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University**



FACULTY OF ARTS

DEPARTMENT OF DEVELOPMENT STUDIES

**AN EVALUATION OF THE IMPACT OF TOBACCO FARMING ON LIVELIHOODS
AND LAND DEGRADATION. A CASE STUDY OF MOUNT BOKOTO, WARD 24,
MUREWA DISTRICT FROM 2000-2013.**

BY

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APPROVAL FORM

The undersigned certify that they have read this project and have approved its submission of marking after confirming that it confirms to departments requirements.

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Supervisor

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Date

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Co-Supervisor

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Date

DEDICATION

I proudly dedicate this work to the almighty Lord without Him it would not have been possible to complete this research. I have witnessed his faithfulness in providing for my needs every step of the way and in leading me into experience far better than I could have hoped for or imagined. Whatever I have learnt and whatever this endeavour has produced is by his grace.

***TO MY BELOVED MOTHER MRS C. MHIKE, MY ONLY SISTER MUNASHE MHIKE
AND FAMILY***

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ABSTRACT

This paper presents a review on the literature of tobacco farming on the observed research on the impact of tobacco farming on the livelihoods of smallholder farmers as well its impact on land. In this study I drew on the existing academic structure on tobacco farming in Zimbabwe. An examination of the determinants of farmer partaking in tobacco farming was carried out on 30 smallholder farmers. The case was Mount Bokoto ward24 in Murewa District. This study was therefore initiated with the aims to (i) to evaluate the extent to which tobacco farming has contributed to the degradation of land (ii) to assess how tobacco farming has affected livelihood (iii) to find ways of preventing massive degradation of land due to tobacco farming. Purposive sampling was used to select the smallholder farmers. Questionnaires and interviews were used to collect data. The findings show that tobacco farming improved the livelihoods of smallholder through impacting better income, improved household food security, increased asset ownership, better standard of living, improved household assets, creation of employment and improved housing structure but however though tobacco farming has improved livelihood it has caused land degradation such as soil erosion, siltation of dams, infiltration, deforestation, desertification, global warming.

ACRONYMS

AGRITEX-Department of Agricultural, Technical and Extension Services

EMA- Environment Management Agency

FAO- Food and Agricultural Organisation

GDP- Gross Domestic Product

GMB- Grain Marketing Board

GTS-Green Tobacco Sickness

LSC- Large Scale Commercial farmers

MTC- Mashonaland Tobacco Company

NGO- Nongovernmental Organisation

SSC- Small Scale Commercial farmers

TIMB- Tobacco Industry Marketing Board

UNCED- United Nations Conference on Environment and Development

UNDP- United Nations Development Programme

ZLT- Zimbabwe Leaf Tobacco

ZTA- Zimbabwe Tobacco Association

INTRODUCTION

Tobacco farming has in one form or another, been practised since time immemorial and is a common feature of improving the livelihood of smallholder farmers in Zimbabwe as well the farming of tobacco has caused damages to the land. Its pre-eminence in Zimbabwe is attributed to a response in the trend towards coordination of agricultural production and processing by agribusiness companies. It is widely acknowledged that tobacco farming has considerable potential in Zimbabwe where smallholder agriculture is widespread.

Tobacco farming is one common culprit in land degradation. Overworking the soil can damage it, sometimes permanently. A modern example of degradation can be seen in the infamous Dust Bowl of the 1930s, when large-scale topsoil loss occurred as a combination of intensive agricultural practices and drought conditions. Degradation can also be the result of overutilization of timber resources that destabilizes the ecosystem; as trees are cut down, the organisms they support are no longer able to survive.

Land degradation is damage to land that makes it less economically useful and less biologically diverse. Degradation of the natural environment is a worldwide problem, and some examples are quite ancient. Therefore, this term is used specifically to refer to damages caused by human activities rather than natural ones, and human activities can indirectly contribute to environmental changes that may accelerate the speed of land degradation.

According to Scoones (2010), land that was once rich in nutrients and able to support diverse organisms becomes compromised. Some types of degradation include salinification and acidification of soils, topsoil loss, soil compaction, and pollution of land that makes it unusable.

The more degraded the soil becomes, the less it can support. This can cause degradation to speed up, as plants and animals that would normally help restore the soil are unable to survive.

Tobacco farming has over the years been considered as one system that has considerable potential for providing a way to integrate smallholder farmers in Zimbabwe into export and processing markets and into the modern economy. In Zimbabwe, tobacco farming is believed to help farmers by providing new technology, ready markets and secured inputs and prices.

In this research the researcher is going to focus on the impacts of tobacco farming in improving the livelihoods of smallholder farmers as well how tobacco farming has contributed in the destruction of land in Mount Bokoto ward 24 in Murewa, Mashonaland East province. Livelihood defined by (Ellis 2010) as: A livelihood comprises the assets, (natural, physical, human, financial and social capital), the activities, and the access to these mediated by institutions and social relations that together determine the living gained by the individual household. Furthermore according to Ghimire (2008), livelihood is a means of making a living. It encompasses people's capabilities, assets, income and activities required to secure the necessities of life. A livelihood is sustainable when it enables people to cope with and recover from shocks and stresses (such as natural disasters and economic or social upheavals) and enhance their well-being and that of future generations without undermining the natural environment or resource base.

BACKGROUND OF THE STUDY

The element of land degradation is a critical and paramount. Land is vital in the future and development of every country and as such its distortions and degradation is an agitation against development. In Zimbabwe the aspect of land degradation is taken as a core issue hence there are structure like Environment Management Agency (EMA) and pieces of legislation like the Natural Resources Act which play a fundamental role in protecting land and environment from degradation. However, the coming in of massive tobacco farming in Zimbabwe has seen the land being prone and vulnerable to gross degradation and also having little positive impact on the livelihoods of massive.

The Zimbabwean economy which was deregulated in the mid 1990 under the structural adjustment programme as a move from an economy which was more socialist oriented in its policies to a liberal, market driven economy to improve efficiency, hence this saw the privatisation or commercialisation of some marketing boards even though some retained their parastatals status including the tobacco industry marketing board, (TIMB).The following years saw the rise of contract farming and other forms of credit extension as companies sought to guarantee themselves a continuous of tobacco even in bad.

Tobacco farming started with large scale farmers by 1930 who were under the board called tobacco control board (Rubert 1998) which is now called the tobacco marketing board(TIMB).Farmers were provided with inputs, assistance from extension workers as well as a guaranteed market. According to the report of tobacco control board (1938), tobacco farmers managed to diversify to other non agricultural activities, assist in developing rural areas by building schools and providing decent housing of workers as well as creating employment.

The farming of tobacco has vault to be a popular livelihood means as smallholder farmers are now able to build decent houses, buy farm machineries such as tractors planters and cultivators, and send their children to better schools and abroad universities and also to pay for hospital bills. These smallholders have managed to venture into off farm activities such as buying minibuses to provide transport, but this has become on the expense of the land, vast land in Zimbabwe has lost its fertility due to tobacco farming hence according to the United Nations Development Programme(UNDP)(1997) reported that deforestation was a major problem facing Zimbabwe, where between 70 000 to 100 00 ha of forest cover was declining at rate of 1,5%per year, therefore as a result from 1990 to 2005, Zimbabwe endured a decline of about 21% in its forest cover.

Murewa district which is in Mashonaland East province, Mount Bokoto a resettlement area in ward 24 has the most tobacco farmers in Murewa district. The production of tobacco farming in Murewa started with the programme of land reform which started in 2000. Most of the farmers in the area have an improved livelihood which can be measured using the livelihood assets which are the human, social, natural, physical, financial, and political capitals but however one can argue that thought many farmers of tobacco have improved their livelihoods but this has be done at the expense of the land, vast land has be depredate due to tobacco farming for example during curing of tobacco the process takes about seven days to adequately cure the tobacco hence wood is less efficient than coal and therefore the curing process demands an excessive amount of firewood. Most tobacco farmers in Mount Bokoto, ward 24 rely solely on firewood to cure their tobacco as coal and electricity, and the associated infrastructure, is beyond the reach of smallholders tobacco farmers therefore the farmers are left with no option other than indigenous forests.

CONCEPTUAL FRAMEWORK

The conceptual framework used in this study emanates from the relationship between tobacco farming, livelihoods and land degradation as is the issue of concern. It has been noted that, besides deforestation, tobacco production and other agricultural practices are causing serious damages to the environment. However, this study focuses more on the economics of tobacco farming and its implications on livelihoods and land degradation. Smallholder tobacco production is the key agent that affects the environment. There had been an increase in the number of contracted smallholder farmers since the mid-2000's and this sector produced a fairly significant proportion of the national crop.

Livelihood was clearly defined by Ellis (2000) in attempt to bring together various definitions defines livelihood as: A livelihood comprises the assets natural, physical, human, financial and social capital, the activities, and the access to these mediated by institutions and social relations that together determine the living gained by the individual or household. Livelihoods of smallholder farmers are going to be assessed using the following indicators, employment creation, income generation, household food security, the standard of living, farm asset ownership, household asset ownership and infrastructural development.

Smallholder farmers are defined in various ways depending on context, country and ecological zone (Machingura, 2007 :). For example, Dixon et al., (2005) suggest that smallholder farmers face limited resource endowments relative to other farmers in the sector, A more comprehensive definition identifies one key characteristic of smallholder farmers as that they have access to land as means of livelihoods whilst relying primarily on family labor for production (Ellis, 1988).

single tree species but rather the ecosystem as a whole. Deforestation is one of the severe environmental problems in areas where tobacco production is practiced worldwide.

