



**REDUCING VULNERABILITY TO
CLIMATE CHANGE**

**THE PIONEERING EXAMPLE OF
COMMUNITY-BASED ADAPTATION**

Edited by
AHSAN UDDIN AHMED

REDUCING VULNERABILITY TO
CLIMATE CHANGE: THE PIONEERING
EXAMPLE OF COMMUNITY-BASED
ADAPTATION

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Centre for Global Change



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CHAPTER 7

ADDRESSING GENDER ISSUES IN ADAPTATION

SHARMIND NEELORMI

1. Status of Women in Bangladesh

Gender relations in Bangladesh have been undergoing a process of considerable transformation over the last two decades as part of a broader process of economic transition and social change (Halim, 2001, World Bank, 2008). Although progress has been considerable in many spheres, women's changing roles have also given rise to a range of new challenges that require shifts in policy making and program implementation as well as the various social and cultural values which have informed and shaped implicit societal understandings on women's roles and responsibilities. Available statistics on health, nutrition, education, employment and political participation bear witnesses of continuing struggle for equality (Asaduzzaman *et al.*, 2007; ASK-BMP-STD, 2004; MOP, 1996). Such data, however, also amply demonstrate gender-based discrimination in many different ways.

Patriarchy controls women's roles and responsibilities in Bangladesh. Within the households, decision-making and control over resources are generally in the hands of men. Women's status tends to be derived from their family, and they are generally considered as economic dependents, while high value is placed on sons as potential family providers and perpetrators of family names (Goetz and Gupta, 1996). The responsibilities of women tend to focus predominantly on family maintenance and reproducing succeeding generations, while their productive capacities are undermined. Despite the fact that a common woman in rural Bangladesh works up to 14 hours a day on domestic chores, her contribution does not get noticed since it does not bring home

cash. Whoever earns and handles cash, he is accepted as the 'provider' in a family and the women remain as 'dependents'.

Whilst poverty rates in Bangladesh have decreased in overall terms in recent years, vulnerability to poverty continues to have concrete gender dimensions. Significant disparities in employment and wage rates persist which, combined with considerable gaps in asset ownership, seriously limit women's economic opportunities. Gender-based 'capability poverty' continues to be a key issue in the health and education sectors despite significant improvements in recent years. It is reflected in poor nutrition, maternal mortality and child mortality indicators as well as gaps in primary and secondary enrolment versus completion rates, low achievement levels and high levels of adult female illiteracy (Asaduzzaman *et al.*, 2007). Whilst quota-based efforts have been made to increase the participation of women in the public sector, there are still few women in decision-making positions. Gender-based violence is also increasingly understood to be a serious and growing problem in Bangladesh. Female poverty and its specific vulnerabilities is also reflected in the sizable numbers of women and children trafficked each year to neighboring countries and beyond.

Bangladesh has enacted a number of laws at the national level to protect equality of rights and opportunities. The Constitution of Bangladesh grants equal rights to women and men in all spheres of public life (Articles 27, 28(1), 28(2), 28(3), 28(4), 29(1), 29(2) and 29(3)) and has been supplemented by a number of Acts and Ordinances¹ to safeguard women's equal rights. Despite such improvements in the essential legal framework for protecting and promoting women's equal rights in the public sphere, women continue to face considerable injustices at home and in family life where the practice of a range of customs and traditions continue to undermine their rights to equality (Jahan, 1975). At the international level, Bangladesh has ratified the UN Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) agreeing to the Optional Protocol in 2000 (ASK-BMP-STD, 2004).

¹ For example, the Dowry Prohibition Act of 1980, the Child Marriage Restraint Act (amended in 1984) and the Family Courts Ordinance of 1985.

There are considerable challenges which will continue to require effectively targeted programs framed by a commitment to mainstreaming gender equality at both the policy and program level. Over the last three decades, a dynamic and increasingly organized civil society has been developing in Bangladesh. A number of the CBOs and NGOs which have emerged from this movement have a specific focus on gender equality goals (World Bank, 1990). Encouragingly, there is also evidence of increasing collaboration between NGOs and government at both the program and policy levels – although this is an area where still further progress needs to be made. Government and NGO interventions to address gender issues have generally focused on education, family planning and gender, with limited success. Despite positive steps at the policy level, gender discrimination is widespread, and women, particularly poor women, are often not aware of their rights (Halim, 2001). Social taboos and religious practices are highly discriminatory towards women.

