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GENDER ISSUES IN CLIMATE CHANGE: BANGLADESH PERSPECTIVE

Abstract

The paper argues that dependence on natural resources and socially constructed roles and responsibilities make rural women in Bangladesh more vulnerable than men to the impact of climate change. Therefore, rural women in Bangladesh are facing added adversity than men due to the consequences of climate change. Gender inequalities intersect with climate risks and vulnerabilities. Women suffer specific consequences of climate change such as huge burden of reproductive works, loss of livelihoods, victims of violence, discrimination towards girl children in regards to acquiring human capital and increase the number of female-headed households. Women's historic disadvantageous position in terms of their limited access to resources, restricted rights and a muted voice in shaping the decisions makes them highly vulnerable to climate change. There are huge gaps in cooperation among international and national level policy frameworks on climate change from feminist point of view although gender issues are the center of sustainable development of international policy initiatives. The impact of climate change will likely to magnify existing patterns of gender inequality and worsen their already precarious situation, and leave them even more vulnerable. Therefore, more efforts should be made to give climate negotiations a gender centered approach, and to provide women their rightful place within sustainable development policy frameworks and bodies.

1. INTRODUCTION

The global climate is subject to increasing change, and this has become more evident in the recent years. The world, especially Asia is experiencing the most adverse impact of climate change (CC). Bangladesh is regarded as one of the extremely exposed countries to CC. This is due to its unique geographic location, dominance of floodplains, low elevation from the sea, high population density, high levels of poverty, and overwhelming dependence on nature, its resources and services. CC has made Bangladesh's leadership visible in the global negotiating process through highlighting its 'right to survival as human being', in

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the CC talks in Switzerland¹. Moreover, CC is an environmental problem with a strong political and development component. The impacts of global CC have not only physical and economic dimension (for instance, in the form of natural disasters), but also social and cultural implications. The Intergovernmental Panel on Climate Change (IPCC) predicted that the impact of CC would be differently distributed among different regions, generations, age, classes, income groups, occupations and gender. Under these circumstances, the IPCC also notes that the CC will have disproportionate impact upon developing countries and the poorer population groups within all countries. Women, particularly living in the rural areas, are more vulnerable to environmental changes as their livelihoods are mostly dependent on environmental resources². Therefore, environmental degradation due to CC affects women more than men due to the gender difference in society. Women are the poorest of the poor and the concept lies on the feminization of poverty³. The gender-poverty links show that 70 percent of the poor in the world are women and their vulnerability is accentuated by their race, ethnicity and age⁴.

The paper investigates the linkages between the impact of CC and women from gender point of view both at government/national and international level from broader perspectives. Thus, the main objective of the paper is to focus on the gender issues in CC due to the social roles and responsibilities in the context of Bangladesh. Gender inequalities intersect with climate risks and vulnerabilities. Women's historic disadvantageous position in terms of their limited access to resources, restricted rights and a muted voice in shaping the decisions makes them highly vulnerable to CC. The impact of CC will likely to magnify existing patterns of gender inequality and disadvantage.

The paper is divided into four sections. First section provides theoretical concepts of gender and impact of CC through a framework. The gender implication of CC is described elaborately in the second section. Scopes of gender sensitive environmental and sustainable development initiatives in the policy frameworks and bodies of international, regional and national are discussed in the third section. Finally, the paper ends with conclusion and recommendations.

¹ Department of Environment (DoE), *Impact of Climate Change for Bangladesh*, Government of the People's Republic of Bangladesh, available at: <http://www.climatechange-cell-bd.org/elibrary.html>, accessed on 08 September, 2009.

² Ariana Araujo and Andrea Quesada-Aguilar, "Gender and Bio-energy", *Programme of Work Concept*, International Union for Conservation of Nature (IUCN), 2007, p. 13.

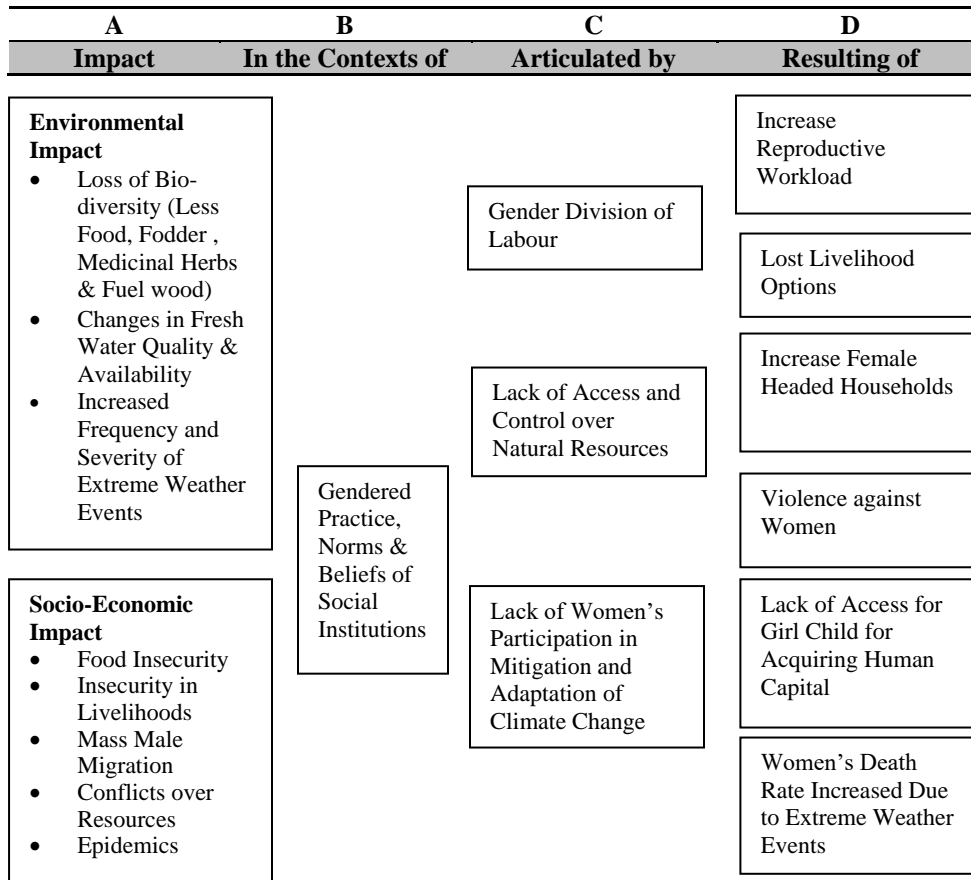
³ Sylvia Chant, "Female Household Headship, Privation and Power: Challenging the Feminization of Poverty Thesis", Patricia Fernández-Kelly, Jon Shefner (eds.) *Out of the Shadows: Political action and the Informal Economy in Latin America*, Pennsylvania State University Press Limited: USA, 2006, pp. 23-30.

