
Gender Assessment

FP069: Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity

Bangladesh | UNDP | GCF/B.19/22/Rev.02

30 April 2018



GREEN
CLIMATE
FUND



Gender documents for FP069

Annex XIIIe: Gender Assessment and Action Plan

Bangladesh: Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity

I. Introduction

The Green Climate Fund recognizes the central importance of gender considerations in terms of both impact and access to climate funding, and requires a Gender Assessment and Gender Action Plan to be submitted as part of the project-funding proposals that it assesses. The main objective of the Gender Assessment is to screen the gender aspects of the GCF project, and to subsequently strengthen the gender responsive actions within the project. Given that the current project places gendered climate vulnerability at its center, and aims to reduce this vulnerability by addressing their adaptive capacity from multiple levels, the information and design considerations in this Annex should not be considered additional, but rather part of the basis of the proposal, with gender assessment related information, including consultations, literature review and relevant data found throughout the proposal, including the Feasibility Study, Stakeholder Engagement and Environmental and Social Management Framework (ESMF) Annexes. That is, as a project “Enhancing adaptive capacities of coastal communities, especially women, to cope with climate change induced salinity” has taken a gender responsive and transformative approach to climate change vulnerability, considering gendered differences in access to resources, ability to pursue adaptive livelihoods and institutional support and capacity building, and this has fundamentally shaped all of the activities and outputs of the project. The proposed intervention aims to go beyond the categorization of women as a “vulnerable” group, or simply as beneficiaries of the project, but rather recognizes women’s essential contributions as leaders and agents of change in the face of a changing climate and resource constraints.

Gender mainstreaming in this project is both gender responsive, by embedding women’s perspectives, and the necessary safeguards and considerations to ensure that existing inequalities are not exacerbated, but also gender transformative, in the sense that it addresses root causes of vulnerability and structural barriers to climate resilience, and challenges the norms around the gendered distribution of labour and constraints in regards to land tenure and participation in community decision-making, which are central to building resilience. Furthermore the project aims to address gendered climate resilience across the household, community and institutional levels. Gender specific vulnerabilities and strengths in regards to climate change resilience have shaped the overall theory of change underlying the project, and planned capacity building activities in regards to gender-responsive climate resilience is integrated across sectoral government institutions, which often operate in silos, by putting the Ministry of Women and Children’s Affairs (MOWCA) at the helm of the intervention, with support from the Department of Public Health Engineering (DPHE), and a proportionate amount of project funds directed at coordination, knowledge sharing and institutional strengthening.

The proposed GCF funded project not only intentionally targets and benefits women, but also considers the intersectional vulnerability to changing conditions, of those beneficiaries facing additional marginalization due to poverty, and social exclusion (religious and indigenous minorities). The project design recognizes that salinization of water and soil has had immediate and profound impacts on women, increasing the significant burden on women’s time from water collection in an area with an acute shortage

of adequate water infrastructure, and the parallel need to build their adaptive capacity in regards to changing environmental conditions, by supporting climate resilient livelihoods and better integration into local value chains, in which women are already playing a growing role.

Although there is an increasing recognition on multiple fronts, both in terms of policy and the interventions of various international organizations, NGOs CSOs and the Government of Bangladesh (GoB), focused on women’s resilience and their critical role in preparedness and recovery from disasters and the necessity of shifting livelihoods towards adaptive options, efforts remain limited compared to the actual and acute needs of women. To address these needs, and get to the heart of these issues, a detailed analysis of the gendered aspects of climate change impacts and vulnerabilities of women and girls has been presented in the Feasibility Study and the current Gender Assessment. The Gender Assessment expands on the information provided throughout the proposal, by providing additional information on the national and local gender context, particularly in regards to women’s access to resources, their role in decision-making and the gendered aspects of local livelihoods, and provides the basis for, and lessons on which, the Gender Action Plan (which is reflective of the overall project design) has been built.

Overall, the project objective is to enhance the climate resilience of women (and by extension, their families and communities), who are in extreme poverty, in two of the most climate change impacted districts of south-western Bangladesh, that are constantly exposed to cyclones, storm surges, flooding and slow-onset salinity. Specifically, GCF resources will be used to enable the Ministry of Women and Children Affairs (MoWCA), with the participation of the Department of Public Health Engineering (DPHE), to implement activities in the context of a national initiative that will empower targeted vulnerable women to become leaders in the adoption of climate change resilient livelihoods and the management of a reliable drinking water supply. That is, resources will be used to effect a significant expansion of safe drinking water through a Rain Water Harvesting (RWH) scheme at the institutional, community and household levels, and will address structural barriers to resilience, by ensuring that water solutions are owned, operated and managed by women. That is, the project aims to create or reactivate Water User Groups (WUGs) and Water Management Committees (WMCs) led by women to manage the drinking water solutions, with technical and financial backstopping support from Local Government Institutions (LGIs) and the DPHE. Resources will also be used to promote climate resilient livelihood options and participation in their associated value chains, for women whose existing livelihoods are particularly vulnerable to salinity ingress. Finally resources will be used to strengthen the capacities of national institutions in regards to gender-responsive, climate-resilient solutions for both water-security and livelihoods.

The primary measurable benefits that will be realized as a result of the GCF investment includes:

- Provide assistance to 25,425 women in the two target districts of Sathkira and Khulna, to pursue climate resilient livelihoods and facilitate associated market linkages, with investment in assets, tools, and training
- Expansion of safe drinking water supply for 68,327 women and 67,783 men, by installing RWH tanks at the household, community and institutional levels (and pond based systems with filtration treatment at the community level).
- Strengthen capacity, coordination and knowledge sharing of national institutions such as MOWCA, DPHE, local government, and their partners on gender-based approaches to climate change adaptation

II. Existing Gender Inequality and Social Inclusion in Bangladesh

Bangladesh has a high level of gender inequality, particularly prevalent in rural areas, which importantly hinders overall development. The life of a woman in Bangladesh is shaped by the patriarchal, patrilineal and patrilocal nature of the social system, with heavily gendered power structures greatly limiting women's roles in the social, political and economic spheres. Although Bangladesh has made significant progress in poverty, human development and gender equality indicators over the last few decades¹, poverty and inequality remains prevalent, and the social status of Bangladeshi women remains very low, especially in rural areas². Central to the issue of gendered inequality, is that Bangladeshi women suffer under a particularly high burden of unpaid work, responsible for a range of essential household functions such as collecting water, providing childcare, and producing half of the food at the household level, yet making up only a quarter of the industrial workforce³.

The severity of gender disparity in Bangladesh persists despite a moderate level of policy formulation and integration of gender issues in social protection measures nationally. Women are disproportionately represented amongst the poor, have considerably less access to formal employment and earn less when employed, while continuing to face high levels of gender-based violence (GBV). These inequalities are further reflected in national health indicators, and although maternal mortality rates have dramatically improved in recent years, and mortality and malnutrition rates for girls are higher than those of boys⁴. The health impacts of climate change, including mortality levels during extreme weather events, and the impacts of water scarcity and exposure to saline water, also disproportionately impact women⁵. Given that Bangladesh is one of the most severely affected countries in regards to climate change, and that women often experience the impacts of climate change differently than men, facing different and often more severe vulnerabilities due to their socio-economic marginalization⁶, addressing the underlying impacts of poverty and gender inequality is both critical, and complex, within the broader challenge of building climate change resilience. The following sections further explore the gendered dimensions of inequality at the national level in regards to social aspects, health, education, decision-making, employment and livelihoods, GBV, access to resources and climate change vulnerability.

Gender Inequality Index

There are several global or international indices in existence that have been developed to quantify the concept of gender inequality. The United Nations Development Programme uses the Gender Inequality Index (GII) and Gender Development Index (GDI).⁷ The GII is a composite measure that shows inequality in achievement between women and men in regards to reproductive health, empowerment and the labour market, while measuring achievement in human development in three areas: health, education, and command over economic resources. The GDI considers the gender gaps on human development between men and women, using sex disaggregated data at the national level related to health, access to knowledge

1 ADB, 2010

2 Ferdushi, 2011

3 Kabeer, 2011

4 WHO, 2015

5 Pionetti, 2016

6 Pelling, 2011

7 United Nations Development Programme, Human Development Report. <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.

and standard of living. According to the UN Gender Development Index, Bangladesh ranks 121 out of 146 countries assessed worldwide. The female Human Development Index (HDI) value for Bangladesh is 0.556 in contrast with 0.599 for males, resulting in a GDI value of 0.927. Bangladesh has a GII value of 0.520, ranking it 119 out of 159 countries in the 2015 index⁸.

While the international rankings provide a snapshot of Bangladesh's measures in gender equality as compared with other countries and show that Bangladeshi women are particularly marginalized, they do not always capture the factors which contribute to that marginalization, nor the complex and changing roles of women in a context of shifting livelihoods and increasing vulnerability to climate change impacts. Nor do they give a deep understanding of the intersections of gender inequality with a range of other dimensions of vulnerability and resilience, which are explored in more detail below.

