

Gendering Climate Change

*A Perspective on the Overlooked Gender Dimension of Climate Change in
the Developing World*



Approaches to Development 2009

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Summary

This thesis applies a much-needed gender perspective on the consequences of climate change in the developing world. Due to the greenhouse gas emissions, primarily of the developed world, the developing countries are even today experiencing fundamental changes in their everyday lives because of increasingly unpredictable weather conditions and shortage of natural resources. The hardships caused by these new challenges hit the women of the developing world disproportionately hard and exacerbate the already existing inequalities between the sexes. This is, we argue, due to the division of labour between the sexes, which places the primary burden of natural resource management on the women, making women more vulnerable than men to the consequences of climate change, as well as making great demands on women's adaptive capabilities. Overlooking these gendered consequences of climate change will aggravate the position of the poorest of the poor and increase the gap between the developed and the developing world. Therefore, the tendency of the international society to neglect placing the gender perspective on the international climate agenda is unfortunate. In this thesis we call on the climate community to apply the strategy of gender mainstreaming to its efforts regarding the alleviation of the consequences of climate change in the developing world. On the basis of an analysis of an NGO project specifically addressing women and sustainable natural resource management, we hope to show that including a gender perspective in mitigating and adapting to climate change is by no means impossible.

List of abbreviations

CBNRM:	Community-Based Management of Natural Resources
COP:	Conference of Parties
DANIDA:	Danish International Development Agency
DFID:	UK Department for International Development
ECOSOC:	The United Nations Economic and Social Council
Gendercc:	Women for Climate Justice
GHG:	Greenhouse gases
IPCC:	Intergovernmental Panel on Climate Change
LDC:	Least Developed Countries
MDG:	Millennium Development Goals
MFC:	Mali Folkecenter
NGO:	Non-Governmental Organisation
NWMLE:	Network of Women Ministers and Leaders for Environment
OOA:	Organisationen til Oplysning om Atomkraft
OVE:	The Organisation for Sustainable Energy (Organisationen for Vedvarende Energi)
UN:	United Nations
UNDP:	United Nations Development Programme
UNFCCC:	United Nations Framework Convention on Climate Change
UNFPA:	United Nations Populations Fund
UNFWCW:	United Nations Fourth World Conference on Women
WEDO:	Women's Environment & Development Organisation
WMO:	World Meteorological Organisation

1. Introduction

The climate changes confronting the world leave no country unaffected and pose grave challenges to the international society's ability to cooperate in coping with this new reality. The consequences of the climate changes are unequally distributed. The developing countries, due to both their geographical position and their social and economic capabilities, are far more vulnerable to the changing conditions than the developed world. Parallel to the vulnerable position of the countries of the South is the position of the women in the developing world. Besides being in charge of a disproportionately large share of household and productive duties, women are in general poorer than men and consequently more vulnerable. 70 per cent of the 1.3 billion people in the developing world living in poverty are women. Also, women account for almost 80 per cent of the agricultural sector in Africa (Denton, 2002: 10). Furthermore, there is a real risk that the climate changes will accentuate the gap between the developed and the developing world as well as between men and women in the developing countries (Lambrou & Piana, 2006). However, for all the attention of political decision makers on equity issues, considerations of gender equality regarding the consequences of climate change have largely been neglected.

In the 1980s the strategy of gender mainstreaming, which aims to make gender equality central to development activities, emerged (www.un.org/womenwatch). Gender mainstreaming was made a major global strategy in Beijing 1995 to be taken into consideration in all aspects of development (UN, 2002). When it comes to the issue of climate change, a gender mainstreaming approach is appropriate considering the cross-cutting nature of the problem. A society's overall ability to cope with the challenges posed by climate change often conceals great differences in the various strata of society regarding people's coping capabilities, as well as intra-class differences determined by gender, age etc. Because of the disadvantaged position of women, their ability to cope with climate change is lower than that of men, and, hence, climate policies are not gender-neutral (Lambrou & Piana, 2006). However, the inclusion of the gender dimension in the international community's response to climate change has to a great extent been lacking.

This thesis examines *the relevance of the gender dimension regarding the consequences of climate change in the developing world*. We ask the question: *why has the international community not yet fully acknowledged the importance of the gender perspective on the global agenda on climate change?* And, further, *why has climate change efforts not been through the process of gender mainstreaming?*

Even though climate change has become “*the defining human development issue of our generation*” (Human Development Report, 2007/2008), climate change has not yet surfaced as an integral part of existing development activities, and the strategy of gender mainstreaming has not become a built-in part of dealing with the consequences of climate change. Therefore, this thesis aims to address and problematize the gender deficit in the existing understanding of the challenges posed by climate change in the developing world. We wish to point out ways to incorporate the gender dimension into the current agenda on climate change, illustrated by a project conducted by the Danish NGO OVE (Organisation for Sustainable Development), which considers women to be the key-stakeholders dealing with natural resource management in the face of climate change in Mali.

The thesis proceeds as follows: first, we present an introduction to climate change and its consequences, focusing on the challenges concerning adaptation and vulnerability, and furthermore we examine the international society’s acknowledgement of the issue. Second, we analyse the consequences of climate change in the developing world from a gender perspective as well as examine women’s adaptive capacities and discuss women and men’s emission profiles. Third, we look at the strategy of gender mainstreaming before, fourth, examining the international society’s inadequate reaction to the gendered aspects of climate change. Fifth, we review and discuss an NGO-project employing a gender and poverty perspective to an environmental project addressing the issue of climate change. The thesis will be concluded with a summing up of the main points.

