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Agricultural Intensification and Livelihood Strategies
of Female Farmers in Babati District, Tanzania
A Minor Field Study



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Foreword

During two months in spring 2014 we carried out a minor field study in Tanzania with a scholarship from the Swedish International Development Cooperation Agency (Sida). This bachelor thesis in Human Geography is based on our field study and is written within the Environmental Social Science Programme at the School of Business, Economics and Law at the University of Gothenburg.

It was the search for an adventure and some luck that took us to Babati. We truly got an adventure and for this we would like to say *asante sana* to Sarah, Mwanaidi, Rose, Sylvia, Frank and Ngulu who gave us their time and knowledge. We would also like to thank our contact person in Tanzania, Per Hillbur, for interesting discussions and devotion. It would not have been the same without you!

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Maria Klerfelt and Marcus Bengtsson

Abstract

In many parts of the world and especially in Sub-Saharan Africa and Tanzania, where the majority of the poorest people live, agriculture is the way to make a living. Life in agriculture is in many ways marked by gender inequality. Female farmers carry a heavy burden both in the farm activities and the household chores while at the same time lacking access to resources as well as power within and outside the household. This gendered disadvantage is changing over time and space although the structure of this disadvantage remains in all places of the world.

In recent years the development agenda started focusing on agriculture to reduce poverty. The World Bank started promoting market-orientation for small-scale farmers, privatisation in land and agricultural intensification. Agricultural intensification is a concept to increase agricultural productivity by using more inputs for example labour, time or fertilisers. One place where agricultural intensification is an on-going process is in Babati District, Tanzania. Babati District was once characterised by fertile soils and available land and many people moved there to farm and the population increased. Today land scarcity and soil infertility are problems. Agricultural intensification is suggested as a solution. But with the prevailing structures of disadvantages in the livelihood opportunities for women we find it important to study how agricultural intensification affects the livelihoods of female farmers. The aim of this thesis is to identify and analyse the livelihood strategies of female farmers in relation to the process of agricultural intensification in six villages in Babati District. To find characterisations of the livelihood strategies of female farmers, the structure of livelihood strategies in general in the villages will also be studied and analysed. To reach the aim of the thesis three research questions are set up:

- Which are the main livelihood strategies in the six villages?
- What characterises the livelihood strategies of female farmers in the six villages?
- How can the process of agricultural intensification affect the livelihood strategies of female farmers in the six villages?

In order to answer the research questions we use qualitative methods consisting of seven focus group interviews with village officers and one Women's Group and 15 semi-structured interviews with individual female farmers complemented by direct observations. The theoretical framework link agricultural intensification to the perspectives modernisation theory, the livelihood framework and the term gender is followed by previous research on development in agriculture, livelihoods and women in Sub-Saharan African agriculture. Our empirical findings show that agriculture is the main way to make a living for rural farmers where subsistence farming is the major livelihood strategy in all of the six villages. Other livelihood strategies constitute a part the socio-economically poorest households. Labour-oriented livelihood strategies specifically labourers working in the fields of other farmers struggle much to support their households. The diversification of livelihood strategies takes place in farming activities but not in non-farm activities. The livelihood strategies of female farmers are characterised by household chores and farming activities while lacking access to resources, capital, services and information. The process of agricultural intensification takes place in a context where the female farmers have a marginalised position.

Keywords: Agricultural intensification, gender, Tanzania, livelihood, household typologies, female farmers

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1. Introduction

1.1 Background

One of the most fundamental factors for having a decent life as a human being is based on the ability to feed yourself and your family. A decent life when living in the Global North can be successful without any means of agricultural skills. For some people the food is just there in the supermarket or in that fast-food restaurant around the corner – and for those people the modernised agricultural development may have changed their relation to agriculture. In other places on earth the picture is quite different. For a majority of the small-scale farmers in rural Sub-Saharan Africa food insecurity and a struggle to feed the family is part of the daily life. As most of the people here are farmers, agriculture is a central part of the daily life where the desire to get a good harvest is of vital importance and the poorest farmers are the ones who struggle the most with this condition for life. For women in Sub-Saharan Africa the level of poverty is higher compared with men (Chant, 2007). A mother with a baby on her back, working on the fields with a hand-hoe as her only tool is the common picture in the rural landscapes of Sub-Saharan Africa.

Since the end of the colonial era institutions based in the Global North have come up with visions to develop African countries in similar directions as the modernised agricultural development has happened earlier in the Global North (Havnevik et al., 2007). The goals with these agricultural development programs have been to support poverty reduction, increase food production and economic growth (World Bank, 2007). The agricultural modernisation processes in the Global South have in earlier and on-going development programs had different effects in different places and the investments have not been spread in a geographically uniform way. The Asian Green Revolution is often described as stories of success for some of the Southeast Asian countries where the implemented modernised agriculture has been seen as the booster for the Asian economic growth (Bationo et al., 2011). Today the modernisation of the African agriculture is in an inception phase where strong perceptions about the necessity of a “productivity revolution” in Sub-Saharan African agriculture can be seen in the strategies for development (World Bank, 2007). Tanzania is seen as one of the poorest countries in the world, where Babati District in the northern part of the country is one of the places where agricultural modernisation processes take place today, mainly characterised by the concept of agricultural intensification.

1.2 Problem statement

Agricultural intensification is a ruling developing strategy suggested by the World Bank (2007) for Sub-Saharan Africa. The aim is to reach increased agricultural productivity to feed the people but it also involves patterns of liberalisation, growth of exports and aims to spread the growth from the agricultural sector into other sectors that will support the global growth (World Bank, 2007). The Food and Agriculture Organization of the United Nations (FAO) defines agricultural intensification as: “...an increase in agricultural production per units of inputs (which may be labour, land, time, fertilizer, seed, feed or cash” (FAO, 2004, p. 3). This kind of agricultural development involves changes in the lives of farmers where

opportunities to adopt are dependent on individual means of living. The term livelihood is used to explore the activities, assets and capabilities to conceptualise people's means of living (Ellis, 1999). The livelihood opportunities are affected by the unequal relations between men and women and the term gender is used to explain how there is not just a biological difference between men and women but also a difference in power, access and rights (Chant, 2007; Kabeer, 2005; Momsen, 2010). According to the World Bank (2007), the rural livelihood activities in Sub-Saharan Africa are mainly based on agriculture and life as a farmer differs between men and women. FAO (2011) shows how female farmers in Sub-Saharan Africa have less access to agricultural assets, social services and employment opportunities. In Sub-Saharan Africa, Tanzania is one of the poorest and least urbanised countries. Two thirds of the labourers are working in the agricultural sector. Most of the people are small-scale subsistence rural farmers using hand-hoes and the female farmers are among the poorest (Utrikespolitiska institutet, 2014).

In Babati District in northern Tanzania, a process of agricultural intensification is going on. According to Per Hillbur (2013), Babati District is an area to which people earlier moved to as they heard about the "grain basket of Tanzania" with good conditions for farming. Because of population growth since the 1950s until today, land scarcity is now an issue in Babati District and Hillbur (2013) as well as the World Bank (2007) stress the importance of an increased agricultural productivity. The agricultural intensification process in Babati District is in its beginning where the research program for agricultural intensification *Africa RISING*, funded by the USAID, started agricultural research trials on improved seeds and inorganic fertilisers in 2012 (Africa RISING, 2014). Since female farmers are disadvantaged in livelihood opportunities (Whitehead & Tsikata, 2004) it is crucial to study how the agricultural intensification process may affect female farmers.

1.3 Aim and Research Questions

In six of the 96 villages in Babati District, the research programme Africa RISING recently started researching and promoting the process of agricultural intensification. The aim of this thesis is to identify and analyse the livelihood strategies of female farmers in relation to the process of agricultural intensification in Babati District, Tanzania. To be able to find distinctions, disadvantages and opportunities in livelihood strategies of female farmers we find it crucial to also study the livelihood strategies among farmers in the villages in general.

- Which are the main livelihood strategies in the six villages?
- What characterises the livelihood strategies of female farmers in the six villages?
- How does the process of agricultural intensification affect the livelihood strategies of female farmers in the six villages?

1.4 Delimitations

This field study took place between March 31 and May 26, 2014. The study involves the six villages Shaurimoyo, Matufa, Long, Sabilo, Seloto and Hallu in Babati District and is based on the farmers' situation during the time of the field study. The Africa RISING research and promotion of the agricultural intensification process in Babati District started in 2012 and consequently our empirical findings reflect a development process that has been going on for only the past two years.

Africa RISING selected these six villages as research sites on agricultural intensification. Our study is delimited to the situation of female farmers in the six villages, including both farmers who are in cooperation with Africa RISING and farmers who are not. The research aim is set on how female farmers can get affected by the agricultural intensification process and does not aim at any evaluation of the Africa RISING project *per se*. The effects on the farmers will be analysed restricted to the socio-economic effects. Due to limited time in the field we chose to focus on the six villages where the agricultural intensification process is going on and have not made a comparison with other villages where the agricultural intensification process is not promoted.

The purpose of this study was to see how female farmers are affected at the household level. Both female and male farmers were interviewed but with focus on the situation of female farmers. Other gender issues than those connected to female farmers and the process of agricultural intensification will not be discussed in this study.

1.5 Disposition

In this thesis, we start by presenting our theoretical framework where we link agricultural intensification to the perspectives of modernisation theory, the livelihood framework and a problematisation of the term gender. This is followed by previous research on development in agriculture, livelihoods and women in Sub-Saharan African agriculture. We put the six villages in a geographical context, followed by the methodology of the study.

In the results section we first present an overview of the livelihood strategies and the socio-economic condition in the six villages. This is followed by the empirical findings on livelihoods of female farmers in the villages in relation to agricultural intensification. In the analysis, the theoretical framework and previous research is linked to the empirical findings leading to our conclusions. The thesis ends with our reflections and suggestions on further research.

2. Theoretical Framework

2.1 Introduction

Theories on modernisation and development, on livelihood and on gender serve as our theoretical framework.

2.2 Modernisation and Development

Modernisation can and has had different meanings during different times and so has the concept of *development*. According to Richard Peet and Elaine Hartwick (2009) the concept of development implicates at improving the life of people. Development is often controlled by different political agendas which can create a conflict between the political intentions in development strategies and the concept of development (Peet & Hartwick, 2009). According to Glyn Williams, Paula Meth and Katie Willis (2009), modernisation theories evolved from the field of development studies in the 1950s and 1960s. With newly independent countries in the Global South, the agenda of the Global North was set on how to transform traditional societies in the South to become industrialised and modern with theories based on experience from economic interventions in the Global North. One of the most influential theories from this time was Walt Rostow's model for economic growth. Rostow argued that all countries should struggle through five stages of development, to reach the same level of economy and development as in the industrialised northern countries. The "take off-stage" in the model was demanding an amount of savings and investment in the industry sector to set the wheels in motion and develop self-sustained industrialised nations. The intention was for the growth to trickle down from the invested sector to create a diversified economic base and a modernised society. The modernisation process in Rostow's model was meant to proceed like the one in eighteenth-century Britain. The difference in Rostow's analysis was the possibility to compress the period of take-off, from a period of over one hundred years in Britain to happen within one generation in the Global South. Rostow meant this was possible with investments from the industrialised countries (Williams, Meth & Willis, 2009).

Peet and Hartwick (2009) stress how modernisation theories display the cultural attitudes from the Global North and declare their leading role that can direct the rest of the world with mass consumption as a universal goal. Development, in the spirit of modernisation theories, is aiming for poorer countries to copy the goals, institutions and culture from the wealthier countries. According to Peet and Hartwick, modernisation theories were developed in the global context of the post-World War II era. A response from the Global North to socialism as an early antipole to neoliberalism. Criticism on development theories was gaining its momentum in the mid-1960s. The universal concept of copying the modernisation processes in Rostow's model was criticised for suggesting the same method and goals for all nations without considering the diversification in different nations' natural, social, cultural and pre-capitalist history. Also the fact that the development of capitalism has already happened in an historical context in the Global North with current power structures where the Global South has to adapt into the current system makes the possibilities small for nations in the Global South to be competitive within existing structures in the international market.

2.3 The Concept of Agricultural Intensification

As Peet and Hartwick (2009) state the meaning of development is to contribute to a better life for people. Lowe Börjesson (2004) states that the underlying factor for most academics and politicians regarding the issue of agricultural intensification as development method lies in the concern of producing enough food for everybody. Population growth in combination with limitations to cultivate more land stresses the issue of intensifying the agricultural productivity. Although Göran Djurfeldt et al. (2005) argue that agricultural intensification in poorer countries does not only occur when there is a population growth or not enough land to cultivate, but can also happen due to commercial forces in the combination of the anti-state bias and market-orientation in the development community.

Börjesson (2004) describes the concept of agricultural intensification as a model with two internal concepts. The first is to increase the inputs of capital in the agricultural activities and the other concept is to increase the inputs of labour. Examples of capital inputs are machinery, biotechnology and energy. Labour as the input basically involves high input of manual labour. Land is a constant in the process of agricultural intensification since the core in the concept is to increase the inputs of labour or capital to raise the yield of a land area during a fixed period of time.

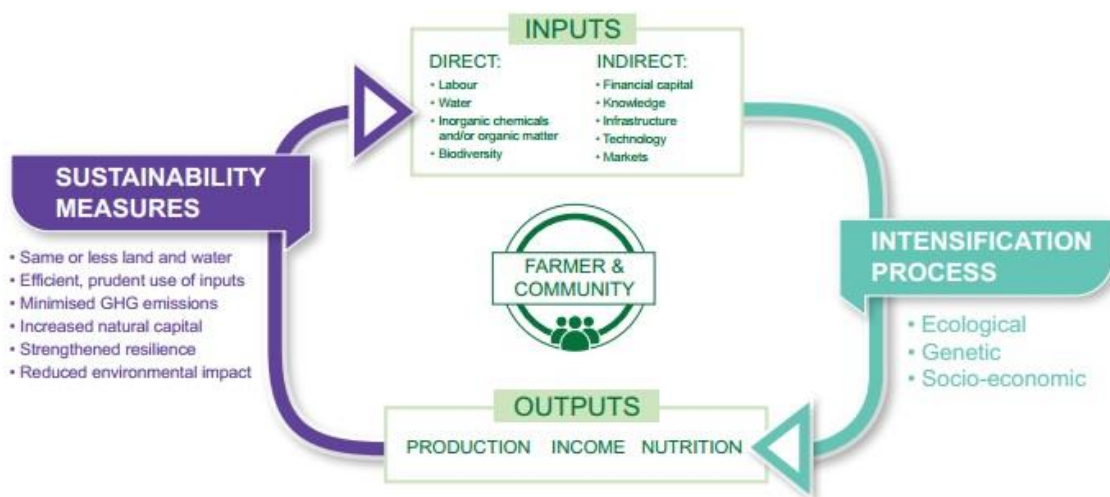


Figure 1. Theoretical model of agricultural intensification (Montpellier Panel, 2013, p. 12).

The concept of agricultural intensification is debated whether it has a positive or negative effect on the environment. It is also debated if agricultural intensification can satisfy development goals concerning agricultural growth, poverty reduction and a sustainable use of resources. A discussion in the development agendas regarding local knowledge and modernised technical knowledge is also concerning the sustainability of the methods in agricultural intensification. Critique has also been made regarding the creation of farmers' dependency on agricultural inputs to maintain their agricultural productivity. The debate concerning African agricultural development is generally set on the question whether there is a need for more sustainable and ecological farming practices or for an increased industrialisation of agricultural production with resemblances of the modernisation theories to satisfy the demands for food and development (Börjesson, 2004).

2.4 A Livelihoods Framework

The concept of livelihood can be explained as *means to a living*. It is not just the net income or consumption but the concept directs attention to the way in which a living is obtained. A common definition is that a livelihood "...comprises the capabilities, assets (resources, claims and access) and activities required for a means of living" (Chambers & Conway, 1992, p. 7). The sustainable livelihood framework is defined by Frank Ellis as "...the activities, the assets, and the access that jointly determine the living gained by an individual or household" (1999, p. 2).

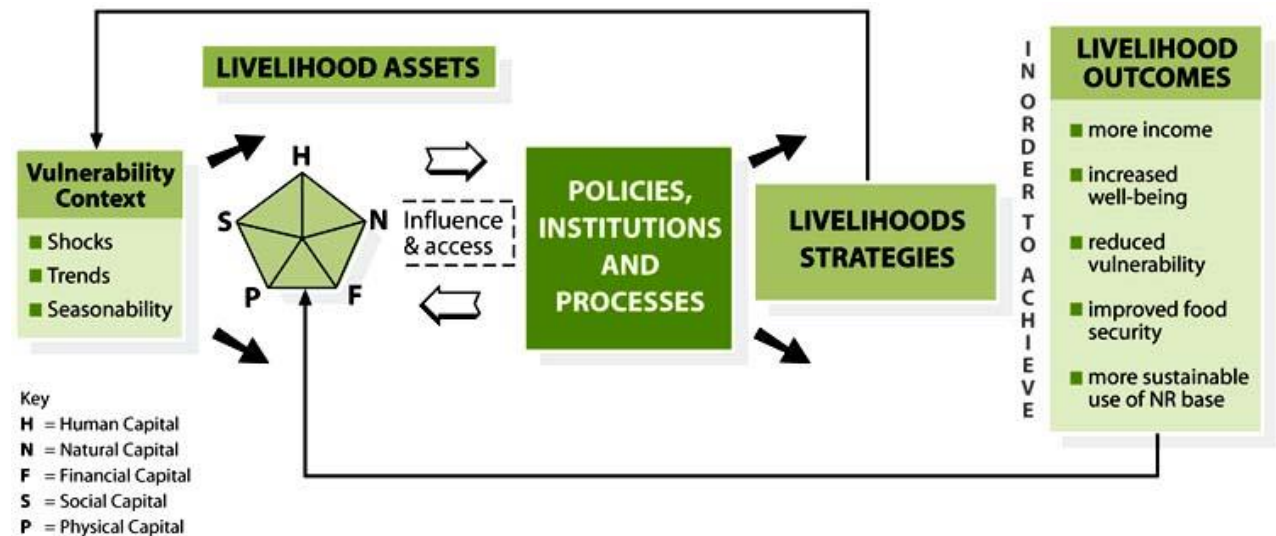


Figure 2. Sustainable Livelihood Framework (FAO, 2014).

