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Role of BRAC in attaining climate resilience: a micro level study from coastal region of Bangladesh

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ABSTRACT

Climate change has triggered the increased incidence of extreme disasters like cyclone, flood, soil salinity etc. in the coastal region of Bangladesh. Thus, the study was undertaken mainly to determine the role of NGOs in attaining climate change in the coastal area under Patuakhali district of Bangladesh. The data were collected from 80 randomly selected respondents from the study area. The findings of the study revealed that many NGOs have been working on climate change among them BRAC were a crucial NGO. Besides, most of the respondents had knowledge, perception and awareness about climate resilience. According to the absolute majority (100 percent) of the respondents BRAC is playing medium to high role in attaining climate resilience. Respondent's education, organizational participation, communication exposure, training on climate change issues and extent of participation in climate resilience program showed positive and significant relationship with the role of BRAC in attaining climate resilience, while only household size show negative and significant relationship. Step-wise multiple regression analysis explored that amongst six independent variables, four (education, communication exposure, training and participation in climate change program) variables finally entered into the study and their contribution accounted for 54.7 percent of the total variation in the role of BRAC in attaining climate resilience. It was found that all (100 percent) of the respondents had faced low to medium level problems in getting BRAC's services during climate change and its resilience.

INTRODUCTION

Bangladesh is frequently cited as one of the most vulnerable countries to climate change (Huq, 2001; Rahman & Alam, 2003; UNDP, 2007 and Huq & Ayers, 2007) because of its disadvantageous geographic location; flat and low-lying topography; high population density; high levels of poverty; reliance of many livelihoods on climate sensitive sectors, particularly agriculture and fisheries; and inefficient institutional aspects (Climate Change Cell, 2006). Many of the anticipated adverse affects of climate change, such as sea level rise, higher temperatures, enhanced monsoon precipitation, and an increase in cyclone intensity, will aggravate the existing stresses that already impede development in Bangladesh, particularly by reducing water and food security and damaging essential infrastructure (MOEF, 2005). These impacts could be extremely detrimental to the economy, the environment, national development, and the people of Bangladesh (Reid and Sims, 2006).

Coastal zones are amongst the most dynamic natural environments in Bangladesh, providing a range of goods and services that are essential to human social and economic well-being. Many people have settled in coastal region of Bangladesh to take advantage of the range of opportunities for food production, transportation, recreation and other human activities. The coastal region of Bangladesh covers about 20 percent of total land area and over 30 percent of the cultivable lands of the country (BBS, 2011).

Peoples of the coastal area not so much aware about this climate change issues and they have little knowledge to cope up and bounce back from the adverse situation (Hossain, 2013). Different GOs and NGOs are working individual or together to help and support this climate change victim poor people by increasing their resilience approach

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due to climate change. Coastal people need different support to increase their climate resilience capacity due to their low climate resilience ability and approach. Coastal NGOs are working to bounce back from this climate change issues for minifying the climate change loss of the coastal people (Iwuchukwu et al., 2014).

It may be mentioned here that with frequent exposure to natural disasters, Bangladeshi people have developed resilience and learned how to cope with them. Compared to many other developing or least developed countries, Bangladesh is doing a lot of activities on climate change. Activities have been undertaken by local inhabitants, the non-governmental and government sectors. NGOs and private research organizations have also taken activities on pilot basis to test different adaptation measures (Billah, 2013). With this background, this study has discussed role of NGOs in attaining climate resilience in selected coastal area of Bangladesh and identifies some existing adaptation measures in selected area practiced by selected NGO named BRAC. This study also aims to find out how much these options are effective in response to climate resilience in study area.

This study focuses on assessing the role of the coastal NGOs in attaining resilience to climate change. However, different researcher works on perception, awareness, capacity building etc. on climate change issues but research on climate resilience specially the role of NGOs on climate resilience are not conducted much . So there is a research gap in between NGOs and its role on climate resilience. The aim of this research is to find out the specific role of BRAC on climate resilience. The resilience capacities in response to climate change of the coastal people are not satisfactory. So they need support and help form different organizations to reduce their stresses. The main purpose of this study is to find out those NGOs who are working on climate resilience on the coastal area.

However, the study was confined in one district due to lack of time and resources. The results would be more generalized if more areas were covered and more respondents were involved in the study. But, still the study would have a great importance for the NGOs who are working on climatic resilience. Both the methods and results of this study would be useful mostly in other districts of the coastal regions as well as in the areas having similar geographical and socio-economic conditions in Bangladesh.

