Assessing the drivers of land abandonment in afforested land reform projects in the Gert Sibande-District in Mpumalanga Province, South Africa

By

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ABSTRACT

The segregation of black Africans to access and participate in forestry was purely a development plan imposed by the apartheid government. Initially, this started as a conservation route, where special indigenous trees were marked as a no-go zone, and this was solely to feed international markets. As the demand increased, it was necessary to introduce the exotic tree species, and this is where forceful removals of indigenous people from their ancestral land began. To reverse the effects of the land dispossession and/or removals, the democratic government prioritised the restitution, redistribution, and tenure of land to the landless. A collapse of transferred land due to under utilisation by new beneficiaries has been reported widely. This study assessed the drivers of land abandonment in afforested land reform projects in Gert Sibande District in Mpumalanga Province in South Africa, in order to formulate mitigation measures or damage control measures on how to revive these farms and assist them to function again. The study further intended to investigate the effects of not functioning forestry farms in the lives of beneficiaries, on the aspect of economic, environment and social.

This study was conducted in two communities that were purposively selected considering their land abandonment status. Data were collected using the semi-structured questionnaire to randomly selected heads of households. Additionally, the focus group discussions were conducted to gather in-depth information regarding the status of forestry in their locality. Descriptive and inferential statistical analysis tests were performed to process the primary data using the statistical package for social sciences (SPSS) software.

The results showed a statistically significant relationship ($p \geq 0.001$) between the respondent's responses regarding the drivers contributing to land abandonment. The study showed that lack of benefit sharing; elitism; lack of transparency; infighting; lack of funding; lack of expertise (technical skills); lack of evaluation and monitoring and lack of mentorship were all contributing factors to land abandonment in restored forestry land. The results indicated that over 98% in both Jabulani and Thuthukani communities have neither benefited from business opportunities nor development skills. Over 98,7% of the community in Thuthukani never benefited from employment compared to 45.7% in Jabulani. The study results show that sufficiency in forest products (firewood, building material, grazing areas, commercial timber, water sources, medicinal plants, crafting materials, food sources) were highly impacted or affected (78.7%) in Thuthukani community compared to 48.6% in Jabulani. Additionally, 76% and 60% of the communities respectively, at Thuthukani and Jabulani indicated that ecosystem

services were affected, typified by sighting of wild animals. Over 88% in both communities observed an increase in fire occurrences. With respect to the preferred intervention forest management models, most preferred partnerships (> 90%), followed by participatory forest management received (88%) and agroforestry (82%).

The study findings revealed that the potential economic benefits intended for accrual to the beneficiaries were compromised. The institutional arrangement resulted in beneficiaries disregarding the constitution in terms of CPA committee members' nomination, which delegitimised the CPA committee members who were elected outside the prescripts of the constitution. Furthermore, this study showed that beneficiaries from both communities have been failed by the government entities whose oversight and coordination role was non-existent. However, a positive note was observed in the Jabulani community where the partnership effort managed to establish an Agri-Village that immensely contributed to the lives of the beneficiaries. However, weaknesses were attributed to the neglect of the forestry business aspect of land management. In contrast, Thuthukani community never experienced transformation including basic service delivery and as a result, beneficiaries have lost hope in the function of their forestry farm. Lastly, to ensure that restored community forestry land use and/or farms are sustainable, it would be paramount that the private sector opens market opportunities for the community beneficiaries. Additionally, considering the sense of fatigue and helplessness of the forestry land beneficiaries, it would be critical that strong support is provided from government entities such as the Department of Forestry, Fisheries and Environment to negotiate and forge mutual partnerships with the private sector as well as ensuring clear benefit sharing mechanisms are defined.

DECLARATION

I, <u>Fridar Bathobile Ntshingila</u>, declare that the thesis/dissertation, which I hereby submit for the degree of Master of Science in Forest Management and the Environment at the University of Pretoria, is my own work and has not previously been submitted by me for a degree at this or any other tertiary institution.

Signature:…………

Date:…………………

DEDICATION

In the words of Tim Hart *"On the role of actors and 'translation' in development, the question we will ask is not whether land reform works (a purely judgemental question), but rather how it works; not whether a development project has succeeded, but in what ways it has succeeded and in what ways it may have failed".* This dissertation is dedicated to all land claimants in South Africa, those that have the land restored, either not yet restored, those that have managed to fully utilise the land or are facing challenges, the bottom line is that land reform in South Africa is a necessity.

ACKNOWLEDGEMENTS

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ASI: Areas of Special Interest

CPA: Communal Property Association

CT: Community Trust

DEFF: Department of Environment, Forestry and Fisheries

DFFE: Department of Forestry, Fisheries and Environment

DRDLR: Department of Rural Development and Land Reform

DWS: Department of Water and Sanitation

FAO: Food and Agriculture Organisation

FGD: Focus Group Discussion

HA: Hector

KAS: Konrad-Adenauer-Stiftung

OAP: Old Age Pension

RDP: Reconstruction and Development Programme

RLCC: Regional Land Claim Commission

SAFCOL: South African Forest Companies Limited

SAHRP: South African Hydrological Research Programme

SAPPI: South African Pulp and Paper Industries Limited

SPSS: Statistical Package for Social Sciences

TUP: Temporarily Unplanted Areas

CHAPTER 1

INTRODUCTION

Chapter one, gives the backbone of this research, starting from introducing the topic of the research, and its relevance to the forest industry. Thereafter, objectives and research questions are elucidated. Problem statement and justification for the study is discussed to present reasons for the importance of the study, and it then concludes with a brief overview of the dissertation structure.

1.1 Background

It is exactly 109 years since the Native Land Act No. 27 of 1913 became law on the 19th of June 1913 (Sibisi, 2015). This Act limited African land ownership to 7% of the total land area of South Africa (Nxezi, 2015; de Satgé, 2014; Vermeulen, 2009). The only intended consequence of this Act was to deny black people the opportunity to own the only asset which was central to their livelihoods (Nxezi, 2015). Furthermore, this Act allowed black people to live together in designated areas, resulting from white farmers issuing notices of eviction for blacks to leave their ancestral areas or to serve as labour tenants (Nxezi, 2015; Sibisi, 2015; Mamba, 2013). Moabelo (2007) recall and recites the act as follows: "*we were comfortably settled until one bitter winter in 1967 when the community was transported by government vehicles to a rocky, treeless, flat, futureless, windy and dry unfamiliar place, what was left were ancestor's graves and a visible mission house*".

After the democratic government was elected in 1994, the Native Land Act No. 27 of 1913 was repealed, and land reform was introduced as a way of correcting historical imbalances created by the colonial government. The Land Reform Act No.3 of 1996 intended to give access and opportunity to those who were discriminated against, by giving them back productive land so that they can utilise it independently (Masoka, 2014; Sibisi, 2015; Vermeulen, 2009). Davis (2020) suggested that giving communities the control of land is the strongest force in sharing their economic, social, and political structures. In this context, the findings from a study by Nxezi (2015) revealed that provision of land to smallholder ordinary households could effectively be a way to reduce poverty. Vermeulen (2009) and Mathiba (2021) concur that apart from economic values, land is recognised for its historic and social significance.

South Africa's land challenges are not any different from the case of Brazil, where land ownership is trusted in the hands of the few, and the majority of the population reside in rural area settings, which according to Robles and Veltmeyer (2015) skewed land ownership arrangements contributes significantly to social ills, resulting in depletion of natural resources. Over and above lack of economic opportunities, basic needs such as health care is compromised by such arrangements, and the need for natural resources dependence is of key importance. Up to sixty percent (60%) of the population in India depend on forests and forest ecosystems for subsistence and commercial living (Soman and Anitha., 2020). The findings from a study by Kamwi et al. (2020) in Namibia, suggested that the dependence on forests by rural dwellers can be diluted through the use on none-timber forest products (NTFP).

Mahlangu (2015) cited that in 1873 it was realised in South Africa that indigenous forests were being exploited, therefore afforestation of exotic plantation was seen as a viable option by the government to meet timber needs in the future. The introduction of exotic species in South Africa contributed to the forceful removal of people for the establishment of forest plantations to supplement wood demand (Sibisi, 2015). These exotic species were recognised for their characteristics to be robust and adapt in low inherent nutrient sites; ability to withstand drought conditions; easy management requirements (limited use of fertilisers) and useful in none-timber forest products such as wind breaks, oil and honey production (FAO, 2002), hence (Richardson, 1997) describes eucalyptus as a "*a tree for solving global problems*". However, it is important to note that in South Africa, black people were denied from participating in forestry or access in general (Tshidzumba et al., 2019), except when they were needed for labour services (Maluleke, 2018). In this case, the South African land reform must be able to cater for historic injustices, which deprived black people access to economic participation, which means securing land rights is not enough. However, land reform must be a vehicle to improve participation in economic activities so that poverty and livelihoods can also improve (Masoka, 2014).

Noteworthy, a devastating scenario recently observed in restored commercial forestry plantation projects in South Africa is that since the transfer of land, production has been impossible under the management of new land beneficiaries (Lahiff, 2001; Manenzhe et al., 2016; Kepe and Hall, 2016; Zerihun et al., 2020). It has been established that 74% of land reform projects have resulted into environmental degradation due to lack of use (Davis, 2020).

Therefore, the purpose of this study was to assess drivers of land abandonment in afforested land reform projects in Gert Sibande District.

1.2 Problem statement and justification

Historically, black people in South Africa were intentionally marginalised and excluded from the mainstream economy and as a result lack the capacity and skills to run farms efficiently (Manenzhe et al., 2016). It is, therefore, important that beneficiaries of restored land are capacitated and equipped to fully utilise the land (Tshidzumba et al., 2018); and post-settlement support is one of the tools for sustainable developments (Lahiff, 2001). Masoka (2014) advised that the effects of land reform can never be seen unless the livelihoods of beneficiaries are transformed. According to Sibisi (2015) without appropriate support for sustainable land production, the poor rural beneficiaries are likely to abandon the land all together or transfer it to a farmer with the funding and expertise to utilise it, and this happens in a form of lease back to cooperate companies who are mostly the previous landowners. Other factors include lack of experience, and the general understanding of forestry as a business is complicated for new land beneficiaries (Manenzhe et al., 2016). Forest-based land reform strategic partnerships have proven to be complicated approaches to understand and appreciate for rural land claimant beneficiaries (Karumbidza, 2005).

Over a decade ago, Anseeuw and Mathebula (2008) placed a need to find a solution to revive land reform projects and avoid similar recurrence of collapse. To this day, studies indicate a decline in production, and the restitution model continues to receive criticism (Zerihun et al, 2020). Plantation Forests are relevant to local communities as they solely depend on forest products for day-to-day survival (Maluleke, 2022), and to improve livelihoods (Tahulela, 2016; Ontusitse, 1997). Makhathini (2010) and Tshidzumba (2019) anticipated that claimants of forest land are most likely to do far better due to high profits obtained from commercial forestry and minimum input requirements for example, no irrigation required. Notably, if forests are not in production or managed in a sustainable manner, that often has a direct influence on environment degradation (deforestation and biodiversity loss) (Tahulela, 2016). Therefore, the aim of the study was to assess drivers that have led to land abandonment, with the objective to investigate the long-term effects of abandoned forestry land focusing on three-pronged approach: economic, environment and social aspects of rural communities, with the intention to derive possible intention measures in order for these farms to be functional again.

1.3 Objectives and Research Questions

The main objective of the study was to investigate the drivers of land abandonment in afforested land reform projects, in order to formulate mitigation measures or damage control measures on how to revive these farms and assist them to function again. The study aimed to identify specific challenges that led to unproductiveness or shattering of these farms. Specific objectives are as follows:

a) To assess the drivers that led to land abandonment of afforested areas.

Research questions

- What exactly happened when the land was transferred?

b) To determine how the abandonment of afforested areas affected forestry-land beneficiaries on the three-pronged approach: Economic, Environmental and Social aspect.

Research questions

- What is the extent of economic, environmental and social losses that the community has suffered due to the farm not being in use?

c) To identify possible approaches suitable for the restoration of the collapsed forest-based farms to sustainably become operational again.

Research questions

- What are the perceptions of land beneficiaries of intervention measures that can work to revive the farm in your community?
- What type of management strategies communities preferred models?

1.4 Dissertation structure

The study is divided into six chapters. The first chapter introduces the background of the research and context, outlines objectives, and formulates research questions, and finally gives justification of the study.

Chapter 2 presents a literature review, which deals with a brief history about the inception of commercial forestry in South Africa; the role of forestry in South Africa: three-pronged approach; the role of post-settlement support in forestry land reform and the conceptual framework of the study has been presented.

Chapter 3 presents the research methodology, with a description of the study area, sampling design and size, data collection (primary and secondary data collection, household survey, and focus group discussion) and statistical analysis.

Chapter 4 presents results, including the social background of the respondents, characteristics of the respondents. The results show that the respondents the eight predetermined drivers of land abandonment were all contributing factors. The results further highlighted the effects of dysfunctional restored forest plantations on economic, environment and social aspects. Finally, the results illustrated proposed intervention measures to have fully functioning restored forest plantations.

Chapter 5 discusses the results from the main results of the research study.

Chapter 6 provides the summary, conclusion, and recommendations of the research study.

CHAPTER 2

LITERATURE REVIEW

2.0 Introduction to the chapter

This first phase of chapter 2 presents literature review which deals with a brief history about the inception of commercial forestry in South Africa; The role of forestry in South Africa: three-pronged approach, explaining how the impact of none-functioning farms has on economic, environment and social prospects of land beneficiaries; the role of post-settlement support in forestry land reform. Finally, the conceptual framework of the study provides a summarised picture of the effects of unproductive land reform projects.

2.1 The inception of commercial forestry in South Africa

Troop (2003) describes the segregation of black population to access and participate in forestry was purely a development plan imposed by the apartheid government, the events are cited as follows: initially it started as a conservation route, where special trees were marked as a no-go zone, and this was solely to feed international markets. As the demand increased, it was necessary to introduce the exotic tree species, and this is where forceful removals of indigenous people from their ancestral land began. Forest guards were placed in forest plantations, strict rules were imposed including fines or imprisonment if black people were found trespassing, collecting medicinal plants or poaching game.

Additionally, Clarke (2006) and Mahlangu (2015) cited that in 1873, it was realised in South Africa that indigenous forests were being over exploited, therefore, the afforestation of exotic plantations was seen as a viable option by the government to meet timber needs in the future, while at the same time protecting the unsustainable depletion of indigenous timber resources. These plantations were established in the Cape (Western and Eastern Cape), Kwa-Zulu- Natal, Limpopo, and Mpumalanga provinces. Predictions of profits and the growing demand for timber attracted private companies to invest in forestry, which now owns approximately 78.2% of South Africa Forest plantations. After 1994, it became South Africa's priority to restore land to those who were wrongfully dispossessed of their land (Masoka, 2014; Sibisi, 2015), while Chapter 4 of the National Forest Act encourages the participation of rural communities to forestry (Bester, 2005).

The Constitution of South Africa recognises that any development should cater for the rights and basic needs of those in rural areas and townships as they were unfairly discriminated against (Department of Water Affairs and Forestry, 2005; Mokwena et al., 2020). This means that people's needs will always be at the forefront of environmental conservation (Maluleke, 2018). The constitution has also accorded that due to the segregation of black people to unproductive and over-populated areas, this has caused greater damage to the environment, therefore, various legislations have been made available to re-address the latter (Van Wyk, 1994; Mokwena et al., 2020). Hence, restructuring of resources such as land, with adequate post-settlement support in a form of capital, extension services and access to markets to the beneficiaries of the land is an effective tool to promote sustainability (Sibisi, 2015). South Africa's Forest land covers over 40 million hectares inclusive of indigenous forests, woodland, and commercial forestry plantations. However, it is important to note that commercial plantation forestry in South Africa covers only 1.27 million ha of afforested land (Robertson, 2018).

2.2 The role of forestry in South Africa: three-pronged approach

2.2.1 Economic

Richardson (1997) recognised the importance of forestry plantations as a supplement for wood demand, instead of reliance on indigenous trees. Exotic species are preferred due to their characteristic in nature, such as the ability to grow faster, easy silvicultural management; data integrity of the species is always known as they are well studied before establishment; ability to adapt in marginal sites which in some areas has managed to prevent soil erosion and desertification (FAO, 2002). Commercial forestry being a rural area-based business, has always been associated with economic growth through creation of employment and small enterprise development (Clarke, 2006; FAO, 2015; Jele, 2012).

However, Bester (2005) argues that the forest sector has not been good at bringing this information to a wider audience, to build a robust policy framework which demonstrates the linkages between forestry and poverty, and further suggested that focus should be on how forestry's contribution could be quantified to the lives of poor people and to the wider economy, so that the role of forestry in poverty alleviation and economic development could be justified. Duraiappah (1998) and Mahlangu (2015) recited some of the challenges faced by new forest beneficiaries include access to markets, coping with risk such as forest fires, lack of skills,

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theft, exploitation by the rich and greed, as a result leading to abandoned plantations. Therefore, this study aimed to quantify potential losses with regards to timber (volume) and employment opportunity lost due to unutilised farms.

2.2.2 Environment

There are legislations in South Africa that govern the management of forest plantations such as the National Water Act (Act No. 36 of 1998) which recognises that commercial forestry plantations have an impact on the environment and needs to be managed appropriately (Mahlangu, 2015). The National Water Act regard commercial plantations as a stream flow reduction activity, for this reason, a water-use licence from the Department of Water and Sanitation (DWS) is a prerequisite for a stream flow reduction activity, such as forestry plantation. The introduction of this Act has resulted into low afforestation uptake, which put emphasis on the sustainable management of forests (FAO, 2015). Bartz and Kowarik (2019) concur that *"legislation is required to assess the significance of impact in order to action against a specific invader plant or to proceed with its introduction".* Padmanaba and Corlett (2014) asserted that commercial forestry plantations may also become invasive, this can also be perpetuated by deforestation or clear felling, which creates large gaps that favour invasion of other related weeds. Richardson (1997) mentioned that the (unavoidable) negative impacts of forestry with alien species are thus spilling over into areas set aside for conservation or water production (wetlands). Padmanaba and Corlett (2014) also share the same sentiments that alien invader plants have a negative impact on the ecosystem goods and services, particularly when they grow on conservation areas. Barnes et al. (2007) further argue that the effects of unmanaged invasive plants is increased fuel loads which enhances fire hazards in plantation operations.