Social Aspects

One of the root causes of gender inequality in Bangladesh is related to widely held beliefs and norms in regards to the role of women in Bangladeshi society. The mobility of women in Bangladesh varies depending on social status, religious affiliation and whether they live in urban or rural areas. Local religious practices such as 'purdah' (or sexual segregation) practiced by Muslim households (which represent 98% of the population nationally, and over 70% of the households in the target districts) have a significant influence on a women's status, limiting women's involvement and movement in the public sphere, seen as a way to preserve a women's purity, and to maintain the honor of a household⁹. Regardless of religious affiliation however, the practice exists within the broader context of the country's existing patriarchal system, and greatly determines women's roles and mobility, further limiting access to resources (water, energy, food), property, education, and income-earning opportunities, as decision-making and control of resources at the household level are generally in the hands of men¹⁰. Socio-cultural norms not only shape perceptions of the value of women, but also restrict a large proportion of women to unpaid domestic responsibilities, further reducing their productive value in the eyes of Bangladeshi society. These restrictions are felt throughout the social sphere, with limits on women's access to education and healthcare. In 2011, only 54.5% of girls were enrolled in secondary school, while 42% of women aged 15-19 were unable to attend a health center alone.¹¹ The recent local study indicates that only 12% women travel outside of their village alone, and that when they travel other family members such as children (52%) and other female members (18%) usually accompany them, which has important implications in terms of women's access to markets¹². Notably, religious and cultural justifications that lead to behavioral restrictions, are often deeply held not only by men, but also by many women, with aphorisms such as "heaven lies at the feet of the husband¹³" widely believed among Muslim rural women, often resulting in the complete allegiance to the husband's wishes and decisions without challenge. Although these social dynamics are in flux, and there have been important shifts due to economic conditions and opportunities, traditional beliefs regarding the role of women in the household and public spheres remain deeply conservative.

8 ibid

9 Bridges, 2011

10 Bangladesh MoEF, 2012

11 Bangladesh Demographic and Health Survey, 2011

12 Assaduzzaman, 2016

13 Hartman and Boyce, 1983

Rearing children and cooking for all members of the family are seen as the central roles of a woman throughout Bangladesh, particularly in rural areas, and the nature of work a woman performs is principally conducted within the premises of the household. This type of labor remains socially invisible and has little exchange value or impact on woman's decision-making power, reinforcing women's undervalued role in Bangladeshi society. The community consultations, focused on the project intervention areas, confirmed the aforementioned social norms regarding men and women's relationships. Potential project beneficiaries reported local gendered disparities in many aspects of life including education, food, and employment opportunities, with men generally enjoying greater access to resources and benefits than women. It was also reported that family members think a son can provide for them, whereas a daughter cannot, which leads to preferential treatment of the males, and daughters getting married off early¹⁴. According to the women consulted, the main impediment to women's empowerment is society's double standards. In regards to local socio-cultural conditions, participants also said that while the tradition of dowry still prevails, violence against women and child marriage is decreasing in the area because people are becoming more aware. Promisingly, another recent study carried out in the target districts, indicated a changing awareness in regards to the challenges faced by women, with women reporting that if they are financially empowered, they can do anything.⁸ Regardless, inequality remains high, and socio-economic indicators, including health, education, public participation and access to resources and employment reveal the deep disparity which exists between the opportunities and outcomes available for men and women.

Health

Women in Bangladesh face high levels of mortality, malnutrition and poor health outcomes, including particularly serious health hazards in regards to anemia, inadequate nutrition, and pregnancy. Women often experience food deprivation at the household level, prioritizing the nutrition of male household members and children, and nearly one third of women are undernourished.¹⁵ This pervasive gender differential in entitlement of food nutrition and care also leads to a higher death rate of female children over male children.¹⁶ The life expectancy of women in Bangladesh at 60.5 years is also mildly lower than that of men at 60.7 years.¹⁷ As mentioned above, women's social status, and restrictions on free and independent movement in the public sphere, translates to a lack of access to essential health care, and a high maternal mortality rate, at 176 per 100,000 live births.¹⁸

Climate change-induced impacts are already increasing the burdens on the Bangladeshi public health system. The most significant of these impacts include the increased prevalence of climate-related water-borne, vector-borne and food-borne diseases, as well as traumatic injuries and deaths from extreme weather events¹⁹. These problems are borne disproportionately by vulnerable sectors of the population, including the poor, young children, the elderly, people with disabilities and women. For example, more than 70% of the fatalities from the 2004 Asian Tsunami were women, and death among women greatly outnumbered those of men in major cyclone and flooding events in 1991 and 2007.²⁰ This is further discussed on the section below on gender and climate vulnerability.

14 See Annex XIIIc Stakeholder Consultations

15 Ahmed, 2012

16 ADB, 2001

17 Ara, 2002

18 WHO, 2015

19 UN Women, 2016

20 Rahman, 2013

The recent UN Women’s baseline study on the socio-economic conditions of women in three eco-zones in Bangladesh²¹ (conducted in the districts targeted by the project) confirmed that women in the coastal zone suffered from water stress including lack of access to safe water, and exposure to high levels of salinity and the presence of certain heavy metals, such as iron and arsenic. The study found that this lack of access to safe water forced families to drink unsafe water and suffer from a high incidence of water borne diseases including cholera, diarrhea, dysentery and typhoid. Though this lack of safe water impacts the health of all family members, women’s healthcare is at the low end of the families’ expenditure prioritization, compounding health issues.²²

Education

Major progress has been made in Bangladesh in closing the gender gap in school enrollments at both primary and secondary levels, and girls currently outnumber boys in enrollments.²³ Unfortunately, although access to education has improved, learning outcomes continue to be poor, particularly for girls, and the gender gap is significant by the end of secondary schooling. According to the 2002 population census, the male literacy rate was 37% in comparison to 33.4% for women. At higher educational levels the discrimination against women is more profound, with poverty, family beliefs that discourage women from pursuing higher education, and a lack of physical security, resulting in a female enrollment rate at Bangladeshi Universities (including private universities) as low as 22% and the representation of female teachers at 15%.²⁴ Throughout Bangladesh, but particularly in rural areas, a major impediment to participation in secondary school is early marriage and household responsibilities. Poor and ultra- poor families in Bangladesh are more likely to marry their daughters at a very young age (as young as 9) to ease the family's financial burden.²⁵ Discrepancies in education outcomes between adolescent girls and boys, perpetuates gender inequality in a vicious cycle, whereby low literacy and numeracy rates limit the employment opportunities available to women, as well as their role in climate change adaptation processes.²⁶

Political Participation and Decision-Making

The status of women in any society is the cumulative effect of their place in the family, in various social and administrative institutions and within political decision-making structures. In the case of Bangladeshi women, limitations within all these spheres have acted as contributing factors to divest women from the mainstream of political and administrative hierarchies, with women’s participation in political and national movements having been seriously limited, despite the fact that Bangladesh has had female Prime Minister’s in power since 1991. Although, women’s opportunities and public participation in Bangladesh have changed significantly in recent decades, and national leadership coupled with a system of quotas has ensured women’s representation in national and local governments (for example in the legislature 45 seats out of 345, are reserved for women), the meaningful participation of women in politics and decision-making remains low, often because of illiteracy and the limited involvement of women in public life due to

21 UN Women, 2014

22 *ibid.*

23 ADB, 2010

24 Daily Star, March 8th 2008

25 Schuler, 2006

26 CCC, 2009

aforementioned religious restriction such as purdah. Furthermore, it remains a challenge for women in politics to influence public decision making, due to lack of representation, lack of experience and continuing resistance from male family members and colleagues.

Women are poorly represented in planning and decision-making processes in climate change policies, limiting their capacity to engage in political decisions that can impact their specific needs and vulnerabilities.²⁷ There has been increasing recognition in international policy frameworks on the importance of incorporating gender in climate risk reduction efforts. In 2009, the Committee on the Elimination of Discrimination against Women (CEDAW) stated, “all stakeholders should ensure that climate change and disaster risk reduction measures are gender-responsive, sensitive to indigenous knowledge systems and respect human rights. Women’s right to participate at all levels of decision-making must be guaranteed in climate change policies and programmes” and the IPCC’s report in 2014 highlights vulnerability due to climate change due to gender.²⁸ The UNFCCC Paris agreement in 2015 also formally recognized the intersection of climate change and gender equality, but women’s participation in planning and decision-making on climate protection is still very low, even in industrialized countries, and is linked above all to the heavily technical nature and male dominance in key areas of work related to climate risk including energy, transport, and urban planning. This is certainly the case in Bangladesh, where women’s perspectives on resilience are often absent from national conversations.

In regards to women’s role in the domestic sphere, most household activities are done by women, with the highest participation in activities such as house cleaning, child care, cooking and meal preparation and lower but significant participation in household level activities such as tree plantations, dairy farming, and poultry rearing.²⁹ Despite this central role in household activities, women’s decision-making power remains limited, with a recent study indicating that only 31% of household decisions are made by women and that women’s participation rate in choice of crop to be grown, and the buying and selling of agricultural products is 19% and 34% respectively and even lower in decision regarding property at 20%.³⁰

Regardless, women’s central role in household management places them in a pivotal position for adapting livelihood strategies to changing environments. Given that women’s roles in decision-making is higher in areas such as food preparation and distribution, resolving food deficits and household work, women are central in assuring household food security as livelihood strategies shift due to slow-onset impacts such as salinity and are assigned higher responsibility in disaster preparedness particularly in storage of food and water, during rapid-onset disasters. Adding nuance, a context-specific view of women’s role in household decision-making in the vulnerable coastal districts targeted by the project is also available from the baseline assessment of socio-economic conditions carried out by UN Women, and is presented in Table 1 below. The results clearly indicate that that women’s decision-making power greatly limited in all spheres, with higher participation in regards to food distribution and household work (including collection of water).

Table 1: Role of women in decision-making

Sl No.	Type of Decision	Percent
--------	------------------	---------

27 CCC, 2009

28 UN Women, 2016

29 Assaduzzaman, 2016

30 ibid.