2. Climate Variability and Gender Issues

Bangladesh is highly vulnerable to climate variability and likely to be amongst the worst hit under climate change. With the above backdrop, when women are faced with the additional burden of coping with hazards and climatic extremes, scanty targeted programmes are made available to them (Denton and Parikh, 2003; Nasreen, 1995). Any response to climate change affected communities cannot be considered complete unless women-specific responses are interwoven in a variety of adaptation options considered in the target areas.

On paper, social safety net programmes for post-hazard recovery and reconstruction tend to cover female headed households. In reality, they receive formal institutional support in a fragmented manner. Only gender-focused NGOs often run programmes which offer services to the poor women. Since vulnerability of women is often disregarded while designing programmes, gender-targeted responses are not often considered and women face further deprivation. Moreover, the benefits of the scanty services offered are often accessed by males. The key to bringing a change in approach, especially in the wake of climate change, is to allow women towards defining their own vulnerability and designing programmes (i.e., adaptation plans) to relieve them from discriminatory gender-biased responsibilities and enable them to take full advantage of the adaptive opportunities as do their male counterparts.



Figure-1: Women, adult and adolescent alike, are forced into drugery due to high salinity in drinking water in the SWR

At the initiation stage of the RVCC project, it was well understood that the negative effects of climate change were likely to hit the poorest people in the poorest countries the hardest. The poor have been considered to be amongst the most vulnerable to climate change². Since women form a disproportionate share of the poor in developing countries, women are likely to be disproportionately vulnerable to the effects of climate change. Moreover, because of gender differences in property rights, mobility, access to information and in cultural, social and economic roles, the contexts of vulnerability of women must differ than those of men. Therefore, the effects of climate change are likely to affect men and women differently.

In case of extreme weather events in Bangladesh women's particular vulnerability has been manifested time and again. Following the high intensity cyclone of 1991 in coastal Bangladesh, it was reported that casualties involving children, old people, and women were higher than other groups (Ikeda, 1995).

² Even the UNFCCC recognized it and called for 'responses' and 'actions' (UN, 1992).

The effects of climate change on gender inequality are not limited to immediate impacts and changing behaviors but also lead to subsequent changes in gender relations. Spending more time on traditional reproductive tasks re-enforces traditional work roles and works against a change in which women might begin to play other roles. For instance, because women are primary care-givers in times of disaster and environmental stresses, the occurrence of magnified burdens of care giving is likely to make them less mobile. Since climate change is expected to exacerbate existing shortfalls in water resources and fuel wood, the time taken to fetch water or wood (which in most countries is the responsibility of women) will certainly increase women's workloads, thus, limiting their opportunities to branch out into other, non-traditional activities.

Women face the brunt of rapidly occurring hazards since they need to take care of their respective family members, including children and elderly people. Despite rising waters in flood condition, they cannot relocate unless safety of all the members and assets within the homestead is ensured. In case of riverbank erosion, women in affected families face derogatory attitude and remarks, even occasional exclusion from accessing social goods and services. Drinking water shortages due to both salinity and drought force women to drudgery. When a crop is damaged due to either erratic behaviour of rainfall and temperature or climate extremes, the intra-household food security is at risk, which is translated into much lesser consumption by the women in the household. Abject poverty is perhaps the root cause of early marriages for girls in their childhood, where the parents of a poverty stricken family consider this as a social process to relieve burden from 'responsibility of feeding yet an extra hungry mouth'. Keeping this in mind, one must design adaptive measures which would pay additional attention to women's specific needs.

There exists a general belief that adaptation measures with an objective to help individuals and/or households to either reduce the adverse effects or to enhance adaptive capacity to deal with climate induced events (or, for that matter, taking advantage of the emerging situation) would eventually help all the beneficiaries equally, which however is not the case. For example, a cyclone warning can save lives only if the warning is disseminated properly. However, women often do not have equal access to the same warning, as in most cases warning is disseminated in public

places where women generally do not go due to social taboo or religious reasons stimulated by patriarchal societal norms (Ahmed *et al.*, 2007a). Therefore, the efficacy of the same warning to different groups of people appears to be different, with an element of discrimination against women. Here the gender relationship allows men to have increased access to warnings. In addition, owing to cultural practices men do not often provide the warning to their respective female family members, rather expect that women would remain at the household and safeguard belongings and assets. A combination of all these factors increase women's vulnerability (Ahmed *et al.*, 2007a,b).