The manifestation of invasive plants consumes not less than 7% of the county's water annually, obstructing irrigation systems, increase veldfires due to increased fuel loads, increased floods, and erosion, increasing siltation of dams and destroying rivers promoting poor water quality (Poona, 2008). Ecosystem goods and services such as carbon sequestration and storage, watershed protection, biodiversity protection, cultural services and landscape beauty are crucial to human being's daily lives and hence crucial to conserve them (Tahulela, 2016). Therefore, this study aimed to identify affected ecosystem services due to land abandonment.

2.2.3 Social

The management of forest resources through collective participation is an acceptable norm in the South African forest industry (Ojwang, 2000). According to Ontusitse (1997), Participatory Forest Management (PFM) promotes the quality of life of the rural community and assist community members to collectively produce their own crops, other than the reliance on free grants. Although, Ojwang (2000) emphasised that a community will not have the same interest because they share a common resource (land), and further cited that various groups exist within communities, which makes the management of forests challenging. The notion of community ownership is misleading as it is unable to identify who really owns the forest. If the true beneficiaries cannot be identified, it is difficult to hold anyone accountable for its management and protection (Tshidzumba et al., 2019). By the same token, the distribution of benefits becomes complicated. Community-owned projects could be characterised by lack of ownership, and uneven distribution of inputs and benefits (Mahlangu, 2015; Tshidzumba, 2019). Therefore, this study sought to assess if collective management of forests is an effective strategy for sustainable forest management in communities.

2.3 The role of post-settlement support in forestry land reform

Maluleke (2018) commented that the unfortunate consequence of skewed land ownership emanated from forceful removals to establish game reserves and timber plantations. As a result, rural poor people lack skills and adequate resources to manage forest land for sustainable economic benefit, neither do they understand ecological effects if plantation forests are neglected (Sibisi, 2015). Hence, Masoka (2014) emphasised the need for post-settlement support for new forestry land beneficiaries, and further cited that this support is not only limited to funding, but also extends to technical service; governance; capacity development and training; business marketing and technology development. Forestry is a long-term timber producing business, which if destroyed, the efforts to restore the farm to be sustainable again could be as similar as re-establishing a virgin land (Clarke, 2006). At the same time, unmanaged commercial forestry plantation affects the ecological structure of the environment from unmanaged weeds, increased fuel loads and uncontrollable fires (Poona, 2008). Socially, the lack of post-settlement support creates unnecessary conflicts within community members, as the anticipated results (improved livelihoods) is never achieved (Ranchod, 2004).

2.4 CONCEPTUAL FRAMEWORK

2.4.1 Theoretical framework of the study

Land looting and dispossession of black people was common practice during the apartheid era (Hart, 2012; Mkhize, 2020). Jarstad (2020) thus asserted that the Native Land Act of 1913 exacerbated this act, as it apportioned 8% of the land area of South Africa as reserves for the Africans and excluded them from the rest of the country, which was made available only to the white minority population. The majority of black South Africans have a dislocated social life, as few could be offered employment by the white farmers and the majority of males migrated to cities for economic opportunities (Sibisi, 2015; Rugege, 2004).

According to Hull et al. (2019), the South African land reform policy uses a Democratic Adaptation Theory, which encompasses Distribution, Restitution and Tenure. This theory entails that historical injustices of the apartheid era are corrected pertaining to land holdings and land rights. This study focused on restitution land reform, which entails giving the land to the rightful owners. Thus, where the rightful owners can prove that they were wrongfully disposed or descendants of those that were forcefully removed (Ranchod, 2004), beneficiaries are offered alternative land or monetary compensation.

The restitution model further intended to address productive land distribution, where beneficiaries are encouraged for collective farming, which will improve distribution of services such as water, roads, and electricity supply amongst other things, thus promoting democratisation of traditional and community leadership (Rugege, 2004). However, Hull et al. (2019) regard this theory as a mismatch, citing "democratic theory represents a square peg trying to fit into the round hole of living custom". This is due to the reoccurring complaints from beneficiaries that timeous post settlement support is not rendered, while the new beneficiaries are inexperienced, lack skills and resources for farm management, as a result the state has been accused of not meeting their statutory obligations.

Consequently, in the forestry concept, unmanaged farms have negative impact on the environment, economic and social aspect of the lives of beneficiaries. Exotic commercial plantations are associated with invasive species, which also themselves can easily become an invasive if they grow in undesignated or conservation areas (FAO, 200; Trethowan, 2011; Richardson, 1998). The Democratic Adaptation Theory further incorporate improving

production through collective farming (Hull et al., 2019) which assumes that people want to live together and farm together. As alluded to by several authors (Clarke, 2006; Maluleke, 2018; Sibisi, 2015) land reform-based collective farming projects are discredited by poor post settlement support which is not timeously provided. The latter has been witnessed in other parts of Africa namely Ethiopia, Tanzania, and Mozambique, where the ideology of collective farming has been abandoned (Hull et al., 2019). As indicated by (Tshidzumba et al, 2022; Makhubele et al, 2022; Chirwa et al, 2022), economic benefits have been adversely affected by deviations and or inconsistences. These include the lack of benefit sharing, transparency, funding, technical expertise (evaluation, and monitoring skills), mentorship, and infighting.

2.4.2 Conceptual framework of the study

The failed forestry land reforms projects emanate from a number of problems and contributing factors. These have social, economic, and environmental impacts as highlighted in Figure 1. All these factors are integrated and serve as conceptual framework for this study.
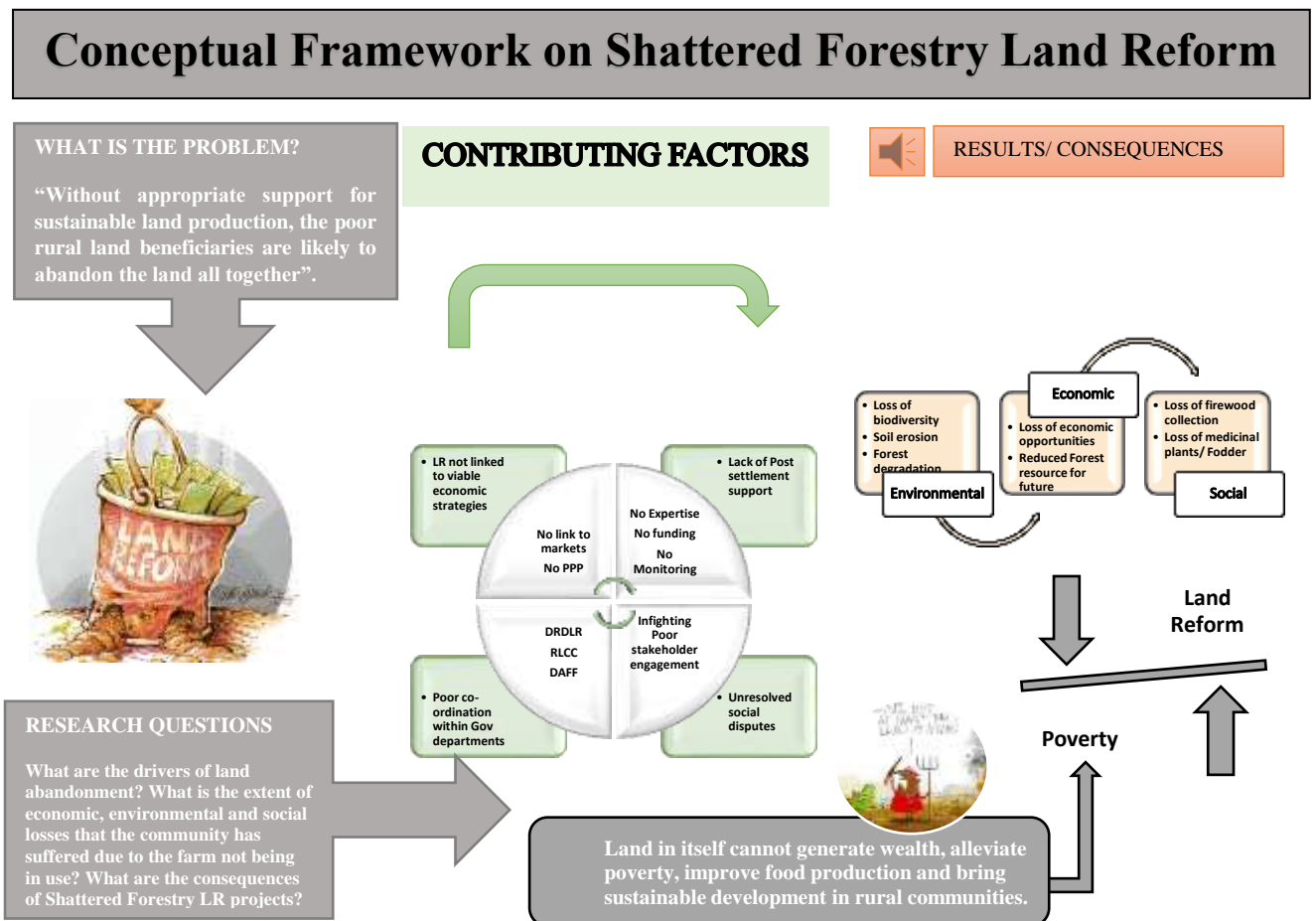
Figure 2.1: Link between land reform and rural development (own creation)

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The collapse of several high productive agricultural farms under land claim became a lesson on finding business models to facilitate production in forestry land claim farms (Tshidzumba and Chirwa, 2022). However, Mkhize, 2020 elaborates that most of these partnership models have not yielded tangible results due to intra conflicts among beneficiaries. For example, the Department of Rural Development and Land Reform is absent to deal with challenges after post claim settlement, such as non-beneficiaries who want to be part of the beneficiaries' list while they do not meet the criteria. The land reform policy was further discredited for not linking beneficiaries with viable economic strategies (Nxezi, 2015). For this reason, (Davis, 2020; Tshidzumba and Chirwa, 2022) established that the majority of land reform projects in South Africa failed due to structural design of the partnerships. Furthermore, access to timber markets remains a measure constraint in these communities (Jagger et al, 2022; Tshidzumba and Chirwa, 2022).

The words *"land in itself cannot generate wealth, alleviate poverty, improve food production and bring sustainable development in rural communities"* (FAO, 2015). Unimproved livelihood of community beneficiaries is persistence (Tshidzumba and Chirwa, 2022). Jagger et al, (2022) asserted that the preservation of forest plantation in return provides benefits from ecosystem services, such food sources, firewood, honey production. However, if unmanaged, a loss of biodiversity is observed (Armstrong, 1998). The latter defeats the purpose of land transfer, as the majority of people in rural areas rely on these services for day-to-day survival, over and above employment opportunities (Jagger et al, 2022).

2.5 Chapter summary

This chapter has presented a brief history on the subject of commercial forest plantations in South Africa, and its significant in changing people's lives. The breakdown of the triple bottom line was alluded to, providing the impact of unutilised land on the economic, environment and social aspects of the communities in question. This chapter has highlighted the role of post settlement support in land reform projects, and how its lack of implementation has contributed to the failure of forestry-based land reform projects. The conceptual framework of the study provided a summarised picture of the effects of unproductive land reform projects.

CHAPTER 3

METHODOLOGY

Chapter 3 presents the study area with regards to location, respondents' characteristics, and socio-economic characteristics. It further outlines the methods used for sample selection and size, household surveys, and focus group discussions. The chapter also describes the statistical analyses methods used for the different tests that were done. Before the study was conducted, the communities committee members were engaged to introduce the study and request for permission to conduct the study on the respective communities. Upon consensus reached, the consent forms were signed, as per the requirement of Ethics Committee at the University of Pretoria.

Manti and Licari (2018) explained that an informed consent is a pre-requisite for every research study conducted on human beings as participants. This is done to ensure that participants are voluntarily giving the information. The study areas are Jabulani and Thuthukani communities, these communities are governed by the local municipalities namely Mkhondo and Msukaligwa, both within Gert Sibande District in Mpumalanga province. Both communities, have registered the transferred land to a Communal Property Association (CPA). Pretesting of the questionnaire was conducted in Thuthukani community to have a feel of how respondents may respond, in order to identify willingness of participants to give information, and identify weakness that may hinder honesty, and identify unforeseen traits that could lead to project failure. Arain et al. (2010) further suggested that for a study to be cost effective and efficient, it is important to note the time it takes to collect data, as time is associate with costs.

3.1 Description of the study area

Mpumalanga Province is divided into three municipal Districts, which are further subdivided into 17 local municipalities (Statistics South Africa 2016). The district municipalities are Gert Sibande, Nkangala and Ehlanzeni (Nxezi, 2015). Gert Sibande District is not any different to most rural communities in the country, it is characterised by high levels of poverty, limited economic opportunities, as a result basic service delivery is inadequate. The Gert Sibande Rural Development report confirmed that current development plans on land use do not have post-settlement support in place, as a result land use practices are done in an unsustainable manner resulting to land degradation. Alternatively, rural dwellers have no choice but to relocate to big

cities for economic opportunities. The report also alluded that "*Agriculture and forestry, both of which are labour intensive, continue to under-perform due to lack of investment in critical infrastructure, market development and lack of beneficiation, farmers also need support services, mentorship and investment towards ensuring sustainability and effective utilisation of farms attained through Land Reform Programme*" (Gert Sibande District Municipality Report, 2016).

3.1.1 Jabulani Community

According to Mkhize (2015), Mondi Group owns about 80 000 hectares (ha) of forestry plantations in Mkhondo municipality. Mondi group, one of the forestry giants in South Africa, embarked on a journey to capitalise on multi-dimensional partnerships looking into the security of tenure for rural dwellers around their plantations. The pilot exercise included the Mpumalanga Department of Rural Development, Mpumalanga Department of Human Settlement and Mkhondo local municipality. Mondi Group identified sixty-two (62) impoverished villages around their plantations, the idea was to consolidate these households into a larger living space called an Agri-village. This revised settlement area will make provision for permanent accommodation with secured tenure and offer access to municipal and social services. Agri village approach was introduced in South Africa in 1992, the pilot project was conducted in Kwa Zulu Natal (Van Leynseele and Hebinck, 2011), the initiative was aimed at bringing sustainable development. The objective was to increase land holdings and promote tenure for farm workers, by providing land with titles which will be enough for each household to practice agricultural farming (Ntuli, 2012). Agri-villages are settlements that provide dwellers with sufficient pieces of land, to allow for subsistence farming (Azevedo, 2019).

The engagements and discussions between stakeholders about the private-public partnership, commenced in 2009, and in 2015, the dream was realised, where one hundred and ten (110) Reconstruction and Development Programme (RDP) houses (Figure 2) were built benefiting five hundred (500) beneficiaries through the Mpumalanga Department Settlement (Makhathini, 2017; Mondi Group, 2021). Over and above the improved living conditions, the beneficiaries were awarded with access to 325 ha of forestry land with commercial trees, which in total 599.28 ha was awarded including residential areas as highlighted in Annexure 3.1 (Makhathini, 2017). The memorandum of understanding established that this area will be managed through the Communal Property Association (CPA) in the community. At this stage, 184 ha was on a

lease agreement between the community and Mondi Group, and the remaining 141ha was assigned to the community to manage by themselves. Figure 2 and Annexure 5.11 to 5.13 illustrates the new settlement called Jabulani Agri-village, the name Jabulani is a Zulu verb which loosely translate "Be happy". During the data collection period, the community did not have any form of partnership, and had indicated that the leased portion has lapsed.

Figure 3. 1: Jabulani Agri-Village (Makhathini, 2017)

3.1.2 Thuthukani Community

Thuthukani community also known as Sunnyside Boerdery - Riversdale community is in Msukaligwa municipality within a small settlement called Lothair. Sunnyside Boerdery-Riversdale, these are the names of the previous owners of this property. According to the Constitution of the CPA, Thuthukani community was restituted in 2003 with a total of 230.6 ha of forestry land indicated in Annexure 3.2, comprising of 86 households. This community is a representation of many communities in rural areas, with depleted housing, lack of proper infrastructure (roads) and or limited to social and municipal services in general as indicated in Figure 3 and Annexure 5.7 to 5.12. Records indicate a joint venture that existed in 2012, between Thuthukani community and Mr J.P.S Van Aardt indicated in Annexure 3.2**,** who is a neighbour to Thuthukani community, but never lasted very long. At the time of data collection, the community had no partnership.

Figure 3. 2: Thuthukani Community

3.2 Research design

The study employed mixed method approach including both qualitative and quantitative approach (Bhattacherjee, 2012; Martin, 2011). This approach was used to ensure the representativeness of the responses from the respondents, as cited by (Creswell, 2014) the research problem is better understood if both methods are used. Quantitative method has been used for many decades in social studies (Hameed, 2020) for testing objective theories by examining the relationship between variables. These variables can be measured, typically on instruments, so that numbered data can be analyzed using statistical procedures (Creswell, 2014). In the early 1980s Qualitative method was introduced to construct a detailed description of social reality using methodological techniques that represent social reality in numeric categories (Marvasti, 2004; Ritchie *et al.,* 2013; Younus, 2014).

3.3 Sampling frame

To address the research objectives, the characteristics that were needed include: forestry farm beneficiaries who obtained their farms through land reform programme, these farms should be non-productive with little or no on-going activity. The land must have been handed back not less than six years ago. The farm must have been handed to a group of individuals or beneficiaries in a community. Consequently, this study employed purposive sampling technique where farm beneficiaries that meet the criteria specified above were considered.

According to Etikan et al. (2016), if an individual or a group of people possess special qualities (experience), information-rich and are willing to provide that information, they become the deliberate choice for participation and that is known as purposive sampling. Table 1.1 below indicates the farms selected for the study, that meets the criteria indicated above.

