

Empowerment of small-scale communal forest
growers based on four case studies: opportunities,
challenges, and risks – towards a sustainable
solution

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DEDICATION

This thesis is dedicated to my parents, Vusumuzi Victor Mkwalo, and my late mother, Nomvulo Irene Mkwalo; my wife, Mbali Protasia Mkwalo, and my children, Lukhanyo, Yolisa and Olethokuhle, for their words of wisdom, emotional support, and constant prayers.

DECLARATION

I, Andile Churchill Mkwalo, student number 44653131, declare that:

- i. The research findings reported in this thesis, except where otherwise indicated, are those issuing from my original research.
- ii. This thesis has not been submitted for any degree or examination at any other university.
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Signature

25/07/2023

Date

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SUMMARY

The purpose of this study is to assess the challenges, opportunities, and risks of small-scale communal forest projects across four communities in South Africa, and through this, to make a contribution to the neglected topic in the field of Geography of the commercial sustainability of traditional rural communities. The study is situated within the broader concerns of the levels of impoverishment amongst South Africa's rural poor and the urgent need to expand the forestry industry and address the looming timber shortage. It examines small-scale communal forest projects at the intersection of the rural development discourse, people-centredness and community participation.

Descriptive analyses were used to determine the socio-economic characteristics and demographics of households and community participants in the study areas; the multinomial regression model was used to determine the benefits, challenges and risks experienced by households across all four projects (i.e., Mkhambathi, Sinawo, and Ntywenka in the Eastern Cape Province and Mabandla in KwaZulu-Natal).

The main challenges highlighted in the household interviews, focus group and key informants' discussions revealed five major challenges: fires (i.e., forest fires [79%]), crime (timber theft [70%]), reduction of grazing land (45%), water shortages (4%) and lack of employment (32%).

The study further indicates that there are opportunities as 80% of the sampled households perceived participation in the forest communal projects as a means to alleviating poverty. This is confirmed by the significant relationship ($p < 0.001$) in the perceptions of household respondents on job creation. In the Sinawo project, 99% of the households perceived that job creation was due to the establishment of forest plantations in their area, the highest when compared to the other projects (i.e., 74% for Mkhambathi; 61% for Mabandla; and 39% for Ntywenka).

The experience of community owned plantations in the Mabandla project clearly indicates that with adequate support, local communities can run plantation enterprises generating year-round employment and sustainable annual incomes. The study

recommends as key ingredients for success: access to grant funding to leverage loans from a development finance institution such as the IDC; providing new entrants with the necessary technical and managerial support; and mentorship arrangements such as those provided by SAPPI, ECRDA and PG-Bison.

Keywords: Afforestation, Community, Community Forestry, Forestry Resources, Land Reform, Poverty, Small-scale Community forestry, Strategic Partnership, Sustainable Development, Rural Development.

LIST OF ACRONYMS

APS	Afforestation Permit System
ARC	Agricultural Research Council
AsgiSA	Accelerated and Shared Growth Initiative for South Africa
B-BBEE	Broad-based Black Economic Empowerment
BEE	Black Economic Empowerment
CARA	Conservation of Agricultural Resources Act
CASP	Comprehensive Agricultural Support Programme
CIS	Co-operative Incentive Scheme
CPAs	Communal Property Associations
CRDP	Comprehensive Rural Development Programme
CSIR	Council of Science and Industrial Research
DAFF	Department of Agriculture, Forestry and Fisheries
DALRRD	Department of Agriculture, Land Reform and Rural Development
DEA	Department of Environmental Affairs
DFFE	Department of Forestry, Fisheries and the Environment
DFID	Department of International Development
DLA	Department of Land Affairs
DRDLR	Department of Rural Development and Land Reform
DTI	Department of Trade and Industry
DWA	Department of Water Affairs
DWAF	Former Department of Water Affairs and Forestry
ECRDA	Eastern Cape Rural Development Agency
EIA	Environmental Impact Assessment
EPWP	Expanded Public Works Programme
ESTA	The Extension of Security of Tenure Act
FAO	Food and Agriculture Organisation
FIETA	Forest Industries Education and Training Authority
FED	Forest Enterprise Development
FPAs	Forestry Protection Associations

FPO	Forestry Protection Officer
FSA	Forestry South Africa
HWSETA	Health and Welfare SETA
IDC	Industrial Development Corporation
IDP	Integrated Development Plan
IFC	International Finance Corporation
IPAP	Industrial Policy Action Plan
IPILRA	Interim Protection of Informal Land Rights Act
ISRDP	Sustainable Rural Development Programme
IUCN	International Union for Conservation of Nature and Natural Resources
KLF	Komatiland Forests
KZN	KwaZulu-Natal
LCC	Land Claims Commission
LED	Local Economic Development
LRAD	Land Redistribution for Agricultural Development Programme
LTA	Labour Tenants Act
Ltd	Limited
MAR	Mean Annual Runoff
MLT	Mkhambathi Land Trust
MCPA	Mabandla Communal Property Association
MCT	Mabandla Community Trust
MoU	Memorandum of Understanding
NCOP	National Council of Provinces
NCT	National Co-operative Timber
NDP	National Development Plan
NFA	National Forest Act
NFDRS	National Fire Danger Rating System
NEMA	National Environmental Management Act
NEMBA	National Environmental Management: Biodiversity Act
NIPF	National Industrial Policy Framework
NTFP	Non-timber Forest Products

NVFFA	National Veld and Forest Fire Act
NWA	National Water Act
NWRS	National Water Resource Strategy
OECD	Organization for Economic Coordination and Development
PES	Payments for Ecosystem Services
RDP	Reconstruction and Development Plan
REDD+	Reducing Emission from Deforestation and Forestry Degradation
RSA	Republic of South Africa
SABIO	South African Bee Industry Organisation
SABS	South African Bureau of Standards
SAFCA	South African Forest Contractors Association
SAFCOL	South African Forestry Company Limited
SAPPI	South African Pulp and Paper Industries
SAUPA	South African Utility Pole Association
SAWPA	South African Wood Preservers Association
SCPA	Sinawo Communal Property Association
SFRA	Stream Flow Reduction Activity
SEDA	Small Enterprise Development Agency
SLAG	Settlement for Land Acquisition Grant
SMME	Small, Medium and Micro Enterprises
SSFE	Small-scale Forest Enterprises
TRACOR	Transkei Agricultural Corporation
TUP	Temporary Unplanted Areas
UN	United Nations
UNEP	United Nations Environmental Programme
WFW	Working for Water
WreMP	Water Resource Modelling Platform

CHAPTER ONE: GENERAL OVERVIEW

1.1 INTRODUCTION

This study is positioned at the juncture of two main challenges: Firstly, poverty amongst post-apartheid South Africa's rural tribal communities, many of whom have not been integrated into the formal economy, and, secondly, the urgent need to expand the country's forestry industry. The purpose of the study is to investigate whether the involvement of four rural African communities with formal community forest projects can be regarded as successful. To this end, the study, in an effort to assess the commercial sustainability of traditional rural communities, investigates the challenges, opportunities and risks involved in these small-scale community forest projects. This chapter provides an overview and outline of the study. The section below provides the contextual background of the study, specifically, poverty among rural communities and the role of forestry resources in South Africa. After providing the context, the chapter discusses the rationale and motivation, problem statement, aim and objectives, theoretical framework, the approach to and the value of the research. The final section of the chapter presents the chapter overview.

1.2 CONTEXTUAL BACKGROUND

1.2.1 Poverty among Rural Communities: a global and local overview

Poverty is defined by some as "absolute poverty" or the lack of basic needs, namely for clean air and water, food, shelter, clothing, and physical and emotional security. In its extreme form, absolute poverty can be defined as the inability of an individual, community or nation to satisfactorily meet their basic needs (Beegle and Christiaensen, 2019; Govender et al., 2007; Weigel, 1986).

The causes of poverty are widespread and often unique to a specific country or region. A common approach to deal with the multidimensionality of poverty is the use of aggregated indices. A well-known example is the Human Poverty Index (HPI) (UNDP, 2010).

Crucially, poverty is caused not only by a lack of money. Various other factors contribute to poverty. They include physical factors, such as poor soil and unreliable rainfall, social factors such as a lack of skills and knowledge, political factors, such as a lack of government commitment, corruption, and nepotism, and economic factors such as a lack of capital, credit and equipment (Burkey, 1993).

According to the World Bank Report of 2020, about 9.2% of the world, or 689 million people, live in extreme poverty on less than \$1.90 a day. Regionally, most countries in sub-Saharan Africa (SSA), marked by very low saving rates and a low per capita gross domestic product (GDP), are in urgent need of substantial public investments through external assistance to reverse the current ever-increasing poverty trends.

It is important to note that despite political and societal global efforts to reduce poverty and address food insecurity, economic inequality is increasing across the developed and developing world alike. Against this background, many world leaders have agreed to an ambitious development agenda to end poverty and hunger by 2030. The so-called Agenda 2030 for sustainable development explicitly recognises the central role that rural development plays (IFAD, 2016). According to IFAD (2016), smallholders still dominate agricultural systems in developing countries and they therefore remain key to food security. However, they also face long-standing barriers to accessing resources, technology, inputs, finance, knowledge, and markets. As a result, smallholders lack resilience and the capacity to take advantage of emerging opportunities. Therefore, although global economic changes offer the possibility of accessing new markets, expanded entrepreneurship and new types of livelihoods in the agrifood sector and beyond, the barriers are often still too great for individual rural women and men. Therefore, transformation in rural areas is urgently needed to enable rural people to meaningfully capitalise on the changes taking place in the world around them, rather than for them to be further marginalised by these changes.

In general, historical challenges around poverty in rural communities have led to a rethinking of rural development in the 21st century (Organisation for Economic Co-operation and Development (OECD), 2016; Ashley and Maxwell, 2001). The 1950s especially marks a period in which perceptions on rural development were evolving, specifically concerning the alleviation of poverty, through the creation of livelihood

opportunities in rural areas. Despite these efforts, however, most developing countries in sub-Saharan Africa (SSA) and Asia still have high rates of rural poverty (IFAD, 2019; OECD, 2016, 2017). As will be illustrated below, South Africa is no exception.

In this regard, it is important to note that rural areas are heterogeneous and rural development strategies must take this heterogeneity into account. Strategies need to be tailored in such a way to account for the specific conditions in an area; in fact, earlier approaches to rural development failed to consider this as previous rural development strategies focused mainly on agricultural development and failed to consider the importance of developing non-agricultural economic activities (Lobao and Sharp, 2013; Ellis and Biggs, 2001).

What is needed, is an approach that is concentrated on reducing poverty and improving rural people's wellbeing through agricultural development, human development, social and economic development, and the protection of the environment (IFAD, 2016). This means that rural development should be done differently - in a way that ties in with the 2030 Agenda for Sustainable Development (Sustainable Development Goals (SDGs)). To achieve the 2030 Agenda for Sustainable Development, rural development should be put at the centre of national development strategies. This requires the development community to refocus its attention on rural people and on direct and adequate investment in rural areas (IFAD, 2019; OECD, 2016).

Rural poverty is a global concern. It is not a recent phenomenon, and it persists regardless of the fact that rural development has been put at the centre of development efforts for the last several decades (Ellis and Biggs, 2001). What is more, rural poverty is unevenly spread across the regions of the developing world. In Africa, rural poverty is severe and various reports indicate that poverty increased significantly during the 1980s and 1990s, leading to the "Africanisation of global poverty" (White and Kellick, 2001).

In the case of Africa, most of the rural population are engaged in agriculture and their livelihoods depend on it (Biewenga, 2009). However, in many of the countries, subsistence agriculture, which predominates, fails to meet the basic needs of

individuals and thus poverty continues in its downward spiral. Environmental degradation is the final outcome as the fight for survival and livelihoods ultimately results in the exploitation of natural resources (e.g., wood, marine life, and wildlife (Cleaver, 1997:2). As a solution to the ongoing problem of poverty, planners and developers see the important role that the modernisation of agriculture and its subsectors (e.g., tree plantations) can bring as crucial to rural development in Africa.

Locally, as it concerns South Africa, the country's colonial and apartheid history has played a central role in negatively affecting emerging black entrepreneurs, particularly entrepreneurs in rural areas and women (Lewis et al., 2004). The segregation laws of the apartheid era excluded the black South African population from owning certain assets and restricted their participation in economic activities. The black South African population had limited access to education, were often spatially displaced, and could not own the main factors of production, including land. Restrictive property rights meant that most black South Africans were without land and as such could not effectively participate in agricultural or forestry activities (Hoole, 2008; Clarke, 2006).

As a result of the political conditions as outlined above, the South African agricultural sector has developed into a dualistic agricultural economy, with well-developed commercial farming on the one hand, up until the early 21st century, dominated by the white population, and a more subsistence-based type of farming, dominated by black farmers, especially in the deep rural areas. As commented by Sihlobo and Kirsten, 2021, this situation resulted in a "problematic conception" of commercial agriculture as governed by a "racially segregated bureaucracy and exclusive technocracy". The commercial agricultural sector was characterised by a modern industrialised economy and existed alongside a subsistence (traditional) economy (Ellis, 1993; Biepke, 2007). Most of the disadvantaged black farmers in the subsistence economy are not part of mainstream agriculture and are generally confined to overcrowded semi-arid areas in the former homelands. The type of subsistence farming that they practise is characterised by limited access to land, inputs, and crucially, credit, and thus to low production levels.

In the South African context, and particularly with reference to post-apartheid South Africa, transformation efforts have been uppermost as a means to mitigate poverty

and underdevelopment (The Presidency, 2011). According to World Bank Indicators (2020), South Africa is still one of the poorest countries in the world. Although South Africa has made progress in reducing poverty since 1994 (the advent of democracy), the trajectory of poverty reduction was reversed between 2011 and 2015, threatening to erode the gains made since 1994 (Stats SA, 2014). Approximately 55.5% (30.3 million people) of the population live in impoverished conditions at the national upper poverty line (~ZAR 992), while 13.8 million people (25%) are experiencing food poverty. Similarly, poverty measured at the international poverty lines of \$1.90 and \$3.20 per person per day (2011 PPP) was estimated at 18.9% and 37.6% in 2014/15, up from 16.6% and 35.9% in 2010/11, respectively. Furthermore, South Africa is one of the countries in the world with the highest level of inequity (a Gini index of 63 in 2014/15). Inequality is high, persistent, and has increased since 1994. High levels of income polarisation are manifested through very high levels of chronic poverty, few high-income earners, and a relatively small middle class (World Bank Indicators, 2020). Unlike absolute poverty, chronic poverty is where chronically poor people experience deprivation over many years, often over their entire lives, and frequently pass poverty on to their children (Shepherd, 2015).

Therefore, as in many other developing countries, there is an urgent need in South Africa to address the issue of poverty and to incorporate poverty reduction policies into development strategies. Roughly 72% of South Africans live in impoverished rural areas (Ngumbela et al., 2020). Most people within South Africa are in agreement about the need to address and reduce poverty (Sulla and Zikhali, 2018). This is evidenced by several national initiatives that have attempted to identify ways to reduce poverty and unemployment (e.g., the 1998 Presidential Jobs Summit, the 2003 Growth and Development Summit, and the subsequent provincial Growth and Development initiatives, to name a few). In addition, high levels of public engagement around poverty have been championed by, amongst others, former President Nelson Mandela and Emeritus Archbishop Desmond Tutu and their respective philanthropic trusts. South Africa has also seen a very large increase in the rate of corporate social investment in recent years, and there are numerous individuals donating to charities, especially to religious organisations addressing various states of vulnerability (Studies in Poverty and Inequality Institute, 2007). Poverty reduction has therefore been on the national and social agenda for a long time. The Reconstruction and Development

Programme (RDP) (1994) and the National Development Plan (NDP) (2011:24) reiterated that *'no political democracy can survive and flourish if the mass of our people remain in poverty, without land, without tangible prospects for a better life; attacking poverty and deprivation must therefore be the first priority of a democratic government'*.

The NDP and Vision for 2030 forms the most current guiding framework for development in South Africa. It is anchored in two fundamental objectives, namely, the elimination of poverty and a reduction in inequality (National Planning Commission, 2011) and provides a "development *map or vision towards which all development efforts of the country should converge*" (The Presidency, 2011). As such, it is directly linked to one of the central concerns of this study, namely, to address poverty, unemployment, and inequality - the ultimate developmental challenges of South Africa. The plan's success will be measured by the degree to which the lives of and opportunities for the poorest South Africans are transformed in a sustainable manner (Stats SA, 2014). It is also important to note, as mentioned by Clarke (2006), that the democratic government elected in 1994 introduced new land policies to improve the tenure rights of all citizens in South Africa (Pasensie, 2010).

Despite the above-mentioned visions and initiatives for the country, poverty and inequality are still rampant. There is also disagreement about both the pace and the choice of paths to end poverty, including questions revolving around the land reform programme and the allocation of state resources (Studies in Poverty and Inequality Institute, 2007). What is important for the purposes of this study is that the goals formulated in the rural development agenda, and the directions envisaged for reaching them, as well as, on a larger scale, the relevant global and national macro economic frameworks generally impact negatively on the impoverished rural population and their geographic space. In this context, 'geographic space' refers to the environment surrounding them that is characterised by natural resource depletion and inequalities in the distribution of resources, as well as the lack in the value attached to the rural people and their space. The fact that the people and the space that they occupy and that infringes on them is undervalued is obvious. The high levels of underdevelopment in the rural areas bear testimony to this. They are marked mainly by an insufficiency of capital inputs, which is particularly the case in those areas accommodating the poor.

There is agreement regarding the fact that forestry alone cannot lift people out of poverty (Miyamoto, 2020; Sunderlin et al., 2003). One of the reasons for this is that although poverty is largely about material wealth, it also involves non-material development and the empowerment of the rural poor. This reasoning is central to the development of this study, namely, to investigate whether forestry could contribute to alleviating poverty, specifically, through a stronger focus on the empowerment of the rural poor, by making them equal partners in forestry activities instead of dependents on the key contributors involved in forestry development activities.

The discussion above indicates that poverty is a global phenomenon. As mentioned, this study is positioned at the juncture of poverty amongst South Africa's rural tribal communities and the need to expand the forestry industry. Poverty is, therefore, central to this study. To reiterate, poverty exists in both the poor developing countries and in the developed countries (Shah, 2011). The global economic divide is ever increasing. As such, the international arena should regard a reduction in poverty on a global scale as a matter for concern and put their weight behind it (Son, 2015). In South Africa, The Presidency (2011) admits that poverty is a challenge with effects that closely align with those of unemployment and inequality. Therefore, poverty reduction is and should form part of the long-term and regular development strategies of most countries (Son, 2015; Shah, 2011). Community forestry, the focus of the study, is a potential means to include in a development strategy to reduce rural poverty.

1.2.2 Forestry Resources in South Africa

According to the National Forest Act (Republic of South Africa (RSA), 1998a), forest resources are divided into three main types, namely, natural forests, woodlands, and forest plantations (DAFF, 2010a). Natural forests are those that can reproduce naturally (excluding invader trees). Natural forests cover a smaller land area when compared to woodlands, i.e., only about 0.4% of the country's land area (DWAF, 2005). Woodland areas are primarily used for firewood and livestock farming and cover about a third of the country's land area (DWAF, 2005). Other uses for woodlands include herbs for medicinal purposes and food products (Shackleton and Shackleton, 2004; Bailey et al., 1999). Forest plantations cover about 1.3 million hectares (Mudombi, 2020; Forest Stewardship Council (FSC), 2017; Ledger, 2017; Scott and

Gush, 2017), amounting to about one percent (1%) of the total South African land area of 122.4 million hectares (Mudombi, 2020; Who owns Whom, 2018; DAFF, 2016). These forest plantations are mostly used as commercial plantations, where industrial forestry grows species such as eucalyptus, pines, and wattle for commercial purposes. Industrial forestry is responsible for the value chain production of timber, pulp, and paper products (DAAF, 1996).

When it comes to the geographic distribution of these forest plantations in South Africa, 80% of forest plantations are in Mpumalanga, KwaZulu-Natal, and the Eastern Cape Province (DAFF, 2010b) (Figure 1.1). The South African Forestry sector is a high potential growth sector for the national economy and an important development vehicle (DTI, 2007). It is largely dominated by four categories of private growers, namely, large growers (corporate entities, publically listed or with multiple shareholders, vertically integrated across the value chain, companies such as South African Pulp and Paper Industries (SAPPI) and Mondi (these growers are also normally referred to as commercial forestry growers)); medium growers (commercial timber farmers with family shareholders); and small-scale growers (small ventures usually run and managed by family members – mostly on communal land), and South African Forestry Company Limited (SAFCOL) – a state-run enterprise which is currently being privatised (Clarke, 2018; DAFF, 2016).

According to DAFF (2016), the commercial forestry growers' control most of the forest plantations in the country, which amounts to about 50%, followed by medium growers at 17%, corporates (ex-SAFCOL) at 12%, SAFCOL at 10%, and the state at seven percent (7%). Small-scale growers amount to about four percent (4%) (Figure 1.2). In addition, there are several independent commercial growers producing trees on privately owned farms that are not classified as communal land, with areas of between 50 ha and 3000 ha. These growers supply timber to either SAPPI or Mondi, or to marketing co-operatives such as Natal Co-operative Timber (NCT) (Lewis et al., 2004). In addition, there are large numbers of independent small-scale producers (which are primarily black farmers) that grow trees on communal land. It is estimated that there are approximately 14 000 individuals operating in out-grower schemes, which is a contractual agreement between private forestry companies and communities which own land suitable for forestry, or other small grower schemes

(Cairns, 2000). These small-scale communal grower holdings can be well over 50ha, but the vast majority are likely to be under five hectares or even as small as half a hectare (Ngubane, 2005).

The latter growers also attempt to sell their timber to SAPPI or Mondi, or through co-operatives such as NCT (Lewis et al., 2004). SAPPI and Mondi have launched out-grower schemes called SAPPI Project Grow in 1983 and Khulanathi in 1989 respectively (Howard et al., 2005). Through these schemes, the companies assist small-scale communal forestry growers in rural areas to establish plantations by providing extension services and seedlings, as well as training in a range of basic forestry skills in the first cycle. At the end of the growing cycle, the companies purchase the timber at a negotiated rate in terms of mutual agreements (Lewis et al., 2004). These small-scale communal growers therefore have more security in terms of support and information during the first growing cycle, as well as inputs and a market on felling, than the independent small growers (Ngubane, 2009; Lewis et al., 2004).

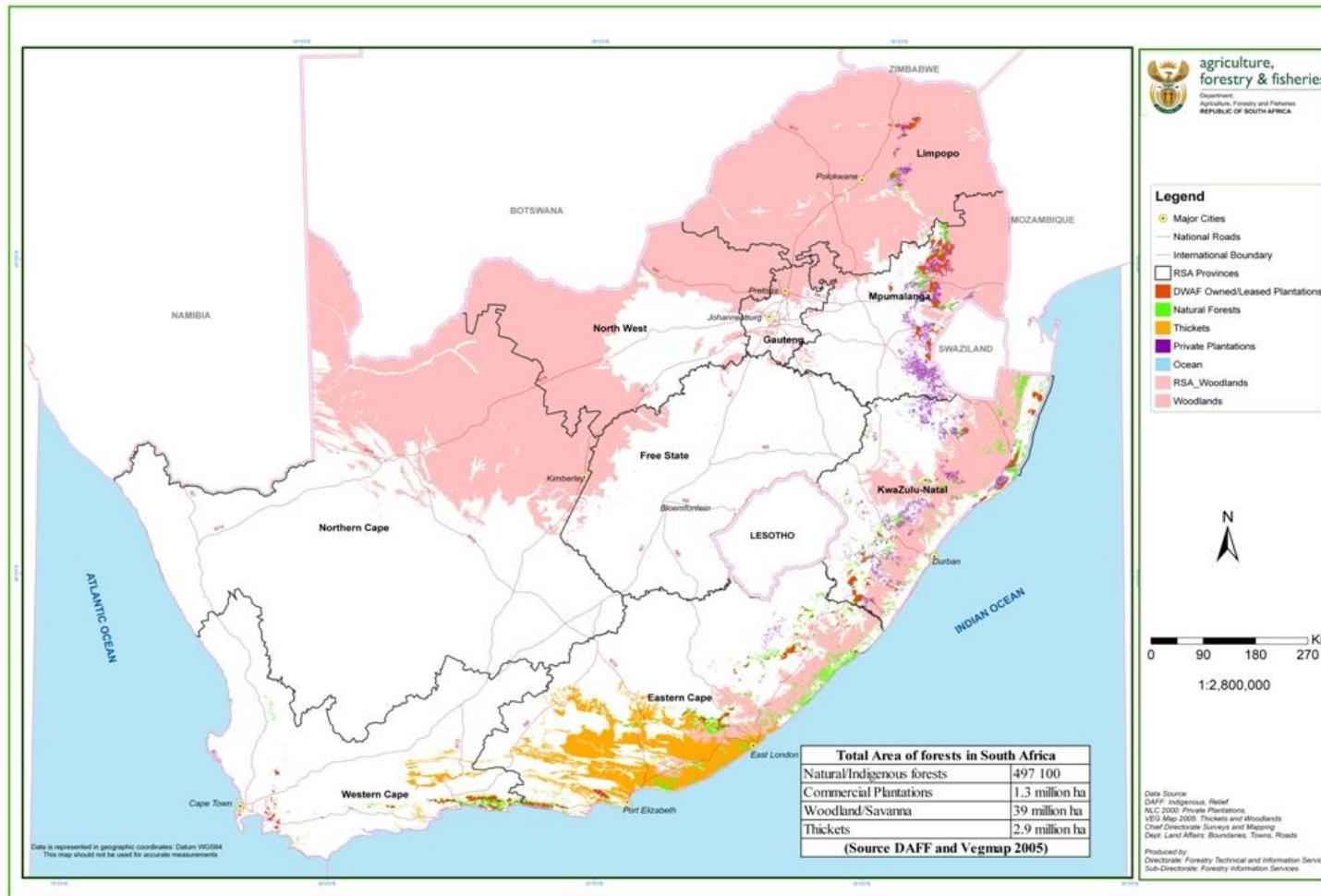


Figure 1.1: Distribution of Forestry Resources in South Africa
Source: DAFF (2015)

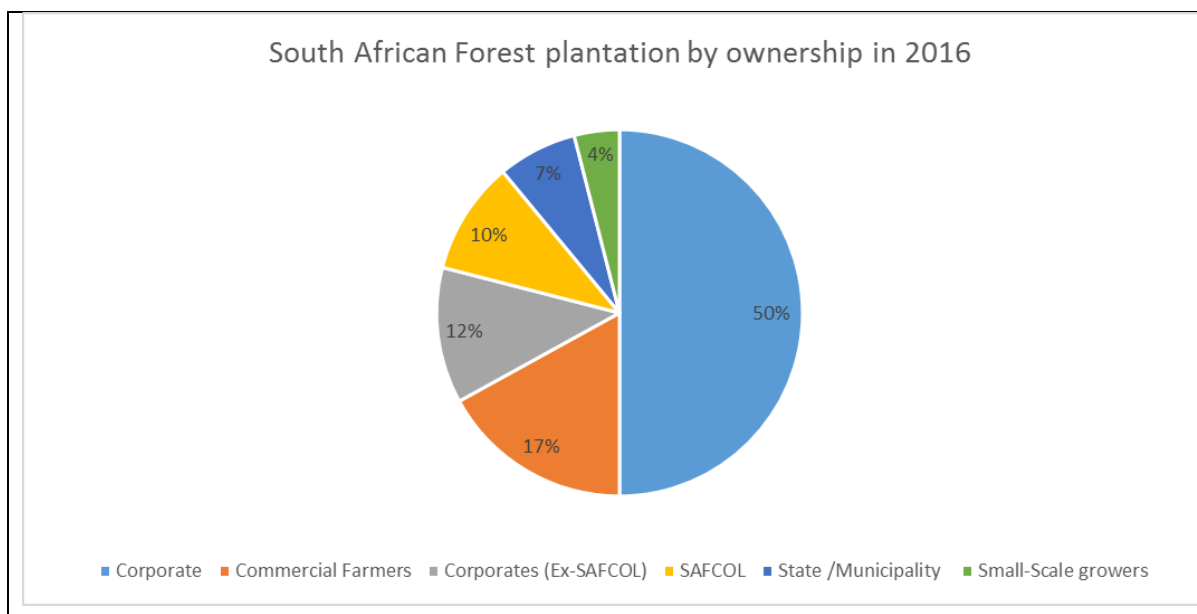


Figure 1.2: Forestry Plantation ownership in 2016
Source DAFF (2016)

The demand for timber in South Africa is expected to grow more rapidly than the economy (Slee et al., 2004). The consumption of timber for industrial purposes in South Africa is expected to double from the current 16 million m³ per annum between 2025 and 2050 (Crickmay et al., 2010; Crickmay and Associates, 2005). The main drivers here are population and development (i.e., economic growth), which are expected to result in per capita increases in consumption of such commodities as paper and packaging and will together significantly increase the gross domestic demand for products based on timber (Bennett and Kruger, 2013). According to Crickmay and Associates (2005; 2010), the demand is to be met through the domestic production of raw materials and a balance is to be achieved by the year 2025. This then means that another 300,000 hectares of afforested land will be needed in the coming decade or so. One of the main questions of this study, and that will be elaborated on below, involves the extent to which small-scale communal forest growers can contribute to the growing need for timber. Chapter 3 examines the different categories of contributors in the small-scale community forestry.

To conclude this section, it is important to note forestry's role in alleviating poverty. Although this aspect is examined and demonstrated in the chapters below, it becomes necessary, at this juncture, to briefly indicate that internationally, people's dependence on forests is well recognised. More than 1 billion people worldwide depend on forests

for their livelihoods. Most forests are located within rural and remote areas, making them important resources for the rural poor who rely on them for income generation to sustain their livelihoods (Mayers et al., 2016; Jele, 2012).

Similarly, in South Africa, forestry is often practised in areas of extreme poverty where rural communities depend on forests for their livelihoods. These communities live in conditions where they are deprived of and/or lack the essentials for a minimum standard of well-being and quality of life. It can be argued that forestry can contribute to the livelihoods of the rural poor in various ways (Jele, 2012). These include direct-use functions where the rural poor use forest products in the place of expensive alternatives or where, in difficult times, they depend on forests as a haven to fulfil their needs for safety and security. Rural communities can also benefit directly from forests by trading in forest goods and services (Paumgarten and Shackleton, 2011; Shackleton et al., 2008; Shackleton and Shackleton, 2004). Forestry activities also bring in incomes in the form of salaries and wages received for either formal employment by forestry companies or informal employment by other members of forestry-dependent communities, for example, timber out-growers (Clarke, 2018).

1.3 RATIONALE AND MOTIVATION

The current levels of economic inequality between people in rural and urban areas, significant rural impoverishment, and the low standard of living amongst the rural population are unsustainable and unacceptable. For many years, community development scholars have demonstrated a link between community development and poverty reduction (Swanepoel and De Beer, 2011; Motherway, 2006; Yanagihara, 2001). Many governments in developing countries have readily accepted this causality. The idea is that poverty levels decrease when community development practitioners implement community development strategies to improve the quality of life of poor communities (Swanepoel and De Beer, 2011).

This theoretical link between the development of the community and a reduction in poverty goes back to the early 1960s; originating in the modernisation theory that holds that community development is a means of transforming the impoverished agrarian

and traditional nations of the Global South into prosperous liberal democratic societies akin to those in Europe (Midgley and Livermore, 2005). Based on this notion, development agencies working within developing countries designed and implemented programmes based on the idea that community development activities could break the cycle of poverty in rural communities (Swanepoel and De Beer, 2011; Motherway, 2006). This argument has been accepted by politicians and policy makers in many developing countries. However, this link or causality has been increasingly questioned by development scholars —so too the effects of community development practices in developing countries. Erskine et al. (1994), for example, indicate that successful implementation of rural community development initiatives requires the participation of the beneficiaries in the formulation and implementation of the project, as well as human resources development through appropriate training. According to Douglas (1983) and Fox and Webber (1981), contemporary rural community development should be directed primarily towards promoting change to simultaneously affect the distribution and growth of income, employment, nutrition, health, and other dimensions of the quality of life in rural areas.

In this study, the focus is on small-scale communal forestry. Community forestry can significantly aid rural community development, both economically and socially, if properly planned and targeted. Community forestry can be a vehicle for long-term social upliftment and development through the promotion of welfare, the provision of and access to a social infrastructure, and the development of a skills base (Njana et al., 2013; Cortez (undated)). Edwards (1994) also indicated that forestry has the potential to play a major role in the employment of the rural population, and through extensive facilities provided by the forestry industry in South Africa, people are and can be empowered through training and education, which enables them to be part of the economy.

As mentioned above, the anticipated potential demand for timber in South Africa is estimated at between 30 and 35 million cubic metres per annum by the year 2025 (Crickmay and Associates, 2005; 2010). According to De Beer et al. (2012), the continual decline in the area occupied by forest plantations will possibly harm the country's economy, local employment, and the development of forestry-related businesses. It thus appears that without any further creative strategies (considering

the inclusion of small-scale communal forestry growers for example) or afforestation; a timber resource shortage is likely to become a reality soon (Crickmay et al., 2010; Chamberlain et al., 2005; Crickmay and Associates, 2005; The Southern African Institute of Forestry, 2000). Thus, the development of intervention strategies is needed to combat the looming timber shortage.

Furthermore, and as mentioned above, the forestry production industry in South Africa is large and diversified, ranging from major corporate enterprises such as SAPPI and Mondi, to large-scale forestry growers and smaller independent communal forestry growers. In South Africa, 79% (1.041, 502ha) of forestry plantations are owned by the private sector; 17% (215,839ha) by the public sector and four percent (4%) (17,528ha) by small-scale communal growers (Godsmark, 2012; 2017). The small-scale communal forestry growers' sector is one of the sectors identified as a key growth area in terms of the Accelerated and Shared Growth Initiative of South Africa (Asgi-SA) (Keet, 2010). It is worth noting that Asgi-SA aims to reduce poverty and unemployment and help the country to achieve an economic growth rate of six percent (6%) per annum (DAFF, 2015).

One of the forestry production industry's developmental attractions is that it is a rural activity offering opportunities to many of the poorest of the country's black citizens living in rural areas, which include small-scale community forestry growers (Shackleton et al., 2007). These community forests can play an important role in fostering sustainability and livelihoods in rural areas. In fact, community forests have a significant economic impact on the income of the majority of involved rural households (Forestry SA, 2011). Both small-scale communal forestry and commercial forestry directly employed an estimated 165 900 people (GCIS, 2014; Godsmark, 2012), but the number declined to a total of 158 400 in 2015 (Godsmark, 2017). The reason attributed to this decline in employment involves the change in the minimum wage in the sector (Godsmark, 2017).

According to the DAFF (2010b), small-scale communal growers in South Africa have the potential to grow as commercial growers. The small-scale communal forestry sector in South Africa can offer new innovative solutions that could further empower some poor rural communities in the country. Although the small-scale communal

forestry sector in South Africa has grown over the past decade, various challenges remain. Poverty, unemployment, and inequality in the country continue to deny the South African rural poor population inclusion and participation in the productive commercial forestry industry. Unemployment is a major factor in South Africa, trapping some sections of the population in a perpetual state of poverty (Chetty, 2016). According to Chetty (2016), unemployment is fuelled by the country's poorly performing education sector that is plagued by many school system dropouts. Less than half of all school learners complete Grade 12 and less than 10% complete some form of higher education. Therefore, the formal skills base in the country is low, and most of the population are rendered unemployable, especially those living in the rural areas.

The second major factor is the socio-economic divide; a small affluent section of the population continues to move into highly paid jobs and to prosper financially, whilst the poorer majority, the unemployed and semi-skilled, remain either unemployed or feed into the low paying jobs within the economy. This cycle repeats across generations, and most previously disadvantaged groups rarely move out of the poverty trap (Chetty, 2016).

This research study involves small-scale communal forest growers in South Africa and argues that this sector can assist in mitigating the looming timber shortage in the country while concurrently improving their quality of life. The aim is to identify opportunities and interventions for implementation (MacQueen, 2013; Bebbington, 2004). The triple bottom-line framework (focusing on social, environmental, and financial factors) as the yardstick for sustainability is worth revisiting (Bolis et al., 2017; Soubbotina, 2004). Owing to the political history of South Africa, the focus is often more on social wellbeing (NDP, 2011). However, when developing programmes to meaningfully assist poor people, the capacity to sustain such development is key. The other two main components of sustainability – economics/profit and the environment – are of utmost importance to this study (Swilling and Annecke, 2012). As stated by Zukang (2011) and cited in FAO (2012:24): “*Sustainable development is not an option! It is the only path that allows all of humanity to share a decent life on this one planet*”.

Another important aspect of this study involves the potential of out-grower schemes. Various arrangements between companies and communities and/or individuals have emerged, including contracts between large timber companies and small-scale growers. These agreements are referred to as out-grower schemes. They are formalised partnership arrangements, where contracts between two or more parties are brokered for the purpose of bringing together the relevant components of land and capital, management skills, and market opportunities, with the intent to produce a commercial forest crop (Mayers et al., 2001). The aim is to assess whether out-grower schemes contribute to project enhancement and the sustainability of small-scale communal forest growers¹. This will also involve assessing the involvement and participation of both community members and beneficiaries and examining how decisions are undertaken in such projects.

A final important aspect that forms part of the basis of the motivation and rationale of the study involves the legacy of inequitable land redistribution in South Africa. In this regard, South Africa's post-apartheid government embarked on several policy-driven programmes that aim to reduce social inequality and improve the quality of life in poverty-stricken areas.

As this study is positioned at the juncture of poverty amongst South Africa's rural tribal communities and the urgent need to expand the country's forestry industry and rural development, it becomes necessary to examine the policy aims of developing efficient, equitable and sustainable mechanisms for land distribution in more detail. As such, a dedicated section on this issue is provided in Chapter 3.

The problem statement; aim and objectives; and research questions of the study are discussed in the next section.

¹ E.g..when a forest company enters into a partnership arrangement with small-scale growers who have access to the land where the timber can be grown.

1.4 PROBLEM STATEMENT

As discussed above, it is projected that South Africa's local commercial timber industry will not be able in the near future to meet the rising demand for timber and timber products. This may open the market to other countries to meet the shortfall (Crickmay and Associates, 2005), and lead to a situation where South Africa will be importing more timber than is exported. South Africa's annual demand for timber is expected to grow by 4.5%, with a projected supply deficit of 15 million tonnes in the long term (Crickmay et al., 2010). At present, the South African government has identified the potential small-scale community forestry growers in producing and supplying timber, thus missing a huge opportunity to use their timber to reduce the timber deficit in the short term.

The forestry sector is currently faced with several challenges. According to DAFF (2015), these challenges include limited afforestation because of difficulties experienced in the complicated licensing process, under-investment in long-term rotation uses, such as timber for sawlogs, and dominance by a few large, vertically integrated forestry corporations. The existing plantation resources in South Africa are insufficient to supply the growing local demand for timber products. Forestry development has been affected by a decline in timber supply, specifically sawmilling, with the number of sawmills decreasing from 115 in 2004 to 90 in 2010 (DAFF, 2015). Figure 1.3 shows a steady decline in the afforested area from 1996 to 2019 (FSA, 2021; FSA, 2010; DAFF, 2015). However, according to Godsmark (2012), there was a slight increase in planted area in 2012, but it is not known whether this was sustained (DAFF, 2015; FSA, 2014).

It should also be noted that since the introduction of small-scale communal forestry growers through out-grower schemes, their contribution to the supply of and demand for timber has not been measured.

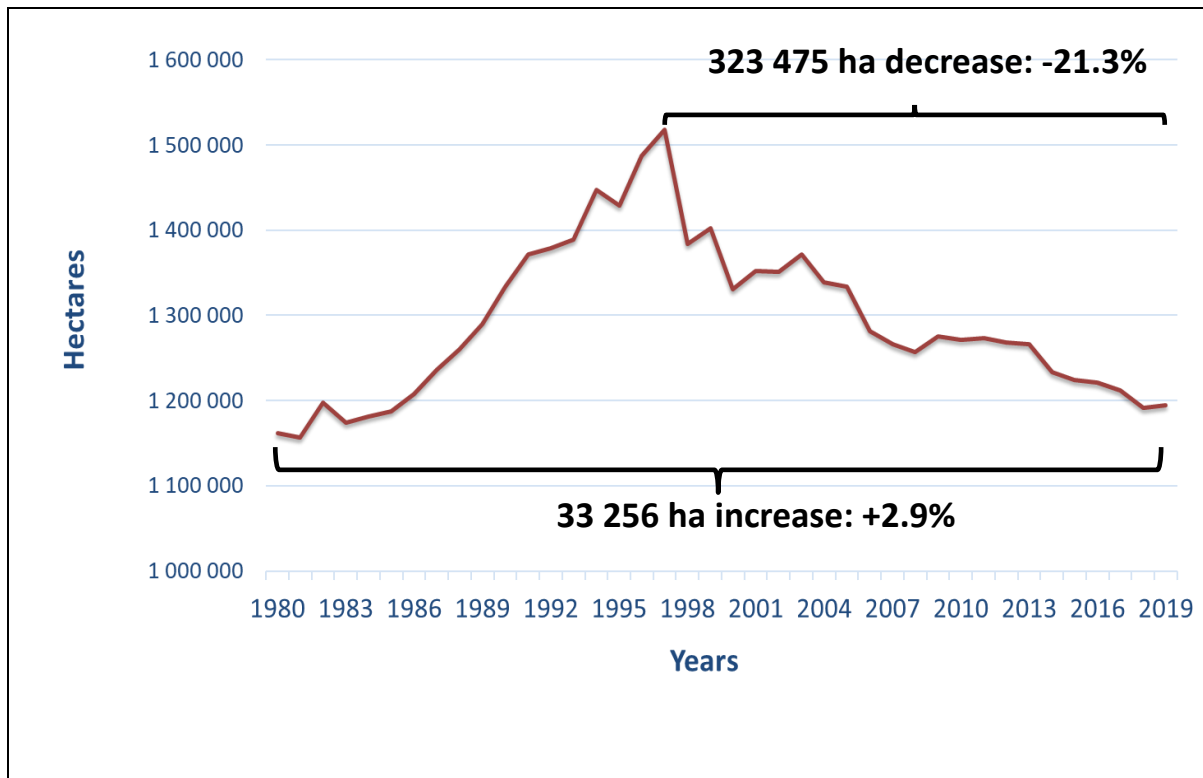


Figure 1.3: South Africa: Total Plantation Area 1980 to 2019
 Source: Forestry South Africa (2014, 2021); DAFF (2015)

Against the background of the discussions above, the following research questions were formulated. The study was guided by central research questions to connect the mixed methods design, data collection, and data analysis phases. The main research questions guiding the study are as follows:

- Can community forestry make an important contribution to ensure a sustainable timber supply in South Africa in the future?
- In addition, is a sustainable relationship between small-scale communal forestry growers and the forestry industry possible?
- Thirdly, can communities become financially sustainable on the basis of community forestry?
- Lastly, what are the main models and approaches to strategic partnerships between private sector actors and small-scale growers?
- Furthermore, what approaches and/or changes are necessary to promote the development of small-scale communal forestry growers to ensure that this sector sustainably increases its contribution to the forestry industry?

1.5 AIM AND OBJECTIVES

The aim of this thesis is to assess the role that could be played by small-scale communal forestry in the looming timber shortage, job creation, economic growth, and rural development in South Africa.

To this end, the study objectives are as follows:

- To analyse the opportunities, challenges, and risks involved in growing trees on a small scale in determining whether community forestry can make an important contribution in ensuring a sustainable timber supply in South Africa in the future.
- To assess the potential sustainability of the relationship between small-scale communal forest growers and the larger private industry and government (i.e., if supportive projects have failed, we need to know why).
- To examine the financial sustainability of community forestry projects for rural communities – this requires an understanding of communal systems of organisation, decision-making rights, and authority structures.
- To investigate the main models and approaches to strategic partnerships between private sector actors and small-scale forest growers.

1.6 THEORETICAL AND CONCEPTUAL FRAMEWORK

1.6.1 Paradigm and Approach

According to Creswell and Creswell (2018), the term “paradigm’ is used to describe a basic set of beliefs that guide actions. Healy and Perry (2000) and Antwi and Hamza (2015) describe a paradigm according to three elements, namely ontology, epistemology, and methodology. These three elements define the approach followed in a study. Bhattacharjee (2012) defines ontology as people’s assumptions of how they see the world. The ontological aspects constitute the science of how things are, the essential features of a phenomenon – and the epistemological aspects – which explain what can be known and how can it be known (Van Der Walt and Potgieter,

2012; Guba and Lincoln, 1994). To the definitions of the above three concepts, Mitchell (2001:125) added the metaphysical “*theory of reality*” as presumption for an ontology (“*theory of what can be known*”), epistemology (“*theory of knowledge production*”), ethics (“*the theory of moral values*”), and methodology (“*the means of knowledge production*”). Paradigms or worldviews can influence the practice of research, even though it may be submerged in the research approach.

Pragmatism is presented as the overarching ‘worldview’ of this study. According to Rossman and Wilson (1985), pragmatists focus on the research problem and questions rather than on the research method. Furthermore, to understand the problems, they use all the approaches available.

The philosophical assumptions and conceptual framework for the convergent mixed methods design, guided by a pragmatism paradigm, provide an umbrella worldview of the study (Creswell and Creswell, 2018; Creswell and Plano Clark, 2018; Morgan, 2017). This paradigm is usually used as an approach for employing mixed methods, as it is important for pragmatists to focus on the research problem in social science research and to follow it up by a pluralistic approach to gain knowledge. Additionally, the pragmatic paradigm opens doors to diverse paradigms, several methods, multiple forms of data collection, and many assumptions. Dalsgaard (2014) supports the view that pragmatism focuses on the truth of an idea or proposition of an observable consequence. Furthermore, pragmatism philosophy aims to uncover the practical knowledge of a case or situation (Biesenthal, 2014). Pragmatism also promotes inquiry focusing on the situation, experiences, or phenomenon to provide a better in-depth understanding of it (Stark, 2014).

The first paradigm that supports the pragmatic approach of the study is post-positivism. The positivist paradigm dates back to the 20th century and the scientific realities of the time. Positivism promotes the use of an objective scientific method in doing research (Creswell and Creswell, 2018; McDougal III, 2011; Guba and Lincoln, 1994). The positivist paradigm epitomises the quantification of variables and the ‘scientific’ investigation of these in search of absolute knowledge and truths. Although classical positivism has been challenged (and somewhat ‘softened’ in its stance) by other opposing paradigms, certain basics of the scientific method have been retained –

leading to the post-positivist worldview. This post-positivist paradigm holds truth for quantitative research but challenges the notion of absolute knowledge when applied in the behavioural domain. This paradigm is relevant to the study in that it underlies the quantitative component of the multi-method tactic applied in this study.

A second paradigm that is relevant to the study is the transformative paradigm. The transformative paradigm includes groups of researchers that are critical theorists; participatory action researchers; Marxists; feminists; specialists on racial and ethnic minorities; persons with disabilities; indigenous and postcolonial peoples; and members of the lesbian, gay, bisexual, transsexual, and queer communities (Creswell and Creswell, 2018). This study is partly founded on this paradigm, as it stresses the need that the politics and political change agenda be intertwined with research related to previous and current social oppression (Mertens, 2010). In this study, the transformative paradigm focuses on the post-apartheid development of previously disadvantaged communities living on traditional communal land.

The third leg on which the overarching pragmatic worldview of this study rests is phenomenology. The discussion of the phenomenological approach deserves more attention than the two paradigms above since it is at the centre of the interaction with the target population in this study. Walmsley and Lewis (1993) define phenomenology as the precise and accurate description and account of the phenomena we encounter in the world, without the distorting influence of *a priori* and unclarified assumptions. Phenomenology focuses on “subjective experience” and on “people’s world awareness” (Banyard, 1996:482), as well as on the reasons for human actions (Layder, 1994). In studies with a phenomenological orientation, the inquirer constructs a rich, detailed experience of a central phenomenon. However, it should be noted that the perception of the central phenomenon is partial and objective (Willis, 2007).

According to Umanilo (2019), the phenomenological approach is used to dissect the human mind through observation and recognition, and to use it as an informant against the social reality that occurs in the community. Umanilo (2019) further explains that researchers take a phenomenological stance to deeply understand the structure of the consciousness of the people who are in a particular situation, and to understand the motives and meaning of their actions that are related to the purpose of survival.

According to Umanailo (2019), phenomenology as a method has four characteristics, namely, descriptive, reductive, essential, and intentional.

The aim of descriptive phenomenology is merely the description of the phenomenon; it does not require that it be explained. It includes any emerging phenomenon, such as the emotions, thoughts, and actions of human beings, and so forth. Phenomenology entails describing the 'thing itself' and 'as it happens'. Secondly, reduction is a process in which the assumptions and prejudices about the phenomenon are examined to ensure that biases do not taint the description of the observations, but that the form of the description is confined to the things themselves. Thirdly, essence is the core meaning of individual experiences in certain phenomena as they are. It is the search for the "essence of things" that cannot be revealed by ordinary observation (Moustakas, 1994; Sanders, 1982). Lastly, phenomenology uses two concepts, *noesis* and *noema*, to express intentionality and experience as realities. *Noema* is an objective statement of behaviour or experience as a reality, while *noesis* is a subjective reflection (consciousness) of the objective statement.

Hence, the phenomenological approach adopted in this study and in the collection of information relating to community decision-making provided the opportunity for members of the community to express their own feelings about the factors that they regard as important in land-use selection in their area. The study seeks to understand the opportunities, challenges, and risks of small-scale communal forest growers as garnered from the experiences and perceptions of households where these forest plantations occur.

According to Kreye et al. (2019), it is important to emphasise the social character of a representation, which evolves within social practices in a given time and space (Figure 4.6). Therefore, social representation is a dynamic concept, but it has a certain persistence that gives it long-term continuity (Frouws, 1998). In this thesis, social representations are expressed through a discourse which has been explained in the literature review section. The researcher believes that a discourse consists of a set of arguments which people might use to communicate their understanding and explanations about the meaning of certain phenomena in their everyday lives. According to Kreye et al. (2019), to gain insight into local discourses on the usage and

experience of, and the values that local people attribute to the forests (in the case of this study, it is communal forest plantations) in their rural areas, a phenomenological approach should be used as basis for the interviews.

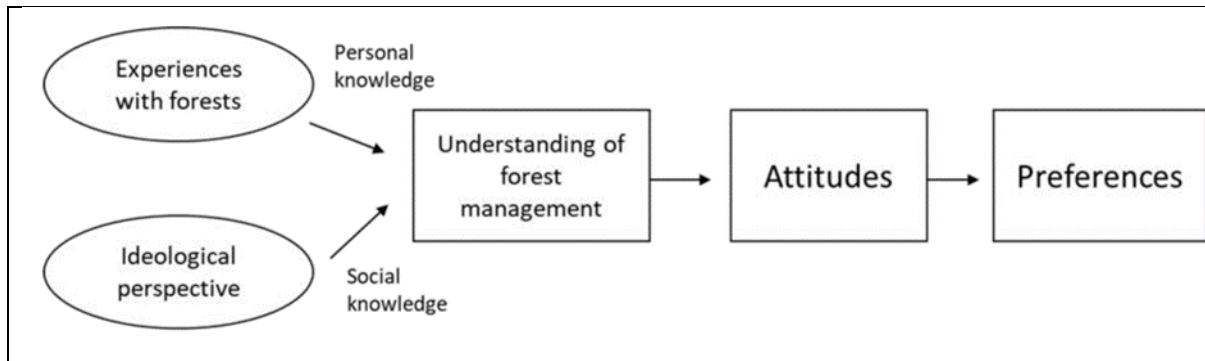


Figure 1.4: Phenomenological approach followed
Source: Adapted from Kreye *et al.* (2019)

1.6.2 Theoretical Framework

The study investigates sustainable rural development and forestry development to examine the sustainability of small-scale communal forestry in several provinces of South Africa. Falling within the broader discipline of development, rural development forms the theoretical framework of this study. In tracing development theory over the past few decades, Aurenhammer (2013) sets out the phases, transitions, timelines, and theories of development. Forestry development can be traced or derived from Aurenhammer's outline.

Firstly, the period of the 1940s to 1960s was characterised by those advocating for modernisation. This involved the idea that economic growth and development can be attained only once traditional societies have progressed to higher levels of societal organisation (modernisation). According to Aurenhammer (2013), modernisation theory is based on the work of classical theorists (e.g., Fischer *et al.* (2004); Kolland (2004); Komlosy (2004); Rostow (1960) and Prebisch (1950)), who focused on the transition from a traditional to a modern society. However, the benefits brought about by these developmental approaches failed to trickle down to those living in poverty and to stimulate growth in rural economies. This is arguably one of the reasons why rural development was proposed as a new solution in the 1960s.

From the 1960s onwards, the emphasis was placed on increasing the efficiency of small farms and their contribution to local economies. This large step was recommended by theorists such as Mellor (1966) and Schultz (1964) who had shifted their focus from industrialisation as the key focus area that had previously been advocated by modernisation theory. In support of this new trend, in 2002, the International Fund for Agricultural Development (IFAD) drew attention to the success of small farms in Brazil as productive units, claiming that their production levels were at least twice those of the larger farms. The authors attributed this to the larger employment uptake that small farms offered, the greater diversity of crops, and the practice of intercropping (Ashley and Maxwell, 2001). During this period, the focus was purely on socio-economic development.

Although ecological aspects were introduced in the 1970s (Aurenhammer, 2013), rural development theories became popular during this period and received even stronger support from donor agencies and governments (Biewenga, 2009). According to Biewenga (2009), this is the period when rural development initiatives became more integrated, and quests were made to incorporate multiple sectors (e.g., health, housing, education, and agriculture) into development programmes. Integrated rural development was not achieved through theoretical analyses. Instead, it was bolstered up by information emanating from assessments as to how development interventions had performed. Biewenga, (2009) is of the opinion that most of the rural development initiatives based on integration showed great potential for success but failed to provide manageable and internationally agreed upon solutions to the problems faced in rural areas. One of the disadvantages of an integrated rural development approach involves the fact that if there is a decline in funding, projects usually collapse; thus, sustainability is questionable in such projects. Furthermore, there is often a mismatch in the power between the community, government, and the agency managing rural or community development projects. According to Birgegard (1988), rural development initiatives do not often focus on the needs of the community.

In the beginning of the 1980s, the idea that the “Third World would disappear” became popular amongst geographers (Menzel, 1992 cited by Aurenhammer, 2013). The 1980s period marked the introduction of the free market approach to rural agriculture that was based on neo-liberal economic policies (Biewenga, 2009; Aurenhammer,

2013). This approach was regarded as an effective one towards achieving rural development and mitigating poverty. Markets could then be opened up to international trade. This approach was built on economist Adam Smith's theory of market liberalisation (1976, quoted from Biewenga, 2009). However, because rural farmers had limited access to funding and were also limited by the scale of their subsistence farming methods, they could not compete in the marketplace. This was especially the case once protective tariffs had been removed. As such, the neo-liberal economic adjustment programmes arising in the 1960s and gaining ground in the subsequent decades, right up to the present time, have tended in certain respects to have had negative outcomes. In fact, Biewenga (2009) is of the opinion that in many cases these structural adjustment programmes have intensified poverty.

According to Aurenhammer (2013:7), "*since the 1990s, neo-liberalism ('free trade') and 'new modernisation theories' (such as environment, sustainability, and gender aspects) 'have become more important'*". Biewenga (2009) notes that during this period there was also an increase in awareness in terms of the value of community participation. In 1982, Freire (1982) had already advocated for a change in the approach to development – together, he and Roodt (1996), promoted the view that the community should progress from being a passive entity to an active one that should display an increased sense of awareness and demonstrate the ability to transform its environment. In this case, the emphasis had shifted to community participation for rural community development. The focus was now on empowering communities and granting them the confidence to take control in the planned development initiatives. The philosophy behind this approach involved the idea that the success of a developmental initiative depends entirely on the participation of the community. Thus, community involvement in development initiatives should be crucial in any development initiatives (Biewenga, 2009).

After the collapse of the Soviet Union, which was used as a model for communism (Zimbalist and Sherman, 1984), some Marxist theorists (e.g., Bowles and Gintis, 1998) were no longer calling for a complete revolution to communism as a solution to poverty and inequality. Instead, they were now promoting what is called "assets-based redistribution". The focus of this approach is the redistribution of productive assets. This new Marxist thought argues that giving "*all citizens ownership rights to assets*

such as workplaces and residences would increase productivity and efficiency as individuals assume the rights and responsibilities of property ownership” (Clark, 1998:167). The new Marxist proposal is dismissed by critics as “speculative and inconclusive” (e.g., Hausman,1998:79) and overly optimistic (Roemer, 1998). However, some studies (e.g., Craig and Pencavel, 1992) do provide empirical evidence in support of the assets-based redistribution approach.

The number of people living in extreme poverty has increased concurrently with the growth in the size of the world’s population. Simply put, a population with a large proportion of its members trapped in abject poverty cannot be said to be developed. From a geographical perspective, this is one of the many characteristics that differentiate the more developed countries (MDCs) from the less developed countries (LDCs) (Shah, 2011). Consequently, poverty eradication (or at least mitigation of its effects on the population) is probably the most important developmental goal of our time. This sentiment is well captured in both the Millennium Development Goals (MDGs) and the Sustainable Development Goals (SDGs). MDG 1 challenges UN member states to:

- reduce by half the proportion of people living in extreme poverty (i.e., living on less than a dollar a day);
- achieve full and productive employment and decent work for all, including women and young people;
- reduce by half the proportion of people who suffer from hunger

The three focal points of MDG1 indicate that poverty is a multidimensional phenomenon that, in addition to monetary deprivation, encompasses many other dimensions of well-being. This notion is also embodied in the World Bank’s (The World Bank, 2000) definition of the phenomenon of poverty.

The Sustainable Development Goals (SDGs) have their foundation in the successes attained by the Millennium Development Goals (MDGs), which embody specific targets and milestones in eliminating absolute poverty and the worst forms of human deprivation. The SDGs expanded their scope to 17 goals from the eight goals presented in the MDGs and cover the universal goals of fighting inequality, increasing

economic growth, providing decent jobs, creating sustainable cities and human settlements, promoting industrialisation, tackling ecosystems, protecting the oceans, fighting climate change, and fostering sustainable consumption, and production, as well as building peace and strengthening justice and the integrity of institutions (Figure 1.4). Unlike the MDGs, which only target developing countries, the SDGs apply to all countries, whether rich, moderately financially endowed, or poor countries. The SDGs are also nationally owned and country-led, to the extent that each country is given the freedom to establish a national framework for achieving the SDGs.



Figure 1.5: The 17 Sustainable Development Goals
Source: IFAD (2018)

Globally, there are many lines of thought as to why the previous rural development initiatives have not been sustainable and ultimately failed. Some experts claim that the lack of consultation and participation offered to the communities in respect of these projects has been one of the main causes (Biewenga, 2009). The essence of this study is the necessity to plant trees on larger tracts of land and, in the process, to apply new technologies. Thus, according to Jayne et al. (2002), the vision is that through increased forest productivity and by ensuring higher yields per hectare, it will be possible to raise many individuals out of poverty.

In the light of the above, many rural development projects have set out to intensify agricultural or forest productivity, but have, however, achieved little success. In fact, the root cause of the problem lies in the prevalence of rural poverty that has contributed largely to the failure of these rural development projects.

Another feasible approach to rural development initiatives is the livelihoods approach. It is in keeping with the transition from top-down to bottom-up rationalisation around rural development initiatives. It can also be labelled as the sustainable livelihoods approach since it advocates that rural development must also consider the various strategies that rural people follow in order to survive and make a living. Scholars such as Carney (1997), Chambers (1997) and Scoones and McCracken (1989) claim that numerous strategies across all sectors of society are followed by myriads of people in their quest to secure their livelihoods. This is questionable when it comes to the accepted views of the small farm group, which puts agriculture at the centre of development. Specifically, it should be noted that according to Ellis and Biggs (2001:445), “agriculture forms only 40-60% of the livelihood package of those living in rural areas”. Furthermore, in the context of the Caprivi Development Project, this particular approach has effectively shown the valuable contributions that livelihood strategies have made to the rural farming communities in this area (Caprivi Farming Holding, 2008).

1.6.3 Conceptual framework

There are several key concepts that need to be critically defined to analyse the findings of this research. These concepts, grounded in the terms, “*rural*” and “*rural areas*”, include community forestry; poverty; sustainable development; community development; land reform; and the role of women in the communal setting.

Firstly, Dijkstra and Poelman (2014) describe a rural area as a geographic area that is located outside towns and cities. Hence, the term “rural” is encompassing of all population, housing, and territory not included within an urban area (i.e., a town or a city) (Dijkstra and Poelman, 2014). The other characteristic that helps to define these two concepts is that a typically rural area has a low population density and includes

relatively small settlements. However, in the light of the relatively wide range of statistical and administrative functions globally, the definitions and meanings pertaining to rural and rural areas differ from country to country.

Since the study focuses on small-scale communal forestry in rural areas, the concept of *community* is also central to the study. Furthermore, to define the concept of community forestry, it also becomes necessary to understand what is meant by the term, *community*. MacQueen et al. (1998) define a community as a group of people with diverse characteristics who are linked by social ties, share common perspectives, and engage in joint action in geographical locations or settings. The massive degradation of natural forests has shown that communities greatly rely on forestry. In acknowledging the degradation of natural forests, the need to rehabilitate degraded forest areas has been identified in most developing countries. To this end, the Indian government of 1970 coined the term, *community forestry*, to differentiate natural and government forests from the forests planted by communities.

Another important concept in the study is *poverty*. According to Ramose (2004), poverty is, to a large degree, the result of political hierarchies, past and present. Poverty is a prominent issue in South Africa that particularly affects rural populations. In these areas, income sources emanate mainly from small-scale farming, self-employment, low-paid jobs, and state welfare grants and pensions (Statistics South Africa (Stats SA), 2017; Jele, 2012; Grundy and Cocks, 2002; Kepe and Cousins, 2002; White, 2001). The democratisation of South Africa in 1994 created a belief that the country has been freed from oppression, violence, and inequality, but, according to Chetty (2016), poverty and unemployment rates, particularly in rural areas, remain high.

One of the solutions put forward to address poverty is *sustainable development*. In the communal forestry areas of rural South Africa, where poverty is prevalent, this approach is particularly relevant in the context of *rural development* and *community development*.

Firstly, *sustainable development* refers to development that yields the highest benefits to the present generation while maintaining the potential to meet the needs and

aspirations of future generations (Senaca and Taussig, 1984). Sustainable development must take into consideration social, ecological, and economic factors. Craig (1995) argued that *community development* involves initiatives to empower the members of a community to improve on their abilities and to contribute meaningfully to the life of their community. Community support also comes into the picture. Communities or groups are encouraged to express their needs, viewpoints, and priorities, and in so doing to make a contribution to the decision-making processes that affect them in their daily living. Ordinary people can participate actively in community development initiatives and can even take the lead in creating and exploiting opportunities (Swanepoel and De Beer, 2011; Mendes, 2008; Flora and Flora, 1993).

Furthermore, *community development* has both economic and socio-cultural dimensions (Flora and Flora, 1993). Abbott and Makeham (1979) identified the following as major indicators of rural development: (1) income per person; (2) life expectancy; (3) infant mortality; (4) food supplies in terms of calories available per person; (5) proportion of children between the age of five and 15 years attending school; and (6) the literacy and employment levels of the economically active population. According to Dudley (1993), the greater the degree of community control over the resources on which the community relies, the greater the incentive for economic and human resource development. Breen (1994) demonstrated that *community forestry* has brought about increased economic activity and rural prosperity in the Eastern Cape and KwaZulu-Natal. It was further recommended by Breen (1994) that to transform forestry into an industry that better serves the needs of South Africa, it should be geared towards greater *participation* by individuals on their own land. This, in turn, would lead to an increase in rural prosperity, and an increase in the number of people who are stakeholders in the industry, thus generating a sense of belonging and ownership. Summarily, according to Schiele (2005), community development is about “*mobilising and organising community development resources, developing local competencies, and mobilising political action for collective problem solving, self-help and empowerment*”. It is very clear that community forestry is not only about industrial timber production in the interests of national economic growth, but also contributes to sustainable development and community development. The idea of community forestry will be discussed in more detail in the coming chapters.

Another important concept when dealing with small-scale communal forestry, especially in the South African context, is *land reform*. Land reform is pivotal to the research topic and is critically analysed in Chapter 3 of this study. A key concept related to land reform is that of “*customary law*” (Obeng-Odoom, 2012). This concept concerns economic and political power, the reason being that traditional authorities often apply a form of resistance to state-led policies at the expense of the communities which they govern in that they use their position and the existing community social networks (social capital) for material/economic gain and political power (Obeng-Odoom, 2012; Boydell and Holzknrecht, 2003).

The Land Reform Programme in South Africa contains three focus components: redistribution, restitution, and tenure reform. Whilst restitution aims to return land to the people who were forcibly removed from the land subsequent to 1913, the land redistribution and tenure reform components are aimed at broadening the base of black land ownership in the country and creating a portfolio of secure tenure options for landholders (White Paper on South African Land Policy, DLA, 1997a). Land reform needs to be seen as a process that contributes to the upliftment and the socio-economic well-being of people in South Africa.

Furthermore, land itself must be viewed as a finite resource. This implies that the sustainable use of the natural environment needs to feature as a central concern in land reform policies and their implementation. Improvements in the living standards of all South Africans, particularly the previously disadvantaged, have become the stated priority of the post-1994 government. The intricate relationship between this land-use purpose and the condition of our natural resource base cannot be understated. The process of formulating a new land reform policy must occur within this context.

Finally, it is important to note the role of *women in rural settings*. Women are primary caregivers but also perform the majority of rural-based agricultural work. They have the responsibility of earning an income through farm labour and housework. Most rural women work long hours of up to 16 hours daily and earn less than men for the same work. Rural women have less access to education and as a result have limited qualifications and low skills levels. They are also underrepresented in government and local leadership roles when compared to men. In rural areas, men own most of the

land, resulting in less access to finance by women and fewer inputs into the agricultural production process (e.g., access to fertilizer). Women also have higher entry barriers when it comes to the opening of businesses (IFAD, 2011).