Figure-2: Women found it difficult to grow vegetables in the courtyard due to salinity

Simultaneously, there may be a few adaptation modalities which put women in additional vulnerability if not designed properly. One may refer to cyclone shelters built along the coastal region of Bangladesh as an example of gender insensitive adaptation, which clearly discriminate against certain female groups based on their gender-specific roles (Ahmed *et al.*, 2007b). The design criteria of a cyclone shelter are such that it should be built on stilts, higher than the ground level to avoid tidal surge (MCSP, 1994). However, the design criteria appear to be insensitive to particular groups of females. Since there is no provision for building a ramp, it discourages pregnant women to take shelter. Climbing steep

stairs is risky to her pregnancy and often in such conditions she stays at home risking being drowned by the tidal surges. The cyclone shelter has toilets which are at the ground level, prone to surge of tidal waters further adding to the risks faced by women.

Adaptation modalities therefore need to be devised with utmost care so that their effectiveness appears high for both the male as well as the female. At least it should not cause additional discrimination against women. To be successful, adaptation policies and measures need to be gender sensitive. To understand the implications of adaptation measures for all people involved, it is necessary that all members of an adapting community are represented in the planning and governance-related processes of adaptation to climate change.

Equal involvement of men and women in adaptation planning is important not only to ensure that the measures developed are actually beneficial for those who are supposed to implement them, but also to ensure that all relevant knowledge, i.e. knowledge from men and women, is integrated into policy and projects.

3. Integrating Gender into RVCC Project Activities

In a male dominated world, the incorporation of gender issues at activity and organizational levels continued to be a challenge. In an attempt to analyze the differing vulnerabilities between men and women, the RVCC project conducted a gender-sensitive vulnerability assessment at the beginning of the project to identify vulnerability and areas of well-being that needs to be addressed through project interventions.

In the design of the RVCC project, all forms of gender-specific vulnerabilities were not addressed with equal rigor. Rather a few selective processes were given higher preference in the pilot activities. The participatory vulnerability analysis (PVA) separately³ involving women gave the basis and rationale of selecting a few adaptation modalities. Two specific concerns were addressed: (a) design of responses (i.e., adaptation) that would solve the topmost priority concern of women (i.e., the non-saline drinking water issue) and help them to overcome the miserable conditions, and (b) to help increase household income so that

³ For more details, please see the Methodology chapter (Chapter # 2) of this anthology.

they would attain increased ability to fight against climate driven hazard(s) and simultaneously their intra-household and community-level dignity would be enhanced by bringing money through their 'economic activities'. As discussed in preceding sections, both these issues were considered to be major causes of gender-based discrimination in Bangladesh.

The RVCC project had made some important progress in promoting gender equity through project activities. During the PVA, separate Focus Group Discussions (FGD) were held for men and women, and separate result matrices allowed determination of gender differences in the results⁴ (CARE, 2003; Ahmed and Schaerer, 2004). It was revealed that women tended to prioritize health, housing and water, while men focused on income and food security. The Vulnerability Assessment also identified current coping strategies employed by women and men. The top three most practiced coping strategies identified were the same for both men and women: selling labor, male migration and taking loans to maintain livelihoods (CARE, 2003; Schaerer and Ahmed, 2004). Based on the PVA outcomes, the project took into consideration gender-sensitive adaptation measures and responded to women's particular needs to develop adaptive capacity.



Figure-3: The RVCC Project invited local women to raise their concerns

⁴ For further details, please see the Methodology Section (i.e., Chapter # 2).

In Bangladesh, women's workload to manage almost all the household activities has hardly been recognized. Lack of access to formal and informal labor markets portrays women, specifically poor rural women, in a subordinate position compared to their male counterparts. Though, from the FGDs, women sketched family well-being as their major concern, they also expressed their keen interest to get directly involved in income generating activities. The FGDs further revealed that women's ability to earn cash would enhance their position in decision making process within their respective families. It was a common perspective of participating women that their voices would be heard in the families if they could earn some cash, which eventually would help in enhancing the well being of the families. The feeling of deprivation and sense of dignity - both induced their urge for getting involved in different income generating activities.

Most interestingly, the participating women identified their options to get involved, emphasizing on the very design of the activities so that their household management would not be hampered. They themselves assessed their needs, gaps and income potentials. They were also aware of the fact that, because of social and religious norms they would have to depend on their male counterparts for marketing of their products.



Figure-4: As a contrary to norms and practices, a woman was given the mike to make her case towards identifying gender-sensitive adaptation

Recognizing that women were especially vulnerable, the project prioritized destitute women, widows, divorced women and women-headed households when selecting participants for the household level activities (58% of participants were female). Activities were designed to work within the social and religious taboos, keeping in mind the gender biased roles and responsibilities of women and men. Learning and training sessions were brought under capacity building, specifically designed for women and held at a time most convenient for the members of the group. Whenever possible, female field organizers of the partner NGOs facilitated the sessions for women groups. A training needs assessment was conducted with the participating groups, and women prioritized adaptation measures (actions) that were close to their homesteads.