Table 1.1: Farms selected for the study (DRDLR, 2017/18)

Name of Community	Number of Households	Type of Land Reform	Afforested Restored land (ha)
Jabulani community	110	Restitution	325
Thuthukani community	86	Restitution	230.6

3.3.1 Selection of study area

Gert Sibande District Municipality comprises of seven local municipalities, namely Chief Albert Luthuli, Dipaleseng, Govan Mbeki, Lekwa, Mkhondo, Msukaligwa, and Dr Pixley ka Isaka Seme. Therefore, the study area was selected on basis that the band of commercial forestry in Gert Sibande District is running on Chief Albert Luthuli; Mkhondo and Msukaligwa on the North – Southern part, stretching all the way from Carolina and Warburton in the north, to Amsterdam and Mkhondo in the south as seen in Figure 3.3 (Gert Sibande District Municipality Report, 2016).
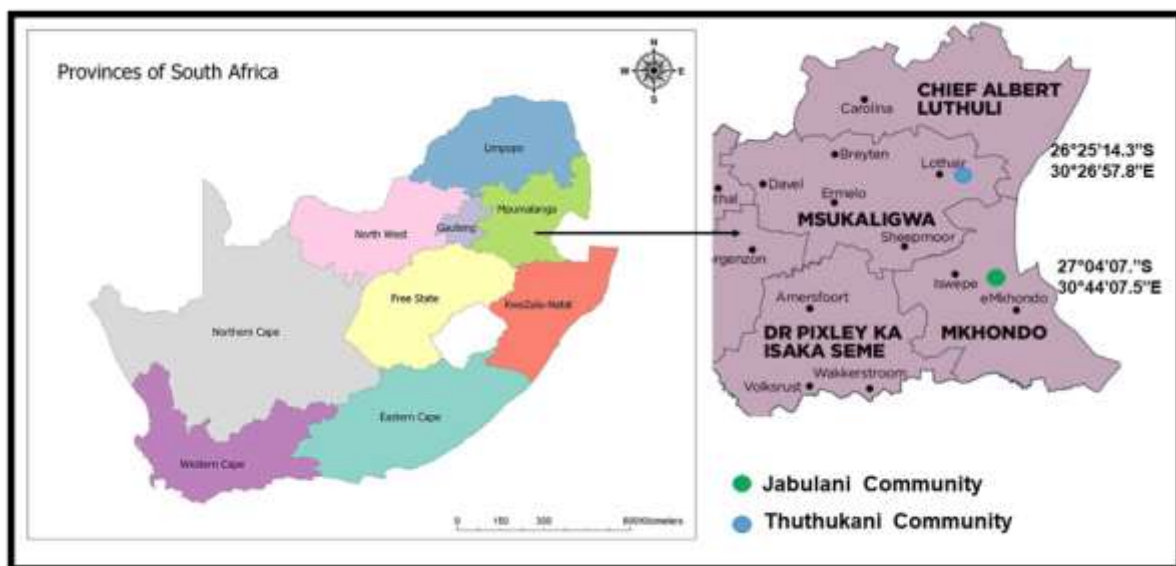
Figure 3.3: Mpumalanga province town map: (Google maps, 2018)

3.3.2 Sample size

There is a growing trend of researchers confirming the effectiveness and efficiency in employing purposive sampling method to acquire the desired sampling size (Vasileiou et al., 2018). This is because purposive sampling focuses on individuals who are information rich and are interested in giving the information freely (Etikan et al., 2016). In both Jabulani and Thuthukani communities, a list of 110 and 86 total household population sizes were used to determine a sample size of 105 and 75 households, respectively. Using the sample size formula below prevents the risk of drawing false conclusions, which Noordzij et al. (2011) recommends to rather have a bigger sample size. All households in the study communities had an equal chance of being interviewed as a random selection was employed (Gao, 2013; World Bank, 2016).

$$S = \frac{X^2NP(1-P)}{d^2(N-1) + X^2P(1-P)}$$

s = required sample size

X^2 = the table value of chi-square for 1 degree of freedom at the desired confidence level (3.841), 1.96 x 1.96 = 3.8416

N = the population size

P = the population proportion (assumed to be 0.50 since this would provide the maximum sample size).

d = the degree of accuracy expressed as a proportion (0.05).

3.4 Data collection

3.4.1 Household survey

Household survey comprise of predetermined lists of questions (Gill et al., 2014), which were administered verbally to the heads of households. Household survey was conducted using semi-structured questionnaires, which according to Gill et al. (2014) allows both the interviewer and participants with a more flexible approach, to go into deeper details when compared to structured questionnaire. Busetto et al. (2020) describes semi-structured survey as an interview with a goal, comprising of predetermined questions as a guideline to remain within the

parameters of the research objectives. Furthermore, Likert scale was used to test the negative strength or positive strength of participants regarding a particular statement or question. The scale allows respondents to describe how much they agree or disagree with a particular statement (Mcleod, 2023). In Jabulani community, the chairperson of the committee made available the secretary to assist the researcher navigate the community, while in Thuthukani community, the chairperson made himself available throughout the data collection period. The households' surveys were conducted first, which was further followed by FGDs. Data collection took place between April and November 2021. The household questionnaire comprised of four sections: the biographic information; predetermined drivers of land abandonment; economic, environmental, and social questions, and lastly intervention measures section.

3.4.2 Focus Group Discussion

Focus group discussion is the cheapest method of data collection, as participant occupy one space, it gives the researcher an opportunity to interact, interrogate and compare the information provided during household data collection. During Focus group discussion, the researcher is able to analyse character's participants on how and why people behave in a particular way (Busetto et al., 2020; Sutton and Austin, 2015). Biographic information of all participants was captured, and attendance register was filed. Focus Group Discussion provided a platform to get an in-depth understanding of conditions on the farms when the transfer took place, and what happened in the interim before the farms collapsed, the devastating incidences of wildfires became a highlight of the group discussions and most importantly to interrogate the understanding on intervention measures as suggested on data collection scripts. Similar semi-structured questionnaire was employed on committee members, elders, and youth Group participants. Gill et al. 2014 and Busetto et al. 2020 recommend FGD of not less than six members, in fact, the bigger the group, the better the accuracy of discussion. Due to the large amount of data collection required, group discussions were audio recorded (with consent from the participants) to maintain integrity in order for the researcher to focus and pay attention on the group. In addition to the variety of study methodologies available, there are also different ways of making a record of what is said and done during an interview or focus group discussions, such as taking handwritten notes or audio or videorecording (Sutton and Austin, 2015).

The group discussions were necessary to receive in-depth understanding about particular aspects (Lune and Berg 2017), such as how was the status of the farm when the farm was handed over, and what transpired thereafter; deliberations on fire matters, as this came through as a major destroyer of the forest plantations and finally the interrogation of intervention measures was of great importance. The first group of entrance were the committee members which comprised of the chairperson, treasury, secretary, and additional members as they hold more information than the rest of the group, some of them could attest to incidences during the land transfer process. Beneficiaries (senior community members) were engaged at large, the invitation to participate was open for all beneficiaries, members depending on availability. In Jabulani community senior members were represented by thirty-nine (39) participants the group constituted of about 85% female and 15% males, as highlighted in Annexure 3.3 to Annexure 3.5. While Thuthukani community was represented by thirty-six (36) participants senior members which constituted of 75% female and 35% as per meeting register attached in Annexure 3.6 to Annexure 3.8. Youth Discussion were further held with Thuthukani community only represented by seventeen youth members as per the register in Annexure 3.9 comprising of 90% females and 10% males. These discussions became critical in Thuthukani community as during household survey about 98% of the respondents have never benefited from employment, as opposed to Jabulani community where most of the youth were employed by the farm.

3.3.3 Pre-testing

For a study to be cost effective and efficient, it is important to note the time it takes to collect data, as time is associate with costs (Arain et al., 2010). Therefore, pretesting of the questionnaire was conducted in Thuthukani community to have a feel of what respondents may respond, in order to identify willingness of participants to give information, and identify weakness that may hinder honesty, and identify unforeseen traits that could lead to project failure (Simon, 2011).

3.4 Data analysis

Primary data were captured from the transcripts to an excel worksheet, which subsequently was transferred to Statistical Package for Social Sciences (SPSS). SPSS is a friendly user application widely used in social studies, it has a capacity to handle huge amount of data, the

program can analyse data in to descriptive and inferential statistics, and able to present it in a form of tables and graphs (Morgan et al., 2011). Descriptive statistics in a form of cross – tabulations and frequencies were produced. Chi-square goodness of fit test was done to determine whether the observed results were statistically different from expected results. Friedman's test was used to rank the respondent's perception on drivers of land abandonment and to scores preference for households on intervention measures (Salkind, 2011).

The study followed the guidelines for Focus Group Discussions as cited by (Rabiee, 2014), in which the discussions were audio recorded, while also memos being taken. The participants were catagorised according to committees, senior beneficiaries, and the youth. Focus Group Discussion analysis followed the patterns described by (Tümen-Akyıldız and Ahmed, 2021), which includes coding theme context from the transcript, reading patterns for repetitive comments, and lastly the participants to listen to the summary of conclusion from the FGDs.

3.5   Ethical consideration

It is a requirement by the University of Pretoria that studies conducted with humans as participants, an ethical approval is a prerequisite, to ensure student follow the guideline stipulated by the institution. In this regard, the student made the application, which complied with supporting documents such as consent forms from community leaders, then, the ethics committee granted the approval in writing with reference number: NAS321/2020.

3.6 Chapter Summary

This chapter has presented the methodology of the study focusing on the description of the study area and socio-economic profiles of the study areas. In addition, the description of how the sampling sizes were determined including the process and approaches used for data collection. At the same time, description of the statistical data analysis performed to process the data was presented.

CHAPTER 4

RESULTS

4.0 INTRODUCTION

Chapter 4 presents detailed results with regards to biographic and socio-economic information; perception of respondents on drivers influencing land abandonment; household ranking of land abandonment drivers; engagement with government departments; frequency of community beneficiaries engaging with government departments; household perceptions on impact of ecosystem services as a result of forestry projects not being functional; time spent collecting forest products; distance travelled to collecting forest products; frequency of fire occurrence in the communities' plantations; economic benefits from the forest; accrued economic benefits to household beneficiaries from the forest; perception of the respondents on collective land ownership, PFM and distribution of benefits; perception on group v/s individual farm management and lastly preferred management model.

4.1 Biographic and socio-economic information

Table 4.1 presents biographic and socioeconomic information of the respondents in both study communities. In both Jabulani and Thuthukani communities, female respondents accounted for over 50% of the communities. The households in both communities were headed by youth (18-35) accounting 32.4% in Jabulani and 41.3% in Thuthukani. In Jabulani community, both the middle age (36-55) and older generation (56-65) accounted for 25.7% compared to the 25.3% of middle age (36-55) and 18.7% of older generation (56-65) from Thuthukani community, respectively. Most importantly, the respondents from Jabulani (16.2%) and Thuthukani (14.7%) were over 65 years of age. The lower percentage age-group were those greater than 75 years who accounted for 3.8% in Jabulani and 2.7% in Thuthukani, respectively. About 80% of the respondents from Thuthukani community revealed that they were not married compared to 68.6% from Jabulani. In contrast, Jabulani community had more married respondents (24.8%) compared to those from Thuthukani (18.7%). Fewer respondents revealed that they are widowed, 5.7% from Jabulani and 1.3% from Thuthukani. Respondents with tertiary education in both communities were low, accounting for 1% in Jabulani and 2.7% in Thuthukani. The respondents from Jabulani (43.8%) and Thuthukani (46.7%) possessed secondary education. However, less than 40% in Thuthukani and 30% in Jabulani had primary

school education. Additionally, were the highest illiteracy levels observed at Jabulani (33.3%) compared to Thuthukani (14.7%). Jabulani community had 38.1% of respondents who are pensioners compared to about 25.3% from Thuthukani. Unemployed (40%) respondents were from Thuthukani while Jabulani community had a share of 25.7% unemployed respondents. Overall, Jabulani and Thuthukani respondents have enjoyed full and seasonal employment accounting 36.2% and 34.7%, respectively. Less than 20% of the households from both Jabulani and Thuthukani community received R3000 to R5000. Furthermore, respondents from Jabulani community (63.8%) generated R1000 to R2000 monthly income compared to 30% from Thuthukani community. About 51.4% of the Thuthukani respondents generated R1000 monthly compared to only 22.3% of respondents from Jabulani community.

Table 4.1: Respondents biographic and socio-economic status in the study communities

Variable	Proportion (%) of respondents' responses	
	Jabulani (N = 110)	Thuthukani (N = 75)
Gender		
Male	44.8	36.0
Female	55.2	64.0
Age Distribution		
18-35	32.4	41.3
36-55	25.7	25.3
56-65	25.7	18.7
66-75	12.4	12.0
>75	3.8	2.7
Marital Status		
Single	68.6	80.0
Married	24.8	18.7
Divorced	0.9	0.0
Widowed	5.7	1.3
Education level		
Tertiary	1.0	2.7
Secondary School	43.8	46.7
Primary School	21.9	36.0
Illiterate	33.3	14.7
Employment Status		
Employed-Full time	27.6	16.0
Seasonal	8.6	18.7
Unemployed	25.7	40
Pensioner	38.1	25.3
Households Income Levels		
<1000	22.3	51.4
R1000 - R2000	63.8	30
R3000 - R5000	13.8	18.6

4.2 Perception of respondents on drivers influencing land abandonment

Table 4.2 indicates the ranking on the perception of respondents on drivers influencing land abandonment in forest-based plantations. In Jabulani community, 96.2% of respondents indicated that lack of expertise contributed to the unproductive forestry land compared to 94.6% from Thuthukani community. Lack of funding was ranked high, as 87.6% respondents in Jabulani strongly agreed and 73.3% in Thuthukani strongly agreed that lack of funding is a contributing factor in land abandonment. Similarly, 97.1% of respondents in Jabulani and 88% in Thuthukani revealed that lack of monitoring and evaluation resulted to land abandonment. Over 90% of respondents from both Jabulani and Thuthukani communities have strongly agreed that lack of mentorship is one of the factors leading to land abandonment. In Thuthukani community, all respondents have revealed that lack of transparency is one of the keys contributing factors to land abandonment compared to 84.8% of those from Jabulani community. In Jabulani community, majority of the respondents (96.2%) highlighted that lack of benefit sharing was not a contributing factor for them to abandon the land compared to all those from Thuthukani community who regarded lack of benefit sharing as a contributory factor to their land abandonment. About 97.3% of the respondents in Thuthukani community revealed that infighting is the biggest contributing factor in forestry land abandonment compared to 31.5% of respondents in Jabulani community. In Thuthukani community, 97.4% of the respondents indicated that elitism is one the drivers for their land abandonment, while those from Jabulani community (83.8%) indicated that elitism did not have an impact in their case.

Table 4.2: Perception of respondents on drivers influencing land abandonment

Drivers	Proportions (%) of respondent's responses							
	Jabulani Community (N = 110)				Thuthukani Community (N = 75)			
	Strongly Agree	Agree	Disagree	Strongly Disagree	Strongly Agree	Agree	Disagree	Strongly Disagree
Lack of expertise	95.2	1.0	3.8	0.0	77.3	17.3	2.7	2.7
Lack of funding	87.6	5.7	0.0	6.7	73.3	24	0.0	2.7
Lack of evaluation and monitoring	97.1	2.9	0.0	0.0	88	12	0.0	0.0
Lack of mentorship	98.1	0.0	1.0	0.0	90.7	8	1.3	0.0
Lack of transparency	2.9	3.8	84.8	8.6	77.3	22.7	0.0	0.0
Lack of benefit sharing	1.9	1.9	64.8	31.4	81.3	18.7	0.0	0.0
Infighting	2.9	28.6	62.9	5.7	76	21.3	1.3	1.3
Elitism	5.7	6.7	72.4	11.4	58.7	38.7	1.3	0.0

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The results also went on to show a statistically significant relationship ($p \geq 0.001$) between the respondent's responses regarding the drivers contributing to land abandonment (Table 4.3). The drivers of land abandonment were ranked, to discuss them in sequence of high to low rated perception according to respondents, lack of benefit sharing was highly ranked, indicating to be the leading factor, followed by elitism; lack of transparency; infighting; lack of funding; lack of expertise (technical skills); lack of evaluation and monitoring and lack of mentorship.

Table 4.3: Household ranking of land abandonment drivers

Land abandonment drivers	Thuthukani community (N=75)	Jabulani community (N=105)	Overall Ranking (N=180)
	Mean Rank	Mean Rank	Mean Rank
Lack of expertise (technical skills)	4.53	2.63	3.42
Lack of funding	4.69	2.97	3.68
Lack of evaluation and monitoring	4.08	2.55	3.19
Elitism (Exclusivity)	5.25	6.21	5.81
Lack of Transparency	4.51	6.36	5.59
Lack of benefit sharing	4.35	6.86	5.82
Infighting	4.59	5.88	5.34
Lack of mentorship	3.99	2.54	3.15

4.3 Engagement with government departments

Table 4.4 illustrate the results on intervals of engagement by respondents with government entities. Both communities, Jabulani and Thuthukani over 90% have alluded that they did not have engagement with the following structures of government: Department of Rural Development and Land Reform (DRDLR); Regional Land Claim Commission (RLCC); Local Municipality and Department of Environment, Forestry and Fisheries (DEFF). Only a smaller portion of respondents (less than 3%) indicated to have engaged in with the Department of Rural Development and Land Reform, on which during focus discussion, it came out that only the members of the committee were in contact at some stage with the officials.

Table 4.4: Frequency of community beneficiaries engaging with government departments

Name of Community		Proportions (%) of respondent's responses	
		Annually	Never
Jabulani community (N=105)	DRDLR	1.0	99
	RLCC	0.0	100
	Local Municipality	1.0	99
	DEFF	1.9	98.1
Thuthukani community (N=75)	DRDLR	2.7	97.3
	RLCC	0.0	100
	Local Municipality	0.0	100
	DEFF	0.0	100

4.4 Access to ecosystem services

Table 4.5 shows the results of respondents on access and the availability of ecosystem services that can be obtained from forest plantations. The results indicate that less than 50% of respondents in Jabulani were unable to access firewood, contrary to Thuthukani where over 90% of the respondents have access to firewood. Moreover, Jabulani community indicated less access to building materials (43.8%), while Thuthukani had access to building materials (65.3%). Jabulani community had the majority of respondents (97.1%) who have access to grazing areas, contrary to 32% from Thuthukani community. Furthermore, Jabulani respondents (100%) indicated that they have been able obtain commercial timber, while 100% of respondents in Thuthukani indicated that they had no timber qualifying sales commercially. In both these communities, more than 80% of respondents indicated that they did not have access to medicinal plants. About 99% of the respondents in Jabulani revealed that access to water was certainly not a constrain compared to 52% of the respondents in Thuthukani community. Furthermore, over 50% of the respondents in Jabulani community indicated that they have access to crafting materials, while in Thuthukani community a higher percentage of 98.7% of the respondents had no access to crafting materials. However, over 50% of the respondents in Jabulani community indicated that they are getting food sources from the forests compared to only 2.7% in Thuthukani community.

