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Climate Change and Gender Impacts on Development among Rural Communities

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Abstract: ***This paper discusses the relationship between climate change and gender, and the implications for development among rural communities. The research findings are based on a survey of secondary sources, research and institutional reports. Climate change is one development issue in which inequalities such as those created by gender will require serious attention in order to provide a comprehensive and meaningful understanding and solutions for mitigation and adaptation to the prevailing changes that affect livelihood systems. Climate change is one development issue in which inequalities such as those created by gender will affect the solutions for mitigation and adaptation to the prevailing changes that affect livelihood systems. Climate change and variability are emerging as some of the most serious global problems affecting sustainable development in the world today. Developing countries are especially vulnerable to climate change because of their heavy dependence on rain-fed agriculture. On the other hand, gender is contained in the human element which has an input in all productive activities. Thus climate change and gender form an integral part of the economic growth and development driving wheel. We live in societies and communities that are dominated by gender differences in terms of the social, political and economic status of men and women. These differences create a skewed pattern in control and ownership of economic and productive resources and this affects the pace and level of rural and economic development. In terms of technology development, most technologies developed are masculine, making it difficult for women to operate them, thus making them lag behind in terms of use of advanced technologies. Access to institutional services such as extension, markets and financial services is largely dominated by men. Women are also marginalized in terms of access to health care, information, skills, and education among other human development facilities, resulting in them having a lower human development index than their male counterparts. These factors have contributed to the marginalization and deprivation of women among rural communities. As such, they are rendered weak and powerless in terms of their ability to respond effectively and appropriately to the vagaries of climate variability and change.***

Keywords: climate variability, climate change, development, gender, rural communities

1. Introduction

The existence of inequalities across races, tribes, religions, age and gender have created a skewed pattern in access and control of economic resources, income distribution, social and economic participation among other issues that are major drawbacks to economic growth and development. Climate change is one development issue in which inequalities such as those created by gender will require serious attention in order to provide a comprehensive and meaningful understanding and solutions for mitigation and adaptation to the prevailing changes that affect livelihood systems (DFID, 2008).

Climate change and variability are emerging as some of the most serious global problems affecting many developmental sectors of the world. The phenomena are considered to be the most significant threats to sustainable development. Climate change is known to have adverse impacts on the environment, human health, food security, economic activities, natural resources and physical infrastructure (IPCC, 2007; Huq et al., 2006). Developing countries are especially vulnerable to climate change because in these countries agriculture employs the bulk of the workforce and is responsible for a quarter of the GDP (World Bank, 2004). Agricultural productivity depends to a large extent on the climate. The African region is one of the most vulnerable to climate change because of factors such as widespread poverty, recurrent droughts, inequitable land distribution, over-dependence on rain-fed agriculture and low adaptive capacity.

Climate change manifests itself as a change in the natural variables such as temperature, precipitation, wind, humidity, etc. which constitute a part of the natural resource base upon which sustainable livelihoods and economic development are hinged (Eicher et al., 1990). On the other hand, gender is contained in the human element which has an input in all productive activities. Thus climate change and gender form an integral part of the economic growth and development driving wheel (Eicher et al., 1990). Gender analysis is a component of socio-economic analysis. Its purpose is to reveal the connections between gender relations and the development problem at hand (UNDP, 2001). In the climate change debate gender analysis is thus an important aspect needed to reveal the connections between gender and climate change causation, prevention, adaptation and mitigation strategies.

Climate change presents the most serious threat to development and could potentially reverse many of the gains that have already been made by developing countries (DFID, 2007). It constitutes a major threat to sustainable livelihoods and human well being if corrective measures are not taken as a matter of urgency. This paper therefore seeks to explore the interrelationships between gender and climate change and contextualize the two issues in the overall growth and development process in a way that will open insights on pertinent issues in the climate change and gender debate.