Assets are identified as natural, physical, human, financial and social capital (Ellis, 2000). In the definition we find access as particularly interesting since Ellis (2000) views this term as defined by rules and social norms that determine people's ability to control, own and claim resources. Social relations, such as gender relations, have an impact on this ability. The term access also refers to the ability to take part in and derive benefits from social and public services. When exploring gender relations and access, Naila Kabeer (2010) highlights the importance of looking at women's access to employment, education and political participation. Research shows how women benefit from education, an income that they control themselves and the opportunity to take part in the political life. However, it is not the access *per se* that makes a change. For example, access to paid work may entail a sense of self-reliance but if the labour conditions affect their health negatively and exploit the labourer – in that case the negative effects might outweigh the positive effects. Access to education can improve the life of women but must provide them with analytical capacity and courage to question injustice if change is to occur. In politics women are often selected from a small elite and for this to change it is important to support grassroots constituency to elect and support women's presence in governance. Kabeer (2010) points out how women's collective capabilities are necessary to consider when looking at the issue of access. Further Ellis (2000) writes that livelihoods in rural areas are not fixed but on-going processes characterised by adaptability in order to survive. Assets and activities are in different ways affected by season, time, natural hazards, norms, trends in the national economy and so on.

A Typology of Rural Households

When studying livelihood strategies the household is considered as an appropriate social arena for analysis. Ellis defines a household as “...conventionally conceived as the social group which resides in the same place, shares the same meals, and make joint or coordinated decisions over resource allocation and income pooling” (2000, p. 18). There is a wide array of rural livelihood strategies. There is a misconception that the type of livelihood activities chosen by the household determines the success in reaching a higher standard of living (World Bank, 2007). A livelihood strategy does not tell the economic status or the well-being of a household. A typology for rural households has been set up by the World Bank:

Some farm households derive most of their income from actively engaging in agricultural markets (market-oriented smallholders). Others primarily depend on farming for their livelihoods, but use the majority of their produce for home consumption (subsistence-oriented farmers). Still others derive the larger part of their incomes from wage work in agriculture or the rural non-farm economy, or from non-agricultural self-employment (labour-oriented households). Some households might choose to leave the rural sector entirely, or depend on transfers from members who have migrated (migration-oriented households). Finally, diversified households combine income from farming, off-farm labour and migration. (World Bank, 2007, p. 75)

Typologies of livelihood strategies can be made by using a proportional measure of the distribution of households between different types of activities (Ellis, 2000). To be able to make a typology of the household strategies, get quantified and comparable results the World Bank define the categories with ‘the breakpoint’ at three quarters (75 %) of total income:

Table 1. *Definition of the typology of rural households (World Bank, 2007, p. 75).*

Market-oriented farm households	> 75 % of total income from farm production and > 50 % of agricultural production sold
Subsistence-oriented farm households	> 75 % of total income from farm production and ≤ 50 % of agricultural production sold
Labour-oriented households	> 75 % of total income from wage or nonfarm self-employment
Migration-oriented households	> 75 % of total income from transfers/other non-labour sources
Diversified households	Neither farming, wage labour nor migration income contributes to > 75 % of total income

As human geographers we use a contextual approach by looking at Babati as a place, a web of socio-spatial practices, where we will use the typology as a tool to study the livelihood strategies and link those to the theories of intensification, modernisation and off course; gender.

2.5 Gender and Place

The term gender refers to the ideas of femininity and masculinity by which people are identified. Linda McDowell (1999) states how the term sex refers to biological differences while gender depicts socially constructed characteristics. McDowell (1999) points out that there is a connection between sex, gender and power. There are power structures based on the idea of women as inferior that derive from the assumption that there is a categorical difference between men and women. In the structures of society as well as in daily interactions there is the thought of men and women as opposites. Masculinity is associated with power, production, independence, work and the public sphere while femininity in this dichotomous relationship is associated with the opposites like lack of power, reproduction, dependence, home and the private sphere. Janet Momsen (2010) finds that these identities and constructions also form the often unequal relations between men and women as well as the conditions in life, work and economics of people. The term gender role is used to explain how different household tasks and types of employment are given to men and women according to norms. Gendered characteristics vary over time and between cultures as well as in everyday practices and spaces. When thinking of gender differences ethnicity, religion, age, class and other factors like these must be considered (Momsen, 2010). Richa Nagar (2004) points out how intersectionality has been a crucial theme within theories of gender issues during the last decade and how concepts such as *situated knowledge* or *grounded knowledge* have been used within feminist geography to create analytical tools to research symbolic and material constructions of identity, power and difference in place and space.

The term place in everyday language is used to define a geographical area, a dot on the map. Within human geography place is the term that weaves together social processes and geographical space. Doreen Massey (1994 in Forsberg, 2003) defines a place as a complex web of relations of domination and subordination but also of solidarity and cooperation. Gunnel Forsberg (2003) writes that the making of a place is through actions and social networks developing in an area. Massey (1991 in McDowell 1999) writes that socio-spatial practices create different places that can overlap and cross each other's boundaries. The boundaries are not fixed but constituted and affected by power relations.

Momsen (2010) argues that since gender relations are socially constructed they are neither binary nor fixed but changing. The issue of gender needs to be considered within a society with historical and political conditions in mind. Forsberg (2003) states that femininity and masculinity are shaped in different places, which is of great importance for understanding how gender relations are a part of the society as a whole. Spatial practices and gender are interconnected and a place is shaped by human actions. Different places are also linked together through social relations and networks on a regional, national and global scale. Forsberg (2003) writes that this interconnectedness is the reason we are able to tell how gender, class and ethnicity are linked together. Ruth Fincher (2004) writes that everyday places, such as in our case the home, the fields or the local market, exhibit power relations which are imbricated and differentiated by gender relations together with the factors of ethnicity, age, class and so on. Sites, scales and spheres where people live their lives cannot be separated when talking of power and politics. The local, the domestic and the private spheres are in fact just as "political" as the national/international.

3. Previous Research

3.1 Introduction

Previous research in agriculture is wide and scattered. We start by focusing on research that has been characterised by modernisation theories to support agricultural development. We give an account of research that involves the major concepts in agricultural development in post-colonial Africa where agricultural intensification plays a central role. This will be followed by the agricultural development in sub-Saharan Africa and Tanzania and the life of women in agriculture where previous research on livelihoods and gender is explored.

3.2 Agricultural Development

3.2.1 Development and Modernisation in Agriculture

A fundamental issue in agricultural development is the debate on population growth and whether or not it generates food insecurity. The view of why agriculture and innovations within it evolved as they have was questioned by Ester Boserup in the 1960s. During this time the Malthusian theory was dominating and in this theory it is the agricultural productivity that affects and sets the limit of the size of the population. Boserup (1965) looks at the issue from the opposite side where changes in population are the factor that affects the agricultural methods and she states that people are capable of solving agricultural issues through innovations. She argues that agricultural practices are being used first when the population needs it. A small population that does not increase would probably not see the necessity of developing their agricultural methods, while an increasing population will have to face the issues of higher productivity and investments in the agricultural activities. Even though some intensification processes in agriculture is first used when the population needs it, Boserup states that in some cases it is possible that population growth has occurred without that the population concerned has been aware of any methods to intensify the agricultural activities. The population growth can then force the people to shorten the period when the soil is in fallow without changing any agricultural methods, which generally leads to decreasing harvests and soil infertility. The people are then in the choice between facing starvation or migration (ibid.).

According to the World Bank (2007), increased agricultural productivity is not only a trigger for food security but can also work as an economic booster, initially for the agricultural sector but sooner or later also as a way to spread development and growth into other sectors. According to Andre Bationo et al. (2011), during the 1960s and 1970s several Asian countries were affected by severe food shortages caused by low agricultural productivity and population growth. Through a number of interventions with focus on smallholder farmers, some of the Asian countries managed to become self-sufficient and to develop an economic growth through the “Asian Green Revolution”. The Asian Green Revolution was supported by governmental investments in roads, education, irrigation, energy, credits and subsidies for fertilisers. Governmental interventions together with high private sector activity and in collaboration with development partners like USAID pushed for a higher agricultural productivity and laid the ground for a coming economic growth. Bationo et al. (2011) present

a number of reasons why African countries could not transform their agricultural productivity like the Asian countries did. One of the main reasons was that the major crops of the Asian Green Revolution, which was rice and wheat, are easier to improve than the diversity of major crops in Africa. There is also a more diversified agro-ecology in Africa than in Asia and the weather conditions differ between the two continents. Other complications in Africa were the negative effect of rural farmers who have limited political power, low level of infrastructure and weak institutions as compared to the situation in Asia. These complications were to a large extent caused by the Structural Adjustment Programs (SAP) (Bationo et al., 2011). The SAPs were implemented by the World Bank and IMF during the 1980s and included privatisation processes, producer price reforms, removal of subsidies, liberalisation in trading and a declined role of the state (Havnevik et al., 2007).

3.2.2 Modernisation in African Agriculture

An “African Green Revolution” similar to the Asian one was, according to Kjell Havnevik et al. (2007) as well as by Göran Djurfeldt et al. (2005), emerging during the 1970s but failed because of economic crises and the SAPs. Havnevik et al. (2007) view the World Bank as the major influence in the process of agricultural development in post-colonial Africa. They further present how two major development approaches were presented by the World Bank in the 1970s, where Havnevik et al. (2007) argue that the first approach could have put the ground for a Green Revolution in Africa. This approach highlighted the needs of education, employment, health improvements, income redistribution, poverty reduction and investments in basic needs. This basic needs development approach included rural development programs where agricultural modernisations together with improved social and physical infrastructure were significant to improve the rural development.

The other approach was instead formed by neoliberal analysis of development and stressed the importance of market-orientation. After the oil-crises in the 1970s and the neoliberal governance in the US and UK, the neoliberal approach came to be the ruling development paradigm in the World Bank policies. To make the developing countries more market-oriented an expansion of market exchange was needed to contribute to the growth of the world economy. The IMF and the World Bank implemented SAPs in developing countries during the 1980s. Instead of an expansion of market exchange this led to large debts for a number of developing countries. According to Havnevik et al. (2007), the IMF and the World Bank failed to understand the African rural society with its complex system that was rooted in traditions far back in time. The African agricultural productivity declined during the 1980s much because of the changed agricultural conditions during the SAPs where the smallholder rural farmers’ subsidies on improved seeds and fertiliser disappeared and left the farmers’ with decreasing harvests (Havnevik et al., 2007).

The World Bank presented their second World Development Report on agriculture in 2008, published 25 years after the first one. In this report, named *Agriculture for Development*, the agricultural development is stated as a vital tool to get people out of extreme poverty and hunger. Agricultural intensification is an essential method in the report where a productivity revolution is described as important. They also argue for “pathways” that can bring smallholder farmers out of poverty by entering the “new agriculture” with high-value products or by entrepreneurship in rural non-farm activities. The opportunities with the new agriculture are in the report presented as the dynamic new markets, technological and institutional innovations in cohesion with new roles for the state, private sector and the civil society. The farm production is mainly produced by smallholder farmers and most efficient

when supported by agricultural organisations. When these organisations fail to evolve economies of scale in production, the labour-intensive commercial farming is being described as a more effective way to reach growth (World Bank, 2007).

The report *Agriculture for Development* states that most of the people in Sub-Saharan Africa base their livelihood on agriculture. In these agriculturally based countries the majority of the people are living in rural areas as smallholder farmers and a productivity revolution is argued as a vital method to create growth in the agricultural sector. The World Bank (2007) means that a major issue with the Sub-Saharan African agricultural sector is that the staple food is unattractive on the global market in combination with high transaction costs and that an increased agricultural productivity can contribute to solving these issues. The agricultural productivity sets the price of the crops which determines the wage costs and the ability to compete with foreign agricultural sectors. An increased agricultural productivity can lower the price of the crops which also lowers the wage costs. This is suggested to create growth in the agricultural sector and will make it more attractive in trading with the global market. According to the World Bank (2007), growth in the agricultural sector spreads, through so called multiplier effects, into other sectors of the economy. The productivity efficiency should according to the World Bank, be focused on staple food but also involve higher productivity of market-oriented cash crops for exportation. Improvements should be made for those small-scale farmers whose profits on investments are highest to improve the competitiveness and the ability for an expanded market. By capitalising the agriculture the intention is to activate the rural non-farm economy which can support non-profit farmers to engage in the non-farm economy instead. The features in the World Bank report are suggested to be linked to the market development. The agenda is also suggested to include management of water and soil together with efficiency improvements with technological interventions like improved seeds and inorganic fertilisers (World Bank, 2007).

Ann-Helene Meyer von Bremen (2013) stresses the issues in the development agendas where Africa is suggested to be an important exporter of cash crops in line with the World Bank report *Agriculture for Development*. The organisation Alliance for a Green Revolution in Africa (AGRA) cooperates with the government of Tanzania with subsidies for inorganic fertiliser, where half of the cost for the subsidies is financed by a loan from the World Bank to the Tanzanian government. Meyer von Bremen highlights the voices from farmer and environmental organisations that criticise development methods with fertiliser subsidies, which rather subsidise the fertiliser companies instead of the farmers since the creation of a fertiliser dependent agriculture will make farmers dependent upon inorganic fertilisers to maintain their production level (Meyer von Bremen, 2013).

3.3 Exploring Livelihood Research

3.3.1 Diversification and a feminisation of poverty?

According to Ellis (1999), the livelihood strategies in Tanzania follow a pattern of diversification. Empirical findings show how rural households reliant on subsistence farming are among the lower levels of income. According to Frank Ellis and Ntengua Mdoe (2003) the way of improving the means of living for the people in rural Tanzania is by becoming less reliant on agriculture and go towards more diverse livelihood strategies. Research on livelihoods show the tendency for rural households to engage in multiple occupations or

activities is often highlighted. Ellis (1999, p. 2) defines this rural livelihood diversification as "...the process by which households construct a diverse portfolio of activities and social support capabilities for survival and in order to improve their standard of living". In previous development discourses there was an assumption that economic growth from farm activities through linkage effect would create many non-farm income-earning opportunities in rural economies. Ellis shows that the income opportunities, besides agriculture, for poor people are often found in part-time and unskilled labour. There is now a realisation of how livelihood diversity results in complex interactions with factors such as poverty, farm productivity, environmental issues and gender relations. Ellis defines gender as an inseparable factor in researching rural livelihoods. Assets, access to resources and opportunities are not so much in the hands of women as in the hands of men. Due to discriminatory access to education as children, women often have a lower level of education. Ellis (1999) has found that decision-making is commonly made with the bargaining power of men. On the issue of diversification, multiple activities can create a better opportunity for livelihood security while this can have different effects on men and women. Rural women have less access to the labour market than men and are also more reliant on low-income/low skilled jobs. Diversification is a greater option to men and can at its worst trap women in a disadvantaged situation (ibid.).

Diversification might not show the same opportunities for women who are amongst the poor and the poorest of the poor. Sylvia Chant (2007) challenges the meanings of poverty in relation to the concept of livelihood from a gendered point of view. In research on livelihoods in many parts of the world, poverty is an important question to clarify and challenge. Caroline Moser (1998) states that the conceptual debates on meanings and measurements of poverty are important to explore. Moser (1998) highlights how research show that when looking into issues of livelihoods it is important to identify what people living in poverty have rather than what they do not have and focus on their assets. The term feminisation of poverty derive from the fact that the majority of the poor people in the world are women, the poverty gap between men and women is growing and that female-headed households are amongst "the poorest of the poor" (Chant, 2007). Chant (2007) challenges the concept of feminisation of poverty and the connections between "feminisation of poverty" and female-headed households. She points out that female-headed households are often victimised within the research discourse. The biggest group of female-headed households are widowed mothers and they are often pictured as unable to support themselves and their children. Chant (2007) writes that a woman who is head of household in some cases has expanded opportunities. Cheryl Doss (2001) argues that when talking about head of households there can be different classifications according to gender. A *de jure* female head is divorced, widow or single while in many cases a married woman is *de facto* household head if the husband for some reason is not present in the household.

Chant (2006) highlights the overemphasis on monetary poverty and income. Other criteria such as access to land and credit, decision-making power, vulnerability to violence and dignity are equally important when examining livelihoods. Chant (2006) suggests a discussion on the "feminisation on responsibilities and obligation". While women in developing countries are often economically poor it must also be taken into account that there are gender differences in inputs in livelihood efforts at household level. In her livelihood studies, Chant (2006) finds that there is a trend of women's work as diversifying and intensifying while the inputs from men are declining. Even though it becomes harder for a man to have the role as the primary economic supporter of the family, there is no significant increase in men's participation in the reproductive work. Chant (2006) has also found a persistent and sometimes growing difference in the capacity for negotiation between

obligations and rights between men and women within households. Research show that while women work harder in contexts of poverty and have a heavy responsibility, they get minimal time for rest or recreation while men are entitled periodic or regular “escapes”. Doss (2001) writes that men rarely take over women’s activities within agriculture except for when those activities become profitable. Even if the woman may be the one who runs the farm on a daily basis the husband is often treated as a key decision-maker in interactions outside of the domestic sphere such as with contacts to government officials, banks, traders or development agencies. Research has also shown that extension services are less likely to reach poor farmers and especially women (Doss, 2001).

3.3.2 Women in Sub-Saharan African Agriculture

In 2011 the FAO released the report *The State of Food and Agriculture 2010-2011. Women in Agriculture – Closing the Gap for Development* which shows that in Sub-Saharan Africa, 50 % of the workforce engaged in agriculture are women. Women generally have smaller farms, on average half to two-thirds of the size of men’s. Economically women receive less income even if they have the same qualifications. Women are also more depending on seasonal and low-skill employment. They keep less livestock, and often of smaller breeds which results in less earnings from the livestock. Women have less access to credit and financial services. Besides an overall lower level in education they also have less access to information regarding agriculture and agricultural extension services, which is a system of state employed agricultural advisers working in the villages in Sub-Saharan African countries. According to the FAO, women are also much less likely to be the one purchasing agricultural inputs such as mechanical equipment, fertilisers and improved seeds (FAO, 2011).

Within the literature on gender and development there is the realisation that within all societies a clear-cut division of labour by sex exists even though what is considered a female or male task varies between cultures, which means there is no fixed division of labour. In order to understand the gender roles in production, such as farm work, we need to understand also the gender roles at household level. The concept of gender roles, which can be explained as the household tasks and types of employment that are assigned to women and men, is important to acknowledge when looking at the burden of household chores (Momsen, 2010). Women provide 85-90 % of the time spent on household chores such as food preparation and they often have the responsibility of taking care of the children. As noted above women also engage in agricultural work. The combined burden of farm work and household chores is particularly severe for women in Africa. This division of labour is also entangled with other processes in society (FAO, 2011). FAO (2011) gives the example on how poor infrastructure and insufficient public service causes Tanzanian women to spend a huge amount of time to collect firewood, fetching water and in childcare activities. Improving infrastructure for water and fuel collection would save the Tanzanian women 8 billion long and heavy hours of work per year. Doss (2001) finds that women often are responsible for growing the subsistence crops while men are responsible for the cash crops. Research in Sub-Saharan Africa shows that women today are involved in cash cropping, but not to the same extent as men due to lack of inputs, credit, market information and less access to land. Both genders may be involved in growing the same crop but in different stages. In some cases high yielding varieties are seen as men’s which means that not only the crop but also the variety may vary by gender. Research show that women’s burden grows when new technologies are introduced such as increased time in weeding when fertilisers are applied (ibid.).

