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Livelihoods Strategies of Thatching grass Harvesters in the Witwatersrand goldfields

Robert Maseko

A research report submitted to the School of Architecture and Planning, University of the Witwatersrand in partial fulfilment of the degree of Master of Science in Development Planning

Johannesburg, 2013

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Declaration

I declare that this thesis is my own unaided work. It is being submitted in partial fulfilment of the Degree of Master of Science in Development Planning, Department of Architecture and Planning at the University of Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination to any other University.

…… (Candidate's Signature)

Robert Maseko

…….. day of……Year…….

Abstract

This study, which was conducted from January 2011 to March 2013, aims to assess the livelihood strategies of thatching grass harvesters on the Witwatersrand goldfields in Gauteng and North West Provinces, South Africa. The region experiences high retrenchments, unemployment and poverty levels and the research sought to uncover the livelihoods strategies using a Sustainable Livelihood Framework as a tool. The study highlights the assets that assist harvesters survive as well as the challenges faced by the poor people in this region. It also demonstrates the value of natural resources to the poor. Unlike many rural areas in South Africa, thatching grass was harvested for commercial trade rather than subsistence use. Most harvesters were immigrants from neighbouring countries (73.7%) some of them had been employed or attempted to find employment on the gold mines. Some operated on full-time basis (44.7%) while others diversified their incomes to supplement the income obtained from harvesting (55.2%). Earnings were generally low, ranging from R255 to R5 917 per month (mean+SE=R1 980±112; n=38). However, several were able to reinvest incomes into their livelihoods by, for example, purchasing a vehicle to transport their loads and, in one instance, employing people to work for them. Access to harvesting sites was a major problem for many harvesters due to conflict with some land owners. But some were able to access land particularly belonging to mines or farmers, drawing on their social connections they have established. Additional problems included crime, xenophobia and social divisions, long distances and lack of reliable markets.

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First, I thank my supervisor Professor Aly Karam and co-supervisor DR Jenny Botha for their guidance, encouragement and numerous consultations we had, without them it was going to be difficult for me to write this kind of a report.

Secondly, I would like to thank Department of Trade and Industry (DTI) and the National Research Foundation (NRF) (THRIP) for funding the project, as well as the Mine Woodlands Programme (Ecological Engineering and Phytotechnology Programme, School of Animal, Plant and Environmental Sciences, University of the Witwatersrand and AngloGold Ashanti) for logistical support.

Thirdly, I will also extend my gratitude to the assistant researchers Zanele Ncube and Tshengisani Khumalo who assisted me in conducting fieldwork, as well as my fellow colleagues Frank Nkulu, Gladys Anaman, Ntandokabawo James, Richard Machava and Seyco Manyaka who also made their contribution to this research.

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CHAPTER 1: THE IMPORTANCE OF THATCHING GRASS HARVESTING

1.1 INTRODUCTION

Thatching grass plays an important role in the livelihoods and survival of many economically deprived communities, particularly in the rural areas of South Africa where grass is frequently used to thatch roofs. In Limpopo Province, there has been an increase in commercial demand for thatching grass over the past years due to an increase in modern structures that use thatching grass such as restaurants and guest houses (Makhado *et al*. 2009) as well as private homes.

Most gold mines in South Africa are located in the grassland biomes of the Witwatersrand which continue to shrink under human activities (Sutton and Weiersbye, 2007). Grasslands can also be a source for livestock grazing and are known for supporting larger human settlements and populations (Partel *et al*. 2005). Thatching grass is harvested by subsistence harvesters at or near the properties of gold mining companies, many of whom own larger amounts of land that could be a source for thatching grass, reeds and other building materials for economically deprived communities (Botha, 2009). The Witwatersrand goldfields are becoming densely populated because of urbanization, and there has been an increased level of unemployment in many mining towns due to the closure of some mines in this part of the country (Labour Market Review, 2007). Many people have struggled to find work hence some have resorted to harvesting thatching grass and other natural resources as a means of surviving. This study aims to reveal different livelihood strategies employed by thatching grass harvesters on the Witwatersrand goldfields, contributing to an understanding of poverty, livelihoods and the informal economy. It will also contribute to sustainable management of natural resources and harvesting, as well as regional development planning, corporate social responsibility programmes and mine closure planning. Also, it will identify issues related to harvesting of thatching grass and link these to planning theories as a way of finding solutions as a poverty reduction strategy.

There has been limited research on thatching grass harvesters locally or at international level. In South Africa, research on thatching grass harvesting has been conducted mostly in the Eastern Cape, KwaZulu Natal and Limpopo Province (Makhado *et al*. 2009; Shackleton, 1990). In the Greater Giyani Municipality, Limpopo Province grass is harvested to make grass brooms as well as for thatching houses. It can cost R1000 to R2500 for 500 bundles of grass to thatch single hut (Makhado *et al*. 2009). Different types of grass are harvested in this region and these include *Hyparrhenia filipendula* (fine thatching grass), *Hyparrhenia hirta* (Common thatch grass), *Themeda triandra* (Red grass), and *Hyparrthelia dissoluta* (Yellow Thatching grass) (ibid). In contrast, 80 to 120 bundles of grass were used to thatch one hut in a study conducted at Mkambati Game Reserve situated in the former Transkei, now known as the Eastern Cape (Shackleton, 1990). These differences are likely to be due to differences in the sizes of huts as well as the size of the bundles of grass sold, bundles of grass sold in Limpopo might be bigger than bundles in the Eastern Cape. Both studies highlight the significance and the role of thatching grass in economically deprived communities of South Africa. Also, in this Eastern Cape study, thatching grass was sold to local entrepreneurs and wealthier people who then resold it for profits. Most communities around the Witwatersrand basin do not use thatching grass to roof houses because this is an urban environment where houses are mostly roofed by corrugated iron sheets unlike the ones in the rural areas of Limpopo, Eastern Cape and KwaZulu Natal as mentioned in Makhodo *et al.* (2009) and Shackleton (1990), because the region is increasingly urbanized. Thatching grass here has not been harvested for personal use by harvesters but it appears to be rather used as a source of income through trade.

At an international level, thatching grass plays an important role in a number of countries in both under-privileged and privileged communities. In Nepal, grasslands support large amounts of biodiversity and supply local people with valued natural resources, including thatching grass (Peet *et al.* 1999). In the Okavango Delta in Botswana, most households in the village of Shorobe and Shakawe have their livelihoods dependent on the harvesting of thatching grass during winter season. Based on the 2003 figures, it was estimated that in Shorobe an average household may make up to US$686 annually through the sale of thatching grass while in Shakawe an average household can make up to US$1 049 annually (Mmopelwa and Blignaut, 2009).

In a study carried out in Central and Northern Ethiopia in Biyo-Kalala and Tiya on the perceptions of people on enclosure practices aiming to prevent or mitigate land degradation, 93% of the respondents were satisfied with benefits they derived from those enclosures and 78% believed that there had been an increase in the availability of thatching grass which was previously not available in these areas (Mengistu *et al*. 2005). Thatching grass provides a source of income for many households. Based on these 2004 figures, it is believed that a single household can get about 104 Ethiopian Birr through the selling of grass and has helped in the increase of annual household income ($US1 was equivalent to 8 Ethiopian Birr) (ibid).

Harvesting of thatching grass in South Africa also falls under national environmental legislation, which emphasizes the sustainable harvesting of some natural resources. Environmental rights are enshrined in the South African Constitution Chapter 2 Section (24) (b) Act 108 of 1996, which states that everyone has the *"right to have the environment protected for the benefits of present and future generation through reasonable legislative and other measures that promote conservation and secure ecological sustainable development and use of natural resources while promoting justifiable economic and social development"* (The Constitution of the Republic of South African Act No 108 of 1996). In South Africa, some organizations are attempting to work towards achieving this goal. For example, the Participatory Forest Management Principles strives to ensure long and short term benefits to locals and other stakeholders and the development of sustainable harvesting practices (Department of Water Affairs and Forestry, http://www2.dwaf.gov.za/dwaf/cmsdocs/Tom/SUMMIT%20PAMPHLET%206a%20-%20PFM.pdf Access date 20/03/2013).

AngloGold Ashanti (Ltd) manages natural vegetation occurring on its properties, including the Vaal River Dolomitic Grasslands, the Vaal-Vet Sandy Grasslands and the Rand Highveld Grasslands occurring on its properties as part of its environmental policy (AngloGold Ashanti, 2009). This includes fire management, alien plant control and two game reserves, one at West Wits and the other at Vaal River. The project involves the University of the Witwatersrand which implemented the phytoremediation project in partnership with AngloGold Ashanti for over 15 years (Botha and Weiersbye, 2010). In this project, mainly indigenous trees, shrubs and other plants are planted strategically to control contaminated

water runoff from Tailings Storage Facilities (mine dumps). Tailings Storage Facilities can be a source of pollution to the surrounding areas if not well managed. Fire is a natural part of grassland ecology and if there is a high build-up of biomass near or on phytoremediation sites they are likely to burn. Although many fire adapted species resprout, their growth rate and thus their ability to control the run off of groundwater is reduced (ibid). As is occurring internationally, the mines are also working on Corporate Social Responsibility projects where they are trying to include the marginalized poor (Jenkins and Obara, 2008). Many thatching grass harvesters in this region live in communities near gold mines and the project of assessing thatching grass harvesters tries to locate harvesters within the mine's Social Responsibility Programmes. AngloGold Ashanti (Ltd) has previously granted thatching grass harvesters permission to harvest on selected sites on its properties.

Improving linkages between the gold mines, the farming community in this region and thatching grass harvesters could help improve the livelihoods of these people and at the same time improving relations with the communities around the mines. The mineral sector needs to show its commitment to socio-economic and environmental development issues, in combination with good governance (The Mining Minerals and Sustainable Development Project MMSD, 2002). In the South African policy context 'sustainable development' is defined as "*development that does not exhaust the resources at a rate more than there are replaced by natural process or new technology, it also combines development with environment as well as social and economic issues"* (Department of Environmental Affairs and Tourism, 2008).

Due to limited time constraints I decided only to focus on livelihoods assessments of thatching grass harvesters and livelihoods in relation to markets in my Masters Degree thesis. The study does not include a market assessment.

1.2 RATIONALE AND PROBLEM STATEMENT

The restructuring of the gold mining industry since the late 1980s has led to massive retrenchments of mine workers as a result of declining gold reserves and increased mining costs-energy and depth as this increased the levels of poverty in these areas (Labour Market Review, 2007), significantly, in the Witwatersrand goldfields. As a result the region experiences higher retrenchments, unemployment and poverty levels. Most people in this region whose livelihood was based on wage labour from working in the mines in the early 1990s lost their jobs (more than 200 000 retrenched) as gold deposits declined, forcing them to find other alternative ways of surviving (ibid). Some people harvest natural resources as a survival strategy in this region (Botha and Weiersbye, 2010). The increasing levels of poverty in and around mining areas have left many people struggling to survive. Thatching grass harvesters form part of the marginalized poor. A study of their livelihood strategies will contribute to an understanding of poverty in this region. It will also contribute to management of natural resources, as well as regional development planning, corporate social responsibility programmes and long-term mine closure planning. It further identifies issues related to harvesting of thatching grass and links them to planning theories, as well as identifying solutions to these issues.

1.3 AIM

- To gain an understanding of the livelihoods strategies being adopted by thatching grass harvesters in the Witwatersrand goldfields.

1.4 OBJECTIVES

- Assess the livelihoods strategies of harvesters using the Sustainable Livelihood Framework (DIFD, 1999).
- Identify sustainable development opportunities and constraints for thatching grass harvesters who form part of the marginalized groups in this part of the country.
- Identify key planning issues and suggest planning interventions to these issues.

1.5 KEY QUESTIONS

- Who are the thatching grass harvesters and where do they come from?
- What are the livelihood challenges faced by thatching grass harvesters?
- How do thatching grass harvesters and their households survive?
- How do livelihood strategies of thatching grass harvesters and market operators compare with similar sectors elsewhere?
- Which are the various linkages of the harvesters that help or hinder them in their business?
- Why are some households able to improve their situations while others are not in the face of similar living conditions?
- What are the key planning issues and relevant planning interventions?

1.6 STUDY AREA

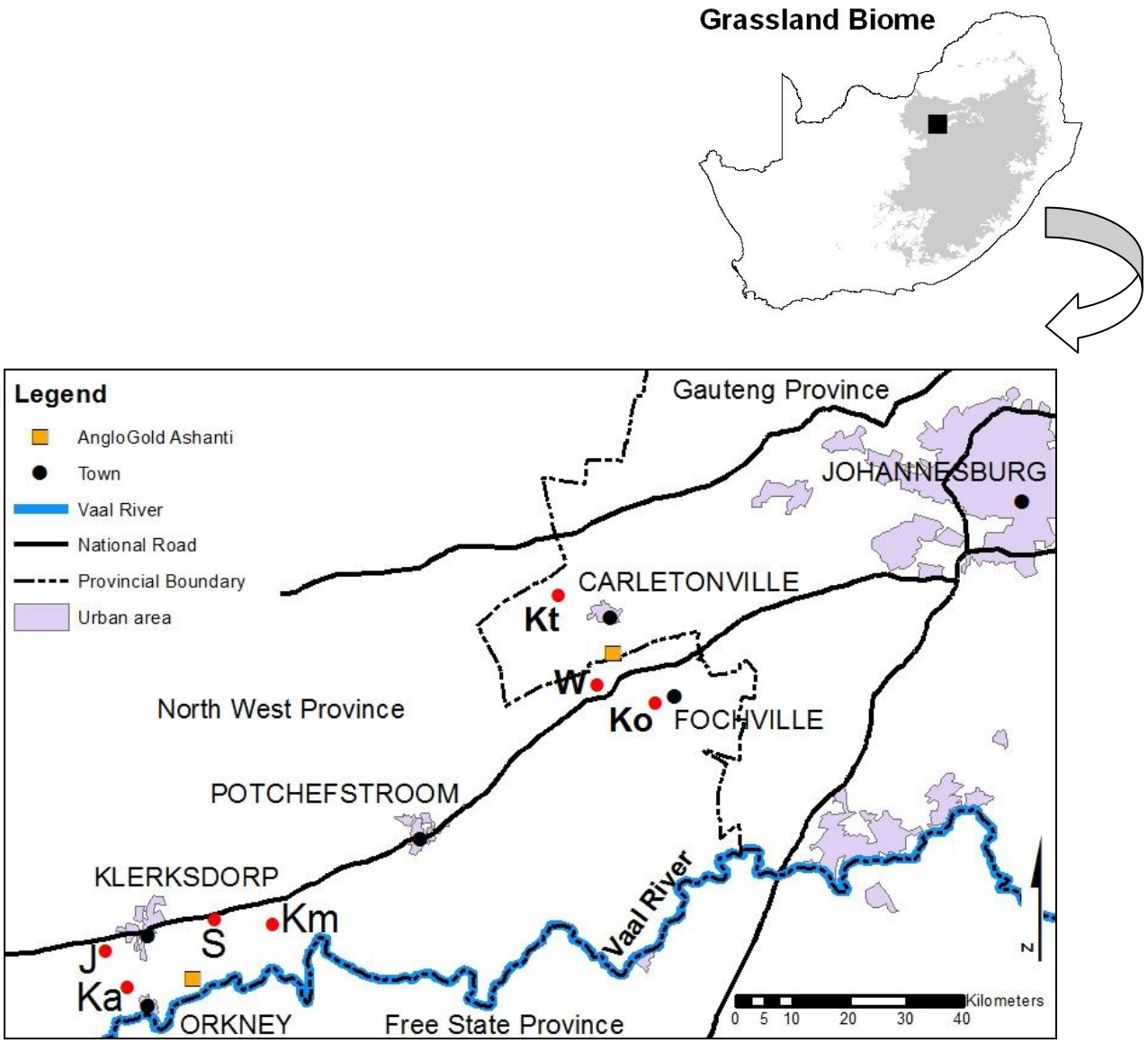
The study was conducted with harvesters operating near AngloGold Ashanti's Vaal River and West Wits Operations in South Africa. Vaal River Operations lies on the border between North West and Free State Provinces (26° 56' 07,65" south 26° 43' 54,41" east). In the North West Province, part of the Vaal River Operations falls under Dr Kenneth Kaunda District Municipality and has an estimated population of 393 988. The Free State section of the Vaal River Operations falls within the Moqhaka Local Municipality with an estimated population of 164,716. Nearest towns in the Vaal River operations include Klerksdorp, Potchefstroom, Orkney, Jouberton and Bothaville (Figure 1.1), (Mucina and Rutherford cited in Botha and Weiersbye, 2010).

Within the Dr Kenneth Kaunda District Municipality, about 37% of the people speak Setswana as their first language, 17% speak Xhosa while 13% speak Afrikaans as compared to about 65% of the people speaking Setswana as their first language in the whole of North West Province. In Wedela (which is where harvesters in Blyvoor resides) in the West Rand District Municipality the dominant language is Xhosa followed by Setswana (AngloGold Ashanti, 2009).

The Vaal River Operations lie on an estimated 14 000 hectares of land, at an altitude of 1 270-1 350 meters. Dolomite soils are dominant in this area as well as some sandstones and lava. The vegetation of the Vaal Reefs Operations includes Vaal Reefs Dolomite Sinkhole Woodlands, Vaal-Vet Sandy Grassland (Conservations status, considered endangered nationally), Dolomite Grasslands (endangered), Klerksdorp Thornveld, Rand Highveld Grassland, Highveld Salt Pans, Carletonville Dolomite Grassland and Andesite Mountain Bushveld (Mucina and Rutherford cited in Botha and Weiersbye, 2010).

West Wits Operations are 65 km west of the City of Johannesburg within West Rand District Municipality. The West Rand District Municipality has a population of about 215 865 people with several towns in it that include Potchefstroom, Carletonville, Khutsong, Fochville and Kokosi (Figure 1.1). Apart from mining, agricultural activities are also common here both in the West Wits Operations and the Vaal River Operations and open grasslands. Vegetation of

this region includes Carletonville Dolomite Grassland (endangered), Gauteng Shell Mountain Bushveld (threatened), Rand Highveld Grassland, Soweto Highveld Grassland and Andesite Mountain Bushveld (Mucina and Rutherford cited in Botha and Weiersbye, 2010).



Source: David Furniss (2013)

Figure 1.1: The location of two study areas in North West and Gauteng Provinces. The red dots showing existing Townships in the study area (**J**=Jouberton, **S**=Stillfontein, **Ka**=Kanana, **Km**=Khuma, **Ko**=Kokosi, **W**=Wedela and **Kt**=Khutsong)

1.7 CONCLUSION

There has been little recent research on the livelihoods of thatching grass harvesters in South Africa. This study will help reveal different livelihood strategies employed by thatching grass harvesters on the Witwatersrand goldfields, contributing to an understanding of poverty, livelihoods and the informal economy. It will also contribute to sustainable management of natural resources and harvesting, as well as regional development and planning, corporate social responsibility programmes and mine closure planning. The next chapter presents the methods used in collecting data in the field and in the presentation of data, ethical considerations as well as the challenges that were encountered.

CHAPTER 2: MEETING WITH THE HARVESTERS

2.1 INTRODUCTION

This chapter presents data collection techniques, data processing, and the challenges faced by the researcher during field work. The chapter also discusses the ethical considerations that form the basis of the research conduct, problems encountered during this process, and the process of introducing and training of research helpers.

2.2 DATA COLLECTION

Interviews were conducted near the Vaal River Operations in Klerksdorp Town, Jouberton and Khuma (Figure 3.1), and near the West Wits Operations in Blyvoor, near Carletonville and Kokosi Township near Fochville (Figure 2.2). All in all, 38 interviews were conducted, 26 of the interviews were conducted near the Vaal River Operations (Dr Kenneth Kaunda Municipality), while 12 of them near the West Wits Operations (West Rand District Municipality). A snowball sampling technique was used in which harvesters who had been previously located and who had agreed to participate in the study, were interviewed. They were then asked for further contacts of the people they know who are also involved in thatching grass harvesting. A snowball sampling technique is usually used when the population under the study is not readily available and difficult to find and usually uncovered through social networks on the respondents (Browne, 2003). This method allowed me to arrange for meetings with other harvesters and also gave me a chance to explain to the harvesters the purpose of my meeting with them telephonically. It also helped to uncover the relationships that exist between these social groups and how they are connected across the region as these formed part of their social networks and survival strategies. Structured interviews were designed to capture the livelihood and harvesting information from the harvesters. Open ended questions were used to capture some of the valuable data that otherwise not be captured through closed questions. Structured, semi-structured and open ended questions allows for more flexibility between the respondents and the interviewer on the themes of the research (Jackson II *et al.* 2007). Face-to-face

interviews allows for a relationship of trust to develop between the interviewer and the respondent vital in capturing rich data (Knox and Burkard, 2009). The questionnaire was further scrutinized to make sure there were no ambiguous questions that can limit the capture of the information. Information captured included the household information, income from harvesting grass, supplementary jobs and the challenges they encounter. Interviews were conducted at harvesting sites where possible so that much of their operations revealed, and to ensure that there were no disturbances to their family time.

Two field assistants helped me in conducting the interviews, as finding the harvesters took considerable time despite making prior arrangements. The two assistants were given training on what they needed to capture during the interviews with regards to the objectives of the research. I first gave them a training session on what was expected from them particularly on the key information they needed to capture during the interview process. My co-supervisor also gave them a training session to make sure they understood what was required from them. The assistants also had prior experience in conducting livelihood interviews from previous projects.