1	Food related (Meal preparation, distribution etc.)	86.78
2	Meeting food deficit	33.58
3	Selling assets (land, house, livestock, seeds)	9.40
4	Selling agricultural production (crops, seeds)	6.88
5	Buying household assets (livestock, ornament, trees.)	11.10
6	Buying agricultural production (crops, seeds etc.)	7.35
7	Receive credit from mohajon/relatives/bank/NGO/GO	14.50
8	Agricultural work (crop cultivation, land mortgage etc.)	5.84
9	Household work (Collection of Water, Collection of natural resource etc.)	47.91
10	Household decision making (Engage in new income generating activity, Conceiving a baby, Using savings, ownership of VGD/ VG	11.59
11	Female and children healthcare decision making	16.32
12	Decision making about communication (Female going outside the homestead, going for work, education for children)	11.06
13	Decision making on disaster preparedness/coping/adaptation (Going to a shelter, Engaging in alternative livelihood activity	11.48
14	Other	14.29

Source: UN Women (2014)

Gender, Employment and Livelihoods

In Bangladesh, employment opportunities for women remain importantly limited compared to those for men, with female participation in the labour market at 43.1% compared to 81% for men.³¹ The types of professional occupations are also extremely limited, with women making up only 5.4% of the total among legislators, senior officials and managers.³² In urban areas, the rapid growth of the garment industry has provided a large number of formal sector jobs for women, who comprise of more than 90% of its labor force.³³ The income brought into households from this employment has contributed to changing family dynamics and the greater visibility of women on the daily journey to work in Dhaka, and other urban areas, has also influenced public perceptions of what is possible and appropriate for women³⁴. This demonstrates that shifting economic constraints and opportunities can act as an importance catalyst for changing social norms and attitudes regarding gender empowerment. The trends within overall migration flows also

31 (Bangladesh Human Development Report, 2016)

32 ibid.

33 ADB, 2010

34 ibid.

provides another example of social change in Bangladesh, with the proportion of women increasing among migrants, and women now predominating among migrants of ages 15–25.³⁵ In Bangladesh, a number of government poverty alleviation schemes with a work component exist, specifically targeting women, such as the Food for Work and Rural Employment Opportunities for Public Assets programmes. There are also some gender-specific social safety nets, such as a gender-sensitive old-age allowance, and unemployment benefits available for formal-sector workers. Regardless, women in these schemes, do not always enjoy decent work, as indicated by labour conditions in the textile industry, and tragically illustrated by the Rana Plaza building collapse of 2013, which resulted in the death of over 1000 garment-factory workers.³⁶

In the stakeholder consultations that were conducted, the participants said that men usually hold the power in the family, and that women are in a subordinate position, as they do not earn. It also appeared that a common scenario is that women produce goods at the household level (food, handicrafts) and then hand it over to men, who then market the products, and that women generally do not commute or have access to the earnings from their products. This demonstrates that it is essential to incorporate women into value chains linkages and not just primary production. The women consulted in the target districts confirmed this conclusion, and provided more details on the types of and areas of livelihoods support, which they felt, would be most helpful to them, outlined below:

- Training, start-up cash support, and market linkage support
- An efficient water supply and sanitation facilities
- Support for petty businesses in the market place
- Raising poultry and livestock (cow/goat)
- Tailoring training and support with sewing machines
- Vocational skills in cottage industry crafts and for the garment sector
- Supplementary food aid so that they can cover a month of food insecurity
- Support for children so that they can continue their educations

Women reported the need to gain. The consultation found that currently, women’s primary livelihood options in the target districts are rearing goats and cows, and homestead gardening. Some of the women in the target districts work as day laborers for agricultural work, as well as some tailoring work. There are very few female entrepreneurs and although many women work to supplement their husbands’ income due to poverty, the consultations confirmed that women’s mobility is still very low due to social stigma.

Gender and Aquaculture Value Chains

Women’s involvement in aquaculture around the world varies based on local, socio-economic contexts and in Bangladesh, is influenced by religion and position in family hierarchy³⁷. Shrimp and Prawn aquaculture in the southwest (coastal zones) of Bangladesh has spread rapidly within the last decade, mainly in converted rice fields known as ‘ghers’, and women are involved in various parts of this value chain, though their labour is often unacknowledged and undervalued³⁸. A recent study looking at the gendered division of power and work in aquaculture in Bangladesh, found that both men and women still believe in a traditional gender

35 *ibid.*

36 Kasperkevic, 2016

37 Das, 2016

38 Huq, 2015

division of labor, in which men are responsible for work outside the household (public space) and women for household work (private space), and that although people in the coastal zones see it as undesirable for women to work in the ghers, given that it is often impossible to meet household expenditures with one income, wives are ‘sent’ by their husbands to work in ghers regardless³⁹.

In the aquaculture context of Bangladesh, homestead pond fish culture is one of the strongest candidates for small-scale aquaculture involving women, as women find ponds easily manageable in addition to the workload of daily chores.⁴⁰ This emphasizes the importance of having small-scale, community-level aquaculture interventions as close to beneficiary homes as possible, with literature confirming that women are also involved in catching fish from ghers for family consumption, when located within 2 km.⁴¹ Women are ideal candidates for pond polyculture dissemination, particularly in conjunction with the production of vegetables, as in aquageoponics systems, given they have the primary responsibility for home garden management, already have access to homestead ponds, have mobility constraints, are more vulnerable to malnutrition than men, and play a critical role in ensuring intra-household distribution of food.⁴² Regardless, it is clear that while aquaculture innovations may be targeted at women, in practice, multi-dimensional gendered power relations determine the degree to which women can use and benefit from such interventions⁴³.

For integration of women into broader aquaculture value chains, there has been a wave of projects in Bangladesh with a focus on gender, with a recent reviews finding that projects have increasingly realized the importance of addressing social and gender norms (through awareness training and community theater) and give explicit attention to gender-based constraints, access and control over resources, and decision-making power.⁴⁴ In a review of projects and literature, it is clear that women already manage many routine operations in pond (gher) aquaculture, such as fertilization and feeding, and can even take a leading role in day-to-day gher operations when their husbands are away for other work. Women also participate in post-harvest management including sorting, grading and washing of fish, but their involvement is very limited in fish stocking, transportation and marketing.⁴⁵ It is also clear that when women are hired as labour, gher owners set unequal wages for male and female laborers and find that women do not resist this discrimination, believing it is normal for men to get higher wages than women and because women’s employment options are much more limited.⁴⁶ One review found that women doing aquaculture related work can earn as little as 40% the wage of men⁴⁷. Another study, examining human rights violations in the shrimp industry in the target districts found that female workers in shrimp farms, depots and processing plants not only endure gender discrimination in wage rates, but also that hazardous working conditions, sexual harassment, verbal and physical abuse are widespread⁴⁸. Furthermore, women

39 ibid

40 Das, 2016

41 Huq, 2015

42 Morgan, 2015

43 ibid

44 Kruijssen, 2016

45 Huq, 2015

46 ibid

47 Belton, 2014

48 Alam, 2012

can face lowered prestige in the community as a result of working in shrimp farms⁴⁹. Shrimp grown in ponds or ghers comes from fry that is caught in the wild or supplied by hatcheries, and women and children tend to work in segments of the value chain, which are more flexible and insecure such as fry catching, with women also subject to widespread verbal and physical harassment during fry collection from rivers.⁵⁰ Information regarding women’s involvement in the crab farming value chain is more limited given its relative nascence and scale, however a study focused on the target districts of Satkhira and Khulna found that up to 74% women were directly involved in mud crab farming through participation with their families, and that minority groups of women (Hindu women, and Indigenous women ‘adivasis’) experienced greater freedom to participate in crab value chains than the majority population of Muslim women.⁵¹ Similar to the fish and shrimp value chains, women were involved in applying feed to crabs (100%), while less than 20% were involved in pond preparation before stocking, and about 65% during harvesting, while participation of women in crab marketing was very low, at about 33%.⁵²

These gendered inequalities in the current aquaculture value chains in the coastal zones of Bangladesh arise from women’s limited access to resources, technologies, education, information and skills, which in turn stem from underlying social norms and constraints around work and women’s roles. There is clearly ample space for the women to contribute in the production and income from aquaculture, however it is clear that project interventions, must draw on previous project experience and the knowledge of local constraints and conditions to directly address the barriers facing women. Project teams must be well aware of gender issues and be gender balanced.⁵³ Special care must also be taken to ensure proper working conditions for woman, to secure land tenure arrangements and provide effective grievance mechanisms when subject to harassment and unfair treatment, to increase their skills to participate in high value segments of the value chain such as marketing, and finally to integrate women into sustainable sourcing of stock from hatcheries, as efforts are made to reduce reliance on wild stock.

[Access to Resources](#)

Although civil laws in Bangladesh guarantees a woman’s right to income and property, given the low percentage of women engaged in paid work, the possibility of accumulating capital is seriously limited for women and any income that may be earned by rural women by investing in poultry or livestock is usually spent for subsistence purposes. Additionally, lack of awareness of property rights, illiteracy, and local practices all restrict women from enjoying whatever legal inheritance rights they may have. Generally, access to and control over productive resources is unequal between women and men, including key productive resources, such as land, trees, housing, skills, and extension support. In regards to women’s access to land, one study found that the issue is “not just land ownership, but all that goes with it, including access to institutional credit, training, and extension facilities.”⁵⁴ That is, women are often not considered “farmers” in part because they do not own land, and hence they often miss out on agricultural extension and information about new technologies, even when these relate to types of production in which women

49 ibid

50 ibid

51 Ferdoushi, 2010

52 ibid

53 Morgan, 2015

54 Kelkar, “Feminization of agriculture,” footnote 3, pp. 8–9

have typically predominated, such as vegetable growing.⁵⁵ Clearly this lack of focus on women in agricultural extension, serves to exacerbate existing inequalities in regards to access to land, and highlights the importance of securing land tenure for women.

