

# A Review of Effects of Emigration on Maize Production in Mpande Ward of Nakonde District.

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## **ABSTRACT**

*Migration may be forced or voluntary, or in many instances, reluctant relocations imposed on the migrants by circumstances. In the work of the founding father of modern migration research and analysis, E.G. Ravenstein (1885), it was implicit that migration was in effect caused by economic development. To make a clear relationship between migration and economic development, he postulated that as industries and commerce develop and transport improves, migration increases in volume. Thus, migration plays a significant role in today's world. The problem of rural emigration therefore continues to plague Zambia's development process. Basing the argument on some U.N. information, Rhoda (2000) predicts that labour migration from the rural areas will account for a loss of somewhat 40% in Africa and other developing countries.*

*Generally, emigration is both age and sex selective phenomenon and all people cannot move, the changes in the age-sex structure of migrants and non-migrants can also affect labour force participation and eventually production system such as maize production. One of the prevalent paradigms in migration studies, the "historical-structural" thought, blames emigration for the loss of the population that can best contribute to the growth of the country of origin, usually young workers with an entrepreneurial and brave spirit (De Haas, 2007).*

*Particularly, Zambia is not an exception, more so Mpande ward where the so well-known border town of Nakonde started, it is on this premise that this work was sought more especially with the observed retardation in maize production. Generally, the ward has over 2800 farmers and cultivates between 250 to 370 hectares of maize alone and labor is mainly manual, (reported by area camp officer,2019). Thus, migration was thought as a variable that could help to understand the said phenomenon primary on the effects of emigration on maize production in the said agrarian society. Therefore. the purpose of this study was to Review the effects of emigration on maize production in the agrarian society of Mpande ward. Thus, data was collected from 100 respondents of whom 01 was the area councilor, 20 village head men 40 public servant and 39 local residents. And data collected was both primary and secondary in nature which was processed using excel spread sheet. Therefore, the study showed that emigration although was moderate it had serious repercussions for the area such as reduced labour force leading to reduced production therefore affecting lots of walks of life such as income, food security, social behavior and many others.*

## CHAPTER 1: INTRODUCTION

### 1.0 Overview.

This chapter reviewed the effects of emigration on the changes in maize production in the agrarian societies of Mpande ward, thus, it tried to bring to light an overview understanding of the phenomenon under discussion. Henceforth, it also looked at the significance of the study, problem statement, as well as the objectives and research questions.

### 1.1 Background

Migration can be defined as the movement of people from one geographical area to the other for a period of not less than a year, and FAO (2018:1) considers migration as “a movement of people, either within a country or across international borders, irrespective of the drivers, duration or purpose of the movement. It encompasses economic migrants, migrants in distress, internally displaced persons (IDPs) refugees and asylum seekers, returnees and people moving for other purposes, including for education and family reunification” Since the first scientific work of Ravenstein (1885), the movement of people across different areas has been studied as a complex phenomenon involving mainly demographic and economic aspects. Internal migration is commonly understood as the movement of people from some rural area to nearby or distant city centre and it helps in redistribution of people over a large region.

Suffice to say normally little information has been gathered in relation to migration Lynda (2018:1) contends that “people who migrate within national borders in Africa have been largely ignored in contemporary conversations about migration. This is partly due to the fact that internal migration, and in particular, rural–urban migration, has been viewed in a negative light in development theory”

this trend therefore has led little and in some instances no data on migration in some areas , a matter which has seen a neglect on the effects of emigration on maize production in a number of areas. FAO (2018) Further highlights that in 2017, there were 258 million international migrants, which is a significant increase from 220 million in 2010 and 173 million in 2002. The median age of all international migrants in 2017 was 39.2 years, compared with 38.0 years in 2000.

As regards to the above account one can see that migration has not left any part of the world, as such it takes place locally and internationally. It is in fact for this reason with noted fact that Zambia is not an exception, more so Mpande ward where the so well-known border town of Nakonde started , it is on this premise that this work has been sought more especially with the observed economic and development retardation observed in the area, thus, emigration has been thought as a variable that can help to understand the said phenomenon primary on the effects of emigration on the agrarian society of the said area, in terms of maize production.

Zambia is 70% agrarian society, According to Nyairo (2011) in Zambia, agriculture is the main source of employment, accounting for more than 70 percent of the working age population. In 2011, the Agricultural sector contributed over 16% to GDP and continued to be the largest employer of the Zambian labour force. Thus, the government and other stake holders have taken keen interest in it, thus, much initiative have been put in place for the betterment of the same, for instance Zambia has a long history of input support, price control and subsidy programs for rural small scale farmers especially for maize which is a staple food for the many people. Before the introduction of structural reforms by the World Bank and the Internationally

Monitory Fund (IMF) on the country, input price and distribution were controlled through the National Marketing Board (NAMBOARD) with the objective of keeping the prices as low as possible for smallholder farmers (MACO 2007).

In Zambia great work has been done on migration in regard the modes of migration i.e. rural to urban, rural to rural and urban to urban not only that the general social and economic implication of migration from both the receiving and sending areas has also been carried out, so is its causes. Most researchers that have done work on Zambia have been motivated to go these lines basing on the works of scholars such as Micheal Todaro and Evereet Lee, For instance Todaro (1976) theorized that even though unemployment is high in the urban areas, an individual migrates in response to urban-rural differences in expected, rather than actual earning. Equally Lee (1966), in his famous sociological explanation contends that the process of migration and decision to migrate relate to (i) factors associated with the area of origin; (ii) factors associated with the area of destination; (iii) intervening obstacles and; (iv) personal factors. Back to Agriculture, equally many areas and factors has been researched on, in the quest to better and improve agricultural production, among some areas of interest haven been types of sustainable agriculture i.e. conservation farming, impact of Drought on agriculture, Agro zones and soil types, credit facilities and many other factors that influence agriculture. Maize production in Mpande ward regardless of the factor for the past four years According to Shem FRA shed: Deport Clerk has been as follows (*in 2014/15 it was 22886, for 2015/16 it was 3858 whereas for 2016/17 it was 3883 and for 2017/18 it was 14611.*) However, from both sides little effort has been made to instigate the link and influence of emigration on maize

production. This is why the researcher opted to carry this work considering the effects of emigration on maize production in the said area.

## 1.2 Statement of the problem

Migration is not a new phenomenon in Africa. Population movements in Africa have always existed from time immemorial, in the form of conquests, slow peaceful shifts in search of greener pastures, better soils, and better hunting grounds. It also took the form of massive fleeing of people from their tribal homes to evade captivity by slave traders. Different types of migration (forced or voluntary) have direct implications on agriculture, food security and rural development. For example, male migration from rural areas leads to feminization of agricultural labor in the countries of origin (FAO 2018). There is increased evidence of labor migration, having both positive but also negative impact on local developments in rural areas. Adverse effects of labor migration may include: brain drain; depopulation of rural areas, with lesser numbers of people willing to engage in farming activities locally. And According to the Bank of Zambia (2012) Zambia has enormous potential to become a major grower and exporter of agricultural and horticultural produce. The Country has abundant quality land, water and ideal climate suitable for production of a wide range of agricultural products. Despite the above, only 15% of the 60 million hectares of arable land in Zambia is under cultivation. The sector is characterized by low crop and livestock productivity.

Rhoda (2000) predicts that labor migration from the rural areas will account for a loss of somewhat 40% in Africa and other developing countries. In the traditional African society, the decision making, what was to be grown in the family farm and how the surplus and the profits made from the sale of the

produce were to be Invested, credit facilities secured and Most importantly, land ownership was vested in men; women were exempted from owning land, as a matter of custom, coupled with some other reasons has forced women shift to urban centers for betterment of themselves. However, little attention has been given to migration I relation to agriculture, as focus has been centred on other factors such as climate (rainfall, temperatures etc.) and others like soil fertility, policy and many more. Mahama (2013) indicates that ‘The consensus in the literature about the relationship between migration and agricultural development remains thin.’

The unresolved question regarding labour migration and agricultural production therefore, is whether migration enhance agro production enough to compensate for the reduced availability of labour in any specific setting (Mochebelele, 2000). In order to understand the complexity of the relationship between migration and agricultural productivity, this paper aims to examine the technical efficiency of maize farmers in Mpande ward of Nakonde district. We review the effects of emigration on maize production.

### 1.3 General objective

The overall objective of this study was;

To review the effects of emigration on maize production in Mpande ward of Nakonde district.

#### 1.3.1 Specific objectives

The specific objectives included.

1. To identify factors leading to emigration among the people of Mpande ward.
2. To relate various factors that affect the production of maize in Mpande ward.

3. To review the effects of emigration on maize production in Mpande ward.

#### 1.3.2 Research questions

1. What factors forcing the people in Mpande ward to migrate to other centers?
2. What factors affect maize production in Mpande ward?
3. What are the effects of emigration on maize production in Mpande ward?

### 1.4. Significance of the study

This study is significant in the sense that for any meaningful rural transformation to take place, it is inevitable for the government and other stakeholders to know the people’s temporal and permanent movements. In an attempt to ascertain rural production systems, it is important to understand women migration, for they do play a big role in the production system. How and why people migrate from one rural place to another is of utmost importance in an explanation of differential production system and economic development, with such knowledge the government, economist, regional analyst, planners, Geographers and any other interested parties are better able to ascertain and channel development to other particular localities and regions. The significance of this study therefore lies in the fact that it tries to explore how, through women migration lives of people can be affected either positively or negatively at the area of origin. This in turn will bring a better understanding of whether or not emigration brings development in the area of origin.

Knowing the direction or flow of migration will help planners and policy makers to come up with good planning strategies and policies. By looking at migration flow, we are able to understand the pull and push factors affecting migration as well as



assessing the available resources in a sending residence and how best they can be improved upon to caution out-migrations.

## 1.5. Theoretical framework

Human migration is the movement by people from one place to another with the intention of settling temporarily or permanently in the new location. Hagen-Zanker (2008) has categorized migration theories into two sub-divisions as 'initiation of migration' and 'perpetuation of migration'. Theories related to the first type are based on causes of migration while the second type is based on the continuity or universality of migration. Kurekova (2011) follows a similar approach. By analyzing previous migration studies of eminent researchers such as Arango (2000), Kurekova classifies migration theories into two divisions, namely, 'determinants of migration' and 'perpetuation of migration'.