Interviews took 30-45 minutes, depending on responses. Interviews were conducted to minimize the time and impact on the harvesters, as their time is money. This was achieved by meeting some when they were not working on weekends and late afternoons or evenings when they were back from work. Other interviews were conducted in the field while the harvesters were working (Figure 2.3, Figure 2.4). To compensate the harvesters for their valuable time, we bought each harvester a food parcel (2kg mealie-meal, two tins of baked beans and fish for each harvester). These were gratefully received; some said they were struggling to feed themselves.

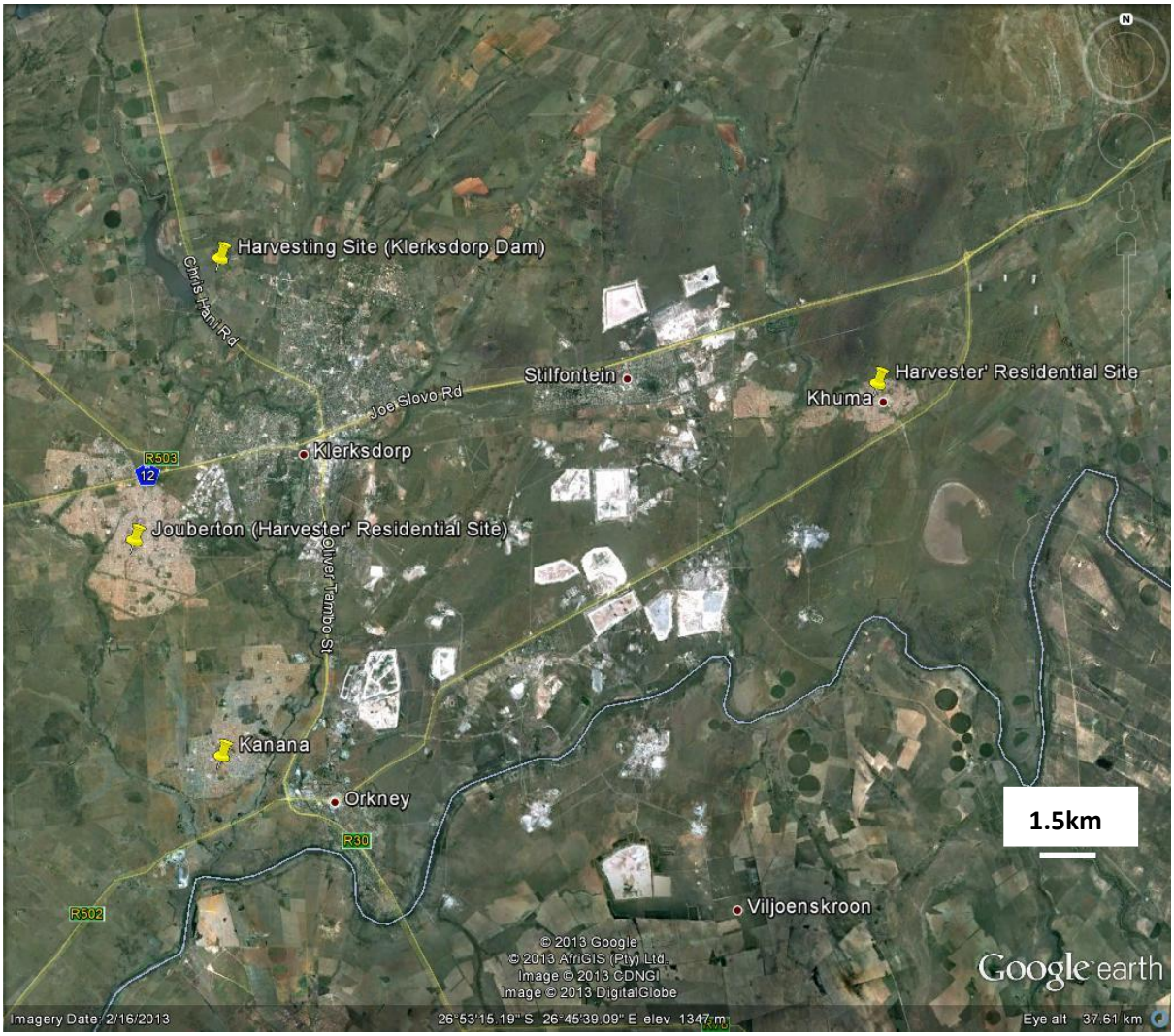


Figure 2.1: Map showing the interview sites (Klerksdorp, Jouberton, Khuma and Klerksdorp Dam) in the Dr Kenneth Kaunda District Municipality, North West Province.

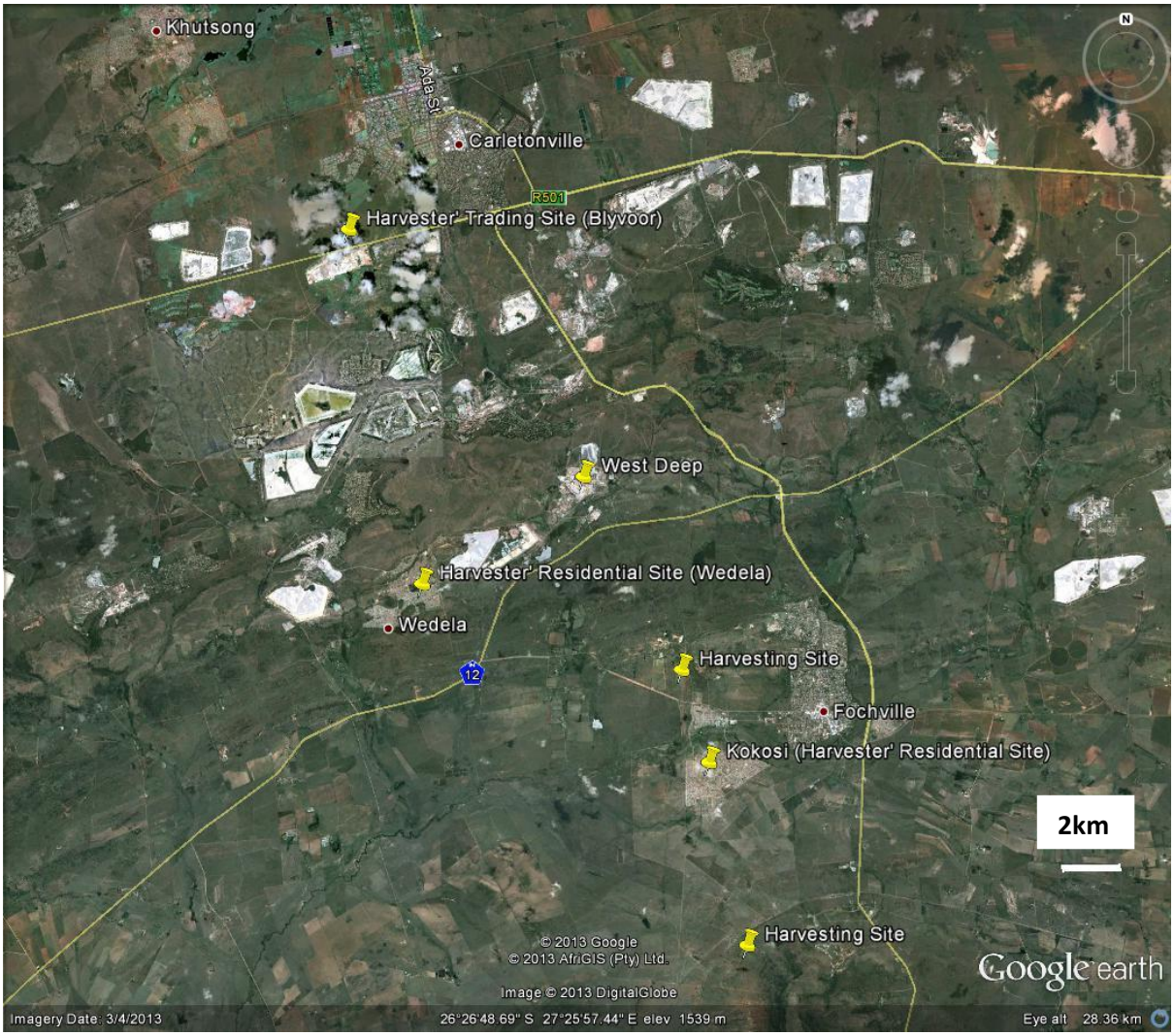


Figure 2.2: Harvesting sites and residential areas (Blyvoor, Kokosi) in the West Rand District Municipality, Gauteng Province.

Data was inputted into a Microsoft Office Access (2007) database and then exported into Microsoft Office Excel (2007) database for analysis. The reason for imputing data first on Microsoft Office Access is because this is relational data and can be difficult to analyse when directly input into Microsoft Office Excel spread sheet. The Relational Database Management System is made up of files and has the capability to connect various data elements to form different relations resulting in a great flexibility of data usage (Haithcoat http://msdis.missouri.edu/presentations/gis_advanced/pdf/Relational.pdf Access date 20/02/2013). It can store large amounts of data and is efficient in accessing this data and can easily be updated by various users (Bergholt *et al*. 1998).

Six groups of harvesters were identified during the course of the interviews, three of them near the Vaal River Operations (Dr Kenneth Kaunda District Municipality) and the other three near the West Wits Operations (West Rand District Municipality). The groups identified and information gathered about their operations was placed on an analysis table to give understanding of the organizational structure of the harvesters in general and the challenges faced by harvesters (Table 4.1). Also, total income for the harvester was calculated on monthly basis and on annual basis. The reason for giving annual income calculations was because monthly incomes were inconsistent and irregular. Report backs for this research report will be carried out with the harvesters when the report is completed (within the first quarter of 2013).



Figure 2.3: One of the harvesters in Kokosi who was interviewed while harvesting



Figure 2.4: The only woman interviewed

2.3 ETHICAL CONSIDERATIONS

Before embarking on this research an application was made to the Wits University ethics committee through the School of Architecture and Planning, which then approved the research as meeting ethical standards. According to Polonski (2004) the researcher must ensure safety for the interviewees, people must be willing to participate, they must also be told that they are free to terminate the conversation if they no longer want to continue and, most importantly, confidentiality should be assured to the subjects. Prior informed consent was obtained from the interviewees before the interviews took place. Also, interviews were conducted on one on one basis and not as a group so that harvesters will be free to talk without the fear of other people around them because some of the questions were personal. To maintain anonymity, harvesters' faces in the photographs have been blurred. Harvesters mostly did not like to be known that they were working as harvesters in the communities they lived in and as soon as we discovered that we stopped asking people in

townships so as not to compromise them and we opted to rely on the harvesters we tracked on their cell phones and those that we met in the veld by chance while we were driving around particularly on roadsides. AngloGold Ashanti was also informed about the interviews taking place in these communities as this project forms part of a broader research programme on phytoremediation on their mines. Municipal managers and the Ward councillors were also informed. The report will also be given to AngloGold Ashanti, the Municipality and Ward councillors when it is completed. Also as an ethical procedure, report backs will be conducted with the harvesters as soon as it is submitted to the University.

2.4 PROBLEMS ENCOUNTERED

One of the problems encountered involved the difficulties of searching for harvesters; we had to drive for many hours on roads along the veld searching for them. At first, we also asked people living in the area for the harvesters they know. Unfortunately, most of the harvesters were unknown in the townships and this made it difficult to track them down. When we managed to find the first harvesters, they also told us where to find other harvesters. Most harvesters do not disclose to their neighbours that they are working as harvesters, making it difficult for them to know what they do for a living. The other challenge was to get contact some of the harvesters as they did not own any cell phone. However, some harvesters contacted on their cell phones were able to bring other harvesters for an interview and even after I conducted interviews with them they continued to contact me when they had found a harvester. Harvesters acknowledged during our interviews that harvesting is regarded as a low class job, often associated with foreign nationals. They did not want people to know that they are harvesters. Some harvesters were unavailable at the time of the interviews, for example several of them from Khuma were attending a court case in Klerksdorp, and others were working further afield in areas. Some harvesters told us that they had been robbed of their belongings, while harvesting while some harvesters from Khuma said they had been hijacked before by criminal gangs and no longer trusted strangers. Language was a problem during telephonic communications to set up appointments as the majority of the harvesters spoke Tsonga, although they also understood English and Zulu. Once we met with the harvesters, direct

communication was not a problem. The harvesters, who did not speak Tsonga, either spoke Tswana or Sotho and English which we understand.

2.5 LIMITATIONS OF THE STUDY

The research has successfully uncovered the challenges faced by the harvesters, but because this was a Master's Thesis (by coursework), time was limited. It would have been interesting if the research covered the broader market study. Results of the study cannot be regionally representative extrapolated to the whole country as thatching grass harvesters as socioeconomic conditions (including job availability and markets) vary, as do access to resources and community conditions differ from place to place. However, overall lessons from this study are likely to apply, for example people resorting to harvesting natural resources as survival strategy. In this part of the country, there are different socioeconomic opportunities from the harvesters in Limpopo Province, KwaZulu Natal and Eastern Cape. The challenges faced by thatching grass harvesters might not be the same as those harvesting other natural resources in this region such as those harvesting medicine and other natural resources. However, the research provided valuable insights into the lives and livelihoods as well as survival strategies of thatching grass harvesters and other marginalized groups who struggle to survive under difficult conditions.

2.6 CONCLUSION

Conducting field work has improved my skills as a researcher, particularly on the importance of careful planning fieldwork and the challenges encountered once in the field. Methods used in this research helped uncover the rich data that would otherwise have been impossible to uncover with other methods. The spatial distribution of the harvesters across the region makes it difficult to locate them as well as their movement which is uneven as they change harvesting sites from time to time. Report backs will be carried out with the harvesters as soon as the report is finalised. It also important for a researcher to clearly specify his or her purpose of doing interviews as some groups of people might have higher expectations which might cause distrust between the researcher and the communities when such expectations are not met at a later stage. The report will also be presented to AngloGold Ashanti the Municipal managers and Ward councillors. The next chapter focuses

on the literature review and the Sustainable Livelihood Framework used to assess the livelihood strategies of thatching grass harvesters.

CHAPTER 3: POVERTY, INFORMAL ECONOMY AND LIVELIHOODS

3.1 INTRODUCTION

In this chapter, I will discuss the state of poverty in South Africa as well as the informal economy as thatching grass harvesting in this part of the country falls under the informal economy and most harvesters are part of the economically deprived citizens. Poor marginalized communities tend to be the worst affected by environmental degradation as they have fewer socioeconomic choices (Botha and Weiersbye, 2010). Use of natural resources particularly firewood, firewood harvesters in South Africa who mostly rely or sometimes depend on this natural resource and the forest often experience tangible benefits of the direct-use value of biodiversity (Dovie *et al.* 2004). A Sustainable Livelihood Framework is used as a theoretical support to this research and the framework is chosen for several reasons. The Sustainable Livelihood Framework offers a holistic approach into the issues of poverty; and it can also identify the causes of poverty, providing solutions to the problems and helping direct future action (DFID, 1999). Thatching grass harvesters have a number of problems affecting their livelihoods and the framework assist in identifying those problems so as to direct future action by relevant authority and responsible organizations. Problems such as inability to access land to harvest, proper documentation of foreign nationals and lack of integration of foreign nationals into these communities are among other problems faced by harvesters, and these can be plotted into the Sustainable Livelihood Framework.

Economically deprived communities harvest plants for building material, food, fuel wood, medicine, weaving and household implements (Botha and Weiersbye, 2010). It is estimated that 80% of the world's population uses traditional medicine while 27 million people in South Africa use traditional medicine (Mander, 1998, cited in Botha *et al*. 2004). The use of natural resources and reliance on biodiversity is not restricted to rural people only; it is also popular with urban people as well. Cocks *et al.* (2008) argues that use of natural resources is also popular with urban people both the rich and the poor. In South Africa, especially in

KwaZulu-Natal and Eastern Cape, harvesting of natural resources, weaving and craft production still plays an important part in the livelihoods of rural communities, where craft products and weaving in these areas is a source of employment for marginalized rural women and gives them an entry point into the economy (Traynor, 2008).

3.2 POVERTY IN SOUTH AFRICA

Poverty is defined as the state of being poor and unable to sustain a livelihood (Concise Oxford English Dictionary, 2011). Poverty trap is defined by The Chronic Poverty Report (2008-2009:133) as *"a situation in which poverty has effects which act as causes of poverty…..it operates on various units of analysis from household to national….At individual level, poverty traps entangle people in various cycles of material deprivation and lack of investment in human capital"*. Chronic poverty is due to lack of capital assets or an individual's failure to turn the available assets into income (Francis, 2006). People vulnerable to chronic poverty in South Africa include *"people without permanent work, female-headed households, the disabled, the elderly, former farm workers, AIDS orphans and households of HIV/AIDS sufferers, cross-border migrants and the homeless"* (ibid: 07). However, South Africa in particular is considered to be a food secure country and ranked lowest in terms of food deprived people (Chronicle Poverty Report 2008-2009). But between 2008 and 2009, 26% of the population in South Africa was living below the food poverty line which was placed at R305 per individual (Statistics South Africa 2008-2009).

One of the key functions of urban planning is to build sustainable economic growth; and uncontrolled urban growth is identified as the major cause of problems of economic growth, lack of livelihood opportunities and poverty. By focusing on improving livelihoods, urban planning can help reduce urban poverty, reduce rural-urban migration and increase economic opportunities (World Planners Congress, 2006). Addressing a World Planners Congress in Vancouver 2006, Anna Tibaijuka, then UN Habitat Executive Director, argued that present planning must be pro-poor as it has a tendency of discriminating against the poor and pushing them in to the periphery of the city. She argues that planning in some countries shields the poor from the public eyes and hides them somewhere else, for example in Nairobi 80% of the population lives on 5% of land while in Zimbabwe 700, 000 people were made homeless as a result of so called 'proper planning' in 2005. One of the

key requirements of any municipality in South Africa is to draft an Integrated Development Plan (IDP). This guides the municipality on issues of spatial planning and reduction of poverty in a city as well as integrating the society (Todes and Mngadi, 2007).

South Africa is ranked among countries with highest inequalities in the world (Altman, 2009). There has been a significant change in the evolution of development strategies in tackling poverty in South Africa since the 1994 independence, including the Reconstruction and Development Programme (RDP) in 1994, the National Growth and Development Strategy (NGSG) in 1996 and the Growth Employment and Reconstruction strategy (GEAR) in 1996 (Alemu, 2012). Further economic frameworks designed for rural development were implemented to try and fight poverty in the rural communities as well.

The objectives of the RDP as a planning tool were to deal with shortfalls in social services in poorer communities, whilst increasing the Gross Domestic Product (GDP) which at that time was declining (Alemu, 2012). One of the main objectives of the RDP in rural areas was to address the question of land ownership by redistributing it to the majority black people who are economically deprived as this affects their food security (ibid). In 1996, RDP was then replaced by GEAR, another planning strategy which focused more on the creation of jobs and the expansion of service delivery base as well as the equitable distribution of income and wealth. An increasing focus on economic growth lead to increased poverty levels as a result of decreased social spending. GEAR's main objective was to correct the imbalances of the past from apartheid by revisiting the economic, social and environmental policies of the past (Alemu, 2012). However, GEAR has been criticized for focusing on economic growth and growth in urban areas while neglecting the rural areas resulting in economic stagnation and increasing rural poverty (ibid). A focus on economic growth increases the levels of poverty in a country as such strategies continue to further isolate the poor (Meth, 2003) Land redistribution is also very important with people who depend on the harvesting of natural resources and to black people who live in poorer communities in general.

While South Africa as a country might be considered as food secure, some people are still food insecure. In order to reduce food insecurity it is necessary to create jobs for those living in poverty as well as promote small scale agricultural growth in rural communities and for those living on the urban periphery (Altman *et al*. 2009). Social grants help people

survive poverty but government resources are limited. An increase in unemployment levels will increase pressure on the resources. To counter such problems the government has introduced a new framework called the Comprehensive Rural Development Programme (CRDP) and pilot projects are already in progress in Giyani, Limpopo Province (Alemu, 2012). The objectives of the CRDP are community participation and engagement that would lead to agrarian transformation, rural development and land reform. The CRDP programmes concentrate on alleviating rural poverty by improving the system of land tenure as well as improving physical infrastructure, economic and social infrastructure (ibid).

3.3 INFORMAL ECONOMY IN SOUTH AFRICA

Informal economy is defined as any form of economic activity that is not registered and unregulated by the government or by law and does not pay tax (Godfrey, 2011). There are direct links between informal economy and being poor, on average those who are a majority and working in the informal sector earn less than those in the formal sector (Carr and Chen, 2002). The role of planning, particularly spatial planning is to control all urban land and property development as well as giving direction to economic activities. The fall in formal-sector employment as a result of structural adjustment and economic liberalization has led to more workers being retrenched, and most of these people have been absorbed by the informal sector (UN-Habitat Report, 2009). The presence of informal economic activities can be either a result of poor planning from the government, or good governance by the government as both have a detrimental effect on market development and economic growth (ibid). Effective planning is needed in integrating the two economic spheres.

Informal economy is on the rise both locally and globally and most of the people involved are women, particularly in urban areas. They are the majority in the informal sector and are generally poor (Neves and du Toit, 2012). The rise and continuous presence of informal economy is attributed to the failure of industrialization and economic growth to absorb those in the informal sector (Carr and Chen, 2002). It has grown to be a source of income and livelihood for many poor families in South Africa (Kurumbidza, 2011).

