

Qualitative assessment of physical and human assets after a coastal flood of Koyra upazila, Khulna, Bangladesh

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Abstract

Koyra is an upazila of the Khulna District of Bangladesh. It's the 2nd largest Upazila in Bangladesh located in the south-western coastal belt of Bay of Bengal and adjacent to the Sundarban mangrove forest. Like other coastal areas of Bangladesh, Koyra is a disaster-prone area. It is assumed that people of the coastal area will be adversely affected due to climate change impact. Most of the people in the area are engaged in the agricultural sector. The agriculture section has more vulnerable to the consequences of climate change, which negatively impacts their livelihood. Previous records and field surveys show that all most areas of Koyra Upazilla face flood hazards frequently. Therefore, inhabitants, household structure, road, and other infrastructures of Koyra Upazilla are supposed to be an element at risk due to flood hazards. This research aims to identify physical and human resources and assess the coastal flood impacts on both physical and human resources in the study area. The main focuses of this study are – accommodation/settlements, livestock, agriculture, water and sanitation, health, and education. Qualitative techniques are applied to collect and analyze data.

Keywords

Coastal Flood, Human assets, climate change, Bangladesh, livelihood

1. Introduction

1.1. Background of the study

Bangladesh is a riverine and flood prone country located in one of the largest deltaic regions of the Ganges, Brahmaputra, and Meghna. According to the Bangladesh Water Development Board (BWDB), there are currently about 230 rivers flowing in Bangladesh (summer and winter), although the number is unclear at some sources. According to BWDB (Bangladesh Water Development Board), 310 rivers flow in the summer, although they have republished another study in the study section where 405 rivers have been described. Old sources and history tell 700 to 800 rivers, but most of them have dried up or become extinct due to distraction and pollution (Rivers Information, 2020). Due to this geographical location, Bangladesh is facing floods year after year. Sometimes these floods are limited to tolerable levels but in most cases, it is dangerous. About 230 rivers are spread in Bangladesh like a complex network. Among these rivers, 56 are inland, which flows into Bangladesh from other countries' rivers. Inland rivers stay within the country's territory, and their flows do not depend on the other countries. There are 57

transboundary rivers in Bangladesh (Rivers Information, 2020). More than 90% of the river flows are in the upstream countries (Michael, 2017)(Water and Energy Uses in an Upstream-Downstream World, n.d.). Bangladesh is playing an important role in river ecology as it is located at the end of the outflow of these rivers. The experience of recent floods has shown that an average of one-fifth of the land in Bangladesh is inundated annually. Agriculture and human habitation, the lives and the health of people, livestock have been affected due to floods. Regional and locally heavy rains and many physical factors are responsible for the floods in Bangladesh. Researchers have almost certainly testified that global climate change and deforestation at the local and regional levels play a significant role in the process. The physical causes of floods include is the recent abnormal melting of glaciers in the Himalayas, declining drainage capacity of rivers, tributaries, and channels due to various reasons like unplanned infrastructure construction and discriminated deforestation. This is reducing the navigability of river's tributary channels and other channels. As a result, rivers are taking shape quickly due to heavy rain. The recent floods in the southern part of Bangladesh are mainly due to heavy rains in the upstream countries.

From a scholastic perspective, numerous parts of these natural issues of Bangladesh have remained understudied. There are not many examinations on flood, and its optional impacts of riverbank disintegration uproot from the work viewpoint. There have been restricted researches on the causes and consequences of floods. This examination explicitly produced information on one village named Gobra in the Khulna region. In light of field study, the exploration gives relevant financial and social information at the experiential level.

The investigation of this study has been done to create information on the effect of flooding on the general lives and employments. Koyra is one of the areas with exclusive settings for the flood. Most of the parts of these areas are low-lying, and the landmass is flood plain, which makes the area risky for the people. Most of the areas of the study area are surrounded by the river. The populaces on the riverside are expanding each year even though the flood continues to devastate their life. In any case, this doesn't quite influence their vocation, just as social and monetary variables.

1.2. Objectives

The research is based on three objectives.