2. Agriculture, Gender and Climate Change in Economic Growth and Development

The relative abundance of natural resources (land, labour and hydrology) and limited opportunities in secondary and tertiary sectors in most developing countries makes them heavily dependent on primary production, especially agriculture (Watson et al., 1997). Developing countries are especially vulnerable to climate change because agricultural productivity depends on the climate. The state and level of development in agriculture also affects other sectors of the economy given the roles of agriculture in food security and provision of raw materials to the agribusiness and manufacturing sectors. A good agricultural performance in most developing countries translates into a sterling overall economic performance. Similarly, a sluggish performance in agriculture will induce a negative performance in other sectors, given the positive inter-sectoral linkages. Thus agricultural development is critical to overall economic development in the majority of developing countries.

By nature, agriculture is heavily dependent on the climatic system which consists of solar radiation, the atmosphere, land surface, snow and ice, oceans and other water bodies, and living things (IPCC, 2007) plus human resources and resource organizers. The climate system is part of the natural resource base and any change in climate affects agriculture and ultimately growth and development.

Human resources are a crucial element of all productive activities in all sectors of the economy. The economically active groups are made up of men and women who are at the centre of productive activity. Understanding the gender implications becomes important in understanding production activities. Gender refers to the social dimensions, attributes, roles, activities and responsibilities between men and women in a given society at a given time (UNDP, 2001). Women and men's gender identity determines how they are perceived and how they are expected to think and act as men and women.

According to the induced innovation model of economic growth and development, six factors are important in driving the process and they are physical, natural, institutional, economic, technological and human factors (Eicher & Staatz, 1990). The increases in productivity arise not only from technological change, but also from institutional factors, improvements in human capital as well as changes in the availability of biological and physical capital. Because technology, human capital and institutional innovations tend to be complementary inputs in production, it is impossible to separate their relative influences with much accuracy. A change in any one of the factors that builds up a growth and development model will require a complementary change in the whole system to ensure sustenance of growth and development. The gender element is contained in the human factor while climate change is a part of the natural factors. Thus according to this model, climate change and gender interact together with other complementary factors in a continuous process of innovative disturbance in one factor followed by managed adaptation of the other factors to find a new, more efficient equilibrium of resource use (Eicher & Staatz, 1990).

3. Gender Imbalances and Implications for Sustainable Livelihoods

We live in societies and communities that are dominated by gender differences in terms of the social, political and economic status of men and women (DFID, 2008). These differences create a skewed pattern in control and ownership of economic and productive resources, political participation and power relations that affect political participation, power relations that affect implementation and outcomes dealing with developmental issues. There is no country in which the outcomes of public policy are equal for men and women, but the dimensions of these inequalities are often so deeply embedded that they are difficult to perceive. Men and women have different roles and access to social, physical and financial resources and this creates imbalances that have implications for sustainable livelihoods and other factors in the framework such as climate change. Gender analysis is a sub-set of socio-economic analysis in the climate change debate that has implications for economic growth and development (UNDP, 2001). Gender analysis in the context of agriculture, climate change and economic development is important in bringing the gender differences to the attention of policy makers, so that their decisions are taken in a manner that is not only sensitive to, but also reflects the outcome of gender analysis (UNDP, 2001).

4. Gender and Access to and Control of Economic Resources

Economic resources are the means through which productive activities can be carried out. It is important to distinguish between access to resources and control over them when examining how the resources (land, labour, credit, income, etc.) are allocated between men and women (CSW, 2008). Access gives a person the use of a resource, e.g. land to grow crops, while control allows a person to make decisions about who uses the resource or to dispose of the resource, e.g. selling land.

Women and men's differential access to social and physical goods or resources is one of the key dimensions of gender inequality. In Zimbabwe for example, culturally a woman is expected to be dependent, submissive, well mannered, enduring, emotional, fearful, soft-hearted, hard working and conservative, while men are expected to be the opposite: independent, ambitious, brave, aggressive, without emotions, and economically empowered. In addition, a woman's place is culturally defined as being in the kitchen while men are the breadwinners (Kanyenze et al., 2011).

