

***Submission of the South Centre on the matters to be addressed at the ‘in-session workshop on gender-responsive climate policy with a focus on adaptation and capacity building, and training for delegates on gender issues’
February 16, 2016***

With DECISION 18/CP.20, the Conference of the Parties to the UNFCCC established a ‘two-year work programme for promoting gender balance and the achievement of gender responsive climate policy and to strengthen the existing work on gender balance in the thematic priority areas...’—The Lima Work Programme on Gender. Paragraph 12 of the decision also requests the Secretariat to organize an ‘in-session workshop on gender responsive climate policy with a focus on adaptation and capacity building, and training for delegates on gender issues during the 44th session of the SBI (May 2016)’; in Para 13 the COP further invites Parties and admitted Observer Organizations to submit to the Secretariat by 3 February 2016, ‘their views on the matters to be addressed at the in-session workshop.

This submission by the South Centre, an Inter-governmental Organization of developing countries, responds to that request ever mindful of the overall context countries obligations to human rights, the rights of women and girls as agreed under the CEDAW, and the recent Paris Agreement—particularly, the goal of limiting the global average temperature increase above the pre-industrial level to 2 degrees C, and 1.5 degrees C as an aspirational goal—recognising the strong linkage between adaptation and mitigation, and that developing and developed countries are in various stages with regard to the implementation of their intended nationally determined contributions, the culminative effect of which puts the planet unto a warming trajectory of 2.6 -3C. This project high level of global warming which portent even greater warming occurring in developing

countries is inimical to the lives of women, men, boys and girls in Africa, Asia, Latin America and the Caribbean. We note that the INDCs are to be revised within a five year period for the post 2020, and some of them include adaptation elements, alongside with their NAPAs and NAPs under the Cancun Adaptation Framework. We further note the urgency of addressing the pre 2020 adaptation, mitigation and the means of implementation gaps, particularly the finance gap. The inadequacy of present levels of financing for climate change adaptation will need to be significantly dealt with by high levels of non-debt creating public finance flows from developed countries to developing countries, if the lives and opportunities for economic and social advancement of women and men are to be safeguarded and their human rights, within the framework of gender justice, are to be fully and effectively realized.

SUMMARY

Women and men have different capability, opportunities, ownership and access to economic, social and technological resources that are needed to facilitate adapting to a changing climate, which adversely impacts the availability of food, fuel and water. Women, as a group, relative to men, as a group, have different possibilities for recovering from frequent and intensive periods of droughts, floods and hurricanes. Adaptation efforts, which are daily issues for individual woman and man, families and households, are likely to require more resources than they currently have available. Though this impacts both men and women and male- and female-headed households, it is likely to be more acute for women and for female-headed households due to gender gaps in income and social and economic resources.

When governments and households must re-allocate expenditures on climate change adaptation measures, this may reduce both targeted (such as projects that improved health

and educational outcome for girls and women) and non-targeted gender equality interventions (such as health clinics)ⁱ and poverty eradication spendingⁱⁱ and budgeting. In addition, if climate change prompts resettlement and engenders decline crop yields, it may reduce household resources and their ability to meet their day-to-day functioning. The depth of these effects and women's and men's ability to respond with appropriate survival strategies will depend on how gender sensitive climate change adaptation policies, programmes and projects are and the extent to which adaptation and mitigation measures are integrated into poverty reduction strategies—whether the strategies function complementarily or are adversarial to each other.

Gender-responsive and gender equality climate governance policies around adaptation and capacity building should hence be targeted at least five important pillars:

- 1) Improving women's role in climate governance and decision-making of climate change adaptation issues at the micro, meso and macro levels—from community to local government to regional and central government and globally through the UNFCCC and related institutional frameworks;
- 2) Improving women empowerment concerns and gender analysis in climate and related sciences,
- 3) Programs and trainings for enhancing the skill set of women to undertake adaptation and related risk and vulnerability assessments from a gender and women's empowerment perspective—Gender and Climate Risk Assessment Framework;

4) Increasing women's participation in timely and strategic interventions around climate protection and building resilience and 5) ensuring adequate climate finance, that is publicly sourced, non-debt crating and easily accessible, to developing countries, women's organisations and community based organisations in those countries; and ensuring gender equity in the flow of this finance.

