

## Climate change impacts on Pastoral Women in Ethiopia: some evidences from the Southern lowlands

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### **Key Messages:**

- ***Climate change has caused additional burden on pastoral women due to its differentiated impacts.***
- ***Due to high vulnerability, local adaptation strategies have limited capacity to deal with the impacts of climate change on pastoral communities in general and women in particular.***
- ***There is a need for an institutional response that is tailored to reduce the vulnerability of pastoral women to climate change impacts.***
- ***There is a need to establish gender focused multi-stakeholder forum and intervention to minimize the vulnerability of pastoral women.***

### **1. Introduction**

Pastoral livelihoods are believed to be highly resilient to periodic shocks of drought and rainfall variability (Hesse and Cotula 2006). In Ethiopia, however, increased frequencies of extreme events such as drought and flooding, attributed to climate change, undermines the pastoral livelihood systems. Owing to the disruption of the delicate balance of pasture (e.g. bush encroachment and invasive species), livestock (overgrazing), and human population pressure, the pastoral production systems have increasingly been put at stake. The spatial distribution and availability of pasture and water, the two most critical resources of pastoral livelihoods, are highly dependent on the pattern and availability of rainfall. Even within the pastoral production systems, the impacts of climate change are not equally distributed among different segments of society. Some studies (e.g., Nelson et al. 2002; UNDP-GEF 2010) report that climate change has a gendered dimension and women tend to be highly vulnerable to climate change related disasters and food insecurities.

Women are invariably important contributors of pastoral livelihood activities, but have limited access to and control over vital resources such as land, livestock, and household incomes. This socio-cultural

‘discrimination’ has put women in a disadvantaged position because of the asymmetrical power relationship between men and women over control of these resources. The recent climate change may have placed an additional burden over women in drylands ecosystems by increasing the distance women must travel to fetch water, collect wood for fuel and fodder for livestock, and affecting other related productive and reproductive roles (Nelson et al. 2002). Despite the pivotal role played by women in livelihood activities and their apparent vulnerability to the adverse effects of climate change, both academia and policy have paid far less attention than they should have. More explicitly, the gender dimension of climate change impacts has largely been neglected in the design and implementation of national and regional adaptation policies and strategies. Data used in this brief is collected by employing qualitative techniques which include key informant interviews, focus group discussion (FGD) and expert interviews.

### **2. Is climate change a gender issue?**

Gender is primarily a social construction and as such embodies in it social norms, expectations, and roles which men and women fill in the society. Whether climate change affects women differently than men,

there is mounting evidence (Denton 2002; IPCC 2007; UNFCCC 2007) suggesting that women suffer more from climate change related problems than men do. A number of issues underscore the different impacts of climate change on women, particularly in pastoral communities. First, women usually take the role of caring for children, the elderly and sick, and weak livestock. When severe drought occurs, men travel long distances in search of water and pasture for the cattle, leaving children and women back at home. This leaves women with the burden of taking care of children, the elderly and the sick, as well as the cattle single handedly.

Second, women are highly dependent on the natural environment because they are involved in the procurement of food for the family. UNFCCC (2007) revealed that increased frequencies of drought and associated heavy precipitation may undermine the availability of food for the family and consequently increase the burdens on women. As Dankelman (2002: 23) aptly put it, "every down brings with it a long march in search of fuel, fodder and water". These critical resources are becoming scarce and the long march is becoming longer and may even reach beyond women's physical endurance (Dankelman 2002).

Finally, climate change has adverse impacts on women because of the cultural burdens in which women in many rural societies have no access to or control over productive assets such as livestock and land (Röhr 2007). Such situations of pastoral women make them more vulnerable to the adverse impacts of climate change. It is therefore not surprising that gender also plays a role in relation to climate change. Yet the topic has not been explored sufficiently, and many people still find it difficult to comprehend the ways in which gender might be a factor in climate change, or how it should be addressed (Aklilu and Alebachew 2009; Röhr 2007).

### 3. Some evidences from Southern Ethiopia

The southern lowlands of Ethiopia are among the country's most vulnerable regions to the impacts of climate change. Recurrent droughts, flash floods, diseases, and pests are among the prevalent disaster risks related to climate change in the area. Pastoral communities are the major victims of these disaster risks.