Lack of effective policies, planning and regularization can lead to the marginalization and criminalization of the informal sector. Street trading has become the most common in cities with many challenges such as police harassment, high rental levels, haphazard site location

policy and lack of information on regulation (Kurumbidza, 2011). The criminalization of the informal sector dates back to the apartheid period in the 1950s and 60s when the nationalist government banned black people from any form of economic activity (ibid). However, there are several factors that attributed to the rise of informal economy, one of these being the fact that some nations have different patterns of economic growth. A good example a focus on hi-tech economy which requires highly skilled personnel which employs few people, other countries experience very little or no economic growth at all (Carr and Chen, 2002). These people who are not absorbed into the formal sector are forced to find other means of survival in the informal sector. Others also argue that restructuring of the economy and the global economic crisis has also led to massive retrenchments, which might also lead to more people being thrown out of their jobs hence finding their way into the informal economy (ibid). For example, a number of harvesters might have been retrenched from their previous jobs particularly in the mining sector and the construction sector and they might have resorted to harvesting grass as their last option.

Many people involved in the informal economy hold more than one job at the same time (Muller, 2002). In the case of thatching grass harvesters, many of them might be involved in more than one job as a diversity strategy to supplement their incomes got from harvesting grass. There is also a close relationship between the informal economy and formal economy as people can be involved in both economies (Neves and du Toit; 2012, Kurumbidza, 2011). The rise of informal economy is as a result of issues related to governance and regulation which includes the state and non-state actors. It includes how land is regulated, for example in urban centers; land is regulated by the municipality while in the rural areas land is regulated by the chiefs and traditional leaders (Neves and du Toit, 2012). Informal economy should be seen as a way of sustaining household survival as many of these people operate on a survivalist mode with the lowest levels of income (ibid).

3.4 LIVELIHOODS DEFINITIONS

Livelihood has been defined as *"adequate stocks and flows of food and cash to meet basic needs. It comprises of capabilities and assets and activities required for a means of living"* (Chambers and Conway, 1992: 05). 'Livelihood' can also be defined as the *"activities, assets and the access that jointly determine the living gained by an individual or a household,*

encompassing income, (both cash and kind), as well as the social institutions, gender relations and property rights required to support and sustain a given standard of living" (Ellis, 1998:04). *"Livelihood is about ways and means of making a living based on the assets available and how people use these assets"* (Sarou, 2009: 08). It includes assets (human, financial, and social capital), the activities, and the access to these (mediated by institutions and social relations) that together determine the living gained by the individual or household (Allison and Ellis, 2001).

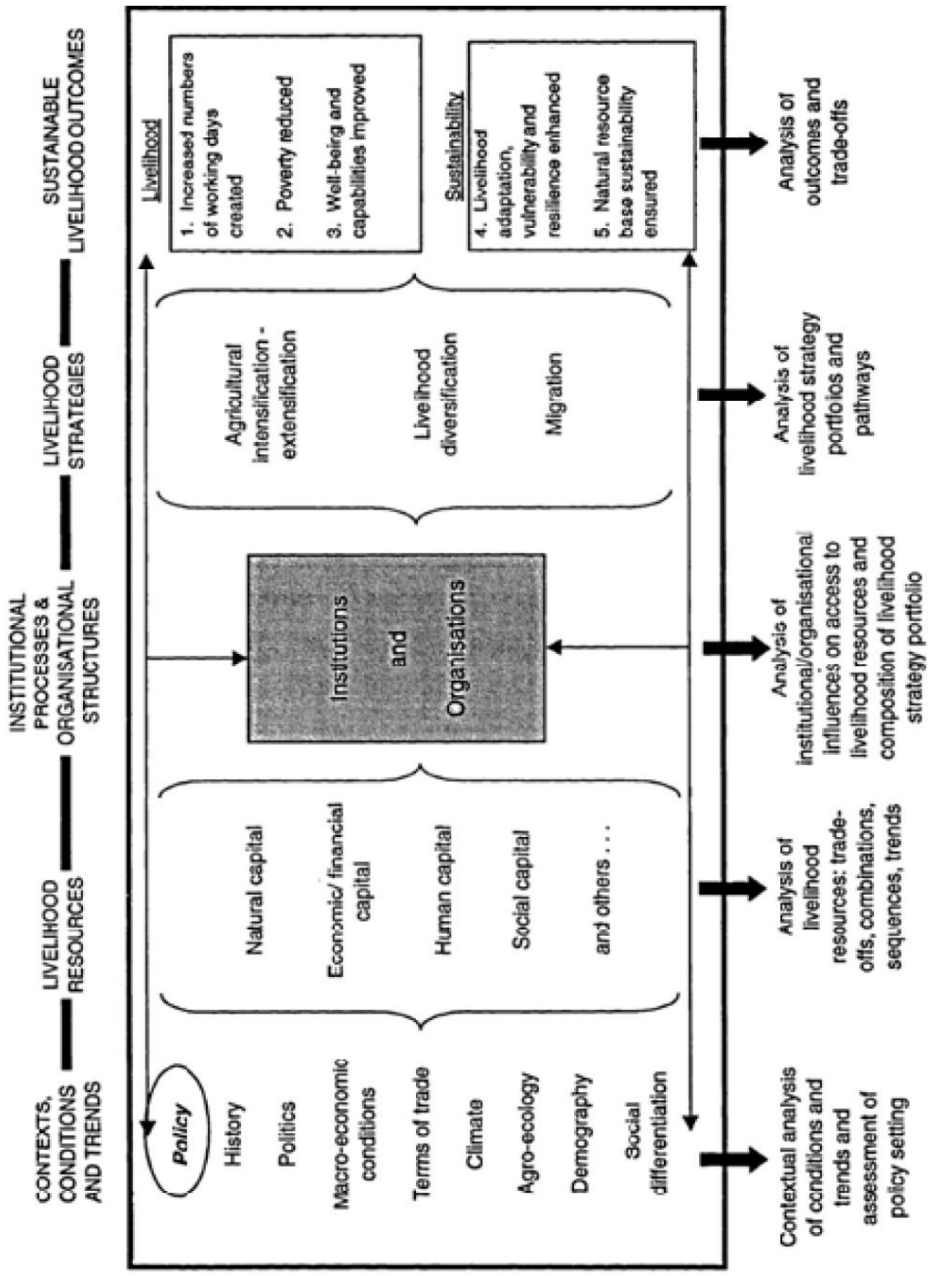
Livelihood strategies involve *"various activities undertaken by the household to generate a living; these activities are a pattern of behaviour adopted by a household as a result of mediation processes on the household assets. Livelihood strategies are generally adaptive over time, responding to both opportunities and changing constraints"* (Morris *et al.* Undated: 09 http://www.tanzaniagateway.org/docs/understandinghouseholdcopingstrategiesinsemiaridtanzania.pdf Access date 09-03-2012).

Sustainable livelihood is therefore defined as a *"livelihood that comprises the capabilities and assets, and activities required for a means of living: a livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and asset and provide sustainable livelihood opportunities for the next generation"* (Chambers and Conway, 1992: 06).

3.4.1 SUSTAINABLE LIVELIHOODS APPROACH

The first idea of a Sustainable Livelihood Approach (SLA) came out from the idea of rural development (Salisbury, 2003). The framework was then further developed into a Sustainable Rural Livelihood Framework by Chambers and Conway in 1992 (Figure 3.2). Sustainable Rural Livelihoods focused solely on maintenance of livelihoods through physical and non physical assets (Chambers and Conway, 1992). A workable framework on rural development and planning was then developed by Scoones (1998) developing from the previous ideas of Chambers and Conway. For Scoones this kind of a framework can be applied to individuals, households, household cluster to kin groups, village region and nation in a planning context. "*It places capital assets as the starting point of any rural livelihood and can be applied at a particular context and includes livelihood resources, livelihood*

strategies and outcomes as well as institutional processes" (ibid) (Figure 3.1). Planning particularly in Africa and other developing nations should consider bridging the gap between urban and rural divide as there are strong links between the two economic spheres (Watson, 2009).



Source: Scoones (1998)

Figure 3.1: Sustainable Rural Livelihoods Framework

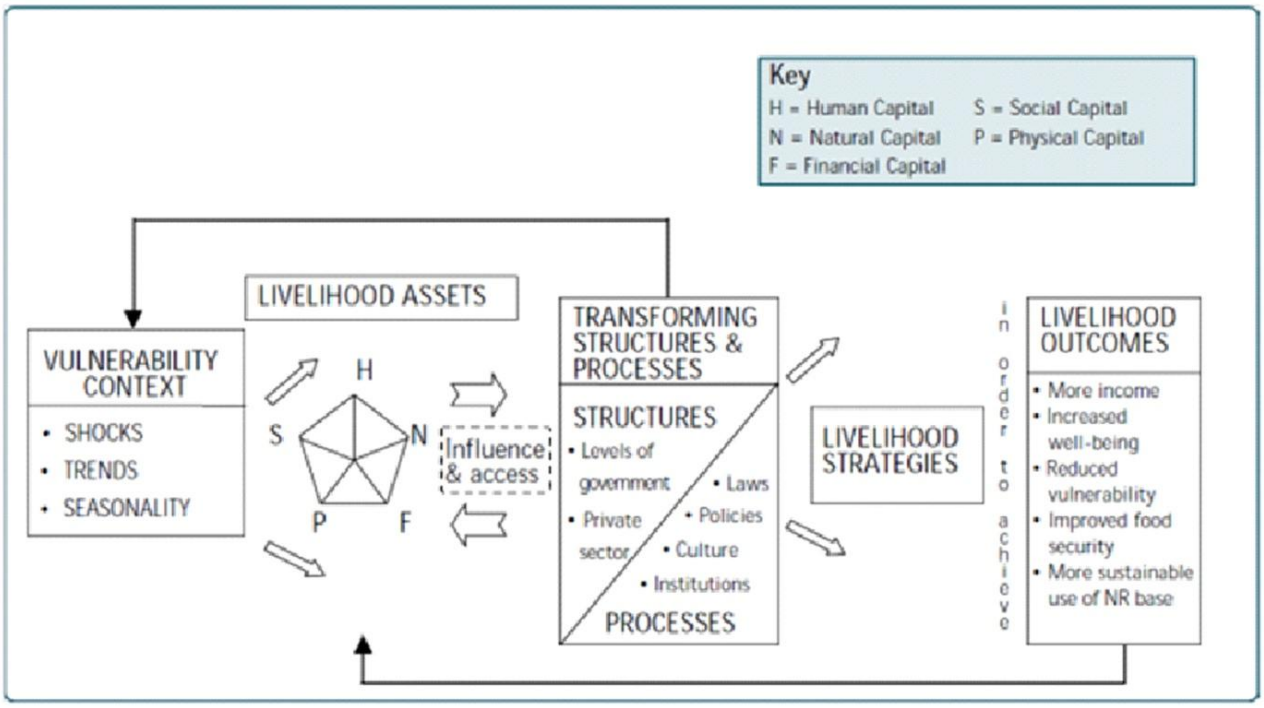
The idea of making assets a key factor in livelihood sustenance was then further looked into by Department for International Development (DFID) which emphasized on capital assets and its relationship with transforming structures and processes as core to livelihoods (DFID, 1999).

The Department for International Development' (DFID) Sustainable Livelihood Framework is used in this research to assess the livelihood strategies for thatching grass harvesters in the Witwatersrand Basin. The reason for choosing this framework in this study is because this Framework focuses mainly on the factors affecting livelihoods and planning for livelihoods.

3.4.2 SUSTAINABLE LIVELIHOODS FRAMEWORK

In this section, I will describe the Sustainable Livelihood Framework designed by the Department for International Development (DFID) as a planning tool. This comprises of the Vulnerability Context, Livelihood Assets, Transforming Structures and Processes and Livelihood Diversification. The Sustainable Livelihood Framework tries to incorporate key factors that have a direct impact on people's livelihoods and identifies the relationships that exist among these linkages (DFID, 1999), (Figure 3.2).

In this study, a Sustainable Livelihood Framework will be used to map and identify livelihood strategies employed by thatching grass harvesters in the Witwatersrand. The framework points out various livelihood strategies that households and individual people might use in order to maintain and sustain a livelihood (DFID, 1999). The Framework links among it, vulnerability context and livelihood assets, transforming structures and processes, livelihood strategies as well as livelihood outcomes (ibid), (Figure 3.2). The main aim and focus of this Framework is to contribute to poverty reduction by identifying areas that need intervention from various stakeholders involved in poverty alleviation in poorer communities. It gives direction for organizations whose activities are mainly poverty reduction by highlighting that poverty focused development should be people cantered, sustainable and participatory in nature (Krantz, 2001).



Source: DFID (1999)

Figure 3.2: Sustainable Livelihood Framework (H=Human Capital, S=Social Capital, N=Natural Capital, P=Physical Capital, F=Financial Capital)

3.4.3 VULNERABILTY CONTEXT

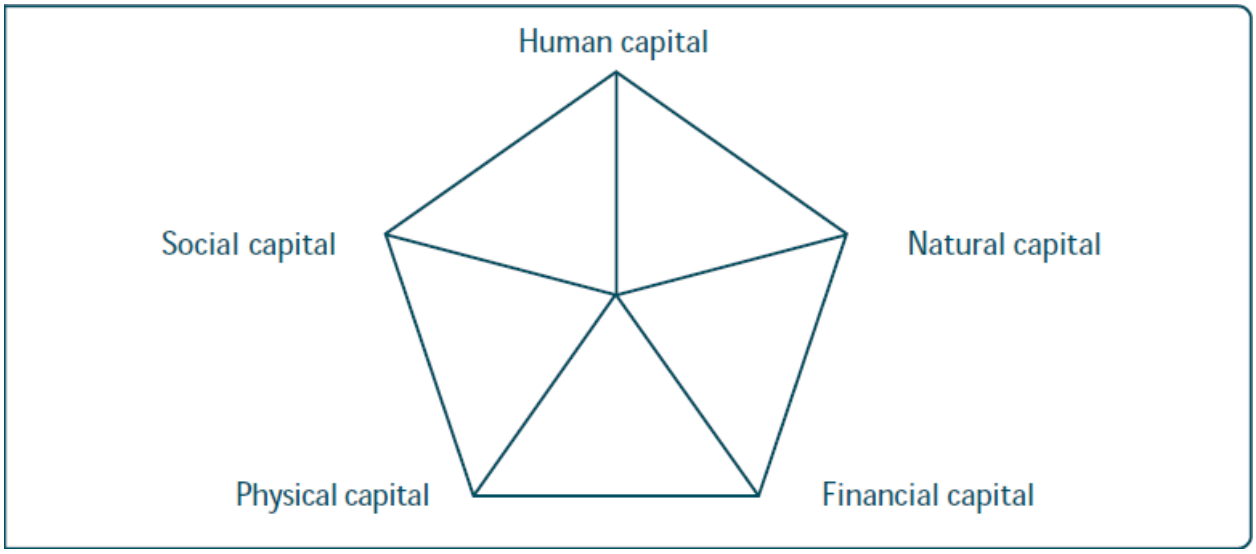
Vulnerability is defined as the "*degree of exposure to shocks and stress and proneness to food security"* (Allison and Ellis, 2001: 378). Households or individuals that are unable to adapt to short term changes and long term changes in their livelihoods are more vulnerable than others and are unlikely to achieve sustainable livelihoods (Scoones, 1998). The Sustainable Livelihood Framework (DFID, 1999) identifies three factors that can make livelihoods vulnerable and these include shocks trends and seasonality on the other hand, Chambers and Conway (1992) talk only about shocks and trends (Figure 3.2).

Shocks are defined as a sudden surprising and upsetting event while trends are generally defined as the direction at which changing things are taking (Concise Oxford English Dictionary, 2011). DFID (1999) defines a shock as "a sudden event that can force people to abandon their homes and destroy their assets such as land, while trends are predictable situations that may have an impact on the economic returns for any chosen livelihood". For thatching grass harvesters, shocks might be natural disasters like floods, veld fires and lack

of sufficient rainfall that might affect the grass which is also a resource base for harvesters. Trends such as increase in number of people who want to harvest, might lead to conflict among harvesting groups. Economic trends may include lack of business for thatching grass harvesters due to global or national economy situation, for example there might be good business during global or national events such as the Soccer World Cup or African Cup of Nations. Trends in government and politics such as change of governments might mean change of laws governing the extraction of resources. The vulnerability context is a direct outcome of government and other structures tasked with policy formulation and may put people in a worse situation than before; hence managing potential vulnerability requires enabling households and individuals to become as resilient as possible to external changes and influences by helping them develop the skills required to develop and manage their own assets (DFID, 1999).

3.4.4 LIVELIHOOD ASSETS

Core to the Sustainable Livelihood Framework are livelihood assets which are in form of capital assets. Assets are defined as valuables or property owned by individuals considered to be of value to meet debts and commitments (Concise Oxford English Dictionary, 2011) Capital assets measures people's strength to maintain a livelihood and are represented in a pentagon of five capital assets which include, human, social, physical, financial and natural capital (DFID, 1999). The centre of the pentagon where all lines meet represents zero access to capital assets for any individual or household, while as one moves out wards from the pentagon the chances of gaining assets increases (Figure 3.3). However, the capabilities and chances of gaining assets differ in all five capital assets; hence the shape of the pentagon varies from household to household (ibid). The role of particular assets in livelihood analysis of economically deprived people can be viewed in terms of their mix with other assets functions and attributes (Dorward *et al*. 2001). There is a relationship that exists amongst assets and one of them is termed sequencing. This is when people escaping from poverty usually start with certain type of assets that can sustain a livelihood for the mean time and this helps intervention to focus on the critical assets that people depend on. Another relationship is on the substitution of assets. Some assets can be substituted by others, for example, human capital can be a substitute for financial capital (DFID, 1999).



Source: DFID (1999)

Figure 3.3: The Asset Pentagon

Access to one set of capital might also be important in gaining other forms of capital. For example one might own a house which might be a source of social capital, giving him prestige and allowing him to be socially connected while equally remaining a source of physical capital (Rust *et al*. (2009). Similarly land can be a form of natural capital but might as well give an individual access to finance through micro loans (DFID, 1999). One advantage of using asset capitals as a form of maintaining livelihood is that they can be converted into liquid or consumption assets to meet the demand of maintaining livelihood (Dorward *et al*. 2001).

HUMAN CAPITAL

In pursuit of different livelihood strategies it is important for one to have the skills, knowledge, ability and good health to sustain a livelihood (Scoones, 1998, DFID, 1999). Human capital is defined in terms of skills, knowledge, ability and good health as these are critical determents of a sustainable livelihood for any household or individual. It forms the basis of well sustained livelihood; hence it is important to focus more on human capital as it is measured by the ability of an individual or a household. The DFID mentions that in developing human capital, it is up to individuals to attend training sessions, to go to school

or to go for medical checkups to develop and equip themselves but if they are not willing it become an impossible task. Another direct way of investing in human capital that the government can do is to build more schools and hospitals to open opportunities for those who are willing to invest in human capital (DFID, 1999). In case of harvesters, human capital might include things such as the skills of harvesters, in marketing and negotiation skills when it comes to finding a good harvesting place. It might also include their health, because when they are not healthy it can affect their chances of making more money through harvesting.

SOCIAL CAPITAL

There is no clear cut definition of social capital as most writers define it in their own terms. However in a Sustainable Livelihood context, it is taken to mean a variety of social connections that people use to draw resources that are crucial in their pursuit of maintaining a sustainable livelihood (DFID, 1999). Social capital is drawn from network connectedness, membership of more formalized groups, relationship of trust and exchange (ibid). Many of these forms of social capital are interconnected and interrelated. Sometimes social capital is determined through birth, gender or caste and also varies within the household. It is however a way in which deprived communities use to acquire capital assets using these informal networks (Kollmair and Gamper, 2002). "*In a caste system the position of an individual has a direct impact on the access of capital resources; those who are ranked high in the system are able to manipulate resources and obtain more capital resources than those on the lower levels of the ladder who might find it hard to pull the resources together*" (ibid: 06). Social capital facilitates innovation and there is often a direct relation between it and human capital; the more people are empowered through human capital the more they are able to maintain social networks and pull the resources that are required for maintaining sustainable livelihoods (DFID, 1999). For harvesters, being socially connected can work to their advantage as they can get access to harvesting sites through their social networks. They are likely to get support from friends when they do not have food or transport money and most importantly they are likely to get customers.

NATURAL CAPITAL

There is a direct relationship between vulnerability and natural capital because when disasters usually occur they destroy the natural capital leaving people unable to maintain their livelihoods. Natural capital includes land, water, forest, air quality, soil and biodiversity, which form the basis of all sustainable livelihoods, particularly for economically deprived communities whose livelihoods is often directly dependent on natural resources (Scoones 1998, Kollmair and Gamper, 2002). Natural capital is key to the survival of all human beings as much of the food produced to sustain urban people and at a global scale comes from the land, forest and water sources which are all natural capital resources. In the context of thatching grass harvesters, their natural capital which includes, grass and water can easily be affected by disasters such as veld fires and severe droughts. The livelihood approach gives an opportunity to focus on structures governing the distribution and access to natural capital as it can have a direct impact on the people's livelihoods of people (DFID, 1999).