MATERIALS AND METHOD

Study Area

The study was conducted in Kalapara Sub-District under Patuakhali District, one of the coastal regions of Bangladesh. Two unions (lower most unit of the local government of Bangladesh) were purposively selected for the study in consultation with the experts, i.e., Upazila Agriculture Officer (UAO) and Upazila Rural Development Officer (URDO) of the same sub-district. These two unions are Baliatali and Latachapli. Kalapara is a small town in the Patuakhali district of the Barisal division, in Bangladesh. Kalapara is located at 21.9861° North latitudes and 90.2422° East longitudes. Kalapara has 237,831 populations in total (Male 120,514 and Female 117,317) (BBS, 2017). This region is considered as coastal areas of Bangladesh and vulnerable to climate change.

Sampling, data collection and analysis

Baliatali and Latachapli union of Kalapara sub-district (upazila) under Patuakhali district was purposively selected for the study on the basis of prior to the research objectives. People of the study area including small farmers, fisherman and livestock farmers were the target population of this study. The total number of farmers was 11000 in the study area (BBS, 2017). Four villages were selected randomly as a study location. The villages were namely Kankunipara, Haripara, Azimour and Misripara. The total number of farmers in these four villages was 615 which constituted the sampling population. Thirteen (13) percent of the total farmers of these four villages were selected as sample. The main occupation of most of the respondents is farming. Very few of them earned their livelihoods from non agricultural sources but they are also doing farming as there partial source of income. So we also may call them farmers. Hence, the sample of the study constitutes 80.

Two FGDs were carried out in September 2017 with the local people and BRAC personnel. A semi-structured questionnaire was used to conduct FGDs and some facts about the climate resilience were identified through this method. The survey instrument was refined based on the results of the FGDs. The additional information gathered from the FGDs was used for interpreting the results of survey. However, before going to the final data collection, pre-testing with 15 respondents was conducted, and the necessary correction and modifications were done accordingly. The survey was conducted in September 2017. Data were collected by two trained enumerators along with the lead researcher himself through a structured questionnaire. The researcher first established rapport with the respondents and clearly explained the objectives of the study using local language as far as possible. The questions were clarified whenever any respondent had difficulties in understanding. Excellent cooperation was received from the respondents and other people of the study area. Role of BRAC in attaining climate resilience was the focus variable of the study.

A-four point rating scale was used to measure the role focus variable. Thirteen statements obtained from the FGDs were asked to the respondents against four possible responses such as high, medium, low and no with the corresponding score of 3, 2, 1, and 0, respectively. The role of BRAC was computed by adding all scores obtained from 13 types of climate resilience approach from which respondents were benefitted. Hence, the scale score ranged from 0 to 39, where 0 indicates no and 39 indicates high climate resilience. Ranking of the statements was done to prioritize the statements on which providing credit support in rehabilitation due to climate change/disaster were number one.

The collected data were coded, categorized, tabulated and analyzed scientifically. The coded data were put into computer for statistical analyses. The Statistical Package for Social Science (SPSS) v.16.0 software was used to analyze the data. Both descriptive and inferential statistics were used to describe the data in this study. Pearson's Product Moment Coefficient of Correlation was used to identify association between the explanatory and focus variables. Besides, multiple linear regression and step-wise multiple regression were employed to identify the factors affecting the focus variable.

RESULTS AND DISCUSSION

Socioeconomic characteristics of the respondents

The socioeconomic characteristics of the respondents are shown in Table 1. It shows that most of the respondents were middle aged (47.5 percent) followed by old (29 percent). This means that the highest portion (80.0 percent) of the respondents were middle to young aged group. The middle aged people are aware of about the climate change and the NGOs give priority to the middle and young aged people to mitigate the loss of natural calamities by climate resilience (Billah, 2013). Age of the respondents is positively correlated with role of BRAC in attaining climate resilience. It is also shows that the half (50.0 percent) of the respondents had primary education followed by 28.8 percent having secondary education. The large number of the respondents could not collect advanced knowledge about climate change resilience from various sources (Mandal, 2011). Data reveal that 45.0 percent of the respondents possessed large followed by 40.0 percent medium family size. The respondents having large family likely to more involve in different climate resilience activities to improve their status (Hossain, 2013). Table indicate that majority (43.8 percent) of the respondents had medium while 38.8 percent having high annual income, this means that majority of the respondents of the study area were resource medium (Mandal, 2011). I was found that 83.8 percent of the respondents had low followed by 16.2 percent had medium participation. Majority of the respondents were found to have low involvement in organizations for short period. It implies that their mobility and participation in development and disaster management activities is limited to a greater extent (Yeasmin, 2013). The information of Table1 indicate that majority (82.5 percent) of the respondents maintained medium type of communication exposure while 12.5 percent maintained low profile of communication exposure. This means that majority of the respondents have maintained medium to high

