

Table 7: Displaced People Receiving Assurances From Governmental Organization

	Frequency	Percentage (%)
Giving Housing Materials	10	8.33
Building House	9	7.5
Abason	4	3.33
Giving Food Items	24	20
Giving Food Items and Clothes	8	6.67
Giving VGF Card	7	5.83
Payment (20,000)	55	45.84
Payment (20,000) With Food Items	-	
Payment (23,000)	-	
Camp (Tent) and Food Items	-	
Cash Payment	-	
Not Applicable (Nobody Didn't Work Here)	3	2.5
Total	120	100

In an effort to assist the 19.16 percent of the population who had been evacuated, the government-built homes, provided housing supplies, and established Abbason in the study area. In the research area, over 32.5 percent of those who were relocated received assistance from a government organization, mostly in the form of food, clothing, and VGF cards. Most of the 45.84 percent received cash compensation (20,000 tk).

2.5% claimed that neither the government nor any other organization was in charge of them. Human displacement is common in the Banskhali region as a result of climate change-related disasters. The purpose of the following table was to examine the relationship between the patterns of life and livelihood of displaced persons in the research region both before and after their displacement.

Table 8: Level of Satisfaction of climatic displaced people

Livelihood indicator	5	4	3	2	1	Total Calculation	Weight	Remarks
Family Income	8	18	7	26	8	100	0.67	Satisfied
Occupation	4	2	10	45	6	105	1.56	Strongly Dissatisfied
Ownership of House	0	2	6	54	5	110	1.64	Strongly Dissatisfied
Source of Drinking Water	0	1	3	50	13	119	1.77	Strongly Dissatisfied
Sanitation Facilities	8	7	5	32	15	117	1.74	Strongly Dissatisfied
Health Care Facilities	3	10	8	50	9	100	1.49	Strongly Dissatisfied
Women Securities	2	4	8	40	14	114	1.70	Strongly Dissatisfied
Social Securities	0	0	5	42	20	120	1.79	Strongly Dissatisfied
Coping with Natural Disaster	0	0	8	50	9	112	1.67	Strongly Dissatisfied

The table 8 illustrates that all most 80% people strongly dissatisfied about their displaced places and 20% people satisfied about their new displaced place.

3.5 Relation Between Climate Change and Coastal People Displacement

Floods in 1988, cyclones in 1991, 1997, 2015, and finally storm Roanu in 2016 all had a huge impact on Banskhali Upazila. During these periods, everyone was temporarily displaced, and a sizable part moved permanently. In addition, this island's size is decreasing every year due to

coastal erosion, which also frequently uproots residents. The following Table-9 aimed to investigate the connection between climate change and displaced coastal residents in the studied locations. An effort has been made to statistically assess the association between climate change and coastal population displacement in both research areas in order to more thoroughly analyze the data.

Table 9: Relationship between Climate Change and Peoples Displaced From the Study Areas

1 st Variable	2 nd Variable	Study Area				
		Chi-square (χ^2)				
		Cal value	Tab value	Result	Df	Sig.*
Displacement of Local People	Flood	1.8342	9.488	-7.653	4	NS
	Cyclone or Storm surge	79.1562	9.488	66.69	4	S
	Bank Erosion (river and sea)	93.805	9.488	84.317	4	S
	Salinization	1.5222	9.488	-7.965	4	NS
	Governmental development Activities	Required response didn't detect				
	Tidal Fluctuation	1.6252	9.488	-7.862	4	NS
	Sea Level Rise (SLR)	1.6252	9.488	-7.862	4	NS
	Increase Temperature	Required response didn't detect				
	Changing pattern of Temperature	Required response didn't detect				
	Land captured by local powerful man	Required response didn't detect				

*S= Significant, *NS = Not Significant, df = degree of freedom, significance at the level of 0.05

3.6 Knowledge Analysis of Climate Change Adaptation and Effectiveness

The authors found that 31.67% people have clear knowledge about Climate Change Adaptation and 55.83% have medium knowledge, 12.5% have not clear knowledge but using adaptation techniques in the study area (Figure 10)

