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Land Reform Program in the Face of Climate Change: An Exploration of a Coffee Farming Community of Honde Valley in Zimbabwe

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Abstract:

This research examined the effects of climate change on the newly resettled Arabica Coffee farmers in Honde Valley Estates. In the beginning of the new millennium, the Zimbabwean government embarked on the land reform program known as Fast Track, which gave land to the black Zimbabweans from the white farmers, and Honde Valley coffee farms were also among the targeted land areas. The land reforms were done, unfortunately, during the time when the country was facing the detrimental effects of climate change. Honde Valley Estates have not been immune to the effects of global warming. The overall agenda of the research was to examine the experiences of these newly resettled farmers in the Honde Valley farming community in relation the effects of the changing climate. In exploring the research agenda, the qualitative approach was used in order to obtain an inside perspective of how the farmers were coping with climate change. The data was collected using in-depth interviews, and key informant's interviews. The research has demonstrated that there are numerous challenges facing the farmers due to the negative effects of climate change. This is mainly due to extreme high heat temperatures that have affected the climatic conditions for growing coffee in the area under discussion. As a result, climate change has increased the farmers` operation costs, and there is need for various stakeholders which includes government, nongovernment organisations, and various private sectors organisations to help new farmers to mitigate the effects of climate change and warming. This is very crucial to make sure that farming play a crucial role in making the country realise the millennium development goals.

Keywords: Land distribution, climate change, challenges, mitigation, coffee production, resettled farmers

1. Introduction

In the traditional economies that depend on agriculture, land remains an integral source of human livelihoods, and an important backbone of the economy, especially in the developing world. The history of land dispossession from the blacks by the western coloniser created a trace of both latent and manifest conflicts between whites and black populace (Sachikonye, 2005). The conflict has continued to the post-colonial period, especially due to the hanging land question that continuously raise controversies in relation to the injustice and social inequality of property rights on racial grounds (Birdsall, 1997). It is from this background that numerous countries of the developing world did engage in massive and successful land redistribution exercises, especially in countries of South East Asia and Africa which were former colonised territories (Feder, 1993). These agrarian programs were meant to make the nationals of these countries the beneficiaries of the most valuable national asset, which is land. The distribution of land in developing countries has been very important especially for the bottom of the pyramid, because it allows every individual to participate in the national development programs including farming activities (Sjaastad & Bromley, 1997). Land reform programs when done in a transparent manner, has the potential to increase social mobility, thereby raising the majority of people out of poverty (Moyo, 2010). Social inequality can be addressed as land opens sources of income for the poor people of the society who might have benefited from such programs. In other words, land is an economic security for individuals in the developing countries as it has the potential to alleviate poverty through large scale subsistence farming, where the land beneficiaries are capable of securing sustainable forms of livelihoods in agriculture.

Zimbabwe as a member of the developing countries has also embarked on the controversial land reform program in a bid to address the colonial imbalance that was created by various land tenures established by western colonialism (Sadomba, 2013). Land has always been an important resource for political, social and economic wellbeing of the developing world and to Zimbabwe as well. In addressing the land inequality in the country, in 2000, the Zimbabwean government embarked on a chaotic land distribution exercise which is known as the Fast Track Land reform program (FTLRP) (Moyo, 2010). This land reform program faced a lot of criticism from local and international media for being catastrophic, chaotic, and destructive and for being dominated by violence. It is undoubtedly a fact that the Fast Track program did address the colonial imbalances by addressing the hanging elements of post-colonialism; however, the chaotic nature of land distribution allowed the land to be acquired by some inexperienced members

at the bottom of the pyramid with little capacity for farming. This was the beginning of the short-sightedness of the Zimbabwean's land distribution program in creating a competitive and sustainable national agricultural strategy. The beneficiaries of the program are black Zimbabweans, who acquired land without any prior farming experience and even the resources to support their new farming economic endeavours (Anderson, 2007). This has compromised the country from being the bread basket of Africa to the basket case itself. The commercial farms which were possessed by the whites were repossessed by the inexperienced blacks with no capital to stimulate their farming activities and the capacity to run farming business.