In regards to access to water resources, there are also significant gender differences, constraints and preferences, reflective of the socio-cultural context. Women are likely to give higher priority than men to the quality and accessibility of water for domestic use, because of their awareness of needs related to cooking, household hygiene, and health, and their responsibility for household water provision. Water Aid conducted a study titled “Assessment of increasing water scarcity in the coast and its socio-economic impacts on poor and vulnerable people” in 2013, which outlined how a lack of safe drinking has a strong negative impact on women in relation to the time required for collecting water from distant, unsafe and unsustainable sources. This heavy unpaid time burden directly affects women’s ability to finish household chores, creates household discord, and perhaps most importantly jeopardizes their ability to focus on any productive livelihood interventions.⁵⁶ Although external actors may assume that extreme-poor women and women-headed households would be likely to seek safe water access points where available, even if at a distance, women in the target districts reported that a long walk to a safer tube well is regarded as a luxury to them. In light of their household work burdens, women cannot waste time collecting safe water, and often resort to pathogen-laden or contaminated surface water, which in turn compounds their vulnerability when they become sick and further impoverished through lost wages and the costs of recovery (including medication).

Gender Based Violence

Gender based violence (GBV) is a common reality in Bangladesh and an important limiting factor on the choices available for women and girls, and on their participation in economic and leadership roles. The high levels of violence, and fear of violence, against women in families and communities remain critical constraints on mobility and quality of life.⁵⁷ The varied forms of GBV to which adolescent girls and women in Bangladesh are exposed, constitute a serious threat of their physical and mental health, personal development and sometimes even their survival. Harassment and intimidation is a common facet of life for Bangladeshi women and girls, throughout the public sphere, with girls reporting harassment on their way to school, and women subject to harassment in offices, in factories, at public transport stands, at railway stations, practicing agriculture and aquaculture and in other common public spaces. This harassment and insecurity often extends to interactions with the police, resulting in women avoiding a range of situations, including markets and employment options, which would increase their exposure. Women consulted in the target districts also mentioned that exposure to GBV is a consideration for them when required to walk to distant water access points.

Gender based violence is also of particular concern in disaster and emergency situations. Global evidence shows that sexual and gender based violence increases during and after disasters, heightening existing vulnerabilities. Given that people are displaced during and after disasters, this displacement can lead to an increase in violence, and the visibility of pre-existing violence, due to over-crowded and unsafe living conditions in evacuation centers, temporary housing and shelters. Furthermore, women staying in shelters

54 ibid

56 CGC, 2013.

57 ADB, 2010

can be exposed to rape, harassment, discrimination and violence, and have limited access to reproductive health services, worsened by the fact that government services such as police and health services may be less effective following disasters, and that medical services already overwhelmed by the emergency do not always meet the needs of survivors of violence⁵⁸. Overall the loss of homes, livelihoods, and community and family protection increases the vulnerability of women to violence, as do increased levels of poverty and scarce resources.

Gender and Climate Change Vulnerability

It is widely documented that women experience the effects of climate change differently than men, both in terms of adjusting livelihood strategies, in their changing relationships to scarce resources and in regards to disasters. There are physical, cultural and social factors, often linked with poverty, that blend in making women more vulnerable to climate change than men. For example, women in Bangladesh are more dependent than men on natural resources threatened by climate change for their livelihoods, with the responsibility to secure water, food and fuel for cooking and heating for their households. It has also been shown that women in Bangladesh face social, economic and political barriers that limit their coping capacity, confronting unequal access to resources and information and cultural restrictions, which limit their mobility.⁵⁹ Climate change effects on health also affect women and girls indirectly through the added burden of caring for sick relatives and, directly, through the additional work and physical effort of collecting water and other resources for their families at increasingly longer distances. Climate change impacts on food production and access also disproportionately affect the nutrition and health of poor women⁶⁰. Finally, recent research has also shown that the strenuous economic conditions created by climate change are leading to an increase in child and forced marriages in Bangladesh, as dowries become cheaper⁶¹. Compelling evidence from this research has shown that child and forced marriages of girls appear to be short term solution designed to ease both the food insecurity and future financial pressures on families exacerbated as a result of climate events. The research concludes that attention to climate challenges must take a much broader focus on social consequences in order to protect the human rights of women and girls in vulnerable communities⁶².

The IPCC suggests that the differentiation of vulnerability to climate change among population groups can be clearly observed in the pattern of vulnerability to natural disasters.⁶³ In general, women have less access to resources that are essential in disaster preparedness, mitigation and rehabilitation⁶⁴ and women and children are 14 times more likely to die than men during disasters.⁶⁵ In Bangladesh, as in global estimates, women are more affected and suffer more during and after disasters than men, exemplified by the impacts of cyclones on women in the coastal areas of Bangladesh. During Cyclone Sidr for example, many of the female casualties in coastal Bangladesh occurred because women, the majority of which are homebound, were busy tending the family livestock when the cyclone struck and could not leave without prior

58 IFRC, 2015

59 UN Women, 2009

60 IPCC, 2001

61 Alston, 2014

62 ibid

63 ibid

64 UN Women, 2014

65 Araujo, 2007

preparations, others died because their traditional clothing (saris) got trapped in trees and other objects while running, and others perished trying to rescue or search for children who could not evacuate fast enough^{66,67}. Furthermore, the cyclone was announced primarily among men, with many women lacking the necessary information to evacuate, remaining at home and facing serious risks.⁶⁸ Disaster preparedness requires decision-making and leadership, but in coastal Bangladesh, women are generally excluded from such roles.⁶⁹ Post disaster stages also take a toll on women. Often, women find facilities for personal hygiene in shelters are inadequate, and with few alternatives, are exposed to urinary tract diseases, may be sexually abused while looking for firewood or reconstruction materials, face deteriorating nutrition status as they eat less in order to offer more food to other household members and they lose the natural resources and livelihood assets they depend upon⁷⁰. Regarding early warning and disaster preparedness, women consulted mentioned having been included in village disaster management committees and have been provided training and necessary equipment, such as early warning flags. The GoB and Bangladesh Red Crescent Society are also rolling out a cyclone preparedness program using community volunteers. However, none of these initiatives has focused on women’s particular needs and have not identified gender segregated preparedness plans and priorities.

Both during disasters and in the face of changing environmental conditions, women’s role in communities is not formally recognized or accounted for in mitigation, adaptation and relief efforts and women’s knowledge about ecosystems and their particular strategies, experiences and skills for coping with water shortages, are often ignored⁷¹. For example, Cyclone Sidr contaminated at least 6000 surface water ponds with saline water, used primarily by women for small vegetable farming and domestic water requirements.⁷² Overall, women and girl’s vulnerability to climate change generally depends on the interaction of three key functions: - exposure (E), sensitivity (S), and adaptive capacity (AC). The exposure is largely determined by the climatic hazards and the extent the women and girls are exposed to cyclones, salinity and sea level rise. The following table provides a summary of the vulnerabilities of women and girls in the context of climate change in coastal areas in Bangladesh:

Table 2: Women and Girls Vulnerability to Coastal Hazards: Sea Level Rise, Coastal Flooding, Cyclone and Tidal Surge, Salinity Intrusion, Waterlogging

<i>Critical elements at risk</i>	<i>Exposure (degree and frequency)</i>	<i>Sensitivity (Low to High)</i>	<i>Deficit in Adaptive Capacity</i>
----------------------------------	--	----------------------------------	-------------------------------------

66 Kabir, 2016

67 Alam, 2010

68 Kabir, 2016

69 Alam, 2010

70 Second National Communication to the UNFCCC (2012)

71 Dankelman, 2002

72 UN Women, BCAS (2014)



	<i>Cyclone & Tidal Surge</i>	<i>Coastal Flooding</i>	<i>Salinity</i>	<i>Waterlogging</i>	<i>Cyclone & Tidal Surge</i>	<i>Coastal Flooding</i>	<i>Salinity</i>	<i>Waterlogging</i>	
Life	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Less education to understand cyclone early warning; lack of warning system for tidal surge and coastal flooding; less access to early warnings; less places to evacuate during cyclone; tendency to undermine the risks from cyclones and tidal surges; lack of long term predictions of salinity and waterlogging, inadequate facilities for women and girls in public cyclone shelters; lack of women volunteers; lack of gender sensitive rehabilitation; lack of water and sanitation in houses and public shelters during cyclone, tidal surge, coastal flooding, salinity and waterlogging.
Employment	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of diversity of livelihoods; lack of off-farm livelihood skills; reduced options for on-farm livelihoods; cultural barriers in employment in industry sector; limited SMEs to absorb women labour; lack of women with diversified skills in urban sector jobs; poor capacity to enter into skilled service sectors; heavy domestic responsibility; lack of incentives in skilled job outside domestic territory; sole responsibility for child care.
Potable Water	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Very limited number of safe and salinity free water-points in public and private spheres; lack of available water sources during droughts; lack of economic ability for poor women and women headed households to install salinity free water sources; forced to spend long hours to collect water from distant sources; insecurity due to sexual harassment during long walks to collect water from distant sources.