This submission gives a synopsis of touches on each of these elements. After a concise introduction, background and context, it focuses on:

I. Critical Gender Issues in Climate Change Adaptation

II. South Centre's Approach to Gender Climate Change Adaptation

III. Highlights of areas of concerns with regard to Gender and Capacity Building

IV. Some tentative thoughts on the Scope and likely Outcomes of the Workshop on gender responsive climate adaptation policies Scope and Outcome

V. Comments and recommendations specific to the training for delegates

Introduction, Background and Context¹

The preamble of Paris Agreement paragraph 7, exhorts Parties to the agreement, *‘when taking action to address climate change (to) respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity.’*

Women are dynamic actors in projects and programmes, particularly related to adaptation, such as crop and livestock selection, crop shifting and soil preservation, the use of traditional water harvesting techniques and the efficient use of water. Women, as the managers of household energy and water supplies, are adapting to the changing climate conditions. Women, as farmers and major producers of food, are also adopting production and growing practices that ensure food security, in spite of climate change (Perlata 2008 and Dampney 2007, Williams 2013 and 2014).

Adapting to climate change and climate variability places increasing burden on women’s and men’s care and social reproduction work. In some countries, the effects of climate change also place women and girls at greater risks for bodily injury, rape and harassment. Ultimately climate goals, priorities and the concomitant actions that are implemented to address the growing climate challenges concern the well-being, livelihood and lives of all

¹ This submission draws heavily on Williams (2016) *Gender and Climate Change Financing—Coming Out of the Margins*, Routledge

citizens—women, men and children, across different socio economic classes and life cycles.

Women are very active and perform significant roles in all of the five key sectors identified by the IPCC in its 2007 report as critical parameters for adaptation activities—agriculture, forestry and fisheries, water supply, human health, coastal zones and infrastructure. These sectors are also the sectors that are highlighted among the top categories of the over 400 ‘urgent and immediate’ adaptation projects listed in the 41 plus National Adaptation Programmes of Action of the least developing countries received by the Global Environment Facility. Women participate actively in sustainable agriculture and the provision of water for family and community life, on their own account as well as through working on family and other types of farms. Worldwide women are 43% of the work force in agriculture and over 50% in Asia and Africa. In India, women undertake 4.6 to 5.7 times the agricultural work men carry out. In Nepal, the range is skewed even more with women carrying out 6.3 to 6.6 times the agricultural work that men carry out (ICIMOD). Additionally, as noted by Achim Steiner of UNEP, ‘women play a much stronger role than men in the management of ecosystem services and food security’ (Nellemann et al, cited in Williams 2016)

Women undertake these as autonomous adaptation activities within women’s groups and also within community based adaptation processes. Yet, they are not the major drivers or beneficiaries in adaptation programmes, policies and projects (IUCN/ UNDP/ GGCA 2009: 155, UNFPA/ WEDO 2009: 4).

At the same time research show that women and children die disproportionately more than men from extreme weather events such as floods, hurricanes and storms. Evidence from the aftermath of extreme weather events analysed by Neumayer and Plümper (2007) show that ‘natural disasters (and their subsequent impacts) on average kill more women than men or kill women at an earlier age than men.’ (Hence, as noted by the authors, one of the social consequences of climate change may be, in some societies, a perverse narrowing of life expectancy gap between men and women by contributing to the lowering of female life expectancy.) Of the hundreds of people killed during the 2005 South Asia heat waves, most were women and children. Women and children often suffer from diarrhoea and dehydration (BBC June 6, 2005 and Chiang 2007).

[The Intergovernmental Panel on Climate Change’s Fifth Assessment Report offers a much more nuanced perspective on the gendered mortality effects of extreme weather. It highlights that the mortality of men and women to extreme events varies regionally. For example, it found that males in the US, China and Vietnam men seem to be at greater risk of death following flooding. In the latter two cases men died due to rural farming and search and risk and protection of fields during flooding. It further noted that, the Paris 2003 heat wave led to ‘excess mortality among females overall...there were more excess deaths among men in the working age span (25-64)’²]

² These deaths it is argued were possible due to differential exposure to heat in occupation settings.

Women are also more likely than men to suffer from the ill effects of mal-adaptation in responding to climate change and they are less likely to receive any or adequate compensation for the losses and damages suffered during extreme events or to have adequate recognition of gender specific needs and priorities before, during and after such events.

Thus the direct impacts of climate change generate highly inter-related chains of cause-and-effect (consequences) linking profoundly and in-directly to areas such as food security, health and economic security and may have other effects on education, child mortality, maternal health and women's empowerment' (WB 2010).