It is generally agreed that the value, availability, and accessibility of natural resources (such as forests, water, and land) vary between men and women because of the gender differences that exist between them, and the way gender is often implicated in their access to and distribution of natural resources (Cotula and Cisse, 2007). Bob (1999:110) defines gender as “socially constructed relationships between men and women”. As a result of these differences, marked variations in their socio-cultural, as well as their economic needs and asset portfolios, emerge between men and women even though they may live in the same household. Perry et al. (2010) indicate that women’s situations are often characterised by a lack of control or ownership of and access to resources, which impacts on them and their households in achieving sustainable livelihoods and food security; thus women represent the most vulnerable of the vulnerable. Sims and Kienzile (2006) emphasise that it is very important for rural development projects to thoroughly observe gender relations in this light so that the strategies they apply to any community would cater for both women and men’s needs, especially if women are not to be further marginalised.

1.7 APPROACH TO THIS RESEARCH

1.7.1 Research Philosophy

In this study, different philosophical worldviews or paradigms, research techniques and procedures were used. Firstly, the pragmatic philosophical paradigm or worldview proved to be the most appropriate for this study. The pragmatism theory adopted in this study primarily shaped the conceptual framework for the convergent mixed methods approach (Creswell and Creswell, 2018). The philosophical assumptions and conceptual framework for the convergent mixed methods design, guided by a pragmatic paradigm, provided an umbrella worldview of the study (Creswell and Creswell, 2018; Creswell and Plano Clark, 2018; Morgan, 2017). Pragmatism focuses on the truth of an idea or proposition of an observable consequence (Dalsgaard,

2014); its philosophy aims to uncover practical knowledge in respect of a case study or situation (Biesenthal, 2014). On a theoretical level, pragmatism contributes to the development of the discourse on the design method (Dalsgaard, 2014; Stark, 2014).

Secondly, pragmatism-inspired inquiry focuses on the situation, phenomenon, or experiences to provide a more in-depth understanding (Stark, 2014). The author believes that a pragmatic philosophical worldview in this study can give meaningful explanations through subjective interpretations of events. Furthermore, for the purposes of this study, both deductive and inductive approaches and principles were followed. Although both were followed, the study tended to be more skewed towards the inductive approach as more qualitative research strategies were used. The inductive approach accords with the pragmatic philosophy, while a deductive approach usually accords with the positivist theory.

The inductive approach is usually used in social research such as this one (i.e., it is based on Human Geography) and is known to be an alternative approach that is prone to flexibility. The other advantage of this approach is the preference for a small sample to even better focus on understanding the research context. In the deductive approach, the knowledge obtained is based on painstaking observations and measurements, with the development of the numerical measure being of the utmost importance in the positivistic paradigm (Guba and Lincoln, 1994). Positivism also highlights the importance of verifying theories by collecting data that either supports or counters the theory, whereupon additional tests and revisions are done (Creswell and Creswell, 2018). Worthy of note is that the use of the positivistic approach as the quantitative component in the mixed methods approach is simply for statistical purposes. As the research assesses the opportunities, challenges, and risks experienced by small-scale forest growers, this study recognises that while quantification is essential to show the magnitude of the elements discussed, it may not necessarily be enough. Therefore, the role played by inductive techniques should not be underestimated. Based on this reasoning, inductive techniques were also considered.

1.7.2 Research Methodology and Methods

Based on the above, an understanding of the so-called participatory developmental approach was used to uncover the challenges, opportunities, and risks faced by small-scale community forest growers in the rural development context (Saunders et al. (2008). This research study adopted a case study as a research strategy to address the above-mentioned objectives (Creswell and Creswell, 2018). The study involved four rural community forestry projects (i.e., Mkhambathi, Sinawo, Ntywenka and Mabandla) which were used to assess the objectives mentioned above. One project was selected from KwaZulu-Natal Province and the other three from the Eastern Cape Province (Figure 1.5). All four selected projects were typical of rural community forestry projects.

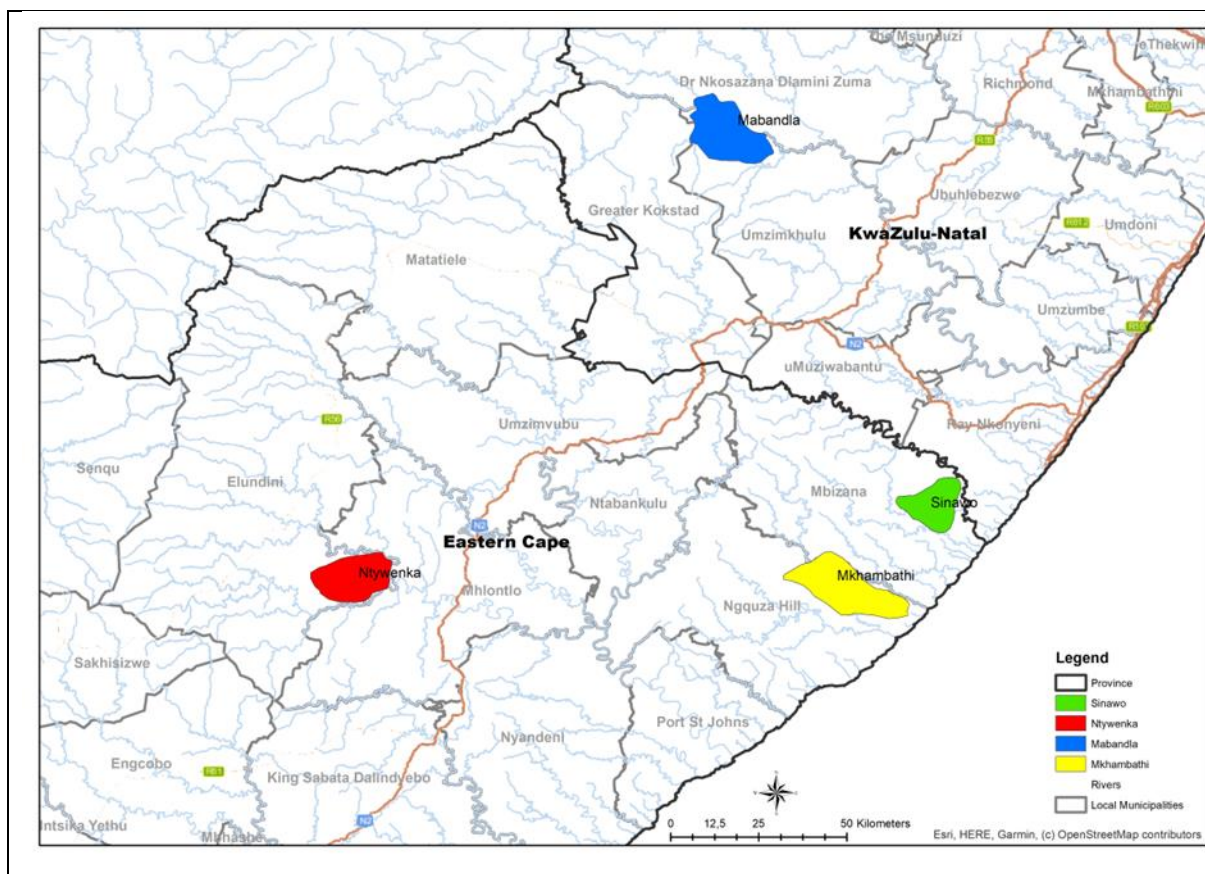


Figure 1.6: Map of Study Areas

Source: Author's own compilation, using DAFF GIS DATA (2018)

The Mkambathi project is situated in Flagstaff in the Eastern Pondoland region (Figure 1.6). This area initially fell under the former Transkei government. Currently, the Mkambathi community falls under the Ngquza Hills Local Municipality, which was formerly known as Qawukeni, an administrative area in the O.R. Tambo District of Eastern Cape Province (Eastern Cape Socio-economic Consultative Council (ECSECC), 2012). The Mkhambathi Project is a restitution project consisting of a land claim for a total of 17 000ha. It was transferred to the Mkambati Land Trust (MLT) which was formed by the Department of Agriculture, Land Reform and Rural Development (DALRRD), representing seven communities, and including more than 5 000 households. The land claim includes the 6 000ha Mkambati Nature Reserve and some 650ha of the existing plantations previously established by the former Transkei Government (Zeka, 2013).

The Sinawo plantation is situated in the former Transkei, along the R61, between Bizana and Port Edward (Figure 1.6). It is situated in the Winnie Madikizela-Mandela Local Municipality (previously Mbizana Local Municipality), within the Alfred Nzo District in the Eastern Cape, and about 20km from the South Coast border of KwaZulu-Natal (Sappi, 2013). The Sinawo Project is another land restitution project consisting of the 10 000ha claimed by the community and now owned by a Community Property Association (SCPA). The SCPA represents all the communities with primary land ownership rights to the land and includes a total of three villages, namely, Greenville, Mfolozi and Hlulweni. The plantations are located on both sides of the R61, with half of the area sloping down towards the Mzamba River and the other half, towards Greenville.

Ntywenka Plantation Project is in the Elundini Local Municipality, at latitude 31°18'32" South and longitude 28°6'16.1" East, between the towns of Tsolo and Maclear in the Joe Gqabi District Municipality in the Eastern Cape Province (www.wikipedia.org; ECRDA, 2014) (Figure 1.6). The Ntywenka Project is also called 'The Sixhotyeni Community Project' and is managed by the Sixhotyeni Trust. The Sixhotyeni Trust was established by the members of the Sixhotyeni communities, which own and manage the forestry project. Ntywenka comprises five administrative areas which form part of the Sixhotyeni Traditional Council (STC). Two administrative areas have resolved to allocate land for the initial forestry enterprise. The land identified for

afforestation is located along the various ridges around the DFFE Ntywenka plantation (ECRDA, 2014).

The Mabandla project is located in the southern Kwa-Zulu Natal Province and falls under the jurisdiction of the Umzimkulu Local Municipality, (latitude 30°15'45" South and *longitude* 29°55'15" East), an administrative area in the Harry Gwala District (Figure 1.6), and forms an enclave between Umzimkulu town in the east and Kokstad in the west (www.wikipedia). The Mabandla Community Trust was established by the community members to oversee the project and manage the social and community issues. The Trust established the Mabandla Development Company (Pty) Ltd, in which the trustees serve as directors, and which manages the forestry operations (Hlatshwako, 2000).

Both Mkhambathi and Sinawo projects were implemented by the Eastern Cape Rural Development Agency (ECRDA), which was formerly known as AsgiSA Eastern Cape. During the process, ECRDA introduced Sappi to both Mkhambathi and Sinawo communities as a potential strategic partner. Sappi is the strategic partner for both these communities and the projects are flourishing (ECRDA, 2014).

Since research methods can be defined as specific techniques and procedures for collecting and analysing data, the study researching these four plantation projects was based on questionnaires, interviews, and personal observations to gather the data on which the statistical analysis for this study was based (Creswell and Creswell, 2018; Creswell, 2014). Among the respondents from whom the necessary information could be collected were the household heads from the above-mentioned projects who completed the household questionnaires. Focus group discussions with women and the youth and interviews with key informants (Neuman, 1997; Bless and Higson-Smith, 1995; Slocum et al., 1995), such as the community forestry managers and the strategic partner managers of each of these projects, as well as personal observations that were noted by the researcher, constituted the other sources from which the information required for this research study was collected.

To collect secondary data, the research methods used in this study also included documentary research, such as information about the background to the case study

and policies (Harris and Brown, 2010; Rubin and Babbie 2008a). Since they specifically focused on certain topics, the interviews were used as the primary data collection method. On the other hand, perceptions about the participation of the respondents in the projects; the benefits and challenges of forest plantations in their villages; and the types and causes of conflicts amongst stakeholders in the projects (if any) were less important sources of data. Owing to the strenuous schedules of the strategic partner managers, there were cases where interviews were not completed. In such cases, telephone interviews were carried out as a follow-up on the incomplete face-face interviews where the questionnaire was used.

Furthermore, three different types of questions were used, namely, open-ended, and closed-ended questions on a 10-point Likert scale. This enabled the researcher to gain a deeper understanding of the complexity of the situation or case study. According to Harris and Brown (2010); Rubin and Babbie (2008a), quantitative data can be obtained through closed-ended questions and qualitative data through open-ended questions. The factors affecting the outcome of each item on the questionnaire were recorded. This detail was augmented with information issuing from the site visits to each plantation, but only after the interviews had been conducted with the household heads from each project and personal observations had been made during the interviews with some of the key informants.

The analysis of the thematic content served to categorise the qualitative data into themes and was aligned with the objectives of the study and the more important concepts identified in the literature. Some of the respondents' more important quotes that emerged during the data analysis process were put to good use by the researcher. They served to clarify certain important concepts, ideas, or themes that featured in the research and to analyse the main themes. As such, they revealed the main perspectives of each of the research participants (Makhubele et al., 2022; Du Plessis 2017).

1.7.3 Sampling Strategy

For the statistical analysis of the mixed collection of data, the researcher followed both probability and non-probability sampling techniques. In this study, respondents were selected by means of the simple random sampling design. This is a procedure whereby respondents are selected based on the pre-knowledge that the researcher and other relevant roleplayers have on the subject. The main purpose of the non-probability sampling design in this study was to avoid making generalisations when revealing the research results of a large population.

To access appropriate respondents, the interviews targeted household heads or land reform beneficiaries of small-scale communal forest projects, the community project managers of these projects, community leaders, the chief/ his *induna* (i.e., sub-chief), managers from strategic partnerships or government, and forestry experts. The land reform beneficiaries were identified with the help of the chief and his *izinduna*. Informed by the simple random sampling design, the researcher was also able to guide the process. Ultimately, primary data were collected from 400 households. In addition, the researcher succeeded in interviewing four community project managers; two strategic partner managers; and two forestry experts.

Being the representatives of their communities, the community leaders were targeted for interviews. Of main interest were the tribal authorities (i.e., the chief and his *izinduna* (i.e., sub-chiefs)) as it was a tedious and complicated process to line up all the project beneficiaries and all those familiar with the history of the project, and to gain permission to interview them. The respondents from the community forestry managers and the strategic partner managers were selected on the grounds of their familiarity with the subject matter; as such, their feedback proved to be relevant to the study, and, therefore, valuable. Two strategic partner managers that were knowledgeable and involved with the Mkhambathi, Sinawo and Ntywenka projects were interviewed as no strategic partner manager for Mabandla project could be accessed. All the above-mentioned strategic partner managers that were interviewed had worked closely on the small-scale communal forest projects and were well-informed about the opportunities, challenges, risks, and the requirements for the effective and sustainable management of a plantation.

1.8 NOVELTY OF THE RESEARCH

1.8.1 Value for rural development

This study involves research on the rural development and sustainability of the forestry sector and land reform projects, particularly small-scale communal forestry projects in South Africa. Communal forestry is of importance because it addresses poverty amongst South Africa's rural tribal communities, as well as issues that have led to the current shortage of timber and the failure of the Land Reform Programme. This research identifies opportunities, challenges, risks, and interventions for the implementation of such projects. The elements of the triple bottom line as yardstick for sustainability (Bolis et al., 2017; Soubbotina, 2004; Senaca and Taussig, 1984), are worth revisiting. To develop sustainable programmes, social, environmental, and economic/financial elements must be considered. All conclusions and recommendations presented in this study will be tested against the issue of enhancing the status of timber production and productivity in small-scale communal forest projects, some of which were spearheaded through the Land Reform Programme. This is important because it has been noted many times that financial resources have been carelessly and irresponsibly spent on similar projects but without improving the livelihoods of the targeted roleplayers (International Finance Corporation (IFC), 2019). Therefore, if any positive findings issuing from the recommendations do eventually come to light, they will be put further to work towards poverty alleviation, job creation and rural economic development in the future.

This research also presents a challenge, namely, to assess whether the current financial resource injection patterns of similar small-scale communal forest projects really do contribute to promote sustainability and the successful realisation of project goals, particularly in the context of community projects.

Most of the proposed recommendations and interventions presented in this research, if properly implemented, will result in enhanced timber production. Where possible, the findings of this study will also be shared with accessible officials who are directly and indirectly involved in facilitating small-scale communal forest development and transfer processes, as motivated by the Land Reform Programme.

1.8.2 Value of Forestry

It is important to note that forestry in South Africa is a rural-based activity that offers opportunities to many of the poorest of black South African citizens living in the rural areas (Shackleton et al., 2007). The main argument of this study is that these community forests can play an important role in promoting sustainability and livelihoods in the rural areas. Community forests have a significant economic impact on the income of the majority of involved rural households (Forestry SA, 2011). In the light of its contribution as the main raw material supplier (i.e., timber) to processing industries such as sawmills, pulp and paper mills, and furniture joineries, the forestry plantation sector in South Africa is an important element in the forestry value chain (Mudombi, 2020; Ledger, 2017). The demand for timber and timber products has steadily increased over the years in a way that is outrunning the supply.

The forestry sector value chain mainly involves plantations and the primary and secondary processing of timber (Mudombi, 2020; Ledger, 2017; DTI, 2005). However, the sector presents a range of opportunities for forestry enterprises. The inclusive appraisal of its possible contributions should entail a holistic view of its overall impact, including its associated economic value (Slee et al., 2004). Slee et al. (2004) asserts that the forestry contribution can be classified and grouped according to four values:

- Those directly linked to forest activities,
- Shadow values, resulting from linkages to direct activities,
- Non-market values, and
- Social values, mostly linked to cultural practices.

As indicated above by Slee et al. (2004), forests may generate social values or relate to people's lives in various ways that contribute to social well-being. Forestry provides an important livelihood resource for the rural poor in the country. Most of South Africa's rural poor also make extensive use of forest products from plantations, indigenous forests, and woodlands for their livelihoods, subsistence, and small-scale trade (Shackleton and Shackleton, 2004). By providing important subsistence products and the prospect of an income, forest resources in the rural areas of South Africa play a significant role in the livelihoods of the population. Rural and poor people depend on

forest and non-timber product resources such as firewood, building poles, medicinal plants, fodder plants, bushmeat and foodstuffs. Despite their importance, only limited information is available on the actual socio-economic importance of these resources and products, as well as on the ecological impact of their exploitation.

There have been limited attempts to evaluate the contribution of all goods and services derived from forest plantations to rural communities. At the national and even local levels, assessment studies have rarely considered the benefits of all goods and services from forest plantations to the local people. However, numerous studies have shown that forest resources are important for supporting rural livelihoods and commercial farming and ranching activities. These findings have been supported by various studies. Shackleton and Shackleton (2004) and Bailey et al. (1999), for example, mention that woodlands provide a large range of non-timber goods and services, both for household consumption, as well for sale, with a mean direct value across several case studies of approximately R5 584 ±745 per household per year. Where individuals come together to manage forest plantation resources in groups, either through their own independent decisions or through the political arrangements that some of them have made for those living in rural areas, there is an accumulation of social capital for group members. Thus, the poor find that beyond their meagre kinship groups, they have patrons within the village, or other new sources of security. Many such groups devise rules for the elderly or the poor, which in some cases do not apply to all (Shepherd et al., 1999).

Finance generated through communal forestry projects may be of special value if it tides a household over its seasonal or unforeseen shortfalls, provides lump sums which can pay off debts, acts as working capital for some new enterprise, or enables the members to sell crops at more advantageous times of the year (Shepherd et al., 1999). Such forest products may also make up a higher percentage of the annual household income of the poor in a village or community of women or of individuals in a certain age group (Deweese, 1994).

1.8.3 Theoretical value of the research

After 27 April 1994, the democratic South African government inherited several challenges, including a ruined economy and widespread poverty and inequality, the result of three centuries of racial discrimination, dispossession, and displacement. Rural areas were affected particularly badly as they had been either totally neglected during the apartheid era or subjected to discriminatory practices that resulted in spatial distortions, which made traditional smallholder agriculture all but impossible (Waeterloos and Cockburn, 2017; Olivier et al., 2010). There is a clear indication that before 1994, rural development was neglected, resulting in underdevelopment and impoverishment in rural areas. After 1994, policies for rural development were adopted by the democratic government to improve the economic well-being of people living in rural communities. However, thus far, this has had limited success as high levels of poverty and inequalities in rural areas still prevail (Statistics SA, 2017; NDP, 2012).

“Rural areas face several new opportunities and challenges which call for appropriate rural development policies and a more efficient use of scarce financial resources” (OECD, 2006:2). According to Meyer (2016), rural development is a possible solution for improving socio-economic conditions, as well as the standard of living in rural areas. The International Fund for Agricultural Development (IFAD) (2018) and OECD (2016; 2018) support this view by suggesting that problems in rural areas can be addressed through investment and rural policies that promote rural development. Rural development is regarded as the backbone of development globally (Gauteng Department of Agriculture and Rural Development, 2011). In South Africa, as indicated by ex-President J.G. Zuma in his State of the Nation Address (SONA) (Zuma, 2013), the government’s key priorities in 2013 included job creation and rural development. The role that rural development plays in mitigating poverty has not, however, been perfectly defined. However, if well implemented, it can possibly lead to improved access to economic opportunities for those living in rural areas (Madell, 2008).

1.9 RESEARCH FRAMEWORK

The flow diagram for the research framework of this study is presented in Figure 1.6. The first stage, which is the research project definition stage, comprises a formulation

of the research topic, a problem statement that the research aims to respond to, brief hypothetical assumptions, as well as the underpinning research question and its related sub-questions. The second stage comprises a comprehensive literature review to place the research topic within the broader, global theoretical debates, thus creating a conceptual framework from which to depart. The third stage focuses on the various debates emerging from within the South African context on the subject matter, and this stage also seeks to establish a framework with a set of criteria that will be used to evaluate small-scale communal forest growers or projects. The fourth stage focuses on the four tribal communal forest projects as case studies for the comparative study in response to the research question. It uses broader theoretical debates (both in the South African and global contexts) as a guiding framework for the case studies. The fifth and final stage focuses on the conclusion and recommendations.

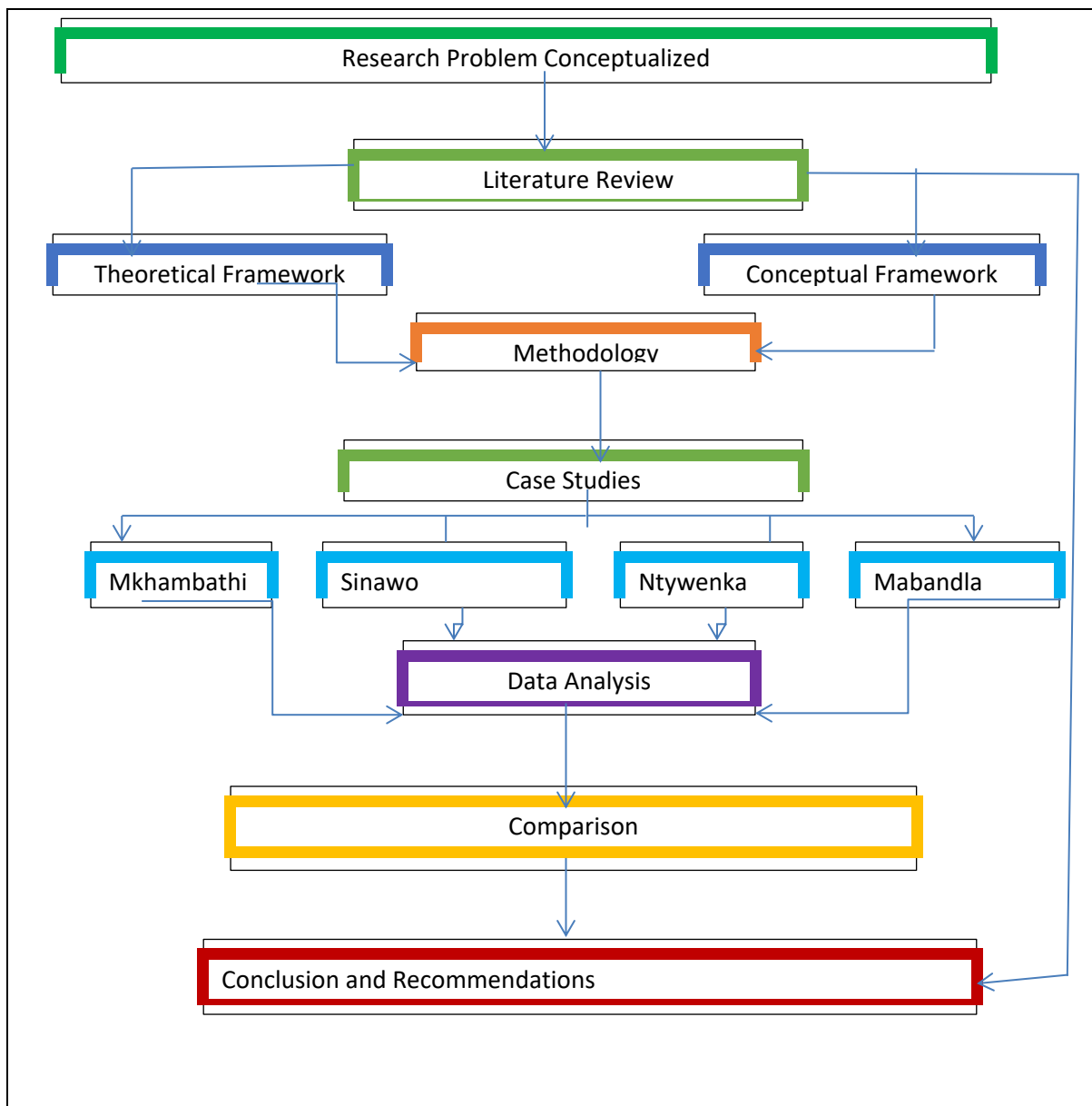


Figure 1.7: Flow Diagram for the Research Framework
Source: Author's own compilation

1.10 ETHICAL CONSIDERATIONS

In compliance with the regulations of the University of South Africa (UNISA), standardisation and uniformity were adopted during the study for all respondents (UNISA, 2013). For example, the ethical compliance approval letter issued by the UNISA CAES General Research Ethics Review Committee is attached as Annexure F. According to Resnik (2020), the most common way of defining "ethics" is as "norms for conduct that distinguish between acceptable and unacceptable behaviour". Most people learn ethical norms at home, at school, from the church, or from other social

settings. Although most people acquire their sense of right and wrong during childhood, moral development occurs throughout life and human beings pass through different stages of growth as they mature (Resnik, 2020). Ethics provide a researcher with a guideline to moral conduct when collecting data from people, and prevent scientific misconduct (Bhandari, 2021).

The above ethical considerations and guidelines mentioned by both writers were considered and addressed at each stage of the research. Permission to enter the community villages to conduct research in the research area was obtained from either the tribal authority, the strategic partner manager, the community forestry manager, or the Department of Forestry, Fisheries, and the Environment (Annexure A). Guarantees were granted to all the respondents that strict confidentiality, their anonymity, and other ethical considerations would be ensured²). The fact that their participation in the study was voluntary was relayed to them at the beginning of each interview and prior to the focus group discussion.

Furthermore, a letter of informed consent was read to each participant and once they had given consent, initialised. No names of participants were made known, and the researcher committed to provide feedback of the findings of this research study to the tribal authority.

1.11 CHAPTER OUTLINE

This study is divided into six chapters as follows:

Chapter 1 – Setting the Scene for the Research Report

Chapter 1 provides an introduction and an overview of the study. It provides the contextual background, the rationale and motivation, the problem statement, aim and objectives, theoretical and conceptual frameworks, the research approach (including the research philosophy, methodology, and strategies), the value of the research, the research framework, ethical considerations, and the chapter outline.

² e.g., no names would be used in the data analysis process or in the discussion on the findings

Chapter 2 – Rural Development

This chapter investigates the concept of rural development and traces rural development timelines, including the era of modernisation from the 1950s, state intervention in the 1970s, market liberalisation in the 1980s, and participation and empowerment as part of the general holistic approach in the 1990s, and sustainable development in the 2000s. It further provides a detailed literature review of key concepts and explains rural development policies in the pre- and post-apartheid South African context.

Chapter 3 – Evolution of Forestry in South Africa

Chapter 3 details the history of the forestry industry and its management in South Africa. The chapter also provides an explanation of the policy and legislative frameworks regulating forestry in South Africa over time. Particular attention is paid to the current predicament of black community forestry, including a review of out-grower schemes and the challenges, opportunities, and risks those strategic partners and the government encounter in their involvement with small-scale communal forest growers.

Chapter 4 – Data Collection

Chapter 4 describes the study area (location, population, and history) and describes how data were collected and analysed. To this end, the chapter also outlines the method by which the research study was conducted, including the rationale for a convergent mixed methods design (triangulation).

Chapter 5 – Results and Data Analysis

This chapter analyses the quantitative and qualitative data. Having categorised the data according to the main themes that were identified by having analysed the thematic content, it also presents a summary of the interview findings. It includes discussions of key opportunities, challenges, and risks as experienced and perceived by the respondents in the study areas.

Chapter 6 – Conclusion and Recommendations

Chapter 6 concludes the study and provides strategic recommendations based on the discussions with the participants. The chapter provides a broad summary of the

findings of the study and then draws conclusions guided by the study aim and objectives. The chapter also provides recommendations for future study.

To conclude, this chapter provides explanations for the contextual background of the study, specifically about poverty among rural communities and a brief overview of forestry resources in South Africa and their role in rural development. Other aspects such as the rationale and motivation, problem statement, aim and objectives, theoretical and conceptual frameworks, and the value of and approach to the research are also discussed. The research study is outlined in this chapter and the aim of the study presented: to provide a detailed analysis of the opportunities, challenges, and risks of small-scale communal forestry growers, with the view to identifying policy gaps in the regulation of the functioning of the forestry industry in South Africa.

The next chapter presents the literature review.

CHAPTER TWO: RURAL DEVELOPMENT THEORIES AND CONCEPTS

2.1 INTRODUCTION

The main objective of this chapter is to review and present literature on theories, concepts and approaches relating to rural development. This chapter involves deconstructing the rural development framework and poverty, population, community development and sustainable development as key concepts and approaches in the current discourse around development.

2.2. GEOGRAPHY AND DEVELOPMENT

This study focuses on the nexus between population factors, economic factors, and environmental factors from a geographical perspective. Development geography is one of the focus areas of Human Geography. The so-called human development approach is central to this study. Ul Haq (2003) explains human development theories by drawing on the ideas of early leaders of political and economic thought. These include Aristotle's idea of social arrangements that promote 'the human good' and that lead to 'flourishing lives'; Kant's notion of treating human beings as an end withal (never as a means only); and Adam Smith's concept of integrating the poor into the mainstream of the community (ul Haq, 2003). Ul Haq (2003) also reflects on the work of Robert Malthus, Karl Marx, and Stuart Mill, and also engages with the work of Amartya Sen. Thus, the theoretical foundation of human development is broad, encompassing several areas of human life. It does not only deal with economic income, but rather encompasses all human choices, whether economic, social, cultural and/or political (ul Haq, 2003).

Within the field of Developmental Geography, many theories and their counter-, approaches, programmes and paradigms attempt to make sense of the successes and failures of development projects. Over time, development thinkers, researchers, practitioners, governments, donor agencies, and policymakers have often sought to categorise places by using a scale of development, i.e., dividing nations into the

“developed” and “developing”, “First World” and “Third World”, or “core” and “periphery” (Boampong, 2017). According to Juliet (2017), all these labels are based on the evaluation of a country's development; but this raises the question: What exactly does it mean to be “developed”? And why have some countries developed while others have not? Juliet (2017) explains that since the beginning of the 18th century, development thinkers and those involved in the vast field of development studies have sought to answer this question, and in the process, have presented many different meanings and models/theories to explain this phenomenon.

Various scholars tend to emphasise that development denotes advancement from a lower to a higher stage, with no end in sight (McNeill, 2007). Importantly, this approach emerged out of a process of thinking about and searching for alternative ways to assess economic and social progress - beyond the usual income and economic growth considerations (Deneulin, 2009; McNeill, 2007). The economic measures of development became dominant after the Second World War and interlock with several development theories that are often regarded as ‘top-down’ theories and that fail to explain development in terms of the well-being of people (Mensah, 2019).

According to Todaro and Smith (2012:16), “*Development must be conceived of as a multidimensional process involving major changes in social structures, popular attitudes, and national institutions, as well as the acceleration of economic growth, and the reduction of poverty*”. Kutor (2014) notes that development includes both quantitative and qualitative aspects that occur in all facets of human endeavour, ranging from social and cultural factors to economic, political and environmental factors. From the viewpoints of Kutor (2014) and Todaro and Smith (2012), development should recognise cultural, ethnic, and national diversity. It is clear, as contended by Sen (2009), that economic development is a means to an end within the broader context of human development. Peercy and Svenson (2016) suggest that the development of human skills could build healthier, richer, and more equitable societies. It is, therefore, important to look at human capabilities based on a perspective that is not only concerned with increasing people’s skills but rather adopts a broad conception of human and economic well-being.

The main argument behind the human development approach is that mainstream measures of development pay too much attention to achievement in terms of economic growth, while neglecting the other elements that people regard as important for a full and meaningful human life. In considering the traditional emphasis on economic growth and national income, ul Haq (1995:24) explains that “people as the agents of change and of development were often forgotten”. As the shortcomings of the traditional measures of development became apparent, different approaches to human development reached prominence, particularly in the United Nations Development Programme (UNDP) through its Human Development Report (HDR), published annually since 1990 (Alkire, 2010). To this end, the recognition of civil society organisations (CSOs) as an important component in delivering social services and in social accountability came to the fore. The demand for meaningful change (ul Haq, 1995) in the lives of the people on the ground in development projects strengthens the significance of refining, monitoring, and evaluation systems for improving accountability and transparency. Organised, active and participating citizens can influence service delivery by taking charge of the relevant preliminary contracts and participation in the provision and delivery of services. It is no longer a priority of communities to strive to be observers of their own development; rather, they want to take charge and hold government accountable in instances where they feel marginalised (Majova, 2018).

Again, development can be approached from different perspectives and for the purposes of this study, it is, as such, important to take cognisance of macro and micro-development theories. According to Coetzee (2001:118), “*a micro-development perspective comprises a people-centred approach; it is distinct in that it defines development as the satisfaction of basic needs in terms of the right of individuals to lead a meaningful life*”. In offering a new discourse on development, the micro-development perspective focuses on such concepts as human rights, participation, empowerment, transparency, accountability, ownership and well-being (Mensah, 2019).

Against the background of this discussion, the next section explores the notion of rural development, which includes an analysis of the evolution and the historical phases of this theoretical concept.

2.3 RURAL DEVELOPMENT

According to the international literature, since the Second World War, several evolving themes on rural development can be identified. Although some scholars rightfully trace contemporary rural development back to the period of colonialism, Ellis and Biggs (2001) and Berry (1993) focus on the trends and changes in rural development since the 1950s. Ellis and Biggs (2001) distinguish between six phases of development which are discussed in the section below. Attention is given to three aspects of this concept, namely, definition, understanding, and discourse.

2.3.1 Definition of 'rural' in a geographical context

It is important to first define the term 'rural' from a geographical perspective. For the purposes of this section, it is also important to again note the differentiation between the concepts, 'rural area' and 'rural', as these are important concepts for this research topic.

According to Dijkstra and Poelman (2014), 'rural area' is a geographical area that is located outside towns and cities, while the word 'rural' encompasses all population, housing, and territory not included within an urban area (Dijkstra and Poelman, 2014). The nature of the term 'rural' varies from place to place (GCSE, 2019). The other characteristic that defines these areas is that typical rural areas have a low population density and small settlements. For example, in terms of the Rural Development Framework (RDF), 'rural' is defined as the sparsely populated areas in which people farm or depend on natural resources, including the villages and small towns scattered across these areas. According to the South African Rural Development Framework (DLA, 1997b: paragraph 1.2), "*Rural clusters in the former homelands (large settlements without an economic base except for transfer payments) are also included in the definition of rural*". This characteristic is also confirmed by GCSE (2019); 'rural' often refers to areas in the specific country that are less densely populated. There are different types of rural areas, depending on how accessible they are from urban areas. These range from the rural-urban fringe to the extreme (remote) rural areas (GCSE, 2019).

Agricultural areas such as forestry areas are commonly rural. But, for statistical and/or administrative purposes, the definition and meaning of rural differ from country to country. Another important issue that is relevant to the purposes of this study is that, in rural areas, especially in South Africa, most resources are communally owned, (Hinze, 2004). Shaw and Williams (1994) see rural areas as idylls for escape from the pressures of modern urban-industrial life in order to rekindle the human spirit. Patmore (1983) describes rural areas as a 'wilderness' that offers restorative and psychological reward to those stressed by urban life. There are different types of rural areas, which can be classified according to how accessible they are to the occupants of the urban areas. The GCSE (2019) diagram below (Figure 2.1) shows different classifications of rural areas.

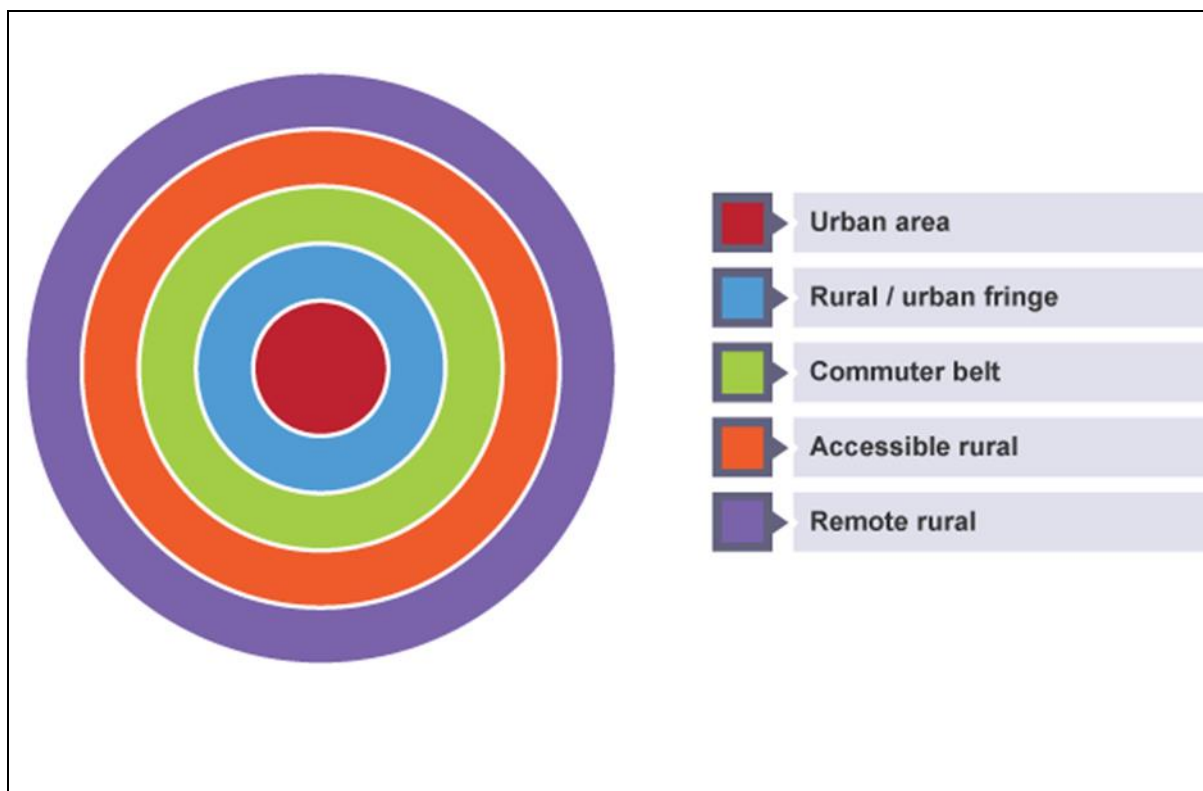


Figure 2.1: Different classifications of rural areas
Source: GCSE (2019)

Rural areas change over time. These changes are caused by:

- Economic factors – tourism income, farming profitability, primary sector jobs.
- Environmental factors – land use, pollution, conservation.
- Social factors – population change and migration, leisure-time activities, retirement (GCSE, 2019).

In rural areas in South Africa, mostly African people do not have access to basic services such as electricity, water and sanitation, and social and health services, leaving the community excluded and marginalised. The plight of the rural community and their families is their exclusion from a decent life, their failure to receive sufficient supportive measures from government, and their reluctance to make attempts to improve their lives (not because they are ignorant or lazy but because they have been side-lined).

2.3.2 Understanding of Rural Development

Many scholars agree that there is no common and acceptable definition for rural development. The concept has been used in innumerable ways, each with its own distinct focus. The most relevant definition of rural development for the purposes of this study is derived from Anriquez and Stamulous (2007:3): “*development that benefits rural populations, where development is understood as the sustained improvement of the population’s standards of living or welfare*”. Consequently, rural development is seen as partly playing the role of empowering communities by building their capacity to enable them to make sustainability a priority or choice in their livelihood activities in good times and in times of shock and stress. Although there may be various forms of stimulation for development (especially through the provision of financial resources) from other regions, every rural development strategy harnesses its own local natural resources to bring about improved livelihoods to its low-income households and to the region in general. In analysing the value of rural development, Anriquez and Stamulous (2007:3) state:

“... promotion of the rural economy in a sustainable way has the potential of increasing employment opportunities in rural areas, reducing regional income disparities, stemming pre-mature rural-urban migration, and ultimately reducing poverty at its very source. In addition, development of rural areas may contribute to the preservation of the rural landscape, the protection of indigenous cultures and traditions, while rural societies could serve as a social buffer for the urban poor in periods of economic crisis or social urban unrest”.

2.3.3 Rural Development Discourse

In analysing the characteristics of rural development, this study focuses on five types of discourse, also termed socio-political discourses of rural development (RD), as set out by Hermans et al. (2010) and Frouws (1998: a) agri-ruralist, b) hedonist, c) utilitarian, d) nature conservation, and e) community sustainability.

According to Frouws (1998:58), in the agri-ruralist discourse, farmers are the stewards of the countryside, the carriers of rural values closely endorsing such aspects as “food production, nature and landscape conservation, open spaces and cultural heritage, etc.”. Agricultural craftsmanship, family farms and traditionalism should constitute the main features of agricultural production, with little space left for markets to organise the sector, as in the capitalist system (Hermans et al., 2010). The agri-ruralist discourse combines both the agrarian component, emphasising the productivism and competitiveness of agriculture to sustain economic dynamism in the countryside through exports, employment, and income, and the rural component of focusing on the preservation of nature (Frouws, 1998). Improvement in technology is, therefore, encouraged although it should be limited to the extent that family production is not replaced by agro-industrial production (Hermans et al., 2010). The state too has a supportive role to play; it provides farmers with financial and institutional means to implement this “ecological modernisation” (Frouws, 1998). On the other hand, the social dimension is also central to this discourse: —. Because the only criticism of the agri-ruralist discourse is the pollution of the rural environment through modern farming methods, farmers need to establish a new “social contract” with society by practising multi-functional agriculture that meets the social demand for items ranging from healthy foods and pure drinking water to attractive landscapes and country recreation (Frouws, 1998:58).

The hedonist discourse emphasises instead the cultural dimension of rurality. A rural area has “*a cultural function in the sense that it should provide a certain quality of life through beauty, attractive landscapes and quietness*” (Frouws, 1998:62). According to Frouws (1998:62), “*this discourse originates from the “urban elite”, composed of nature conservationists, biologists, artists, and estate owners who see the countryside/*

rural areas as the “garden of the city””. The priority for rural development is to regenerate the aesthetic characteristics of the rural scenery to provide authenticity to urban incomers. One point of criticism against the hedonist discourse is that “*the interests of rural inhabitants are not meaningfully considered*” (Frouws 1998:63).

Hermans et al. (2010) note that rural development is conceptualised according to economic dimensions in the utilitarian discourse. For example, according to Frouws (1998:60), rural areas need instead to be “*integrated into the dynamics of modern markets for housing, recreation, food specialities, high-tech agriculture, attractive business parks, and so on*”, as they are economically underdeveloped because of the inefficiency of their regulatory systems. Rural areas can develop if there is openness to innovative economic activities and investment (Elands and Wiersum, 2001). In this discourse, the countryside is considered a mere commodity where natural spaces should satisfy “productive and consumptive needs” (Frouws, 1998:61).

Elands and Wiersum (2001) highlighted that the agri-ruralist discourse promotes an endogenous form of rural development (i.e., where rural development is conceived as a process in which development is the result of local initiatives) while the hedonist and utilitarian discourses emphasise the role of external forces in this process (i.e., rural development is conceived of as a process in which development is the result of forces emanating from outside the rural areas).

Based on the work of Elands and Wiersum (2001); Hoggart, et al. (1995) add two additional discourses that are relevant to this study and that deal with the broader debate on rural development, especially as it concerns developing countries: community sustainability and nature conservation. In the community sustainability discourse, isolation and poor economic dynamism characterise rural areas, which need to be revitalised with improved living conditions. Rural development should therefore aim at creating a minimum set of social and economic structures (Elands and Wiersum, 2001) for the rural population. Employment and income need to be supported through state intervention and regulation and compared to the utilitarian discourse; market forces should have a very limited role to play. The nature conservation discourse criticises the intrusion of agriculture into wild areas and the threat it constitutes for biodiversity. Nature has intrinsic values, which need to be

preserved for future generations instead of being consumed in the process of development. In terms of this discourse, eco-development is promoted instead of rural development, with the final objective being to recover a balance between the rural and wilderness areas (Elands and Wiersum, 2001). This means that in this discourse the conservation and improved management of natural elements are not considered as tools for rural development, but rather as the ultimate objectives.

2.4 RURAL DEVELOPMENT IDEAS: TIMELINE

Section 2.4 aims to analyse the theoretical framework for rural development. Its objective is to critique the manner in which rural development has and is still being conceptualised. Over the decades, an entire range of developmental paradigms has been instrumental in promoting the rural development theory. Their foundations lie in the neoliberal policies that have marginalised, disregarded, or undervalued the productivity aspect of rural households (Ellis and Biggs, 2001).

The review below presents the development theories and paradigms from the 1950s to the 2000s that have played an important role in rural development thinking and are as such relevant to the current situation. Perspectives on rural development have undergone significant changes over the past six decades. During the 1950s, the so-called 'modernisation paradigm' was the dominant model; it focused on delivering benefits at the macro-economic level without adequately considering the interests of the rural majority. In the 1990s, an alternative holistic approach emerged; it was more flexible and responsive to the needs of diverse population groups and sectors of society, particularly the rural poor. The major changes in rural development thinking can be summarised according to the timeline set out by Ellis and Biggs (2001) and as demonstrated in Figure 2.2 below.

The timeline lists several theories, approaches, and policy directions that have since the 1950s influenced rural development thinking. This timeline attempts to highlight mainstream rural development narratives and to investigate their changes and the divergence between them. Ellis and Biggs (2001) warn against oversimplification. In

fact, they indicate that these transitions have not unfolded according to plan and in a linear manner. Rather they have occurred in a “cluttered” manner.

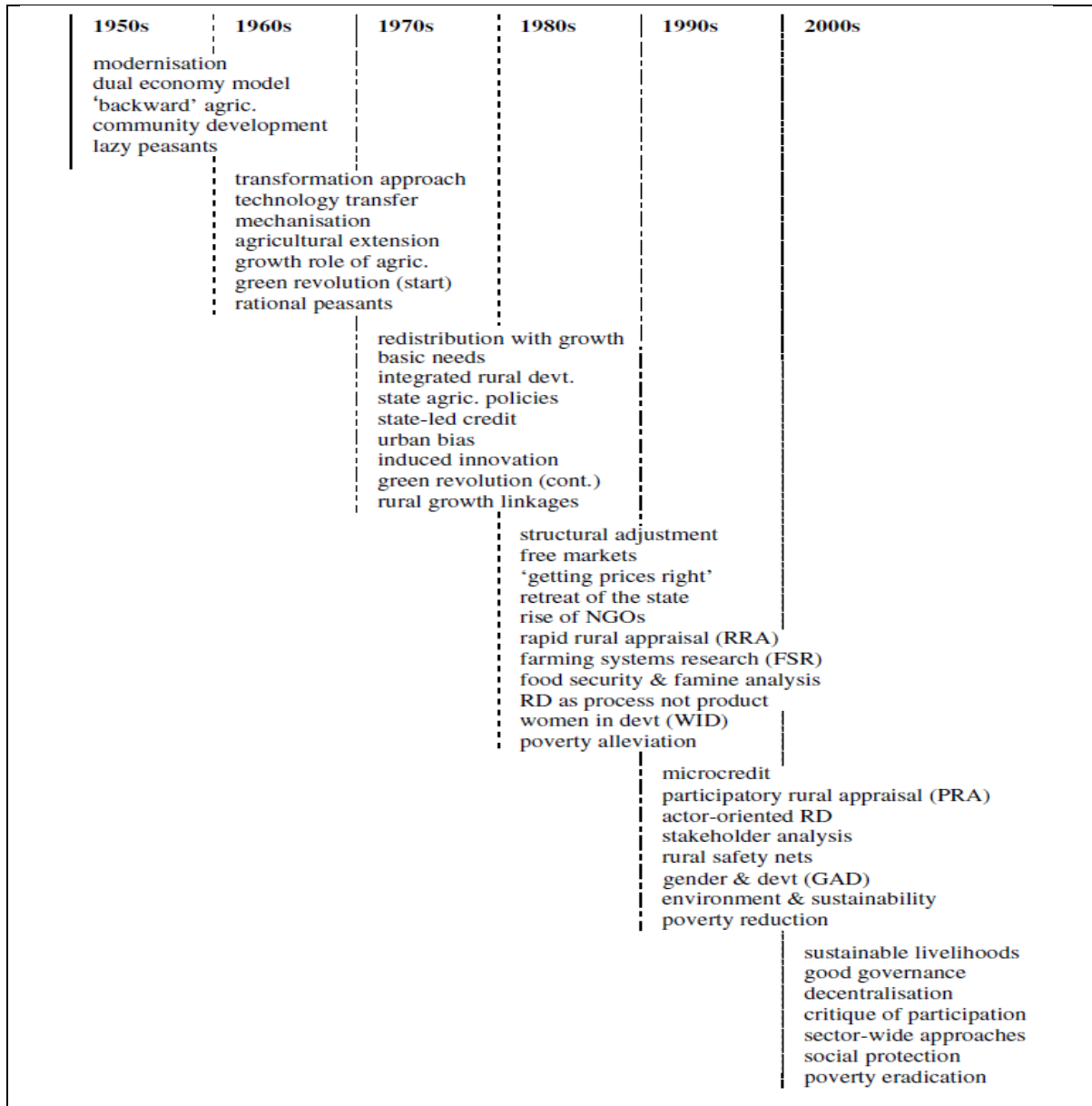


Figure 2.2: Timeline representing the advancement of the Rural Development concept
Source: Ellis and Biggs (2001:439)

It is important to mention that the section below does not discuss all the notions and ideas, as indicated in the timeline devised by Ellis and Biggs (2001), that pertain to rural development concepts (Refer to Figure 2.2). Rather subjectively, this section focuses on those phases and concepts relevant to the aims and objectives of the study.

To this end, the section unfolds as follows:

The timeline shows an era from the 1950s characterised by modernisation, state intervention in the 1970s, market liberalisation in the 1980s, and participation and empowerment as part of the generally holistic approach in the 1990s. Since 2000, attention is focused on the concept of sustainable livelihoods.

2.4.1 Phase One: Modernisation (1950s →)

Modernisation theory dominated the post-Second World War period and had a profound impact on rural development (Ellis and Biggs, 2001). Firstly, this section assesses modernisation theory in the context of rural development. The discussion then moves on to the approaches used to facilitate it.

According to Biewenga (2009), the decade of the 1950s was characterised by the motivations of those pushing for modernisation. The last-mentioned involved the idea that economic growth and development could be attained only once traditional societies had progressed to the more illustrious, more elevated levels of modern society. This theory was based on the works of classical scholars, such as Comte, Durkheim, and Marx, who focused on the transition from traditional to modern societies. In listing the criteria for modernisation, Parsons (1958, cited in Biewenga, 2009) stood out as an influential icon.

However, despite attempts to modernise rural agriculture, the number of poor continued to increase, thus degrading the notion of modernity. Some of these theories, such as the modernisation and the dependency theories, lauded the economy and the role that it played in society. On the other hand, theories, such as the Alternative Development Theory, focused on social aspects and the role of the community (Burkey, 1993). Various perspectives as to how to alleviate poverty, long considered to be an essential goal of development, were presented in these theories.

The transition from a 'traditional' to a 'modern' society was promoted by considering and introducing variables such as industrialisation, democratisation, and

secularisation” (Coetzee, 2001:27). What came to light was that transition in societies develop over time and through many stages (Preston, 1996). Modernisation theory states that a traditional society, regarded as the base level from which development progresses, advances to a more complex level in that it eventually establishes a modern economy. Secondly, since modern values need to be diffused throughout society and there is no business or entrepreneurial class, it is the responsibility of the state to initiate this transition from traditional to modern (Coetzee, 2001; Preston, 1996). Thus, through various projects, the state is required to instigate this transition. Structural differentiation, specialisation, bureaucratisation, industrialisation, and commercialisation are the relevant processes that must be set in motion and on which it relies. This trajectory is followed until a more modern level of functionality has been reached (Martinussen, 1999). This can be attributed to the fact that traditional societies cannot on their own make the transition from an agrarian to a modern society. Their lack of capacity is the reason for this.

2.4.2 Phase Two: Transformation Approach (1960s →)

The traditional sector, incorporating the subsistence sector, has hardly contributed to the economic development process. As described in Phase One above, it has, merely supplied resources to the modern sector. From the 1950s, theorists such as Mellor (1966) and Schultz (1964) observed that certain aspects of human endeavour and certain segments of society were being left out in state-led developmental pursuits. Mellor (1966) and Schultz (1964) shifted their focus by arguing that industrialisation, one of the tenets of the modernisation theory, should not, as previously advocated, receive the attention. Instead, the small farms, should be in the limelight, with the focus specifically on their efficient functioning and their contribution to the local economy (Biewenga, 2009). Ellis and Biggs (2001) noted that the first “paradigm shift” occurred in the early to mid-1960s. Small farm-centred agriculture was now prioritised and regarded as the answer to economic growth and development. It did not, however, replace large-scale farming which was based on mechanised equipment and methods. Such opinions led to the Transformation Approach in the 1960s as depicted by the Small Farm Model, as presented below.

In a 2002 report on agriculture in Brazil, the International Fund for Agricultural Development (IFAD) pointed to the fact that the small farms in the country were proving to be at least twice as productive as the larger farms; this was attributed to higher levels of employment, greater crop diversity, and the increased attention given to the practice of intercropping (Ashley and Maxwell, 2001). Chang (2010) has demonstrated that the successful development of modern agriculture in the era before neo-liberalism was largely based on state support and on controlling the supply and pricing of major agricultural products. For example, according to Chang (2010), land reform worked in many countries when combined with measures to increase agricultural productivity, stabilise agricultural income, and create non-agricultural jobs. Chang (2010) further argued that before the rise of neo-liberalism in the 1970s, small and medium-sized farmers in many countries received enough support to allow them to produce most of the food their countries needed.

The small farm model has been relatively successful and according to Ellis and Biggs (2001), there are still advocates for it. This new approach was aimed at responding directly to the needs of the poor, especially poor families who did not have enough land to plough (Swanepoel, 2006). Ellis and Biggs (2001) noted that the small-scale farm model has played an important role in development thinking up to the 2000s. This assessment can be attributed to their acknowledgment of the informed decisions that small farmers, as deep-thinking economic agents, are able to make in respect of land utilisation. Rosset (2008) pointed to a further element favouring the small farm model, namely, the inverse relationship between farm size and economic efficiency. Ashley and La Franchi (1997) and Rosset (2008) set forth several reasons in favour of the small farm model when specifically compared to large-scale farming. Firstly, Rosset (2008:2) argued that larger investments in better quality labour are made by small farmers “since the family’s future depends on it, driving them to take care of it”. Furthermore, family labour is used more intensively on small farms.

Secondly, he stated that although “large farms may ‘yield’ more crops per hectare, small farmers have crop mixtures and thus produce a greater variety of products from a piece of land” (Rosset 2008:2). As an additional benefit emanating from small farms, Rosset (2008) posits the idea that the environmental damage wreaked through the production methods practised on small farms is far less than that on large farms.

According to Ashley and La Franchi (1997), the relatively large spaces between the planted rows in subsistence farming enable the small farmers to use more land than is the case on large farms where single crops are cultivated.

As mentioned, the small farm model has been relatively successful and is currently still being advocated as a worthwhile enterprise (Rosset, 2008; Ellis and Biggs, 2001; Ashley and La Franchi, 1997). However, it only benefits some as it fails to take cognisance of the fact that not all the poor people in the rural areas earn their livelihoods from agriculture. There are many other different ways in which they do so (Biewenga, 2009). For example, although the model may uplift the rural poor, this would not be the case with part-time farmers, who, according to Ellis and Biggs (2001), may be of the opinion that they need not maximise their returns from farming. According to Ellis and Biggs (2001), this means that part-time farmers may continue with their subsistence farming methods and merely grow staple crops for their own consumption. Evidently, these farmers are not motivated or do not have the available cash to buy the mechanical equipment needed to increase their crop production (Biewenga, 2009). Other criticisms include the fact that small farmers may lack the skills to use modern equipment or technology (Ellis, 1993).

Although Ashley and Maxwell (2001) note that some of these positive assessments mentioned above about small farms are questionable, according to Biewenga (2009), it is clearly evident that the efficiency of small farms is open to doubt. The reasons for these ambiguous assessments are not entirely related to the practice of subsistence farming as such, but rather to the pressures of globalisation: - in modernised commercial agriculture, the focus is on non-traditional crops produced through mechanised farming methods where machines replace manual labour (Ashley and Maxwell, 2001).

Furthermore, there are other scholars who maintain that the focus on agriculture in the rural areas is too narrow, and therefore unrealistic. In order to sustain their livelihoods, many of the rural poor, for instance, depend on various other non-agricultural activities (e.g., wages, pensions and/or profits from selling hand-made goods) in order to earn an income to sustain their livelihoods (Jele, 2012; Ashley and Maxwell, 2001; Ellis and Biggs, 2001).

Apart from the small farm model, another idea that should be emphasised within the context of Ellis and Biggs' (2001) timeline is the so-called Green Revolution. In general, Green Revolution usually refers to the transformation of agriculture that began in 1945. According to the Food and Agriculture Organisation of the United Nations (FAO, 1986), the Green Revolution of the 1960s and 1970s, with its package of improved seeds and farm technology, better irrigation, and chemical fertilisers, was highly successful in meeting its primary objective of increasing crop yields and augmenting aggregate food supplies. Former USAID director, William Gaud (FAO, 1986) was the first, in 1968, to use the term 'Green Revolution'. He noted that the spread of the new technologies in the field of agriculture "*is not a violent Red Revolution, like that of the Soviets, nor is it a White Revolution, like that of the Shah of Iran. But rather, I call it a Green Revolution, based on the application of science and technology.*" He termed this spread of new technologies the Green Revolution (cited in Abayechaw and Dikir, 2022:16).

Much of the increase in agricultural output was because of an increase in the yields per hectare rather than an expansion of the area under cultivation. Global food production increased by 58% between 1970 and 1990 (World Bank, 2010). For instance, FAO (1986) data indicate that for "*all developing countries, wheat yields rose by 208% in the period between 1960 and 2000; rice yields rose 109%; maize yields rose 157%; potato yields rose 78%; while cassava yields rose 36%*" (cited in Pingali and Raney 2005:3). One point of criticism involving the Green Revolution is the complex traditional farming systems and particularly the traditional shifting cultivation and range-grazing pastoral livestock systems. In these systems, a farmer clears a piece of land from the initial fallow stage through slash-and-burn methods and then cultivates it for two to four years. When the soils are exhausted, the farmer moves to other land. This system is adapted for low population densities and is not compatible with the application of the Green Revolution technologies (Dezi, 2003 cited in Abayechaw and Dikir, 2022). This argument is supported by the FAO (1986), arguing that despite Green Revolution success in increasing the aggregate food supply, the Green Revolution as a developmental approach has not necessarily translated into benefits for the lower strata of the rural poor in terms of greater food security or greater economic opportunity and well-being.

2.4.3 Phase Three: Integrated Rural Development (1970s →)

The failure of the modernisation paradigm through the small farm model and the community development approach to improve the lives of the rural poor signalled a change from a trickle-down development to an endogenous development facilitated by developing countries. With reference to the pursuit of modernisation in the rural areas of developing countries, the Integrated Rural Development policy was adopted. The next section discusses state-led rural development with the significance of integrated rural development as the major theme of this phase.

This phase is concerned with state-led policies in rural development. It should be acknowledged that the modernisation phase has an inherent state/ donor-driven component. It is also largely supply-driven and provides funds at the input side. The Integrated Rural Development Approach is discussed below as one of the major themes to illustrate this shift in policy.

According to Biewenga (2009), the 1970s were marked by more integrated rural development initiatives, pushing for the incorporation of numerous sectors (e.g., health, housing, education, and agriculture) into development programmes. This author (Biewenga, 2009) claimed that integrated rural development does not emanate from theoretical postulates but is based instead on the findings emerging from assessments of the performance of development interventions. The same author (Biewenga, 2009) also believes that at that time, most of the development initiatives based on integration were showing great potential for success.

Given the above expectations of rural development programmes or interventions in the 1970s, it is commonly agreed that a successful rural development programme or project would demand some form of coordinated development at the rural level, and that this would lead to the introduction of the notion of integrated rural development (IRD) (Baah-Dwomoh, 2016). Thus, Integrated Rural Development became a complex and multi-sectoral model, the success of which was found to be dependent on the interaction of multiple factors and the performance of different entities, whose

integration proved to be a prerequisite to effective implementation (Baah-Dwomoh, 2016).

Citing two main reasons, Masset (2018) indicates that the policy of Integrated Rural Development became very popular in the 1970s. The first reason relates to the widespread persistence of poverty in the rural areas in the 1970s. The second relates to the perceived need to simultaneously address the multiple constraints to economic growth (Masset, 2018). Between the 1950s and 1960s, developmental efforts were mainly devoted to the promotion of industrialisation and community development following the theoretical thinking and the development discourse of the time. For example, the persistence of poverty in rural areas implied that these policies had largely failed and that entire segments of the rural population had been left behind by development interventions. It was felt that deprived areas needed special programmes to improve productivity and that a package of basic services had to be provided. At the same time, it was believed that poverty could not be addressed by simply promoting agricultural development. Poor people's opportunities, it was thought, were limited by multiple constraints in infrastructure, health, and education that needed to be addressed simultaneously. Integrated rural development projects promised to address these multiple constraints by exploiting synergies and complementarities across sectors (Masset, 2018).

The practice of integrated rural development took many different forms, including small-area interventions, packages of agricultural interventions, and truly holistic programmes (Masset, 2018). During this period, most policies were state driven, and farmers were given significant support for extensions, input supplies, and the marketing of their outputs. These were provided through parastatals in the form of controlled floor prices and subsidised inputs, which protected local producers and stimulated production (Baah-Dwomoh, 2016). According to Masset (2018), wide consensus emerged over the fact that these projects were not successful, and several questions remained unanswered. Although hundreds of large-scale integrated rural development projects were implemented in different forms by different agencies in an incredibly wide variety of contexts, many of them were not successful. According to Kumar (1988), the greatest criticism levelled at the integrated rural development approach revolved around project sustainability since once the funding was

discontinued, a decline in the physical infrastructure and services soon transpired (Kumar, 1988).

Further criticism involves the fact that integrated rural development projects were often too complex and overwhelmed the weak management capacity of state institutions, especially in several African countries, which included the parastatals set up to manage them. Furthermore, these projects or programmes became too technocratic and were far removed from the needs of the local people. They became more exogenous in that they depended to a large extent on external expertise from donor countries for their designs, implementation, and the management of their programmes. A number of these projects or programmes failed because of serious institutional weaknesses, and progress that was slowest where most needed, especially in sub-Saharan Africa. A lot of the integrated rural development projects therefore achieved disappointing results (Masset, 2018; Baah-Dwomoh, 2016).

Thorbecke (1992:86) contends that “*the rural poor, who represent a latent productive potential, need to be provided with an appropriate policy and institutional framework, resource and technology support, and an enabling market environment so that they can raise their productivity on land where access to it is assured, and raise their income through off-farm income-generating activities, where there is scope for the generation of productive employment*”. There can be no other way of achieving this than preparing rural people with the necessary skills that would permit them to explore other avenues and other activities. Erskine et al. (1994) further indicate that the successful implementation of rural development initiatives requires the participation of the beneficiaries in the formulation and implementation of the projects, as well as human resource development through appropriate training.

2.4.4 Phase Four: Structural Adjustment (1980 →)

The development policy of the 1980s can be described as a failed paradigm, mainly to be attributed to the state. Hulme and Turner (1990:90-102) term it “*an intellectual climate conditioned by the New Right*” or an encapsulation of what some researchers

call the “neoliberal” approach (Stockbridge and Dorward, 2014; Pieterse, 2010; Ellis and Biggs, 2001).

According to Turner (2008), neoliberalism is “*an ideology that favours economic policies based on neoclassical theories of economics*”. In addition, according to Turner (2008), the role of the state is minimised while the private business sector is maximised, with fiscal discipline and business-friendly exchange rates being the central focus. Pieterse (2010) argues that neoliberalism is based on the concept that economic growth is possible in the context of an unregulated market and an absence of government intervention. On the other hand, Harver (2005) is of the opinion that neoliberalism is a means whereby power can be restored to the rich, which makes the poor even poorer. During the 1980s, neoliberal policies continued to drive the global economic systems and those of both developed and developing countries.

This phase is characterised by an anti-state development programme, which is built on the premise that in the 1970s, the governments of the developing countries spent too much money on implementing the Integrated Rural Development projects model and meeting the basic needs of the people, thus causing budget deficits. The neoliberalist development approach supports the free market economy over government intervention as the agent of development. In this approach, development means economic growth that is achieved through structural reform in terms of deregulation, liberalisation, and privatisation, while reducing market-distorting intervention (Pieterse, 2010). The International Monetary Fund (IMF) and the World Bank promote this neoliberal approach through their Structural Adjustment Programmes (SAPs) and the granting of loans to developing countries in exchange for the implementation of structural changes in their economies (Stockbridge and Dorward, 2014).