Recognizing the needs of women for information and awareness on climate change related issues and realizing their relatively limited mobility in the neighborhood, awareness campaigns were designed carefully to serve the women better. Within the awareness component, all awareness tools and materials were developed considering women's understanding and concerns, and were field tested with women's group to ensure they were appropriate. Folk media and cultural soirees with information regarding impact of and adaptation to climate change were designed and performed in remote villages, to be able to reach wider audiences including women. The timing for such performances was also chosen carefully. To spread knowledge on climate change through school education program, efforts were made to select Girls' High Schools in addition to Boys' and Co-education schools.

In order to reduce women's additional burden to fetch non-saline water from far away places, the project designed direct interventions. Salinity was high in the water of tube wells in the southern parts of the districts of Satkhira, Khulna and Bagerhat. Tube wells linking non-saline deeper groundwater aquifer (generally >700 feet) were sunk under technical supervision of government officials. However, lack of available non-saline aquifers limited the effectiveness of this intervention in many cases. Pilot scale pond sand filters (PSF) were established. People in the neighbourhood, including women, were provided with training to clean up the filtering material on a regular basis and to mend the infrastructure as needed. Enhancement of local capacity was thought to be the right approach towards sustainability of the adaptation modality.

In addition, a few demonstration-scale rain water harvesters (RWH) were built in 'hot-spot' areas where women had to travel three to four kilometers each way to reach a non-saline tube well. Local masons were provided with training so that they could be called on in case of any malfunctioning. The demonstration-RWHs were mostly donated by the project in a bid to popularize the technique in the neighbourhood. Hard core poor and female headed households were chosen as initial recipients of the RWHs. It was thought that the wealthy households would realize the benefits of the adaptive modality and replicate it in their respective courtyards.

By involving community as a whole, community-based 'designated ponds' were earmarked/ established, which were considered as sources of drinking water. All other services from those ponds were banned. Since those ponds were designated for the collection of drinking water, women were asked not to bathe or wash clothes in them, while fish culture was also discouraged. In most cases, such ponds were maintained under the supervision of local elected leaders and elites. Involvement of local institutions was vital to stop all forms of services from these designated ponds other than keeping them sacred for the collection of drinking water.



Figure-5: To make a cyclone shelter women-friendly: the old design had provision for a toilet (X) in the ground level prone to surge

The project offered capacity building training for the women groups in a bid to increase income and earn dignity. A few of those activities had been practiced in the community, however the females were not particularly empowered with the know-how. Based on the PVA, women identified a few modalities which could help them raise their income and women felt confident that they could maintain income streams during difficult times (especially when they would hit by a climate driven event). Homestead gardening, poultry rearing without using electricity, crab fattening, mele cultivation, establishing/maintaining kawra nursery, etc. were among those activities.

In some cases, women asked for capacity building/enhancement training in groups on particular adaptive modalities where they also requested to further strengthen their groups by inviting a few male members. For example, a particular apiculture group involving five women and two men in Debhata sub-district of Satkhira District was highly successful to raise their income significantly. In this group, recognizing limited mobility of women, the females concentrated their roles in taking care of bee colonies (in boxes) and hives, while the males were involved in marketing. The project ensured that all the members in the group equally shared the proceeds of the collective adaptive activity.

Similarly, 40 poor households along the Kobadak river in Manirampur sub-District were given hands-on training on floating vegetable gardening, *baira*. Out of the 40 recipients of training, 15 were women. These women were found to be equally apt towards maintaining the 'baira' platforms, harvesting vegetables, composting the rotten beds and marketing both the vegetables and the composts in local market – the latter being greatly facilitated by their male counterparts. In such cases, the group activities really helped participating women to increase their income and in the process earn dignified position within their respective households.

At the community level, the project emphasized participation of female Union Parishad (UP) members, and prioritized working with female community leaders. Gender training was provided to UP members, and additional training was provided to female UP members to support their effective participation.



Figure-6: A good number of suitable options towards maintaining production and income were promoted amongst women in the RVCC project areas

Towards choosing one advocacy issue, the challenge was to make women's concerns visible in the policy discourse. RVCC's advocacy campaign addressed issues concerning salinity and potable water, which was the primary priority concern, identified by women. Due to project intervention, the membership of the 'Pani' Committee, the projects' civil society advocacy partner, was expanded to include five women. Some of the female members of *Pani Committees* were given chance to speak as lead speakers in national level roundtables on the drinking water issue. Women focused demonstrations and pitcher-processions were carefully designed and implemented in a bid to raise awareness of issues which were prioritized by women.