Furthermore, the Zimbabwe's land reform could not only face the challenge inexperienced farmers and lack of farming capital, but also the detrimental effects of climate change. Global warming and the changing climate are some of the main farming challenges of the modern-day era, especially for the agriculture societies of Africa including Zimbabwean community (Gukurume, 2014). Climate change has been increasingly becoming a topical issue of the modern day, as witnessed by cumulative high profile climate conventions hosted by respectable organisations like United Nations (UNFCCC, 1998). The climate change topic is very important topical issue for Africa and Zimbabwe, not only because Africa depends on Agricultural economy, but also because Africa is the least capable of adapting to climate change, while at the same time being one of the most affected continent on planet (Urama et al, 2010). Africa has witnessed enormous cumulative years of droughts and the cumulative years of droughts are threatening community livelihoods, by creating a vicious cycle of vulnerability. The new farmers resettled by the government under the Fast Track Program are also victims of the devastating phenomenon of climate change. The El Nino effect has destroyed the relative potential of local black farmers to be partners in national development agenda (Gukurume, 2014). The effects of climate change have affected various agricultural crops grown by local farmers including maize, tobacco, and other small cash crops. Furthermore, since the beginning of the millennium period, there have been a number of young people who has been leaving the country for other countries to explore other means of livelihoods in other neighbouring countries, and this is attributed to the failure of farmers to cope with climate change effects and to feed the nation (Phiri et al, 2014). The Zimbabwean national Agricultural mechanisation programs have been failing to feed the country mainly because; the government's focus is on cash crops like tobacco (FAO, 2000). The selective approach by the government towards cash crops jeopardises the potential of one of the national cash crops which is on demand globally, that is coffee. The coffee plantations in the Zimbabwean's Eastern highlands have been taken over by small scale farmers who have benefitted through the Fast Track Land Reform Program. However, these farms have never been immune to the effects of climate change. Globally, coffee is one of the commodities that is on demand, and it was estimated to have export value of \$19 billion in 2015 (FAO Report, 2003-2013). The report added that two billion and two hundred and fifty million cups of coffee are said to be consumed on a daily basis worldwide, and this reflects the enormous demand the product have in the world market. However, coffee industry is one of the agro-based sectors that is sensitive to the negative effects of climate change, simply because coffee depends mainly on temperature levels and also level of rainfall (Davis et al, 2012). Due to the sensitivity of this cash crop, there is high prediction that global coffee might be at risk and as a result there are some high levels of anticipated shortages, with shortages already being felt in the world (Siddle & Venema, 2015). The Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR5) predicts possible decrease in the area suitable for coffee cultivation by 2050 due to the devastating effects of climate change (IPCC, 2014). The cumulative years of unseasonal rainfall and extreme weather patterns are increasingly threatening the community livelihoods of coffee growers in the world and a Zimbabwean case study could be vital for exploring the relationship between land redistribution, climate change and agricultural production in coffee farming sector as mitigation measures would be vital for any future progress of farming. Zimbabwe has of recent suffered from the devastating effects of El Nino and farmers have suffered detrimentally from the effects of climate change as agricultural livelihoods were threatened by the changing weather patterns that make farming a risky investment (Gukurume, 2014). The vulnerability of the Zimbabwe society to climate change, the lack of governmental commitment to climate investments and the inexperienced number of farmers who inherited traditionally white owned farms demonstrate hurdles to Zimbabwe agricultural development agendas. Besides, the country is suffering from a number of challenges including poor performing economy, unemployment, cash shortages and western imposed sanctions, which divert governmental priorities from climate change investments. It is from this background that one can observe the vulnerability of the newly resettled farmers in the Zimbabwe community. The Honde Valley coffee farms are not an exception to the effects of this discussed phenomenon. Regardless of the demand of the coffee product globally, the Honde Valley farming community is likely to face enormous challenges in farming activities due to environmental pressure as a result of climate change. Besides, research on coffee farming in literature has been focusing on traditionally coffee dominant farming areas like Guatemala, Uganda, Ethiopia, Brazil and India. Ignoring some small regions for example Zimbabwe's Honde Valley in the Eastern highlands of the country which has the potential to scale up production and complement global efforts to deal with coffee shortages. Furthermore, Zimbabwean agricultural mechanisation programs have been focusing on tobacco crop, a controversial crop globally which could be banned or boycotted for ethical reason on the international market. Cash crops like coffee become more realistically sustainable cash crops if farmers adhere to the climate mitigation strategies. It is from this background that this research intends to explore the circumstances of the resettled coffee farmers in the Honde Valley farming community in relation to climate change.

2. Research Main Objectives

- a. To examine the climate related problems faced by resettled farmers in the Honde Valley Community
- b. To identify signs and traces of the changing climate from the Honde Valley Community area.
- c. To examine the actions that are being carried out by farmers to mitigate the effects of climate change.
- d. To explore the required solutions required to handle climate related problems amongst resettled community in Honde Valley Area.