PHYSICAL CAPITAL

Physical capital includes basic infrastructure such as roads, secure shelter, adequate water supply and sanitation, affordable energy and communication which all plays a crucial role in maintaining livelihood strategies (DFID, 1999). Improved infrastructure can lead to improvement in access to other social services such as education and health, as well as other opportunities critical in sustaining livelihoods. Access to irrigation facilities can lead to improved livelihoods than using buckets to draw water for agricultural purposes (Kollmair and Gamper, 2002). Most deprived communities struggle to maintain a sustainable livelihood because they spend much of their time collecting water and fuel wood for energy, and most of these communities are far from accessible roads, schools, hospitals and job opportunities (DFID, 1999). For thatching grass harvesters, lack of physical infrastructure accessibility to harvesting spot becomes very difficult and in addition, most of these areas do not have adequate infrastructure.

FINANCIAL CAPITAL

Financial capital refers to access to money that are needed in maintaining livelihoods. Two main sources of financial capital are listed in the Sustainable Livelihoods Framework as available stocks and regular inflows of money (DFID, 1999), (Figure 3.2). Available stocks may include savings in the banks, cash and sometimes liquid stocks like keeping livestock that can be sold when need arises. Credit can also be obtained through banks using other forms of capital such as houses and land as a form of collateral which allows individuals to get money from the banks. Regular cash inflows can be as a result of pension money and other forms of part time jobs particularly non-farm jobs (Ibid). The people involved in the harvesting of thatching grass might lack strong financial capital as they might not (not all of them) own properties which they can use as a form of collateral to the bank in order to access loans.

3.4.5 TRANSFORMING STRUCTURES AND PROCESSES

Transforming structures and processes encompasses institutions, organizations, polices and laws and these determine the livelihoods of individuals. These control access to the resources, and they guarantee the livelihoods outcomes and they can operate from the lowest level of organization (family level) and to the highest level of organization (international level) (DFID 1999).

STRUCTURES

Structures are divided into two main categories, mainly, the private sector and the public sector (Figure 3.2). Most of these have varying levels of autonomy and power at different levels of operation. Their influence also varies in livelihoods, hence it is important to engage those in power to influence livelihoods change. The influence of the private sector can be local and at a global level, the most important thing is to look at its influence at local level as this has a direct result on the state of livelihoods on the ground. The problem with such structures as the courts and legislative bodies is that they are not always effective in rural communities and other deprived communities, and some people have little knowledge about their rights, hence most people in these areas are not protected and often left vulnerable by the actions of other structures (DFID, 1999). The DFID proposes various

recommendations to these problems including, building structures that are pro-poor, promoting reforms in structures that deal with policy formulation so that policies favours the poor, extending the scope of private organizations and promoting a top down approach in decision making.

In this case, thatching grass harvesters' various structures operating in this part of the country include local NGOs, the mines, local farmers as well as the municipality. These structures might be vital in the improvement of the conditions for the thatching grass harvesters who form part of the local poor population.

PROCESSES

Processes involve the relationship between different structures and people (Kollmair and Gamper, 2002). These include policies, legislation, institutions culture and power relations which all have a strong influence on livelihoods (DFID, 1999). The DFID makes a point that the processes that are supposed to promote sustainable livelihoods for the poor are sometimes the ones restricting them from opportunities and advancement. Sometimes the laws of the country can hinder self-development for the rural poor. For example policies and laws might favour those living in Gauteng while the same processes are inaccessible to some communities in the periphery. There has to be a two way relationship between assets capital and transforming structures and processes (Figure 3.2). In South Africa, small businesses are being greatly hindered throughout the amount of bureaucracy and red tape with further legislation that will make things worse-ironically to reduce levels of counterfeits being traded in favour of big businesses.

In the case of harvesters, there might be laws regarding the harvesting of natural resources that might prevent people from accessing these natural resources. Similarly laws might also make it hard for poor people to survive for example laws preventing street traders is some areas of the city, while allowing big business to operate in the same area.

3.4.6 LIVELIHOOD DIVERSIFICATION

The Sustainable Livelihood Framework emphasizes on the need for diversification of livelihoods and linkages as a means of achieving stable livelihoods (DFID, 1999). Most families have a range of income sources to support them which may vary from farming to non-farming jobs while the poor might also migrate in search of temporary jobs in urban areas, and this strategy is common with the rural poor (Ellis, 2000). Families that diversify are likely to survive shocks and stress while those that do not engage in various sources of income are likely to find it hard to survive (Ellis, 2000). Most rural families have some of their members working in the urban areas, thus keeping them out of poverty by supplementing their income needed for maintaining livelihoods (DFID, 1999). It should also be noted that livelihood diversification is not only common with rural people, similar diversification occurs in urban areas as well.

The most important thing in *livelihood strategies* is to access all forms of capital needed to sustain livelihoods, and it requires higher levels of human capital, an upgrade of physical capital such as the infrastructure, and a need for social connectedness. Transforming structures and processes can work better if they can facilitate and improve job creation strategies and local economic development as well as affordable prices to the consumers (DFID, 1999).

In this study, it is also important to consider *survival strategies* as some thatching grass harvesters are also operating at the lower end of the economic spectrum. Why are some households able to improve their situations while others are not in the face of similar living conditions (Berlage *et al*. 2003)? Meert, Mistian and Kesteloot (1997) cited in Owusu (2006:06) define survival strategies as a *"deliberate economic act by a household with the ultimate motivation to satisfy the most elementary human needs, at least on a minimum level, according to the universal social and cultural norms, and without a full social integrating character"*. Understanding survival strategies make us aware of any families harvesting thatching grass solely for survival purposes while others might be making brisk business, as some of them were rumoured to be exporting thatching grass to China.

The end product of the Sustainable Livelihood Framework is the *livelihood outcomes* which is a product of the complex processes of trying to achieve a sustainable livelihood. The

expected outcomes for this framework might include more or less income, wellbeing, vulnerability, food security and more sustainable use of natural resource base. One of the problems of focusing on outcomes like development projects is that an increase in income may not translate into improved wellbeing of households. These outcomes may be used as indicator bases for all development programmes designed to reduce poverty which can also be assessed on their achievements in livelihood outcomes. Based on the feedback arrows from the Framework it can be said there is a correlation between livelihood assets and livelihood outcomes (DFID, 1999) (Figure 3.3).

3.5 WHY SUSTAINABLE LIVELIHOODS FRAMEWORK?

A Sustainable Livelihood Framework was selected as a tool for analysis as it provides a holistic approach into the issues of poverty, since poverty can present itself in many forms. The framework has been chosen among other frameworks that have informed it prior, and they include the Sustainable Rural Livelihoods Framework by Chambers and Conway in 1992. The framework helps identify various drivers of poverty that might not be clear or unnoticed at the same time making recommendations on how to deal with these issues (DFID, 1999). The framework is flexible and can be adapted and easily followed by individuals or different organizations and can be used in any context. It enables the government or any other organization to design programmes that are pro-poor across the country; it also enables a coherent approach to poverty as well as identifying areas that need immediate attention (Ludi and Slater, 2008). It identifies various relationships among factors affecting livelihoods as well as their linkages, and besides, the framework puts poor people at the centre of everything and encourages policies that support the poor. A list of all the factors is provided, and how to go about tackling these issues (DFID, 1999). The most important advantage of utilizing a Sustainable Livelihood Framework is that it puts people at the centre of development (Ludi and Slater, 2008).

It recognizes the importance of natural capital in poverty alleviation such as land and natural resources; all these might play an important role with thatching grass harvesters as they might be surviving from the extraction of natural resources. Thatch grass harvesters and their families are likely to be supported by various income flows including occasional work in the mines or other industries, or farm jobs and informal trade around the Dr

Kenneth Kaunda District Municipality. The framework might help in focusing on transforming structures and processes that might have an influence in this region. The structures might include the government, the local municipalities of Dr Kenneth Kaunda District Municipality, West Rand District Municipality and the private sector, while the processes might be the laws and policies that govern the extraction of resources and how these may impact to the harvesters. This will assist me in identifying weak links between processes and structures and possibly provide recommendations that might improve the livelihoods of the harvesters.

3.6 PROBLEMS IN CAPTURING LIOVELIHOOD INFORMATION

Capturing livelihood information is not an easy task as different people and different households get their resources that sustain them from different sources that are sometimes difficult to capture and measure using the recommended research tools. Also, some forms of capital for social capital are very difficult to measure. Poverty is also diverse and multifaceted, it can also be chronic and sometimes transitory, and poverty judgments are always made by people who are part of a social and political agenda, and therefore, the results are a reflection of an ideological inclination of a researcher. The main issue in poverty is how to distinguish between those who are deprived only on one dimension and those deprived on multiple scales, for example some people can be food insecure while others can be educationally deprived, chronically sick and food insecure. Poverty, however frequently incorporates multiple levels (du Toit, 2007).

In this research thatch grass harvesters might be lacking in capital assets such as human capital, natural capital, physical capital and/or financial capital but managing to pull enough resources from their social networks through various connections that might help sustain their livelihoods. This however becomes difficult to capture within one interview.

3.7 CONCLUSION

This chapter presents a theoretical framework for livelihood analysis and different dimensions of poverty and livelihood assets and also highlights challenges in capturing livelihood information. It sets the basis for the study as it gives direction on how the research questionnaire should focus in uncovering different livelihood strategies that might be employed by thatching grass harvesters. This will also assist strategic poverty planning and implementation of poverty alleviation projects in such deprived communities. The results are presented and discussed in the next chapter.

CHAPTER 4: LIVELIHOODS OUTCOMES FOR THE HARVESTERS

4.1 INTRODUCTION

Of these 38 harvesters, 37 harvesters operated in groups of (usually three to four people), three of whom operated in and around Klerksdorp (Dr Kenneth Kaunda District Municipality) and the other three in Blyvoor and Kokosi (West Rand District Municipality). The remaining 16 operated in groups but at the time of the interview, their group members were not around. There was only one solo harvester (the only woman in the study) who was harvesting in Kokosi.

The attributes of the harvesters and their households are presented in the next section. The Sustainable Livelihood Framework is then used to analyse the livelihoods of harvesters, starting with financial, natural, human, social and physical capital. This is followed by an assessment of potential structures and processes that may influence the harvesters, as well as the vulnerability context of harvesters. Financial capital will involve household incomes generated from harvesting of grass as well as the various activities contributing to the total income of households. Natural capital discusses issues such as the length of the harvesting season, type of grass harvested and other natural resources harvested by the harvesters. Social capital would include harvesters' relationships with the landowners and the community, the number of buyers and their groups and social organizations. Under human capital, health of harvesters, education, languages spoken and their skills will be included. Physical capital will involve places where they harvest, transport used, landowners, storage facilities accessibility availability of transport and cell phones. Lastly, the vulnerability context will discuss issues such as wildfires and weather conditions that have an impact on the harvesters.

4.2 HOUSEHOLD ATTRIBUTES

Most harvesters grew up in rural areas (80.7%), with a few coming from peri-urban environments (11.5%) while a minority was born in an urban environment (7.6%). Compared to South African harvesters (26.3%), more foreign nationals were harvesters (73.6%), mainly from Mozambique (65.7%), but also Zimbabwe (5.2%) and Lesotho (2.6%). Foreign

harvesters said they arrived without passports, travel documents or work permits, or had over-stayed the number of days that were allocated to them at the border.

Household size ranged from 1 to 7 (4.0±1.6; n = 38). Most of these family members were not working with harvesters being the main breadwinners. Family members who were supported by harvesters were either staying with them or were living back in their rural homes particularly foreign harvesters who some of them had families in South Africa they supported and in their countries or origin. All harvesters and their families combined had (all ages) 62 females and 83 males indicating a higher number of males than females. Females ranged from 1 to 5 (1.9±1.1 n=38) per household, while males ranged from 1 to 5 (2.2±1.1; n=38) per household.

Harvesters were between the ages of 22 to 65 years (41.3±10.5; n = 38). The majority of them were between the ages of 25 to 45 (63.1%) (Figure 4.1). Only 2.6% were below 25 years, and 13.2% above 55 years.

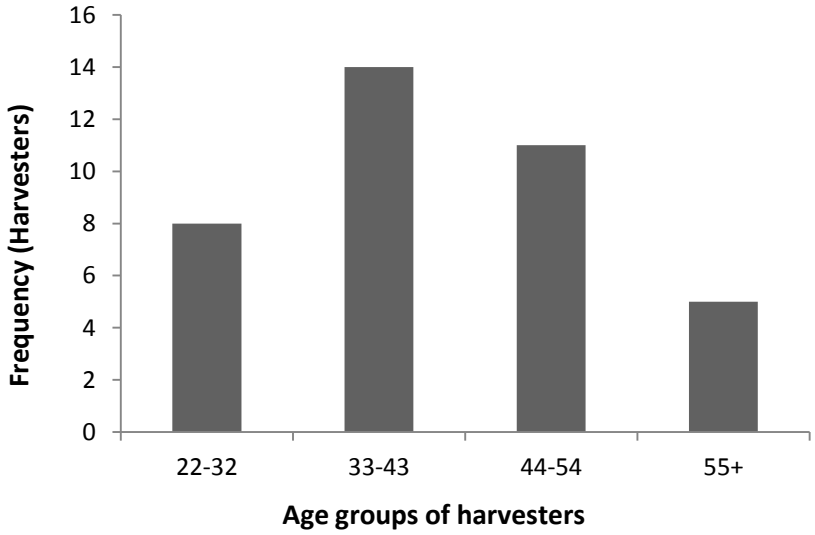


Figure 4.1: Age distribution of harvesters

Harvesters arrived at the place of residence at different times and the majority of them arrived between 1990 and 2004 (Figure 4.2). Most harvesters (78.9%) said they chose to live where they are because they were looking for jobs. A few arrived in the country mainly to look for thatching grass to harvest because a family member or a friend had invited them to come and work as harvesters (15.8%), while others said they only turned to harvesting

(57.9%) because they could not secure any job or were retrenched from their previous jobs. Additional reasons given by harvesters for choosing to live at current place of residence, 7.8% said that they were retrenched, 7.8% said they were born there, 2.6% said that they left their country of origin because of war, while 2.6% came because they wanted to join their families.

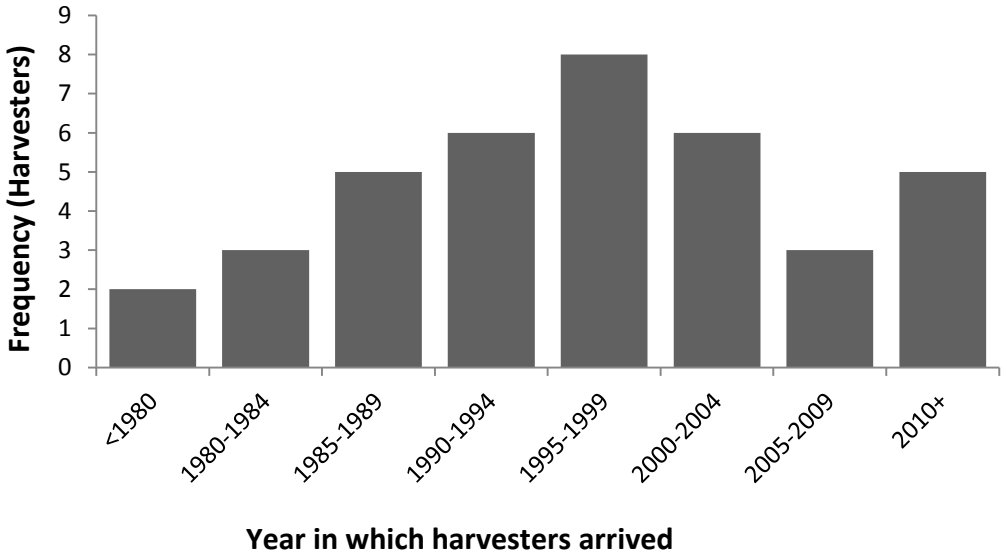


Figure 4.2: Year of arrival in the place of harvest

Most harvesters operated as harvesting groups (97.4%). A group harvesting near Klerksdorp Dam said groups are formed as a safety strategy because harvesting in the veld poses many dangers, which include dangerous snakes and criminals operating in the bush. Most importantly, groups help maximize harvesting so that customers are constantly supplied with grass particularly those buying in bulk to ensure enough supplies in the future. Money earned from the sales of grass is then shared according to the contributions made by each harvester (for example the bundles of grass harvested by each individual) (Table 4.1). Each group comprises of a leader and most importantly, each group member has a particular important role to play. The groups in this region are not necessarily formed from related people or people from the same ethnic group, but can cut across ethnic lines and national boundaries.

Groups included here for analysis gave us an understanding of the organizational structure of the harvesters. Some harvesters said they were actually members of a harvesting group, but because their members were not available at the time of the interviews and thus their groups were not included in the table of group analysis (Table 4.1).

Table 4.1: Comparison of six thatch-harvesting groups, and the different forms of capital they use.

	No of groups	Group one	Group two	Group three	Group four	Group five	Group six
Group attributes	**No of People per group**	Four	Four	Three	Three	Three	Four
	Nationality	All Mozambicans	One Lesotho, one Mozambican, two South Africans	Two Mozambicans, one South African	Two Mozambicans, one South African	Two Mozambicans, one South African	Two Mozambicans, two Zimbabweans
	Year arrived	1984 1991 1993 2003	1980 1995 1999 2004	1973 1996 2001	1991 2001 2007	1987 1993 1987	1983 1985 2011 2012
	Relations with landowner	The mine authorities have allowed them to harvest in their land. They have even built fire breaks to protect grass for the harvesters. However, there some areas where harvesters should not harvest as these include contaminated land.	A local farmer gave them permission to harvest on condition that they don't set fire to the grass. He is happy about their presence because they form part of the security for the farm.	Commercial farmers confiscate their harvest mostly when they harvest close to public roads. Government officials make them pay R200 per season to get access to harvesting sites.	A lot of conflict with farmers. Sometimes farmers chase them away even if they are harvesting along public roads but close to their properties.	Conflicts with farmers, e.g. a farmer pointed a gun at them when they asked for permission to harvest; some mine security guards arrested them as they suspected them to be illegal gold diggers.	The current land owner demands them to share the money after selling their harvest. At one time the leader stated that he had been attacked by another farmer.
	Buyers	Traders from Bloemfontein, Rustenburg, Johannesburg (These are mostly white people dealing in thatching grass, but some buy grass for their personal use)	Changisa (their main buyer from Soweto, who was also a harvester before opening a thatching grass business. He is also a Mozambican national), & local people	Changisa (their main buyer from Soweto, who was also a harvester before opening a thatching grass business and is a Mozambican national), & local people	Gert, who owns a company that, specializes on buying and selling grass in Klerksdorp. The group sells grass to him only, because, he provides them with transport on daily basis.	No specific buyer-local people from the community who need grass for personal use	Local people from the community and Maranatha, a local company dealing in grass trade based in Klerksdorp and also people from Botswana & Mozambique who are involved in cross border grass trade
	Community relations	Community relations are not good. The group leader said he has lost most of his grass on suspected acts of arson. He says most of the group members returned to Mozambique because of xenophobic attacks by community members	Young people usually set their harvest on fire and young initiates from initiation schools around steal their harvest to build small huts as a requirement by initiations schools.	The community in general does not give them problems, except for the farming community around which does not like them close to their properties.	This group complains that harvesting job is regarded as a low class job. They have experience a lot of crime, in recent times they have been hijacked by criminal gangs and they say it is no longer safe for them to harvest.	The group says they have lost much of their harvest through stealing and sometimes acts of arson. They have also experienced xenophobic attitudes by some community members and this affects them In their business.	The group leader was attacked at his home at night by criminals who wanted money, after he had sold his grass. Another member had his bicycle taken from him while returning home from work. He spent days without harvesting.