### The New Economics of Labour Migration (NELM)

New Economics of Labour Migration has been developed recently with the purpose of challenging the assumptions and conclusions of Neo-classical Theory. NELM focuses on migration from the micro individual level to meso units such as families, households or other culturally defined units. In other words, a key insight of this new approach is that the decision to migrate is not merely an individual decision, but is a collective decision of households or families where their aim is not only to increase income, but is also a risk management strategy. However, the theory suggests not to ignore individual behavior, but to study it in the context of a group. When a group is considered, households are in a position to diversify risks of economic well-being by utilizing labour resources in different

ways, in this context some family members could be made to earn an income in order to minimize risks of job insecurity and income fluctuations by assigning them economic activities both in the place of origin and in the hosting place. Through this, deterioration of local income could be compensated by migrant remittances and vice versa. Furthering the argument, Cassarino (2004) opines that the return of migrants to the place of origin after achieving such targets as savings, insurance, household needs, acquisition of investment capital and skills is logical.

Thus, the NELM Theory was used because as Ellis (2000) puts it has the capability to explain how through international remittances, migration can be a household strategy to overcome such market constraints by enabling households to invest in productive activities and to improve their welfare more especially that the area under is barely few kilometres to both Tanzania and Malawi the supposedly destinations for emigrants of the area. Conceptually, this also implies that the development contribution of migrants is not necessarily linked to return migration. Still-abroad migrants, permanent settlers and their descendants can contribute to development by remitting money, which in turn can have great influence on maize production in the area. The theory also accords the possibility of ascertaining the motives behind migration in relation to family opinion and not individualistic perception.

The theory also helped to explain that migration is often more than a short-term survival strategy by rural populations, who were uprooted by global capitalist forces and more or less forced to join the ranks of a new international proletariat. Rather, empirical work suggested that migration is often a deliberate decision to improve livelihoods, enable

investments and help to reduce fluctuations in the family income that often used to be largely dependent on climatic and it was useful because it is more applicable to rural-urban internal migration in poor countries thus fitting the situation of Mpande ward which has experienced this kind of migration and that it is actually in a rural set up.,

## **Push-pull models**

Push-pull models dominated much migration thinking during the mid- twentieth century, until the 1960s if not later, and reflect the neoclassical economics paradigm, based on principles of utility maximization, rational choice, factor-price differentials between regions and countries, and labour mobility.

The model was opted for because it looks at the factors that force people to migrate thus, it was the best option because it helped the researcher to understand the factor that were at play in Mpande ward which made some individual to opt for migration. Two principle factors- push and pull-influenced people for migration.

*push factors* as eluded to push factors are the factors which make people leave their place of origin irrespective of the place of their destination. Definition says that push factors are those life situations which make someone be dissatisfied with the place where he or she lives Another definition defines the push factor as a feature or event that encourages a person to leave his or her place (high unemployment, poverty, famine, drought, natural disasters, political oppression or persecution, and so on). According to Boyd (2006) the push factors of emigration include one more important factor, that is gender equality or women's empowerment.

*pull factors* When people decide to leave their home land, they also choose the place where they move. Thus, pull factors from outside are important and they may become critical not only for the choice of migration destination but also for the decision to migrate alone. The pull factors are then defined as factors which make distant places appear appealing. Another definition explains a pull factor as a feature or event that attracts a person to move to another places. Broader view suggests that migrants are considering the economic conditions in their country of origin as well as the conditions in the place of destination. Emigration is more likely when the economic conditions decline and less likely when they improve, This means that migrants are responding to fluctuations in economic conditions Chihiro (2010:46) states that 'The well-known framework for understanding the causes of migration has been the ,push-pull' perspective, examining factors such as increasing population pressure, scarcity of land, and income disparity between urban and rural areas. The theories based on this perspective consider the migrating actor as an economically rational individual.'

## **1.6. Limitations of the study**

A number of limitations affected this study. Firstly, inadequate funding posed a difficult for the researcher to conduct the research as some very remote places were difficult to access, Language barrier was yet another limitation in which the researcher faced a challenge as the area is Namwanga speaking area. The other challenge was repeated visits to respondents who sometimes were not found during the first or second visit and to such several visits were made until they were found and data collected from them.

Some claims have been based on conventional wisdom without providing the original study or studies upon which the claims were based, without exhausting all topics or relevant studies.

The review covers a wide range of current and recent literature, focusing on publications from prominent scholars and reports. Because of the nature of the reports used in this review, some evidence has been based on older literature, which may or may not be accessible for fact-checking.

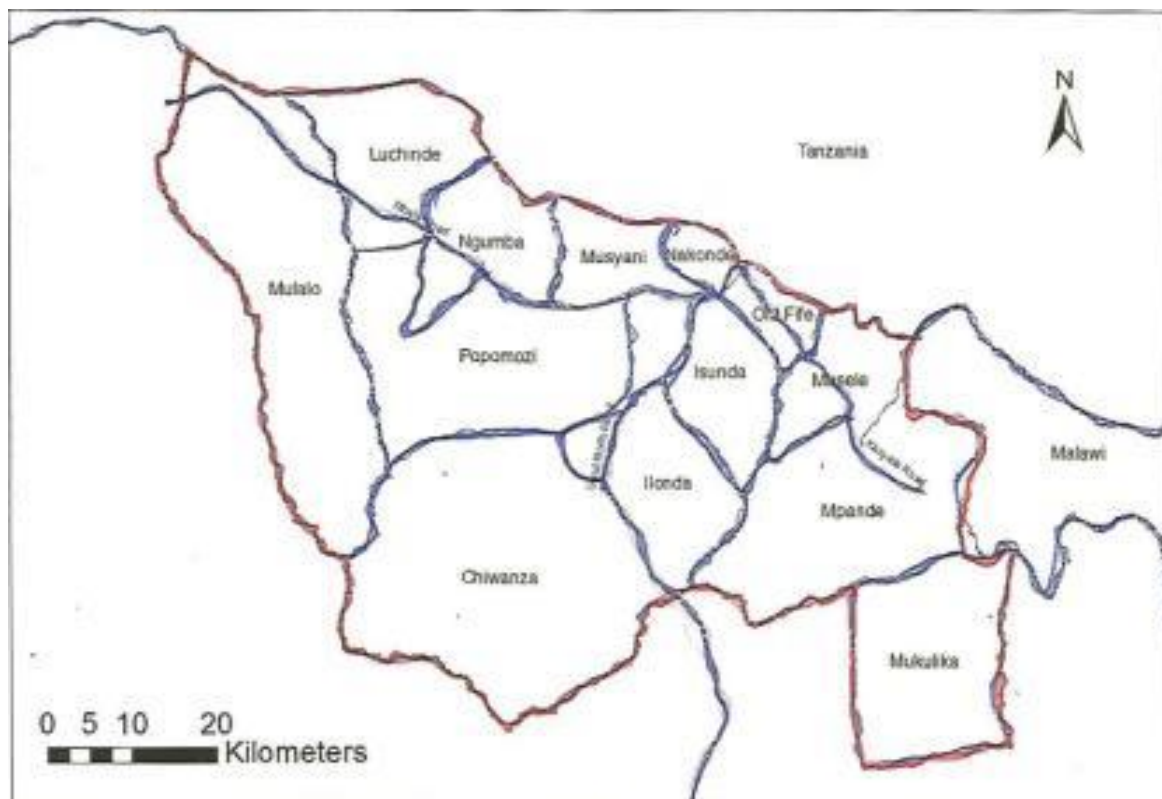
In addition, the study was also limited to the application of questionnaire, observation and interview guides to collect data which might not capture psychological aspects of the respondents which would assist to form cues on the status of the respondent's mind, attitudes and other factors. The study posed a challenge of reaching the respondents as the selected ones are widely spaced

geographically. Finances were another limiting factor as especially on the part of transportation.

## 1.7. Delimitations of the study

The study delimited itself to the effect of emigration on maize production within the boundaries of Mpande ward, however, since maize production is affected by a number of factors a look at some other factors was done so as to ascertain well how far emigration can go in affecting the production of maize. Mpande ward is found in eastern part of Nakonde district it is 30 kilometres from the CBD of the District, and lies along the Nakonde Chitipa road (Kanyala road) formerly Stevenson road. Generally, it falls in the general climatic characteristic of the district.

**Figure 01: location of Mpande ward.**



Source: Nakonde District state of Environment report 2015.

## 1.8 Ethical consideration

The research proposal was submitted and presented before the Information and Communications University research committee and as such it was scrutinized whether it met the ethical requirements. The purpose of the study was explained to and informed consent to participate in the research obtained. The researcher did not include names of respondents throughout the report. Other researchers interested in secondary data will access data file with encrypted subject identities.

The researcher assured the respondents of the confidentiality of the information provided, including their own personal information. The respondents were informed of the purpose of the study, that is, for academic purposes only. This was to enable them to provide the information without any suspicions.

The researcher also agreed to comply with the other following principles which aim at protecting the dignity and privacy of every individual who, in the course of the research work carried out under the project, was requested to provide personal or commercially valuable information about him/her or others hereinafter referred to as a subject of research.

## Chapter conclusion

This chapter has discussed the background to the study, statement of the problem, objectives and research questions. Further, it has presented the significance of the study, Theoretical framework.

## CHAPTER 2: LITERATURE REVIEW

### 2.0 Overview

The main purpose of this literature review is to provide a background for the previous researches on migration (with a focus on emigration) and how it has affected maize production. And to review some of the available works related to this field by considering some other factor that affect the production of maize as well. In migration literature there exists no single theory or models that covers all the aspects of migration. Therefore, here an attempt has been made to examine some of the important studies in this field.