⁴ T. Cannon, *Gender Equality and Climate Change: Why Consider Gender Equality When Talking Action on Climate Change*, Canadian Development Agency, 2002, pp. 45-55.

2. GENDER AND CLIMATE CHANGE FRAMEWORK

In this section, the correlation between gender and CC relationship will be discussed in general from a theoretical point of view. Gender refers to the socially constructed roles, behavior, activities and attributes that a particular society considers appropriate for men and women⁵. It is understood as historical and cross-cultural context specific social attributes and opportunities associated with being male and female. These attributes, opportunities and relationships are socially constructed and are learned through socialization processes. Figure 1 shows the gender specific impact of CC. The following discussion elaborates the gender and CC link through this framework.

Figure 1: Impact of Climate Change on Women



⁵ World Health Organization (WHO), “Gender”, available at: <http://www.who.int/topics/gender/en/>, accessed on 27 June, 2009.

Gender determines what is expected, allowed and valued in a woman or a man in a given context. In most societies there are differences and inequalities between women and men in responsibilities assigned, activities undertaken, access to and control over resources, as well as decision-making opportunities. These are termed as 'gender roles and responsibilities' or 'gender division of labor'. The concept of gender roles has been developed from the work of Caroline Moser (1993). She explains this concept as follows:

Gender planning recognises that women undertake triple⁶ roles such as reproductive, productive, and community managing activities, while men primarily undertake productive and community politics activities in the most societies⁷.

Existing gender relations manifest themselves through the different roles played by men and women. Productive and reproductive roles are parts of gender relations⁸. Gender relations and power relation between women and men, different groups, among women and men are revealed in a range of practices, ideas, representations and opportunities over resources⁹. Like all other social relations, institutional construction of gender inequalities are constituted through rules, norms and practices by which resources are allocated, tasks and responsibilities are assigned, power value is given and power is mobilized¹⁰. In addition to that, women from poor socio-economic strata and living in the rural areas are more dependent on the common property and natural resources. They are affected more due to the construction of gender roles and patriarchal structure of institutions as these institutions ensure women's access to resources. Therefore, women suffer specific consequences of CC such as huge burden of reproductive works, lost jobs, victim of violence, discrimination towards girl

⁶ **Reproductive Role** includes childbearing/rearing responsibilities, and domestic tasks done by women, required to guarantee the maintenance and reproduction of the labour force. It includes not only biological reproduction but also the care and maintenance of the work force (male partner and working children) and the future work force (infants and school-going children). **Productive Roles** are done by both men and women for pay in cash or kind. It includes both market production with an exchange-value, and subsistence/home production with actual use-value, and also potential exchange-value. For women in agricultural production, this includes work as independent farmers, peasant wives and wage workers. **Community Roles** are undertaken primarily by women at the community level, as an extension of their reproductive role, to ensure the provision and maintenance of scarce resources of collective consumption, such as water, health care and education. This is voluntary unpaid work, undertaken in 'free' time.

⁷ Caroline O.N. Moser, *Gender Planning and Development: Theory, Practice and Training*, Rutledge: London and New York, 1993, pp. 26-30.

⁸ R.W. Connell "Gender Relations", *Gender*, Policy Press: London, 2000, pp. 51-55.

⁹ Gerda Lerner, "Origins: A Working Hypothesis" *The Creation of Patriarchy*, Oxford University Press: Oxford, 1986, pp. 31-32.

¹⁰ Naila Kabeer, "Resources, Agency Achievements: Reflections on the Measurement of Women's Empowerment" *Development and Change*, Volume 30, No. 3, 1999, p.23.

child in regards to education and health facilities and increase the number of female headed households. These facts provide the first key principle for a gender planning methodology that enables the policy makers to translate gender needs and relation as a tool for adaptation and mitigation of CC initiatives.

3. GENDERED IMPACT OF CLIMATE CHANGE

According to IPCC, CC refers to any change in climate over time, whether due to natural variability or as a result of human activity. The Framework Convention on Climate Change defined CC differently than that of IPCC. The Framework refers that the attributes of CC are directly or indirectly caused by human activities and alters the composition of the global atmosphere. The natural climate variability due to CC is observed over comparable time periods¹¹. The impacts of CC are worldwide. For Bangladesh, they are the most critical as large part of the population is critically exposed and vulnerable to a range of natural hazards. Already the human sufferings and cost to development is massive to this country and its people are victim of human induced CC. Bangladeshi scientists believe that because of CC Bangladesh has already experienced the worst impact especially in terms of coastal inundation and river bank erosion, saline intrusion, deforestation, loss of biodiversity and agriculture, and large scale migration¹². Between 1991 and 2000, 93 major disasters were recorded in Bangladesh, resulting in nearly 200,000 deaths and causing US \$ 5.9 billion in damages with high losses in agriculture and infrastructure. Because of CC, a sea level rise of 0.5 meter over the last 100 years has already eroded 65 percent landmass of 250 square kilometer of Kutubdia, 227 square kilometer of Bhola and 180 square kilometer of Sandwip. Moreover, about 830,000 million hectares of arable land is affected by varying degrees of soil salinity. The IPCC's Third Assessment Report projected a sea-level rise of 30-100 centimeter by 2100¹³ and the United Nations

¹¹ Working Group II, "Impacts, Adaptation and Vulnerability", *IPCC Fourth Assessment Report*, <http://www.ipcc.ch/pdf/assessment-report/ar4/wg2/ar4-wg2-intro.pdf> accessed on 25 June 2009.