Table 4.5: Access and availability of ecosystem system services

	Proportions (%) of respondents' responses			
Ecosystem Services	**Jabulani community** **(N=105)**		**Thuthukani community** **(N=75)**	
	Yes	**No**	**Yes**	**No**
Firewood	45.7	54.3	97.3	2.7
Building Material	43.8	56.2	65.3	34.7
Grazing Areas	97.1	2.9	32	68
Commercial Timber	100	0	0	100
Medicinal plants	7.6	92.4	16	84
Water sources	99	1.0	52	48
Crafting material	58.1	41.9	1.3	98.7
Food sources	55.2	44.8	2.7	97.3

Table 4.6 presents how the interaction of lack of function of a forest has an impact on the functioning of the ecosystem. About 76% of respondents from Thuthukani and 60% from Jabulani community indicated the availability of wild animals to have been highly impacted. While a fraction of respondents in Thuthukani (21.3%) and Jabulani community (12.4%) cited that the availability of wild animals to have been impacted. In addition, less than 20% of respondents in Jabulani community were uncertain of the impact concerning availability of wild animals compared to only 2.7% in Thuthukani community. Noteworthy, Jabulani community respondents (9.5%, 36.2% and 2.9%) indicated that availability of the animals, sufficiency in forest products and frequency of fire occurrences were least impacted, respectively. Additionally, sufficiency in forest products was indicated to have been highly impacted (78.7%) in Thuthukani community and only 15.2% in Jabulani community. The majority of respondents in Jabulani community (48.6%) cited sufficiency in forest products to have been impacted, and only 15.2% in Thuthukani community. Both communities indicated to have noticed an increase in fire occurrences in their plantations and as a result, 88% of the respondents in Thuthukani community and an overwhelming 94.3% in Jabulani community cited the latter to have been highly impacted.

Table 4.6: Household perceptions on impact of ecosystem services as a result of forestry projects not being functional

Name of Community		Highly impacted	Impacted	Uncertain	Least impacted
Jabulani community (N=105)	Availability of wild animals	12.4	61	17.1	9.5
	Sufficiency in forests products	15.2	48.6	0.0	36.2
	Frequency of fire occurrences	94.3	2.9	0.0	2.9
Thuthukani community (N=75)	Availability of wild animals	76	21.3	2.7	0.0
	Sufficiency in forests products	78.7	21.3	0.0	0.0
	Frequency of fire occurrences	88	10.7	1.3	0.0

Figure 4.1 indicates the amount of time taken to collect forest products by the two communities. The study showed that over 50% of the respondents in both Jabulani and Thuthukani communities are travelling the longest that is: one to two hours, followed by those travelling about 30 minutes 43.8% in Jabulani community and 42.8% in Thuthukani community respectively. The lowest percentage were respondents travelling between two to three hours and four to five hours, Jabulani community 3.8% and Thuthukani community 5.6% respectively.
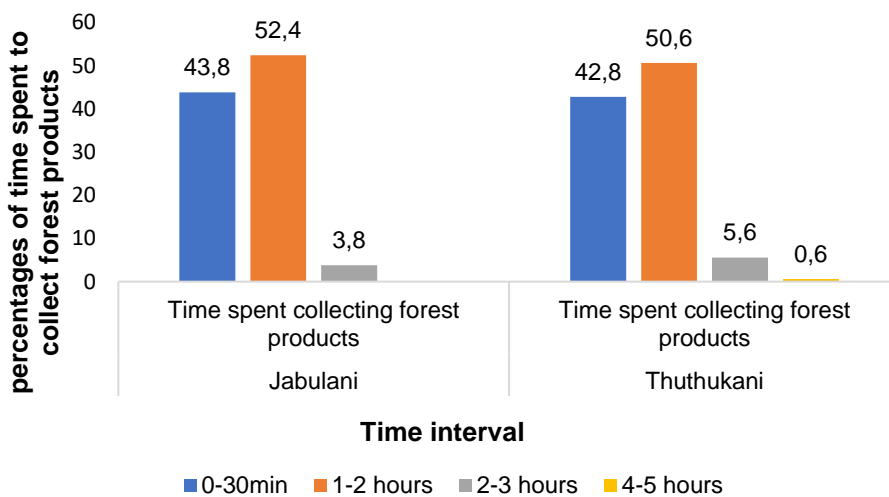
Figure 4.1: Time spent collecting forest products

On the same accord, it was necessary to test the distance respondents travel to collect forest products, the results in Figure 4.2 indicate that the large proportion of respondents travel between 0 – 5 Kilometres, in Jabulani community (84.8%) and Thuthukani community (65.3%). The following category of respondents indicated to travel between 6-10 Kilometres

was 13.8% in Jabulani community and 33.4% in Thuthukani community. The least category being those travelling between 11-15 Kilometres 1.9% in Jabulani community and 1.3% in Thuthukani community, with none travelling 15-20 Kilometres, neither 25-30 Kilometres.
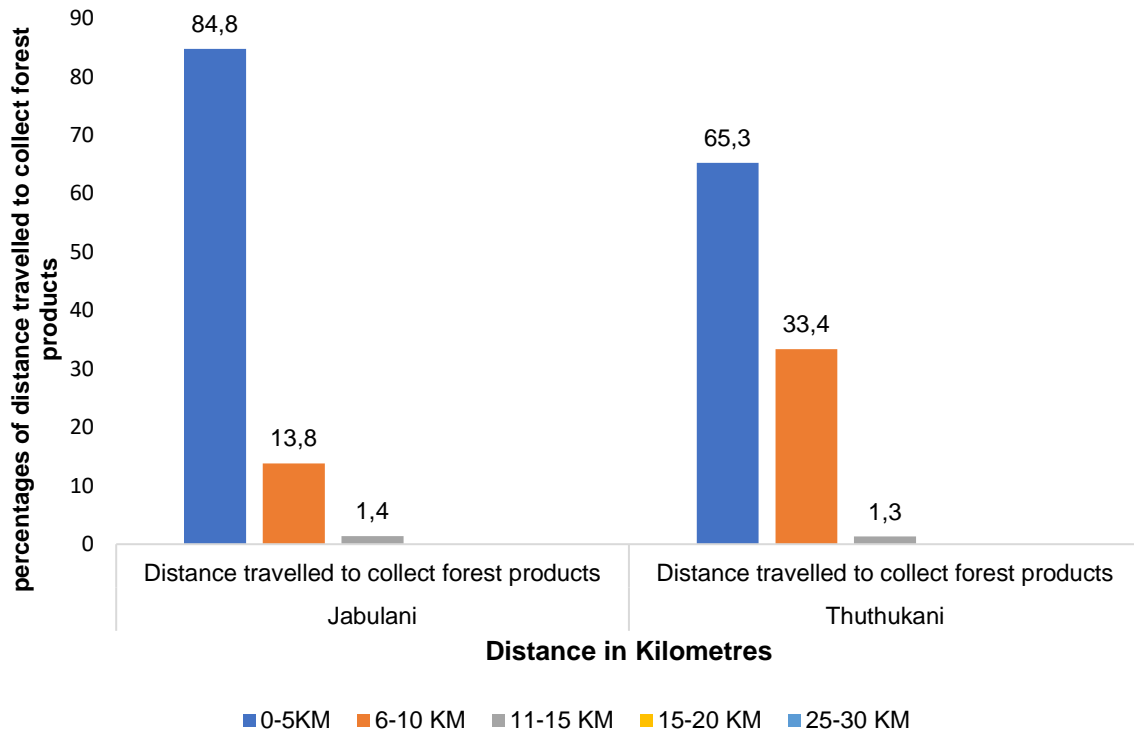
Figure 4.2: Distance travelled to collecting forest products

Figure 4.3 shows the frequency of fire occurrence in the communities' plantations. Majority of the respondents indicated that they have experienced fires during the fire season (between May and October) accounting for 97.1% in Jabulani community and 89.4% in Thuthukani community. About 2.9% of the respondents from both communities revealed their uncertainty about the frequency of fire occurrences. Furthermore, the results revealed that fewer respondents (7.7%) in Thuthukani community have experienced fires 3-4 times a year.
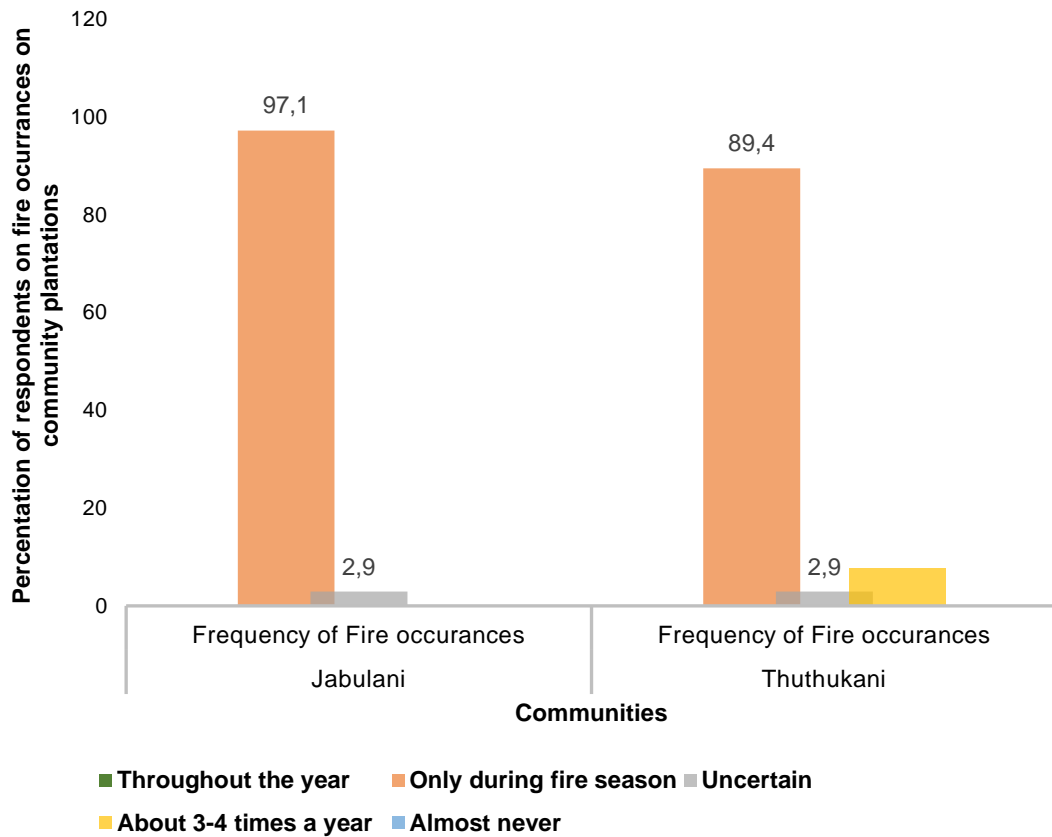
Figure 4.3: The frequency of fire occurrence in the communities' plantations

Figure 4.4 illustrates responses regarding the availability of firefighting equipment in case of a fire incident. Both communities cited the difficulty in obtaining resources to combat fires, in Jabulani 46.7% indicated that it is fairly difficult compared to 40% of those from Thuthukani. Additionally, 18.7% of the respondents in Thuthukani community indicated that it is fairly difficult to obtain resource for firefighting. A fair share of respondents cited the contrary, where 41% of respondents in Jabulani community and 33.3% in Thuthukani community cited that it was fairly easy to obtain resources to fight fires. A fraction of respondents in Jabulani community (11.4%) cited that it is very easy to obtain firefighting resources compared to only 6.7% of those from Thuthukani community.
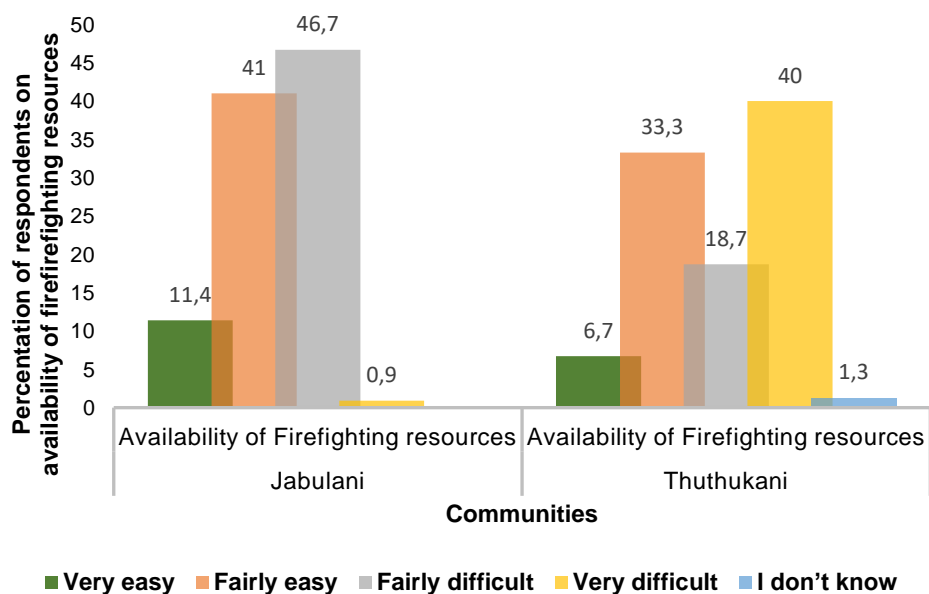
Figure 4.4: Availability of firefighting resources

4.5 Economic benefits from the forest

Table 4.7 presents the benefits that accrued to beneficiaries since obtaining the land. In Jabulani community, 54.3% of respondents indicated that they never benefited from employment in the forests compared to 98.7% of those from Thuthukani community. In contrast, 45.7% of the respondents in Jabulani community indicated that they have benefited from job opportunities compared to only 1.3% of those from Thuthukani community. Over 98% of the respondents from both Jabulani and Thuthukani communities indicated that they never obtained a business opportunity, and neither of them have received skills development (training). During FGDs, in both Jabulani and Thuthukani communities, the participants indicated that they believe their livelihoods would have improved if the forestry farms were fully functional.

Table 4.7: Accrued economic benefits to household beneficiaries from the forest

Economic benefits from the forest	Proportions (%) of respondent's responses			
	Jabulani (N=105)		Thuthukani (N=75)	
	Yes	No	Yes	No
None	53.3	46.7	94.7	5.3
Job opportunity	45.7	54.3	1.3	98.7
Business opportunity	1.9	98.1	1.3	98.7
Skills development	0	100	0	100

4.5 Intervention measures

Figure 4.5 presents results on respondents' perception on collective land ownership contribution towards failure of land reform project. In Jabulani community, majority of the respondents (84.4%) disagreed that collective land ownership contributed to the failure of land reform project, while in Thuthukani community a mixed reaction was observed, where by 20% of respondents strongly agreed, 28% agreed, 21.3% disagreed, and 30% strongly disagreed. Majority of the respondents in both communities concurred that Participatory Forest Management (PFM) contributed meaningfully to forestry farms accounting for 94.2% in Jabulani community and 76.0% in Thuthukani community Furthermore, respondents in Jabulani community (75.3%) disagreed that collective of land ownership makes the distribution of benefits difficult compared to 12% of those from Thuthukani community. In contrary, Thuthukani community respondents (37.3%) agreed, while 30.7% strongly agreed that collective land ownership makes the distribution of benefits difficult. However, 20% of the respondents strongly disagreed that collective land ownership makes the distribution of benefits. It was a smaller percentage (15.2%) in Jabulani community that had agreed that collective land ownership makes the distribution of benefits difficult.
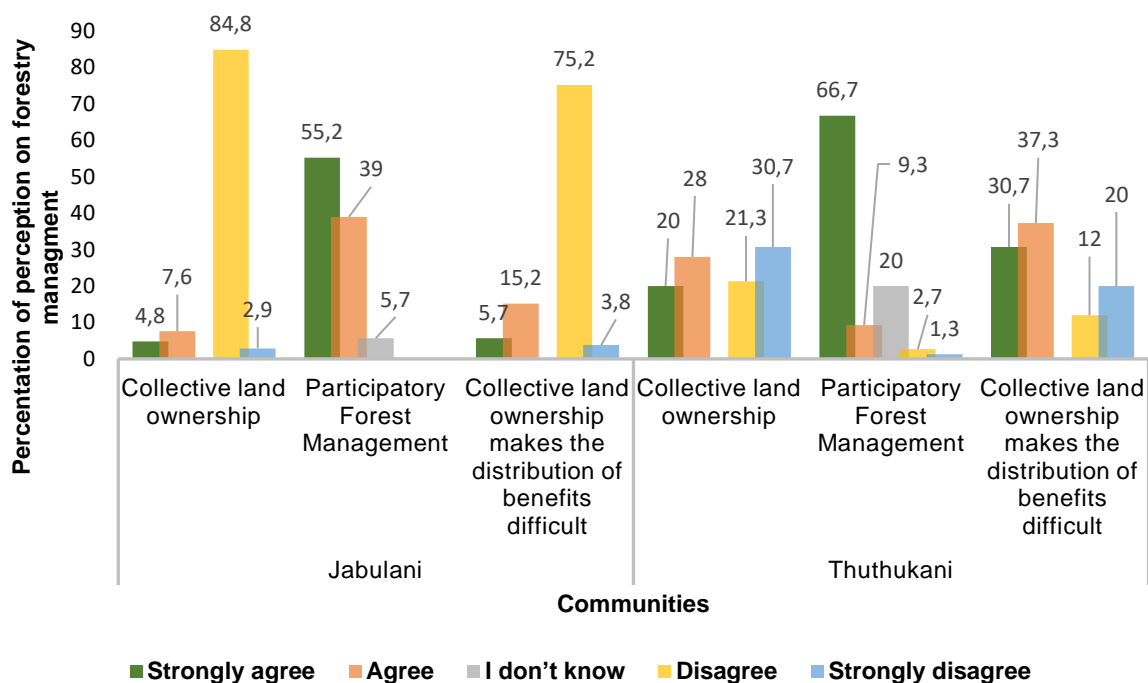
Figure 4.5: Perception of the respondents on Collective land ownership, PFM and distribution of benefits