The problem that has triggered this research is massive land degradation that is being provoked by tobacco farming in communal and smallholder farmers. The rapid increase of tobacco farmers has seen a lot of deforestation taking place as people would want to be catalyzed.

THEORETICAL FRAME WORK

The research is anchored on the theory of sustainable development. By definition the Brundtland Commission defined it as development with sustainability that meet the needs of the present without compromising the ability of the future generation to meet their own needs (United Nations 1987)the concept however of sustainable development is always being redefined and explored .The human rights education associates also define sustainable development as development that ensures the well being of the human person by integrating social development ,economic development and environmental conservation and protection.

The World Commission on Environment and Development also known as the Brundtland Commission published a report on common future in 1987 emphasizing the unity of environment and development. According to the report sustainable development as a concept points to the reality that: The environment does not exist as a sphere separate from human action, ambitions and needs and attempt to defend it in isolation from human concern will therefore be fruitless.” The report also expanded the word “development” to mean a healthy environment in which economic activities, human livelihood and good governance can flourish. As noted development is what we all do in attempting to improve our lot without our environment”

According to the 1987 Brundtland Commission's sustainable development mean "the ability to make development sustainable i.e. to ensure that it meets the needs of the present without compromising the ability of future generations to meet their needs." Sustainable development would focus on preserving the ecological footprint that is "The area of biologically productive land and water required to produce the resources consumed and to assimilate the waste produced by humanity and other organisms."

Tobacco farming provides for the needs of present through improving their livelihoods. Transforming the lives of the present will also mean the lives of the future generation is secure .Tobacco farming improves the lives of the present generation through sustainable development which would have a bearing on future generations thought the tobacco production is causing land damages which might affect the future generation.

JUSTIFICATION OF THE STUDY

The researcher carried out this study as a result of rapid escalation of land degradation due to tobacco farming. The way trees are being razed down is leading to a plethora of problems like massive soil erosion siltation, global warming and several other environmental ills triggered by this degradation. Some tobacco farmers do it due to lack of proper information dissemination by relevant authorities. The appalling levels and standards of land degradation in communal areas pushed the researcher to carry out such a research. The case study selected is essential because tobacco farming was began around 2000 and thus the effects of land degradation are now visible

STUDY AREA

The field work was carried out in Mount Bokoto ward 24, in Murewa District, Mashonaland East in Zimbabwe.

LITERATURE REVIEW

A lot has been written about tobacco farming, land degradation and livelihoods. However one has to note that these are contemporary issues and hence such literature review is limited. According to Glover, (1987) the land is being depredated and distorted by several elements chief among them human negligence. Poor farming methods and settlements issues are a cause for concern and have a direct impact on land degradation.

One of the major problem in the third world countries is the issue of the environment Benkin (2006). Human activities has been view as one of the causes of land degradation. Hassan and Hertzler (1998) stipulated that overgrazing, the extensive removal of tree cover for dry-land farming both (mechanized and traditional) and excessive cutting of wood resources for fuel purpose are the main causes of deforestation n and semi-arid environment. The World Bank (1989) highlighted that more than 50% of the wood stock removed annually is burnt in Africa. Furthermore the cost of tobacco production has been summarized by Lightwood et al (2000) to include among the environmental damages such as soil degradation, deforestation and water pollution.

Deforestation is the cutting down of trees to an extent of exploiting therefore disturbing the normal function of the ecosystem hence this viewed as a major problem caused by human activities to fulfill their interest at the expense of the environment. According to van Kooten (2000) deforestation is the removal of trees from a forested site and the conversion of land to another use most often agriculture. Deforestation is one the major impacts caused by tobacco farming (ITGA 1996) it also led to losss of biodiversity and land degradation particularly in the

smallholder sector this led to reduction in the supply of timber and non-timber forest products to rural folk.

The statement that land degradation due to tobacco farming is insignificant especially in the developed where resources are available is debatable hence this is in relation to environmental consequences as a result of tobacco production and in particular to the impact of the flue cure and fire cured tobacco on the indigenous forest thus wood for tobacco curing is a major cause of damage. Most of the smallholder farmers use firewood sourced from the natural forest as the cheapest method of curing their tobacco leaf. The environment is affected through deforestation as the farmers continuously cut down trees without any restrictions. More so this will threaten the environment through habitat destruction and also disturb the ecosystem.

Flue curing is the dominant method of curing Virginia tobacco which is in demand, Flue curing means that heated air coming from the furnace usually the barn, is passed through the harvested leaves by means of metal pipes inside the barn. If furnace technology barn construction and efficient loading are improved, high rates of wood use can be considerably reduced. Flue-curing produces sugar in the leaves and gives a mild alkaline flavor to light cigarettes. Flue is done in traditional barns where wood smoke is introduced during the process to produce a dark, smoky product especially for pipes tobacco. The general problem with the fuel wood use for curing especially in the developing nation is the extreme lack of data to explain the tobacco and environment interaction

OBJECTIVE

The main aim of the study is to analyse the role played by tobacco farming on livelihood and land degradation across the country.

RESEARCH OBJECTIVES

1. To evaluate the extent to which tobacco farming has contributed to the degradation of land.
2. To assess how tobacco farming has affected livelihoods.
3. To find ways of preventing massive degradation of land due to tobacco farming.

RESEARCH QUESTIONS

In a bid to respond to the broad question of whether tobacco farming has an impact on livelihoods as well land degradation, the study seeks to evaluate the impact of tobacco on livelihoods and land degradation in Mount Bokoto, ward 24, Murewa District in Mashonaland East in Zimbabwe. The research seeks to address the following specific questions:

1. Is tobacco farming contributing negatively or positively to rural livelihoods?
2. Analyze the extent or degree of land degradation as a result of tobacco farming
3. Was there such degree of land degradation due to tobacco farming prior Fast Track Land Reform Programme?
4. How exactly is the land being degraded due to tobacco farming?
5. What ways can be implemented to alleviate degradation?

RESEARCH METHODOLOGY

Research methodology is the study of methods used to obtain data from a research project (Bell, 1993). According to the American Heritage Dictionary (2000), methodology can properly refer

to the theoretical analysis of the methods appropriate to a field of study or to the body of methods and principles particular to a branch of knowledge. Hence in this research the researcher used qualitative methodology to obtain information about the role of tobacco farming on livelihood and land degradation. Qualitative methodology is the major research methodology used in this research.

RESEARCH DESIGN

According to White (2000), a research design is the final selection of the appropriate methodology, data collection techniques intended for use, the chosen methods of data analysis and interpretation. The research assumes that, human nature is a product of the environment in which a person lives (Leung; 2001). Based on the above considerations, this research was premised on the understanding that, the impact of tobacco farming on livelihoods as well on the environment how farming of tobacco is causing land degradation could be evaluated through first hand feedback of the farmers themselves as well as other members of the community. Thus, it was deemed most appropriate to use a qualitative method because, qualitative research aims to gather an in-depth understanding of human behavior and the resources that govern it (Denzin, 2005).

According to Denzin (1994), qualitative research studies things in their natural setting, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them. Qualitative research intended to penetrate to the deeper significance that the participant of the research ascribed to the topic that was being researched. A qualitative method was chosen for this particular research because it is instrumental to unearth the intricate issues affecting the livelihood of people in Zimbabwe.

The researcher used the longitudinal research design whereby it will be easy to see the impact of tobacco farming on livelihood and land degradation this will be done comparing with other crops such as cotton as well maize since these crops used to cultivated in the area hence longitudinal research design is the best in this research as it will be about comparing.

SAMPLE

A sample population is a proportion of the population that represents the entire population being researched (Hall, 1998). In this study, the study sample was made up of smallholder farmers where cases of massive land degradation as well livelihoods are reported and unearthed.

For this study, the researcher used purposive sampling method which is a form of non-probability sampling in which decisions concerning the individuals to be included in the sample are taken by the researcher, based upon a variety of criteria which may include specialist knowledge of the research issue, or capacity and willingness to participate in the research (Oliver; 2006). Purposive sampling was used because it focuses on particular characteristics of a population that are of interest, which will best enable respondents to answer the research questions.

RESEARCH METHODS

In order to fully comprehend the role played by the Zimbabwean government and non-governmental organizations in safeguarding land degradation and livelihoods due to tobacco farming within the area under study, a need arose to conduct an empirical study. The thrust behind the research is to analyze the role played by tobacco farming in livelihoods and land degradation in Mount Bokoto. The above mentioned study will therefore adopt a qualitative research design. Qualitative research emphasizes the use of words rather than numbers as

compared to the quantitative research style. Lichtman (2006) describes how qualitative research is best suited to help understand & interpret social interactions. He also elaborates on how it identifies patterns, features and themes. Such features of qualitative research justify its applicability in undertaking the case study in question. The interactions between tobacco farmers themselves as well as other members of the community are undoubtedly going to assist in explaining the realities of the livelihoods and land degradation.

DATA COLLECTION

QUESTIONNAIRE

According to Foddy, W. H (1994) a questionnaire is a research instrument consisting of a series of questions and other prompts for the purpose of gathering information from respondents. The responses are gathered in a standardized way, so questionnaires are more objective, certainly more so than interviews. Generally it is relatively quick to collect information using a questionnaire. However, in some situations they can take a long time not only to design but also to apply and analyze.