¹² See Saleemul Huq, Atiq Rahman, Mama Konate, Youba Sokona and Hanna Reid, *Mainstreaming Adaptation to Climate Change in Least Developing Countries (LDCs)*, Russell Press: UK, 2003; Mahfuzul Haque, *Climate Change: Issues for the Policy Makers of Bangladesh*, Environment and Development Alliances: University of Michigan, 1995; M. Alam, Ainun Nishat and S. Siddiqui, "Vulnerability of Water Resources to Climate Change with Special Reference to Inundation" in *Vulnerability and Adaptation to Climate Change for Bangladesh*, S. Huq, Z. Karim, M. Asaduzzaman and F. Mahtab (Eds.) Kluwer Academic Publishers, Dordrecht: Netherlands, 1998; and A.U. Ahmed, *Ecological Security in a Warmer World: The Case of Sundarbans, Bangladesh* Unnayan Parishad (BUP), Dhaka: Bangladesh, 1998.

¹³ IPCC: Working Group II, "Climate Change 2007: Impacts, Adaptation and Vulnerability", *IPCC Fourth Assessment Report*, available at: <http://www.ipcc.ch/ipccreports/ar4-wg2.htm>, accessed on 15 July 2009.

Environmental Programme (UNEP) estimated that sea level rise in Bangladesh would affect 17 million people and 22,000 square kilometer of land (16 percent of the total landmass)¹⁴. In these cases of CC, Bangladesh would be hit hard resulting in billions of dollars of losses in GDP, economic downturn, ecological damage and livelihoods options and assets.

Impact of CC may trigger a chain of consequences and outcomes of which may erode the household and community safety nets. Men and women living in the same environmental condition in regard to CC but they face different forms of crises due to gender norms, beliefs and practices of social institutions¹⁵. They have different roles and responsibilities in their own lives, households, families, and communities. Gender refers to the different social roles that women and men play, and the power relations between them. It influences how they use their resources. To understand how gender shapes activities that are affected by the environmental degradation, it is necessary to examine three aspects such as (i) women's and men's roles and responsibilities, (ii) access to and control over resources and (iii) authority to make decisions about resource use. Denton argues that women in the developing societies are more vulnerable than men due to the effects of CC. Her point is that women are in general poor and mostly dependent on natural resources¹⁶. However, women's socio-economic positions restrict their secure and independent access to and management of resources. As a result, women practice common or public property based livelihoods due to their poverty. Besides these, women are less likely to invest time and resources or adopt environmentally sustainable practices in their insecure status of accessibility to the tangible and non-tangible resources.

A. Increased Burden of Reproductive Works

Women in Bangladesh are found to be engaged in multifarious activities from early in the morning till late at night. The span of time is covered by various reproductive activities including sweeping surroundings, cleaning cowsheds, caring domestic animals, collection of fuels and water, looking after the children and sick family members. Women are also regarded as agent of supporting activities for production system. Women's contributions for reproductive and productive works varied in different environmental condition. A study shows that women have to take more responsibility or spend more time for reproductive works under stressed environmental condition as livelihoods are more insecure in

¹⁴ United Nation Environmental Programme (UNEP), "Potential Impacts of Climate Change", <http://www.grida.no/climate/vital/33.htm>, accessed on 15 July 2009.

¹⁵ R.W. Connell, *op. cit.*

¹⁶ Fatema Denton, "Climate Change, Gender and Poverty- Academic Babble or Realpolitik?" *Bulletin African Bio-resources*, ENDA Energies: Senegal, 2001, available at: <http://enda.sn/energie>, accessed on 11 January 2008.

stressed environmental condition¹⁷. CC facilitates the environment stressed for the people who are dependent on the natural resources. Consequently, women have to carry out a huge burden of reproductive works along with the productive works for sustainable livelihoods. The followings are some of the aspects of women's increased burden of reproductive works that are caused due to climate induced environmental conditions such as drought, shortage of energy resources, epidemics and so on:

Increased Drought and Water Shortage

Drought is a prolonged, continuous period of dry weather along with abnormal insufficient rainfall. This is one of the major impacts of CC. It occurs when evaporation and transpiration exceed the amount of precipitation for a reasonable period. Drought causes a considerable hydrologic (water) imbalance resulting water shortages, well to dry, depletion of groundwater and soil moisture, stream flow reduction, crops to wither leading to crop failure and scarcity in fodder for livestock. Drought is a major natural hazard faced by communities directly dependent on rainfall for drinking water, crop production, and rearing of animals. Women and girls in Bangladesh are the primary collectors of water, users and managers (sometimes) of water. Throughout the world, women are intrinsically linked to water resources because of their roles and responsibilities in using and managing water. Since women and girls often cook, clean, wash, and provide health care and hygiene for their households, they are on the front lines of their communities' and countries' water issues. Besides these, women face violence and sexual harassment during the collection of water from remote sources of water.

Decreased Energy Sources

In Bangladesh, especially in the rural areas, most energy currently comes from traditional biomass fuels such as wood, charcoal and agricultural wastes. Women mainly collect and manage these biomass fuels. This linkage of energy supplies and gender roles are strongest in Bangladesh with low availability of basic electricity and modern fuels. Biomass fuels are the primary source of energy for close to 2 billion people in developing countries¹⁸. In Asia and Africa, cultural traditions make women responsible for gathering fuels. CC decreases the availability of biomass fuels. The amount of time spent for collection of biomass fuels will dramatically increase. In parts of India, women walk 1 to 5 hours for

¹⁷ Dilip Kumar Dutta, *Women's Contribution to Poverty Alleviation under Stressed Environmental Condition*, Forum on Women in Security and International Affairs (FOWSIA): Bangladesh, 2005, p. 12.

¹⁸ Rogger C. Riddell, Mark Robinson, John De Coninck, Ann Muir, Sarah White, "Four Case Studies from Developing Countries" *Non Governmental Organization and Rural Poverty Alleviation*, Oxford University Press Limited: New York, 2002, pp. 101-137.

each load of firewood¹⁹. A study found that 50 percent of fuel wood was washed away during the flood in 2007 in Sirajgonj, Bangladesh²⁰. Moreover, girls' responsibility of collecting biomass fuel also contributes to higher drop out rates from schools. The World Health Organization (WHO) estimates that the energy used to carry fuels may consume the one-third of their calorie intake²¹. In areas where fuel supply is particularly short, it may compound the risk of malnutrition for women in resource-poor settings and huge burden of reproductive works they undertake.

Increased Epidemics

CC increases the epidemics like Cholera, Malaria, Diarrhoea, skin disease, eye infection, dysentery, fever etc. all over the country. Climate variability played a critical role in Malaria epidemics in the East African highlands and accounted for an estimated 70 percent of variation in recent Cholera series in Bangladesh²². Sick people need extra care and women are the main caregivers both at home and health service sectors. Care giving is an important and stressful job. Women's workloads increase when they have to spend more time for the sick. Women caregivers report that they are often isolated from social life²³.