According to Hulme and Turner (1990), the fundamental premise of this new ideology was that the state should withdraw and allow the market forces to take over. The latter should increasingly be in control and guide the allocation of and decision-making around resources. The role and responsibility of the government would be to construct and regulate a macro economic framework that would allow competitive markets to set prices and allocate resources. In its turn, the private sector would also feature as

a dominant role player in that it would identify public needs and provide for them (Hulme and Turner, 1990).

The above-mentioned functions and responsibilities were drawn from the structural adjustment policies³ based on the Washington consensus and led by the IMF and the World Bank. These policies pushed for a free market system, for reductions in public spending, and for the transfer of assets from the public to the private sector.

Safety nets were implemented as a measure to compensate the poor and the marginalised and thus to mitigate the impact of these policies. As such, they were termed 'structural adjustments with a human face' (Cornia et al, 1988). Set in motion by UNICEF, these structural adjustments took cognisance of the fact that it was essential to overcome the macro economic problems facing developing countries and that these challenges could be overcome by making certain adjustments and by implementing compensatory policy measures targeting certain groups (e.g., supporting small-scale producers by investing in low-cost primary healthcare facilities and services and rural works programmes, and intervening in the nutritional field).

Trade liberalisation, privatisation, commoditisation, financialisation, the management of crises, and state redistributions were the main target areas of the neoliberal policies and their recommended strategies (Harver, 2005). According to Mahlati (2011), the negative impact of the neoliberal policies and strategies on the poor (whether real or perceived) has been raised globally as an issue to be placed on the agenda of social justice movements and trade unions world-wide. These policies and strategies have indeed become the motivating force behind the anti-poverty protest demonstrations at world trade conferences and at the annual G8 and G20 gatherings (Bhagwati, 2007; Stiglitz and Charlton, 2005). The critical negative issues raised at these gatherings include the financialisation and "manipulation" of crises in the name of fiscal discipline. Joblessness and a reduction in social spending have indeed had negative impacts on the rural poor (Mahlati, 2009; 2011). For example, according to Mahlati (2011), the fact that the exclusion and disempowerment of the poor - that has caused them to be

³ According to Mahlati (2011), these policies were prescribed as the "policy basis for developing countries with conditionalities for access to loans"

classified as a “deprived” group – has not been adequately addressed and can be partly attributed to the financialisation of the global economic system. According to Foster (2007), “financialisation” refers to “the shift in the weight of economic activity from production to finance”. An example of the financialisation of the economic system in the context of an environment of peasant households strengthens the huge problematical aspects of the macro economic framework. The fact that the members of a peasant family have limited access to financial capital and are holders of “dead assets”, that are both undervalued and worthless (de Soto, 2000), underlies the enormity of the problem of financialisation on a global scale. Of further concern, according to Mahlat (2011) and IAASTD (2008), are the ever declining and appalling production conditions on small farms in the impoverished rural areas.

The above concerns have led to the promotion of the development of human and physical resources in rural areas. Thus, the fact that local people themselves should be the main implementation agents of development projects needs to be acknowledged. A detailed discussion about this approach is presented next - as Phase Five.

2.4.5 Phase Five: Participatory Rural Appraisal (1990s →)

According to Mustanir and Lewis (2017) and Chambers (1994), the Participatory Rural Appraisal (PRA) approach is a strategy used by NGOs and other development agencies. The purpose that is common to all is to seek to integrate the perspectives of rural people and their understanding of rural development projects, programmes, planning and management. Local people are thereby encouraged and empowered to participate actively in assessing problems and in finding solutions to them (Narayanasamy, 2009). Participatory rural appraisal has its philosophical origins in the techniques propagated in activist adult education (e.g., those of Paulo Freire and the Antigonish Movement study clubs) (Sandham et al, 2019).

According to Mahlati, 2011, Participatory Rural Appraisal is regarded as a “*combination of approaches and methods*” that allows for “*vulnerable people to share, enhance, and analyse their knowledge of life and conditions, to plan and act, and to*

monitor and evaluate". This author (Mahlati, 2011) indicates that any vulnerable person in the community, actually an outsider, acts as a catalyst to facilitate processes within his/her community, which is in turn prepared to improve the situation. The PRA encourages self-reliant development with most of the responsibilities to manage and execute the developmental activities performed by local people. This creates a sense of ownership and enthusiasm among local people and thus the required efficiency needed to achieve the goal also increases. Furthermore, through this approach, local people are encouraged to formulate their own planning goals and have them integrated into the official development plans (Lara et al., 2018). As such, in the case of a specific project, for example, which has been targeted through the PRA, there is the assurance then that the specific project will serve the local people (Mahra et al., 2015). These targets could vary significantly and could include increased incomes; greater efficiency in the consumption and management of water; a larger supply of cash crops; or an increased supply of timber. The ultimate goal of the PRA, according to Brett (2003), is to promote self-reliant development, with the community readily accepting its accountability in implementing and managing the development activities that it has initiated itself. The PRA can significantly improve the efficiency of development work and minimise any problematic issues in terms of their ownership and activities at the community level (Mustanir and Lewis, 2017). Reddy (2016) is of the opinion that the community can benefit through its involvement in PRA initiatives that are generally orchestrated through NGOs, other organisations, and even the government. In this way, the enthused community can be motivated and mobilised to support a project or programme. Furthermore, when changes are made (e.g., to a more advanced planning system for development), a PRA activity, in demonstrating its effect on structures on the ground, can act as facilitator to help local workers in their understanding of it and thus their commitment to it (Castelli and Bresci, 2017).

One disadvantage associated with the PRA approach involves the contention that if people participate passively in projects, they become inactive and will depend on external inputs. To avoid this situation, local decision-making in project planning and implementation is important. In other words, a project planned and implemented by local people themselves should be given priority, as, in being a local initiative, local materials and human resources would then be used more effectively. Such project

outcomes could then enhance local independence and the sustainability of such projects (JICA, 2004).

A further point of criticism of this approach involves the fact that many development projects still follow top-down approaches, where donors continue to dictate the areas of their interests; while projects that do not meet their interests are not supported (Magazi-Rugasira, 1994).

These concerns paved the way for the 'Community Development Approach'. According to Swanepoel and De Beer (2011), community development writers have declared for decades that there is a link between community development and poverty reduction. The Modernisation Theory developed in the early 50s saw community development as a means of transforming the impoverished agrarian and traditional nations of the Global South into prosperous liberal democratic societies akin to those of Europe (Midgley and Livermore, 2005). As part of the idea of modernisation, the reasoning behind community development was to improve the economies of the former colonies through the construction of roads and schools, and the provision of water and of community centres (Ruttan, 1975). Community development during this phase was contextualised closely to government or donor-driven approaches and focused on typical government services to modernise society and rural areas (El-Kogali et al., 2016; William and Christopher, 2011).

This shift in developmental thinking focused on people's needs and allowed community members to make their own decisions, plan, manage and implement community activities. Community-driven development is founded on the idea that the involvement of community members will help in better identifying a community's needs and in encouraging the more efficient use of existing local resources (El-Kogali et al., 2016). The community development approach strives to enable community members to solve their own problems (William and Christopher, 2011). This view clearly shows that people participation and the development of local leadership are central aspects of the community development process. William and Christopher (2011) further view the concept of community development that can be applied to both rural and urban settings.

The approach of community development has several definitions and descriptions that have been put forward. Cornwell (1987) defines it as an approach of practical experience in national development programmes. Frank and Smith (1999) define community development as the “*planned evolution of all aspects of community well-being (economic, social, environmental, and cultural)*”. These authors (Frank and Smith, 1999) also believe that it is “*a process whereby community members come together to act and generate solutions to common problems*”. Schuftan (1996) defines community development as comprising four different approaches. The first is service delivery, that seeks to address the causes of inadequate development by providing a structured set of services. Community representatives participate in decision-making concerning the local human resources and service delivery facilities currently available, and in the delivery of these services. The second community development approach is a capacity-building one which raises human capital and empowers participants to resolve the underlying causes of inadequate development. The third approach is advocacy, which entails the dynamic process of developing consensus and a mandate for action. It also brings together like-minded people with common goals. The last approach to community development is social mobilisation. This involves actions that articulate people’s anticipatory needs into actual demands, mobilising people’s needed resources, decentralising decision-making, giving people power over decision-making, and consolidating sustainable social movements.

According to the Combat Poverty Agency (2005), in the context of addressing poverty, rural community development is understood as a developmental activity that works for change in disadvantaged areas with disadvantaged groups. In this view, rural community development is a strategy that mediates between people and poverty. The Combat Poverty Agency (2005) further believes that community development is a multilevel process which includes those who are affected and advocates that they can effectively change themselves. According to Kenny (2011), cited in Mendes and Binns (2012:605), community development refers to “*various methods, approaches, and philosophies that underpin a range of activities, and can be practised by various professionals and non-professionals beyond social work practice*”. This view implies that community development involves a multi-dimensional approach, and to be effective, it needs dimensional strategies to effect change in poor communities. Craig (1998:2) notes that “*community development can be used to solve local problems*

which are often thought of as an essentially local approach to problem solving". Mendes and Binns (2013:608) confirm that "*community development is known to be a central and necessary strategy for effective practice in the rural context*". Compton and Rooney (2012) concur with the above statement, noting that community development is a practice which assists the process of poor people acting together to improve their shared conditions, both through their own efforts and through negotiation with the public service for support.

Compton and Rooney (2012:9) state that "*public service agencies and private agencies seek dialogue and cooperation with users in communities*". This means that poor people need each other to push their own developmental endeavours, with limited influence from outside their communities. For instance, the development intended for the rural poor should be conducted in consultation with the community structures and traditional authorities since there are cultural aspects that should be respected and observed. Furthermore, in order for that development to succeed, it should be localised to embrace the socio-economic conditions of the community. Oakely (1998) agrees by noting that community development as the national rural development strategy sets out to create and maintain the spirit of self-help within the domain of self-reliant development of rural communities. Therefore, community development is regarded as a tool that can be used to create awareness and to increase the potential of those living in rural settings to solve their own problems.

2.4.6 Phase Six: Sustainable Livelihoods (2000 →)

The structural adjustment era from the 1980s onwards resulted in more demanding calls for the alleviation of poverty (1980s), poverty reduction (1990s) and even later, the eradication of poverty (2000s). It was in this era that participatory processes to empower rural dwellers were considered necessary and subsequently implemented (Mahlati, 2011).

The approach relating to the fight against poverty has evolved over the years in response to a deepened understanding of the complexity and weakness of development strategies. The goal of reducing poverty is a global one and is promoted

by international organisations and donors, including the World Bank, the OECD, the IMF, and the UN.

According to Scoones (1998), owing to limited success in terms of the elimination of poverty, sustainable livelihood (SL) approaches emerged and have been central to discussions on rural development. Sustainable livelihood was introduced in the 2000s as a new approach to rural development to reduce and eradicate rural poverty. It further emphasises comprehensive and coherent thinking related to poverty reduction and to achieving rural development and quickly gained great popularity among researchers and development stakeholders (Jomehpour and Kiomars, 2012). SL approaches have evolved from other themes which put more emphasis on poverty eradication, participation (listening and responding to livelihood priorities identified by poor people) and sustainable development (Malatji, 2020; Mazibuko, 2017; Serrat, 2017; Matiei Langroudi et al., 2011; Chambers and Conway, 1992). Initially, the sustainable livelihood concept was introduced as a means of linking socio-economic and environmental concerns, but it was later consolidated into an approach to poverty eradication (Malatji, 2020; Mazibuko, 2013; Brocklesby and Fisher, 2003).

The SL approach is accommodated within the 'humanist' paradigm and the Sen's Capabilities Approach. Both of these sources have influenced the work on Capabilities, Equity and Sustainability by Chambers and Conway (1992) where the term, "livelihood", is described as:

"the capabilities, assets (stores, resources, claims and access) and activities required for a means of living a livelihood which is sustainable and which can cope with and recover from stress and shocks, maintain or enhance its capabilities and assets, and provide sustainable livelihood opportunities for the next generation; and which contributes net benefits to other livelihoods at the local and global levels in the long and short term" (p.6).

Scoones (1998:5) defines a sustainable livelihood in the following quotation: "A livelihood comprises the capabilities, assets (including both material and social

resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base". For instance, according to Mohammadi et al. (2021) and Sajasi Gheidari et al., (2016), achieving sustainable rural livelihoods is not possible without considering the rural livelihood assets.

The Sustainable Livelihoods Approach (SLA) is a developmental approach which aims to define, understand, and improve people's livelihoods. Basically, it is a 'people-centred, bottom-up and dynamic' approach to developmental thinking (Peng et al., 2017). Sustainable livelihood approaches have evolved over three decades. They have given an overview of how the perspectives on poverty have changed over time and how poor people live their lives; they have also focused on structural and institutional issues (Ashley and Carney, 1999).

The sustainable rural livelihood framework consists of five main components, namely natural, human, social, physical, and financial capital components, the improvement of which is considered necessary to achieve a sustainable livelihood (Abdullahzadeh et al., 2015). Capital is considered an essential component in influencing people's livelihoods, especially the poor. People need different forms of capital to achieve their defined goals (Jomehpour and Kiomars, 2012). Livelihood capital forms the core component of a sustainable livelihood and is a fundamental factor in poor communities (Ghadiri Masoum et al., 2015). Figure 2.3 shows the framework that has been adapted and employed by the Department for International Development (DFID). The sustainable rural livelihood framework is an analytical structure which intends to understand the complexity of people's livelihoods, including their vulnerabilities, access to assets, and numerous factors that influence the way people make a living (Jele, 2012; Farrington et al., 1999). The five livelihood assets possessed by household members are interdependent, each one capable of complementing the other (Ellis, 2005), and capable of offering a solution to a crisis (Elasha et al., 2005). The ability of individuals to escape the scourge of poverty depends on the availability and magnitude of their wealth. It is in fact these factors that determine the various

livelihood choices that are offered to an individual and that finally impinge on the sustainability of the individual's livelihood (Peng et al., 2017; Belcher et al., 2013; Morse and McNamara, 2013).

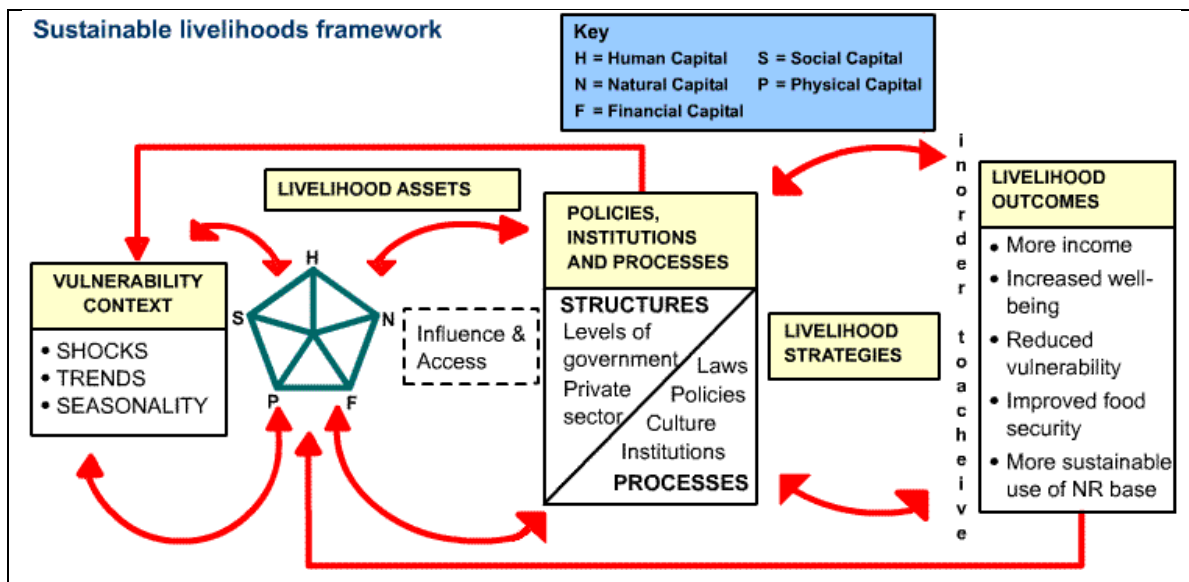


Figure 2.3: The Sustainable Livelihoods Framework (SLF)
Source: Scoones (1998:7)

The SLF has proved to be useful as an analytical tool, a set of principles and a developmental objective, particularly in the spheres of, amongst others, project design, project reviews and the assessment of sectors (Farrington, 1991; Farrington et al., 1999). Sustainable livelihood is regarded as one of the key aspects of the sustainable rural development paradigm. Serious attention is given in this paradigm to livelihood and its transformation; in fact, the ways in which its challenges can be addressed are among the most essential aspects in the mitigation of rural poverty reduction and rural development (Sajasi Gheidari et al., 2013).

The SL approach has raised many questions and there have also been many critiques, such as that by Farrington et al., (1999:13):

“To its potential critics, an SL approach may appear excessively micro-focused, time-consuming, and complex, with only limited value-adding. It does not obviate the need for existing methods and tools, and yet requires investments of time and resources to

implement wider perspectives and achieve a degree of synergy among existing initiatives”.

A few examples follow: As the first principle, the SL framework calls for a focus on people which means that the approach should be ‘people-centred’. However, people, especially the poor, find it difficult at times to participate (FAO, 1999). Also ‘poverty’, or ‘poverty alleviation’, does not feature in the SL framework (Ashley and Carney, 1999). Additional criticisms of this approach include the failure to engage in debates about politics and governance, to link livelihood and governance debates, to discuss shifts in rural economies, and to deal with broader questions around agrarian change (Scoones, 2009).

Another important theme relevant to this study is Sustainable Development (SD). The paradigm of Sustainable Development seems to have attracted the broad-based attention that other development concepts have lack(ed) and appears poised to remain the dominant development paradigm for a long time (Scopelliti et al., 2018; Shepherd et al., 2016). The Brundtland Commission, in its report entitled “Our Common Future” (1987), was the first to give an authoritative definition of the term. The full definition of sustainable development is provided in detail in the sections below. Firstly, it is important to note that the Brundtland Report provided the momentum for the landmark 1992 Rio Summit that laid the foundations for the global institutionalisation of sustainable development. In development literature, a path is seen as being sustainable as long as overall welfare does not decline along the path (Pezzey, 1989).

Whitmore (2006:309) rightly noted that “*sustainability implies something quite different, depending on which side of the bulldozer you are on*”. According to Ololade and Annegarn (2013), numerous human activities that contribute to advancement and development are possibly also environmentally harmful, socially damaging, and disruptive. As such, the concept of sustainable development has enjoyed much attention in recent years, with much emphasis being placed on the relationship between the benefits of sustainable living and its detrimental effects. Sustainable

development has been defined by the World Commission on Environment and Development (1987:15) as “*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*”. Essentially, the main thrust of sustainable development is to establish harmony between the environment, society, and the economy – also known as the “triple bottom line”. The next section focuses on the central concepts associated with rural development.

2.5 RURAL DEVELOPMENT: CENTRAL CONCEPTS

2.5.1 Poverty

2.5.1.1 Poverty defined

Poverty has many faces (Van Noordwijk, 2017). Before presenting the World Bank’s definition of poverty, it is important to note that definitions of poverty serve to provide precise statements of what differentiates the state of poverty from that of not being poor (Lister, 2004). These statements guide the choice of measures used in determining the level of poverty in a population and consequently translate conceptualisations of poverty into policy initiatives. Consequently, there is no single definition of poverty that cuts across all societies. Different societies, organisations, and independent researchers define poverty in different ways. However, it is important that each definition used relates to the conditions of the society to which it is applied (Du Toit, 2005; Lister, 2004). As Lister (2004:12) puts it, “*any definition has to be understood, at least in part, in relation to particular social, cultural and historical contexts*”.

Obviously, the importance of context specificity in defining poverty has implications for studies that compare poverty levels across different societies. The World Bank (2000:44) describes poverty as follows:

“Poverty is hunger. Poverty is lack of shelter. Poverty is being poor and not being able to see a doctor. Poverty is not having access to school and not knowing how to read. Poverty is not having a job, is fear for the future, living

one day at a time. Poverty is losing a child to illness brought about by unclean water. Poverty is powerlessness, lack of representation and of freedom.”

The different conceptualisations of poverty discussed in this section provide the framework in which definitions and measurements are developed (Lister, 2004; Lok-Dessalien, 2000). They basically shed light on what poverty means - both to those who are directly affected and to different groups in society (Lister, 2004). Conceptualisations of poverty are also critical for the formulation of poverty alleviation strategies (Lister, 2004; World Bank, 2001a; Lok-Dessalien, 2000).

Different competing conceptualisations of poverty have been developed. Some concepts of poverty are also used as definitions. The notions of absolute *versus* relative poverty are, for example, used as definitions and as conceptualisations. In addition to the two widely used concepts of poverty, the phenomenon can also be conceptualised according to chronic as opposed to transitory poverty. Furthermore, poverty is sometimes conceptualised as static, and this notion is contrasted with dynamic poverty. Other concepts of poverty include vulnerability *versus* social exclusion and primary secondary poverty. Moreover, poverty can also be viewed according to a capabilities dimension. Lastly, there is also a body of literature that conceptualises poverty as a structural phenomenon. None of these concepts of poverty permeates all societies. This is because, as mentioned earlier, poverty is a construction that is specific to societies. In addition, different groups within society may hold different conceptualisations of poverty.

Absolute versus relative poverty: According to Todaro (1994:661), absolute poverty is a situation in which a population, or a section thereof, is able to “*only meet its bare subsistence essentials of food, shelter, and clothing to maintain minimum levels of living*”. The depth of this type of poverty within an area is measured by the percentage of the population living below a pre-determined poverty line (see, for example, Figure 2.4. the map of world poverty). As the name suggests, relative poverty refers to poverty in relative terms. In this category, an area, person, or group of persons is considered poor by comparing its or their situation with that of other areas, persons, or groups of persons. This type of poverty is normally illustrated in the form of percentage shares

of the total national income going to percentile groups (e.g., quintiles or deciles) in the population (Todaro, 1994).

Capabilities: The concept of capabilities is defined by Osmani (2003) as the ability of people to lead the kind of life they desire. The thrust of the concept is that “*poverty is an absolute notion in the space of capabilities but very often will take a relative form in the space of commodities or characteristics*” (Sen, 1983:161). Implicit in this thesis is the argument that individuals have fixed capabilities, and given different commodities, they either fulfil their needs or fail to fulfil them and live above or below the poverty line. May (2000) identifies four crucial capabilities that must be met to sustain “acceptable” living standards. These are: (1) Human capabilities, which incorporate the notion of human capital – focusing on factors that improve productivity in the formal labour market, as well as livelihood activities that occur outside of the labour market. Thus, human capabilities include general health and nutritional status; skills and abilities that are used in reproductive activities such as childcare; and livelihood activities such as subsistence farming; (2) Natural resources; (3) Social and institutional assets; and (4) Human-made assets. Finally, the relativists (e.g., Townsend, 1985) challenge the notion that capabilities are absolute and argue that they are a relative construction.

Chronic versus transitory poverty: In addition to the absolute *versus* relative poverty debate, another interesting distinction in the conceptualisation of poverty is that of chronic and transitory poverty. This dichotomisation is made possible by incorporating the time dimension into the study of poverty (May, 2003; Jalan and Ravallion, 2000). The differentiation of *chronic* from *transitory* poverty involves studies of the welfare levels of households and/or individuals over time. According to Aliber (2001), cited in May (2003), chronic poverty can be understood as a household’s or individual’s inability or lack of opportunity to better its circumstances over time or to sustain itself through difficult times. Other researchers (e.g., Hulme and Shepherd, 2003; Mehta and Shah, 2003) define chronic poverty as an occurrence of prolonged experience (e.g., five years or more) of capability deprivation. Furthermore, chronic poverty can also be conceived as poverty that is transmitted from one generation to the next, usually meaning that children from poor households are likely to become poor adults, whose children will inherit the poverty, and so on (Aliber, 2003; World Bank, 2001b).

Clearly, whatever functional definition of the concept a researcher adopts, the key issue in identifying whether a household/individual is chronically poor or not is the period of time it/he/she spends in the state of being categorised as poor (May, 2003).

The *transitory poverty* concept captures poverty of households and/or individuals that comes in spells (Chronic Poverty Research Center, 2004; McKay and Lawson, 2003; May, 2003; Jalan and Ravallion, 2000). Transitory poverty is related to the impact of shocks on individuals, households, and communities. It could, for example, be a result of floods that hit a community and destroy its livelihoods and render its members temporarily poor until the necessary interventions have taken place.

Vulnerability and exclusion: The vulnerability and exclusion conceptualisation of poverty is new to studies of poverty in developing countries. The idea of vulnerability is related to the concept of transitory poverty. Vulnerability is derived from the fact that shocks – of both economic and non-economic nature – can either pull people and/or households that are not poor into poverty or exacerbate the problem for those that are already poor (Osmani, 2003; World Bank, 2001a; Lok-Dessalien, 2000). The greatest contribution of the concept of vulnerability in our understanding of the dynamics of poverty is that it allows for the consideration of risk and insecurity in the study of deprivation. The consideration of these issues, according to Osmani (2003), brings poverty studies closer to reality in so far as the perceptions and the behaviour of poor people are concerned.

The concept of social exclusion originated from Europe (Brady, 2003a; Osmani, 2003; Saith, 2001), and yet, its application in poverty studies for developing countries has not been straightforward (Lok-Dessalien, 2000). Exclusion occurs when certain people or groups of people (e.g., by sex, race, religion, etc.) are excluded from taking part in various aspects of social life (Osmani, 2003). The definition of exclusion in the context of poverty studies largely depends on how poverty is conceptualised. When a narrow definition of poverty is used (such as lack of income), exclusion is mostly defined in broad terms such as material deprivation. On the other hand, if poverty is conceptualised as multidimensional, specific issues of the phenomenon are identified (e.g., participation, empowerment, social/civil rights, etc.) (Lok-Dessalien, 2000).

Structural poverty: The structural conceptualisation of poverty explicitly acknowledges that the profile of poverty in a population is configured by the economic, political, and social organisation of the society (Du Toit, 2005; Mbeki, 2003; South Africa, Department of Welfare, 2003). Accordingly, the “structuralist” approach places emphasis on studying poverty with reference to specific configurations of the political economies, local geographies, and specific histories of the populations being studied (Du Toit, 2005).

2.5.1.2 Basic Measures of Poverty

As mentioned above, the choice of measures of poverty is, among other things, based on the operational definition of the phenomenon. Thus, measures of poverty provide a platform to operationalise the definitions so that those defined as poor in each population can be counted upon to determine the prevalence of poverty (human development) in that population.

The two strands of methodology in poverty measurement applied in this research are: (1) unidimensional methods; and (2) multidimensional methods. It does not matter which methodology is adopted; poverty measurement involves three important steps (World Bank, 2005; Ruggles, 1990). The first step involves the determination of the relevant indicator of welfare. Some of the commonly used indicators include number of calories consumed, income, consumption expenditure, basic needs (e.g., food, shelter, clothing, schooling, employment, etc.), capabilities (e.g., life expectancy, literacy rates, etc.) and wealth (Lok-Dessalien, 2000; Chaubey, 1995; Blackwood and Lynch, 1994). Income and/or expenditure data – employed in the unidimensional methodologies of poverty measurement – are the most frequently used. As indicated above, this study doesn’t deviate from this norm in that the index has been developed and used as an indicator of welfare, in fact, a composite measure of wealth. Its computation is based on various variables pertaining to household consumer durables and access to services.

The second step in poverty measurement involves establishing a minimum acceptable standard for the chosen indicator to separate the poor from the non-poor (*poverty line*). Multiple poverty lines can also be used to distinguish between different levels of

poverty (Coudouel et al., 2002) because the characteristics of the poor may vary in terms of the different intensities of poverty. The category “extremely poor” is, for example, used to distinguish that segment of the population that survives on a per capita income of less than US\$1.90 a day from the “generally poor” - those that live on US\$2 per day (Lakner et al., 2020).

Depending on the definition and conceptualisation of poverty, the poverty line can be set as an absolute minimum or a relative position. The poverty lines of US\$1 and US\$2 per person a day are examples of absolute poverty lines that are used by the World Bank to measure and compare poverty levels across countries (World Bank, 2020).

The third crucial step in poverty measurement involves generating an index that aggregates the information from the chosen welfare indicator. In addition to three principal steps involved in measuring poverty, there are, in practice, other decisions that need to be made. These include the choice of the unit of analysis. In general, under an assumption that within families or households where resources are pooled together and consumption decisions are made jointly, households are used as the unit of analysis in poverty studies. However, this practice may have serious implications for the measurement of the depth of poverty in a population. Borat (1999), for example, shows by using survey data from South Africa that by switching from a household to an individual level, an analysis of poverty may potentially result in significant differences in the ranking of indigence among the same group of persons. Several of these indicators have been developed over time. They include: (1) the poverty gap index; (2) the squared poverty gap index; (3) the Lorenz curve; (4) the Gini coefficient. However, the two most widely used (and easily understood) indices are the head count index and the poverty gap index:

The headcount index simply measures the proportion of the population that falls below the poverty line; hence, the proportion that is counted as poor. Figure 2.4 shows the spatial distribution of world poverty in 2000, measured using the head count measure.

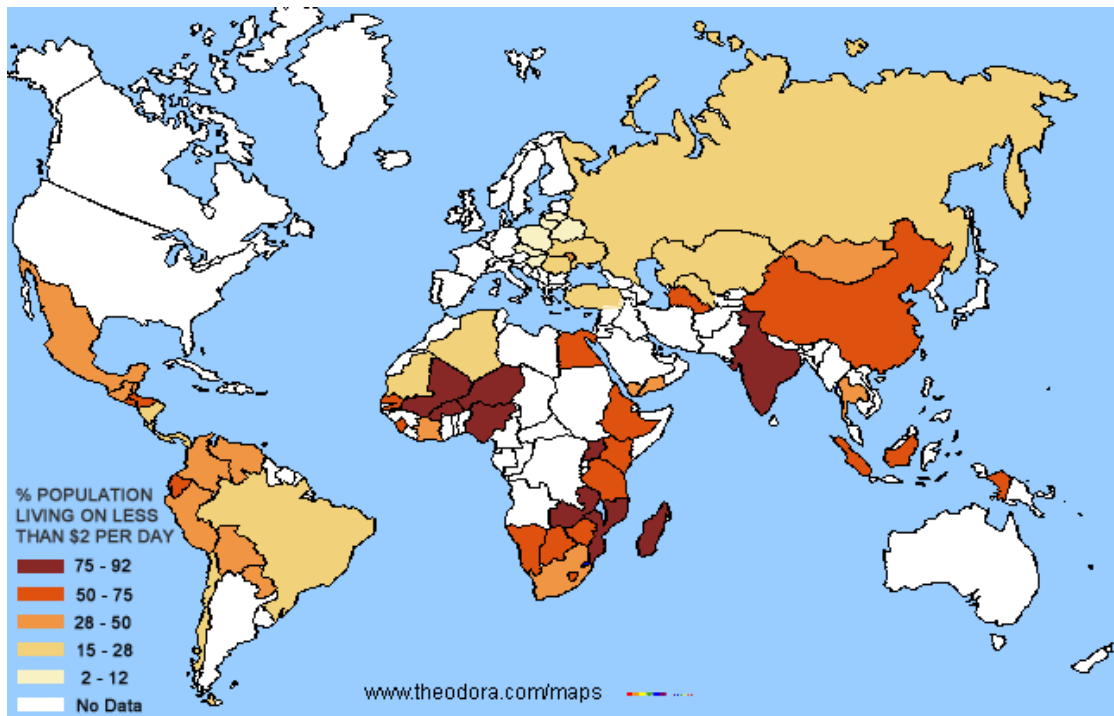


Figure 2.4: Map of World Poverty in 2000

Source: http://www.theodora.com/maps/new9/poverty_map.gif (accessed 2018/07/24)

Critique of the head count index involves the fact that it fails to account for substantial differences in the welfare levels among the people/households classified as poor, with some living just below the poverty line while others are experiencing acute impoverishment. Secondly, the traditional head count measure assumes, at least implicitly, that poverty is discrete. That is, the index assumes that poverty ends abruptly when a given household/individual experiences a unit increase in an indicator of welfare (e.g., income) that pushes it above the predetermined defined poverty line. According to Blackwood and Lynch (1994:569), this conception of poverty is misleading, and *“it is more accurate to conceive poverty as a continuous function of various gradations.”*

Another important point involves the fact that the headcount index of poverty remains unchanged after a transfer of income (or any other measure of welfare) between households/ individuals that are living below the poverty line.

The poverty gap index provides a measure of the aggregate distance of the poor segment of the population from the poverty line (depth of poverty) but fails to show the spread of poverty and the level of inequality among the poor.

2.5.1.3 *Poverty and population*

The World Bank's (2000) definition discussed above demonstrates that poverty interacts with population factors and development issues in many ways. However, because poverty is a highly contested phenomenon, it is almost impossible to discuss the interrelationships with population and development issues without drawing on some theoretical explanations. Important perspectives on these interrelationships are briefly discussed below. There are two extreme views with regard to the interrelationships between population and poverty. On the one hand, there is the view that poverty is caused by rapid population growth (overpopulation), whilst on the other hand, there is the view that poverty is the cause of overpopulation. Before discussing these perspectives, it is important to define the idea of overpopulation.

Overpopulation defined - This concept links the size of a population to the resources (land, mineral resources, human resources, etc.) available to it. The definition of the concept can be drawn from explanations of other related concepts such as population pressure, optimum population, and carrying capacity.

Population pressure: This concept also links a population's size to the resources at its disposal. A country or any other territory can be viewed as having high or low levels of population pressure depending on how far or near that country's/ territory's population size is from the maximum consistent with the available resources. Therefore, a country experiencing strong population pressure is one whose population size is nearer to the maximum consistent with the available resources, and *vice versa* (Pressat, 1989).

Optimum population: This concept is also defined from a geographical perspective. Optimum population refers to an ideal number of people that can be sustained in a given area. It simply means that should the population size be larger than this ideal figure, then that area is overpopulated. Likewise, a population size less than the ideal

figure is characteristic of underpopulation. This concept also shows that a population can be said to be either large or small, based on how it relates to its resources.

Carrying capacity: This is another concept that geography scholars frequently use when referencing population size. Carrying capacity refers to “*the largest number of persons that an area could sustain at an assumed standard of life, given its available resources*” (Pressat, 1989:24). From the above definitions from a geographical perspective, it can be deduced that overpopulation occurs when: 1) an area is experiencing strong population pressure; 2) the population size of an area is above its optimum size; 3) the population size of an area is closer to the maximum population that it can sustain, given its resources.

It is also worth mentioning that overpopulation usually results from rapid population growth (i.e., an annual growth rate above 2%). Furthermore, by emphasising the relationship between population and resources, the definitions of “overpopulation” and its related terms suggest that population densities are important indicators of this phenomenon. Now that the concept of overpopulation has been defined, the contrasting views on its interrelationship with poverty and development can be explored.

The number of people living in extreme poverty has increased along with the growth in the size of the world’s population. Simply put, a population with a large proportion of its members entrapped in abject poverty cannot be said to be developed. In Geography, this is one of the many characteristics that differentiate what today is referred to as more developed countries (MDCs) from less developed countries (LDCs). Consequently, poverty eradication (or at least the mitigation of its effects on the population) is probably the most important developmental goal of our time. This sentiment has been well captured in the Millennium Development Goals (MDGs). For example, the MDG 1 challenged United Nations (UN) member states to:

- reduce by half the proportion of people living in extreme poverty (i.e., living on less than a dollar a day);
- achieve full and productive employment and decent work for all, including women and young people; and

- reduce by half the proportion of people who suffer from hunger.

The three focal points of MDG1 indicate that poverty is a multidimensional phenomenon that encompasses many other dimensions of well-being, in addition to monetary deprivation. This notion is embodied in the World Bank's (2000) definition of the phenomenon, which is discussed above.

At this juncture, it becomes important for the purposes of this study to consider all theoretical views on the interrelationships of poverty and population, which are given attention in the section below.

The most prominent among the main approaches involves the Malthusian theory of population that attributes poverty to overpopulation. Based on the principle of diminishing returns, this perspective unequivocally argues that poverty results from overpopulation. The thrust of the theory is that rapid population growth rates result in declining per capita resources enjoyed by the population - reflected in high unemployment; high population densities; lower per capita food production and intake; child labour; crime, etc. — and hence exacerbates poverty and underdevelopment.

The Malthusian school of thought prescribes that the only way to escape poverty is for populations to control their growth rates by exercising moral restraint and limiting their progeny (United Nations, 1995; Todaro, 1994). The contemporary variants of this perspective (the neo-Malthusian views) promote family planning programmes as the driving force behind human development.

The most prominent opponent of the Malthusian theory is the Marxist perspective. The thrust of this perspective is that population growth and its characteristics are determined by the social and economic conditions prevailing in each society. It vehemently rejects the existence of natural laws of population as postulated by the Malthusian theory. The Marxist approach maintains that each mode of production (economic system) has its own law of population.

The Marxist perspective does not seem to contradict the Malthusian theory on why and how a population grows. Rather, these two theories differ on the consequences

of population growth. First, the Marxist perspective sees overpopulation as a relative phenomenon that results from the accumulation of capital. It defines capital accumulation as *“a process in which “variable capital”, the source of demand for human resources, increases less rapidly than “constant capital” the source of finance for capital assets”* (United Nations, 1973:47). The idea embedded in the Marxist argument is that if there is population pressure in society, that pressure is on the means of employment and not on the means of subsistence. Secondly, the Marxist approach strongly rejects the notion that poverty results from the reproductive behaviour of the population. Instead, it argues that poverty results from a poorly organised society, and especially a capitalist society.

Marxists argue that poverty is a result of the capitalist desire for an industrial reserve army that would keep wages low through competition for jobs, and at the same time, force workers to be more productive to maintain their jobs. Marxists sees this as the only way for capitalists to generate profits. Hence, according to this approach, the poor are not poor because they overran the supply of the means of sustenance but because firstly, a portion of their wages has been taken away from them, and secondly, their jobs have been overtaken by machines. Implicit in the Marxist argument is that, ideally, population growth should bring about increases in per capita incomes (improve the welfare of society). It rejects the idea of diminishing returns on the basis that through technological advances it is possible to increase the production of subsistence appropriate products to match the needs of the population.

According to the original Marxist position, the only lasting solution to the problem of poverty is a complete reorganisation of society by dismantling the class structure, and by establishing a communist society where property is publicly owned, and production is centrally planned. It argues that this system would guarantee a free and fair society where technological advances would benefit all and unlimited population growth could be accommodated at comfortable living standards.

In conclusion, as this study also uses the perspective of Geography, it is worth noting here that several studies have suggested that poverty should be conceptualised and measured as an absolute construct in the Least Developed Countries (LDCs) and as a relative construct in the More Developed Countries (MDCs). The motivation for this

suggestion is that it is more rational to focus on absolute measures in LDCs because significant proportions of their populations face acute deprivation. In MDCs, where a small proportion of the population faces absolute deprivation, relative measures are recommended to capture the dynamics of relative deprivation. The suggested mode of conceptualising poverty in MDCs and LDCs is, however, not generally followed in practice. The official poverty line for the U.S., for example, is absolute. Likewise, some recent poverty studies from LDCs use relative poverty lines. Hence, *“(t)here can be little question that population growth creates long-term pressures on societal resources that must be dealt with. Ultimately, each of the several perspectives of the relationship between population growth and development probably has merit; it is just that each is describing a different part of a complicated process, one that is unfolding differently for today’s less developed nations than it did historically for the now developed nations”* (Weeks, 2002:509)

As mentioned above, the concepts of poverty, population and development are closely related. The next section explores the notion of sustainable development and its related concepts.

2.5.2 Sustainable Development

2.5.2.1 Definition of Sustainable Development

The term ‘sustainable development’ has been widely used by politicians in the past few decades even though there is no uniform definition (Soubbotina, 2004). However, the idea of sustainable development is not as new (Mensah, 2019; Shrestha, 2017). According to Shrestha (2017), the term originated in 1713 in the first book on forest sciences, edited by Carlowitz. He argued that

“timber should be as important as our daily bread” and that it should be *“used with caution in a way, that there is a balance between timber growth and lumbering”*. This would allow forever for a continuous, perpetual use. *“For this reason, we should organise our economy in a way that we won’t suffer scarcity [of timber], and where it is lumbered; we should strive for young growth at its place”* (Carlowitz, 1713, cited in Shrestha, 2017:17).

Conservation organisations use the term ‘sustainable’ in several contexts. These organisations refer to ‘sustainable development’, as well as ‘sustainable use’. As mentioned, sustainable development is the development or activities concerning the improvement of the quality of human life while living within the carrying capacity of the earth’s finite resources (Ben-Eli, 2015). It means meeting the needs of the present generation, particularly those of the poor, without jeopardising the ability of future generations to fulfil their own needs (World Commission on Environment and Development, 1987). Sustainable use of resources means using natural resources (e.g., forests or woodlands, rivers, lakes and the ocean for food, medicine, firewood and building materials), while remaining within the limits of environmental capacity (Yeld,1997; International Union for Conservation of Nature and Natural Resources - IUCN/ World Wide Fund-WWF/ United Nations Educational, Scientific and Cultural Organization-UNESCO, 1991).

According to Mensah (2019), scholars such as Abubakar (2017) and Cerin (2006) acknowledge the pervasiveness of the WCED’s definition, and further, that sustainable development is a core concept within global development policy and agenda. It provides a mechanism through which society can interact with the environment while not risking damage to resources in the future. Thus, it is a development paradigm, as well as a concept, that calls for improving living standards without jeopardising the earth’s ecosystems or causing environmental challenges such as deforestation and water and air pollution that could result in problems such as climate change and the extinction of species (Browning and Rigolon, 2019, cited in Mensah 2019; Benaim and Raftis, 2008).

The most cited definition from the WCED’s report is that “*sustainable development is the development that meets the needs of the present without compromising the ability of future generations to meet their own*” (WCED, 1987:43).

According to Bolis et al. (2017) sustainable development is concerned with finding ways where human socioeconomic needs are met in harmony with environmental issues. As a concept, the sustainable development framework consists of many different components/dimensions and is usually presented as the interface between

the environmental, economic, and social components/dimensions, with each having a specific function (EEA Grants, 2006:3):

- The environment is the basis for sustainable development;
- The economy is the tool whereby sustainable development is achieved; and
- A good life for all (i.e., the social component/dimension) is the target of sustainable development.

Environmental sustainability cannot be achieved without taking into consideration the social and economic importance of those who are dependent on the resources. McCormick (1999) asserts that sustainability integrates economic, environmental, and social values during planning; distributes benefits equitably across socio-economic strata and gender upon implementation; and ensures that opportunities for continuing development remain undiminished to future generations. It is therefore vital to ensure the continued existence of finite resources through the protection of our environment and to ensure the respect of our inherent dignity. McCormick (1999) further argues in support of the above statement that the unborn have a right to life; have a right to an environment capable of sustaining life; and to sustaining it at a level of quality enjoyed by the present generation.

“Any development or growth process which depletes capital (plant, machinery, infrastructure, land, water minerals and human capital - skills, knowledge, health, social organisation, etc.) must eventually slow down” (World Bank, 1989:44). Therefore, sustainable (economic) growth demands that the future strategy should emphasise both sound environmental management and human resource development. The concept is aimed at *“providing fairness and opportunity for everybody, [and] not just the privileged few, [but] without further destroying the nation’s finite resources and without compromising its carrying capacity”* (UNDP, 1992:17). The definition can easily be extended to a country (such as South Africa or its component administrative regions), region (Africa, Asia, etc.) or the world. Sustainable development has therefore been appropriately defined as follows:

“Sustainable development is a process in which economic, fiscal trade, energy, agricultural and industrial policies are all designed to bring about development that is economically, socially and ecologically sustainable (and in which) current consumption cannot be financed by incurring (economic, social and ecological) debts that others must repay in the future” (UNDP, 1992:17).

In order to achieve sustainable development, the UNDP has suggested the following minimum requirements:

- The elimination of poverty,
- A reduction in population growth,
- A more equitable distribution of resources,
- Healthier, more educated and better-trained people,
- A decentralised, more participatory government.

Sustainable development encourages people to take responsibility for their own development and promotes development activities that address the actual needs of the people and require increasing community contributions to development services and infrastructure (UNDP, 1992). Sustainable development, on the part of the government and the citizens, calls for the following:

- a) Partnerships (between government, business, communities, NGOs and community-based organizations (CBOs), academic institutions, the international community and donors, rural and urban communities, etc.);
- b) Capacity enhancement (human and institutional);
- c) Good governance, accountability and transparency;
- d) Democracy and human rights;
- e) Environmental protection;
- f) Peace and political stability.

From the above-mentioned definition, it is clear that the purpose of development is to widen the range of all human choices in order to promote human well-being, by : a) increasing the availability of basic life-sustaining goods, such as food, shelter, and

protection, and extending the space receiving such products; b) raising the standard of living through better jobs, education, etc. and; c) widening the range of economic and social choices offered to individuals by liberating them from servitude and the forces of ignorance and human misery.

In rural areas, especially in the developing countries such as South Africa, it is not easy to avoid environmental degradation. In order to satisfy their daily needs, rural people are often forced to depend on the natural resource base. The challenge that they are confronted with is that the only resource available to them might be from the environment. Most of the time, since they are faced with absolute poverty, it is more difficult for them to protect the environment than to exploit and degrade it (Van Rooyen, 2004). Furthermore, their lack of knowledge and the limited choices available to them may leave people with no choice but to sustain themselves through unsustainable means. This situation impacts on and undermines their livelihoods and in turn, sustainable development. These are the issues that need to be considered when thinking about sustainable development.

2.5.2.2 *Sustainable Development: a dimensional view*

Sustainable development is often described as a catch phrase, with many contending that it is ambiguous (Mensah, 2019). However, the word that Kates et al. (2005:20) use to describe the concept of sustainable development is “malleable”, which allows for it to represent “open, dynamic, and evolving conditions”, and, as such, enables it to be adapted to “fit diverse contexts and situations”. In the discussions on sustainability and sustainable development above, the term ‘sustainable development’ includes the notions of *making better* (development) and *maintaining* (sustainability). Associated with the concept of sustainable development is also the urgency for us to consider the effects of our actions on the environment, economy, and society (Talyor, 2016; Strange and Bayley, 2008; Bell and Morse, 2003). Our consideration should not only be pertinent to the present, but also to the future; not only in our own neighbourhood, workplace, city, or country, but also beyond the borders of these respective spheres (Strange and Bayley, 2008; Basiago, 1999). Bossel (1999:3) is of the opinion that the particular sustainable development concept “*an individual/community/society adopts, and its interpretation of it will have*

consequences for the development that that individual/community/society will achieve”.

In conclusion, it can be stated that the constant that emerges from the multitude of definitions of sustainable development is the respective interconnections between the environment, the economy, and society. These are generally referred to as the three pillars of sustainable development (Figure 2.5).

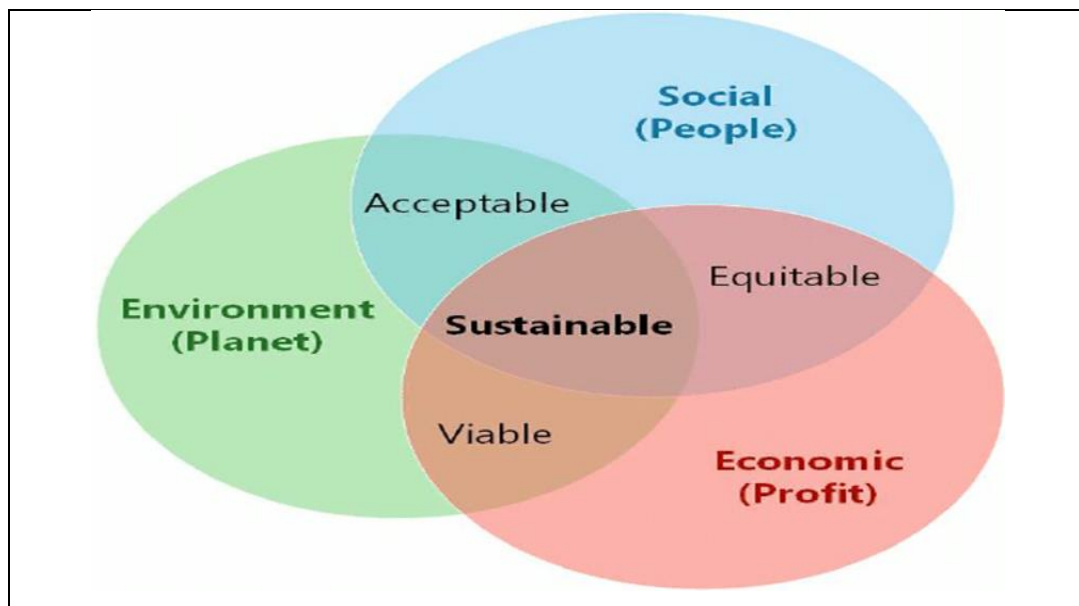


Figure 2.5: Three E's balance rule: Environment, Equity, Economy
Source: SOGESID (n.d.)

The section below provides a brief overview of each of these three components/dimensions:

Social Dimension: According to Mensah (2019), the social dimension involves notions such as equity, empowerment, accessibility, participation, cultural identity, and institutional stability. Cronjé (2007:2) refers to the sustainable social development dimension as the one representing the wellbeing of individuals and society at large. In their quest to achieve social sustainability, the goals that social organisations and structures set themselves include the following: distribution equity, the effective provision of social services, gender equality, and political accountability and participation.

Economic Dimension: According to Van Wyk (2011:53), “an economically sustainable system is one that supports sustainable livelihoods, and facilitates equitable access to resources and opportunities, including the equal sharing of finite ecologically productive space and the establishment of viable businesses and industries based on sound ethical principles”

According to Cronjé (2007:21), the following principles need to be followed in order to achieve economic sustainability:

Work towards equity within countries, between nations and between generations; promote ethical business practices (e.g., fair trade); promote business practices that are socially and environmentally responsible and policies that ensure the equitable distribution of true costs and benefits; support local economies and job creation; and base business success on the level of social and environmental responsibility achieved.

Environmental Dimension: This dimension, including natural resources⁴ and ecosystem services, focuses on the preservation of “natural capital”. Thus, environmental sustainability is about preserving the qualities that are valued in the physical environment (Sutton, 2004).

Cronjé (2007:18) provides the guiding principles to follow in terms of the environmental dimension, namely,

“Protect the earth’s life-support systems (air, water, soil); use renewable resources no faster than nature can replenish them; minimise the use of non-renewable resources through the three R’s (Reduce, Reuse and Recycle); manage waste and prevent pollution; and instil environmental awareness in society and a respect for the load capacity of ecosystems”.

⁴ Natural resources include both renewable components (e.g., plants and animals) and non-renewable components (e.g., fossil fuels, minerals, and soil).

To conclude, sustainable development involves the evenly proportioned interaction of the environmental, economic, and social components/dimensions, with the three dimensions being of equal importance, equally interdependent and mutually reinforcing. According to Mensah (2019), the 'triple bottom line' (TBL) is the means to represent the balance and harmony between the three dimensions (Mensah, 2019).

2.5.2.3 *Sustainable Development as a people-centred approach*

The people-centred approach is informed by ideas that evolved primarily out of four contexts: (i) the theoretical works by phenomenologists of the Frankfurt School in the 1950s and 1960s, and especially the work of Jurgen Habermas since the 1970s regarding the relationship between theory and praxis; (ii) the work on student participation in controlling their education, as informed by Paulo Freire, and related questions about the production of knowledge; (iii) work advanced within and through the development of NGOs to shift power relationships within development practice and to redefine the roles of external agents; and (iv) the profound frustrations in respect of failed development projects experienced by many working within the world of externally funded development interventions.

The people-centred approach emerged as a paradigm shift in development thinking during the 1960s and early 1970s, and while participatory development has been described and defined in a variety of ways (Vainio-Mattila, 1997; World Bank, 1996; Sachs, 1992), all these definitions reflect the desire by those involved as agents of donor agencies to engage more deeply with the contexts of their work. While the genesis of the paradigm shift has been discussed in greater detail elsewhere (Vainio-Mattila, 1996 and 2000), the combined intellectual and experiential basis of the shift is worth noting. The three central discourses — emerge-theory *versus* praxis, production of knowledge, and the role of external agents — are described in more detail later in the study. In that section, the meanings of these discourses are discussed in a participatory development context, and their implications for and evidence in community forestry are also analysed.

There is no uniform definition of a people-centred approach, but there are two key factors when describing such an approach: the actor *and* the meaning of participation. In terms of "actor", the literature refers to "people's participation" (McCall, 1987), "community participation" (Midgeley et al., 1986), "people's own development" (Swantz, 1986), "community development" (Korten, 1990; Gow and Vansart, 1983), and "self-help" (Verhagen, 1987). The use of these categories reflects a variety of political and sociological epistemologies. The important commonality is the shift from a passive voice (such as in "basic needs development") to an active voice.

The second aspect, the meaning of participation, refers to the positioning of participatory initiatives on the continuum from manipulating participation for the achievement of externally identified project goals to the empowerment of the actors to define such goals themselves, as well as the actions required to achieve them. The participation and empowerment concepts are discussed in detail below. Arnstein's Ladder of Citizen Participation (Arnstein, 1969) is perhaps the best known and the most often cited continuum. The continuum signifies viewing participation in terms of project implementation and on the other hand, viewing participation as an end in itself, that, when achieved, will result in long-term engagement by those involved in the process of solution finding.

The micro foundation of a people-centred approach to development involves the active participation of individuals in their quest to stimulate sustainable development. Most definitions of development include action plans, strategies and programmes aimed at improving the circumstances of the poor and the conditions in the rural areas of developing countries (traditional culture). The micro foundation of a people-centred approach defines development as "*the right to live a meaningful life and not just the mere satisfaction of the material needs of people*" (Coetzee, 2001:119).

Coetzee (2001:122-126) presents the following six principles associated with the basic people-centred approach to development:

- People can be more than they are - Apart from aiming to bring about material improvement, development from the basic (micro-foundation) perspective aims to increase the level of wellbeing of a human or 'humanness'. A developmental

initiative should therefore provide people with the means or tools to become more than they are. This can be achieved through social justice, joint decision-making, the satisfaction of basic needs, respect for the ecosystem and an indigenous lifestyle, freedom of expression, and the advancement of people through their own initiatives.

- Meaning - The people-centred approach to development places the meaning that people attach to their lives as the essence of sustainable development and of their obligations towards this goal. For the success and sustainability of development projects, the following conditions are essential: a desire to work towards an idealised utopia; the use of the existing structures, mainly economic and social, for the purposes of improving the three-dimensional components of sustainable development; and an emphasis on the equitable sharing amongst members of innovative ideas and skills, knowledge, resources, and initiatives.
- Experiencing the life-world – a cultural concept. The probability of development taking place is more likely when people integrate the meanings that they attach to their world into their desire to improve their circumstances.
- Desirable direction – Individual decisions and interactions constitute the point of departure for development initiatives. The most appropriate approach would thus be a bottom-up approach. The starting point for development would be to explore people’s definitions of wellbeing and the ways in which they verbalise their desired state. Participation is all important in development initiatives, with shared decision-making, involvement, collaboration, co-operation in mutual creations, and evenly balanced power being the main aspects to consider.
- Consciousness – People concerned with development should involve themselves in the development process; they should have the confidence to realise that they have the right to make decisions for themselves. Development studies that are “grounded in consciousness” (of the individual and the community/society) are built on an awareness of the relationship that exists between an individual and his/her community/society.

2.5.3 Community Participation and Development

Participation is a common theme in contemporary development literature covering specific spheres such as policymaking, development planning and implementation, and donor policies. Two forms of participation emerge from contemporary development theory: participation of citizens in the utilisation of benefits (for example, services), and participation of citizens in decision-making. Both these forms of participation are central to this thesis. As explained by Bryant and White (1980), the former type of participation concerns the question of 'who gets what', while the latter is about 'who decides what'.

Two of the most important principles of wellbeing are participation and self-reliance. They imply the involvement of people in development initiatives. The micro foundation of a people-centred approach to development claims that "*development is for the people*". This approach therefore accords value to the subjective meanings that people associate with development. Central to the idea of a people-centred approach is the concept of 'community'.

As mentioned above, "community" has its source in the Latin word, *communis*, which denotes "common", "public", "shared by all or many" (Schulenkorf, 2012). Mompati and Prinsen (2000) highlighted that it is essential to recognise that communities are not homogeneous but in fact heterogeneous. According to Elias (1974:xiii), the concept of community "*is closely akin to the hope and wish to resuscitate convergent, intimate and closer ties between people with often different interests*". Thus, according to Taylor (2003) and Purdue et al. (2000), a community is "*construed as a space where solidarity, participation and coherence prescribe the order of things*". Schulenkorf (2011) further defines community as "*a web of social relations characterised by relations of mutual dependence and reciprocal interdependencies*".

Based on the above definitions, there are three geographical aspects of community that are important to those who advocate a positive role for communities in resource management: community as a small spatial unit; as a homogeneous social structure; and as a sharing of norms (Agrawal and Gibson, 1999). The boundaries of community are usually based on people or places and, as such, interest communities (people-

centred) are often differentiated from territorial communities (place-centred) (Kelly, 2001).

Three meanings of community that are more widely used can be identified within the literature (Bispo Júnior and Morais, 2020; Marston et al., 2016; Draper et al., 2010; Rifkin et al., 1988). Firstly, a *geographical community* refers to a population of a particular geographical area – a territorial community. Bispo Júnior and Morais (2020) describe a geographical community as the demographic characterisation of a community as a group of persons living in a defined area such as a specific neighbourhood or locality and sharing the same processes of territorial organisation. Secondly, an *interest community* involves a group of persons that share the same interests and identities (Bispo Júnior and Morais, 2020). Here, the meaning of community has less to do with territory and more to do with common identities and affinities, even while living in different neighbourhoods, cities, or countries (Bispo Júnior and Morais, 2020). Anderson (1983) and Willmott (1988) noted that an interest community does not require physical proximity but rather focuses on people who have something in common, such as a collective interest as a functional community.

Furthermore, Schulenkorf (2012) defines interest communities as the ‘imagined community’, consisting of members generally bound together in relationships, less intimate than those of close friends, by “*affiliation, interaction and a common sense of self*”. According to Schulenkorf (2012), the members of such a community share deep sentiments, convictions, or beliefs and, through these, make sense of their lives. Furthermore, Appadurai (1996) described an ‘imagined community’ as one that can be affixed in a local place but concurrently, in addition to its local members, also includes in its membership people from other localities. As such, in spite of not having physically met or communicated with each other, people may feel part of the group. The third definition relates to “*community as a target population or risk group*”. This definition is the basis for the epidemiological view of community and may or may not be linked to territory (Bispo Júnior and Morais, 2020).

There have been calls to link community participation with development processes (Theron and Mchunu, 2014; Midgley, 1986). There are different views as to what community participation actually means (Theron et al., 2016). They range from active

participation in political processes to the idea that this notion is possible only if the people participating wield the necessary power and control over the decision-making processes of their particular organisations. Intrinsic to the concept of community participation are the opportunities that need to be created to allow the community members to actively initiate the necessary steps to contribute to the development enterprise in question, to influence the process, and to draw fair benefits from its proceeds. The concepts of community-driven participation and community-driven development are similar in that the community members are the main role-players in the enterprise and have control over the culture of the development process and the direction that it takes.

Also intrinsic to the conceptualisation of community participation is the understanding that nobody has a monopoly over determining and defining the needs of the community; this is in fact the responsibility of the collective (Taylor, 1994). However, as suggested by Taylor (1994), the capacity to participate actively in the development process is already present in every community. Guidance may instead be sourced from development stakeholders to define and formulate the needs and priorities of the community. Alternatively, development stakeholders may present to them a whole range of options and approaches that may not be familiar to them. In this respect, the development stakeholders would offer their assistance in guiding the communities to make informed choices as to their preferred options and approaches. According to Theron and Mchunu (2016), development stakeholders are not permitted to make choices on behalf of the communities or impose their choices on the communities as this might prevent the communities from participating in their own development. Thus, community participation reflects the notion that nothing about a community should happen without the knowledge and permission of the community.

The above section provided an overview of sustainable rural development by defining the term, examining the dimensions of rural development and sustainable development, and analysing the role of the forestry industry in bringing about development that can be sustained. Furthermore, a people-centred approach to development was conceptualised. The following section provides an overview of the intersection between Geography, forestry, and poverty. The discussion then moves to providing an overview of rural development in South Africa.

2.6 GEOGRAPHY OF POVERTY AND FORESTRY: PEOPLE AND FOREST PRODUCTS

Brons et al. (2007) state that Geography is strongly correlated with poverty and wealth. It remains unclear, however, in geographical concentrations of persistent poverty, whether such concentrations can be regarded as a cause or an effect of poverty. Usually, they exhibit characteristics of both. Since Geography is about the how and where (Pattison, 1990), it has important implications for forests, poverty, and product value chains (Ingram, 2014). Forest value chains are discussed in more detail below, in the section on value chains in forestry plantations. Physical geographical variables are major factors determining ecoregions and forest types, and thus the species providing forestry products or non-forestry products (NFTPs) that originate from any specific area (Ingram, 2014).

According to Ingram (2014) and Sumner (2010), poverty has been traditionally defined geographically, by classifying countries according to aggregated average per capita income and Gross Domestic Product (GDP) levels. In the last decade, more holistic measures such as the Human Development Index (HDI) and the composite Human Poverty Index (HPI) have emerged (Sumner, 2010; UNDP, 2009). Using these classifications for 182 countries, 41 fall into a medium HDI category (34% of which are African and include South Africa), and 13% of countries of which are categorised as 'low' HDIs. The low and medium categories dominate (84%) in the African states (Sumner, 2010).

Sumner (2010; 2016) classifies the world's poor people into four geographical regions: 12% in low-income fragile states, 16% in stable low-income countries, 61% in stable middle-income countries, such as South Africa, and 11% in fragile middle-income countries. Sumner (2010) also highlights those developing countries that are still in extreme poverty; for instance, unlike most of the rest of the world, the total number of extremely poor people in sub-Saharan Africa increased from 278 million in 1990 to 413 million in 2015 (Barne and Wadha, 2018). In 2015, sub-Saharan Africa was home to 27 of the world's 28 poorest countries and had more extremely poor people than the rest of the world combined (Barne and Wadha, 2018). Against the background of

the Geography of Poverty and Forestry, the next section moves on to explore the role of forestry in the rural development discourse.

The role of forestry follows the same pattern as the rural development discourse mentioned above. It changes rapidly from not only productive but also consumptive and proactive (e.g., biodiversity, erosion) functions (Pistorius et al., 2011; 2012; Miles and Kapos, 2008). It is important to first discuss forest as a natural resource and highlight the role that it plays as an asset. Assets (mainly focusing on natural resources) are seen as essential for any rural development strategy (Barbier, 2012; Mensah, 2012). Shinns and Lyne (2005:158) view economic wealth as derived “from assets that can generate income, capital gains or liquidity”. Shinns and Lyne (2005) emphasise the key position held by assets in the rural development process. Most literature addressing rural development pays special attention to asset availability, asset distribution, and access to assets. Some scholars believe that some rural areas are richly endowed with resources but due to the lack of accessibility to them, the lack of knowledge about the resources in the area, and the lack of proper distributional services, they are described as poor (Beaulieu, 2002; Mararike, 1999).

Most governments and non-governmental organisations (NGOs) engage in a preliminary scrutiny of the natural resources available in rural areas and their accessibility to households. These institutions then develop new and sustainable rural development strategies that are based largely on the resource stock of an area. They involve households in development projects so that the supposedly available resources can be harnessed and be fully utilised for the households’ benefit. Beaulieu (2002) calls it “asset mapping”, which involves taking an inventory of what the community offers and to manipulate these resources for the good of the whole community.

Whilst natural resources are the key ingredient to rural development (Domon, 2012; Nelson, 2012), there is often a wide range of challenges and management issues that are almost universal in their nature that stakeholders face. Some of these challenges, according to Chen and Chai (2010), include massive forest destruction, soil erosion, land degradation and water pollution. Chen and Chai (2010) further assert that these environmental problems are a result of, and lead to, overconsumption and the

deterioration of the environment. Warhurst (2002) believes that these are some of the reasons for the rise and widespread adoption of the concepts of sustainable development and sustainable living, both of which focus on making sure that while the needs of the current population are met, this is done in such a way that the prospects of future generations will not be jeopardised. The sustainable livelihood framework that is based on promoting the sustainability of ecosystems and livelihoods has been adopted as the conceptual framework for this study, and owing to its ability to link people, their resources, activities, and coping strategies, and to deal with the challenges confronting them, this framework is used to guide most development projects. This is discussed in detail in the next section below.

The sections above considered rural development, rural discourse, and the role of forestry in the context of sustainable development, and it is important, therefore, to delve deeper into some of these discussions. What is central to this thesis is that sustainable development should be viewed not as an end state, but as a process that is not linked to any technological practice or vision. Specifically, innovative practical projects should be selected not only for funding but be based on the triple bottom line considerations of sustainability, namely, people, the planet, and profit, as well as on the level of involvement of the stakeholders (Elkington, 1998). The overall aim should be to promote a bottom-up vision of innovation, where all projects should be characterised as learning-by-doing and doing-by-learning initiatives. The ideas of the local entrepreneurs (i.e., small scale communal growers) for confronting and finding solutions to practical problems should be the drivers of the innovation process. Furthermore, lessons learnt through practice and research, and the information thus gleaned, should be closely integrated into scientific and indigenous knowledge banks and used innovatively and in of ways to the benefit of such projects. Such projects should be aimed not only at profiting the strategic partners or government but at generally assisting the stakeholders and at advancing their needs.

