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Empowerment of Women by Using Local Adaptation Practices in Coastal Area of Bangladesh: Benefits and Constraints

Women in coastal Bangladesh struggle hard to withstand natural disasters. Economic, social, cultural and religious constraints surges their hardship. The study uncovers the barriers faced by women and reveals that empowering women by taking different types of adaptation measures will help them to cope with natural disaster and also improve their economic condition.

Introduction

Bangladesh has 710 km coastline which is well known for its tropical cyclones from the Bay of Bengal. These are one of the major causes of disaster in Bangladesh. The high number of casualties is due to the fact that cyclones are mostly associated with storm surges (Jayeda & Mohammad, 2013). The impact of the cyclone on coastal community varies across societies and communities but it is widely experienced that cyclones affect women and men differently. Women are more vulnerable than men before, during and after the cyclone in Bangladesh (Juran & Trivedi, 2015). This is due to their poverty, their attitudes, social norms, and their marginal position in the social system (Md. Sadequr 2013). Although gender mainstreaming is largely absent in formal disaster management, women execute pre-disaster activities that increase resiliency. Again, women are always involved with income generating activities like homestead plantation and gardening, integrated plantation, livestock rearing, aquaculture and handloom activities for supporting her family during and after hazardous events. But women still face inequalities in various sectors like social, economic, cultural and political institutions. Men tend to control income distribution, property, access to credit, decision-making processes, and sources of food. Women have limited access to and control over natural resources, or money and more importantly are less mobile and have limited access to information. In this context, this study aims to find out:

- The coastal adaptation practices adopted by local women groups
- Function of adaptation for women's empowerment
- Barriers for adopting the adaptation measures by local women groups.

Method

The study was mainly based on primary data collected by household surveys. Secondary data was also collected from BBS (BBS 2011). A semi-structured questionnaire was prepared to collect primary household data through Key Informant Interviews and Focus Group Discussions across the study area.

In this study, Galachipa Upazilla of Patuakhali district is selected as the study area (Figure 1).

This place is highly vulnerable for cyclone induced storm-surges because it is situated on the bank of the Ramnabad River. After applying the PPS technique, 3 Mouzas of

Key Messages

- Women are the backbone of a family and they play a key role in protecting, managing and recovering their household and assets during and after a disaster by practicing different types of income generating activities.
- Women face constraint in access to assets, information and services as well as they are victims of domestic and social violence in Bangladesh.
- Income generating activities through local adaptation practices, women face at least one or more barrier that interrupts their empowerment.

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Galachipa Upazila are finally selected for the survey. These are: (1) Dakhsin Panpatty Mouza from Panpatty Union (2) Dari Baherchar Mouza from Amkhola Union and (3) Atkhali Mouza from Dakua Union (Figure 1).

Sampling for selecting the units of observations (households), cluster sampling method was adopted in this study where the unions are considered as clusters. However 430 respondents were surveyed in 10 days and 80 questionnaires were excluded due to poor data quality. About 15 Focus Group Discussion (FGD) has been done at the local tea stalls and local hat (local village market). Key Informant Interviews (KII) were taken from local government primary teachers, Union Parishad member and different members of local committee of disaster risk reduction. Engagement of local NGO also ensured to reduce the communication gap among local people. The HHs survey and KIIs output has been validated during the FGDs.

Local adaptation practices have been found out according to peoples' opinion. Gender based involvement in local adaptation practices and adaptation practices based on household basis has been measured by cross-tabulation.

Result

Gender wise involvement in local adaptation

100% women respondents are rearing duck and hen for economic support and also nutrition purpose for the family. From the all respondents in the study area it was seen that women are more active than men to preserve dry foods that is very essential during disaster time and to collect relief for the family during and after a disaster. The survey shows that 38% female are taking loan as an adaptation and they use it on small business (tea shops, vegetable garden), poultry farm, handcraft or handloom and also use it for repairing the house after a disaster or on shifting house location.

Sometimes very poor women migrate as an adaptation strategy and the chances of migration increase after a disaster. About 10% women migrate as an adaptation strategy and maximum women migrate to urban areas and work as domestic worker and a big number are working in the Ready Made Garment industry.

Women's contribution in adaptation

The role of women in disaster management is far more effective and they also have a lot of contribution on adaptation. About 100% women in the study area are connected with different types of economic activities which help to adapt as well as to empower themselves.

Again, 62% woman raise the plinth of their houses and 40% women shift their houses to less vulnerable areas to avoid catastrophic damage.