3.4 Gender and Place in Agriculture

For households depending on agriculture as their livelihood, land is the most important asset (FAO, 2011). Land rights and ownership is clearly an issue, especially for women. Ann Whitehead and Dzodzi Tsikata (2004) point out that the issue of land and the contemporary level of land scarcity differ among the African countries. The level of scarcity depends on factors such as degree of urbanisation, commercial development in agriculture and a country's experience of the colonial appropriation of land. How to handle land scarcity is affected by historical, political and ideological shifts. During the 1980s the discourse of population pressure in combination with a commercialisation in agriculture led to a severe pressure on land resources. A situation of increased conflicts between land users, increased individualisation of land access and a demand for more formal property rights occurred. It was also during this time individual land tenure became a focus in the modernising discourses of agricultural intensification and economic growth. Another issue when talking about land as a rural resource is according to Geir Sundet (2005) the growing phenomenon when wealthy countries buy land in developing countries and export the crops immediately is called "land grabs". However, land grabbing can be found at different levels; by international actors, by wealthy individuals or national companies. Previous livelihood studies in Tanzania, such as Ellis and Mdoe (2003), stress the importance of access to land and resources such as livestock. In Tanzania all land was previously owned by the government but is now released for reallocation and ends up in the possession of a few individuals. There is a similar situation when looking at livestock ownership where people who are better-off have cattle and the livestock ownership is non-existent among the poor people (ibid.).

According to Whitehead and Tsikata (2004), African land access and use are gendered issues. Women in Sub-Saharan Africa have had access to land for a long time but women and men have rarely or ever had the same right to claim land. The ability to claim land is embedded in gender relations where different positions within kinship systems for women and men are powerful factors for access to land. However in general, the process of privatisation affects women's property rights negatively and results in that African women's are losing land rights. This is due to women's systematic disadvantages in state- as well as market-backed systems of property ownership or because of gender discrimination in local-level leadership. Whitehead and Tsikata (2004) state that the land legislation in Tanzania today is characterised by legal pluralism, statutory and customary rights, and that this is a conscious constructed dichotomy that is connected to other dichotomies such as urban-rural, public-private, modern-traditional and male-female. Dichotomies such as these are often used by the people in power to control the less powerful. There is empirical evidence showing negative results for women in local-level negotiations. But in some places women are also gaining from this process. Case studies show that women, whether as mothers, sisters or wives, have to fight harder than men for their right to land. Life-cycle changes such as marriage, divorce or widowhood can create difficulties in relation to land tenure (ibid.).

When looking at resource regeneration or degradation it is crucial to see that the environment is linked to issues of livelihood, culture and power. Dharam Ghai (2004) points out that the importance to view environmental issues through a gendered lens is receiving a growing recognition in research concerning environmental degradation. It is recognised that women have a key influence regarding the quality of environment in many places. Meanwhile women and girls are severely affected by resource degradation because of declining agricultural harvests and also carrying an increased burden when fetching water and firewood

due to environmental changes. Case studies from Kenya shows that the division of labour puts women in a position of increased pressure due to declining resources (ibid.).

4. Geographical Location and Historical Background

4.1 Introduction

This chapter contains a brief presentation of Tanzania and Babati District where the six villages Shaurimoyo, Matufa, Seletu, Sabilo, Hallu and Long are located. The geographical location with its historical patterns and environmental conditions together with the local and global context is crucial to keep in mind for understanding the empirical findings of this thesis.

4.2 Tanzania

Tanzania is located in eastern Sub-Saharan Africa (see figure 3). Today the United Republic of Tanzania is a union between the mainland and the island Zanzibar. In Tanzania you can find both the lowest and highest point of Africa where the majority of mainland is covered by steppe-land and about one third of the land is covered by forest. Being one of the least urbanised countries in Africa, the majority of the 47 million (2012) inhabitants live in rural areas and base their livelihoods on agriculture. The population is unevenly distributed, where some of the areas are densely populated. The population is of a great ethnical variety where most of the people originates from the about 120 different Bantu tribes. Fractions between Christians and Muslims have occurred during the last 20 years, but the people have lived without any severe internal conflicts. The life expectancy has increased, in 1990 it was 44 years and today life expectancy is 56 years. However, Tanzania is one of the poorest countries in the world and around one third of the population live below the poverty line (1.25 USD/day). HIV/aids and malaria are severe problems. More than one out of four Tanzanians are illiterate. This pattern is likely change since nine out of ten children is going to primary school today (Sida, 2014; Utrikespolitiska institutet, 2014).

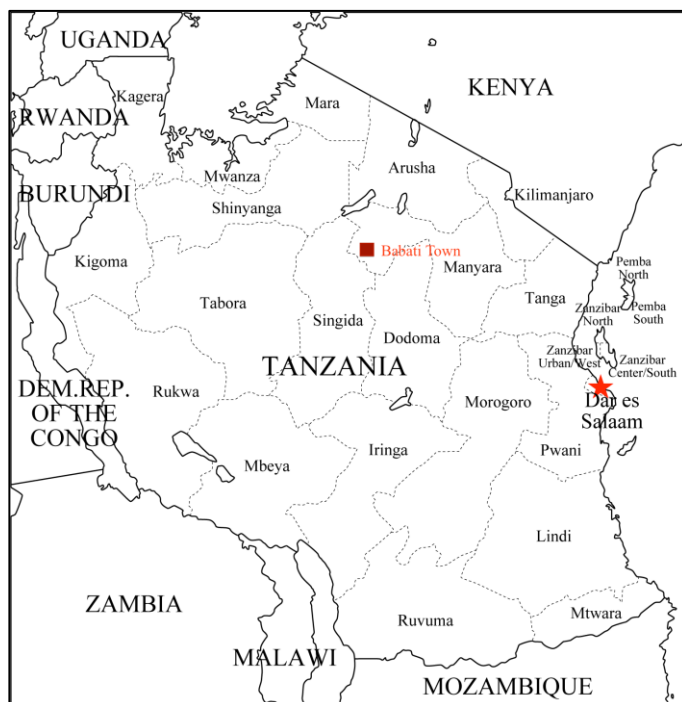


Figure 3. Tanzania in east Africa and the location of Babati Town (English Free Map, 2014). The location of Babati Town is our editing

During the colonisation era Tanzania was colonised by Germany and later by Great Britain. The struggle for independence was led by the former teacher Julius Nyerere who in 1961 could declare freedom for Tanzania. Nyerere became the first president of Tanzania and his political party CCM became the ruling one within a one-party-system where socialism “on African terms” was dominating the politics. Nyerere implemented *Ujamaa*, a social and economic policy development program that was meant to unify the new nation. One of the most important policies was to implement Swahili as the official language but also the *villagisation* played a central role of the new Tanzania. The structures of life in the rural parts changed by the villagisation that stressed a creation of villages where social service could be provided. The aim with these villages was to reach a collectivisation of production and in the mid-1970s millions of Tanzanians were relocated by military force. Until the 1980s many saw Tanzania as one of few African countries with a successful developing pattern. Economic crises, aid dependency and ineffective management changed that picture in the 1980s. Since 1992, Tanzania has a multiparty system where CCM is still ruling but the country is now a market economy (Utrikespolitiska institutet, 2014).

4.3 Babati District

Babati District is located in Manyara Region in the northern part of Tanzania and is recognised by many for its shifting landscapes and good conditions for farming. The availability of fertile land has in a recent history attracted farmers from other places and the population has increased since the 1950s. The agricultural conditions in Babati were earlier known as a “grain basket of Tanzania”. As for Tanzania and Sub-Saharan Africa as a whole the economic situation affected Babati during the 1980s when extension services and subsidies of inputs were withdrawn. This together with sheet erosion and compacted soils has changed the agricultural conditions. Today Babati district have 405 000 inhabitants (2012) and is divided into 96 villages where most of the households depend on agriculture. A great variety of crops are grown in the fields of Babati where rice, cotton, maize, pigeon peas, sunflower, chick peas and potatoes are the most common crops. In Babati District, 95% of the land area is utilised even though the planted area per household is as low as 1.3 ha. In the years 2007 to 2008 organic fertiliser was used on 10 % of the planted area and the usage of inorganic fertiliser was insignificant. Among the agriculturally related problems for the farmers in Babati, the major ones are infertile soils, soil erosion and land scarcity (Hillbur, 2013).

Babati Town has strengthened its position as a market town since the tarmac road was improved in the beginning of the 21st century. The road is a part of the Trans-African Highway and runs through Babati Town. Some of the villages, generally those located far away from Babati Town, are however suffering from low market accessibility. 5% of the agricultural livelihood dependent households in 2007 to 2008 had access to agricultural credits (mainly from cooperatives, commercial banks, family or relatives), 75 % of those where men. The Village Community Banks (VICOBA) credit system was represented in 60 of the 96 villages of Babati District in 2013 (Hillbur, 2013).

4.4 The Villages

Africa RISING is since 2012 doing research in Babati District and states that the population growth in combination with shortage of land makes it urgent for a sustainable intensification

process. Africa RISING has selected six out of the 96 villages in Babati-District as research sites. The involved villages are Shaurimoyo, Matufa, Long, Seletto, Sabilo and Hallu. These villages are located in different agro-ecological zones (Hillbur, 2013). The map in Figure 4 shows Babati District and the six villages in this study. The number and borders of villages has however changed since the map was created and does not show the villages in the present form of the time when our field study were done. The Africa RISING research involves implementing demonstration plots in a piece of some selected farmers land in each of the six villages. The demonstration plots were organised in the seasons of 2012 to 2013 and are supporting the selected farmers with inorganic fertilisers, improved seeds and advice from the agricultural extension officer to use the new inputs in the demonstration plots.

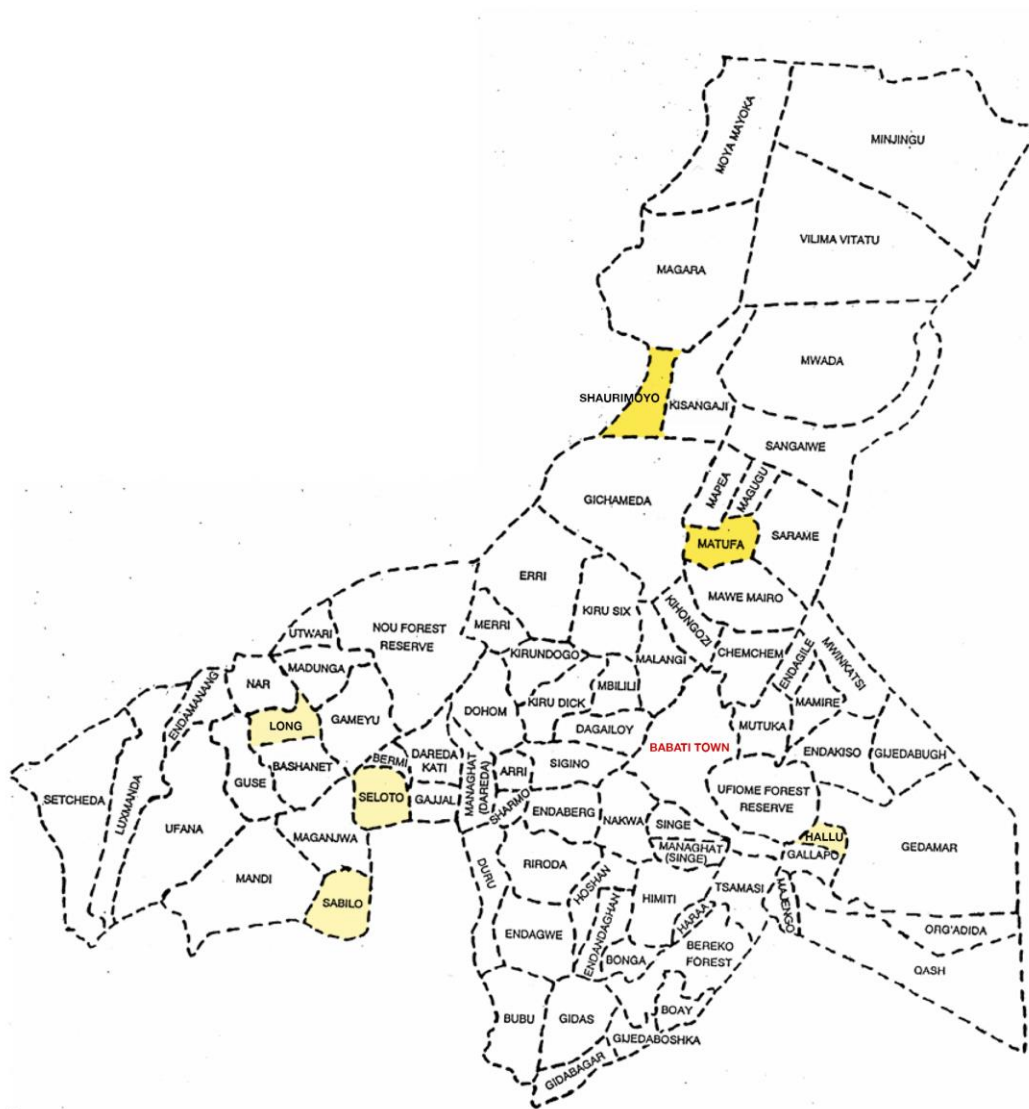


Figure 4. Map of Babati District where the six villages are marked in yellow. The original map is obtained from L fstrand (2005) and edited by Rasmus Lindell (2014). The size and location of Long and Hallu is approximate edited since these villages recently were parts of adjacent villages.

5. Methodology

5.1 Introduction

Methodology, systematic ways of researching reality, is about what procedure is used to answer the research questions. In this chapter we will present our exploratory research approach. We have chosen qualitative methods with interviews and observations. Within the frame of qualitative interviews we used focus group interviews and semi-structured interviews. In this chapter we also discuss the ethical considerations and the validity of our study.

5.2 Research Approach

A scientific approach is a matter on how researchers view the world. In historical-hermeneutic science, facts do not exist independently of experience and individual perception is focus. From this point of view outcomes are not predictable and laws are not derivable (Scheyvens & Storey, 2003). As human geographers we use a contextual approach by looking at Babati as a place, a web of socio-spatial practices, and linking these to the livelihood strategies and the process of agricultural intensification. We use the contextual approach to reach what Donna Haraway (in Nayak & Jeffrey, 2012) calls a feminist vision of objectivity which is an attempt to produce situated knowledge that is sensitive to structures of power and committed to making visible the claims of the less powerful. We are looking for knowledge and experiences of someone who experiences a process in a unique place.

According to Peter Esaiasson et al. (2012), the choice of research design is one of the most important within all research activities. Since this thesis aims to study livelihood strategies of female farmers we find it crucial to have this in mind when developing our research design as well as in the choice of methods. Within research methodology there is a difference between inductive and deductive approaches. Working inductively means that you start without a hypothesis and aim for a holistic understanding of a research problem. Deductive research on the other hand means that you have a hypothesis that you seek to prove or dismiss. However, in reality research is never purely inductive or deductive (Bernard, 2011). Russel Bernard (2011) explains how *exploratory research* is a continual combination of deductive and inductive research and it is a way to recognise that human experience is endlessly unique and therefore always exploratory. Bernard (2011) also recognises how human experience is patterned. The combination of a realisation of human experiences as both unique and patterned as well as an aim to stay open to what we will find we define our approach as exploratory but leaning towards an inductive approach.

5.3 Cross Cultural Research

For us this minor field study is about trying to contribute to research on the lives and rights of women as well as on environmental changes in Tanzania. As Momsen (2006) writes, fieldwork in developing areas can create all kinds of ethical dilemmas having to do with exploitation, ownership and knowledge generation. Another dilemma, according to Momsen (2006), is that the character of the researcher in terms of ethnicity, gender, age, nationality, sexuality and economic status could influence the empirical data. In the field we faced

several situations where there were unequal power relations, for example due to education level. This awareness was something we had in mind in every step in the field and in writing the thesis. The unequal relation is something we tried our best to tackle with respect, humility and openness towards the people we met.

In feminist geographical theory critiques on universalism, the destabilisation of the category "woman" and the idea of situated knowledge were developed. Situated knowledge is derived through researching the lives and experiences of people in different social and geographical places. However, there have also been critiques on who has the power to research this situated knowledge. Chandra Talpade Mohanty once articulated this critique as western feminist research on women in the Global South as a "...discursive colonization of Third World women's lives and struggles" (2003, p. 501). In finding ways towards a non-colonising research across borders, Mohanty pushes the importance of putting the particular in relation to the universal and making the local specify and illuminate the universal.

5.4 Choice of Method

5.4.1 Qualitative Method

Within research methodology there is conventionally a divide between quantitative and qualitative methods. Quantitative methods often aim at measuring predetermined hypotheses while qualitative methods aim for a holistic understanding of processes and realities. A quantitative method is useful when precise measurement and quantifiable results are needed while qualitative methods question the possibility of this kind of "objectivity" and instead focus on competing "subjectivities" and different, sometimes competing, meanings (Mayoux, 2006). Through a phenomenological approach we focus on the meanings of the people we met, their way of living and their perspectives to get knowledge of social phenomena. Out of the qualitative methods we used the qualitative research interview, which is useful when seeking for qualitative knowledge rather than quantifiable knowledge. With a qualitative interview the researcher can get an insight on the world from the interviewee's point of view (Kvale & Brinkmann, 2009). We felt that this was the most appropriate way to study our problem since we were interested in the livelihoods of people in a specific place and the information we were looking for could only be found and described by people living in this place. However, the same problem could have been studied by using different types of methods (Esaiasson et al., 2012). When studying how female farmers are affected by agricultural intensification quantitative methods could have been used. Surveys on what access women hold to factors of agricultural intensification such as seeds and fertiliser or issues of land ownership would have been possible and interesting. But in Babati District, the process of agricultural intensification is not long gone and in many of the villages the process of land titling has not yet taken place. For us this is a strong argument as to why it is important to find out how these processes are perceived by the female farmers before they hit off.

5.4.2 Working with an Interpreter

In Tanzania, the official language is Swahili. Besides Swahili, local languages of the Iraqw, Barabaig and Cehagga tribes among many other are spoken in the Babati villages. This is why we needed an interpreter. But when doing fieldwork an interpreter also has the role of

translating the social context. Social as well as power relations can be hard to perceive in the short amount of time allocated for a minor field study (Brydon, 2006). All our interviews raised the issues of gender and some of the interviews took place in the homes of female farmers. Research with women can be sensitive if it reveals aspects of women's disadvantages (Scheyvens & Storey, 2003). But it is also important to have in mind that the interpreter also holds a position of power (Brydon, 2006). This is why we decided on working with a female interpreter. We also considered that the home is a private space and a female interpreter could make it easier to be welcomed into the home of female farmers.