Food Production	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of available varieties of food to produce in salinity and waterlogging context; lack of means to recover food loss from cyclones, tidal surges and coastal flooding; lack of fresh irrigation options; lack of grasses and other inputs for livestock rearing.
Food Preparation	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of fire-wood during coastal flooding, cyclone, tidal surges, salinity and waterlogging; unsafe and saline water for cooking; lack of hygiene during different hazards; lack of food during cyclone and tidal surge; lack of knowledge on food and nutrition standards; lack of storage facilities during hazard onsets; challenge of food preservation in extreme temperatures.
Sanitation and Hygiene	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of number of salinity, cyclone, flooding and waterlogged proof/resilient toilets; lack of hazard proof public toilets; poor public health condition; lack of personal hygiene knowledge.
Core Shelter Maintenance	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Poor maintenance of household assets and housing materials safer from salinity, coastal flooding, waterlogging, and tidal surge; lack of saline free housing materials for durable and cyclone resistant housing; lack of retrofitting materials and capacities to protect house from hazards; lack of financial capacities to prepare hazard proof/resilient house materials.
Child Care	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of means and knowledge to protect children from death, injury, fever, drowning, de-hydration, malaria, pneumonia, and other water-borne diseases.
Reproductive Health	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of knowledge and means for safe births during cyclone, tidal surge, waterlogging and coastal inundation; lack of trained birth attendants in disasters; lack of easy access to MCH clinic and hospitals in disasters.

Girl's Education	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Challenge to continue education of girls during cyclone, coastal flooding, tidal surge and waterlogging; increased role of adolescent girls in domestic spheres during disasters; increasing tendency to early marriage amongst disaster affected households; discontinuation of girl's education; lack of social safety net for girl's continued education.
Marriage and Family	Very Likely	Very Likely	Certain	Very Likely	High	High	Low	Low	Lack of social, human, and economic capacity to protect girls forced into early marriage; lack of capacity of poor families to protect divorce as consequence of economic crisis and dowry led consequences.

Source: Compiled by UNDP Bangladesh Country Office from (CDMP, 2009; GoB, 2008; FAO, 2006; GoB, 2006; BAU, 2013; UNWOMEN, 2014(a), (b); Asia Foundation, 2012; BUET, 2103; MoWCA, 2012; BDRC, 2013; WEDO, 2008)

III. Mechanisms to address gender inequality and climate change in Bangladesh - legal and administrative framework

Incorporating gender and gender-sensitive policy and planning is an essential part of effectively and strategically dealing with climate change impacts. Bangladesh has a range of policies in place, which explicitly prioritize gender responsiveness in a variety of sectors impacted by changing climate. For example the *National Agricultural Policy* includes women's access to agricultural extension and their "technological empowerment" and ensuring women's access to productive resources, inputs and services is highlighted in the *National Food Policy*. A key theme of the *National Water Policy* is increased participation by women, including commitments to ensure an enabling environment for women to play a key role in community organizations for the management of water resources.⁷³ Finally, there are policies that directly address the intersection of gender and climate change at the national level relevant to building gender transformative climate resilience, outlined below:

Gender and the Women's Development Policy

In the context of the Convention on the Elimination of All Forms of Discrimination Against Women (CEDAW) and the Beijing Platform of Action, Bangladesh has developed several policies and sectoral strategies to ensure gender equality, including the Women's Development Policy (WDP), 2011 and the National Action Plan (NAP) to implement the WDP. The objective of this policy is to take special measures to enhance the overall safety and security of women and children, including helping them deal with disasters, ensuring rehabilitation services of those affected with special consideration for disabled women and ensuring food distribution and assistance to eliminate bottlenecks created due to extreme climate events and disasters.

Bangladesh Climate Change Strategy and Action Plan (BCCSAP)

⁷³ ADB, 2010

The Bangladesh Climate Change Strategy and Action Plan (BCCSAP) identifies women, particularly in poor households, as an important target group for monitoring and planning to protect livelihoods and achieve objectives for equitable and sustainable growth.

Climate Change and Gender Action Plan (ccGAP)

1. The underlying principle of the ccGAP is the transformative nature of gender-focused interventions and the action plan has the potential to enhance the effectiveness and efficiency of climate change and socioeconomic development responses. The development of the ccGAP followed a participatory process that included in-country meetings, stakeholder consultations involved representatives from several ministries/ government departments, civil society, academia, research institutions, local NGOs and international organizations, as well as a desk review of several key reports, publications, websites, surveys and in-person interviews.
2. The ccGAP integrates gender considerations into four of the six main pillars as identified in the BCCSAP: (i) Food security, social protection and health; (ii) Comprehensive disaster management; (iii) Infrastructure and (iv) Mitigation and low carbon development. The remaining two pillars of the BCCSAP, those of research and knowledge management and capacity building and institutional strengthening, were mainstreamed within the above four pillars as crosscutting topics.
3. Under the food security, social protection and health pillars, emphasis has been given to integrate gender and climate change concerns into policies and national documents concerning the agricultural sector, create an environment to lease land/water bodies to women, ensure crop insurance and/or other safety nets for poor female farmers, access to financial instruments and involvement of women applying alternative technologies e.g. bio-fertilizer and climate resilient cropping practices.
4. Under the Comprehensive Disaster Management pillar, some actions worth highlighting are the development of a gender responsive disaster management policy, increased participation of women in central and local disaster management councils (UDMC/UzDMC), allocating financial resources to address gender and DRR issues, participation of women in community risk assessments, vulnerability and capacity assessment activities, as well as activities to help women and men provide first aid and primary health care as first responders in an emergency.

The National Plan for Disaster Management

This plan recognizes the particular vulnerabilities of women, though in implementation these do not necessarily trickle down into disaster-specific or local plans. The policy calls for incorporating the needs of female internally displaced persons (IDPs) in that it encourages the building of separate facilities where possible, and for the inclusion of women in the management committees of cyclone shelters. In practice, security and privacy concerns continue to deter women from shelters, and there as mentioned above there continues to be evidence of increased domestic and external violence against women taking place during and after the onset of disasters.

IV. Lessons learned from Climate Resilience and Gender Programmes in Bangladesh

Bangladesh has invested significant human and financial resources to both mitigation and adaptation priorities, and continues to improve in programmatic design and practice. In parallel, programmes which tackle gender inequality and social exclusion are led by the Ministry of Women and Children Affairs (MoWCA), which through its ongoing support of the GOB's development initiatives has gained a wealth of experience, particularly relevant to addressing the needs and priorities of rural women and other marginalized communities in the country. One of MoWCA most significant recent efforts is the Vulnerable Group Development (VGD) program, one of GoB's largest Social Safety Net (SSN) programs, providing in-kind transfers with development programs for selected women-headed households experiencing food insecurity. Programs such as these provide useful information in regards to targeting beneficiaries and provide an excellent foundation for integrating climate change adaptation programmes for the country's most vulnerable. Previous interventions and lessons learned suggest that local government financing does not currently directly address the climate change adaptation needs of vulnerable households, and that the schemes and projects of LGIs focus mostly on community level infrastructure development. This emphasizes the urgent need for better coordination and integration of efforts addressing multiple facets of resilience, and requires that the project draw on project/programme experience focused on alleviating gender inequality, as well as focused on building climate resilience. Although a general consensus exists among development professionals that women's economic empowerment improves gender relationship at the family and community levels, it is clear from project experience and stakeholder consultation carried out for the preparation of this project, that this conclusion is conditioned by many factors. In order to achieve a transformative impact, interventions must carefully incorporate lessons learned and design successes from previous interventions.

A review of the lessons learned from recent climate change adaptation programmes in Bangladesh⁷⁴ (CDMP, Coastal Afforestation, RVCC) include the following:

- Capacity building of individuals (both men and women) and community members in climate hotspots is critical to minimize risk.
- Capacity building of the institutions working on climate change adaptation is equally important.
- The generation of knowledge, knowhow and resources (material and money through savings, emergency funds and emergency plans) at the community level, and maintenance of community assets are essential to address immediate emergency needs.
- Ensuring the participation of women, girls, youth, indigenous people, religious minorities, and persons with disabilities in planning and implementation of climate resilience is critical.
- Adaptive economic opportunities for year-round employment and earning opportunities for community men and women are critical for their awareness and livelihood adaptability.
- Livelihood support to vulnerable women and their families needs to be followed up to ensure retention of assets and their productive use.
- The motivation and awareness raising activities should continue for project ownerships. Communities should understand that capacity building should be the prime objective of adaptation and disaster management strategies, rather than relief and response.
- More robust coordination between Government Ministries, as well as between Government Organizations, Non-Governmental Organizations and local government is essential.

⁷⁴ This GCF project is designed based on the lessons of these key projects in past implemented in the similar area, but did not address the gender based vulnerabilities and adaptive capacity.

- Besides preparedness, the capacity to respond in emergencies should be promoted as a community effort, as early response from external actors during disasters is inadequate or slow, and cannot sustain the livelihood strategies over longer timescales, of the inhabitants of the disaster prone area.

Recommendations for addressing gender inequality in the UN Women’s baseline survey⁷⁵:

- Increase access to training for economic activities, which are flood/drought/salinity resilient (as appropriate in the area).
- Maximize the diversification of livelihoods options to increase economic security.
- Increase training in financial skills to plan for crisis and maximize marketing of goods before crisis.
- Promote equal access for women and men to food and nutrition.
- Ensure women’s safety in shelters, latrines and public spaces.
- Ensure access to women’s specific and gender sensitive accessible medical care.
- Reduce women’s burden of unpaid work. Promote assistance from male members of the family with collection of fuel and water.
- Ensure new livelihoods for women do not involve a huge increase in time unless other household members take on other time burdens for responsibilities women currently hold.
- Ensure women’s voices as well as men’s voices are heard at all stages of adaptation and disaster management (from preparedness to recovery) planning.