At the end of the project, participatory M&E exercises were undertaken to determine the level of perceived reduction of vulnerability in project-beneficiary households. These exercises were conducted separately for groups of men and women, and emphasize was placed on women's participation and mobility throughout the discussions.

4. Challenges and Lessons Learnt

Many challenges had been encountered in effectively integrating gender into the project activities and management. One of the major challenges

was selection of partners and identification of priority issues through the vulnerability assessment. As mentioned above, women prioritized health and potable water as their priority interventions in relation to household well being. However, at initial stage a few partners showed reluctance to work with females and rather opted to work on agriculture and income generation activities. These partners were comfortable to work on the issues having prior expertise, though those were clearly not the top priority for women. This limited the project's ability to address women's priorities effectively. Expanding partnership with organizations with more diverse expertise, particularly on water and gender, would have improved the project's ability to address women's priority concerns.

At the activity level, the ability of women to participate in the implementation of adaptation measures at the household level was sometimes limited. Social and religious restrictions were difficult to overcome and limited the opportunities to undertake new activities. Decision making for the family was rarely in the hands of women, and often a lack of access to resources, either land or capital, made it difficult for women to innovate in their livelihood strategies. Mobility outside the homestead was limited, which reduced opportunities for training, accessing financial and/or technical support, and marketing of products. Appropriateness and feasibility for women must be a key consideration when selecting adaptation measures to be promoted.



Figure-7: Rainwater harvesting, Pond Sand Filter, and three pitcher filtering processes helped women to address health issues and defy salinity in drinking water

Women in general were found to be reluctant to take their produce to market. They were too concerned regarding the social response to their activities. The successful women groups could have earned more from their economic activities if they could ensure marketing and retain the control within themselves. However, they chose to remain within their homesteads and gave away the role of marketing their products to male partners, thereby accepting the financial consequences of the venture.

The RWHs worked reasonably well as long as those installations were maintained properly. Since a good number of such units were given away to the poorest households (primarily to assist them to have safer water), they could not manage additional cash to retrofit/repair the units as needed. Intriguingly, the well to do households who had replicated the adaptive modality could easily mobilize the funds needed and enjoyed non-saline water during the dry season. It was realized that, until a household had financial capacity to mobilize funds required, it would be difficult to maintain such installations.

The project made efforts to ensure participation by women in Union Parishads and in the Pani Committee, however there were questions about the adequacy and effectiveness of this participation. The proportion of female members in these committees was well below 50% and it was observed that their participation in discussions and decision-making was often weak. On the one hand, lack of information and practical knowledge outside the household domains forced these women to keep quiet, while on the other the powerful males generally dominated the discussions as they were 'better informed'. There was a strong need to prioritize equitable and effective participation by women in local government and civil society organizations.

Community ponds did not work well. In most cases, the ponds went dry during early dry season, as the water was collected by the neighbouring community. Even if there was little water, it was found to be contaminated with pathogens (people reported spread of diarrheal disease). Moreover, with the rapid increase in fish price, local elites preferred to utilize the pond to raise fish. Therefore, the objective to keep the ponds as designated for the collection of drinking water could not be met. Until governance processes are made pro-people, it appears difficult to maintain community efforts for the larger benefit of the community.

A major post-project concern was to investigate whether women had any complain regarding a few adaptation measures, especially those requiring women's extra physical effort to implement in a bid to increase household income. Since the women never could handle the proceeds (i.e., cash) by themselves, it was intriguing to find any resentment for not being directly benefited from their hard work. Women, in most cases, expressed their dissatisfaction for the outcome. However, they in one hand were happy to note an increase in their family/household income and on the other recognized the generic male dominance over household decisions and financial affairs. Women also commented that those were perhaps beyond the scope of the project to address, as those had been common practices due to patriarchal societal norms.

Despite a few challenges, the RVCC process helped identification of gender-differentiated vulnerability contexts and their responses within the general adaptation framework. A number of adaptation modalities such as crab fattening, goat and poultry rearing, establishment of keora nursery in saline affected areas, mele cultivation and subsequent mat production offer targeted intervention opportunities for women. Interventions in water supply and sanitation directly benefit all within a community, however the issue appeared to be a priority one for women. Respect towards women's special adaptation needs can indeed enhance effectiveness of community based adaptation.

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