2. Climate change

In 1988, the Intergovernmental Panel on Climate Change (IPCC) was jointly established by the World Meteorological Organization and the United Nations to scientifically evaluate the risk of climate change caused by human activity. The IPCC has submitted four reports with fairly consistent results, stating in their 2001-report that “*there is new and stronger evidence that most of the warming... is attributable to human activities*” (cited in Lambrou & Piana, 2006).

Natural variations in climate have always existed, but since the Industrial Revolution manmade climate changes caused by GHG (greenhouse gas) emissions have become still more

visible and it has been established with still greater certainty as an unavoidable scientific fact that the changes in climate are in fact manmade: “*Most of the observed increase in global average temperatures since the mid-20th century is very likely due to the observed increase in anthropogenic GHG concentrations*” (IPCC, 2007).

Even if some sceptics still remain, the consequences of climate change are felt all over the world and remain an undisputable fact. Increasing temperatures, rising sea levels, observed decreases in snow and ice extent, decreasing precipitation in the South, and increasing occurrences of extreme weather events (ibid.) are some of the consequences, felt most intensely in the developing world where the ability to cope with changing conditions is low and dependence on the weather conditions is high.

2.1. The dynamics of climate change, adaptation challenges, and vulnerability

‘The greenhouse effect’ refers to the physical mechanism that through the emission of greenhouse gases (e.g. carbon dioxide, methane and ozone) a blanketing effect is caused in the earth’s atmosphere causing the temperature at the earth’s surface to be higher than would otherwise be the case (Gardiner, 2004). Without a natural greenhouse effect the world would probably be uninhabitable. However, human activities impact the level of GHG emissions in the atmosphere, causing the world to overheat.

The main problem is one of adaptation. The world has not yet reached a stable equilibrium at a higher temperature, a situation in which adaptation would be hard, but not impossible. Right now change is happening at an unprecedented rate and a new equilibrium position seems thousands of years away. Existing species, humans, animals, and plant life alike are unlikely to be able to adapt quickly and easily under such conditions of imbalance (ibid.). Adaptation efforts are therefore unavoidable, even if emissions would be curbed immediately. The impacts of climate change on food security, freshwater supply, rural and urban settlements are already felt today, especially in the developing countries. In the South, even small temperature increases dramatically affect crop yields. The human health situation is aggravated because of increases in the spread of malaria, dengue fever, and other diseases as well as malnutrition. Increases in conflict, migration and natural disasters will threaten human security in areas that are historically very unstable (Lambrou & Piana, 2006).

The consequences of the climate changes in the North will not be felt with the same strength – some of us might even be happy to experience higher temperatures and fewer rainy days. Unfortunately, the countries that feel the negative effects of the climate changes the most and confront the biggest adaptation challenges are those with the fewest resources and the lowest adaptive capabilities. The situation is that the world's most vulnerable countries pay the price of the rich countries' successful development. Vulnerability can be defined as: “...*the extent to which the natural or social system is susceptible to sustaining damage from climate change and is a function of the magnitude of climate change, the sensitivity of the system to changes in climate. Hence, a highly vulnerable system is one that is highly sensitive to modest changes and one for which the ability to adapt is severely constrained*” (Olmos 2001, cited in Denton, 2002). This vulnerability means that climate change poses a great threat to the basic human rights of the people of the developing world when it comes to access to water and food, a sustainable livelihood, minimal health risk, education and basic security (ibid.). In this context one must keep in mind both the vulnerability of the developing countries as a whole and the extreme vulnerability of the women and girls of the developing world, women and girls representing one of the most marginalised and exploited social groups (www.un.org/womenwatch). The impacts of climate change on this highly vulnerable group might be comparably greater than the impacts on the developing world as a whole. A point to which we shall shortly return.

2.2. A view of the international society's acknowledgment of the issue of climate change

The climate is, as it affects water, air, and winds, a common good, and hence, climate change has the structure of a commons problem which would, in game-theoretic terms, make it very hard to reach collective binding agreements on the issue. Commons problems pose the complication that defection is an attractive strategy: each country might be sincerely concerned about the problem, but at the same time aware that it might not be in its interest to do its share. Therefore, theoretically, agreements need to be closely monitored and effectively sanctioned. If the effort towards climate change is not sufficiently institutionalized, nations will be inclined to let future generations and developing countries pay the highest price (Gardiner, 2004). Surprisingly, though, the global society has come a long way in dealing with the threats of climate change. At the beginning in 1995 the COPs (Conference of Parties), the annual meetings of the UNFCCC (United Nations Framework Convention on Climate Change) were characterized by the countries' self-

seeking interests of power and economics. A tendency illustrated by the unwillingness of the US to ratify the Kyoto protocol unless Russia and China did the same – which did not happen. Since then, however, with the increasing scientific confidence that the emissions of (primarily) the industrialized countries are causing the current changes in climate, the will to act in concert is strengthened, and great expectations are directed towards COP-15 in Copenhagen this December.

Even if, puzzlingly, climate change has become widely recognized as an international problem of high priority, the international community has failed to perceive the problem as a multifaceted *socio-ecological* problem. The social dimension has been widely neglected, probably due to the fact that the debate on climate change has been dominated by technological voices (Denton, 2002: 12).

In conclusion, because the issue of climate change can be characterized as a commons problem whereby no country has the incentive to take responsibility for handling certain aspects of the problem, and because a discourse of technology has been hegemonic, the gender perspective has failed to obtain sufficient recognition.

