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# Rethinking women empowerment at the crossroads of climate change and sustainable development

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## Abstract

This paper is based on a gender analysis of literature on impacts of climate change. It uses feminist political ecology as a theoretical lens and the women empowerment framework as a tool of analysis. Paper reveals that inequitable distribution of rights, power and resources, and the repressive cultural gender roles and norms prohibit women's full participation. Sustainable development can be realized if women empowerment is pivotal in developmental issues such as climate change. Women are not groomed to plan and make decisions concerning the interventions as these are imposed. They are brewed not to reflect on the strategies, thus failing to bring about women empowerment. Interventions used also focus on giving women increased access to practical gender needs such as education in the face of climate change. This paper argues that it is in addressing the strategic gender needs of women that empowerment can be realized. By focusing on practical gender needs of women, the strategies leave the structures of oppression and domination unchanged leading to their failure. The paper therefore calls for mitigation and adaptation strategies that ensure proactive empowerment of women. Potent empowerment strategies that focus on mobilization, conscientisation, participation and control must be invoked.

**Keywords:** Gender, practical gender needs, strategic gender needs, climate change, sustainable development, women empowerment

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## **1. Introduction**

What are the gender impacts of climate change? How does climate change impact on sustainable development? How can women empowerment reduce the effects of climate change on sustainable development? This paper sets out to answer these questions through a gender analysis of available literature on gender, climate change mitigation and adaptation interventions. To put this paper into perspective the next section will provide a reader on existing literature that shows the gendered impacts of climate change, mitigation and adaptation strategies to help argue for a strong rethink in women's empowerment in the face of climate change. However before that the paper will work towards a conceptualization of terms by providing a definition of key terms as well as providing the theoretical framework and methodology that was adapted in the literature study.

## **2. Definition of key terms**

The term gender is used to describe the social differences between males and females throughout their life cycle, that are learned, deeply rooted in culture, are changeable over time and have wide variations both within and between cultures (CARE, 2008). It includes a set of socially defined and prescribed roles, attributes, activities, responsibilities, expectations and behavior patterns that are linked to each sex by a given cultural group. They can be simply taken to refer to the social meaning of maleness and females in a given cultural group.

Practical gender needs are concrete, immediate, short term needs of women and men which when met they do not challenge or change power relations between men and women. They are often essential needs of men and women for their day in and day out survival. For example the needs for food, fuel, shelter or education on climate change adaptation and mitigation. Strategic gender needs on the other hand refers to the invisible long term needs of men and women which when met they tend to challenge and change power relations. For example when women begin to decide and control the nature and type of mitigation strategy or use of strategy on their own.

Climate change, on the other hand refers to changes in the dominant and normal weather patterns of a particular region (Pender, 2007). Responses to climate change could either be through adaptation or mitigation. Climate change adaptation refers to the adjustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploits beneficial opportunities The United Nations Framework on the Convention for Climate Change (UNFCCC, 2010). Pender (2007:7) defines climate change adaptation as a process through which people reduce the negative effects of climate change on their health and well-being and adjust their life styles to the new situation around them. Climate change mitigation on the other hand refers to the reduction or storage of greenhouse gases. It is a human intervention to reduce the sources or enhance sinks of greenhouses (UNFCCC, 2010). It refers to the efforts to reduce greenhouse gas emissions or to capture greenhouses through certain kind of land use such as tree planting (Huq, 2006).

The term sustainable development refers to programmes that improve people's quality of life, meeting the needs of the present generation without compromising the ability of future generations to meet their needs (Pigozzi, 2003). It entails environmental protection and since climate change impacts negatively on the environment which manifests through incessant droughts, storms, floods, it therefore poses a threat to the attainment of sustainable development. It has broad impacts not only on the environment but also on social development.

For the purpose of this paper, the definition of women's empowerment will be based on Kabeer (2001)'s definition of empowerment. Women empowerment is taken to refer to the expansion of women's abilities, knowledge, skills, capacities and capabilities to make strategic life choices in a context where these abilities have previously been denied. It has been acknowledged that women's voices are absent from climate change discourse as observed by the Convention on the Elimination of All forms of Discrimination against Women (CEDAW) and the Commission on the Status of Women (CSW) (CEDAW, 2009; CSW, 2008; 2002). Applied in the context of this paper women empowerment would entail equipping women with skills and confidence to transform gender relations so that they are in full control of the decisions they make about climate change adaptation and mitigation. It would entail women having control or gaining further control or being in a position to define and create mitigation and adaptation strategies from a women's perspective. Women's empowerment therefore, entails undoing of internalized oppression and the rejection of the definition of femininity. This implies the ability of women to challenge some cultural norms relating to what may be considered appropriate for women and men which prevents women to learn certain skills like swimming thereby increasing their vulnerability.