The researcher intends to make use of questionnaires in this study because information can be collected from a large portion of a group. The researcher will administer questionnaires which contain both open-ended question and closed-ended question. Open-ended questions ask the respondent to formulate his own answer, whereas a closed-ended question has the respondent pick an answer from a given number of options (Gillham; 2008). The researcher will make use of open-ended questions so as to allow both the farmers and members of the community responding to express and explain their scenarios and experiences in the best way they can. Giving them the

space and allowance to explain will surely ensure that the researcher receives feedback particularly on sensitive issues like land degradation and livelihood.

Closed-ended questions will serve the purpose of generating specific information required such as the sex of the participants. Ideally the response options for a closed-ended question should be exhaustive and mutually exclusive and as such the questionnaires will ensure that. Participants will be assured that the data collected will be confidential and strictly used for the purpose of this study.

INTERVIEWS

In this study, structured interviews were a vital way of data collection because they are a very good way of accessing people's perceptions, thoughts, experiences and meanings. Hence they were appropriate for finding out respondents' knowledge and perceptions, and experiences vis-à-vis their welfare and livelihoods. Interviews are a far more personal forms of research than questionnaires hence their relevance in this study.

Kvale (1996) defines the qualitative research interview as an interview whose purpose is to gather descriptions of life-world of the interviewee with respect to interpretations of the meanings of the described phenomena. They (interviews) are data collecting tools containing an organized or planned conversation with a view to explore the unknown information from the interviewee. Carter (1999) is of the view that an interview is a two way method which permits an exchange of ideas and information; it is unique in that it involves the collection of data through direct verbal interaction between the interviewer and the interviewee.

According to Cohen and Manion (2002) interviews can serve a number of distinct purposes which can be used as a means of gathering information about a person's knowledge, values,

preference and attitudes and experiences highlighting their welfare and state of livelihood. Hence, the researcher intends to use them to gather detailed information on the experiences, knowledge as well as conditions of the people living in the communities under research. However, it should also be noted that interviews are time consuming since it takes time to interview the whole population sample.

DESK RESEARCH

Desk research which is classified as secondary research involves the summary, collation and/or synthesis of existing research rather than primary research, where data is collected from, for example, research subjects or experiments. It can therefore be treated as the most convenient starting point of research for any organization. The main advantage why the researcher found it important here to use desk research is that literature and information on tobacco farming, livelihoods and land degradation is readily available. Sometimes desk research is also required in the preliminary stages of research to determine what is known already and what new data are required, or to inform research design. Desk research allows the researcher to work within the confines of one small area using all forms of literature available like books and the internet. Thus, this could be the cheapest and most effective medium of gathering the information.

The researcher will make use of several sources for information. These include Journals, Periodicals, Magazines, Newspapers, Published Electronic Sources, and E-journals.

DESERTATION LAYOUT

The dissertation has six parts, the first part is the introduction, part two is chapter one which includes the history of farming in Mount Bokoto ward 24 in Murewa District. Chapter two looks at the livelihood before the tobacco farming in Mount Bokoto ward 24 in Murewa District.

Chapter three has the impact of tobacco on livelihood and land degradation in Murewa District. Chapter four has the future of the environment and people's livelihood as a result of tobacco farming. Lastly is the conclusion which include the summary of the dissertation as well recommendations and areas of further studies

CHAPTER 1

History of farming in Murewa District

CHAPTER 2

Livelihood before tobacco farming

CHAPTER 3

How tobacco is impacting livelihoods and land degradation in Murewa District

CHAPTER 4

Future of the environment and people's livelihood as a result of tobacco farming

CHAPTER 1- THE HISTORY OF FARMING IN MUREWA DISTRICT

1.1: OVERVIEW ON THE HISTORY OF TOBACCO FARMING IN MUREWA DISTRICT AND ITS EFFECT ON LIVELIHOODS

This chapter provides a detailed overview on the background of tobacco farming in Zimbabwe as well the impact of tobacco farming on livelihood of smallholder farmers as how tobacco farming has caused land degradation in Zimbabwe. In doing so the researcher will explore main indicators of livelihoods on smallholder farmers as well land degradation due to tobacco farming. Much attention will be rendered on the effects of tobacco farming on livelihood and land degradation and also the genesis of tobacco farming in Zimbabwe.

1.2: THE BACKGROUND OF TOBACCO FARMING IN ZIMBABWE

The tobacco sector, previously dominated by the white, large scale commercial farmers, has historically made a critical contribution to the country's gross domestic product (GDP). There has been an increase in the number of new smallholder farmers joining the tobacco-growing sector in Zimbabwe. For instance, in comparison with the 2012 growing season, the number of tobacco growers registered in the 2013 growing season increased by 22,000 to 64,775. More than 80% of these registered tobacco farmers come from the smallholder sector, where each farmer grows an average of 1.3 hectares. The majority of these smallholder tobacco farmers are beneficiaries of the fast-track land reform programme that was initiated in the year 2000, with many women and youths having been empowered in the process. The Land Reform Programme brought numerous changes to the tobacco industry. It broadened the smallholder tobacco producing sector and narrowed the large scale commercial tobacco farming producing. The Fast

Land Reform Programme introduced new farmers in the industry and these make up cover 50% of the farmers who are into tobacco production (TIMB 2007)

There is a convergence of factors that have contributed to this surge in smallholder tobacco production. The issue of land as a means of production is the most critical. The fast-track land reform programme empowered a number of people who were previously marginalized by giving them access to land. Agriculture is the backbone of most economies particularly the developing countries as it is the major source of revenue (Keyser, 2002). In the wake of increased environmental and sustainability concerns with improvement in agricultural production, the country faced with the dilemma of choices in resource allocation and use especially in agriculture. Short –run technological gains and long-run environmental conservation are the two choices concerned in sustainable development. These require the adoption of appropriate technology that would suit particular level of different global communities, therefore there is need to optimize the environment. Agriculture and other economic activities are producing externalities affect the environment such as deforestation, pollution and so on (Pearce and Brown, 1994).

Zimbabwe is one the poorest country in African region economy, and as such heavily depends on agriculture for employment and income generation to sustain itself (Rukuni and Eicher, 1994). Zimbabwe heavily depends on agriculture for economic development. Tobacco production seems to have impacts on the environment but the impacts are undermined or not considered. Smallholder farmers mainly use natural forest as the source of firewood for tobacco curing. They use natural forest because it is cheap to access and this lead to deforestation problems. Deforestation is one of the major impacts caused by the production of tobacco (ITGA, 1996). It is therefore important to consider such impacts if tobacco production is to be sustainable. Most

smallholder farmers are diversifying into tobacco production with the perception that the crop is profitable. This decision has led to an increased demand for natural forest as source firewood for tobacco curing due to an increase in the number of smallholder tobacco farmers. Tobacco leaf is cured using different sources of fuel. The sources of fuel include the following: coal, fossil fuels, electricity and natural forest. However, the majority of the farmers use natural forest as the source of firewood resulting in deforestation. Environmental degradation in the form of forest loss and soil due to mining continue at unprecedented rates in the country, eroding biodiversity and prospects for sustainable economic development of agricultural and forest resources (Bensel, 2008).

Tobacco is a strategic crop in Zimbabwe as it provides employment, foreign currency and also improves the livelihoods of the farmers and the nation at large. Three main types of tobacco grown in Zimbabwe are Virginia (flue-cured), burley (air-cured) and oriental (sun-cured) tobacco. Of these, flue-cured is by far the most important and is generally produced in the better rainfall areas in natural regions II and III. Air-cured and sun-cured tobacco is predominantly smallholder crops though they are grown in the same natural regions with the flue-cured tobacco (Rukuni and Eicher, 1994). In contrast to sun-cured and air-cured tobacco, flue-cured tobacco was mainly grown by the Large Scale Commercial farmers (LSC). In Zimbabwe there are three groups of farmers involved in tobacco production namely LSC, small-scale commercial (SSC) and smallholder (communal and resettlement). Although not as advanced as LSC growers, most SSC farmers used to produce at a reasonably high level and enjoy good access to basic equipments (Bishop et.al., 1985).

Most tobacco farmers are in contract farming arrangements, where they are attracted by convenient farm inputs. In the 2013 growing season, about 77,910 hectares of land were put

under tobacco production compared to the 56,377 hectares of land in the 2012 season, showing a 38% increase. Furthermore, in 2013 tobacco production is predicted to be around 170 million kg, in contrast to the 144.5 million kg for the 2012 growing season – far higher than the 49 million kg of the 2008 season.

In addition, with the advent of the government of national unity came the use of a multi-currency system, setting aside the local currency from 2009 onwards. This meant that farmers would directly earn hard currency for their produce, and this helped to reduce losses attributed to foreign currency regulations – a situation that prevailed in the preceding hyper- inflation period. The firming of international tobacco prices in particular buoyed the sector. In previous seasons, prices had dropped as low as US\$ 0.50 per kg, subsequently discouraging farmers; of late, however, prices have increased and now range between US\$ 2 and US\$ 5 per kilogram. This attracted so-called new farmers to take risks and venture into the smallholder tobacco farming sector, even without adequate knowledge, skills and other necessary resources.