In addition to the direct and in-direct impacts, human meso and micro level responses to climate challenges ranging from migration, to increased violence & conflicts over diminishing resources (water, fertile lands and fisheries, Pachauri & Reisinger 2007) to the exacerbation of malnutrition among vulnerable groups further complicate and compromise the lives of women, men and boys and girls.

Adapting to climate change challenges therefore will stretch the coping skills of men and women in developing countries. Adaptation of women and men, as consumers, entrepreneurs, individuals and workers and as heads of households, is a function of multiple inter-related factors including control over land, money credit, health, personal mobility and food and housing security. As indicated above, women, especially poor women tend have less control than men over these factors. They are therefore at significant disadvantages in the face of, gender blind and male-biased climate change policies.

Clearly, carefully addressing climate change can present many opportunities for employment, entrepreneurial opportunities as well as the enhancement of the lives and living standards of women and men in poor, rural and urban communities. This can be the case if proactive attempts are undertaken with designing, developing and implementing adaptation projects that enhances and ensure food security and access to health care and clean and renewable projects ensure access to decent work and opportunities for women as workers, and business owners. Unfortunately, this is not yet automatically the case in the current operation of adaptation, and the synergetic linkages between adaptation and mitigation responses to climate change.

I. Critical Gender Issues in Climate Change Adaptation

WHO 2011 argues that the responses to climate change is a function of ‘capacities, resources, behavior and attitudes.’ These factors, however, are all mediated by pre-existing social and gendered norms values, roles and relationships and the attendant gender biases and gender-based inequalities existing in the economy. The norms and values and the underlying gender system condition men and women’s ability and capacities to take precautionary actions, to respond to the immediate threats and to recover and replace damaged or destroyed assets in the aftermaths of particular climate related events at a given point in time, or over a period of time.

While there is a growing array of climate actions, under taken by non-governmental organizations, international institutions and overseas development agencies, focused at the community level, where it is often assumed that women’s and men’s needs are

adequately covered; but this is not often the case. Addressing community concerns do not automatically take care of gender or social equity issues. As noted by gender and water activists, this is because there is a tendency to see communities as collections of people with a common purpose, 'in reality communities are made up of individuals and interest groups who command different levels of power, wealth, influence and ability to express their needs, concerns and rights' (African Water Strategy). Most often those at the lower spectrum, primarily poor women, men and other vulnerable groups are usually left out or neglected. This unequal power relation often place women in a disadvantaged position. Individual women and women's organizations take part fully in community life where they contribute greatly to the building of social capital but their participation in many aspects of decision-making processes remain weak and their representation at provincial, regional and national levels is still minimal (Oxfam and OECD).

Pre-existing gender biases and gender inequities that emanated from the gendered roles, responsibilities and constraints of men and women continue to operate in the economy inspite of climate change and its variability. In fact some of these biases and inequities may even be exacerbated by extreme weather events. In turn, these gender realities may have serious implications for the pathways and the ultimate outcomes of climate change policy responses. The IPCC Working Group II cites work by O'Brien et al. (2004) that lends some support to this point. Adaptive capacity plays a key role in influencing the outcomes of adaptation or other climate strategy. O'Brien et al., locate gender as one of the socio-economic factors that 'influenced the capacity to adapt to changing environmental and economic conditions' (IPCC 2007b:729).

The literature on women and vulnerability highlights that pre-existing gender-related patterns of vulnerabilities can block women's ability and capacity to effectively engage in eco-friendly technology, natural resource management and early warning system. These vulnerabilities range from lack of secure land rights (which is interrelated with access to credits and livelihood), gender gaps in the ownership of productive assets, higher illiteracy rates among women than men, unpredictable and less favourable access to employment and income and inequality in participation in decision making (FAO 1998).

Many of the factors affecting women's empowerment and their control over economic and financial resources are well-known and have become widely accepted. These factors include gender inequality around differential access to economy, social and physical goods, gender gaps in education, income, time use, and leisure and gender differentiated roles and responsibilities in the household, community and labour markets.

In the Millennium Development Goals (MDG-3)-oriented literature, these factors are clustered in terms of their implications for the three operational domains of gender equality and women's human development: capabilities, resources and opportunities and security (UN Millennium Project 2005, Crown et al, 2006, Antonopoulos, R. and Floro (2008), Agarwal (1994) and Pearl (2003).