Financial Capital	**Annual income from thatch grass between group members**	(R16 275±R6 669; n = 4) annually	(R12 000±R6 119; n = 4) annually	(R36 000±R20 785; n = 3) annually	(R26 000±R12 490; n = 3) annually	(R24 000±R6 000; n = 3) annually	(R25 500±R5 745; n = 4) annually
	Range	R9 600 to R22 500 annually	R3 600 to R18 000 annually	R12 000 to R48 000 annually	R12 000 to R36 000 annually	R18 000 to R30 000 annually	R18 000 to R30 000 annually
	Bundles of grass harvested per day	Range 300-400 (350±41; n = 4)	Range 40-150 (86±49; n = 4)	Range 120-400 (307±162; n = 3)	Range 350-400 (383±29; n = 3)	Range 300-400 (367±58; n = 3)	Range 300-600 (413±144; n = 4)
	Price per bundle between group members	70c- All had the same price of a bundle	50c- All had the same price of a bundle	Range from 50c to 100c (83c±29c; n = 3)	Range from 37c to 50c (41c±8c; n = 3)	Range from 50c to 100c (70c±27c; n = 3)	Range from 60c to 70c (65c±4c; n = 4)
	Additional earnings	One does panel beating R1200 per year	Occasional jobs, recycling, gardening, R15600 per year	none	One collect recycle material gets R16800 per year	Only one work part time jobs, R6000 per year	none
	Social grants	none	One member gets R270 per month (Child Support grant)	The group leader gets R1200 per month (old age grant)	none	One group member gets R270 per month for two children (child support grant)	None
Physical Capital	**Transport**	The group leader owns a van	All group members walk to harvesting sites	All members walk to harvesting sites ±10km	Buyer provides a van on daily bases	All members cycle or use a taxi to harvesting site	All members cycle or use a taxi to harvesting site
	Where harvest	West Wits (Blyvoor, Carletonville, West Deep)	West Wits (Kokosi)	West Wits (Kokosi)	Vaal Reefs (Klerksdorp, Potchefstroom, Welkom, Vereeniging)	Vaal Reefs (Klerksdorp, Potchefstroom, Welkom, Vereeniging)	Vaal Reefs (Klerksdorp Dam, Lichtenburg)
	Who own land	Mining Companies	Local farmer	Local Government	Private farmers	Private Farmers Mining Companies	Private farmers
	Storage facilities	The group member was given a place to store his grass and it is an open area close to the shops, but much safer than in the veld. But their harvest is not safe from rain or veld fires	This group does not have storage facilities at all. They struggle to store their harvest, constantly hiding it under the tree and tall grass. As such they have lost large amounts of grass through stealing and wild fires.	They have no storage facilities, and their harvest is always left on harvesting sites but hide it from criminal acts. They have also lost a lot of their harvest from wild fires.	Very good storage facilities. Their main buyer Gert collects grass every day and takes it to Klerksdorp and his company premises. There are no complaints about the storage of their harvest.	No storage facilities and complain of losing a lot of their harvest from crime and wild fires. At one time they lost 30 000 bundles from fire. Currently they had about 7 000 bundle in the veld and feared it would be lost again.	No storage facilities for this group. They have lost much of their harvest from theft, wild fires and cattle from the farm trampling their grass. They hide their grass everyday under tall trees and grass.
	Accessibility	Very accessible, with good roads	Good roads, most of the region has paved roads	Accessible but roads are poor, gravel roads which are not good during rainy season	Roads are good and mostly paved	Good roads mostly paved	Good roads and paved up to the harvesting site

Natural Capital	**Season length**	Harvesting season ranges from 7 months to 9 months (8.0±1.0; n = 4)	Harvesting season ranges from 10 to 12 months (10.5±1.0; n = 4)	Ranges from 7 months to 9 months (8.3±1.2; n = 3)	All members said they harvest for 12 months in a year	All members said they harvest for 12 months in a year	Ranges from 10 to 12 months (11.5±1.0 n= 4)
	Other resources harvested	Fuelwood to supplement electricity	Fuelwood to supplement electricity	none	none	none	None
Human Capital	**Formal education**	Ranges from grade 0 to 7 (3.0±3.6; n = 4)	Ranges from grade 0 to 7 (4.0±2.7; n = 4)	Ranges from 3 to 8 (6.3±2.8; n = 3)	Ranges from grade 3 to 8 (6.0±2.6; n = 3)	Ranges from grade 5 to 6 (5.7±0.6; n = 3)	Ranges from grade 0 to 11 (8.0±5.4; n = 4
	Health	All said they don't have health problems	Three members said they don't have health problems, one member he is always affected by illness	Two members said they do not have health problems, two said they are always ill	All said they don't have health problems	Two members said they don't have problems with health, one said his health affects him	All said they don't have health problems
	Distance travelled	Very mobile, changes places ±10km	±1km	±10km	Very mobile, changes places ±40km	Very mobile, changes places ±40km	±15km
	Language	The group speaks Shangan and understands English as well.. The group leader can speak Afrikaans, Portuguese and Germanic. Negotiations are done by the group leader.	The group communicates in Sotho mostly, but one harvester is originally Shangan speaker and the other members are of Basotho origin. Communication is not a problem when it comes to negotiating resources.	Two of the members speak Shangan and the group leader speaks Xhosa. Because the group leader speaks Xhosa and Zulu he can easily negotiate for sites.	Two members speak Shangan while the other one speak Swati. But all can communicate fluently in Xhosa and Zulu. This is an advantage as most farmers understand Sotho, Tswana, Xhosa and Zulu	Originally the two group members speak Shangan and the other one speak Swati. But they all are fluent in English, Xhosa, Tswana and Zulu. They seem not to have any problems in negotiating for harvesting sites; more so, the group leader also understands Afrikaans	Two group members speak Shangan, while the other two speak Shona. But they communicate in Tswana and English with each other, and the group leader also understands Zulu and Afrikaans.
	Skills	Leader trained in Germany to run businesses, he is able to negotiate prices with customers. He speaks Afrikaans, Portuguese and Germanic.	The group has two leaders, but all have good negotiation skills. The group members are also good in combining harvesting and other income generating activities	They are able to use their skills while travelling on foot to locate areas with grass to harvest, they navigate in the veld for more than 10km on foot	They have a skill of locating good harvesting sites.	Good at negotiating and their geographic skills are good as they move along provinces, particularly moving as far as Potchefstroom, Welkom and Vereeniging.	Good negotiation skills, the leader has good relations with people in the area as he has stayed in this area for a long time.

4.3 FINANCIAL CAPITAL

Financial capital involves the financial resources that are crucial in maintaining people's livelihoods, and these may include income flows, cash and access to banks (DFID 1999). In all areas of the study, harvesting of grass was done solely for selling as a form of livelihood and not for personal use. In some cases, particularly in Jouberton and Khuma, some harvesters sell to individuals and companies that deal with selling of thatching grass to various people across the country while other harvesters do not have specific buyers at all.

4.3.1 INCOME DIVERSITY

The majority of harvesters have multiple sources of income (55.2%) to supplement income from harvesting of grass. The other harvesters are fulltime harvesters (44.7%). People interviewed said they look for non-specialized, manual jobs when they are not harvesting, for example, repairing cars (2.6%), construction work (15.8%), working as gardeners (13.2%), selling material for recycling (2.6%), farm work (2.6%), driving (5.3%) and other jobs (13.6%). Some of these jobs are done simultaneously with harvesting while others are done when thatching grass is not selling well. Some harvesters said that if they can find a stable job, they would leave harvesting, as it is not a reliable source of income.

Income diversity from harvesters and their households combined contributed much, in a total of R189 300 per annum. Incomes from grass only had a total of R692 400 per annum while income from grants contributed R79 200 per annum. The grand total per annum of all households who received grants (31.6%) was R960 900, of which money from grass harvesting contributed 73.4%, additional livelihood activities 26.6% and grants 8.3% per annum. No harvester had any external sources of income such as people sending them money. Harvesters said the money they were making was very little to support their families, the reason being that thatching grass has few buyers and grass was seasonal.

Some family members who contributed to the overall household income would mostly work occasionally particularly as domestic workers (7.9%) while others also had to work other part time jobs which includes selling cloths (2.6%), working at a hair salon (2.6%), working at a restaurant (2.6%) or traditional healing (2.6%).

Through the harvesting of grass, some people have managed to succeed in opening up a thatching grass business of buying and selling grass, just like the leader of a group based in Blyvoor who now employs about four workers to harvest for him. Those who harvest in groups are in a position to make more money as they are able to supply more customers, since some grass buyers buy in bulk. For example, a group based in Klerksdorp Dam said, a truck from Botswana or Mozambique can buy 30 000 to 40 000 bundles of grass at the sometime. Much of the grass that is sold here is in form of orders, sometimes from known customers or community members. Such orders are arranged through phone calls or other informal means of communication.

4.3.2 HOUSEHOLD INCOME

Most harvesters were the sole breadwinners in their households (73.7%) and a few were multiple breadwinners (26.3%) within different households (mean±SE = 1.3±0.5; range = 1-3; n=38). Other household members contributed to household income through work in the construction sector, or as domestic workers, informal trading or working in a restaurant, and, only one person was a traditional healer. One person could be involved in many different ocupations that generate income. For example a harvester could also be involved in construction work, and also collecting recycle meterial at the same time. There could be one to four different occupations (fulltime jobs and occasional jobs) per household among thatching grass harvesters and their households that contribute to the overall household income per year (1.5±0.7 n=38).

Income of grants contributed 8.3% to the overall total income earned by harvesters and their households. However, some of the households did not have any form of grants (65.7%); rather, only a few of them did (31.5%). Household income from grants ranged from R280 to R1 480 (R174±343; n=12) per per month. Foreign citizens from countries like Mozambique, Lesotho and Zimbabwe do not receive welfare grants.

Total earnings excluding grants ranged from R225 to R5 917 (R1 980±1 312; n=38) per month (Figure 4.3). Income from grass harvesting only ranged from R200 to a high of R3 500 (R1 518±763; n=38) per month. Income from grass harvesting only contributed a significant amount (72.1%) of the total households' earnings combined.

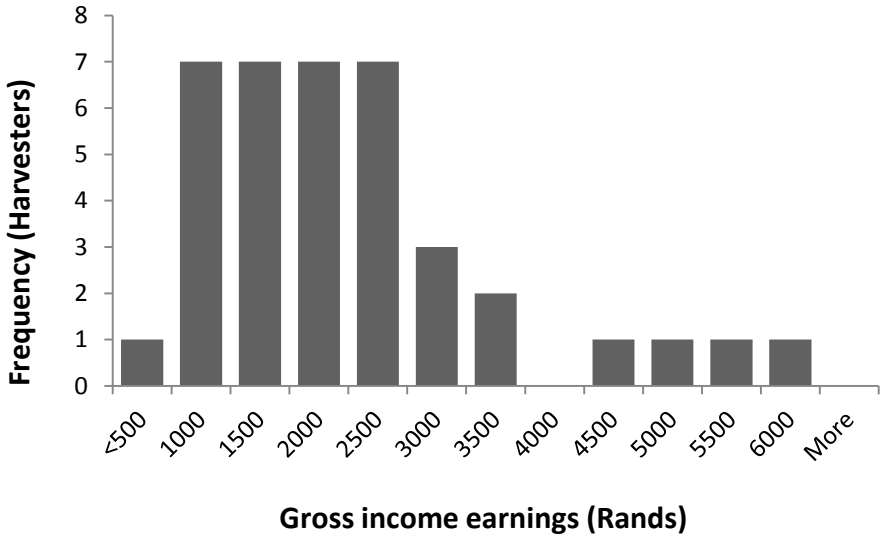


Figure 4.3: Total household earnings (excluding grants)

Total household incomes including total grants ranged from R225 to R5 917 (R2 022±1 252; n=38) per month (Figure 4.4). Most households earned between R1 000 and R3 000 (81.6%), with 7.9% earning more than R5 000 and 2.6% earning less than R500 per month. A substantial proportion of harvester households earned below R3 000 per annum (84.2%).

Foreign nationals earned R225 to R5 917 (R1 965±1 290; n=28) per month while South Africans earned between R760 to R5 090 (R2 173±1 448; n=10) per month. The proportion of South African harvesters earning less than R2 000 per annum was similar to that of foreign nationals 50% and (42.1%), respectively.



Figure 4.4: Total income per annum, including grants

Harvested grass is made into bundles and sometimes the bundle sizes differ according to groups (Figure 4.5). The regional price for a bundle of grass ranges from 25c to R1 (58c±18c; n=38). However, in Limpopo, based on the 2006 figures, a bundle of grass was costing R2 to R5 (Makhado *et al.* 2009), and this might be because of the size of their bundle in that region. Buyers are sometimes not willing to buy grass at higher prices. They may ask the harvesters to reduce the price or even buy on credit, which therefore means that payment is inconsistent. Poorer harvesters are sometimes desperate to sell their grass and are less able to negotiate a good price and out of desperation, they end up selling at a lower price. In Blyvoor, where harvesters seem to be much better than those in Kokosi in terms of organization and physical assets, their bundle price remains the same at 70c while those operating in Kokosi, price their bundle at range from 40c to R1. Sometimes regular buyers are not willing to pay more on grass. They always ask harvesters to reduce the prices, and this has been the trend particularly in Klerksdorp where most buyers are based. Harvesters in Jouberton said some buyers even ask them to transport grass to them and on top of that, offer them less per bundle.



Figure 4.5: Bundles of grass

Thatching grass markets are inconsistent. Sometimes harvesters would go for weeks if not months without selling any grass while sometimes they would have more customers than expected. Because thatching grass markets are low, harvesters are still operating below poverty lines and their households are thus short of funds and food. In 2006, the poverty datum line was R431 per individual per month on basic foodstuff (Statistics South Africa 2007). Harvesters have an average of four members per family and based on the money they are getting from harvesting, it becomes difficult to support their families. According to some harvesters, thatching grass business has gone down mainly because more harvesters are now joining the industry while buyers remain few and much of harvested grass ends up as waste or destroyed by natural elements when it is not properly stored.

Harvesters' gross incomes are between R225 to R5 917 per month. In comparison, the median monthly average earnings for the working populations of Gauteng Province was R3 683 and R3 000 for North West Province in 2010 (Stats South Africa 2010). According to the 2012 census, on average, the annual household income has increased dramatically for all households in South Africa over the past ten years. It increased from R48 385 in 2001 up to R103 204 in 2011 and this translates to an increase of 113,3% (Statistics South Africa 2012). In Wedela, where harvesters from Blyvoor reside, the unemployment rate is 50%, and income ranges from R2 000 to R7 000 per month for about 75% of the population in the West Wits area (AngloGold Ashanti 2009). In the West Rand Municipality there is a 40% unemployment rate, 17% have no income at all, 5% earn between R1-R4 800, 9% earn R4 801-R9 600, 28% earn R9 601-R19 200, 27% earn R19 2001-R38 400 and 14% earn above

R38 401 (ibid:39). In the Vaal Reefs area 26% have formal jobs, while 55% are unemployed with monthly income below R12 800 and the majority earning between R401-R800 (AngloGold Ashanti 2010:66). This means that harvesters fall short of average monthly earnings mentioned since the majority of the harvesters (84.2%) earning R3 000 and below a month. There is a need to focus on the formulation of policies targeting programmes designed to boost the average income earnings for harvesters and other natural resource harvesters. The challenge is that there is a higher number of people in the country in dire situations who do not have any source of income and are even far worse than the thatching grass harvesters in all interview sites.

The average earnings of thatching grass harvesters are comparable to other harvesters of other natural resources in the country who are also in the same situation with the thatching grass harvesters. In a study from 1997 to 1999 near Kruger National Park in Mpumalanga on the trade of wildlife products used in medicinal plants, informal street and pension market vendors had a net income of R2 800 to R5 250 (R3 883±721; n=2) through the selling of these natural resources (Botha *et al.* 2004).

Harvesters complained about the high cost of their business. Sickles (cost R30 to R70) is one of the major costs that harvesters have to incur because they have to buy two or three every season. Other costs include buying strings to tie-up bundles of grass, buying food when harvesting, traveling costs and high transport costs in delivering grass to the markets. Transporting a truckload of grass to the market would cost harvesters in Jouberton R500 to R600. For medicinal traders, costs ranged from R50 to R20 100 (R2 666±1379) per annum (Botha *et al*. 2004). Harvesters' clothes are worn out faster, particularly shoes, as they have to buy a new pair every season.

The majority of household members were not working (65.5%). Here, unlike thatching grass harvesters, who had few family members to assist them (2.6%), the majority worked alone without the assistance of other members of the family. Informal street and pension market operators in the medicinal trade sometimes worked with other family members, usually spouses or co-wives. However, 55.3% of the harvesters worked in groups. A number of men had more than one wife. While thatching grass families did not have polygamous family in their groups according to their responses, medicine traders in Limpopo and Mpumalanga

worked as a family in their business. In addition, their children sometimes sold vegetables and selling curios to tourists on a part-time basis assisted their families. Assistance from family members is important since it increases the overall earnings for the grass harvesters and volumes of grass are what constitute more income. In Limpopo and Mpumalanga, pension and street vendors, many of whom harvested the medicinal plants that they sold made less money than those who bought it and resold them for profits. This might be an indication that those who harvested spent a lot of time in the bush but made little profit while those who bought harvesters made profits out of them.

4.3.3 THATCHING GRASS MARKETS

There appeared to be few buyers of thatching grass in Kokosi as harvesters mainly relied on one buyer (Changisa) from Sowoto, near Johannesburg. In Kleksdorp, there were more companies and individuals buying grass from harvesters around this region. In Khuma, Gert, a local thatching grass dealer had specific harvesters that he provided with transport to harvesting sites and bought all their grass. Gert did not allow his harvesters to harvest for other people. The main buyers for harvesters in Jouberton, Klerksdorp and khuma were Maranatha, a company that specialized in buying and selling thatching grass, Gert, who is a thatching dealer, white people from Klerksdorp, Botha from Klerksdorp, a company known as 'Seven Thatchers,' and Mr. Jub Smith from Marispark. While in the West Wits Operation particularly in Blyvoor, the group leader employed about three harvesters under him, and his buyers came as far as Bloemfontein, Rustenburg, Vereeniging, Potchefstroom, and from Johannesburg. In Kokosi, Changisa, and a few customers from Westonaria and Carletonville are the main buyers.

The selling of grass depends on market forces. For example, considerable construction of hotels, guest houses and restaurants took place before the Soccer World Cup, and thatch grass was in high demand. . Most customers for the harvesters in Jouberton came as far as Mozambique and Botswana and they bought grass in bulk. However, there are other times when the business is low, for example, harvesters said they could sometimes go for many weeks and even months without selling their grass. They end up resorting to other jobs as a way for survival. Some reiterated that they end up selling their harvest at low prices at 30c to 50c per bundle, instead of 70c per bundle to most buyers.

4.3.4 CROSS-BORDER TRADING OF THATCHING GRASS

Informal cross-border trading involves goods crossing borders through unofficial routes and sometimes includes goods passing through official points without properly recording them. This might include agricultural and horticultural commodities (Nkendah 2010). Thatching grass is sometimes taken across national borders to other countries such as Botswana, Mozambique and sometimes Zimbabwe. This forms part of the harvesters' skills and abilities to use every opportunity in grass trade. According to harvesters, thatching grass species such as the *Hiparrhenia hirta* are not common in these countries and thus much of the people in need of thatching grass come to South Africa. Former harvesters initiated cross border grass trade. Most cross-border trade happens outside official entry points to a country and this is done in order to avoid high costs of tax fees and import duty, sometimes people might use official entry points but bribe corrupt border officials to avoid high taxations or under recording of goods (Titeca, 2009).

In Jouberton, a group of harvesters near Klerksdorp Dam said the main reason why they work as a group and not as individuals was that most of their orders were in bulk and had to satisfy their customer within as specific period. Most of these bulk orders come from outside, particularly Botswana and Mozambique (Table 4.1). One of the harvesters contacted on the phone form Hartbeesfontein just outside Jouberton said he was not able to meet with us for an interview as he was busy loading a truck from Mozambique which had come to buy his grass. Similarly, harvesting and trade of Mopani worms in Zimbabwe has grown and trade links for this natural resource include South Africa, Botswana, Zambia and Democratic Republic of Congo (Kozanayi, 2002). According to harvesters, individuals dealing in cross border grass trade, particularly between South Africa and Mozambique are Mozambican nationals who were harvesters but managed to save enough money to start a cross border business in grass. However, for these harvesters to keep the cross border traders supplied, they need to form harvesting groups.

4.4 NATURAL CAPITAL

Natural capital is defined as the natural resources that people are dependent on for their livelihoods (DFID 1999).

There are several species of grass and reeds occurring in this region that are used for thatching but only one species, *Hyparrhenia hirta* was being harvested (Table 4.2) (Figure 4.6). Different names for thatching grass were recorded from different harvesting groups across different languages. In Xhosa, it is called '*liqunde*'; in Sotho, it is called '*tlaka'*, '*dekgras*' in Afrikaans, '*usva'* in Shona, and '*dzwanya'* in Shangani. Suitable thatching grass was said to be brownish in colour, taller and stronger than other grass and most importantly, buyers want neatly cleaned strong grass made into bigger bundles.

Table 4.2: Grass and reeds species found in the region and its uses

Type of grass	**General uses**	**Other household implements**
Aristida junciformis		Brooms
Arundinella nepalensis	Thatching	
Cymbopogon validus	Thatching	
Hyparrhenia filipendula	Thatching	
Hyparrhenia hirta	Thatching	
Imperata cylindrica	Thatching	Paper
Schizachyriusm sanguineum	Thatching	
Setaria pallinde-fusca		Rope
Triraphis andropogonoides		Brooms
Type of reeds		
Phragmites australis	Thatching, Lattice	
Phragmites mauritianus	Thatching	
Typha capensis		

Source: (Botha and Weiersbye, 2008)



Figure 4.6: Harvested grass '*Hyparrhenia hirta' (Photo by Jenny Botha)*

Thatching grass is in abundance in winter, this is because grass matures in summer and is ready for harvesting in the next winter season. Similarly, reeds mature in summer and ready for harvesting in the next winter season (van Rooyen *et al.* 2004). Much of North West and Free State Provinces occur in the grassland biome. Accessibility of this resource is a problem as much of it is on privately owned land. Few harvesters like the two harvesters operating near Klerksdorp Dam said they move as far as Mafikeng and Lichtenburg, close to the border between Botswana and South Africa, in search of harvesting sites. Here, they said also grass is in abundance. Because Free State Province shares the border with North West Province, with a distance of three kilometres across the Vaal River, most harvesters prefer to go there. Their destination is determined by the availability of thatching grass and its sales; however, there are challenges in selling of grass.

Most harvesters interviewed said there are seasonal variations in the amount of grass harvested and its income (89.4%) while a few said there is no difference in seasons (10.5%).

Those who believed thatching grass business to be seasonal said that grass is abundant in winter. This causes a glut in the markets making market prices drop while in summer there is shortage of grass. During droughts there is very little grass to harvest. Too much rainfall can also affect the growth and harvest of grass. Harvesting seasons thus vary in length due to biophysical conditions. Harvester perceptions of length of season varied. In a good year, good harvesting periods range from 3 to 10 months (5.3±1.9; n=38), while poor harvesting months in a good year can range from 2 to 9 months (5.0±1.8; n=38). In a bad year good harvesting months also vary. They range from 1 to 8 months (4.2±.6; n=38), while bad months can vary from 3 to 10 months (5.7±1.9; n=38).