1.3: THE BACKGROUND OF FARMING IN MUREWA DISTRICT

Land Reform has brought about the most far reaching redistribution of resources in Zimbabwe since independence in 1980. After a slow but orderly process of redistribution between 1980 and 1999, a fast track programme was implemented between 2000 and 2002. Land Reform involved the acquisition of 11 million hectares from white commercial farmers' redistribution on a process marked by considerable coercion and violence. Mount Bokoto ward 24 area was a commercial farming area which was developed into an A1 model hence small hectors was done for tobacco and it is located in the natural farm 2B.

Farmers in Murewa District used their land for agricultural crops and livestock production. They grow their crops for both cash and consumption with tobacco mainly for cash. In addition there was a balance of crops which means there was an adversity of crops on the same land for example a farmer could have 200 hectares arable so he could grow 50 hectares of maize, 50 hectares of soya beans, 10 hectares of sunflower and 50 hectares of tobacco and the remaining for horticulture and structure. Major crops grown before the farming of tobacco were barley wheat, maize (yellow and white), sorghum and other small grained crops for trading. Yellow maize was mainly for feeding cattle and other domestic animals whilst white maize was mainly for human consumption (farm workers)

TABLE 1: SHOWS THE CROPS THAT WERE MAINLY GROWN IN MUREWA DISTRICT

Crop	Average Area grown(Ha)	Area Standard Deviation(Ha)	Minimum Area Grown(Ha)	Maximum Area Grown(Ha)
Maize	1.72	0.95	1.00	4.00
Soyabean	1.60	0.80	0.00	2.50
Groundnuts	0.49	0.37	0.00	2.00
Tobacco	1.17	0.38	0.50	2.00
Total land	6.62	4.50	2.50	25
Total Arable Land	4.35	2.10	2	14

SOURCE: MUREWA AGRITEX 2010

Farmers grow maize , soyabean, groundnuts and tobacco with maize occupying a larger area, four hectare and the smallest area the farmers grow maize was a hectare. One of the interviewed farmer Mr. Musingwini a agriculture extension officer said that before the fast track land reform programme of 2000 farmers grow tobacco with some growing the crop on a half hectare and others up to two hectares through he highlighted that tobacco is labor intensive hence that period they need to grow a small area as well most farmers lack-knowhow as well machinery and chemical.

Furthermore, farmers kept dairy and beef cattle, sheep and goats though most farmers were not practicing dairy production with majority keeping sheep and goats. The majority of the farmers own beef cattle and most farmers combine dairy and beef cattle. As illustrated by the table below

TABLE 2: SHOWS LIVESTOCK THAT WERE MAINLY KEPT IN MUREWA DISTRICT

Livestock	% farmer's livestock Ownership	Minimum number of livestock owned	Maximum number of livestock owned by a farmer
Dairy Cattle	43	0	4
Beef Cattle	98	1	10
Sheep/ Goats	63	0	20

SOURCE: MUREWA DISTRICT AGRITEX 2010

Tobacco farming was also practiced in Mount Bokoto ward 24 since Zimbabwe attained its independence in 1980 though the major farmers were the white commercial farmers who used to sell their tobacco to the auction floors within Zimbabwe but exported directly outside the

country. Small holder famers also practiced tobacco farming at a smaller scale but after the resettlement programme there was an increase of tobacco small holder famers in Mount Bokoto.

1.4: CONCLUSION

The research findings show tobacco farming in Mount Bokoto ward 24 in Murewa District was less practiced by smallholder farmers previously was dominated by white commercial farmers. Smallholder farmers previously rely more on maize production and animal husbandry. Most tobacco smallholder farmers benefitted from the fast track land reform programme of 2000 thus when tobacco production increased in the area because most people were now having access to land though tobacco was practiced since time immemorial.

CHAPTER 2-LIVELIHOOD BEFORE TOBACCO FARMING IN MOUNT BOKOTO, WARD 24, MUREWA DISTRICT.

2.1: INTRODUCTION

Using livelihood indicators such as household income, food security, assets ownership, household assets, employment creation, improved infrastructures and standard of living this chapter evaluates the livelihood of smallholders before the coming in of tobacco farming in Murewa District, Mount Bokoto ward 24 as well their impacts on livelihoods. The findings shows that other economic activities have impact on the livelihoods of smallholders farmers through impacting better income, more savings and reduced input costs. In view of such evidence, further promotion, deepening and supporting of other economic activities such as maize, sorghum and cotton farming is recommended.

2.2: UNDERSTANDING THE CONCEPT OF LIVELIHOODS

There are a number of definitions of livelihood that have been forwarded for example include Chambers (1987) who defined livelihood as adequate stocks and flows of cash to meet basic needs. Hence this was later expanded by Chambers and Conway (1992) who described livelihood as the capabilities, assets and activities required for means of living. Though this definition does not clarify how these adequate stocks and flows of cash come about Ellis (2000) defines livelihood as livelihood comprises the assets (natural, physical, human, financial and social capital) the activities and the access to (these mediated by institutions and social relations) that together determine the living gained by the individual or household.

Nichof and Price (2001) define livelihood in terms of a system which can be conceptualized as having inputs (resources and assets), output or livelihood purpose (livelihood adequacy for

meeting basic needs) activities (livelihood generation and the composition of the livelihood portfolio) agencies (efforts of household and individual to achieve livelihood), quality degree of vulnerability on sustainability of the livelihood, environment (context within which the livelihood system interface with other systems and institutions) and the locus which is the household.

Therefore many definitions of livelihood available, the most widely accepted definitions of a sustainable livelihood is that of Chambers and Conway (1991) “ a livelihood comprises the capabilities, assets and activities required for a means of living: a livelihood is sustainable which can cope with and recover from stresses and shocks, maintain or enhances its capabilities and assets and provide sustainable livelihood opportunities for the next generation, which contributes not benefits to the other livelihood at the local and global levels and in the short long run.”

A livelihood with encompass both cash and in kind income social institutions (kin, family and community networks) gender relations and property rights required for sustaining a standard of living .social networks are important for facilitating and sustaining diverse income portfolios but this does not exclude access to, and benefits derived from social and public services provided by the state such as education, health services, roads and water supplies etc which also constitute livelihood Ellis (1998). However Carswell et al (1997) defined livelihood “are often unclear, inconsistent and relatively narrow without clarification there is a risk of simply adding the conceptual muddle.”

In addition livelihood comprises capabilities, material and social resources and activities required for a means of living which also takes into account the role played by structures, policies and processes in influencing the choice of livelihood strategies by the rural people hence it is

considered sustainable when it can cope with and recover from stresses and shocks maintain or enhance its capabilities and assets while not undermining its natural resource base Scoones (1998). The concept of livelihood therefore is about individual, households or communities making a living, attempting to meet their various consumptions and economic necessities, coping with uncertainties and responding to new opportunities (de Haan and Zoomers (2005). A livelihood strategy would include activities that generate income to household hence it not only captures what people do in order to make a living but also resources that provide them with the capabilities to build a satisfactory living, risk factors that consider in managing their resources as well as their institution and policy context that either helps or hinders them in pursuit of an improved standard of living.

2.3: EVALUATION OF THE SUSTAINABLE LIVELIHOOD APPROACH

The sustainable livelihood concept was introduced by the Brundtland Commission on Environment and Development as a way of linking socio economic and ecological consideration in a cohesive, policy relevant structure Kranta (2001). The 1992 United Nations Conference on Environment and Development (UNCED) expanded the concept and advocated for the achievement of sustainable livelihood goal for poverty eradication. It stated that sustainable livelihood could serve as an “integrating factor that allows policies to address development sustainable, resource management and poverty eradication simultaneously”

2.4: OVER OF THE SUSTAINABLE LIVELIHOODS FRAMEWORK

The Sustainable Livelihood Framework serves as an instrument for the investigation of poor people’s livelihood. It provides a useful guide for the analysis on livelihood suggesting that livelihood comprise capabilities, assets and activities required making a living. Livelihood

assets and capitals are interchangeably as they are important component of the SLF because they form the strength upon which people construct their livelihood and achieve their goals Bebbington (1999).

Kollimar and Gomer (2002) the framework stakeholders as operating in a context of vulnerability within which access certain asset. These gain their meaning and value through the prevailing social, institution and organizational environment known as transforming structures and processes hence this context influence the livelihood strategies that are open to people in pursuit of their self-defined beneficial livelihood outcomes. The framework does not work in a linear manner but rather than seek to provide a way of thinking about the livelihood of poor people which should help in identifying more effective ways to support livelihoods and reduce poverty.

The concept of Sustainable Livelihood is an attempt to go beyond the narrow conventional approaches which focused only on certain aspects of poverty, such as low income excluding other aspects such as vulnerability and social exclusion. The framework pays more attention to the various factors and processes which either constraint or enhance poor people's ability to make a living in an economically, ecological and socially sustainable manner Krantz (2001). It also take into consideration the context in which households and individual operate (in macro-economic, social, political, environment, demographic, historical factors), livelihood resources available to households(i.e. economic, natural, physical, human, social and political capital,) institutional processes and structure that operate within the communities, livelihood strategies that are pursued by households and the livelihood outcomes derived from these strategies(i.e. conditions of well being, access to food, health education and safety.)