3. Research Methodology

The research relied upon a qualitative research approach to explore the experiences of farmers in the climate challenged area of Honde Valley, in Manicaland Province. The thrust of the research was to examine how climate change is affecting the farming activities of the newly resettled farmers in the Honde valley farming area. In other words, the research explored the challenges faced by newly resettled farmers and how they are trying to mitigate these challenges. Purposive sampling was chosen as the appropriate sampling methodology to ensure important stakeholders are incorporated in the sample. This includes, wards councillors, farmers, agricultural agency and the environmental management agency authorities. In total, there were 40 participants in the research, and the data was collected using key informants interview in corroboration with in-depth interviews. The data collection procedure was done with sensitivity to research ethical codes of informed consent, privacy, and anonymity. These individuals were chosen on the grounds of being able to provide appropriate information for this research, and the data was distributed and analysed using qualitative thematic approach.

4. Results and Discussion

4.1. Climate Challenges for Farmers in Honde Valley Coffee Estates

4.1.1. Heat and Pest Vulnerability of Coffee Plants

Weather conditions are some of the challenging factors crippling the developmental progress of the coffee farmers in Honde Valley farming community. Coffee is regarded as cash crop which grows in semi tropical climatic conditions, which means a combination of humidity, abundant rainfall and also heat (Jaramillo, 2011). However, the Honde Valley community has been badly affected by extreme weather patterns specifically droughts and extreme heat, and this has affected the suitability of the Eastern highlands to be an appropriate climate area for growing coffee. One of the community famers reported that, *“we have experienced many years of extreme heat and this is affecting the general health of the coffee plants leading to decrease in the coffee produced for the past years since the land reform program”*. The extreme heat has however made the business of growing coffee a capital-intensive business. This is mainly due to the fact that, the community has to rely upon greenhouse system which has been inherited from old farmers, and the service of the infrastructure is reported to be basically expensive considering the general income levels of these farmers. Direct sunlight was reported to be very harmful to the coffee plants which exposed the plants to various pests' diseases like coffee berry borer which tend to thrive under the warming climate (Jaramillo, 2011). The cost of pest control is also a major operational cost that milks the farmers of small profit margins they could have realised. The monitoring of pest requires special skills, which new farmers are struggling, because of lack of prior farming skills for majority of them. Besides, direct heat has been reported to affect negatively the mental and physical health of those individuals working in plantations, hence, productivity is compromised. Research has demonstrated that extreme temperatures have damaging effects on the coffee plants causing stunting growth, spawning stems tumours, and yellowish leaves (IPCC, 2014).

4.1.2. Heat and Crops Productivity

Furthermore, the increase in heat levels in the country has posed operational costs for those farmers in the Honde Valley farming area. The higher temperatures experienced in the traditionally semi tropical region of the country has increased the evapotranspiration thereby reducing the soil's moisture content. One of the agricultural experts in the community has reported that, *“coffee plats are more susceptible to hydric stress and as result their life span is shortened in hot temperatures”*. This is made worse by the fact that on average the coffee plant would require three to four years for them to get to a fruit bearing stage of maturity (Siddle & Venema,). The temperature increase does not only affect crop metabolism, but other crop aspects like photosynthesis, respiration, product composition, and flowering and as result it negatively affects coffee yields. This therefore, reflects the opinion that newly settled farmers are trapped in the vicious cycle of failing to generate adequate returns for farming business expansion.

4.1.3. Gender and Quality of Life

Women are the group that is negatively affected by farming problems in the Honde Valley farming areas. The money produced by the farmers is not enough to support the livelihoods of the farmers' families throughout the year. As a result, men are the ones working in other professions outside the farm, and they would occasionally monitor farming progress through weekends visit or via the phone. Women on the other hand do the work in the plantations for long hours and at times they do not accrue the profits at the same rate with their man counterparts. In other words, although land was distributed to improve the quality life and broaden people's livelihoods, however, it seems a cycle of poverty and life challenges is perpetually following the resettled farmers and this could only be attributed to skill naivety and also lack of capacity. The contrasting effect between consumers of coffee and the farmers of coffee express the need for social responsibility values on the side of the successful coffee retailers to ensure sustainability of the business. This is why there is need for global research around the relationship between climate change and gender. Regardless of availability of land, patriarchal principles are continuously crippling the social progress of women in agricultural business (Neumayer & Plumper, 2007).