Only 13.2% of the harvesters extracted other natural resources besides thatching grass. Additional plants harvested included fruits and wild vegetables for consumption, as well as fuelwood. Harvested fruits were consumed in the veld or taken home for family consumption if there is enough stock to take back home. Those operating in Blyvoor said they harvest firewood mostly to supplement electricity by cooking on fire and warming themselves. They usually bring loads of firewood home in the evening after harvesting grass and they use their own means of transport. In Mametja Rural Community in Limpopo, despite having electricity in some villages, the use of fuelwood as a source of energy is still very common (Twine et al. 2003). Harvesters say fuelwood is commonly used in winter to warm them. Mostly, '*gumtree*', '*moka*' and '*umnga*' were mentioned as the main trees used in firewood, while '*thepe*' and '*seruwe*' were consumed, as wild vegetables, and '*dinawa*' were cooked and consumed as wild beans.

4.5 HUMAN CAPITAL

Human capital is defined in terms of skills, knowledge, ability and good health as these are critical determents of a sustainable livelihood for any household or individual (DFID 1999). In this section, human capital is in form of harvesters' skills, levels of education, health and languages spoken that can have impact in their harvesting business. Levels of education among harvesters and their household members (adults only) were low with most acquiring only four years of primary school education, with a range of 0-12 years (grade 0 to 12) (4.2±3.7; n=93).

The levels of education could also have an impact on harvesters and the way they run their business. Education might also help them to understand basic principles of the economy such as inflation, supply and demand. When prices are low, particularly when buyers offer less for a bundle of grass, those with basic education would easily understand market dynamics. For example, the group operating on the northern side of Kokosi complained about their buyer offering less, but they could not understand that the oversupply of grass had caused a glut in the market. The other member of the group operating near Klerksdorp, who completed his form four (average of grade 12), easily understood the trends. For example, he mentioned that the Soccer World Cup had a positive effect on their operations and he was expecting the same from the African Cup of Nations. This is because during this time more construction was taking place, particularly restaurants, hotels and guesthouses and thatching grass was used to roof these structures. Through his level of understanding, the group chose him to negotiate harvesting sites from the farmers.

Apart from education, health was one of the challenges mentioned by harvesters. Most harvesters said that they had experienced health problems at some point and that it had severely impacted on their livelihoods (65.7%) (Figure 4.9). For example, at Jouberton a harvester had not been able to harvest for about three months because of his poor state of health and had found it hard to support his family of seven. Some harvesters said that they had at one time in their lives been diagnosed with tuberculosis (TB). The are high dust levels encountered by people when harvesting grass. High dust levels might also be related to health problems recorded (10.5%). Moreover, high dust levels can also be attributes of dust pollution from the mines, particularly in the Witwatersrand Goldmines where more tailings dams are found (Oelofse *et al*.
http://www.anthonyturton.com/admin/my_documents/my_files/983_SWEMP.pdf Access date 11-03-2013).

In addition to health issues, harvesters also had to overcome the challenges of having to walk long distances to the harvesting sites. For example, group three, operate south of Kokosi walked more than 10km to the site (Figure 4.7). By the time they get to work they were often already tired and late and this is likely to affect their ability to harvest. Group one and four, who used their own pickup van (bakkie), were more likely to get to work faster and work for many hours, and are likely to return the following morning still enegetic,

unlike the ones walking and cycling to and from work who are likely to be affected in their ability to harvest more grass, as cycling and walking takes a lot of their physical strenght. However, despite all the challenges faced, harvesters have the willingness to work very hard and for long hours. But long journeys for the majority who do not have their means of transport takes much from their physical strength, something which is expressed as beyond their control (Table 4.1).



Figure 4.7: One of the two members of the group operating near Klerksdorp Dam with one of the assistant researchers Zanele Ncube (left) and two members of a group south of Kokosi (right)

The majority of harvesters (65%) were Shangan speakers, while others spoke Sotho, Tswana, Swati and Xhosa. However, all the harvesters can communicate in Tswana which is the dominant languange in this region. Their ability to speak many languages helps them in negotiating for land to harvest and in acquiring other social connections. For example, the leader of the group in Blyvoor can speak Afrikaans, English and Germanic and he uses his skills to communicate with mostly white buyers who come from as far as Bloemfontein, Rustarnburg, Vereenigin and Johannesburg. Those who operate on the north of Kokosi who are Sotho speakers hardly speak any other language besides Sotho and have few buyers. Language problems have a direct impact between those who succeed in this business and those who fail.

Higher operational costs can also be a problem with harvesters of natural resources. Much of the costs for those who harvested medicine were for transport to the markets (R2 420 per annum) and similarly, the thatching grass harvesters particularly those operating near

Klerksdorp had to incur higher transport costs to the market (about R500 to R600 per truckload of grass to the markets). Harvesters do not stay at the same harvesting site for a long time and their movement ranges from few kilometres around where they stay, to more than 50 kilometres across provinces. Accessing grass can be a problem; this is because harvesters need to identify more grass that can sustain them for a while and negotiate its access. This requires harvesting and negotiation skills to determine when and where to move.

The technique of actual harvesting and other aspects of their trade are acquired through learning from other harvesters, and this contributes to the survival harvesters in the business. Those who grew up in a rural environment might be more familiar with the types of grass in demand in the construction industry. For the traders in the traditional medicine, knowledge of medicine is developed within the family while some are professionally trained traditional healers (Botha *et al.* 2004), although knowledge of medicine is much more specialized than the knowledge of grass harvesting.

4.6 SOCIAL CAPITAL

Social capital is defined as the social resources, which include network and connectedness as well as membership of any group (DFID 1999). In this section, the organization and social connectedness of the harvesters are examined. It includes the formation of harvesting groups by some harvesters, their social networks, and thatching grass markets, as well as cross border trading of thatching grass.

Unlike in this study where only one harvester was a female However, in a study carried out in Okavango Delta in Botswana, 75% of thatching grass harvesters were female while only 25% were male, and the average family size was six people per household (Mmopelwa and Blignaut 2009). Males (94.6%) dominated the study of thatching grass harvesters in the Witwatersrand goldfields. However, it should be noted that this was a rural community, different from the harvesters in the Witwatersrand goldfield. Most rural communities have their male population migrating to bigger cities in search for jobs while women remain at home looking after the children. From personal knowledge, human communities have gender roles between male and females, man are usually associated with harvesting wood

and harvesting poles for roofing while women collect harvest grass for thatching. This might be another reason why there were more women harvesting in Botswana.

4.6.1 SOCIAL ORGANISATION AND NETWORKS

Some informal networks form part of the crucial elements needed by an individual to maintain a sustainable livelihood. Networks also play a crucial role in acquiring information, most importantly, among thatching grass harvesters in accessing grass and markets, as well as other crucial information needed in their operations. Social networks are strengthened when someone has a problem such as lack of accommodation, unemployment, shortage of food, and transport money (Muzondidya, 2008). A substantial number of harvesters have not joined social organizations (94.7%) such as burial societies and stokvels despite being a vital component and a survival strategy for the poor. Only a few of them (5.3%) have managed. It costs R50 to R100 to join fee to join such social organizations while some foreign harvesters said they could not do so as they do not have passports or identity documents needed to register for these organizations. In South African communities, stokvels, Rotating Savings and Credit Associations, play a major role in generating income for poor communities, these are formed by several members who agree on terms of payments, which are usually in form of cash and in kind (Irving, 2005). Only two South African nationals who are harvesters said they are members of a burial society, and the other eight said they do not have money to join these organizations because joining fees are high. Social capital has a bigger role to play particularly in the formation of informal social security networks and livelihood insurance popular with South African black townships (Irving 2005).

Joining social organizations has been a vital strategy particularly among Zimbabwean immigrants working in South Africa who are members of Masasane Burial Society in Johannesburg and Mandara and Mberengwa burial societies in Pretoria (Muzondidya, 2008). Only one harvester in Klerksdorp said that joining these organizations, one needs to have proper documents like a South African identity document or a valid passport. The majority of harvesters are in the country illegally and do not have these documents.

Some migrant harvesters lived together in smaller groups as a way of protecting and helping each other. In Jouberton, near Klerksdorp Dam, one of the group members had not been harvesting for some time because he did not have transport money. The group said they would give him transport money as soon as they sell their harvest. This is an indication of how strong and useful networks can be in assisting each other when there is a need. However, these networks do not always include people from the same country. Different groups of people from different countries sometimes combine to form a harvesting team. In Kokosi, a group comprised of two Mozambican nationals, and a South African, who is the group leader, while in Klerksdorp Dam, the group has combined two people from Mozambique and two brothers who are Zimbabwean nationals.

When asked how the community assists or hinders them in their thatching grass business, foreign harvesters mentioned that the main problem was xenophobic tendencies by some community members and as a result they steal (31.5%) or burn (5.2%) much of their harvest (Figure 4.9). In Blyvoor, harvesters in this group hinted that thatchgrass business has now declined since 2008 xenophobic attacks on foreign nationals and most of their harvesting friends decided to go back to Mozambique and they never returned to South Africa. The group leader in Klerksdorp Dam said he has lost a large amount of harvesterd grass on suspected acts of arson linked to hatred of foreigners as they set his grass on fire from time to time. Foreign nationals in South Africa talk about being targeted by local people as a result of frustration for lack of jobs and economic hardships and are now used as scapegoat to these problems (Harris, 2002, Human Science Research Council 2008). Attacks seem to be targeted on the poor and unskilled foreigners, particularly those resinding in poor neighbourhoods with low levels of organisations among foreign population (Citizenship Rights in Africa Initiative 2009). In Cape Town, a study also found that foreigners were accused of taking jobs from the locals as they fall prey to employers who underpay them, and many have dominated unskilled jobs such as gardening, house keeping and construction work. They are also accused of opening up businesses that offer cheap products that out compete local shops (Human Science Research Council 2008).

4.6.2 RELATIONSHIPS WITH LANDOWNERS

Conflict with land owners was one of the challenges mentioned by harvetsers (Figure 4.9). However, not all landowners have a problem with harvesters. In Blyvoor, near Carletonville most of the land is owned by the mines and a group based here appear to have a good working relationship with at least one of the mining companies. The AngloGold Ashanti management have allowed harvesters to harvest within its properties and in one area burnt fire breaks to protect grass being stored on a busy road, as the group had lost a large load to fire the previous year. In one ocassion, the mine manager specifically burnt the fire break to help the harvesters who had previously lost a large load through fire, apart from the ones burned as part of their routine fire management). In Kokosi, near Fochville, sites which harvesters frequently visit are mostly owned by the government and private farmers and there are two groups operating there. The group which operates on the southern side of Kokosi encounters most of the conflicts because, there are many private farms in this area. Government land can only be accessible to them when they pay R200 per per person season to some governemnt officials in that area. On the southern side of Kokosi, harvesters have a number of problems because land is owned by different people and negotiations are sometimes overlooked or deteriorate to confrontation. On the sorthern side, harvesters only harvest in one farm where they were given permission by the land owner and he has never given them any problem. On the Western side of the Township, the only women harvester interviewed there said there was no problem at all because land was owned by the government. All harvesters could not say which governemrnt department owned the land, but they said was owned by the local council.

One major problem that was stated by harvesters was the conflict between them and local land owners (21.05%) whereby some farmers did not want harvesters close to their own properties as they suspected that they might steal from them. This was the second highest problem after veld fires recorded which was mentioned during interviews wich affevted their harvesting and livelihoods (Figure 4.10). A 62-year-old harvester operating near Klerksdorp Dam had scars in his hands where he claimed that was recently beaten by a white farmer while harvesting close to his farm, even though it was along the public road. His harvest was then taken from him by force. In the West Wits, Kokosi, local government

officials tasked with taking care of the council land are making local harvesters pay R200 each per season to get access to government land. Here, harvesters say they find it difficult to find a good harvesting site as both local farmers and government officials treat them badly. A harvester from Jouberton said sometimes when they harvest close to the mines they are mistaken for illegal gold miners and they are arrested and detained by the police (Table 4.1). On one occasion, this harvester was saved from police custody by a friend who is a police officer based in Klerksdorp Police Station. The above information shows that harvesters have a weak physical capital (land to harvest on) which also hinders them from producing a sustainable livelihood. However, their weak physical capital is compensated by their strong social networks which is vital in their ability to access things they do not have. This is a structural problem which needs clear policy direction and relevant stakeholders. Likewise, bad policies might increase the levels of poverty.

The national poverty line stands at R433 per month per individual (Statistics South Africa 2007). Harvesters have an average of four people per household and with their current income situation; it is difficult for them to survive. One of the harvesters in Jouberton harvesting near Klerksdorp Dam had not been harvesting for weeks, the reason being that he did not have transport money to take a taxi from Jouberton, where he lives, to the harvesting site. If this harvester remains trapped in this kind of situation, he might not be able to break away unless he gets assistance. Another person interviewed was a 61-year-old man who is originally from Lesotho. He had come to live in Kokosi Township in 2004 after losing his job as a construction worker. Now he is a harvester and he said he wished to go back to his home country. If this person does not find another job that can take him to another level he might probably spend the rest of his life in this situation without having to raise enough money to go back home to his family.

4.7 PHYSICAL CAPITAL

Physical capital consists of basic infrastructure, which includes affordable transport, shelter, water supply and sanitation, and access to communication facilities (DFID 1999). Harvesting of grass tends to be concentrated along or close to where the harvesters live due to transport costs associated with travelling long distances. There are instances where harvesters move across provinces and to other cities in search of good harvesting sites that

can sustain them for a while. Most of these sites are not accessible through public transport and harvesters are forced to use alternative modes of transport. Those who have their own means of transport can access them with ease while those who do not have are forced to use other alternatives such as walking, cycling (within provinces) and sometimes using a taxi (within and across provinces). Roads in this region are generally good and allow harvesters to transport their harvest in large quantities using trucks and vans.

Harvesters used different transport systems, for example, 18.4% of them used a taxi to reach harvesting sites, 13.2% had their cars, and 23.7% used bicycles while 44.7% walked to the harvesting sites. In Nepal, the Chitwan National Park allowed harvesters to get access to the harvesting sites and did not allow the use of cars and carts into the park so that harvesters could have equal access both the poor and the rich (Mishra 1982). However, those who came as far as 50km away used their own vans and carts to come to harvesting sites and to carry their harvest to their homes (ibid). In KwaZulu Natal, Mzuzi Swamp KwaMsomi, all harvesters from eSibonisweni community walked to the harvesting sites where they harvested reeds and never used other means of transport (van Rooyen, *et al.* 2004). Those who have their own transport to go to work on time have a chance of making more money than those who walk for kilometres to harvesting sites. For example, the group operating in Blyvoor has its own transport while the other group that operates in Klerksdorp Dam cycle to work for more than 10km. Those who cycle probably get to work late and by the time they get there, they could be tired, while those who use their own cars get to work early and probably harvest more grass. Those who walk are at a disadvantage, for example, the group south of Kokosi walk for more than 10km to their harvesting site, by the time they get to work it would be late hence harvest less grass. A 65-year-old man harvesting in Kokosi complained about tiredness from walking long distance.

Accessibility and availability of thatching grass sites can also be another reason why harvesters would travel long distances in search for harvesting sites. Good harvesting sites are usually far from where harvesters live (residential areas). Those who harvest close to where they live face a number of challenges such as dangers of wild fires, which destroy much of their harvest, either naturally or through people deliberately setting fire to their harvest and constant stealing of their harvest by local residents. Harvesting usually takes place close to roads for easy access.

Movement also ensures the sustainable harvesting of natural resources, particularly the harvest of reeds (*Phragmites australis)* in KwaZulu Natal (van Rooyen *et al*. 2004). This is similar to the harvesters from the interview sites that move to different places in search for more grass to harvest in order to sustain their livelihoods. Harvesters do this by moving across provinces and across towns in search of good harvesting sites that can give them the highest possible income. Movement depends on the mode of transport used, those who have their means of transport get to work faster than those who walk to work and besides, walking or even cycling takes a lot of physical strength that is needed in harvesting. However, transporting harvested grass includes the use of delivery vans by those who owned them or through hired transport in mean of a truck of a small van and sometimes buyers provided transport. Harvested grass was taken directly to the buyers' selling point or some buyers will collect the harvest from the harvesting points to where grass is sold. A study on the use of fuelwood in South African savannas revealed that harvesting of fuelwood tended to be concentrated along or close to the communities, while the further one moves from the community the fewer the harvesters, with the quality of wood improving with distance (Shackleton *et al.* 1994). Similarly, harvesting of grass was intense close to where harvesters lived and the quality of grass was much lower at the time of the interviews. Reasons for this includes high levels of harvesting by people living close by, fire, and other human activities such as dumping human waste, destruction of grass through walking and play grounds, and construction activities. Harvesting sites that are far from residential sites offer good grass and increases the chances of making good money for the harvesters. These spatial utilization patterns of harvesters are also dependant on the availability of private landowners who are willing to let harvesters access their properties, as most of private farm owners do not want harvesters close to their farms. Farmers are wary of allowing strangers onto their properties due to high levels of crime in South Africa, particularly targeted to farmers.

The Sustainable livelihood Framework emphasizes on the importance of having a strong physical capital base such as efficient and affordable transport systems. Harvesters struggle to access land to harvest and sometimes their means of transport is not efficient enough to take them to work on time; this makes the industry unsustainable and unable to sustain livelihoods.

The majority of harvesters particularly those in Kokosi and Jouberton stay in informal settlements where sanitation levels are low. Some shacks have no electricity and no refuse collection services. However, piped water is available but the majority of houses are still shacks and a few RDP houses particularly in Jouberton and Kokosi. The majority of harvesters have cell phones to communicate with clients and other harvesters to share information and keep contacts, strengthening social networks. The region is well serviced with telephone signals and communication among harvesters is not a problem at all.



Figure 4.8: Examples of housing in Jouberton *(Photo Jenny Botha)*

4.8 TRANSFORMING STRUCTURES AND PROCESSES

Transforming structures and processes involve the institutions, organizations, policies and legislation that have an impact on the livelihood outcomes (DFID 199). In this case, various organizations and institutions involve the government, the farmers and the mines that have a direct impact on the livelihood outcomes of the harvesters.

The harvesters still face a number of challenges in their daily operations and this range from social challenges that can be addressed to natural challenges that are not easy to solve. Relevant institution, organizations and even relevant legislations and policies can solve some of these problems. Crime is one of the major challenges that were raised by harvesters (31.6%), it is usually in form of suspected arson cases, when people burn their harvest (5.3%) and stealing of harvested grass, or it can be inform of serious crimes such as robbery. For example, one harvester in Jouberton had his bicycle taken from him by force;

criminals attacked the other also in Jouberton in his house at night who wanted money, while the other harvesters from Khuma were hijacked while using the buyers' car. Shortage of thatching grass buyers can also lead to low income for the harvesters and this might also be linked to health issues raised by harvesters (10.5%), no food to eat for some (2.6%), lack of protective clothing by harvesters. These problems arise because of lack of strong financial capital that then lead to increased levels of poverty. In addition, conflict with farmers was one of the main challenges raised (21.1%), these conflicts have resulted in some harvesters changing harvesting sites from time to time. Shortage of harvesting sites forces them to travel long distances sometimes across provinces in search of good harvesting sites and this eventually leads to high transport costs (10.5%). However, most of these problems can be addressed through dialogue between stakeholders (Figure 4.9).

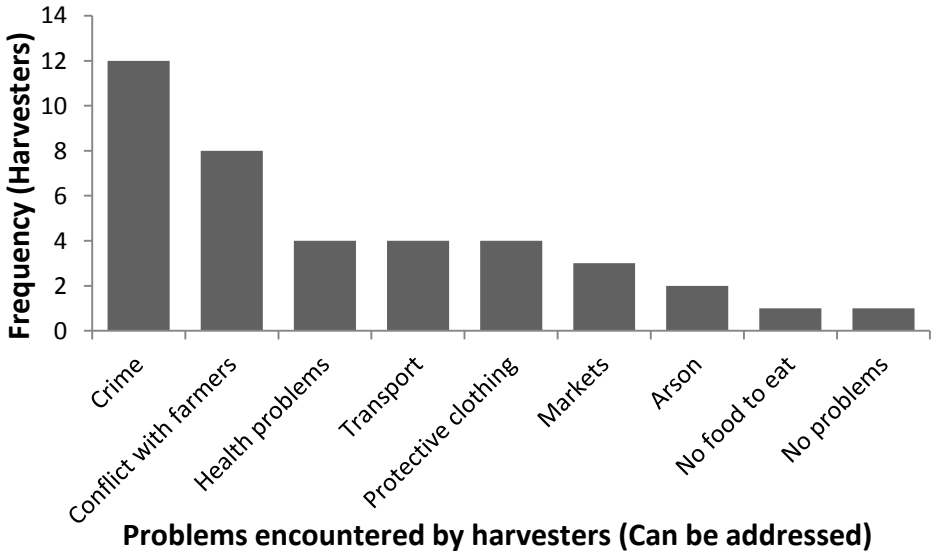


Figure 4.9: Challenges faced by harvesters that can be addressed

However, there are problems that are natural and these are sometimes difficult to deal with. Fire is one of the major obstacles for the harvesters of thatching grass (42.1%), this can be through natural causes such as lightning or higher temperatures, or through humans starting fires. This is a serious problem because fire can wipe out a large amont of harvesting sites that can sustain many livelihoods, most importantly, harvested grass can also be destroyed. Unfavourable weather conditions can also impact on the livelihood of

harvesters, this can lead to shortages in grass stock or harvesting of grass can stop during such times. Snakes and injuries can not be addressed, because snakes are home to the veld and human beings are likely to sustain injuries while walking or operating in the veld. Distance is always a challenge for the harvesters because grass is usually found on the outskirts of the city. Those who need it have to travel long distances to access it as much of it closer to the city have been destroyed by human activities such as clearing of land for settlements construction (Figure 4.10).