Before we started our study we found it important to get to know our interpreters and tried to make sure that they understood what we wanted to find out. We explained our analytical categories and tried to make sure that they felt secure with us. We had invaluable help from our interpreters, who also contributed by explaining the history and the societal context of the life in Babati District. They were raised as farmers and had a good insight into the lives of women in rural Tanzania and they shared their knowledge with us. During the interviews both language and cultural barriers occurred. For example some words have different meanings and are used differently in Swahili and English. It also happened during one focus group interview that the discussion among the interviewees were made in the local language Iraqw and then translated by another interviewee to Swahili, which our interpreter spoke and she in her turn translated into English. The interviews were made in a slow pace and we tried to take time for clarification but there were always a risk for misunderstandings. Many times our interpreters told us their reflections after the interviews and explained things that were not spoken out loud and were hard for us to tell. Working with an interpreter was a difficult task but it was also a great support, especially when we were new to the field.

5.4.3 Focus Group Interviews

Gathering a focus group is a way to create an interview situation where the members discuss a particular topic (Bernard, 2011). The result from a focus group interview does not give the opportunity for generalisation about different groups. It is however a useful tool for mapping the existence of different approaches and perceptions. When using focus groups it is recommended to combine this method with other methods. To organise a focus group early in the research process can contribute with ideas to questionnaires and thoughtful principles for the further selection (Esaiaasson et al., 2012). We did a total of seven focus group interviews: six with key informants from the Village Offices, one in each of the six villages and one with a Women's group. A key informant, according to Bernard (2011), is someone who understands the information needed and who is willing to share it. The two different kinds of focus group interviews were done to get empirical findings from two different groups of key informants, from the Village Offices and the from the Women's Group.

An initial aim for our study was to get a picture of the livelihood strategies and what wealth meant in the villages. One way to get this knowledge was to arrange focus group interviews with key informants from the Village Offices since they are the ones with important knowledge about livelihood strategies and the socio-economic conditions of the village households. To be able to collect this information the key informants in the focus groups made a classification of the village households into the predefined livelihood categories in the household typology made by the World Bank (see table 1, p. 7). Categories of the socio-economic condition were made by each focus group of key informants, where they further did a classification of the village households into the unique socio-economic categories in each village. This kind of quantified data could not be found and the aim with collecting it

was to get an overall picture of the socio-economic conditions in the villages, which was necessary to make our semi-structured interviews and the selection as good as possible but also as a support for future research in Babati District.

Further we wanted to know about the situation of women and their perceptions of the agricultural activities and therefore arranged a focus group interview with a Women's Group that had knowledge on livelihoods and agricultural issues in the villages. The aim of the focus group interview with a Women's group was to be able to ask questions about the lives and rights of women that might have been sensitive to ask in an individual interview. The information from the two different types of focus group interviews early in our study helped us to become aware of important factors, which we considered when we selected the female farmers in the fieldwork that followed.

5.4.4 Semi-Structured Interviews

One aim of the interview as a method is to find and interpret the meanings and the opinions visible in what is told during the interview (Kvale & Brinkmann, 2011). A semi-structured interview follows themes set up by the researcher but the interview can be shaped by what the interviewee talks about. Using this kind of interview structure is a way of making sure to cover the issues you are researching while at the same time giving the interviewee the opportunity to explain their own thoughts. A semi-structured interview is easier than an unstructured interview when working with an interpreter because it helps the interpreter to be prepared (Willis, 2006). We used semi-structured interviews with the female farmers to have an open discussion but also to make sure we did not forget any of the topics we wanted to find out about.

5.4.5 Direct Observation

We chose to use interviews as our main method. Momsen (2006) finds that even if a woman is interviewed individually the power structures do not disappear and it could happen that the woman continues to behave and answer as if the husband was present. We made direct observations during our time in the villages as a complement to our interviews. A direct observation is when you watch people and record their behaviour. Direct observation can help you find out a lot about how people actually behave in different situations (Bernard, 2011). We call our way to use observation unstructured because we did not observe anything in particular that we had decided beforehand. But during all of our interviews and when we walked around in the villages we took notes on situations that occurred which we thought would be important and could affect our results and our way of analysing. Those situations were for example how our interviewees behaved when the husband came home during an interview, how the ruling of the villages worked and how the natural environment appeared.

5.4.6 Selection

Selecting an Interpreter

We decided to work with two interpreters. One for the focus group interviews with key informants from the Village Offices and another for the focus group interview with the Women's Group and the semi-structured interviews with female farmers. It was our contact person in Tanzania who helped us to get in touch with our interpreters. Our first interpreter

who helped us with the focus group interviews with the Village Offices worked at *the District Office of Agriculture* as an expert on horticulture. For the focus group interview with the Women's group and the semi-structured interviews with female farmers we cooperated with our second interpreter who worked at *the District Office of Community Development*. During the interviews with the female farmers we also had help from a third interpreter, also from *the District Office of Community Development*, because the second interpreter had other duties.

Selection Focus Group Interviews - Village Office

When we selected the key informants for the focus group interviews we made what Bernard (2011) refers to as a purposive sampling which is when you know what purpose you want your informants to serve. The first information we were interested in was what livelihood strategies that could be found in the six villages. This is why we conducted one focus group interview in each Village Office with *the Village Chairman, the Village Executive Officer* (commonly known as the VEO) and some of *the Sub-Village Chairmen* as our key informants. The people behind these titles are trustees who have administrative responsibility and who hold a great influence of the development and ruling in the villages. Each village in Babati District has a Village Office where meetings such as "the Village Assembly" are held and the management of the agricultural decisions in the village with regulation from the state are made. *The Village Chairman* and the VEO are further the ones that agricultural programs and organisations frequently cooperate and communicate with. The reason for wanting to communicate with the Village Officers was that they have a good knowledge of each household in their village and on how the people in the village support themselves. In 2013, Wageningen University (Timler et al., 2014) in Holland made a project in Babati District and received lists from the Village Offices with names on head of households and number of households in each village. We got access to these lists through Africa RISING. The sizes of the villages were between 250-598 households. A pragmatic way to get an overview of the livelihood strategies in the villages was to let each group of key informants sort the names from the list of their village into the categories on livelihoods and socio-economics. But due to limited time and for this to be done in a way where the focus group interview would open up for discussion and be achievable for us and our key informants we decided to make what Bernard (2011) calls a simple random sample (n/N). We took 100 names from each list and in those cases the numbers were not even, we created a random sample by using the random-number generator www.slump.nu (2014).

Selection Focus Group Interviews - Women's Group

The selection of key informants for the focus group with a Women's Group aimed to get in touch with female farmers who had organised themselves to support, discuss and develop their lives as women. For us the only demands when looking for a Women's Group to interview was that the group was currently active in any of the six villages and that they had some knowledge on agricultural issues. We got help from the Village Executive Officer (VEO) in Matufa to set up an interview with a Women's Group in Matufa.

Selection Semi-structured Interviews – Individual Female Farmers

As Esaiasson et al. (2012) argue there is no clear limitation on the number of qualitative interviews to be made in a study. There is a balance in the question of the selection considering the number of interviews and the workload that is possible to put into every interview, therefore it is important to be well organised and to have a carefully prepared criteria for selection before the empirical data is collected (Esaiasson et al., 2012). The focus

group interviews helped us to find important information and factors about the villages and also to make good preparations for the individual interviews with female farmers. Based on the results of the categorisation of the livelihood strategies and the socio-economic conditions in the villages we chose to go on with the semi-structured interviews with female farmers in Matufa and Shaurimoyo. The choice to do the interviews with female farmers in Matufa and Shaurimoyo was based on factors such as the village socio-economic composition, livelihood strategies, number of female-headed households and Women's Group activities.

The selection of female farmers in the two villages aimed for a variation concerning socio-economic conditions and also to create a mix of households that do or do not cooperate with Africa RISING and therefore are or are not involved in the process of agricultural intensification. In both Shaurimoyo and Matufa we started out by coming back to the Village Office and being accompanied by a Sub-Village Chairman to the households that cooperated with Africa RISING. When finished with the households in cooperation with Africa RISING we continued our selection of interviewees by using *the snowball method*. Bernard (2011) explains the snowball method as a chain referral where you let one interviewee lead you on to a next possible person to interview. The snowball method is suitable for example when you are looking for interviewees who are hard to find or who are stigmatised. It is also a way to make a random selection within certain criteria for a study. For us this was a good way to meet people who might not be the first a Sub-Village Chairman would lead you to and a way to randomise the female farmers. However we did control the snowball method by sometimes setting up criteria when we asked for a female farmer such as farm size, female-headed household or economic condition.

5.5 Conducting the Interviews

We conducted our interviews from mid-April to mid-May 2014. During this time we carried out:

- Six focus group interviews with key informants from the Village Offices
- One focus group interview with a Women's Group
- 15 semi-structured interviews with individual female farmers

5.5.1 Focus Group Interviews at Village Offices

The focus group interviews were carried out during April and followed this order: Long, Seloto, Sabilo, Matufa, Shaurimoyo and Hallu villages. The focus groups at the Village Offices consisted of between five to nine key informants. Generally all key informants were living in the villages, living out of farming, were aged between 35-55 years and were male. The exceptions were the Village Executive Officers in Matufa and Hallu who were women and one female Sub-Village Chairman each in Seloto and Shaurimoyo. The focus group interviews took between 90-120 minutes each and followed an interview guide (see Appendix 1). We started the focus group interviews by explaining what the five categories in the farm typology meant and what conditions was set up for each category. During all these interviews we had gathered around a table and on the table we had six folders, one for each category with an explanation of the meaning of the category written on it in Swahili (see Appendix 2). We asked for permission to record the interview and besides the recording we took notes.

Our interpreter had 100 cards with 100 names of head of households which she read out loud one by one. After one name was read the key informants could discuss to what category the household belonged in and when they had decided a category, we could put the card in the chosen folder. The key informants usually had some questions on the categories in the beginning but after a while the categorisation seemed to be quite easy for them. In all the villages the key informants had good knowledge about the households and in almost all cases they simultaneously pointed out what category a household belonged to. Once finished with the categorisation of livelihood strategies we had a discussion with them on the accuracy of the results.

During the second part of the focus group interview we asked the group to discuss what wealth, poverty and well-being meant in their village. What economic indicators needed to be defined as poor, wealthy or in-between in that particular village? For example; which were the particular factors to define the livelihood of someone who was having a daily struggle in their village? We asked if it was possible to make new categories according to the specific socio-economic conditions in their village. The key informants made new categories and defined them according to life in their particular village and then categorised the same names as in the livelihood categorisation, but now into the socio-economic categories. The discussions carried on with issues such as environment, history of the village and conditions for women.

The key informants sorted 100 households in their village into the, by the World Bank predefined, livelihood categories based on the household typology (see table 1, p. 14). In total 600 households were classified by the key informants and sorted into the categories in the farm typology.

Before the focus group interviews, we were worried. Would the key informants sit with us to categorise 100 names? And then categorise them again? They did and all these interviews gave us a good insight into life in the villages as well as how the village was managed. As we became more secure in our role as researchers, we got more and more information out of these interviews. The dynamics in the groups differed a bit and in some villages it was apparent that the Village Chairman had a lot to say.

5.5.2 Focus Group Interview with Women's Group

We met the Women's Group "Bravery" at the Village Office in Matufa. The group consisted of 12 members and six of these had met up with us in the small room in the back of the Village Office. The interview started out with a presentation of the members who were all female farmers and living in Matufa. The interview followed an interview guide (see Appendix 3) but was open for discussion. This interview lasted for 90 minutes and we used a recorder. This interview was important as the group spoke open-mindedly, they were interested in our questions and they were well aware of what was going on in the lives of women in Matufa. They also found us important for them as a group – to have a meeting with someone from outside their village to discuss the same issues as they usually discuss in their own meetings. However these women were not typical since it was not common with Women's Groups in the villages.

5.5.3 Semi-Structured Interviews with Female Farmers

In the beginning of May we came back to Matufa. One of the Sub-village leaders walked us through the village and to four of the female farmers who cooperated with Africa RISING. The cooperation with Africa RISING meant that the farmers upheld a piece of their land as a demonstration plot, a *shambadarasa*, for improved seeds of different kinds and for inorganic fertilisers. In exchange these farmers got the seeds and fertilisers for free as well as advice and assistance on how to plant. After interviewing these farmers, one by one, we asked them who we could interview next. We were led to neighbours and to friends and during our time in Matufa we met with eight women in total. By mid-May we moved on to Shaurimoyo and started out with interviewing three female farmers, one by one, who are in cooperation with Africa RISING. Then we interviewed four female farmers who are not in cooperation with Africa RISING so in Shaurimoyo we interviewed seven women in total.

Almost all the interviews followed the same pattern. We came to the house of a female farmer, either accompanied by a Sub-Village Chairman or our previous interviewee and were introduced by our interpreter. We were almost always immediately welcomed to sit under a tree in the yard on small chairs. We asked for consent to record the interview and recorded all the interviews with the female farmers. However we were not always sure that they actually understood the purpose of the interview or why we recorded it but we tried to do our best to explain that the interviews were confidential. Since this took place during the rainy season it often started raining halfway through the interview and we were welcomed into the house. All the women had their children around and always one child on their arm. Sometimes the husband was at home but he always left us alone with our interviewee. However since there were always people around, who were very curious of us, this probably affected our interviewees' possibility to speak their mind. A few of the female farmers had very difficult lives and some had suffered tragedies. For the purpose of our study we felt it was very important to interview them as well as someone who was willing to talk but sometimes we questioned what we had learned from books on research methods and we faced lot of dilemmas during these interviews. Questions on why we were doing this? Why do we not pay them for their time? Women who had stayed home because their neighbour told them we would come – who got left without a day of payment because we did not want to affect our research result by paying them. But the questioning of us was only made by those who were relatively well off. None of the ones with no or low education or with a bad economic condition questioned us. This left us with a feeling of starting to question ourselves. But in all these interviews we also had interesting meetings. The interviewees did not speak very freely and even though the interviews were made out by open-ended questions (see the interview guide in Appendix 4) a lot of follow up questions were needed.

5.6 Data Analysis

The processing and analysis of the gathered data is a search for patterns and ideas that are a way to explain why the patterns could be constructed in the first place (Bernard, 2011). We started our data analysis with listening to and transcribing the recordings from our interviews. After our focus group interviews we had got an insight about the life in the villages and we also had quantitative data from the categorisation of the 100 households in each village in categories on livelihood strategies and the 100 households in each village in the categories on socio-economic conditions. We did what Bernard (2011) refers to as qualitative analysis of

quantitative data. We will present the quantitative data in diagrams and tables. The first diagrams show the livelihood strategies followed by tables of each village definitions of their socio-economic categories, diagrams of the socio-economic conditions and tables that show the linkages between the livelihood strategies and socio-economic conditions between the households. Since we used the same 100 names two times, in both the categorisations, we could see what socio-economic conditions was represented in the livelihood categories. In the following chapter where we will present the results we search for the meanings in the result of this quantitative processing.

The qualitative empirical findings from the focus group interviews are the discussions on conditions for women in the villages, the environment and a few other topics. These findings were transcribed and are according to Bernard (2011) possible to be analysed with the same techniques as for the text from the semi-structured interviews. With this data we went on with a qualitative analysis of qualitative data where we outlined themes we found important in our empirical data. These themes tied to the theoretical framework and previous research are used to answer the research questions. In the set of themes we also try to highlight patterns, similarities, differences as well as identifying how the themes are linked to each other (Bernard, 2011). The empirical data from our observations and field notes have helped us to widen our knowledge on the socio-spatial patterns in Babati District and put our empirical data from the interviews in a context.

5.7 Validity and Transferability

The validity describes the accuracy in the research made (Bernard, 2011). To reach high validity means that there is a good correspondence between the theoretical definitions and the operational definition, that what is meant to be measured in theory actually is being measured in the empirical research (Esaiasson et al., 2012). First to have in mind is *the validity of instruments and data*. Have we asked the right questions? The validity of the data is bound to the validity of the instruments (Bernard, 2011). During every interview we conducted, the questions shifted a little depending on the answers and the more knowledge we got about the culture in the villages we became better in grasping what was important when finding the answers to our questions. Although two months is not enough in a different culture it was plenty of time for us to learn about whom we interviewed, how to interview and how to ask questions relating to our subjects. We also felt that the focus group interviews gave us a good starting point before going out to get deeper into the livelihood strategies of female farmers. We also went back in our recordings and listened again if we suspected there had been a misunderstanding. *The validity of the findings* concerns whether the conclusions made from the data are valid (Bernard, 2011). Have we drawn the right conclusions? Directly after every interview we discussed what had come up during that interview with our interpreter. She was a great help in telling us things that we might not have noticed. When transcribing the data the process of understanding what our empirical data actually told us started. We base our conclusions with support from our theoretical framework and with the context of previous research findings in mind.

A qualitative study can never be presented as representative from a statistical point of view. However it is possible to find universal aspects, but according to Esaiasson et al. (2012), that kind of aspects cannot be generalised since results must be possible to test and repeat. Jamie Baxter and John Eyles (1997) use the term transferability to describe if a result from a qualitative study can be true even outside the study context. They point out how qualitative research often focuses on being reliable more than transferable. According to Baxter and

Eyles (1997), this does not have to be the case - a qualitative study can be transferable since it focuses on finding, describing and analysing the values and meanings of people - and values and meanings are often universal. Mohanty (2003) finds that we need to emphasise the connections between the local and the universal. If we are open to knowing differences and particularities we can see connections more clearly.

Momsen (2010) states that local knowledge and situations also have a value in themselves and that it is important to look away from “universal truths”. She raises how local knowledge is complex and that there is no “average” person but rather different perspectives that are changing over time and varying by for example age and gender. We feel that it is of great importance to avoid universalising narratives. We do not think that the people we interview can speak for all - that a woman with high status in a village speaks for all women in the village or that the people in the villages speak for all Tanzanians and so on. But even if they speak for themselves we find that important for the research anyway. Describing one situation can help explain similar situations even if they differ.

6. Results

6.1 Introduction

In this chapter the empirical data is presented. We start by giving an overview of the livelihood strategies in the villages. Since the livelihood strategies do not tell the socio-economic conditions, the livelihood overview is followed by an overview of the socio-economic conditions in each village. The livelihood strategies and the socio-economic conditions are further interlinked to see what kind of connection there is between them. These results are based on six focus group interviews with key informants from the Village Offices, one in each of the six villages. The following section in this chapter is constituted as a presentation of the empirical data on the livelihood strategies of female farmers in relation to the processes of agricultural intensification. These findings are mainly based on 15 interviews with female farmers and the focus group interview with the Women's Group but also supplemented by the qualitative data from the focus group interviews with key informants from the Village Offices.

6.2 Livelihood and Socio-Economic Overviews in the Villages

6.2.1 Livelihood Overview

According to the different criteria of the five livelihood categories in the household typology set by the World Bank (see table 1, p. 7), a total of 600 households in the villages were sorted by the key informants into these pre-defined categories. The aggregated result of the livelihood overviews from the six focus group interviews with key informants can be seen in figure 5.