contact with various information sources in getting necessary weather and climate change information. Majority (41.2 percent) of respondents did not get any training followed by 40.0 percent of the respondents received short duration training. This means that a large portion of the respondents are trying to in receive training for mitigate the loss and cope up with the situation in response to climate change (Iwuchukwu et al., 2014; Mandal, 2011). It also shows that 87.5 percent of the respondents are suffering climate change much followed by 10 percent of the respondents suffer medium. Data furnished in Table 1 indicate that 38.8 percent of the respondents had medium participation while 33.8 percent had high participation. It implies that their mobility and participation in climate change program not so satisfactory.

Table 1
Socioeconomic characteristics of the respondents (n = 80).

Category	Respondents (%)	Mean	SD*
Age (year)			
Young (18 -35)	32.5		
Middle aged (36-55)	47.5	43.65	12.44
Old (Above 55)	20.0		
Education (year of schooling)			
Illiterate (0)	11.2		
Primary (1-5)	50.0	5.35	4.08
Secondary (6-10)	28.8		
Above secondary (Above 10)	10		
Household Size (number)			
Small (2-4)	15.0		
Medium (5-6)	40.0	7.0	2.74
Large (above 6)	45.0		
Annual Income (‘000’ BDT*)			
Low (Up to 150)	17.5		
Medium (151-250)	43.8	243.8	109.9
High (Above 250)	38.8		
Organizational Participation (possible score: 0-24)			
Low (up to 8)	83.8		
Medium(9-16)	16.2	3.88	4.50
High (above 16)	0.0		
Communication exposure (possible score: 0-51)			
Low (up to 17)	12.5		
Medium (18-34)	82.5	24.95	5.80
High (above 34)	5.0		
Training on climate resilience (no. of days)			
No training (0)	41.2		
Short (1-7)	40.0	3.78	4.83
Medium (8-14)	13.8		
High (above 14)	5.0		
Consequences due to climate change (“000” BDT*)			
Low (up to 50)	2.5		
Medium(51-100)	10.0	208.2	98.92
High (above 100)	87.5		
Participation in climate resilience program (possible score: 0-12)			
Low (up to 4)	27.5		
Medium(5-8)	38.8	6.73	3.22
High (above 8)	33.8		

*SD = Standard Deviation; *BDT = Bangladeshi Taka

Table 2
Distribution of the respondents based on their resilience score.

Range		Respondent Categories	Respondents		Mean	SD*
Possible	Observed		No.	%		
0-39	17-34	Low (0-13)	0.0	0.0	27.02	3.46
		Medium (14-26)	34	42.5		
		High (27-39)	46	57.5		

Table 3
Statement-wise score on role of BRAC in attaining climatic resilience as perceived by the respondents (n=80).

Aspects	No. of Respondents				RI	M	RO
	H	M	L	N			
Climate Change							
Knowledge generation on consequence of climate change	34	31	13	2	177	2.21	5
Understanding development in importance of ecosystem conservation (forest & aquatic)	39	24	13	4	178	2.22	4
General awareness creation on climate change for better livelihood and wellbeing	30	33	12	4	168	2.21	7
Vulnerability							
Providing credit support in rehabilitation due to climate change/disaster	64	8	4	4	212	2.65	1
Provides grants or aids to the poor people for reducing dependency on natural resource	46	13	10	11	174	2.17	6
Contribution in social capital formation	26	27	13	14	145	1.81	11
Climate Resilience							
Ability development of the community people to response with the situation during natural calamities	26	34	14	6	160	2.00	9
Capacity building on disaster risk reduction	21	29	21	9	142	1.77	12
Adaptive capacity building to the vulnerable people to cope up in adverse situation	22	31	13	14	141	1.76	13
Works for infrastructure reorganization and development caused by climate disaster	40	27	10	3	184	2.30	2
Adaptation							
Disaster management and climate change program by the NGOs	21	42	14	3	161	2.01	8
Leadership development and group formation in climate perspective	47	15	11	7	182	2.27	3
Agriculture and food security program for mitigating consequence of climate change	27	26	18	9	151	1.88	10

Code: H= High (3); M= Medium (2); L= Low (1); RI=Resilience Index; M=Mean and RO= Rank Order

Role of BRAC in attaining climate resilience in coastal area

Data presented in Table 2 shows that more than half (57.5 percent) of the respondents had a perception that BRAC is playing high role in attaining climate resilience. While, a little less than half (42.5 percent) had mentioned that BRAC is playing medium role in attaining climate resilience and no respondents were found who assessed BRAC's role as low in attaining climatic resilience.