- Identifying physical and human resources in the study area from local people.
- Assessing the impacts of the coastal flood on physical resources in the study area.
- Assessing the impacts of the coastal flood on human resources in the study area.

2. LITERATURE REVIEW

Floods are not a new disaster in South Asian countries. Due to its geographical location, Bangladesh is seen as one of the world's examples of flood vulnerable regions. The history of floods in the subcontinent shows that present Bangladesh was created due to floods in 18AD.

On November 9, 2019, cyclone Bulbul landed across India. The storm entered Bangladesh through the Buri Golini range in the Sundarbans in Shyamnagar Upazila of Satkhira district. The cyclone lasted about 36 hours in Bangladesh: it was one of the longest-lasting cyclones in the country for more than five decades. It results in considerable floods in Bangladesh (Cyclone Bulbul a month on the impact on Bangladesh's coastal communities, 2019). End of May 2019, cyclone Fani landed in Bangladesh. But it weakened over time due to tri-effects (high winds, rainfall, and tidal surges) it caused floods, damage, and loss in Satkhira, Jessore and Khulna regions and 26 districts (Kaiser Rejve, 2019).

The 2016 floods have been called the most significant devastating flood in Bangladesh. A total of 19 districts in North-Western and Central Bangladesh were affected. July 28 of 2016. The water level of Jamuna raised 121 cm is flowing over the locality. As a result the low-lying areas and Char areas of Jabalpur via submerged. As a result, more than 3.4 million people were affected (Ali, Hasanat, & Md., Floods impact and protection, 2020).

Category 1 cyclone Aila hit the southwest coast on May 25, 2009, killing 190 people and injuring several others. Although Aila was a cyclone by definition, its impact was more significant than that of Super Cyclone SIDR off the coast of Bangladesh. Using data from a variety of sources, the survey identified some of the economic costs and suffering for coastal people as a result of the storm surges (Mst. Rupale Khatun, 2017).

Bangladesh is at risk of floods, mainly in the southern part, floods occurring in Bangladesh due to Cyclone Sidr (November 15, 2007). It was a cyclone that brought disaster to South and Central Bangladesh. It killed about 4,000 people and injured nearly 30,000. Official sources say the numbers are even higher. The aftermath of the cyclone was even more devastating. Sidr flooded the floodplain with 100,000 homes. About 3 million people were evacuated from the cyclone zone, but the result was still not beyond imagination. The second effect of a cyclone or devastating flood is that vacant land, trees have been uprooted, crops have been destroyed, entire roads and bridges have been completely washed away, telephone poles have fallen to the ground, electricity has been cut off, and livestock have died. This situation severely affects our already fragile economy (Hossain, Natural Disasters Impact on the Water Cycle, Resources, Quality, and Human Health, 2014). The 2007 floods are called the greatest flood of 2007. It is flooded 72300 square kilometers which is 42% of the country according to the 2003 government disaster management. In Bangladesh, 18 out of 64 districts were affected by this floods (Uddin, Matin, & Meyer, 2019). Cholera broke out in the form of an epidemic after the floodwaters receded. The history of the flood problem can be traced back to the floods loss of life, loss of livestock crops, and homes, it's a burning issue (Ali, Hasanat, & Md., Floods impact and protection, 2020). In some cases, especially the worst flood of 1986 and 1996, about 80% of Bangladesh's land has been damaged. Agriculture and human habitation, the lives and the health of people, livestock have been affected due to floods.

The 2004 floods hit in July. It flooded 55000 square kilometers of Bangladesh. The floods occurred in Bangladesh due to heavy rains and floods from India. This huge amount of silt is dumped in Bangladesh by making the river channels more inefficient and reducing the comparative hydraulic radius. The tectonic rise of the Himalayas means that the rate of sediment erosion increases as rivers are more likely to erode. Sediment is dumped, and flooding may occur (Bangladesh LEDC, 2019).