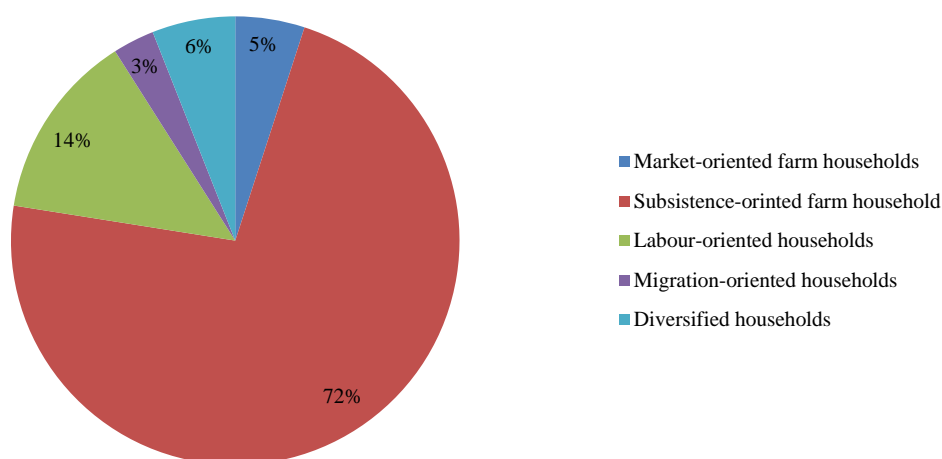


Figure 5. Aggregated result of the livelihood overviews in the six villages (N=600).

The aggregated result of the livelihood overviews in figure 5 displays that all of the pre-defined livelihood categories were found among the households in the six villages. A majority (72 %) of the households in the villages was Subsistence-oriented farm households. The second most common livelihood category was the Labour-oriented households (14 %), followed by Diversified households (6 %), Market-oriented farm households (5 %) and a few households was found in the category Migration-oriented households (3 %). The results from the livelihood overview in each village can be seen in figure 6 where the group of key informants in each village sorted 100 households from their village into the five pre-defined livelihood categories.

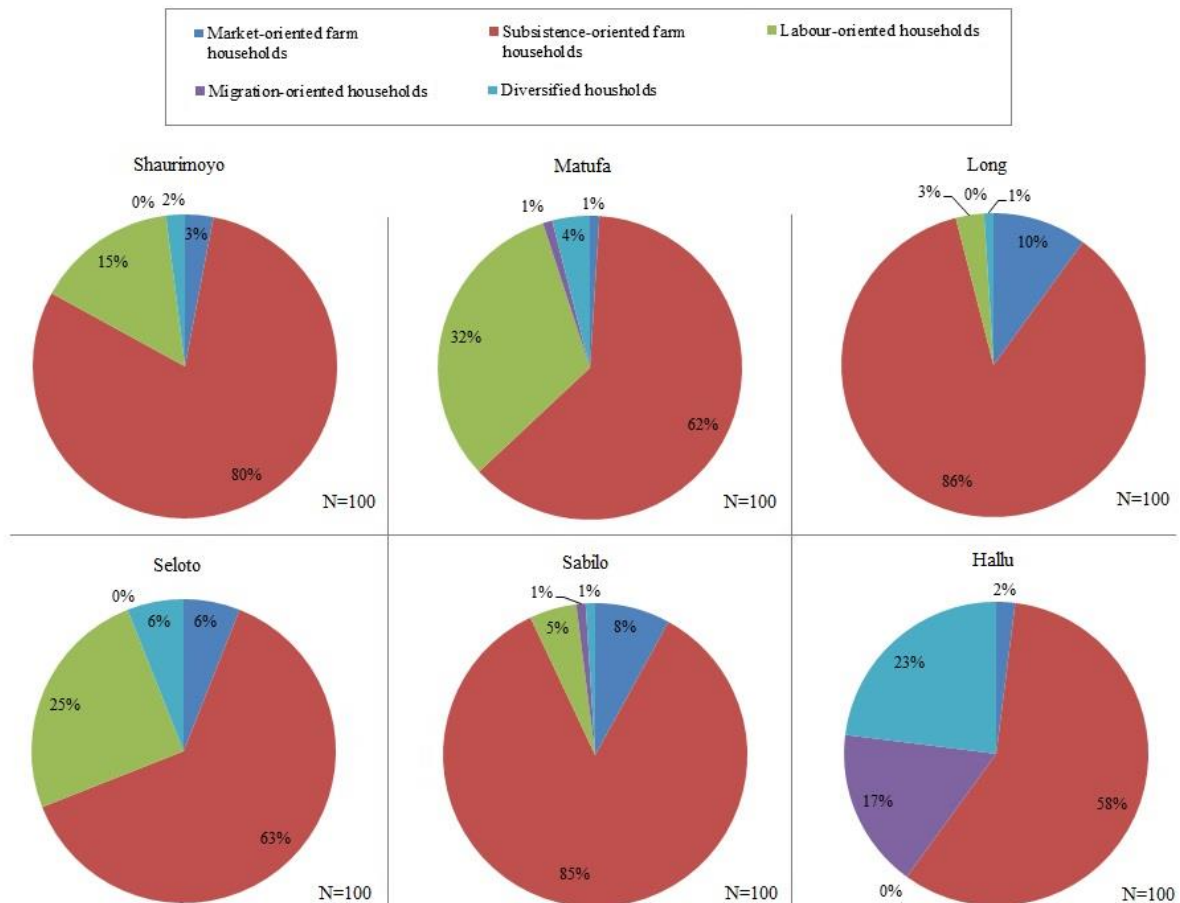


Figure 6. Results of the livelihood overview in each of the six villages.

When comparing the results from the livelihood overviews in figure 6, a variation of the distribution of livelihood strategies can be seen between the six villages. A majority of the households in all of the villages was Subsistence-oriented households (58-86 %) however the other livelihood strategies were more scattered. Between 1 % and 10 % of the households in the villages was classified as Market-oriented farm households. The Migration-oriented households were in all the villages between none and 1 %, except for in Hallu where the Migration-oriented households were 17 %. The result in Hallu also differs from the others considering the share of Diversified households, with 23 % in Hallu compared to 1-6 % in the other villages. The Labour-oriented households were the second largest livelihood category in Shaurimoyo, Matufa and Seloto while there were none Labour-oriented households in Hallu. The key informants in Hallu meant that there were households in the sample that

partly based their livelihood on labour activities but since these households mainly based their livelihood on non-labour activities, they were more fitted into other livelihood categories. The key informants in Hallu also meant that there were some distinct Labour-oriented households in the village but they did not appear in the random selection.

6.2.2 Socio-Economic Overviews

The socio-economic overviews were done in three steps during each focus group interview in each village. Since the socio-economic condition and meaning of wealth and well-being can differ between the villages, the first step of making an overview of the socio-economic conditions was to have a discussion among the key informants in each village concerning their definition of wealth and well-being in their particular village. From the insights of the discussion the second step was for the key informants to define a free number of socio-economic categories fitted to their specific village. The results of the categories based on the key informants definitions and criteria unique for each village can be seen in table 2.

Table 2. Socio-economic conditions – definitions of the categories

Shaurimoyo (N=100)		
High income (3 %)	Moderate income (51 %)	Low income (46 %)
Farm size: Large areas of land	Farm size: about 10 acres.	Farm size: Some of them own small fields but since they spend most of their time working for someone else they don't have the time to take care of their own farm.
Number of livestock: more than 20 cattle.	Number of livestock: about 10 cows.	
Production of valuable crops such as maize, pigeon peas, rice or sim-sim. Level of production: more than 50 bags of a valuable crop.	Subsistence farming is common. The households are sure to get at least three meals per day.	Farm production: low.
	Ability to send their children to school.	Do not have the means to send their children to school.
Engaging in crop business or other business like owning a shop		
	Means of transport: motorbike or at least a bicycle.	
Housing: Brick houses with iron sheet roof and glass window. The house is well painted and when you go inside you find it well furnished and with ceiling boards	Housing: Brick houses that could have a grass roof but generally they have managed to get an iron sheet roof.	
	The category of moderate income is different from the higher level in terms of quantities.	Their earnings are only sufficient for the daily needs and they are not able to make any savings.

Matufa (N=100)		
High income (1 %)	Moderate income (74 %)	Low income (25 %)
Food secured: big farms with good production. Approximately 20 acres and above.	Food secured: produce enough to feed the household and at least 50 % of the production is sold on the market.	Food insecurity: not capable to have three meals per day
	Ability to send the children to school: at least to secondary school.	
Doing business besides of farming activities.		Depends mainly on wage labour in the fields of their neighbours.
Means of transport: cars, motorbikes	Means of transport: to some extent.	No means of transport facilities.
Housing: brick house with iron sheet roof.		Housing: House made of mud with grass roof. These houses are at high risk of being destroyed during bad weather conditions.
Farming tools: tractors.	Farming tools: ox-plough.	Low means of farming tools.
Can afford healthcare.	Can afford healthcare.	

Long			(N=100)
High income (11 %)	Moderate income (79 %)	Low income (10 %)	
Have farm land	Food secured	Has none or few of the means in the other categories.	
Number of cattle: more than 15.			
Doing some kind of business.			
Means of transport: car.	Means of transport: at least a motorbike.		
Good house.	Good house.		
A household is considered better off if they have all things mentioned above. The maximum land size for a household in Long is 10 acres. Very few have the things mentioned above.	Means to send their children to school.		

Seloto					(N=100)
Very high income (2 %)	High income (17 %)	Moderate income (53 %)	Low income (25 %)	Very low income (3 %)	
Farm size: big.	Farm size: big.	Farm size: medium.	Farm size: small.	Small quantities of farm production.	
Business besides farming or crop business. Generally market-oriented households.			Can not afford daily requirements. Generally depending on wage labour.	Can not afford daily requirements. No ability to work or get hired. Depend on support from others.	
Have more than one house, which could be outside of Seloto, for example guesthouses.					
Mechanised farming.	Mechanised farming. Access to tractors.	Work manually in the farms.	No capital for good seeds.		

Sabilo			(N=100)
High income (8%)	Moderate income (61%)	Low income (31%)	
Food secured.	Food secured.	Food insecurity: struggle to be food secured. Farm size: small, approximately one acre.	
High amount of livestock.	Some amount of livestock.		
High level of production in farmland.		May need to get hired as labour or get support from family members to survive.	
Ability to send their children to school.	Ability to send their children to school.		
Car and/or tractor ownership.			
Modern house: made by bricks and roof of iron sheets.			
Can afford healthcare.	Can afford healthcare.		

Hallu				(N=100)
Very high income (1 %)	High income (2 %)	Moderate income (58%)	Low income (39 %)	
Farm size: 500 acres. Sells produce to other areas.	Farm size: big.	Sufficient means for living.	No ownership of land. Insufficient means for living. Lacking basic needs. Depend on renting land from someone else for farming or work as wage labourer in someone else's fields.	
Amount of livestock: about 200.	Own livestock.			
Post-harvest facilities.	Own both a tractor and a car.	Motorbikes and able to hire tractors.	No means of transport.	
	Self-contained house with a modern toilet. A blocked fence surrounds the house and valuable things. The house has a porch	Housing: House of medium quality with iron sheet roof.		

Even though the names of the socio-economic categories seem to be the same between some of the villages, the criteria and definitions are of different values, which can be seen in table 2. For instance to have large areas of land was a factor that all of the key informants meant was significant for being in the higher socio-economic categories. Large areas of land were though defined in different ways between the villages. For instance the key informants in Hallu indicated that there were households with 500 acres of land in their village while the key informants in Long told us that there were no households with more than ten acres of land in their village. Other important factors for the households socio-economic conditions in all of the villages was: number of cattle, ability to send their children to school, if the households were food secured, productivity of crops and means of transport.

In the third step of making an overview of the socio-economic condition in the villages, the same 100 households in each of the six villages as in the livelihood overviews were classified by the key informants into the socio-economic categories that they set up in table 2. The results of the categorisation shows the socio-economic condition in each village presented in figure 7.

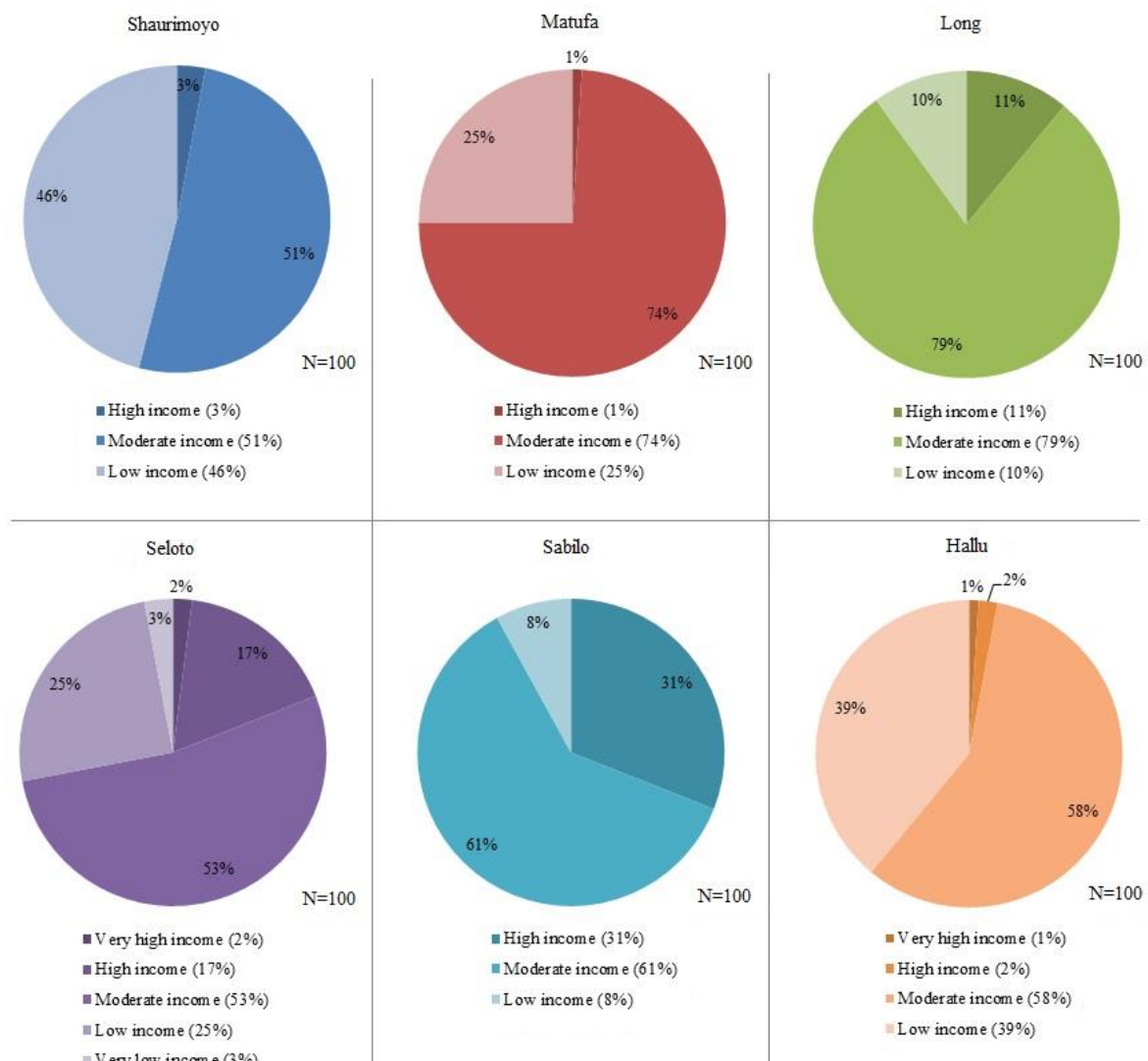


Figure 7. Results of the socio-economic overview in each of the six villages.

The results in figure 7 should not be compared between the villages due to the number and definitions of the socio-economic categories are unique for each village despite the same names of some categories. The results in figure 7 should be studied together with the definitions of the categories found in table 2 to get the different meanings of the socio-economic categories in each village. Although the resemblance in all of the socio-economic overviews is that most of the households are categorised in the mid or lower categories and there are generally few households in the higher socio-economic categories.

6.2.3 Linkages Between the Livelihood Strategies and the Socio-economic Conditions

With the results of the livelihood overviews and the socio-economic overviews in the villages' linkages between livelihoods and socio-economy can be studied. Since the same 600 households have been sorted by the key informants into livelihood categories (figure 6) and in socio-economic categories (figure 7). The results in these two categorisations can be interlinked to see in which socio-economic category the different household categories were sorted in. The linkages between livelihoods and socio-economy in each village can be seen below in table 3, where the percentage shows the distributions of the socio-economic categories in the livelihood categories.

Table 3. Socio-economic conditions in the livelihood categories.

Shaurimoyo	(N=100/N=100)	High income (n=3)	Moderate income (n=51)	Low income (n=46)
Market-oriented households (n=3)		100%		
Subsistence-oriented households (n=80)			62,50%	37,50%
Labour-oriented households (n=15)				100%
Migration-oriented households (n=0)				
Diversified households (n=2)			50%	50%

Matufa	(N=100/N=100)	High income (n=1)	Moderate income (n=74)	Low income (n=25)
Market-oriented households (n=1)		100%		
Subsistence-oriented households (n=62)			97%	3%
Labour-oriented households (n=32)			31%	69%
Migration-oriented households (n=1)			100%	
Diversified households (n=4)			75%	25%

Long	(N=100/N=100)	High income (n=11)	Moderate income (n=79)	Low income (n=10)
Market-oriented households (n=10)		90%	10%	
Subsistence-oriented households (n=86)		2%	90%	8%
Labour-oriented households (n=3)				100%
Migration-oriented households (n=0)				
Diversified households (n=1)		100%		

Seloto	(N=100/N=100)	Very high income (n=2)	High income (n=17)	Moderate income (n=53)	Low income (n=25)	Very low income (n=3)
Market-oriented households (n=6)		17%	66%	17%		
Subsistence-oriented households (n=63)			6%	67%	27%	
Labour-oriented households (n=25)		4%	32%	28%	24%	12%
Migration-oriented households (n=0)						
Diversified households (n=6)			17%	50%	33%	

Sabilo	(N=100/N=100)	High income (n=31)	Moderate income (n=61)	Low income (n=8)
Market-oriented households (n=8)		100%		
Subsistence-oriented households (n=85)			72%	28%
Labour-oriented households (n=5)				100%
Migration-oriented households (n=1)				100%
Diversified households (n=1)				100%

Hallu	(N=100/N=100)	Very high income (n=1)	High income (n= 2)	Moderate income (n=58)	Low income (n= 39)
Market-oriented households (n=2)		50%	50%		
Subsistence-oriented households (n=58)			2%	98%	
Labour-oriented households (n=0)					
Migration-oriented households (n=17)				6%	94%
Diversified households (n=23)					100%

The majority of the Market-oriented farm households in the villages were categorised in the highest socio-economic categories by the key informants. It was only in Seloto where 17 % of the Market-oriented farm households was categorised in the middle socio-economic category. A majority of the Subsistence-oriented farm households was categorised in the middle socio-economic category. The Labour-oriented households were most commonly categorised in the lower socio-economic categories with some exceptions. The Migration-oriented households were few but almost all categorised in the lower socio-economic categories. The categorisations of the Diversified households were more scattered between the villages but were mainly categorised in the mid to lower socio-economic categories.