Photo by Mesfin Kassa, PHE EC

**Woitto river with top soil-laden flash flood**

### Are pastoral women differentially affected?

Although climate change generally affects pastoral communities, the impact on women has become more pronounced. The fact that pastoral women shoulder multiple household responsibilities makes them more vulnerable to and affected by the impacts of climate change related problems. Pastoral women in the southern lowlands of Ethiopia carry out several household responsibilities; taking care of children, managing young calves, looking after sick and weak livestock, milking livestock, fetching water and collecting firewood, and household food preparation. In same place, construction of huts is the sole responsibility of women. Climate change induced hazards create additional burdens on women in many ways and make them vulnerable to its impacts. A survey in the southern lowlands indicated that women are more affected than men by the impacts of climate change related problems (Aklilu and Alebachew, 2009). Particularly during drought years, the workload on women increases to meet household responsibilities. For instance, in times of drought, women have to spend on average four to six hours to fetch water and fodder for small ruminants and calves. The burden on women is heightened since the responsibility of feeding family members by collecting wild fruits, plants, berries, and edible roots rests largely on them.

Increased workload and resource shortage puts pastoral women under pressure to meet household food requirements. Food preparation, including procurement of grain from the market, and collecting wild fruits and leaves are the sole responsibilities of women. In times of food shortage in the households, women first feed all members of the household and feed themselves if there is any left over. This predisposes women to malnutrition and related health problems with subsequent impacts on children and the entire household. On the other hand, when women fail to meet household responsibilities, they get into disputes with husbands that strain intra-household relations. In extreme situations, such disputes often lead to divorce and eventually to destitution of pastoral women.

In order to overcome the problem of drought-induced food and water scarcity, pastoral households move their livestock to places where they find these resources. Fetching water for young livestock and the family is a daunting task for women especially during drought seasons. At times of conflict and violence, pastoral women also suffer from other negative consequences. For instance, in the absence of men, they have the sole responsibility of sustaining the household which increases their workload. Many women and young girls fear going out of their villages, as they are often the targets of attacks, and this makes it difficult for them to fetch water, collect firewood or go to the market. Additionally, when part of the family is moving, usually women and children remain behind. Though women shoulder the family responsibility, they cannot take critical decisions on the remaining household resources,

mainly livestock. Pastoral women are not allowed to sell livestock even in times of extreme adversities. Lack of access to and control over household resources make women more vulnerable to climate change impacts.

Conflicts over scarce pasture and water resources usually occur during severe droughts following pastoral mobility in search of water and pasture for livestock. The conflicts often lead to population displacement and livestock raiding. The prevalence of social and economic instability force children to drop out of school, leave farms and settlements unattended, and crops unharvested.



**Women in pastoralist area carrying fuel wood**

All these conflict related disruptions bring about increased work burden on women in terms of their household responsibilities.

### ***What mechanisms do communities use to deal with climate change?***

Local communities use a range of measures to cope with the impacts of climate change related problems. Herd diversification, crop cultivation, social support mechanisms, seasonal mobility, and resource management strategies are some of the most commonly used strategies in the southern lowlands. Reducing the number of meals per day, collecting wild fruits, and consuming cattle blood are also additional strategies used to deal with intermittent food shortages. However, to this level of high vulnerability, their capacity to the impacts of the disasters is limited. Some strategies, such as cultivation of unsuitable areas, overgrazing, charcoal burning and fuel-wood selling are not only unsustainable but can also contribute to further degradation of resources and desertification which accelerates both vulnerability and retards local and national development endeavours. Some strategies communities use to adapt to the effects of climate change include:

#### **➤ Herd diversification:**

Diversification offers sustained supply of various livestock products, allows the manipulation of different ecological potentials of livestock, and helps to spread risks associated with changing climatic conditions. In general, there appears to be a shift from the production of grazers (cattle and sheep) to browsers (camels and goats) as

browsers are more adaptive to changing climatic conditions and vegetation cover by introducing camel to the area. Herd and household mobility is used to optimize the utilization of natural resources and as a response to disaster risks such as disease outbreaks, flooding risks, droughts and conflict. However, the duration and frequency of long distance mobility has changed in response to increased climatic stresses and over exploitation of resources.

#### **➤ Crop farming:**

Crop cultivation is used as a complementary strategy to avoid potential risks of sole dependence on livestock production. Crop cultivation is spreading to rangelands and areas that have never been put under cultivation, particularly in Borena. The expansion of crop cultivation is mainly linked to decline in range resources as well as a decrease in both per household livestock numbers and productivity. The responsibility of farming and managing cropland largely rests on women. However, given the unreliability of rainfall, increased frequency of droughts and associated crop diseases and pests, the sustainability of rainfed crop cultivation as a viable coping strategy is questionable. Though crop farming is being widely used as an ad hoc coping strategy by pastoral communities, increased dependence on it might increase vulnerability of the local community to future climate change related risks. Moreover, crop cultivation on fragile rangelands would accelerate soil erosion and land degradation.