The 'capabilities domain' refers to basic human abilities as reflected in education, health and nutrition. The 'access to resources and opportunities domain' refers to equality in the opportunity to use or apply basic capabilities through access to economic assets (such as land, property, or infrastructure) and resources (such as income and employment), as well

as political opportunity (such as representation in parliaments). The ‘security domain’ is defined to mean reduced vulnerability to violence and conflict. Empirical research has also located the gender-differentiated dynamics of these domains across a broad range of human social and economic activities, including agriculture, services, manufacturing, water and energy distribution and use, transportation and disaster management (Antonopoulos, R. and Floro, 2008, Agarwal, 1994 and, Pearl 2003).

II. South Centre’s Approach to Gender Climate Change Adaptation

Drawing on these complex and intertwined relations between the capabilities framework and the growing literature on gender and vulnerability, South Centre is evolving a highly textured template for exposing in a more clear and rigorous manner the links between gender and climate change, particularly climate change adaptation. The analysis posits that the risks of climate change to women’s empowerment and gender equality arises from the emerging identifiable links between climate change and the operational domains of gender equality. (These linkages are more clearly highlighted in Table 1.)

Gender Capabilities domain & climate change. Climate change is associated with the intensification of food shortage, increase respiratory diseases and exhaustion from travelling further distances in order to securing drinking water and water for other household uses. These factors relate to women’s and men’s health and morbidity and time-use, and hence climate change poses significant challenges for women’s and men’s personal adaptability and resilience. The available literature on the social and human costs of climate change points out that women and men living at the margins of poverty

or below the poverty line face specific forms of vulnerabilities in terms of lack of access to clean drinking water, inadequate sanitation and water-borne diseases. Women dominate among those in this category. Therefore, climate change and variability expressed in the forms of drought, floods and storms by negatively affecting water source, introducing other contaminants into water as well impacting the vector of diseases increase women's vulnerability and imposes disproportionate amounts of adaptation pressures (both planned and reactive) to secure food, water and housing for their children, extended families, especially elders and themselves.

The gender Opportunities and Resources domain in the context of climate change.

Climate change and related events such as droughts and floods are associated with the destruction of women's agricultural livelihoods, shelter and access to biodiversities. Climate change may create the need for climate proofing housing and business establishments. In the case of extreme weather events, households and individuals may need to purchase materials and equipment to rebuild or repair damaged dwellings. They may also need to obtain new appliances to replace lost or damaged household appliances and farm equipment. In the immediate aftermath of climate induced events the prices for these items may be at a premium and credit may be constrained in the short run. In such cases, women are more likely than men to be unable to access credit and must draw down their income and savings. Therefore, climate change may also impact women's access to credit, technology and finance. Depending on the duration and severity of the problem, this may have long-term implications for women's economic empowerment. The IPCC's Working Group II notes that women's relative 'insecurity of access and rights over resources and sources of wealth such as agricultural land can have implications both for

their vulnerability in a changing climate, and also their capacity to adapt productive livelihoods to a changing climate' (IPCC 2007b:729)

The Gender Security Domain and climate change. Climate change also intensifies the effects of pre-existing gender gaps. First, older forms of information asymmetries, such as differential access to crop and marketing information between men and women, may be superimposed by new forms of asymmetries. While the old forms of asymmetries led to long-term chronic problems such as endemic poverty, the new forms such as asymmetrical information sharing regarding early warning and disaster preparedness are urgent and immediately life-threatening. This is more likely to be the case in areas where men dominate the public space and therefore have earlier access to information about pending extreme weather events. Women, if they tend to remain in the household sphere, may not have such information until it is too late to take precautionary measures.

Second, climate change-induced weather events, to the extent that they create homelessness and forced resettlement, adversely impact women's personal security. It is widely report that rape, sexual assault and other forms of gender based violence are perpetuated against girls and women, who are forced to leave their homes during climate related events, and find shelter in refugee camps or other forms of re-settlement. As a result of droughts drying up nearby water sources young girls and women must wander further away from residence to secure water for their family. They are vulnerable to attacks and harassment.

Third, conflicts over resources, especially water and land intensify with climate change. Ironically, some of these conflicts are generated as individuals seek to take the

opportunity presented by climate change. For example, in the area of carbon offset, with regards to afforestation and reforestation and other land-use changes, the forest and its environment have become increasingly valuable resources. This in some cases may lead to women as well as indigenous peoples losing control over land and forest. Many of these changes predispose women to both domestic and community violence.