The flood that hit Bangladesh in 1978, 1988, and 1998 were the worst floods in the country's history. The floods inundated about 60% of the country. The torrents in different areas last for 15 to 20 days. It is the deadliest and most devastating natural disaster in the history of the country. The flood of 1988 was discussed all over the world. This flood was caused due to rain. The first three days of rains flooded the country's three main rivers. The 1998 floods are one of the worst in the history of Bangladesh. Its duration was about two months. About two-thirds of the country has submerged this flood due to heavy rainfall. (Ali, Hasanat, & Md., Floods impact and protection, 2020) (Ali & Hasanat, Various effects of flood and its recovery, 2020).

The causes of climate change are also linked to Bangladesh's geographical location and are most climate-sensitive in South Asia. Due to continuing urbanization, industrialization, and vigorous deforestation, the soil loses its capacity to absorb rainwater. These ultimately lead to severe flooding in the urban areas. According to a report by the Commonwealth Scientific and Industrial Research Organization, Bangladesh,

India, Vietnam, China, and the pacific region will be homeless by 2060 due to rising sea levels alone (Wallemacq, 2018).

As an agricultural country, Bangladesh is constantly dealing with the effects of climate change through heavy rains, droughts, river erosion, and floods. The average rainfall has increased by about 100 mm in almost all seasons. Geographically our country is a deltaic river basin in the Himalayas. Nightly two percent of the floodwaters that come to our country come from neighboring upstream countries (Haskoning, 2003).

The rainfall in the interior rivers of our country is significantly less than the rainfall in the rivers of Brahmaputra, Ganges, Meghna, and southeastern hill basins. Six percent of the floodwater is caused by inland rainfall. It is responsible for climate change such as deforestation, flooding due to various reasons, including the rising chars in the river, the human suffering has increased due to the floods (Bangladesh, 1999-2020) (Bangladesh Average Precipitation, 2019-2020).

Thirty years of flood research experience shows that people start their economic activities with stronger morale (M.A. Rakib, Islam, Nikolaos, Bodrud-Doza, & A.H. Bhuiyan, 2017). But when waterlogged, their dependencies increase due to homelessness, joblessness, and unavailability of resources. So we have to stand by with all the necessary assistance during and after the flood. The government is preparing for the catastrophic floods this year but the combined support of people from all walks of life will give hope and benefit to the flood victims. Post-flood rehabilitation prevents outbreaks of flood diseases, providing long-term assistance to children and women with disabilities, particularly poor and day laborers living with daily income.

3. The study area

3.1. Geographical Introduction

Modinabad village of Koyra Upazila is situated in the southernmost part of Khulna District under the Khulna Division, one of the 64 districts of Bangladesh. The geographical location of Koyra thana is in the North of Paikgachha thana, South and East of Sundarbans and Dakop Upazilas, West of Shyamnagar, and Asashuni Upazilas of Satkhira District. Most of the population of this area depends on seasonal agriculture and shrimp culture. Rice, potato, Vegetables, etc.; are the main products of that area. The total population of this area is 25716. The literacy rate of this area is 28.06% (Koyra Upazila, 2020).

Koyra is an upazila of the Khulna District of Bangladesh. It's the 2nd largest Upazila in Bangladesh located in the south-western coastal belt of Bay of Bengal and adjacent to the Sundarban mangrove forest. It is assumed that people of the coastal area will be adversely affected due to climate change impact. Most of the people in the area are engaged in agricultural sector. The agriculture section is more vulnerable as the consequences of climate change negatively impact their livelihood. Koyra is one of the upazila in Khulna district located very near to world heritage Sundarban region. Climate change has a negative impact on farmers' livelihood because it reduces their food production and potential income level.

Previous record and field survey show that all most all area of Koyra Upazilla face flood hazard frequently. So all the people, household structures and roads of Koyra Upazilla are supposed to be an element at risk due to flood hazard. Most of the year, people in this area are facing floods. This type of floods remains 10 to 15 days found from the respondents. Local NGOs shows proof of the flood history of this area. Talking with the respondents, it seems that the state of the riverbank is the most vulnerable in this area for affecting flood. There are eight primary schools, 3 High Schools, 3 colleges, 5 Mosques, and six more madrasahs in this area (Koyra Upazila, 2020).