4.2. Local Mitigation Strategies

4.2.1. Greenhouses Solution

Some members of the farming community are investing in greenhouse infrastructure, and not all members can afford such an expensive facility. The reliance of the community to greenhouses seem to have negative effects on quality of coffee these farmers are producing compared to the coffee that has direct access to the sun. Green house has a negative effect of compromising the taste and quality of the coffee, which in return will compromise the value of the product in general at the world market, thereby jeopardising the income returns supposed to be acquired from the coffee sales. One participant explained that, “*greenhouse coffee is different to the one that has direct access to the sun in a correct environmental climate*” In short, land distribution requires well trained farm personnel, with enough farming resources or support considering the vulnerability of farming and the risk involved in farming due to climate change. Therefore, the haphazard land reform Fast Track Land reformed program exercised by the Zimbabwean government may never be successful considering the farming techniques that are required in some cash crops like Coffee.

Besides, through group efforts, the farmers were able to work together to share some resources required for farming, and also able to outsource some external agricultural experts to improve their product yields. Despite these proactive measures, the cost associated with coffee business and the demand of the product at the global market is a reflection that such small farmers do require external support for them to scale up and meet the global growing demand of the commodity. The scenario is demanding newly resettled farmers in the Honde valley to adhere to irrigation facilities to maintain the survival of the plants. However, this is coming with great expense for individuals who are new and inexperienced in the business of coffee farming. Therefore, the ideas raised in this point are reflecting the vulnerability of the new farmers who desperately require external funding for capacity building. One of the farmers has reported that, “*the irrigation pond I have been operating at 10% capacity*”. This can only reflect the opinion that coffee is very difficult to maintain, as it requires high level of expertise coupled with capital to drive daily operation. In response, some farmers are engaging in the preservation of tropical forest to making sure the climate is continuously maintained for better coffee product yields.

4.2.2. Coffee Hand Picking

In response to the aspect of quality, the farmers have reported that, they do not have an option except to rely on greenhouse system regardless of its expense; however, they also are trying to cut off the danger of compromising quality by making sure that their coffee is handpicked. Hand picking ensures quality as reported one of the local farmers, “*Picking coffee by hand safe guards its quality unlike when one relies on big harvesting machineries...*” Therefore, coffee is both a labour and capital intensive exercise, as farmers pay a lot of money towards labour, and considering the fact that they are still learning this farming business, one can easily observe that climate change has detrimentally affected their farming business. The greenhouse system was not the technology of farming that was used in the previous years in the same area, but in 21st century it is very difficult for farmers to allow direct sunlight to their coffee plants ((Davis, 2012). Therefore, green house has come at a cost for new farmers and with the possibility of huge labour cost, and maintenance cost, therefore basing on this argument, the environmental challenges facing the farmers requires some external funding to improve crop productivity. The important coffee consumers like Star Bucks, McDonalds amongst many, are required to support local community farmers with resources that are important for their sustainability of business. Besides, the government of Zimbabwe should also combine with private sectors and nongovernmental organisation to come up with resource facilities that help coffee farmers. This makes more sense considering the fact that the demand for coffee is increasing almost every year in the world, and shortage is already being felt in the market. The business has the potential to bring in high level of foreign currencies complementing the traditional tobacco cash crop which the government so depends upon.

5. Conclusion

The research has demonstrated that Zimbabwe is one of the developing countries that has fallen victim to the devastating effects of climate change, in the process of addressing social inequality by distributing land to the local majority through the Fast Track Land Program. The research has explored that land reform can only be successful if implemented with great sensitivity to the danger posed by climate change and the warming world. The warming environment of the Zimbabwe`s Eastern Highlands has proven to be crude to the inexperienced local resettled coffee farmers, who inherited what was traditionally successful cash crop plantations. Coffee is a sensitive crop which require special environmental climate, however, the extreme weather patterns in the country have detrimentally affected the farmers` crop yields in Honde Valley Estates. There are a number of costs related to operations that continue to frustrate farmers` agricultural progress, as a result of climate change. This involves greenhouse operational expenses, labour expenses, and cost of pesticides, irrigation facilities, soil protection, and health amongst many. All these operational requirements were not wholly required in previous years because the climatic conditions were ideal for supporting coffee growing in the region. However, due to the changing climate, pressure is on farmers to be proactive and come up with resources and external support to sustain their farming activity, failure to which the land reform would be regarded as a complete fiasco.

The danger posed by climate change would mean there is need for systematic information accessibility for farmers regarding climate change and also adaptation methods and this could be government driven. The climate mitigation efforts of farmers are very limited, to comprehensively tackle the devastating effects of climate change for coffee farmers. The risk posed by climate change towards farming requires a national affordability of farming insurance, which will protect the farmers in case of loss especially in this unpredictable economic environment of the day. Financial mechanism is also required to be established to include the microcredit facilities for labour funding, shading of the crops, irrigation amongst many other operational requirements. The fact that the majority of resettled farmers were inexperienced is a clear demonstration of the need for government intervention to equip the farmers with

knowledge and skill to increase resilience of farmers to the effects of climate change. Besides, farmers also require stakeholder help in terms of social capital and access to market. The greatest consumers of coffee are supposed to help small scale farmers in Honde Valley with social capita, financial support and other necessary resources, knowing very well that this will help the sustainability of their business (Star Bucks, McDonalds, and Freshly Ground). These comprehensive strategies can prove to be useful if the land reform program has to realise its intended agenda. In other words, the implementation of the suggested recommendations would mean Zimbabwe`s achievement to millennium development goals.