2.3. Instruments: mitigation and adaptation

Decision makers apply a two-thronged strategy based on the instruments of mitigation and adaptation. Mitigation has since the beginning of the climate negotiations been the dominating instrument, whereas adaptation has only recently entered the debate (Lambrou & Piana, 2006).

“Mitigation issues are about preventing or limiting the occurrence of climate change” (ibid: 9) and focus on handling the cause of climate change: the GHG emissions. All countries in the UNFCCC share commitments to promote mitigation, but the Kyoto protocol acknowledges that not all countries have the same emission profile and the same abilities to reduce their emissions. Countries are therefore divided into two groups with differing obligations: Annex I Parties, industrialized countries and those with economies in transition, and Non Annex I Parties, developing countries (ibid: 6).

“Adaptation refers to changes in processes or structures to moderate or offset potential dangers or to take advantage of opportunities associated with changes in climate” (ibid: 8). Adaptation is an ongoing, incremental process, the burden of which, as it is today, mainly lies on the developing countries, who unfortunately have the lowest capacity to adapt, due to their high vulnerability, unstable economies and low access to technology and adaptation strategies.

Adaptation to climate change in the least-developed countries (LDCs) is similar to the development activities being carried out by the developed world (providing safer housing, creating agricultural projects, improving educational levels etc.). However, in the face of climate change, the LDCs' need for outside assistance is bigger than ever, and the developed world faces an ethical obligation to increase its efforts in the developing world, being responsible for the lion's share of the GHG emissions (Gardiner, 2004).

3. The gender perspective

According to Nobel laureate Amartya Sen, it is central to development efforts that women are recognized as responsible "agents of change" rather than being prescribed the role of patients without a share in their own well-being (Sen, 1999). This agency approach is also found in the literature on gender mainstreaming that perceives the women of the third world as an untapped (or overexploited) resource; a potential key to sustainable development (www.un.org/womenwatch).

Women's position in the developing world today is, however, one of discrimination and oppression. Of the world's nearly one billion illiterate adults, two-thirds are women (www.un.org (a)). The total work burden of women exceeds that of men by 2.9 hours a day because women work both in and out of the home, whereas men work almost exclusively out of the home (Levine et al., 2001). Women are actively involved in agricultural production but do not, however, have access to decision-making instances (Farnworth & Hutchings, 2009). Being marginalised, women have no voice and are thus underrepresented, both at the community level and in the international negotiations on climate change (Denton, 2002).

In the boxes below two central conceptions are defined. Due to limitations of space, this paper necessarily simplifies the many-faceted concept of gender. In reality the line between male and female is less full-drawn than it might appear in this paper.

Box 1:**Women's empowerment:**

Women's empowerment has five components, according to UNFPA: women's sense of self-worth; their right to have and to determine choices; their right to have access to opportunities and resources; their right to have the power to control

Box 2:**Gender:**

'Gender' refers to the socially constructed identities, roles and expectations associated with males and females. Understanding gender as a socially constructed relationship makes it possible to change the nature of male-female

When considering poverty, the differences between men and women with regard to access to income and services, workload and intra-household disparities are often neglected. It is, however, important to be aware of the intimate connections between poverty, vulnerability and gender inequality. In this connection, the term 'the feminisation of poverty' has been employed and discussed (Bridge, 2001). The term is used to bring attention to the increasing inequality between men and women which means 1) that women have a higher incidence of poverty than men, and 2) that women's poverty is more severe than men's (ibid). In general, women represent the majority of low-income earners, often deprived of legal rights to land etc. and therefore dependent on their male relatives. They find themselves imprisoned in cycles of dependency, having to fight to maintain their livelihoods and households and at the same time take care of the family (Brody et al., 2008). In the following, we will further elaborate these points regarding the inferior position of women in the developing world with regards to climate change.

Our analysis of the gendered implications of climate change will be rather tentative due to the unfortunate lack of gender-disaggregated data on the impacts of climate change. As stated by Women's Environment & Development Organisation (WEDO): "*More gender-specific data are urgently needed. Such data are necessary to evaluate women's situation as compared to that of men in relation to specific environmental concerns*" (www.wedo.org). When working with women in climate change, you often depend on the literature on experiences from natural disaster management. This is sensible, as the changes in climate probably do cause more extreme weather (although the direct connections between climate change and natural disasters are hard to establish). However, this use of the natural disaster management literature can create some analytic

uncertainty, as patterns of reaction in the face of sudden catastrophe may differ markedly from the gradual process of adjustment to climate changes. With these qualifications in mind, we shall now proceed to the analysis.

3.1. An analysis of the challenges posed by climate change to the lives of women in the developing world

There are two approaches to understanding the impacts of climate change on third world women: the poverty perspective and the gender perspective. The poverty perspective perceives the fact that there are more poor women than men in the world as the reason why women are more affected by climate change than men. The gender perspective, on the other hand, explains the greater impact on women of changing weather patterns by the fact that women are more dependent on natural resources and agricultural activities than men (Oldrup & Brengaard, 2009). We will return to the discussion whether poverty level or gender is the primary explanatory variable after having analysed the influence of climate change on women's lives in the developing world. Our immediate understanding of the problem is, however, that the gender variable does contain significant explanatory power in this context.

Because of the division of labour between the sexes which, among other things, means that women are the main natural resource managers, women are more affected by climate change than men. This claim will be elaborated in the following paragraphs where we describe the tasks of women and how these tasks are affected by the changing climate.