2.5: DESCRIPTION OF THE AREA

Tobacco farming is considered as one of the most agricultural activity for socio-economic development as well to promote agricultural production and rural development. This study addresses the case study of Mount Bokoto ward 24, Murewa District using 250 purposively selected tobacco farmers. Murewa District comprises of one growth point town with 2 850 smallholder farm households of whom 25 are female headed households (Murewa District Rural Office 2014)

Characterized by tobacco production as a major livelihood strategy mainly for commercial purpose hence Murewa District provides a good representation of the livelihood strategies of farm household in most parts. Murewa District falls under natural region 2b in which the soil are almost universally sand and the area is ideal of tobacco. The rainfall ranges from 750 to 1000mm per year; it is fairly reliable falling from November to April. It accounts for a-80% of the area planted crops in Zimbabwe. Murewa District was selected for research since there are of lot smallholder farmers and almost all of the beneficiaries of the resettlement scheme are tobacco farmers in ward 24.

2.6: THE LIVELIHOOD OF TOBACCO FARMERS BEFORE EMBARKING ON TOBACCO FARMING IN MOUNT BOKOTO WARD24, MUREWA DISTRICT.

Agriculture is regarded as the most dominant source of income in Murewa District hence from the survey carried out; the household in ward 24 earned some income from off farm business and livestock growth and reported small contribution from remittances. Farmers in ward 24 are beneficiaries of the Fast Track Land Reform Programme of 2000 and own twenty-five hecters of

land but before the introduction of tobacco farming, they only farm four to five hectares for subsistence.

Mount Bokoto village was typically made out of pole and mud hence majority of the houses were constructed from poles and mud as well having the thatched roofing. In ward 24 few houses were made of fired brick and having asbestos roofing as this was narrated that about five houses have corrugated iron sheets roofing hence you could easily count because they were very few. Mr. Nyamburi goes to state that there were only few households that were having flush toilets at the household whilst the majority in ward 24 uses the bush system. Residents pointed out concerning that excess water run-off into unprotected drinking water sources during the rainy season.

Mount Bokoto settlement area were serviced by Chamapango Primary School which is located on a neighboring farm, hence other families sent their children to school in the nearby communal areas to Virginia and a little further to Zhombwe. Virginia and Zhombwe are estimated to be 15 kilometers from the farm which actually was very difficult for young children to take day to and from school. Most families have thus their children in the old communal homes as in the towns so they can attend school therefore they join their families during school holidays. The nearest secondary school is Nhowe High School which was considered very expensive that very few farmers from ward 24 can afford to send their children there.

In terms of production in ward 24 most farmers were specializing into maize production as well they used to do subsistence farming where by they would produce some maize or groundnuts to feed themselves then if there are some surplus they would exchange with others who would be specializing into animal husbandry and they could travel for 25 to 30 kilometers in exchange of meat because there were no farmers who were into animal husbandry hence the area lived for

many years with butter trade to have decent meals since maize production was their major agricultural crop. Furthermore very few smallholder farmers were practicing mixed farming they will keep cattle for meat and cultivation, they would also keep sheep and goats for meats.

There were no boreholes in war 24 hence residents rely on unprotected wells for drinking water, cooking and other households' users. The water was safe for human consumption. Only three homesteads had a protected well and five families in the close neighboring had of the household also have access to the wells. According to Headman Nyamburi during rainy season, problems of diarrhoea arise as well typhoid because sanitation was very poor this was because only four household have access to a blair toilet while the rest rely on the bush. This resulted in that water runoff into the dam contaminates the water leading to high incidences of water-borne diseases

Furthermore the nearest clinic was located 10 kilometers from the area whilst Murewa District Hospital is 20 kilometers from Mount Bokoto hence this was very difficult for farmers to travel in cases of emergency as well for pregnancy women and also during crisis of water-borne disease therefore according to Mr. Musingwini a smallholder farmer explained that before the advent of tobacco farming many families lost their beloved ones because they lacked healthy assistance during 1995 cholera attack this was because health services are located too far from the resettlement area.

2.7: CONCLUSION

This chapter was focus on the livelihood of smallholder farmers before the coming in of tobacco production; hence this chapter explored what is livelihood as well highlighted what farmers specialized before tobacco farming such as maize production, animal husbandry, sorghum production and cotton production as a source of living. An analysis has been drawn out that

before tobacco production in Mount Bokoto ward²⁴ in Murewa District smallholder farmers used to leave a poor life as compared after the boost of tobacco farming. Chapter 3 is going to explore more on livelihood after tobacco farming in Murewa District as well to analysis its impact on livelihood and land.

***CHAPTER 3- IMPACT OF TOBACCO ON LIVELIHOODS AND LAND DEGRADATION
IN MUREWA DISTRICT.***

3.1: INTRODUCTION

This chapter reviews the impact of tobacco farming on livelihood and on land degradation. Tobacco farming within Murewa district is reviewed. The economics importance of tobacco crop on livelihood and forest is also outlined. The research then reviewing practical studies on land degradation, livelihood and tobacco production

3.2: THE POSITIVE IMPACT OF TOBACCO FARMING ON LIVELIHOOD IN MUREWA DISTRICT.

Murewa farmers in Mashonaland East Province ventured into tobacco farming, which used to be exclusive cash crop for white commercial farmers hence there was coming out of black rich middle and their standards of living has greatly improved. In Mount Bokoto ward 24 there are 250 smallholder farmers and tobacco is increasing by a growing role for farmers who traditionally used to venture into maize production as well animal husbandry and other low paying small grain. These tobacco farmers were inspired by the lucrative process of tobacco on the international market; therefore the Murewa farmers are now enjoying a new lease of life.

Tobacco farming has been practiced in Zimbabwe since time immemorial and the absence in its literature the next pragmatic question in what effect it has on smallholder livelihood and land degradation. Few published articles indicated that smallholder farmers benefited positively through better incomes they receive after sale, improved household, food security, employment creation both formal and informal, increase in asset ownership, improved household assets,

improved standards of living since they are able to send their children to better schools and abroad universities and improved housing structure.

Tobacco farming provides the most dependable source of income hence according to the report of TIMB (2012) in Murewa district the reliability and the long term trend of tobacco growing's contribution to household income is important. From the contracted 15 tobacco growers interviewed in that paper reported that tobacco farming was their most steadfast income source and for 14 out of 15(96%), income from tobacco had either increased or drastically increased overtime. The farm laborers have also said tobacco was their most important income source.

The major types of asserts owned by the tobacco smallholder farmers in Murewa District are farmland, domestic animals and houses in towns like Marondera and also in the big cities like Harare, Mutare and Bulawayo. According to headman Nyamburi, all the households considered have farmland, with variation in its 66% of the farm households owns 20 to 30hectares, about 23% of the farm household own between 30 to 60 hectares and about 12% of the farm household own above 80 hectares. There is variation in land holdings, with few extremes owning as high as 150 hectares maximum and as low as 20 hectares minimum. Domestic animals such as cattle, sheep and donkeys are another important asserts owned by farm householders.

Small holder farmers involved in tobacco fairly in Murewa district have indicated that takings from their tobacco output have enabled them to improve household income in terms of cash as well raise assets such as number of livestock, good houses, motor cycle, bicycles and milling machines this has been observed in Mount Bokoto ward 24 which is now becoming a major area of tobacco production TIMB (2012) annual report. Tobacco farming has managed to create

employment at a local level both permanent and hired labor which have improved the standards of living of people in Murewa district (MTC Report 2013).

A few years ago one could count people who owned a car, however, since many people ventured into tobacco farming there was a sudden change of life. Mr. Siyawamwaya one of the tobacco smallholder farmer said after being frustrated low prices fetched by maize, he decided to try his luck by growing the golden leaf. He further said although he had little knowledge of how to grow tobacco this did not discourage him. “ I started growing tobacco about six years ago and my life has extensively changed for the better, I used to grow maize and groundnuts for many years but our main buyer the Grain Marketing Board(G.M.B) was failing to pay us for the delivered produces” he said.

Mr. Siyawamwaya said he did not regret growing tobacco as the decision was bearing fruits, he further said that last year he managed to sell about 49bales of tobacco at around US\$4 a kilogram which was actually a good price, he also aiming to sell the same number of bales this year. The farmer said he also acquired farming implements and machinery from the producers of tobacco sales. “Within the few years that I has been into tobacco farming so far I have managed to acquire a tractor and beefed up my cattle herd. L also built a new house” he said

In addition another tobacco farmer Mrs. Grace Zemura supported Mr. Siyawamwaya sentiments and she added that farming tobacco had proved to be rewarding. She said although this year she was expecting reduced harvest due to infrequent rains, she was hopeful that they would get quality harvest. “Rains were bit challenging but I am hopeful that the tobacco that we are going to sell is going to obtain a good price like last season” said Mrs. Makunde who is expecting 20

bales. Farming tobacco has been beneficial to us; our lives could have been somewhere if we started growing it 10 years ago she said.

In addition the existence of tobacco farming in the area such as Marondera, Hwedza and Murewa has created other income generating activities and opportunities, these include buying and selling of cattle, cattle trade, selling of firewood for tobacco curing from private owned forests, building of guest houses, institutionalizing of small grocery shops and buying of milling machines. Income from tobacco farming or smallholder farmers improved household food security. The positive about the contribution of tobacco growing to household income is also reflected in the view of tobacco growers about the relationship between tobacco farming and household food security. The survey by (MTC 2011) report in Murewa district smallholder farmers are food secure from income from tobacco sales therefore most of smallholders also reported that in their view tobacco cultivation either improved or radically improved food security. The tobacco workers in the district made it very clear that working in tobacco cultivation had improved their position high levels of income having help to increase household food security.