6. References

- i. Andersson, J.A. (2007). How Much Did Property Rights Matter? Understanding Food Insecurity in Zimbabwe: A Critique of Richardson, *African Affairs* 106(425): 681–90.
- ii. Birdsall, N., and J.L. Londono. 1997. Asset Inequality Matters: An Assessment of the World
- iii. Bank`s Approach to Poverty Reduction, *American Economic Review, Papers, and Proceedings* 87(2): 32–7.
- iv. Davis, A.P., Gole, T.W., Baena, S., Moat, J. (2012). The Impact of Climate Change on Indigenous Arabica Coffee (*Coffea arabica*): Predicting Future Trends and Identifying Priorities. *PLoS ONE*. DOI: 10.1371/journal.pone.0047981.
- v. Food and Agriculture Organization of the United Nations (2003-2013).FAOSTAT database: Coffee, green bean production
- vi. Food and Agriculture Organisation (2000). ‘Climate-smart Agriculture: Policies, Practices and Financing for food Security, Adaptation and Mitigation’, Technical input for The Hague Conference on Agriculture, Food Security and Climate Change. FAO. Rome, Oct–Nov 2000
- vii. Feder, G., (1993). The economics of land and titling in Thailand. In: Hoff, K., Braverman, A., Stiglitz, J.E. (Eds.), *The Economics of Rural Organization*. Oxford University Press, San Jose, pp. 259–268.
- viii. Gukurume, S. 2014 Climate Change, Variability and Sustainable Agriculture IN Zimbabwe`s Rural Communities, *Russian Journal of Agricultural and Socio-Economic Sciences*, 2(14)
- ix. Intergovernmental Panel on Climate Change (IPCC). (2014, May 1). Data Distribution Centre: SRES emissions scenarios. International Coffee Organization.
- x. Jaramillo, J., Muchugu, E., Vega, F.E., Davis, A.P., Borgemeister, C., Chabi-Olaye, A. (2011). Some Like It Hot: The Influence and Implications of Climate Change on Coffee Berry Borer (*Hypothenemus hampei*) and Coffee Production in East Africa. *PLoS ONE*. DOI: 10.1371/journal.pone.0024528.
- xi. Moyo, S and Chambati, W. (2010). (eds). *Land and Agrarian Reform in Zimbabwe: Beyond White-Settler Capitalism*. Dakar: CODESRIA.
- xii. Phiri, K, Ndlovu, S & Chimene T.B (2014). Climate Change Impacts on Rural Based Women: Emerging Evidence on Coping and Adaptation Strategies in Tsholotsho, Zimbabwe. *Mediterranean Journal of Social Sciences* MCSER Publishing, Rome-Italy. Vol 5 No 23
- xiii. Neumayer &Plumper, (2007). The Gendered Nature of Natural Disasters: The Impact of Catastrophic Events on the Gender Gap in Life Expectancy, 1981-2002.
- xiv. Sachikonye, L. M. (2005). *The Promised Land: From expropriation to reconciliation and Jambanja*. Harare: Weaver Press.
- xv. Sadomba, Z. W. (2013). ‘A decade of Zimbabwe`s land redistribution: the politics of the war veteran vanguard’, *Land and Agrarian Reform in Zimbabwe: Beyond White-Settler Capitalism*. Dakar: CODESRIA.
- xvi. Siddle, J., Venema, V. (2015, May 24). Saving coffee from extinction. *BBC News Magazine*. World Coffee Research. Accessed October 21, 2016.
- xvii. Sjaastad, E and Daniel, W. B.,(1997). Indigenous land rights in Sub-Saharan Africa: Appropriation, Security and Investment Dynamics. *World Development* 25(4):549-562.
- xviii. Urama, K. C., Ozor, N., Kane, O., Hassan, M., (2010): *Sub-Saharan Africa*, Chapter 14, UNESCO Science Report 2010, pp. 279-321.
- xix. United Nations Framework Convention on Climate Change (UNFCCC), (1998). Technical Paper on Terms of Transfer of Technology and Know-how - Barriers and Opportunities related to the Transfer of Technology.