#### **➤ Resource sharing:**

Resource sharing is a traditional social support mechanism practiced by pastoral communities to support vulnerable members of the society (Smucker and Wisner 2008). The support mechanism ranges from simple sharing of milk and other food items to contributing heads of livestock in order to restock the herds of affected families. Households who received the support in turn contribute to the community by helping others through labour work and livestock herding. Local communities support relatives and other clan members by temporarily providing milking livestock (a goat or cow) and other productive assets to overcome immediate household food shortages. However, the capacity of these social support systems has been weakened due to increased intensity of the problems.

#### **➤ Income diversification:**

Pastoral communities are looking for additional sources of income which include engagement in non-pastoral activities. Such activities include labor work in urban areas, charcoal making, and firewood selling. Most of these income generating activities are carried out by women. In addition, women conduct petty trade and related income generating activities.

### ➤ **Consumption smoothing:**

During severe disasters, households are forced to change their normal food intake and adjust their consumption to the available household resources. Consumption smoothing usually involves adjusting diets to available food items, supplementing with edible wild plants and fruits, and reducing the amount of meals and the frequency of serving. Such adjustments involve food intake from three times to once a day, giving priority to children and the elderly, and shifting from milk and milk products to cereals and tea. Households mix cattle blood with milk and water, milk with water and maize flour, and there is unprecedented consumption of tea replacing milk during severe droughts.

### ➤ **Natural resource management:**

Various types of local resource management strategies are used by pastoral communities to deal with changing climatic conditions. Dynamic management of rangelands, water and livestock resources is widely practiced in order to prevent overgrazing, allow fast regeneration of pasture, and in response to climatic variations within and between months in a year. Rangelands are traditionally managed by dividing into dry and wet season grazing considering water availability and herd size and structure. Particular areas, which are close to settlements and homesteads and considered rich in both pasture and water resources, are reserved for calves, milking cows, and weak livestock.

## **Institutional responses**

The Government of Ethiopia (GoE) has adopted policies, strategies and action programs aimed at poverty reduction, environmental protection and sustainable development. Although climate change is being mainstreamed in several sectoral policies and strategy documents, recently the country has launched a Climate Resilient Green Economy (CRGE) strategy, but there is not explicit policy on climate change yet. However, there have been institutional responses in various ways by state and non-state actors against the adverse impacts of climate change over the past few decades in the country. In the southern lowlands, government responses mainly focus on emergency assistance, disaster risk reduction, asset protection and livelihood enhancement, and conflict management and resolution.

### ➤ **Emergency response:**

The GoE has long been engaged in supplying emergency aid to victims of various types of disasters. In the southern lowlands, there has been continued supply of food and non-food items by the government since the 1980s and particularly during recent drought and flooding. Relief operations were carried out and tents, blankets, foodstuffs, mosquito nets and

non-food items were distributed and health, sanitation and security services were provided. Relief operations are followed by continued relief assistance and rehabilitation activities for some time in order to restore life and livelihood of the affected people. The Disaster Prevention and Preparedness Office at the district and sub-district levels work together with other sector offices and local NGOs at the initial stage of a disaster to study and report the situation to relevant authorities for immediate attention and support. During the FGDs, participants reported that the government supports those critically food insecure and destitute pastoral households through its productive safety-net program. For instance, households in South Omo receive support through food-for-work and productive safety net arrangements. Livestock feed and water rationing has also been carried out in Borena zone during severe droughts. However, emergency responses in most cases do not match the amount required to address emergency needs of the local community, nor delivered on time to local communities.

### ➤ **Disaster risk reduction:**

In the study areas, there are disaster prevention and preparedness units and committees in each Woreda that are commissioned to provide early warning information, assess needs and monitor risks. However, most of these units suffer from poor organization, limited capacity and resources (material and human), and lack of networking with relevant sector offices. FGD participants, mainly in Borena, indicated that they are not satisfied with responses of the government particularly against droughts, diseases and pests, and conflicts that have been inflicting heavy losses. In fact, other sector offices undertake some development activities that enhance access to water (through wells and boreholes) and carry out environmental protection and rehabilitation programs to improve range resources. Nevertheless, most of these activities are handicapped by material and capacity limitations and often lack continuity in order to enable households to cope with disasters for long.

### ➤ **Asset protection and livelihood enhancement:**

Based on the belief that protection of household and community assets reduces vulnerability to the impacts of climate variability and change, the Federal government introduced a Productive Safety Net Program in 2004. The program is aimed at supporting extremely vulnerable and destitute households through direct transfer of cash and food. It also mobilizes the community through food-for-work arrangements to engage in soil and water conservation, bush clearing and maintenance of rural roads. Additionally, the government has been supporting households by providing different packages that facilitate the transition from an exclusively pastoral way of

life to agro-pastoralism through the provision of seeds, fertilizers, tools and training. However, such efforts need to consider appropriateness of the local agro-ecology, and the socio-cultural fabric in transitioning to crop cultivation and sedentary way of life (Aklilu and Alebachew 2009).