3.2. Food Adequacy

The scenery of nourishment in this area is hopeless. 33% of the total people have nourishment adequacy for all the year. Most of the part of the population in this area has insufficient nourishment for even a season. And it is increased during the floods and downpour issues in the investigation zone. Especially those who live on the river bank are an extremely poor condition about their nourishment issues.

3.3 Seasonal Relocation

Floods destroy their homes, lands, and their food, and also their jobs. They have no other way of supporting their family. Then they only need work to keep their daily lives. They start leaving their region, land, and homes to seek support works. It was shared that after the huge flood of 2019, individuals began to relocate regularly in looking for daily work to make their income. From regular movement has become a typical practice in this area. They do it for their betterment of lives and the security of food and housing. The main person of the family is looking for a job or work to support his or her family for food security and health security. They tend to go towards the town for work. Some of them taking daily labor to support their family.

3.4 Substructure

Most houses are made of tin and mud. Accordingly, the house suffers some damage during a series of storms. After the storm period, it needs to be fixed, which always requires lots of cash. After the center-gathering conversation, it was realized that after the floods, most of the year's downstream bank disintegration is now one of the most recognized supporting effects (Koyra Upazila, 2020). Koyra Upazila has two big bridges with Khulna City. The study areas without bridges are entirely isolated from the southern part of the Khulna district. This isolation is further felt during the rainy season when there is waterlogging all around and there is a risk of a boat crossing the river due to the river's strong currents.

3.5 Livelihood

In the study area, farming and shrimp culture are now the most recognized professions. Thirteen of the twenty-three respondents to this observation were directly involved in horticulture and shrimp culture for their main earning source. Day laborer is now a regular surprise. Occasionally business is another common source of income. The basic premise of paying the salaries of the four respondents in this investigation is working as an assistant in a shop. Two investigated respondents said that the animals were the main source of their family's basic salary. The rest of the respondents in this investigation included educated homemakers, students, and nearby NGO experts.

4. Conceptual framework

The Padma, Meghna, Brahmaputra, Jamuna, and Teesta rivers have flowed over the danger zone causing floods in the country. The main cause of floods is excess water and heavy rains coming down from upstream. Floods not only ruin people's lives their role in the economy of the whole country. To analyze livelihood assets it is required to concentrate on human capital, physical capital, social capital, natural capital, and financial capital. Livelihood assets are segmented in human, physical, social, natural, and financial capital. It is seen that the impact of floods in this area is so dangerous.

Human capital is an indomitable asset or quality that is not listed in the balance sheet of any organization. It can be classified as the economic value of a worker's experience and skills. These include resources such as education, training, intelligence, skills, health, and the loyalty and punctuality of the owners. **Physical capital** is the three main causes of production- land labor and capital. It contains static,

man-made products that help in the process of creating a product or service. Equipment, buildings, offices, or warehouse supplies, vehicles, and computers owned by an organization are considered part of its physical capital. The term **social capital** refers to a positive product of human interaction. The positive result can be tangible or invisible and may include useful information, innovative ideas, and future opportunities. It can be used to describe the contribution to the success of an organization that can be attributed to personal relationships and networks inside or outside an organization. **Natural capital** is another term for stocks of renewable and non-renewable assets (e.g. plants, animals, air, water, soil, minerals) that combine the flow of human benefits. And **financial capital** (also commonly known as capital or equity in finance, accounting, and economics) an economic resource that is measured in terms of the amount of money used by entrepreneurs and businesses to make their products or to buy the products needed to provide services in their sectors. Where the economy is based on their management, such as retail, corporate, investment banking, etc. In other words, financial capital is the funds provided for the business of internal reserve income or donors (and investors) for the purchase of real capital equipment or services for the production of new products and services.