The role of forestry and the function of the rural landscape in forestry production are two contested aspects included in the five rurality discourse perspectives discussed above. This leads to the need to adapt the existing classification of sustainability discourses for application in rurality discourses. Currently, perspectives on rural development through forestry are lacking and inadequate, not only in South Africa, but

in rurality discourses in general. The challenge of the future lies in developing a new perspective that has a multifunctional view of rural areas without neglecting the possibilities that forestry development has to offer in rural areas. The concept of commercial forestry for rural development has this potential. The discussion now turns to rural development in the South African context.

2.7 RURAL DEVELOPMENT IN SOUTH AFRICA

Rural development remains a crosscutting policy in South Africa as it requires a multifaceted approach. Although South Africa has embraced rural development as an approach to fighting rural marginalisation since 1996, there has been little improvement in the standard of living of the rural population over the last 25 years. Since 1994, South Africa has adopted various approaches to rural development, but it was only in 2009 that the country adopted its first holistic and radical approach to rural development that required different government departments to implement it. Despite these efforts in rural development, the incidence of poverty is still higher in rural areas than in urban areas, and is more concentrated in previously disadvantaged areas, especially in the former homeland states (Sulla and Zikhali, 2018). In addition, backlogs in basic infrastructure and other government services have remained concentrated in the rural areas, further exacerbating rural-urban inequalities (Presidency, 2014).

The focus of this section is to review South Africa's rural development experience before and since the onset of democracy (i.e., 1994 – 2022). This review is aimed at providing insights into both the national economy and the current situation in the rural areas, as well as policy measures and outcomes. It will also contribute to identifying potential areas that should be given more consideration by policymakers when developing policy tools and setting objectives to deal with rural development.

The review will provide an understanding of the drivers of poverty, inequality, and underdevelopment in the rural areas of South Africa *before* and *after* 1994. Therefore, an in-depth analysis of colonial British programmes and those of the subsequent Boer/Afrikaner regime programmes will be examined.

2.7.1 Apartheid policies

Rural development policies focus on improving the living conditions of the rural dwellers by improving their access to various services and economic opportunities. These are in fact their constitutional rights. The lack of development in the rural areas of South Africa can be attributed to the apartheid model that created a capitalist economy for an elite minority group, with a legacy of rural poverty and underdevelopment as the outcomes. According to Neves (2017), the apartheid system differentiated between three types of space in South Africa, namely, the major urban areas; the commercial agricultural regions; and the other rural regions, each with its own political, social, and economic systems.

According to SAHO (2016), spatial segregation laws promulgated by the Dutch and British settlers (as early as the 1900s) resulted in a series of laws being passed, which led to black South African people being dispossessed of their land; they became tenants and sharecroppers and were restricted in their attempts to acquire land in reserved areas.

This ultimately culminated in land dispossession through the 1913 Land Act that was passed three years after Unionisation. It marked the beginning of territorial segregation by forcing the majority of black South Africans to live in reserves (forced removals) and made it illegal for them to work as sharecroppers. In 1926, the Natives Land Amendment Bill, geared towards removing Africans occupying small parcels of land (also known as black spots) from the “white” areas, was proposed (SAHO, 2016). In 1936, the Representation of Natives Act was passed, which effectively abolished black spots and all black occupants were moved to the “Bantu reserves”. During the same year, the Native Laws Amendment Act, first proposed in 1926, was passed. It marginally increased the land allocated to black South Africans by the Natives Land Act of 1913 from seven percent (7%) to 13.7% (SAHO, 2016). According to Phuhlisani Solutions (2009), the bulk of forced removals took place between the 1960s and 1994, during the era of so-called “Grand Apartheid”. Land taken from blacks was given and sometimes sold at low prices to whites (SAHO, 2016; Butler et al., 1977).

Table 2.1 details the laws that were passed after 1910, confining black Africans to predominantly the rural reserves, which were later expanded to become Bantustans or homeland areas.

Table 2.1: Racial segregation laws and enquiries in South Africa: from 1913 – pre-1994

Commission /outcome	Timelines						
	1913	1922	1923	1936	1950	1954	1959
Commission/ Act	Land Act	Stallard Commission	Natives (Urban Areas)	Land Act	Group Areas Act	Tomlinson Commission	Promotion of Bantu Self Government Act
Outcomes	Denied blacks access to land	Recommended a system of influx control for blacks	Excluded Blacks from white-funded amenities	Denied blacks access to land	Created racially segregated areas	Recommended separate development and betterment planning programmes in the reserves	Created 10 Bantu homelands

Source: Adapted from SAHO (2015; 2016); Houghton (1957); Union of South Africa (1923, 1959)

Under the 1913 Natives Land Act and 1936 Land Act, as mentioned above, black Africans were allocated only 13.7% of the total land surface area, while the remaining land, both rural and urban areas, including major mineral resources and cities, was reserved for whites. Since the government wanted racial segregation without undermining the foundation of white economic privileges, it established the Stallard Commission to devise a framework for administering the lives of South Africans entering or living in the “white” urban areas. The commission recommended an influx control system and the forced removal of the “surplus” black African labour force. Black Africans could enter and live in the urban industrial areas only if they were working in those areas; they had to depart once the job was done. The Stallard Commission formed the basis for the Urban Areas Act of 1923 which allowed urban local authorities to establish separate residence locations for black African occupants, and to exercise control over the black Africans in these areas. Furthermore, black people living in these areas were not allowed access to the white-funded amenities (SAHO, 2015).

One of the significant consequences of historically separate development is the high incidence of poverty among black Africans. Poverty was extremely rife in rural areas, with about 71% of all rural residents experiencing poverty. It was concentrated in the Eastern Cape, KwaZulu-Natal, and Limpopo – the most overcrowded of the homeland states. Secondly, the land identified for black occupation in the rural areas was insufficient for the number of people that were living there. This led to the deterioration of the land under the pressure of overgrazing and intensive farming (SAHO, 2016; Aliber, 2003; Nattrass and Nattrass, 1990; Lipton, 1985; Butler et al., 1977). The homelands had virtually no independent economic base and the people were dependent on South Africa for jobs, government grants and transfers (Nattrass and Nattrass, 1990). This can be attributed to the lack of meaningful income-earning opportunities and land deprivation in the homelands. Thus, the pressure of poverty and underdevelopment in the homeland areas led to the migration of black Africans into the expanding South African economy. According to Aliber (2003), the migrant labour system was the main survival strategy for the black African householders living in the homelands.

Following the (Afrikaner) National Party's election victory in 1948, the Group Areas Act of 1950 was passed, giving power to the government to create racially segregated areas in cities. Many areas were taken from Africans and declared whites-only areas. Africans were then given the right to citizenship within the reserve areas only and prohibited from acquiring land outside these "Bantu reserves". The National Party promoted the programme of apartheid (Houghton, 1957). The concept of apartheid is understood by some as the total separation of racial groups and the preservation of white dominance and supremacy (Simons, 1959). Its purpose was not only to separate whites from non-whites, but also non-whites from one another, which made it difficult for non-whites to unify and rebel against white dominance.

It is important to highlight that in 1950, the government commissioned a study into the socio-economic development of the reserve areas. The commission, chaired by Professor FR Tomlinson, was charged with reporting on ways to rehabilitate and develop the underdeveloped reserve areas. In 1954, the commission report recommended separate development for white and black areas and sustainable development – on a large scale –, or the reserve areas. More specifically, the

commission's recommendation included land tenure reform and, the development of mining, forestry, and agriculture, the last-mentioned including the extension of irrigation and the introduction of sugarcane and fibre production in the reserve areas. Regarding secondary and tertiary development, the report suggested industrial development, urban development through the establishment of towns and cities, and the expansion of tertiary services. In addition, it recognised the need for enough universities, hospitals, and other welfare services in the "Bantu reserves". The estimated amount of funding required to implement the recommended programmes was about £104 million, of which 32% was allocated to agricultural development and 29% to manufacturing and tertiary activities, 12.4% to transport and other basic facilities, 11% to urban development, and the remaining 15% to forestry development (3%), mining development (1%), health (5%), education (3%) and welfare (3%) (Houghton, 1957; Union of South Africa, 1955).

The apartheid government commended the Tomlinson Commission for its recommendation of a policy of separate development. However, it did not accept the commission's detailed recommendations, arguing that the expenditure proposed was excessive. Houghton (1957) highlighted three key recommendations that were rejected by the government:

- i. Reform of land tenure system: the commission recommended the introduction of freehold tenure⁵, which was to replace the tribal system of land tenure.
- ii. Industrial development: the commission advocated the establishment of industries within the "Bantu reserves".
- iii. Development corporation: the commission recommended the establishment of a development corporation within the reserve areas, with the mandate to implement the commission's recommended programmes.

In 1951, out of 8.5 million black Africans, about 4.9 million were living outside "Bantu reserves" while 3.6 million remained in the "Bantu reserves". Those outside the "Bantu reserves" were absorbed by the expanding economy of the Union of South Africa,

⁵ Freehold tenure gives individuals ownership rights to the land, an essential pre-condition for agricultural reform.

providing labour services in the agricultural, mining, manufacturing, transport, and commercial sectors. Although their services were significant in facilitating the rapid growth of industrialisation, their housing and social services lagged behind the national norm (Houghton, 1957).

In 1958, the apartheid system was advanced into one of separate development by the then newly appointed Prime Minister, Dr Hendrik Verwoerd. Under separate development, new political and administrative mechanisms, as well as new institutions, previously unavailable to African groups, were established to promote separate development (Butler *et al.*, 1977). One of the goals of the separate development policy was to create independent homeland areas within South Africa, where Africans would develop their own economies. In 1959, the Promotion of Bantu Self-Government Act was passed, leading to the designation of 10 preponderantly rural areas as homeland areas (SAHO, 2015).

The origin of betterment planning, also called rural development planning, can be traced as far back as the 1930s. It emerged as a government response to the growing crisis of agricultural production in the homelands (Letsoalo and Rogerson, 1982). The goal of the government was to combat erosion, conserve the environment, and rehabilitate agricultural production in the homelands (De Wet, 1987). Underlying the introduction of betterment planning was the belief that once homeland areas were rehabilitated and made economically viable, more black Africans would choose to stay in the homelands, so reducing urbanisation and the influx of migrant labour into South Africa (De Wet, 1989). A large part of the betterment planning involved rearranging the pattern of land use by dividing homeland areas into residential, arable, and grazing areas (De Wet, 1989; McAllister, 1989). This required families to move from their traditional scattered residential clusters to newly concentrated residential areas (McAllister, 1989).

Letsoalo and Rogerson (1982) argued that the introduction of betterment schemes resulted in the growth of a landless population and a reduction in arable land and livestock, which left people impoverished. They further argued that the failure of betterment planning can be attributed to the small area available for farming, and the lack of capital support for agricultural production.

Thus, the underdevelopment of the homeland areas is the outcome of the apartheid policies of land dispossession, separate development, the system of land tenure, and the programme of betterment planning as an agency of rural development.

2.7.2 Post-Apartheid policies

From 1994, the government attempted to rebuild and transform the rural economy through various rural development strategies. Table 2.2 summarises the rural development initiatives and national development policies introduced by the government of South Africa since 1994. The first strategy was grounded in the socio-economic policy framework provided by the Reconstruction and Development Programme (RDP) (Olivier et al., 2010). The RDP, as a socio-economic programme, emphasised the promotion of socio-economic development, the building of a social infrastructure, the meeting of basic needs, the development of human resources and the achievement of inclusive economic growth. The objective was to address the inherited inequalities caused by apartheid and to alleviate poverty in both urban and rural areas. Some of the first priorities on the agenda of the RDP which the post-apartheid government aimed to address included (i) the lack of adequate housing in the rural areas, (ii) inadequate access to a safe and accessible water supply and sanitation services, (iii) rural electrification and (iv) a social safety net.

Although the RDP was successful in some areas, such as social security, it did not deliver in terms of economic growth, human resource development, and in meeting all basic needs as a result of fiscal constraints and the lack of administrative capacity (SAHO, 2017). Other shortcomings of the RDP included the lack of priority setting, inadequate inter-departmental co-ordination, and limited planning and implementation capacity at the level of local government, which was responsible for promoting socio-economic development (Gwanya, 2010).

Table 2.2: A summary of South Africa’s rural development initiatives and development policies

Framework / Initiatives	Timelines	
	1994 – 2000	2001 – 2022
National Policy Framework	<ul style="list-style-type: none"> • Reconstruction and Development Programme (RDP) • Growth, Employment, Redistribution Strategy (GEAR) • Accelerated and Shared Growth Initiative for South Africa (AsgiSA) 	<ul style="list-style-type: none"> • The Comprehensive Agricultural Support Programme (CASP) • New Economic Growth Path • National Development Plan • Ilima/Letsema
Rural development initiatives	<ul style="list-style-type: none"> • Rural development strategy within the RDP • Comprehensive rural development strategy within the GEAR 	<ul style="list-style-type: none"> • Integrated Sustainable Rural Development Strategy • Comprehensive Rural Development Programme • Mafisa

Source: Adapted from NPC (2011); Gwanya (2010); Olivier et al. (2010); Department of Rural Development and Land Reform (DRDLR) (2009); National Treasury (1996); African National Congress (1994)

In 1996, according to Olivier et al., (2010), the government introduced the second comprehensive rural development strategy, which was formulated within the Growth, Employment and Redistribution Strategy (GEAR). The GEAR, a national policy framework, aimed at rebuilding and restructuring the national economy. It focused on stimulating faster economic growth, creating jobs, and meeting social investment needs (SAHO, 2017; National Treasury, 1996). As a result of a failure to alleviate poverty and the need to create jobs, GEAR was replaced in 2005 by the Accelerated and Shared Growth Initiative for South Africa (AsgiSA).

Between 2000 and 2022, government introduced policies and strategies designed specifically to deal with rural issues such as poverty and underdevelopment. During this period, key rural development initiatives included the Integrated Sustainable Rural

Development Strategy (ISRDS) and the Comprehensive Rural Development Programme (CRDP). For instance, according to Gwanya (2010), ISRDS was approved in 2000 although the implementation process was initiated only in 2001. ISRDS attempted to provide integrated solutions to poverty and underdevelopment in the rural areas, especially in the former homeland areas. To achieve this objective, ISRDS served as a mechanism for the integration of government projects and activities that would promote sustainable development (Gwanya, 2010). Among the key elements of ISRDS were the Integrated Development Plans (IDPs) of the country's municipalities. To ensure broad participation and the delivery of an integrated set of relevant services that would match the various needs of communities, the ISRDS relied on the municipalities to develop their own IDPs, specifically listing the needs in their areas.

In 2004, a research report revealed that the ISRDS had encountered several implementation issues. According to Olivier et al. (2010), not much has been accomplished by the ISRDS. Cousins (2003), Everatt and Zulu (2001), and Pieterse (2001) have all criticised the ISRDS. Firstly, the programme depended entirely on the fiscal allocation processes existing on an intergovernmental level in a system that was marked by fragmentation and the protection of territory. Cousins (2003) questioned the feasibility of the ISRDS and pointed out that without strategic planning and the prioritisation of certain sectors, decentralisation would probably not be able to deal with the systemic and structural constraints that hamper rural development. Everatt and Zulu (2001) and Pieterse (2001) queried whether, particularly at local government level, the programme would ever have the capacity to be executed. Cousins (2003), on the other hand, further indicated that a major problem involved the lame acceptance by the ISRDS of the shortcomings of the Land Redistribution and Agricultural Development (LRAD) programme. From the strategies presented by the ISRDS and their implementation, it became clear that this programme reflected those programmes based on the early theories of integrated rural development, that were marked by poor linkages to the macro-economic frameworks and national policies and key initiatives. Another failure was the top-down dominance of the government in cases where the participatory processes were dubious.

In 2009, the South African government announced the establishment of a Ministry of Rural Development and Land Reform (DRDLR) in line with the national policy

conference resolutions of the African National Congress (ANC) (ANC, 2007). During the same year, the Comprehensive Rural Development Programme (CRDP) was introduced as a programme aimed at alleviating poverty by creating vibrant, equitable and sustainable rural communities through rural development, land and agrarian reforms. The 2009 CRDP document states that:

“The vision of the CRDP is to create vibrant, equitable and sustainable rural communities and includes: contributing to the redistribution of 30% of the country’s agricultural land; improving [the] food security of the rural poor; [creating] business opportunities, de-congesting and [rehabilitating] overcrowded former homeland areas; and expanding opportunities for women, youth, people with disabilities and older persons who stay in rural areas”.
(CRDP, 2009:3)

Since the programme, launched in August 2009, is still unfolding, most of the literature on the CRDP sources its content from the government’s strategy documents and speeches. Ex-President Zuma’s keynote address at its launch on 17 August 2009 highlighted the CRDP as the South African government’s national collective strategy in its fight against poverty, hunger, unemployment, and lack of development in the rural areas of the country, and an embodiment of the government’s unshaken commitment that *“we shall not rest in our drive to eradicate poverty”* (Zuma 2009:2). A significant part of the rural development strategy in Zuma’s estimation was to stimulate agricultural production with a view to contributing to food security: *“In this regard, government will support the provision of agricultural implements and inputs to support emerging farmers and households nationally. We must also make agricultural loans accessible and ensure agricultural extension services of a high quality”* (Zuma, 2009:3).

In his 2010 Budget Speech, Rural Development and Land Reform Minister, Nkwinti, indicated that the CRDP strategy would be achieved through broad-based and coordinated agrarian transformation, with the main focus being on the following:

- Building communities through social mobilisation and institution building;

- Strategically investing in old and new social, economic and ICT infrastructures, public amenities, and facilities coordinated through the Rural Infrastructure Programme;
- Implementing a new: Land Reform Programme in the context of the already reviewed Land Tenure System;
- Rendering professional and technical services, as well as effectively and sustainably managing resources through geo-spatial services, the development of technology, and disaster management;
- Effectively providing cadastral and deeds registries, as well as surveying and mapping services.

According to Nkwinti (2010), ‘agrarian transformation’ was to feature as the core focus area and to denote “*a rapid and fundamental change in the relations (systems and patterns of ownership and control) of land, livestock, cropping and community. The objective of the strategy [was to be] social cohesion and development*” (Nkwinti, 2010:2).

Between 2010 and 2013, the New Growth Path and the 2030 National Development Plan were adopted as the frameworks for national economic and development policies. Both outline agendas to overcome unemployment and chronic poverty that afflict people living in rural areas. The implementation of these policies reinforces and complements the CRDP. So far, rural development programmes have had a slight influence on South Africa’s rural areas. Most rural landscapes, especially in the homeland areas, are still characteristic of the pre-1994 scenarios, with many rural households continuing to reside in the densely populated homelands (The Presidency, 2014).

2.8 CHAPTER SUMMARY

This chapter provided an overview of sustainable rural development in that it defined the relevant terms, examined the dimensions of rural development and sustainable development, and analysed the role of the forestry industry in bringing about development that can be sustained. The history of rural development approaches from

the 1950s to the 2000s was also reviewed. Furthermore, a people-centred approach to development was conceptualised and the concept of community participation was also described. At the centre of the development processes was community participation. All important, was the precept that essential to community participation is the understanding that rather than serving self, community development should serve the community.

The chapter further provided an overview of the historical and structural foundations of South Africa's political economy in the context of rural development. It also discussed the intersection of Geography, poverty and forestry in South Africa and examined pre- and post-apartheid policies on rural development. The section on the pre-apartheid era presented a brief synopsis of South Africa's past land ownership and tenure system, where black people were dispossessed of their land and pushed into the reserves in the homelands in the land administered by the traditional authorities, through legislation such as the 1913 Land Act. The section on the post-1994 period, on the other hand, showed that the South African government had developed several strategies and legislation aimed at addressing rural poverty and underdevelopment as it had become clear that the agricultural sector needed to be transformed. The emphasis was now being placed on changing the *status quo* in respect of land ownership through programmes such as the Land Reform Programme.

The next chapter examines the evolution of forestry in South Africa. It discusses the history of forest plantations; the legislative framework on sustainable forest management; and provides an overview of small-scale communal forestry.

CHAPTER THREE: FORESTRY AND SUSTAINABLE COMMUNITY DEVELOPMENT

3.1 INTRODUCTION

In South Africa, the government's goal is to ensure the growth of the forestry industry and its affiliates; and to improve and capitalise on new opportunities whilst contributing to prosperity and quality of life in rural South Africa. Forests are renewable ecosystems capable of providing a wide range of environmental, economic, social, and cultural benefits (National Forest Act, 1998).

The chapter is broadly divided into three sections. Section 3.2 explains the potential benefits of forestry in respect of the sustainable economic benefits that it offers the small-scale growers in rural and semi-rural areas. The aim of this section is to illuminate the potential role of small-scale forestry in sustainable community development in South Africa in relation to economic benefits (section 3.2.1), employment (section 3.2.2), and security of tenure through land reform and vested interests (section 3.2.3). Section 3.3 provides the necessary background through its reference to the history of forestry in South Africa (section 3.3.1) and the current status of forestry plantations in the country (section 3.3.2). In the third part of the chapter (section 3.4), the attention shifts to small-scale communal forestry growers. An overview is provided (section 3.4.1), agroforestry and woodlots in South Africa are discussed (section 3.4.2), the barriers to and benefits of small-scale community forestry are examined (section 3.4.3), the policy and legislative framework of sustainable forest development in South Africa is analysed (section 3.4.4), and, finally, the main forest models for communal forestry in South Africa are discussed (section 3.4.5). Section 3.5 is the conclusion to the chapter.

3.2 THE LINK BETWEEN FORESTRY AND SUSTAINABLE DEVELOPMENT

3.2.1 Economic Benefits of Forest Plantations

The South African economic focus is now shifting to developing non-mining sectors, especially those with employment creation opportunities, such as manufacturing (IPAP, 2011 and 2017; NGP, 2011). Timber plantations play a key role in the economy as the source of production inputs for several sectors. As demonstrated in Figure 3.1, the contribution of sectors to growth and the Gross Domestic Product (GDP) has changed over the years.

Forestry South Africa and the Department of Agriculture, Forestry and Fisheries have provided detailed statistics about insights into the value of the forest and its products over the past 40 years. Over the past 15 years, from 2016, the combined gross value of forestry and forest products industries was R 58.2 billion, higher than the value of maize production (Forestry South Africa, 2017). Furthermore, according to Forestry South Africa (2019), forestry industries have contributed approximately one percent (1%) to South Africa's national Gross Domestic Product (GDP) (Figure 3.2), ranging between 4.6 and 9.4% as its contribution towards the Manufacturing GDP and between 4.4 and 13.1% towards the Agricultural GDP, with significant contributions to the economies of Mpumalanga and KwaZulu-Natal (Forestry South Africa, 2019). The forestry sector is a net exporter of timber products, with the major products exported being pulp and paper, whilst wood chips are also exported. According to Clarke (2018), the forestry industry relies heavily on exports and is a worthy competitor in the global forest product marketplace. In 1960, export earnings amounted to roughly R29.1 billion worth of goods, with the majority having been converted into value-added products (Clarke, 2018; Forestry South Africa, 2016). Based on industry statistics (Forestry South Africa, 2016), exports in 2016 amounted to more than 80% of the revenue earned for this sector.

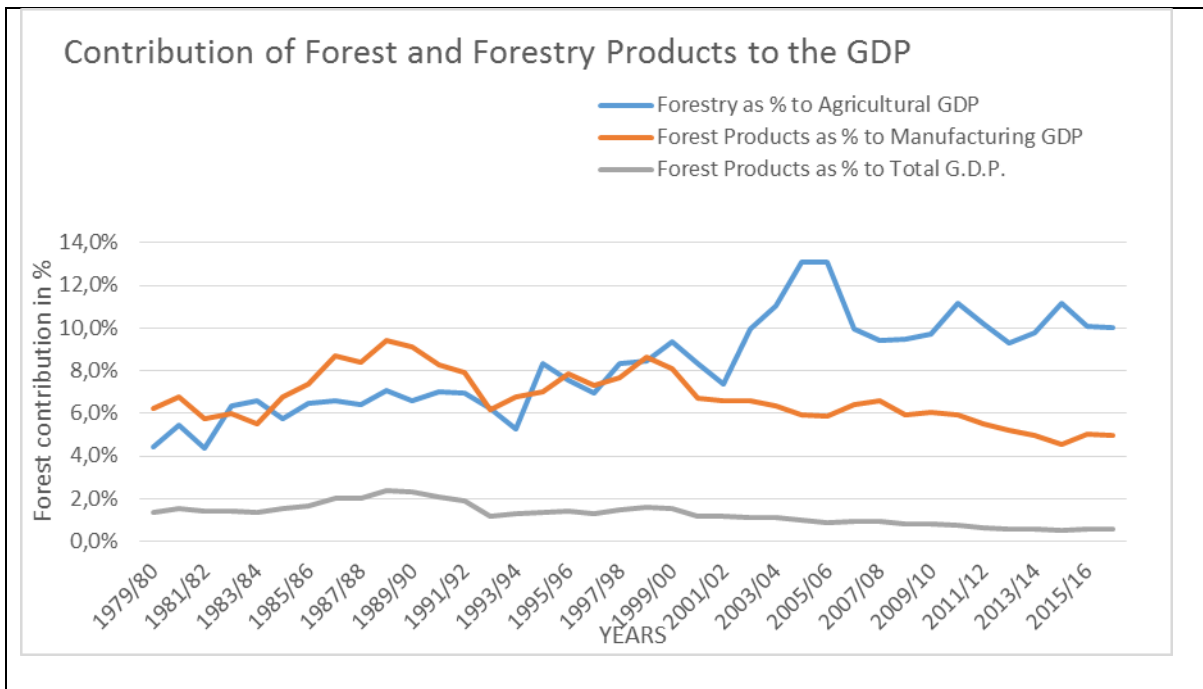


Figure 3.1: FTTP contribution to National GDP (1980-2017) (FSA, 2017)

Source: DAFF (2019)

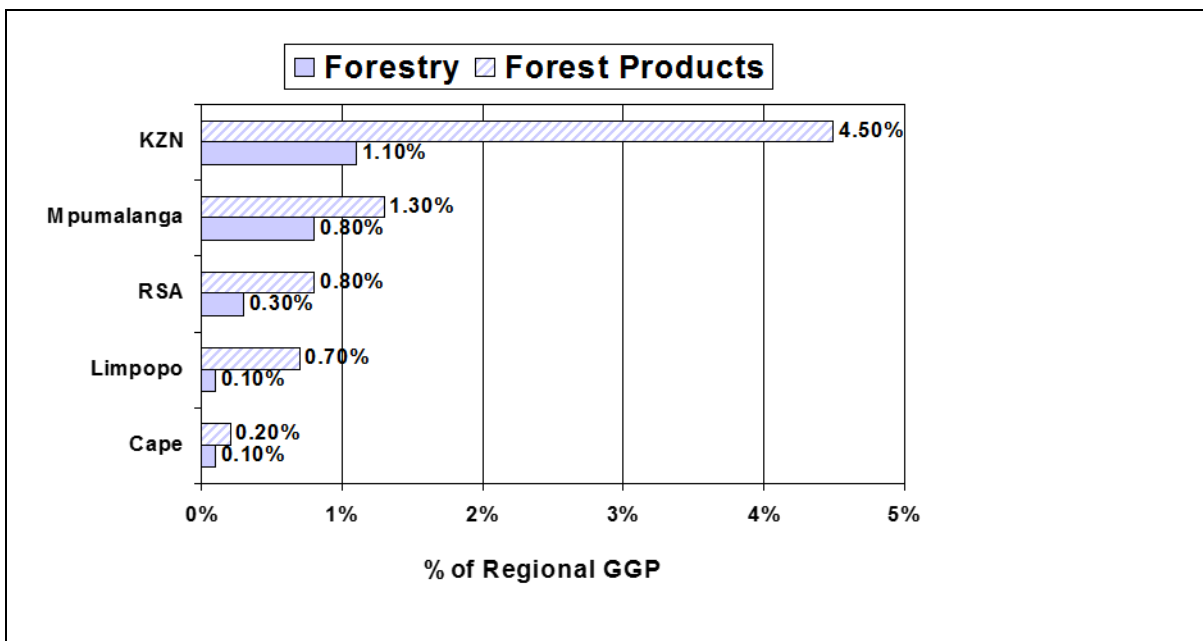


Figure 3.2: FTTP contribution to provincial Gross Geographic Product (GGP) in 2007.

Source: Forestry South Africa (2008)

Given the growth dynamics inherent in the overall South African economy, the forestry sector has likewise experienced growth. However, the strength of the Rand has impacted on exports, which means that the growth in export volumes has not been

matched by growth in value terms. To meet the demands of the growing domestic economy and to maintain its position in exports, some R7 billion is being invested to expand manufacturing capacity in the forest products sector.

Unfortunately, investment and expansion in the forestry sector have not kept pace, which places huge constraints on its growth. Currently, the demand for roundwood amounts to 23 million m³/p.a., whereas forests can supply only 20 million m³ on a sustainable basis (Table 3.1). The average net increase in planted area over the last five years has amounted to no more than 500 ha p.a., leading to an ever-widening supply deficit. To meet current and anticipated growth over the next 25 to 30 years, South Africa should be increasing her planted area by a minimum of 25,000 ha per annum. The country therefore faces a serious timber availability outlook, which will necessitate a dramatic escalation in imports in the coming years. This unfavourable timber supply position is unfortunately being exacerbated by a noticeable increase in the plantation losses caused *inter alia* by fires and pests and diseases (DAFF, 2012).

Table 3.1: Long-term demand and supply scenario

Five-year period	Total domestic supply	Total Demand	Supply (+)/ deficit (-)	
	(tons)	(tons)	(tons)	%
2005-2009	20 550 761	22 249 214	-2 698 453	-13,1
2010-2014	20 087 199	23 932 910	-3 845 711	-19,1
2015-2019	18 609 931	24 650 053	-6 040 122	-32,5
2020-2024	19 454 356	25 448 516	-5 994 160	-30,8
2025-2029	18 666 332	26 372 899	-7 706 567	-41,4
2030-2034	18 134 701	27 501 409	-9 366 708	-51,7
Estimated sustainable supply	19 250 547	25 192 500	-5 941 953	-23,2

Source: DAFF (2012)

The discussions above and in the rest of the chapter demonstrate a few key factors at play in the context of this study. Poverty and inequality continue to deny South Africa's rural poor inclusion and participation in the productive commercial forestry industry. Forestry development represents untapped economic potential and can play a major role in the employment of the rural population. Furthermore, it offers opportunities for job creation and plays an important role in the further industrialisation of the forestry value chains. The promotion of small-scale communal forestry can lead to community participation that allows community members to have control over their land and forest resources (Clarke, 2018). In this regard, tenure security through land reform is central to providing access to and control over these resources and in developing efficient, equitable and sustainable mechanisms for land distribution. Equitable redistribution can contribute towards sustainable economic benefits for the small-scale growers in the rural and semi-rural areas. The development of small-scale community grower schemes can, in turn, contribute to addressing the timber availability outlook. The sections below serve to demonstrate this context in that they deal with employment and security of tenure.

3.2.2 Employment

Growth and employment creation in the forestry sector are constrained by some key factors (Clarke, 2018). Poverty and inequality in the country continue to deny the South African rural poor of their right to inclusion and participation in the productive commercial forestry industry. In addition, unemployment is a major factor in South Africa and, as such, traps the population in a state of poverty (Chetty, 2016). South Africa is faced with persistently high levels of unemployment (Statistics South Africa, 2020). For instance, South Africa's unemployment rate rose to 30.1% in the first quarter of 2020 from 29.1% for the previous period and above the market expectation figure of 29.7% (Figure 3.3). Stats SA (2020) reported this as the highest jobless rate on record since the quarterly data became available in 2008, as the number of unemployed people increased by 344 000 to an all-time high of 7.1 million. Employment fell by 91 000 to 16.38 million from 16.42 million in the previous quarter. Total employment dropped in seven out of the 10 industries, with the largest declines recorded in the finance industry (-50 000), followed by community and social services

(-33 000), agriculture (-21 000), transport (-17 000), manufacturing (-15 000), construction (-7 000), and utilities (-4 000). The expanded definition of unemployment, including people who have stopped looking for a work, was at 39.7% —, up from 38.7% in the previous period.

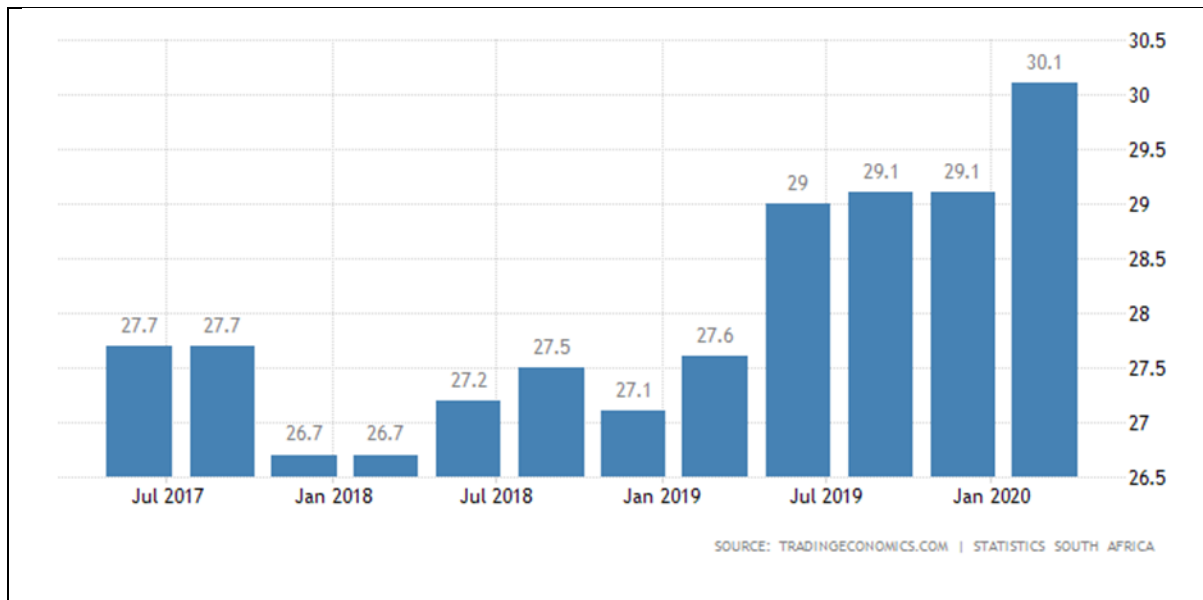


Figure 3.3: South Africa: unemployment rate in the first quarter of 2020
Source: Stats SA (2020)

According to Chetty (2016), unemployment is fuelled by the country's poorly performing education sector, which is plagued by many school system dropouts. Less than half of all school learners complete Grade 12 and less than 10% complete some form of higher education. Therefore, the formal skills base in the country is very low, and most of the people find that they are unemployable, especially as far as the rural poor are concerned. The second major factor is that the economy is divided unequally as the affluent minority continue to move into higher skilled jobs whilst the poorer majority, the unemployed and the semi-skilled, remain either unemployed or feed into low paying jobs within the economy. This cycle repeats across the generations and the majority rarely move out of the poverty trap (Chetty, 2016). These high levels of inequality can be seen in the country's rate of dependency and unemployment.

Unemployment is more prevalent among the youth and is rooted in the lack of access to means of production (such as land), as well as the limited access to a good education and training (Chetty, 2016). Of the estimated 58.8 million people in South Africa, 29% of them are below the age of 15 and about 5.3 million (9% of people) are over the age of 60 (Stats SA, 2020) (Figure 3.4). This basically means that the dependency ratio in the country is substantially high, given that fewer people are employed, and less tax can be collected because of that. South African citizens are thus dependent on a smaller number of employees and on the state for survival.

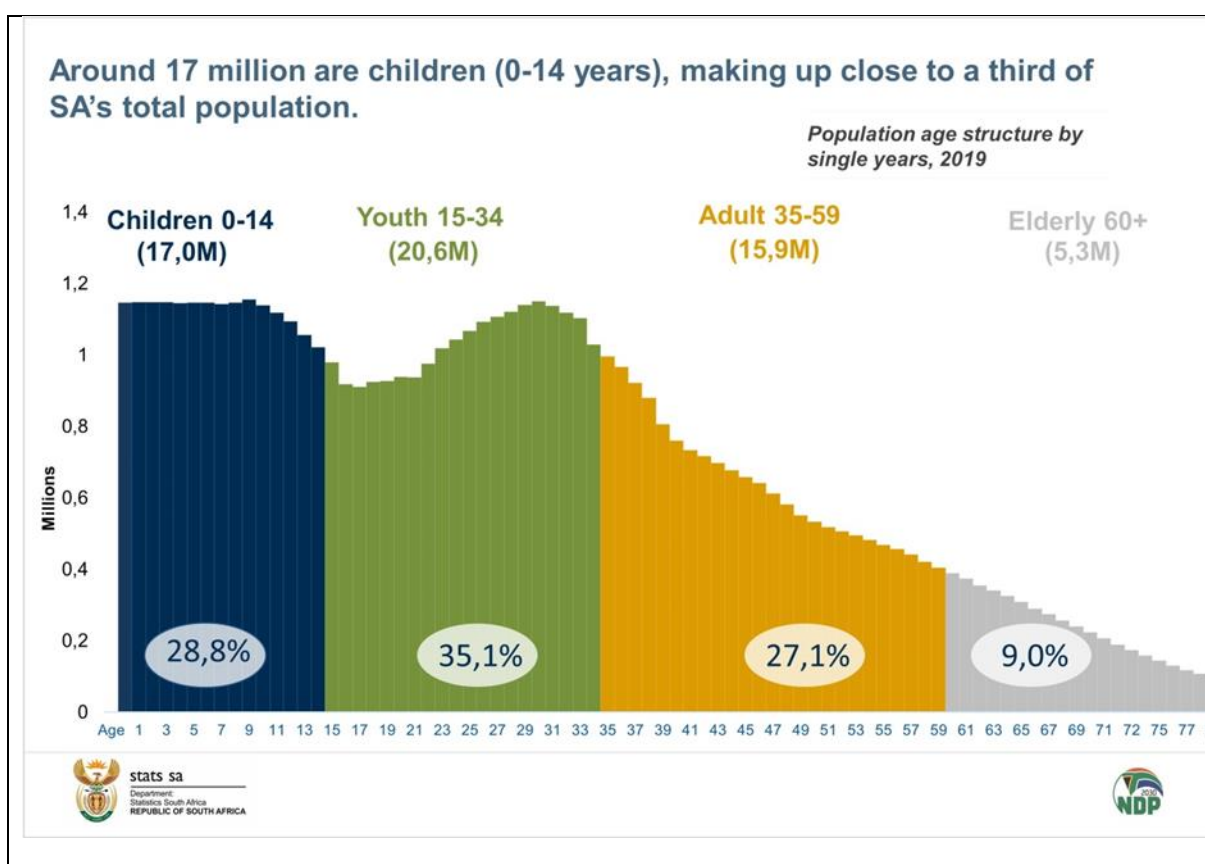


Figure 3.4: South African population distribution and unemployment by age structure in 2020
Source: Stats SA (2020)

According to Lewis et al. (2005), the creation of employment and business opportunities within the forestry areas is probably the most significant contribution that forestry could make towards the reduction of poverty. The Department of Agriculture, Forestry and Fisheries (DAFF) develops human resources through forestry sector skills development initiatives and promotes employment through commercial forestry

activities, such as afforestation and downstream activities (GCIS, 2018). Clarke (2018) indicates that a significant number of job opportunities lie in the further industrialisation of the forestry products. In South Africa, for example, the forestry sector provides jobs – both directly and indirectly. The forestry sector employs around 158 400 workers, with the forestry sub-sector providing about 60 200 direct jobs and 28 000 indirect jobs. Forestry provides livelihood support to 692 000 of the country's rural population. The pulp and paper industry provides about 13 200 direct and 10 800 indirect employment opportunities. In sawmilling, some 20 000 direct workers are employed, and 8 000 indirect workers are employed –; 6 000 in the timber board and 2 200 in the mining timber industries, while a further 10 000 workers are employed in miscellaneous jobs in forestry (Clarke, 2018; GCIS, 2018).

Based on the discussion above, commercial forests in South Africa contribute to the alleviation of poverty in that they offer employment opportunities in the spheres of growing trees, processing local wood, and harvesting and processing the other products of the forest. People with limited educational skills and other resources can find their employment niche through the employment opportunities offered by commercial plantations since more advanced skills levels and/financial backing might not necessarily be required. As such, this sector offers the poor, and mainly rural people, the opportunity to become involved in economic activities through initiatives such as the Department of Agriculture, Forestry and Fisheries' (DAFF) Participatory Forestry Management (PFM) programme and the Broad Based Black Economic Empowerment (BBBEE) Charter. The BBBEE Charter supports equity goals in respect of the growing of trees and other areas across the value chain. Since it was gazetted in 2008, DAFF works in partnership with Forestry South Africa (FSA), as well as contractors' associations and the sector as a whole, to achieve these goals. However, DAFF (2015) has noted the slow pace in the realisation of the goals of the Transformation Charter.

The discussion above on the economics of forestry development in South Africa clearly indicates that forestry is an important foreign exchange earner. Moreover, it is important in employment creation and has been described by van Staden (1996) as a

'slumbering economic giant', which has great potential. Edwards (1994) indicated that forestry also has the potential to play a major role in the employment of the rural population. It was further indicated that through the extensive facilities provided by the forestry industry, people are empowered through training and education, which enables them to become part of the economic system. According to Edwards (1994), the availability of wood from forestry projects promotes the development of other small-scale industries such as craftwork, with benefits accruing directly to the local people. Furthermore, Edwards (1994) concluded that the promotion of small-scale communal forestry jobs leads to community participation in the forestry industry. This allows community members to have control over their land and forest resources.

3.2.3 Security of Tenure

The purpose of land reform is to provide security of tenure and sustainable economic benefits, specifically to rural communities. Land reform became necessary against the background of the colonial and apartheid eras and their legacy of unequal distribution of land. Security of tenure therefore forms an integral part in the growth of forestry through which rural communities can access land and benefit economically, socially, and culturally.

3.2.3.1 Background

In South Africa, a history of colonial conquest, dispossession and apartheid created a situation where black inhabitants, representing 80% of the population, resided on less than 14% of the land, and where 62 000 white farmers controlled 12 times as much land as the 14 million rural Africans (Kotze and Basson, 1994; Bundy, 1991; Davenport, 1990). The Occupation Act 1886, The Glen Grey Act 1894, The Land Settlement Act 1912, The Natives Land Act 1913, and The Land Act of 1936 did not necessarily directly regulate the dispossession of Africans or lay the primary foundation for land segregation, but these acts were nonetheless cornerstones of the system of white supremacy in South Africa (SAHO, 2015; Nefolovhodwe, 2013). Describing the struggle for land between black and white around the turn of the 20th century, Davenport (1991) suggests that the 1913 Act was brought into force to

subordinate the interests of black farmers to those of white farmers and landowners and to establish and sustain supplies of cheap labour for mining and its related industries. This obliged African people to change their livelihood system in favour of white commercial farming (Dodson, 2013; Nefolovhodwe, 2013).

The 1936 Act gave powers to a Trust to purchase further land in order to increase the size of the reserves (i.e., the areas allocated to blacks) (SAHO, 2015; Pepeteka, 2013). However, even with the staggered purchase of additional land after 1936, the reserves were increasingly overcrowded in terms of both human and animal populations and underdeveloped in respect of resources and infrastructure (Manenzhe, 2007). It was into these overcrowded reserves that the apartheid government attempted to force and move Africans who were at that stage resident in 'white' South Africa (Adams, 1995).

In terms of the use of natural resources in South Africa, the restriction of the African population in the homelands caused by the 1913 and 1936 Acts resulted in increased population pressure in these areas. In the absence of alternative resources, the harvesting of fuelwood, construction poles, craft timber and traditional medicines, as well as the maintenance of livestock as a means of wealth, placed intense pressure on the woodland resources in communal areas (Shackleton and Wills, 2000).

South Africa's post-apartheid government embarked on several policy-driven programmes that aimed to reduce social inequality and improve the quality of life in the poverty-stricken areas. The Land Reform Programme is arguably one of the most challenging programmes. Van Zyl et al. (1996) argue that land reform can be associated with political change. This was supported by former Minister of the then Department of Land Affairs (DLA), Derek Hanekom, when he argued: "*Land policy, especially land reform has been shaped by the remarkable struggle of Black people against forced dispossession under apartheid*" (Marcus et al., 1996: i). Following more than three centuries of conflict over land, which was characterised by inequality, dispossession, and exploitation, the government is currently trying to correct the wrongs of the past.

Government has outlined its strategy for dealing with land dispossession in its White Paper on South African Land Policy. The White Paper on South African Land Policy (1997a), developed by the then DLA, recognises land as a finite resource, which is at the same time the cornerstone for reconstruction and development. According to O’Laughlin et al. (2013) and Pepeteka (2013), the land policy was put in place to remedy the following in both the rural and urban areas:

- The injustices emanating from the racially based dispossession of the land;
- The need for security of tenure for all;
- Inequalities in terms of land ownership;
- The need for land to be used in a sustainable manner;
- The need to hasten the process to release land for development;
- The need to record and register all property rights; and
- The need to administer public land in an effective manner. (Land Policy, 1997)

The Land Reform Programme aimed at developing efficient, equitable and sustainable mechanisms for land distribution and represents the basic thrust of the South African Government’s Land Policy. The Land Reform Programme is viewed by the Reconstruction and Development Programme (RDP) (African National Congress (ANC), 1994), as the central driving force behind the programme of rural development – it represents a demand-driven approach aimed at supplying residential and productive land to the poorest section of the rural population and those considering farming as a potential opportunity for employment and a livelihood (Marcus et al., 1996; ANC, 1994). The programme is also viewed as part of a comprehensive rural development policy concerned with raising productivity and rural incomes. As such, the programme is intimately connected to the plight and capacity of small-scale community farmers in rural areas.

Therefore, to this end, the Land Reform Programme should be informed by the following principles:

- It should result in tangible and realistic benefits for the communities and the restitution package should be aligned to these benefits;
- It should strive for equity and not disadvantage the communities by making them worse off than they were before the settlement;

- It should support the principles of economic viability, financial sustainability, and holistic management;
- It should enable the communities to establish institutional means to collectively lock away the various compensations issuing from their land claims and to come up with risk mitigation strategies; and
- It should aim for an agreement that should be a full and final settlement of the land claim issue, with no further claims for reinstatement against the government and SAFCOL in respect of the land claimed being permitted.

3.2.3.2 Land Reform Policy Framework

The Land Reform Programme was implemented by the South African democratic government immediately after its election in 1994. As a result, in 1997, the government adopted a three-legged programme to ensure that land would be shared amongst all landless Africans. The main areas in the programme that were demanding attention were redistribution, restitution, and the land tenure system. In terms of the Land Reform Policy framework, these three related areas were identified as areas of concern (DLA, 1997a):

- **Land Redistribution Programme** – providing the poor and disadvantaged with land for residential and productive purposes. This is the focus of the project-planning phase of the Land Reform Pilot Programme. The purpose of this programme, as set out in the White Paper (1997a), is to provide the rural disadvantaged and poor with access to land for residential and productive use and thus as a means to improve their livelihoods, and thereby contribute to economic growth. Through land redistribution, government aims to give vast numbers of landless people in South Africa, who were denied land rights in the past, access to land (Sihlobo and Kapuya, 2018). The component is also the largest in terms of the financial allocation grants of just R16 000 (which amounted to R15 000 in the past) made available for land acquisition and settlement support, and also for infrastructure and other basic needs. Of importance to the redistribution programme, are the following two Acts:
 - *The Provision of Land and Assistance Act, 126 of 1993*. This Act is used as a mechanism for distributing land to the poor, accessing the financial support of labour tenants, farm workers, restitution communities, women,

and emerging farmers. The Act has primarily operated on the basis of a 'willing-buyer/willing-seller' principle, although recent amendments to the Act have now focused more on the provision of financial assistance from the Department of Rural Development and Land Reform (DRDLR) to communities in the form of the Settlement/Land Acquisition Grant.

- *The Communal Property Association Act, 28 of 1996*. This legislation makes provision for groups or communities to acquire, hold, and manage property as a group with a written constitution. The Redistribution Programme responds to different needs, with a wide variety of different projects being implemented. Five broad categories of redistribution products have emerged over the past 26 years. These are the following: *Municipal Commonages Schemes*, where land is purchased by a municipality (through the assistance of a grant for the Acquisition of Municipal commonages administered by the DRDLR) for use by local poor residents to supplement their income, keep their livestock, or for small farmers to use as a stepping stone to becoming independent producers; *Farm worker equity schemes*, where the DRDLR assists farm workers to buy into existing farming enterprises; *Group production*, a group of beneficiaries pool their grants to purchase a farm for productive purposes; *Individual/family farms*, the same as group production but on an individual or family scale; and *Settlement*, where families or groups access land primarily for settlement through the assistance of DRDLR legislation and grants.
- **Restitution Programme** - the transfer of land back to the original owners or their descendants. This programme deals with cases of forced removal that took place after 1913, as dealt with by a Land Claims Court and Commission established under the Restitution of Land Rights Act 22 of 1994. It simply means the returning of land rights to those people who had lost these rights during the apartheid years.

The beneficiaries of land restitution are a mix of people with diverse interests. Some are interested in resettlement; others are interested in selling the land to share the money; and a small number is focused on agriculture. The right to restitution is a powerful one. It is difficult, although certainly not impossible, to impose restrictions on the successful beneficiaries once, after the land has

been returned to them, they have started to use and enjoy it. As beneficiaries are often poor, they struggle to raise the money needed to make optimal use of their regained land. Not far back in the past, a successful beneficiary under restitution would be hampered in his/her efforts by an announcement from the LRAD (Land Redistribution for Agricultural Development). However, just recently, it has been announced that a restitution beneficiary will be entitled to financial assistance to enable him/her to develop the land and other resources in a sustainable manner (DLA, 2000).

- **Tenure Reform Programme** – providing security of tenure to all people and allowing for a diversity of tenure options. According to Ntsebeza and Hall (2007), the main aim of the tenure programme is to improve the tenure security of all South Africans and to accommodate different forms of land tenure, including certain types of communal tenure. This has been supported by Obeng-Odoom (2012), who defines it as the system of institutions or rules of land ownership, use, and management, obligations, responsibilities, and constraints on how land is owned and used, and distinguishes between individualised or private land tenure on the one hand and communal land tenure on the other. Private land tenure refers to the rights to land that the owner is entitled to, while communal land tenure refers to the land rights which are held by any figure of authority on behalf of the community (Obeng-Odoom, 2012). Furthermore, the Land Tenure Reform Programme is intended to address the chaotic state of land administration in the communal areas of the former homelands and coloured reserves. According to Adams (1999), the overarching goal for this programme is to secure people's right to use land for farming or residential purposes, to harvest the local natural resources and to mine the minerals. These aspects might engender a spirit of independence in the rural dwellers or farmers to use the land as they think good and in a sustainable manner. The government, in its quest to successfully secure tenure rights, has applied numerous legislative acts to control the formulation of land rights for different groups of landowners. They are all presented in terms of the Section 25(7) property clause and include the Upgrading of Land Tenure Rights Amendment Act 34 of 1996, the Land Reform (Labour Tenants) Act 3 of 1996 (LTA), the Interim Protection of Informal Land Rights Act 31 of 1996 (IPILRA)

and the Extension of Security of Tenure Act 62 of 1997 (ESTA) (Hall, 2004; DLA, 1997a).

- *The Extension of Security of Tenure Act, 62 of 1997*. Key to land reform is to provide security of tenure to people who currently occupy the land but who have no formal land rights. The purpose of this legislation is to provide a basis for adjusting the long-standing skewed relationships between landowners and land occupiers (DLA, 1997a). Specifically, this act deals with cases where farm workers or labour tenants have largely been removed from those farms that adopted this form of tenure. In terms of the Extension of Security of Tenure Act (ESTA), they cannot be summarily evicted. An eviction can only take place if a court orders this (DLA, 1997a). In terms of the 1996 Constitution, government has an obligation to reinforce land rights. Section 25(6) of the Constitution states:

A person or community whose tenure of land is legally insecure as a result of past racially discriminatory laws or practices, is entitled, to the extent provided by the Act of Parliament, either to tenure which is legally secure or to comparable redress (Republic of South Africa (RSA), 1996a). It is also important to mention that the Act gives considerable powers to the courts. It is thus important that officials in the judiciary, such as magistrates and prosecutors, are familiar with the Act's provisions. The Labour Tenants Act, 3 of 1996 also provides a useful mechanism for securing the tenure of labour tenants. As with ESTA, the success of the Labour Tenants Act (LTA) depends significantly on the extent to which the implementers of land reform understand and comply with the provisions of the Act (RSA, 1996d).

- *The Land Reform (Labour Tenants) Act 3 of 1996*. The National Assembly passed the Land Reform (Labour Tenants) Act 3 of 1996 to grant labour tenants a more secure tenure on rural land (DLA, 1997a). This legislation provides for the purchase of land by labour tenants and the provision of subsidies to this end (RSA, 1996b).
- *Interim Protection of Informal Land Rights Act 31 of 1996*. According to the White Paper on South African Land Policy (DLA, 1997a), the Interim Protection of Informal Land Rights Act (IPILRA) has two main aims.

Firstly, it aims to protect the long-term vested interests and insecure rights, which exist in reality but which have not been legally recognised. These rights exist on a *de facto* but not a *de jure* basis. Secondly, it treats the holders of informal land rights as stakeholders in land transactions and/or developments of the land which they occupy. In general, this Act provides for the temporary protection of certain rights to and interests in land, which is not otherwise adequately protected by the law (RSA, 1996c).

Tenure reform is probably the most complex area of land reform. It aims to bring all people occupying land under a centralised, legally validated system of land holding, provides for secure forms of land tenure, helps resolve tenure disputes, and makes awards to provide people with secure tenure. A challenging aspect in this regard involves labour in commercial farming where workers reside on the farming property. However, as Altman et al. (2009) note, the extension of employment opportunities, social grants and small-scale agricultural production has since 1994 been an important contribution to address poverty and food insecurity in South Africa. South Africa should consider investing more in small-scale agriculture or forestry as these two activities contribute to reducing poverty and and promoting food security at the household level.

Shackleton and Wills (2000) mentioned several tenure patterns and land uses within the woodland biome. In KZN alone, approximately 46% of woodlands is under private ownership, 6.5% under the state and 48% under communal ownership. Private land owned by individuals, groups, or companies, constitutes by far the largest proportion of 65% of the woodlands in South Africa. In these areas, there are only a few cases where local communities have access to forestry resources.

Finally, it is important to mention the Land Redistribution Sub-Programme (LRAD) that replaced the previous programme, labelled the Settlement for Land Acquisition Grant (SLAG) (Mearns, 2011). Since it played a significant role in terms of policy development, SLAG focused on a group of people with the potential to become farmers or growers, with each person being entitled to receive R16 000.00 as grant

funding towards buying agricultural land (Dawood, 2018; Mearns, 2011). One of the aspects that hampered the success of SLAG was the fact that the demarcated areas to be worked on were huge, which complicated the issue of making this form of assistance a reality. On the other hand, LRAD, focusing on families rather than on groups, stood a better chance of succeeding (Aliber and Cousins, 2013). However, a challenge was looming before it was temporarily halted. The challenge was the lack of infrastructure and production inputs (Mearns, 2011). According to Dawood (2018), the grants issued to the beneficiaries were small, and thus, beneficiaries could purchase land only as a collective, which led to the formation of dysfunctional groups that were driven by the need to make up the numbers rather than to bring together individuals with the know-how, complementary resources, and similar objectives. Other challenges, as noted by Deininger and May (2000) and cited in Dawood (2018), include many commercially unviable projects, high transactional costs, scattered projects that do not meet people's needs, and inadequate infrastructures provided by the provincial governments and municipalities. The recent trend to make state land available for black farmers is, however, worth noting.

The section above illuminated the potential role of community forestry in South Africa in relation to the economic benefits, employment, and security of tenure envisaged through the: Land Reform Programme.

The next section examines the geographical history of forest development in South Africa. It further discusses the status of forestry plantations in the country and presents an overview of small-scale communal forestry and the legislative framework on sustainable forest management in South Africa.

3.3 GEOGRAPHICAL HISTORY OF FOREST DEVELOPMENT IN SOUTH AFRICA

In this section, three categories of forests, namely, indigenous forests, woodlands, and plantation forests, are discussed. Forestry, on the other hand, refers to all activities or practices associated with any of the forests mentioned above. Forestry activities in

indigenous forests and woodlands are not limited to the protection of the resource as a natural heritage, but include their development, use, and management, as well as the management and processing of non-timber forest products (NTFPs). This research is based predominantly on the forest plantation, including the history and geographical distribution of this type of forest in South Africa. Forest plantation practices include the establishment of vast areas of land with exotic species (e.g., eucalyptus, pines, and wattle) that are harvested and processed into pulp for the paper and packaging industries, for sawn timber, furniture, shelving, flooring, etc. More discussion about these species and the different types of forest in South Africa is provided below.

Furthermore, as mentioned, in this chapter, the South African legislation and policies that affect the development of sustainable forestry are also discussed. These are:

- The National Forest Act, 1998 (Act No.84 of 1998)
- The National Water Act, 1998 (Act No. 36 of 1998)
- Environmental legislation
- Agricultural legislation
- Land legislation
- Labour legislation, and so forth.

The above-mentioned legislation and policies seek to address the challenges in certain sectors by addressing the shortages of timber in the industry, which is necessary for sustainable growth and increased beneficiation. The policy focus has shifted since attaining democracy. For example, during the apartheid era, timber plantations were mostly promoted for the purposes of industrial consumption and not for promoting the participation of previously disadvantaged communities. In contrast, the post-apartheid legislation and policies focus on increasing the access of communities to forestry resources, land-planning services, and conserving resources, although, it can be argued, with little success (DAFF, 2010).

3.3.1 Natural or Indigenous Forests in South Africa

In South Africa, only 1.27 million ha or approximately one percent (1%) of the country's total land area is covered by forest plantations, while the exact extent of woodlands,

that play an important role in terms of community livelihoods in rural areas, is not clear (Table 3.2). There is immense pressure on woodlands and indigenous forests to provide communities with a safety net in terms of food, fuel, shelter, medicine, etc. The expansion of forest plantations is hampered by the availability of water and suitable land.

Table 3.2: Types of forests in South Africa

Forest Type	Area	% of Land Cover
Indigenous forests	500 000 ha	0.5%
Woodlands	39 million ha	40%
Plantation forests	1.2 million ha	1.1%

Source: DWAF (2009); Mucina and Rutherford (2006)

South Africa does not have any extensive tracts of indigenous forestland. So, when the first European settlers arrived in the country, in an effort to meet their increasing demand for timber products, the limited indigenous forest resources that were available were rapidly exploited (The Wood Foundation, 2010). Natural indigenous forests constitute a small resource sector in South Africa, mainly occurring in the moister parts of the country (Figure 3.5). They are often relicts from a larger forest coverage that retreated at the end of the previous Ice Age. Thus, they are susceptible to degradation through excessive use and clearance projects. Fifty-four percent (54%) of forests in South Africa occur on state land, 23.4% on private land, and 22.6% on communal land. It is only in recent years that the state has considered these forests as community assets rather than as a resource to be protected by the people.

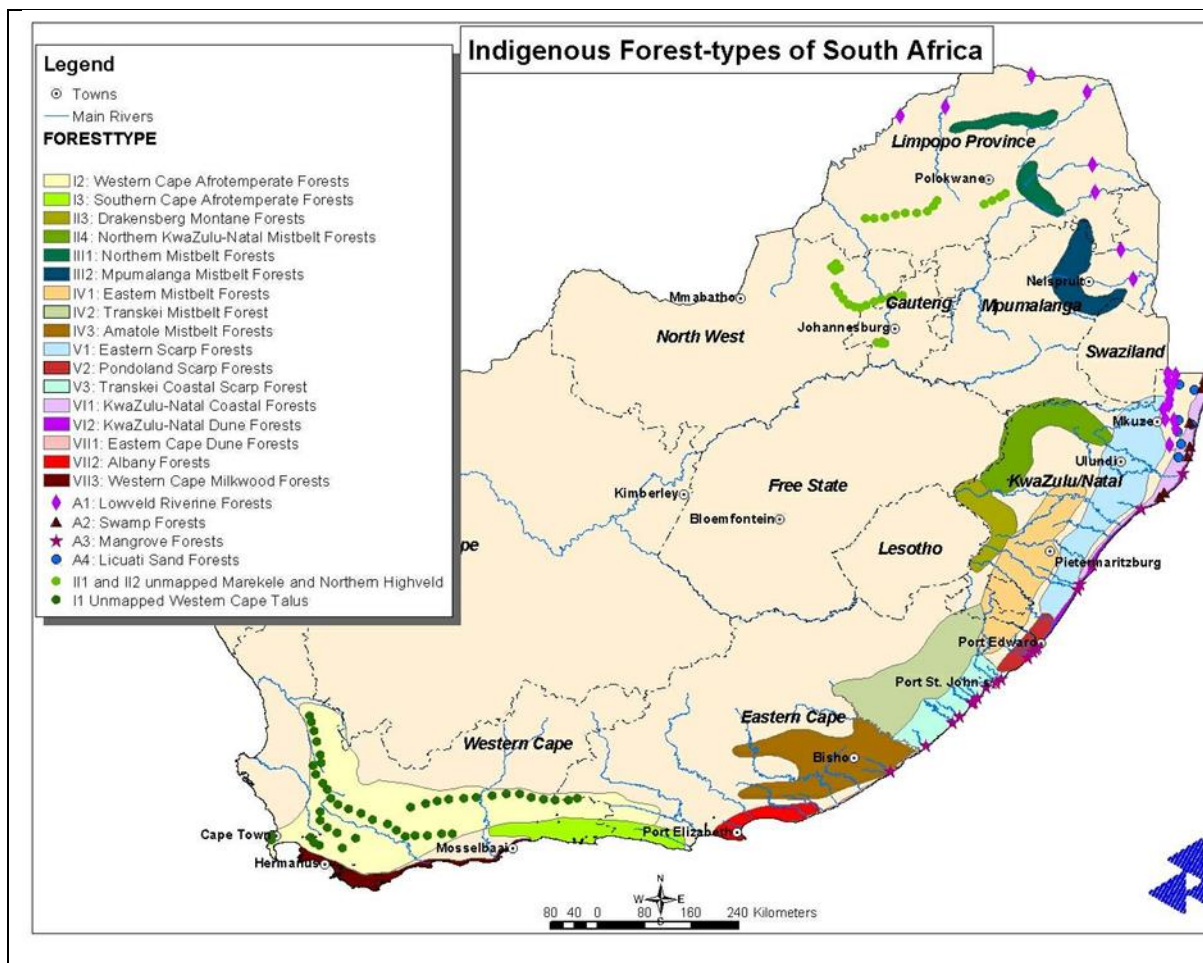


Figure 3.5: Geographical distribution of natural forests in South Africa
Source: CSIR (2006)

Most definitions of forests suggest a 75% canopy cover, with a common definition, considered to be a continuous stand of trees that are at least 10 m tall, with their crowns interlocking (Geldenhuys, 2005). Using this as a guideline, South Africa's indigenous forests cover approximately 500 000ha of the country, with their ownership split more or less equally between the state and private holdings. Indigenous forests are restricted to high rainfall areas where the forests grow in areas protected against fire and other forms of disturbance. As based on the findings of Gibbs-Russell (1987) and Geldenhuys (1992), they do in fact support the highest biodiversity per unit area of any biome in South Africa (0.418 species per ha of the biome as opposed to an average of 0.098 species per ha in respect of the fynbos biome, which covers a much larger area). Forests in South Africa also represent the most diverse of the warm temperate forest areas of the world, and the most vulnerable, smallest, and most fragmented biome.

Indigenous forests are valued in South Africa for many different reasons. The limited supply of timber from indigenous forests has led to the establishment of the commercial forestry sector in South Africa. There are increasing demands for forest resources, particularly in the exploitation by poor rural people of the resource for subsistence purposes, and also in the illegal commercial trade with urban areas. For example, timber is still harvested from indigenous forests, but this is strictly controlled. Other benefits presented by forests, both direct and indirect, include their role in tourism and the various edible and non-edible products that they offer, such as traditional medicines, honey, mushrooms, ferns, etc., as illustrated in Figure 3.6 (Bailey et al., 1999). There are several poverty alleviation strategies that promote the sustainable harvesting of these products as important contributors to rural livelihoods. The National Forests Act of 1998 is the main legislation governing and controlling indigenous forests.

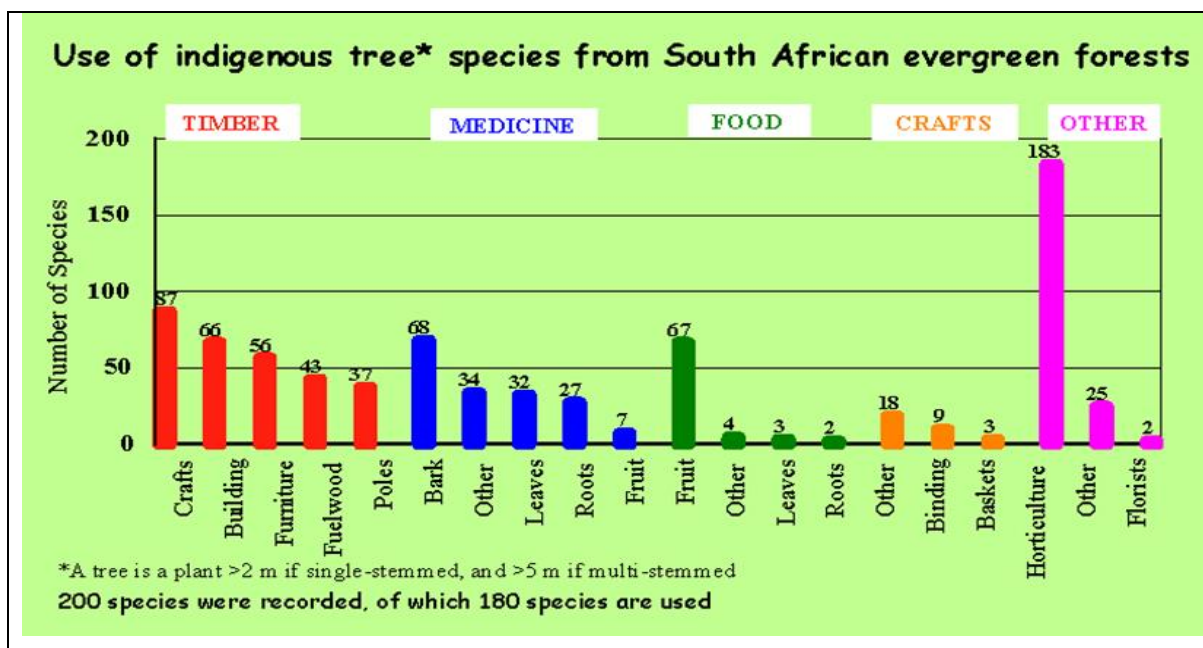


Figure 3.6: Use of indigenous tree species in South Africa
 Source: Bailey et al. (1999)

3.3.2 Woodlands

The term, 'woodland', is generally synonymous with the term savanna. According to Balance et al. (1998), savanna refers to a suite of neotropical vegetation types in which fire-adapted, co-dominant herbaceous and tree strata experience markedly seasonal growth patterns in relation to the seasonal delivery of precipitation. The term, 'savanna', embraces a range of wooded areas, ranging country from the tall, broad-leaved miombo woodland of Zimbabwe and northern Mozambique to the arid thornveld of the Kalahari (Sinclair and Hockey, 1996).