If climate policies, to adapt to climate change ignore or benignly neglect gender equality interventions or does not mainstream gender issues into sectoral programmes, projects and policies, they will exacerbate structural gender inequalities, and may potentially further disadvantage women. This will act as a break on the forward momentum of gender equality and women's economic and social empowerment that the last twenty years of global commitments on gender equality and gender mainstreaming have set in motion. It is therefore imperative that proactive attention, including the necessary remedial measures, is paid to address any adverse gender differentiated impacts of climate change policy, social and economic responses measures and climate change financing. Recognition of the links between gender equality outcomes and successful climate change outcomes might lead to the process of integrating both targeted and non-targeted gender and non-gender equality interventions within the framework of adaptation programmes and projects. The distinction between targeted (programmes and projects that directly reduce gender inequality and empower women such as efforts dedicated to improving educational outcomes for girls and women, and gender mainstreaming activities –gender training and gender focal points in sector ministries) and non-targeted gender equality interventions (projects and programmes that are directed at improving

social development but which have spill over effects on gender equality, such as the construction of feeder and rural roads, health clinics and water services).

Table 1: Climate change and the Gender Operational Domains Plus Finance related issues

	Capability & Security related impacts/challenges	Resources & Opportunity.: (Economic resources)	Resources & Opportunity: financial impacts/resources
Climate Change	<p>FOOD/HEALTH & NUTRITION</p> <p>Food insecurity/Malnutrition</p> <p>Food shortage (higher rate. Malnutrition)</p> <p>Ill-health/Morbidity Maternal & infant deaths</p> <p>Time burden (increase)</p> <p>Family planning /antenatal care/home deliveries</p> <p>Access to health care</p> <p>Increase respiratory diseases</p> <p>Stress related illness Exhaustion (travel further for water or fire wood)</p> <p>Increase in water born-diseases</p> <p>Heat related mortality; heat stress</p> <p>Work load increase</p> <p>New skill set for survival (tree climbing & swimming)</p> <p>EDUCTATION</p> <p>Challenge for girls due to need to travel longer distance for water etc.</p>	<p>Safety nets</p> <p>Access to inputs etc. (fertilize)</p> <p>Land tenure/security</p> <p>Literacy/Education & Training</p> <p>Livelihood/Employment</p> <p>Access to social services</p> <p>Social protection</p> <p>Social Insurance</p> <p>Access to housing</p> <p>Real Wage/disposable income</p> <p>Housing/Land</p> <p>Information asymmetry in the transmittal of warning</p> <p>Hazard management</p> <p>Disaster preparedness and management</p> <p>Control of early warning system/information flow</p> <p>Weather related hazard</p> <p>Training & capacity</p>	<p>Asset valuation effect</p> <p>Access to credit</p> <p>Insurance</p> <p>Savings/wealth effect</p> <p>Pension etc.</p> <p>Access to finance</p> <p>Subsidy</p> <p>Household Budget effect</p> <p>Adaptation Finance needs</p> <p>Mitigation Finance needs</p> <p>Technology transfer</p> <p>R&D</p>

	<p>SECURITY.</p> <p>Increased potential for conflict</p> <p>Violence against women</p> <p>Increase risk of Sexual harassment & violence</p>	building	
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Drawing on the emerging gender and vulnerability literature it is possible to develop a rich gendered and well-textured qualitative risk assessment framework—GEMCRA that can be implemented both at the micro and meso levels. A gender climate risk and vulnerability assessment framework provides an opportunity to clearly identify the risks that climate change poses for women’s social and economic situation, and provide the appropriate level of visibility so the risks can accounted for and be fully addressed. Initially we identify seven broad risk assessment categories: 1) Supply risk, 2) Market risk, 3) operating risk-cost/losses, 4) social and personal security risk, 5) Domestic/time burden risk and 6) recovery risk and 7) Participant risk. These risk categories and their likely economic effects are presented in the table below. The economic effects can serve as key entry points and the basis for claims on both public sector financing and options for private sector financial opportunities. Such a framework can be developed or grafted on to one, more or all of the numerous emerging climate risks and vulnerability approaches.

Table 2: A Qualitative Gender Climate Risk Assessment for Climate Change Adaptation finance

Category of Risk	Description/likely effects
Market Risk	Price or demand changes for food and input. Food in-security and livelihood loss
Supply Risk	Supply interrupted; decrease access/income
Operating Risk-cost/Losses	Loss of assets including shelter
Social and Personal Security Risk	Health/wellness disparity Information gap Mobility and public space constraints Relocation Rise in violence Increase exposure to sexual abuse and harassment
Domestic/Time Burden Risk	Increased care and other work load
Recovery Risk	Impaired ability to recover assets and resources after catastrophe
Participant Risk	Financial stability, asset holding/management. Credit worthiness. Inadequate administrative and technical capacity.