### 2.1 Factors leading to emigration

Generally, migration takes place from economically depressed areas to the centres of commerce and industry. Thus, the real force behind migration could be the desire among people to improve their economic lot. though unemployment is high in the urban areas, an individual migrates in response to urban-rural differences in expected, rather than actual earning. Besides, due to an increasing pressure on agrarian economy as a consequence of high rate of population growth, constant re-distribution of the excess population from the rural areas to the urban areas within a country or beyond the international boundaries becomes the accepted norm Lee's theory of (1966), contends that the process of migration and decision to migrate relate to (i) factors associated with the area of origin; (ii) factors associated with the area of destination; (iii) intervening obstacles and; (iv) personal factors.

The drivers of migration are changing over time but have undergone limited research. In a recent report by the World Bank, analysts estimate that by 2050 there will 86 million internal migrants in Africa



from environmental change alone (World Bank, 2018). Unpredictable push and pull factors for migration are emerging at the same time as the sheer number of aspiring migrants is skyrocketing. The trend started to change in the late 1990s when other West Africans started to make up a more significant component of migration to Libya. In the 2000s, President Muammar Gaddafi became an important partner of the European Union (EU) in fighting illegal migration (Brachet, 2018). With his departure from power in 2011 and the ensuing chaos in Libya, many migrants saw an opening in their quest to reach Europe, and the number of sub-Saharan Africans transiting grew significantly.

Overall emigration from Zambia is not high by regional standards but the pattern of migration in Zambia is skewed towards the skilled. Even though international migration offers potentially large benefits to sending and receiving countries, industrial receiving countries have shown little interest in liberalizing the inward flow of the unskilled while being relatively open to the entry of the skilled. The total stock of Zambians living in the OECD countries is estimated at 27 per 10,000 of Zambia's population, an emigration rate far below that of many other African countries, such as Kenya (56) and Zimbabwe (47). Currently, about 10% of all tertiary educated Zambians live outside Zambia as compared to over 18% for Eastern Africa. The emigration rate amongst the tertiary educated is about 35 times that for the secondary educated in Zambia, while for most other African countries the ratio is below 10. The main reason for this is the low level of unskilled migration from Zambia. Emigration from Zambia is mostly driven by the economic motives mentioned above with little role of civil unrest, security concerns, etc., as the country has enjoyed peace and stability since its independence. Fears of mass emigration from

Zambia (and continental Africa) to the rich developed countries seem unfounded at least for the present.

## **2.2 Other factors that affect the production of maize**

### **2.2.1 Seed variety**

In the majority of countries, open-pollinated varieties are still the most common type of seed used. They can easily be multiplied so that their seeds are cheap and readily available, and the farmer usually retains a certain portion of his harvest for future planting. In fact, 60 percent of the total maize area in the developing world, outside of Argentina, Brazil and China, is estimated to be still planted to unimproved local varieties. Although national and international breeding programs have considerably increased the yields of open-pollinated varieties over the past, they remain below those of hybrids. Yields of hybrids, in fact, can exceed those of landraces open-pollinated varieties by 30-100 percent, with an average of perhaps 40-50 percent. (Weber, 2002).

In Africa the use of improved high yielding varieties is considerably low (Cudjoe et al. 2010; Breisinger et al. 2008). Yield data from the FAO suggest that yield increase in Ghana was of about 1.1% per year and is ranking among the lowest in the world, even if compared with countries of similar conditions (Ragasa et al.2013). In 2010, the food production estimates recorded a marginal increase of 4% of cropped area and according to MoFA in Ghana. On-station and on- farm trials suggest that yield averages between 4 and 6 tons/hectare for maize are actually achievable in the country

Several policy and regulatory changes influenced the structure of the seed industry. Along with

experiencing severe economic pressure and mounting losses in maize trade as well as continuing complaints from maize growers, Zambian government was under a huge pressure to liberalize the economy thus pushing for new reforms in the Agricultural sector and eventually the seed industry. Before, government had almost total control over maize production. Eventually, due to increased pressure such as complaints about low seed quality from farmers, high cost of improved seed, and contract problems with farmers, the Zambian government decided to liberalized seed market. During that time, the state gave up more control and several private seed companies were set up.

## 2.2.2 Access to finance

Access to finance is essential for the further development of maize farming enterprises: for example, successful marketing depends upon the purchase of containers for processing and packaging of products. Credit is necessary for maize farming associations running collection centres, buying products from producers and selling on in bulk. However, significant financial assets are not essential for maize farming at subsistence level A good maize farming project will work to ensure that all available capital assets are taken into consideration. The reduction of patronage ties, such as in South Asian villages that have adopted GR technologies, may also produce labour bottlenecks that affect harvests.

A report of a food-security forum in southern Africa (FFSSA, 2004), which examined the scope of the region's economic development from different sectors, argued that agricultural smallholders are a suitable growth driver, with impacts on pro-poor growth, food security, and market expansion. Expanded cash crop production by smallholder farmers could contribute both to rural growth

(through consumption, labour demand, etc.) and to household food security (e.g., through generating cash with which to buy food or inputs). Small-scale farmers' capital investments for intermediate goods and farm improvements were constrained by limited access to credit and low farm profitability. Small-scale farmers' only sources of formal credit, ZCF-FS, CUSA, and Lima Bank, provided mainly short-term loans. For example, between 1987 and 1990, about 90 percent of Lima Bank loans went to finance crop production while only between 1 and 4 percent was lent for machinery and equipment (Kalinda, 2007). Most credit schemes did not require savings as a prerequisite for obtaining a loan. Thus, most small-scale farmers did not build up personal capital for investments. Their agricultural assets (excluding crop inventories and cash/bank deposits) in the 1980s were estimated at US\$1,000 per farm household. Cattle accounted for most of this amount, while farm machinery accounted for 5 percent

## 2.2.3 Climatic change

Global food security threatened by climate change is one of the most important challenges in the 21st century to supply sufficient food for the increasing population while sustaining the already stressed environment. Climate change has already caused significant impacts on water resources, food security, hydropower, human health especially for African countries, as well as to the whole world. Effect of Climatic Change factor on Maize production Agro-climatic conditions mainly imply soil conditions and weather factors including rainfall, temperature and humidity (Michele, 2001).

Regionally Eastern African countries have taken maize production as a crucial aspect of development. According to Kaliba (2000) in the study on adoption of maize production technologies

in Central Tanzania where several issues require closer attention from research, extension, and policy makers. It was recommended that Research and extension efforts need to be linked and strengthened to increase the flow of information to farmers. In developing improved maize varieties, researchers must consider yield as well as other important traits: drought resistance/tolerance, resistance to storage pests, shelling quality, and taste. For this to occur, farmers must participate in the research process. The formal credit system needs to be altered to address the credit problems faced by small-scale farmers. A more efficient marketing system for inputs and outputs would benefit farmers by providing higher maize prices and reducing fertilizer costs. Such a system would require supporting policies from the government.

For Zambia specifically, World Bank (2006) indicated that temperature is increasing at the rate of 0.6 degrees Celsius per decade, which is ten times higher than global or Southern Africa rate. Nevertheless, in terms of rainfall, there would be both regional increase and decrease over land areas in the low latitudes (IPCC, 2001). Although it is still uncertain which effects climate change will have in different localities, most models indicate that they will be stronger near the equator and hence in Sub-Saharan Africa than in most other major regions on earth. For example, since 1970s, intense and longer droughts have been observed especially in the tropics and subtropics (IPCC, 2007). It is also predicted that countries that depend heavily on the primary sector (such as agriculture), are likely to be more adversely hit than countries that have a more diversified economic base Mitchell and Tanner, (2006.) Some 70 percent of Zambia's working population is engaged in agriculture, largely subsistence farming. The agricultural sector remains underdeveloped and vulnerable to weather

fluctuations, and food shortages have occurred in some areas.

## 2.2.4 Cost of the commodity

In the past, the maize market was controlled by the Maize Board, which apart from regulating the market also set a uniform maize price. In 1996 the maize market was liberalised and the Maize Board was abolished. One of the most important consequences of the abolition of the Maize Board is that prices are now allowed to fluctuate according to both local and international conditions. Another significant change that has taken place since liberalisation has been the restructuring of the main agents, with each level of the maize supply chain, thereby impacting on the levels of concentration in the market.

Furthermore, some discussions around maize production suggest that endogenous reactions to changes in price, or behavior related to price risk, also contribute to production instability. Some researchers at Michigan State University suggest that during a deficit season, prices increase and provide an incentive for increased production. Farmers face the risk that prices will be depressed when increased production in the following year results in a surplus. Farmers depend on export opportunities and advantageous import policies to mitigate the risk of depressed market prices.

Although this type of market behavior driven by reactions to price risk is noted in policy briefs, we were unable to find published research studies showing these dynamics in Zambian maize markets through econometric analysis.

Maize is the dominant food crop in most of the region, and most farmers grow maize for subsistence. A paper from the Food Security

Research Project – Zambia, at Michigan State University shows that based on post-harvest data from 2001 and 2004, approximately 40 to 45 percent of the total marketed supply of maize from the smallholder farm sector was produced by only 2 percent of smallholder farms, suggesting high concentration of the marketed surplus. These considerations suggest that interventions designed to raise market prices of maize could have negative consequences for the majority of rural households, especially the poor, who are net purchasers of maize in Zambia.

## 2.2.5 Accessibility of inputs

Fertilizer is considered a ‘lead’ practice, which predisposes the farmer to adopt other improved practices, thus, recognized as a major factor in increasing food production. It has become the ‘backbone’ of agricultural development programmes in many countries. According to Crawford et al. (2006) the improvements in soil fertility needed to stimulate agricultural productivity growth, improved food security, and increases in rural incomes will require substantial increases in fertilizer use in combination with improved land husbandry practices. In every region of the world, the intensification of crop-based agriculture has been associated with a sharp increase in the use of chemical fertilizer (Morris et al., 2007). Because of the strategic role of fertilizer in accelerating agricultural production and productivity, different policies have been put in place to promote efficient fertilizer production, distribution and use. As a result of these policies, there has been rapid growth in fertilizer consumption in Nigeria; rising from 186,000 MT in 1977 to over one million metric tonnes in 1994 (Ogunfowora, 1996). The motive for government involvement in fertilizer production, procurement

and distribution is that fertilizer is seen as vital commodity that should not be left to the care of the private sector which is regarded as exploitative and unreliable (World Bank, 1981).