Woodlands are one of the world's major terrestrial ecosystems, constituting between 10 and 15% of the world's land surface area, and are home to over 30% of the world's population (Shackleton et al., 1999). Woodlands are differentiated from natural forests on the basis of the degree of coverage of the canopy. The term 'woodland' is used when the trees form a closed canopy, while 'parkland' is used when the trees are scattered. According to the National Forestry Act (Act 84 of 1998; DAFF, 1998: 14), woodland is taken to mean a group of indigenous trees which are not natural forest, but whose crown covers more than five percent (5%) of the area bounded by the trees, thus forming the perimeter of the group". Shackleton (2000) claims that this is different from a natural forest, which is defined as a group of indigenous trees, whose crowns are largely contiguous, or which have been declared by the Minister under Section 7(2) of the National Forestry Act (Act 84 of 1998), to be a natural forest.

The National Forestry Act (Act 84 of 1998) further explains that the definition of woodlands includes areas currently deemed to be fynbos, thicket, and other woodlands, but excludes other areas of woodland with either a sparse ($\geq 5\%$) or a dense canopy cover ($\geq 75\%$). Although they may include some localised areas of self-seeded exotic species, woodlands generally exclude planted forests and woodlots (Balance et al., 1998).

Unlike forest and grassland, there is no climate or soil that typifies woodland regions, although much of the woodland areas occur within regions characterised by rain-green tropical forests or thorn forests. The great expanse of woodlands that cover the surface of the earth is now believed to have been caused by the activities of people and domestic animals. Humans seem to prefer the interspersion of vegetation and create such conditions wherever they go. Fire and grazing have been techniques used to open up the forest and allow the grassland to enter. Grazing, irrigation, and planting are techniques for spreading woody vegetation into otherwise grassy areas (Dasmann, 1984).

In terms of the classification of woodlands in South Africa, approximately 50% of the African continent, 65% of southern Africa, and 30% of South Africa can be classified as woodlands (Shackleton et al., 1999). There are two main types of woodland in South Africa, namely, the eutrophic and dystrophic woodlands. Most of South Africa's woodlands are eutrophic (\pm 82%), while the remainder are dystrophic. According to Low and Rebelo (1996), woodlands are the most widely distributed vegetational type in South Africa, covering about one third of South Africa. They are home to approximately 9.2 million rural inhabitants (National Forests Act, 84 of 1998).

According to the FAO (1999) ecozones classification, cited in Global Forestry Resource Assessment (GFRA) 2000 (FAO, 2000), the woodlands in South Africa fall under the tropical high and montane dry ecozone regions. Approximately nine percent (9%) of the South African woodland biome falls within the state conservation areas, with a more-or-less equal area under private ownership (9% eutrophic woodlands; 6% dystrophic woodlands). The eutrophic woodlands are more common than the dystrophic woodlands and constitute about 83% of the woodland area (Bailey et al., 1999).

Geographically, in South Africa, most woodland occurs in the northern regions of the country (e.g., about 67% of woodland occurs in the Limpopo, Northwest and Northern Cape Provinces). The eastern region, including provinces such as KwaZulu-Natal and

the Eastern Cape, follows the distributions for the above-mentioned provinces (Figure 3.7). All of the woodlands are eutrophic in the Northern Cape, while the other two provinces accommodate both types. The Western Cape and Free State provinces have few woodland areas, with only approximately two percent (2%) and six percent (6%) of these provinces, respectively, covered by woodland vegetation (These are eutrophic woodlands).

In most rural areas, woodland resources play a significant role in the livelihood of the population in that they provide key subsistence products and incomes. Rural and poor people depend on woodland resources such as medicinal plants, fodder plants, bushmeat and foodstuffs, etc (Shackleton et al. (1998). There have been numerous studies to evaluate the contribution of all goods and services derived from woodlands. These studies have shown that woodlands are important sources for resources that support rural livelihoods and commercial farming and ranching activities. These findings have been supported by various studies, including Bailey et al. (1999) and Shackleton et al. (1998), where it is noted that woodlands provide a large range of non-timber goods and services, both for household consumption, as well as for sale, with a mean direct value across a number of case studies of approximately R5 584 ±745 per household per year.

3.3.3 Historical Development of Forest Plantations

Forestry plantations in South Africa date back to 1874 and were born out of the need to conserve the limited natural forest resources (Bigalke, 1983). At the time, the industry was based on indigenous forests. These forests had suffered severely from uncontrolled exploitation, and in 1874, the first Government Forest Conservator of the Cape Colony was appointed to control the exploitation of indigenous forests in the Knysna district (Scholes et al., 1995). In recognition of the need to conserve indigenous forests in South Africa, the Cape Colony enacted legislation in the late 1800s to prevent their over-exploitation. Without the ability to use this indigenous resource and in recognition of the need to supply the local market with timber, the Government embarked on a policy to establish man-made plantations of fast-growing

tree species to meet the timber needs of a rapidly developing economy. A severe shortage of timber products was experienced during World War I (Olivier, 2009; Hinze, 2004), and at that time, virtually all timber was imported (The Wood Foundation, 2010). This led the Government to embark on an accelerated drive to increase the country's timber resources for "strategic" reasons. Thus, the Government was again the driver behind the expansion of the planted area during the depression years of the 1930s through its extensive public works programmes (The Wood Foundation, 2010).

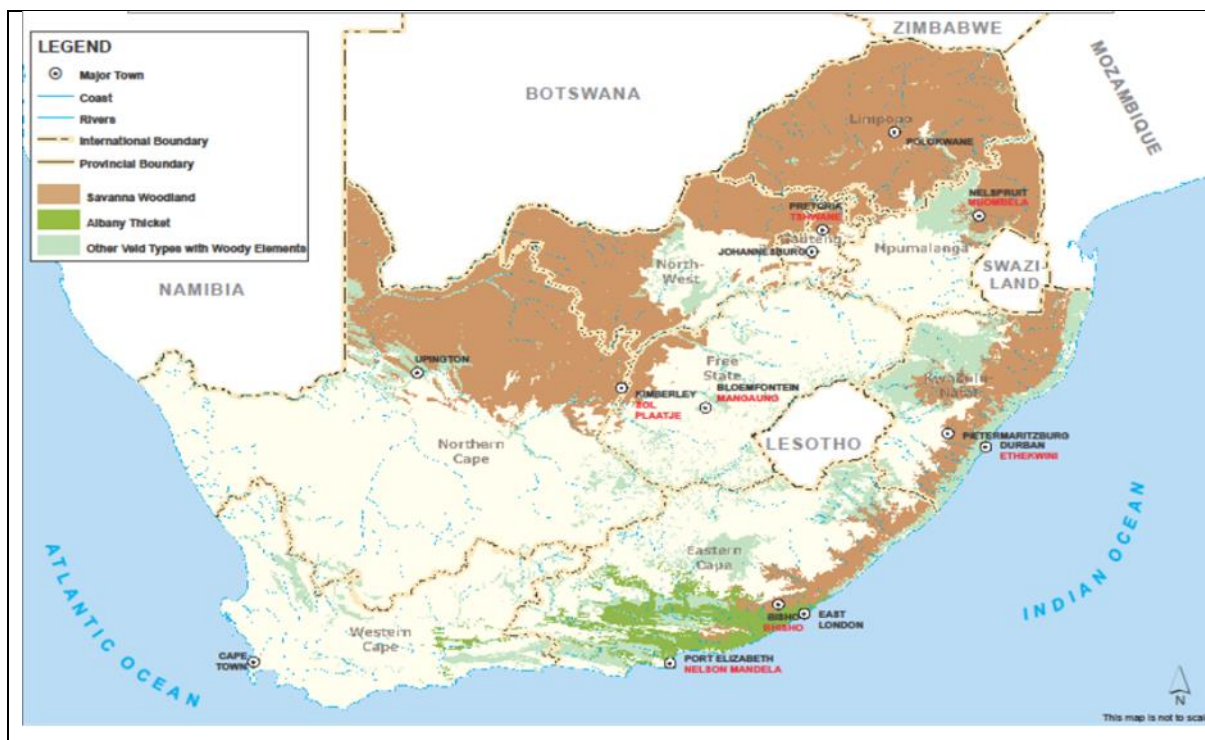


Figure 3.7: Geographical distribution of woodland in South Africa
Source: DAFF (2012)

According to Bethlem and Dlomo (2004), forestry development in South Africa arose out of colonial development strategies. The increasing demands for timber, primarily by mining operations and urbanisation, resulted in the establishment of exotic *Pinus* and *Eucalyptus* plantations to supplement the limited local wood supply. The first exotic timber plantation was established at Worcester in 1876. It produced wood for fuelling the early steam locomotives (Hinze, 2004; Steyn, 1982). Planting then proceeded on a small scale when sample plots were established to the east and north. Eventually, about 1 000 species were counted. The outputs from these plots proved

to benefit later afforestation programmes. The three main genera, used in the early commercial plantings were the *Pinus spp.*, *Eucalyptus spp.* and the *Acacia* species. *Acacia mearnsii* was cultivated in the Cape for poles and fuel and for building stables for stock (Olivier, 2009). It was from the 1880s onwards that several newly planted wattle plantations were noted in KwaZulu-Natal province, with the bark from these plantations eventually being sold to local tanneries. In 1886, the first consignment of tanning material was sent to London and subsequent to that, there was a rapid growth in the industry. By 1917, there were in the region of 65 000 ha of *Acacia mearnsii* in South Africa (Poynton, 1990).

The Union Forestry Department was founded in 1910 (Steyn, 1961). At this stage, the Department of Forestry had already established 13 500 ha of plantations and the railway sector, 5 000 ha. The timber from these plantations was used for the building of coaches and wagons and was also sold to the mines (Pirie, 1982). The advent and progress of the First World War saw the importation of timber supplies from South Africa halted - a serious blow to the economic life of the country. With the rise in timber prices because of the scarcity of the product, the Government showed much interest in making South Africa self-sufficient in terms of her timber resources (Anon, 1973). Thus, the Government built the first sawmill in 1915 at Fort Cunyngame, Stutterheim, Eastern Cape province, which was dedicated to sawn pine timber (Steyn, 1982). At this stage, because the private sector had shown little interest in such long-term investments, the Government took the lead in sawn timber production from its exotic pine plantations. New incentives for afforestation rose to the fore during the depression years of the late 1920s and early 1930s as unemployed families were accommodated in “forestry settlements”, where they worked as tree planters. A problem that arose at this stage was that when timber became available from the thinning⁶ of the early pine plantations, there were very few sawmills to process it. Furthermore, the private sector was again not interested in investing large amounts of money in wood processing plants (The Wood Foundation, 2010).

⁶ i.e., the selective removal of trees, primarily to improve the growth rate of the remaining trees

South Africa was extremely successful in the establishment of exotic plantations. Dr Ian Craib, who in 1939, published his well-known book entitled: 'Thinning, pruning and management studies on the main exotic conifers grown in South Africa', made one of the most important contributions. Many of the South African principles were also implemented in other southern hemisphere countries, such as New Zealand, Australia, and various countries in South America (Olivier, 2009; Hinze, 2004).

Initially, in South Africa, private investors in the forestry industry concentrated on short rotation products (e.g., wattle bark and poles). By the 1960s, the private sector (e.g., Mondi and SAPPI) had started to compete and about 900 000 ha of commercial plantation had been established in South Africa (Hinze, 2004). The period after the 1960s saw the maturation of the forestry industry in South Africa, with the private sector making strides in longer-term sawn timber and processing-plant initiatives. At this stage too, the mining timber sector reached a peak, which impacted negatively on the wattle bark industry.

By 1970, 471 000 ha had been planted to *Pinus spp.*, 289 000 ha to *Eucalyptus spp.* and 191 000 ha to *Acacia mearnsii* (Black Wattle), with other commercial species covering an area of 7 000 ha. The total afforested area now amounted to an area of 958 000 ha. By 1976, this was doubled to about 1 140 000 ha, the estimated value being R1 231 million. Thus, afforestation, although slow to start at the beginning of the 1900s, had by the 1970s pinnacled through massive expansion in the forestry sector to ultimately lead to alarming concern about the effects of afforestation on the water resources and the environment (Mkwalo, 2011; Olivier, 2009; Hinze, 2004; Anon, 1973).

South Africa currently has the highest global proportion of its plantations environmentally certified, with 82% of planted forests certified by international certification bodies. In 2014, approximately 1.3 million ha of plantations in South Africa (over 80%) were situated in Mpumalanga, KwaZulu-Natal, and the Eastern Cape (DAFF, 2015; Forestry SA, 2014).

3.3.4 Current Status of Forestry Plantations in South Africa

3.3.4.1 Geographical Distribution and Ownership

In South Africa, forestry plantings are generally practised in the high rainfall regions, which receive a minimum mean annual precipitation (MAP) of 850 mm (Van der Zel, 1997), have a soil depth of 0.5m or more, and experience suitable temperatures and elevations. Geographically, these conditions exist across only 25% of the surface area of South Africa. It has recently been estimated that 39% of South Africa's population resides in the rural areas (Statistics South Africa, 2011). Of this area, which is classified as rural, 80% is commercial land (either for agricultural farming or commercial forestry) and 20% constitutes a portion of the former homelands.

Centuries of unequal land distribution have resulted in the domination of South African rural areas by commercial farming; only 28% of the country's rural population, many of whom are farm and migrant labourers, live on 88% of arable land, while the remaining 12% of land supports 72% of the rural population in the former homelands (Department of Agriculture, 2011). The forestry sector is dominated by corporate institutions. As shown in Table 3.3; 1, 82% of South Africa's plantation area is owned by the private sector, incorporating corporate owners (68%), commercial farmers (13%), and other private institutions (0.02%). The state (17.53%) and local authorities (0.46%) are the other important role players in the forestry sector in South Africa (DAFF, 2019). The major corporate stakeholders are SAPPI and Mondi, with the state, through its SAFCOL and direct DAFF holdings, being another major actor. This is despite the ongoing privatisation of these forests. The most significant representatives of the other growers are the major co-operatives, such as Hans Merensky (HM), PG Bison, Natal Cooperative Timber (NCT), and, to a lesser extent, Transvaal Wattle Growers (TWK).

Table 3.3: Ownership and extent (ha) of South African timber plantations

Member Description	Number	Hectares	Percentage
Private Sector			
Corporate Companies	9	810 620	68
Commercial Farmers (Individual, Partnerships or Family Trusts)	5	166 469	13
Other Private Institutions	1303	191	0.02
Subtotal	1 317	977 280	82
Government Sector			
Government Departments (Including SAFCOL)	19000	208 835	17.54
Local Authorities	1 001	5523	0.46
Subtotal	20 001	214 358	18
Total	21 318	1 191 638	100

Source: DAFF (2019)

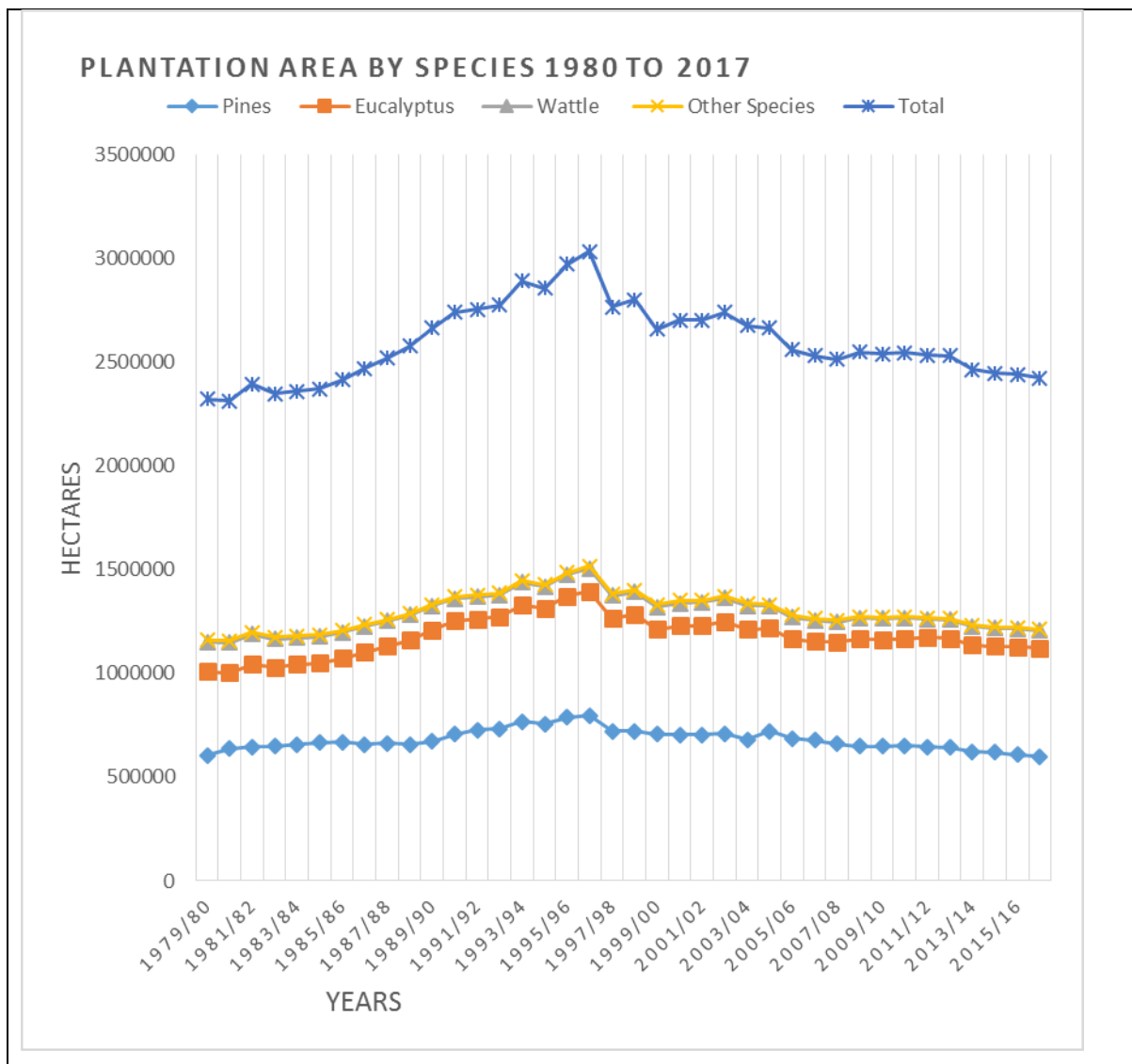


Figure 3.8: Plantation Areas in South Africa from 1980 to 2017
 Source: DAFF (2019)

Most of South Africa’s timber is grown in Mpumalanga (41%) and KwaZulu-Natal (39.6%), with the Eastern Cape becoming an increasingly important area (11.9%) and presenting the greatest opportunities for expansion. The importance of commercial forestry in the Western Cape (3.1%) is declining, whilst approximately 4.3% of South Africa’s plantations are in Limpopo. Despite a shift (indicated in Figure 3.8) towards eucalyptus species from 2007, most of South Africa’s plantations are still dominated by softwood, i.e., pine (49%), hardwoods (eucalyptus (43%), wattle (8%), and other hardwood species (0.4%) making up the balance (Figure 3.9). Mpumalanga has the largest area of pine plantations, while Kwa-Zulu Natal has the largest area of eucalyptus and wattle (DAFF, 2019). These details are summarised in Figure 3.9.

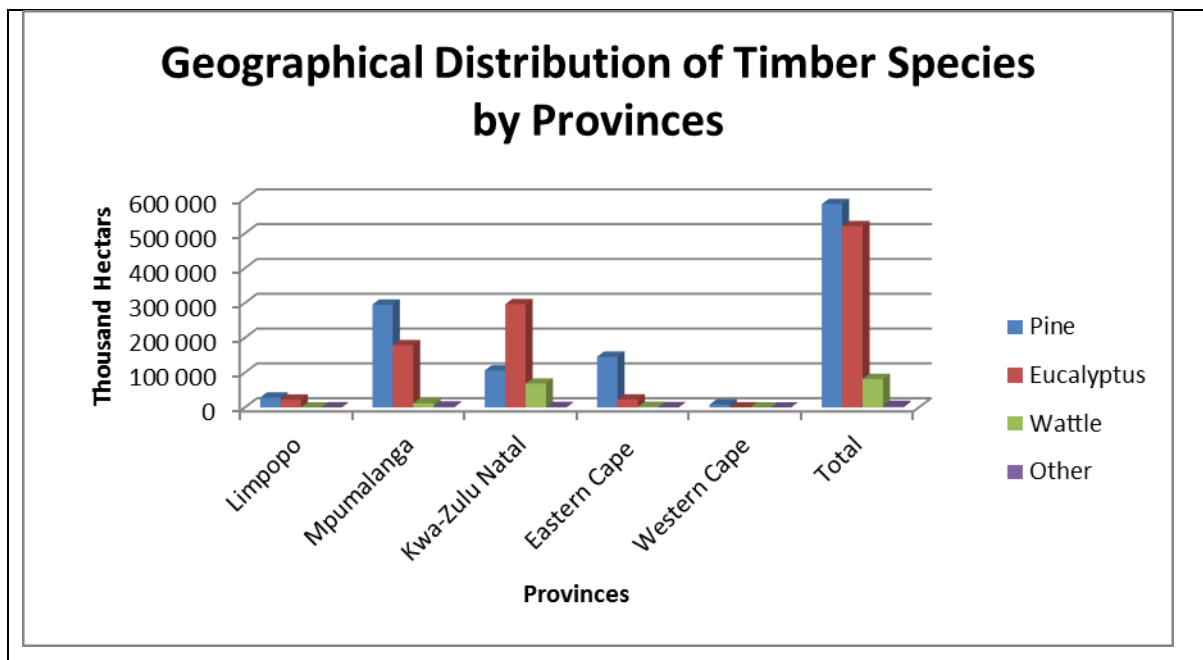


Figure 3.9: Overview of forest species planted per province in 2018
Source: DAFF (2019)

Eucalyptus, pine and wattle and a few other tree types are grown under different rotational lengths (7-30 years) for several purposes. The plantations are managed through species rotation and according to their intended purpose. Commercial plantations provide feedstock to several industries in the form of roundwood or logs, and are then converted into a number of products, as illustrated in Figure 3.10.

According to DAFF (2019), in 2018, 57% of the plantation area was intended for pulpwood, 38% for sawn logs, and about five percent (5%) for mining timber and other purposes. About 75% of pine (softwood) plantations is intended for use in the sawmills, with 25% intended for the pulp market. Almost 87% of the hard woods are intended for pulpwood, with mining timber (5% only) and poles (3%) being the next most significant on the market (Figure 3.11).

Ownership of commercial plantations by previously disadvantaged groups is estimated at less than five percent (5%). This is based on small-scale grower schemes and the Black Economic Empowerment (BEE) percentage in privatized Category A plantation packages. The growth in the small-scale grower industry, supported by the major forestry companies, is encouraging. However, much more will need to be done

to ensure equitable ownership patterns; this will not be achieved solely through the small-scale grower sector (DAFF, 2019).

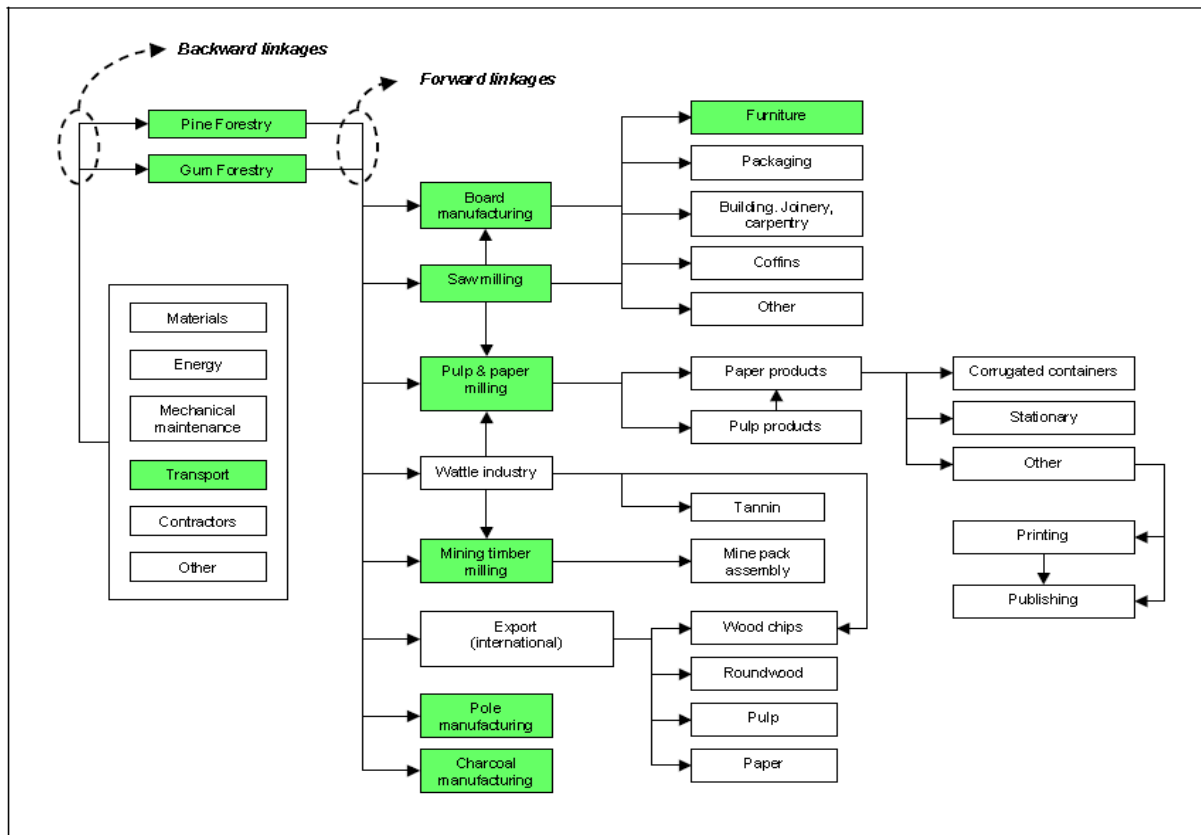


Figure 3.10: The forestry value chain
Source: Crafford et al. (2004)

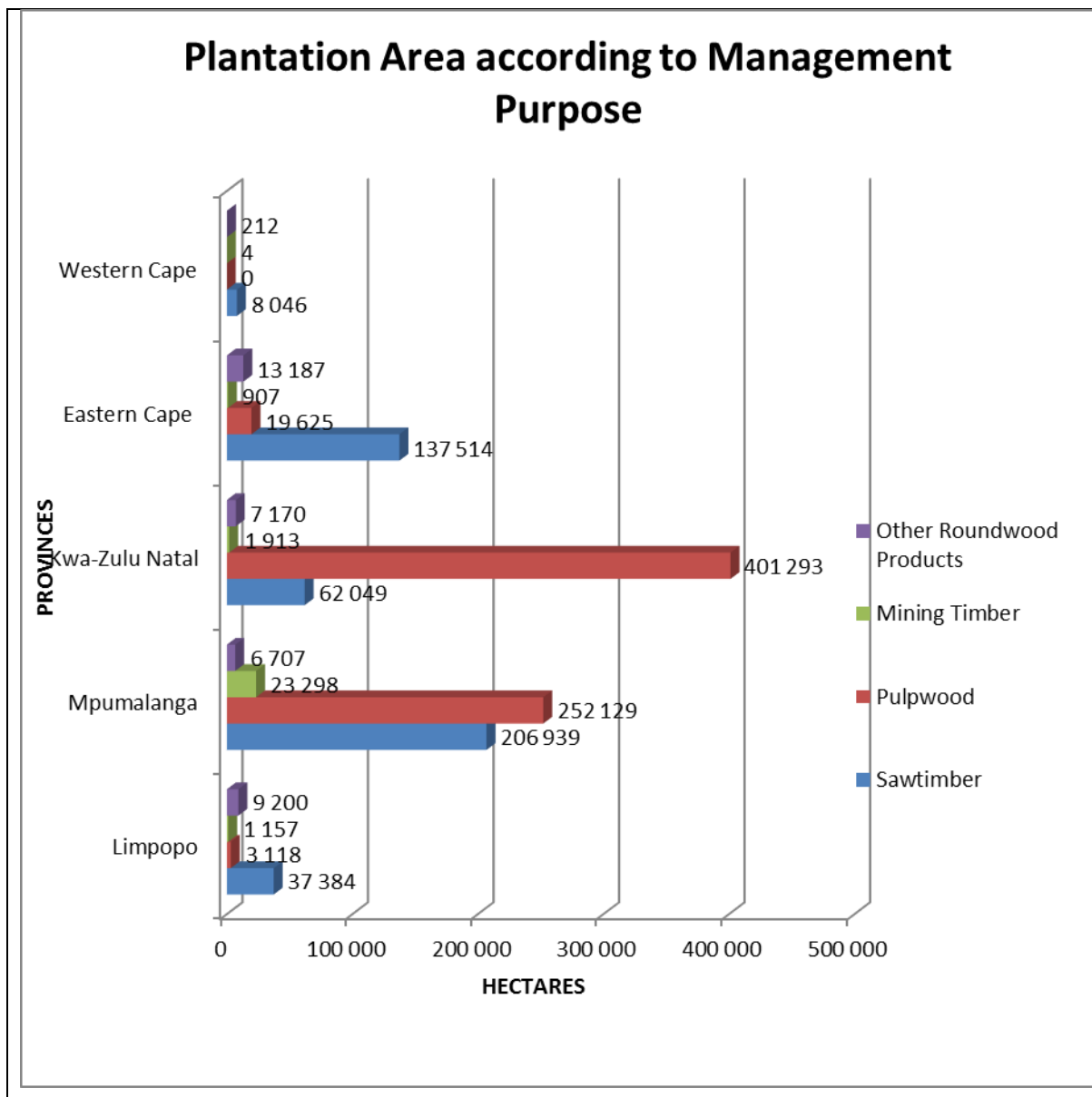


Figure 3.11: Provincial forest plantation area by management objectives
 Source: DAFF (2019)

Equity participation in the pulp and paper sector is limited, although some companies have begun to engage with black economic empowerment companies. Equity participation in hardwood chip-exporting companies is very limited, except in cases where raw material is supplied from small grower schemes.

There is also participation in small-scale softwood sawmills, with 240 out of the 320 sawmills in the country being black-owned. However, these produce only 25% of the country’s sawn timber. Many operate at marginal levels of sustainability, with black participation in formal large-scale saw milling and in local hardwood saw milling being

extremely limited. However, there have been some late developments in this sub-sector that have raised the level of black participation. The participation by black people in imported lumber distribution and value-added processing is negligible.

In forestry contracting, more than 40% of businesses involve endeavours into some form of black economic empowerment. However, there are huge challenges of viability in this industry which have resulted from the unequal power relations between large forestry companies and their contractors. This leads to a cycle marked by a lack of training, limited management skills, low wages, and marginal profitability. Therefore, there are concerns about the sustainability of the forestry outsourcing/contracting sector, as well as the need for effective empowerment. More generally, black people, especially black women, are poorly represented in the national industry bodies. While institutions of higher learning offering forestry education have a 56% black enrolment, there appear to be limited job opportunities for graduates, and there are very few black women in forestry education (Clarke, 2018).

3.3.4.2 *Shrinkage of forest plantations in South Africa*

Over the past few years, there has been a net loss in the area of forestry growing in South Africa, as illustrated by Figure 3.8. The demand already exceeds the supply of sawn logs, whilst shortages in the other sectors are predicted for the near future. Forestry South Africa (FSA) and the Department of Agriculture, Forestry and Fisheries (DAFF) have identified a number of reasons for the low rate of afforestation currently being experienced. These include the licensing process; uncertainties in and the non-resolution of land claims; risks associated with forestry, such as fires, pests and diseases affecting financial returns; low profiles, unawareness and misunderstandings about forestry; the lack of appropriate financing packages and of afforestation incentives and tax concessions to encourage development (DAFF, 2011; FSA, 2008). The long-term nature of forestry (07 to 30 years) has also been identified as a key issue because of the difficulty in facilitating the development of new growers in areas where it is necessary to invest for several years before any income is generated.

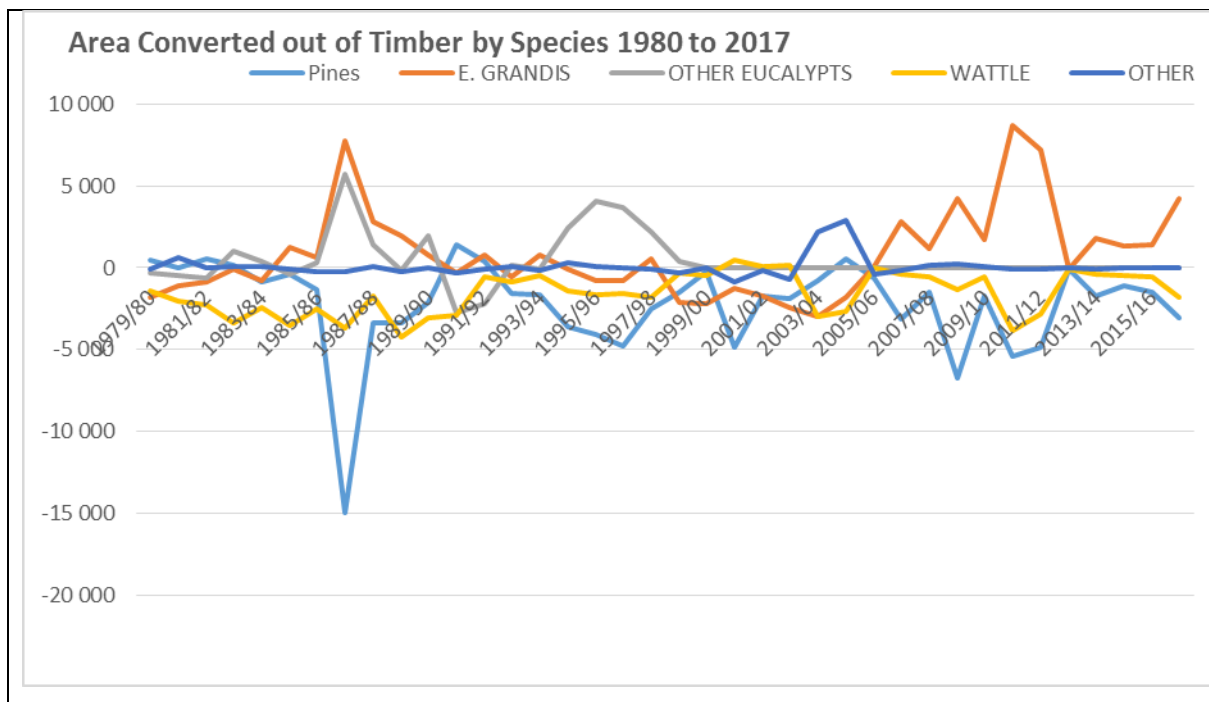


Figure 3.12: Net gain and losses in forestry growing areas – 1970 - 2017
Source: DAFF (2019)

The variations indicated in Figure 3.12 are attributed to several factors:

- The introduction of policies and strategies in South Africa from 1998 that call for the withdrawal of the existing plantations from priority water catchments and newly created protected areas (e.g., Isimangaliso Wetland Park, Table Mountain National Park);
- Some of the forestry land area converted to agricultural land;
- Fire damage, pests and diseases, and drought causing damage to plantations, but having only a small impact on the areas that have been permanently withdrawn (DAFF, 2019).

3.4 SMALL-SCALE COMMUNAL FORESTRY GROWERS

3.4.1 Overview of Small-scale Communal Forestry Growers

According to MacLellan (2012), to strictly define small-scale communal forests is difficult. The ways in which small-scale growers are defined differ from country to country. For example, in the United States of America (USA), the term ‘family forestry’ is used, while in the developing countries, such as South Africa, the term ‘community

forestry' is used. These terms, as well as the term 'small-scale communal forestry growers, are used interchangeably in this research (Underwood, 2014). According to MacLellan and Duinker (2012), in geographical terms, community forestry can simply be regarded as a group of people living within a given area, although the size of that area and the density of its population may bring that entire assumption into question.

Community forestry is a tree-based farming system that enables local communities, individuals, and farm owners to practise forestry activities (Underwood, 2014; MacLellan and Duinker, 2012; Nair, 1993). Nair (1993) defines community forestry as forestry by the people, of the people, and for the people. It is an isolated activity and more focused than commercial forestry initiatives. It involves the production of timber and timber products derived from planted trees and incorporates animal grazing. This practice is vitally important in enhancing the livelihoods of local communities (Underwood, 2014; Nair, 1993).

This next section discusses the exploitation of small-scale community forestry by the people, its importance to them, and the changes that have taken place and that are still taking place. The different products derived from small-scale community forestry are highlighted, as also, the benefits associated with the community forests and barriers which are also explained. For example, people in the past practised community forestry for domestic purposes; the focus being on fuelwood (Underwood, 2014). Hence, because of the restructuring of the land, community forestry is no longer currently geared to domestic purposes only. Government's strategic goals include the alleviation of poverty, especially for poor rural communities, and to advance persons that were disadvantaged through unfair discrimination. This is one of the purposes highlighted in the National Forest Act, 84 of 1998. Post-1994, the restructuring of state forestry in South Africa has been grouped into three categories. Underwood (2014) explains these restructured categories:

- Category A – Economically viable plantation land, theoretically given to communities, with 50% of this land going to corporates and five percent (5%) to shares for the affected communities. The plantations are leased to private companies;

- Category B – Commercially viable plantations that are being faced with challenges in terms of ownership; and
- Category C – Small scattered plantations extending over 17 000 ha and established to provide communities with building materials and fuel wood. Their area is under 200 ha, and they are classified as economically non-viable.

Small-scale growers are expanding their projects to include wood as an alternative source of secured fibre for the forestry industry in South Africa (Table 3.4):

Table 3.4: Small-scale growers in the forestry sector

Company	Number growers	of Area in ha	Average size in ha
SAPPI – Project Grow	9 810	15 000	1.5
MONDI BP – Khulanathi	3 000	7 000	2.3
NCT Forestry Co-operative	1 600	25 000	15.6
TWK Agriculture Ltd	500	1 800	3.6
Siyathuthuka Co-operative	2 860	4 560	1.6
Independent growers	+200	809	4
Government-supported projects	6 200 (11 projects)	2 584	0.4
Subtotal	24 170	56 753	4.1

Source: DAFF (2010)

In addition to the above, there are 37 independent small-scale growers and 47 community woodlots covering a total area of just under 1 000 ha.

3.4.2 Agroforestry and Woodlots

Agroforestry involves land management systems and technologies and is defined as a conscious and sustained means of growing woody perennials (trees, shrubs, palms, and bamboo) that is deliberately used on the same land management unit, with agricultural crop cultivation and animal rearing also being incorporated (Underwood, 2014). The difference between agroforestry and community forestry is that agroforestry emphasises the interactive association between woody perennials (trees and shrubs) and agricultural crops and/or animals for multiple products and services (Nair, 1993).

The objective of this integration of plants, crops, animals, and woody species is to play a major ecological and economic role. It enhances the productivity and diversifies the economic base of a land-use system. It further protects and enhances the physical and social environment to the benefit of rural communities (Underwood, 2014). Agroforestry significantly contributes to the generation of multiple benefits, such as biodiversity conservation, carbon sequestration, and watershed management (Kariuki, 2011). It ensures biological diversity and healthy ecosystems. Leguminous trees, such as the wattle, play a major role in nitrogen fixing. Agroforestry protects soil damage, water losses, and terrestrial carbon sequestration. Kariuki (2011) states that environmental sustainability as Goal 7 of the Millennium Development Goals can be achieved through agroforestry practices.

A woodlot is a common example of small-scale communal forestry in rural areas. It involves the establishment of timber plantations in the fight against poverty, a shortage of timber, and other forest product shortages. Black people are involved in forestry activities with the local community playing a significant role in forest management and land-use practices. The area in hectares of a woodlot varies from 0.5 to 200 ha, with an average size of two hectares (Underwood, 2014). Underwood (2014) further explains that the first woodlot in South Africa (SA) was established in 1876 outside King Williamstown in the Eastern Cape. The growing of trees to produce timber for firewood and poles, the grazing of animals in the plantation, and the processing of forest products at the household or small industry level, all serve to generate

incomes (Arnold, 1995). Underwood (2014) stated that the main aim of community forestry is to assist people in their quest to solve wood supply shortages and to preserve the environment through the planting of trees.

The objectives of community woodlots can vary according to diverse requirements that involve cultural, environmental, and financial aspects. Community woodlots can be managed for forest protection, commercial use and to the benefit of households. All these aspects are important, allowing a community to enhance the livelihoods of the rural population and to empower people to plant and manage trees in a sustainable manner. The current community woodlots work towards the multi-production of fuelwood, poles, droppers and lathes for domestic use and fibre for the commercial pulp mills. The latter purpose — the establishment of community woodlots — refers to commercial community forestry. The establishment of large commercial community woodlots (up to 200 ha) results from state land that has been released to communities for their own development (Underwood, 2014). According to this practice, women are also participants in the management of this type of community forestry.

3.4.3 Small-scale Community Forests

3.4.3.1 *Barriers to successful small-scale communal forestry growers*

There are, however, some barriers that hinder the success of small-scale communal forestry activity in South Africa. According to Nair (1993, cited by Underwood, 2014), the success of small-scale communal forestry has been hampered by what is called the "Tragedy of the Commons". According to the Tragedy of the Commons theory, individuals, or groups of individuals (e.g., a community) make use of natural resources for their own benefit, without considering how this will affect others or how it would impact on a global scale (Corporate Finance Institute (CFI) Team, 2019). Sarre (1990) also noted the following restrictions that prevent small-scale communal forestry growers from successful forestry enterprises:

- Ownership of the forest is a major barrier and capital may be the greatest;
- Education and training, as well as a lack of technical skills, could be barriers to managing a forest;

- With the heterogeneity of a community, different groups within a community may exploit others;
- The degraded state of the forest or land owing to past destructive activities impacting on it; and
- Actions of an outside agency may not be in tune with the needs of the community (Underwood, 2014).

According to Forestry SA (2014), barriers to small-scale communal forestry growers are more prevalent in land reform projects. Most land reform projects thus far have not been successful because there has been a lack of effective post-settlement support; a lack of beneficiary management/business/technical skills; and a lack in accessing finance for working capital (Forestry SA, 2014). Forestry SA (2014) further mentioned that the lack of skills is a major problem area in land reform projects. This study specifically focuses on whether any training or skills are provided to forestry growers by either strategic partners or government. Furthermore, the research assesses the different models provided by the strategic partners and/or government to forest growers in the Land Reform Programme, as detailed in the section below.

3.4.3.2 *Benefits derived from small-scale community forestry*

Small-scale community forestry has some advantages despite the disadvantages highlighted above. The benefits of small-scale community forestry are explained in detail by Underwood (2014). These advantages include job creation; establishing a long-term source of income; improved livelihoods; the empowering of poor rural people, women, and disadvantaged groups; increased supplies of forest products; environmental greening and oxygen production; the availability of sinks for carbon; the restoration of degraded forestland; and increased biodiversity.

Small-scale communal forestry could involve a range of forest types, ranging from natural forests to secondary degraded forests to tree plantations. An example of small-scale communal forestry is the woodlot of the Mooifontein community forest in the Northwest Province that is around 200 ha and is managed by government for local communities. Peluso et al. (1994) highlighted the fact that small-scale community

forestry projects should deliver a variety of benefits to people. The practice could have added benefits, such as non-timber products (e.g., mushrooms, fern, and honey, etc.) harvested from spaces amongst the trees, and much more. To ensure a variety of products and sustainable benefits for people engaged in small-scale communal forestry, it is vital to make attempts to remove the constraints and barriers.

3.4.3.3 *Emergence of out-grower schemes*

The failure of the community forests has led to the suspension of community forest programmes in most rural parts of South Africa (Ham and Theron, 1998). As the model of the community forest has declined, a new approach (the model of individual ownership) has emerged. This happened during the same period that a shift from non-industrial to industrial small-scale timber production occurred (Mahlangu and Mubangizi, 2015). The commercialisation of plantations began to attract independent small-scale growers in the early 1980s when commercial forestry companies saw an opportunity to make communities their business partners. SAPPI entered the arena of small grower schemes in 1982 and, since then, this type of scheme has picked up momentum (Ham and Theron, 1999). As a result, by 1999, four main schemes were running in KwaZulu-Natal province alone. They were SAPPI's Project Grow, MONDI's Khulanathi, Lima Rural Development Foundation schemes, and the South African Wattle Growers Union's Loan Scheme (Ham and Theron, 1999).

The current democratic government of South Africa has an interest in promoting small-scale forestry growers because such initiatives have the potential to create jobs and thus deal with issues of poverty in rural areas. Commercial timber production has the potential to generate benefits at two levels (Mahlangu and Mubangizi, 2015; Harrison and Herbohn, 2002). These are the 'upstream flow effect' and the 'downstream flow effect' (Harrison and Herbohn, 2002). According to Harrison and Herbohn (2002), the upstream flow effect refers to benefits that are received, for example, from nursery operators through employment creation. On the other hand, the 'downstreamflow effect' includes opportunities created in the harvesting and processing industries, including tertiary processing such as furniture manufacturing (Harrison and Herbohn, 2002).

Further aspects of out-grower schemes are discussed below under the section on forest models and land reform.

3.4.4 Policies and Legislative Framework

To promote and ensure the sustainability of small-scale forestry growers, there is a need to look at existing policies, what these policies entail, and whether these policies can facilitate small-scale forestry growers in terms of their social and economic development outcomes. The forestry and related policies and legislation in the South African context are discussed in the section below.

3.4.4.1 *White Paper on sustainable forest development in South Africa*

Forestry is well placed to play an important role in contributing to the alleviation of unemployment, particularly in rural areas. The White Paper on Sustainable Forest Development (DWAF, 1996:4) articulates the important role of forestry as follows: “*The forest sector [is] an important element of local natural resource development that can contribute to creating better living environments and economic opportunity*”.

The overall goal of the White Paper is to promote a thriving forestry sector to be used for the lasting benefit of the nation, and for it to be developed and managed in ways that protect the environment (DWAF, 1996). Measures include the demarcation of state forests; the promotion of the rehabilitation of natural forests and woodlands; fire protection in districts where forestry is important; protection against pests and diseases; the management and control of invasive alien plants to augment current legislation on the control of weeds; the monitoring and evaluation of the state of all of the forests in the country, forest inventories and statistics; the accreditation of sustainable forest management; the certification of products according to nationally and internationally acceptable indicators of sustainability; the establishment of standards for traded forest products and the certification of those standards; the protection of the biodiversity, habitats, soil and cultural assets of industrial forests; incentives for and the financing of small-scale afforestation projects (e.g., woodlots);

their conservation and restoration, and related matters; and levies for such purposes as research and training.

The White Paper (DWAF, 1996) laid the foundation for supporting small-scale forestry enterprises. It has done so by highlighting the role of the forest sector in rural development so that it “*will encourage rural people to develop entrepreneurial skills and promote appropriate markets that will implement local economic development*” (DWAF, 1996:2).

The White Paper (DWAF, 1996:22) also introduces the concept of “community forestry” from a geographical perspective in that it “*can contribute to improving the environment, enriching the resources, and creating income opportunities in previously disadvantaged communities in rural, peri-urban, and urban environments*”.

3.4.4.2 *The National Forests Act (Act 84 of 1998)*

The legal foundations for the implementation of forest policy in South Africa have been established within two administering instruments, namely, the National Forests Act, 1998 (Act 84 of 1998) (NFA) (RSA, 1998a) and the National Veld and Forest Fire Act, 1998 (Act 101 of 1998) (NVFFA) (RSA, 1998b). Both Acts were passed by Parliament in October 1998 but did not take immediate effect. The Acts were promulgated in a staggered manner to enable the Department to fully equip itself to effectively administer the provisions of both Acts.

The need to improve on certain provisions of the Act required the drafting of an Amendment Bill, which subsequently, after promulgation, became the Forest and Fire Laws Amendment Act, 2001 (Act 12 of 2001). This Act specifically seeks to facilitate the restructuring of commercial plantations, to help create certainty in the understanding of certain words, definitions, and provisions, and to remove anomalies.

The key elements of the White Paper on Sustainable Forest Development in South Africa (DWAF, 1996) were enacted in the NFA. The Act provides for ‘community forestry’, whereby communities can enter into agreements with the responsible Minister to access, use and manage state forest resources. From the perspective of

this research, it is important to note that in terms of Section 32(2) of the NFA, the Minister may:

- a) *provide information, training, advice and management, and extension services for community forestry;*
- b) *establish and maintain nurseries and other facilities to provide seed and plants for community forestry;*
- c) *provide material or financial assistance for community forestry, including aids to facilitate recovery from disaster, if no such grants are available from any other source.*

In terms of Section 32(1) of the Act, the scope of community forestry, as referred to in Section 32(2), is wider than that provided for in the rest of the Act and includes “*small-scale plantation forestry by persons disadvantaged by unfair discrimination*”. The NFA therefore puts on the Minister the responsibility for forestry with the mandate to provide support services to the small-scale forestry sector within the larger forestry sector. However, the Act does not provide the mandate to provide material and financial assistance for downstream forestry processing enterprises. In analysing the DAFF’s budget allocation, very little support has been offered to small- scale plantation forestry under the Act. Most of the Department’s efforts are aimed at managing the remaining state forests, regulating forestry operations, and developing forestry strategies and plans for implementation by provincial and local government (DAFF, 2015).

The role for the Department of Agriculture, Forestry and Fisheries is to support the sustainable management of the nation’s forests. The National Forests Act (Act 84 of 1998) focuses on the principle of sustainable forest management. The Minister is given the power to set criteria, indicators, and standards for assessing and enforcing sustainable forest management and creating incentives to manage forests in a sustainable way. Principles guiding decision-making state that “*forests must be developed and managed to sustain the potential yield of their economic, social, and environmental benefits, and to conserve natural resources, especially soil and water*”. Special measures are included to protect indigenous forests and trees. Regulations may be made to control the collection, removal, and transport of products, and various other activities relating to the products from the protected trees and their parts (RSA, 1998a).

The NFA further specifies in Section 4(2) that the Minister may:

- a) i. determine criteria on the basis of which it can be determined whether or not forests are being managed sustainably;
- ii. determine indicators which may be used to measure the state of forest management;
- iii. determine appropriate standards in relation to the indicators; and
- b) create or promote certification programmes and other incentives to encourage sustainable forest management on the advice of the Committee for Sustainable Forest Management.

Lastly, Section 4(6) of the NFA lays down further legal requirements, namely, criteria and indicators that may include, but are not limited to, those for determining--

- a) the level of maintenance and development of --
 - i. forest resources;
 - ii. biological diversity in forests;
 - iii. the health and vitality of forests;
 - iv. the productive functions of forests;
 - v. the protective and environmental functions of forests; and
 - vi. the social functions of forests;
- b) the level of provision of socio-economic benefits; and
- c) the status and appropriateness of the policy and the legislative and institutional framework for forest management.

3.4.4.3 *The National Veld and Forest Fire Act (Act 101 of 1998):*

In South Africa, fire damage to forest plantations is a well-known and expensive problem. In 1998, a new National Veld and Forest Fire Act (NVFFA) (Act 101 of 1998) was promulgated. Soon after, the National Forest and Fire Laws Amendment Act (Act 12 of 2001) was brought into effect and regulations were developed with special focus on the establishment of local Fire Protection Associations (FPAs). The National Veld and Forest Fire Act (Act No.101 of 1998) provides for systems to predict and prevent uncontrolled fires, and to manage fire in general. These provisions are in line with the National Disaster Management Policy (Provincial and Local Government, 2005), and in many cases, with international trends.

A key concept of the Act is the incentive encouraging landowners and communities to accept the responsibility of managing fires in their areas. This concept is facilitated through the establishment of Fire Protection Associations (FPAs), as provided for in the Act (NVFFA, 1998) (RSA, 1998b). The duties of FPAs include the development and implementation of veldfire management strategies, as well as the communication of fire danger ratings. The number of FPAs increased from zero (0) in 2003 to 81 in 2006. An area of more than 31 million ha falls under the protection of these FPAs.

Primary to ensuring the prevention and control of fire, is the development of a National Fire Danger-rating System (NFDRS). It is believed that the correct implementation of a NFDRS will contribute significantly to the prevention of uncontrolled fires. The development of a NFDRS is in progress and has advanced to the stage where a trial test period can be embarked upon. To support and refine the NFDRS, a set of specifications for a fire statistics system has been finalised. This will be developed into a national system for the gathering and evaluation of fire-related statistics and will enable the Minister to report to Cabinet on the trends in veldfire-related incidents and losses due to fires.

To ensure the prevention and effective control of fires, the Act requires landowners on whose land a fire may start or burn or from whose land it may spread, to prepare and maintain a firebreak on the boundary of the land. The Act clearly stipulates the requirements for establishing a firebreak. The Act, however, provides for the Minister to exempt persons from the duty of preparing and maintaining firebreaks (RSA, 1998b). The Department of Agriculture, Forestry and Fisheries (DAFF) has developed a draft policy defining the criteria to be applied in considering an exemption. This policy will be finalised through a process of consultation. The Department is currently running a National Fire Awareness Programme, which will be an ongoing initiative. The National Veld and Forest Fire working group, which provides a national and co-ordinated input, informs the programme.

3.4.4.4 *The Forest Charter*

The BBEE Charter for the forest sector (DWAF, 2008) is intended to provide an enabling environment to facilitate poverty alleviation through new afforestation in KwaZulu-Natal (KZN) and in the Eastern Cape specifically. It also aims to ensure improved yields from existing plantations by ensuring that communal forest lands are supported through extension support for new entrants to forestry and technical assistance to small-scale growers. The Charter acknowledges that transformation without growth in the sector will be very difficult to achieve. Under the Charter, new afforestation on communal land is one of the main foci identified for KwaZulu-Natal and the Eastern Cape, with potential outcomes including 30% black ownership and a total of 12% black women ownership within the sector within 10 years. An aim of establishing 100 000 ha of new afforestation, mostly within the Eastern Cape, within 10 years from 2008, is also specified.

Whilst the Charter aims to ensure that transformation of the sector is implemented and is broad-based, 13.2.3 (a) of the Charter describes an undertaking to streamline and expedite afforestation licensing procedures with the intention of easing the establishment of at least a 100 000-ha net increase in planted area over the next 10 years, as well as ensuring that forestry's water use is considered and weighted fully against competing proponents for water allocations in licensing decisions. A detailed list of measures to meet these targets is provided in Table 3.5 and Annexure A to the Charter, which undertakes to "*streamline and expedite afforestation licensing procedures*" and indicates in Paragraph 13.2.3 (a) that the purpose behind this will be "*to facilitate the establishment of a minimum of a 100 000 ha net increase in planted area over 10 years, based on a target average of 10 000 ha per annum*", and at the same time, to ensure that "*forestry's water use is considered and weighted fully against competing proponents for water allocation in licensing decisions*". The Charter also specifies a number of measures that "will" take place (DWAF, 2008). To some extent, these measures reflect the strong belief by the sector that it is not being treated in the same way as other water users.

Table 3.5: Undertakings according to Annexure 1 of the Forestry Charter

Measures specified in Annexure A of the Forestry Charter	Water Implications	Resource
a) Create an enabling regulatory environment that renders the costs of the licence application process for water use affordable to the emerging growers.		
b) Support and advise the emerging growers to comply with the environmental and other authorisation requirements for afforestation when applying for a water licence	Beneficial in terms of established plantations	of well-managed
c) Take steps to ensure that as opposed to their treatment of other forms of land use, legislative and regulatory requirements do not disadvantage forestry and the planting of trees for commercial and subsistence use .		
d) Ensure that all applications for afforestation are processed expediently by developing with other pertinent authorising regulatory authorities a Memorandum of Understanding (MoU), which should also be ratified by them. The MoU should ensure the strict enforcement of the application procedures relating to Stream Flow Reduction Activity (SFRA) and adherence by all participating parties to the stipulated time frames prescribed for the relevant interventions (e.g., inspecting sites, receiving and attending to comments, and processing applications).		
e) Implement a proactive approach ⁷ to forestry development in areas that have substantial opportunities for afforestation , namely, a co-operative government initiative to authorise		

⁷ This is provided for in the Memorandum of Understanding referred to in par (d) above.

Measures specified in Annexure A of the Forestry Charter	Water Implications	Resource
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swift afforestation licensing, in areas that have been identified and demarcated as being suitable for afforestation in the Eastern Cape and KwaZulu-Natal.

- | | |
|---|---|
| <p>f) Develop a protocol to be included in the Memorandum of Understanding⁸ to facilitate the lawful conversion of tree genera or species. This should be specified as a permit or licensing condition, where the change should be informed by forestry practice or economics. The key principle governing such a change would be the conditions for water use stipulated in the applicable authorisation.</p> | <p>Potentially negative if conversions from pine to eucalyptus should take place on a large scale. An area exchange ratio should be applied if the water resources are to be maintained at the current levels. The impact of low flow, in particular, needs to be carefully considered.</p> |
| <p>g) Make provision for water use by subsistent and homestead woodlots by formulating a Schedule 1 clause and/or a General Authorisation for such small-scale woodlots.</p> | <p>Whilst the immediate water resource impacts may be minor, the long-term threat of IAP expansion and fire risk needs to be considered (See Section 5.3.3.)</p> |
| <p>h) Facilitate the transfer of or trade in a water use allocation or the existing lawful use of water, and the issuing of licences in the event of the conversion of a land use from irrigated cropping (including sugarcane) to a timber plantation.</p> | <p>Low flow impacts need to be carefully considered.</p> |
| <p>i) Allow the amount of water used by dryland sugarcane fields to be allocated to timber plantations - to be based on an equitable water use exchange ratio for sugarcane crops, provided that such dryland sugarcane cultivation has been an</p> | <p>Sugarcane is not an SFRA and is not licensed as such. These applications will effectively be new ones and should be processed as such.</p> |

⁸Referred to in par. (d) above

Measures specified in Annexure A of the Forestry Charter	Water Implications	Resource
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existing land-use practice for at least five years, and that this does not compromise the availability of water to the Reserve and other lawful water users.

- | | |
|--|--|
| <p>j) Allow the water use attributed to wattle, pine and eucalyptus forests that have been rehabilitated or converted and correctly managed as commercial timber plantations, to be allocated through an SFRA water use licence to such timber plantations. General authorisations are to be considered in catchments where there are sufficient amounts of available water to allow for such a conversion.</p> <p>k) In cases where, as an existing legal user of water, timber is permitted in a riparian zone, develop an efficient and effective framework to authorise the re-allocation of water - to alternative plantation areas within the same quaternary catchment or elsewhere within the wider catchment.</p> | <p>A potential win-win situation. However, other potential water users should also be considered if they are prepared to commit resources to IAP clearing.</p> <p>This is difficult to justify, particularly where water resources have already been committed. Whilst timber growing in riparian areas may have been considered to be a legal existing user of water in the context of the erstwhile permit system, it would be difficult to justify an increase in the area of plantation land if the new guidelines and certification requirements are to be adhered to.</p> <p>From a water resources perspective, timber grown outside the riparian areas has a smaller impact on the catchment water resources than that grown in the riparian</p> |
|--|--|

The NDP is supported by the national administration's development priorities. These are rural development; decent employment and sustainable livelihoods; education; health; food security; land reform; and the fight against crime and corruption (The Presidency, 2012). These priorities exist within a challenging socio-economic environment that is compounded by poverty, extreme inequality, poor service delivery, infrastructural backlogs, natural resource depletion, an ineffective land reform policy, and corruption.

To address these priorities, the Presidency (2012) developed 12 key outcomes, with accompanying outputs, strategic activities, and performance agreements between the President, Cabinet, and other key partners. The critical outcomes for rural communities are:

- Outcome 7: Vibrant, equitable and sustainable rural communities with food security for all.
- Outcome 8: Sustainable human settlements and improved quality of life for households.
- Outcome 9: A responsive, accountable, effective, and efficient local government system.
- Outcome 10: Environmental assets and natural resources that are well protected and continually being enhanced.

As will be highlighted in the section on land reform below, the Department of Rural Development and Land Reform (DRDLR), responsible for nationally prioritising rural development, is the lead institution for the implementation of Outcome 7, mentioned above. The performance in terms of Outcome 7 is to be supported by the process of land reform, the Comprehensive Rural Development Programme (CRDP), and rural job creation. The DRDLR has chosen the strategy of "agrarian transformation" to achieve Outcome 7, which focuses on establishing rural business initiatives, agro-industries, cooperatives, cultural initiatives, rural settings; empowering rural people and communities; and revitalising old and upgrading economic, social, information and communications infrastructures, public amenities and facilities in villages and small rural towns (The Presidency, 2012). However, because the environment is a cross-

cutting sector and rural communities are dependent on the environment, the DRDLR also has a role to play in achieving Outcome 10.

The outputs of Outcome 10 are as follows:

- i. Enhanced quality and increased quantities of water resources;
- ii. Reduced greenhouse gas emissions, the mitigation of climate change impacts and improved atmospheric quality;
- iii. Sustainable environmental management; and
- iv. Protected biodiversity.

3.4.5 Forest Models for Community Forestry

This section provides an overview of the main forest models in respect of community forestry in South Africa. The section starts with a broader discussion and then provides brief explanations of the various models.

In South Africa, the main challenge for rural development has been the marginalisation of the poor. This challenge has involved the acknowledgment of the problems of the spatial design patterns and land ownership patterns associated with the apartheid era, and the fact that reform has yet to be translated into the establishment of sufficient numbers of sustainable new black farmers or growers (National Council of Provinces (NCOP) on Land and Mineral Resources, 2014). The challenge of growing the smallholder sector, including the small-scale communal forest growers, is closely tied to the challenge of making small-scale forestry more remunerative (NCOP, 2014).

According to Mwale (2000), in the 1970s, the demand for paper in South Africa increased, and this marked the beginning of private sector involvement aimed at helping the government to meet the growing paper demand. In 1997/8, government owned about 17% of the afforestation land in South Africa through SAFCOL; the forestry companies (SAPPI, Mondi) owned a total of 46% of the plantations; and the remaining 37% belonged to private individuals and the public (Mamba, 2013).

In its intention to reverse the Land Act of 1913, the Land Reform Policy (RSA, 1997) discussed above brought about changes. The issue of skewed land ownership featured uppermost in this agenda as it had, over the years, posed serious threats in

respect of land available for forestry as most had been subject to land disputes (Clarke, 2006). In fact, the Pulp and Paper International Report (2008) indicated that more than half of the national timber estate was subject to land claims. Even currently, most of the land on which forest companies operate is subject to land claims. In 2016, for example, about 61% of SAFCOL forestland was under claim (SAFCOL, 2018).

According to Clarke (2007), the potential for the land transfers achieved through restitution and redistribution is to change the patterns of forest resource ownership and management and to contribute to the development of impoverished communities is great. The forestry industry has developed generic models to address the forestland under land claims. These models were designed to empower and transfer skills to future forestry claimants. Since the industry's intention has been to achieve growth in this sector, most policies have been developed as incentives to investment in the sector and can assist those involved in managing and working towards a much-needed long-term horizon in decision-making (Cruz, 2010).

In their quest to address the land issue, the timber companies have approached the land issue in different ways. Generally, the models that they have presented have been formulated in such a way that they have been able to consider the livelihoods and development of the community members, and thus to positively impact on the economy.

As mentioned, land reform in South Africa is aimed at transforming the discrepancies in land ownership and achieving the more equitable distribution of productive land (Lahiff and Cousins, 2005). According to Meinzen-Dick et al. (2008), one of the main objectives of land reform is to give community members the right to own the existing forest on the land that is under a claim. Clarke (2008) estimated that about 40% of privately owned plantations are subject to land claims, while approximately 70% of the state-owned plantations are either under claim or have well-established agreements in place that recognise the rights of the local communities to ownership. Makhatini (2010) stated that in 2010, there were only 10 claims to privately owned forests that had been settled by Mondi. Makhatini (2010) added that the problems that had to be addressed included the settlement of land restitution on 40% (100 000 ha) of the Mondi plantations.

To this end, this research places emphasis on the need to reassess the proposed approaches and objectives listed in the forestry models in the light of their socio-economic impact on communities. The section below provides an overview of the main generic models used.

3.4.5.1 *Joint Venture*

This model recognises the right of the community to contribute the land and Komatiland Forests (KLF) (a SAFCOL subsidiary) to contribute the trees. After this process, the specifics of the joint venture are formulated. The operating company usually establishes collectives to represent the community's interests and to operate the business. The idea with a joint venture is that incomes, skills training, and empowerment will transfer to the community members. In that it owns the land, the community in this model has leverage in the partnerships that it takes on (Mamba, 2013; Lahiff et al., 2012; Ojwang, 2000).