3.1.1. Natural resource management: water and firewood

Women and girls are responsible for collecting water. In fact, women in Sub-Saharan Africa spend 40 billion hours per year collecting water, which is equivalent to a year's worth of labour by the entire workforce of France (UNDP, 2009: 32). As a consequence of climate change this task will become even more time-consuming and demanding. It is estimated that by 2025 two-thirds of the world population will experience some sort of water shortage and for one billion people access to water will be severely constrained (Brody et al., 2008: 5). Droughts and an increasing frequency of floods will increase the distance women and girls have to walk to reach water and cause deteriorating water quality, which will lead to a rise in water-borne illnesses. In conflict areas women will face even bigger risks of harassment and sexual assault as the distance to water grows.

As an indirect consequence it is likely that educational levels will be negatively affected as girls are taken out of school because of the extra time needed to collect water. Also, women's income-generating possibilities and participation in public life will be constrained, and it is likely that the level of poverty will rise as production falls (ibid).

It is estimated that women spend from two to nine hours per day collecting firewood (UNDP, 2009: 32), another domestic chore that will grow more extensive. A woman from Senegal expresses: "*We the women are responsible for feeding our families. The bush has... become a desert shrub... and there is nowhere to go to fetch wood... One day, unable to find enough wood..., I used some branches to cook. Since the wood was not enough, I cut my plastic bassinette in pieces to fuel the fire... Then I took the wooden bench where I was seated and cut it to feed the fire...*" (WEDO, 2008). Problems finding firewood lead to deforestation, and pollution in homes pose severe health hazards to women (UNDP, 2009: 32). Ironically, this means that women are in fact, being the main natural resource managers, responsible for the chief part of GHG emissions in the developing world, making it important to recognize women as key stakeholders in effective environmental management.

3.1.2. Agriculture

As stated earlier, women account for the largest part of agricultural production in the LDCs although this fact is rarely acknowledged – even the women tend to call themselves “farmwives” as opposed to “farmers” and are reluctant to take credit for the work they do (Farnworth & Hutchings, 2009). Women often grow, process, manage, and market food while men are responsible for cash cropping and larger livestock (Brody et al., 2008). Hence, women's livelihoods are more exposed to the vagaries of nature and the challenges posed by changes in precipitation patterns, and, because of their limited access to the labour market, far more dependent than men on agricultural yields. Also, men may, facing the agricultural challenges of climate change, increase migrational activities to find work; a possibility largely unavailable to women due to society's constraints and women's domestic and familiar obligations. This will further increase women's workload (Buechler, 2009).

3.1.3. Caretaking responsibilities

Since women keep the families together, increased migration among women, should the changing natural conditions leave them no choice, would have great destabilising consequences for the already vulnerable communities (Denton, 2000). Women have a multi-dimensional role to fill as mothers, caretakers, providers, producers, and natural resource managers, and many, in addition, head the family (ibid). Climate change is predicted to cause serious health problems related to warmer temperatures and lower water quality, making women's role as caretakers more demanding. Women will thus have less time available for productive chores and coupled with the expenses due to medical supplies this will heighten the level of poverty (Brody et al., 2008).

3.2. Women's adaptive capacity

The changing conditions caused by climate change make heavy calls on women's adaptive abilities. According to the IPCC, the ability to adapt to climate-induced changes is a function of several factors including wealth, technology, information, skills, infrastructure, institutions, equity, and empowerment. On the household level this translates into control over land, money, credit, low dependency ratios, good health and personal mobility, household entitlements and food security, secure housing in safe locations, and freedom from violence (Lambrou & Piana, 2006: 14-15). It goes without saying that the women of the LDCs are severely challenged in many if not all of these aspects of life. From this point of view, the outlook is black and one would expect women's adaptive capacity to be very low.

Nevertheless, experiences have shown that women are not unable to cope with the challenges brought about by the changes in climate. As expressed by a South Asian woman: "*As we never know when the rain will come, we had to change. I started to change the way I prepare the seedbed so... we don't lose all our crops. I am also using different crops depending on the situation*" (cited in Oldrup & Brengaard, 2009). At the same time, women's involvement in agricultural production and their dependency on biomass energy mean that they possess great amounts of indigenous knowledge as well as untapped resources and skills that make their participation in discussions about adaptation to climate change absolutely necessary, however neglected it might be. This knowledge needs to be recognised (UNDP, 2009), and it furthermore exemplifies that women are not without means when it comes to handling climate change and often exhibit surprising resilience.

There are, nevertheless, limits to women's adaptive abilities. However flexible and knowledgeable, if they do not have the resources to e.g. grow alternative crops, their adaptive skills are rendered superfluous. Therefore, there is a need for developmental activities to take capacity building seriously and focus on the above-mentioned factors that stand in the way of women fulfilling their potential as central agents in the process of adaptation to climate change.

3.3. Discussion of men and women's emission profiles and mitigative capacities

The relevance of gender-differentiating emission profiles is disputed. According to Lambrou and Piana, this perspective is neglected but nonetheless important. Some early data, not specifically related to the developing world, show that men's emissions are relatively higher than women's. Women in developed countries, for instance, use much less emission-intensive modes of transport than men (Lambrou & Piana, 2006: 12). These differences, however, narrow with increasing gender equality, as women tend to adopt a lifestyle similar to that of men when more equal economic opportunities are obtained (ibid). Assuming that in time gender equality in the developing world will increase, the hypothesis is that third world women's emissions are likely to rise as their position vis-à-vis men improves. The challenge is, therefore, to enhance women's resilience and adaptive capacities while avoiding that their emission profiles follow the male model. This makes awareness-raising through education an important instrument in climate change mitigation.