### 3. Theoretical framework

Three basic theories have been proffered to explicate the link between women and the environment. Ecofeminism as one of the early theories to link women with the environment posit that women have a special relation to the environment because of their intrinsic biological attributes. Women in this theory are presented as universal victims with nature to patriarchy and western culture (Shiva, 1988), this essentialising of women attracted much criticism and critics called for an analysis of gender social relations (Leach, 1994) rather than an *a priori* relationship. The criticism led to the development of two other strands that is, feminist environmentalism associated with Bina Agarwal (1992) and feminist political ecology associated with Dianne Rocheleau (1995).

Feminist environmentalism advocated for attention to the material circumstances that shape women's relationship with the environment. It argues that since women are more involved in drawing resources from the environment, they are more disadvantaged by degradation as this will increase the demand on their labour and time. It defies an *a priori* relationship between women and the environment and argues that it is the material needs of women from the environment and the roles of collecting these that gives women more knowledge and the propensity to protect the environment. Feminist political ecology on the other hand tries to transcend the earlier naturalist and materialist tendencies that orient women to the environment by

recognizing gendered environmental rights of control and access as well as responsibilities to procure and manage resources for the household and the community.

The paper adopts feminist political ecology as a theoretical lens to analyze mitigation and adaptation strategies in literature. Feminist political ecology seeks to link local experience with global processes on environmental change which resonates well with the principles of sustainable development. It makes environmental management, resource use and technological change a dynamic and interactive process (Wangui, 2003). By looking at the gendered division of power to preserve, change or rehabilitate environments, feminist political ecology holds the potential for transforming gender relations between men and women that gives one gender more powers than the other. This makes feminist political ecology a suitable lens to analyze the literature on gender, climate change and adaptation to assess the extent to which the strategies used are bringing about women empowerment. According to Momsen (2004), people cannot change the way they use and manage resources without changing gender relations with each other. Climate change adaptations and mitigation embodies gender relations. Women are involved in relationships with men and it is at the level of these gender relations that must be the focus of adaptation and mitigation strategies.

#### **4. Methodology**

Empowerment model proposed by Sarah Longwe will be used as a tool for analysis to analyze existing literature on mitigation and adaptation, and its linkages with gender. The framework identifies five hierarchical levels of empowerment. These are welfare, access, conscientisation, participation and control in order of increasing potential for empowerment. The extent to which these are evident in an empowering intervention such as in mitigation and adaptation strategies determines the level of empowerment achieved. That is, if a development project focuses on higher levels of the framework, there is greater likelihood that women and men's empowerment will be increased by the intervention than when the intervention focuses on the lower levels.

The lowest level is called welfare; it focuses in meeting women's material welfare needs relative to men. At this level intervention focuses on whether women have access to their practical needs such as food, income and medical care. Women are given these benefits rather than producing or acquiring them for themselves. Thus, in terms of empowerment, it is a zero level of empowerment.

The second level is called access. It focuses on giving women access to factors of production on an equal footing with men. Factors of production such as land, labour, training, public service and benefits (March, 1995). Women may be given access or increase their own access. If they increase their own access it is more empowering than if they are given the access. The third level is called conscientisation, when women begin to recognize their own problems as cultural constructs that can be deconstructed. Participation and mobilization is when women have equal participation with men in the decision making process, policy making, planning and administration (March, 1995). Women come together for the recognition and analysis of their problem, identifying strategies to overcome these and take collective action to remove

discriminatory practices. It entails full involvement and representation of the women constituency. The last and highest level of the framework is called the empowerment or control level, thus when women can now set their own agendas as to what mitigation and adaptation strategies/ interventions are suitable for them, or make choices on which strategies to implement.