3.4.5.2 *Resumption Lease*

This model involves the ownership of the land by the community and the leasing of the land on a rotational basis to the forest company. At maturity, the plantations are harvested by the forestry company. This is when the community can decide whether to continue with the leasing of the land for forestry purposes or to use it for other purposes. In the case of the resumption lease, the community has the option to lease the land to another company. This particular model favours the community more than it does the forest company. Its advantages are that the supply is certain for one rotation. Thus, communities are able to see at first-hand the benefits of using the land for forestry. Furthermore, for the duration of the arrangement, rentals from land leases provide a regular income to the community. The disadvantage of this model involves uncertainty in the long term in terms of the supply of the resource (Mamba, 2013; Lahiff, 2008).

3.4.5.3 Total Package

In this model, the Land Claims Commission (LCC) buys the land, as well as the trees, on behalf of the community. The claimants gain full ownership and can sell the timber on the open market. However, if the business has not been well supported by a strategic partner (i.e., SAPPI / MONDI / DAFF/ SAFCOL/KLF) and the costs incurred by the state (MONDI, 2014) are also high, the risk of failure would be high. These two aspects would then be considered to be disadvantages of the model.

3.4.5.4 Funded Purchase of Trees

This model involves the ownership of the land and the purchasing of the trees by the community. An institution funding the purchase of the trees and a forestry company managing the plantation are both set in place to represent the interests of the community. The advantage of this model is that the claimants receive full ownership and could sell timber on the open market. However, the disadvantage here is that the acquisition of trees is funded —, to the effect that the claimants would then have to pay interest on these purchases. According to Mamba, (2013), this practice is detrimental to tree growers in that they lose the benefit of being part of a large company (e.g., KLF).

3.4.5.5 Conventional Lease

This type of lease refers to a community owning the land and leasing it back to the forest company. The LCC buys the land, while the forest company retains ownership of the trees and pays a rental at market rates for the use of the land. In this type of lease, the claimants receive a guaranteed annual income for the rental. Such a lease could be extended through offers of employment, skills training and thus of the empowerment of the local community, as well as the socio-economic development for the area. This model is lacking in that its potential to offer empowerment to the community is limited — unless a well-structured programme is in place. Furthermore, there is usually little involvement of the community in the operations, unless this aspect is well structured (Mamba, 2013).

3.4.5.6 *Sale and Lease Back*

This model involves the transfer of land ownership to the claimant communities. Initially, the South African government pays the market price for the land, but subsequently transfers ownership to the claimant community. Subsequently, on the basis of a contract brokered between a forestry company and the community, the company then leases the land from the claimant community. This model is chosen because it is able to respond to the aspirations of the negotiating parties and the government. It is then up to the claimants to resettle the land. Factors to consider include the geographic location of the claimant community, the need to continue the business, the extent of the land claimed, the nature of the plantation, the real needs of the claimant community, the issue of land as an emotional issue, the claimant community's business capacity, and the levels of skills and sophistication (SAFCOL, 2018).

3.4.5.7 *Business Model*

In this model a community owns the land on which trees are planted, but the company retains ownership of the trees. The advantage of this model is that land that is unsuitable for forestry (e.g., fallow and non-arable land within the forest plantation) can be used by the community members for activities such as the grazing of their cattle. However, such use must follow forestry regulations. In addition, the community is obliged to refrain from disrupting the operations in the forests. In this case, where the forestry business operation is in fact owned by the forestry company, the use of the services of the community in the forestry operations also proves to be advantageous (Mamba, 2013).

3.4.5.8 *Out-growers Scheme*

This is a model that refers to the situation when a forest company enters partnership arrangements with growers who have access to the land where timber can be grown. In their turn, landowners provide the land and the labour, whereafter the trees are sold to the processing company at a market-related price. In this model, the forest company provides technology in the form of improved genetic seedlings or clones/hybrids. Also,

provided by the forestry company are aids such as technical advice, cash loans in the form of advances against completed silvicultural operations, and the creation of local timber collection points for the delivery of timber by the local growers, as well as for sales transactions (Mamba, 2013; Makhathini, 2010; Ojwang, 2000).

3.4.5.9 *Projects Grow*

This is an existing programme to support smallholder tree farming, where money earned from the sale of trees is paid to individual farmers. It usually includes technical assistance, the provision of free seedlings, interest-free payments for silviculture work completed prior to harvest, and a guaranteed market. In return, the community signs an agreement committing the harvest to SAPPI, which pays market-related prices for the timber (SAPPI, 2008).

3.4.5.10 *Plantation Management Plan*

This model involves the community's ownership of land and trees. Since the members of the community have no management skills, expertise, nor the financial resources to manage the forest enterprise, the forest company manages the plantations. This it does on behalf of the community for a minimum period of one rotation, at a fee that has been agreed upon (Mamba, 2013).

3.4.5.11 *Management Assistant Plan*

In this model, the assumption is that the community owns the land and the timber, as well as having the expertise and business management skills to manage the plantation. In this case, the forestry company provides only the technical assistance. If necessary, the company will provide seedlings for the community, and source markets for the community timber growers. The company may also provide financial assistance at an arranged payback period (Mamba, 2013).

3.4.5.12 Timber Supply Agreement

In this model, the community has access to technical assistance but needs access to more advanced business methods and resources and sufficient funding. In this case, the forestry company will enter into a business agreement with the members of the community by agreeing to purchase their produce. If there is a need for it, the company then provides technical assistance and in terms of a long-term arrangement, supplies the community with the necessary inputs, such as, amongst others, seedlings, for their forestry enterprises (Mamba, 2013; Makhathini, 2010).

3.4.5.13 Lease Agreement

In this type of lease agreement, the land commissioner purchases the land for the community. The forestry company then enters into a lease agreement with the community for at least two rotations, with lease fees ranging from six percent (6%) to 10% of the value of the leased land. The community also receives a risk-free, annual lease income. The community members are then considered to be eligible to use the open spaces on the plantation for several different land-use activities (Mamba, 2013).

To conclude this section, it is in the interests of the stakeholders from industry to ensure that timberland is transferred to the claimant communities and that its management is geared to sustainability and productivity.

3.5 CHAPTER SUMMARY

This chapter discussed forestry with reference to sustainable community development in South Africa. It explained the potential role of small-scale forestry in sustainable community development in South Africa in relation to economic benefits (section 3.2.1), employment (section 3.2.2), and security of tenure through land reform and vested interests (section 3.2.3). In this regard, it provided the necessary background through reference to the history of forestry in South Africa and provided an overview of the current status of forestry plantations in the country. Furthermore, an overview of small-scale communal forestry growers was provided and agroforestry and woodlots in South Africa were discussed. The barriers to and benefits of small-scale

community forestry were examined and highlighted, and the policy and legislative frameworks of sustainable forest development in South Africa were analysed. The main forest models for community forestry in South Africa were also explained and discussed.

The next chapter focuses on the empirical research design and the methodology used in conducting the study.

CHAPTER FOUR: RESEARCH SETTING AND METHODOLOGY

4.1 INTRODUCTION

This chapter provides an overview of the geographical locations, characteristics, historical backgrounds of afforestation and land tenure in all the study areas. It also outlines the research methodology and research methods. The research strategy, adapted as a case study, is also explained, as well as the approach to the study. The methods and tools for data collection, as well as the analysis, are also discussed.

The study adopted questionnaires, interviews, and personal observations as the means to gather data for the statistical approach, as well as research methods, which included documentary research, in order to collect secondary data. The interviews were used as the primary data collection method and focused on the respondents' perceptions about their participation in the projects; the benefits and challenges concerning their involvement in the projects, and the types and causes of the conflicts that they had experienced in the study area. The chapter further discusses the different types of questions posed and the analysis of the thematic content applied in the study.

4.2 STUDY AREAS: GEOGRAPHICAL LOCATIONS, CHARACTERISTICS, LAND TENURE AND AFFORESTATION

To achieve the research aims, four small-scale communal forest plantations in four geographical areas of South Africa were selected for the purpose of the study. These were Umzimkulu (Mabandla) in the KwaZulu-Natal Province and the Flagstaff (Mkhambathi), Bizana (Sinawo) and Tsolo (Ntywenka) regions in the Eastern Cape Province (Figure 1.6).

4.2.1 Geographical Locations and Characteristics

4.2.1.1 *Mkhambathi Project*

The Mkhambathi project is situated in Flagstaff in the Eastern Pondoland region. This area previously fell under to the former Transkei government. Currently, the Mkhambathi community falls under the Ngquza Hills Local Municipality, which was formerly known as Qawukeni, an administrative area in the O.R. Tambo District of Eastern Cape. The Mkhambathi project is on the coast, just north of Port St Johns. Two rivers act as boundaries to this community. To the south is the Msikaba River and to the north, the Mtentu River. The Mkhambathi Nature Reserve forms part of the communal area of Umkhambathi. This nature reserve lies on the eastern side of the community of Mkhambathi and is bordered by the Indian Ocean (Eastern Cape Socio-economic Consultative Council (ECSECC), 2012; Zeka, 2013).

4.2.1.2 *Sinawo Project*

The Sinawo plantation is situated in the former Transkei, along the R61, between Bizana and Port Edward. It is situated in the Winnie Madikizela-Mandela Local Municipality, within the Alfred Nzo District in the Eastern Cape, and about 20km from the KwaZulu-Natal South Coast boundary. The plantations are located on both sides of the R61, half of the area towards the Mzamba River, and the other half towards Greenville (Etyeni). Access to Greenville is via gravel roads and tracks from the R61. The closest major centres to the plantation are Port Edward (25kms), Kokstad (110kms) and Durban (190kms) (Sappi, 2013).

4.2.1.3 *Ntywenka Project*

The Ntywenka Project, locally known as the 'Sixhotyeni', is situated in the northern part of the Eastern Cape Province, approximately 25km from Maclear on the R396 between Maclear and Tsolo, south of Mount Fletcher. The project is 45km from the

PG Bison board mill at Ugie and 226km from the Harding Treated Timbers pole plant at Harding (ECRDA, 2014; SA Forestry Magazine, 2012). It is located in the Elundini Local Municipality, at 31°18'32" South and 28°6'16.1" East, in the Joe Gqabi District Municipality (www.wikipedea; ECRDA, 2014).

4.2.1.4 **Mabandla Project**

The Mabandla project is located in the southern Kwa-Zulu Natal Province, under the Umzimkulu Local Municipality (30°15'45" South and 29°55'15" East), an administrative area in the Harry Gwala District (Table 4.1), and enclaves between Kokstad in the west and Umzimkulu town in the east. Furthermore, the Mabandla community is settled on the southern slopes of the Drakensberg (30°15' South and 29°15' East) and 30km south of the 'flyfishing town' of Underberg (Hlatshwako, 2000). About 90.8% of the population In the Umzimkulu Local Municipality reside in rural areas, while the remaining 9.2% are urban based (www.wikipedea).

A summary of the locational characteristics of the study areas is presented in Table 4.1.

Table 4.1: Geographical location of study areas

Information	Mkhambathi	Sinawo	Ntywenka	Mabandla
Province	Eastern Cape	Eastern Cape	Eastern Cape	KwaZulu-Natal
District Municipality	O.R Tambo	Alfred Nzo	Joe Gqabi	Harry Gwala
Local Municipality	Ngquza Hills	Bizana	Elundini	Umzimkulu
Geographic Location	28°35'E 32°10'S	30°5'38.508"E 30°59'44.2716"S	28°6'16.1"E 31°18'32"S	29°55'15"E 30°15'45"S
Population	278 481	281 905	144 929	180 302

Type of Rural Settlement	Rural	Rural	Rural	Rural
Most Spoken Language(s)	Xhosa	Xhosa and Zulu	Xhosa	Zulu and Xhosa

Sources: Alfred Nzo District Municipality (2017, 2020); DALRRD, 2019; ECSECC (2012); Ingquza Hill Local Municipality (2017); www.wikipedia

The aerial maps below (Figures 4.1 to 4.4) depict an overview of the location and environment of the four projects.

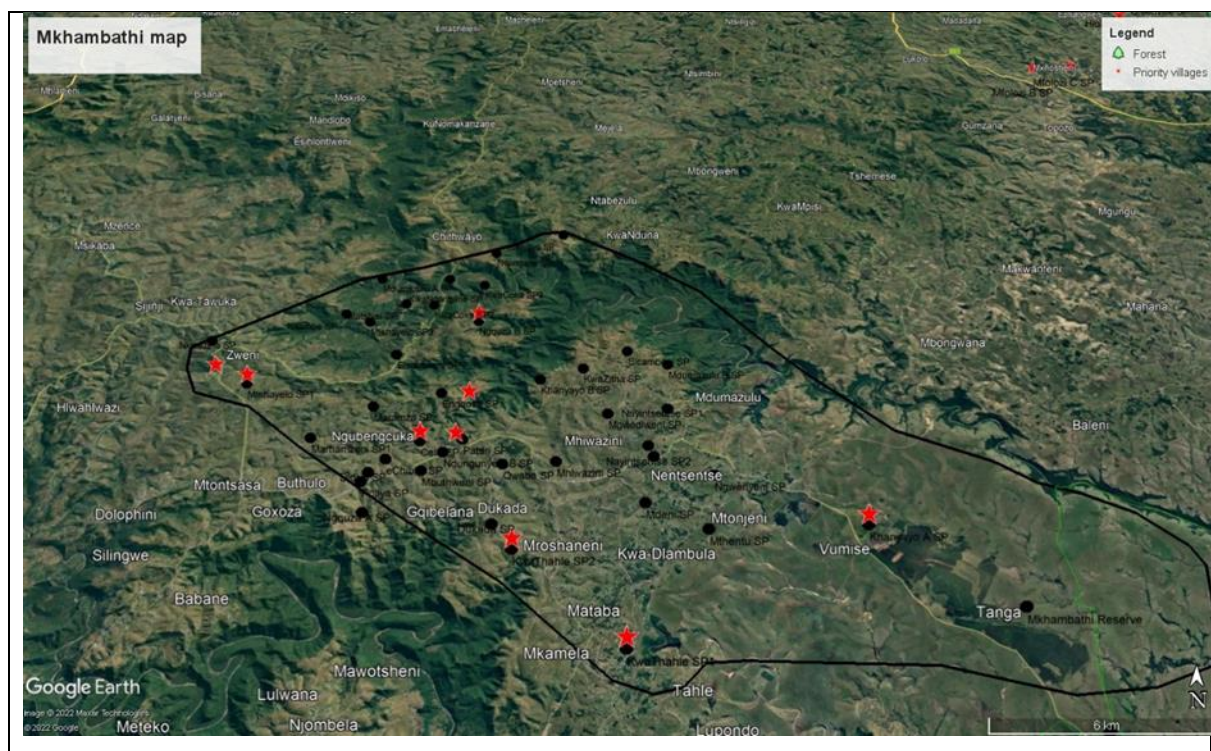


Figure 4.1: Map depicting Mkhambathi Location
Source: Google Earth (Accessed 15/09/2022)

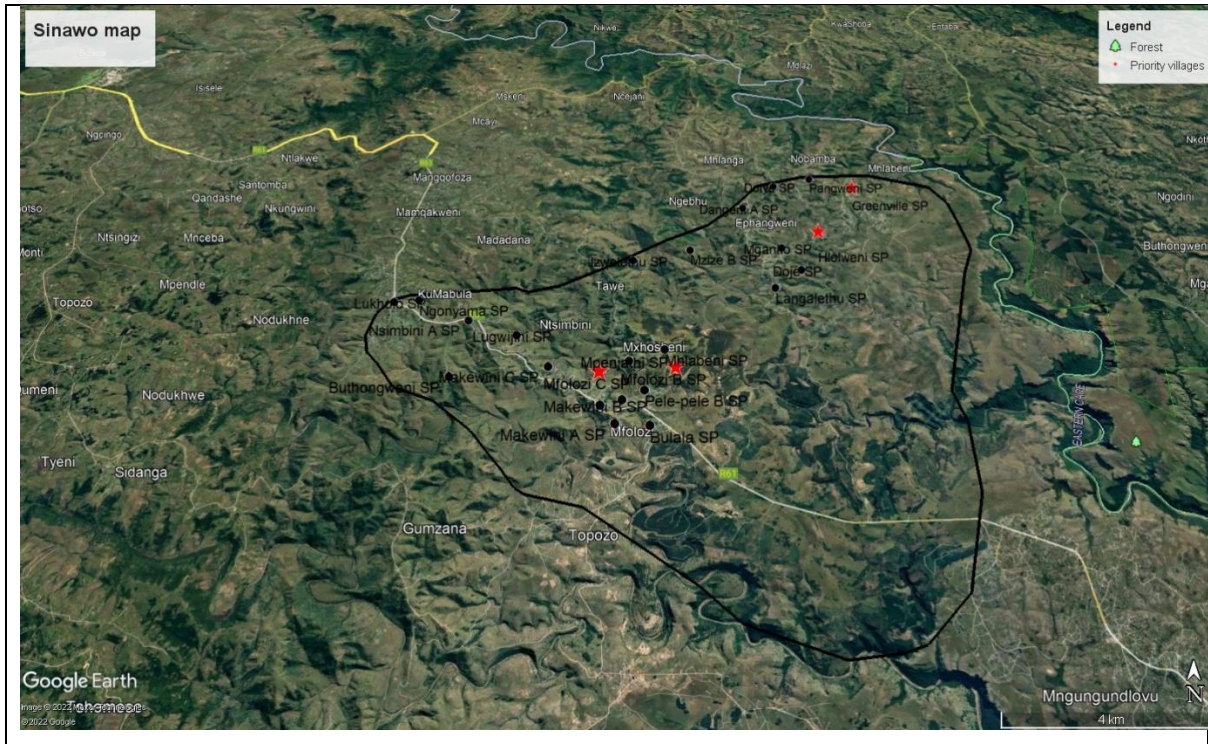


Figure 4.2: Map depicting Sinawo Location
 Source: Google Earth (Accessed 15/09/2022)

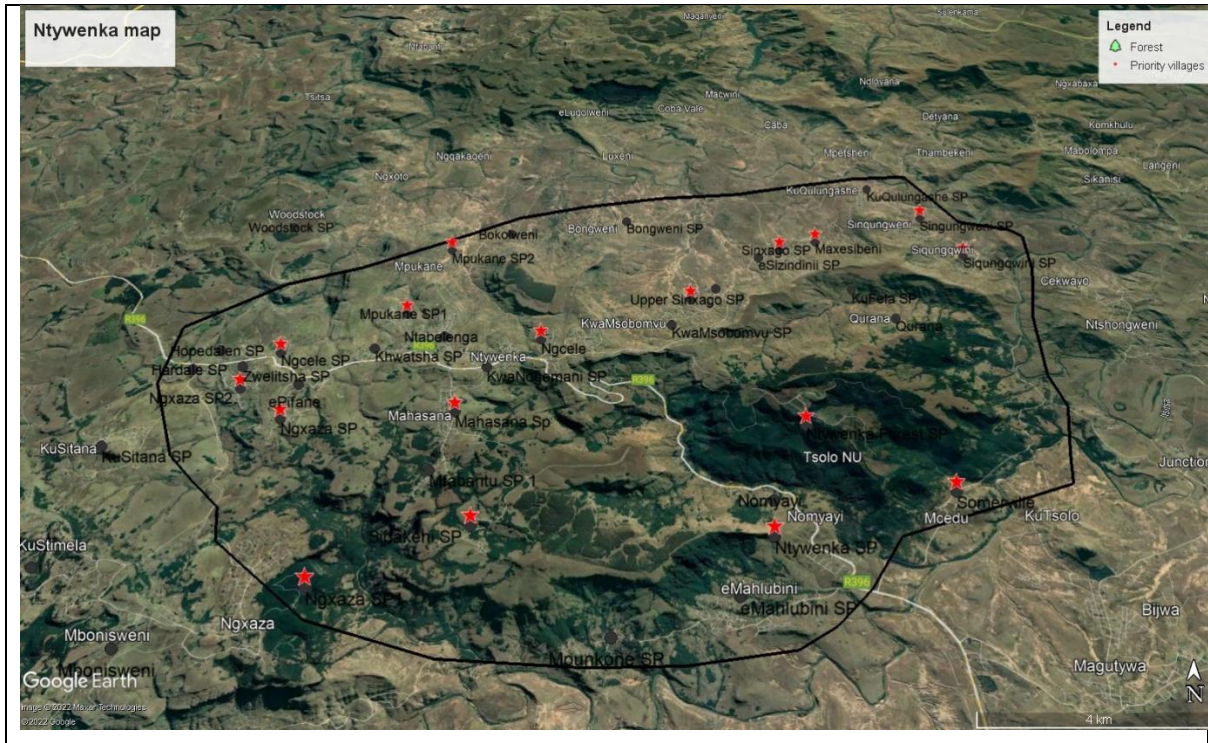


Figure 4.3: Map depicting Ntywenka Location
 Source: Google Earth (Accessed 15/09/2022)

representing the seven CPAs, the Mkhambathi Land Trust (MLT) was also established under the Trust Property Control Act 57 of 1988(Zeka, 2013).

The land claim includes the 6 000-hectare Mkhambathi Nature Reserve, and some 650ha of existing plantations established by the former Transkei government (SA Forestry Magazine (2012). According to SA Forestry Magazine (2012), currently there are 650ha of gum plantations and a potential for 580ha of new plantations. Therefore, there is a total of 1,230ha of land in Mkhambathi that could be used for afforestation.

4.2.2.2 Sinawo Project

Around 1992, the land in Sinawo was owned by North Pondoland Sugar Company. This company established about 1300ha of eucalyptus plantations, with about 3 500ha dedicated to the cultivation of sugar cane from a total of 10 000 ha of land that was available for development. According to the Department of Agriculture, Forestry and Fisheries (2012), it appears that the best sites were chosen for sugarcane at the time and the more marginal sites for afforestation. After withdrawal of North Pondoland Sugar, and once the negotiations for the land claim settlement were underway, the management activities of both the sugarcane and forest plantations were terminated. Apart from the large number of fires that had caused damage to the plantations, much uncontrolled selective harvesting was also taking place, with community members exploiting the timber for poles and firewood. This has resulted in a significant decline in the state of the plantations and the complete loss of the sugarcane stands.

Following a lengthy court case, the land claim was finally settled and the Communal Property Association (CPA) for Sinawo was established. The Sinawo Communal Property Association (SCPA) represents all the communities with primary land ownership rights and comprises a total of three villages, namely, Greenville, Mfolozi and Hlolweni (Table 4.2 and Figure 4.2). Towards the end of 2010 the Sinawo Communal Property Association and the Accelerated and Shared Growth Initiative for South Africa in the Eastern Cape (AsgiSA-EC) agreed that the plantations needed to

be sustainably managed by the community, and consideration of further afforestation should be undertaken. A business plan was developed. It was based on the rehabilitation of these existing plantations, as well as the establishment of new plantations in the adjacent areas in an attempt to consolidate the management units and to increase the economic scale of the business. Its objective was to establish and operate a consolidated block of forestry as a land use complementary to other agricultural enterprises envisaged for this land. For example, in 2010, some 100 ha of the better-quality trees were felled by a harvesting contractor (DAFF, 2012).

According to the SA Forestry Magazine (2011) and DAFF (2012), the current plantation is around 1 300ha of Eucalyptus (predominantly *E. grandis*) in extent. The climate, soils and terrain are favourable for afforestation in this area. Of the 10 000ha of land received through the Land Restitution Programme, it is anticipated that the land comprising a future sustainable forestry enterprise could be around 3 200ha. An added advantage is that it forms part of an integrated development of various projects on the land.

4.2.2.3 Ntywenka Project

The Ntywenka (Sixhotyeni) Project was identified by the then North East Cape Forests (Now PG Bison) as an area with the potential for new afforestation. PG Bison, through extension officers, began to sell the idea to the local communities, especially to the late Chief Mathandela of the area. The idea grew, especially after the establishment of the PG Bison Board Plant, which provided the market for the timber, once matured. Furthermore, the Ntywenka project is adjacent to a Department of Forestry, Fisheries and the Environment (DFFE) plantation which extends across approximately 1 000ha along the road between Tsolo and Maclear (Refer to Figure 4.3) and provides an opportunity for integration to increase the economies of scale. In addition, according to the late Chief Mathandela (2018, pers. comm.), the community is using its position as a neighbour to the DFFE enterprise, to consult with the forest manager as to how to manage forest plantations.

The challenge is that the DFFE forest plantations are surrounded by a large portion of wattle jungle, spreading around the moist southern slopes of a mountain. The top of the mountain, with a fair amount of pine, is showing evidence of maintenance work, including pruning, in progress. There is a pole-treating operation near the plantation and a sawmill that because there are no or very few sawlogs available, appears to have come more-or-less to a standstill (SA Forestry Magazine, 2012).

4.2.2.4 Mabandla Project

The Mabandla community, under the Mabandla Tribal Authority (MTA), established the Mabandla Communal Property Association (MCPA) in 1997 through the Communal Property Association Act 28 of 1996. The MCPA was established for the implementation of a community afforestation project in a joint venture between the Mabandla community and Mondi Forests (MCPA Business Plan, 1998, cited in Hlatshwako, 2000). The Mabandla Community Property Association later became Mabandla Community Trust (MCT).

The Mabandla or Umgano project was started up 25 years ago when two foresters, Peter Nixon and Themba Radebe, who were working for Mondi, were scouting for forestry land and the area on the slopes of the Umgano Mountain looked favourable. They arranged a meeting with the community leader and at the meeting, Chief (*Nkosi*) Sidoi, expressed keen interest by motivating the community members for their support and commitment (Farmer's Weekly Magazine, 2016; SA Forestry Magazine, 2011). After Mondi withdrew from the project, Peter and Themba went on with the project and established Rural Forest Management cc for this purpose. A total of 3 200 Mabandla households committed to the afforestation project (some 80% of the community) and signed over their shares of the grant (R11 million) to the newly established Mabandla Community Trust (MCT). The Trust successfully established 880ha of gum and 440ha of pine on the hills above the Mabandla village. According to Mr Jaca (December, 2020, pers. comm.) and SA Forestry Magazine (2011), the forestry project now owns 1 320 ha (Mabandla).

With the Mabandla community, the 'betterment' scheme resulted in the people being resettled in 13 wards, namely, Bovini, Khayeka, Delam'zi, Matshahlolo, Lucingweni, Mangeni, Tsawule, Ziqabeleni, Lukhasini, Goso, Mtintwa, Mncweba and Ndawana (Table 4.2 and Figure 4.4). Almost all the villages, as illustrated in Figure 4.4, are next to the main road.

The original project has expanded and now comprises a revolutionary conservation initiative, a cattle farming project, an eco-tourism project, and an HIV/Aids clinic (SA Forestry Magazine, 2011). For example, in 2015, Umgano Devco established the Umgano Livestock Association. The association, which is wholly owned and driven by the community, aims to generate a sustainable income for Mabandla's cattle owners, so that they are able to afford good breeding facilities, veterinary care, supplementary feeds, and fencing. *"The aim is to have as many of Mabandla's cattle owners as possible putting their animals into the Umgano Livestock Association"*, says Mr Dlamini, manager at Umgano Sawmill.

Furthermore, Umgano Timbers (Pty) Ltd became operational in 2016. It is a small-scale sawmill that produces sawn timber from the 450ha community-owned pine trees. It also produces treated timber from the community's eucalyptus plantations (Farmer's Weekly Magazine, 2016).

Table 4.2, below, provides a summary of the information on land tenure and afforestation in the study areas.

Table 4.2: Information on Land Tenure and Afforestation in the Study Areas

Information	Mkhambathi	Sinawo	Ntywenka	Mabandla
Land claim settlement	2002	2007	N/A	1995
Size of the land	17400ha	10000ha	980ha	7000ha
Total planted land	668,8ha	1300ha	214ha	1350ha
Number of household beneficiaries	326	800	N/A	3200
Species	<i>E. Dunnii</i>	<i>E. grandis</i> <i>E. dunnii</i> <i>GU clones</i>	<i>E. nitens</i>	Eucalyptus Pines
Partner type	Strategic Partner	Strategic Partner	Strategic Partner	Private Company
Strategic partners/ company	SAPPI	SAPPI	ECRDA PG-BISON	SAPPI PG-BISON RFM
Forest-based land reform model adopted	Out-grower Scheme	Out-grower Scheme	Out-grower Scheme	Out-grower Scheme
Registered entity	Community Trust	Community Property Ass.(CPA)	N/A	Community Trust
Number of jobs	127	320	127	120
Grant funding (R)	7.4 million		8.1million	11 million
Registered company	Mkhambathi	Sinawo	Sixhotyeni	Umgano Development Company (DEVCO)
Names of villages in the projects	Khanyayo, Mtshayelo, Rhamza, Kwa Cele, Thahle, Ngquza, and Vlei	Hlolweni, Mfolozi and Greenville (Etyeni)	Nkolosana, Kondlwaneni, Sixhotyeni, Ntywenka, Mqhokolo, Mpukanane, Somaville, Sigqunqweni, MaBheleni, Ngcele, Singxako	Bovini, Khayeka, Delamzi, Matshahlolo, Lucingweni, Mangeni, Tsawule, Ziqabeleni, Lukhasini, Bhuqwini, Goso, Mtintwa, Mncweba and Ndawana

Sources: Zeka (2013); SA Forestry Magazine (2011) and (2012)

4.3 RESEARCH STRATEGY AND DESIGN

A case study research method (Rule and John, 2011; Yin, 2009) was adopted for the study to explore the opportunities, challenges, and risks of the small-scale community forest in Mabandla (KwaZulu-Natal Province); Sinawo, Mkhambathi and Ntywenka (Eastern Cape). The projects were selected according to several criteria (not specific to the livelihood analysis) as follows:

- a representation of a rural small-scale communal forest project that is functioning relatively well;
- a choice of four communities for diversity, representivity and comparative purposes;
- the presence of land reform projects and out-grower schemes (restitution claims, redistribution projects) in the selected area;
- a functioning communal forest project with institutional structures (e.g., community property associations (CPAs) and community trusts)
- the presence of a stakeholder network of strategic partners, government representatives, representatives from community structures (e.g., CPAs and trusts)

Although the research was conducted as case studies in the selected small-scale communal forest projects, the idea was also to identify the current trends in the community livelihoods and to analyse possible impacts and changes in the households and communities at large. According to the theory of social representation, it is vital to investigate how people understand, explain, and articulate the complexity of stimuli and experiences emanating from the social and physical environments in which they are immersed (Halfacree, 1993).

A convergent mixed methods design was used to understand the opportunities, challenges, and risks associated with small-scale forests across the four communal projects mentioned above. The two techniques for gathering and analysing data, both qualitative and quantitative (Saunders et al., 2008), are discussed as follows:

Mayoux (2003:10) differentiated between the qualitative and quantitative components of data by postulating that *“qualitative methods are an essential complement to both quantitative and participatory methods”*. According to Saunders et al. (2008:151) quantitative research *“is predominantly used as a synonym for any data collection technique (e.g., too long a questionnaire) or data analysis procedure (e.g., graphs or statistics) that generates or uses numerical data”*. Quantitative research is also closely associated with the post-positivist paradigm. A quantitative design can include experimental research (true experiments, quasi experiments and applied behaviour analysis or single subject experiments), non-experimental research (casual-comparative research and correlation design), and lastly, longitudinal design, which is a collection of data over a longer period to examine the ideas and trends developed (Creswell and Creswell, 2018).

The second method of data collection is qualitative research. This approach originated from research done in various fields of the humanities in the late 20th century and continuing into the 21st century. According to Mayoux (2003), qualitative methods are necessary to increase the understanding of complex and sensitive issues, which are in most instances dealt with in social science studies or when dealing with issues of the social world. Furthermore, qualitative research is conducive to studying societal issues as it allows for the researcher to gain insight into people's attitudes, behaviour, value systems, concerns, motivations, aspirations, culture, and their perceptions about societal issues. Nicholls (2011) agrees with this point, postulating that qualitative research methods serve to provide a broader picture of a situation and can inform in an accessible way. They do this by allowing for a *“detailed investigation of issues, such as answering questions of meaning, who is affected (by the issue), why, [and] what factors are involved, [and] do individuals react or respond differently to each other”*.

There are multiple designs that can be used for qualitative research. For this study, five popular designs are discussed. Firstly, researchers can use the narrative research design, which includes studies on the lives of individuals translated and restructured by the researcher into a narrative chronology. Secondly, phenomenological research is a design with a strong philosophical underpinning that usually involves interviews. Thirdly, the grounded theory design involves the researcher's formulation of a general

theory, whereby he/she collects information over different stages and refines the data thus collected by evaluating the views of the participants in terms of their actions and interactions. The fourth design of interaction is the ethnographic design that originated from anthropology and sociology. Researchers study the shared behaviours, language, and actions of a specific cultural group in their natural setting, over an estimated period, usually through observation or by conducting interviews. The last design of inquiry, found in many fields, particularly in evaluations, is the qualitative case study. It usually comprises an in-depth qualitative investigation of a specific case, programme, activity, process, individuals, or events, and is bound by a time.

There is also a mixed methods approach, which is a combination of both qualitative and quantitative methods. Creswell and Creswell (2018); Creswell (2003, 2005), define the mixed methods approach as an inquiry which involves collecting both qualitative and quantitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. This is a combination assumed to provide a more complete understanding of a research problem. To refresh, qualitative research is effective in obtaining culturally specific information about the values, opinions, behaviours, and social contexts of populations. Its flexible, less formal, and more elaborative nature gives the researcher the opportunity to respond immediately to what participants say by tailoring subsequent questions to the information that the participant has provided (Mack et al., 2005). Quantitative methods such as surveys and questionnaires, on the other hand, are inflexible. This inflexibility has the advantage of allowing for meaningful comparisons of responses across participants and study sites. The quantitative method requires a thorough understanding of the important questions to ask, the best way to ask them, and the range of possible responses (Mack et al., 2005).

The mixed design can further be divided into four methods, convergent mixed method (both forms of data collected and merged); exploratory sequential mixed method (the researcher begins with qualitative data and explains by collecting quantitative data); explanatory sequential mixed method (the researcher first collects quantitative data and then finds qualitative data to explain); and complex design, with an embedded core design (Creswell and Creswell, 2018).

The questions that arose in this study could be best answered through the convergent mixed method (Glogowska, 2011). The convergent mixed method research design in this study also included the triangulation of data collection and analytical methods. One of the important reasons why the researcher opted for triangulation in this study was that information obtained from primary and secondary data has shortcomings in that it is usually constructed with a specific agenda. Therefore, to address the shortcomings of the primary and secondary data, a triangulation was used (Ghrayeb et al., 2011; Stake, 2010). Secondly, the choice of triangulation in this study was based on Neuman's (2000) arguments that it is better to look at something from several angles (i.e., use various methods of data collection) than to look at it in only one way or via only one technique. The use of various methods of data collection enables one to attend to the limitations associated with each technique.

As indicated above, various theoretical dispositions are used to provide a better understanding of the impacts of small-scale communal forests; decision-making in these out-grower schemes and the sustaining constructive relationships between communities and their strategic partners. Therefore, this study used wide-ranging data collection techniques to provide validity (acceptable outcomes and processes of data collection) and reliability (whether information has been gathered through academically accepted norms) for the data gathered. Validity and reliability of data are essential both in answering the questions that have been asked and in satisfying the objectives of this study (Neuman, 2000).

4.4 PROCEDURES AND PARTICIPATION

The study is rooted in the pursuit of an understanding of participatory development, which is also referred to as people-centred development. Therefore, the concept, 'participation', is a concept that is critical to this study. Many researchers point out that different people attach very different meanings to the concept of 'participation'. For example, Armonia and Campilan (1997) point out that the interpretation of 'participation' varies widely among the case studies. Rudqvist and Woodford-Berger (1996) argue that participation is often defined very generally or taken to mean a range of stakeholder roles. Thus, there is a recognised need to clarify and refine the concept

of 'participation' specifically with respect to the roles of different stakeholders within and outside communities.

Muller-Glodde (1991) argue that participation is the involvement and activities of people in development programmes in which people are given the opportunity to explore their inputs in planning, decision-making and in project implementation. Chambers (1997) describes the participatory approach as the 'new approach', which starts with people's knowledge as the basis for planning and change. Participatory methodologies assume that local people, regardless of age (except minors, who are less than 18 years old), gender, social and economic status, or educational background, are knowledgeable about their development, situations, opportunities, and constraints, and they have the capacity to assess, plan, implement, monitor, and adapt "development projects" in meaningful ways. Based on the above explanations, the concept of participatory development was used as the process critical to uncovering the challenges, opportunities, and risks faced by the small-scale forestry growers in the selected projects.

4.4.1 Preliminary Visits

The fieldwork started with preliminary visits to the sites of the four small-scale communal forestry projects (*i.e.*, Mabandla in KwaZulu- Natal Province; Ntywenka, Sinawo and Mkhambathi, which are all in the Eastern Cape Province). The main aim of the preliminary visits was to explain the purpose of the study and to ask for permission from the project managers and traditional leaders or chiefs of these projects (see Appendix A). It was to assure the traditional leaders and project managers that whoever would be participating in the study would be guaranteed confidentiality in cases where it would be required. The consent and permission letters requesting that the research study be conducted were presented to the community leaders; the project manager from SAPPI (for both Sinawo and Mkhambathi projects); and the project manager from the Department of Agriculture, Forestry and Fisheries (DAFF) (for Ntywenka); and the chief manager and project manager of Umgano Project (for the Mabandla project). In all four projects, the consent and permission letters to conduct the study were signed and permission granted (see Appendix A).

The household heads participating in the surveys were identified numerically after preliminary visits to the study areas.

4.4.2 Sampling Techniques

The population for a research study is that category (usually people) about whom deductions are made (Rubin and Babbie, 2008b). However, owing to costs and time, one is never practically able to research the entire targeted population, and neither is it possible to make sense of every possible observation made by the participants. As a result, information would more often be collected in terms of a sample which is chosen to represent the population. Furthermore, the choice of the population to be sampled is greatly affected by an accessible database (Rubin and Babbie, 2008b). According to Ary et al. (2018), a sample is a subgroup of a population selected to participate in the research.

There are two types of sampling, namely, representative sampling (probability) and judgmental sampling (non-probability). With representative sampling, the probability of each sample is known, and as such, it would be possible to answer the research questions or test the hypotheses by statistically analysing the sample probabilities, which can be inferred from the sample population. However, with non-probability sampling, the results of the sample cannot be discussed statistically. It would, however, be possible to generalise this type of sampling to a non-statistical population (Saunders et al., 2008).

- **Simple Random Sampling**

For the statistical analysis of a mixed data collection, this research used probability sampling. Based on Saunders et al. (2008), there are four frame types for representative probability sampling which are: simple random, systematic, stratified random, and cluster (Figure 4.5). To select the sample size from the population, based on the sample size table of Saunders et al. (2008), the population for this study was selected to be between 1 000 and 6 000. To improve on the representative sample, the higher number was selected for the sample size. This was 400, with a 95% confidence level.

For this study, a simple random sampling method was used for the selection of the respondents. The target population (sampling frame) for the study consisted of households, the land reform beneficiaries of the small-scale communal forest projects, the community project managers of these projects, the strategic partner managers, and government and forestry experts.

A sampling frame, which had a total of 4 326 household beneficiary units for the project study, as indicated in Table 4.2, was obtained from all four community projects. The sample projects had an unequal number of household beneficiary units (Table 4.2). To address the uneven distribution of household numbers from project to project, the total number chosen as the sampling scale (T) was simply divided by the total number of projects (N) to obtain the same number of sampled household units from each project. T was 400 households selected at a 99% confidence level and a $\pm 10\%$ deviation. A figure $S(100)$ was obtained from the calculation.

A qualitative approach was used to determine the sample size using the formula:

$$S = T/N$$

$$S = 400/4 = 100$$

For example, sampled households of 100 per project were selected. Therefore, a total of 400 households were drawn from the four sample projects. An approach on randomly selecting households from which to carry out the survey was adopted from Shackleton and Clarke (2007) and Howard et al. (2005). For example, for the purpose of the study, one household was selected. One person between the age of 18 to 60 and more years was selected from each household, with their gender, marital status and educational level recorded (Table 4.3). The target was the head of the household, but in cases where there was no head, a child of 18 years and above would be interviewed.

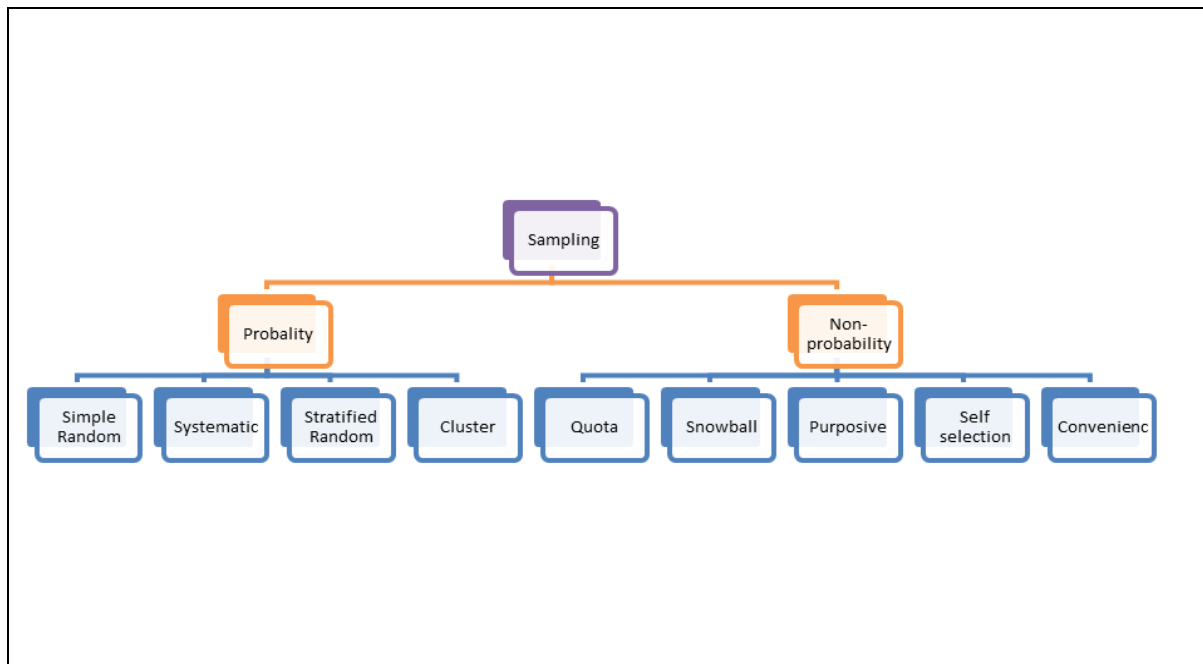


Figure 4.5: Sampling techniques
 Source : Saunders *et al.* (2008:213)

- **Snowball non-probability sampling**

The key informants were identified through ‘snowball sampling’. Snowball sampling is carried out when an informant identifies a list of individuals who are in most cases directly involved in community development and, therefore, able to provide insights into aspects about working in these community projects (Bilton *et al*, 1996; Nichols, 1991). Snowball sampling is an approach used to gather additional participants from individuals who have already participated in the study (Glesne, 2016). For instance, during the process of interviewing, a particular respondent would indicate that, “*Ukho omunye umntu osebenza khona ehlathini endimazinyo, ongakuceda ngolwazi ikakhulu ngemvelaphi yelihlathi*” or “*ukhona umntu odlangokubalisa ngelihlathi*”, meaning that “*there is someone who is working in this plantation who has the knowledge about the history of the establishment of this plantation*”, or “*there is someone who usually talks about the history of this plantation*”. Then the researcher would get the details of the person being referred to, locate where the person resides; and arrange an interview with that person (Zeka, 2013). The key informants included the SAPPI extension programme manager or officer, the chief of the project area, community members of either the Community Property Association (CPA) or the trust,

community forestry managers and experts, elderly community members and youth members.

Table 4.3: Biographical information of the sampled households in the study communities

Category	Number of households interviewed per project				
	Mkhambathi N=100	Sinawo N=100	Ntywenka N=100	Mabandla N=100	Total
Age					
18-35	31	16	1	9	57
36-59	19	30	53	34	136
60 and above	50	54	46	57	207
Total	100	100	100	100	400
Gender					
Male	53	47	69	64	233
Female	47	53	31	36	167
Total	100	100	100	100	400
Marital Status					
Married	63	60	81	86	290
Widow/Widower	19	27	17	7	70
Single	18	13	2	7	40
Total	100	100	100	100	400
Education Level					
No Education	30	8	16	1	55
Primary Education	31	42	44	36	153
Secondary Education	34	44	34	52	164
Tertiary Education	5	6	6	11	28
Total	100	100	100	100	400

4.4.3 Research Instruments

According to Bhattacharjee (2012), a survey is a research method involving the use of standardised questionnaires or interviews to collect data about people and their preferences, thoughts, and behaviours in a systematic manner. Bhattacharjee (2012) notes that in survey research, all respondents are given questions that are worded and demonstrated in the same order and the response alternatives (scales) are the same. A structured or standardised, questionnaire also provides an inexpensive and

time-efficient method to gather data from a potentially large number of respondents (Zohrabi, 2013).

The researcher used a variety of data collection methods to achieve the objectives of the study and find responses to the research questions raised: questionnaires; in-depth interviews; focus group discussions; reports/policy documents and observations. According to Creswell and Creswell (2018) and Creswell (2014), for a qualitative interview, researchers conduct face-to-face interviews with participants, telephone interviews, or engage in focus group interviews with six to eight interviewees in each group.

Figure 4.6 below is a summary of what research tools were used and how the data were collected in this research.

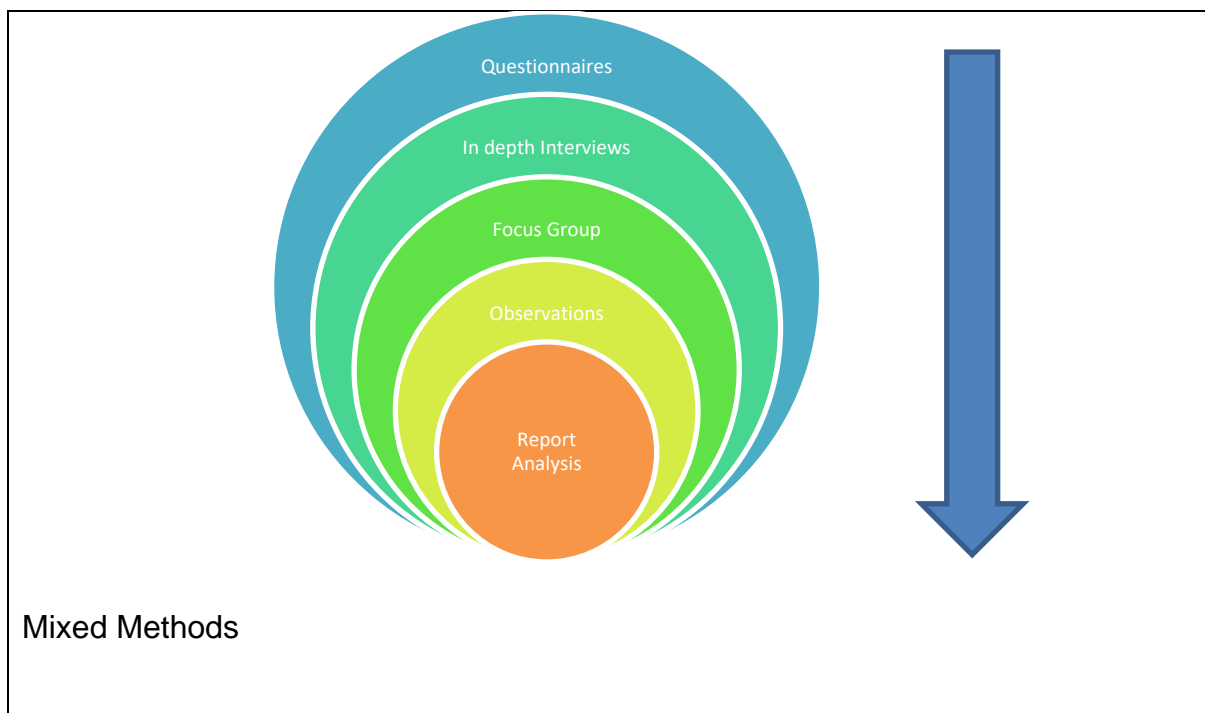


Figure 4.6: The mixed method approach to the study
Source: Author's own compilation

4.4.3.1 Structured Questionnaires

Research is not only a set of skills, but also a way of thinking. In the framework of thinking, the researcher usually questions what is being witnessed, tries to search, understand, and clarify the observations, and makes assumptions and interpretations to improve on his/her knowledge base and ability to conduct research (Kumar, 2014). In this research, four different types of questionnaires were prepared for the community members or households; community leaders; strategic partners (*i.e.*, SAPPI and government officials from the Department of Environment, Forestry and Fisheries), and forestry experts; as well as for the focus group discussions (Appendices B, C, D and E). Questionnaires were used as a quantitative and qualitative research tool. Two questionnaires were used, namely a household questionnaire and a questionnaire for community leaders.

Household Questionnaire

The household questionnaire presented to the respondents requested basic information from the households or the beneficiaries; their knowledge about reality and their participation in the project, their educational level, income sources; forestry and agricultural management experience; the benefits and challenges for their villages; and the types and causes of conflicts amongst the stakeholders in the projects (if any) (Annexure B). The questionnaire was seven pages long with 38 individual questions composed of both open-ended (qualitative) and closed-ended questions (quantitative).

According to Harris and Brown (2010), quantitative data is obtained through closed-ended questions and qualitative data through open-ended questions. Rubin and Babbie (2008a) describe closed-ended questions as survey questions in which the respondent is asked to select an answer from among a list provided by the researcher. The open-ended questions, permitting an unlimited number of possible answers, give people the option to answer questions without restrictions. On the other hand, the closed-ended questions, an easier and quicker form of asking questions, restrict the respondent in how to answer them. The sequence of questions is also considered in closed-

ended questions to make sure that there is no confusion and discomfort. The detailed results and discussion on the household questionnaire are presented in Chapter 5 below.

Questionnaire for Community Leaders, Project Managers and Strategic Partners

The approach for the key informants in the study area also involved a structured questionnaire (Annexure C and D). Even in these interviews with key informants, structured questionnaires comprising both closed-ended and open-ended questions (Neuman, 1997; Bless and Higson-Smith, 1995; Slocum et al., 1995) were used. The issues and perceptions relating to forest plantations were established by basing them on the community leaders and project managers' questionnaire which investigated: i) general information on community involvement in communal plantations; ii) initiatives and achievements to date; iii) provision of markets; and iv) constraining factors (e.g., fire, pests and diseases, alien invasive plants, etc.). The community leaders and project managers' questionnaire were nine pages long with 60 individual questions (Annexure C) included. Again, the detailed analysis on this aspect is presented in Chapter 5.

The questionnaire for strategic partners was divided into five sections (Annexure D), each assessing responses on the feasibility of initiating, implementing, and sustaining the practice of small-scale communal forestry in rural areas. The questions for strategic partners were as follows: i) general information about the history of the project and the role played by the strategic partner; ii) the opportunities, risks and challenges or constraints that are faced by the small-scale operators that wish to establish themselves in large timber companies; iii) the technical difficulties faced by small-scale operators – from cultivation regimes through to efficient methods for processing the forest products and market development; iv) skills development and capacity building; and v) those factors that continue to hold back the growth of small-scale forest businesses.

The factors affecting the outcome of each item on the questionnaire were recorded and augmented with information collected through personal observations made with some of the key informants during the site visits to each plantation after the household interviews. Due to the hectic schedule of the strategic partner managers, there were cases where the interviews were not completed. In such cases, telephone interviews using the questionnaire as the basis for the interview, were conducted as a follow-up to the incomplete face-face interviews.

4.4.3.2 *In-depth Interviews*

The in-depth interviews, in the form of face-to-face interviews, were conducted as the second phase in data collection. The in-depth interview was used to gather data for the above-mentioned objectives. The primary approach at the household level was based on a face-to-face interview and complemented by focus group discussions with the sampled women and the youth. The researcher also used this opportunity to ask more questions that had arisen during the interviews. The in-depth interviews were conducted with community members or households, leaders, or stakeholders (e.g., the DFFE project managers and the strategic partner managers), but also with other forestry experts or specialists. Community or household interviews were conducted in the local languages, which are IsiXhosa in Eastern Cape and IsiZulu in KwaZulu-Natal. Each survey took about 60 minutes per person on average.

Key informants and important stakeholders were identified for the investigation. The purpose of having key informant interviews in this study was to collect data through the identification of members of the community or leaders who were known to be knowledgeable about a topic, and to ask them questions about their experiences in terms of the topic. Key informants should be people with an above-average knowledge of the issues that are of concern (The Access Project, 1999). Community leaders and project managers were also interviewed to enquire how people-centred development is facilitated and what the barriers are in achieving this goal. These community leaders, with their indigenous knowledge and understanding, were able to provide insights into the nature of the problems and give recommendations for solutions (Centre for Health

Policy Research, 2000). Community project managers (i.e., Forestry Managers) were also interviewed to investigate their experiences in managing and controlling projects.

The in-depth interviews were also conducted with forestry experts or specialists involved either in the selected projects or in small-scale communal forestry projects in South Africa (USDJ, 2006). Also, experts or specialists from government or from companies dealing with small-scale forest growers, such as NCT, Khulanathi, etc., were considered for this study. These experts or specialists were chosen on the basis of their seniority and their knowledge of the forestry industry. The interviews conducted with forestry experts, especially those working with small-scale forest growers, were more to identify the key factors that affect the growth of timber in South Africa. Therefore, interviews were conducted more to come to an understanding of the decline in the rate and area of afforestation in South Africa. Secondly, it was necessary for the experts to list the factors that they perceived to be key to the decline in the rate of afforestation in the country. Once those factors had been listed, the above-mentioned participants were asked to rank them in an order of priority. The results were compared amongst the four selected projects in order to determine whether the order of priority was the same for all of the projects. The other main issue was to find out whether, according to the participants, the issues of transformation and privatisation do in fact work, or not.

4.4.3.3 *Focus Group Interviews*

For the focus groups, an approach such as that conducted by van Tol et al. (2014) was followed: focus groups were held among i) purposively constituted, mixed groups of elderly residents (males and females), ii) a group composed only of women, and iii) a youth group (males and females). Splitting the focus groups in this manner, the concerns around power dynamics, gender roles, and perceptions about the challenges, opportunities, and risks associated with forest plantations in rural areas, could be addressed. Holstein and Gubrium (1995) and Chambers (1983) observed that information obtained from focus group informants tends to centre on people's experience and, as such, information which would not normally be obtained through quantitative procedures, could, therefore, be accessed through group discussions. In

this study, the combination of the in-depth interviews and focus group discussions unpacked perceptions of how forest plantations impact on community livelihoods, with the emphasis being on community beliefs about forest plantations in their villages (Annexure E).

The information obtained from the formal interviews and from the focus group discussions was used to conceptualise data obtained through other means. The information from the focus group discussions provided insights into some of the social activities that take place in the community, and which needed to be considered in the data analysis.

No participants were excluded from these focus group discussions. Whoever wanted to be involved in the discussions was accepted, whether unemployed or employed, either in the forest plantations or elsewhere. The only condition was that the participants had to be living for the duration of their lifetime in the area where there was a project. The similarity in the requirements for participation, as mentioned above, was a prerequisite to encourage a sense of belonging amongst the participants, which in turn enabled them to enjoy freedom of expression during the discussions (Nichols, 1991).

Another important consideration in the focus group discussions was the number of respondents to be invited for discussion (Creswell, 2014). Creswell (2014) states that a focus group should consist of between six and ten participants. However, in this study the number of participants per focus group ranged from five to thirteen participants, with a median of seven participants (Table 4.4).

4.4.3.4 *Personal Observations*

Personal observations also featured as the fourth data source for the study. They were to especially check those areas identified as presenting opportunities for the expansion of the forest plantation. Personal observations also assist in the acquisition of more knowledge about the progress of a project and about the factors that constrain projects. For example, in this study, the purpose was to find confirmation for the

responses from household interviews or focus group discussions. Observation thus proved to be a tool to use in addition to the data collected from households and focus group discussions through site visits⁹. The third purpose of personal observations was to assess whether the answers or concerns provided during the interviews and focus group discussions were in line with what was happening on the ground. It was not considered to be a transect walk, but rather a form of ‘ground truthing’ as to what was said by the households on the possibility of extending the forest plantations and of indicating areas of damage to these resources, either as a result of fire, drought, or other activities.

Table 4.4: The total number of participants per group involved in the study area

Projects	Mixed group	Women	Youth	Total
Mkhambathi	7	5	13	25
Sinawo	5	7	8	20
Ntywenka	8	6	7	21
Mabandla	10	9	7	26
Total	30	27	35	92

Ground truthing is a procedure that was also carried out to verify whether the orthorphotographs providing information on land use activities, river systems and settlement areas; as well as on the landmarks featured the 1: 50 000 topocadastral maps, were a true reflection of what is in fact on the ground. Ground truthing further assists in verifying how far these potential areas for afforestation or extended plantations are from the water bodies or wetlands and river systems. Since there have been several gains that have been made since 1994 in the regulatory system, the National Forest Act (Act 84 of 1998) has set out to promote sustainable use, cooperative governance, and stakeholder participation (DWAF, 1998). Despite the potential for afforestation or the expansion of the forest plantation, as identified by the community in the area, the system might remain restrictive in terms of excessive bureaucracy and overly constraining regulations in some areas.

⁹ Site visits were carried out to confirm the responses from focus group discussions and interviews. In addition, they were meant to assess the possibility of the expansion of the plantations in each project or to pinpoint potential areas for afforestation.

4.4.3.5 Reports and Document Analysis

The sections below provide an overview of the primary and secondary sources used in the study. Documentary evidence is information that is accessible and valuable as it provides the researcher with the necessary background information to understand the context and circumstances within which the study takes place.

Primary Sources

The researcher obtained permission to work with the managers, growers/households, and contractors of the plantations selected for this study. These participants were asked to provide information that could assist the researcher in his knowledge of the history of the area (e.g., the projects). Also, primary sources such as the minutes of meetings; training manuals; business plans; environmental impact assessments (EIAs); official reports, etc., were used as part of this study. Being the primary source of information to geographers, the literature review of documentary evidence was the primary source of information for this study. This information is reflected in the results that are discussed in more detail in Chapter 5.

According to Bailey (1987), document study has the advantage that the information is readily accessible, especially in historical cases, where the subject matter for the area is no longer available. The disadvantages of documentary evidence are when the content has not been written for geographical research purposes and can be biased. This can be overcome by carefully studying the documents and being critical of the information they contain (Bailey, 1987). Research studies and other sources of information, including graduate studies (Masters and Ph.D. theses), consultancy reports, government, and industry reports, were used in this study.

Secondary Sources

According to Yin (2011), 'another form of primary evidence' can be highly revealing and valuable. Furthermore, doing some form of research on documents can also contribute to an uninterrupted interview, giving the

interviewer an advantage of knowing the related information beforehand. This study also made extensive use of secondary information, such as that which could be gleaned from reports, research studies, books, journals, and manuscripts. The main purpose was to obtain a broader view of small-scale forestry growers, their challenges, opportunities, and the risks of this sector. This information assisted the researcher in coming up with the recommendations for the future development of the forestry industry in South Africa.

4.5 DATA ANALYSIS

Wilcox (1982) noted that the analysis of qualitative data depends on the nature of the data and the conceptual framework employed from the theory. The data, collected in terms of both qualitative and quantitative measures, as indicated above, were processed, and analysed using descriptive statistics (e.g., tables, percentages, frequencies, and graphs). Microsoft Excel was used for drawing up tables and the graphic analysis of the data. The statistical package called Statistical Package for Social Science (SPSS) version 20 was used. The SPSS computer programme was used to compute the data. The quantitative data were entered and encoded into the SPSS spreadsheet for analysis (Creswell, 2013). Descriptive analyses were conducted to produce general statistics in respect of the demographics of the households involved in these community forestry projects, and in respect of the benefits, challenges, and risks that they were experiencing. In this case, the multinomial regression model was used to determine factors influencing the accrual of benefits. The inferential statistical analysis (Chi-square test of independence) was used to test the relationship between the responses of the respondents as to the challenges and risks that they were experiencing in the community forestry projects and the various land-use activities carried out by the members of the community. Again, the multinomial regression model was also used in this study to determine the various land-use activities carried out by the members of the community.

The statistical analysis phase in this research study was performed using non-parametric statistical tests, including the Friedman and Kruskal-Wallis H tests (Pikaar,

2013; Fagerland and Sandvik, 2009). Using the mean ranking test devised by Friedman (Pikaar, 2013), the study analyzed the issue of land-use competition where households were required to rank the significance of forestry production and the selling of forestry products, as well as the production and selling of various cash crops, to determine the most likely options for future land-use in their area. The ranking ranged from 1-10, with the first rank position indicating the best option, and the 10th position the worst. Furthermore, the Kruskal-Wallis H test, a non-parametric independent analysis (Fagerland and Sandvik, 2009), was used to determine the ownership of livestock across the four projects, to decide whether there were any significant differences in the distribution of the livestock in the four project areas. The null hypothesis (H_0) for this study was that the ownership of livestock across all four projects is the same. The Kruskal-Wallis H test was used to test the null hypothesis, the main objective being to determine the number of households owning livestock across the four projects. In addition, data collected through personal observations and discoveries were also analysed by examining maps and photographs.

Content analysis, also known as thematic analysis, was used to process the qualitative data. In this regard, the approach used by the researcher, assisted by his enumerators, was to organise and analyse the data by transcribing the audio recordings of the focus group discussions into a notebook. This information was then subjected to successive readings, thus allowing for interpretive perspectives to be drawn from it, and for the dominant patterns thus presented to be identified (Makhubele et al., 2022; Du Plessis 2017). The following thematic areas relevant to the community projects were identified: governance; sustainability and risk; the accrual of benefits, conflicts; land reform; participation, and empowerment. This analytical approach was also used to process the data collected from the key informants.

The methodology framework indicated above was also informed by reviewing the vast body of literature on the small-scale grower in the forestry sector. The authors who influenced the formulation of this methodology include, amongst others, Sepul and Lehtonen (2013) and Howard et al. (2005), all of whom have done some work on small-scale forestry plantations globally – and locally, in areas such as Cata in the Eastern Cape Province.

According to Eneyew and Bekele (2012), livelihood strategies are at the centre of development and very important in determining the abilities of rural households. The livelihoods framework provides a comprehensive and complex approach to understanding how people make a living (Eneyew and Bekele, 2012; Kanji et al., 2005). In this research study, it was in fact The Sustainable Livelihood Framework that assisted the researcher in analysing the extent to which commercial companies (such as SAPPI/MONDI etc.) and government contribute to small-scale communal forestry. Further analysis was conducted in this study as to why, despite the assistance from commercial companies or government, small-scale projects by forestry growers have failed.

The information from all four selected community projects has been documented and analysed. Similarities and differences amongst the four forestry out-grower schemes and government-managed projects have been highlighted. The regression analysis was used to analysis the challenges, risks, and opportunities for small-scale forestry growers and to emphasise the impact that this sector can make on the timber shortage that is looming in the country. The role that the forestry sector is playing in the lives of the community members was also analysed. Aspects such as the impact of out-grower schemes on communities, the impact of cooperatives, and the effect of an exit strategy/policy devised for commercial forestry on communities or small-scale forestry projects, were highlighted. Also, the Geographical Information System (GIS) was used as a geographical tool for map development in this thesis.

4.6 LIMITATIONS OF THE RESEARCH

Although, the study employed mixed (qualitative and quantitative) research methods, it was more skewed towards qualitative research methods. One of the characteristics of qualitative research methods is that the qualitative results cannot be generalised to apply to the rest of the population (Welman et al., 2005). Owing to limited resources and time, the study was limited to four small-scale communal forest projects in the Eastern Cape Province and KwaZulu-Natal. The results presented in this thesis solely represent the sampled population of four small-scale communal forest projects and their beneficiaries in the provinces mentioned above. Only those inhabitants who made themselves available and who accepted the invitation to be interviewed and to

participate in the focus group discussions were included. Furthermore, the sample of participants involved in the management of the selected forest projects was also limited to community forestry managers, strategic partner managers and four forest experts, who had knowledge about the projects and forestry management in general.

Owing to COVID-19 pandemic restrictions, which prohibited travelling, the researcher could not go to the field according to the schedule that was initially developed. As such, he had to re-draft another schedule to visit the selected projects. Another complication was that some of the participants were not willing to divulge all the information at their disposal for fear of victimisation or assumed legal consequences.

Lastly, finding time in the busy schedule of strategic partner managers and forestry experts was a huge challenge. Often appointments would be cancelled and/ or postponed for another date. This would mean that the researcher had travelled all the way from Pretoria to the Eastern Cape or KwaZulu-Natal, but to no avail. Thus, on such occasions, no results could be produced towards the objectives of the study. It is for this reason that in an effort to finalise the responses to the face-face interviews, the researcher decided to conduct some of the interviews with strategic partner managers by telephone. The main limitation with the telephone interviews was that body language, facial expressions, and other non-verbal signals, so necessary in communication, could not be observed. In such cases, the researcher had then to rely only on the spoken word for a response.

4.7 CHAPTER SUMMARY

This chapter provided a detailed account of the geographical location and historical background of afforestation in each study area. Furthermore, it served to outline the research methodology applied in the study, making provision for the research methods used, highlighting and explaining the research strategy, which was adapted as a case study, and using the phenomenological approach. The methods and tools used for data collection, as well as the data analysis process, were also explained.

For ease of access to the techniques which were used in this study, the following table presents an overview of the particular options chosen for this study (Table 4.5).

The next chapter, Chapter 5, includes all the findings from the research that were gathered through the interviews, questionnaires, focus group discussions and direct observations in respect of the four small-scale communal forest projects.