In fact, due to gender-specific roles, women and young girls are more likely than men to bear the negative consequences of epidemic, according to a community-based study conducted by the United Nations Development Fund for Women (UNIFEM) in Zimbabwe²⁴. Women have less access to medical services than men. Poorer women are affected by epidemics more as they have fewer resources to adapt to the impacts of CC. They also have less expendable income to devote for their own comprehensive health care. Already bearing the burden of socio-economic and gender inequality, women who are sick have less access to psycho-social services than men. As a result the epidemic is a gender issue. It is found that the impact of diseases affects everybody, but women are more burdened due to care work. Orphans are one of the major issues related to the

¹⁹ *Ibid.*, 141.

²⁰ "Climate Change and Security in Bangladesh: A Case Study", Bangladesh Institute of International and Strategic Studies (BIISS) and Safer World, 2009, p. 14.

²¹ World Health Organization (WHO), "Climate Change and Human Health", available at: <http://www.who.int/globalchange/en/>, accessed on 21 June 2009.

²² "Climate Change: The Implications for Oxfam's Programme, Policies and Advocacy", *Unpublished Paper*, Oxford: Oxfam, 2000, p. 61.

²³ Pat Armstrong and Hugh Armstrong "Thinking It Through: Women, Work and Caring in the New Millennium", in Karen R. Grant, Carol Amaratunga, Pat Armstrong *et al.* (Eds.) *Caring For/ Caring About: Women, Home Care and Unpaid Care Giving*, Garamond Press Limited: Canada, 2004, p. 11.

²⁴ United Nations Development Fund for Women, "A Life Free of Violence: Unleashing the Power of Women's Empowerment and Gender Equality", *Strategy Paper 2008-2011*, p. 29.

negative impact of epidemic. This is a heavy burden of care giving for women and girl child. Among the orphans, the girl children face most vulnerability. Usually the girl children drop out from school and take over the responsibilities of the families. Sometimes, she has to take care of the other family members in the absence of elder female family member even if she is younger than other male family members. This scenario perpetuates the long-standing educational imbalance between boys and girls, which in turn put the girls' opportunities in life at risk, thus exposing them to greater economic exploitation and higher risk of insecurity.

B. Increased Livelihood Insecurity

The CC is responsible for decreasing the livelihood options. Nearly 70 percent of the population in Bangladesh is dependent on the agricultural lands for their livelihoods²⁵. Therefore, any loss of agricultural land and degradation of its fertility caused by CC present a serious source of livelihood insecurity. A study observed that about 68 percent of women worked directly in the agricultural field at least up to two hours/day, 21 percent worked 3-4 hours/day and 11 percent worked 5-9 hours/day²⁶. Moreover, the gross return from crops increases with the direct involvement of women in the fields. In addition to that food grains sufficiency provide women a kind of security in the households. Rural women in particular are responsible for half of the world's food production and produce between 60-70 percent of the food in most developing countries. In Africa, the share of women affected by climate related crop changes could range from 48-73 percent in Burkina Faso and 71-73 percent in Congo²⁷. Therefore, women's securities are connected with food security and sustainable livelihood options.

CC has severe impact on loss of biodiversity. By 2050, CC could result in species extinctions of biodiversity ranging from 18-35 percent²⁸. Loss of ocean biodiversity can damage the fish processing industries in Bangladesh, which has demonstrated its potential for creating jobs and encouraging income-generating activities to benefit local communities in coastal areas. This sector definitely provides various entry points for women's employment and opportunities for

²⁵ United Nation Development Programme (UNDP), "Fighting with Climate Change: Human Solidarity in a Divided World (2007), *Human Development Report 2007/2008*, available at: <http://hdr.undp.org/en/reports/global/hdr2007-2008/>, accessed on 21 July 2009.

²⁶ Dilip Kumar Dutta, *op.cit.*, p. 25.

²⁷ Caroline Moser and David Satterthwaite, "Towards Pro-poor Adaptation to Climate Change in the Urban Centers of Low and Middle-income Countries", *Human and Settlement Discussion Paper*, International Institute for Environment and Development (IIED), 2008, pp. 41-47.

²⁸ Bina Agarwal, "The Gender and Environment Debate: Lessons from India", *Feminist Studies 1 (Spring)*, 1992, p. 167.

creating self-employment in small and medium sized income generating activities. About 46 percent of workforces in this industry are women²⁹. Women are perceived as being particularly suited to fill certain positions in those fish/shrimp processing factories. Loss of coastal biodiversity has negative impact on the tourist attraction places such as Saint Martin coral island and Sundarbans in Bangladesh. Women take on certain jobs in tourist hotels and resorts, for example involving caring and household-related work and service positions which are very much related to their reproductive works. On the other hand, the situation allows women to enter the workforce based on their traditional roles and their own confidence to fulfill them³⁰. The loss of ocean and biodiversity due to the impact of climate change will definitely insecure women's livelihood in these sectors.

Moreover, the permanent change in temperature will reduce agro-biodiversity and traditional medicines options. Women rely on the agro-diversity for ensuring food security for households and medicinal plants for health security. They preserve seeds and have knowledge of conservation of biodiversity due to their social roles. Adopting new strategies for crop production or mobilizing livestock is harder for women and female-headed households in stressed environmental condition. So, women have to face insecurity due to the loss of biodiversity as they are dependent on natural resources for food, fodder, fuel wood and medicinal use in the rural areas. Women can exercise some extents of empowerment because they have better knowledge about environment and biodiversity³¹. It has been found that the vulnerability and capacity of social group to adopt or change depends greatly on their assets. Next to their physical location and women's asset such as resources and land, knowledge, technology, power, decision making potentials, education, health care and food have been identified as determinant factors of vulnerability and adaptive capacity in terms of loss of biodiversity. According to Moser and Satterthwaite, the more assets people have the less vulnerable they are and the greater the erosion of people's assets, the greater their insecurity³². Women own only 1 percent of the total world property. Loss of biodiversity will give no chance for exercising their knowledge and expertise on it.

²⁹ M M Q Mirza, "Climate Change and Extreme Weather Events: Can Developing Countries Adapt", *Climate Policy*, Volume 1, Issue 3, 2003, p. 1220.