A four-point rating scale was used to determine the role of BRAC in attaining climate resilience in the study area. Different statements regarding

agriculture in the study area were obtained from the FGDs conducted during the survey. Table 3 represents the rank order of different aspects of BRAC in attaining climatic resilience.

Due to climate change the weather pattern of the coastal area being changed and among the NGOs BRAC works on different aspects of climatic resilience. Table 3 shows that "Providing credit support in rehabilitation due to climate change/disaster" got the first rank among the statements with the total RI 212. So it is understand that BRAC may be support the local rural people by proving money or other income generating things. *"Activities of BRAC are more business oriented though they provide grants or aids during natural hazards or works for infrastructure development"*- FGD participants. Works for infrastructure reorganization and development caused by climate disaster (RI=184) was the second highest rank among the statements. After the natural disaster infrastructure system of the coastal area become collapse. BRAC works for infrastructure development to attaining climate resilience in the coastal area. Leadership development and group formation in climate perspective obtained the third highest RI (182) and stood third in the rank order. Local leader always works as an opinion leader and express the local need and they improve the group affiliation (Hashemi et al, 1996). *"Before cyclone or any other natural disaster the BRAC workers comes to us and teach us how to escape and prevent loss from natural disaster. They also provide different grants or aids after the disaster with the help of local leader"*- FGD participants. Adaptive capacity building to the vulnerable people to cope up in adverse situation got the last position in the rank order with RI 141. BRAC works for the vulnerable people but they may not be able to contribute much as to the need of the local people.

Correlation between socioeconomic characteristics of the respondents and role of BRAC in attaining climate resilience

To determine the association between the socioeconomic characteristics of the respondents which are the explanatory variables of the study and the focus variable, i.e., role of BRAC in attaining climate resilience, a null hypothesis (H_0) was formulated.H_0 indicates that there is no association between the explanatory and focus variables. Pearson's Product Moment Coefficient of Correlation (r) was used to test the H_0. To reject the H_0, 1 and 5 percent level of probability was taken into consideration. Table 4 represents the summary correlation test between the variables.

From Table 4 we found that out of nine characteristics of the respondents, six characteristics such as education, organizational participation, communication exposure, training and participation in climate resilience program had positive and significant association and household size negative and significant relationship with role of BRAC in attaining climate resilience.

Table 4
Correlation between socioeconomic characteristics and role of BRAC in attaining climate resilience (n= 80)

Socioeconomic characteristics	Correlation co-efficient (r) with 78 d.f.
Age	0.052
Education	0.527**
Household size	-0.229*
Annual family income	-0.215
Organizational participation	0.497**
Communication exposure	0.297**
Training on climate resilience	0.613**
Consequence due to climate change	0.125
Participation in climate resilience program	0.695**

Tabulated value (r) = 0.250 (5 percent level) and 0.325 (1 percent level)
*Correlation is significant at 5% level of probability, **Correlation is significant at 1% level of probability

Table 5
Summary of multiple regression explaining focus variable (n = 80).

Explanatory variable	Unstandardized Coefficients (B)	Standardized Coefficients (Beta)	't' value	F value
Age	0.024	0.087	0.972	
Education	0.125	0.225	2.248*	
Household size	-0.108	-0.086	-0.821	
Annual family Income	-0.002	-0.074	-0.698	
Organizational participation	0.028	0.046	0.460	
Communication exposure	0.053	0.107	1.267*	11.18**
Training on climate issues	0.110	0.170	1.528*	
Consequence on climate resilience	-0.001	-0.024	-0.295	
Participation in climate resilience program	0.146	0.396	3.436*	
R^2= 0.590 and Adjusted R^2= 0.547				

Significant if p<0.05, Level of significance = 95%

Table 6
Summary of stepwise multiple regression analysis (n = 80).