About 90% of women respondents have knowledge about integrated plantation.

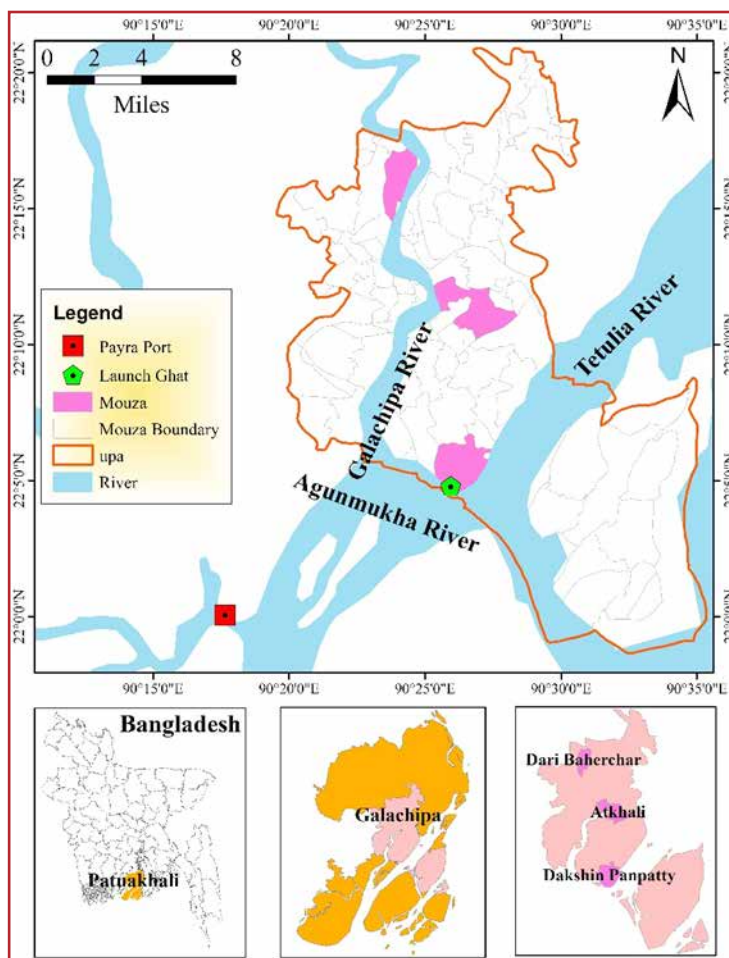


Figure 1: Study area

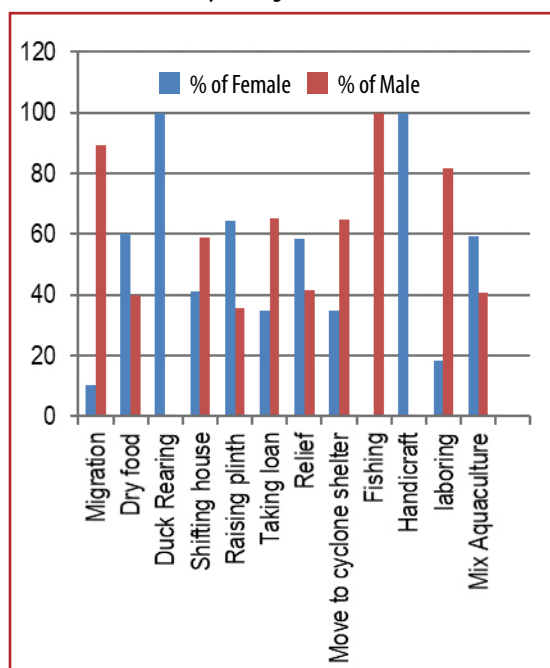


Figure 2: Gender wise involvement in local adaptation

Women perform their role in homestead garden that ensure food security for family. A few women respondents who are living outside the polder area are planting shrubs and herbs around the house that can protect soil erosion during flood or normal tide water.

Moreover, 40% woman take loan from different organizations like ASSA and Grameen Bank and they use it in small business or for fixing their house after a disaster. However, 10% women respondents are using migration and alternative employment as an adaptation.

Traditional role of women in family

For minimizing the impact of climatic events women traditionally practice some strategies that help to balance family's economic condition and also ensure food and nutrition security.

Poultry and livestock rearing economically empower women and act as a safety net during or after a disaster. From the field survey it is noticed that 100% respondents are rearing poultry or livestock and most of them are rearing both. Maximum activities of poultry and livestock rearing are done by women. Women are more engaged in feeding, cleaning and collecting the egg from poultry shed and collecting milk from livestock.