Table 4.5: Overview of research options used in this study

Research approach	Deductive			Inductive				
Research purpose	Exploratory		Explanatory	Descriptive				
Research strategy	Experiment	Survey	Phenomenological	Action research	Grounded Theory	Case study	Ethnography	Archival research
Data collecting Techniques	Qualitative		Quantitative		Mixed methods			
Data collection type	Questionnaire		Interview	Focus Group			Observation	
Questionnaire types	Internet-mediated questionnaires		Postal questionnaire	Delivery and collection of questionnaires		Telephone questionnaire	Structured Interview	
Types of sampling	Representative sampling			Judgmental sampling				
Sampling technique	Simple random		Stratified random			Cluster	Systematic	
Design of questionnaire	Adapting		Adopting			Developing new		
Types of questions	Closed- ended questions		10-point Likert scale – Closed-ended questions			Open-ended questions		
Validity and Reliability	Group of experts		Cronbach alpha				Factor Analysis	

CHAPTER FIVE: RESULTS AND DATA ANALYSIS

5.1 INTRODUCTION

This chapter presents the results and findings emanating from the analysis of the data pertaining to this study. It is divided into themes which emerged from the data that were collected and analysed. Thus, it includes such themes as opportunities/benefits, challenges, and risks perceived by households, community forestry managers, and strategic partner managers across all projects; land reform and forest-based land use; community participation and empowerment, both including women and youth, in the selected projects; governance; and sustainability and risks. The respective findings on each of the thematic topics, as mentioned above, are followed by analytical discussions on the same topics.

The **first section** (5.2. Benefits/opportunities and challenges in the study area) reports on the key benefits, opportunities, and challenges experienced and perceived by the stakeholders. The multinomial regression model was used to determine the benefits, challenges and risks experienced by the participants in the community forestry projects, as well as the various land-use activities carried out by the members of the community.

The **second section** (5.4) explores the issues of land reform and forest-based land use, the latter including a comparison between forestry and other land-use activities (e.g., silviculture, harvesting, beekeeping, mushroom cultivation, agroforestry, and timber processing/sales) and their impact on poverty alleviation. This analysis is then followed by an exercise to determine the influence of livestock ownership on households practising agroforestry in the study areas.

The **third section** (5.6 Community Participation and Empowerment) provides basic information about the participants in the study and their involvement in the study and study area. Specific attention is paid to the participation of the community at large, forestry managers, and women and the youth in the selected projects. Thereafter, demographic information about the heads of households who completed the

questionnaire is outlined. The t-test was applied to compare the differences between the demographic statistics for the four community projects (Table 5.9). It was also used to compare the differences in the living standards of those members of the community who are involved in these projects. This section also analyses the challenges faced by women and the youth and their role in the community forestry projects, outlines the views of the women and those of the youth, as expressed in the respective focus group discussions.

The findings concerning conflict among the stakeholders in the study are discussed separately in the **fourth section** (5.8) under the thematic area on governance. Information around the perceptions of the selected community members in respect of the current and future arrangements, Common Property Associations (CPAs)/ Community Trust (CP) structures and their relationships with the strategic partners were determined from their responses during the interviews and focus group discussions and used as input data for the relevant computer programmes. The perceptions of the community specifically in respect of their responses to the current arrangement and future choices, as in the case of, for example, the expansion of the plantations, were computed by using the percentages of the best rank option for the preferred land-use possibility. In this section, the cross-tabulation method was also used, and chi-square tests were run to measure any significant differences that might be evident in the data that contained the ranged values.

The **fifth section** (5.10 – Sustainability and risks) presents the results of the data analyses and discusses several proposals based on personal observations and discoveries regarding the alien invasive plants (AIPs) and wattles that could assist in forestry development in the study areas. Finally, a discussion follows on the discovery of, amongst others, temporarily unplanted areas (TUPs) which have the potential in the study areas and South Africa for further expansion in conjunction with afforestation initiatives.

5.2 BENEFITS/OPPORTUNITIES AND CHALLENGES IN THE STUDY AREA

5.2.1 Benefits perceived from Household Interviews

Table 5.1 presents the results of the benefits that households experience through these community forestry projects. A significant relationship ($p < 0.001$) between the respective perceptions of the household respondents and the employment opportunities presented to them through the forestry projects. In the Sinawo project, 99% of the households believed more jobs were being created as a result of the forestry projects, which proved to be the highest estimate as compared to the other projects, such as Ntywenka (only 39%). The perceptions on job creation to benefit members of both the Mkhambathi and the Mabandla projects were very high, with 74% and 61%, respectively, of households being of the conviction that jobs were being created as a result of the forestry projects.

There was also a significant relationship ($p < 0.001$) amongst all four projects in terms of the perceived benefits issuing from forestry projects (e.g., firewood, fencing materials, poles, logs, and improvements to the road infrastructure) (Table 5.1). Table 5.1 further revealed that in Mabandla, 13% of the households perceived that the forestry projects had resulted in improvements to the road infrastructure as opposed to only five percent (5%) of the households involved in the Mkhambathi and Sinawo projects respectively, and that these benefits were associated with the improvement of the road infrastructure and the establishment of the forest plantation. In Ntywenka, only four percent (4%) of the households felt the benefits from the improved road infrastructure. Furthermore, there was a significant relationship ($p < 0.001$) between household heads associated with the Ntywenka project (59%) who felt that they were enjoying the benefits of fencing poles through the forestry projects as opposed to the reactions of those involved in the Sinawo (7%); Mabandla (6%) and Mkhambathi (6%) projects, who were obviously not of the same conviction.

Table 5.1: Benefits identified by households across all four projects

Benefits	Proportion (%) of household respondents per project								Inferential Statistics		
	Mkhambathi		Sinawo		Ntywenka		Mabandla		X ²	df	p-Value
	N=100	N=100	N=100	N=100	N=100	N=100					
Yes	No	Yes	No	Yes	No	Yes	No				
Employment	74.0	26.0	99.0	1.0	39.0	61.0	63.0	37.0	86.609	3	0.000*
Firewood	79.0	21.0	34.0	66.0	80.0	20.0	72.0	28.0	63.720	3	0.000*
Fencing Poles	6.0	94.0	7.0	93.0	59.0	41.0	6.0	94.0	140.743	6	0.000*
Logs	0.0	100.0	0.0	100.0	0.0	100.0	0.0	100.0	-	-	0.000*
Improvement of road infrastructure	5.0	95.0	5.0	95.0	4.0	96.0	13.0	87.0	17.124	3	0.000*

* signifies a significant difference at a 0.05 level

5.2.2 Opportunities perceived by Focus Group Discussion Participants

In the focus group discussions, participants that were in favour of forest plantation expansion believed that the planting of trees was a good land-use option because it would provide them with an opportunity to generate income for their household and create employment for other members of the community. Regarding the employment created through the establishment of these forestry projects, most of the respondents participating in all the focus group discussions (mixed, women and youth) felt that employment was being created through the establishment of community forestry projects in their villages. Despite their reference to job creation, there were some concerns in all the focus group discussions that not enough employment had been created by these projects in their areas. All the focus group discussion participants were also concerned about the wages/salaries to be gotten from these projects. Although, according to the participants across all four projects, communal forestry has brought about job creation, most of the participants mentioned that they earn less money from these projects, since they are allowed to work not more than 18 days per month - and at a low rate.

The workers in these forest plantation projects indicated the following: *“In fact, you will be lucky to get R3 000.00 in a month because you might be lucky to work up to a maximum of 22 days in a month. Yes, if you have managed to work 22 days and not 17 or 18 days, you will be able to get R3 000.00 a month. The amount of R3 000.00... it’s not for everyone and it’s a salary that we even managed to reach this year from 2019 to 2020.”*

Furthermore, during the focus group discussions around employment in the forest plantation in the four study areas, the participants indicated that they find the project helpful; but they do not have permanent contracts with the project managers, and their contracts are renewed on a yearly basis. Some of them indicated that because of the lack of job security, they end up leaving these plantations and migrating to towns or other places for better jobs and wages. Some even mentioned that they regret having accepted work in plantations in the first place because, they cannot sustain their lives with the money they earn from the projects.

5.2.3 Opportunities perceived by the Community Forestry Managers

The opportunities that the community forestry managers mentioned is that they are better trained as workers than anyone in the community. According to all four of these managers, this is due to the amount of training that they have received from the strategic partners, as compared to that of the other community members. One of the community forestry managers mentioned the following: *“There are several training courses that SAPPI provides to us as forestry managers. I have got many certificates from training and some of these certificates, we keep them under our bed mattresses, because they are so many. It’s just a joke that I’m putting certificates under my mattress, but there are several certificates that we received as managers because of the training that the strategic partner provides”.*

5.2.4 Perceived Challenges experienced by Households and Stakeholders

5.2.4.1 Challenges: Household Interviews

Table 5.2 presents the results of the perceived challenges experienced by households as a result of the establishment of forestry community projects in their areas. In Table 5.2 below, there is a 'yes'/'no' option: 'yes' denotes that a certain number of households indicated that there is a challenge in terms of both forest and veld fires; crime (e.g., timber theft and hiding stolen cars in the plantation); a reduction in grazing land; water reductions; and a lack of employment. On the other hand, 'no' denotes that a certain number of households did not indicate some of the factors indicated in the table as a challenge. There was a significant relationship ($p < 0.001$) in their experience of challenges that was expressed by the household respondents from the forestry community members across all four projects. In the Sinawo project, 99% of the households revealed that forest and veld fires pose a challenge to them - the highest score relative to the other projects. Concerns for their households having to face the challenge of forest and veld fires scored very high in Mabandla (89%) and also in both Mkhambathi and Ntywenka (69% and 57%), respectively.

There were also significant concerns ($p < 0.001$) about the reduction in grazing land for livestock as a result of the expansion of forest plantations. This challenge scored highest in the Sinawo project (95%), with Mkhambathi (35%) as the second highest, while the Mabandla and Ntywenka households were least concerned about this challenge, with 19% and 5%, respectively. There was significant concern ($p < 0.001$) across all four of the projects over the perceived reduction in water from the catchments as a result of afforestation. Only two of the four projects were concerned about this challenge, however, with Ntywenka and Mkhambathi (11% and three percent (3%)), respectively, not regarding the reduction of water from their catchment areas as a result of afforestation as a challenge.

Table 5.2: Challenges mentioned by households across all four projects

Challenges	Proportion (%) of household respondents per project								Inferential Statistics		
	Mkhambathi (N=100)		Sinawo (N=100)		Ntywenka (N=100)		Mabandla (N=100)		X ²	df	p- Value
	Yes	No	Yes	No	Yes	No	Yes	No			
Fires	69.0	31.0	99.0	1.0	57.0	43.0	89.0	11.0	68.17	3	0.000*
Crime	67.0	33.0	99.0	1.0	90.0	10.0	25.0	75.0	156.69	3	0.000*
Reduction of grazing land	35.0	65.0	95.0	5.0	30.0	70.0	19.0	81.0	141.59	3	0.000*
Water shortage	3.0	97.0	0.0	100.0	11.0	89.0	0.0	100.0	23.98	3	0.000*
Lack of employment	9.0	91.0	99.0	1.0	5.0	95.0	14.0	86.0	280.15	3	0.000*

* signifies a significant difference at the 0.05 level

5.2.4.2 Challenges perceived by Community Forestry Managers

There were a myriad of challenges and risks that were commonly highlighted by the forestry managers during interviews across all four of the projects. Some of them are as follows:

- There are several training courses that forestry managers attend that are run by strategic partners such as SAPPI. According to the forestry managers across all of the projects, the challenges are as follows: “*As forestry managers, we don’t come back and apply what we have been taught in these trainings*”. The reason cited is that most of the forestry operations are carried out by the strategic partners.
- Secondly, the issue of factions among the community members or community fighting against either the CPA or the Community Trust. One of the forestry managers further explained that *the infightings caused by the community: – it’s that all of them want to lead and think that one is better than the other*”.
- The issue of the undermining of the forestry managers by the community members was cited as the other challenge experienced in the community forestry projects. All four forestry managers interviewed mentioned the same issue, namely, the nasty attitude towards them. They believe that this attitude is because the community members think that the former are employed by the

community. As such, the community regards itself as the employer of the forestry managers. One of the forestry managers further explained this challenge as follows: *“These community members forget that forestry managers are better trained compared to the community at large”*.

- There is no support from the government, specifically from the Department of Agriculture, Land Reform and Rural Development (DALRRD). DALRRD is supposed to assist the CPAs/CTs, especially when the term of office of these structures comes to an end. One of the forestry managers mentioned the following: *“It is not expected from the CPA/CT members to announce that their term of office has expired, because they may have been enjoying being in office”*.
- Another problem linked to the above challenge mentioned by the forestry managers across all four projects is that the forestry managers must inform the CPAs/CTs that their mandates have lapsed: it can go up to two and even three years that these bodies remain uninformed. One of the forestry managers indicated that *“even when the interim structure has been established, it will take some months, even three to six months, without any activities or functions in the project. In that period, people will be doing all sorts of things, burning forests. There will be literally no activities at all in those months. The reasons will be cited that they don’t have money to come to the venues for holding meetings”*.
- Conflicts amongst the stakeholders in these projects is a major issue, according to the three forestry managers of the Mkhambathi, Sinawo and Mabandla projects. In the Ntywenka project, the issue of conflict amongst the stakeholders was not cited as an issue, even among the households that were interviewed (Table 5.11). It was, however, cited that a sense of anticipation of a conflict prevails during the harvesting season when the benefits are distributed among the beneficiaries. All three forestry managers cited conflict as a huge problem in their community forest projects. For example, all three indicated that: *‘communities want to lead, while there is no skill to do that’*. Secondly, the forest managers also link this challenge to the failure of DALRRD to assist in land restitution projects, where, according to the forestry managers, DALRRD will give a person the responsibility to lead a multi-million Rand project without

providing the training. According to the three forestry managers of these land reform restitution projects, it is only SAPPI or the service providers that provide training; from the government side (e.g., DALRRD), no training is provided. One of the managers had the following to say: *“This failure of government in assisting in projects such as these..... I even think that government wants to see the project fail so that government takes over the project, because there was such a policy in the past. But I don’t know what happened with that policy; whether it still exists or not, but the way government does things... it wants to take over these projects”*.

- According to the forestry managers across all four projects, these forestry community projects are considered by the communities to be mere community projects, and not as business projects. The community members do not apparently know how to run a business, and have no knowledge or experience in financial management, but are expected to lead a multi-million-Rand project. It was further mentioned by the managers that *‘these CPAs/CTs members will be fighting with the Forestry Management Committee; may be claiming to follow their instructions; but they have no knowledge on the management of forestry’*.
- According to the forestry managers across all four projects, the risks are that they cannot improve their houses or homesteads. The reason cited is that the communities are saying that they are corrupt if they use the monies from the projects. One of the managers stated: *“In these days, if you are seen with [a] large [bag of] groceries, the communities will be saying “yaphela imali yeprojeti yethu nguwe maneja”*, meaning that *“or project money; it’s finished because of you, Forestry Manager”*.
- The slow processing of water licensing arrangements by government departments, such as the Department of Water and Sanitation is yet another challenge highlighted by the forest managers.
- According to the four forestry managers, the Environmental Impact Assessment (EIA) exercise was taken as the complex system to follow, but it proved to be expensive to conduct, especially in the case of small-scale forest projects. Legislation from the Department of Forestry, Fisheries and the Environment, i.e., the National Environmental Management Act (NEMA) requires EIAs for the establishment of forest plantations (FSA, 2019). According to the findings

emanating from the interviews with the forestry managers, the NEMA regulations are far too complex for application by the traditional authorities or in the context terms of the local traditional circumstances. Forestry managers have quoted an example that, at the insistence of complying with the requirements of the EIA's, a consultant is employed at a cost burden of at least R25000.00 per hectare. This is unwarranted and is viewed by forestry managers as a deterrent to further participation in rural development. All these managers see the mindset of the DFFE that alternate land uses should be explained and offered as absurd. This issue is also regarded by the forestry managers across all four projects as a problem for the future once these plantations have been handed over to the communities to manage them.

- Lastly, the important challenge mentioned by the community forestry managers across all four projects is the issue of competitive land use. This challenge is consistent with what has been indicated by households across all four projects (45%) during the interviews (Table 5.6).

5.2.4.3 Challenges perceived by the Strategic Partner Managers

The challenges perceived by the strategic partner managers have been categorised in terms of industrial disorganisation, conflicting land uses, the risks of fire, pests and diseases, lack of acceptance by the community, and sand mining.

Industrial Disorganisation: According to the strategic partner managers, in some community projects, the community members want to expand, but they cannot because of the chaos within the industry in that it is unable to assist the small-scale growers to grow. One of the strategic partner managers indicated the following:

“The industry is good to talk about its vision; where it would indicate that it [would want] to grow as an industry... to so many hectares. {However}, the industry couldn't support these small-scale growers to ensure that that which the small-scale growers require for them to grow [is provided]. For example, the industry could not assist in areas such as water licensing (i.e., [to] take the water licence through and the community will be stacked somewhere). The

licensing process will be stacked because there is no fund for the Environmental Impact Assessments (EIAs) from the community. Thus, the major stumbling block [is] in terms of [the] growth of [the] small-scale communal forest growers. It doesn't help to see these growers remaining at 500 ha, for example, they must grow from 500ha to 1 000ha and above. The industry does not help these growers to grow more plantations in their areas. The industry must review this. Who should be responsible for what? Once this has been done, industry must locate money according to the needs of these projects. The industry needs to do 'need analysis' in these communities so that even the small-scale growers can see themselves growing as commercial growers".

This concern is in line with what has been indicated by the community forestry managers as the challenge of the complexity of the EIA exercise, which has further been indicated as a complex system to follow and expensive to conduct (FSA, 2019), especially in small-scale forest projects.

Conflicting Land Use: According to the strategic partner managers, changes in and conflicts over land use affect community projects in different ways. When water licenses are issued, for instance, it is no longer possible to continue with afforestation. The reason attributed to this is that differences then arise among the community members; some want afforestation, while others may want to continue with the grazing of the land by their livestock. The strategic partner managers further indicated that because of these conflicts in land use, the community loses future volumes of timber and obviously future incomes. One of the strategic partner managers stated the following: *"Anyway, it's the way these projects were formed that can lead to this kind of conflict. The communities are not able to deal with conflicts amongst themselves, because they focus more on their differences. They spend a whole lot of time on issues that they differ on, until the whole thing collapses. There are very important issues that they call each other to discuss, but when they attend these meetings, they will only focus on the differences instead".*

Risk of Fire, Pests, and Diseases: In the interviews with the strategic partner managers, fire was indicated as the biggest risk across all four projects. The

other risks indicated by the strategic partner managers across all four projects were pests and diseases such as *Botryosphaeria*. More discussion about these risks will be presented under the section on sustainability and risks.

Acceptance by the Community: According to the strategic partner managers, it takes time to be accepted by the community. Even if there are social supports within the community, one cannot be 100% confident that the project will succeed. One of the strategic partner managers mentioned the following: *“It needs a great deal of patience, because as a facilitator, you can talk with community members today and the following day, [but] they will [only] start hearing after you have talked with them 10 times. Thus, the problem with the forestry community projects is that such projects need patience from you as the social facilitator”*.

Sand Mining: According to the strategic partners, sand mining in the Mkhambathi and Sinawo projects is one of the problems facing the plantation projects. In the above-mentioned projects, sand, which is extensively mined in Mkhambathi, is an important input to the construction industry. The challenge is that sand mining in the above-mentioned project areas has led not only to the depletion of the rivers, but to damage to the riparian habitat, and to changes to the riverbanks and beds; it has also caused severe damage to the plantations in both the Sinawo and Mkhambathi projects. The researcher has personally observed the geomorphological scars that sand mining has left on the plantations at Mkhambathi (Figure 5.1). With the high rate of sand mining in the above-mentioned projects, it is self-evident that sand mining needs to be strictly controlled.



Figure 5.1: Sand mining at Mkhambathi Project
Source: Pictures taken by author, December (2019)

5.3 DISCUSSION ON BENEFITS/OPPORTUNITIES AND CHALLENGES IN THE STUDY AREA

5.3.1 Accrued benefits from communal forest projects

Globally, approximately 30 million of the 47 million permanent jobs in the formal forest industry are in small enterprises, most of which have fewer than 20 employees (Molnar et al., 2007). According to Molnar et al. (2007) SMFEs and smallholders provide more than 50% of the wood harvested in the European Union countries and the United States and generate most of the employment in processing and contracting. For example, small-scale forest enterprises (SSFES) in India, defined as units, and, with an investment in plant and machinery up to R1,65 million, produce 82% of the sawn timber and safety match production in the country. It is estimated that the wood processing industries in India process about 24 to 30 million m³ of wood per annum, the bulk of which is processed by SSFEs. It is important to note that the policy environment for small-scale industries in India is generally very favourable and that they enjoy import protection and several concessions (Sushil and Sharmistha, 2003).

A similar situation of significance in terms of small-scale forest enterprises is also found in Brazil, where SMFEs comprise a significant percentage of the total number of forest enterprises. Taking 99 employees as the cut-off point, SMFEs constitute 98% of the total number of forest-harvesting operations; employ 50% of the labour force in

this sector; 99% of wood processing enterprises; 70% of the labour force; 99% of furniture manufacturers; and 70% of the labour force. Overall, SMFEs contribute some 75% to the total production in the forest sector in Brazil (May et al., 2003).

In contrast, SMFEs play a limited role in the forest industry in South Africa. Just over 70% of the plantation resources and more than 85% of the timber processing capacity in the country is owned by a handful of corporate and large companies (Clarke, 2018). Smallholders own less than 4.5% of the plantation resources, while a significant portion of the resource (about 20%) is owned by independent growers and commercial farmers. While most forestry contracting enterprises could be considered to be micro enterprises (annual turnover of less than R5 million), most of the contracting work goes to larger operators. Micro and small processing enterprises (with a log intake of less than 5000m³/annum) produce less than four percent (4%) of the country's sawn timber and less than 50% of the country's pole and charcoal production output. The pulp paper and timber board industry, which dominates the South African processing industry, is highly capital intensive and does not lend itself to small-scale processing enterprises.

The study results revealed that households (on average 69%) across all four projects perceived that owing to communal forestry projects, there were more jobs being created in their villages. Most of the jobs created are in rural and remote areas where the rate of unemployment is high and alternative employment opportunities are scarce. The forestry sector generates employment for more than 158 400 workers, with the forest sub-sector providing about 60 200 direct jobs and 28 000 indirect jobs. Forestry also provides livelihood support to 692 000 people constituting the country's rural population (GCIS, 2018; Clarke, 2018).

Most of South Africa's rural poor make extensive use of forest products from plantations and woodlands for their daily needs and for their small-scale businesses. Firewood, building poles, medicinal plants, and edible fruits are critical to the livelihoods of the impoverished and provide a safety net to the most vulnerable of families (Winker and Marquard, 2011; Seidman, 2005). This is in line with the results in this study. Households across all four community projects indicated firewood and

fencing poles, with an average of 66% and 20%, respectively, as one of the key benefits provided by the establishment of communal forest plantations in their villages. Based on the opportunities indicated by households and interviews with the community forestry managers and the managers from the strategic partners in the study, it is important for small-scale communal forest growers to exploit the opportunities that prevail in the forestry industry in South Africa. The following have been identified in this research as opportunities for small-scale communal forestry growers:

- There are ready and easy markets for timber, especially for those working with strategic partners.
- The eucalyptus plantations in the country's forestry industry offer a real and significant opportunity for developing timber production in the case of the poor.
- There are good, easily accessible markets for by-products, such as firewood; construction poles; logs (especially sawn logs in the Mabandla project, the only project that plants both eucalyptus and pine).
- Government and the strategic partners already provide support to the rural communities to enable them to enter the sector. These small-scale forestry grower or community-company out-grower scheme initiatives address a range of issues, including training, technical issues, enterprise management, and marketing. They also relate to the provision of start-up forestry production kits, the related skills required, and the development of capacity. These facts have been confirmed by the community forestry managers (e.g., they have confirmed that there are several training courses that SAPPI provides as a strategic partner).

In addition to countries such as Brazil and India, also New Zealand is counted as one of those countries that empowers local communities through forestry employment (Charnley, 2005). The salary packages from employment in this sphere are potentially significant in the generation of incomes for the local communities in the vicinities surrounding the forest plantations (Mayers, 2006; Charnely, 2005). Despite the fact that the interviewed households in the current study, perceived employment as one of the benefits received through the establishment of forest plantations in their areas (Table 5.1). Most of the participants in the focus group discussions, were not happy

with the number of people from the local communities that were employed and the salaries that they were earning from working in the forest plantations. This concern was in contrast to the report made by Ham (2000). According to Ham (2000), two state forest plantations (i.e., Gaba and Rossbach), serving two communities, (i.e., Tshikudini and Magangeni) respectively, expressed positive sentiments about employment in their areas. In fact, these two state forest plantations in the Limpopo Province were overstaffed with people from the local communities in comparison to the private forest companies in the neighbouring areas.

As single independent productive entities, forest plantations seldom create employment opportunities unless they are operated in conjunction with other timber processes (Munyanduki et al., 2016). Furthermore, eucalyptus plantations are inferior to pine plantations in the sphere of job creation. According to Charnley (2005), eucalyptus species offer fewer employment opportunities than pine species because of the limited tending operations involved in bringing the former to maturity. Secondly, it is because eucalyptus species have the ability to regenerate through the development of coppice¹⁰, stands that eucalyptus plantations do not need much labour for replanting at the end of each rotation (Munyanduki et al, 2016). In the study, it was only the Mabandla project, as opposed to the other projects (i.e., Mkhambathi, Sinawo and Ntywenka) that had both eucalyptus and pine plantations.

The next section presents the discussion analysis about challenges experienced by households, the strategic partners, and the community forestry managers across the four projects.

5.3.2 Challenges perceived by household participants and stakeholders

Despite the importance of the forestry cases in India and Brazil, as mentioned above, these countries are currently experiencing challenges. The SMFEs in India face several problems, the greatest being the shortage of timber supply. A further key challenge is the increasing national and international competition arising from economic liberalisation (Sushil and Sharmistha, 2003). Despite their importance to the

¹⁰ or areas of densely growing small trees which are regularly cut back to encourage more growth

national economy of Brazil, as mentioned in the section on benefits in the study, SMFEs in this country have traditionally been marginalised in respect of policy and decision-making. However, more recently, these policies have become more supportive (May et al., 2007).

Apart from the opportunities that prevail in the South African forestry industry, there are also challenges (as in Brazil and India) affecting small-scale growers engaging in commercial forestry in South Africa that have affected their development in this sphere. These challenges, identified in this study, range from those facing household heads, community forestry managers, strategic partner managers to those facing all members involved in the focus group discussions; and even the researcher and others in terms of the personal observations that they were required to make in this study.

The discussion on the perceived challenges emanating from the interviews with the heads of households, community forestry managers, experts, and strategic partner managers; the members of the focus group discussions, as well as the personal observations made by the researcher and others has been summarised as follows:

Limited knowledge about forestry potential: The study revealed that there is limited knowledge across all four projects about the potential of forest plantations. This is in line with the study by Clarke (2018) where it is indicated that this is the case in most regions, especially in the rural areas.

Lack of accurate information about small-scale communal forestry growers: There is limited information about where the small-scale forest growers are located, who they are, how many there are of them, when and how much they produce, the frequency of the harvest, the problems they encounter regarding their production, what they do with their produce, their market linkages, the marketing channels that they pursue, and the prices that they charge, etc.

Lack of knowledge and skills in forest production and management: Despite the initial training provided for most out-grower schemes, the emerging growers still display limited knowledge and skills in terms of forest

management. This is attributed to their inadequate training (Mahlangu and Mubangizi, 2015). The results of the study revealed that most of the skills training initially provided by strategic partners is usually for a short period, which does not equip the new growers with the skills they need for forest management. In most cases, training is not followed through mentorship programmes that would normally ensure proper skills transfers to new forest managers. According to Nawir (2012), the success of local communities in the management of forest enterprises requires technical skills and strong knowledge concerning the financial management of a forest.

Theft and Vandalism: Theft and vandalism are the most common and serious problems experienced by the small-scale forest growers. In many cases, they lose their incomes on account of vandalism and timber theft (DAFF, 2018; Mayers and Vermeulen, 2002). Even in Java, in the PT Perhutani plantations, the staff have been reporting increasingly high levels of theft and vandalism (Mayers and Vermeulen, 2002). According to the households, the community forestry managers, the strategic partner managers, and even the forestry experts, this also proved to be an issue in the study. In South Africa, both state forest plantations and small-scale forest growers are mostly affected by the lack of security as most of the plantations are unfenced and have no armed security personnel (DAFF, 2018). This was confirmed by the women focus group discussions of this study, where women from the Mkhambathi and Sinawo projects suggested that there is a need to employ armed security guards as a measure to mitigate the vandalism and timber theft on their plantations.

Lack of access to resources: Small-scale growers are constrained by a lack of adequate resources, such as funding. This prevents them from operating at a commercial level, which would allow them to achieve economies of scale.

Marketing constraints: According to Molnar et al. (2007) community-based forest growers lack market links, are unable to exploit economies of scale owing to their small size and organizational gaps, and their lack of business expertise. Lack of information, low productivity and poor-quality road infrastructure are the major economic impediments for the development of the market-oriented

enterprises of the small-scale commercial forest growers. This is in line with what the study revealed, in fact, SAPPI as a strategic partner, introduced a quota system to assist small-scale growers to sell their timber, where in most cases, a portion (65%) of the timber produced is committed to the companies at the current market price —, 20% is on a right-of-first-refusal to the companies and 15% is uncommitted.

Absence of an organisation for collective action for small-scale growers:

In most provinces, there are no organisational or institutional structures that represent small-scale forest growers, whereas the commercial forest companies have forums for reaching other corporate companies in order to mobilise their participation, disseminate information, be a voice for their concerns, and promote collective action for market development.

The FAO (2011) identified the following major obstacles for small-scale forest growers engaging at the commercial level.

- Lack of knowledge about advanced forest management and methods
- Unawareness about the profitability of forest plantations
- Limited access to markets
- An inefficient supply chain — in many instances, no proper infrastructure (e.g., transport, processing facilities, or certain types of equipment) for the small-scale growers
- Certain projects experience the problem of workers absconding from their forestry duties and low production levels, which in their turn prevent these growers from converting their forestry businesses into commercial activities.

Wattle jungle and alien invasive plants: More discussion about this challenge is featured in the section below on wattle jungle and alien invasive plants.

Competitive land use: More discussion about this challenge is presented as a separate issue under preferred forestry-based land use in the study areas below.

5.4 LAND REFORM AND PREFERRED FORESTRY-BASED LAND USE IN THE STUDY AREAS

5.4.1 Household respondents' perceptions about forestry as opposed to other land-use activities

Table 5.3 presents the households' responses concerning the influence of forestry activities, such as silviculture, harvesting, agroforestry, beekeeping, mushroom cultivation, and timber processing, on poverty alleviation. According to the results of the study, the household respondents' perceptions were that timber sales/processing and agroforestry were more likely to reduce poverty. In this regard, the households' responses further indicated that land-use forms set aside for timber sales/ processing ($p=0.011$) and agroforestry ($p=0.025$) had a significant influence on poverty reduction. This implies that forestry was indeed considered by the participants to be the most important land-use form.

Table 5.3: Likelihood of preference of household for forestry-based land-use options

Independent Variable	B	S.E	Wald	df	Sig.	Exp (B)	95% C.I. for EXP(B)	
							Lower	Upper
Silviculture	0.524	0.371	1.993	1	0.158	1.688	0.816	3.493
Harvesting	0.231	0.363	0.404	1	0.525	1.259	0.619	2.563
Agroforestry	1.246	0.555	5.048	1	0.025*	3.478	1.173	10.317
Bee keeping	17.892	9542.125	0.000	1	0.999	58962395.993	0.000*	-
Mushroom cultivation	-41.566	18644.523	0.000	1	0.998	0.000*	0.000*	-
Timber sales	1.169	0.461	6.414	1	0.011*	3.217	1.302	7.947

* signifies a significant difference at the 0.05 level

Secondly, as regards land use, the households were required to rank the significance of forestry/ production/ selling and the production of various cash crops to determine the most likely future land-use option for their area. The ranking ranged from 1-10, with the first rank indicating the best option and the 10th position the worst. Table 5.4 shows the households' average mean ranking of 5.90 for forestry as the preferred land-use activity for all four projects. Vegetables, as a land-use activity, proved to be the most important land-use activity of all, with a mean ranking of 1.64. Potatoes came second as the most important land-use option, with a mean ranking of 2.62, followed

by maize, with a mean ranking of 3.15, and then beans (4.07). Ultimately, a significant relationship ($p=0.001$) was found in the ranking of all the land-use activity options amongst all four of the projects.

Table 5.4: Household respondents' preference rankings for land-use options

Land Use	Mean Rank	Inferential Statistics		
		X ²	Df	p-value
Forestry	5.90			
Maize	3.15			
Beans	4.07			
Potatoes	2.62			
Vegetables	1.64			
Fruits	6.40	2459.148	9	0.001*
Cotton	9.28			
Wheat	7.04			
Tea	7.58			
Groundnuts	7.32			

* signifies a significant difference at the 0.05 level 1= most important; 10= less important

5.4.2 Influence of Livestock Ownership on Households practising Agroforestry in the Study Area

Table 5.5 presents the mean ranking of the number of livestock owned by an average household across the four projects. The results show that the most important livestock in the study area owned by households included cattle (61%), goats (5.75%), sheep (19%), donkeys (4.25%), pigs (11.5%) and chicken (61%) (Table 5.5). The results revealed that there is a statically significant difference in the number of sheep owned by households in the respective projects ($p=0.013$) as compared to the other types of livestock owned.

Furthermore, the Kruskal-Wallis H test indicates that the null hypothesis had to be rejected since the median of the number of sheep owned by a household was not the same across the four projects. In contrast, the numbers of all the other livestock types owned across the four projects were not found to be statistically different, and as a result, the null hypothesis was accepted. Therefore, the null hypothesis testing the similarity in the distribution of sheep owned was rejected, since there was a significant difference ($p=0.013$) in terms of ownership of sheep across the four projects.

Table 5.5: Mean rank of livestock numbers owned by households per project

Livestock type	Mean Rank				Kruskal-Wallis H-test statistic			
	Mkhambathi	Sinawo	Ntywenka	Mabandla	%	Chi-Square	df	p-value
Cattle	133.74	121.97	123.35	107.32	61	4.501	3	0.212
Goats	10.67	12.67	14.00	7.00	5.75	3.433	3	0.330
Sheep	34.50	35.22	41.63	8.40	19	10.850	3	0.013*
Donkeys	8.60	0.0	8.50	10.50	4.25	0.726	2	0.696
Pigs	16.13	0.0	25.05	0.0	11.5	3.132	1	0.077
Chickens	112.30	127.15	131.16	120.44	61	3.012	3	0.390

* Indicates the statistically significant differences between the mean ranks at a 0.05 level

5.4.3 Knowledge about Land Use in the study before forced removals

Of the 400 households interviewed across the four projects, 90% indicated that where there was currently forest plantation, the land had previously been used for grazing; 82% of the household respondents indicated that the land had previously been used for ploughing; and only 45% indicated that prior to their forced removal, the land had previously been used for human settlement (Table 5.6). There was a significant difference ($p=0.000$) in all the categories mentioned above and across all four projects. During the focus group discussions, some of the interviewed participants indicated that they were interested in the expansion of the forest plantations but were discouraged by the limited availability of land. Others cited the challenges of competition in land use. For example, the household respondents from the Sinawo project that participated in the group discussions mentioned the conflict between the sugarcane growers and forest growers as one of the major problems that was preventing the plantation from expanding into an area of about 600ha and more, where the land would be well suited to afforestation.

Table 5.6: Proportion (%) of household respondents per project with knowledge versus without knowledge of land-use type prior to forest plantations

Land-use type	Households per project who had knowledge versus without knowledge of land use prior to forest plantations										Inferential Statistics		
	Mkhambathi N=100		Sinawo N=100		Ntywenka N=100		Mabandla N=100		Total		X ²	Df	p-Value
	Yes	No	Yes	No	Yes	No	Yes	No	Yes	No			
Grazing	27	73	93	7	97	3	97	3%	90	10	44.00	3	0.000*
Ploughing	84	16	77	23	69	31	98	2%	82	18	30.76	3	0.000*
Settlement	35	65	95	5	30	70	19	81%	45	55	61.01	3	0.000*

* signifies a significant difference at the 0.05 level

5.5 DISCUSSION AND ANALYSIS OF THE LAND REFORM PROGRAMME AND LAND USE IN THE STUDY AREAS

As a result of land reform and the land restitution process, it is anticipated that more than 40% of the plantation resources in the country (+ 500 000 ha) will change hands from state and private ownership to black community ownership over the next few years (Upfold et al., 2015; Mamba, 2013; Clarke, 2012 and 2008). This will introduce a new ownership class that has no or very little previous experience in operating forestry enterprises.

The sheer scale of this endeavour has far-reaching consequences for the forest sector. On the one hand, the restitution process offers an opportunity to substantially advance broad-based black economic empowerment (Mamba, 2013; Makhathini, 2010; Clarke, 2008), not only through the transfer of the plantation resources to black communities, but also in terms of opportunities for black participation in value-adding forest activities that can be leveraged through the ownership of scarce timber resources.

Table 5.1 summarises the benefits to be gained from forestry projects as listed by the household heads. The focus group discussions revealed that some communities and individuals had lost their precious fertile land, evidently for purposes other than those listed in Table 5.6. There was an additional land-use type which the participants in the focus group discussions listed. According to the households across all the projects, some of the land-use activities that were listed included non-timber forest products

(NTFPs) such as valuable plants used during traditional rituals and for medicinal purposes. The participants themselves used the land for various reasons, such as ploughing; grazing; residential purposes; the harvesting of medicinal plants; collecting firewood; performing rituals and ceremonial activities; and lastly, burying the dead.

It has been recognised and confirmed by this study that rapid afforestation has had significant social impacts on rural communities. According to Schirmer (2015), the social impacts include a reduction in agricultural land that would have been used by those communities or the land reform beneficiaries, and although the forestry sector does provide employment for rural people, such opportunities are significantly fewer than those for agriculture. In South Africa, the allocation of land among the sectors presents only one allocative issue; the better publicised, more perennial, and more political one is allocation of land between established and emerging population groups.

Chitonge and Ntsebeza (2012) state that most people from rural areas rely on agricultural activities as livelihood strategies, and their access to land is an assurance that rural communities can engage in agricultural activities. Land access therefore plays an important role in rural livelihoods. One of the reasons why communities lodge land claims is to gain access to the land so that they can use it to improve their livelihoods (Mamba, 2013).

This study reveals that there are sectoral allocations in land use (crops vs livestock vs forestry vs conservation areas vs rural or urban settlements vs infrastructure, etc.). In addition, the following may be noted:

- In an ideal world, each piece of land would be used for the product for which the land is best suited, i.e., for which it renders the greatest productivity (biomass, financial yield, or other productive protective, or social benefits). However, this ideal is unattainable in practice. As such, pragmatism must of necessity take over.
- The land itself may be useless, but if combined with the product or service produced on it, it can be a very important basis for decision-making in terms of one or other option.

The following is a non-exhaustive listing of competing land uses. The main competing land uses in the study area include the following:

- Cropping
- Livestock rearing
- Forest/woodland habitat for game (which then supports tourism, specifically in the Mabandla and Mkhambathi projects)
- Forests and woodland for wood and non-wood vegetative products
- Forests or other vegetation conserved for soil and water protection and for the preservation of biological resources
- Land for human settlements
- Land for public infrastructure (roads, rail, *etc.*)
- Mosaics (i.e., combinations of some of/or any of the above)

If the relevant role-players had their way in selecting the above-mentioned land-use forms would, almost all go for fertile /productive land and land that is most easily accessible. Separately, but often in combination, the above land uses allow the land to deliver in terms of its productive (economic), protective, and social functions, both in total and in equity terms, but depend on the provisions of public policy and the level or manner of private sector compliance.

According to the DFFE (2020a), land as a resource for production is becoming a challenge because of the competition for specific land-use types required from other sectors, and between the agricultural and forestry sectors. Where feasible, the promotion of multiple land-use functions (i.e., the integrated approach) through agroforestry can address this issue. According to Octavia et al (2022), agroforestry is a silvicultural plan that responds to the challenges of sustainable forest management, especially when the land is adjacent to community settlements. The system of multiple land-use types, as implemented through agroforestry, can address issues of household food security and the generation of income through short-term enterprises for forestry growers who must wait for a long period for their harvests to mature. If applied, the system provides mechanisms for diversification, minimisation of risk, and the building of resilience during times of natural disasters such as drought (Octavia et al., 2022). In the study, it was confirmed that this type of system is not known: In fact,

the livestock farmers revealed that they were not happy with the establishment of forest plantations as they perceived that they would reduce the grazing land for their livestock.

With the adoption of agroforestry as a land-use system, communities can benefit more by practising agriculture and forestry on the same piece of land (DFFE, 2020). In countries such as India, Indonesia, etc., agroforestry programmes have been implemented. For example, in India, the agroforestry programmes have been adopted enthusiastically by many farmers (WCED, 1987). Also, in Indonesia, the agroforestry programme is being used by two government departments (i.e., the Minister of Environment and Forestry (MoEF), and the Ministry of Agriculture (MoA)) as a regulatory tool to prevent forest conversion and to encourage its application as a means to conflict resolution (Octavia et al., 2022). Forestry can also be extended into agriculture, where farmers can use agroforestry systems to produce food and fuel. In such systems, one or more tree crops are combined with one or more food crops or types of animal farming on the same land, although sometimes at different times (Octavia et al., 2022; DFFE, 2020; WCED, 1987). In the study, and across all four projects, the responses of the household heads and the results of the focus group discussions revealed that communities do not understand that livestock or crops can be integrated into forestry, even though this may be done at different times, especially when, for example, the trees are old enough not to be damaged by cattle.

In most land reform projects, conflict of interest and competition in respect of the selected land-use type present problems. This has been confirmed by Sibisi (2015), who explained that conflict of interest in Platt Estate has indeed emerged as a problem in such a context. For example, according to Sibisi (2015), some beneficiaries in Platt Estate wanted to plant *Acacia mearnsii* for household or subsistence use, while others, as advised by the mentor after the land assessment had been completed, wanted to plant *Eucalyptus* for commercial purposes. According to Terblanché (2008) and Hall et al. (2003), the focus of land reform is on commercial production, while subsistence production is perceived as a waste of useful resources as it does not contribute to the country's economy (Terblanché, 2008; Hall et al., 2003). Sibisi (2015) argued that it could be assumed that beneficiaries lack knowledge about the focus of land reform programmes and suggested that the system is not set up to meet its own goals.

Land-use decisions are made at government, individual and corporate levels: at all of these levels, the forestry sector has no pre-ordained right to preferential treatment in respect of land allocations. A signal of this is that there are few, if any, reports of rural communities automatically selecting forestry as the top choice for land use when given land. Forestry is not unique enough to automatically deserve first place when other sectors also want the same land - competition is a reality. Thus, forestry must make an effective case for itself – that it should be prioritised and must be justified or earned. This has been confirmed by the results of this study, where the average mean ranking of forestry was 5.90 as the preferred land-use option for all four projects. Amongst all the land-use types, vegetables were recorded as the most important land-use option, with a mean ranking of 1.64 (Table 5.4).

The study also confirmed that the land-using community of South Africa is quite segmented in that it includes a mass of poor farmers and a small knot of wealthy land users – these have different capacities to fully capture the potential to make the land yield the full extent of the productivity it is capable of for society (e.g., by having adequate resources to enable the land produce at its full capacity). In order to improve the land's agricultural returns to society, a worthy suggestion would be to take cognisance of the need to favour the land-allocation preferences of the most capable societal sectors – but how this will permit equity in accessing opportunities, is a challenge, which will be discussed further under “Recommendations”.

In relation to land reform, a drastic change in the composition and ownership profile of the forestry sector can be expected over the next few years. It would be expected to bring new opportunities, but also new challenges, for the development of small-scale communal forest enterprises. Instigated by the Land Reform Programme, such a drastic measure would include the transfer of a large portion of the country's plantation assets to communities. According to Clarke (2018) and DAFF (2010b), the total scale of this endeavour has far-reaching consequences for the forestry sector. On the one hand, the restitution process offers an opportunity to substantially advance broad-based black economic empowerment (B-BBEE), not only through the transfer of the forest plantation resources to black communities, but also in terms of the opportunities for black participation in value-adding forestry activities that can be leveraged through the ownership of scarce timber resources. On the other hand, this study has revealed

that if this process is not implemented in a manner that would ensure the transfer of skills and resources to enable and encourage communities to continue with forestry, this will have devastating consequences for the future of forestry and the forest-product industry, as well as for the livelihoods of the community beneficiaries.

The study also revealed that there are opportunities for new afforestation projects on communally owned land. Based on the observation of the opportunities for the expansion of the existing plantations in all four projects, there are potential areas for new afforestation initiatives across all four projects. This is an opportunity for the adoption of the Transformation Charter for the forestry sector, created to further the opportunities for B-BBEE. At the time of the interviews and the focus group discussions, the land reform beneficiaries of and the participants in the Sinawo project reported that they were in the process of receiving their title deeds from the Department of Agriculture, Land Reform and Rural Development.

A key land reform challenge that impacts on the forestry sector is that of providing 'post-settlement support' to land reform beneficiaries (Sibisi, 2015). The development of forestry, especially in rural areas, depends on the extension services offered by extension officers/workers. The unfortunate part is that even globally (i.e., in countries such as Brazil, Colombia, Zimbabwe, etc.), the land reform programmes have not been successful. This has been due to a lack of post-settlement support¹¹ for the development projects targeting the land reform beneficiaries (Sibisi, 2015; Binswanger-Mkhize, 2014; Wiedeman, 2004).

According to Sibisi (2015); Binswanger-Mkhize (2014); Tilley (2008); Wiedeman (2004) and the DFID (2002), in most cases post-settlement support is minimal (e.g., in Brazil, extension agents were involved in land reform but did not play a role in the utilization of the land and production). Sibisi (2015) further indicated that without the appropriate extension services, beneficiaries in Colombia were unable in 1994 to exploit the potential of the land and produce on it. Furthermore, in Zimbabwe, since 2000, post-settlement support in terms of catering for extension services and training

¹¹ Post-settlement support refers to the support given to land reform beneficiaries after they have received land and settled there (Hall, 2007).

has been minimal, especially after the so-called land invasions. As such, it is evident that land reform initiatives are continually failing, and at an ever-increasing rate (Sibisi, 2015).

A similar situation prevails in South Africa. Many scholars have criticised government for its inability to broker post-settlement support. They claim that this abandonment has resulted in the failure of the reform programme (Tshidzumba, 2019; Tshidzumba et al., 2018a; Cousins, 2015; PLAAS, 2015, Sibisi, 2015; Hall et al., 2003; Jacobs, 2003). The study revealed a similar situation, with community forestry managers being concerned about the post-settlement support that they are not receiving from the Department of Agriculture, Land Reform and Rural Development. In fact, one of the community forestry managers who was interviewed with and supported by the others, had the view in his assessment of the situation, that the failure of government to assist with post-settlement support services in land reform is because it wants to see the project fail and might then possibly be able to take over the project. This has created suspicion as to whether the government wants to take back the project as such a policy was alluded to in cases where the land reform beneficiaries are unable to use the land efficiently.

5.6 COMMUNITY PARTICIPATION AND EMPOWERMENT IN THE STUDY COMMUNITIES

5.6.1 Community participation and empowerment

Table 5.7 presents the community participation in the projects. According to the results, Mkhambathi had fewer households participating in the actual management of trees, thus accounting for only 10%, as opposed to those from Sinawo (27%); Ntywenka (13%) and Mabandla (12%). Furthermore, the results revealed that there was a significant relationship between the responses of the respondents from the four communities regarding their participation in the projects ($p=0.003$).

Table 5.7: Community participation in projects

Projects	Proportion (%) of households participating in forestry management		Inferential Statistics		
	Yes	No	χ^2	Df	p-Value
Mkhambathi	10	90	13.819	3	0.003*
Sinawo	27	73			
Ntywenka	13	87			
Mabandla	12	88			

* signifies a significant relationship at the 0.05 level

Furthermore, the perceptions about the involvement of the community members in such communal forest projects and whether the latter could alleviate poverty were also measured. Overall, Table 5.8 indicates that across all four projects a total of 80% of all households believe that being involved in small-scale community forest projects can assist in poverty alleviation.

Table 5.8: Perception of households on the contribution of forestry project participation to alleviating poverty

Question	Responses	Total no. of responses	Overall Percentage	N
Do you think participation in the project can alleviate poverty?	Yes	321	80	400
	No	79	20	

5.6.2 Economic information: household monthly income, gender and age

Table 5.9 presents the information concerning household demographics across all four projects, which were categorised in terms of age, male and female composition, marital status, and educational levels. Comparisons were made between the four groups. The objective was to determine whether the above-mentioned factors have an impact on the quality or value of livelihoods.

Furthermore, in terms of gender, Table 5.9 shows that there were more males (69%) to the 31% females in Ntywenka, followed by the 64% males to the 36% females in Mabandla; 53% males to 47% females in Mkhambathi, and least of all, 47% males to

53% females in Sinawo. There was a significant relationship between the household responses in terms of gender ($p=0.006$). In addition, an examination of the present life status of the households helped to clarify the allocation of responsibilities in the families. Table 5.9 shows that the household heads in Mkhambathi (18%); Sinawo (13%); Mabandla (7%) and Ntywenka (2%) were single. However, the married ones featured to a greater extent, with 86% in Mabandla being married, followed by 81% in Ntywenka; 63% in Mkhambathi and 60% in Sinawo. Unfortunately, 27% of the household members in Sinawo; 19% in Mkhambathi; 17% in Ntywenka; and seven percent (7%) in Mabandla (7%) were already widowed. There was a significant relationship between marital status ($p<0.001$) and household responses across the four study communities.

In terms of the educational level of the households in the study, Table 5.9 reveals that the Mabandla project had the highest number of household members with a secondary education of 52%, followed by Sinawo (44%) and both Mkhambathi and Ntywenka with 34%. The overall results in Table 5.9 show that household members in Mabandla had received a generally better education: – 52% with a secondary educational qualification and 11% with a tertiary qualification, as opposed to the households in Sinawo (44% and 6%), Ntywenka (34% and 6%), and Mkhambathi (34% and 5%), respectively. There was a significant relationship between household responses in terms of the overall educational level ($p<0.001$).

Table 5.9: Proportions (%) of the socioeconomic characteristics of households in the study communities

Categories	Proportions (%) of household respondents per project				Inferential Statistics		
	Mkhambathi N=100	Sinawo N=100	Ntywenka N=100	Mabandla N=100	X^2	df	p-Value
Age							
18-35	31	16	1	9	53.192	6	0.000*
36-59	19	30	53	34			
60 and above	50	54	46	57			
Gender							
Male	53	47	69	64	12.449	3	0.006*
Female	47	53	31	36			
Marital Status							
Married	63	60	81	86	33.110	6	0.000*
Widow/Widower	19	27	17	7			
Single	18	13	2	7			
Education Level							

No Education	30	8	16	1			
Primary Education	31	42	44	36			
Secondary Education	34	44	34	52	45.242	9	0.000*
Tertiary Education	5	6	6	11			

* signifies a significant difference at the 0.05 level

Table 5.10 reveals that there were more households (a total of 46.1%) earning a monthly income of between R500.00 to R2000.00 than any other category in the study. Secondly, the category of households earning no monthly income followed as the second highest with a total of 26.5%. Table 5.10 also shows that the household monthly income profile in this study in the category, R500.00 to R2000.00, dominated over that for any other monthly income category. On the other hand, the Mkhambathi project proved to be an exception to the rule, as presented in the above statement, showing its dominance in its 33% figure of households earning no monthly income as opposed to the 29.3% in Ntywenka, the 28% in Sinawo, and the 17% in Mbandla.

Furthermore, Table 5.10 also shows that there were more females (43.1% and 17.4%) falling into the category earning a household monthly income of less than R500.00 to R2000.00 and between R2000.00 and R5000.00, respectively, as compared to the other categories, where the males were dominant. For example, the category representing households earning no monthly income (35.2%) proved to be the highest, for the males. It was followed by the category representing more than R5000.00 (9.0%); and lastly, the category representing less than a R500.00 monthly income (0.4%). The study revealed that there were more households where females (43.1%) or males (39.9%) received a monthly income of between R500.00 and R2000.00. In fact, this category includes those receiving social grants as their source of income. In addition, Table 5.10 revealed that there were more males (35.2%) to females (32.9%) earning no monthly income. This means that there are more males who are not working as compared to females. There was a significant relationship ($p=0.545$) between household responses regarding monthly income distribution and gender in the study.

Table 5. 10: Household monthly income from various sources

	Proportion (%) of household monthly income categories					Inferential Statistics			
	Less than R500	R500 - R2000	R2000- R5000	More than R5000	No monthly income	Total %	χ^2	df	p-Value
Projects									
Mkhambathi	1.0	46.0	16.0	4.0	33.0	100.0	16.054 ^a	12	0.189
Sinawo	2.0	44.0	17.0	9.0	28.0	100.0			
Ntywenka	0.0	44.8	20.7	5.2	29.3	100.0			
Mabandla	0.0	49.0	20.0	14.0	17.0	100.0			
Total	0.8	46.1	18.2	8.4	26.5	100.0			
Gender									
Male	0.4	39.9	15.5	9.0	35.2	100.0	3.075 ^a	4	0.545
Female	1.2	43.1	17.4	5.4	32.9	100.0			
Age									
18-35 years	0.0	15.8	10.5	7.0	66.7	100.0	153.757 ^a	8	0.000*
36-59 years	0.9	16.2	28.8	18.9	35.1	100.0			
60 and above	1.1	72.6	14.2	2.6	9.5	100.0			
Total	0.8	46.1	18.2	8.4	26.5	100.0			

* signifies a significant relationship at the 0.05 level

Table 5.10 further shows that household participants (72.6%) in the study who were 60 years and above received an income of between R500.00 and R2000.00 more than the 66.7% of 18 - 35 years of age who received no monthly income at all. Furthermore, 35.1% of the household heads aged 36 - 59 years also received no monthly income. There was a significant relationship ($p < 0.001$) between household responses regarding monthly income distribution *versus* age in the study.

5.7 DISCUSSION ON COMMUNITY PARTICIPATION AND EMPOWERMENT

5.7.1 Community participation and empowerment

Community participation is a major aspect of community empowerment. High or low levels of community participation will determine the success of a programme and activity (Anisykurlillah et al., 2019). For example, according to Anisykurlillah et al. (2019), participation in the development of private forests in the Malang Regency plantations in Indonesia is still low. This is similar to the results of this study. As indicated in Table 5.7, participation of communities across all four projects was extremely low.

In the context of this study, empowerment is taken as a process whereby individuals or the community acquire new skills and knowledge that will allow them to take greater control of their own destiny (Guy, 1994). Community empowerment has strengthened only slightly in recent years. Yet, there is strong evidence that it is the most effective approach for sustaining both human livelihoods and the forests themselves, and the ways in which it could now be greatly strengthened are increasingly clear and proven (Anisykurlillah et al., 2019). The time has now come for concerted support for community forest organisations. According to Drijver and Sajise (1993), an assessment of a community forestry-based project in terms of community involvement and whether it really uses the community empowerment approach, can be assessed from the following elements or principles: a) participation; b) use of the bottom-up approach; c) conservation and sustainable use; d) linkages; e) incentive packages. The participation principle reveals that beneficiaries should be the main actors in identifying issues that affect them (Mazibuko, 2013; Valdés-Rodríguez and Pérez-Vázquez, 2011); and they should participate by challenging the accountability of the relevant institutions because such institutions should be responding to the necessities of the community members. Mazibuko (2013) states that community members are empowered when change is amplified by voice; they are then given opportunities and the assurance of their wellbeing.

Principle linkages in empowerment are very important and are evident from the prevailing policies and strategies at the local, regional, and national levels (Drijver and Sajise, 1993). In South Africa, the remaining land still suitable for afforestation is very limited. According to Clarke (2018) and the DAFF (2011), the land that is suitable for afforestation is anything between 100 000 and 150 000 ha compared to the almost 17 million ha of arable land and the 84 million ha of grazing land in the country. This limited resource can make a meaningful contribution to the economic development and growth of the country, especially in the rural areas, where most of the poor are currently located. For this reason, it is necessary to secure the high-potential forestry land by earmarking it for forestry purposes. Government needs to ensure that there is zoning of the land with the potential for forestry in terms of the National Spatial Development Perspective (NSDP), the Provincial Growth and Development Programme (PGDS) and the Integrated Development Plans (IDPs). As provided for in

the IDPs, municipalities need to provide the detailed spatial development frameworks (SDFs) for project identification to ensure that projects fit into their SDFs. This includes the responsibility of the district municipality to ensure that the projects identified fit into the area-based land reform plans since the district municipalities have a key role to play in facilitating access to community structures during the initiation of afforestation projects. Local and district municipalities need to clarify amongst themselves who should be doing what.

It is therefore imperative to look at the role of the Sustainable Livelihoods Approach (SLA) in poverty reduction in more detail, and as presented in Chapter one, to ensure that the context of the study is dominated by poverty. The SLA as a framework used in poverty reduction strategies within communities works in line with the community development principles as enshrined in Swanepoel and De Beer (1997). The principle of empowerment specifies that people contribute because it is their autonomous right to do so. For this principle, participation is the natural result of empowerment. This means that for people to participate, especially the needy and the vulnerable, there is a need for them to first be empowered so that they will be able to participate.

Through participation, the SLA allows people to move out of the poverty cycle, by using their capital and responding to what they need for their development (Mazibuko, 2013; Valdés-Rodríguez and Pérez-Vázquez, 2011). Partnerships are expected to assist in building local decision-making and management capacities, as well as in increasing the technical skills levels of the role-players. Empowerment of this kind should have multiplier effects in terms of increasing the capacity of local residents to make more productive and efficient use of their resources and to diversify into new livelihood activities (Andrew et al., 2000). Out-grower schemes, especially company-community partnerships as sustainable livelihood strategies when implemented according to community empowerment principles, are significant in addressing poverty situations in households. This is because out-grower schemes are not only limited in dealing with an individual, but also communities, and in sustaining the human, social, financial, and physical forms of capital of the members, as well as of the community (Raniga, 2016; Valdés-Rodríguez and Pérez-Vázquez, 2011).

Empowerment is defined as the process by which communities become more capable and confident in pursuing what they value, including commercial rights over forests, and claiming authority over them. The core of the community forest development programme, based on community empowerment, is as such one of building capacity. In the study, the community participation and post-settlement support components were limited. According to Pujo et al. (2018, cited in Anisykurlillah et al., 2019) to achieve success in capacity building requires the participation of local communities in forest management activities and in the sharing of responsibilities in forest management. Success in forestry development can be achieved by building capacity. According to the New York Declaration on Forest (NYDF) Assessment Partners and the IIED report (2019), local communities and rural people are often the forest's best custodians because they live with the impacts of their forest-related decisions. Since remoteness from authority figures or institutions brings vulnerability, communities seek greater empowerment in order to gain or regain authority, to develop their technical and business skills and to secure markets to sustainably manage forest goods and services. The local community must be involved in deciding which activities to develop in order to achieve a proper forest management system (in economic terms), that in its turn would require them to adapt socially, and to be environmentally friendly.

The forestry extension services are also among the most important activities for community development forestry. The Malang Regency plantation, still viewed as a challenge, has been constrained by the limited number of field extension workers (Anisykurlillah et al., 2019) and is in line with the findings of this study, namely that the strategic partner managers were the only parties assisting the communities in the technical skills of forest development and management, and in so doing, acting as the extension officers. Furthermore, there was no assistance from the government, neither from DALRRD, nor from the DFFE. Overall, there has been little advancement in community empowerment in the rural areas (Anisykurlillah et al. (2019).

The participation, perceptions, and attitudes of the households towards these community forest projects as a land-use activity were assessed through interviews and focus group discussions. The main aim was to determine whether the community regards the forest plantation as an important form of land use and that the creation of forestry jobs in their area, could take them out of poverty. As the results indicated,

80% of the households believe that tree planting is a good development initiative which would generate incomes for their households (Table 5.8). Thus, it can be said that a good form of land use can raise people out of poverty.

The section below also looks at the involvement of women in company-community out-grower schemes and forest plantation management. This section was included to clarify the participatory role and experiences of women in these communal forest projects.

5.7.2 Participation of women in the community projects

In rural areas, particularly in developing countries such as South Africa, women play a key role in running households and contributing to agriculture and forest production, etc. However, the inequalities that exist in society make it difficult for them to fulfil their potential (International Fund for Agricultural Development (IFAD), 2011). According to the IFAD (2011), when women are economically and socially empowered, they are likely to become “a potent force for change”. The rate of unemployment amongst women in South Africa is higher than that amongst men, with women twice as likely to be unemployed than men (Statistics SA, 2012). The issue of gender equity in decision-making is as important as the need to speed up the processes that have the potential to ensure that sustained forestry development is realised in rural areas. As indicated in Table 5.9, the growing number of women-headed households means that women have become the sole bread winners and thus need to be included as role players in formulating livelihood strategies. Thus, the inclusion of women through the focus group discussions and the gender quota in the sampling in this study ensured that there was a fair representation of both men and women. (This is also demonstrated in Table 5.9).

The findings of this study emanating from both the household interviews and the focus group discussions (i.e., the women and mixed focus group discussions) revealed that educating a girl in the rural areas has not been a priority in the past; the main objective was merely to prepare a girl for household chores.

As in many other sectors, the study also revealed that women are more likely to be employed in lower paid jobs, with the ratio of men to women workers increasing with

job status. This is in line with the study by James (2005), who found that less than one percent (1%) of the chainsaw operators were women, while there were no female machine operators whatsoever. Although, overall, James's (2005) study revealed that there are significantly more men than women employed in community projects, women tend to dominate in certain types of work, such as bark stripping, log marking, silvicultural work, and firefighting. This is the situation in this study, across all projects, and in line with James's (2005) study. James (2005) further indicated that men would appear to dominate in the 'better' jobs; those that are better paid, more secure, and less arduous, as evidenced by the following:

- A survey of forestry contractors found that higher paid jobs, including drivers, machine operators, chainsaw operators and supervisors, are virtually totally dominated by men, whereas the lower paid jobs, such as general silviculture work and bark stripping, are dominated by women.
- The job with the largest percentage of women workers, according to the survey conducted by James (2005), is bark stripping. This work is particularly unpleasant and uncomfortable, requiring a stooped position for the duration of a shift.

The above-mentioned facts by James (2005) are consistent with the findings of this research, where women in all four projects indicated that they are involved in bark stripping, slashing, the making of fire breaks, pitting, marking, and chemical weeding. Furthermore, in all these projects women were found to prefer slashing to any other jobs indicated above.

During the women's focus discussions across all the projects, the observation was that it was only those working on these projects who were wanting the forest to be extended, since forest plantations are their source of employment. This statement indicates that the expectation that afforestation can contribute to poverty reduction and sustainable community development was rejected by most of the participants in the study.

The findings of this study are further supported by the Forestry Charter (DWAF, 2008), the aims of which are: to achieve sustainable change in the racial and gender

composition in the ownership, management and control structures of the forests and in the skilled positions incorporated into the existing and new forest enterprises; to increase the extent to which black women and men, workers, cooperatives, and other collective enterprises own and manage the existing and new forest enterprises; and to increase their access to economic activities, infrastructures and skills training; to nurture new black-owned and/or black-managed enterprises and to encourage them to undertake new forms of economic and value–adding activities in the forest sector. The Forestry Charter (DWAF, 2008) proposes to use the forest industry as a catalyst for empowering rural and local black communities to access economic activities, land, infrastructure, ownership, and skills.

The literature in support of this study further indicates the way in which the empowerment of women is decided by the activities which are adopted by them to respond to their vulnerabilities. Furthermore, these literature sources also elucidate the manner in which women direct their involvement in order to secure a livelihood that is sustainable in terms of the available forms of capital within the community (financial, social, human, natural and physical) that they have access to (Hategekimana, 2011).

5.7.3 Inclusion of women in the study communities

One of the important issues relating to the inclusion of women in the study through focus group discussions was to determine whether there were any women involved in these community forest plantations and to assess whether their numbers were increasing or not. Most of the women participants in the focus discussions across all four projects pointed out some reasons that made them participate in these community forest projects. They explained that in the light of their not having had access to schooling, they were participating in the forestry projects as general workers since general labourers are accepted in the forestry sector. The women participants in all focus group discussions further mentioned the reasons for having no education as follows:

“When you were a girl in the past, parents will be saying that: ‘there is no need to send a girl into a school because she will get married and look after her home. She is not

supposed to work and look for a job. It's the man who is supposed to be educated because he is the provider of the family. In fact, to send a girl to school, you are teaching a girl to be a crook".

Women across all four projects in the focus group discussions further mentioned that to have a Standard 2, which is a Grade 4, at that time, was enough for a girl, because her parents would say: *'You have [been] educated enough; now you can write a letter to your husband and be able to read what your husband has written'.*

The other important factor was to determine what types of jobs women are involved in as opposed to those held by men. The issue of the involvement of women in forest plantation work was assessed through the following question: Is the number of women working in this plantation increasing? (Appendix D). The response was that across all projects, the problem is that *"women get employed but later they 'run away'",* citing that it is *'difficult to work in forest plantations'.* The researcher asked a follow-up question: *"Who normally runs away mostly from the job? Is it the women or the men?"* The response was: *"It doesn't matter what the age or gender is; everyone, including the young and old, men and women, 'run away' from working in the forest plantations".* According to women across all focus group discussions, *"Most people working in these plantations who leave, [run away]' from their jobs or from employment, not because they are fired; it's due to the difficulties they found in working in the forest plantations".* One woman in the women's focus group discussion in Mkhambathi said that when she meets people that she was previously working with, they will ask her: *"Are you still working in that difficult job in the forest plantation? You will die there, where there is too much work and where you bend all day long".*

In the case of the division of labour, all the women in the focus group discussions indicated that in all of the projects, there are no activities that are meant for men or women only. Everyone does the same task. However, in all projects, the women indicated that they are more involved as women at a lower level of employment. In all four of the projects, the women indicated that they are involved in bark stripping, slashing, making fire breaks, pitting, marking, and chemical weeding. Furthermore, as indicated above, they prefer slashing to any other job.