³⁰ "Gender & Tourism: Women's Employment and Participation in Tourism", *Toolkit for Women*, Summary of UNED-UK's Project Report, available at: <http://www.earthsummit2002.org/toolkits/women/current/gendertourismrep.html>, accessed on 23 June 2009.

³¹ Bina Agarwal, *op.cit.* p. 167.

³² Caroline Moser and David Satterthwaite, *op. cit.*

C. Increased Migration and Female Headed Households

Long-term environmental deterioration and change in climate variability brings intense droughts, floods and natural disasters. These extreme weather events cause scarcity of resources, economic shocks and reduce employment opportunities especially in the country side. Consequently, CC contributes to massive migration and creates environmental refugees. Migration has gender specific impacts. Women are the most insecure and abused refugees in South Asian countries³³. They suffer from greater poverty, health risks, less information about employment, education and training in the newly settled areas³⁴. A study shows that 75 percent of migrant women in Sherpur, Bangladesh remain unemployed due to their inability to adapt successfully to local working practices for rice milling³⁵.

Social stigma is the added adversity for female headed migrant households³⁶. Male migration, leaving families behind at the place of origin, is a predominant form of migration in many African, Latin American and Asian countries³⁷. Apart from socio-economic impact on the area of origin, migration also has a profound influence on the status of left behind wives in the family. Some studies show that in the absence of husband, overall status of women improves as they have greater access to money which they can spend as they wish, they have the freedom of movement, they can take independent decisions regarding the education of their children and type of treatment to be given to them if they fall sick³⁸. Nevertheless, absence of husband makes the life of a wife difficult. Her workload increases as she has to take care of several other things, which culturally are done by men. Apart from doing the regular household chores and taking care of children, she has to work in agricultural fields, look after the livestock, and manage all the outdoor works. In Chile, female household heads work in excess of 10 hours a day. Another study found that male migration doubled women's

³³ Ranabir Samaddar, *The Marginal Nation: Transborder Migration from Bangladesh to West Bengal*, Sage Publication Limited: New Delhi, 1999. P. 121.

³⁴ Paula Banerjee, "Resisting Erasure: Women IDPs in South Asia" in Paula Banerjee, Sabyasachi Basu, Ray Choudhury, & Samir Kumar Das (eds.), *Internal displacement in South Asia*, Sage Publication Limited: New Delhi, 2004, pp. 280–315.

³⁵BIISS and Safer World, 2009, *op.cit.* p.19.

³⁶ Mosarrat Qadeem, "Internally Displaced Persons in Afghanistan: A Long Way Home", *Refugee Watch*, Volume 19, 2004, pp. 17–20.

³⁷ "Youth and HIV/AIDS Can We Avoid Catastrophe?" *Population Reports 2002*, p.3.

³⁸ Gulati Leela, *In the Absence of their Men: the Impact of Male Migration on Women*, Sage Publication Limited: New Delhi, 1993; Abdullahel Hadi, "Overseas Migration and the Well Being of Those Left Behind in Rural Communities of Bangladesh," *Asia-Pacific Population Journal*, Volume 14, No. 1, 1993, pp. 43-58; and G. Hugo, "International labor Migration and Family: Some Observations from Indonesia", *Asian and Pacific Migration Journal* Volume 4, No. 2-3, 1995, pp. 273-301.

physical work burden and community activities particularly for women with no grown sons³⁹.

A study on 'Filipino wives' and another one on 'Gulf wives' in India found that wives experience a certain amount of emotional stress when they have to bear the responsibility of making decisions in the absence of their husband⁴⁰. Apart from increased responsibilities, frequent thoughts about the safety of migrant husband add to mental stress of left behind wives. Thus, the added responsibilities of managing family, children and financial matters, anxiety about safety of husband and self, and the problems associated with isolation, altogether create a condition of stress among left behind wives. However, there is hardly any available literature focusing on mental stress on wives left behind by male migrants.

Women are treated as both migrant and women in the new places. Gender inequity and stratification can be reproduced in places of relocation, where women generally possess less education and fewer skills than their male counterparts, and hence lack bargaining power in the community⁴¹. Culturally, women are marked by the society as 'ethno-marker' for the ethnic community in the relocated community where their bodies are symbol of reconstruction and site of contestation for patriarchy in many displaced communities⁴². Therefore, women are bonded to maintain those cultural norms and practices in the places of relocation in spite of acquiring human capital for self development.

D. Increased Conflict over Resources and Violence Against Women

Importantly, climate and environmental stress may play a role in producing violence. The degree to which societies will experience the negative environmental and socio-economic effects of CC depends in large part on their vulnerability and dependency on nature. Various reports on CC shows that CC will induce scarcities of food, water and health and will increase poverty, affect migration patterns and potentially lead to or exacerbate deadly conflict. A key informant from a local non-governmental organization based in Khulna, Bangladesh stated that in areas affected by salinisation (one of the impact of CC) had been a rise in tensions between local agricultural farmers and workers on shrimp farms. Therefore, local farmers felt marginalized and were resentful

³⁹ D. P. Saxena, *Rural Migration and Cultural Change*, Popular Prakshan Private Limited: India, 1977, pp. 175-178.

⁴⁰ S. Jetly, "Impact of Male Migration on Rural Females," *Economic and Political Weekly*, Volume 22, No. 44, 1987, pp.47-53.

⁴¹ Imtiaz Ahmed, Abhijit Dasgupta, & Kathinka Sinha-Kerkhoff (Eds.), *State, Society and Displaced People in South Asia*, The University Press Limited: Dhaka, 2004.

⁴² Ruchira Ganguly-Scrase & Roberta Julian, Roberta "Minority Women and the Experiences of Migration". *Women's Studies International Forum*, Volume 21, No.6, 1998, pp. 633-648.

towards the shrimp enterprises for loss of livelihood. This clash has resulted in periods of violence on shrimp farms and increased vandalism of farms in the districts of Shatkhira and Khulna, Bangladesh⁴³. To better understand this climate-conflict link it is important to consider the complex social factors of CC. These social factors can determine the degree to which men and women will experience climate effects from gender perspective.