Figure 4.6 presents respondents' perception on the management approach restored forestry farms. Over 80% of respondents in both communities preferred farm management as a group. In addition, majority of respondents in Jabulani (92.4%) and Thuthukani (94.7%) communities least preferred the individual land management model.
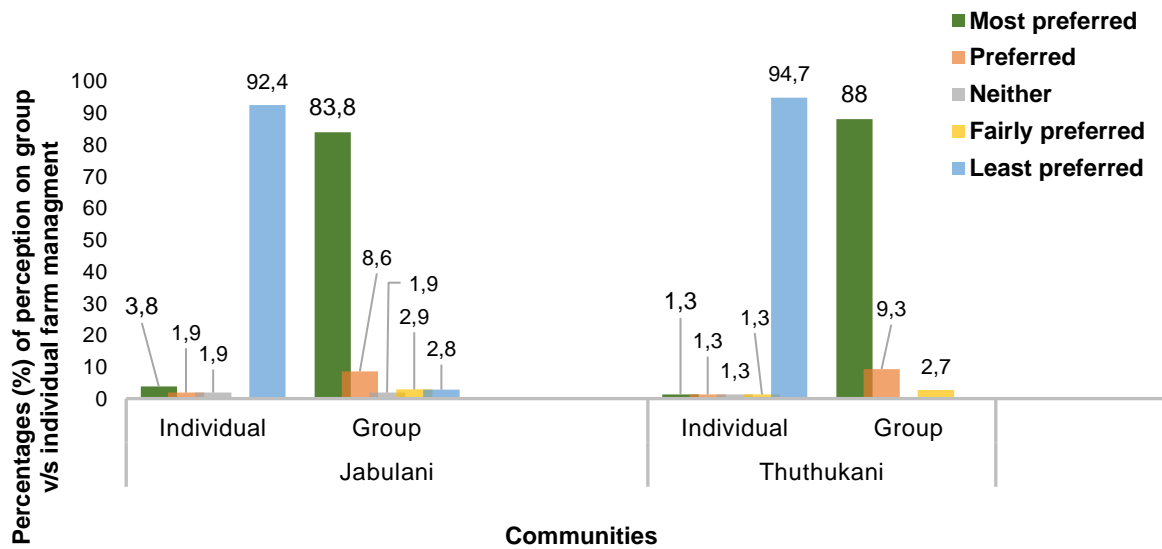
Figure 4.6: Perception on group v/s individual farm management

Figure 4.7 shows respondents' preference on the following intervention measures to assist in revamping their farms including plot allocation to individual households; Partnerships (Joint venture, PPP, strategic); Participatory Forest Management; Agroforestry and Lease back to previous owner. In both Jabulani and Thuthukani communities, over 90% of the respondents regarded plot allocation as a least preferred intervention land management model. However, the majority of the respondents from Jabulani community (91.4%) and Thuthukani community (96%) revealed that partnership is the most preferred model. Participatory Forest Management and agroforestry were revealed as the mostly preferred land management model by respondents in Jabulani and Thuthukani communities accounting for 91.4% and 88.6% and 82.7% and 92%, respectively. Leasing the land back to previous landowner was viewed not to be an option by most of the respondents in both Jabulani community (85.7%) and Thuthukani community (70.7%).
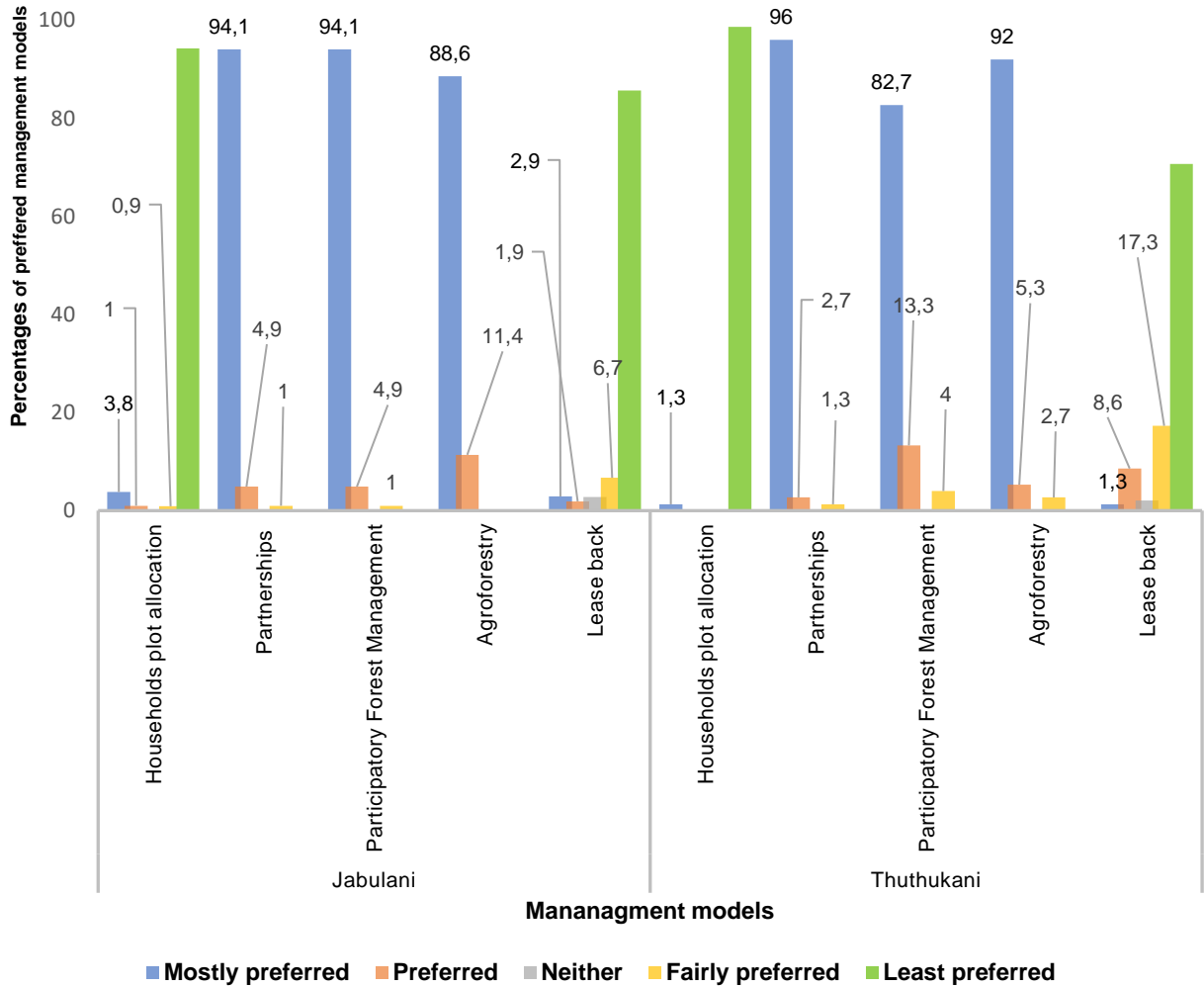
Figure 4.7: Preferred Management Model

4.6 Chapter Summary

This chapter presented the results from the respondents, indicating consensus with the eight predetermined drivers of land abandonment, the top three being lack of sharing of benefits, elitism, and lack of transparency. The results revealed poor engagement between key stakeholders from government entities to beneficiaries. The availability of ecosystem services was looked into which is timber, firewood, building material, grazing areas, medicinal plants, water, crafting and poor food sources. Furthermore, the study highlighted the impacts of poorly managed farm, in terms of habitat for animals and the occurrence of wildfires. Economic benefits in a form of employment, business opportunities and skills development were also

evaluated. In this regard, Jabulani community benefited the most from employment opportunities. Lastly intervention measures to revive the management of the farms have been presented, and in this regard, both Jabulani and Thuthukani communities indicated that partnerships, participatory forest management and agroforestry are the most preferred management models, while the least popular was plot allocation to individuals. Chapter 5 will present the possible explanations to these results and relate these findings to similar studies.

CHAPTER 5

DISCUSSION

This chapter discusses the results presented in the previous chapter and provides further supporting literature on the findings of the study. The chapter commences with the discussion of household's characteristics with regards to their socio-economic, further the study discusses the eight predetermined drivers of land abandonment. The availability of ecosystem services and the impacts of poorly managed farm, in terms of habitat for animals and the occurrence of wildfires will be further discussed. Economic benefits in a form of employment, business opportunities and skills development will be thoroughly perused. Lastly intervention measures to revive the management of the farms will be deliberated.

5.1 Households characteristics in the study communities

The majority of the households' respondents comprised of female headed household and have cited their marital status to have never been married in both Jabulani and Thuthukani communities. According to (Sibisi, 2015; Rugege, 2004) a number of males in rural areas migrate to cities for employment opportunities which explains the female headed homes, similarly Tshidzumba et al. (2019) attest that at least 44.3% of respondents in Amabomvini community have never been married. Furthermore, statistics are not rare in rural communities, similar findings were observed by (Nxezi, 2015; Pokwana, 2019). Kollamparambil et al. (2019) underlined the significance of old age pension (OAP) citing that beneficiaries of this grant are vulnerable, and without this provision may not survive. Jabulani community comprised on a substantial number of pensioners, receiving not more than R2000 per month. To the contrary, Thuthukani community resembled many rural areas in South Africa, where the majority of respondents are youth and unemployed, and a high percentage of households are hugely reliant on children support grant which is lower than one thousand (R1000) per person per month. In line with Mokwena et al. (2020), it is clear that livelihoods in rural areas have not improved since apartheid was dismantled. Education level in both communities were dominated by lack of tertiary education. In Jabulani community senior citizens contributed to the illiterate group, while a fair share had secondary education. On the other hand, Thuthukani community had a majority of responds with a combination of primary and secondary education. Several studies have drawn a conclusion about the link between education level of land beneficiaries and the

failure of restored land, as management decisions will have to be made by them (Nxezi, 2015; Pokwana, 2019; Mokwena et al., 2020; Moeng, 2011).

5.2 Drivers of land abandonment

There were eight predetermined drivers of land abandonment that the study referred the respondents to rank presented from highly to lower ranked in the following order: lack of benefit sharing; elitism; lack of transparency; infighting; lack of funding; lack of expertise; lack of evaluation and monitoring and lack of mentoring.

5.2.1   Lack of benefit sharing

Amongst the eight predetermined drivers of land abandonment in forestry land reform projects, the study found that lack of benefit sharing is the main contributor of abandonment, which collaborates with the findings from (Tshidzumba, 2019; Tshidzumba et al., 2022) who cited that land reform forest-based projects have not been effective in bringing forth anticipated benefits to household beneficiaries. The purpose of land restitution is to redress the historical injustices (Mamba, 2013; Sibisi, 2015), which in turn provide the land beneficiaries an opportunity to improve their livelihoods through sustainable production, and environment protection (Steenkamp, 2000; Vermeulen, 2009). However, Cernea (2008) argues that in most national policies benefit sharing principle is absent, particularly in developing countries. A study by Maluleke (2018) revealed that beneficiation failure is caused by the imbalance of projected income versus actual income, and forecasted profits that are never realised. This further gives rise to the need to re-evaluate the benefit sharing mechanism or model, to incorporate both financial and non-financial benefits entitled to household beneficiaries (Makhubele et al., 2022). This study found that, even in cases where beneficiaries have felled a compartment, and are willing to share the proceeds among themselves, limited financial resources in the CPA banking account made the possibility of sharing proceeds difficult.

In focus group discussions (FGDs) with the CPA committee in Jabulani community, it was confirmed that payment of R5000 dividends per household was affected. The chairperson, in great disappointment acknowledged stating that *"This sharing of proceeds was not executed from a business point of view, but it had to be done because the members of the community are becoming so impatient, as we speak, provision for re-establishment has not been made for"*.

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Others commented on the fact that the dividends were paid directly to the household's heads, which made it difficult for the rest of family members to benefit. This was also confirmed in a study by Anseeuw and Mathebula (2008) where it was stated that many restituted farms become not feasible because of misleading financial projections.

The study by Makhubele et al. (2022) concluded that forestry restored land beneficiaries resonated better with financial benefits than any other form of benefit. This finding was prominent in Thuthukani community where since inception of the project, the farm was fully stocked with matured timber. Consequently, harvesting proceeds were kept in a bank account, and every household had opportunity to access funds through a loan arrangement from the CPA committee. This form of arrangement backfired, because the criteria for borrowing money from the CPA's account was neither clear nor was the penalty for defaulting borrowers documented. Mokwena et al. (2020) disputed the blanket approach, arguing that every project requires a pre-determined tailor-made beneficiation model before the commencement of the project, and all beneficiaries should be presented with an opportunity to participate in its formation. Makhubele et al. (2022) furthers warns that if an appropriate benefit-sharing model is not in place, elitism is bound to dominate, and this warning was eminent as this study found that elitism was ranked the second highest driver of land abandonment.

5.2.2 Elitism (Exclusivity)

The Britannica and Cambridge (2023) dictionaries describe elitism as an entitlement of powerful people given special treatment and advantages as opposed to the poor people, and such suggests that certain things belong to individuals with special abilities and qualities. Tshidzumba et al. (2022) classified the few individuals that represents the community during the settlement negotiations as a those holding some form of power. The approach used to administer land in South Africa, by default causes division amongst the most vulnerable, and those with political connections (Mathiba, 2021). The latter promote elements of favouritism and corruption, which creates further injustice to those who are unable to have access to those officials.

Manenzhe et al. (2016) overemphasised that the success and sustainability of land reform projects is directly linked to the level of education of beneficiaries, as this plays a huge role in decision making for farm management. As echoed by Mamba (2013) who observed that the

choice of management (management model) in forestry projects was linked to the level of education of land beneficiaries. It is possible to conclude that elitism was further perpetuated by poor levels of education as observed in both communities, where less than 3% possesses tertiary education. Similar findings were obtained by Mamba (2013) in neighbouring forestry plantations in Gert Sibande District (Roburnia and Jessivale), where only 1.6% of respondents had tertiary education. Mathiba (2021) suggested that elitism promotes exclusivity where women's roles are ring-fenced to domestic tasks such as firewood collection. This perpetuated their marginalization on decision making structures since land ownership has been traditionally associated with male figures. The latter was observed in these two communities as in serving committees, where women were assigned roles of being an additional member, but none serving as a chairperson. It is impossible to refer to elitism in land reform without the subject of corruption in land administration (Mathiba, 2021). Du toit (2017) cited that *"An important role is also played by the collapse of structures of local government, a creeping process of dysfunctionality and ungovernability within the state that has allowed processes of elite capture. But that is another story"*.

According to DuToit (2017), challenges to secure tenure continues to persist in land reform projects. In this regard, Jabulani community beneficiaries had not been able to receive a title deed for their land, except for documents authorising them to use the land, and stating their names as beneficiaries. This has been a source of many challenges, including being unable to apply for financial assistance due to incomplete paperwork. Similarly, Thuthukani community experienced restrictions during submission of financial applications due to deceased signatories, and the current committee not being legally recognised as they were not elected in a general meeting as per the requirements of the Communal Property Association (CPA). This further affects the flow of information and co-ordination from management committees to the general community. Therefore, the level of trust among the land beneficiaries is compromised (Maluleke, 2018), and community members are most likely to accuse committee members as being dishonest, which leads to the next driver "lack of transparency".

5.2.3 Lack of Transparency

Hanna and Wigmore (2022) differentiate the transparency according to various business aspect, the important for this study being corporate governance which requires being open, disclosure of relevant information in order to assist those at the disposal of this information to make

informed decisions, thus enhancing trust. Lack of transparency is as a result of unmanaged perceptions (Aliber and Maluleke, 2010), poor communication and lack of understanding to some extend due to low education levels (Mamba, 2013). This was echoed from a study by Aliber and Maluleke, (2010) citing that *"One of the remaining active members ascribes the collapse of the project to poor management, and specifically alleges that the project leaders paid themselves big salaries and forgot about the operational costs. However, even if this were untrue, the farm could probably not sustain anything close to R1 000 per month for 88 members when previously the number of employees was only nine"*. Unmanaged perception has an influence on creating division and mistrust among beneficiaries (Mkhize, 2020). Focus group discussions on both study communities revealed the latter, where the larger population could not comprehend the needs of the farm (operational costs), and monetary benefits accrued to them. This led to the conclusion or assumption that CPA committee members were compensating themselves with large sum of money, leaving the community behind.

An article by Birkinshaw and Cable (2017) strongly warns against the pitfalls of transparency, and further calls it the "dark side" of transparency. The article alluded that information displayed or made available prematurely, could backfire leading to endless debates or eventually second guessing the role that committee members are supposed to play. This is exactly what the CPA committee in Jabulani community referred to, emphasizing that when they are elected to lead operations on the farm, they should be trusted to execute that role, and be able to engage in negotiations with the buyer or customer for timber without the community's interference. In this regard, the study found an alarming gap and a disconnection between the government entities, who are supposed to provide oversight. This is with regards to conducting annual general meetings, to ensure that CPAs can rotate representation within its leadership structures. The absence of compliance in this regard causes speculations and increases mistrust amongst community members, as the current leadership structures occupy positions beyond their appointed window. Therefore, infighting is inevitable amongst community members because beneficiaries may accuse the leadership of being dishonest. The study further observed that in both these two communities, the functions of leadership were not clearly defined, the committee members was expected to lead both the affairs of the CPA, and also make decisions for operations, and this indirectly leads to conflicts, as accountability becomes skewed (Nxezi, 2015).

5.2.4 Infighting

South Africa embarked on land reform as a mechanism to forge peace, between the haves and have not which emanated from historical injustices (Vermeulen, 2009). However, the slow progress of transformation in land reform, bring about a lot of uncertainties in communities (Nxezi, 2015). Failed structures of government and corruption at its peak are major reasons for unstable communities in South Africa. Inequalities exist even in rural settlements, and such is exacerbated by poor service delivery, which in turn creates uneasiness and jealous among community members (Mubecua et al., 2022).

This study found that even smaller issues such as fight about firewood collection for domestic use versus reserving trees for commercial use, are all instigators of conflicts in a forestry farm. In Jabulani community, the chairperson of the CPA, who also plays a role as an adhoc contractor for harvesting, pointed out that community members steal commercial timber while it is being processed infield and cited such as act of theft as being inconsiderate since each log stolen counts financially. Notwithstanding, the community members needed the firewood and could not wait until the harvesting operation is completed. In Thuthukani community, the respondents complained about elites giving permission for access to the farm without anyone's consent, in this case illegal harvesting of compartments will be taking place, and with financial exchanges being done without anyone's involvement. *"We become observers in our own farm, and one cannot even go to the police for the fear of our lives been taken"* one respondent cited during a focus group discussion.