The repayment of tobacco can be witnessed through income increment among smallholder farmers in Murewa District; therefore generally tobacco farming creates business and income generating opportunities by supporting and encouraging surplus production. Total income in this study is a composite income mainly from crop sales, livestock sales and petty trade, while crop sales and livestock are direct results of tobacco farming, petty-trade activities are resulted from new opportunities created by tobacco farming hence from the survey the effect of tobacco farming is a string- pulling of smallholder farmers in terms of income growth. The explanation for this increase total income is fairly high prices paid for tobacco crop.

The majority of tobacco small holder producers experience difficulties in obtaining credit for production inputs, with the collapse and restructuring of many agricultural development banks and the closure of many export crop marketing boards particularly in Zimbabwe which in the past supplied farmers with input on credit, difficulties have increased rather than decreased. The introduction of contracting farming to tobacco farmers allows farmers access to some form of credit to finance production inputs. In most cases it is the sponsors who advance credit through their manager. However provision can be made with commercial bank or government agencies through crop liens that are guaranteed by the sponsor. When substantial investment are required of farmers such as packing, tobacco barns or heavy machinery banks will not normally advance credit without guarantees from the sponsor.

The growing of tobacco also plays a positive role in improving the household income of smallholder farmers in Mount Bokoto ward 24. The growing of tobacco is associated to the growing of other crops in rotating with tobacco. Farmers indicated that they are being paid immediately on delivery and this will enable them to buy food in large volume for their family. Mrs. Mupfunde states that besides all the labor at the end she manage to have end meets. Since switching to tobacco farming his annual income has mushroomed from about US\$600 for one harvest of maize a year to US\$4 500 for single tobacco crop. The work is tiresome but is able to feed my family and pay school fees for my children.

Socially tobacco has actually reduced illegal activities such as livestock theft which was practiced by a group of people in Murewa district in the past years. One of the interviewed a focus member in mount Bokoto ward 24 reported, ‘we are thanking the introduction of tobacco farming in our resettlement area because we are carefully granted of our livestock safety. Most people nowadays are getting money through tobacco farming instead of involving themselves

and theft.’ Hence it was so interesting when one of the top farmers confidently stood and reported that, ‘I am really thanking the government to allow us to venture into tobacco because male family heads are now taking care of their family better than before.’ Tobacco farmers are now able to send their children to better schools such as Marondera high, St Ignatius high and etc in Mashonaland east province.

The quality of life of smallholder farmers has changed positively because of tobacco, one of the interviewed farmers Mr. Musingwini who was the household head, a married man and looking after his parents. Income earned from tobacco sales enabled Musingwini built a modern, asbestos-roofed seven roomed house at the farm homestead in 2011. In that same year he bought five cows, he also bought an ox-drawn cart in 2012 and replaced the brushwood fencing of the family homestead with a steel fence in 2011. Musingwini also bought furniture, a television and radio set. In the beginning of 2013 he gave his wife Lorraine startup capital to embark on cross trading to South Africa and Zambia, with some of the profits generated, supplemented by Musingwini’s tobacco income, she expanded their portfolio of non-farm activity by opening up a chicken project. He was also able to pay fees US\$320 per term for his siblings to boarding schools such as St Pauls’ Musami in Murewa and Mutoko high school in Mutoko. Musingwini was pleased with his household’s progress “with only six years in tobacco farming, I was content because all one needs are possessions which allow one to have a decent living that is livestock, capital, equipment such as plough, harrow and scotch-cart, even good health remember being able bodied these days is wealth, my household is also food protected.”

Small capitalist farmers have emerged from tobacco farming and so far from the survey conducted in Murewa district by researcher shows an intra-household democratized decision making process with regards to the allocation and utilization of resources within the household.

This is a stark departure from a highly patriarchal decision making process which used to exist in the area therefore results show that in Murewa district women constitutes the majority about 64% of farm laborers on tobacco farms though on the negative impact of tobacco it has actually caused most males to migrate seek employment in urban areas or across the borders leaving behind women staying in farm compounds.

A tobacco farmer always has selection of crops to grow to increase household food security thus affording at least three meals a day as well having variety of meals such vegetables, meat and beans, furthermore the growth of tobacco farming has enabled diversification into the activities that are non- agricultural for instance Mr. Mushonga another prominent tobacco farmer in Mount Bokoto ward 24 has been able to buy mini bus and have now diversified into providing transport to the secluded community they live in. Tobacco farming increases portfolio of activities and assets for small holder farmers in Murewa district and also led to deagrarianization and a higher income which intends result in higher crop productivity. The production of tobacco has improved the infrastructure of people in Mount Bokoto ward 24, due to the income from tobacco the farmers are now able to build large houses and also have decent toilets. Mr. Kahuni another interviewed tobacco farmer indicated that before the coming in of tobacco farming people in the area practiced bush system which was a threat to their health since they do not have money to build toilets. The farming of tobacco has also led to the surfacing of grocery shops nearby, the construction of roads although they are dust roads, the building of schools and clinics.

Another interviewed farmer a former soldier Mr. Makunde said “I have achieved in seven years that I have been hear what I have failed to achieve is more than 30 years as a soldier and as a transport operator, I may not have achieved it in the next 20 to 30years if it was not tobacco farming. Tobacco farming has enabled me to acquire the machinery I needed, the 12.5m long

irrigation tower for US\$8500 and a 100 kva generator to power it, with the income I am receiving from tobacco I will venture into horticulture since I have an irrigation system. Mr. Makunde also boasts of 75 cattle, 100 goats and 5 sheep. He employs 20 permanent workers and 20 casual thereby creating employment.

On gender dimension male and female smallholder farmers have emerged from tobacco farming and so far groundwork result from survey in Mount Bokoto ward 24 shows and intra-household democratized decision making process with regards to the allocation and utilization of resources within the household are carried out by female, hence this is stark departure from a highly patriarchal decision making process which existed in Zimbabwean societies.

Smallholder farmers involved in tobacco farming in Murewa District have indicated that proceeds from outputs have enabled them to invest in farming machinery such as tractors, animal drawn plough, water pump and social capital such as sending their children to schools and health centers. Furthermore another outcome has been the enhancement of household food security, household income and the creation of employment at local level as the distribution of income since growing tobacco is labor intensive and most companies pour money upfront for the hiring of labor (Murewa Field Survey 2014)

Furthermore, tobacco farming has improved the assets of many tobacco farmers such as cars, cattle this was evidenced by Mr. Kadiki another interviewed tobacco farmer who used to be a general dealer but he said when he ventured into tobacco farming and he became a full time tobacco farmer hence the profit he earns from tobacco pushed him to start the transport operating system, right now Mr. Kadiki is proud of having five community omnibuses which transport people from Harare to Macheke as well Murewa to Macheke this actually enabled him to send

his children to universities such as Midlands State University therefore this shows the positive impact of tobacco on livelihood in Murewa District.

3.3: THE NEGATIVE IMPACT OF TOBACCO FARMING ON LIVELIHOOD IN MUREWA DISTRICT

The cultivation of tobacco has caused or increased risk of injury and illness hence children and adults who are mainly women working in tobacco farms frequently suffered from green tobacco sickness (GTS) hence which caused by dermal absorption of nicotine from contact with wet tobacco leave therefore GTS is characterized by symptoms that include nausea, vomiting, weakness, headache, dizziness, abdominal clamps and difficulty in breathing as well as fluctuations in blood pressure and heart rates.

Furthermore, large and frequent application of pesticides such as Butramex 36EC, Ethephon 48SL, N-Decanol 79EC and Toptab 33 EC to protect the plant from insects and disease has also noted that has caused a lot of damages to human such as poisoning skin and eye irritation and other disorder of the nervous, respiratory system as well as kidding hence this has actually decreased the life expectancy of many tobacco farmers as well laborers in Murewa District.

Tobacco farming in Murewa District has resulted in the decrease of the life span of the active group especially women who take part mostly as tobacco laborers in many farms there according to Mrs. Gopo a nurse at Murewa District Hospital point out that many people especially women has committed suicide and most of them they consume tobacco chemical which are highly poisonous this has left many households without women support, not only that orphans have increased in the district because of tobacco chemicals therefore this clearly shows that tobacco farming has negative impacts on the livelihood in Murewa District.

3.4: THE IMPACTS OF TOBACCO FARMING ON LAND DEGRADATION IN MUREWA DISTRICT WARD 24, MOUNT BOKOTO.

Tobacco farming in Murewa District ward 24 has left vast forest land barren, risking denudation due to the massive cutting down of trees by small-scale tobacco farmers who use firewood to cure their tobacco. Although technically it is nothing close to desertification. Land degradation in which a relatively dry land region become increasingly arid, typically losing its bodies of water as well vegetation and wildlife hence it is clearly deforestation.