In a research carried out on how food security of the local people of Solwezi Central farm Block had been affected it was reported that the delay on the delivery of input especially in the 2013- 2014 farming season saw the crop production per Lima (piece of land which is 25 x25 meters) at 10 x50 kg’s bags of maize. This poor harvest threatened food security especially among the vulnerable in the farming block and beyond. In the 2014 – 2015 farming season input had been delivered early and the harvest was good. This was attributed to good delivery of input and use of conservation farming in some areas of the block. Farmers on average produced 25 x 50 kg’s bags of maize per Lima. This mainly was revealed in the areas where Kansashi mines sponsored farmers with lime to neutralize soil acidity and encouraged conservation farming. In other areas good management of the crop resulted into good harvest. Enough rains and better temperature conditions contributed to the good crop production. Therefore, the period at which farmers received input correlated with crop production.

## 2.2.6 Land:

Land is an important resource in farming (Babalola and Olayemi, 2013), and a major resource for the livelihood of the poor (Raufu and Adetunji, 2012). Demand for land for agricultural purposes is increasing globally implying a limitation in land resources, and necessitating a yearning for decisions leading to the most beneficial use of limited land resources (Abah, 2013)

There is insufficient information on the impacts of land grabbing on the livelihoods of rural



communities, either negative or positive (Andrianirina-Ratsialonana and Teyssier, 2010). Over 90 percent of Nigerians live in rural areas and rely on agriculture for survival; dispossessing this greater percentage of the population of their major source of livelihood, will make land unsuitable for farming and in turn intensify poverty among these marginalised farmers.

In Zambia only 16 percent of the estimated 9 million hectares of cultivable land is regularly cropped and only 6 percent of the vast irrigation potential of 2.5 to 3 million hectares is used for irrigated agriculture. It thus seems that land as a resource cannot be considered a major constraint on further agricultural growth. Zambia's land tenure system classifies land in three categories: State, Reserve, and Trust Land (Milimo, 2000). State Land mostly consists of a narrow strip of land along the line of rail, 50 kilometres on both sides, and a few pockets of land in outlying areas. State Land, named Crown Land in the colonial era, was earmarked for European settlers and mining activities. It amounts to 3 million hectares and is held on 99-year leasehold. Reserve Land was set aside for indigenous people. It was augmented by Trust Land after land degradation was noted on the former on account of overcrowding. Both were placed under customary law and are mainly referred to as traditional land. They amount to 24 million hectares. Some factors have constrained the development of land markets in Zambia. First, for fear of creating a poor, landless society, the Land (Conversion of Titles) Act was passed in 1975. It deemed all land to be without commercial value and non-tradable except for the improvements on the 1995 Land Act tried to abolish the "no-value" and "communal land" constraints cited above.

## 2.2.7 Technology

Recent technological and methodological changes in farming have led to an emerging set of claims about the role of digital technology in food production. Known as precision agriculture, the integration of digital management and surveillance technologies in farming is normatively presented as a revolutionary transformation. Proponents contend that machine learning, Big Data, and automation will create more accurate, efficient, transparent, and environmentally friendly food production, staving off both food insecurity and ecological ruin

In the global perspective maize production is connected to technology. According to Huang and Rozelle (2004) on Technological change they stipulate that increase in the production of maize and other cereal crops in Zambia the last decade has been recognized as one of the most remarkable trying period in science and technology and agricultural policy reform. Development of technology, including hybrid technology; increased water availability through government-funded infrastructural projects; and the supply and use of inorganic fertilizer and other farm chemicals are important factors contributing to maize production growth

## 2.3 Migration and Maize production

Several papers make some reference to such impact's migration, but these are not analysed in depth to arrive at conclusions on the impacts of such migration on maize production. example is a case study of a migrant sending community in West Java by Silvey (2006), which documents how the landscape has been transformed with new houses,



satellite dishes and consumer goods, yet without discussing the impacts on maize production.

However, not all studies report positive economic impacts. Shaw (2010) collates the evidence on the impacts of Sri Lankan migrant domestic workers on source families and observes that while households with a female migrant were more likely to have working-age men at home than those with male migrants, this did not always mean that remittances were used productively.

Similar finding by Chukwuonne et al. (2012) indicated that remittances reduce the level, depth and severity of poverty in Nigeria. Nwaru et al. (2011) in their study of South Eastern Nigeria affirmed that the remittance recipient households had higher welfare than the non-recipient households. Again, Quartey and Blankson (2004) observed that remittances improve household welfare and have become an important source of income for consumption smoothing in Ghana. In Nigeria farm households will continue to spend most of international and domestic remittances on welfare, given the severity of poverty in the rural areas where they reside. Crop production is still the primary source of employment for women in most developing countries, particularly in sub-Saharan Africa. Almost two-thirds of rural women are from low-income households. over 50% of households in Africa reports at least one internal migrant and are located in rural areas, and the share of rural–urban migrants ranges from 40% in Nigeria to 55% in South Africa. Women’s participation in internal flow varies widely, ranging from about 12% in Burkina Faso to about 53% in Malawi (FAO, 2017) and country studies suggest that women account for an increasing proportion of internal migrants.

Despite the declines in the economy and the general deteriorations in the provisions of socio-economic

services and facilities, Zambia is one of the rapidly urbanizing countries in Sub Saharan Africa with more than a third of her population living in urban areas. The current rate of urbanization has been pegged at 40%, (CSO 2005). The population density is reported to be about 12.5 persons per square kilometre with the highest population concentration being in Lusaka and the Copper-belt provinces, which have 65.4 and 52.9 persons per square kilometre respectively. However, recent evidence suggests a slow shift in internal population movement in the country and involves migrants moving from either rural to rural, urban to urban, or urban to rural.

## Chapter conclusion

In a nut shell, it can be ascertained without doubt that emigration has been in existence from time immemorial, although literature has of late concentrated on some aspects of migration, its effect on maize production cannot be ignored.

## CHAPTER 3: RESEARCH METHODOLOGY

### 3.0 Overview

Having presented the introduction and background information of the research, it is now opportune to look at the methods and techniques that were used to gather the data for the study. The researcher describes the research design, instruments and procedures.

### 3.1 Research design

This paper embraced a Qualitative research, which is especially effective in obtaining specific information about the values, opinions, thoughts, and insights of the people concerned. When used along with quantitative methods of data collection, qualitative research can help us to interpret and better understand the complex reality of a given

situation and the implications of quantitative data. A descriptive case study design was used in this study and it specifically utilised a mixed methods research approach so that the researcher could have a holistic picture of the issue under investigation in this study as well as to overcome the weaknesses of each one of them and take advantage of their strengths. According to (Creswell,2012) Therefore the design has been chosen with a view of combining the collection and analysing of both quantitative and qualitative data to better understand the research problem in a single study. In this regard the research adopted both qualitative and quantitative approaches that suit well a descriptive case study (Creswell, 2009).

It will also use structured methods of data collection such as questionnaires and observation to qualify and quantify variations and to predict causal relationships. The use of various techniques to collect data facilitates triangulation and thus assures valid and objective results. Bryman (in press) says that “triangulation refers to the use of more than one approach to the investigation of a research question in order to enhance confidence in the ensuing findings.”

To compensate for the problem of representativity, it is possible to test the validity of what the respondents say by using a triangulation method. Using a triangulation method in this case implies that the researcher checks the results derived from one person with other people who are expected to have knowledge about the person or about the topic that is subject to investigation. One possible way of doing this in the context of emigration will be to travel to the native homes of the respondent and talk to her family or to other people who knew the person before they migrated. As *ibid* points out, participatory methods are useful for explorative questions. The output of the participatory

observations can be a good way of gaining information and develop questions for the in-depth interviews.

### **3.2 Study population**

The study comprised of the Area councillor, Village heads, Civil servants and the general public from Mpande ward of Nakonde District.

### **3.3 Sample size**

The researcher worked with a sample of 100 people of whom 01 was the Area Councilor,14 was Village Head, 30 Civil Servants and 55 community members. The Councillor, community members and the Civil servants were supplied with Questionnaires whereas the Headmen participated in the interview. This sample size was commensurate with the population the researcher was interested in.

### **3.4 Sampling procedure**

For qualitative research, the researcher employed combination of purposive sampling and simple random sampling. Purposive sampling is a non-probability sampling method which groups research participants according to preselected criteria relevant to a particular research question. In this case it was used due to the fact that some respondents were required to participate by virtue of their titles and responsibility. Simple random sampling is a random method of picking elements of a population that is widely distributed geographically or occurs in natural clusters of subunits. It was equally employed to arrive at a representative and proportionate number of respondents with regard to the sex, age, marital status and residential areas of the study population.

### **3.5 Data collection methods**

Data for the study was gathered from both primary and secondary sources. Primary data was sourced through questionnaires, observations, and interview guides while secondary data came from the review of a wide range of literature on the matter

concerning emigration. The researcher ensured confidentiality and anonymity of the participants in the study and Prior consent from them was obtained. Therefore, in this study both qualitative and quantitative primary data collection relied on interviews, and questionnaires to determine the effect of emigration on maize production in Mpande ward. Primary data was mainly obtained through semi-structured questionnaires with some study participants particularly men and women above 18 years and interviews with some key stakeholders. Interviews were held with key informants from Headmen, Subjects and Extension Service Officer from Shem camp.

### 3.6 Data collection Instruments

Data is often collected using questionnaires, observations, documents, interviews and past records (Creswell, 2003). However, in this study data was collected through the use of questionnaires, interviews and observations.

An **interview** is a face to face confrontation between the interviewer and the respondent (Leedy, 2008). The interview afforded the researcher personal contact with key people. The unstructured part of the interview guide was suitable for the study because it provided in-depth information on the matter.

### Questionnaire

A questionnaire is a document containing questions designed to seek information that is appropriate for analysis (Tuckman, 1997). The questionnaires allowed for anonymity and privacy, which encouraged more open responses on sensitive issues.

### 3.7 Data analysis

Quantitative data was analyzed using excel which helped in generating frequency tables and other descriptive statistics for easy interpretation and analysis. While qualitative data obtained from interviews was analyzed using themes and content

analysis. Emerging themes were critically and objectively described, analyzed and interpreted. Further, ethical issues were also taken into considerations by obtaining participants consent and permission from relevant authority. Additionally, the respondents' identities were kept anonymous as a way of enhancing confidentiality and privacy.