However, this perspective can be challenged from two sides according to Wamukonya and Skutsch. First, the literature is lacking a wide consensus about the gender-related emissions since the data on the subject is not unambiguous, and, secondly, it has often been claimed that it is futile to impose a gender perspective on the emissions debate. One might add that the essence of this debate is not placing blame but rather how to limit the emissions, regardless of gender relations. When it comes to the developing world, people have no choice but to handle daily tasks in an unsustainable way, as the poor, especially in the rural areas, have no alternatives. It can be argued that developmental activities should focus not on *who* performs the tasks but rather on *how* the tasks are performed, as men and women are likely to handle natural resources in largely the same way because of the severe constraints of poverty under which they exist.

At the same time, women, being the primary natural resource managers, are responsible for a great deal of the emissions of the developing world, emissions that will only

increase as the scarcity of firewood grows and alternative energy sources are sought, leading to desertification and deforestation due to excessive felling. The nature of the businesses women are involved in is dictated more by access to resources, skills and information than by their concern for the environment (Wamukonya & Skutsch, 2001). Therefore, when designing developmental work, it will be useful on the implementation level, regardless of this academic discussion, to focus on the practical reality and directly address mitigation initiatives to the key stakeholders when it comes to natural resource management, the women. This is an attempt to offer alternatives to an unsustainable practice, rather than a game of placing blame. Due to the lack of recognition of women's stake in agricultural production and the duties performed by women in general, technological innovations and the like have often been presented to men rather than women, resulting in implementation failure (ibid: 7).

In order to decrease the emissions of the developing world, it is important to pay regard to socio-economical conditions and take factors such as gender into consideration. It is, however, important to acknowledge the fact that the main responsibility for the climate changes lies with the developed countries. While it is of course necessary to educate about and spread more sustainable technology in the developing world, it is vital that demands about mitigation do not weigh too heavily on people whose living conditions are already badly constrained.

3.4. Discussion and conclusions

In the beginning of this chapter we introduced the distinction between a gender and a poverty approach and asked which was more relevant when it comes to the debate on gender and climate change. Are women the most vulnerable group because they are women or simply because they constitute the poorest social group? Is it important to address the gendered differences between men and women or is it sufficient to address the problematics of poverty, when it comes to efforts at tackling climate change?

Box 3: Gender analysis

Gender analysis provides a method for understanding how the lives of men and women are shaped more by socially defined values and perceptions than by biological differences. Gender analysis challenges the notion of 'gender-neutral' policies, and provides a means with which to ensure that the perspectives of both men and women are taken into account in the designing and implementation of development initiatives (Lambrou & Piana, 2006: 37).

According to Wamukonya & Skutsch, studies of vulnerability should recognize poverty rather than gender as the *primary* variable. Whether today's poverty alleviation strategies are sufficient or if the inclusion of gender is necessary when confronting climate change depends on the local circumstances. However, gender analysis should always be employed in order to make sure that development projects do not have negative unintended consequences regarding gender (Wamukonya & Skutsch, 2001). Wamukonya & Skutsch point out the risks of solely targeting women, as this approach might result in resentment among the male community against what they see as excessive emphasis on women in development programmes.

It is in any case important to take a *gender* approach rather than a narrow women's approach to development activities, because of the "*vital relations of interdependence*" between the sexes (Lambrou & Piana, 2006: 20). The question is, then, not whether to involve men, but to which extent. A distinction between projects that seek to empower women and projects concerning gender mainstreaming (which will be further defined in the following chapter) is relevant here. Male support for empowerment projects is crucial, as men might feel threatened by projects that could be perceived as altering existing relations of power between the sexes (Oxaal & Baden, 1997). Empowerment is an ongoing process which can be initiated from above, e.g. by an NGO that promotes a certain type of activity. Empowerment must, however, essentially be a bottom-up process that allows women to define their own interests and needs. As empowerment projects explicitly aim to change the status of women and might change gender relations radically, it is important to focus concretely on both men and women in the specific community.

If for example, on the other hand, an agricultural project which aims to improve agricultural production rather than change women's status, employs a gender approach by directly addressing women (e.g. by introducing women to new technology), the need to involve men and secure their support is less pressing, as the project has a practical rather than an ideological aim. Women are targeted for the practical reason that they are the ones handling the machinery, not because they need to rethink or alter their status in society. Women's position in the community is taken as a given and not as a condition that needs to be changed. That is not to say, of course, that the perspectives cannot be combined, only that the gender mainstreaming approach is less demanding and easier to effectively implement within a shorter time frame than women's empowerment projects. A combination of the approaches is probably recommendable, but it is important not to confuse the two and be aware that they are in fact two different approaches to gender.

Denton understands gender as the decisive variable in the discussion of gender versus poverty. The high vulnerability of women to the consequences of climate change is due to the division of labour between the sexes. The daily tasks of women make women more dependent on the primary resources than men. The problem is therefore not reducible to the fact that women's access to resources is more restricted than that of men; one cannot meaningfully ignore the consequences of the gender-specific division of labour (Denton, 2000 and 2002, Oldrup & Brengaard, 2009). This division of labour might itself ultimately be caused by poverty, but it is important not to reduce the problem to one of poverty, as this would lead to a blindness to the gender dimension that is undoubtedly a part of the problem.