1) Supply Risk

Supply risk represents the potential for disruption of supply or demand and cost of input due to climate event. It is anticipated that climate risk will increase supply risk and disrupt supply channels (Hart 2007). For example storms, floods and hurricanes may damage homes and business and destroy harvest and live stocks. This will negatively impact economic activity and the livelihoods of men and women. In some countries,

women may face disproportionately more negative impact than men from weather events such as floods, because of their over-reliance on food processing, cattle, and chickens for their cash income (Khondker, H.H. (1996). The impact of climate change in the agricultural sector will have negative impact on food security imposing additional burden on women, who are primarily responsible for maintaining food supplies in many households. From the vantage point of gender and (indigenous men and women), an emerging and unique form of climate risk, may be disruptions, due to offset programs, which lead to loss of access and control of land, as occurred in the Mt. Elgon debacle and is reported to be on the rise due to monetary incentives around afforestation and reforestation. There is some concern that REDD, if not properly managed and implemented could exacerbate these negative effects.

2) Market Risk

Market risk may be more applicable to entrepreneurs and small holders. However, market risk and supply risks are inter-related as extreme weather events will tend to drive both in the same direction. In the case of market risk, the primary effect will be on price and demand conditions. Climate risk will likely decrease the availability of locally relevant inputs, increasing the price of inputs and final goods. From the vantage point of small-holders, the change in demand conditions may be both advantageous and disadvantageous: While prices may increase, demand may not be forthcoming and, or, there will be competition from imports.

From the household side, rising in prices of basic goods and service presents hardship for women, who must manage the shortfall income against rising prices. In terms of

mitigation, household may experience rising cost in the purchase of energy efficient appliances and heating and energy bill for weather related events such as heat waves etc. Female-headed households, which tend to have lower income and less access to resources than male-headed households, in some countries, may be at a disadvantage with regard to the purchase or repairs of such household items or meeting the additional cost of heating or cooling that may be associated with extreme variability in climate.

3) Operating Risk

Operating risk raises the issues of data gathering regarding around adaptation, mitigation, technology and finance. It underscores the need for resilient and climate proofed dwelling and business establishments. It also highlights the importance of insurance products to offset the risk of increase of flood etc. Climate change and adverse weather events increase the cost of housing and community infrastructure and overall cost of living, especially in vulnerable areas. With regard to data gathering, there may be an information cost premium for many women, who are not always connected to the main flow of information about new technology, adaptation or mitigation programs. Most often women, because of household duties, are unable to participate in informational and extension type trainings that take place during the daytime when they must perform livelihood or farming work. Women may also not be able to travel far distances or in the late evening to access information and trainings about financial, technology or other opportunities that may be available to support climate proofing their dwelling and livelihood activities. Women may also suffer from premium bias with regard to insurance products to transfer risk of crop and other losses due to climate change and climate variability.

4) Social and personal security Risk

Social and personal security risk and time burden risk and recovery risk are new additions to Hart's framework. From the purview of gender analysis, social risk covers a broad range of gender related phenomena including: nutritional capacity and health; lack of education; the influence of religious and social dogmas and unequal power relationships. According to del Ninno et al 2001, women in many poor economies, are generally more calorie-deficient than men and suffer from chronic energy deficiency. This poor health and caloric deficiency make women vulnerable during climate-induced catastrophes (del Ninno et al 2001). Climate risk compounds the problem of lack of education that affects poor men and women. But because of women's lower levels of education (i.e., knowledge about technology and other information), in many poor and vulnerable countries, women and girls suffer from reduced "ability to access information, including early warning mechanisms and resources, or to make their voices heard" (Islam 2009).

In some cultures, religion and social dogmas place taboos on female and male cohabitating the same public space or unaccompanied single women participating in the public domain (Masika, 2002:5). This places women in extremely vulnerable position during extreme weather events (Masika 2002:5). Women are likely to suffer increased mental strain, and bear the brunt of certain social constraints; for instance, they are shamed by using public latrines, or being seen by men when in wet clothing (Rashid and Michaud 2000). The social and institutional barrier of women's mobility also keeps them in vulnerable positions as they may not be able to move easily to find alternate sources of livelihood and income.