## CHAPTER FOUR: DATA ANALYSIS AND INTERPRETATION

### 4.1 Overview

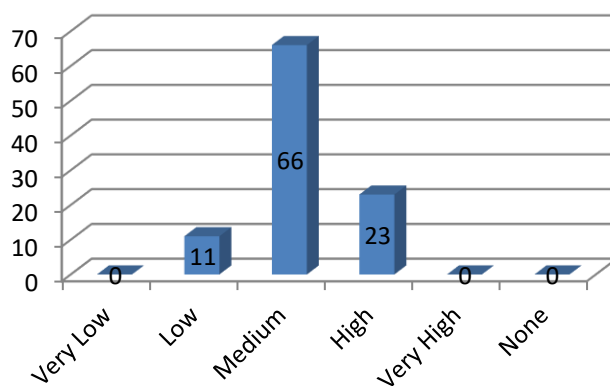
This chapter looks at the analysis, presentation, and the interpretation of findings. The chapter is divided into subsections. The first section presents the analysis and presentation of general characteristics of the respondents such as age, gender and marital status. In the second section, the data analyzed around key variables as relates to the migration of women on maize production.

### 4.2 Factors leading to emigration among the people of Mpande ward.

#### 4.2.1. Rate of emigration.

Figure 01 below is trying to ascertain the rate at which women are moving out of Mpande ward, in short it is trying to show the percentage of migration of women in the area.

FIGURE 02: emigration rate



Source; Fieldwork; February, 2019.

The figure above, indicates that 66 % of the respondents said that women migration is medium, were as 23 % said that it is high and 11 % indicated that it is low. Moreover, nothing was recorded for very low, very high and none.

#### 4.2.2. Reason for emigration in the area.

The table below outlines the factors that have forced women to move out of Mpande ward, thus, leading to women emigration (out migration).

**TABLE 01: Reasons for emigration**

REASONS GIVEN BY RESPONDENTS	No OF RESPONSES IN %
Death of Partners	23
Divorce	12
Lack of family support	13
Need for better Education	26
In search of employment	51
In search of social amenities, egg: housing, electricity etc	10
To join their spouses and Marriages	56
For business purposes	53
To seek improved health services	11
Search for Agro land in other areas	16
Poor performance of Agro activities e.g. low agro output.	19

Source: Fieldwork; February, 2019.

In table 03 above, there are a number of responses given by the respondents as factors leading to women out migration. Among the reasons observed the majority of the respondents gave such reasons as; search of employment, marriages and business as the main factors for the phenomenon with scores

of 51, 56 and 53 respectively. However, among the least factors were; prostitution calls, seek improved health services and seeking of improved social amenities such as electricity with scores 09, 11 and 10. Others reasons given were poor Agro performance with score 19, search of farm land 16, due to death of partners 23 and due to divorce 12. Lack of family support and search for better education had scores of 13 and 26 respectively.

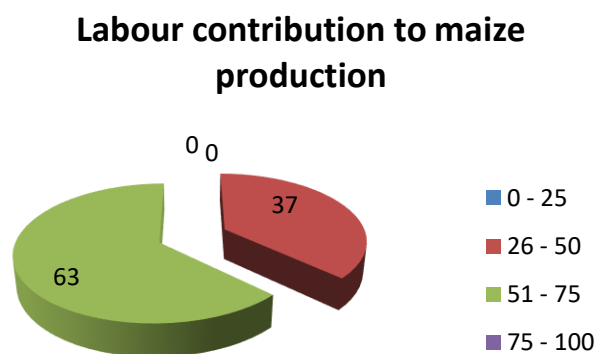
#### 4.3 Various factors that affect the production of maize in Mpande ward

##### 4.3.1 Labour contribution to maize production

##### 4.3.1. Labour Contribution by people towards the production of Maize in Mpande ward.

This figure given below is trying to give a picture of how much labour contributes to the production of maize in Mpande ward.

**Figure 03. Labour contribution to maize production.**



Source; Fieldwork; February.2019.

Maize is the staple food for in Zambia, and the government has been paying much attention to the production of maize. Thus, many communities in Zambia are maize producing societies, Mpande not

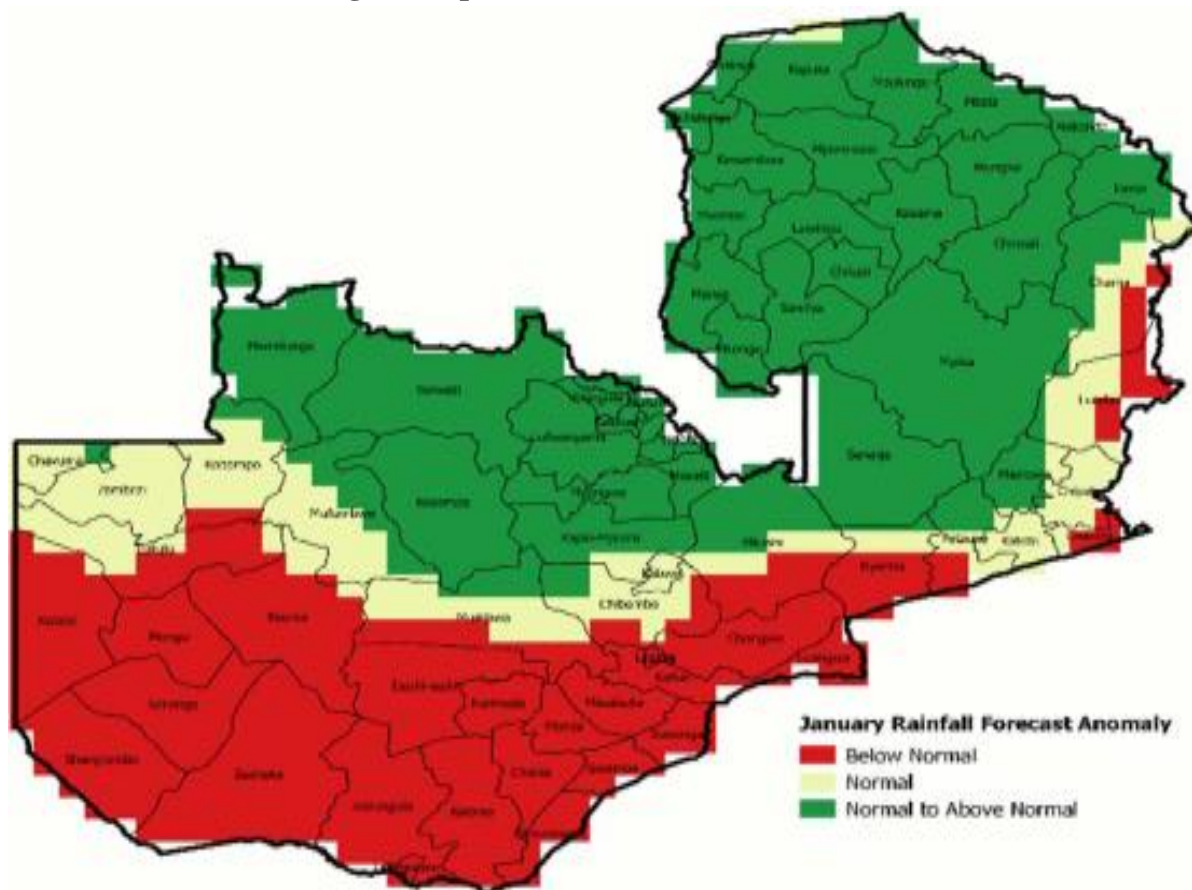
exception. Hence according to data gathered from the respondents 63% of them said that labour contribution to maize production was about 51 to 75 percent. And the other 37% of the respondents also

said that it was about 26 to 50 percent, and there was no score for percentage contribution of 0 to 25 and 75 to 100.