Livelihood assets are segmented in human, physical, social, natural, and financial capital. It is seen that the impact of floods in this area is so dangerous. The economy of Bangladesh is still dependent on agriculture. Floods caused extensive damage to agriculture. Rural infrastructure is damaged by the flood in Bangladesh where the highest number of people living. Most of them lead their lives hand to mouth. The floods have submerged the roads and cut off their livelihoods. As a result, people are forced to live in human lives due to a lack of food in the flood-hit areas. People's houses, agricultural lands, and houses were away by the floods. Many people become landless. The study emphasizes the effects on physical and human assets after a coastal flood of the selected area. Livelihood resources refer to the resource base of the community and the different classes of families.

5. Methodology

This study was done in the chosen village, Gobra, under Koyra thana of Khulna district. To identifying the resources, a transect walk method was conducted among the villagers. An overview was completed to discover the influenced populaces in flood and waterway bank disintegration of the village. The sample determination methodology of this examination is purposive. A straightforward self-constructed tester conducted the review by the analyst. The examiner is adjusted to the final language and interpreted in English to test the possibility of changing the meaning of the examinee.

Authorization was taken from each volunteer member by utilizing the assent. Toward the start of the information assortment, the specialist educated each member about this investigation's moral and classified issues. It was additionally informed that members had the option to decline to respond to any question of the exploration and reserved the option to pull back from any piece of the examination.

Subordinate factors right now are the diverse business resources like a family unit, creature, land, and so forth. The institutionalized business resources evaluation scale estimated these reliant factors. A considerable number of family unit meetings are organized for gathering information from the members of the households. The survey was primarily centered around the flood impacts on the physical resources of the influenced populace in the examination regions. The factors right now are the floods and their effects itself. All twenty-three respondents report the flood circumstance in the investigation region just as the significant effects for these factors. The respondents were solicited to clarify the effects of the substantial surge of the ongoing future.

Also, optional information and data were gathered from the pertinent association, for example, Bangladesh Water Development Board (BWDB), Google Guide, Bangladesh Bureau of Statistics (BBS), and

Diverse neighborhood NGO's. Right now, the whole populace of the town, instructive level, actual yields, and primary salary wellspring of that town are gathered. With the assistance of the information assortment examiner, top to bottom meeting and key witness meet were directed with twenty-three family units. For a productive and enlightening information assortment, this examination utilized members' understanding, view, and conclusions to achieve the destinations of this investigation during the questionnaire survey. It concentrated on their major household livelihood strategy, types of damage by the flood, most affected assets of households, and its recovery system. The study also concentrated on economic and farming resources like cash crops and fisheries, total losses, and recovery. It also emphasizes the water and sanitation system in the selected study area and impacts the health issues in the flood-affected area.

6. Results and Discussion

The observation area is one of the most vulnerable villages for flooding in Khulna district, Bangladesh. Inconsistent flooding causes indispensable effects, particularly on the employment segments. The majority of the individuals straightforwardly rely upon the farming division right now. It also affects the horticulture of these areas. The vast majority of the respondents of the investigation said that agribusiness as well as the domestic animals are the most influenced during the flood.

6.1 Accommodation Sector

It has been observed that maximum houses are made of natural material like: jute stick, wood and bamboo. Mud, tin sheet and Golpata (a special kind of leaf in Sundarbans) are used in floors and roofs. 90% of the respondents indicated that their houses collapsed during coastal flood. Furthermost, mainly the people whose houses collapsed due to floods, said that the flood water enters their houses every year. Less than half of the respondents complained that the floods damaged their homes and they were forced to relocate to other alternative areas and the rest remained inside their homes. All respondents to the survey said that the floodwater enters their homes and the water level rises day by day. Seven of the twenty-three respondents said that preparing food and making fires was the hardest job during the flood.

Almost all respondents said that they need to prepare a hanging platform for floodwaters to hold on to beds and other furniture and valuables. Half of the respondents said that it takes a lot of money to build a house to survive a flood. The discussion revealed that some displaced families sent their children to stay with other relatives during the floods. It somehow disrupts their way of life and social networks.