Model No.	Variables entered	Unstandardized Coefficient (B)	Standardized coefficient (Beta)	Adjusted R^2	R2 Change (% contribution)
1	Constant + Participation in CRP	0.256	0.695	0.477	47.7
2	Constant+ Participation in CRP +Training on climate resilience	0.375	0.80	0.520	4.3
3	Constant+ Participation in CRP +Training on climate resilience+ Communication exposure	0.408	0.86	0.536	1.6
4	Constant+ Participation in CRP +Training on climate resilience+ Communication exposure+ Education	0.455	0.952	0.547	1.1

Econometric estimation of the factors affecting role of BRAC in attaining climate resilience

Multiple linear regression analysis was employed to determine the factors and their contribution in predicting the focus variable, i.e., role of BRAC in attaining climate resilience. Table 5 represents the outputs of the analysis.

The results show that four explanatory variables out of nine were significant with the F value of 11.18 and adjusted R^2 value of 0.547. Therefore, the results imply that about 54.7 percent of the variation in the role of BRAC in attaining climate resilience was explained by the combined effects of explanatory variables. The coefficient of education (t = 2.248 and p<0.05), communication exposure (t= 1.26 and p<0.05), training on climate issues (t= 1.528 and p<0.05), participation in climate resilience program (t = 3.43 and p<0.05) were significant. The results imply that these factors influenced the role of BRAC in attaining climate resilience in the study area. The results also reveal that education of the farmers had a positive coefficient, i.e., educated people are more likely to cope-up with the adverse climatic condition. This result is in line with the study in Kerala state in India conducted by (Divakarannair, 2007). This may be due to that education facilitates of the respondents are increased so they aware about climate resilience. The results show that communication exposure of the respondents if increased resulting in increasing resilience capacity of the respondents. This may be due to more information get from different sources about climate resilience. A study conducted by (Onoh,

2014) found that communication has positive and significant influence on climate resilience. Training on climate resilience was positive and significant for the respondents in attaining climate resilience in the study area. The result implies that increased in training facilities in the coastal area are more effective to bounce back from the adverse climatic condition. But people of the coastal area are not always participating in the training program due to lack of training facilities about climate resilience (Mobassarul et al., 2007). Therefore, the result may be due to the fact that higher participation in the training program was increase their resilience capacities (Billah, 2013). Participation in climate resilience program also emerged as a positive and significant factor to influence the role of BRAC in attaining climate resilience. It may be because the respondents having higher partnership in climate resilience program have higher capacities to cope up and mitigate the loss of climate resilience. This result is in line with (Iwuchukwu et al., 2014; Saroar and Routray, 2010).

Step-wise multiple regression analysis

To understand the contribution of each variable to the respondents' variation in the role of BRAC in attaining climate resilience in the study area, a step-wise multiple regression analysis was conducted. Table 6 represents the output of the analysis. The findings indicate that out of four significant socioeconomic characteristics obtained from the multiple linear regressions, all four such as participation in climate resilience program, training on climate resilience program, communication program and education entered into the model. The findings also indicate these four variables together explained 54.7 percent variation in the role of BRAC in attaining climate resilience in the study area.

The first variable entered into the model was participation in climate resilience program of the respondents (R^2 =0.477) which had the highest contribution (47.7 percent) in explaining the variation in the focus variable. This implies that with the increase of participation in climate resilience program, the respondents are more likely to bounce back from natural hazards. The respondents with higher participation in climate resilience program are more capable to cope up with the climate change (Semenza et al, 2008). This may be due to they have more knowledge about the effect of climate change and importance of climate resilience approach. The second variable entered into the model was training on climate resilience of the respondents and it is shown that 4.3 percent variation of the focus variable was explained solely by the training on climate resilience of the respondents. The finding reveals that with the increase in training of the respondents, they are more likely to cope up with the climate change and attain climate resilience in the study area. The reason behind this may be that the trained respondents possess a high level of knowledge regarding climate resilience through their experience gather from training. However, participation in climate resilience program and training on climate resilience of the respondents together (R^2 = 0.520) had 52.0 percent contribution in the variation in attaining climate resilience of the resilience. The third variable entered into the model was communication exposure of the respondents which accounts for 1.6 percent contribution in explaining the focus variable. Communication exposure of the respondents helps to get necessary information from different source according to their need on climate resilience. People contact with extension and NGO worker before and after the disaster to mitigate the loss (Hasan and Akhter, 2011). The fourth variable entered into the model was Education of the respondents which accounts for 1.1 percent contribution in explaining the focus variable. Education plays a significant role in acquiring useful information in a person's life. The finding implies that with the increase in educational level, the respondents are more likely and able to attain climate resilience in the study area. The respondents with high education are able to explore the environment and they can pick up useful information from any circumstance. According to Ekpoh and Ekpoh, (2011) the educated farmers have greater knowledge to understand and ability to cope with adverse changes as they have a wider exposure to different information sources. Educational level increases the probability of adopting climate change adaptation measures (Uddin et al., 2014). Therefore, the finding implies the same.