## 5. The linkages between Gender and climate change impacts

Although the United Nations Framework on the Convention for Climate Change (UNFCCC) does not address gender equality there are a numerous global commitments and agreements that make the linkage between gender equality and climate change. The role played by women in sustainable development has been long recognized by the international community. It has been debated at the highest level through world conferences such as the International Conference on Population and Development (1994), Beijing Declaration and Platform for Action (1995), The World Summit on Sustainable Development (2002) and at the 2005 World Summit. All these international forums acknowledge that women play a crucial role in the attainment of sustainable development. They recognize the need for gender equality and women empowerment. However, climate change is likely to reverse progress towards sustainability as revealed by existing literature on the gender impacts of climate change.

Schalatek (2009) acknowledged that the differential impact of climate change on men and women are due to social norms, traditional roles and different power structures as revealed below:

- It is those who are already the most vulnerable and marginalized who experience the greatest impacts. (IPCC, 2007). "The poorest of the poorest" are women. It is the women who are the most negatively affected by environmental degradation (Moser, 1993).
- It is the vulnerable and marginalized that have the least capacity or opportunity to prepare for the impacts or to participate in negotiations on mitigation (Lambrou and Piana, 2006:5). Women are more exposed and vulnerable to climate change because they are often poor, receive less education and are not involved in political and household decision making that affect their lives, cultural norms related to gender sometimes prevent /limit the ability of women to make quick decisions on whether to move to safer grounds in disaster situation until it is too late (Rohr, 2005).
- Rising water levels associated with climate change will lead to an increase in waterborne diseases such as malaria and dengue fever (Rodenberg, 2009:29) and it is the women who are hit hard due to the gender discrimination in the allocation of resources including nutrition and medicines (Bridge 2008:3) putting women and girls at risk. Moreover, it is the women and girls who are expected to look after the sick (IUCN/ WEDO, 2007). This limits women's time to attend to community decision making processes on climate change or disaster reduction.
- In the aftermath of disasters, as families are separated, law and order break down, making women and girls to become vulnerable to abuse from their own extended family members (Luetz, 2008).

- Constraints on time means women are not engaged in income generating projects and coupled with rising medical costs associated with family illness exacerbates poverty, further compromising women's ability to access healthcare facilities due to lack of economic assets to pay for the services (Bridge, 2008).
- Women suffer a double burden of caring for the dependent, the sick and at the same time are expected to secure food and fuel for the household. This makes women more prone to stress-related illness and exhaustion (Bridge, 2008:3; Voluntary Services Overseas, 2006).
- Cultural restrictions on women's mobility may prevent women from seeking medical attention (Bridge, 2008).
- A decline in food security and livelihood caused by climate change can cause considerable stress for men who are given the socially ascribed role of being a breadwinner. (Bartlett, 2008). Stress is likely to heighten after disasters particularly where families are displaced and have to live in emergency transitional housing. Overcrowding, lack of privacy and the collapse of regular routines and livelihood patterns can contribute to anger, frustration and violence on women and children (Rodenberg, 2009:13; Grossman and Owren, 2008; Luetz, 2008 and Bartlett, 2008) as men displace the anger. To make matters worse Masika (2002) reports that men are less likely to seek help for stress and mental health. This may be due to socialisation which tells men that 'men do not to cry' hence in adulthood they face challenges of failure to share their problems with others (emphasis original)
- Women shoulder the burden of managing resources and ensuring nutrition for their household. Climate change will therefore overburden them as they are to find alternative ways of feeding their families (FAO, 2003; CIDA, 2002)
- Climate change also puts a strain on water availability and because there are gender dimensions in the use and management of water (Fisher, 2006). With women and girls assuming the primary responsibility for collecting water for cooking, washing, hygiene and raising livestock. This makes men and women have different needs and priorities in terms of water uses, climate change may lead to water stress, deteriorating water quality due to frequency and intensity of floods. This can increase time for water collection as women will have to walk greater distances to collect water. Much of the women's time is also spent in cleaning the house after flood.
- Young girls are also at a higher risk of sexual violence, exploitation and trafficking (Luetz, 2008)
- Traveling long distances to fetch fuel and water exposes women and girls to sexual assault especially in areas of conflict (Rodenberg, 2009:13; Bridge, 2008)
- Women are more likely to die than men during disaster due to a combination of socio-cultural factors including differences in socialisation where girls are not equipped with the same skills as their brothers such as swimming and tree climbing. (Araujo et al., 2007)
- Women in Bangladesh are reported to have not left their houses during floods due to cultural constraints on female mobility and those who did were unable to swim in the floods (Rohr, 2005)

- Studies also report women's inability to access information on warning about disasters which were transmitted by men to men in public spaces that are often inaccessible to woman and the information was rarely communicated to the family (Rodenberg, 2009:30; Rohr, 2005).
- Gender inequalities can also be exacerbated in the aftermath of disaster leading to substantially increase in household workload forcing many girls to drop out of school to help with domestic chores (Rodenberg, 2009:30; Davis et al., 2005). This spells doom for sustainable development which advocates for gender equality as it will be revealed in the next section.