4. Gender mainstreaming

Based on the conclusions of the analysis there are critical aspects of climate change that make the inclusion of gender hard to evade. The strategy used for this purpose is gender mainstreaming, which will be defined and discussed in relation to gender and climate change.

The ECOSOC defines gender mainstreaming as “...*the process of assessing the implications for women and men of any planned action, including legislation, policies or programmes, in all areas and at all levels. It is a strategy for making women's as well as men's concerns and experiences an integral dimension of the design, implementation, monitoring and evaluation of policies and programmes in all political, economic and societal spheres so that women and men benefit equally and inequality is not perpetuated. The ultimate goal is to achieve gender equality*” (2002).

The *Beijing Declaration and Platform for Action* adopted by the Fourth World Conference on Women (UNFWCW) in September 1995 emphasized the importance of considering the impacts on women and men of actions taken in *every* sector (ibid). Since then gender mainstreaming has been an objective to be considered in all aspects of development work, regardless of sector or issue.

When it comes to working with climate change as a development issue the strategy of gender mainstreaming has, however, been widely neglected. “*With regards to both mitigation and adaptation policies, scientific and technological measures are preferred to “soft” policies addressing behaviour and social differences*” (Lambrou & Piana, 2006: 2). Discussions about climate change tend to focus on “*emissions, industry standards and compliance, monitoring and*

scientific projections". However, since climate change programmes involve people, it is important to recognise the gender dimensions of the processes (UN, 2009: 10).

Although the issue of climate change is new to development work, new approaches as such are not needed, since the challenges posed by climate change closely resemble those of development work as we know it. In addition, this means that the challenge of gender mainstreaming is not insurmountable, as principles and strategies already in use when it comes to gender mainstreaming will be readily applicable when working with climate change. Including gender in climate change-related projects is a process that is slowly beginning to gain recognition. The willingness to implement the strategy, however, seems low, as climate change as well as gender is both a cross-cutting issue and a common problem, making it unclear whose responsibility it is to carry out the strategy in praxis. In reality, however, no sector or project should avoid taking responsibility for addressing both the global climate problems and the gender dimension pertaining to these.

In the following chapter we set out to discover the position of the gender dimension in the international society's agenda on climate change. We intend to review the international society's awareness of the gendered consequences of climate change, as well as the actual inclusion of the perspective in international negotiations and development policies.

5. Does the international society have a gendered agenda on climate change?

That the international society acknowledges gender as an important component of the process of development in general is readily apparent, for example when examining the Millennium Development Goals, where the third of the eight goals for the promotion of global development states the aim to "*promote gender equality and empower women*"¹ (UNDP, 2009). When it comes to the issue of climate change, however, the acknowledgement of the importance of a gender perspective has been slower, most likely due to the prevailing technological focus on the issue which has meant that the social dimensions have been widely neglected.

The international community does to a degree recognise the impact of climate change on women's lives. At COP-8 in New Delhi 2002 the first official side event on gender was arranged. That gender is not mentioned in relation to negotiations on climate until 2002, and that

¹ With regard to climate change the relevant institutions of the international society are UN institutions such as the UNFCCC, the Kyoto Protocol and the COPs.

this mention only takes the shape of a side event, points to a downgrading of the gender dimension in the early negotiations on climate (www.gendercc.net). COP-9 in Milan was a starting point for improved networking and advocacy for mainstreaming gender into the COPs (ibid). However, it was not until COP-13 and the Bali Action Plan in 2007 that the promotion of gender equality was recognized as an essential part of the climate change problematic rather than as a subordinate concern. During the conference the Network of Women Ministers and Leaders for Environment (NWMLE) appeal to the participating nations and the UNFCCC to “*recognize that women are powerful agents of change and that their full participation in climate change adaptation and mitigation policies and initiatives is indispensable and to ensure participation of women and female gender experts in all decisions relating to climate change*” (UNDP, 2009: 48).

In connection with COP-15 this year in Copenhagen some initiatives are being taken to investigate and discuss the gender angle to climate change (Oldrup & Breengaard, 2009). However, browsing the official homepage of COP-15, no mention of gender mainstreaming or gender is to be found, although a single article touches upon gender in relation to a broader context of human rights and not as an isolated focus point (www.en.cop15.dk). There is no doubt an awareness of the gendered problems regarding climate change within the international society, but even though the process of recognising the issue has led to a deeper understanding of the problem, the angle is still given low priority, no COP has had an official gender strategy as such, and real action has been lacking. It seems very odd, since efforts were made in Bali to place gender on the climate change agenda, that the issue has been given so insufficient attention in the preparations of COP-15. According to WEDO, all major global agreements contain a gender component, except the major international institution regarding climate change, the UNFCCC, under which the COPs are arranged and the Kyoto Protocol has been created and adopted (www.wedo.org).

Oldrup and Breengaard bring attention to the fact that the international agenda on climate change is a predominantly male agenda, in that men are the primary agenda setters, male norms dominate, and few women participate (Oldrup & Breengaard, 2009: 33). This might be one of the reasons why the gender angle is given low priority (Denton, 2002). Brody et al. hypothesise that if the degree of female participation in the decision-making processes surrounding climate change was higher, it is likely that more drastic and effective solutions to the challenges would be reached than is the case today. Their argument is that “*fewer women than men believe that science and technology will solve environmental problems without our having to change our lifestyles*”

(Brody et al., 2008: 17). Whether or not this argumentation is accepted, it is no doubt vital to include both male and female decision makers if a well-balanced view of gender is to be reached.