Unequal power relations between women and menⁱⁱⁱ impacts women's differential and lesser access to environmental resources and opportunities for income diversification all of which intensify climate change (Islam 2009). This has implications for critical matters such as accessing quality of housing, and building material and the location of dwelling. For example, power dynamics may underlie whether women's houses are located on raised grounds or less attractive (in terms of adaptation to climate risk) areas.

With regard to personal security (self protection), women face risks of bodily injury during climate and weather events. Women and girls are also subject to sexual harassment and rape due to further distances needed to fetch water while at their permanent residential areas, during relocation or at shelters. As noted by researchers such as Islam (2009), post-disaster mortality, injury, and illness rates are often (but not universally) higher for girls and women.

5) Domestic and Time burden Risk

Domestic and Time risk burden are quite strongly connected to social risk. In the first case, many poor women in developing countries must spend more time on the search for food, fuel and water, especially if warming events intensify water scarcity and dries up nearby water sources. Evidence from the literature suggests that droughts and floods increase women's domestic burden. Women must expend more energy and time sourcing water from far away places while still maintaining their customary domestic work loads. According to Islam (2009) "work load changes increase women's responsibilities in the domestic sphere, paid workplace, and community through the disaster cycle of preparation, relief, reconstruction, and mitigation". When there are girl children of the

appropriate age in the household, they may support the women of the housing in carrying water. Ultimately, intensified domestic load and time burden may exacerbate women's physical and mental stress.

It is important to note that there is an implicit technology risk that is cross cutting across the seven climate risks areas. This technological risk is assumed to be a decreasing one and thus may acts as a leveraging factor within the framework. The technology risk may be positive if technology supports care services and, if, after its costs of implementation are accounted for, it delivers net benefits to the household or business sector. It is assumed that technology has beneficial effects on productive and care activities and thus on the domestic and time burden of the women and girls in the household. Time burden can be reduced by the availability of technological innovations in milling and processing of grains and nuts, cooking, heating as climate change mitigation and adaptation projects are implemented.

6) Recovery risk

Recovery risk covers a range of losses to individual, households and business. It is a particularly relevant concept for poor female-headed household whose loss of asset are often not visible in statistical damage estimation and often ignored in governmental assistance measures. Women and female-headed households are likely to experience full or partial loss of essential household durables (including utensils) that they are unable to recoup in a short or medium time frame. Women, especially those in the agricultural sector, may lose livelihood and income sources on a permanent basis depending on the nature of the damage and the permanency of re-settlement efforts. Furthermore, as noted

in the literature, many female-headed households face social issues around the re-settlement and the rebuilding of homes and community that impact their health and well-being. Women with micro and small business are also likely to lose their inventories of goods. Since these may also tend to be quite small in volume and value, they may not be eligible for grants or other compensation, where these exist. Many time women may not have adequate documentation to verify asset and they often may not have insurance protection.

7) Participant risk

Participants risk covers issues such as financial stability, credit worthiness and inadequate administrative or technical capacity. Women suffer from significant bias in the financial market. Many times, because of the precarious nature of their income sources, some women may lack the kind of income stability that is important for financial stability. Their lack of property rights may also impede access to loans (outside of micro finance) and may also impact their ability to develop and meet creditworthiness criteria. They may also suffer from informational and premium bias with regard to life and other forms of insurance. Women micro enterprises also suffer from lack of proper administration in terms of management of record and accounting. Often because their cash flow, size of operations and rate of turnover, women owned enterprises may not be able to hire or have access to ancillary management support staff.

The discussion above points to the importance of the careful calibration of climate change adaptation policy to include the perspectives, voice and decision making participation of women and men taking into considerations their different challenges and

constraints as well as the potential to take advantage of any emerging opportunities/dividends from such policies. In this regard, the building of capacity as an area of focused attention and evolving with multiple strands of activities for deepening capacity and enhancing the scientific and technical capacities of women and men.

III. Highlights of areas of concerns with regard to Gender and Capacity Building

A stronger and more deliberately gender friendly support for capacity building and the strengthening of project frameworks will be important in providing women enhanced access to extensions trainings and services in food production and climate resilient agriculture and forest management. Research is showing that comprehensive capacity building in food production, processing and marketing, apiculture and the planting and care of trees help to empower women to generate an income of their own. Likewise, increase knowledge about climate science and the phenomenon of climate change is an important part of capacity building which is a growing aspect of approaches to addressing climate change for ensuring gender equality and women's empowerment. While there continues to be a disproportionate presence of women researchers in the social and the human science, there is even less women from developing countries involved in the area of climate science research and development.