The respondents briefly moved from the ground inside the house to a higher place with increasing water levels. They said working with a cooking chimney during the flood was the most troublesome task. As a result, respondents lament that they endured a great deal when they set up their dinner. Conversations with these family units ultimately demonstrated a positive desire to transition to a more secure safe home with stable fruitful land enforcement experts. It is worth mentioning that a few family units have moved to other areas. Some respondents said that they lost their homes to river erosion as the second effect of regular flooding in the region. Two respondents complained that they were forced to relocate their possessions as their farmland was damaged due to riverbank erosion after the previous year's floods. Most respondents and locals said the floodwaters had been in the water for at least 10 to 15 days, resulting in the water making the manhole more soft and brittle. Thus, after the floods, bank collapse destroyed homes, schools as well as agricultural land.

6.2 Livestock Sector

Half of the population is dependent on their livestock as a source of income for their support. Livestock, ducks, chickens, and goats are the different types of livestock in the field of study. Some families in the study sample group depended entirely on their livestock income. Cattle and other livestock are severely affected during the floods. Damage to animal homes is one of the main problems of floods. The crisis of animal food during the floods was the main complaint of the respondents.

Information on a variety of effects was obtained from the family. Eight of the 23 respondents said they do a lot of damage to save their cattle from floodwaters. Sometimes they send their cattle to the barrier. Fields and grasslands were under floodwaters. Gathering food for cattle and creating a safe place to live was not the only major problem. They were moving those cattle from one place to another problem during the time of the flood. This is because they focus on protecting the livestock in their home. Respondents said that the floodwaters increase day by day and they do a lot of damage to the food maintenance of the cattle because they do not go to the flood shelter. After all, the flood shelter does not allow them to take their cattle. Some respondents said that they were forced to sell their livestock because they did not have a safe and suitable place to eat.

6.3 Agriculture/Business Sector

Most of the investigated households indicated that the floods damaged their crop fields. It was even clearer that most of the crops that were damaged by the floods were major crops. Sustainable, safe drinking water was the main problem during and post-flood situations, respondents said. Most respondents complained that the main crops were under floodwaters at the time of the floods. All respondents in the family said that the floodwater enters croplands and causes great damage to cash crops. Some of the respondents' main occupations were shopping and they said that the floodwaters flooded their shops and they were forced to close their shops during the floods. Economically they suffer a lot due to crop and business losses. Respondents said that sometimes floods occur suddenly and they cannot collect their main crops at that time. As a result, total crop production is going to be affected.

There were some experts at the gathering; their essential occupation was the creation and sale of shrimp. During the flood, most of the extreme lakes were overflowing with rising water so the shrimp creation was destroyed and the shrimp were completely heading towards the open water. Respondents said that one year ago, the sudden floods destroyed the shrimp production. There was an extreme financial emergency during and after the floods.

The basic negative effect of floods on horticulture is the water availability of the fertile land. Each crop has an obvious length of time to fight to waterlog, yet the harvest is severely affected when this term is over. It is noteworthy that the flood is a permanent kind of fiasco. Thus, the length of water logging is a major factor for any crop production. That is why any flood easily damages most cash crops. Each respondent said there were already several types of symptoms before any flooding. However, on this day the flood brings no notice or early signs.

6.4 Water and Sanitation Sector

All respondents in all households stated that the floodwaters severely damaged their water sources. The tube wells were contaminated by the floodwaters as well as the ponds overflowing. The main source of water was floodwaters at that time. Most respondents said that they collect their drinking water from a tube well far from home but had flood water for other household and self-care work.

Also, two-thirds of respondents showed that their primary water hotspots for drinking were affected by the flood among the tested family units. A large portion of the respondents said that each cylinder's well or drinking water source was affected during the flood. As a result, safe drinking water was difficult to deal with. Most of the respondents said that they had collected water far away from their homes or had been drinking rising water which had affected by the saline water of flood. Because of this risky rising water, many respondents are suffering from a variety of water-borne skin diseases in their relatives, especially children. All the respondents in all the families said that they use the open space of floodwater for their sanitation. Some said they used a boat to get far from home and chose a small tree land to carry out their sanitation work.