Furthermore, Jarstad, (2020) summarised consequences of unresolved land ownership as a major instigator for conflicts in South African land reform communities, referring to the recent increasing levels of violence seen in protests around the country. This is a battle for all races (white and black), as food security knows no colour, the ongoing debates about appropriation of land without compensation propels the white farmers not to invest in the farms, on the same accord the unsettled restless communities with restored land struggled to fully utilise the land (Young, 2017). Anseeuw and Mathebula (2008) disputed the current land reform policy, pointing out that the policy requires restructuring, which will include sustainable measures to deal with monitoring, institutional control, and conflict resolutions. Kepe and Hall (2016)

confirmed the group tension and lack of support from government officials as a serious threat for progress on land reform.

5.2.5   Lack of funding

As many authors have pointed out, post settlement support is a major cause to failure of land reform projects in South Africa (Kepe and Hall, 2016; Khapayi and Celliers, 2016). This is as a result of pro-longed application processes, which is not simultaneously aligned with post settlement support, this entails that once the land is restored, only then financial application could begin, which is usually delayed by months if not years (de Satgé, 2014; Mkhize, 2014). Land reform policy in South Africa has made provision through different structures to ensure necessary support is offered to land beneficiaries (Sibisi, 2015). The introduction of the Recapitalisation and Development Programme (RADP) was established primarily to focus on human capacity development; strategic support, infrastructure development, and incentives for day-to-day operation of the farm (Manenzhe et al., 2016; Sibisi, 2015). It is this form of support that would yield sustainable communities, that are able to produce and have their products reaching the market while protecting natural resources from depletion and degradation to the detriment of future generation (Manenzhe et al., 2016).

This study revealed that sustainable management practices were not in place. The case of Thuthukani community is evidence, where the farm is completely unable to produce commercial timber (economic benefit). The farm could only produce firewood for domestic use and this is contrary to the objective of land reform claim settlement. The community members alluded that when the farm was handed over, it was fully stocked with matured timber, and they could sell products to markets through a third party, however, the lack of sufficient resources to combat fires resulted in the farm being destroyed, as they could not protect it. These are all-detrimental effects of not having sufficient support necessary for production (Manenzhe et al., 2016). Common denominators in both Jabulani and Thuthukani communities were the lack of resources to fight fires, and lack of primary material to re-plant after harvesting, which tempers with the sustainability and availability of the forestry business for the future. Notably, this has been a source of many challenges, including inability to apply for financial assistance due to incomplete paperwork (Kepe and Hall, 2016). Furthermore, in FGD both communities confessed uncertainties of the future, as they did not have management structures in place. This resonates with argument from Rick de Satgé (2014) who stated, "*The*

present conjuncture is characterised by a great deal of uncertainty and rising political contestation over the future direction of the land reform programme".

5.2.6   Lack of expertise (technical skills)

Evidently, land reform has failed to provide post settlement support to new land beneficiaries (Sibisi, 2015), particularly human capacity development, training and social services. Similar findings were observed from Tshidzumba (2019) who concluded that lack of post settlement support from government never materialised as promised. This is what Anseeuw and Mathebula (2008) described restitution as a programme that is dealing with land administration (land transfer only) and anything after that, the community will sort themselves out.

Anseeuw and Mathebula (2008) and Sibisi (2014) argued that it is openly not surprising that land reform farms are failing due to lack of human capacity development. Mabuza (2016) shared the same sentiments that lack of skills for beneficiaries to manage sustainable farms remains a major problem for land reform in South Africa. Although, some beneficiary members have worked in the farm during the previous landowner era, the community find forestry business management as requiring a special skill. In their capacity as people who could plant or harvest a tree, is not only a requirement to run a successful and sustainable forestry business. It requires greater understanding of different markets available, including pricing structures in order to forecast profit margins. Mokwena et al. (2020) summarised the scope as follows *"Additional services, including infrastructure, markets and social services have to be provided as part of a comprehensive reconstruction and development programme"*.

Over and above, in Jabulani community, the lack of having own timber trucks to deliver the timber to markets has been a challenge, pointed out during a focus group discussion with CPA committee members. Issues of timber pricing and access to markets were highlighted as a major constrain in Jabulani community, as it was indicated that they are able to sell the high valued product to the market (pulp). However, this is done through a middleman, whom they cannot prove if the selling price is adequate, or they are being taken advantage of. The chairperson of the CPA indicated that they do not have many options to choose from, and hence, the reliance on middlemen arrangement. One could not help but to wonder, how does the middlemen compensate himself for his services, and who sets the criteria. Mkhize (2014) alluded similar

trends in emerging farmers, citing that lack of marketing skills and information and poor market infrastructure are major constrains for land reform beneficiaries.

Thuthukani community shared similar circumstances during focus group discussions that, in the inception of the project (immediately the land was transferred), a close neighbour who is a farm owner offered to partner with them, providing mentorship and transferring skills. Part of the agreement, the farmer would source markets, sell the timber, use his farm resources to re-establish a felled compartment, and provide firefighting resources. However, this form of agreement never lasted because terms of the contract were never stipulated. The community emphasized that incidences of wildfires, of which in one instance the fire jumped from the community property to the farmer's property resulting to the end of the partnership. In this case, the moment the farmer withdrew his resources, "*we were left stranded, and we did not know how we move forward, as we appreciated the support from the neighbour*". Furthermore, the farmer threatened to claim for damages, the CPA committee members mentioned that since he had access to markets, monies for sold timber was paid directly to him, and he would then later transfer profits to the CPA's bank account. The absence of government officials to oversee the progress on the farms, over and above ensuring that structures are in place to make sure that beneficiaries do not enter into raw deals could be liable for this failure.

5.2.7   Lack of evaluation and monitoring

The White Paper on Land Policy (1997) clearly states the responsibility of the National government in relation with other levels of provincial government to implement guidelines as well as monitoring, evaluation and review specific aspects of the land reform. Other studies revealed that government has confessed failure in providing evaluation and monitoring due to shortage of staff with relevant skills to do so (Kepe and Hall, 2016). Mathiba (2021) argued that the lack of control poses a significant threat to the country's transitional justice project and transformation imperatives as after the land is given to the beneficiaries, in some cases, the claimants would have last seen a government official on the day of the land hand-over. In this regard, there seems to be broken institutional frameworks, for instance, beneficiaries are of the opinion that if there is an infighting, they rely on the same office that has administered the land (Anseeuw and Mathebula, 2008).

This was confirmed by the findings of this study as both Jabulani and Thuthukani communities complained about poor visibility and availability of government officials. The FGDs in Jabulani community cited the change of personnel in local government, citing that "*all the time we follow up on our case (about the title deed) we will be told that official x is no longer working in this department.*" Similar experience was observed in Thuthukani community where beneficiaries in FGDs indicated that they have lost hope in government structures citing *"we have wasted the little that we have to try and reach out to the officials, and the distance we needed to travel is no longer viable for us."*

Karumbidza (2005) stated that beneficiaries have no bargaining counsels or structures accessible to address conflicts amongst themselves. The role of different government structures should be clearly identified, not just on paper, but in practice. Beneficiaries explained the absence of co-ordination from these entities, as some offices may only be available in metropolitan cities, far from their projects, and access to them becomes difficult (Mkhize, 2014). In this contest, the role of municipalities is fruitless, on paper their obligations are so clear, as every municipality would like to lead and manage a community where there are economic activities going on. However, officials seem not to care at all, these were some of the comments alluded by beneficiaries from the study communities, and this is further perpetuated by lack of capacity (Mkhize, 2014).

5.2.8   Lack of Mentorship

Terblanché (2011) defined mentorship as *"a structure and series of processes designed to create effective mentoring relationships, guide the desired behaviour change of those involved, and evaluate the results for other people, the mentors and the organisation with the primary purpose of systematically developing the skills and leadership abilities of the less experienced members of the organisation"*. Currently land reform structures focus on deracialising, without taking cognisance of land use planning before land transfer is concluded (Hall, 2007). Terblanché, (2011) pronounced mentorship in land reform projects in South Africa as an outcry and fundamental need for beneficiaries. Mabuza, (2016) affirmed that mentorship has to be provided by government entities, as the extension services provided by the private sector is limited. Although this study encouraged formal education, citing that sustainable land use management requires skills for financial management, marketing, and human resources

management as these are key fundamentals in land management. One could therefore argue that given the levels of education of land beneficiaries, as observed in this study, how would it be possible for beneficiaries to learn such skills in a rapidly and consistently manner. Hall, (2007) advised that land use planning should integrate beneficiary needs, skills, and assets assessment prior the hand over.

During focus group discussions, Jabulani community indicated that community engagements were conducted, and the land beneficiaries were informed of possible development opportunities. This was confirmed by Makhathini, (2017) who indicated that piloted Agri-villages will ensure shelter and secure tenure, provide sustainable and affordable utility services, deal with infrastructure and service access, build community institutions and capacity, ensure income enhancement and improved food security. These results are eminent in Jabulani community as there is access to domestic services such as water and roads. Furthermore, the study observed that at least over 40% of beneficiaries have enjoyed employment in the farm. However, the chairperson of Jabulani CPA discouraged the lease agreement terms, citing that it gives access to the previous owner to operate the land without any skills transfer taking place. Additionally, the none-concluded land ownership and recently expired lease agreement between Mondi and Jabulani community, is an opening for many challenges, and what other farms has witnessed will soon come to them if no intervention is imposed.

The results in Thuthukani community indicated that land use planning exercise was none-existent leading to skewed partnership with the neighbouring farmer, which did not yield any anticipated results and at the end, the farm is neglected altogether. Thuthukani community believes that if the relationship with the neighbouring farmer was strengthened, documented, and government played the oversight role, the farm could have strived as they will be learning from an experienced tree farmer.

5.3 The availability of ecosystem services

Commercial forest plantations in South Africa, has for many years integrated the principles of sustainable forest management, incorporating economic, environmental, and social benefits (Environmental Guidelines for Commercial Forestry Plantations in South Africa, 2019). Conservation areas in the South African forestry areas context such as grasslands, watercourse -wetlands, dams, rivers, Areas of Special Interest (ASI) and indigenous forests falls within

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environmental management. These areas provide habitat for flora and fauna species (particularly declared as endangered), therefore, management prescriptions are well established in company policies to ensure forest practises do not temper with these areas, while ensuring that the primary product (timber) is obtained for economic benefits (Environmental Guidelines for Commercial Forestry Plantations in South Africa, 2019; Makhubele et al., 2022). In the same accord, there are Non-Timber Forests Products which communities can freely benefit from the forests include crafting materials, medicinal plants, food sources such as mushrooms and honey amongst others. This study aimed to understand the extent of availability to these services. An acceptable norm is that, after harvesting, community members will collect harvesting residues for domestic purposes (firewood, building materials etc.), while the grassland areas, referred to as conservation areas, community members are permitted to graze livestock (following company regulations to ensure grazing capacity is maintained).

It was established that forest plantations in South Africa is associated and accused of loss of biodiversity (Armstrong et al., 1998; DEFF, 2015), major concerns have shifted to water scarcity in the country, and predicted droughts which could last for longer periods (Scott et al., 1998; Pawson et al., 2013). A study done by the South African hydrological research programme (SAHRP) confirmed that afforested areas have an impact on water reduction in catchments, and a possibility exist for a catchment becoming completely dry. According to Richardson (1998), water extinction in catchments could be as a result of planted forest species and weeds migrating to conservation areas (undesignated areas) as these have large impacts on a wide range of ecosystem properties and functions. The research programme (SAHRP) further indicated that the reduction in low runoff in dry season is somewhat greater than the total annual runoff. Based on the findings from Scott et al. (1998), one could argue this has been the case with Thuthukani community where the community experience dry water tanks during winter months. Pawson et al. (2013) commented on the spread of invasive into conservation areas, citing that climate change will exacerbate the manifestation of these invasive species, and affect biodiversity in the following manner:

- It may facilitate the expansion of existing invasive plants infestation beyond their current limits.
- Increasing fuel loads, which will influence wildfire occurrences, and the intensity thereof.
- The probability of invasion success will be prominent due to climate change impact.

Given the above citation, it is deeply concerning if restored forest plantations are left idling without prescribed environmental management being implemented.

5.3.1   Sufficiency in forests products

Zhang et al. (2022) indicated that forest resource management plans are necessary tools to create sustainable livelihoods through the provision of goods and services. Similarly, FAO (2016) emphasized the need to maintain forest monitoring, citing that monitoring is one of the indicators that determines the decline or increase in both planted and indigenous forests around the world. The article further articulates that a decline in natural forests and an increase in planted forests has been observed around the world. There is a direct link between forest depletion, deforestation, and population growth, particularly in rural areas (Fraser, 2017). This study proved that South Africa is experiencing a decline in both natural and planted forests as further articulated by (Makhubele et al., 2022).

Comparing the two study communities, the results shown that Jabulani community maintained the primary product (commercial timber) with respondent having access to ecosystem services (i.e., firewood, building material, grazing areas, crafting material, food sources and water). As indicated on the example in Annexure 5.1, a group of women meet at the community centre every day to construct grass mats to generate extra income. On the other hand, Thuthukani community has fully depleted commercial timber, and the only available wood product was firewood (selling to local markets) as shown in Annexure 5.2, and building material, which are secondary in the forest plantation context. In Thuthukani community, damaged roads hindering access were clear signs of poor farm management as highlighted in Annexure 5.2. The results further indicated a decline in the NTFP as fewer respondents reported having limited access to grazing areas, crafting materials, food sources and water. In FGD, they expressed the water rationing (on and off times), citing that, since they have JoJo water tanks, and the water is extracted underground using a pump, the scarcity is mostly experienced during winter season. Notably, the availability of water in the JoJo tanks was observed during data collection as indicated in Annexure 5.3.

The biggest contributor in the reduction of forest products obtained was the issue of wildfires in both Jabulani and Thuthukani communities as illustrated in photographs of fire incidences in Annexure 5.4 and Annexure 5.5 respectively. Over and above the devastating fire incidences,

Jabulani community highlighted the challenge of having no plan in place for re-establishment, citing that after harvesting, the Temporarily Unplanted Areas known as TUP (Annexure 5.6) remain idling for some time, which potentially will lead to the reduction of raw materials.

5.3.2 Frequency of fire occurrences

Forest fires has been recorded as the most destructive factor of forest plantations in South Africa. Makhado and Saidi (2013) referred to the 2007/2008 fires highlighting that in this period alone, approximately 77 150 ha of forest plantations was lost to fires, and these fires were attributed to harsh change in climatic conditions, pest, and diseases. Xulu et al. (2021) further explained that forest fires in South Africa account for 87% of losses in forest plantations, and such losses are experienced during the drier season of the year as there is sufficient conducive flammable fuels. Similarly, findings of this study clearly revealed that fires in both Jabulani and Thuthukani communities' fires poses a problem during the prescribed fire season in the district, which is during the months of May to November. In FGDs, participants indicated that they receive frost from May, and thereafter the conditions become more favourable for fires. It can therefore be concluded that forest plantations are prone to experience fire disasters at some point, and this is not linked to change of land ownership. Under good forest management practices, a fire management plan would exist, which highlights prescribed (pre-planned) fires that will be conducted to reduce fire risk, every fire that occurs in a plantation is recorded and mapped, which Xulu et al. (2021) described as an expensive exercise. Most importantly, these communities did not have systems in place to record fire occurrences due to lack of available resources. The two study communities over emphasized the challenges with fires. During FGDs, both communities confirmed that they did not have any firefighting equipment, and that they have to fully depend on neighbours for assistance to extinguish fires.

In Jabulani community, clarity was given in group discussions where participants mentioned that their neighbour is Mondi group and would often dispatch firefighting resources to them. However, they have recently observed that Mondi is willing to assist them to combat fires only if the fire is burning adjacent to their property. The chairperson indicated that this could be because most of their fires could be linked to arsonist around the community, and it is very discouraging if community members cause harm to their own farm. On the same note, Thuthukani community is situated between two tree farmers namely Somhlolo Trust and a

private farmer Mr van Aardt, which makes access to firefighting assistance difficult. Somhlolo Trust is a community Trust, and their resources are often stretched, and the private farmer often perceive Thuthukani community as negligent due to past experiences. These dynamics in turn, affects the number of products obtainable from the forests, and the distance travelled on obtain those products.

5.3.3 Time spent collecting and distance travelled to collect forest products

Semenya and Machete (2019) highlighted that although South Africa has extended electricity in rural areas, the majority of households in rural settings heavily rely on firewood for source of energy, particularly for cooking. The study further highlighted that in these areas the rate of unemployment makes affordability to rely on electricity a challenge. The FAO (2016) has established a methodology to estimate the availability of forest products, the study depicts that distance travelled to collect forest products is an indicator for availability of that product. In this study both Jabulani and Thuthukani communities, respondents travel between zero to five (0-5) kilometres. According to Concentric-circles model for distances designed by (Makhubele et al, 2022) for forest products collection, a distance between 0 and 5 kilometres is classified as an immediate distance, and anything above 5 to 10 Kilometres as a far distance. In reference to the assumption by FAO (2016), one can concur that the travelling distance within reach to where the beneficiaries live is critical for easy access of resources, particularly with regards to the collection of firewood and building materials.

Makhado and Saidi (2013) conducted a study in Gert Sibande Region, in two forest plantations namely Roburnia and Jessievale of the South African Forest Companies Limited (SAFCOL), the findings indicated that fires in the region occurs throughout the year due to bee-honey harvesters, heavy machinery and lightning. Most importantly, the study revealed that high percentage of the fires are related to arson activities. This is in line with the findings from both Jabulani and Thuthukani communities as they pointed out that fires on their plantations are as a result of arsonist. The study from Roburnia plantation further revealed that South African forest plantations are prone to uncontrolled wildfires due to available flammable fuels. This was echoed Xulu et al. (2021), who indicated that due to change in climatic conditions, pest and diseases in the forest sector, wildfires are bound to be prominent. The destruction of forest plantations by fires, affect the entire ecosystem to those depending on it including both humans and animals.

5.3.4   Availability of wild animals

Nolte and Dykzeul (2000) explained that wildlife is a desirable and an integral part of the ecosystem. However, these fires should be controlled and monitored so that they do not become destructive and become a threat to other fauna species. Bauer (2016) depicts wildlife extinction as a worldwide crisis, and further explained that forest plantations in South Africa are not helping as they continue to endure uncontrolled wildfires, putting pressure on the ecosystem functions. It has been concluded that it is difficult to assess the impact and to quantify wildlife extinction without proper management of the species by the landowner (Nolte and Dykzeul, 2000). This has been the case in the study communities. Both Jabulani and Thuthukani communities, although could not quantify the amounts of species seen, but they could detect lack of availability of wild animals, that in some way they have been impacted. The function and structure of ecosystem is bound to change, exacerbating extinction of wildlife as a result of changes caused by climatic change (Bauer, 2016).