It is against this background that this study was motivated. The paper seeks to show how women empowerment should be recast if sustainable development is to be achieved in the face of climate change. It has been long recognized that there is a direct relationship between gender equality, women's empowerment and climate change. On the one hand women are disproportionately vulnerable to the effects of climate change, which further exacerbates existing gender inequalities. On the other hand, women have unique knowledge and skills that can help make the response to climate change more effective and sustainable (Momsen, 2007). Literature reviewed acknowledges that the impacts of climate change are not gender neutral hence it stands to Reverse gains towards gender equitable sustainable development as discussed below.

## **6. Gender, climate change and sustainable development: The interface**

Literature reviewed in the previous section shows that climate change could deepen poverty, increase food insecurity, health hazards that are gendered, thus reversing progress towards achieving the Millennium Development Goals and Sustainable Development. Gender equality has been acknowledged as a prerequisite to the achievement of all the Millennium Development Goals (MDGs) (Shumba et al., 2008; Unterhalter, 2007). Effects of climate change by and large are derailing progress towards sustainable development and are likely to reverse the gains towards the achievement of the Millennium Development Goals (UNDP, Human Development Report, 2011). Climate change exacerbates chronic environmental threats such as deforestation, water scarcity and land degradation. These are likely to put more strain on women's available time and labour to engage in other developmental projects as they will spend more time searching for the scarce resources. For example in Tanzania, women on average are reported to walk a distance of forty kilometers a week in search of firewood (Rwechingura in Suliman, 1991), while Dankelman (2002) reports that on a daily basis, young, old and pregnant women make long marches in search of fuel, food, fodder and water. These challenges constrain women's economic opportunities, exacerbates poverty and hold back sustainable development. As access to these resources become more difficult due to climate change. This results in a greater workload for women. More labour is needed for basic subsistence production, fuel and water collection forcing girls to drop out of school to help their mothers with domestic chores (Rodenberg, 2009). This spells doom for gender equality in education thereby holding back sustainable development.

Judging by the linkages of gender, climate change and sustainable development discussed in the preceding paragraphs it is unlikely that sustainable development will be achieved given the gendered socio- ecological

risks caused by climate change. Sustainable development is not possible without women empowerment (Women Watch, 2008). This calls for a strong rethink on women empowerment. Women who are dependent on the natural resources for their livelihoods, have the responsibility to secure water, food and energy for the subsistence of their households, hence, are likely to bear the brunt of climate change more than males. As climate change is likely to make it harder for these women to meet their daily practical gender needs. This makes women empowerment a key focus at the intersectionality of climate change and sustainable development. It is therefore imperative that mitigation and adaptation strategies should aim to bring about empowerment of the most affected which happen to be women in this case.

## **7. Gender, climate change adaptation and mitigation strategies**

Over the last several years, however the increasing portfolio of climate change mitigation and adaptation strategies have begun to include a gender perspective in the intervention strategies. However, strategies to mitigate and adapt to climate change revolve more on meeting practical gender needs. For example use of clean fuels to reduce indoor pollution in Bangladesh as well as stoves in Kenya (Pender, 2010). These help reduce greenhouses emissions as well saving women's time for fuel collection. Unfortunately the projects are designed not in consultation with women leading to marginalization of women's concerns and needs. Climate equity should make sure that voices are not muffled by the voices of the more powerful. It is not enough to focus on the welfare level of women in isolation, negating power relations between men and women as this can accentuate inequalities between men and women. Mitigation and adaptation strategies should aim to build women's capacity and undo gender asymmetries that increase women's vulnerability to climate change. Another mitigation strategy widely documented in literature involves the building up of sinks for greenhouses through reforestation and afforestation projects (Pender, 2010; Bridge, 2008). Though an effective strategy in mitigating climate change, it need to be complemented by other strategies because using women to plant trees is not empowering them enough because women have traditionally been involved in this activity which has been widely considered a women's area, hence, by engaging them in the planting of trees means women remain confined to the same space yet, empowerment entails accessibility to areas that were traditionally inaccessible to them.