The cultural interpretation of honor, shame and sexual purity of women are central in sustaining gender differentiation and gender inequality and at the same time justifies violence against women. For instance, cultural construction of male sexuality as aggressive and female sexuality as passive often led to the treatment of women as male property and women are denied of any legitimate sense of personal worth. Therefore, women are targeted as male property in any conflict situation. A key informant from Khulna University, Bangladesh alleged that there had been a rise in the incidence of sexual assault against women in the areas that had experienced an influx of shrimp farming⁴⁴. Moreover, statistics on acid violence shows that most of the women are targeted due to the dispute over land, property and money⁴⁵. Conflict over natural resources augments the gender based violence against women. In addition to that, women have to suffer more socio-cultural dishonor than men after violence against them. Victims of violence become social pariahs. They are rejected by their husbands, families and communities, and face impoverishment and humiliation.

Even women are also excluded in the post conflict reconstruction initiatives. They further experience discrimination and marginalization during post conflict power struggles and reconstructions of the management of natural resources. They are kept out from the decision making process about the conflict and resource management both at household and community level. Therefore, women are the worst victim of CC in regards to the conflict situation.

E. Lack of Access for Human Capital

CC has indirect socio-economic impact on girl child. Decreases in water, fuel wood and fodder availability jeopardize their livelihoods and increase their reproductive work load. Lower school enrollment figures for girls and less opportunity for women to engage in income generating activities are secondary effects of CC. Water scarcity and contamination have disproportionate impact on low-income women and girls⁴⁶. For many girls who must walk miles to access

⁴³BIISS and Safer World, *op.cit.* p. 14.

⁴⁴ *Ibid* p.15

⁴⁵ Acid Survivors Foundation (ASF), "Motivation of Acid Attack-2008", available at: <http://www.acidsurvivors.org/statistics.html>, accessed on 01 October 2009.

⁴⁶ Úrsula Oswald Spring, "Climate Change: A Gender Perspective on Human and State Security Approaches to Global Security", *International Women Leaders Global Security Initiatives*, CRIM-National University of Mexico, November 2007, p. 44-46.

clean water and fuel wood, school is not a reality for them. When they go out to collect water, girls are sometimes harassed by boys and men. Therefore, girls feel uneasy and threatened while collecting water from distant sources. Without a basic education and training (as element of human capital) or the ability to get a formal wage-earning job, many girl children become locked into a vicious cycle of poverty. This has a ripple effect that impacts communities and countries socially, economically and environmentally.

F. Increased Women's Death Rate for Extreme Weather Events

Natural hazards by themselves do not cause disasters. It is the combination of an exposed, vulnerable and ill prepared population or community with a hazard event that results in a disaster. CC enhances greater intensity and frequency of cyclones, hurricanes, floods and heat waves as the extreme weather events. The social structures of most societies formally relegate women to inferior and dependent, and keep away from the information about disaster and adaptation which is increasing their vulnerability and disempowerment. However, the actual performance of women in production and distribution differs significantly from gender ideology and role stereotypes in most societies. It is therefore essential to address these realities in order to find the differential impact of disasters on women, and to recognize their potentials for disaster preparedness, mitigation, and recovery. IPCC organized a survey on 141 countries about the gender dimension of disaster as result of CC in 1981-2002. The study report shows that natural disasters and subsequent impacts on average kill more women than men or kill women at an earlier age than men⁴⁷. Because men and women have different biological and physical appearances, different social norms and role behavior; women face discrimination in access to resources and information; and women have less capacity to breakdown of social order during the period of disaster.

4. GENDER PERSPECTIVES OF INTERNATIONAL, REGIONAL AND NATIONAL POLICY FRAMEWORK ON CLIMATE CHANGE

The previous section discussed about the relationship between the impact of CC and gender issues in Bangladesh perspective. This section will explore the gender aspects in existing national and international policy frameworks as CC is a global security and human rights issue. And it represents a series of challenges to sustainable development, social justice, equity and respect for human rights and future generations. Gender is a central factor in the combination of these issues. The CC debate and the development of a future climate protection system need to set firmly within the context of sustainable development. However, the

⁴⁷ "Climate Change 2002: Impacts, Adaptation and Vulnerability- Summary for the Policy Makers", *Intergovernmental Panel on Climate Change (IPCC) Report 2002*, p. 123, available at: <http://www.ipcc.ch/>, accessed on 21 June 2009.

gender issues are not much emphasized in the regional and national level policy frameworks of CC and sustainable development initiatives. There are some international policy frameworks on CC where gender issues are much focused. But there is a huge gap in the national and international policies from feminist point of view. There are some national, regional and international policy frameworks in the context of human rights, sustainable development and environmental policy and agreement where gender perspective is discussed in the following way:

A. International Response to Climate Change

CC policy frameworks provide a unique platform for the global community to come together and work towards protecting the global commons and ensuring a common future. Therefore, climate risk management and adaptation is a survival as well as development concern for international community. The followings are some of the international policy framework in regards to CC from gender perspective:

*Agenda 21 (United Nations Conference on Environment and Development or UNCED, 1992)*⁴⁸ aims to secure equity in all aspects of society, including the involvement of women in decision making and environmental management. Chapter 24 “Global Action for Women towards Sustainable Development” calls upon governments to eliminate all obstacles to women’s full involvement in sustainable development and public life.

*UN Framework Convention on Climate Change (UNFCCC, 1992)*⁴⁹ was promoted as the centerpiece for combating global warming. The Kyoto Protocol was approved by a number of nations as an addition to the Treaty (1995). Gender perspective has not been included in the documents till now although NGO’s are trying to incorporating the gender into the Yearly Conferences of the Parties on Climate Protection (COP).

*The Millennium Declaration (Millennium Summit, 2000)*⁵⁰ promotes sexual equality and the empowering of women as a means to fight against poverty, hunger, and diseases and to promote a truly sustainable environment. The three-fold Millennium Development Goals of poverty eradication (MDG 1), gender

⁴⁸ UNDP, “Rio Declaration on Environment and Development” *United Nation Conference on Environment and Development, 1992*, available at: <http://habitat.igc.org/agenda21/rio-dec.htm>, accessed on 02 July 2009.

⁴⁹UNDP “The United Nations Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol: A Guide to Climate Change”, *United Nations Report 1992*, available at:http://www.ipieca.org/activities/climate_change/downloads/publications/unfcccguide.pdf, accessed on 02 July 2009.

⁵⁰ UNDP, “United Nations Millennium Declaration”, *Millennium Summit 2000*, available at: <http://www.un.org/millennium/summit.htm>, accessed on 29 June 2009.

equality and women's empowerment (MDG 3) and environmental sustainability (MDG 7) reaffirm gender equality in both environmental and human security.