### ➤ **Conflict management:**

Considering the complex nature and seriousness of conflicts, the government has set up various committees at different administrative levels although strong coordination and collaboration is in question. In this regard, there are encouraging efforts particularly along with community policing to identify and detect symptoms of conflict and tension, control crime and criminals, and peacefully resolve disputes. This is an encouraging direction, but should proactively engage and empower community institutions, and should promote peaceful co-existence through public education, capacity building and social development.

In past years, the NGOs operating in the study areas have been implementing several projects aimed at disaster impact mitigation and poverty reduction in pastoral communities. The projects have had considerable impacts, but also numerous problems in enhancing local adaptive capacity and securing livelihoods. The responses focus on disaster risk reduction (DDR), provision of social services, awareness creation, and conflict management and resolution. DDR through asset protection and livelihood diversification is a basic intervention aimed at reducing vulnerability and enhancing the adaptive capacity of pastoral communities. Some NGOs in South Omo have projects and programs aimed at managing droughts and other risks through the protection of household assets and community-owned natural resources and by enhancing livelihood sources. Specific interventions include water harvesting, identifying and fencing dry season grazing areas, destocking, use of early warning information, micro-credit services (for acquiring goats and camels), and emergency aid. The Women's Goat Project in South Omo is an exemplary intervention designed to enhance the capacity of poor pastoral women by providing female goats so that they can be able to recover their stock. The impact of this project in reducing the vulnerability of women has been considerable, though its continuity to widen the coverage of beneficiaries appears to be limited.

Basic social services such as education, health, and infrastructure are for the most part lacking and poorly developed. Some NGOs are involved in the provision of education and health services to the community. However, the provision of these services is largely fragmented, less coordinated and short lived. Social services that particularly focus on women empowerment and reducing their work burdens are quite limited. There are also NGOs which are actively engaged in peace building activities. They operate by mobilizing traditional leaders

and elders, providing training, organizing peace conferences and delivering information, finance and materials for conflict resolution efforts in conflict prone areas (Aklilu and Alebachew 2009). However, despite the wider scale and frequency of potential conflicts in the area, available interventions are quite limited and less effective to build sustainable peace. Moreover, these operational NGOs and government interventions mainly focus on one aspect of their specific program but the context in the area highly demand implementing multi-sectoral integrated intervention that can sustainably provide comprehensive benefit to the beneficiary at grass root level.

## 4. Conclusion

Although climate change has become one of the pressing challenges of human society, its impacts are disproportionately distributed among different regions and socio-economic groups. Pastoral communities in Ethiopia are among the most vulnerable groups to climate change impacts and the impacts on women in these communities are more pronounced.

The findings of this assessment indicate that women have limited access to and control over productive resources such as land, livestock and household income. The existing socio-cultural situations of the pastoral community has put women in a disadvantaged position mainly because of the asymmetrical power relationship between men and women over control of resources and decisions related to the utilization of household resources. In addition, climate change has compounded an already existing burden on pastoral women through increased distance of fetching water, fire wood collection, fodder for livestock, and other related productive and reproductive roles. Crop cultivation, which has not been common practice among the pastoral communities of Borena and South Omo, has increasingly become a regular activity for women. Due to unreliable rains and flash floods, frequent crop failure and farm destruction causes labour wastage due to sowing, re-sowing, land preparation and weeding.

Local communities in Borena and South Omo employ different strategies to cope with the impacts of climate change related problems. The strategies range from management of existing livestock and range and water resources to crop cultivation, use of wild leaves and fruits and introduction of camels. In this regard, the contribution of women is vital though they face enormous burdens that affect them in various ways. The current institutional response attempts to address the multifaceted problems pastoral communities face due to the impacts of climate change. Nonetheless, the responses barely consider the gender dimensions of climate change impacts in the area and it is silo. Gender differentiated strategies are required due to differences in gender specific roles and responsibilities created by society. The responses are grossly designed to address

immediate problems and manifestations instead of proactive interventions against future risks and impacts. Generally, future interventions need to consider raising awareness in the areas of population planning and reproductive health, girl's education, women empowerment, alternative livelihood and the impacts of harmful traditional practices which complicate the impacts of climate change. Hence it is important to:

- Recognize that women are more vulnerable and differentially affected by the impacts of climate change.
- Address gender-specific natural resource use patterns that enhance women's access to and control over household resources.
- Introduce pro-women development interventions that focus on pastoral women in order to reduce vulnerability and enhance local adaptive capacity.

Last but not least, concerted joint efforts of multi-sectoral stakeholders would be advisable to establish in order to plan, implement, monitor and evaluate the development programs meant to pastoral areas to address the social, economic and environmental concerns of pastoral communities in an integrated manner.

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