Analysis of the reviewed literature also shows that climate change mitigation and adaptation strategies are yet to focus on women empowerment that address gender relations, otherwise women will still remain, largely, an untapped resource in combating climate change. While suggested strategies claim to empower women, this author argues that such approaches are not effective because empowerment involves the redistribution of power and power cannot be given, but, it has to be taken (Longwe, 2001; Kabeer in March et al., 1997). It therefore, takes the women's initiative to empower themselves so as to attain full empowerment. The argument raised in this paper is that women are not engaged in empowerment processes. They are rather taken as beneficiaries of empowerment projects and not agents of their own empowerment. The mitigation and adaptation strategies are just imposed on women, hence women are brewed not to reflect or control the projects. This stifles women's decision making capacity, a crucial aspect in empowerment. Women empowerment strategies in face of climate change adaptation and mitigation strategies must nurture



decision making skills of women so that they can exercise control and influence in their own lives. The paper argues that gender relations should be the entry point of mitigation and adaptation strategies for empowerment to be realized. The strategies cannot be translated into action on the ground without transformation of gender relations and an increase in women's bargaining power in society as well as at household level.

In view of the literature on climate change mitigation and adaptation strategies above it is shown that more proactive empowerment of women is still lacking. More potent women empowerment strategies in climate change mitigation and adaptation strategies need to be conceived and these should target the higher levels of the empowerment framework. It is in the highest levels of the empowerment framework that is, the conscientisation, mobilization/ participation and control level that the focus of mitigation and adaptation strategies must be concentrated. It is these levels that have the transformative potential to reverse the oppressive gender relations. Transformation of gender relations is vital if the efficacy of climate change adaptation and mitigation is to be realized. Reversal of these oppressive gender relations marks women empowerment. The first step then to make women full participants in adaptation and mitigation strategies is to transform gender relations so as to minimize disadvantages of women. Full participation by women is only possible with altered gender relations. When gender relations are transformed, women are ensured of a capability of voice, representation, visibility and agency. Lack of meaningful participation of women due to gender relations would undermine and compromise the effectiveness and sustainability of strategies.

Another major shortcoming noticed in the literature on mitigation and adaptation strategies is that they are inclined to target women's practical gender needs at the expense of strategic needs. Strategic gender needs are not given the prominence that they deserve. It is through strategic gender needs that the gender relations are shaken. By not focusing on strategic gender needs means the structures of oppression and domination which work against women's empowerment are left untouched. This in turn means gender relations between men and women are unaltered leading to failure of even well planned and intended strategies. For example in Zimbabwe men are reported to have rejected the use of solar cookers by their wives because technology is seen as traditionally a male domain (Nyoni in Clancy and Skustch, 2003). Rodenberg (2009:3) argues that with regard to climate adaptation, it should be noted that woman often do not have a say in decision taken by the family or community and are therefore unable to diversify cultivation. All these challenges cannot be there if the strategies of mitigation and adaptation aim to transform gender relations.

## **8. Women empowerment in the face of climate change: a refocus**

Discussions in this paper reveal that the women's voice is dissuaded in climate change adaptation and mitigation strategies. There is need to devise strategies that will allow women to speak and appreciate the value of their knowledge. Empowerment programs must be bottom up. This can go a long way in instilling confidence in women among their social groups which suffers on a daily basis from injustices and inequalities. This will encourage women to construct a vision for their communities as well as environmental

management for sustainable development in all aspects of their lives. Women empowerment in the face of climate change must enable the recognition of women's voice. Women should be able to make contributions in climate change discourses at all level of society and at household level. They must have a say and be listened to thus, calling for need of gender analysis and gender mainstreaming at all stages of the mitigation and adaptation projects. As the impacts of mitigation projects differ on men and women, this necessitates the need for gender mainstreaming at all levels in the planning design, implementation, monitoring and evaluation of the interventions. The paper calls for gender mainstreaming in all stages of the interventions. This should be done to avoid conflicts with women's needs for example forest conservation plans may conflict with women's need for fuel collection or income generation. Women empowerment should enable women to set their own agendas in response to climate change. Their voices have to be acknowledged and recognized throughout the planning, designing, implementation monitoring and evaluation of the interventions. Adaptation and mitigation strategies have to work for women, recognizing their voice increasing their visibility and be accommodative of their agendas so that they can freely participate and exercise influence and control in the implementation of these strategies. Participation of women in the interventions is empowering if women have the right to express themselves without prejudice or intimidation, can dialogue to exchange ideas constructively. This will help women to decide the best editions to take, when it comes to their lives, communities and the environment leading to sustainable development. Empowerment strategies should aim to transform gender relations as these determine decision making abilities between men and women. With transformed gender relations sustainable development and viable climate change mitigation and adaptation strategies are ensured. These should target conscientisation, participation and mobilization as well as the control level of the empowerment framework. Addressing these high levels of the empowerment frameworks will enable women to take up different roles than they used to, get more say in the household and at community level. It may even make the women take up leadership positions (Bryce and Soo, 2004). This has a positive effect on women's position, status and role in society which ultimately culminates in sustainable development.