In most African cultures and traditions, the rights to make decisions on family land are vested in male members of the family. They are entitled to a share of the family land while women would only enjoy land entitlement through marriage to their husbands. As a result, women have less access to land than men; inheritance laws are unfair to women; unmarried women do not have access to land; land allocated is usually in the name of men; and women do not have tenure security. Even after the husband's passing on, women will continue to enjoy access to land through the family name; if they leave the family, their rights will automatically

be scrapped off. Water and natural resources are associated with access in the same way as land; in the same way that women are deprived of land rights; they are also deprived of access to these resources (Kanyenze et al., 2011).

Agricultural finance is provided on the basis of collateral. With women disadvantaged on land use and control, they automatically also have limited access to finance. This is a serious hindrance to women's participation in business as they do not have security to secure loans for business activities (Kanyenze et al., 2011).

Women are also marginalized in terms of access to health care, information, skills, and education among other human development facilities, resulting in them having a lower human development index than their male counterparts. The 1998 Human Development Report on Zimbabwe described the country has a highly unequal society in terms of access, control and ownership of resources (UNDP, 1998; Kanyenze, 2009). The 2003 Poverty Assessment Study Survey report indicated that poverty was higher among female headed households than male headed households, with incidence of poverty around 72% and 58% respectively (MPSLSW, 2006). The inequalities in human development make women to lag behind in terms of employment opportunities, decision making, political and social positions among other issues (Kanyenze, 2009). Most administrative posts are held by men who are insensitive to women's rights. Thus gender mainstreaming remains a policy on paper but in practice it is not being implemented.

In terms of technology development, most technologies developed are masculine, making it difficult for women to operate them, thus making them lag behind in terms of use of advanced technologies (ILO, 2007). Access to institutional services such as extension, markets and financial services is largely dominated by men. Participation on the market is male-dominated as women are confined to household duties. In much of sub-Saharan Africa, women have no decision making role with respect to income jointly obtained with the men because of cultural and traditional norms. In spite of their more advantageous positions, men usually spend the proceeds on their own personal utilities; while the little that women access, earn and control is used on household welfare and investment for the future. A gender gap in earnings persists across almost all employment categories, including informal wage employment and self employment (ILO, 2007).

The disparities in access to and control of basic resources between men and women cannot be allowed to continue, for this poses a serious impediment to sustainable development and the attainment of equality and equity between men and women. It is therefore recommended that all organizations, institutions, public and private sectors, civic organizations, individuals, families, churches, religious groups, traditional structures and cultural institutions mainstream gender in all their policies, strategic and operational plans, programs and activities, including climate change related activities (Muzari & Mutambara, 2014). Of particular relevance is the fact that gender related marginalization and deprivation of women in terms of access to and control over resources puts women in a very weak position with regard to climate change adaptive capacity.

5. Gender Roles and Development

Men and women are the two human resources that are involved in the day to day activities in pursuit of human livelihoods. Roles can be divided into reproductive and productive duties and there is a sexual division of duties and responsibilities between men and women. While both men and women can be viewed as taking part in the two roles, there are differences in responsibilities for specific tasks within these broad role categories that are worth noting. This allocation of activities on the basis of sex is known as the sexual division of labour, and is known and clearly understood by all members of a given society, as are the circumstances under which the typical practices can be varied, and the limitations of this variation (UNDP, 2001). The sexual division of labour is perhaps the most significant social structure governing gender relations; men and women take part in different productive and reproductive work in society (UNP, 2001).

Productive work is work that produces goods and services for exchange in the market place. This also includes production of goods and services for subsistence purposes; they never reach the market place but are rather used for consumption by household members. Both men and women contribute to family income with various forms of productive work, although men predominate in productive work, especially at the higher levels of remuneration. In every society, men and women have different roles outside the household and different resources to deliver them. In the rural communities of developing countries, men's roles typically focus on earning cash by growing food, trading, or selling labour. It is largely the role of women to provide the food, fuel, water, child care and other family needs (all for no pay), in addition to roles in the agricultural sector. In the Zimbabwean smallholder sector women have the heaviest workloads and they provide the bulk of the labour (Rukuni & Eicher, 2006).