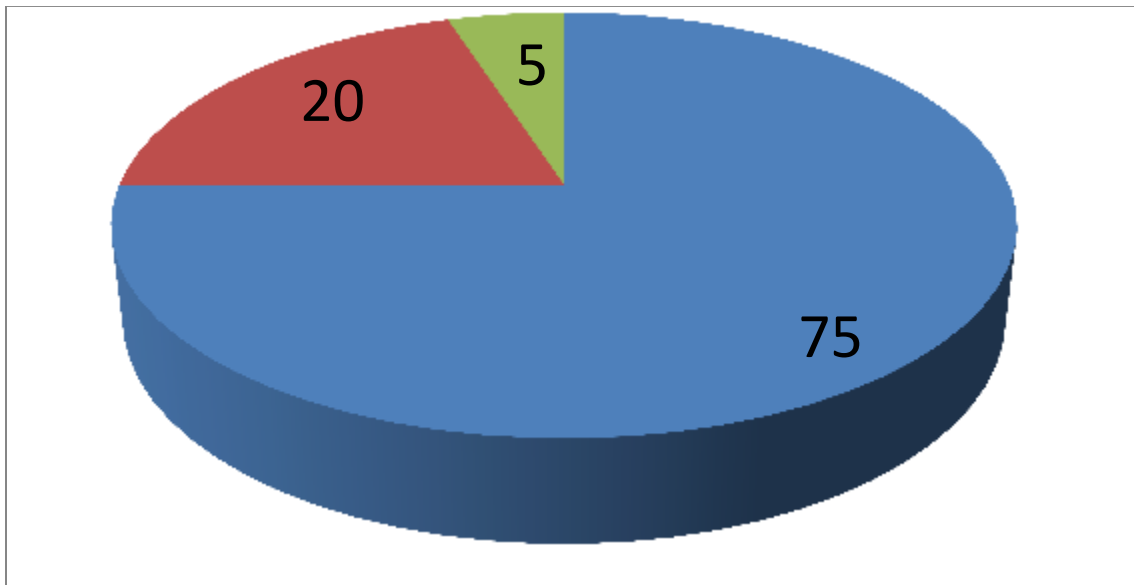
Observation in mount Bokoto ward 24 shows that deforestation is underway due to the cutting down of trees by small holder farmers without sufficient reforestation therefore natural or intentional restocking of forests and woodlands that has been depleted which actually raising fears of widespread damages to the habitant, biodiversity loss and aridity, something that has adverse impact of bio-sequestration (capture and storage) of the atmospheric carbon dioxide. Deforestation hence on a larger scale is cause soil erosion, some areas can be degraded into wasteland causing extinction of flora and fauna, changes to climate conditions, desertification and displacement of population as this has been observed in Murewa District and in the past through the fossil record.

Tobacco farming has caused a lot of damages to the environment hence in Murewa firewood is used as fuel to cure tobacco leaves not only that but also in the construction of curing tobacco. Land degradation has also been caused by tobacco plant which leaches nutrient from soil, as well pollution from pesticides such as acephate 75SP, chlorpyrifos 48EC, etc and fertilizers applied to tobacco fields. Therefore farmers often used pesticides that are highly toxic on their crop which tends to destroy the environment.

A number of small holder tobacco farmers have grown exponentially since the country's controversial land reform programme of 2000 which saw thousands of subsistence farmers resettled on prime agrarian land formerly owned by white commercial farmers. The tobacco farmers find temporary in what could be vicious cycle through to a greater extend tobacco farming offered them the opportunities to increase household income in the short-term and rescue themselves from poverty but in ward 24

Most of these farmers in Mount Bokoto ward 24 used coals or firewood in curing tobacco leaves 75% of tobacco farmers reported that they cut wood from the Mount Bokoto hills for curing tobacco

FIGURE1: PERCENTAGES SOURCE OF ENERGY USED IN MOUNT BOKOTO



SOURCE: MUREWA FORESTRY COMMISSION 2012

The pie chart above shows the sources of energy used by tobacco farmers in Mount Bokoto ward 24 in Murewa District hence this pie shows that 75% of the source comes from firewood whereas

coal and electricity is less used hence this actually shows that the frequent use firewood has resulted in land degradation in the Murewa District., vegetation, water resources

Tobacco farming has actually caused the deterioration of the quality of land in Murewa District as well the topsoil, vegetation and water resources. The multiple cultivation of tobacco farming in mount Bokoto ward 24 has degraded the quality of soils affecting the quality of soil hence this has affected food production, livelihood, the production and provision of other ecosystem good and services.

Land degradation is a global issue with serious implications worldwide on biodiversity, eco-safety, poverty eradication, socio-economic stability and sustainable development hence according to Murewa Agritex has estimated that about 20 families have been displaced as a result of desertification which is a form of land degradation. Furthermore, more tobacco farming has also caused impact on land result in the loss of vegetation hence vegetation plays a major role in determining the biological composition of the soil. The researcher saw that in the area the rate of erosion and run off decreases greatly with increased vegetation cover unprotected, dry soil surfaces blow along with the wind or are washed away by the flash flood hence this infertile lower soil layers that bake in the sun and become unproductive hardpan.

Tobacco farming also involves a great deal of pesticides which must be used in all stages of tobacco growth therefore this depletes soil nutrients at a higher rate, it requires regular inputs of chemical fertilizers for example during the 3 month period for making the seed bed to transplant the seed into the field, up to 16 applications of pesticides maybe recommended. These pesticides, herbicides and fertilizers directly poisoning framework and may cause chronic health problems but they also sip into the soil and pollute waterways, ecosystem and poisoning livestock and food

crops. These effects have been witnessed in ward 24 in Murewa district and this has resulted in an increase of poverty because of tobacco farming which caused soil erosion as well as acidification.

According to Forestry commission in Murewa district tobacco farming has increased land degradation in the area hence as farming activity tobacco farming is characterized by frequent soil tillage, removal of waste crop material from the fields by livestock grazing or burning and in many cases, mono-cropping (Chigonda 2008). In addition, conventional tillage entails intensive ploughing and turning of the soil using tractors and plough hence his obvious implication on soil organism and antecedent moisture for example soil organism get exposed to excessive solar radiation, while moisture loss gets accelerated through the exposure of a larger surface area, therefore this means that plants experience moisture stress much earlier than expected. Furthermore, soil inversion enhances the oxidation of soil organic matter. Apart from that soil turning leads to reduced infiltration and aeration as a consequences of the resultant soil compaction therefore tobacco farming as an activity has lead to the exposure of soil to erosion agent. Pictures below also show how tobacco has hindered land of Murewa District.

LAND THAT HAS BEEN HINDERED BY TOBACCO FARMING





SOURCE: MUREWA FORESTRY COMMISSION OF ZIMBABWE 2014

In addition, Mr. Bhowa an agriculture extension officer states that tobacco production in Murewa District has caused the net effect by declining the productivity on account of declining soil quality, soil compaction and infiltration hence this resulted that at a human level there is increase of food insecurity and poverty in Murewa District.

CHAPTER 4: FUTURE OF THE ENVIRONMENT AND PEOPLE'S LIVELIHOOD AS A RESULT OF TOBACCO FARMING.

4.1 INTRODUCTION

The survey carried out as well as during the broad literature review undertaken during this research, hence raise number of very important issues that need to be addressed by the relevant stakeholders. This chapter is going to analyses the future effects of tobacco farming on the environment as well people's livelihood since there are some costs that are associated with the environment damages due to tobacco farming.

4.2: COST TO THE ENVIRONMENT

There are some costs that are associated with damages due to tobacco farming hence these costs calculated based on the quality of firewood used per hectare and the cost of firewood per scotch cart. In this research, the assumption is that the cost to the environment is based on the cost of firewood which represents the value of the tonnes that the farmer cut. In coming years in Murewa District farmers environmental cost due to the production of tobacco in the district is going to increase ranging from US\$20 to US\$800 per hectare with an average of US200. Therefore with the speed in which trees are being cutted in Mount Bokoto ward 24 the quantities the farmer could use will range from 1 to 10 scotch cart per barn for curling tobacco and this can be translated to the costs based on the price of scotch cart which is pegged at US\$20.

TABLE 2: SUMMARY OF THE QUANTITY OF FIREWOOD AND COSTS TO THE ENVIRONMENT FOR FARMERS IN MUREWA DISTRICT.

Variables	Average	Standard Deviation	Lowest	Highest
Quantity/ barn (scotch cart)	4.2	1.5	1	10
Environmental cost US\$/ha	201	125.2	10	800

4.3 LIVELIHOOD

Tobacco farming in the near future is going to affect people’s livelihood because of many factors, in Murewa District the crop has began to prove that it is not an activity that people as well farmers would rely on it because of corruption on tobacco sales floors that tends to be affecting farmers hence this will result in affecting farmers’ livelihood because of these challenges.

4.3.1: CORRUPTION

Corruption has proven to be the main factor that would affect people’s livelihood in the coming years. Auction officials, farmers indicated that they have been asked to pay bribes to have their tobacco positional tactically on the floors or to have the price at contractors floor fixed. Tobacco farmers have been notified by auction officials of stop orders established on their crops before a sale and have side marketed crop to avoid them lots of orders did not go through year by year therefore this has been increased seriously compromising the order system, hence this can clearly

shows that the future of the people's livelihood as a result of tobacco farming is going to be affected greatly because smallholder farmers are now facing huge setbacks that might result in them stopping to pursue tobacco farming because of these problems at auction floors.