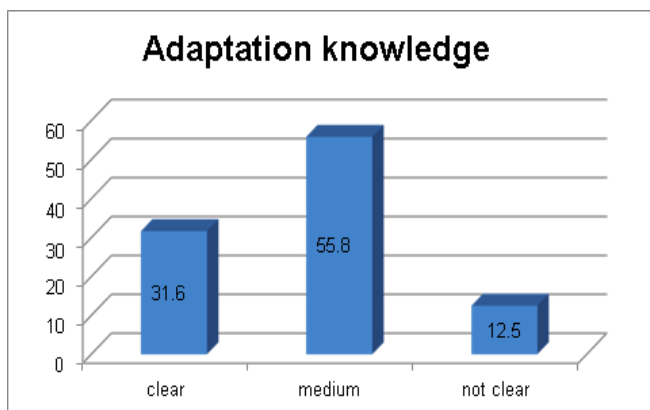


Figure 10: Showing Knowledge of Local people about climate change adaptation

The authors discovered that the coastal populations in the research area practice various indigenous adaptation strategies for their survival, which are planting of grass, cultivation of multiple crops on one land raise consciousness, Building of embankments and generation of salt deep tubewell used to provide pure drinking water, Development of livelihood skills is a highly successful adaptation strategy. constructing a lofty, Rope protection for the home Mangrove plantations are only moderately to poorly successful at mitigating climate change (Table 9).

Table 9: The Adaptation Policies and Effectiveness

Adaptation Policies	High	Medium	Low	Remarks
Incorporate Climate Change in Long Term Planning	34	20	6	Highly Effective
Promote Awareness	40	15	5	Highly Effective
Using Semi Paccka House	25	27	9	Medium Effective
Grass Plantation	43	10	7	Highly Effective
Embankment	33	18	9	Highly Effective
Making House at High	20	26	14	Medium Effective
Protect House Through Rope	18	20	22	Low Effective
Using Deep Tubewell For Pure Drinking Water	34	15	11	Highly Effective
Multi Crops Cultivation in A Land	44	6	10	Highly Effective
Salt Production	28	21	11	Highly Effective
Mangrove Plantation	20	26	14	Medium Effective
Livelihood Skill Development	25	19	16	Highly Effective
Livestock Based Training	40	9	11	Highly Effective
Control Pollution	37	14	9	Highly Effective

This study serves as a springboard for understanding the crucial aspects of rural life in Bangladesh's coastal region that give households the flexibility to alter their way of life in the face of climate variability and change. The findings contribute to a preliminary knowledge of the empirically untested aspects of food sovereignty and extend the current theories on livelihood adaptation. The study's initial contribution is to give theories on development corridors and chains an empirical foundation, admitting their critical influence on micro-level adaptability. There can be no generalization of results because of the study's qualitative

foundation and limited sample size. Additionally, due to time constraints, a longer-term study of livelihood adaptability was not possible.

The researcher finally came to the conclusion that more time with the homes was required in order to establish a relationship that could have produced more detailed and in-depth findings.

The authors discovered that the study areas and coastal areas of Bangladesh face the following obstacles to successfully implementing indigenous knowledge systems for adaptation practices:

- i) Crop yields in coastal areas will decline due to extreme temperature and salinity intrusion;
- ii) Changes in rainfall have already had an impact on the nation's crop production. Therefore, the altered weather due to climate change would have an impact on the indigenous coping mechanisms.
 - ✓ Through an increase in the frequency of natural catastrophes, salinity intrusion in coastal land would have an impact on the rice production in these areas as well as other means of subsistence.
 - ✓ As we can see, the climate trends are causing changes in the diversity of Bangladesh's six seasons, which means that the locals will have difficulty using their tactics for early warning of storms.

The fishing industries would face difficulties as a result of increased salinity and a lack of fresh water (like: shrimp cultivation).

- ✓ The coastal regions of the nation would experience a substantial influx of climate refugees as a result of sea level rise. Local communities' marine resources, biodiversity, and human health will all suffer as a result.
- ✓ Indigenous coping mechanisms would be severely impacted since the climatic pattern is drastically altering its scenario, endangering the local capacity for resilience in the near future.
- ✓ Climate change is anticipated to have a direct influence on the poor's way of life in coastal areas in a number of ways, including by increasing food insecurity, water stress, and health issues.
- ✓ Climate change would have an impact on public property like mangrove forests, which support the livelihoods of many low-income people in coastal communities.

4. CONCLUSION

The study's author hypothesized that increasing coastal residents' awareness of climate change through observation and widespread media coverage would allow policymakers to put adaptation methods into action and make it easier for coastal residents to plan for future mitigation measures. Using research findings from Bangladesh's southeast coast, this manuscript offers local level adaptation solutions based on indigenous knowledge in connection to hazard-prone, resource-poor rural households' perceptions of climate change and climatic hazards. Although many different types of climate-induced disasters have been happening in the study areas, the cyclone/storm surge, coastal bank erosion, and saline water intrusion are the most significant and recurrent nature in the study area. As a result, hundreds of thousands of people have been forced to leave their homes in coastal areas of Bangladesh. In this region, a person's life and means of support are more at risk.