When the empirical findings of livelihood strategies and socio-economic conditions were collected in the six villages, our aim was to continue the study in two of the six villages. The focus for the continuing research was set on finding the characterisations of the livelihood strategies of female farmers in the process of agricultural intensification. Both the livelihood strategies and the socio-economic conditions differ between the villages where geographical factors and local conditions can contribute to the in some manners different results in the overviews. With the empirical findings from the focus group interviews with key informants we chose to continue our study in the villages Matufa and Shaurimoyo. Both villages had a large number of the most common livelihood categories when comparing their individual result to the aggregated result in the livelihood overviews. Matufa had households representing every livelihood category and is located in an area close to Babati Town. In the focus group interview in Matufa it also came to our awareness that the village recently implemented a process of land titling where the households has gotten a land title document to confirm their possession of land. In contrast to Matufa, Shaurimoyo is a more remote village, located in a hilly area further away from Babati Town and according to the focus group interview in Shaurimoyo, none of the households in the village have a land title documentation. Both villages had a large number of households in the Labour-oriented livelihood category which the key informants described as the livelihood strategy of some of the socio-economically poorest households, characterised by struggle to support their households while working on the fields of other farmers. The key informants in Matufa also informed us that there were an active Women's Group in the village while the key informants in Shaurimoyo were not aware of any Women's Group in their village. These local factors and conditions displayed through the focus group interviews with key informants made us interested to further study the livelihood strategies of female farmers in line with the process of agricultural intensification in Shaurimoyo and Matufa.

6.3 Livelihood Strategies of the Female Farmers

6.3.1 The Female Farmers

We met with the 15 women at a critical time of the year - when waiting for the harvest. These women welcomed us into their homes. Their homes ranged from tiny mud houses to brick houses with iron sheet roofs. Some had started harvesting and letting their groundnuts and sorghum dry in the sun outside the house. Others still waited and worried about how their harvest would turn out this year.

Seven of the interviewees had a demonstration plot in their fields in cooperation with Africa RISING, and got agricultural inputs to these plots although eight of the interviewees did not have a demonstration plot. Most of the women in the households were married and they all had children. Some of the households were female-headed since their husbands had passed away recently. There were also women who were married but living alone since the husband lived with a second wife or worked outside the village. All livelihood categories within the household typology were represented among the interviewees and so were different socio-economic conditions. In table 4, basic information about the interviewees is given. The reason for not specifying which of the interviewees that are in cooperation with Africa RISING is for them to remain anonymous.

Table 4. *The interviewees in Matufa and Shaurimoyo.*

	Name	Age	Village	Education	Nr. of children	Civil status	Typology	Land
1.	"Aisha"	44	Matufa	Primary school	2	Married (2:nd wife)	Market-oriented	7 acre
2.	"Fatima"	42	Matufa	No education	6	Married	Diversified household	3 acre
3.	"Ifemelu"	32	Matufa	Primary school	2	Widow	Subsistence-oriented	10 acre
4.	"Grace"	42	Matufa	Primary school	4	Married	Subsistence-oriented	3 acre
5.	"Neema"	34	Matufa	Primary school (standard 4)	3	Married (living apart)	Subsistence-oriented	Rents 1 acre
6.	"Mary"	38	Matufa	Primary school	3	Married (living apart)	Subsistence-oriented	1 ¼ acre
7.	"Happy"	37	Matufa	Primary school (standard 4)	3	Widow	Subsistence-oriented	2 acre
8.	"Joyce"	30	Matufa	Primary school	3	Married	Labour-oriented	Rents 4,5 acre
9.	"Lilian"	39	Shaurimoyo	Primary school	6	Married	Market-oriented	3,5 acre
10.	"Costansia"	45	Shaurimoyo	Primary school	8	Widow	Market-oriented	1 acre
11.	"Cecilia"	41	Shaurimoyo	Primary school	3 (+3 relatives)	Married	Diversified household	30 acre
12.	"Justina"	40	Shaurimoyo	Primary school	6	Married	Subsistence-oriented	2,5 acre
13.	"Esther"	39	Shaurimoyo	Primary school	6 (+2 relatives)	Married	Market-oriented	6 acre
14.	"Leyla"	29	Shaurimoyo	Primary school	2 (+1 relative)	Married	Diversified household	6 acre
15.	"Zulfa"	44	Shaurimoyo	Primary school	2 (+ 1 relative)	Married	Market-oriented	5 acre

6.3.2 Daily Life

When the sun rises the women of Shaurimoyo and Matufa get up from bed to start their day. Their daily activities start at five o'clock in the morning with preparing ugali¹ and chai for the family. After breakfast the husband leaves for the fields and the women send their children to school. Then they clean the house and go out to sweep the yard. The day continues with farming activities as well as household chores. The work in the fields is put on pause when the children come home from school for lunch. The women are responsible for coming home from the fields to prepare lunch. They take a bit of the firewood that they collected a few days ago and make a fire at the small stove inside the house. If they have some time to sit down during the day and rest that time is now. After lunch the day continues in the fields or with other activities such as fetching drinking water and collecting firewood. In the afternoon the women are responsible for making dinner, washing clothes, doing dishes, looking after the children and gardening. As the husbands come home from the fields their daily responsibilities are finished. If they want they sometimes help with fetching water or doing wood chopping. In the evening the women make sure there is water for the whole family to wash themselves. As the sun goes down the responsibilities at home take up a few more hours before they go to bed.

All the women described their day as in the piece of text above, although in some households the husband is not present, as in the text above. All of the women are somehow involved and working in farm activities. Some of them have other livelihood strategies. For Grace, the first thing to do in the morning is milking her cow since she wants to go to the market and sell the milk while it is fresh. Then she goes home to prepare breakfast for her family. When she has sent her children to school she feeds the cow. During the day she goes to collect grass for the cow and milk it one more time in the evening. Generally she does not have time to rest during the day. The interviewees describe their activities as their responsibilities. Some of them prefer certain activities to others and one reason they prefer farm activities to household activities is because they generate an income. A few of the women have activities that give them a cash income such as Cecilia who goes to the weekly market in Shaurimoyo every Wednesday to sell clothes that she buys from a dealer in Arusha. After breakfast she prepares lunch for the children so that she can go to the market at nine o'clock in the morning and get home at six o'clock in the evening to cook dinner.

Working as a wage labourer in the fields of other farmers in the village is common according to the key informants in the focus group interviews. When working in the fields of others the workers spend the whole day out in the fields which also can be located far from their homes. The interviewees who work as wage labourers describe how they come home in the evening and continue with their household chores. The wages do not cover the daily needs and keep them from taking care of their own fields and developing their own farms. The daily life of the interviewees was described as filled with activities and there is not much time to spend on other activities besides work. The time to rest is very limited. "The people with weak economy depend mainly on wage labour work in the fields. Most of the farms which offers them to be hired is on this side of the village and so you know them because early in the morning you will see them going this side with their hoes and in the evening coming back." - Key informants, Matufa

¹ Ugali is a dish of maize flour and has the consistency as porridge/dough. Chai is spicy tea.



Photo 2. Women carrying firewood down the Mountain of Happiness in Babati District. The closest houses are located a few kilometers downhill. (Photo: Maria Klerfelt)

There is one day in the week that sticks out from the rest. Sunday for those who are Christians and Friday for those who are Muslims. Going to the mosque or the church is pointed out as an important, social and enjoyable activity for many of the interviewees. But going away for a few hours has to be prepared by working extra hard with their activities before and after. Many of the interviewees described how the workload differs depending on season. During farming time when the fields are prepared, sowed, irrigated and weeded the time is not enough and the workload is heavy. But during the summer it is easier and then the workload increases again during the harvest. The workload for those interviewees who had become widows is described as increased since their husbands passed away. The interviewees with a husband described how the workload at the household was the woman's responsibility. "It is very uncommon that I get the time to rest during an average day, it is only when I don't have clothes to wash in the afternoon that I get the time to rest. Some days my husband goes to the fields to work and sometimes he stays home and rest when the young boys are going there instead." – Fatima

6.3.3 Signs of Modernisation

All of the interviewees have a small piece of land where they had built their houses and around the houses there are small-scale plantations of vegetables and fruits such as tomatoes, pumpkin, bananas and mango. The fields of varying sizes are situated between five minutes to one hour walking distance from the homes. In the fields maize, pigeon peas, black beans, sorghum, millet, rice, groundnuts, cassava, sweet potatoes, *sim-sim* (sesame) and sunflowers are common crops. The interviewees talk of a major change from cassava to maize as the main staple food. Maize is grown by all interviewees for home consumption. For the subsistence farmers, maize is usually the only crop grown because they explain their lack in capital to invest in crops that are valuable as cash crops. The market-oriented farmers all have a mix of for example maize, pigeon peas and sunflowers. They explain how pigeon peas and sorghum are important cash crops in Babati District. The ones who had the possibility had started to grow sorghum since a couple of years back.

When the interviewees talk about the fields they describe a difference between rain-fed and irrigated agriculture. Some fields are located close to water sources. In some cases the farmers had dug canals leading water to the fields. The fields that have access to water somehow are more valuable to own and expensive to buy or rent. The farmers who do not have access to irrigated areas try to irrigate by using buckets but in most cases they are dependent on the rainfall. The ones who could afford rent electric pumps driven by

generators. The equipment used in the agricultural activities is dominated by the hand-hoe. This is the only tool owned by the interviewees and for some of them the only tool they have access to. The ones who could afford rents tractors, ploughs and power tillers. When renting this kind of equipment it includes someone who for example drives the tractor. Some of the interviewees who had big areas of land meant that it is a lot easier to cultivate big areas today with help of these machines than it was before when the hand hoe was their only tool. The interviewees with smaller areas of land did not rent any of these machines. “Nowadays we thank God that there is a difference from the past time because now we have these machines like tractors and other things that makes cultivation easier. Nowadays everything is more simple and it is good.” - Women’s Group, Matufa

Other means of transport such as bicycle and motorbike are often used in the agricultural activities for carrying equipment or water. Bicycles are also used to get to and from the fields. The interviewees describe new means of communication by using cell phone and M-Pesa.² All of the interviewees have a cell phone in the household and this phone is described as used in the agricultural activities when hiring people to help you in the field, to get hired or when selling the harvest. In some households it is only the husband who has a cell phone but in those cases it is accessible to the woman.

6.3.5 Seeds of Intensification

Since a couple of years back the use of inorganic fertiliser³ in the fields of the villages has become more common. To buy improved seeds from companies is also more common today. The interviewees who have a demonstration plot describe how they use inorganic fertiliser and improved seeds that they have received for free because they have a demonstration plot with an organisation. But many of the farmers without any subsidies cannot afford buying the agricultural inputs. “We still have a problem of new seeds because in agriculture as you see in maize we have few seeds. We started using these new seeds but not all people have started. They don’t have enough money to buy these seeds.” - Women’s Group, Matufa

Among the interviewees, both the ones with a demonstration plot and the ones without, the perceptions on fertiliser differ from one to another. Some of the interviewees use and prefer farm manure as fertiliser and emphasize that it is cheaper and better for the soil than the inorganic fertiliser. The soil fertility and varying conditions in different areas is also described as important when talking about the fertiliser usage. “In the village people normally say that it is a natural land. You can’t use fertiliser. Only this year we have seen this program of giving us fertiliser and we started to use it. In the past years we only used natural land without fertilisers but in Singida, where I grew up, we used manure.” – Costansia

One of the interviewees had a demonstration plot with the English NGO Farm Africa four years ago. This year she and her husband started a demonstration plot with Africa Rising. They met with the agricultural extension worker who came to their farm and showed them how to plant the seeds and made directions on which crops to use. The agricultural extension

² M-Pesa (M for mobile and pesa is Swahili for money) is a cell phone based money transfer and micro-financing service launched in Tanzania in 2007 (Vodacom, 2014).

³ When writing about *inorganic fertiliser* (often called commercial fertiliser) we refer to industrially processed minerals or chemical substances. We use the term *farm manure* when describing organic matter, mainly animal manure but also plant manure, used as organic fertiliser in the fields.

workers also gave them inorganic fertilisers and improved seeds. Later the agricultural extension worker came back to see how the demonstration plot had evolved and directed her on how to continue. She describe how she thinks that the Village Office chose her farm as a demonstration area, since her area is near by the road where people pass by and can learn from there and also as the Village Chairmen see them as “good farmers”. When the agricultural extension worker came and saw the results they also saw that the area without inorganic fertiliser had grown as well as with inorganic fertiliser. She says that she appreciate to see that it is as good without inorganic fertiliser but that it depends on which area you farm in and it differ depending on soil fertility. She thinks that the soil in her land is good and the production is enough without the use of inorganic fertiliser. She says that the inorganic fertiliser is more expensive than animal manure and that she also has used farm manure when growing vegetables since she wanted them to grow faster.

Since about five years back the government has put its hand on the agricultural activities in the villages by bringing the subsidised agricultural inputs and especially improved seeds and fertilisers and this as we said before some farmers can fail to produce only because they don't have enough capital to pay for agricultural inputs. But once the government has given them the subsidised inputs then at least more households can manage to have good seeds and fertilisers. But also the agricultural extension staffs are moving around to advise farmers on how to plant, when to do weeding, how to do the proper harvesting and processing for storage, what kind of agricultural chemicals. So this has helped them to increase their production and to maintain their produce that they are not destroyed by insect pests. - Key informants, Shaurimoyo

Another interviewee with a demonstration plot is using inorganic fertiliser since three years back. The agricultural extension worker helped the interviewee and her family and decided that they had to use fertiliser and instructed them in how to use it. This interviewee buys the fertiliser in a nearby village and she says that it is expensive for her but the production is higher with the fertiliser. She has not tried to use farm manure since she does not have any cattle. She describes how the people in Matufa that does not use fertiliser still have a negative attitude to inorganic fertiliser since they do not know what it consists of and do not want their soil to change, they use farm manure and mean that the inorganic fertiliser is bad for the soil.

Grace started to use inorganic fertiliser two years ago. The reason for using it was because Grace and her family started to plant sorghum. She explains that it is not possible to grow sorghum without using fertiliser. Two years ago Grace and her family also started using pesticides in the same area to get rid of weeds. It is her husband who is responsible for applying the pesticides. Grace says that this work is for men and not for women and that is because it is very poisoning and you do not want the same person that handles the pesticides to handle the cooking and to take care of the children.

Esther tried inorganic fertiliser on her fields for the first time last year but she did not continue to use it this season. The reason why she started to use inorganic fertiliser was since her rice was turning yellow and a neighbour that used fertiliser advised her to use it. Later she realised that the reason the rice turned yellow was not because of low soil fertility but because there was not enough water. Esther thinks that if you start using inorganic fertiliser you have to use it continuously and if you stop the soil will be depleted.

Many of the interviewees describe that the reason for not using inorganic fertiliser is because they cannot afford it. Using animal manure as fertiliser can also be expensive. The farmers that have cattle might need to pay for transporting the manure to the fields and for the farmers

that do not have cattle the problem of affording to buy the farm manure remains. Some of the interviewees describe their situation where they cannot afford inorganic fertiliser and do not have access to farm manure. Some of the interviewees who could not afford inorganic fertiliser and animal manure did not improve their soil fertility in any ways and some used various agricultural practices to increase the fertility such as mixing nitrogen-fixing crops, such as pigeon peas, with the other crops.

Here in Matufa three quarters of the farmers don't have any cattle so only the ones with cattle have enough manure. Another way we use in our farms is that after harvesting we take those drying grasses and put it on the ground so that it becomes manure. We normally use that. In our village we have seen that to mix crops is good because if we mix...in maize there is a disease then you can harvest pigeon peas. If pigeon peas have diseases you can get maize from that land and not fail completely. - Women's Group, Matufa

In Shaurimoyo some of the farmers told us that they get improved seeds for free from the Village Office. In other cases "local seeds" are put away for next season and some of the interviewees describe how this was done by their husbands. There are also the ones like Zulfa who uses farm manure and "local seeds". When we asked why she did not get the improved seeds for free from the Village office, she answered that it is because she is satisfied with the production from the local seeds. Neema who lives in Matufa also uses local seeds because she does not have enough money to buy improved seeds. She bought maize for home consumption and used some of it to keep as seeds. The only crop she is growing is maize and she stresses the problem that she does not know if it is a good seed or not since she only had one bag of maize to choose from. She has never used any kind of fertiliser, even though she has access to farm manure from her parents cattle, because she is not depending on one piece of land. She rents from different people every year. She does not know much about the land she rents beforehand such as the fertility of the soil and since she has almost no capital to invest she cannot risk investing if she has to move next year.

6.3.6 Decision-making in Agriculture

Both when making decisions regarding agricultural activities as well as with other economic issues almost all of the interviewees said that the husband is the one in charge although some interviewees described how the family made the decisions together. "It is my husband who makes decisions. Sometimes he tells me what is going on and sometimes he decides and doesn't even tell me what is going on. I just see what is going on and then I understand what he has done." – Zulfa.

Besides making the decisions the interviewees describe how their husbands often are the ones that are responsible for the income generating activities. Either because they are wage labourers or because the husband often is in charge of selling the crops from their fields. In the families where the husband is not always present another relative was described as a support in decision-making. In the female-headed households the interviewees either decides by themselves or with support from relatives. Depending on the situation in the family the interviewees in the female-headed household perceive the decision making as an opportunity but for some it is seen as a burden. Neema told us that she has a husband that stays at her place in Matufa sometimes during the year but spend most of the time on his farm in another village and does not help her economically or in decision-making. "My mother decide by my

side, she also helps by lending me money to rent land. She knows that my husband will not help me.” – Neema

Costansia is head of her household since her husband past away told us that she mostly makes the decisions on her own.

It is difficult because it is only for you to decide. If you fail to decide - who will decide for you? So you have to decide yourself for your activities. Nobody will help you. In the years before when I lived with my husband here I used to discuss with him. He was responsible for many things. But after his death life became difficult because I had only my own mind to think about because my children were still young. Then after a period of time I think I benefit because my children have grown up. I discuss with them and I can send them somewhere to do things for me. – Costansia

6.3.7 Advice on Agriculture



Photo 3. *Two variations of maize. Local seeds to the left and improved seeds to the right.*
(Photo: Maria Klerfelt)

The key informants in Shaurimoyo described how about five years back the government started focusing on the agricultural activities in the villages by bringing the subsidised agricultural inputs and especially improved seeds and fertilisers. Besides the subsidies on farm input they point out how the agricultural extension services have an important role in improving the agricultural practices. The agricultural extension officer is advising farmers on how to plant, when to do weeding, how to do proper harvesting and processing for storage. The agricultural extension officer also has a key role in the agricultural intensification process since he or she is the one to advise on for example the use of inorganic fertilisers and improved seeds.