Due to this sanitation process, the floodwater becomes contaminated with various bacteria and toxins. As a result, these floodwaters easily cause various waterborne diseases. Water and sanitation facilities are the most affected sectors. During any flood, most of the tube wells go under the floodwaters and safe water for drinking and other activities becomes unavailable for this region. Due to sanitation facilities or infrastructural damage during floods, people are forced to complete their sanitation work in the open air or in a healthy way.

6.5 Health Sector

The study also found that more than half of the 23 sample households indicated that at least one member of their family became ill during the flood. The most notable diseases in the sample family are diarrhea, malaria/fever, and skin diseases. Respondents also pointed out in the survey that the floodwaters lasted for 10-15 days and the roads and transport were underwater and as a result, the family members of the respondent were forced to go into the floodwaters. Because of this, they are easily affected by fever, diarrhea, and itching. They further noted that the economic cost of treating their family members for flood-borne diseases was high.

Besides, other visited family units have proven that they were exposed to another illness after the flood period, for example, hacks, scabies, injuries, and rashes. The study additionally determined that households who drink water from the river, the majority of them become ill. They had small gatherings of family units that identified the borehole (a major lake for safe drinking water) as their primary water source. This means that family units will remain powerless against episodes of increased illness as long as the waterways remain their main source of drinking water. This is due to the extended sullen that occurs during floods. Though deep tubewell water is the safest source of drinking water, we think, but during the flood, it is not possible to manage it always. Safer drinking water source is not very available in this area. It has a long-distance that is not possible every time to collect because the transport system is damaged during the flood. People use polluted water and it causes many water-related diseases like cholera, diarrhea etc.

6.5 Educational Sector

The education department was also affected during any flood. In the area of investigation, water has flooded in every educational institution. In this manner, every educational institution was closed during the flood. All respondents in the family unit said that a wide range of educational bases was closed during the floods. The largest educational base used as flood cover was also wide. A section of the respondents said that the delay in opening school was extended with the rising water. In this manner, the rising water has damaged the school furniture for some time which has caused huge financial misfortune. Several respondents from the family unit said that with the help of school authorities and the surrounding network of volunteers, educational institutions are consolidated after the flood period and they have

fixed the road and transportation offices. During a flood, educational foundations are used as flood cover should be followed by extensive educational practices. Immediately after the flood, the study rooms became inoperable due to sleeper floors and broken furniture, reducing some efforts to start similar educational activities. Sometimes, home furniture can't be used as that break. Thus, one colossal measure of cash is expected to recover misfortune.

7. Conclusion

As discussed across different sectors, it is clear from the study that the floods are detrimental to the socio-economic conditions of life and livelihood of the people of the Gobra village community of Modinabad Union. The study has established that flood resilience and depth play an important role in living patterns to a large extent. It is even clearer that floods have various underlying causes of people's vulnerability and have created a challenge to reduce or reduce the proximity of flood-prone areas, living in flood-prone areas and poverty has been identified as the main underlying cause. Apart from that, some superstitions about floods also play an important role in increasing the risk of floods.

Experiments have additionally shown that floods in a single section can affect different sections of society. Under the benevolent region, the prevalence of various diseases (jungle fever, run, and hacking) was responsible for the impact of the floods on water sources and sanitation offices. The issue of waterway stigma and water treatment from boreholes increases the risk of recurrence during flood sorting. Nevertheless, openness to the welfare administration was an issue due to the damage to the lodging department structure (roads and extensions) caused by the floods causing damage to roads and transportation.

Also, school participation was disrupted due to roadblocks under the area of instruction. From the experiment, uninterrupted family units adapt differently when affected by flooding. The community should use strong materials to adapt to the floods and call for the construction of houses away from flood-prone areas. Different government initiatives should be increased in these situations. Increase motivation to the affected people for coming back to their normal life. Rehabilitation programs should be considered for helpless yet potential ranchers. Perhaps, more advanced and adaptive measures need to be taken to mitigate and prepare for the effects of the floods. Most importantly, the key issue must include all stakeholders to upgrade the flexibility of flood networks.

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