adult girls are facing sanitation problems due to mensuration. Pregnant women are facing a lack of medical facilities. They are facing domestic violence which is leading to mental health disorders. The rate of sexual harassment is increasing day by day. Exploitation is increasing day by day. The families do not prefer more and more girl children due to financial burden.

Educational Vulnerability

Due to the impact of disasters (cyclones, floods, rise of sea level), the children are facing educational vulnerability. The educational vulnerability here implies children are not interested in getting educational facilities due to various problems like losing their livelihood, an increase of poverty

in families, the psychological impact of disasters, migration from one place to another, lack of psycho-social support, etc. Children from this area are preferring to help their families by staying at home. Children prefer to do labour rather than go to school. Girls prefer early marriage rather than pursuing higher education to minimize the burden on their families. Some children prefer to go to school but after eight classes or after matriculation especially the boys, are preparing themselves to go to other states for work, as the bus facilities are also there to go to Kerala.

Rehabilitation

Rehabilitation refers to the restoration of the lives of people who are affected by any type of disaster. The government is trying to provide basic services to the needy people. Basic services can be provided to the people by providing the facilities for a proper livelihood. But in Bagapatia, people are not getting the benefits of ration cards and during relief without ration cards, they are not getting any food as a relief from the authority. Previously, they depended on fishing, but now they have lost their livelihood from fishing. They cannot depend upon agriculture because they have no sufficient place to farm. Hence, they prefer to go outside of their village. They depend upon other states for their livelihood. Young boys and middle-aged men are going to other states, particularly Kerala for their livelihood. They do not prefer any government job but they prefer to be labourers in other states. The Kerala government gave the bus facilities to take people from Bagapatia to Ernakulam or to other areas of the Kerala State. Men prefer to leave their families at home with their children and elders. They are earning nearly 10,000 in a month. They said that in the village, the temple was built. That temple is the temple of the Goddesses. According to them, the Goddesses are watching their families. In that village, men do not always live in their homes. They are leaving their women by depending on the Goddesses and the elders. They are facing food shortage problems. They are not getting any type of food security allowance. Awareness campaigns are organized in their village about dealing with any type of disaster. They have no land to cultivate as the government only provided land for their home. Due to a lack of food, they are facing various health related problems. They said that the quality of relief food is very low which is leading to create health issues. They are not able to afford food in the pre-disaster and in post-disaster periods as there is the emergence of a "black market" in pre-disaster and post-disaster periods. According to them, the road facilities are not provided in that area which is the cause of the communication gap between people and the authority. The government always sends people to survey about their problems. They spoke about their problems which are like a lack of communication facilities on the road, food shortage, threat to life from the crocodile, threat to life from disasters, a smaller number of cyclone shelters but till now those problems have not been solved, whereas there is the emergence of new problems.

Way Forward

The life of residents of Satabhaya was melancholic and the constant sound of the roaring sea added to the gloom. But after relocation, their problems are not completely solved. There is an acute shortage of drinking water, and sanitation remains to be a big issue due to a lack of toilet facilities. The administration provides 10 decimals of land and rupees 1.5 lakhs each for the construction of houses. But that money is not sufficient to build a house in that place. Because the Bagapatia village is completely near to the canal. In that canal, crocodiles stay. Common people were facing problems due to the attack of crocodiles. It is a challenge for the people to establish their life at Bagapatia. The *Satabhaya* people's main sources of livelihood were farming and fishing. But the sea took all the fertile farmlands. The government of Odisha issued only 10 decimals to a family and that land is also wet. People of that village completely lost their livelihood and they are facing serious issues with running a family. For the maintenance of the family, young people migrated to Gujarat, Kerala, and Tamil Nadu, where they earn some amount. This helps to run their family in the village. But that money is not sufficient to run a family. For the bread and butter, the newly married persons were also leaving for other areas. The precarious condition of the people shows how difficult it is to live a life. But they are always trying their best to manage everything.

The policies are there, but policies are not implemented properly in the particular region. The people are facing challenges, though there was relocation and rehabilitation facilities. Rehabilitation is paving the way to restoring the lives of people to a normal way. But in Bagapatia, after rehabilitation, people are facing more problems. They got home but lost their livelihood. They are away from the danger of sea level rise but near to the crocodile attack. They have a place for rehabilitation but are not able to get the facility of shelters during any disasters. They got the school facility but not able to get the facility's medical service. They are becoming labourer not in their own state but in Kerala, Tamil Nadu, and Gujarat.

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