*The Johannesburg Plan of Action (World Summit on Sustainable Development 2002)*⁵¹ calls for incorporating gender perspectives into all policies and strategies and for improving the health, economic welfare of women and girls through full and equal access to land, economic opportunities, credit education, and health care services.

*Hyogo Framework for Action (World Conference on Disaster Reduction, 2005)*⁵² mandates that a gender perspective should be integrated into all disaster risk management policies, plans and decision-making processes, including climate-induced disasters.

*Resolution on Human Rights and Climate Change (Human Rights Council 3/2008)*⁵³ was adopted by consensus and recognizing that CC poses an immediate and far-reaching threat to people and communities around the world, with implications for the full realization of human rights. The Office of the High Commissioner was encouraged to execute an analytical study of the relationship between CC and human rights.

*Convention on the Elimination of Discrimination Against Women (1979)*⁵⁴ calls for integrating a gender perspective into environmental policies, obliging parties to take "all appropriate measures to eliminate discrimination against women in rural areas in order to ensure, on a basis of equality of men and women, that they participate in and benefit from rural development" and, "participate in the elaboration and implementation of development planning at all levels", and "in all community activities".

*Fourth World Conference on Women (1995)*⁵⁵ commits to securing the active involvement of women in environmental decision-making, integrating gender concerns and perspectives in policies and programs for sustainable development, and strengthening or establishing mechanisms at the national, regional and international levels to assess the impact of development and environmental policies on women.

⁵¹ UN, "The Johannesburg Plan of Action", *The World Summit on Sustainable Development*, 2002, available at: http://www.un.org/jsummit/html/basic_info/basicinfo.html, accessed on 29 June 2009.

⁵² "Hyogo Framework for Action", *World Conference on Disaster Reduction, Japan, 18-22 January, 2005*, available at: <http://www.unisdr.org/wcdr/>, accessed on 30 June 2009.

⁵³ "Resolution on human rights and climate change" *Human Rights Council, 3rd January 2008*, pp. 11-19.

⁵⁴ UN, *Convention on the Elimination of All Discriminations against Women*, available at: <http://www.un.org/womenwatch/daw/cedaw/>, accessed on 12 June 2009.

⁵⁵ UN, *Fourth World Conference on Women 1995*, available at: <http://www.un.org/womenwatch/daw/beijing/>, accessed on: 12 June 2009.

*Commission on the Status of Women 49 (2005)*⁵⁶ called on member states to enhance rural women's income-generating potential and the importance of greater security of land tenure and property ownership for resource mobilization and environmental management.

*International Women Leaders Global Security Summit (2007)*⁵⁷ recognized that CC poses serious security risks, especially for women, and that they must be included in decision-making at all levels.

*Commission on the Status of Women 52 (2008)*⁵⁸ identified gender perspectives on CC as its key emerging issue. In the agreed Resolution 21(jj) on Financing for Gender Equality and the Empowerment of Women. Governments are urged to: "Integrate a gender perspective in the design, implementation, monitoring and evaluation and reporting of national environmental policies, strengthen mechanisms and provide adequate resources to ensure women's full and equal participation in decision-making at all levels on environmental issues, in particular on strategies related to CC and the lives of women and girls."

*The Manila Declaration for Global Action on Gender, Climate Change and Disaster (3rd Global Congress of Women in Politics & Governance, 2008)*⁵⁹ argues for a gender sensitive approach to CC adaptation and disaster risk reduction.

B. Regional Response to Climate Change

CC is a development concern with severe implications in South Asia. All countries in this region are already affected by adverse climate impact. The costs of CC are already having major impacts on the South Asian economies and on the lives and livelihoods of millions of poor people. It is envisaged that adaptation costs will be substantial for the South Asian member states and could be strain on the already critical scarce resource base in the region. For the South Asian Association for Regional Cooperation (SAARC), this could eventually

⁵⁶ UN, *49th Session of the Commission on the Status of Women, 28 February-11 March, 2005*, available at: <http://www.liechtenstein.li/en/pdf-fl-aussenstelle-newyork-dokumente-women-03-07-2005-statement-49th-session-csw.pdf>, accessed on 01 July 2009.

⁵⁷ Women and Global Security, *International Women Leaders Global Security Summit, New York, November 15-17, 2007*, available at: <http://womenandglobalsecurity.org/docs/IWLGSS%20Power%20Point%20Presentation.pdf>, accessed on 01 July 2009.

⁵⁸ UN, *52nd Session of the Commission on the Status of Women, 28-07th March, 2008*, available at: http://www.aumission-ny.org/documents/commission_status_women.pdf, accessed on 03 July 2009.

⁵⁹ Women's Environment and Development Organization, *Manila Declaration for Global Action on Gender for Climate Change and Disaster Risk Reduction, 22 October, 2008, Philippines*, available at: <http://www.wedo.org/wp-content/uploads/manila-declaration-for-global-action-on-gender-in-climate-change-and-disaster-risk-reduction.pdf>, accessed on 03 July 2009.

constrain achieving many of other sectoral goals and objectives, namely the 22 SAARC Development Goals (SDGs), SAARC Social Charter, etc. Efforts to address sustainable development goals in every member state could therefore be increasingly challenged by climate variability and change.

At the 14th SAARC Summit in New Delhi during 3-4 April 2007, delegations expressed “deep concern” in this respect⁶⁰. As a follow up action, the Declaration called for identification of collective actions to pursue climate resilient development in South Asia. Bangladesh accordingly proposed to organize a Regional Workshop to identify collective concerns and priorities to engage in cooperative actions⁶¹. Member states can benefit substantially from sharing, coordination and cooperation among members within our Association. Further, sharing of mutual concerns and options can play a vital role toward consensus building, leading to collective positions in international processes and multilateral agreements. The Workshop was scheduled in October 2007 to establish a regional platform to address CC issues and concerns, focusing on knowledge and information sharing, communication and coordination, impact and vulnerability assessment, risk management and adaptation to CC; initiate a process and mechanism within member countries to address CC concerns collectively and develop a proposal for collective action to address CC concerns. Unfortunately, women are not addressed in the workshop paper as one of the key victim of environmental changes.