The Chars Livelihood project (CLP) funded by DFID in Bangladesh, provided livelihood resilience support to poor women in the river islands in Bangladesh. Its 2013 impact study concluded the following:⁷⁶

- Targeting women had a positive impact on their status within the household
- Women from the core beneficiary households expressed that attending weekly social development meetings, helped to develop their confidence to move around the community and visit others.
- There was evidence to suggest greater levels of respect for women in the community and improved intra-household relationships.
- Both males and females from core beneficiary households appeared satisfied that the female member was selected and intra-household relationships were not negatively affected, nor did the target criteria aggravate community harmony.

Another evaluation of a recent BRAC ultra-poor program, showed that:⁷⁷

- A large capital transfer, intensive asset-specific training, and regular follow-up visits by an asset specialist had a significant, transformative impact on the occupational choices of very poor women in Bangladesh.
- Very poor women changed occupational choices from casual day labor to self-employment and increased earnings by 34% relative to the baseline, highlighting the flexibility of women to adopt new types of livelihood strategies.

75 UN Women 2014

76 International Programme Management, 2011: Impact assessment of CLP phase -1

77 Bandiera, 2012

V. Recommendations

Gender Analysis

The gender analysis undertaken at the design phase of this project, forms the basis of the overall gender-focused project design, and acts as a foundation for gender mainstreaming throughout the project's activities and implementation. As projections indicate that climate change will cause less secure means of subsistence, more vulnerability to poverty and hunger, exacerbation of social inequalities (including the gender inequalities described here) and more environmental degradation, it is clear that the poorest and most vulnerable groups in a society will be most affected.⁷⁸ The ability to participate in climate resilient income generating activities by these groups will therefore strengthen their climate change resilience and ability to withstand slow-onset climate impacts such as salinization, as well as recover from disasters. The project therefore provides climate change resilient livelihoods support, water-provision and capacity building, focused on the most vulnerable coastal populations in Bangladesh, and further focused on women, in light of the additional barriers to climate resilience that they face. Ensuring the central participation of vulnerable groups, particularly women, is not only a matter of social justice and respect, but also of responsible and effective project design and implementation. It is also clear from the above analysis that although women and men work together to fulfill the needs and contribute to the wellbeing of their families and communities in the face of changing climatic conditions, they often perform different activities on a day-to-day basis to meet these needs, and in order to integrate gender into climate change projects, it is necessary to recognize the different roles, priorities and needs of men and women, and the ways in which both perspectives are valuable.⁷⁹ It is particularly important to recognize and effectively utilize these gender-differentiated capabilities when it comes to designing project interventions. Recognizing women's invaluable contributions to resource management, while directly addressing the constraints that lead to diminished climate resilience, and facilitating women-led and managed interventions, also moves away from an approach which frames women as simply 'vulnerable,' but rather draws on women's strengths and capabilities.

Directly addressing the gendered dimensions of building climate resilience has therefore been central to project design and this proposal identifies and integrates lessons learned other interventions and extensive consultations to encourage not only gender responsiveness in implementation, but aims for gender transformative results. Furthermore, as discussed herein, and within the Feasibility Study and Environmental and Social Management Framework (ESMF), it is likely that gender equality concerns are not the only marker of exclusion or vulnerability, and it is therefore important to build on and leverage the project's approach to target the most vulnerable beneficiaries, including women, (and women-headed households), youth and children, the elderly, people living with disabilities and marginalized groups, such as religious and indigenous minorities found in the target areas.

In the preparation of this project, UNDP conducted stakeholder consultations with a wide range of stakeholders, including six Focus Group Discussions (FGDs) as part of the feasibility study. One of the key aspects of the feasibility study was to better understand the current gender relationships at the household and community levels. Table 2 above describes the gendered vulnerabilities to coastal hazards, and clearly demonstrates that addressing gender inequality at the household and community levels is essential for building resilience. Deepening this understanding, women and Upazila

78 UNDP Resource Guide on Gender and Climate Change, 2009

79 Secretariat of the Pacific Community, Pacific Gender and Climate Change Toolkit, 2013

representatives were asked in the FGDs to discuss how climate resilient grants, improved drinking water supply and disaster preparedness will impact the gender relationships at the household level. A compilation of the results of the 6 FGD findings is summarized in Table 3 below, which outline the expected changes from the project as described in the FGDs. Results from the consultations are included in full as an additional annex to this proposal.

Table 3: Gender Relations at household level in coastal areas (Baseline and Expected changes)

Dimensions	Male		Female	
	<i>Baseline</i>	<i>Expected Changes</i>	<i>Baseline</i>	<i>Expected Changes</i>
Division of Labor				
<i>Productive</i>	+++++	NA	+	++++
<i>Reproductive</i>	+	NA	+++++	+++
<i>Community/Social</i>	+++++	NA	+	+++
Unpaid Domestic Work				
<i>Drinking Water Collection</i>	+	++	+++++	++++
<i>Care of Livestock and Poultry</i>	+	++	+++++	NA
<i>Cooking and Washing</i>	-	NA	+++++	NA
<i>Child Care</i>	+	NA	+++++	NA
<i>Home Repair</i>	+++++	NA	+	NA
<i>House Keeping</i>	-	+	+++++	++++
<i>Collection of Fuel Wood</i>	+	++	+++++	+++
<i>Purchasing Food</i>	++++	NA	++	NA
<i>Means of Earnings</i>	+++++	NA	++	++++
Time Spent for Unpaid Work	+	NA	+++++	+++
Empowerment				
<i>Decision making about HH asset</i>	+++++	NA	++	++++
<i>Decision making about education</i>	+++++	NA	+	+++
<i>Decision making about marriage</i>	+++++	NA	+	+++
<i>Decision making about health</i>	++++	NA	+++	+++
<i>Decision making about food</i>	+++	NA	++++	NA
<i>Decision making about shopping</i>	+++++	NA	+++	++++
<i>Decision making about divorce</i>	+++++	NA	-	NA
<i>Decision making about sanitation</i>	+++++	NA	+++	++++
<i>Freedom of mobility</i>	+++++	NA	-	+++
<i>Freedom to work outside home</i>	+++++	NA	+	+++
<i>Decision making about livelihoods</i>	+++++	NA	++	++++
<i>Control over money earned</i>	+++++	NA	++	++++

Project Design and Implementation

The project design has considered various lessons and recommendations from previous interventions outlined above, and incorporates project components and actions to address them. Overall, the project aims to create a paradigm shift that transforms extreme poor women in coastal Bangladesh from primarily a vulnerable group that suffers disproportionately from climate change, to agents of change in climate change adaptation, with greater access to resources and productive assets. It does so firstly by not only targeting women as primary beneficiaries of the intervention, but also addressing their

unpaid burden of work through water provision, the collection of which can take 2.5 hours for women in the target districts. Furthermore, livelihood interventions supported by the project are not only climate resilient, chosen based on their resistance to increasingly saline conditions and vulnerability to extreme weather, but also able to provide significant economic gains, as well as the opportunity to better integrate women into value chains which are already being pursued in light of changing environmental conditions. The project will also address the unequal gender relations in the targeted communities, recognizing that livelihood strategies, which may push the boundaries of what is considered appropriate work for women, require parallel efforts in community sensitization, norms and behavior change, as well as ensure gender-responsive training and working conditions. The project aims at not only ensuring equitable access to resources, services and technologies for climate livelihoods, but also embeds safeguards for land tenure arrangements and community ownership, such as ensuring that water user groups are led by women and that land tenure support in the form of a land lease is provided for community groups. Finally, the project addresses the need for coordination and institutional capacity building at the intersection of gender-transformative climate change adaptation. Overall, the strategy and action areas are based on an empowerment approach for women and consistent with the GoB's gender strategy and action plan, aiming to transform gender relations in the target communities. The collaborative relationship between UNDP and the MoWCA, with the integration of other relevant government agencies such as the Department of Public Health Engineering (DPHE), brings valuable experience, country ownership and the cross-sectoral perspective required to ensure the success of this approach.

Overall, the gender analysis reveals the following key elements for gender-transformative project design:

Increasing Women's Skills and Capacities: A comprehensive adaptation strategy that engages women directly in decision-making and management of resources, and builds skills for the successful pursuit of climate-resilient livelihoods is the key to this project. The project components on livelihoods support and market linkages, and management of a reliable potable water supply have been designed to improve women's climate resilience by developing their awareness, technical skills, and resource management capacities regarding various facets of adaptation. Women's existing knowledge of homestead food production will be leveraged, developed and scaled-up in the support of homestead gardens, plantations, sesame cultivation and hydroponic gardens, acknowledging and enhancing women's central role in ensuring household and community food security. This, coupled with skills in managing a safe water supply, through the creation and reactivation of women's groups responsible for planning, operation and maintenance will in turn contribute to increased agency, and improved health and wellbeing of women and their families, resulting in lower incidence of disease and improved intra-household food distribution. Women's already growing role in aquaculture value chains will be supported through the promotion of skills in climate-resilient crab farming, and market linkages in feed processing and crab hatcheries, ensuring training is given in a gender-responsive manner, and ensuring good working conditions for women. Developing women's skills in management and O&M of water solutions, choice of economic options, contingency planning for livelihoods and disaster management are all identified as key areas for capacity building in regards to climate resilience.