Ultimately, climate change policies, programmes and projects should seek to reinforce the reduction of gender inequality and to enhance the empowerment of women as well as ensure that specific climate resilient adaptation programming work to promote gender equality and women's empowerment in in each of the specific programmatic area and to

mitigate the risks under each of the areas identified as relevant in a particular national and local context.

A good programmatic focused of adaptation would seek to develop programmes ranging from ‘very concrete efforts around decreasing the impact of disasters, ensuring coping and relief strategies for dealing with damages when they do occur to the more complex issue of increasing resilience’ (UN DESA 2009). This point to different types and approaches to adaptation including for climate-proofing existing infrastructure, community based adaptation and the integration of adaptation strategies and measures into the framework of poverty reduction programme.

IV. Some tentative thoughts on the Scope and likely Outcomes of the Workshop on gender responsive climate adaptation policies Scope and Outcome

The workshop should focus attention on threshold issues such as the financial, time and physical resource costs of adapting to climate change that are incurred by particular groups of women (e.g., agricultural food producers and fisher folks). A gender and climate risk assessment framework can be used to make these costs more visible. This can help to provide the basis for securing funding for gender equality objectives and women’s economic empowerment in the context of the emerging climate change financing architecture. The workshop should aim to stimulate the development of tools and methodologies for Further identification of women-specific climate change adaptation opportunities, challenges and vulnerabilities. For example there is need for much more work on:

1. Cross-regional comparisons in term of six specific areas: nutrient capacity and women’s health; women’s domestic burden and increased hardships; women’s

- reduced ability to provide self-protection; religious and social dogma concerns; lack of education; and unequal power relations;
- a. Gender audits of vulnerability and assessment methodologies and
 - b. Programmes and projects to decrease women and girls' vulnerability to climate change effects.
2. *Gender climate change and sectoral issues*: agriculture (food security, adaptation and traditional Knowledge/intellectual property); water, health, sanitation and livelihood; clean energy, energy efficiency and renewable energy—all with an awareness of the issues of traditional knowledge and women's challenges and constraints around women and intellectual property rights; gender, climate change adaptation and the household and informal economies;

V. Comments and recommendations specific to the training for delegates

It is important that the training for delegates be focused and comprehensive building on their needs and priorities on the specific knowledge deficits or blindsides they may have with regard to the gender dimensions of adaptation and capacity building. So as much as possible the training should be tailored to the specificity of the thematic priority so as to help delegates better think through their negotiation approaches as well as give better support for the enhancement of gender issues in their INDCs etc. implementation. If at all feasible, it is recommended to have some interactive out reach to delegates before the workshop. This so that delegations can also prepare for their participation in the workshop. Maybe there could be a concise questionnaire that focus the attention on the national context so that delegates can come to the workshop with some awareness of the positive direction as well as the shortfall in their own national adaptation framework, including INDCs. To what extent these now do or do not integrate gender concerns? What are the primary and secondary challenges to enhancing or beginning such endeavors (where they do not now exists)?

The workshop should also have a section that highlights adaptation and capacity building finance and technical support.

Lastly, delegation should be encouraged to include teams from their gender machinery to participate in this workshop.

With regard to format, the workshop should shy away from simply being a talk shop with multiple presentations and very little interactions. Time and space should be made available for small group work and questions and answers session between and among delegates not simply questions directed at participants.

A follow up online interactive mechanism could be envisioned to allow for more and deeper discussions and exposure on the priorities themes identified.

All citations can be found in Williams (2016), *Gender and Climate Finance—Coming out of the Margins*, Routledge

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ⁱ Targeted gender equality interventions refer to programmes and projects that directly reduce gender inequality and empower women. These include programmes or projects geared to improving educational outcomes for girls and women, and gender mainstreaming activities such as gender training and gender focal points in sector ministries. Targeted non gender inequality interventions are projects and programmes that are directed at improving social development but which have spill over effects (work synergistically) on gender equality. Examples of non-targeted gender equality interventions are the construction of feeder and rural roads, health clinics and water services, UN Millennium Project 2005.

ⁱⁱ MDG3 emphasized poverty sectors include: education, health, rural development, slum upgrading, water, sanitation and energy, UN Millennium Project 2005.

ⁱⁱⁱ In a more complex and nuance development of this framework this sub category could potential hold its own as a key climate risk category. This is quite possible under some reformulation combining management capacity/operational risk and political risk maybe under the heading: Power and decision making Risk. Since the framework presented here is but a first round approximation and requires further thinking through and validation it is kept very simple.