### 4.3.2. Other factors affecting the production of maize in Mpande ward.

#### 4.3.2.1. Factor affecting maize production in the Area

**Table 02: Factor affecting maize production in the Area**

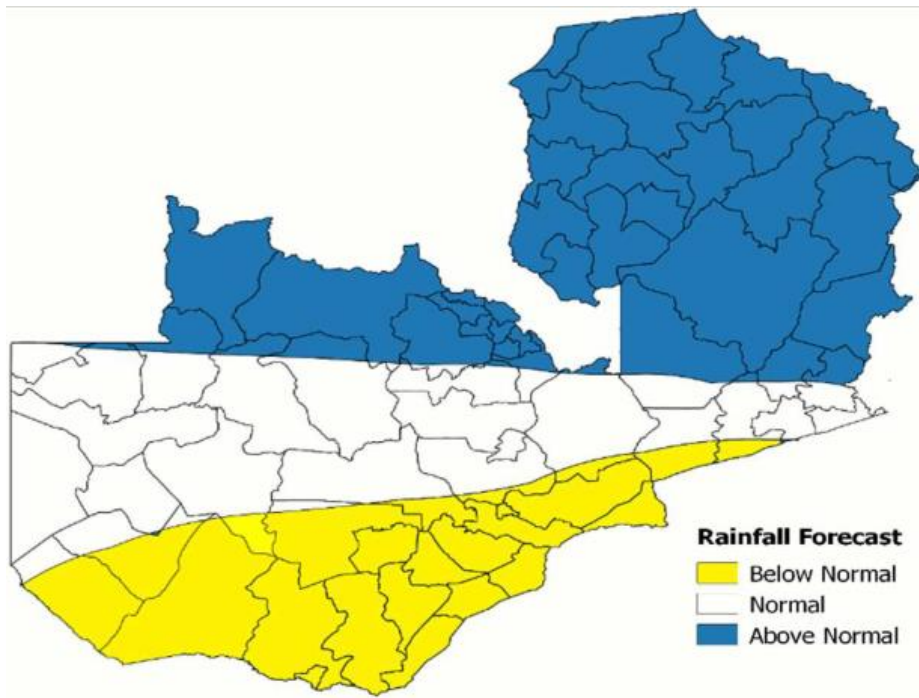
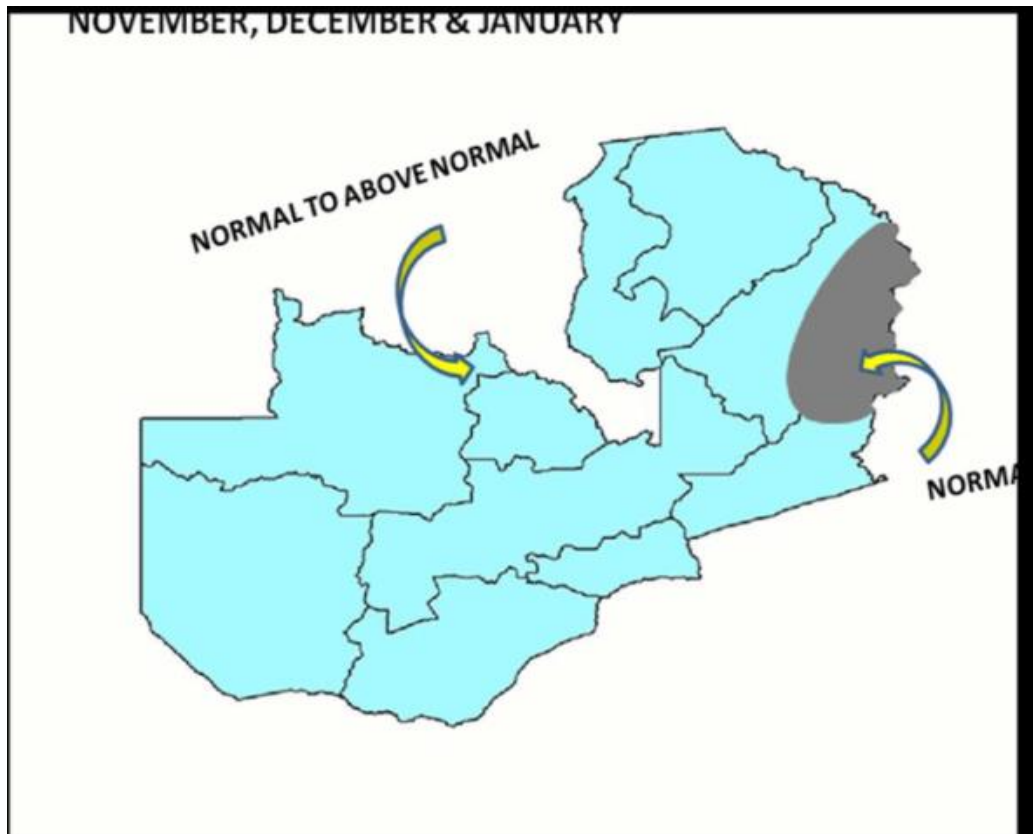


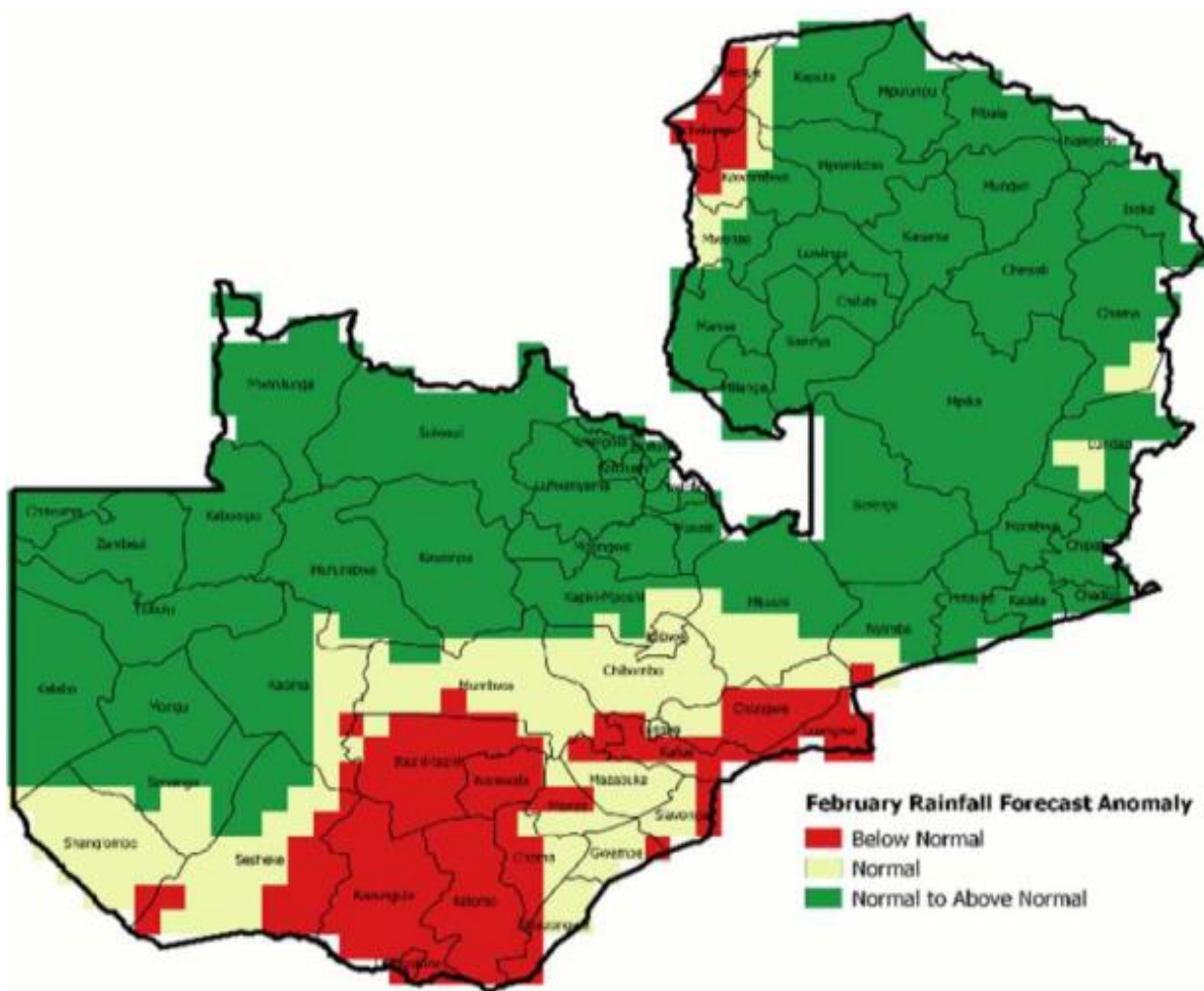
**Table 02: Factor affecting maize production in the Area**

FARMING SEASON (IN YEARS)	MAIZE HARVEST (in 000)	RAINFALL (Amount)	GVT price of 50KG Bag of Maize in (K)	PERIOD OF INPUT DISTRTION (Fertilizer)	No. Of Farmers per farming season.
2014/2015	22886	Normal	85	On time	333
2015/2016	3858	Normal	70	On time	103
2016/2017	3883	Normal	60	On time	72
2017/2018	14611	Normal	70	On time	198



Figure 03: Rainfall distribution. (2014,2015,2016,2017.)





Source: Zambia metrological centre 2018

In 2014/2015 farming season the total number of maize produced was 22886 50Kg bags, in 2015/16 there was a drastic fall to 3853bag but a very small increase in the number of bags was recorded i the 2016/17 farming season going to 3883 bags, and in 2017/18 it further increased up to 14611 bags. On the other hand, rainfall distribution was recorded at normal in area throughout all the farming seasons. As for maize prices by the government through the government agency ushered with maize procurement in Zambia Food Reserve Agency, in the 2014/15 marketing season a 50 kg bag of white maize was going at Kwacha 85, the price dropped in

2015/16 to kwacha 70 , and further dropped to kwacha 60 in the 2016/17 marketing season , however, the price appreciated in the 2017/18 marketing season to kwacha 70. However, farm input distribution (fertilizer) on average was on time for all the farming season under review. As for the number of farmers that participated in farming the years under review was as follows, in 2014/15 a total of 333 farmer were recorded to have participated and supplied maize to the FRA, in 2015/16 the number of farmers dropped to 103 and further dropped to 72 in 2016/17 but slightly increased to 198 in 2017/18 farming season.

## Other challenges faced by the farmers in Mpande ward.

**Table:02 challenges faced by the farmers**

CHALLENGE	%
Exhaustion of land due to mono culture	67
Limited seeds to practice crop rotation	53
Lack of Morden technology in crop production (maize)	44
Lack of access to suitable seeds to certain farming zones prone to dry spell	87
Lack of farm extension services due to vast catchment	72
Lack of information about climate change	36
Poor academic background by majority of farmers	91

Source: field work February 2019

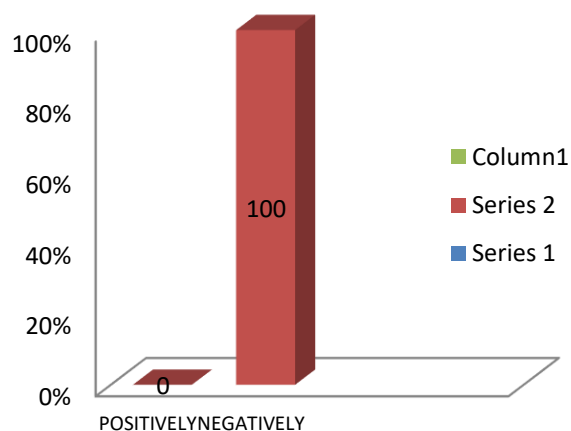
In the table above, it is evident that farmers are facing a countless of challenges, in this regard it was found that among some of which as postulated by the participants are land exhaustion due to over practicing of mono culture which led to the problem as forwarded by 67 percent of the people, the other one on the list was provided by 53 percent of the participant was limited types of seeds to help in facilitate crop rotation thereby leading to the above problem. Furthermore, 44 percent of the participants also provided that lack of Morden technology in the farming especially of maize was yet another problem that was faced by the farmers. In another development, 87 percent of the responses indicated that lack of access to suitable seeds suitable for certain already prone to dry spells was yet another challenge faced by the farmers in the ward. Yet 72 percent again of the participant showed that lack of farm extension services by the ministry of Agriculture was another problem primarily due to the vastness of the catchment area. Lack of information about climate change was yet another challenge as voted by 36 percent of the participants.