As predicted by Swart (2016), the major cause of extinction is a result of poor management of natural landscapes. The Environmental Guidelines for Commercial Forestry Plantations in South Africa (2019) alluded that everybody who resides or works in plantation forests should sight and record animal species observed on a daily basis. This is a necessary excise to retain available species for future generations. In Thuthukani community, the beneficiaries quantified the sighting of fauna species as highly impacted, indicating that they have not been seeing forest animals such as (porcupine or Impala) as in the past. In Jabulani community, the results showed that even though the sighting of animals was not highly impacted, it has been somehow impacted. There are various debates about keeping animals and the forestry industry alive, this context is broad, and further research required. Existing literature has recorded animals within forests plantations as damaging agents such as baboons, and top of the list inserts, further down to interlopes which are associated with small seedlings damage (Swart, 2016; Phillips, 2012).

5.4 Economic benefits

A study by Makhubele et al. (2022) confirmed the hope of land claimants who had received forestry farms, that it would give employment opportunities to youth of the community. The same assumptions were echoed by Cousins (2016) and Masoka (2014) suggesting that land reform must be a vehicle to improve participation in economic activities so that poverty and

livelihoods can also improve. However, de Satgé (2014) and du Toit (2017) alluded that the ideology of expecting community farms to function successfully, using an individually owned entity strategy for large-scale industrial farming tactics as the root cause collapsing land reform programme. A common denominator in Jabulani and Thuthukani communities were low educational level of education, where over 40% of the population possess at least a secondary school certificate without additional tertiary knowledge. According to Idris et al. (2012) a society's development is directly linked to the level of education of its citizens, education can play a role in supporting youths' development toward a positive sense of ethnic identity.

A distinction was clear from these two communities, where in Jabulani community, at least some of respondents indicated having enjoyed access to employment opportunities from the project. While an alarming majority of respondents from Thuthukani community have never benefited in any economic participation. During the youth focus group discussions, the youth in Thuthukani community indicated several issues of concern regarding the farm collapse, including lack of mentorship being the major contributing factor. In addition, they indicated that the lack of understanding the value of a planted tree and the importance of sustainable forestry farming as well as why the rotational harvesting is done. The participants further questioned the science behind exotic trees, emphasising on the lack of proper handover and constitution terms and conditions which were never followed. As a result, the infighting remains a major cause of arson fires, coupled with lawlessness due to government absence to oversee the project.

5.5 Social aspect

A re-curing cycle pointed out a decade ago in a seminar funded by the Konrad-Adenauer-Stiftung (KAS) held at the University of Pretoria to debate 'Land reform in South Africa: Constructive aims and positive outcomes – reflecting on experiences on the way to 2014' concluded that:

"The tragedy with the story of land reform in South Africa is that the country does not have officials in the Department of Land Affairs (DLA) who are capable of turning the legal framework, structures, plans and dreams into reality. Rather, their involvement had been destructive and has become an important source of conflict, polarisation, frustration, and mistrust. I am afraid that the damage done to sensitive rural economies in KwaZulu-Natal, Limpopo, Mpumalanga and some areas in Northwest Province is already irreparable." (de

Jager, 2014). These findings above are a true reflection of what the study witnessed in both Jabulani and Thuthukani communities, which remains a gap that has not be rectified. The study findings showed that both communities have never engaged with the government departments, which are very key to the function of forestry land, and the few that engaged with these departments are usually the committee structures that are elected as representatives that is, Department of Rural Development and Land Reform (DRDLR); Regional Land Claim Commission (RLCC); Local Municipality; Department of Environment, Forestry and Fisheries (DEFF).

The idea of securing 'quick wins' without proper research on the type of land to be restored, requirements of post-settlement support and implementation thereof contributes to failure of land reform. The Department of Rural Development and Land Reform (DRDLR) in particular, do not have Terms of Reference, they casually deal with cases, with no cognisance of forecast of potential challenges that may lead to collapse. In cases where research has been conducted, the findings will be well documented in policies, but never implemented. Due to the lack of capacity to administer specific functions in the public sector, many of these functions are outsourced such as land valuation. However, the relevant government departments fail to provide oversight, which in turn contributes to the challenges land claimants face (de Satgé, 2014). Comparing both study communities, it has been observed that Thuthukani community never experienced transformation in their lifetime. On the other hand, Jabulani community enjoyed improved housing with bigger living and gardens spaces, access to infrastructure, water and electricity (Annexure 5.8 to 5.10 and Annexure 5.11 to 5.13) displays photographs taken during household's data collection). The difference is clearly visible that Thuthukani community is far left behind, where beneficiaries live in mud houses with limited access to municipal services. Let alone, the forestry business aspect in their community has been completely abandoned.

5.6 Intervention measures

By identifying the drivers of land abandonment in forestry land reform project, the study needed to understand from land claimants their perception on intervention measures required to revive the farms. Land reform has exacerbated the need to investigate forestry business models which will benefit both the forestry sector and surrounding communities. Hence, in the early two thousand, a few scholars were attracted to further investigate forestry models that

would create sustainable livelihoods in rural areas. This study anticipated that preferred models of partnerships will mimic those cited by (Chirwa et al 2015; Ojwang, 2000; Mamba, 2013; Mkhize, 2020) namely: Joint venture; Lease agreement; Resumption lease; Plantation management plan; Total package; Funded purchase of trees; Conventional lease; Sale and lease back; Business model; Outgrowers scheme; Project grow; Management assistant plan and Timber supply agreement. These are tried and tested and are used by the forestry companies such as Sappi, Mondi and Safcol. The studies further cited that even though the state (DFFE) has slowly moved away from land ownership to regulatory and advisory role, it still has the role to create an enabling environment that attracts private investment through establishing legal frameworks for development such as clarity in property rights, economic, political, and social rights (Mkhize, 2020). The predetermined forest-based management approaches presented to beneficiaries to choose from include households plot allocation; partnerships (Joint venture, PPP, strategic); participatory forest management; agroforestry and lease back to previous owner.

5.6.1 Households plot allocation versus collective land ownership

Both study communities, Jabulani and Thuthukani communities preferred group ownership as opposed to household's plot allocation. Mkhize (2014) identified group farm ownership and management as one of the drivers that led to the collapse of land reform in South Africa. This has mainly been due to mis-matched approach, where poor communities are expected to strive using individual owned farm' strategies. However, a number of studies (Mahlangu, 2015; Robles and Veltmeyer, 2015; Kamwi et al., 2020) made emphasis that group ownership model has proven to be successful around the world, therefore cannot be dismissed, as confirmed by this study, that group ownership remains the preferred model. In the words of Islam et al. (2019) "*In response, the concept of co-management has evolved as one of the most viable options for both poverty reduction, local level economic development and biodiversity conservation, and also recognizes the importance of the inclusion of local communities along with government*".

5.6.2 Participatory Forest Management (PFM)

Participatory Forest Management (PFM) refers to full participation of community members for forestry farm management, for them to experience commercial timber production, while also enjoying the rights to diversify land uses, and obtain ecosystem services obtainable within a

forest space (Ameha et al., 2013). Schreckenberg (2006) adds that PFM enhance community led-sustainable forest management, shared value with state departments, and forest agencies concerning access of land and the use of forest resources (Holmes, 2007). This is exactly what land reform for forestry farms aims to achieve in South Africa, to give land claimants full forest property rights for decision making, and the capacity of communities to establish viable working terms through their constitution. It is therefore not a surprise that the study discovered that both Jabulani and Thuthukani supported Participatory Forest Management as a tool to achieve sustainable results. One of the most successful stories captured by South Africa Forestry Magazine is that of Mabandla Community Trust in uMzimkhulu-South of Kwa-Zulu Natal. In an article published in June 2008, the author recites the story as follows:

"This plantation is like our own goldmine," he told me with obvious pride. "There was nothing here before but now we have work for our people. The Mabandla forestry operation provides jobs for around 70 people involved in harvesting and another 30 in silviculture and fire protection. These jobs are seasonal, and last for about eight months in the year. A core of eight to 10 people is employed full-time.

The first thing that one notices on entering the estate is that the compartments and access roads have been well planned, and the riparian zones are clear of alien vegetation. The infrastructure, legal structures and human resources capacity that has been built up for the forestry projects will be used as a platform for developing a range of diverse business enterprises for the benefit of the community. Projects that are being considered include commercial farming ventures, poultry, honey production, eco-tourism and the collection and sale of thatching grass. The communities involved in these projects have a long-term vision that hinges on the success of the forestry enterprises". Noteworthy, the understanding of land claimants is that forest plantations are relevant to communities, if they can extract resources and benefit from them leading from the poverty to wealth (Holmes, 2007).

5.6.3   Strategic Partnerships (Joint venture, PPP, strategic)

Any form of partnerships requires a high set of skills particularly financial and entrepreneurial skills (Tshidzumba et al., 2018), which is the most missing puzzle in these two communities. Hence, Mokwena et al. (2020) suggested that the eminent failure of land reform presents an opportunity for all South Africans to collaborate and become a solution, partnership is expected from the private sectors, individuals (experts), academics and the public sector to collaborate

and contribute meaningful to the land reform imperative. A clear challenge that has to be addressed is enhancing property rights to land beneficiaries and sustaining productivity with secure marketing and improving beneficiation models (Mokwena et al., 2020).

The results of this study corresponded with findings from Mamba (2013) where respondents highly preferred partnerships (e.g.,) for effective forestry farm management as opposed to lease back model. During Focus Group Discussions, what came out strongly was the fear of losing the very own asset (land), which the communities have struggled to secure in the first place. Participants described the fear of lease back to previous owners as a set up for failure, this is highlighted in a study by Tshidzumba et al. (2018) as lease arrangements comes with contracts, predetermined terms, and conditions without prior participation of community members, and Karumbidza (2005) described such as skewed deals. Mokwena et al. (2020) cited this fear as "*The affected communities understand the issue of land because they are the ones who bear the brunt of poverty and inequality as a result of landlessness, but they have less understanding of the real causes of their fate*".

5.6.4   Agroforestry

Zerihun (2020) described Agroforestry as an innovation to promote rural livelihoods through incorporating both trees and agricultural activities in one landscape, without having to compromise trees for food. It is, therefore, not a surprise that both Jabulani and Thuthukani communities preferred Agroforestry as a mechanism to sustainable land management. In Jabulani community, they indicated that when the new settlement (Agri-village) was established, every household was allocated enough extra land for vegetable gardens. Furthermore, they maintain their firebreaks well, and their livestock benefit freely from grazing areas. In a nutshell, land beneficiaries see value in multiple land use systems. On the same breath, Thuthukani cited similar opinions about Agroforestry, indicating that combining agriculture and forestry reduces the pressure from the need to clear trees to make room for agricultural crops. However, even with such enthusiasm about agroforestry, Thuthukani community over emphasised the lack of sufficient resources to control livestock as a disadvantage. They indicated to never understand the grazing capacities of available pastures, and they have close by communities roaming livestock grazing on their property, and this is an area of concern. Over and above these findings, a gap still exists between available data and

the benefits from agroforestry strategies, as (Zerihun, 2020) suggest that stable farmers regard agroforestry as an obstruction.

5.7 Chapter Summary

This chapter discussed the results presented in chapter 4 and further provided supporting literature on the findings of the study. Household's characteristics with regards to their socio-economic were discussed including the eight predetermined drivers of land abandonment. The availability of ecosystem services and the impacts of poorly managed farm, in terms of habitat for animals and the occurrence of wildfires were discussed. Economic benefits in a form of employment, business opportunities and skills development were thoroughly perused. Lastly intervention measures to revive the management of the farms were deliberated.

CHAPTER 6

SUMMARY, CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

This study was conducted to assess drivers of land abandonment in forestry land reform projects in Gert Sibande District, with an objective to investigate the long-term effects of abandonment of forestry land focusing on three-pronged approach: economic, environment and social aspects of rural communities, with the intention to derive possible intervention measures in order for these farms to be functional again. Household survey and focus group discussions were used methods for data collection, as the study was both investigative and descriptive in nature. This last chapter summarises the deliberations of findings and thereafter recommendations are stipulated.

6.2 Drivers influencing land abandonment

The study evaluated eight possible drivers of land abandonment including lack of benefit sharing; elitism; lack of transparency; Infighting; lack of funding; lack of expertise; lack of evaluation and monitoring and lack of mentoring. The findings of this study confirmed that all these drivers were possible factors contributing to land management failure with lack of benefit sharing being the most leading factor. It is important to note that these factors are interlinked and addressing one driver could result in the alignment of the other factors. For example, the lack of evaluation and monitoring, which entails oversight by government, could eliminate all the other factors. Most importantly, timeous provision of post settlement support from government could improvement the land management situation.

6.3 The role of forestry in South Africa: three-pronged approach

The triple bottom line that is: economic, environmental, and social aspect were thoroughly evaluated. The South African Land reform policy states clearly that improving livelihoods is at the forefront, through land restitution, redistribution, and tenure. As such, it was anticipated that employment opportunities for beneficiaries who have claimed land will improve, and by making land available to the landless will enhance environmental conservation, and social life of society will improve. This study has discovered that employment and business opportunities has not materialised, and this has been due to poor land administration techniques, institutional

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capacity and land reform policies that have not been implemented appropriately. Beneficiaries in the study communities had no choice but to abandon the land or either resolve to secondary benefits such a firewood, charcoal and building material. This has a great influence on environmental degradation, as the study findings recorded the depletion of ecosystem services due to non-functional forest plantations.

The study findings revealed the significance of partnerships, as demonstrated by Jabulani community, where Mondi group (previous landowner) and government worked together to establish an Agri-village which in turn improved the lives of beneficiaries through adequate land stands and access to basic services such as water and roads. To avoid eminent collapse or abandonment of forestry business component in Jabulani community, interventions including partnership with previous landowner and post-settlement support efforts from government should be prioritized. Notably, Thuthukani community encountered complete forestry land use abandonment of which directly had an impact on business (income generation) and employment opportunities for the beneficiaries. Furthermore, Thuthukani community suffered unavailability of ecosystem service due to significant loss of forest products (timber, food source, crafting materials), wild animals and shortage of water supply.

6.4 Intervention measures

The study established that participatory forest managements, strategic partnerships and Agroforestry are preferred management tools for forest plantations restore land. The study could further confirm that part of failure on these farms is caused by the lack of management tools as listed. Strategic partnerships will unlock opportunities for fair and stable markets, capacity development, and mentorship, which could solve the business aspect of the farm. Community cohesion can be strengthened through participatory forest management, which may deal with a number of social ills such as unemployment and the rate of crime. Furthermore, the study confirmed that communities resonate better with food, and/or short rotation crops, especially because rural communities have been reliant on subsistence farming for decades, therefore incorporating agriculture with forestry will be crucial.

6.5 Recommendations

It is important that these land abandonment drivers should be considered by government before or when returning the land back to the land claimants. Furthermore, mutual approach to

empower land claimants through timely provisioning of the post-settlement support should be prioritized. Most importantly, it would be critical to incorporate the post-settlement support mechanisms as compulsory requirement for settling the claims before returning the land back to the community. Poor integration between key role players in government entities is a contributor to failing forestry projects, and such should be addressed. Land transfer process should be intertwined with an appointment of a strategic partner to fulfil the mentorship role, thereafter financial grant can be released. The government has to make provision of officers who will overlook the project and ensure that the constitution designed for the CPA is being followed. To ensure restored community forestry land use and business strive, it would be paramount that the private sector opens up market opportunities to the community beneficiaries. Additionally, considering the sense of fatigue and helplessness observed from forestry land beneficiaries, it would be critical that beneficiaries are provided with the support from government entities such as the Department of Forestry, Fisheries and Environment to negotiate and forge mutual partnerships with the private sector with clear benefit sharing mechanisms.