C. National Response to Climate Change

Bangladesh was one of the first countries to finalize a National Adaptation Programme of Action (NAPA) in accordance with UNFCCC. The NAPA was

⁶⁰ Paragraph 13 of Delhi Declaration of the 14th SAARC Summit: “The Heads of State or Governmentexpressed deep concern over global climate change and the consequent rise in sea level and its impact on the lives and livelihoods in the region. They emphasized the need for assessing and managing its risks and impacts. They called for adaptation of initiatives and programmes; cooperation in early forecasting, warning and monitoring; and sharing of knowledge on consequences of climate change for pursuing a climate resilient development in South Asia. They agreed to commission a team of regional experts to identify collective actions in this regard.”

⁶¹ “The rise in sea level due to global warming is an (other) impending threat. We are also experiencing an alarming intrusion of salinity into our river channels. The lives and livelihood of our peoples are adversely affected because of these looming environmental crises. Bangladesh, therefore, urges immediate collective action and stronger regional cooperation for the conservation and utilization of our shared environment.” Dr. Fakhruddin Ahmed, Honorable Chief Adviser, Government of the People's Republic of Bangladesh, in his Statement at the Inaugural Session of the Fourteenth SAARC Summit, 03 April 2007

completed in 2005 and is the first official initiative for mainstreaming adaptation into national policies to cope with CC and vulnerability. Bangladesh has already included most elements of mainstreaming CC adaptation into its Poverty Reduction Strategy Paper (PRSP) but as yet, there has been little progress in implementing the stated goals and targets of NAPA.

Although it contains brief references to gender and women, the NAPA does not include women as stakeholders or actors in the proposed adaptation actions. In developing the NAPA, “indigenous women” were noted as consultants, but no details are provided as to the ratio of male to female participants, and no women’s rights or gender-equality organizations or gender experts are mentioned as contributors⁶². Women are repeatedly referred to as one of the most vulnerable groups, yet no statistical or factual evidence is provided on gender-differentiated income levels, occupations or demographics. Particularly striking is the omission of women in discussing the public health situation of the country (i.e. no mention of gender-differentiated access to health care, differences in life expectancy or breakdown of government expenditures by gender). The NAPA presents women as victims of climate impacts but they are not considered active participants in adaptation to those impacts.

There are enough evidences to show that women are the center of sustainable development, and they are already paying huge prices for globalization, economic depression, and environmental degradation. CC is likely to worsen their already precarious situation, and leave them even more vulnerable. Therefore, more efforts should be made to give climate negotiations a gender centered approach, and to provide women their rightful place within sustainable development policy frameworks and bodies.

5. CONCLUSION AND RECOMMENDATIONS

CC is a threat to human security in general. There are important gender perspectives in all aspects of CC in Bangladesh. Gender inequalities in access to resources, including credit, extension services, information and technology, must be taken into account in developing mitigation activities. Adaptation efforts should systematically and effectively address gender-specific impacts of CC in the areas of energy, water, food security, agriculture and fisheries, biodiversity and ecosystem services, health, industry, human settlements, disaster management, and conflict and security. Decision makers and stakeholders should ensure the gender equality as a key priority. Women and men face different types of vulnerability to CC i.e. the gender implications of CC because of their different roles and responsibilities in society and women’s under representation

⁶² Women and Environment Development Organization’s Study, *Gender, Climate Change and Human Security*, Commissioned by the Greek Chairmanship of Human Security Network 2007-2008, p. 14.

in the decision-making process about CC. Women are not only victims of CC, but also effective agents of change in relation to both mitigation and adaptation. Women have a strong body of knowledge and expertise that can be used in CC mitigation, disaster reduction and adaptation strategies. Women's responsibilities in households and communities as stewards of natural resources has positioned them well for livelihood strategies adapted to changing environmental realities. The lack of attention to gender issues in the climate process is partly a reflection of the lack of attention to social, behavioral and justice issues towards women. The followings are some of the modest recommendations for steps ahead towards gender equality in the context of CC:

- **Collecting and Analyzing Sex-Disaggregated Information**

Currently, sex-disaggregated information is rarely used in national environmental policies or programs. Collecting sex-disaggregated information is a step toward developing gender responsive policies and programs. Data that provide information on women's and men's resource use, access to resources, and participation in environmental decision making contributes to sound policies. Interviewers should use separate questionnaires for women and men, along with other instruments, including a 24-hour recall questionnaire and activities profile, to better understand men and women's interactions with the environment.

- **Strengthening Women's Involvement in Environmental Decision Making**

Worldwide, women are poorly represented in governments and decision making bodies. This lack of representation limits women's influence over environmental policies and programs. Women need official channels to reflect their needs and to have a voice in environmental policy decisions. In the 1990s, countries like India, Uganda, Brazil and the Philippines, formally set aside a percentage of seats on national and local bodies for women. Bangladesh should ensure women's active participation in environmental management and decision making bodies.

- **Issuing Gender Policy Declarations**

Commitment to addressing gender concerns must be reflected at the highest level of policy declaration. Several governments around the world have taken steps to incorporate a gender perspective into their national environmental policies. Gender policy declarations are important because they demonstrate a government's intent to address gender concerns and provide a reference document for technical staff that is working on national policies and programs and the basis for action to develop the capacity of both women and men to address gender concerns in regards to CC.

- **Regional Cooperation Among South Asian Countries**

SAARC members should commit themselves to promote programmes for advocacy and awareness of CC and to inculcate habits towards a low-carbon society, including incorporation of gender-based information on impact and mode of mitigation and adaptation. They should identify the priority actions including clean development management, exchange of information on disaster preparedness, exchange of meteorological data, monitoring CC impact, supporting international negotiation process and sensitising the media to the gender issue to implement the plan of Dhaka Declaration 2009.

- **Commitment to International Agreement**

UN conference documents often called a platform, program, or plan of action to represent a common policy statement among all of the nations that participate in the process. Conference agreements such as CEDAW, Fourth World Conference on Women, etc. can be a catalyst for national action. They should influence government policies through international “peer pressure”. Advocates from women’s group should use the documents to put pressure on governments to fund or approve actions that support the agreements and the goals and benchmarks in the documents can serve as tools for monitoring national progress and encouraging action.

Minimizing the vulnerability linked to CC impact will require sustainable development interventions in multiple sectors (agriculture, employment, education, health and so on) to address the incipient threats. Without a gender-sensitive method of analysis, it is impossible to determine the full set of causes and potential effects of CC. Therefore, it would be impossible to design an effective climate protection system. The CC processes should adopt the principles of gender equity at all stages including research, analysis, the design and implementation of mitigation and adaptation strategies.