The subsidised inputs which were brought by the government were not sufficient for each household in the village so few farmers got the inputs. Through the advices which have been given by the extension staff the farmers who did not get the subsidised inputs are now eager to buy certified seeds and fertilisers and use the good agricultural practices. And when we say good agricultural practice this could include timely operations, good seeds and good fertilisers. Others are now trying to copy from those who got the subsidised inputs and used the advice they were given by agricultural extension staff. - Key informants, Shaurimoyo

In Matufa all the interviewees that have a demonstration plot had met the agricultural extension officer and heard his advice. “The agricultural extension worker is the only one that has given us advice in agriculture, and she advised that I have never heard before. I will never forget these advices because this knowledge will help me to produce more.” – Interviewee with demo plot, Matufa

None of the interviewees who did not have a demonstration plot in Matufa had met the agricultural extension officer. In Shaurimoyo one out of the two interviewees who has a demonstration plot had met the agricultural extension officer. The other interviewees in Shaurimoyo have never met the agricultural extension officer. One of them was not aware that there is an agricultural extension officer in the village. In some cases the husbands of the interviewees had met the agricultural extension officer but not the interviewees themselves. Different reasons were given to why they have never met the agricultural extension officer;

“I only know that they have to be paid, but I don’t know what amount and I fear that even if I just go to talk I have to pay something. I have nothing so I have never even bothered to go and ask.” – Justina

“Since I got this small baby I am mostly in my house so when the agricultural extension worker came to plant in our demonstration plot he didn’t pass our home so I never met him. It is only my husband that is in contact with him.” – Interviewee with demo plot, Matufa

“When you compare the skills, women have big skills and they want to learn more but they have no chance. Men have a good chance to hear from outside and to learn more.”
- Women’s Group, Matufa



Photo 4. A demonstration plot for maize in Matufa. (Photo: Maria Klerfelt).

6.3.8 Land



Photo 5. *The hills of Babati. In the foregrounds you can see the Sisal plants that mark the boundaries between the fields of different landowners. (Photo: Maria Klerfelt).*

On the issue of land our interviewees describe a changing situation. The key informants in Matufa told us how most of the land is now used by the people either as farmland or for living. This has created two situations. First the conflicts of interest between pastoralists and farmers but also between preserving the nature and making a living or in some cases surviving. It has also come to the point where it is hard to acquire enough land if you are not able to buy land. In Matufa the process of land titling started in 2011. The process of giving out a land title document is still going on in Matufa but almost all of our interviewees had received the document. But the one who is written as the owner of the land differs.

“We were told to fill some forms with our picture and register ourselves with our names, tribe and age and then they prepared the document for us.” - Mary.

Mary owns one acre of land and she has her name on the land title document. She inherited this land from her parents and when she heard about the possibility of applying for a land title document she did. Her husband stays in another sub-village and she did not write his name on the document.

Aisha explains that her husband is the owner of their five acres and that their family is in the process of getting the land title document. Her family has five acres that are shared with the first wife. In the land title document the husband and one child from each wife is written as the owner. For some of the interviewees in Matufa the families have a land title document and the husband is the landowner. In some cases the interviewees and their household do not own any land but rent each year.

“I moved back here from Dodoma two years ago after my husband died. The family of my husband told me ‘you are still young and you don’t have to stay here, you should go back to your family’ and they gave me some money.” - Happy. Now Happy does not own any land but has used the money to rent one acre.

In Shaurimoyo the process of land titling has not started yet. During the focus group interview we were told that the land is owned by the family and the children are entitled to inherit the land. According to the key informants in Shaurimoyo it is known in the village which land belongs to which person.

“If the family does not have a land title document they cannot use the land as a collateral to apply for a loan in the bank. But traditionally it is known that this land belongs to that particular family or a particular household.” - Key informants, Shaurimoyo

In Shaurimoyo there is a mix among the interviewees considering land ownership. In some cases the husband is the owner and the interviewed women have not heard about the process of getting a land title document. Lilian tells us that the custom in her area is that the husband owns the land. In other cases the interviewees says that the family owns the land together. Both in Shaurimoyo and Matufa it differs in how the family acquired their land. Some were given by the village and others bought their land from other people. In Shaurimoyo many of the interviewees moved there when they got married to stay with their husband.

Letting land to or renting land from someone else is something almost all of the interviewees describe. Some are in a position where they let out and others in a situation where they are left to rent from others to get access to more land. Leyla describes how her husband owns six acres of land. They usually use two acres to grow their food and the remaining four acres they usually let to other farmers. She works in her two acres but also as a labourer in the fields of others. It was only last year that she took a loan to make an investment and starting to use one more acre of her own land.

None of the focus groups could see any negative effects so far from having the land title document. The land title process is described as a positive impact where the rising value of land and the possibility of using the land as collateral when taking a loan from a bank or financial institutions are positive effects. Another positive result of having the document that was described was that conflicts concerning boundaries of the farms have decreased since the land ownership was introduced in Matufa. On the issue of land the key informants in Matufa as well as the Women’s Group describe companies who are dealing with agro-industries and in Matufa it is mosyly sugar factories. These companies are owned by foreign investors who also have the rights to big portions of land in Matufa and nearby areas.

As you compare these labourers and the ones working in their own farms there is a difference because these labourers are going for the work in the company which are dealing with farming, big farms. You work morning until evening. You don’t have time to work in your own fields. Also their health is not good because they use them for a long time. The workers have no time to rest so they become different from other people who manage their own land that can rest a while when waiting for weeding season. But for those who go to the company they do not earn enough money to manage life. - Women’s Group, Matufa

6.3.9 Environmental Changes

The interviewees describe different changes in the environment that they have noticed and these changes affect their work in agriculture in many ways. The change that everyone talks of is the rainfall patterns. The interviewees describe how there is less rain and also that the rainfall is erratic. It has become harder to predict the rain, which makes it harder to plan for when to plant. This also makes irrigation more important than ever. Most of the natural springs have dried up completely in some places. Some interviewees describe how they started to grow sorghum because it is a plant that demands less water than other plants. The interviewees describe how life in the village has changed in recent years. Many of the interviewees in Shaurimoyo have moved to the village from other parts of the region and so

have many other people. The villages have grown quickly and a lot of the land is now used for cultivation. Many of the interviewees describe positive changes in access to services such as health center and as in the case of Matufa where water taps are easily accessible in the village. But this has also put constraints on the environment and particularly the vegetation and the forests. According to the focus group in Matufa, soil erosion is occurring there. Also the focus groups in other villages described the problem of soil erosion. In Sabilo the problem can be seen of the changes in the salt lake in the village were the people in this area no longer have to turn their eyes away from the salt lake but it has made them open their eyes on environmental changes. “Some years back it was not easy to look at Lake Balangida, the salt lake, during the daytime because the glittering salt would harm your eyes. But nowadays you can just look at it, which means that there is a lot of soil that has been taken from the fields to the lake so the salt is no longer glittering.” - Key informants, Seloto

The trees are important in agriculture because they bind the soil and prevent erosion however the key informants in Matufa mean that people in the villages are aware of this problem. “As far as the environment is concerned in the past years there were some very good natural forests that have been destroyed now. They are not as good as they were. In their premises people are planting a lot of trees. It’s not enough but people are trying.” - Key informants, Matufa.

Another important aspect of the degrading forest has been found since many of the interviewees describe how they have to walk further away to collect firewood. The forest is, according to the interviewees, slowly crawling up the mountains and away from the village. When answering the question on where her field is an interviewee in Shaurimoyo points on the cracked dry land and says “it’s far away. You can’t grow anything here.”

6.3.10 Socio-Economic Condition

The interviewees, no matter what economic status their household had, describe how life as a farmer is economically unpredictable. Justina has a life where she has never been and still is not food secured.

The food is not enough. When you harvest in June you eat what you harvested during June, July and August but then you find that everything is over. Then you have to wait until December when you can plant and grow again. So around that time you have to buy food but that is difficult since we have no money. Sometimes you find a day when you wake up in the morning and you find it difficult. Everything is difficult...because you have nothing inside. Nothing that you can give the children. So that can make the whole day difficult for you. There are some days when you wake up and everything is there and you feel that at least everything is possible for that day. - Justina

Almost all the interviewees work as labourers in the fields of others sometime during the year. Some of the interviewees with big fields describe how they cannot find the capital to invest in order to use all their land and the solution is to work in the fields of others and let out parts of their land to others. Even though some of the interviewees got an income from letting land they explained how they were not able to re-invest that money into their agricultural activities or use the money to improve their economic situation on a long term.

In those households where there was enough money to invest the decision on what to invest in was often made by the husband. Some women who had an income described that they used

their income for food and things for the children. The income that the farming generated was often spent on the house or for means of transport such as motorbikes, although the motorbikes are never used by the interviewees but only by their husbands.

Besides the physiological burden of not being able to support her household some of the interviewees described the dependence on good health. The farmers depend on their body to do the work and if they get sick they face a hard time to stay food secure. The interviewees talked of the necessity to save money for medical treatment. In both Shaurimoyo and Matufa there are health dispensaries but if it is a more serious illness they have to travel to other villages and to pay for that is hard. Some interviewees could not afford the medicines they needed and Justina described how she had given birth to her six children in her home with no professional assistance.

The interviewees described animals as a way to secure their economy. Owning cattle is a way to make a lot of money or if they have a few chickens they have something to sell or eat if they run out of food. Most of the interviewees had four to ten chickens and some had goats. But cows and bigger animals were rare among the interviewees.

All of the interviewees had aspirations and plans regarding their livelihood activities. Lack of money was described as one of the hindering factors. Like Neema who described her aspirations in her livelihood activities. She would like to do some business but since she does not have enough money she has not been able to accomplish anything except farming activities in her own land and working as a labourer in others farmers' fields. She says that she knows how to do business well, it is just the lack in capital that keeps her from starting. She would like to open up a kiosk to sell some things, maybe cook and sell some food, the work she is doing now is very hard work she says. She also describes how her economic situation hinders her in other parts of her life. "Sometimes there is a celebration nearby or at my relatives' house and I can't go there because if you go there you have to bring a gift - and then I can't go because I don't have anything to bring." – Neema

6.3.11 Ways of Cooperation

Neighbours, friends, relatives and family are people who the interviewees describe as their support, both in daily life as well as when something unexpected occurs. In everyday life the interviewees usually cooperate with neighbours and friends in asking for advice regarding agriculture or taking care of the children. For the interviewees who had limited economic means or for those who had suffered a tragedy, the interviewees described their parents as especially important in supporting them. In those cases the parents are the only safety net and through them some interviewees had received support in the forms of a loan, a piece of land or help in the agricultural activities. One interviewee from Matufa talked of elderly women as those she turn to when she needs advice. The interviewees also have their children as support in life once the children are a bit grown up. "There is a big change if I compare my activities to when the children were younger and couldn't help out. Today they are the ones who help me and make it possible for me to manage my life here." - Fatima

In Matufa one woman had been a member of a donor-funded group where she received a cow with the prerequisite of building a shelter for it. This cow served as her income and the cow had also gotten a calf. This cow was described as very important income source. This group met once a week to exchange ideas and save money together. Another interviewee is part of a

similar group but for herding chicken. In this group they also contribute and help each other with economic assistance to pay for school fees for the children if someone is sick. Joyce is a member of a group and means that her group also handles other issues than just economic ones. “Besides of paying and getting a loan we have another activity which is cooperating within the group. The group come and see you if you have a problem, like death, and we share that problem.” – Joyce

One interviewee is engaged in a group that educates people in the village on how to deal with tuberculosis. One interviewee is a part of a collective for sesame growers. None of the interviewees is a part of a Women’s Group and they had not heard of any in Matufa. The situation in Shaurimoyo was the same. One interviewee had heard of a Women’s Group but she did not know anything about it. “I have heard of groups that you can borrow money from but I have never gone there because I fear that if I go and borrow and fail to pay back they will take me to jail.” – Justina

During the focus group interview with the Women’s Group in Matufa, one of the members told us that before they started the group they used to see each other and discuss matters in life and decided to start a Women’s Group to be able to help each other out economically and socially. “We used to discuss matters in life before and we said to ourselves that it is better to start a group so that we can exchange ideas. When we are in sorrow and happy times we can save each other - because we stay without anything here.” - Women’s Group, Matufa

In Matufa there is a VICOBA⁴ group where the members get access to microfinance loans. Some of the interviewees are members of the VICOBA group and a few of them had taken a loan. The loans had been used for paying for school materials or investing in the agricultural activities. Other interviewees had heard of the VICOBA but did not know how the organisation worked and most of the ones who are not part of any kind of group say it is because they lack the monthly fee to become and remain member. All the interviewees describe the importance of getting money from their activities to pay for the school fees and for the children’s school uniforms, books and pencils. Some had taken loans to pay their children’s school fee and providing education for their children is described as a top priority by the interviewees.

⁴ VICOBA (Village Community Bank) is an organisation which follows the model of Bangladeshi Graamen Bank. It is structured to give poor people, especially in rural areas, microfinance credits and get organised in groups to fight poverty (Microfinance Gateway, 2014).

7. Analysis

7.1 Introduction

In this chapter we connect our empirical findings to previous research as well as the theoretical framework. The analysis is divided into three parts connected to and with the aim of answering our research questions.

- Which are the main livelihood strategies in the villages?
- What characterises the livelihood strategies of female farmers in the villages?
- How can the process of agricultural intensification affect the livelihood strategies of female farmers?

7.2 The Main Livelihood Strategies in the Villages

The livelihood strategies in Sub-Saharan Africa are described by the World Bank (2007) as agriculturally based where the majority of the people are living in rural areas as small-scale farmers. Our empirical findings based on the focus groups with key informants have given us a picture of the livelihood strategies in the villages. The unique socio-economic conditions in each village have also been given which provide us with the opportunity to study the interconnections between the livelihood strategies and the socio-economic conditions in the six villages. Our empirical findings give us a picture of the six villages in which 72 % of the households are subsistence farmers.

Previous research on livelihoods in Tanzania shows the importance of access to land and resources where there are significant inequalities between the farmers. Subsistence-oriented farmers are among the economically poorest with small areas of land and where livestock ownership is rare. Most of the land is owned by a few people with high economic status (Ellis, 1999, 2003). In the descriptions of the socio-economic categories by the key informants, high level of land and livestock ownership were described as assets that the households in the strongest socio-economic categories possessed. The socio-economically poorest households had small areas of land and no livestock. The same thing could be seen among the female farmers where the ones with a stronger socio-economic condition had access to livestock and a larger area of land.

Even though the subsistence farmers are, as shown by Ellis (1999, 2003), the economically poorest, other categories within the household typology were classified by the key informants as socio-economically poorer. The subsistence farmers were most commonly categorised in the middle of the socio-economic categories. The labour-oriented and the migration-oriented households were most commonly placed in the weakest socio-economic category. However, this does not mean that the economic conditions in the subsistence-oriented households are above the poverty line.

Ellis (1999) writes that the way of becoming better off for the poorer people in Tanzania is to diversify their livelihood strategies and become less reliant on agriculture. Ellis (1999) argues that multiple activities can create a better opportunity for livelihood security. The effect can

though give different outcomes between men and women. Rural women have less access to the labour market than men and also have to face the low-income jobs. Diversification is a better option to men and can at its worst trap women in a disadvantaged situation (Ellis, 1999). The diversification of livelihoods is also what the World Bank promotes for those farmers who do not have enough scale in production. According to the World Bank (2007), a diversification is necessary where poor farmers turn to rural non-farm activities.

The labour-oriented households in our empirical findings can base their livelihood activities on non-farm activities, for instance, owning a shop or working as a teacher. The most common labour activity in the villages was however described as occasionally working with farm activities on the fields of other farmers. The socio-economically weaker households were described by the key informants as reliant on wage labour activities at least as seasonal work or as a part of their livelihood activities. The interviewees describe how these labour activities with hard physical work and low pay make them dependent on the labour-oriented livelihood activities without any time to work in their own fields. This can be described as spirals of poverty, in which the farmers have to work with farm activities in the fields of others as they have no other option to support themselves and their households. With low income they have to work many hours to make the amount of money decent enough to support their household. When not working in the fields of others they are left with little or no time or energy for their other livelihood activities. Some of the interviewees describe how this is the last but also the only thing to do when the harvest is not enough to support their household, that is why the wage-labour in farming is a common feature in the livelihood strategies of the socio-economically poorer households. The diversification that can be seen as the most common in the villages is thus a diversification in agricultural activities with working as wage labour in farm activities and not a diversification towards non-farm activities.

The focus group interviews with key informants showed that the market-oriented households were described as socio-economically better off in all villages. According to the findings, market-oriented households make up 5% and none of these households were categorised by the key informants in the lower socio-economic categories. The World Bank (2007) states that only the farmers with enough profit should continue and is capable to create a growth in the agricultural sector. According to the World Bank (2007), the market-oriented farmers are the ones who should be profitable to invest in with agricultural inputs to reach a growth in the agricultural sector. However, in the studied villages that would only be 5% of the households. A few households from the subsistence-oriented, labour-oriented and diversified household categories were also classified by the key informants in the highest socio-economic category, which makes also them potential to fit into the demands of the World Bank (2007) to stay in the agriculturally based livelihoods.

7.3 The Characteristics in Livelihood Strategies of the Female Farmers

Ellis (1999) stresses the importance of gender when researching livelihoods and this is why we chose to start the second part of the results with a portrait of the daily lives of the interviewees. A life that turned out to be of very similar characterisation between the interviewees regarding areas of responsibilities, chores and the heavy workload. Ellis (1999) argues that inequalities exist regarding assets and access to resources between women and men. A silver thread through our empirical findings is this inequality. Within the issue of livelihoods of female farmers this inequality was made visible through patterns of less land

ownership, less access to economic and material resources and less access than men to the public sphere.

Since our interviewees have less access than men to the public sphere we agree with Fincher (2004) that the home and the everyday place is important. The private sphere becomes important to explore because of the clear-cut division of labour based on gender, which Momsen (2012) points to where different tasks are viewed as male or female responsibilities is also found in the lives of our interviewees. All of the household chores and responsibilities tied to the home-place were seen as female tasks. Besides these activities all of the interviewees are also working in agriculture. It is clear in our study that the female farmers carry a heavy workload. The interviewees carry what FAO (2011) calls a combined burden of farm work and household chores. As Chant (2006) has found there is a trend of bigger and heavier workloads for women but not for men. A division of labour exists also within agricultural work. According to Doss (2001), women are responsible for the subsistence crops and men for the cash crops. Our interviewees spend a huge amount of time collecting firewood, fetching water, cooking and taking care of the family. They also grow a small number of crops around the home-place for home consumption. Besides the question of decision-making power - how much time can they possibly have to control also the cash crops? Doss (2001) also states that men and women could be engaged in growing the same crops but at different stages. The empirical findings show that in the families of the interviewees the husband is responsible for selling the crops. This also puts him in charge of the money and leaving the women to depend on the decisions made by the husband.