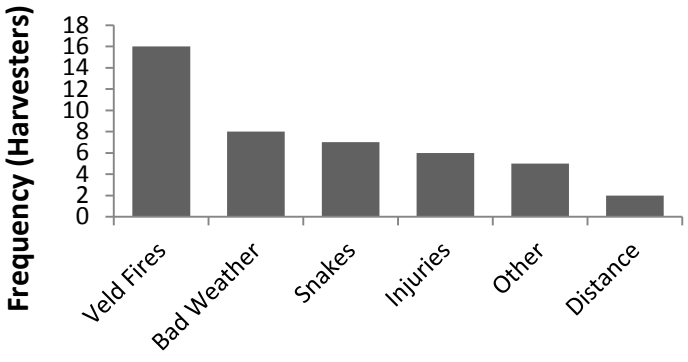


Figure 4.10: Problems encountered that are difficult to address. These are kinds of challenges that are difficult to solve as many of them are natural but not man made.

4.9 VULNERABILTY CONTEXT OF HARVESTERS

Fire are very difficult to categorise because fire can be aa investment in future natural capital in the sense that it is a driving variable of the grassland ecology, while on the other hand if fire is in the form of arson it can be a social capital as well. Likewise, veld fires are one of the natural factors that increase the vulnerability of the harvesters. Veld fires are very common in this part of the country, partly because the area of operation for harvesters is doted with privately owned farms, hence landowners particularly private farmers who practise cattle farming, use fire to clear their grass so that new grass can sprout in the next season. For farmers, this form of practice helps to clear old grass which might not be

favourable for their livestock. Fresh grass would then grow when the rain season comes. In KwaZulu Natal, at Sibonosweni Community, controlled fires on the reeds proved to increase the rate of resprouting of the reeds in the next season and providing them with enough reeds to harvest (van Rooyen, 2004). Also, veld fires are a natural phenomenon of the grassland ecology. However, acts of arson have been on the increase with some harvesters losing much their of harvest, which harvesters believe are the actions of jealous people. According to the harvesters, there has been an increase in the amount of harvested grass being stolen, and to them different harvesting groups sometimes steal from each other particularly when they have found a ready buyer who needs more grass at a particular time. Local people have also realised that there is more money made through the sell of grass and they usually come after the harvesters have left their sites to steal their harvest. Young initiates from the local communities have also been accused of stealing grass to build their temporary structures during the process of initiation which usually happens in winter every year, a time when harvesting grass is at its peak. As a result, the rise of crime incidents (31.5%) related to the stealing of thatching grass from the harvesters by other harvesters or by the local community (Figure 4.9) have been recorded from the interviewees.

Unfavourable weather also negatively affects the livelihoods of harvesters. During interviews, 21.1% of harvesters said bad weather affects their operations (Figure 4.10). Heavy rains usually destroy grass and infrastructure such as roads, making accessibility to harvesting sites impossible. More so, excessive rains and prolonged rains can prevent harvesters from engaging in their normal duties and discourage the growth of grass though flooding, which is a source of livelihood for the harvesters. The road used by harvesters operating south of Kokosi is so bad that during rain seasons, cars cannot use it and this has an impact on their livelihoods as they depend on buyers that come to collect their grass. On the other hand, shortage of rainfall might also result in less grass to harvest for the year. Last year (2012), was not a good year for the harvesters as they said that there was little rainfall received and the harvest was not good at all.

4.10 CONCLUSION

The study has revealed that harvesting of grass is the main source of income for thatching grass harvesters, followed by additional income earnings and social grants. The research has also found out that harvesters engage in multiple jobs to diversify their income because grass sales are not entirely reliable since thatching grass markets are unpredictable. The majority of harvesters interviewed were foreign nationals from Mozambique, Zimbabwe and Lesotho (73.7%) only a few of them were South African nationals (26.3%). Thatching grass harvesters form part of the local poor and marginalized, hence their focus highlights the dire situations of poverty and struggles of life in this region, which is vital in policy redirection. Their operations are unknown to the local authority and the people around, but their existence form part of the survival of the poor groups that help evoke policy discussions around the issues of poverty. The next chapter will focus on the conclusions of the study. In addition, conclusions on the research problems in relation to theory will be made and recommendations for future research opportunities. The success and failures as well as meanings of results in relation to the aims and objectives of the study will also be looked at.

CHAPTER 5: RELEVANT INTERVENTIONS

5.1 INTRODUCTION

To my knowledge, this is the first assessment of the livelihood strategies employed by thatching grass harvesters on the Witwatersrand goldfields. There has also been limited research on thatching grass harvesting as a source of livelihood in South Africa or internationally. Incomes from the harvest of grass are usually low and irregular which makes it difficult to maintain a livelihood. However, there are a few harvesters who earn more than R5 000 (7.9%). One of the most important results of this study is that it shows how people operate and earn at different levels of the socioeconomic stratum.

In monetary societies, chronic poverty results in an inability to buy basic items such as food and clothing. Some harvesters also experienced ongoing poor health, which reduced their ability to work, leading to increased levels of poverty.

Globally, it is believed that hunger and food deprivation has been reduced from 20% to 17% in developing countries while the number of those undernourished has also slightly been reduced from 823 million to 820 million (Food and Agriculture Organisation of the United Nations 2006). Food-deprived people are also food insecure. According to The Chronicle Poverty Report 2008-2009, food insecurity is defined as a situation where people lack sufficient food for natural growth, development and a healthy life, and this might be caused by unavailability of food and lack of purchasing power. South Africa is ranked number 40 out of 105 countries in the world of the countries that are food secure (Global Food Security Index, 2012), but a substantial proportion of the population is food insecure. This chapter synthesizes the results of the study, and provides recommendations and lessons learnt as well as the implications of these results at a local and at regional level.

5.2 ASSESSING THATCHING GRASS LIVELIHOODS ASSETS

The research aim was to gain an understanding of the livelihood strategies employed by thatching grass harvesters in the Witwatersrand goldfields. The objective was to assess livelihood strategies of these harvesters using the Sustainable Livelihood Framework as a

tool of analysis. Many thatching grass harvesters earned their incomes from a variety of sources (55.2%), such as construction work, farm work, car repairs, gardening, selling recycling material and driving. The grand total per annum of all households was R960 900, of which money from grass harvesting contributed 73.4%, income diversity 26.6% and total grants 8.3% per annum. However, a substantial number of harvesters were fulltime harvesters (44.7%) and these do not have other supplementary jobs making harvesting of grass a key livelihood strategy for them. Most harvesters relied on their strong social networks to survive but, were unable to join organisations such as burial societies, stokvels and credit associations through lack of funds and, in the case of illegal immigrants, passports and work permits. In addition, their illegal status makes them unable to acquire bank loans to support their business

Thatching grass markets goes beyond the county's borders though most of them were local; they include individuals who need grass directly from the harvesters while companies and other individuals also buy grass for resale. Most of the income (73.4%) came from these people and companies that buy grass in bulk for sale in smaller towns as well as and bigger cities like Johannesburg. However, in some instances thatching grass can also be sold to cross-border traders particularly those operating in Mozambique and Botswana and these usually buy in bulk too. This is common particularly with harvesting groups operating Jouberton as compare to the harvesters in West Rand District Municipality who only have local customers.

5.3 FINANCIAL CAPITAL

The financial capital base for the harvesters increases their vulnerability because for them to acquire other capital assets mentioned by the Sustainable Livelihood Framework they need to have a strong financial capital base in order to access other capital assets, particularly physical and some forms of social and human capital. Furthermore, their financial position puts them in better position to withstand shocks and trends and could help them gain respect from other members of the community.

5.3.1 LOW LEVELS OF INCOME

The majority of harvesters earn less than R3 000 per month (81.6%). Money earned by harvesters and their households ranged from R225 to R5 917 (R2 022±1 252; n=38) per month. Considering most members are unable to secure other jobs, harvesting became their last resort. Many of the harvesters still operate on a survivalist level and thatching grass was not a reliable source of income according to the harvesters. Most of these harvesters are unable to break away from the poverty cycle. Some have been harvesting for more than ten years and are still in the same situation as it was before and most of them struggle to make more money from the harvesting of grass. Their income status makes them unable to acquire other assets needed in sustaining their livelihoods. For example, if harvesters can have enough financial power they might strengthen their physical capitals by buying a small van so that harvesting and transporting their products could be much easier. This can also give them respect with their customers and other prospective buyers and also strengthen their social assets. For example, the group operating in Blyvoor had managed to serve money to buy a small delivery van and they are able to operate with ease. They can travel long distances in search of grass and delivers their grass to a safer point, and they have managed to advertise their business and a local feeling station where people can access their phone numbers. Because of their physical assets they posses (delivery van, trading stand), they have more customers spread around the country and command respect with the community members. More so, their educational levels have an effect in negotiating a good price from the prospective buyers of grass. Those with better education levels are able to negotiate, for example a member of a group based in Klerksdorp Dam was chosen as a negotiator with the land owners and buyers because he completed his grade 12 and relates well with the buyers.

Harvesters should also be encouraged to strengthen their diversification strategies. Livelihood diversity has been noted as a livelihood strategy in academic circles on developing nations for lower income groups, both in rural areas and in urban settings (Ellis, 1998). It is also emphasized by the Sustainable Livelihood Framework as playing a major role in sustaining livelihoods. However, recommendations need to be specific to the type of livelihood and local conditions. Harvesters who are able to obtain part-time work when

shocks such as veld fires and droughts strike may in a better position to survive and their vulnerability to such dangers are reduced. Also, in times when there is no grass to harvest, such as when grass is off season, such families are able to survive, more so, when there is too much grass in the market that can lead to grass prices dropping dramatically.

Also strengthening links between harvesting groups could also ensure that their prices of grass bundles are constant in the region so as to avoid exploitation of harvesters by buyers particularly when harvesters are in a desperate situation. Further assessments of the market are required, however.

Proper storage facilities for harvested grass can be an alternative in order to have grass available throughout the year; this will make grass supply more stable. Storage facilities will protect harvested grass from natural weather elements such as rainfall as well as natural fires. The current storage of grass does not protect grass from there dangers because harvesters leave their harvested grass in the open and they also said much of their grass is destroyed because they do not have a place to store it (Figure 5.1). However, harvesters might find it difficult to transport harvested grass to the storage points and this might also lead to accelerated transport costs. But to counter this problem a planner might advise the stake holders to build cheaper structures made wood and tarpaulins as they are required by the harvesters. This will ensure safety of harvested grass particularly from wild fires and rainfall.

Storing of grass would also give a chance for harvesters to continue doing other jobs when grass is out of season and also continue to get money from the grass they harvested the last season. This initiative can lead to constant flow of income per month and this can be key to poverty reduction among harvesters and this can only be possible if markets are constant.



Figure 5.1: The current storage of harvested grass

It is also important to promote health education and the provision and accessibility of health facilities to poor communities such as the thatching grass harvesters. Sometimes people are reluctant to go for regulat health checkups in the clinics until they are very ill. In South Africa health care can be accessed by anyone regardless of one's nationality in government clinics. But as long as harvester are still food insecure, their health status and natural growth will not improve. Lack of food has an effect on the ability of any individual to sustain a livelihood (Jha, Gaiha and Sharma 2008).

5.3.2 THATCHING GRASS MARKETS

Thatching grass markets are not constant because grass is seasonal and during winter there is an oversupply of grass and these causes a glut in the market and prices fall. Harvesters from Jouberton who harvest close to Klerksdorp Dam said after having travelled for long distances in search of grass, their buyer Maranatha requires them to use their own means of transport to transport grass and they have to pay high transport cost from their own

pockets. Similarly, harvesters in Nepal had to travel for more than 50 km to get to the harvesting sites at their own costs (Mishra, 1982). Some harvesters suggested a need to be assisted in finding constant buyers who will buy their grass at a better price, while others suggested the government to be their main buyer. However, this might indicate the desperate situation of some harvesters to an extent they believe the government must intervene in their business. Harvesters based in Klerksdorp are in a better position in terms of the number of buyers than harvesters based in Kokosi where there is only one main buyer in Orange Farm in Johannesburg. A harvester in Jouberton said he has more 7 000 bundles of grass in the veld and he does not know what to do with it as there is no one willing to buy his grass. When there is an oversupply of grass, buyers are not willing to pay more per bundle of grass and out of desperation most poor harvesters end up offering it for less.

Lack of income can trap people into chronic poverty; some people find themselves in this kind of a situation because of a certain crisis. For example, people may be retrenched from their jobs, face a war situation, or experience a disaster such as drought and floods. These can trigger a situation where people are trapped in chronic poverty. However, some people will eventually free themselves from this situation while some people cannot. Some people will use their social connections to absorb these shocks and trends; some will migrate to other places while others will use their available stocks that may include their savings from the banks to recover. For the harvesters, they are in a tricky situation because the majority are illegal in the country and cannot access formal jobs. They do not own property that they can sell in case of a disaster in order to recover. Their levels of education are low and cannot obtain any form of employment to free them from chronic poverty. Those who receive social grants are in a better position to survive shocks and their resilience is higher than those who do not have other sources of income.

According to the harvesters thatching grass is being sold to neighbouring countries such Mozambique, Botswana and Zimbabwe. Harvesters said grass is being taken to those countries because the type of grass which found in the country is not available in neighbouring countries. The tourism industry in Mozambique and Botswana continues to grow and demand for thatching grass is likely to increase as well, because of an increase in structures that required thatching roofs continues to increase. In addition, more research

needs to be done on where the grass is being sold in these countries and who buys the grass so that regional development and cooperation may be improved and strategic areas of intervention may be identified.

5.4 SOCIAL CAPITAL

Socially, some harvesters have serious problems that affect them in maintaining a sustainable livelihood, although some were well assisted by the community. Social problems encountered are in the form of conflict between harvesters and local landowners' particularly local farmers and mines mostly near Kokosi (West Rand District Municipality) and in Klerksdorp (Dr Kenneth Kaunda District Municipality). This might be partially related to the number of murders targeting the farming community in South Africa mostly white farmers (The Centre for the Study for Violence and Reconciliation 2007). As a result most farmers do not trust strangers in their properties and this makes it difficult for harvesters to secure and sustain their livelihoods. There are stigmas attached to harvesters despite nationality, harvesters are usually seen as low class citizens because of the job they are doing which is usually not taken serious by some community members. More so, attacks or acts of arson might not only be a problem of foreign harvesters but all community members face the same problem because of high rate of crime in the region. Conversely, there are some farmers willing to assist the harvesters. Some allow them to access their properties without any terms or conditions while some are willing to assist harvesters but only if they bring a letter from the authority which states that they are harvesters. Such relationships are usually based on mutual trust and understanding between the landowner and the harvesters.

Managers of some mines are willing to assist harvesters, although security personnel arrested harvesters as they were suspected of being artisanal miners. In Blyvoor, AngloGold Ashanti has even built fire breaks to protect grass for the harvesters and allowed them free access to harvesting sites. Social capital is vital in the acquisition of other capital assets. Focusing on this capital asset will improve the management of natural capital (grass and other natural resources harvested) maintenance of physical capital (roads, own transport, land to harvest) and the improvement in human capital (sharing of knowledge and transfer of skills) (DFID 1999).

There are high incidents of crime in the region; harvesters said they are victims of crime, particularly because they are vulnerable and easy targets when they work on the open velds away from the residential areas. However, some said sometimes they are victims of crime mainly because they are foreign nationals. He also believes he was attacked by people who knew him and because he was a foreigner. Some harvesters mentioned that their harvest is sometimes set alight by community members and they suspect that they are targeted because they are foreign nationals. Under these conditions the harvesters said this has affected them in their business. One harvester from Jouberton said he was attacked while cycling home from the harvesting site and his bicycle was taken from him and as a result he spent days without working because he had no transport money. This he believed it was done to him because they knew him as a foreigner. Three harvesters from Khuma said they were hijacked at one time and were held hostage by the hijackers until they were rescued by the police officers. Another harvester from Jouberton said he was also attacked at his house the day he had sold his grass and all his money, passport and property was taken from him in the middle of the night. The attacks on them weaken their capabilities of maintaining their livelihoods particularly because their social capital is reduced leading to a weakened capital asset base mentioned in the Sustainable Livelihood Framework.

Possible solutions to this should not only focus on the crime and the criminals but rather focus on the root cause of these problems which are mainly poverty and unemployment in the region. Crime also weakens the social capital for the harvesters because it makes it difficult for them to use their connections to get access to harvesting sites. It also destroys trust between landowners and the harvesters and this makes the life of harvesters difficult.

However, implementing projects that are meant to strengthen social relations in the community can come with its own challenges. In South Africa's nursery projects prospective members who wanted to join some projects were usually blocked by those who were already members simply because they did not belong to their social network but they were not foreigners (Botha *et al.* 2008). This might indicate a culture with some deprived people who usually a jealous on one's success as in the case of harvesters who experience arson and vandalism to their harvests.

Farmers, mines and the government may be encouraged to use thatching grass harvesters to their advantage by using them to do duties that would otherwise need them to hire labour to complete the task such as clearing grass to create fire breaks on farms and mine properties and on the roadsides on municipal roads. In turn harvesters will also benefit by gaining access to plenty of grass to harvest in locally available farms, mines and government land. But this could also lead to possible exploitation of harvesters by landowners whereby harvesters are given more work which is not related to harvesting before accessing harvesting sites. In this case harvesters can be used as a source of cheap labour by landowners if not well managed.

Some farmers have agreed to let harvesters access their properties particularly in the Klerksdorp but on condition that they share the money they get with them. However, this should be discouraged as both the farmer and the harvester will be benefiting from this relationship and for farmers to ask a share of their harvest will be too much as most harvesters operate below the poverty line. Planners can help harvesters negotiate more equitable agreements and ensure that this type of unfair practice is avoided. Planners need to develop the skills of harvesters to enable them to negotiate independently in the long term.

Development planners can encourage unity among harvesting groups and form an association that will look at issues of discipline and responsibility. They could be encouraged to choose their own representatives that will negotiate on behalf of all harvesters to solve issues affecting them. The formulation of policies regarding the extraction of natural resources must first deal with issues of equity in accessibility of these resources (Twine *et al*. 2003).

Mines may be able to offer part-time jobs to clear grass on phytoremediation sites and create fire breaks. Such initiatives might boost the amount of income per year that is made by harvesters and their families. However, many harvesters live far from mines, for example, those staying in Jouberton. Mines cannot, by law, employ illegal immigrants. However, the illegal status of the some foreign harvesters makes life difficult for them. It will also be difficult for the mines to provide jobs for those harvesters who live far away from the mines like the ones staying in Jouberton. The jobs might include farm jobs in the local farms and

mine jobs such as clearing of grass around mine properties as well as creating and strengthening of existing fireguards.

In Nepal in the early 1980s, a conflict between harvesters and the landowners (Parks) was resolved amiable between stakeholders through dialogue where harvesters were allowed to access the park only on specific days of the year. Harvesting permits (50 000) were given to the locals but on condition that no use of cars and scotch carts will be used inside parks to avoid over harvesting of grass. This increased the household incomes for many poor households (Mishra, 1982).

Comprehensive planning techniques can be used to find suitable projects that can bring people together. This can be through a democratic process where community members make their own suggestions. The ability to keep the community together rests on the organisation or the people running such projects. In South African outreach Nurseries, lack of compensation for members of the projects lead to stealing of project's resources by some members, and ward councillors attempting to take over the project (Botha *et al*. 2008). However, challenges might be imminent when implementing such projects. Projects generating income for the people usually draw bigger expectations from the community and if those expectations are not met people are bound to react negatively. Such initiative could strengthen social capital, human capital and physical capital for the harvesters vital in the Sustainable Livelihood Framework.

5.5 PHYSICAL CAPITAL

Issues raised with regard to physical capital were lack of own means of transport, having to walk long distances and accessibility to the harvesting sites. Although the region is well serviced with road network, most harvesters do not have their own means of transport and this affects their operations. This inhibits their ability to harvest as their physical asset capabilities also differ. Because harvesters have a weak financial capital, they also lack in their physical capital as the majority of them do not own any properties such as their own means of transport to go to work. Because of distance that had to be travelled by harvesters and lack of own transport, they were an easy target by criminals. However, crime was never mentioned in the study of grass harvesters in Nepal (Mishra 1982) it was also not mentioned

with the harvesters of reeds in KwaZulu Natal (van Rooyen, 2004). This is an urban setup different from the case study of Nepal and KwaZulu Natal; this shows crime is affecting people more in urban areas. This could also mean that despite the fact that much is said about crime affecting the middle class in the country; it is also a problem among the poor particularly in urban townships. Crime prevention initiatives should not only focus on those who are privileged also the poor needs protection from the growing number crime incidents in their communities.