Last but not the least was poor academic background by the farmers also posed as a challenge in crop production.

## 4.4 Effect of emigration on maize production in Mpande ward

### 4.5.1 The rate of effects of emigration on maize production.

*FIGURE 04: The rate of effects of emigration on maize production.*



Source: fieldwork; February, 2019

Figure 20: Maize Growing in Mpande



Source: Nakonde district state of Environment 2015.

In figure 04 above, the data collected shows that of the 100 respondents that participated in the research, all of them thus, 100% were for the idea that emigration in Mpande ward had affected the production of maize in the area negatively.

#### 4.4.2. Negative effects of emigration on maize production.

**TABLE 03: Negative effects of emigration on maize production**

EFFECTS	No OF RESPONSES IN %
Reduced farm labour.	94
Reduced maize production due to reduced labour.	98
Shortage of food leading illnesses such as malnutrition.	92
Increased hunger in homes and communities as a result of reduced production.	86
Retarded family and community development due to reduced source of income for most people of Mpande ward.	46
Youths migrate leaving old people to perform farm labour.	37
Leads to increased school drop outs due to poverty, since mothers have migrated and are no longer participating in Agriculture as means of survival.	49
Psychological disorder, due to lack of support, since mothers have migrated.	44
Amounts to increased dependent ratio but reduced food production.	53
Leads to early or child marriage by those children left behind and, or those that migrate alone or with parents, when financial survival proves difficulty.	78

Source: Fieldwork; February, 2019.

It is clear as indicated in the table above, on the results of women out migration on maize production. In the table the results given by respondents show that, 98 of the respondents said that women out migration led to low production of maize in the area. Whereas 94 of them indicated that it led to reduced labour force on the farms. 86 of them also said that due to reduced maize production it led to hunger at household level and community level, thus 92 respondents added that as a result of food shortage it led to emergency of illnesses such as malnutrition. Thus, of the total 100 respondents 46 also indicated that low production of maize due to women out migration led to retarded development at both household level and ward level. Such an act also contributed to such vices as prostitution and theft by young girls and boys in the quest to make ends meet as a result backwardness due to low maize production as indicated by 21 respondents, other results were that old people were left with the responsibility of performing farm labour and rate of school drop outs increased due to limited income as said by 37 and 49 respondents respectively. Some other effects as indicated above were that 44 said it led to psychological disorder as a result of lack of support, 53 others indicated that it led to increased dependency ratio but reduced food production in most families, and 78 of the respondents said that it led to early or child marriages more so with the children whose mothers have migrated thus , subjecting the children to child headed families.

#### Chapter conclusion

The findings of the research were as presented above as given out or gathered from the respondents.



## CHAPTER 5: DISCUSSION OF FINDINGS

### 5.1: Overview.

Chapter Five discusses the results of this study in the context of the research questions and reviewed literature. Firstly: a discussion is centered on the period of stay in the area by respondents. Secondly: a look at the migration of women out of the area, thirdly: A look on the contributions made by women on the production of maize in the area. And fourth: A focus on the effects of women migration on maize production in the area.

### 5.2 Factors leading to migration.

#### 5.2.2: Rate of emigration.

##### 5.2.2.1: Rate of emigration from the area. (Mpande ward)

Emigration is the notion of people going or leaving the areas where they have stayed for a considerable number of years in option for some other place for various reasons mainly on permanent basis or for a considerable good number of years, from time immemorial to resent present male migration has been the center focus, thus, ignoring the fact that women have also been migrating, UKAid (2014:13) shows that “Although trends are context specific and changing (e.g. both men and women are migrating in increasing numbers).”

In 1983, the Zambian government agreed to implement Structural Adjustment Programs, including raising the price of maize meal. These policies hit the living conditions of the urban population, especially those with low incomes, and depressed the migration flow to major cities. In the past twenty years, net in-migration to urban areas as a whole has declined, particularly in the 1990s.

In Mpande ward it was found that indeed emigration has been taking place although not at a worrying rate but it was not at a low pace either, but moderate as 66% of the respondents ascertained that women out migration rate was moderate with 11% indicating low and 23 % indicating high. However, all in all one can conclude that women out migration in the area was neither high nor low but moderate, moreover, caution has to take as moderate was high enough to cause damage.

#### 5.2.3: Reasons for emigration.

##### 5.2.3.1: Reasons behind emigration among the people of Mpande ward.

There are many reason which leads people to migrate, the Pull and Push model has given out that people migrate because of un-conducive factors in resident areas which force them to go out termed as the push factor and those that attract them in destination areas termed as Pull factors Nori ( 2009 :1) stipulates that “ In the period 2009-2014 both internal and external migrants were largely young (between 20 and 40 years old); main reason to migrate for men for males is employment while women mostly migrate for marriage or family reasons.” Equally in Mpande ward the respondents gave out varied reasons that compounded the people of the area to move the first set of reasons were as follows, The major reasons that has contributed to the said phenomenon as given out by the respondents are the factor of some women joining their spouses either as newlyweds or to joins their spouses who relocated in search of better life. This factor was found to be the main reason especially among women emigrants in Mpande ward, on the other hand second in importance was need to venture into or participating into business was yet another major factor, in Mpande ward a number of residents have been relocating to the central



business district (CBD) of Nakonde for the sole purpose of doing business, it being the a border town it has a good business environment. Third in rank among the reason leading to emigration in the area was search for employment. In fact, it was discovered that almost 98% of the native that had acquired tertiary education had relocated to some other areas and 80% of them that had senior secondary education had also moved.

Coupled with the above factor, Death of partners was also among the reasons that made some to migrate , this is where some widows or widowers opted to go back to their paternal families or relocate in the quest to make the ends meet because they had kid they needed to support having become single parents. Furthermore, Farm land has been an issue in the Zambian community and generally Africa. This is so because tradition has deliberately disadvantaged women when it comes to owing of land, a matter which saw a high number of women without land of their own. Moreover, with the government's call to empower women with Agro land, many have migrated into such areas where they have just acquired farm land. That can be supplemented with poor performance in Agriculture due to such factors as destruction caused by pest i.e. army worms, and the elimination of subsidies which has made access of input such as fertilizer very difficult thus, forcing some women to venture into some other means of survival in some other new places.

In addition to the above factors the third set of reasons which seemed least but played a part in fueling emigration in the area also includes the following: Divorce was reported to play a part , woman especially those that had come from other places when divorced they went or go back to their fathers land, Lack of family support forced some

people in the area to migrate especially when the family could not help in material and financial hiccups, hence, most of the decided to migrate, and not only that others migrated in search of better social amenities such as electricity while other sought improved medical facilities especially those that has chronic diseases such as asthma. Some other women especially those in tender age relocated towards the CBD for prostitution after they failed to survive in the area for various reasons.

### **5.3. Various factors affecting maize production.**

#### ***5.3.1. Labor contribution to maize production.***

In most rural places of the Sub Saharan Africa, labour contribution towards maize production is about 60% to over 70% labour in agriculture and food production thus, (FAO 2007b ) explains that Although detailed statistics are not available and figures vary depending on the geographical context, it is fair to say that natives supply a large proportion of the agricultural labour and in some societies produce up to 80 percent of the food crop. The relationship between migration and agricultural productivity may be particularly interesting in agrarian settings for the following reasons. Agriculture is the primary source of rural household income, and so proceeds from agricultural production are the main source of liquidity for the household. If households in general face constraints against investing in migration, one would expect migration to be more likely to occur from more productive households. Alternatively, if less productive households send out migrants, one would infer that credit constraints are not an issue; and in fact higher productivity households find that retaining the labour of potential migrants locally would be more productive In Mpande ward it was found as reported by 63% of the respondents that labour contribution to maize production was

between 50 to 75 percent and 37 % of the respondent tagged it at between 25 to 50 percent. All in all, one can thus, conclude that residents' contribution to maize production in the area stood at 50% to 75%.

### **5.3.2: Other factors affecting the production of maize in Mpande ward.**

#### **5.3.2.1: maize production verses rainfall**

In the case of this study in the table in chapter four it is clearly shown that the harvest of maize in the periods of production stated had varied production however, one can still see that the area had received normal rains throughout the years but with great variations in maize production, for instance despite the area receiving normal rains in the 2014/15 and 2015/16 farming season there was a huge decrease in maize production which was 22886 and 3858 respectively and although the difference is not notable in the following season 2016/17 considering the same amounts of rain the change is highly notable in the 2017/18 farming season which saw an increase from 3883 to 14611 respectively , thus, though rainfall without question played a part in all these maize production it can be deduced that it was not the major determinant of the production that was received in the area.

Kassie (2013) explains that Drought has different intensities and thus different levels of damages to household level livelihoods. It is easier to remember, however, the serious devastations than the mediocre variations in yield level which farmers can rightly attribute to different factors altogether. Total crop failure due to drought was assessed in this study as it captures the experience and the vulnerability of the households to drought and similar vagaries of nature. The descriptive statistics of the crop failure due to drought across the countries shows that Malawian and Zambian

farmers experience total crop failure every three years on average. Mozambican farmers experience drought induced crop failure every four years and Angolan farmers every eight years.

#### **5.3.2.2: Maize production verses inputs**

When one tries to consider the output of maize with the provision of farm inputs(fertilizer) table in chapter four indicates that the farmers had accessed the inputs in good time, thus considering the huge variations in maize production, one can therefore conclude that even though inputs play a significant role in crop production , inputs in this regard had little influence because the variations of maize production in the years of production indicated were just too huge when farm inputs were accessed in good time.