As Moser (1998) and Chant (2007) we want to explore the meanings of poverty in relation to the concept of livelihood. When looking at what people have instead of what they do not have, when focusing on their assets it is clear that the social networks, social life and the cooperation within different groups are of great importance. For many of the interviewees it is the membership of a group that has made their life easier. All groups, not only the VICOBA with the possibility to get a micro credit, seem to be of this great and equal importance. The empirical findings show that all economic groups, as the VICOBA or other groups where savings are involved, go beyond their economic purpose and are developed into social security networks. When the interviewees describe the membership in the group and what they gain from it they talk equally of for example the cooperation in herding the hens and in supporting each other in the joys and difficulties in life. Once a membership in a group is obtained the economic aspects are not the only goal. Although the lack of capital is a barrier to enter into groups, it is clear that those who stand outside any group formation are vulnerable both in their life and livelihood opportunities. Not being able to enter a group is not only linked to lack of capital but also to lack of education and lack of time and energy. To enter a group there must be both time and opportunities the leave the private sphere for a while.

Land use and access to land is a gendered issue in Sub-Saharan Africa where women do not have the same right to claim land as men and the process of privatisation of land generally makes women lose the land they once had access to (Whitehead & Tsikata, 2003). According to the legislation in Tanzania, women have the possibility to be written as owner in the land title documents, but among the interviewees this was usually not the case. In the two villages where we interviewed female farmers it was only in Matufa that the process of land titling had started. A majority of the interviewees explained that their husbands are the official landowners. Whitehead & Tsikata (2003) show the empirical evidence of negative results for

women in local-level negotiations on land ownership in Africa and our interviewees also specify norms declaring male ownership.

The issue of the growing population and land scarcity in Babati District is shown by Hillbur (2013). Some of the interviewees rent or let land. The rent is described as a big expense for those who rent land but they have to feed the household. The rent is by some of the interviewees financed with loans from the VICOBA or from family members. One household had more than 30 acres of land and some did not even have one acre. The inequalities in land ownership are big as is also shown in other places by Ellis' (1999) description on land ownership. The female farmers' disadvantage in comparison with men in land ownership is also described by FAO (2011). The problem of land grabs, as according to Sundet (2005), can take place also within a village. This can happen when the wealthy individuals use their advantage to get the high quality or larger areas of land. According to Sundet this is a problem to the land title process. There is a process of land ownership documentation in the villages and the tendency on a global level goes towards privatisation. There is risk of foreign investors in the near future to see the opportunity of buying land from farmers with a land title document. For the female farmers, who are already at risk of being left out of the land ownership at household or local level negotiations, this is another factor where their resources are at risk.

7.4 The process of agricultural intensification and the livelihood strategies of female farmers

Even though the empirical findings in this study are found on a local scale, the development at local levels is linked to the development at the global level. The World Bank (2007) states agricultural development as a vital tool to get people out of extreme poverty and hunger. The World Bank (2007) seeks a productivity revolution which should be brought by small-scale farmers who would start grow high-value products for the market. If it is not possible for the small-scale farmers to grow high value products they should turn to entrepreneurship in rural non-farm activities (World Bank 2007). In the rural parts of Babati District the members of our focus groups and our interviewees talk about a reality where agriculture is not just a vital tool to sustain their livelihoods - it is the only tool. The World Bank (2007) pushes for local economic growth to deal with poverty reduction and to support global economic growth. However, Momsen (2010) stresses how economic growth rarely benefits women. For our interviewees the development agenda, regardless of direction seems far away when the vital tool in the life of the female farmers is the hand-hoe. The FAO (2011) finds that female farmers in Sub-Saharan Africa have less access to agricultural assets. This correlates with the interviewees descriptions of their limited access to the mechanised agricultural tools, means of transport and other important factors such as irrigated land. Ownership of tractors, power tillers and ploughs was non-existent among the interviewees. To get access to these tools, it was necessary for the female farmers both to rent capital and to be influencing the decision-making regarding investments in the household. FAO (2011) shows that women in Sub-Saharan Africa have less access to social services and infrastructure. In Matufa water taps had been installed in the village a few years ago, but in Shaurimoyo there were no taps. This was an important difference in the life of the interviewees in these two villages since the female farmers spent a huge amount of time and effort to fetch water. A breakthrough in infrastructure was the cell phone which all interviewees had access to and used in their agricultural activities.

The interviewees describe a changing natural environment. The farmers of Babati District and Tanzania are directly dependent on agriculture for their survival. Ghai (2004) highlights how women are affected by environmental changes and at the same time their burden is increasing when, for example, water become scarce. In the agricultural intensification process it is important to review how the female farmers are affected by environmental changes and an increased workload due to intensifying the agriculture. It is also important to realise that putting together how women are left out of land ownership or in some cases with smaller pieces of land while the environmental resources are degrading it puts them in a difficult situation to invest in agricultural inputs.

The World Bank (2007) stresses the significance in their strategy to invest in agricultural sector activities for the market-oriented farmers or subsistence-oriented farmers who are moving towards becoming market-oriented. The interviewees describe how “the good farmers”, the ones who are most successful in their agricultural activities in the villages, are the ones who get agricultural inputs from the village offices as well as support from international organisations. Since the female farmers are socio-economically weaker (FAO, 2011) the conditions for the female farmers’ participation in the agricultural intensification processes seems to be less compared to the male farmers. According to the FAO (2011), women are much less likely to be the one purchasing agricultural inputs such as mechanical equipment, fertilisers and improved seeds. Most of the interviewees who used inorganic fertilisers were the ones with a demonstration plot. The perceptions on fertilisers differ between the interviewees, both between those who use it and the ones who do not. The varying opinions on whether fertiliser is something good and necessary or something that is bad for the soil and not necessary for better harvests does not only depend on if they use inorganic fertiliser or not, but also on what kind of crop they are growing, the condition of their farm land, and on what they have heard about the method from other people.

Ellis (1999) argues that the decision-making is commonly made with the stronger bargaining power of men. Almost all of the interviewees who have a man in the household describe how their husband is the one who makes the decisions in both agricultural and economic issues. For some of the interviewees the social life is limited in both time and space. They lack the time to leave home and as previous research shows, extension services are less likely to reach poor and especially women (Doss, 2001), which is the case also in Shaurimoyo and Matufa. The opportunities in public as well as private spheres are constrained by unequal power relations between men and women and as Doss (2001) finds, the husband is often treated as a key decision-maker in interactions outside of the domestic sphere. In our empirical findings we see the example of female farmers, for example, at home with the children miss out on information and knowledge on the process of agricultural intensification as well as advice regarding agriculture.

The key informants highlight the extension officers’ significant role to spread knowledge regarding agricultural methods to the farmers. The FAO (2011) also states that women compared to men have a disadvantage in their access to social services. Very few of the interviewees had met the agricultural extension officer and this situation could be seen as an example on women’s marginalisation in some social contexts and limited access to education. The interviewees who had met the agricultural extension officer were limited to some of the female farmers who lived in a household with a demonstration plot, and therefore they were integrated in the process of agricultural intensification. None of the interviewees without a demonstration plot had met the agricultural extension officer and were therefore not aware of

the knowledge about agricultural methods that the agricultural extension officer can offer information about.

Since the knowledge on agricultural methods might be spread in social spheres to which the women have limited access, agricultural intensification methods might be used in a wrong way. Boserup (1965) argue that some farmers may not know how to develop the agriculture and therefore use the land more intensively, which can make the soil infertile. Our study shows examples on how lack of knowledge or misjudged guidelines from others have made the farmers to make agricultural decisions with unwanted consequences. One interviewee started to use fertiliser after being advised by her neighbour when her rice was turning yellow. Later she realised that yellowness was caused by too little water and not of soil infertility. Agro-chemical stores are common in the village markets but the knowledge and education of how and when to use fertilisers is lacking as it is a new feature in the farmers' agricultural methods. The knowledge does not reach into the home, which is the women's main spatial social context (Momsen, 2010).

The socio-economic conditions of the interviewees range from well off to well below the poverty line. Many of the interviewees face poverty. The connection between gender and poverty is there and as Chant (2007) writes it is important to discover why and avoid victimising discourses. Female-headed households are often generalised as the poorest of the poor. Among our interviewees there are both the *de jure* and the *de facto* female-headed households that Doss (2001) defines. One of the female-headed households in Shaurimoyo had a demonstration plot. In the process of agricultural intensification this could be a way to include women. What happens around her demonstration plot is not possible for us to say but at least she has the knowledge about the improved seeds and how to use the inorganic fertiliser. Knowledge and information is important in the process of agricultural intensification and depending on what position this farmer has in the village she might have an important role in strengthening other women. In other cases the interviewees who are the female-head of household did face difficult lives. In the case of the widow there is the burden of taking care of the children and in this case without inheriting any land from the late husband and in the case of the *de jure* female-headed households there was the burden of supporting the children and also the husband who was not living with the family. This workload and small means of life makes it hard to follow the process of agricultural intensification. In the households where the interviewees lived with their husband there is a risk that female farmers do not get the same say and knowledge in the process of agricultural intensification.

8. Conclusions

8.1 Agricultural Intensification and the Livelihood Strategies of Female Farmers

Very few households in the studied villages fall under the guidelines for development from the World Bank (2007) on which types of households that are recommended to stay in agriculturally based livelihood strategies. The World Bank (2007) suggests farmers that do not qualify to go in a market-orientation to seek livelihood strategies in non-farm activities. The signs of diversification in this study do not have any non-farm sectorial capacity and show a situation that is not in line with the World Bank agenda. In the studied villages the livelihood diversifications are happening in farm activities and not in non-farm activities.

We found that factors at different levels such as degrading environment, increasing workloads and changing access to land have serious implications on female farmers livelihoods. In line with Chant (2007) we also found an increasing obligation for women. There is an increasing differentiation in the rural societies and we found a risk that the process of land titling may cause a proletarianisation and since the female farmers have and probably will have less access to land ownership they might become a majority of the wage labourers. Working as a wage labourer within the agricultural sector is a livelihood strategy described by all our interviewees as a last resort, a spiral towards poverty and a poverty trap.

All types of social networks and groups are crucial for the livelihood strategies of the female farmers. Economic groups develop beyond their purpose and serve as a social security network. Women's Groups are rare to non-existent in the researched villages.

The process of agricultural intensification in relation to the livelihood opportunities has a spatial dimension. Female farmers are tied to the home, the private sphere. Both within the private sphere as well as in the public sphere the power of female farmers is limited. Lack of power within and outside the household, lack of access to resources, lack of capital and less access to extension services and information are risking to leave female farmers outside the process of agricultural intensification. Several factors and opportunities within the agricultural intensification process are tied to the public sphere. For example the purchase of agricultural inputs, the meeting with the agricultural extension officer and the contact with agricultural organisations. These important factors are also depending on having the economic means to buy the inputs and the social norms regarding contacts outside the home-place. Within the prevailing gendered structures of society today women in Sub-Saharan Africa do not have the time, status, economic means and power to gain *access* to the processes of agricultural intensification.

8.2 Reflections and Further Research

When studying intensification in agriculture and how it affects the livelihoods of female farmers we found the dilemma of development processes that focuses on economic development for poor people. In Tanzania and in the villages we visited many of the female farmers who were practically outside the market; they are not a part of the formal monetary sector and barely a part of the informal economy either. Pushing for a development towards

market-orientation and privatisation for female farmers in Tanzania is pushing for a big change and since the aim for agricultural intensification and the “productivity revolution” that the World Bank is seeking for something to happen fast, we find this development as contradictory. It might actually be more effective to find a way towards development at local level, where place-specific and considerations on what means of living that are already there is in focus. Meanwhile we had to change our mind-set considering a lot of things after visiting the villages and realised that it is easy to have opinions about things we never have or will experience ourselves.

The research on gender and development as well as research on women in agriculture is both wide and widespread. During the time of this study we have noticed that there is a trend towards bringing the socio-economic factors and human perspective into questions of agricultural development. However, we do not find the research on agricultural intensification in relation to the livelihoods of women as common. In the development agenda, as in the World Bank report on agriculture for development (2007), it seems clear that women play an important role in agriculture and development but it is not as clear how development processes, such as agricultural intensification, affect women. We call for further research on the agricultural intensification processes as it goes on since we found that there is a risk and an on-going development towards a majority of female farmers being left out of the agricultural intensification processes. In order to say something about how intensification in agriculture affects women’s livelihoods more studies, from different places in and outside Tanzania, are needed. It might also be possible to research how the process of agricultural intensification can become more including towards women and the poorest for example by looking at how other farmer groups support each other. We would also like to highlight the importance of development research that goes beyond the dominating development paradigm. Both by bringing different perspectives, such as gender, socio-economic conditions and ecological perspectives into the dominating development agenda for agriculture, but also by researching and finding other ways in supporting female farmers to sustain and improve their livelihoods.

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Editing

Editing of the map showing the Babati District at p. 18: Rasmus Lindell.

Appendix 1

Interview Guide - Focus Group Interviews at the Village Offices

Introductory Questions

- Name and position.
- General information about the village.
- Main responsibilities for the Village Chairman, the Executive Officer and the Sub-village Chairmen.

About Livelihood strategies in the Village

- Categorisation of 100 names of head of households from the village into the household typology.

Discussion on Socio-economic Conditions in the Village

- Opinions on what material and economic wealth/poverty and well-being means in this village.
- What defines wealth/poverty/well-being?
- How is the social composition in the village?
- Is food insecurity an issue in the village?
- What are the fundamental conditions for a good life in the village?
- Which are the main constraints/struggles for small-holder farmers in the village?
- How have the village changed during the last 10-20 years?
- The focus group setting up categories according to wealth/poverty in this village
- Is it possible to come up with categories? What defines this category?
- Categorisation of the same 100 names of head of households from the village according to categories of wealth/poverty

Appendix 2

Household Typology – The Livelihood categories in Swahili

Market-oriented farm households – Wakulima wafanyabiashara

Kundi hili zaidi ya asilimia 75 ya kipato chao kinatokana na uzalishaji mashambani; na zaidi ya asilimia 50 ya mazao ya kilimo/mifugo huuzwa sokoni.

Subsistence-oriented farm households – Wakulima wazalishaji wa chakula cha kaya

Kundi hili zaidi ya asilimia 75 ya kipato chao kinatokana na uzalishaji mashambani; na kiasi cha au pungufu ya asilimia 50 ya mazao ya kilimo huuzwa sokoni.

Labour-oriented households – Kaya zinazotegema vibarua

Kundi hili zaidi ya asilimia 75 ya kipato chao kinatokana na malipo ya vibarua na au kujiajiri katika shughuli nyingine zisizo za mashambani.

Migration-oriented households – Kaya zinazotegemea vyanzo vingine vya mapato mbali na nyumbani

Kaya hizi zinapata zaidi ya asilimia 75 ya kipato chao kutokana na shughuli nyingine mbali na nyumbani na tofauti na malipo ya kibarua.

Diversified households – Kaya zenye maisha ya njia tofauti

Zaidi ya asilimia 75 ya kipato cha kaya hizi hazitokani na shughuli za kilimo, vibarua wala mapato toka shughuli nyingine nje ya nyumbani.

Appendix 3

Interview Guide – Focus Group Interview, Women’s Group

Introductory Questions

Name, age and work/what you do
Composition of the group
When they started the group and why
Aim of the group
How does your meetings work? What could be a typical topic in a meeting?

Life of Female Small-holder Farmers

Have you seen any changes in agricultural practices in the last years?
- Can you think of positive and negative effects of these changes?
- Do these changes have any particular/special effect on women?
What kind of agricultural practices do the farmers in Matufa use to get a good harvest?
What could be the limitation of this practice?
- Does this practice, xxx, work different for women and men? Once you have done xxx, does it have different effects on women and men?
What kind of seeds is common to use in Matufa?
Before you could buy seeds - how did it work? Who handle the seeds?
Are fertilisers used in Matufa? What kind?
Access to resources
Knowledge systems in agriculture. Do women and men have different knowledges/knowledge areas?
Female headed households

Land Rights

Ownership, land title document and inheritance

Women’s Rights

What are the main differences or constraints for women compared to men in Tanzania?
If you think about the conditions for women - what changes would you like to see?
Education
Political situation in Babati/Tanzania
Women’s influence in the political life in the village/in Babati

Appendix 4

Interview Guide - Female Farmers

Introductory Questions

Name and age?
How long have you been living here?
Where did you live before?
Why did you move here?
Can you tell us all the people living in the household?
What age are the children that live at home?
Did you go to school when you were a child?
What standard did you finish?

Workload

What do you do at home?
- What does that include?
What does your husband do at home?
- Does he have any other kind of responsibility?
- Does your husband do any other kind of work outside the household?
- Has he been doing any other kind of business before?
- Does he do any other kind of work?
What responsibilities do children have?
- Work/responsibilities/school...?
What do you do to make money?
Do you do any other kind of work outside the household?
- What do you do?
- Where do you have this business?
- Do you do anything else?
What are your activities during a normal/average day?
Can you describe a typical day?
Can you remember a day that was not typical and describe that day?

Land Rights

Do you and your husband own any land?
Land title document? Whose name is on the document?
Do you let or rent land?

Agriculture

What kind of crops do you grow?
Do you sell crops?
Do you use any equipment when growing the crops?
Do you use any kind of fertiliser?
What kind of seeds do you use?

Where do you get the seeds from?
How does it work with irrigation?
Do you have any animals (including chicken)?
- What kind?
- How many?
- What do you use them for?

If you compare the natural environment now and when you were young/when your first born was a baby - have you noticed any changes?

Is your agricultural production enough to feed the household?

How do you get access to drinking water?

What energy source do you use for cooking?

Do you have access to electricity?

Do you have access to a cell phone?

-What do you use the cell phone for?

Is there any kind of organisation/group in the village that you can save money in or borrow money from?

-If you have money left. Who decides on what to do with the money?

Aspirations

Do you wish for any kind of improvement regarding your work in agriculture?

- How would those improvements affect your household?

Do you wish for any kind of improvement for your own household?

Do you feel you can influence your situation in any way regarding agricultural activities?

- Do you feel you could go to someone if there is a problem?

- (If no) Why not?

- Who could that person be?

If you change something in your agricultural activities - how do you make these decisions?

Do you cooperate with someone else in the village (like a neighbour) with something in your daily life - like taking care of children, discussing agriculture?

Is there any women's groups in the village?

Agricultural Intensification

Are you or anyone in your household in contact with Africa RISING?

How long have you been in contact with Africa RISING?

How did Africa RISING contact you?

Why did you want to cooperate with Africa RISING?

Have Africa RISING made any suggestions on what kind of crops you should grow and how to plant them?

Have Africa RISING made any suggestions on what kind of fertiliser you should use?

Have you got any other suggestions from Africa RISING concerning your farming activities?

What are your perceptions about these changes?