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ANNEXURES

Annexure 3.1: Jabulani Agri-Village Locality Map (Ha)

USE (All uses are regarded to be "Special"-zoned)	PORTIONS	AREA	% OF TOWNSHIP	PORTION NUMBERS
RESIDENTIAL (Residential)	110	29.9038	4.99	1-11, 13-53, 56-89, 91-97, 100-108 & 110-117
CHURCH (Community Facility)	2	0.5191	0.09	55 & 98
CRECHE (Community Facility)	1	0.4084	0.07	12
MUNICIPAL	2	0.7634	0.12	90 & 109
MIXED USES (Business / Beehive Industries / Community Facility)	1	3.3916	0.57	99
PRIMARY SCHOOL (Community Facility)	1	0.0156	0.94	54
TOURISM:				
- Camp Site	1	2.000	0.58	118
- Lodge	1	3.9250	0.65	119
- Picnic Site	1	0.5800	0.11	120
AGRICULTURAL USES (Special)	1	545.7972	91.07	121
STREET	1	6.0311	1.01	122
TOTAL	122	599.2852	100	

PROPOSED TOWNSHIP JABULANI AGRI-VILLAGE
Situated on Portion 1
of the farm The Bends No 417-IT
Local Authority MKONDO LOCAL MUNICIPALITY
USE TABLE

SIZE OF PORTIONS			SCALE	PLAN NO
USE	MINIMUM	RULING	1:5000	K2386/17

Annexure 3.2: Thuthukani community forestry farm map-partnership
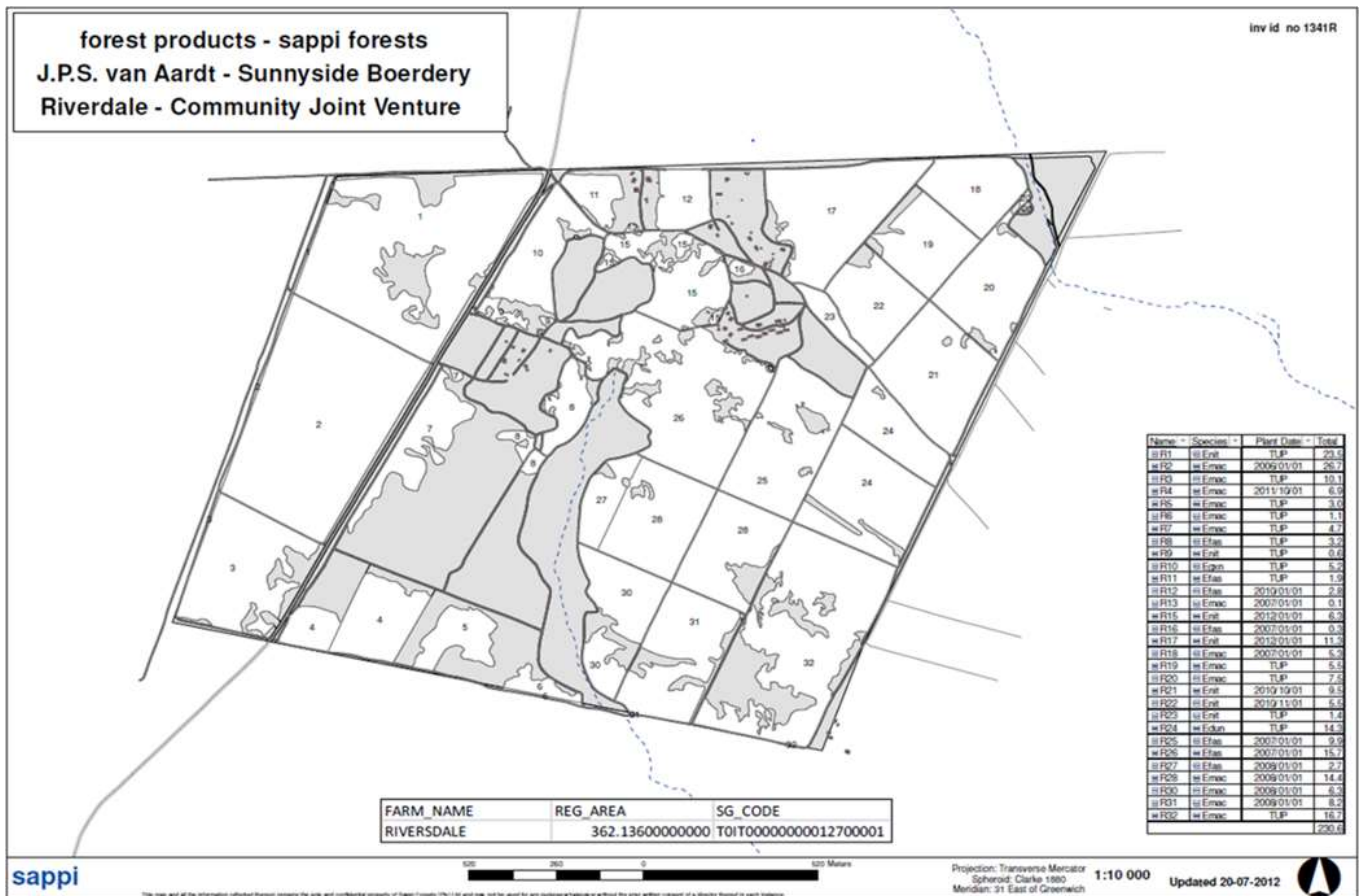
Annexure 3.3: Jabulani community senior meeting

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date. 23 October 2001

ATTENDANCE REGISTER- FOCUS GROUP DISCUSSION

NAME & SURNAME	NAME OF CPA	POSITION IN CPA	SIGNATURE
Nontokozo Nkosi	Jabulani	Secretory	N. Nkosi
Mafika Vilakazi	Jabulani	Chair person	A
Pretty Hlatshwayo	Jabulani	Additional Member	
Wanda Dlongolo	Jabulani	Treasurer	
Gabriel Hlatshwayo	Jabulani	Member	
Thembeka Mazibuko	Jabulani	Member	T. mazibuko
Thulisile Sibanyoni	Jabulani	member	X
Monica Khumalo	Jabulani	Member	M. khumalo
Hana Mtshethwa	Jabulani	member	X
Vusi siyaya	Jabulani	member	
Jimson Ngwenya	Jabulani	member	J. Ngwaya
Tina Madonsela	Jabulani	member	x
Norah Dladla	Jabulani	Member	
Sibusiso Siyaya	Jabulani	member	+
Ntombifuthi vilakazi	Jabulani	Member	n. vilakazi
Ncamsile Ndabeni	Jabulani	Member	X

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Annexure 3.4: Jabulani community senior meeting continues

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date 23 October 2021

Joshua Madonsela	Jabulani	member	
Mandla Dlamini	Jabulani	member	M Dlamini
Sibusiso Mabuza	Jabulani	member	S. Mabuza
Anna Nkambule	Jabulani	member	a. Nkambule
Jeremiah Nkosi	Jabulani	member	X
Martha Hlatshwayo	Jabulani	Member	X
Sphiwe Madonsela	Jabulani	member	M sphiwe
Thandi Nzimande	Jabulani	Member	X
Nontobeko Vilakazi	Jabulani	Member	n. Vilakazi
Ntombifuthi Nkambuli	Jabulani	member	n. Nkambule
Victor Mchunu	Jabulani	member	VMun
Nomqibelo Masuku	Jabulani	member	n. Masuku
Nonhlanhla Ndlangamandla	Jabulani	member	X
Nhlanhla Nhlabathi	Jabulani	member	X
Busisiwe Dlamini	Jabulani	Member	B. Dlamini
Murfi Sibanyoni	Jabulani	Member	Sibanyoni
Julia Kunene	Jabulani	Member	Kun
Siphiwe Sibiya	Jabulani	Member	Sibi

Annexure 3.5: Jabulani community senior meeting continues

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date. 23 October 2021

Thoko Nzima	Jabulani	member	T. Nzima
Mbongiseni Zwane	Jabulani	member	
Zandile Sithole	Jabulani	member	
Nonhlanhla Maseko	Jabulani	Member	n. Maseko
Phethile Lukhele	Jabulani	member	P. Lukhele
Sunboy Mkhonza	Jabulani	Member	
Jacob Mkhonza	Jabulani	member	

Annexure 3.6: Thuthukani community senior meeting

Key Informants

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date 23 May 2021

ATTENDANCE REGISTER- FOCUS GROUP DISCUSSION

NAME & SURNAME	NAME OF CPA	POSITION IN CPA	SIGNATURE
Alvwah Zwane	Thuthukani	Member	ali'vina Zwane
Bussssue Nhwanys	Thuthukani	Member	X
Rose Moxuba	Thuthukani	Member	X
Jahiway Hlunalo	Thuthukani	Member	∓
Geuy Nethula	Thuthukani	Member	G Methula.
Bavvok Sibeko	Thuthukani	Member	N. Sibeko
Ambxe's Sitalo	Thuthukani	Member	+
Nyanga Vdateri	Thuthukani	Member	X
Abloss Mantara	Thuthukani	Member	∓
Aaadmpu Nroo	Thuthukani	Chairperson	
Fiisph Nbdli	Thuthukani	Member	X
Sanso Dube	Thuthukani	Secretary	
Duduzi Vidteri	Thuthukani	Member	
Jayca Buba	Thuthukani	Member	
Borgile Dabe	Thuthukani	Member	
Nicholas Zawueb	Thuthukani	Member	Rvane

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Annexure 3.7: Thuthukani community senior meeting continues

Name	Community	Role	Signature
Denzani Maseko	Thuthukani	*Member*	*Dn. Maseko*
Ellis Thela	Thuthukani	*Member*	*E Thela*
John Nkambule	Thuthukani	*Member*	*Zama*
Erlous Nkosi	Thuthukani	*Member*	*+ 14*
Vusi Sibelo	Thuthukani	*Member*	
Simon Vilakazi	Thuthukani	*Member*	*Simon*
Zandile Nkambule	Thuthukani	*Adv counsil*	*Za Nkambule.*
Themb Sibelo	Thuthukani	*Member*	*T Sibeko*
Delsile Vilakazi	Thuthukani	*Member*	*D L Vilakazi*
Nkanbo Lindiwe	Thuthukani	*Assistcouncil*	*Ln Mhondo*
Holo Zongwe.	Thuthukani	*Member*	*X*
Nomisile Phakathi	Thuthukani	*Member*	*N Phakathi*
Donnois Vilakazi	Thuthukani	*Member*	*X*
Naiense Mhambi	Thuthukani	*Member*	*M T*
Elles Nkosi	Thuthukani	*Member*	*ell*
Jeri Shongwe.	Thuthukani	*Member*	*Shongwe*
Holo Nethule	Thuthukani	*Member*	*+*
Thembeni Vilakazi	Thuthukani	*Member*	*T S*

Maurice

Annexure 3.8: Thuthukani community senior meeting continues

Key Informants

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date 23 May 2021

Elli Sibelo	Thuthukani	Member	Sibeko
Maria Khanaho	Thuthukani	Member	mk
	Thuthukani		✱
	Thuthukani		
	Thuthukani		
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	Thuthukani		
	Thuthukani		
	Thuthukani		

Annexure 3.9: Thuthukani community youth focus group discussion

ATTENDANCE REGISTER- FOCUS GROUP DISCUSSION

NAME & SURNAME	NAME OF CPA	POSITION IN CPA	SIGNATURE
Makhubu Lizbeth	Thuthukani	member	*(signature)*
Thela Nomvula	Thuthukani	member	*(signature)*
Makhubu Nomusa	Thuthukani	Member	*(signature)*
BONGIWE MKHWANAZI	Thuthukani	member	*(signature)*
GRACE MAKHUBU	Thuthukani	MEMBER	*(signature)*
Thombizonke Vilakati	Thuthukani	MEMBER	*(signature)*
Amia Makhathini	Thuthukani	MEMBER	*(signature)*
Mthobisi Madonsela	Thuthukani	member	*(signature)*
Mbongiseni Lorothwayo	Thuthukani	Manber	*(signature)*
Deliwe Duba	Thuthukani	member	Duba
Linah Nkosi	Thuthukani	member	Nkosi
Sfiso Mhlanga	Thuthukani	Member	SASO
Happiness Masero	Thuthukani	Member	Gmasero
Khumalo Simphiwe	Thuthukani	Member	S.W. Mhlanga
Khumalo Pretty	Thuthukani	Member	HP Khumalo
Zanele Nkosi	Thuthukani	Member	Nkosi

Annexure 3.10: Thuthukani community youth meeting continues

UNIVERSITEIT VAN PRETORIA
UNIVERSITY OF PRETORIA
YUNIBESITHI YA PRETORIA

Date. 16 May 2021

Goodman Nkos.	Thuthukani	Chairperson	
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Annexure 5.1: Jabulani community crafting materials

Annexure 5.2: Thuthukani community timber ready to be transported to charcoal market and poor access roads

Annexure 5.3: Thuthukani community- JoJo tank for water access

Annexure 5.4: Jabulani community compartments affected with fires

Annexure 5.5: Thuthukani community compartments affected by fires

Annexure 5.6: Jabulani community temporary unplanted areas

Annexure 5.7: Thuthukani community households data collection

Annexure 5.8: Thuthukani community households data collection continues

Annexure 5.9: Thuthukani community households data collection continues

Annexure 5.10: Thuthukani community households data collection continues

Annexure 5.11: Jabulani community households data collection

Annexure 5.12: Jabulani community households data collection continues

Annexure 5.13: Jabulani community households data collection continues

Annexure 5.14: Households questionnaire

ASSESSING THE DRIVERS OF LAND ABANDONMENT IN AFFORESTED LAND REFORM PROJECTS

<u>**HOUSE HOLDS SURVEY 1**</u>**: Respondents Biographic Information**

	…...
Survey No:	……………………
Municipality:	
Farm Name:	……………………..
Name of Respondent:	…...............................
Household members	…………………………..

Gender	1	2
	Male	Female

Age category	Category 1	Category 2	Category 3	Category 4	Category 5
	18-35	35-55	55-65	65-75	>75

Marital Status	1	2	3	4
	Single	Married	Divorced	Widowed

Educational Level	1	2	3	4
	Tertiary	Secondary	Primary	Illiterate

Employment status	1	2	3	4	5
	Full-time	Seasonal	Unemployed	Pensioner	Student

Annexure 5.15: Households questionnaire continues

Source of income	1	2	3	4	5
	Gov grants	Business	Labour	Forestry	Other…............

Levels of Income/month	1	2	3	4
	<R1000	R1000-R2000	R3000-R5000	>R5000

2. Possible drivers of forestry land abandonment

2.1 To what extent do you agree the following as possible drivers of forestry land abandonment	Strongly agree	Agree	I don't know	Disagree	Strongly Disagree
Lack of expertise (technical skills)					
Lack of funding					
Lack of evaluation and monitoring					
Elitism (Exclusivity)					
Lack of transparency					
Lack of benefit sharing					
Infighting					
Lack of mentorship					

2.2 How much impact do you think it would have made if you had access to the following:	High–impact	Medium impact	Low impact
Access to markets			
Access to Strategic Partners (Private/ Public)			

Annexure 5.16: Households questionnaire continues

2.3 How often were you able to engage with the following departments?	Monthly	Quarterly	Annually	Never
Department of Rural Development and Land Reform (DRDLR)				
Regional Land Claim Commission (RLCC)				
Local Municipality				
Department of Environment, Forestry and Fisheries (DEFF)				

2.3.1 If ever there were meetings, explain which was the most discussed issues…...…..............

3. Environment: Ecosystem services and the environment

3.1 Indicate all Ecosystem services that you are able to extract from your forest plantation.

Ecosystem Services	Tick all that apply
Firewood	
Building Material	
Grazing areas	
Commercial Timber (Pulp, Structural poles)	
Medicinal plants	
Water sources	
Crafting materials	
Food sources (mushrooms, fruits)	

Annexure 5.17: Households questionnaire continues

3.2 Indicate all Ecosystem Services that you would expect to gain from forests but not available.

Ecosystem Services	Tick all that apply
Firewood	
Building Material	
Grazing areas	
Commercial Timber (pulp, banana poles)	
Medicinal plants	
Water sources	
Crafting materials	
Food sources (mushrooms, fruits, honey)	

3.3 Indicate how the following have been impacted as a result of forestry projects not being functional

	Highly impacted	Impacted	Uncertain	Least impacted
Availability of wild/ forest animals (antelopes, porcupines)				
Sufficiency in forest products (Commercial timber, Firewood, building material, grazing areas, food sources)				
Frequency of fire occurrences				

3.3.1	0-30min	1-2hrs	2-3 hrs	3-4hrs	4-5hrs
How much time do you spend collecting forest products					

Annexure 5.18: Households questionnaire continues

3.3.2	0-5KM	5-10KM	10-15KM	15-20KM	25-30KM
How long is the distance you travel to collect forest products?					

3.3.3	Throughout the year	Only During fire season (May - Oct)	Uncertain	About 3-4 times a year	Almost never
How often do you experience forest/veld fires					

3.3.4	Very easy	Fairly easy	Fairly difficult	Very difficult	I don't know
How easy it is to find resources to combat veld fires in your farm?					

4. Economic:

4.1 Which benefits has your household obtained from Commercial Forest Plantation in your project?

None	
Job opportunity	
Business opportunity	
Skills Development (technical, financial, entrepreneur)	
Other specify:	

Annexure 5.19: Households questionnaire continues

	Strongly agree	Agree	I don't know	Strongly Disagree	Disagree
4.1 Do you believe that livelihoods would improve if forestry farms were operational?					

5. Intervention measures on forest plantation management

5.1 How do you feel about the statement below:

	Strongly agree	Agree	I don't know	Strongly Disagree	Disagree
Collective land ownership contributes to failure of land reform projects in forestry					
Participatory Forest Management (PFM) promotes the quality of life of the rural community					
Collective land ownership makes the distribution of benefits difficult					

5.2 Are you aware of the list of beneficiaries that is compiled for the purpose of recording the land claimant beneficiaries?

☐ Yes

☐ No

5.3. Do you have an existing committee in place?

☐ Yes

☐ No

5.4 Indicate which manner do you prefer to manage forestry farms?

	Most preferred	Preferred	Neither	Fairly Preferred	Least preferred
Individual					
Group					

Annexure 5.20: Households questionnaire continues

5.6. How would you rate the present condition on the farm?

☐100% destroyed

☐70% destroyed

☐50% destroyed

5.7 What do you think has been the cause of the poor condition of the farm or to be at the state at which it is right now?

………………………………………………………………………………………………

5.8 Rank the following, based on your perception as intervention measure that can work to revive the farm in your community?

	Most preferred	Preferred	Neither	Fairly Preferred	Least preferred
Households plot allocation					
Partnerships (Joint venture, PPP, strategic)					
Participatory Forest Management					
Agroforestry					
Lease back to previous owner					

Annexure 5.21: Focus Group Discussion Questionnaire

ASSESSING THE DRIVERS OF LAND ABANDONMENT IN AFFORESTED LAND REFORM PROJECTS

FOCUS GROUP DISCUSSION: COMMITTEE MEMBERS/ SENIOR GROUP/ YOUTH

1: Respondents Biographic Information

Gender	1	2
	Male	Female

Age category	Category 1	Category 2	Category 3	Category 4	Category 5
	18-35	35-55	55-65	65-75	>75

Marital Status	1	2	3	4
	Single	Married	Divorced	Widowed

Educational Level	1	2	3	4
	Tertiary	Secondary	Primary	Illiterate

Employment status	1	2	3	4	5
	Full-time	Seasonal	Unemployed	Pensioner	Student

Annexure 5.22: Focus Group Discussion questionnaire continues

Source of income	1	2	3	4	5
	Gov grants	Business	Labour	Forestry	Other….............

Levels of Income/month	1	2	3	4
	<R1000	R1 000 - R 2000	R2 000 - R5 000	>R5 000

2. Describe the condition (s) of the land (Farm) when it was transferred to you, and compare the status now?

……………………………………………………………………………………………
……………………………………………………………………………………………

3. What has led to the present condition of the farm (Possible drivers of forestry land abandonment)

……………………………………………………………………………………………
……………………………………………………………………………………………

4. The survey indicated that Partnership (Joint venture, PPP, Strategic); PFM, Agroforestry as the most preferred manner of forestry farm management. Therefore, explain how would you like to be assisted?

……………………………………………………………………………………………
……………………………………………………………………………………………

5. During the survey you indicated that FIRES has been a measure challenge in your farm, explain how you will control/ prevent fire occurrences in your farm?

……………………………………………………………………………………………
……………………………………………………………………………………………

6. Based on your perception as INTERVENTION MEASURES, discuss what intervention measures are needed to revive the farm in your community?

……………………………………………………………………………………………
……………………………………………………………………………………………

Annexure 5.23: Attendance register- focus group discussion

NAME & SURNAME	NAME OF CPA	POSITION IN CPA	SIGNATURE