Mediation can come up with solutions that might improve the capital assets base for the poor people and enable them to absorb shocks and trends in their lives. For example, transport problems may be reduced by making land available closer to where the harvesters live to avoid transport costs through various stakeholders coming together particularly land owners in this part of the country. Harvesters need to obtain access to the land. This could also help farmers, mines and the state as they remove excess grass, which can improve grazing for cattle and reduce fire hazards.

5.6 FOREIGN HARVESTERS IN SOUTH AFRICA

Most harvesters interviewed in this research were foreign migrants (73.6%) while they were few South Africans (26.3%). The reasons for having a higher number of harvesters in the region of the study was that gold mines attract a large number of foreign population particularly from Southern Africa with the prospects of getting employment in the goldmines (Labor Market Review 2007). Among foreign harvesters most of them were from Mozambique (65.7%) followed by harvesters from Zimbabwe (5.2%) and then harvesters from Lesotho (2.6%). Foreign harvesters and their illegal status in the country make them vulnerable and unable to sustain a living. Another harvester from Jouberton said he has been in South Africa since 1972 and used his passport for a while until he lost it and now he no longer has any formal document. Furthermore, a harvester from Jouberton said their legal status is affecting them as they sometimes are required to produce a letter or any certificate that shows they are harvesters by some local farmers. This requires them to go to the Department of Home Affairs and to the Department of Labour to get a letter that approves them as harvesters, and without any form of identification they are unable to obtain that.

It was estimated in 2006 that there were 9.8 million irregular undocumented immigrants who constitute 20% of South Africa's population. Then the Centre for Development and Enterprise (CDE) surveys concluded that there were 500 000 illegal immigrants in Johannesburg contrary to Statistic South Africa data which said there 1.26 million immigrants. The majority of these are Zimbabweans followed by Mozambicans and Nigerians. The Namibians, Botswana nationals and Lesotho nationals are a minority according to the survey (Centre for Development and Enterprise (CDE) 2008). This relates to the findings of the research where the majority of the harvesters were foreign nationals from Mozambique, Zimbabwe and Lesotho. Targeted destinations for these migrants were provinces like Gauteng Province.

Civil war and economic collapse at the end of 1992 forced most of the Mozambicans into South Africa (De Jongh 1994). Due to lack of border monitoring mechanism and the collapse of apartheid in South Africa in the 1990s, most foreign nationals have continued to find their way to South Africa. The changes in the mining industry in 2001 led to retrenchments of many Mozambicans (Labour Market Review 2007). Most of these migrant workers were denied legal status (Dolan *et al.* 1997). It is however difficult to quantify the number of Lesotho nationals in South Africa as there are more people of Lesotho origin in South Africa than in Lesotho. More than 50% of the male population in Lesotho worked in South Africa in the 20th century, but this has changed due to recent tight border controls (Cobbe, 2012). The UN Food and Agriculture Organization says there are about 100 000 to 500 000 Lesotho immigrants, while the World Bank says there are 427 500 people from Lesotho (Cobbe, 2012). Because of the economic crisis of Zimbabwe early in the year 2000, Zimbabweans were estimated to be in a range of three million to five million living in South Africa. It is also difficult to quantify the exact number of Zimbabweans living in South Africa as much of the figures come from official documents, but through deportation figures, there were 102 413 deported in 2007 only (Muzondidya, 2008).

Poverty can manifest itself in different ways in some people. Harvesters might remain tangled in this situation because there is no one who can assist them in strengthening their capital assets. For foreign harvesters it can be much more difficult, because their illegal status can make things worse than other harvesters. Firstly, they are working in fear of being caught and deported to their own countries. Secondly, they do not have valid

passports or South African identity documents to access financial capital from the banks. And thirdly they cannot join social organizations because these organisations require valid identity documents to join them. Access to microfinance capital proves to be a popular development strategy for the poor and in developing economies of scale (Basu *et al*. 2004). Under these conditions foreign harvesters are unlikely to free themselves from this misery.

Harvesters are still living in fear in their communities, and they sometimes hide themselves from the public by spending much of their time in the open velds harvesting and then come back in the evening to sleep or they simple stay in the bush where they harvest. They argued that most of them are still targeted because they are foreign nationals as the society sometimes do not welcome them and some of them stated arson as people burn their harvest for no particular reasons (5.2%) as well as stealing their harvest (28.9%), (Fig 4.5). This shows that harvesters are still living in fear in their communities and remain largely not integrated to their communities. In the West Wits in Blyvoor, the group leader of the harvesters there said they have experienced a number of arson attacks to their harvest and that most of their friends left the country soon after 2008 xenophobic attacks. Their group members have decreased from seven members to four members and they say their production had slowed down since then. Another harvester from Zimbabwe who is also part of the group that harvest in Klerksdorp Dam also said he has been a victim of crime targeted mainly because he is a foreigner and had his property taken away from him on several occasions including his bicycle that he uses to go to work.

All this might be an indication that foreign nationals are still not well integrated into South African communities and there is a need to promote programmes that promote social cohesion and promotion of multicultural societies. Planning recommendations should be to foster relationships and benefit all members of the society. This might mean that the societies do not understand each other and development projects should encourage social contact among community members. For example, South African communities do not understand foreign nationals and foreign nationals do not understand South African communities. Prescribed interventions must work on integrating the divided community as a whole, without specifically selecting out a certain group of people as this frequently heightens tensions in an already divided society (Botha *et al*. 2008.

5.7 PREVALENCE OF CRIME

Incidents of crime are common in South Africa particularly in poor communities. However, measures could be taken to reduce these crimes particularly targeted to harvesters. Firstly, we need to identify the source of the problem as to why there is high rate of crime in the area. This is because there is high unemployment rate in the area. A development project could be prescribed for such a community to keep people busy with a source of income. Labour intensive projects such as road construction and other projects that do not need the use of machinery but people employed in large numbers could be another angle to fight this challenge. Labour intensive projects involves training people on various skills particularly in the construction industry and the skills can be used in life even after the projects lifespan has elapsed (Department of Water Affairs and Forestry 2001). Transfer of skills to individuals such as the harvesters could improve their human capital in the sense that it will enable them to look for other jobs to supplement income from grass and thus improving their financial capital as well. Such projects could be promoted through the collaboration of the community as well as the department of Public Works. Various stakeholders such as the Department of Public Works, the community and various NGO involved in development projects can come together and discuss possible sustainable projects that could employ more people but discourage the use of machinery, for example in road construction.

A development planning might come up with solutions that would see harvesters getting better off-season jobs when they are not harvesting. Financial capabilities of harvesters will help them acquire other capital assets and this will put them in a position to survive shocks and trends associated with harvesting. Improved financial power helps keeps a steady income for the harvesters. However, foreign harvesters do not have social grants mentioned in the sustainable livelihood framework as one on the ways to keep a steady cash flow.

In addition, harvesters should be encouraged to form their own harvesting organisations that will look into the issues affecting them and proper representation of their grievances. Formation of informal social organisation such as stokvels, rotating servings and credit associations could also help harvesters to save. A development planner could also assist in organising meetings between affected stakeholders to come up with solutions that can lead to formation of community base projects that are independent from the government and

run by the community. But foreign nationals could be at a disadvantage since most of them do not have proper documents to open bank accounts. Government response to such issues is usually slow and mostly comes towards elections when they want to be voted into power. Credit associations could help particularly those harvesters who might be stranded without transport money to go to work just like a harvester in Jouberton who was not harvesting for a long time because he did not have transport money. The formation of harvesting groups and associations will also be a challenge as much of the time could be lost while having meetings and trying to solve in-fighting among some members. Some projects could be hijacked by political elites who try and achieve their own goal. In South African outreach nurseries, political elites wanted to use the projects for their political strength and attempted to control the project resources, and sometimes democratically elected councillors clashed with traditional authority for the control of resources (Botha et al. 2008).

For this kind of the problem, key stakeholders include the local government and the harvesters that might have an influence in finding a way of assisting harvesters in selling their grass as well as in building storage facilities for harvested grass. Although storage facilities has to be temporal and permission to erect them has to be sought from the landowners because building them along public roads would attract criminals hence arson. Using the approach, a development planner might convince government departments such as the Department of Agriculture, Forestry and Fisheries (DAFF) to help find prospective buyers of grass for the harvesters as this would improve the income for harvesters that is critical for their livelihoods, for example, through their Working for Fire Programme However, challenges are likely to be experienced as much of the aid from government does not always comes easily because of a long bureaucratic system.

Most importantly, harvesters and the community must be encouraged to form their own economies of scales. However, poor harvesters could also struggle to form their economies of scale as they lack capital

5.8 SOCIAL INTERGRATION

Foreign nationals living in fear for the local population is an indication of a divided society which lacks integration and multiculturalism. A planner might recommend social activities such as sporting events to be promoted and these might include soccer events and musical events featuring foreign musicians with the hope that these will increase mixing of local people and foreign nationals and create tolerance among people of various groups. Such events should also be supported by the political elite who will speak against xenophobia and a divide nation. This must also be accompanied by enforcement of current stricter laws to the perpetrators of xenophobic attacks. Also, public markets and shops that sell goods from other countries is a form of teaching the local community about various cultures from around Africa and promote tolerance, although many foreign traders have been attacked in the past and jalousies are likely to be fuelled through such initiatives. However, it should be noted that some of the politicians were accused of perpetrating violence against the foreign population and their support to such projects is not guaranteed.

Foreign nationals send money back to their home countries and this has an impact on poverty alleviation at a regional scale. Economically struggling countries can have money sent to their countries from them by their citizens in other countries. This has been the strategy by most Zimbabwean nationals living abroad who send money to their home country and sustaining the country's economy (Muzondidya, 2008). I believe more research has to be done to find how the lessons learnt from thatching grass harvesting in this country that I believe may assist other countries in the development of small-scale economies.

Harvesters might be issued with work permits and harvesting licences so that their stay will be legalised and reduce the problem of misunderstandings between harvesters and the landowners in the region. This can be achieved through working with the Department of Home Affairs and Refugee Centre tasked with looking at the issues of refugees in the country.

5.9 VULNERABILITY OF HARVESTERS

Thatching grass business opportunities are higher in bigger municipalities such as Klerksdorp but usually relatively low in smaller municipalities like Stilfontein, Orkney, Carletonville

(Blyvoor) and Fochville (Kokosi). Harvesting groups and buyers could develop linkages and utilize trade opportunities that would improve the livelihoods of thatching grass harvesters and other natural resource. One of the requirements of the Municipal Systems Act is to foster linkages on developmental issues between bigger and smaller cities (The Constitution of South Africa 1996). However, less is mentioned on the benefits of natural resources in most municipalities besides the issue of economic growth (Shackleton, 2009).

Development planners are frequently under pressure to ensure gender equity in projects, but they need to be sensitive to the conditions under which people are operating. In this study, for example, most harvesters were men. This may be due to the arduous conditions of harvesting but is also likely to be related to the high levels of crime and violence in South Africa, which numerous harvesters had experienced. Women are particularly vulnerable to assault and violence in South Africa. They also frequently experience social disapproval if they move beyond gender-related social boundaries for example there are some jobs that the community would expect to find men only and some jobs are preserved for women. In the case of harvesting grass in the veld, few men would allow their wives to do that.

5.10 RECOMMENDATIONS

A study on thatching grass markets needs to be conducted in order to provide improved recommendations on the marketing and managing of this resource, and thus ways of improving the harvesters' livelihoods. The research should include the dynamics and trade of thatching grass identifying the market operators and how the business in organised. Key recommendations are summarised in Table 5.1.

Table 5.1: Summary of main recommendations

Problems	Causes	Possible Solutions
Conflict with land owners	High crime rate and lack of trust between stakeholders	Dialogue between stakeholders so that harvesters could be granted access to harvesting sites. Provision of harvesters with harvesting permits to be presented to the landowners. Promote reciprocal relations between farmers and harvesters where harvesters get the grass they need and landowners get excess and unwanted grass removed from their land.
High transport costs	Long distances to harvesting sites	Making land available close to where harvesters live to reduce distance travelled to the harvesting sites particularly those living close to farms where grass is available. Protecting grasslands close to residential sites so that harvesters can harvest closer particularly during harvesting season.
Crime and xenophobia	Lack of jobs and economic opportunities (poverty). Various community groups do not understand each other.	Integrated development planning at community level, including job and other means of income generation, working with public, private and NGOs. Find ways to include the whole community in a programme without singling out vulnerable groups susceptible to xenophobia and other social ostracisation. This draws the vulnerable groups into the community and promotes social interaction. Promote projects that are labour intensive so that more people could be employed. Developing life skills in communities in conflict management staring at school level.
Lack of markets and low income	Seasonality of thatching grass and uneven distribution of grass buyers along the region. Influx of thatching grass in a season which causes a glut into the market. Lack of strong social networks.	Strengthen diversification strategies to supplement income from grass. Provision of storage facilities for the harvesters to reduce losses from heavy rains. Promote social organizations such as stokvels, credit organizations that will concentrate on sharing and saving of income from grass. Provide off season jobs by the mines, farmers and the municipality for the harvesters.
Illegal status of foreign national	Lack proper and valid documentation (South African identity document, valid passport, work permit).	Provision of foreign nationals working in the country with work permits particularly those in the harvesting industry. Their illegal status makes it difficult for them to find any form of job in the country and this also result in a weak diversification strategies.

Veld fires	Natural fire from lightning, unintended fires as a result of human activities as well as controlled fires by farmers as a way of clearing unwanted grass. Lack of firebreaks and enforcement of laws regarding burning of grass.	Building of firebreaks to protect thatching grass by harvesters themselves. This can also be done by the use of harvesters to clear firebreaks before harvesting at a site. Enforcement of law regarding the burning of grasslands ecosystem.

5.11 LESSONS LEARNT

Planning and planners tend to focus on issues happening in the middle of the city and turning a blind eye in what is happening in the periphery and the surrounding communities. The study on the thatching grass harvesters has revealed that the poor people continue to be marginalised by planners. Planning should be inclusive of all citizens and economic sectors of the city. Focus should be on the outreach programmes and consultations with various stakeholders to improve understanding of the concerns of the poor and marginalised people.

Poor people are not passive citizens in an urban environment but active citizens who struggle to survive through the informal sector. They are active members of the society who engage in jobs that other groups in societies would otherwise not do, and thereby contribute to economic growth. Development planning should include such economic activities not only on paper but through constant consultations in collaboration with the political elite and the promotion of democracy so that such people can be given a platform to air their views. Development planning also should focus on strengthening the capital asset base for the harvesters and a proper use of the sustainable livelihood framework in policy implementation. Natural resources (natural capital) should not only benefit eco-tourism industry only but poor people must also benefit by making accessibility easy for those surviving on those resources. Thatching grass harvesters represent the marginalized groups who are only absorbed by the informal economy and understanding these would make easy for inclusive planning and other planning initiatives.

The presence of migrant workers with low levels of education can solve demand in low skilled labour force in the host country, particularly when there is shortage of unskilled labour in the host nation.

5.12 CONCLUSION

The use of a Sustainable livelihood Framework has helped uncover challenges that are faced by thatching grass harvesters in maintaining their livelihoods. One effective way to assess the livelihoods is to focus on capital assets, these include financial, natural, human, social and physical capital, they gives us an understanding of the challenges that are faced by the poor people and enable development intervention recommendations. Income diversity remains one of the key survival strategies for the poor and this strengthens their capital base, and initiatives should also focus on developing skills to harvesters that will make them able to diversify their income. Relationships with land owners remains a critical issues that needs to be addressed because it makes it difficult for them to access natural resources. This however, needs to be combined with an integrated approach to tackling poverty, crime, xenophobia and other social divisions in the region and South Africa as a whole. Unfortunately, given the current state of the national and global economy, this remains the biggest challenge in the country as the economy is struggling and social tensions continue to reach a its highest levels because of lack of job opportunities and increased poverty levels.

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6. APPENDICES

6.1 APPENDIX 1- QUESTIONNAIRE

INTERVIEW WITH THATCHING GRASS HARVESTERS

DATE……..…PLACE……

INTRODUCTION: My name is…….. I am a student at Wits University working on a research project to try and understand how people earn money from thatching grass, as well as important aspects of the business. Our group has been working with people who use plants to earn income as well as in their households for many years. We use the information to make recommendations to the government, businesses and others on how to improve services to people who work in these types of business, as well how to improve the management of the plants so that people can benefit from them now and in the future. Wits University has been working with AngloGold Ashanti to plant trees and other plants to control pollution for the past 15 years. We have also worked in Kanana to assess how people use wild plants in their households, for example, thepe and modi or African potato. We are also doing a study to make sure that the places where people harvest moroho in Kanana and other places are safe. We will start off by asking you thatching grass business, and then ask some questions about your household and incomes. We need this information to understand the opportunities and challenges involved in your business. The information will totally be confidential and will not be used in anything else. Taking part in this research is voluntary. If you are uncomfortable with any of the questions or do not wish to answer then that is fine too. Will it be possible for me to ask you a few questions, it will take approximately 45 minutes of your time? If you do agree to participate in this research and change your mind at a later stage let me know and will stop the interview immediately. Results of this research will be reported back to AngloGold Ashanti, Matlosana Municipality, Merafong Municipality and community leaders as well as respondents.

GPS Reading…….

PERSONAL AND HOUSEHOLD INFORMATION

1. Gender: Male……Female……

2. Which year were you born? .....

3. Where were you born? (Province……Town/City…… rural/urban) ……..

4. (I) When did you come to this place? .....

(ii)Why?.....
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THATCHING GRASS HARVEST

6. For how long have you been harvesting thatching grass? .....

7. How many bundles of thatch grass do you harvest per day? .....

8. (a) Which mode of transport do you use to come to this veld?
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……

9. How often do you harvest thatching grass?

I.	Number of days per week	
II.	Number of months per year	

10. What type of grass do you harvest?
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11. Where do you sell your harvested grass and for how much grass?

Who buys from you?	Where do they collect grass from?	Rands per bundle?	Rands per day? (good season)	Rands per day? (bad season)

12. Do other members of your family also harvest?

Who? ..... How often (i.e. 3 times a week)

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13. Are there any other plants that you harvest besides thatching grass in this area?
Yes……..No……..

14. If so, which are those plants and what do you use then for?

Name of plant	Its use (thatching, building, fuelwood etc	Tree, shrub, creeper or grass	Where do you get it from

15. Where do you store the bundles of harvested thatch grass?

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16. For how long do you store your harvested thatch grass?

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17. Where else do you harvest besides this place?

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18. How do you select grass of good quality?

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19. (i) What do the buyers like in terms of quality?

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(ii) What don't they like?

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20. Are there any costs associated with the thatch grass business? Yes…….
No……..

What is the cost?	How much per day?	How many days per month?

21. What do you do to earn money out of the thatching grass season?

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22. Do you experience any problems when selling, or is it easy to sell the grass? Please explain

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23 (a) Do you ever get any assistance from anyone in your business? Yes……..No……

(b) If yes, what form of assistance do you get?

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24, (a). Have you ever had problems with the owners of the land when it comes to harvesting? Yes……..No……..

(b). If yes, what sort of problems?

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(c) If no, why do you think there are no problems?

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25. What main problems do you face when harvesting?

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26. Do you experience any other problems?

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27 (a) Do you belong to any society or organisation (Interviewer: only prompt if they say no. eg thatch grass harvester association, stokvels or burial societies)? If yes, which society or organisation?

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(b) How are these organisations important to you and your business?

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(c) Do other community members help you or prevent you from doing your business?
Yes…… no……Please explain

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28 Have you ever had health problems that affect you in your business?
Yes……No…… If yes, how has it affected you?

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29. Do people from the mine aver talk to you when you are harvesting? If yes, do you know who they are? And what do they say? Do you ever experience problems with anyone from the mine?

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30. Do you experience differences in harvesting levels from one season to another?
Yes……..No……What is the difference between good and bad years in harvesting?
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31. Are there any laws that control grass harvesting?
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32. Do you ever experience problems with any authority when harvesting?
Yes……..No…….

If yes, what type? …… How often? …… What problems?
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33. What form of assistance do you need to your business?
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We are now going to ask you questions about your household

HOUSEHOLD INCOME INFORMATION

34. How many people live in your home permanently (i.e. full time for last 3 months)?
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How many children? (Complete table)

Gender (start with youngest child)	Age	Level of education

35 (a) Income earned by harvesting thatching grass

(i) In a good year, how many months do you earn 'good money', and how many months 'poor money'? ……
……
……
……

(ii) In a poor year, how many months do you earn 'good money' and how many months 'poor money'?.....
……
……

Male/ Female	Age	Education level	How much earned in good month?	Months per year this money is earned	How much earned in a poor month?	Months per year this money is earned	What do you do out of season?	How much do you earn doing this each month?

(b) How many adults are there in your household at the moment (list them in the table: gender and age). When all of them are listed, start with the first one and ask whether she/he is working, and complete rest of the table.

Male/ Female (M/F)	Age	Education level	Sector employed e.g. mining agriculture, office, etc.	Informal sector activity (selling clothes, vegetables, domestic work e.t.c)	Amount earned	How often is income earned (monthly, weekly, occasionally (if occasionally, how often on average? etc.)	Total per month

36 (a) Do you or other members of your family obtain grants? Yes……No…….

(b) How many grants does your family get and how much are they (amount each)?

(i) Pension: Number……R…… (ii) Child support: Number.....R…… (iii) Disability: Number……..R……

37. Any other source of income? e.g. someone working away from home who sometimes send something, or brings when they visit you?

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We have come to the end of the questionnaire. Thank you for the time to participate in the research. Do you have and questions for me?