Female headed households are concentrated among the poorer strata of society and often have lower incomes than male headed households. Despite their high rates of participation in agriculture and the economy, women farmers have limited access to productive assets such as land, technology, credit, training and education. Although rural women and men play complementary roles in guaranteeing food security, women tend to play a greater role in natural resource management and ensuring family nutrition (FAO, 2003). Women often grow, process, manage and market food and other natural resources, and are responsible for raising small livestock, managing vegetable gardens and collecting fuel and water (FAO, 2003).

Reproductive work involves all the tasks associated with supporting and servicing the current and future workforce, that is, those who undertake and will undertake productive work in future. It includes child bearing and nurture, but is not limited to these tasks. It has increasingly been referred to as "social reproduction" to indicate the broader scope of the term than the activities associated with biological

reproduction (Muzari & Mutambara, 2014). Social reproductive activities include child care, food preparation, care for the sick, socialization of the young, attention to ritual and cultural activities through which the society's work ethic is transmitted, and the community sharing and support which is essential for survival from economic stress.

The fact that reproductive work is the essential basis for productive work is the principal argument for the economic importance of reproductive work, even though most of it is unpaid, and is unrecorded in national accounts. Women and girls are usually responsible for this work which is largely unpaid. Women's social positioning in many situations means that the roles they are expected to take on are often supportive and reproductive, centered around the home and local community rather than the public sphere. This does not mean that women do not play important roles in agricultural production and other activities crucial to sustainable livelihoods and public recognition that men are engaged in. Typically women particularly those in poor, rural locations, are expected to assume primary responsibility for their families' subsistence. Yet because they often do not earn a wage, women are frequently excluded from decisions about spending or about their children's education (Muzari & Mutambara, 2014). The expectation that girls will help their mothers with household tasks and with caring for younger siblings means that they are more likely to be excluded from opportunities to gain an education than boys, although these gaps are gradually closing up. Women earning a wage often earn less than men, leaving them more vulnerable to changes in their working environment caused by external phenomena, including climate change (Muzari & Mutambara, 2014).

Gender inequities often exist within the agriculture and agribusiness sectors in terms of decision making, enterprise responsibility, training, labour and staff composition. This is the situation in market institutions and service providers, as well as commercial farms and industry. While women constitute the majority of farmers, men numerically dominate in business decision making positions, are the main applicants and recipients of agricultural financing, receive more formal technical training, are awarded larger salaries in the labour market, and make up the bulk of the membership in farmers' unions.

The situation is the same in the agri-business sector where men dominate leadership and key decision-making positions. Women are only housewives, mothers and agricultural labourers. In some countries, even when husband and wife are both farmers, women still perform more than 50% of the tasks in all major crops in subsistence oriented farming communities. In addition they have to carry out household chores such as fetching fuel and water, processing food, cooking, herding cattle and caring for children, the sick and the elderly (IUCN/WEDO, 2007). It is also believed that the commercial agricultural sector employs more women than men, implying that the labour market in this sector is dominated by women.

6. Conclusion

The different productive and reproductive roles of women and men in society and their different dispositions to resources implies that the two are bound to feel differently the impacts of shocks and disturbances that affect their livelihoods, such as climate change. The implication is that men and women will require different strategies for effective adaptation and mitigation to climate change (Muzari & Mutambara, 2014). The approach will be to mainstream gender into all program activities, instilling gender sensitivity in all dialogue, discussions, debate and all advocacy activities, regardless of whether women are present or not. The inter-linkages between people's reproductive and productive responsibilities and policy priorities, which have repercussions at all levels of an economy and society, are the principal focus of a gender analysis. Insufficient attention to gender analysis has meant that women's contributions and concerns remain too often ignored in economic structures, such as financial markets and institutions, labour markets, economics as an academic discipline, economic and social infrastructure, taxation and social security systems, as well as in families and households. As a result, many policies and programs, including climate change mitigation and adaptation, may continue to contribute to inequalities between women and women. Where progress has been made in integrating gender perspectives, program and policy effectiveness has also been enhanced.

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