Increasing Women's Economic Opportunities: A key aspect of promoting women's empowerment in dealing with climate change induced risks is expanding women's economic opportunities, already limited in the target districts and further threatened by climate change. Through the introduction and scale-up of climate resilient activities and applied technological options for market linkages, as well as through water provision, women can manage critical resources, gain access to assets and increase their savings over time. This practical support is essential for food security, safe year-round water access and

diversified income opportunities, which will bring higher economic gains in the short and long terms. Women will be supported in the form of necessary assets and infrastructure, capital, skills and linkage to markets. The support for access to water will further contribute towards women's resilience and economic gains by reducing the burden of unpaid work, expanding productive time to engage in new income earning opportunities and reducing the costs of care and lost time due to reliance on unsafe water supplies.

Increasing Women's Voice and Agency: Strengthening women's voices and increasing their agency brings extensive resilience dividends, not only for women themselves, but for their families and communities. The project will attempt to remove the multiple barriers to women's participation and provide opportunities to empower women socially. Women will be supported in participating in discussions on the situation of their families and communities and identify needs and gaps in coping with climatic conditions and the means to gain resilience. Women's awareness and skills in regards to managing climate change impacts will be enhanced to enable them to participate in community decision-making processes and to take action related to livelihoods, water management and overall wellbeing. Women's particular needs will be addressed, in terms of designing gender-responsive training and interventions and their active engagement will be ensured to enhance the effectiveness of the programme. The project thereby aims to enhance women's social capital and strengthen women's social networks, enhancing the collective capacity for forecasting, and undertaking contingency planning for climate resilient livelihood shifts. A climate change literacy integrated livelihood learning package will be introduced to enhance their knowledge of possible climatic shocks and methods of adaptation. The overall aim is to support women of targeted beneficiary families to become active agents in livelihood enhancement, disaster preparedness and management, and water management within their communities.

Creating an Enabling Environment for Women's Advancement: The project also goes beyond focusing interventions towards women beneficiaries, but recognizes underlying norms and social constraints, which may contribute to gendered vulnerability to changing climate conditions. The active involvement of women in planning, implementation and monitoring has the power to shift community attitudes and behavior towards women's status and roles, eventually creates an enabling environment for women to thrive. The project implementation strategy will address women's needs, while ensuring men's cooperation, and will ensure participation of both women and men in adaptation planning, implementation and monitoring of project outputs. Sensitization activities will take place, both embedded in training activities and through community theater, to promote an environment in which the target communities are supportive of women working with men, and encouraged to raise their voices against discrimination and violence against women/girls. The monitoring, reporting and verification of activities will ensure women's participation and benefits in order to reduce the resilience gender gap. Awareness raising programmes, capacity development of stakeholders from the community level to the institutional level and management systems put in place will aim at transforming existing women's development and social safety net programmes (i.e. Vulnerable Group Development) programme to deliver enhanced gender equality results within the climate change adaptation context. The project draws on lessons learned from previous interventions, and aims to integrate women from the project level, as primary beneficiaries, to the institutional level working on building the gender responsiveness of government institutions, across project intervention components.

Proactively Addressing Challenges: There is the potential, in the process of challenging and shifting of social norms and traditional gendered power relations, that interventions may raise social conflict. Project experience in Bangladesh shows however that social protection and micro finance programmes targeting women have had positive outcomes for household wellbeing, and considering that women

are among the poorest and most vulnerable segments of the population, targeting women is good for programme efficiency. Overall, a positive environment has been fostered in Bangladesh regarding gendered targeting in poverty-focused programmes run by the GoB and NGOs, and although there remains much progress to be made, negative attitudes towards women working outside the home are gradually diminishing with project efforts and changing socio-economic constraints. Regardless, there is some risk that gender transformative interventions will increase community conflict and Gender Based Violence (GBV) due to challenging community gender norms and targeting women as primary beneficiaries of project interventions. Addressing this directly when designing the livelihood interventions, a balance was considered between providing opportunities that would be considered suitable for, and preferred by, women with an expansion of opportunities in value chains in which women are already participating, but are often subject to unfair or unsuitable working conditions. This is particularly pertinent in the aquaculture value chain, for which additional skills and conditions are required to have access to fair and equitable economic opportunities, which build climate resilience. Better integration of women in these types of value chains, such as crab farming, has a strong potential for transformative change, and will be accompanied by community sensitization activities addressing norms around “appropriate” work for women. Finally, the unpaid burden of work has been central in project design, and in the site selection of both water provision and livelihoods support, with additional attention paid to integrated community involvement and norm change. Finally, a robust, gender-sensitive grievance mechanism will be put in place, which will allow beneficiary women to report any incidences of social conflict or possible increase of GBV arising from their involvement in project activities.

Beneficiary Selection: The project targets the most vulnerable areas and beneficiaries, particularly women and where appropriate, adolescent girls, who are disproportionately affected by the loss of productivity or livelihoods and the growing drinking water insecurity, due to observed and projected climate change induced salinity impacts. As such, a combination of observed and projected salinity impacts, land use changes and elevation models, screening for livelihoods that are currently non-climate resilient, and socio-economic vulnerability was used to identify target areas and formed the first criteria for beneficiary selection. The project components work holistically to reduce the unpaid work burden of beneficiary women, by targeting women for water interventions who do not already have access to existing sources and live the farthest from existing water points, while also addressing their economic constraints through livelihood interventions. The project will then further refine the beneficiary selection, through consultations with targeted communities and local government institutions, to identify households that face intersectional marginalization, including the poorest households with the least capital and assets to pursue adaptive livelihoods, female-headed households, households headed by adolescent girls that have been married early and are solely responsible for household income, households with disabilities or chronic illness, and will ensure that households of ethnic and religious minorities are represented proportionately among beneficiaries. The project will be careful to not target adolescent girls for livelihoods support, unless pre-maturely married and solely responsible for household income, in order to ensure that girls are encouraged to stay in school. This process will be externally monitored by the PMU. Additionally, orientation meetings will be arranged in the project areas and will disseminate the project objectives and the importance of the role of women and marginalized groups in community development, including in climate change adaptation, and will ensure clarity and transparency of the beneficiary selection criteria. The project will actively involve men and local level leaders as key stakeholders in the stakeholder workshops/dialogues/meetings, in livelihoods support training and in disaster management committees, in parallel with social awareness raising activities. Again, a tiered grievance mechanism will be established and available to target communities, to signal issues with beneficiary selection if they arise.

Gender-Responsive Grievance Mechanism: As mentioned above, a key element of the project is the establishment of a conflict-sensitive, gender-responsive and inclusive Grievance Redress Mechanism (GRM), to minimize possible conflict and to address it, if it occurs. The DFID Funded project Strengthening Government Social Protection Systems for the Poor (SGSP) is supporting a pilot grievance mechanism with Manusher Jonno Foundation (MJF), a national NGO, which will conclude in August 2017. In this context, MJF recently conducted a baseline survey of accountability of 10 Social Safety Net (SSN) schemes in selected areas, confirming the challenges ahead for establishing and mainstreaming grievance mechanisms at the national level, but also gaining valuable insight into how accountability can be approved. The grievance mechanisms piloted under this program are already facilitating demand-driven accountability of social protection programmes, and demonstrate a clear and distinctive role for civil society. MJF will use this experience to advocate for a greater participation of civil society and to embed lessons learned on grievance mechanisms within government systems. Furthermore, UNDP Bangladesh has also recently completed a Situation Analysis Report of Grievance Redress Systems in Bangladesh, which will also refine the implementation of the project-level GRM. The GRM is described in detail in Annex VIb - Environmental and Social Management Framework (ESMF).

VI. Proposed Gender Action Plan

The purpose of a Gender Action Plan is to operationalize the constraints and opportunities for women and men that were identified during the gender analysis, towards fully integrating them into the project design, providing the framework for a gender-responsive and socially inclusive project. In addition, specific indicators are also proposed to measure and track progress on these actions at the activity level, which can be incorporated into the detailed M&E plan which will be developed at the start of implementation, and provides concrete recommendations on how to ensure that the degree of gender-responsiveness and transformation (including collection of sex and age disaggregated data) continues to be measured throughout implementation. For each of the activities of the project directly related to gender actions that have been included below, a gender specific budget has been allocated as a subset of the overall project budget, shown below. Furthermore, it is recommended that the project take into consideration gender and social inclusion measures outlined above and these measures are tailored specifically for a Bangladeshi context. In order to do this, the following approaches are strongly recommended:

Overall:

- Increase women's participation in decision-making (contingency planning for disaster and climate resilient livelihoods, water provision, disaster preparedness committees, early warning system).
- Account for differing needs of women and other marginalized groups in building climate resilience.
- Identify gaps in equality through the use of sex and age disaggregated data, enabling development of action plans to close those gaps, devoting resources and expertise for implementing such strategies, monitoring the results of implementation, and holding individuals and institutions accountable for outcomes that promote gender equality.
- Include all stakeholders involved in the project to develop awareness / trainings aimed at drawing attention to the implication of climate resilience adaptation and gender equality.
- Undertake community dialogue in relation to gender and social inclusion in climate resilience.
- Include a Gender Specialist position to implement gender related activities and monitor outcomes.

For Targeting:

- Targeting of female-headed households and households facing intersectional marginalization.

- Ensure women are within 1 km of water provision infrastructure or 2km of community livelihood interventions, and when beyond that radius, provide household based options to account for mobility restrictions and the unpaid burden of work.