Table 7
Distribution of the respondents according to their problems in getting BRAC's services.

Category	Respondents		Mean	SD
	Number	Percentage		
Low problems (Up to 11)	47	58.8		
Medium problems (12-22)	33	41.2	11.11	3.70
High problems (above 22)	0.0	0.0		

Table 8
Problems faced by the respondents in getting BRAC's services on climate change issues (n= 80).

Name of the problems	Extent of problems				PCI	RO
	H	M	L	N		
Unable to build rapport with the BRAC worker	11	14	27	28	88	5
Unavailability of the BRAC workers	6	16	30	28	80	8
Lack of leadership and group affiliation	9	16	40	15	99	4
Lack of awareness on BRAC services	18	14	34	14	116	2
Poor communication and limited capacity of BRAC	10	14	25	31	83	6
Political interference in getting membership	14	6	12	48	66	10
Poor participation in disaster management and climate change program	26	14	19	21	125	1
Negative perception regarding BRAC	5	13	15	47	56	11
Scarcity of credit for climate resilience program	8	21	11	40	77	9
Importance of the respondents as vital stakeholders for programs of climate resilience	19	12	28	21	109	3
Less interest to conduct programs related to climate change	6	19	26	29	82	7

Problems faced by the respondents in getting access to BRAC's services on climate change issues

Table 7 shows that the highest proportion 58.8 percent of the respondents had low problems while 41.2 percent of them had medium and no one faced high problem in getting access to BRAC's services on climate change IssuesRespondents gave their responses as high, medium, low and not at all against each problem included in problem confrontation scale. To ascertain the extent of seriousness of problems a Problem Confrontation Index (PCI) value was computed (Table 8). The Table 8 showed some problems of the respondents during getting service from BRAC and their ranking positions on the basis of severity. From the rank order it was found that 'Poor participation in disaster management and climate change program' was the first problem of the respondents. Respondent was not participating in climate change and its related program because of their low level education and lack of awareness so they could not take any precautions measures to avoid disaster (Billah, 2013). *"Climate resilience program did not arranged frequently by the BRAC; again we were not informed about disaster management program properly"*- FGD participants.

'Lack of the awareness on the BRAC services' was the second problem of the respondents. It is also due to low level of education and training facilities. Different organizations are not always organized climate change related program (Gadédjisso-Tossou, 2016). The third problem faced by the respondents was 'Importance of the respondents as vital stakeholders for programs of climate resilience'. *"BRAC which are available in coastal area are not always working with small respondents. Again BRAC provides credit to the medium income family so they are the main stakeholders of BRAC"*- FGD participants.

CONCLUSION

Climate resilience is a complex subject usually surrounded with a lot of skepticism hence the need for conclusive evidence to support climate resilience reality. The average role of BRAC in attaining climate resilience score was found 27.2 which are satisfactory, because all aspects of climate resilience were fulfilled by the BRAC. The role of BRAC in attaining climate resilience can also be further strength through active participation of local people, changing NGO's policy along with government support. The study revealed that education and organizational participation, communication exposure, training and participation of the respondents had significant relationship with their role of BRAC in attaining climate resilience. Higher training and participation in climate resilience program and more exposure in different information sources and peoples having more knowledge on climate resilience resulting in participation in the climate resilience program provided by BRAC on climate change issues and its resilience. The study shows that among the different factors contributing to the role of BRAC in attaining climate resilience of the respondents, participation in climate resilience program contributed a major portion for bringing change and can singly explained 47.7. So participation in climate resilience program of the respondents may be considered as influential factors while taking policy measures for the development of the climate resilience issue in the respective area. Findings showed that all of the respondents had faced low to medium problems in getting access to BRAC services on climate change issues. However, these problems may hinder the way of attaining climate resilience by the different BRAC. BRAC and other NGOs working in coastal area need to be taken into consideration the above mentioned factors, associated problems and their solutions to have some real contribution in attaining climate resilience in the vulnerable coastal zone.

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