Women in the study area are traditionally involved in homestead vegetable gardening. Not only the homestead garden increase income and ensure food security but it also helps to reduce homestead soil erosion during flood. Homestead vegetable, fruits, spices cultivation are especially important in overcoming seasonal availability of foods and promotes household self-sufficiency.

Male member of a family participated more in vegetable bed preparation, plowing, crop protection and marketing while female members participated more in applying irrigation, mulching, making platform, planting, weeding, staling, fencing, and harvesting of vegetables. Women are more involved than male person in homestead gardening activities.

Table 1: Gender wise involvement in poultry and livestock rearing activities

Activities of poultry and livestock rearing	Male Role	Female Role
Making livestock and poultry shed	***	*
Feeding	*	***
Cleaning	*	***
Collect egg and milk	*	***
Marketing	***	**
Vaccination	*	***
Graze	**	**
High rate of involvement (***) ; Predominant (**); Involvement (*); Not-involvement (x)		

Table 2: Gender wise involvement in homestead gardening activities

Homestead Gardening Activities	Male Role	Female Role
Make Platform	**	***
Fertilizing	*	***
Fencing	**	***
Irrigation	x	***
Seeding	**	**
Weeding	**	***
Plowing	***	*
Support pillar	**	**
Marketing	***	*
High rate of involvement (***) ; Predominant (**); Involvement (*); Not-involvement (x)		

Women's contribution to increase income

62% respondents are increasing their household income by poultry rearing and 43% women by livestock rearing. About 13% women are doing homestead vegetable gardening which has both economic and nutrition value for the household. Over 20% women are sewing *nokshi kantha* (traditional embroidery) and are involved with different handicrafts. A significant number of women respondents about 2% particularly from extremely poor landless households, also engage in paid labor in construction and earthwork.

Function of adaptation for women empowerment

From the table no 3, it is seen that handicraft, handloom, and sewing are done specially in the rainy session when the other sectors have less work. Some activities like poultry rearing, livestock rearing, small business (tea shop) are running over the calendar. About 15% women engage in paid labor as adaptation measure which can increase their household income. But women cannot take this option over the year, they mention that in rainy session they cannot find work at all. Women are active in homestead plantation from September to March.

Table 3: Seasonal variation of different income generating activities of women in study area

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Sewing												
Nursery Creation												
Handloom												
Day Labor												
Livestock Rearing												
Small Business												
Handicraft												
Homestead Vegetation												
Poultry												

Barriers to women empowerment

It is found that respondents face different types of barriers to adopt local adaptation practices. The barriers are mainly social, economic, political, religious and cultural. All of these barriers directly and indirectly slow down the adaptation activities.

61% respondent faces only 2 barriers. Among them, respondents facing both social and economic problems are the highest and it is 31%. Only 8% respondent faces 3 barriers, on which, social, economic and cultural barriers are faced by 4% respondents.

Table 4: Mutually inclusive barriers in the study area

Barrier	Percentage (%)	Barrier	Percentage (%)
Both Social & Economical	31	Both Economical & Cultural	7
Both Social & Cultural	9	Both Economical & Religious	1
Both Social & Religious	2	Both Economical & Political	4
Both Social & Political	4	Both Economical & Cultural	1
Both Religious & Political	0	Both Cultural & Political	1

In figure 4, the big circle indicates the more influence and small circle indicates less influence to women empowerment.

From the field survey result it is clear that women’s empowerment is mostly impacted by economical barrier and social barrier. This is because of less access to resources, less access to information and the male dominant family system coupled with social barrier. Women’s empowerment depend on economic condition; when a female member is earning money from any activity, it increases her value to the family.

60% respondents face social barrier to adaptation that comes from household and community level. Women stated that physical, sexual and emotional violence increases during and after a disaster. Sometimes women are facing domestic violence for taking any step to their

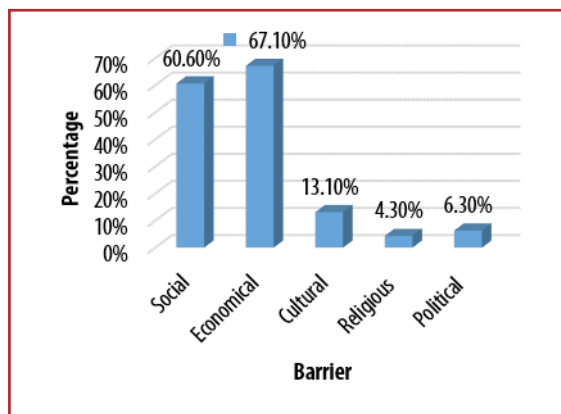


Figure 3: Barriers faced for climate adaptation in Galachipa Upazilla (multiple response)