The study discovered that 20 percent of respondents relocated outside of their own village, whereas 63.34 percent of respondents stayed in their own villages(Max) but in other locations. The majority of respondents (35%) have lived in this area for five to ten years, followed by less than five years (29.16%) and between ten and fifteen years (21.67%) respectively. No one is living in their place of birth in the study area, which is an important finding from this study. The majority of displaced persons are reported to be illiterate or only somewhat literate (signature). The majority of them work in agriculture, fishing, and salt production in their home regions, but they are quite unsatisfied with the day labor and small businesses they must participate in to make a living in their new locations. There are a lot of people who make less than \$5,000 per month in the poor income bracket. The most common types of housing were katcha and straw buildings, thin structures, and katcha (earthen walls with straw roofs) (earthen wall with tin roof).

People are either residing on privately owned land, government property, or a majority of embankments. The absence of frequent calamities, unstable living conditions, losses of homes, lands, and other properties, and a constrained range of possibilities for a living are seen to be the main push factors. The majority of adaptation knowledge is now recognised as being essential for adjusting to this changing environment. According to

the results of the current study, only a small number of individuals are aware of climate change adaptation measures, but because their vulnerability is growing, they are using coping mechanisms. The development of livelihood skills, the planting of grass, the cultivation of multiple crops on one piece of land, raising awareness, the building of embankments, the production of salt, and the incorporation of climate change into long-term planning are all examples of highly effective adaptation strategies. By providing funds or habitation programs, the government and NGOs can make it possible for the displaced community to participate in catastrophe risk reduction, be used in policy making, or both.

The extent to which risks cause a disaster in an indigenous society when they are activated is a measure of that community's environmental adaptation or maladaptation. Here, the breadth of socio-cultural intervention comes into play, and the function of disasters as mobilizing forces of cultural change is largely understudied. Disasters in local communities often reveal the social structure, spark conflict between opposing social groups, and promote social cohesiveness and unity. The relationship between the little community and the larger society is also made clear. In order to bring the research back to the fourfold essence of the disciplinary specialization, socio-cultural research on natural catastrophes and climate change might integrate the platforms of assay of the social sciences.

- Socio-cultural research can offer insightful socio-cultural data and viewpoints that can aid in disaster management and recovery.
- Through the established study approach, socio-cultural interventions can offer more comprehensive perspectives on the vulnerability of frontline workers.
- A skilled social researcher can help reorient the locally developed disaster management models so that they are more able to incorporate local resources.- In order to adapt to the severe effects of climate change, locals must develop alternate means of subsistence through the right application of indigenous knowledge.
- Coastal area women should be included in some livelihood methods, such as duck rearing, so they can support their families financially.
- The poor in coastal areas can simply undertake farming as a means of subsistence in their smallest household.
- GO-NGOs might have stepped forward to encourage the growing of regionally unique crops and to offer high-yielding seeds and technology to the far-flung coastal areas.
- GO should step up and take the effort to purify the pond water utilizing various inventive methods.
- Supplying clean drinking water using ring tube wells should be considered a campaign to raise awareness among nearby coastal communities.
- The government should pay attention to shrimp farming and tending to prawn rearing as two of the finest coping mechanisms for the rising salinity.
- The government might launch pro-active programs for crab farming.
- By increasing the techniques to build "Pusher Bari" in the coastal areas, the loss of homes and other properties during cyclones and storm surges can be reduced.

The homestead's increased plant and tree cover should be replicable in areas of the nation that are vulnerable to natural disasters. GO-NGOs may step forward to share these native coping mechanisms with the frontline members of the vulnerable communities through a variety of activities. Their initiative can be beneficial in overcoming the difficulties of climate change by enhancing their traditional knowledge and coping mechanisms. Here, sociocultural interventions made through a variety of research projects may be crucial. This study looks at how adaptation strategies can lessen households' susceptibility to both gradual and abrupt climatic changes.

The literature on climate change was mined for a wide range of variables that come under social adaptation, economic adaptation, and physical adaptation to see whether and how any of these are connected to the vulnerability of the households. OLR (ordinal logistic regression) is used in this process, and the results of the regression models are reliable. Through the advancement of odds ratio analysis, it also elicits the adaptation differential among various vulnerable groups, with the

outcome being that very vulnerable households have specific adaptation techniques used more frequently than the sum of moderate and low vulnerable households. It also provides an idea/clue about the co-existence of vulnerability and resilience in the context of climate change.

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