For Trainings:

- Provision of women trainers and women-exclusive training sessions, including flexible times, and provision of household training for women-headed households as required.
- Integration of men and community elders in community trainings that addresses women's participation, and norms around appropriate work for women, as well as mobility outside the homestead.

For Norm Change:

- Recognize the norms and restrictions on women's participation and establish an environment conducive to participation (committees involving men and women, girls and boys).
- Gender norm change programs in target communities including households sensitization activities, which encourage family members to help reduce women's unpaid burden of work, including men's involvement in child care and address the issue of 'appropriate' work for women.
- Promote positive social norms (community awareness and orientation on role of women and girls in general and in climate adaptation in particular) through training sessions and separate community theatre-based activities.

For Livelihoods:

- Analysis of the gendered division of labour (gender-differentiated responsibilities, and needs).
- Ensuring that working conditions are gender responsive at the homestead and community levels
- For hatcheries and factories: segregated sanitation, ensuring equal pay for equal work, and access to the administrative, technical and managerial positions.
- Promote advocacy and awareness regarding gender-based violence, in value chains and within work places, and in water collection.
- Provide gender ombudsmen for complaints related to sexual harassment and other forms of GBV.
- For household and community level agriculture and aquaculture based livelihoods: Consider Shaded ponds, shallow water depth, and proximity to homestead.

For Ownership of Assets:

- Enhance women's control over productive assets (finance, productive skills, land and technology) through women led groups and community land tenure arrangements.
- Training in land rights, fair working conditions, and negotiation.
- Monitoring of productive assets and revenues, to ensure that revenues are kept in the hands of women and targeted beneficiaries.

For Market Integration:

- Access to finance, financial management training, and market prices for women.
- Conservation training on managing wild stocks, and alternatives to mangrove fuel wood, given that women are often the collectors of wild crab fry and fuel wood from the mangrove areas.
- Give preference for employment in crab hatcheries.

For Grievances:

- Adoption of gender sensitive (and marginalized group sensitive) grievance mechanism, which allows women easy and unrestricted access, including provision of female GRM focal points.

For Continuous Learning:

- Take a continuous learning approach that incorporated the perspectives and experiences of women and refined interventions with the collection of sex-disaggregated data.
- Research on the underlying gender-based social dynamics and preferences related to technology adoption (for both water and livelihoods) to avoid project failure and to ensure that women can benefit from resources/assets made available to them.
- Monitoring of changing power dynamics and attitudes at the intra-household and community levels and monitoring possible increase in conflict as a result of project interventions

For Institutional Strengthening:

- Improve institutional capacity, accountability and oversight (capacity of project executing and implementing agencies in addressing gender issues in climate change programming).
- Build on the projects, structures and initiatives being rolled out by the GoB and other development partners, in order to maximize the use of resources, and for greatest efficiency and effectiveness.
- Assess how gender is currently being mainstreamed in differing Ministries and sectors, to most effectively develop needs assessments, enable planning, and be effective in monitoring and evaluation.

Annex A: Bibliography

Ahmed, T. et al. (2012) Nutrition of children and women in Bangladesh: trends and directions for the future. Mar 30 (1) V1-11. 1. Centre for Nutrition and Food Security. Dhaka, Bangladesh.

Ahmed, K., Halim, S., and Shamima Sultana, S. (2012). Participation of Women in Aquaculture in Three Coastal Districts of Bangladesh: Approaches Toward Sustainable Livelihood. World Journal of Agricultural Sciences 8 (3): 253-268.

Alam, E. and Collins, A. E. (2010). Cyclone Disaster Vulnerability and Response Experiences in Coastal Bangladesh. Disasters 34(4): 931-54.

Alam T., Shahi M., Shifuzzaman, and Lasker. (2012). Economic Prospects as well as Human Rights Violation at Shrimp Farming: A study based in south west coastal region of Bangladesh, IOSR Journal of Humanities and Social Science (IOSRJHSS) Volume 1, Issue 1 (July-August 2012), PP 45-49.

Alston, M. et al (2014) Are climate challenges reinforcing child and forced marriage and dowry as adaptation strategies in the context of Bangladesh? Women's Studies International Forum Volume 47, Part A, Nov-Dec P.137-144.

Araujo, A. and Quesada-Aguilar, A., (2007), Gender Equality and Adaptation, USA: Women's Environment and Development Organization (WEDO).

Asian Development Bank (2010) Country gender assessment: Bangladesh. Mandaluyong City, Philippines: ISBN 978-92-9092-115-8 Publication Stock No. RPS102036.

Asaduzzaman, Rafiqun Nessa Ali, Md. Shajahan Kabir (2016) Gender inequality: Case of rural Bangladesh. Lambert Academic Publishing.

Bandiera, O. et. al (2012) Asset Transfer Programme for the Ultra Poor: A Randomized Control Trial Evaluation. CFPR Working Paper No. 22. BRAC Research and Evaluation Division, Dhaka, Bangladesh.

Belton, B., M. Karim, S. Thilsted, M.K. Jahan, W. Collis and M. Phillips. (2011) Review of aquaculture and fish consumption in Bangladesh. Studies and Reviews. WorldFish Centre, Dhaka. 71 pp.

Bridges S, Lawson D and Begum S. 2011. Labour market outcomes in Bangladesh: The role of poverty and gender norms. *The European Journal of Development Research* 23(3): 459–87.

CCC, 2009. Climate Change, Gender and Vulnerable Groups in Bangladesh. Climate Change Cell, DoE, MoEF; Component 4b, CDMP, MoFDM. Month 2009, Dhaka, Bangladesh.

Ferdoushi Z, Xiang-Guo Z (2009) Role of women in mud crab (*Scylla* sp.) fattening in the southwest part of Bangladesh. *Marine Res. Aqua*. 1(1), 5-13.

Huq, H. (2015) Gender in Aquaculture: A Study in Division of Power and Work. Centre for Sustainable Development, University of Liberal Arts Bangladesh.

IFRC (2015) International Federation of the Red Cross: Unseen, unheard: Gender-based violence in disasters 1297700 11/2015. Geneva, Switzerland.



IPCC (2001) Intergovernmental Panel on Climate Change, Working Group II: Impacts, Adaptation and Vulnerability. <http://www.ipcc.ch/ipccreports/tar/wg2/index.php?idp=674>.

Kabeer, N., Mahmud, S. and Tasneem, S. (2011) 'Does Paid Work Provide a Pathway to Women's Empowerment? Empirical Findings from Bangladesh', Working Paper 375, IDS, Brighton).

Kabir, R. et al. (2016) Climate Change Impact: The Experience of the Coastal Areas of Bangladesh Affected by Cyclones Sidr and Alia Available at <https://www.hindawi.com/journals/jeph/2016/9654753/#B26>

Kasperkevic, J. Rana Plaza collapse: workplace dangers persist three years later, reports find. The Guardian, 31 May 2016. Accessed: 7 June 2016.

Kruijssen F, Rajaratnam S, Choudhury A, McDougall C and Dalsgaard JPT. (2016) Gender in the farmed fish value chain of Bangladesh: A review of the evidence and development approaches. Penang, Malaysia: WorldFish. Program Brief: 2016-38.

Ministry of Environment and Forests (2012). Second National Communication of Bangladesh to the UNFCCC. Available online at: <http://unfccc.int/resource/docs/natc/bgdnc2.pdf>.

Momtaz, S., Shameem, M., (2015) Experiencing Climate Change in Bangladesh: Vulnerability and Adaptation in Coastal Regions. Academic Press.

Morgan M, Choudhury A, Braun M, Beare D, Benedict J and Kantor P. (2015) Understanding the gender dimensions of adopting climate-smart smallholder aquaculture innovations. Penang, Malaysia: CGIAR Research Program on Aquatic Agricultural Systems. Working Paper: AAS-2015-08.

Pelling, M. (2011) Adaptation to Climate Change: From Resilience to Transformation, Routledge, London. United Kingdom.

Pionetti, C. (2016) Filling Buckets, Fueling Change: Ensuring Gender-Responsive Climate Change Adaptation, Learning from the Canada-UNDP Climate Change Adaptation Facility. UNDP-GEF.

Rahman, Md. Sadequr, (2013) Climate Change, Disaster and Gender Vulnerability: A Study on Two Divisions of Bangladesh American Journal of Human Ecology Vol. 2, No. 2, 2013, 72-82.

Schuler, S. R., Bates, L. M., Islam, F., & Islam, K. (2006). The timing of marriage and childbearing among rural families in Bangladesh: Choosing between competing risks. *Social Science & Medicine*, 62, 2826–2837.

Tahmeed Ahmed, Mustafa Mahfuz, et al. (2012) *J Health Popul Nutr*. 2012 Mar; 30(1): 1–11. Nutrition of Children and Women in Bangladesh: Trends and Directions for the Future.

UN Women (2009). Fact Sheet: Women, Gender Equality and Climate Change. Available online at: http://www.un.org/womenwatch/feature/climate_change/downloads/Women_and_Climate_Change_Factsheet.pdf.

UN Women, BCAS (2014) Baseline Study on the Socioeconomic Conditions of Women in Three Eco-zones of Bangladesh. Dhaka, Bangladesh.



Annex XIII (d) – Gender Assessment and Action Plan

GREEN CLIMATE FUND FUNDING PROPOSAL

UN Women (2016) Leveraging Co-Benefits Between Gender Equality and Climate Action for Sustainable Development. New York, USA.

UNDP, Human Development Report (2015) <http://hdr.undp.org/en/content/table-4-gender-inequality-index>.