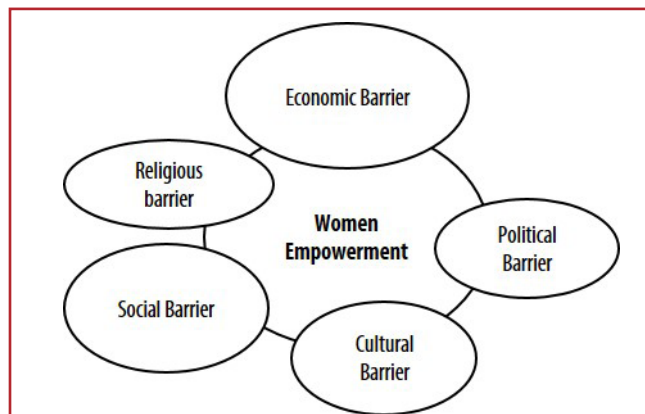


Figure 4: Barriers to women’s empowerment

empowerment. Women reported that they also face harassment in cyclone shelter and in relief queues. In society, women's ability in decision-making is not the same as men which are the social barriers for women.

About 13% respondents are facing cultural barrier to empower. The scope of women education is very low here. Some women respondents said that they have less access to the local market, they cultivate but they cannot sell it to the local market directly. As a result, they have to sell these vegetable at home at a low price.

During interview sessions, majority of the key informant reported that conservative religious groups never believe in the concept of women empowerment.

Political barriers strongly influence the perception of the community. Local leaders or influential people often occupy spaces in cyclone shelter due to their political power. That creates negative impact to choose this as an adaptation.

Relations between barriers and women empowerment option

From the study it has been found that every adaptation measure has at least one or more than one barrier that influence empowerment of women through local adaptation practices to the community. Homestead gardening and poultry or livestock rearing is an effective adaptation measure and financial activity but women face social, cultural and political barriers in this sector. Taking loan is an important as well as a controversial adaptation practice which is mainly influenced by economic barriers. Economic barriers directly influenced small business, nursery creation, mix aquaculture and handcraft.

Conclusion

Data and arguments in this study establish that women play a key role in protecting, managing and recovering their household and assets during and after a disaster by practicing different types of income generating activities. When women can add income to their family, they can participate in decision-making of their family. That is a way they may be empowered. But women face constraint in access to assets, information and services as well as they are victims of domestic and social violence.

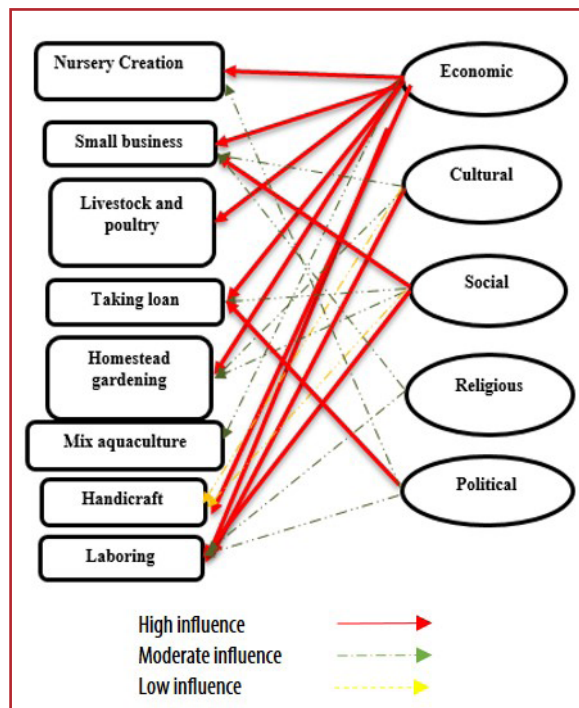


Figure 5: Influential map of barriers for women empowerment in the study area



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About IWFM

The Institute of Water and Flood Management (IWFM) is a research institute at Bangladesh University of Engineering and Technology (BUET), established in 1974 as the Institute of Flood Control and Drainage Research, later renamed as IWFM in 2002. The Institute pursues research and capacity development in the field of water and flood management that is vital for economic development and social prosperity of the country.

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