Without altering gender relations between men and women in climate change this paper, argues that the objectives of sustainable development will not be achieved as women are likely more than men to be hit harder by climate change than men due to division of labour and other social positions in society which are defined and prescribed through gender relations. Breaking the gender relations which happen to be the source of inequalities between men and women will ensure complete empowerment of women which will cascade up to sustainable development.

## References

Araujo, A., Quesda-Aguilar, A., Mit-Aguilar, L. and Pearl, R. (2007), *Gender equality and adaptation* Factsheet, Women's environment and Development organization (WEDO) and the International Union for Conservation (IUCN) ,Available at :<http://www.generoyambiente.com/arcangel2/documents/496.pdf>and [environment.org/admin/admin](http://environment.org/admin/admin) (Accessed 28 October 2012).

- Agarwal, B. (1992), "The Gender and Environment Debate: lessons from India, *feminists studies*, Vol. 18 No.1, pp. 119-158.
- Bridge (2008), *Gender and climate change: mapping the linkages. A scoping study on knowledge and gaps*, Available at: <http://www.bridge.ids.ac.uk/reports/climate-change-DFID.pdf> (Accessed 13 September 2012).
- Bryce, D. and Soo, C.C. (2004), "Bulelavata women speak", *ENERGIA News*, Vol. 6 No. 2, pp. 19-20.
- Canadian International Development Association (CIDA) (2002). *Gender Equality and Climate change: Why consider gender equality when taking action on climate change?* CIDA, Canada, Available at: <http://www.acdi-cida.gc.ca/NET/IMAGES.NSF/VLuiimages/climate%20changes> (Accessed 23 September 2012).
- CARE (2008), *International gender policy*, Available at: <http://www.careclimatechange.org> (Accessed 14 March 2013).
- Clancy, J. and Skutsch, M. (2003), *The Gender-Energy Poverty Nexus*, DFID, UK, Available at: <http://www.sparknet.info/goto.php/view/z/fue.htm> (Accessed 23 September 2012).
- Davis, I., De Costa, K.P., Khurshid, A., Ariyabandu, M.M., Bhatt, M.R., Shneider-Sliwa, R. and Balsari, S. (2005.) *Tsunami, Gender and Recovery Special Issues for International Day for Disaster Risk Reduction*, South Asia Disasters.net, Available at: <http://www.gdonline.org/resource/tsunami%20genderandrecovery.pdf> (Accessed 21 September 2012).
- Dankelman, I. (2002b), "Climate change: Learning from Gender analysis and women's experiences of organizing for Sustainable Development", *Gender and Development*, Vol. 10 No. 2, pp. 21-29.
- Food Agricultural Organization (FAO) (2003), *Gender and Sustainable Development in Dry Lands: An Analysis of Field Resources*, Food and Agricultural; Organization of the United Nations, Rome.
- Fisher, D. (2003), *For Her it's the Big Issue: Putting Women at the Centre of Water Supply Sanitation and Hygiene*. Water Supply and Sanitation Collaborative Council, Switzerland, Available at: <http://www.wassh-cc.org/pdf/publication/for-her-its-the-big-issue-evidence-report.pdf> (Accessed 12 September 2012).
- Grossman, A. and Owren, C. (2008), *Gender Climate Change and Human Security. Lessons from Bangladesh Ghana and Senegal*. Report Prepared by the Women's Environment and Development Organization (WEDO) with ABANTU for Development in Ghana, Action Aid, Bangladesh and ENDA in Senegal.
- Huq, S. (2006), *Learning to live with Climate Change*, International Institute for Environment and Development (IIED), London.
- Intergovernmental Panel on Climate Change (IPCC) (2007), *Climate change: Impacts, Adaptation and Vulnerability, IPCC Working Group ii Report, Chapter 19 IPCC*, Available at: <http://www.ipcc.ch/pdf/assessment-report/art/wg2/or4-wg2-chapter19.pdf> (Accessed 27 September 2012).
- Kabeer, N. (2001), "Resources, Agency, Achievements: Reflections of women's empowerment", In Sevejyord, B. Kabeer, N. McFadden, P. Arnfred, S. Domiguez, E and Saadallah, S. (Eds.), *Discussing women's empowerment: Theory and Practice*, Sida studies no 3, Stockholm, pp.17-57, Available at: <http://www2.sida.se/shared/jsp/download.jsp?f=sidastudies+No3pdf&a=2080> (Accessed 11 March 2013).