4.3.2: LATE OR NON-SUPPLY OF INPUTS

Farmers have begun complaining about inputs supply, most smallholder farmers reported that inputs would often arrive late or not all. Tobacco farmers at times miss the opportunity to plant at correct time and often obtain lower yield which compromise potential income and the ability to repay input loans. In previous year 2006 most inputs were in short supply and even the best organized companies such ZLT had challenges in securing inputs hence failure to secure and deliver inputs can make the differences between success and failure of tobacco smallholder farmers. Company who insures against extreme weather condition or other disaster would be welcomed by farmers even if they had to pay for it hence one can clearly argue that the future of many tobacco farmers in terms of livelihood is going to be affected a lot due to lower input supply which the area has already started to witness as well facing. Therefore this might result in school drops outs of many children with parents who are into tobacco farming because many farmers will be in great debt hence they would have to pay back loans first for their future.

4.3.3: CONGESTION AT AUCTION FLOORS

Most smallholder farmers indicated the congestion at tobacco sales floors has resulted to them as the major problem. Congestion at floors results in corruption, health hazards, theft and wastage of time hence this will result most tobacco farmers to have second thoughts about tobacco farming because most of them will be scared of risk as well wasting their precious time on the floor which result in them returning to maize production hence maize production in the country

is not paying much compared to tobacco production. Most of the farmers will engage bogus dealers at auction floor in order to sell their tobacco and this will result in theft. Farmers also indicated out that because of congestion at floor if the weather changes and it rain their plant will lose quantity therefore booking system should be fully implemented to avoid farmers turning up at auction floors without booking also eradicate corruption of booking officials.

4.3.4 PRICING

In addition another challenging aspect is the correct pricing that might harm tobacco farmers in the near future hence this will result affecting people's livelihood. Most companies have a responsibility to conduct a profitability analysis to ensure profitability for both parties under a wide range of possible scenarios. In order to be sustainable, contracting farming must present both companies and farmers with a win –win outcome. In a stable economic environment it is possible to advise farmers of the price that they can expect at the end of the season. Therefore this is a good practice which enables farmers to calculate cash-flows and profitability. Therefore many smallholder farmers articulated disappointment in future will affect most farmers that will end up deciding to drop tobacco and venture into cotton production.

4.4: MEASURES TO HELP SMALLHOLDER FARMERS TO REDUCE LAND DEGRADATION AS WELL IMPROVING LIVELIHOOD.

4.4.1 FARMER TRAINING

Many researchers documented that the success of smallholder tobacco farmers is dependent on the organizational agricultural and business capacity of the farmer hence farmers also need to fully aware of tobacco farming principals such as the advantages and disadvantages. It has thought that companies might assist tobacco farmer through in house extension programmers or

with the assistance of government e.g. Agritex or even non government organization. In addition the possibility of Agritex extension officers to work at processing companies for a short time so as to become acquainted with the production requirement hence a suggestion was made that land degradation can be reduced as well increment on livelihood if tobacco farmer training approach was adopted.

4.4.2 COMPANY TRAINING

An overview given by TIMB 2012 of the condition under which Zimbabwean companies are currently contracting smallholder farmers in the tobacco sector shows that some of the companies have not previously being involved in contract farming and requested that information on models and specification be made available for further study hence there is need for smallholder to engage into contracting farming with many stakeholders this will help them to explored product selection, site and project implementation, funding and risk management. A number of suggestion were made as to how experience might be traded and information deserrmination to companies and NGOs hence one of the ideas is to build a discussion forum who's membership would comprise all stakeholders and which would be regularly convinced.

4.4.3 SUPPORT AGRIBUSINESS IN ESTABLISHING GOOD FARMING MODELS

The potential of farming by smallholder is only realized when firms establish system that enable them to work with large number of small-scale producers. Establishing these systems might require the right management skills and knowledge of tobacco farming. Even when these are present, establishing efficient farming system and building sufficient economics of scale in terms of volumes of production and number of farmers takes time. Therefore during the start up period tobacco farming scheme may not return a profit to the stakeholder. Most contracting firm would

benefit from technical advice on efficient system for engaging with smallholder and support on reducing the risk of investment as well this might also help to reduce the speed of land degradation due to tobacco farming in Murewa District by smallholder tobacco farmers

CONCLUSIONS AND RECOMMENDATIONS

This research, using mix-method approach reported on the impact of tobacco farming on the livelihood of the tobacco farmers and explored the relationship between tobacco production and land degradation in Mount Bokoto ward24 in Murewa District. In addition the research also beginning described the usage of pesticides and fertilizers to the health symptoms related to GTS and tobacco cultivation for ward 24 farmers. To the best of my knowledge this research was among the first of its kind to be conducted in Murewa District hence this study had generated a number of valuable findings surrounding tobacco farming not only improving knowledge of socio economic and land degradation due to tobacco production but more importantly providing sound evidence for deserrmination to the general public and policy makers at different levels in Murewa District. Therefore this would help to advocate for better tobacco control policies.

1. This study preliminarily described the livelihood of the tobacco farmers of Mount Bokoto ward 24 in Murewa District hence the findings of this research indicated that smallholder tobacco farmers were wealthier than the other farmers because tobacco production seemed to have slightly increased income level at the tobacco farmer in Murewa District.
2. The findings on tobacco production expenditure and revenue also confirmed the fact that tobacco bring much benefit to the farmers through the situation was called benefits are due to hard physical work. Therefore the results indicated that tobacco has become the main source of household revenues even in communities with a long tradition of planting tobacco.
3. Most of the tobacco farmers used firewood and coal in curing tobacco and most of them took woods for curing tobacco from the forest hence this is actually a bad practice as this

has led to deforestation. Flue-cured tobacco has been proven to be a threat to ecological functions in a number of studies therefore in Murewa District it is estimated that 1.2% of forest area was destroyed because of tobacco production. Tobacco farming has also contributed to an environmental crisis in a number of countries mostly in developing countries firewood is used as fuel to cure tobacco leaves and to construct curing burns.

4. Health effects related to tobacco farming has also proven to be the negative impact on people's livelihood. The consequences of tobacco farming among tobacco workers include green tobacco sickness GTS, an occupational illness reported by tobacco farmers. Research on GTS has indicted that there is limited evidence on the relationships between tobacco farmers and GTS-related self reported illness in Zimbabwe as well many developing countries.
5. As mentioned this study was among the first of its kind to be conducted in Murewa livelihood and land degradation in Mount Bokoto ward 24 in Murewa District. Due to some constraints like time I used retrospective approach to collect different types of information such as income and expenditure because, the information I collected might not be completely accurate especially the information on pesticides, fertilizers, etc. Equating all types of pesticides and fertilizers that might cause ecological problems hence I recommend further study on this research the suppression of human rights of women and children in tobacco production since they are the major laborers in tobacco farming.

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APPENDIX

QUESTIONNAIRES

My name is Munyaradzi Mhike a student from Midlands State University. I am carrying out a study on the impact of tobacco farming on livelihood and land degradation in Mount Bokoto, ward 24 in Murewa District.

Name of farmer.....

Date of interview.....

Type of farmer.....

A: DEMOGRAPHIC DATA

1. Are you the head of the household(HOH) (i) Yes (ii)No

If (no) What is your relationship to the HOH (i) Wife (ii) Husband (iii) Daughter (iv) Son (v)Other

2. What is the full-time of the HOH (i) family farm work (ii) rural agricultural work (iii) rural non-agricultural work (iv) employed in town (v) other specify.....

3. What is the size of the household?.....

B: LAND USE

4. How much land (total) do you own in (acre/hectares)?.....

5. For how many years has been farming in this region?.....

6. FILL IN THE TABLE BELOW

Crop	Hectares	Purpose of production
Maize		
Soyabean		
Tobacco		
Other		

7. How many do you have

Farm Asserts	Quantity
Tractor	
Plough	
Cultivator	
Scotch cart	
Vehicles	
Other	

Class		
Dairy Cattle		
Beef Cattle		
Donkeys		

8. In the past 5 years what farm venture generated the highest amount of money?
(i)..... (ii)..... (iii).....

C: TOBACCO PRODUCTION

9. How many hectare s/acres did you grow tobacco?.....

10. Is this first time to grow tobacco?.....

11. Why do you choose to venture into tobacco farming?.....
.....
.....

12. Do you intent to continue with tobacco farming in the future(i) Yes (ii)No

Why?.....
.....
.....

14. Do you hire labor for tobacco curing(i) Yes (ii)No

15. If yes, at what rate.....

16. Which method of tobacco curing do you use(i) Coal (ii) Natural Forest (ii) Gum plantation (iv) Other specify

17. What approximate yield do you got from a hectare/acre in terms of bales?.....

18. Approximately how many kilogram's constitute a bale.....
19. How much firewood do you require to cure a bale (using scotch cart).....
20. Who is the supplier of your firewood?.....
21. What are the charges rates of the firewood(\$/ scotch)?.....
22. What has been your best yield in tobacco production bale/hectare?.....
23. What has been the worst yield bales/hectares?.....
24. What was the reason for such a drop in your yield?.....
.....
.....

D: CONSTRAINTS AND POLICY MEASURES FOR LAND DEGRADATION

25. Are you facing problems during curing periods(i) Yes (ii)No
26. If yes what are the problems?.....
.....
.....
.....
27. What current measure do you take to reduce land degradation due to tobacco farming.....

.....
.....

28. Any future proposition that you feel will cater for land degradation minimization?.....

.....
.....

29. What amount are you willing to pay for damaging the environment through cutting down of trees (\$/bale).....