The only mechanism in the Kyoto Protocol which actively involves the developing countries in mitigation is the Clean Development Mechanism (CDM) (Lambrou & Piana, 2006: 21). This mechanism allows industrialised countries with a GHG reduction commitment to invest in projects that reduce emissions in developing countries as an alternative to more expensive emission reductions in their own countries (ibid). The best opportunity for the CDM to be successful in both alleviating poverty and reducing GHG emissions is through small-scale projects in e.g. biomass energy generation, afforestation and reforestation (ibid). These projects are those with maximum benefits for marginalised groups such as women, as they can be designed very flexibly to best fit the concrete area in which the project is situated. There is, herewith, a concrete possibility built into the Kyoto Protocol of implementing the gender angle to climate change into practical development activities.

In the following chapter we review and discuss a project conducted by the Danish NGO OVE in order to illustrate how a gender approach can be incorporated into developmental practice dealing with the consequences of climate change, drawing on experience and well-known strategies from gender mainstreaming in other sectors. Due to the actuality of the project, running from 2007 to 2010, no evaluations or end-results have been available to us, and we therefore base our analysis on the project application sent to the NGO Counselling Service in Århus, Denmark.

6. The effort at the NGO level - An analysis of OVE's project: Sustainable Development and Environmental Protection in 3 Communes in Mali

6.1. Project background

The objective of OVE, the Danish Organisation for Sustainable Energy, is *“to promote a national as well as international energy and environmental policy, which is both resource and environmentally friendly; and to improve democracy and achieve 100 % self-sufficiency from renewable energy sources through people's participation and initiatives”* (OVE, 2007: 2).

OVE's partner in this project is the Malian NGO MFC, Mali Folkecenter, whose mission it is to contribute to a sustainable development of rural areas (ibid: 3). In the project, OVE is contract holder with Danida. OVE will assume the primary responsibility for the project and enter into contract with MFC, who will be the implementing part (ibid: 21). OVE and MFC have

cooperated on earlier projects, and these experiences, along with MFC's local knowledge and OVE's experience from more than 30 years of NGO-work in Denmark will benefit their cooperation.

The main aim of the present project is "*to address existing conservation practice and its serious negative effects on the livelihoods of the poor*"² (ibid: 6). The project addresses the management of natural resources in the project area through a gender approach that recognises women and women's participation as key to handling the problems with sustainable resource management that have arisen as a consequence of the changes in climate in the area. More concretely, the project deals with the problems of desertification and deforestation in the rural areas south of Bamako, the capital of Mali (www.ove.org). The explicit aim of the project is sustainable development, within a context of climate change. The project, if successful, will have a mitigating effect by affecting the level of GHG emissions in the area, as well as improving the target groups' capacity for adaptation to climate change.

The focus of the project is poverty alleviation through improved conservation (OVE, 2007: 4). The project objectives are, first, to train women's organisations in participatory conservation planning and project implementation. Second, that half of all households in the project area participate in new conservation practice and environmental activities. Third, that the villages in the project form their own environment and development plans. Fourth, that a community environment group mainly consisting of women is established in each commune administration. And, finally, that a minimum of 12 environmental projects (e.g. nurseries and planting of fruit trees, sustainable maintenance of existing forest, training in sustainable charcoal production as an income possibility for rural people) are implemented in the villages (ibid: 11, 14-15).

The project has been thoroughly prepared since 2005, and in 2007 OVE launched and financed a design mission together with MFC in order to establish a clear understanding of the organisation of the project and an in-depth knowledge of experiences and ongoing initiatives within the energy and environment sector in Mali. Information has been gathered about the area and the population through surveys and interviews. Meetings were held with all important stakeholders, and the support of the mayors from the involved communes was secured. As part of the design mission organisation and gender analysis was carried out in order to understand the social and institutional conditions of the area (ibid: 4-5).

² 'Conservation' refers to management of natural resources, e.g. sustainable forest and farming management, sustainable use of firewood, and environmental protection measures.

6.2. Problem analysis – the context of the project

6.2.1. The natural and social environment

The project addresses the process leading from deforestation into land degradation and further into desertification of the area around Bamako, a process caused by the past decades of firewood business practised especially by rural women (ibid: 8). The main focus of the project is on mitigating the negative effects of this process on the vulnerable living conditions of the people of the area. Desertification leads to lower capacities to adapt to climate change, as the process negatively influences rainfalls and winds in the area, as well as constrains people's access to firewood for domestic use, and makes vast areas of land infertile (ibid). Also, protecting forests helps mitigate climate change, as forests remove carbon dioxide from the atmosphere. The project's focus areas reflect both an adaptation and a mitigation perspective. OVE's focus as an organisation on environment and sustainable energy is represented in the project's aim to replace unsustainable practices with environmentally correct ones. The adaptation focus is, however, evident in this project that has poverty alleviation and capacity building as high-ranging rather than secondary objectives, as well as a distinct focus on women.

Mali's Human Development Index ranking is 164 out of a total of 173 countries. 70 per cent of the population live below the poverty line, and the average number of children per woman is seven (ibid: 6). The results of the gender analysis carried out as part of the preparation for the project show that the felling is mostly done by women, as it constitutes a secure source of income for women. Women often work over 12 hours a day, handling cooking and cleaning, washing clothes, taking care of children, searching for firewood and water, and carrying out small income-generating activities, most important of which is the cutting and collecting of forest products, as well as farming in family fields (ibid: 5).