- Lambrou, Y. and Piana, G. (2006), *Gender: The missing component of the responses to climate change*, Food and Agriculture Organization (FAO), USA, Available at: <http://www.fao.org/sd/dim-pei/docs/pe/i-05100idi-en-pdf> (Accessed 16 December 2012).
- Leach, M. (1994), *Rainforest Relations: Gender and Resource use among the Mende of Gola, Sierra Leone*, Smithsonian Institution's press, Washington, DC.
- Longwe, S. (2001), *Gender, equality and women empowerment*, Available at: <http://www.quets.kwinnoforum.se/measuring/Namibianreport.htm> (Accessed 11 March 2013).
- Luetz, J. (Ed.) (2008), *Planet Prepare: Preparing Coastal Communities in Asia for future catastrophes. Asia Pacific Disaster Report*, World Vision International, Bangkok.
- March, C., Smyth, I. and Mukhopadhyay, M. (1999), *A Guide to Gender Analysis Framework*, Oxfam, Oxford.
- Masika, R. (2002), Editorial in Gender Development and Climate Change, in Masika R (Ed.), *Gender and Development*, Vol.10 No.2, pp. iv.
- Moser, C. (1993), *Gender Planning and Development: Theory and Practice and Training*, Routledge, London.
- Momsen, J.H. (2007), "Gender and Agro-biodiversity: Introduction to the special issue", *Singapore Journal of Tropical Geography*, Vol. 8, pp. 1-6.
- Momsen, J.H. (2004), *Gender and Development*, Routledge, London.
- Pender, J.S. (2010), *Climate change: Its Impacts and Possible Community Based Responses in Bangladesh (2<sup>nd</sup> Ed)*, Church of Bangladesh, Dhaka, Bangladesh.
- Rocheleau, D. (1995), Gender and biodiversity, a feminist political ecology perspective, *IDS Bulletin*, Vol. 26 No. 1, pp. 9-16.
- Rodenberg, B. (2009), *Climate change and adaptation from a gender perspective: Germany development Institute, Germany*.
- Rohr, U. (2005), *Gender and Climate change: A forgotten issue. In Tiempo: Climate Change Newsletter UEA, SEI and IIE*, Available at: <http://www.temposcyberclimate.org/newswatch/comment0507//htm> (Accessed 28 January 2013).
- Schalatek, L. (2009), *Gender and Climate Finance Double Mainstreaming for Sustainable Development*. Heinrich Boll Foundation North America and overseas Development Institute, Washington, DC.
- Shiva, V. (1988), *Staying Alive, Women, Ecology and Development*, Zed Books, London.
- Shumba, O., Kasambe, R., Mukundu, C. and Muzenda, C. (2008), "Environmental sustainability and quality education: perspectives from a community living in a context of poverty", *South African Journal of Environmental Education*, Vol. 23, pp. 81-97.
- Suliman, M. (1991), *Alternative Development Strategies for Africa*, IFAA, London.
- United Nations Framework Convention on Climate Change (UNFCCC) (2010). *Glossary of climate change Acronyms*, Available at: <http://unfccc.int/essential-background/glossary/items/3666.php> (Accessed 14 March 2013).

Unterhalter, E. (2007), *Gender, schooling and global justice*, Routledge, London.

Voluntary Services Overseas (VSO) (2006), *Reducing the burden of HIV and AIDS Care on Women and Girls*.  
Voluntary Services Overseas (VSO) Policy Brief, VSO, UK, Available at :<http://www.vso.org.uk/images/RBHACWG-tcm8-8415.pdf> (Accessed 14 March 2013).