According Wiebe (2001), Factors that influence productivity of a particular producer may be classified into three, as: the quantity and quality of inputs used to include land, labour and capital. Capital inputs among others include seed, fertiliser, and farm equipment. Farm and farmer characteristics on the other hand include factors such as size and topography of area cultivated, location of the farm with respect to input and output markets, age, gender, education level, household size, access to extension services, and access credit (Michele, 2001). Access to finance is essential for the further development of maize farming enterprises: for example, successful marketing depends upon the purchase of containers for processing and packaging of products. Credit is necessary for maize farming associations running collection centres, buying products from producers and selling on in bulk. However, significant financial assets are not essential for maize farming at subsistence level A good maize farming project will work to ensure that all available capital assets

are taken into consideration, without dependence on any that are not. For example, too many projects have depended on the importation of the beeswax foundation used in frame hives: this is impossible for beekeepers without financial assets.

### **5.3.2.3: Maize production verses Pricing**

If one carefully studies table in chapter four on the slots of maize harvest and maize price, one will see a correlation for instance in the farming season 2014/15 when the price of maize was k 85 , the production was very good meaning that farmers were motivated with the price, however, when the pricing had fallen in the years 2015/16 and 2016/17 equally the production also dropped but when the price was raised in 2017/18 from K60 in 2016/17 to K70 so did the production considerably increase. This therefore, suggests that maize pricing by the government had a big role to play in the general production of maize in the area.

### **5.3.2.4: Maize production verses Number of farmer participants.**

In table of chapter four it can clearly be noted that there is a very big relationship between maize production and the number of farmers that participated in the growing of maize in given farming season. One can see that in the 2014/15 farming season when the area recorded the highest number of maize production even the number of farmers was high ,but when maize production had reduced from 22886 in the earlier said farming season to 3858 in 2015/16, thus, a drop of about 83.14 percent so did the number of farmers reduce from 333 in 2014/15 to 103 in 2015/16 thus a reduction of 60.07 percent this loss was big enough to affect the overall maize production. Furthermore,

one can still see that in 2016/17 the area recorded tiny increase of maize production from 3858 to 3883 thus, 0.65 percent when the number of farmers had further reduced to 72 from 103 thus 30.09 percent. However, in the 2017/18 farming season the number of farmers increased to 198 thus 175 percent and equally the production of maize also increased to 14611 from 3883 in the previous farming season which amounted to 276 percent. This therefore, can be strongly be deduced that the number of participants in maize production had a direct influence on the production.

Jayne et al., (2006) explains that, the farm size structure of production is a key feature creating particular impacts of price instability in countries of this region. One important consideration is that farm size in the smallholder sector has been declining for the past 40 years and is estimated in Malawi, Zambia, Kenya and Ethiopia to have approximately halved over this time interval (Jayne et al., 2003). In addition, the distribution of landholding size is highly unequal within the small farm sector. Data on farm sizes for five countries cited in Jayne et al., (2006) reveal mean farm sizes in the small farm sector ranging from 1 ha in Rwanda and Ethiopia to 2.5-3.0 ha in Kenya and Zambia. The bottom 20 per cent of the land distribution is approaching functional landlessness in all cases, with access to less than 0.5 ha of land. According to the same source, in Malawi 80 per cent of smallholder farm households possess less than one ha of land.

### **5.3.3 other challenges faced by farmers**

The research findings showed that a lot of farmers have challenges in the production of maize separately from the effect of climate change. The research revealed that most farmers in the ward have got enough land for practicing crop rotation. Consequently, they are practicing mono cropping

which has led to exhaustion of soils leading to reduced yield. Furthermore, those farmers who had sufficient land had in short supply of seed to practice crop rotation. Additionally, farmer's academic background was another challenge and this led to most of them using conventional methods of farming which depletes the soil. Inadequate knowledge of modern technique of crop production and lack of farm implements was another challenge. The other challenge was lack of access to suitable seed varieties to plant depending on weather conditions experienced in the area and very few farmers are growing drought tolerant crops such as cassava and cotton apart from the main crop; which is maize. Secondly, most areas had meagre agriculture extension advisory services due to big catchment area for Extension officers in some areas and also late delivery of agriculture inputs under farmer input supply programme was another challenge. It was either some farmer planted early or late. Last of all, most respondents had insufficient awareness about climate change due to deprived access to bulletins from meteorological station on climatic information.

#### **5.4: Impact of emigration on maize production.**

##### **5.4.1. Rate of effect of emigration on maize production.**

Migration has both the positives and the negative effects on the social economic life of the people among the positives are the remittances received from emigrants while among the negatives are the depopulation; reduction in farm labour and many others Gladwin (2001) observe that in most parts of Africa, women consider farming for food as part of what makes them women and gives them a gender identity. In other situations, women themselves are the ones who migrate in search of employment, which again has significant consequences for crop

production. These intra household socioeconomic changes are important to understand and consider in any crop production intervention. Thus, in this light it was found that all the 100 respondents indicated that emigration in Mpande ward had a negative effect on maize production, henceforth, maize production in the area has been greatly affected.

#### **5.5. Effects of emigration on maize production.**

As stated above there are a number effects by migration both good and bad, and in this case of Mpande ward it was it was found that it had done them more bad than good, and among the effects found were as follows; one emigration in the area had affected labour, hence, there has been continued reduction of farm labour in the area. The other negative effect noted was reduction of maize production this was experienced because of farm labour reduction because the people that were supposed to do the production had decided to migrate, this is so because mostly Agro production is mostly rural incline in Zambia. In another development, because there has been reduction in maize production in the area it has led to shortage of food, hence, emergency of illnesses by among some local people such as malnutrition.

Research from elsewhere in Latin America similarly indicates that domestic migration damages agricultural systems. Barrios (2000) assert that in San Andre's, Mexico, temporary migration undermined "sociotechnical institutions" that promoted conservation and productivity enhancing practices, leading farmers to abandon nearly 40% of the best land and nearly 100% of the lowest quality land in the area. Researchers operating from structural perspectives have argued that international migration is even worse than domestic migration because regions are denied valuable labour for extended periods and remittances are

seldom dedicated to investment goods, productive ventures, or agricultural improvement, For example, Durand (2002) report in their review of the literature on Mexico that most studies indicate that between 66% and 92% of remittances are spent on basic and luxury goods, house construction, family health and debt repayment. International migration spurs demand led inflation in housing and land, but may not raise local food prices because migrant families purchase imported food products. Migrant households may purchase agricultural land inflating land values beyond the reach of non-migrant households but this land may be dedicated to pasture or taken out of production rather than improved or cultivated regularly.

## CONCLUSION

Based on the findings of the study as discussed above, it can be concluded that indeed emigration has been going on in the area and although the rate was estimate at moderate and not too threatening it was again a level that cannot be ignored. Thus, precaution is really needed. Various reasons were at play for the same and serious among them being relocation due to spouses' deaths, divorce, employment opportunities, others were to join couples or because of marriages, business venture and need for Agro lands were also among the reasons. These reasons therefore, call for minimisation if the matter is to be addressed.

The need to call for reduction of emigration in the area cannot be given a deaf ear, because in Mpande ward, the people has always from time immemorial contributed great to Agro production especially maize production. Thus, it is imperative that effort to address this matter be made. One can see without doubt that should the matter be ignored the ward will never develop has it should give a conducive environment, Maize production in the area has been

the greatest source of income for the majority of the people there although some other economic activities such as trade, livestock production, labour and house maid has been going on ,they have just supplemented , maize production cannot be sup placed, thus, it being the source of income and not only that but also source of food at home, there is thus, every need to improve production by cutting emigration.

Already the effects of emigration in the area is being felt, among the many negative effects of migration affecting the area are reduction of farm labour leading to reduced maize production which has affect from of cash (income) hence leading to such issues as dropping school by children, hunger in homes, increased prostitution as well as shortage of food leading to illnesses such as malnutrition at both house and community level. All in all, women out migration in the area has negatively affect production of maize in the area which in turn has affected the welfare of the people Mpande ward.

## RECOMMENDATIONS.

The reconditions of the research by the researcher basing on the findings of the study are as follows:

1. The government should consider:
  - i. Empowering rural people through expanding the already existing youth empowerment and Citizen empowerment funds to rural places and made the qualifications more friendly so that as many rural people as possible can qualify.
  - ii. Setting up an agricultural settlement scheme in Mpande ward so as to empower the people especially women with farm land.
2. The government and stakeholders to:



- i. Consider funding both the Secondary school and Primary schools in order to improve both the face and delivery of quality education so as to attract the local in order to caution emigration on this basis.
  - ii. Consider funding and upgrading Shem rural Health centre which is currently the only health centre in the ward and the referral centre for health centres in for Mpande, Mukulika, Musele wards in order to provide them with quality health service so as to cut them from relocating to other places for better health services.
3. The Rural Electricity Authority to quicken the installation of power at Shem centre and consider rolling out even to the surrounding communities so that electricity cannot become the reason for people's emigration.
  4. The government, NGOs and other stakeholders to:
    - i. provide education and other farm extension service to farmers so as to vest them with knowledge in order to improve production in order to attract farmers to stay in the farming business this way relocation on the basis of poor agro production will be dealt with.
    - ii. Come up with strategies that will help female farmers to access Agro inputs in good time and sell their produce with less difficulty at a good price in good time.
  5. Government, Private companies and individuals to consider setting up Agro processing companies in the area to provide employment to the people so that they can stop going too far place looking for employment.
  6. Government to reopen the community development office as well Social welfare office in order to co-ordinate the local development and provide social counselling services to both the parents and children over child marriages that have been going on in the area and take control of any such matter as regards the wellbeing of women so as to minimise emigration
  7. The study therefore recommended that compensatory lands should be released to the farmers and incentives granted to facilitate improvement in food crop (maize) production in the LGAs. In addition, the intended use of subsequent land grabbed by the government should be geared towards agricultural development projects following the provisions of the land use act instead of the gross violation as observed. Focusing on promoting and supporting farmers and ensuring full employment of farmers in the area will not only increase food crop production in the area, but will ensure sustainable livelihood peaceful governance.
  8. Training of members of staff under Ministry of Agriculture at all levels is needed in the area of climate change so that they have a wider knowledge on the issue and are aware of the expected effects. With that in mind, staffs will be able to carry out their duties responsively and in turn be able to educate the public.
  9. ) Information centre should be established (if not existing currently) so as to disseminate timely information (in connection with the meteorological department) to members of staff and the farmers on the expected effects of climate change.

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