Decision making in the villages is the men's domain. Women only participate in issues directly related to them. Women's low participation causes difficulties in solving the environmental problems in the area, as they are holders of valuable knowledge that, because of their low status, low educational levels and low self-confidence, is not voiced (ibid: 8). The project aims both at women's empowerment and at empowerment of the rural poor in general, and acknowledges the fact that women are the key actors in solving the problems regarding sustainable natural resource management. Men, however, are not excluded but will as well be involved. There is, unfortunately, no elaboration on how this involvement will take place. The application states:

“*Men will have opportunities of joining in*” (ibid: 18), but no concrete examples of this inclusion is given (this might, of course, be due to the space requirements of the application form).

The inclusion of both men and women is important when employing a gender approach, especially one that mentions empowerment as an aim, as conflicts might arise between the sexes. OVE does, however, note that the practical projects to be carried out involve traditional women’s work and are therefore not likely to threaten male institutions and alter gender relations (ibid: 20). This remark shows that OVE is not blind to the possibility of creating gender-related conflicts of power when employing a women’s empowerment approach. That being said, OVE seems to confuse a less pervasive gender mainstreaming approach with the empowerment approach. This also comes across when examining the main goal of the project; addressing existing conservation practice and its effects on the livelihoods of the poor, which does not mention the gender perspective of the project. Processes of empowerment are seldom about confronting a single aspect of life, but rather about challenging deeply-rooted relations between people – a process that a project with a two and a half year timeframe is unlikely to carry into effect. It might be that the project, despite its intentions to aim higher, is more of an environmental project that, for practical reasons, focuses on women rather than men. However, the talk of improving women’s self-confidence and participation levels fit into the discourse of empowerment. This ambiguity might hamper the project in reaching its goals. The point is important, because the confusion of concepts and strategies may have negative consequences for the implementation of the project.

The project does, however, apply a clear bottom-up approach using the principles from Community-Based Management of Natural Resources (CBNRM), which attempts to find new solutions for the failure of top-down approaches to conservation. The CBNRM approach is both a conservation and a rural development strategy, involving community mobilisation and organisation as well as institutional development (ibid: 17).

6.3. Valuation of the project

OVE’s collaboration partner MFC has in earlier projects been criticised of focusing too much on technological solutions and to a lesser extent on the social and organisational dimensions (ibid: 4). This kind of criticism is a typical problem for activities carried out in the context of climate change, and has, in the case of MFC’s projects, prevented the poor from participating. MFC has now changed its focus, and in the present project the social and participation dimensions are taken very

seriously. From the preparatory phases of the project, women and women's associations are directly involved, and dialogue is established with the local community.

The social level along with the adaptation approach to climate change are highly prioritised, which is made evident by the fact that the project makes sure that alternative ways for the families of generating income are present or developed, before addressing the unsustainability of the wood cutting which used to be the primary income-generating activity of the women. In this way, sustainable conservation is combined with income generation, and the livelihoods of the Malians are respected.

Because this is an ongoing project, it is not possible to address the actual implementation of the project. It is, unfortunately, often in the implementation process that the biggest problems arise. However, since this project, contrary to many projects relating to climate change, has taken the social dimension into account in a satisfactory manner, and since the goals and objectives of the project are clearly stated (ibid: 11-16), a crucial precondition for a successful implementation, *and*, as the strategic approach of the project is well-proven in many previous OVE-projects (ibid: 19), this project might have a chance at successful implementation. The project applies well-known strategies and principles from gender-related development and environmental work to the gendered consequences and causes of climate change. From looking at this example, it does not seem impossible to combine a gender perspective with a desire to effectively confront climate change and its consequences.

7. Concluding remarks

This thesis set out to examine the relevance of the gender dimension regarding the consequences of climate change in the developing world and has thrown some light on why the international society has made such slow progress in incorporating the gender perspective in its efforts handling the challenges of climate change.

Our analysis has shown that the consequences of climate change do affect women to a disproportionately high degree, not only because women constitute the poorest social group, but also because the gendered division of labour makes women more vulnerable to the consequences of climate change than men. It is, therefore, imperative to address the deeply-rooted structures of inequality between the sexes in the developing world when addressing climate change; a gender-blind focus on poverty alleviation is not sufficient.

The focus of the international community's climate change efforts has been on scientific and technological solutions, resulting in neglect of the social and gendered aspects of the issue. This one-sided focus has led to implementation problems in projects addressing climate change, as the decisive social aspects have not been sufficiently addressed. These gender-neutral policies and projects have had negative unintended consequences and failed to satisfactorily meet the needs of the target groups, the poor men and women of the developing world.

The international society's reaction to climate change seems, however, to be in a process of slow recognition of the importance of gender. At the NGO-level there are lessons to be learned, e.g. for the development of projects under the Clean Development Mechanism. From our analysis of OVE's project in Mali we conclude that to address the gendered consequences of climate change, well-known practices of development work, such as experiences drawn from the gender mainstreaming-strategy, are sufficient, since there is, as such, nothing new under the sun. Dialogue is important between the development community, mainly the NGOs, and the international society dealing with the policies of climate change.

Drawing attention to the problems of gender inequality pertaining to climate change is not an attempt to create a polemic or necessarily feminist debate about the relations between men and women. Our aim is merely to point out the importance of a condition, that of the women of the third world's circumstances of living, which is aggravated and elucidated by today's context of climate change, and which has not received the attention it deserves and demands.

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