The other important issue raised by the women in the focus group discussions in this study was their assessment as to whether there were any challenges that were gender specific. Most of the women indicated that the forest is the site of crime and is the reason for the reduction in the grazing land for livestock. For example, in the Mkhambathi and Sinawo projects, the women indicated that in some areas the plantations were too close to their homesteads. According to the women in two of the projects, this was a torment to them as they had to be on guard for fear of being attacked by the men in these plantations. Women further added that the community is against forestry plantations because of the competition for land use. According to the women in Mkhambathi and Sinawo, people who own livestock are anti forest plantations; they even vandalise plantations and uproot the seedlings. Women in these two projects further proposed that this vandalism should be stopped and suggested that there should be security guards to look after the livestock grazing in these plantations and to prevent the crooks from vandalising and stealing the immature trees.

Lastly, with regard to the sustainability of the community projects, the inclusion of women in the study through the focus group discussions served to determine the level of acceptance and involvement that the community members in the communal forest projects were taking on. As a result, a question such as: *'Do you think the community wants this plantation to be expanded'?* was asked during the women's focus group discussions. Most of the women indicated that the community members by no means want forestry plantations in their areas. For instance, the women in Mkhambathi indicated that they are usually chased away by community members, especially livestock owners, who are against the plantations. This is not something that happens once, but continuously, with the result that the community members are completely disrupted in their work in the plantation. According to Chirwa et al., (2015) women that are given more participation opportunities can translate this benefit into an improvement in their economic freedom.

The researcher also then followed up on this action with the following question: *What is the reason for the refusal of the community to extend the plantation?* According to the women across all the projects, those community members who were against the plantations were known to claim that the 'open lands' in their areas, that were lying

fallow and not being used for land-use types, such as agriculture, settlement, or afforestation, were not meant for plantations, but should instead be reserved for livestock grazing. The women were then asked which projects they prefer other than tree planting. They indicated their preference for the planting of cabbages, potatoes, pumpkins, and maize rather than forestry. This statement is echoed in the findings of this study, as presented in Table 5.4.

5.7.4 Youth involvement in the study communities

This section talks about the views and concerns that the youth in the focus group discussions across all four projects mostly hold in common. The world is faced with an extraordinary level of youth unemployment, a notable level of movement of people from one nation to another; and the domination of casual and short-term employment (Roelants et al., 2014). Although unemployment is rife in all the project areas, the youth working in the plantations complain that they are not earning enough from these forest projects. They mentioned that as workers in these plantations, they are living from the hand to the mouth. Given their current exorbitant lifestyle, young people are not interested in working in forest plantations — not even those that are complaining about not having permanent contracts and the fact that they are not given a chance to express their views concerning the planning and implementation of the developments affecting them.

The above-mentioned statement is in line with what the participants (youth) advanced by giving a variety of reasons for what they believe to be the cause of youth apathy when it comes to participating in community development projects. The study revealed that one of the concerns of the youth in all four projects is that: they are never able to air their views. The reason behind this issue that they brought up in the focus group discussions is that it would not make any difference. In fact, according to the youth in the study, they had learnt that whatever the suggestions might be that they put forth during their informal discussions with community representatives and strategic partners, they would be ignored. As a result, they have stopped making any suggestions during meetings with the forestry committees or strategic partners. They further mentioned that these committees are meant for “old” people and not for younger ones. This is in line with what Robson et al. (2019) indicated, namely, that

young people talk about limited opportunities for sharing their ideas (with others in the community), and raise their doubts and concerns that for them, as youth, opportunities are particularly limited. Robson et al. (2019) further mentioned that younger youth (25 years and under, including female youth of all ages) highlighted that older youth (26 – 35 years old) are more likely to be listened to during assemblies or community meetings.

The Department of National Treasury (2011) indicated that one of the reasons for the unemployment of the youth is that education is not a substitute for skills. This confirms what the youth across all projects in the study mentioned, namely, that unemployed young people with a better education find it difficult to work in the forest plantations doing manual work alongside other manual workers who have had no schooling. They feel stigmatized by doing such jobs.

Despite the concerns mentioned above, most of the youth participating in this study valued the forests and forest activities, but a few, especially those from the Mabandla project, made it clear that they see the forest sector as an obvious livelihood opportunity (Mora, 2022). The youth from the Mabandla project were happier than any other of the youth in these projects (i.e., Mkhambathi, Sinawo, and Ntywenka). They cited several bursary holders who had been assisted by the project in obtaining a bursary to study forestry and related courses in tertiary education. One of the young women in Mabandla proudly said: *“I got a chance to go and study marketing at Nelson Mandela University through a bursary that was organised by the Mabandla Project. I am now an assistant manager at a sawmill here in the Umgano project”*.

Lastly, the legacy of apartheid, which encourages a culture of dependence that is entrenched in the rural communities (Williams, 2006), where people wait to be provided with “something”, cannot be ignored. Young people believe that their situation will change, but without their own intervention, this is unlikely. They believe that “something” will fall from the sky and change their circumstances.

5.8 GOVERNANCE IN THE STUDY COMMUNITIES

5.8.1 Status of conflict among stakeholders in the study communities

Table 5.11 presents the results on the status of conflict among the stakeholders (i.e., community or beneficiaries; community forestry managers; strategic partners, and government) in the study communities. The chi-square results ($\chi^2= 294.360$; $df= 6$; $p= 0.001$) revealed that statistically there was a relationship between the responses of the respondents in the study communities regarding the conflict with the stakeholders in the community projects. It was only in Ntywenka (0.0%) where households felt that there were no conflicts at the time of the research, but perceived that during the harvesting stage, when trees reach maturity, there would be conflicts among the beneficiaries and between the beneficiaries and the strategic partners. In other projects, such as Sinawo (100%), households felt that there was conflict among the beneficiaries, followed by Mkhambathi with 88%, where the conflict was between the land claimants and the Trust. In the Mabandla project, only 35.8% of the household respondents felt that there was conflict in the project between the beneficiaries and the forestry management. Furthermore, the household heads provided three main solutions as to how to resolve the conflicts in their projects, namely, transparency, accountability, and adherence to the constitution of the project or to the promises made (Table 5.12).

Table 5.11: Proportion (%) of household respondents concerning conflict with stakeholders in their community projects

Projects	Responses per study community (N = 400)			Inferential Statistics		
	Agree	Disagree	Neither agree nor disagree	χ^2	Df	p-value
Mkhambathi	88.0	12.0	0.0	294.360	6	0.000*
Sinawo	100.0	0.0	0.0			
Ntywenka	0.0	17.3	82.7			
Mabandla	35.8	27.4	36.8			

*signifies a significant difference at the 0.05 level

Table 5.12 shows that in Mkhambathi, 83%, 11%, and 6% of households felt that transparency, accountability, and adherence to the constitution, respectively, were

very important in their forest project. On the other hand, in Sinawo, 100% of the households felt that transparency was the only important tool for avoiding conflict in their project, followed by Ntywenka with 98% and two percent (2%) on adherence to the constitution or sticking to the promises made and accountability, respectively. In Mabandla, there was some sort of balance in coming up with the solutions to resolve the conflict in their project, with 42.5% adherence to the constitution, 32.2% transparency, and 25.3% accountability. The chi-square results ($X^2 = 318.499$; $df = 6$; $p = 0.001$) revealed that statistically there was a relationship between the responses of the respondents in the study communities regarding solutions to manage conflicts in the community projects.

Table 5.12: Solutions on what should be done to manage the conflicts in communal forest projects

Projects	Proportion (%) of suggested solutions per study community (N=400)			Inferential Statistics		
	Transparency	Accountability	Adherence to the constitution	X^2	df	p-value
Mkhambathi	83.0	11.0	6.0			
Sinawo	100.0	0.0	0.0	318.499	6	0.000*
Ntywenka	0.0	2.0	98.0			
Mabandla	32.2	25.3	42.5			

* signifies a significant difference at the 0.05 level

5.9 DISCUSSION ON GOVERNANCE

Chapter two on the literature review of this study covers a wide variety of aspects on participatory or people-centred development, rural development, and its relevance in the South African context. The literature reflects that the participatory development approach involves the active participation and involvement of people in development projects. Participation means that people become part of the decision-making processes (Roodt, 1996). People should feel themselves to be the owners and enjoy the fruits of their projects. This means that people should be involved from the planning up to the implementation phase. Therefore, it is clear that everyone in the community

needs to be involved, represented, consulted, and informed, and their interests considered.

In the company-community outgrower scheme, the relationship (i.e., in a form of a trust, and transparency) between the strategic partner and the community is very important. This is because the community believe that the strategic partner will assist at each stage of the entire process of forestry development, charge fair prices, and pay fair prices for the timber. On the other hand, the strategic partner trusts that the growers will look after the trees and deliver the timber to them when it is ready (Guy, 1994). Therefore, regarding the ownership of the land and the management of the enterprise or business venture, it should be noted that an enterprise cannot be run by groups of people. Thus, communities need to assign the responsibility of managing a business to competent professionals. A clear distinction needs to be drawn between community members as shareholders in the business because of their ownership of the land, and the responsibility of the board members (elected by the shareholders) in overseeing the business operations and the responsibility of the managers and staff in operating the business. Organisational structures need to be put in place that separate these functions and can source the required expertise and finance to establish and operate the business. A common structure that should be established and used in this regard is the Common Property Association (CPA) or Community Trust (CT) that owns the land and establishes a separate business entity (or entities) in which the CPA/CT is the sole shareholder (or a major shareholder in the case of a joint venture with a strategic partner) to establish the business (Upfold et al. (2015).

Common Property Associations (CPAs) are landholding institutions that were established under the Communal Property Associations Act No. 28 of 1996. CPAs were created for groups who needed to organise themselves as legal bodies to be able to receive title deeds to land under the restitution and redistribution programmes (Hall and Kepe 2017; Weinberg and Cousins, 2014). Community development committees, such as CPAs, CTs and forestry committees, need to be formed to act as liaison bodies and mouthpieces between the people and the traditional chiefs, strategic partners, government, and even the local municipalities involved in that particular project. Across all four projects, there is either a CPA, CT or forestry committee which is the liaison factor and mouthpiece of the community to foster

relations between the community and the strategic partners and government. Most of the South African cases (tourism development at Makuleke, Dwesa Cwebe, Mdluli and others, community holdings in the Hans Merensky consortium, and others) rely on CPAs, CTs, or other institutions to receive and exploit the ensuing benefits, and thus have clear potential for capturing the elite tourist. On the other hand, in other countries, it is the leaders or allies of an investor that capture the benefits. For example, at Vilanculos, the chiefs are already benefiting, but in Zimbabwe, on the resettled land, it is the elite who are taking up new wildlife investment opportunities (Ashley and Wolmer, 2003).

Community representatives (CPAs/ CTs or forestry management committee members) tend to make false promises to beneficiary communities which results in community development projects that are not established or completed (Mkhize, 2020; DWAF, 2005). This often results in frustrations within communities causing some community members to burn down forestry plantations or encroach on them by constructing their homesteads next to or within the forests (Mkhize, 2020; Mamba, 2013; Mayers and Vermeulen, 2002). The study conducted by Mamba (2013) revealed that company-community conflicts are the main reason why an estimated 30% of land claimants opt for compensation rather than for proposed settlement models that would allow them to become involved in forestry. In fact, as an easy way out, most land beneficiaries or communities prefer compensation in the form of a monetary payment, which is more convenient than to own land and the means to the quick settlement of a land claim (Mkhize, 2020; Mamba, 2013; Lahiff, 2008, De Villiers, 2003).

Anseeuw and Mathebula (2008) observed that the main challenge in land reform projects is largely the poor governance skills demonstrated by the CPA committee members and/or trustees, coupled with a lack of transparency on the use of the benefits accumulated from the partnership agreement. This statement is supported by Tshidzumba et al. (2018b), who indicated that both communities from Amabomvini and Cata linked the failure to achieve equitable benefit-sharing among the beneficiaries with a lack of transparency, trust, financial management skills, and a clearly defined benefit-sharing approach, as well as excessive greed.

During the focus group discussion across all four projects, the study revealed that communities felt that the management of the forest plantation by the community through a CPA/CT does not have any potential in achieving socio-economic sustainability. For example, specifically in the Sinawo project, the community indicated that the CPA leadership had not been calling meetings (or acting according to the CPA constitution requirements) for some months. Secondly, CPA records in some cases were not easily accessible to the CPA members on account of the absenteeism of some of the CPA leaders. In other study projects, such as Mabandla and Mkhambathi, the main issues were the lack of transparency on how these enterprises are run (e.g., the amount of profit made over the harvesting period); general inexperience and a lack of understanding as to how associations or trusts work; and suspicions of corruption by CPAs/CTS and or community forestry managers).

The above-mentioned issues concerning the findings of this study are in line with what Anseeuw and Mathebula (2008) postulated, namely, that there are a number of factors which contribute to conflicts among stakeholders, as well as to the disappointing outcomes of land reform projects, including weak administration, extreme delays in implementing projects, the collapse of projects, the powerlessness felt by members, and the lack of adaptability in the provision of services to these projects.

According to Mkhize (2020), rural areas are characterised by inequalities in terms of the power dynamics within the communities. Rural communities usually have a traditional leader system, which consists of the chief, headmen/izinduna, and council members (Mkhize, 2020; Cobbinah, 2015). The chief/induna is the most powerful individual of that tribe; she/he is the final decision-maker on issues that concern the community (Mkhize, 2020). In most cases, the traditional leadership system has been regarded as one of the causes of conflict between community members and their local chiefs, especially in projects that are related to land reform (Mkhize, 2020; Claassens, 2014).

One of the issues related to the above statement is that in most cases, chiefs will make decisions about the land without informing the community. In fact, there are numerous incidents of corruption and abuse of power within the traditional leader system arising from this tradition (Mkhize, 2020; Claassens, 2014; Cobbinah, 2015). In contradiction

of the above statement and this study generally, the study communities were found to be happy with their chiefs and were informed and involved in the implementation of the forestry projects in their areas. For example, the participants in the focus group discussion in the Ntywenka project community were happy that the late Chief Mathandela had brought forestry development to the area. The community also added that it was not only the forestry development project that the late Chief Mathandela had assisted in. According to the community, there were several projects where the chief had assisted the community members in securing jobs in projects and programmes such as the Working for Water Programme, etc. In other study projects, such as the Sinawo and Mkhambathi projects, the chiefs or traditional leaders were not involved at all. Similar reasons from both these projects were cited, namely, that their families were not involved in the forceful removals that had taken place over the previous years.

In this study, there were some suggestions from the community forestry managers regarding the above-mentioned governance-related issues, highlighted above during their interviews and how they had dealt with them. The suggestions are presented as follows:

The first suggestion was on the failure of the government to assist in these projects. According to the community forestry managers across all projects, the government should monitor these projects directly, on a quarterly basis, as meetings are held on a quarterly basis with the CPAs/CTs. An official should be appointed to take responsibility to monitor the running of the business; to explain the challenges facing the leadership; and to come up with a strategy as to how to assist the CPAs/CTs in facing their challenges (Weinberg and Cousins, 2014). Secondly, the role of the Department of Agriculture, Land Reform and Rural Development (DALRRD) should be to inform the community about the election of members to the CPAs/CTs and to highlight the challenges which had emerged during the previous elections and what the current challenges are, if any; to pinpoint those who have the right to vote and those who have the right to be voted onto the committee; and lastly, to appoint those who are responsible for informing the community that there should be elections.

Other suggestions were from the households, which appointed themselves as beneficiaries, and highlighted the fact that they needed to be given a chance to know more about the forestry industry. According to the households, the challenge currently is that only those who are working on the plantations are trained in forestry management. As beneficiaries, the households expressed their concern that should the strategic partners leave office and the project be handed over to new appointees, it would be difficult for the few to immediately gather the information and knowledge to manage these plantations efficiently. The beneficiaries felt that they should be given the opportunity to learn more about the forestry industry so that the transition to community ownership would be smooth and the partnership with the forestry company would be on good terms.

The other governance issue highlighted in the study is the overall performance of administrative, financial management and coordination by CPAs/CTs across all four projects – which has not been optimal. Even the performance coordination process, which requires that the strategic partner managers and community project managers inform the members of the community about the financial aspects of the projects has also not been optimal across all four projects. Strategic partner managers are more focused on the technical aspects than on other issues (e.g., the maturity date for the plantation and the expected dividend amounts per household). Such information, provided by the strategic partners, is only for the community forestry managers or the CPA/CT members and not the entire community.

Cousins (2020); Puckett (2018) and Barry (2011) linked up the challenges associated with the CPAs/CTs as related to the ‘silo approach’ that government applies in dealing with the land reform projects and the manner in which these projects are established. Clearly, they lack commitment to see the land reform project through to the end. The researcher supports the recommendations made by Tshidzumba et al. (2018b) that in order to avoid conflicts issuing from poor governance, either through the dereliction of duties by the CPAs/CTs and/or the community forestry managers, the government would have to take the lead and make sure that the monitoring and evaluation of the CPAs and CTs are prioritised. This would ensure that the benefits would trickle down equitably to all the beneficiaries. The communities need considerable assistance in setting up such structures (i.e., CPAs/CTs, etc.), and these are not always available.

The capacity of the DALRRD to assist is very limited and stretched to capacity, and the availability of these services from other sources depends on the availability of the implementing agents, donor funding and/or company willingness (Andrew et al., 2000).

5.10 SUSTAINABILITY AND RISKS

5.10.1 Potential areas of forest plantation for expansion in the study projects

The results of the study also revealed through direct observation that there are potential areas and temporarily unplanted areas (TUPs) in the study areas to accommodate the expansion of afforestation across all four projects. Community members in the group discussions and forestry managers and strategic partner managers across all four projects mentioned and identified these areas during the interviews that the researcher arranged with them, and also through direct observation.

Using secondary data as the tool for data collection, the results of the strategic plan (DAFF, 2016) document of the then Department of Agriculture, Forestry and Fisheries, revealed that there are several TUPs in its plantations (Table 5.13), especially in the Category B and C plantations. Table 5.13 reveals that in there are more Category B and C plantations (50 613.54ha) in the Eastern Cape Province, with 9.8% being TUPs. On the other hand, as compared to the Eastern Cape Province KwaZulu-Natal has Category Band C plantations that cover fewer hectares (46 558.69ha) but a higher percentage of TUPs (14.9%).

5.10.2 Alien Invasive Plants

In this study there were several hectares of alien invasive plants that were directly observed across all four projects. As opposed to the other two projects (i.e., Sinawo and Ntywenka), the Mkhambathi and Mabandla projects were the most seriously affected by alien invasive plants (Figures 5.2 and 5.3).

Table 5.13: Table showing plantation areas managed by DFFE

Province	Category (ha)	B Category (ha)	C Total Area (ha)	Temporarily unplanted areas (ha and %)
Eastern Cape	27 823.54	22 790.00	50 613.54	4 962.75 (9.8%)
KwaZulu-Natal	28 291.72	18 266.97	46 558.69	6 956.83 (14.9%)
Limpopo	3 922.61	2 627.94	6 550.55	68.93 (1.05%)
Mpumalanga	4 090.89	2 408.82	6 499.71	1 875.58 (28.9%)
Northwest	206.13	261.67	467.80	9.73 (2.1%)
TOTAL	65 960.39	47 955.81	113 916.20	16 863.51 (14.8%)

Source: DAFF (2016)

5.10.3 Water Jungle

Furthermore, direct observations as a form of data collection revealed that all four projects are infested by wattle. Compared to the other projects, however, Ntywenka was found through direct observation to be the project most seriously affected. In fact, 900ha or more of land was estimated to have been subjected to invasions by the alien wattle species (Figures 5.4 to 5.6). The large number of hectares of wattle jungle discovered across all four projects can be an indication that the planting of even more wattle forests/trees in many of the quaternary or sub-catchments in the study areas might significantly affect the stream flow.



Figure 5.2: Invasive Plants - *Caesalpinia decapetala* (Mysore Thorn) and *Solanum mauritianum* (Bugweed) at Mkhambathi
Source: Picture taken by Author, October (2020)



Figure 5.3: *Rubus cuneifolius* (American bramble) at Mabandla
Source: Picture taken by Author, October (2020)



Figure 5.4: Pockets of wattle jungle at Ntywenka, next to the Sixhotyeni plantation
Source: Picture taken by Author, December (2019)



Figure 5.5: Stems of wattle plants at eSidakeni (left) similar to those at Ngxaza (eMthezi) village, next to the Ntywenka project (right)
Source: Picture taken by author, December (2019)



Figure 5.6: Wattle jungle at Mbonisweni (background) and Ngxaza (Mtshezi) villages, next to the Ntywenka project (front)
Source: Picture taken by Author, December (2019)

5.11 DISCUSSION ON SUSTAINABILITY AND RISKS

Sustainability refers to the ability of an organisation to initiate projects/programmes that take into consideration the social, political, cultural, economic and environmental context, to ensure that projects continue to exist long after the change agents have left the scene of development (Clarke, 2018; Elliot, 1994). Gambe (2015) asserts that it is important to analyse any livelihood activity in relation to its ability to sustain the lives of the people over a period. The major challenge to growth and sustainable equity in the forest sector is the shortage of timber, which is not keeping up with the increase in the local demand for forest products. If this challenge is not addressed, the growth

and employment prospects and opportunities for transformation in the forestry sector will be seriously constrained (Winker and Marquard, 2011; Seidman, 2005).

Lewis (2018) reports that the timber resource base in lowveld plantations is becoming increasingly degraded. Because of uncontrolled coppicing and the ravage caused by fires, such areas have remained unplanted, and the spread of invasive alien species has taken place. In the study, strategic partner managers highlighted the incidence of veld or forest fires in all projects as one of the challenges. In the eyes of the strategic partner managers, fire has been reported in the study as one of the greatest risks to forest plantations. They evidently proposed the following: i) The risk of fire to the plantation would be reduced if the community members were to see the plantations as their assets, i.e., they would all stand to lose should a plantation burn down. ii) All community members should be properly trained in firefighting. Therefore, fire awareness and equipment in such projects will be needed.

Fire readiness is split into three categories, which rate the effectiveness of the fire breaks, fire equipment and staff to fight fires on the forestry. Veld and forest fires are a common feature of the South African landscape and an inevitable consequence of the country's fire-prone vegetation and its hot, dry climate. Unmanaged veld or forest fires are among the main contributors to economic, social, and environmental degradation in South Africa. What was highlighted by the strategic partner managers is in line with the views of some of the researchers (e.g., Stephenson et al., 2012; Forsyth et al., 2010) who claim that veld fires impact severely on the economy of the country. Veld fires account for job losses, the displacement of people, and the loss of habitat and biodiversity, to mention but a few. It can therefore be concluded that veld fires are generally amongst the greatest impediments to socio-economic development in the country.

According to Wingfield et al. (2008, 2011) and Hurley et al. (2016), there has recently been a dramatic rise in the number of insect pests and diseases threatening non-native trees worldwide, including those in Africa. These authors have also highlighted the vulnerability of sustainable forestry plantations in sub-Saharan Africa. The statements by these authors confirm what has been highlighted in their reports by the strategic partner managers in the study, namely, that pests and diseases have

increasingly emerged as a threat to the plantations. The strategic partner managers in all four projects reported that in recent times, the *Botryosphaeria*, which appears after climatic and environmental stresses, such as drought, frost or hail, has posed a problem in their forest plantations. Therefore, building local capacity, developing centres of excellence in the region, and connecting these effectively will be critical to ensuring the sustainability and growth of forest plantations in Africa (Hurley et al, 2017). In addition, through public-private partnership initiatives, such as the South African *Sirex* Control Programme, government has provided support in areas of forest protection (Upfold et al., 2015).

According to Mpekule (2020:123) “*water is life and vital for food production and [the] general wellbeing of the population. However, it is not just access to safe water that [is an indicator of poverty; it is also] the source of water used for domestic purposes – whether the water source is adequate; whether the same source of water can be used for all domestic purposes; the number of households that fetch water [from that particular source]; and the time that it takes to collect that water*”.

The components of the hydrological cycle (rainfall, evaporation, plant water use, infiltration, and runoff) in South Africa are showing significant geo-spatial and temporal variations. This is proving to be of major concern, particularly in terms of the use of water by alien invasive species¹², such as *Eucalyptus spp.*, *Pinus spp.* and the *Acacia* species. These species are posing a major problem in that they are limiting the availability of water within the South African catchment rivers. Being invasive, such alien species are easily able to establish themselves in natural or semi-natural ecosystems or habitats. As an agent of change, they threaten the indigenous biodiversity of the ecosystem that they invade (IUCN, 2000). According to Sharma (2008), this species can move about quite aggressively and take over resources such as light, nutrients, water, and space that of necessity would then harm the other indigenous species already ensconced in the habitat. In the context of the forest ecosystem, a typical invasive species is referred to as a forest Invasive species (FIS) (cited from Mkwalo, 2011).

¹² An alien species is a species, sub-species or member of a lower taxon that has been introduced beyond its normal distribution. Examples include the gametes, seeds, eggs, propagules, or any other part of such species that might survive and subsequently reproduce (GISP, 2008).

Although it was not in the scope of this thesis to assess what the impact of additional forest plantations in the study area would be, the challenge facing the researcher and in fact the various participants in this study was that a number of hectares of alien invasive plants were directly observed across all four projects. As opposed to the other two projects (i.e., Sinawo and Ntywenka), the Mkhambathi and Mabandla projects were the most seriously affected by alien invasive plants (Figures 5.2 and 5.3).

According to the FAO (1998), the lack of a natural source of fast-growing trees leads to the establishment of forestry plantations of alien species. In South Africa, these started up long ago, as early as the 19th Century. Plantations of alien trees, mainly *Pinus spp.* and *Eucalyptus spp.*, now cover a total of 1.52 million ha in South Africa. If invasive trees are not properly managed, they tend to spread very quickly, and to compete with the indigenous vegetation. They invade catchment areas where the water supply may not be sufficient even to support the indigenous vegetation already growing there. Affecting almost 10 million hectares (8.28%) of the country, and spreading rapidly, invasive alien plants pose a huge problem to South Africa. Their effect on the economy and the environment is considerable, and remedial action to counter their invasions comes at a high price. Furthermore, although not always obvious, they affect the lives of all South Africans, either directly or indirectly (Department of Water Affairs (DWA), 2011; Le Maitre *et al.*, 2002; Jordan, 1998).

Thus, the invasive alien species, including some that are used in forestry, are cause for concern. Several studies have confirmed that invasive plant species cause significant losses to the water reserves of a region through their high levels of evapotranspiration and their tendency for take up copious amounts of water. They also cause reductions in streamflow (Chamier *et al.*, 2012; Versfeld *et al.*, 1998; Le Maitre *et al.*, 2002). To add to the problem of assessing the amount of water used by indigenous and exotic species, uncertainties and technical difficulties then rise to the fore. These challenges include the following:

- A limited database to inform on the water consumption levels of different species (indigenous *versus* exotic);
- Challenges when extrapolating the water use model in different ecosystems;
- The lack of standardised or universal methodologies for estimating water use;

- Challenges when scaling-up the water use measurements of species for them to be representative of tree water use in the larger holistic ecosystem or biome; and
- A limited budget for forestry research.

A second factor that might be a challenge in the expansion of forest plantations in the study areas is the phenomenon of wattle infestations. According to Upfold et al. (2015), private grower co-operatives in South Africa have set up partnerships with small-scale timber growers and local communities to provide technical and financial support. Wattle is a very important tree species in some local cooperatives such as NCT. NCT, a local co-operative, relies on small-scale wattle growers for 11.5% of its wattle timber annually – valued at R14.2m. It is also critical for these growers to have the knowledge and skills to maintain and grow timber of a high quality (Upfold et al., 2015; NCT, 2012). NCT has developed Project Regeneration, which provides financial support for small-scale growers and is engaged in technology transfer initiatives such as providing training material and field days to support these growers (Upfold et al., 2015).

In the study, direct observations revealed that all four projects, especially in the Ntywenka plantation area, are infested by wattle (Figures 5.4 to 5.6). The large number of hectares of wattle jungle discovered across all four projects can be an indication that the planting of even more wattle forests/trees in many of the quaternary or sub-catchments in the study areas might significantly affect the stream flow. As such, it might not be an option to plant additional forests since there is the possibility that the amount of water to support forestry growth and to meet the current and future demands for timber, as well as the transformation targets in the catchment, is insufficient. This also means that the planting of any additional forests will make it difficult to manage or mitigate the impacts of low flow in those study areas. With no water available for new afforestation projects in the quaternary or sub-catchments already developed in the study areas, the result could be uncertainties around the water reserves¹³, which could in turn present yet another major bottleneck in the process.

¹³ “Reserve” means the quantity and quality of water required to satisfy basic human needs, to protect aquatic ecosystems and to secure ecologically sustainable development and the use of the relevant water resource (National Water Act (Act No. 36 of 1998)).

Based on the challenges discussed above, there is a need for further research into indigenous and invasive plant species and their copious use of water. More funding is also required to make this forestry research possible. Efficient and equitable allocations of water to stream flow reduction activities depend on the availability of accurate information gained from calculations to determine their likely effects on the amount of water to be allocated. Such data require consistent and accurate estimates of the details concerning reductions in stream flow and changes in flow regimes that would be expected to arise from each activity. These would include estimates of reductions in flow for the different seasons and during periods of low flow, as well as of high, low, and normal annual flows. What follows then is to estimate the reductions in flow relative to a selected baseline for the water resource in that catchment. Much work has already been carried out in quantifying the impacts of forest plantations by using the Water Resource Modelling Platform (WReMP) model. This model has been used to simulate the effects of afforestation on the water and those areas that could have the potential for forestry activities. According to Mkwalo (2011), the hydrological effect of afforestation on water flow depends on the percentage of afforested area in a catchment, the rotational period, the genera, and the availability of water. According to this same source, the disadvantage in using the models is that their degree of accuracy is not well known.

The results of the study also revealed through direct observation that there are potential areas and temporarily unplanted areas (TUPs) in the study areas to accommodate the expansion of afforestation across all four projects. Community members in the group discussions, forestry managers, and strategic partner managers across all four projects identified and mentioned these areas during the interviews that the researcher arranged with them. They were also identified through direct observation.

The opinions of the communities of the Mabandla and Ntywenka projects differed from those of the Sinawo and Mkhambathi projects in that the former were not opposed to the expansion of forest areas and not against planting more trees in the TUPs or the potential areas of afforestation. For example, at the Sinawo project there was enough suitable land (about 600ha), for afforestation that had been observed during the site visit to this area. This area (i.e., the estimated 600ha and more) suitable for

afforestation was confirmed in the interviews with the forestry manager, the forest expert, who was familiar with the area, and a strategic partner manager in this area. The challenge was that the sugarcane growers do not want to release this area for afforestation. A similar situation was evident in the Mkhambathi project, with areas suitable for afforestation, but where the community was not willing to accept any further afforestation initiatives. According to the forestry manager at the Mkhambathi project, the reasons attributed to the unwillingness of the community to further afforestation of the area were as follows: 1) the community highlighted the fact that the grazing land was not enough to sustain the livestock of the Mkhambathi project. The community even suggested that the currently unplanted areas should be left for livestock grazing; 2) According to the community of Mkhambathi, the currently unplanted areas had previously been used by the Transkei Agricultural Corporation (TRACOR) for the planting of sugarcane, cabbage, and potatoes. Hence, some of the community members proposed a continuation of the above-mentioned land-use activities and did not wish to promote afforestation.

According to the DAFF (2016), there are currently TUPs are in the government plantations. Table 5.13 indicates that the Department of Forestry, Fisheries and the Environment manages approximately 113 916.20 ha of such plantations which are categorised as B and C (DAFF, 2016). This is despite the call by the White Paper on Sustainable Forest Development (DWAFF, 1996) for the state to withdraw from the management of the plantations and to be a sector leader and the regulator of the industry. This call subsequently led to the commencement of the restructuring process in 2001 which identified three categories of plantations, namely, categories A, B and C, as defined in Chapter 2 of this study. In 2001, Category A plantations were privatised and grouped into five business packages. Four of the five business packages were sold to private companies (Siyahubeka, Singisi, MTO and Amathole), with the last package, Komatiland, still remaining with SAFCOL. The land is leased for 70 years (DFFE, 2020b).

Since the Category B plantations are small and medium sized and considered suitable for management by small to medium enterprises, they were left under the DFFE's management to be restructured as a second phase. The woodlots (Category C plantations), situated mainly in the former homelands, were considered to be

unsuitable for industrial management and were also left under DFFE management, to be subsequently transferred directly to the relevant communities (DAFF, 2016). Thus, Categories B and C are plantations that should be transferred to the communities and should serve to assist in job creation and in increasing timber production.

The 113 916.20 hectares, categorised as B and C plantations, are geographically spread across the provinces: – KwaZulu Natal, has 46 558.69 ha; Eastern Cape has 50 613.54 ha; Mpumalanga has 6 550.55 ha; Limpopo has 6 550.55 ha; and Northwest has 467.80 ha (Table 5.13) (DAFF, 2016). The Category B and C plantations are vast areas suitable for planting, but currently temporarily unplanted (TUPs). They are in fact classified as three percent (3%) above the industrial norms and standards.

Based on Table 5.13 above, it is clear that the DFFE plantations do not comply with the mandate, standards, and industrial norms of three percent (3%). The significantly large percentage accorded to the temporarily unplanted areas (TUPs) has impacted negatively on the long-term potential of the plantations. It is of major concern that the DFFE is lagging behind with the replanting of these areas as a result of its questionable financial capacity, the lack of labour, the challenges that it is facing in the procurement process; and the damage caused by fires in the plantations over the past 10 years. These challenges have all contributed to the very high percentages for TUPs (DFFE, 2020b). TUPs can be considered as a resource that can be exploited to counter the timber shortage that is threatening the country. A reduction in the area of temporarily unplanted state plantations is critical if sustainable forest management, so vital to the supply of timber in the country, is to be achieved (DAFF, 2016). Further discussion on this issue is presented in the conclusion and recommendations in Chapter 6.

5.12 CHAPTER SUMMARY

Because of the land reform programmes recently promulgated, the government of South Africa is about to transfer the ownership of forestry plantations to new owners who, in most cases, have little knowledge of operating forestry enterprises. This brings opportunities as well as challenges that must be addressed to ensure productivity and

the economic success of the new businesses, as well as sustainability to the sector as whole.

One of the central foci of this thesis was to discuss the impacts that commercial forest plantations have on rural communities in South Africa. As can be seen in the thesis, forestry has an impact on rural communities. During the apartheid era (as discussed in the literature review section), land was taken away from the rural community members for the purpose of planting forests. After apartheid, numerous projects were launched where rural communities worked together with strategic partners, and both parties benefited (Andrew et al., 2000). The study also revealed that with rural communities and strategic partners working together (i.e., company-community outgrower schemes), the future looks promising to both the poor members of the rural communities and the strategic partners of South Africa. The study further revealed that many job opportunities were created and communities' career opportunities were improved, while strategic partners had land to exploit for afforestation. Although the study revealed that in terms of career opportunities, strategic partners (i.e., SAPPI and ECRDA) could play a role the focus was rather on community forestry managers and the workers on these projects, and not to benefit the community members in the villages at large. The study also drew attention to the strategic partnership agreement – that it should be based on principles to enable and ensure best practice, sound governance, skills transfer, empowerment, and sustainability. Furthermore, it proposed that the strategic partners should not only provide training to those that are working on the plantations or as community forest managers; the entire body of community members should be involved and given assistance and support in finding ways of successfully managing these forest plantations. Moreover, the strategic partners should conduct a needs analysis investigation of the four projects to accurately determine the requirements of the communities.

Developing commercial forest plantations on a communal basis is a complex process that requires substantial support if such an initiative is to be turned into a real and sustainable small business development offering opportunities for black people. The study revealed that the participation of the communities and the empowerment of their members in the study areas are not optimal. The active participation by the previously disadvantaged is increasingly seen as an investment requirement, with some

international investors questioning the sustainability of the sectors of the economy which lack active participation by this group. The Transformation Charter for the forestry sector (DWAF, 2008) has opened the door for a concerted effort to create opportunities for broad-based black economic empowerment (B-BBEE) in the sector. The findings of this study are further supported by the Transformation Charter for the forestry sector (DWAF, 2008), the aims of which are as follows: to promote investment programmes that lead to sustainable broad-based black economic empowerment, the growth and development of the forest sector, and the meaningful participation of the black people in the entire forestry value chain; to achieve sustainable change in the racial and gender composition of the ownership, management and control structures, as well as in the skilled positions in the existing and new forest enterprises; to increase the extent to which black women and men, workers, cooperatives and other collective enterprises own and manage the existing and new forest enterprises, and are able to increase their access to economic activities, infrastructures and skills training; and to nurture new black-owned and/or black-managed enterprises in their quest to undertake new forms of economic and value-adding activities in the forestry sector.

The Transformation Charter for the forestry sector (DWAF, 2008) proposes to use the forest industry as a catalyst for empowering rural and local black communities to access economic activities, land, infrastructure, and to gain ownership and skills, thus promoting sustainable employment and contracting practices in the forestry sector. In turn, this industry needs to promote access to finance for broad-based black economic empowerment in the forest sector, equitable representation in industrial structures, and equitable access to forestry support systems. Lastly, it needs to provide an enabling environment for transparency, fairness, and consistency. As the study revealed, structures such as the CPAs/ CTs are very weak.

A key land reform challenge that the study revealed and that impacts on the small-scale forestry sector is that of providing 'post-settlement support' to land reform beneficiaries. The interviews with the households showed that they agreed that there was conflict among the stakeholders in three of the projects, namely, Sinawo (100%), Mkhambathi (88%), and Mbabandla (35.8%). No household from Ntywenka (0.00%) agreed that there was conflict in this project, although the perception was that during the harvesting stage, when trees have matured, conflict could be expected.

Community projects are plagued by conflicts and disputes between individuals or groups within the claimant communities.

Findings emanating from the interviews with the community forestry managers from the Mabandla, Sinawo and Mkhambathi projects indicated that the establishment and initial operating costs of the projects were financed from the land reform grants. The study also revealed that potential small-scale communal forest growers do not always have the necessary skills and knowledge to be classified as potential growers. The challenges indicated in this study of insufficient marketing and /or business skills and exposure; insufficient silvicultural knowledge and skills; and inexperience in looking after forest plantations and woodlots need to be addressed.

The issue is not that commercial forest plantations are a high-risk enterprise. The point is that communities and land reform beneficiaries must be made aware of both the risks and the potential profit to be made before they plant trees (Guy, 1994). The study further revealed that forestry does not only have positive impacts on rural communities in South Africa. There are also negative effects on the poor people living in these communities. The study highlighted that most households were concerned that their land had been taken away in the past but that once it had been returned, there was no full access to it. The study revealed the challenges that forest plantations are subjected to, namely fires, which are dangerous, and the fact too that exotic forests consume more clean water than indigenous forests. These facts were indicated in the interviews with the household members.

With the planting of any of the species, namely, *Eucalyptus spp.*, *Acacia spp* or *Pinus spp.*, impacts are to be expected in the consumption of water, as well as in the loss of biodiversity and habitats. The usual and preferred method to employ in order to mitigate the impact of afforestation would be to reduce the proportion of a catchment that is planted with trees and to keep the riparian or wetland areas free of trees.

The study revealed that the forest plantation in South Africa is a form of land use that replaces natural ecosystems and impacts on both the biodiversity and the water resources, in terms of streamflow. The forest plantation is also a source of exotic (alien) or invasive trees. Thus, it is important to garner primary data on the biodiversity

of a study area to support the quantitative decision models that determine the conservation priorities and targets. Because the conservation of the natural biodiversity of the environment is a form of expertise that should be shared among the different government departments, there is the necessity for co-operation and co-ordination among them. Because the forestry industry plays a vital role in the economy of the country, it is important for the current legislation pertaining to the effective management of the forestry industry in the country to ensure that the forestry sector remains a sustainable economic enterprise in South Africa. Thus, it is crucial that forestry should be managed effectively and efficiently in order to mitigate its negative impacts on water resources and the environment (e.g., the loss of biodiversity and of habitats).

There is evidence of serious wattle invasions across all the study areas, particularly in the areas surrounding the Ntywenka area (Figure 5.5 - 5.6). However, wattle jungle is not limited to the areas mentioned above. It also covers large areas of grassland, woodland, farmland and grazing veld, often providing a valuable resource (e.g., fuelwood) in the rural areas. This puts strain on the natural forests and vegetation which, in the light of the prevailing circumstances, are being harvested as alternative sources of fuel and timber.

The transferral of Category B and C plantations to communities and interested people in the communal areas and others with the necessary expertise should further be accompanied by funding for these projects, the business development of these plantations, and for ongoing maintenance of the forestry operations for them. For example, the forestry manager of the Mabandla project indicated that he and his team were assisted with funds in the start-up and implementation phases of the Mabandla project, but that these funds were limited and insufficient for the ongoing maintenance of forestry operations.

The orientation of public policy choices needs to be driven by the extent to which each alternative land-use form facilitates achievements in terms of the following pillars: equity of opportunities for all population groups and strata of society, economic growth; and environmental sustainability. Each competing land-use form could be assessed from the viewpoint of its productive, protective, and social contributions to the three

sustainability pillars. In the end, all can be judged in terms of 'national security', as follows:

- Food security – through job creation, direct offers of food products, or habitats for livestock, game, *etc.* that contribute to the food supply;
- Energy security – all development requires the harnessing of energy, and the contribution of that particular energy for economically useful production;
- Economic security – overall economic growth and wellbeing (e.g., wealth creation and/or poverty reduction through employment and physical outputs in the form of commodity production, construction, packaging, tourism, *etc.*
- Environmental security – sustainability of the natural resource base for all the above areas of “security”, and more specifically of soils, water, vegetation, climate, biological resources (both vegetal and animal), *etc.*
- Military security – rarely associated with agricultural land resources, but land must be made available for military facilities, such as air bases and garrisons, *etc.* and their ancillary infrastructure. This type of security may earn an overriding priority over all the other sectors but requires only a limited area of land in total.

Chapter 6 presents in detail the findings, conclusions, and recommendations pertaining to the study. It synthesises the findings from this study into a holistic body of information and offers policy recommendations.

CHAPTER SIX: CONCLUSION AND RECOMMENDATIONS

6.1 INTRODUCTION

This chapter presents a summary of the major findings, the conclusion, and the recommendations of the study, where the main goal was to assess the role that could be played by small-scale communal forestry in the looming timber shortage, job creation, and economic growth in South Africa. The previous chapter provided the results and a detailed analysis of the opportunities, challenges; community participation and empowerment; governance and sustainability, and the risks of small-scale communal forestry growers, with the view to identifying the policy gaps that regulate the function of the forestry industry in South Africa. This chapter is more about coming up with recommendations that will ensure that small-scale communal forestry sustainably increases its contribution to the forestry industry in South Africa.

Four hundred (400) households from four forest plantation projects were interviewed. The interviews were based on a simple random sampling technique to determine the opportunities, challenges, and risks that these four communal forest projects experience. The data were collected with the aid of a structured questionnaire and divided into six sections as follows: the socio-economic characteristics of a household; the knowledge of the project and the activities carried out in it; community participation and empowerment, household income; land-use competition and livelihoods; and conflicts that might be experienced in each project. The descriptive analyses, regression models, the Heckman selection procedure, and the Kruskal-Wallis H test were all used to analyse the data (Fagerland and Sandvik, 2009).

6.2 SUMMARY OF FINDINGS

The main aim of the study was to assess the role that could be played by small-scale communal forestry in the looming timber shortage, job creation, and economic growth in South Africa. The view was to identify the policy gaps regulating the function of the

forestry industry in South Africa and to come up with recommendations that would ensure that small-scale communal forestry sustainably increases its contribution to the forestry industry. The specific objectives of the study were as follows: to analyse the opportunities, challenges, and risks involved in growing trees on a small scale; to determine whether community forestry can make an important contribution in ensuring a sustainable timber supply in South Africa in the future; to assess the potential sustainability of the relationship between small-scale communal forest growers and the larger private industry and government (i.e., if supportive projects have failed, we need to know why); to examine the financial sustainability of community forestry projects for rural communities, which includes understanding communal systems of organisation, decision-making rights, and authority structures; and to investigate the main models and approaches to strategic partnerships between private sector actors and small-scale forest growers. Overall, the study set out to make recommendations to promote the development of small-scale communal forestry growers which will in turn ensure that this sector sustainably increases its contribution to the forestry industry.

Data were collected, sorted, encoded, and analysed using the SPSS version 20.0 computer programme. Descriptive analyses were used to determine the socio-economic characteristics and demographics of the households and community participation in the study area. The multinomial regression model was used to determine the benefits, challenges and risks experienced by the households across all four projects (i.e., Mkhambathi, Sinawo, Ntywenka and Mabandla). The Friedman test was conducted to determine whether the income-generating sources would vary significantly among the households in these community forestry projects; a second reason for conducting the Friedman test was to check whether forestry projects in operation in the four areas of study had contributed to an increase in living standards or whether there was still a need for interventions that would contribute to the well-being of the members of the community employed in these projects. The Kruskal-Wallis H test was used to determine the ownership of livestock across the four projects and whether there was any significant difference (or not) in the distribution of livestock in the study area.

The main research questions guiding the study were as follows:

- Can community forestry make an important contribution to ensure a sustainable timber supply in South Africa in the future?
- In addition, is a sustainable relationship between small-scale communal forestry growers and the forestry industry possible?
- Thirdly, can communities become financially sustainable when they are based on community forestry?
- Lastly, what are the main models and approaches to strategic partnerships between private sector actors and small-scale growers?
- What approaches and/or changes are necessary to promote the development of small-scale communal forestry growers to ensure that this sector sustainably increases its contribution to the forestry industry?

The findings of this study were presented as follows: Firstly, the study revealed that the household members that were interviewed were not fully involved in the management of the forestry projects. It is, however, essential, in amongst others, forest plantations, for the local communities to participate in the sustainable use and successful management of their natural resources. In the past, efforts to protect these resources by preventing people from using them proved to be unsuccessful. However, for the future, the success of the forest plantation industry will depend on the goodwill of the local communities. The main challenge is the one that has been highlighted by both the community forestry managers and the strategic partners, namely, that small-scale communal growers do not see these projects as business enterprises for themselves, but rather as community projects. Important to note is that the basic principle underlying entrepreneurship is to allow people themselves to indicate their business desires and to subsequently support them. However, in this case, the reverse applies: the forestry projects have been imposed upon the recipients and with the expectation that sustainable results would be achieved. Sadly, the main motivation for this course of action was to drive political agendas.

The purpose of business is to make a profit and accumulate wealth. This is not so easy to achieve when communities, such as those in this study, are grouped together, simply because they generally lack the required business management skills. Thus, the researcher re-iterates the need for training to enhance the productivity potential of the small-scale growers until they can reach the stage where their enterprises can be classified as commercial businesses. Out-grower schemes, such as Mondi Zimele and Khulanathi, support small-scale growers to become actively engaged in the forestry business through forestry management and planning support; by providing access to expertise, resources, and technology; by supporting capacity development through training and mentorships; and by giving bursaries for further studies and relevant skills training (Upfold et al., 2015; Mondi, 2014; SA Forestry, 2010; 2012). While Sappi's Project Grow is a partnership between the company and small-scale tree farmers, currently supporting 4 506 growers managing 19 257 ha. SAPPI provides free seedlings and technical advice to growers as well as interest-free loans and a guaranteed market (Upfold et al., 2015). In 2013, this contributed 243 000 tonnes to SAPPI's timber supply (Mamba, 2013).

Furthermore, the study revealed that conflict¹⁴ amongst the stakeholders was the main challenge that these projects had to face. The study further highlighted the fact that conflict is sometimes caused by a lack of transparency and accountability from either the forestry managers or the strategic partners. The responses of communities to the planting of fast-growing, highly valuable species, (especially *Eucalyptus* in these community projects) that offer multiple benefits, need to be explored through a participatory research survey. Also, to be considered in such a survey would be the models regarded as the most suitable for implementation. Furthermore, the results from the study revealed that the challenges facing these small-scale communal forest projects can more readily be related to the operational activities of the forestry development.

¹⁴ In this context, conflict emanates from the expectations of a community to benefit from the land that has been restored to it.

The second issue revealed by the study is that the community forestry managers are happy with their strategic partners. The study revealed that households or out-growers have been made to believe that the strategic partners offer better selling prices than those offered by the other timber buyers (i.e., 70:30 in terms of the contractual agreement for timber sales). This means that 70% of the timber produced will be sold to the companies at the current market price, as against the 30% timber procured which will be for the community. Even 30% would be sold to the strategic partner at a low price. The challenge might be that small-scale growers are at a disadvantage in terms of negotiating fair prices for their timber. Because of the nature of their enterprises, the small-scale growers produce very small volumes of timber. Therefore, in terms of their contractual agreements, the small-scale growers are forced to accept the prices calculated for them by the strategic partners or the timber companies.

The second challenge emanating from the findings of this study is that most of the so-called small-scale forestry growers work as individuals or as an individual community and lack access to market information, business acumen, or business influence to negotiate favourable prices. Some are misled by unscrupulous buyers who offer immediate cash for their crops. This has been a major issue in the Mkhambathi project, rather than in any of the other projects. One of the important relief measures suggested by the community forestry managers for facing this challenge would be to establish an association specifically geared to the needs of the small-scale growers. According to the community forestry managers, this would be where small-scale growers could jointly market their timber. Therefore, development programmes or projects such as these, as well as the technical support needed, will have to be supplied by the forest industry, especially by those companies involved as strategic partners. However, this would again lead to dependence on external control rather than on control from within.

The timber from small-scale communal forest growers will not be enough to make up the shortfall in the looming timber shortage. Therefore, the conversion of wattle jungle to proper plantations was identified as a possible solution across the four projects, especially in the areas in the vicinity of the Ntywenka project where there are about 900 ha or more of wattle jungle. The conversion to wattle jungle plantations would also

be for the purpose of water conservation. Secondly, the conversion of the existing Category B and C plantations, managed by the Department of Forestry, Fisheries and the Environment, to commercially viable plantations is another viable option. Thirdly, the re-planting of the Category B and C plantations in the light of the huge area of temporarily unplanted areas (TUPs) is another possibility. For example, any temporarily unplanted area (TUP) in excess of three percent (3%) in respect of pine and 10% in respect of hardwood (eucalyptus and wattle), and on condition that it has not been replanted after five years of harvesting, is regarded as excessive when after a year of harvesting not replanted in terms of TUP. The normal TUP is replanted in the year following the year in which it is harvested.

Last, but not least, the Republic of South Africa in its process of comparing how its Land Reform Programme has unfolded with those of other countries had to remember that no two countries are the same in terms of their dynamics. It had to be borne in mind that the way other countries deal with their challenges and succeed, might differ totally from the South African scenario. The accession to power of the country's majority population group for the purpose of achieving a democracy will require a second opinion. The current population requires sustainable livelihoods that will serve its members and their progeny beyond their lifetime. South Africans, and in this context, the community forest growers, should not be creating liabilities for their dependants while their voting rights are highly compromised during elections. The issue is that as land reform beneficiaries and the current recipients of the land, the small-scale communal forest growers do not view projects in a business context, but as community projects. This has been highlighted by the community forestry managers.

The study revealed that three of the community forestry projects, (i.e., Mkhambathi, Sinawo and Mabandla), are land restitution reform projects and will not be allowed to continue once the contractual agreement with the strategic partners has expired. As a result, the shortfall in their implementation funding would need to be addressed through a government or forestry grant. Community forestry projects therefore offer an

opportunity to source more money. Otherwise, in the absence of the Land Reform Programme, this would not be possible.

6.3 MAJOR FINDINGS OF THE STUDY

In terms of the objectives of this study, as highlighted in Section 1.5 (Chapter 1), an analysis of the empirical results revealed the following major findings:

6.3.1 Objective one: To analyse the opportunities, challenges, and risks of growing trees on a small scale.

Household interviews, focus group and key discussions revealed five major challenges, namely, fire, crime, reduction of grazing land, water shortages, and lack of employment. The cross tabulation of the household interviews identified the issue of fire as one of the major challenges being faced. There were several reasons attributed to the causes of this challenge. These include the use of fire as a management tool, purposively created by communities when they are angry with the strategic partners or the CPA/CT, and natural causes, that may be attributed to the high temperatures over that particular season/year, or just droughts; Crime presented as the second major challenge in the study areas. It has a two-fold angle: crime in stealing poles or logs by communities and crime in using forest plantations as a hiding place, specifically for stolen cars. The use of plantations as a hiding place has been a huge challenge at the Ntywenka project where 90% of the households indicated that this type of crime is rampant in their forest plantations (Table 4.6). In the Sinawo project, 99% of the households indicated crime in the stealing of poles or logs.¹⁵ from the plantations (Table 4.6) as prevalent. This type of crime has led to the pre-mature harvesting of several plantation compartments (Figure 6.1).

The reduction in land grazing has become the other major challenge in all four projects, but in the Sinawo project, more households (95%) than in any of the other projects

¹⁵ 'Timber mafia' - organised crime in the field of the illegal logging of timber

showed their concern about this challenge (Table 4.6). It is important to note that this challenge is linked to land-use competition across all four projects. Livestock owners were more concerned that the forests would take away their grazing areas. Other challenges linked to the lack of support given by livestock owners to the forest plantations in their areas were that livestock were being stolen from the plantations. This was according to most of the households which own livestock. Secondly, livestock owners were concerned that the present arrangement is biased towards forest plantations because it appears that afforestation alone has the potential to provide the households or communities with cash benefits.

The study also revealed that there were some household members who were tree growers but who were not involved in the projects, especially in Mkhambathi. These households have their own woodlots and are benefiting immensely from small-scale timber farming, more so than those households which are beneficiaries of the study projects. They had engaged in small-scale farming on their own initiative, with little or no support from the forestry companies or government. The disadvantage that these individual small-scale growers have to suffer is that they are robbed by unscrupulous buyers who offer them immediate cash for their crops.

6.3.2 Objective two: To assess the involvement and relationship between small-scale communal growers and the larger, private industry and government (i.e., if the supportive projects have failed, we need to know why.)

The findings of the study revealed that the role of the development stakeholders is relatively weak. This was confirmed during the group focus discussions (all of them) and the interview responses of both the households and the community forestry managers. The people participating in these forestry projects felt that community development is lacking and indeed inadequate for them. It was recognised in the study that the promotion of small-scale businesses is a shared competency.



Figure 6.1: One of the compartments at the Sinawo Project that was harvested prematurely because of timber theft.

To the detriment of the forestry initiatives, the weakness in the development stakeholders' cuts across a wide range of policy areas and programmes, namely, across the boundaries of the Department of Forestry, Fisheries and the Environment (DFFE) and involves several departments at the national, provincial, and local government levels. It goes beyond the public sector and its agencies and encompasses the private sector and its organisations, educational institutions, and non-governmental organisations (NGOs). The scale and scope of the interventions required to support small-scale grower development in the forestry sector require the active and coordinated participation of all these stakeholders. Therefore, extension services play a critical role in small-scale forestry enterprises. In most cases, such services are sourced from government institutions.

However, the study confirmed that as a strategic partner, the private sector is already playing a key role in extension services. For example, the study revealed that the strategic partners offer knowledge and skills and that the extension officers and the community forestry managers across the four projects are satisfied with their services and outcomes. All the community forestry managers interviewed indicated that it would be difficult to continue as small-scale growers without their strategic partners. As small-scale growers, they all listed a myriad of challenges in furthering their enterprises alone. In particular, they mentioned the absence of appropriate and

affordable business advice and planning services as the major constraints to developing their businesses and to accessing other support services (e.g., training and funding). They drew attention to the fact that these services are potentially available but need to be unlocked through the submission of sound business plans.

The results from the study revealed that the challenges facing these small-scale communal forest projects are related more to the operational activities involved in forestry development. The entire survey, including interviews with the households, focus group discussions and meetings with the experts and forestry managers, indicated that strategic partners such as SAPPI play an important role in the operations of these projects. Furthermore, the results from the study revealed that the challenges facing these small-scale communal forest projects are related more to the operational activities of forestry development. From personal observations, forestry development in these areas seems to encourage dependence on external control rather than on growth and development from within the small-scale grower community. It is based on what has been indicated by households, community forestry managers, and experts as the direct dependence of small-scale growers on strategic partners for basic activities, technical skills, the accessing of water licenses, seedlings, and finance, and the transportation of harvested material.

The other challenge revealed by the study is also linked to the dependence on external control rather than on that from within, the forestry industry's inadequate involvement of the public in the projects, the transfer of skills and organisational capacity to enable the small-scale growers to take on these responsibilities themselves. Based on the above discussion, currently the small-scale growers cannot operate independently without assistance from strategic partners or the government; neither are they well organised from a business point of view. For example, small-scale communal forest growers still need assistance in operating at a scale where they can buy the required equipment for harvesting and transport their timber. This means that in the absence of strategic partners, these growers will be unable to effectively market their timber. It is, therefore, very important to focus on developing and integrating business opportunities along the "forestry value chain". This is seen from two perspectives,

namely, “adding value”, which empowers small-scale (black) growers and beneficiaries of the Land Reform Programme and creates new business opportunities for small-scale forest enterprises to leverage these opportunities, as mentioned by the households. Secondly, an emphasis should be placed on supporting start-up businesses (new entrants to the forestry sector) *vis-à-vis* supporting existing (struggling) businesses during their “expansion phase”.

The study (i.e., literature review and data analysis) also revealed that experience, both internationally and locally, has shown that the success rate of supporting start-up businesses is very low. In fact, more attention needs to be given to supporting existing entrepreneurs and people that have proven their entrepreneurial ability by establishing small-scale businesses, to further develop their businesses. This study subscribes to this approach as the most cost-effective and efficient way of supporting small business development in the forestry sector. At the same time, it is recognised that, because of the country’s Restitution and Tenure Reform Programme, communities will gain ownership of the plantation resources to which they have historical rights, but with little or no previous entrepreneurial experience. Therefore, in the case of small-scale communal forest growers and because of the Land Reform Programme, equal attention needs to be given to the many existing small-scale forest growers and the new entrants to this scene.

In summary to the above objective, it is necessary to identify the most suitable models for the effective delivery of support services, to apply government resources as leverage, and to encourage the participation of the private sector to support small-scale communal forest growers; to build on the existing best practices and to use and upscale the existing delivery mechanisms that work, rather than to create new delivery mechanisms; and to focus on locally and provincially based delivery institutions that are “closer to the ground”. There will be more discussion about this approach under the recommendations below.

6.3.3 Objective three: To examine the communal system in terms of organisation, decision-making rights, authority, etc.

The local communities living in rural areas rely on a complex system of tenure and access. Although their access to the local resources may be classified as open, the pattern of land use is established on the basis of a clan system in which the rights of cultivation and other agricultural land-use practices are vested in the chief. Although, there might be different clans in the same tribe and the customs may vary, one from another (Junod, 1974), the rights of use are granted and controlled by the chief as custodian of the people's cultural heritage and land. This form of resource holding was greatly respected in the past. However, currently there are some factions.

Participatory planning will inevitably shift the greater responsibilities for the use and management of forest plantations from the national level down towards the local people. For this part, government will need to play a guiding, more facilitatory role in support of the local communities that would be consistent with rural development strategies. For this to work in practice, the extent and nature of local people's rights to resources in rural areas will need to be clarified.

In the focus group discussions, it was indicated that there were some communities and people who had lost their precious fertile land, which had initially been meant to be used for other purposes, and who had lost their valuable plants, which would normally have been used during traditional rituals and for medicinal purposes. This change in land use had resulted in several conflicts that were highlighted by the households and during the focus group discussions and interviews with forestry managers and experts across all four projects.

Conflicts amongst stakeholders in these projects can be attributed to several issues: the importance of sugarcane *versus* forestry plantations (especially in Sinawo and Mkhambathi); the lack of communication and transparency by the CPA/CTs, forestry managers and strategic partners in these projects; the use of land for the grazing of

livestock *versus* the establishment and expansion of forest plantations; and the rights of claimants or non-claimants *versus* the land reform beneficiaries.

6.3.4 Objective four: To investigate the main models and approaches to strategic partnerships between private sector actors and small-scale forest growers.

The study revealed that communities or households enter partnerships as company-community out-growers with the hope that assistance will be provided in the form of capacity building; finance; seedlings; technical skills from commercial growers or strategic partners. From the side of the strategic partners, it is more on gaining access to land that has changed hands in order to continue with the production of timber. The other important issue revealed by the study is that the benefits indicated by communities are outweighed by the challenges, the latter also revealed here. There is a myriad of challenges highlighted by the study that need to be addressed. These challenges start from the respective stages of initiation and implementation and advance up to the monitoring and evaluation stages of a project. Furthermore, these challenges are related more to social, economic, and environmental considerations.

It is therefore imperative to come up with new ways of thinking to solve the above-mentioned challenges and risks and to improve on the existing benefits. Firstly, there is a need to address the issues around timber shortages within the context of the small-scale growers and the country at large. The main purpose for this study was to determine how this looming shortage of timber in the country can be curbed. Secondly, the issue of capacity building and empowerment of the community/households in respect of forestry management would be an imperative strategy to allow the members of the community to make the right decisions. It is also important to address the issues of governance that the study identified as the challenge which will ultimately impact on the allocation and use of resources.

The other important issue is that government policies are advocating for an increase in timber production from forest plantations. For example, the White Paper on Sustainable Forestry Development (1996) was developed with the aim of promoting forestry development. On the other hand, some of the government policies or legislative acts contradict aspects such as water use, land use, and the environment in general. It is, therefore, imperative to come up with strategies that will avoid contradiction and support the objectives of sustainable forest management.

Lastly, proper evaluations of the benefits that could accrue from forestry sector investments would help make a convincing case and ultimately attract investors.

6.4 CONCLUSION

The aim of this study was to assess the role that could be played by small-scale communal forestry in the looming timber shortage, job creation, economic growth, and rural development in the country. The study confirmed that South Africa's land-using society is quite segmented – a mass of poor peasants and a knot of rich land users – each category having different capacities to fully capture the potential to make the land yield all the wealth and profits it is capable of for society (e.g., to gain access to a sufficiency of resources that could make the land produce at full capacity). By improving the returns for society, this suggestion would need to favour the land-allocation preferences of the most capable societal segments. The question is: How would this permit equity in accessing opportunities?

Based on the results of this study, it became apparent that forest development offers real opportunities for poverty alleviation, employment, and enterprise development in many rural areas of the country and can therefore serve as a catalyst to rural development. There are two important key aspects of communal forestry that the study discovered: Forestry in rural areas of South Africa can be successfully practised within the communal land tenure system and presents the opportunity for economic development for communities, not just individuals. Because rural communities at the

local level are not homogeneous in terms of their aspirations, their levels of education and income, the diverse needs and desires of each community need to be recognised and balanced in the development approach. The main challenges with the small-scale communal forest growers are that they do not have the skills and financial resources required to establish and operate forestry enterprises on their own and rely instead on support from the private sector (i.e., in the form of strategic partners or company-community partnerships) and government to do so. Therefore, the ability of these growers to engage with private investors at a technical and business level, and without support, is constrained.

Forestry has been identified as one of the high impact sectors in the economy and with the potential to contribute positively to economic growth, foreign exchange, job creation, and rural development. The forestry sector in South Africa still bears the marks and characteristics of the pre-1994 planning phase (Williams, 2006). On the one hand, the sector is dominated by a few large capital-intensive industries with high concentrations in ownership and management. These players are globally competitive and drive growth within the forestry sector. On the other hand, the sector contributes to the livelihoods of thousands of people who derive their income from forest and forest-related products, as informal traders and by running formal, but relatively small, forest enterprises. The small-scale communal forestry sector can be described as falling within the second economy and is showing signs of stress and decline.

When compared globally (Brazil, Colombia, Indonesia, etc.), small-scale enterprises comprise the bulk of the forestry industry (64%) and receive a lot of attention in their efforts to support job creation and more equitable growth (DAFF, 2010b). In the South African situation, the case is different. There are very few permanent jobs in the formal forestry industry in South Africa that have been created in the small-scale sector. In fact, an estimate of not more than five percent (5%) has been mentioned (DFFE, 2020b). The study revealed that there is a peak of employment of community members in the initial stage of development but as time passes the number declines tremendously. Moreover, owing to external and internal barriers, which limit their productivity and competitiveness, the small-scale sector operates within an

environment of uncertainty and vulnerability. This study exposes that there is very little in fact being done to deal with this predicament and to assist the small-scale entrepreneurs in their graduation from the 'second economy' into the 'first economy', and to move from conducting small business enterprises to managing large-scale business ventures. Once such steps have been attained on a relatively large scale, it will indeed be hoped to counter the looming shortage of timber in the country. Furthermore, the potential of the forestry sector to create jobs and to reduce poverty will only be realised if a concerted effort is made to bring the small-scale communal forestry sector into the mainstream forestry sector economy.

The other important issue presented in this study is that there is a sense of anticipation that a drastic change in the composition and ownership profile of the forestry sector over the next few years would bring new opportunities, but also new challenges, for the development of small-scale communal forest enterprises in the sector. According to Clarke (2018), it is anticipated that, because of the Land Reform Programme, a large portion of the country's plantation assets will be transferred to the rural communities. Three out of four of the projects selected for this study were established because of the Land Reform Programme. The totality of this has far-reaching consequences for the sector. For example, the restitution process offers an opportunity to substantially advance broad-based black economic empowerment (B-BBEE). This would be realised not only through the transfer of the forest plantations, but also in terms of the opportunities for black participation in value-adding forestry activities that can be leveraged through the ownership of scarce timber resources (DFFE, 2020b). The challenge for the entire scenario is that if this is not done or implemented in a manner that would ensure the transfer of skills and resources to enable and encourage communities to continue with forestry, there will be disastrous consequences for the future of forestry and the forest-product industries, as well as for the livelihoods of the benefiting communities. The Land Reform Programme would create opportunities for new afforestations on communally owned land, the adoption of the Transformation Charter (DWAF, 2008) for the forestry sector, and further opportunities for B-BBEE.

Mainly from the literature review in this study, the researcher found that globally, small-scale communal forests are playing a critical role in absorbing labour, penetrating new markets, and generally expanding economies in creative and innovative ways (Molnar et al., 2007; Charnley, 2005; May et al., 2003; Sushil and Sharmistha, 2003). The researcher is of the view that with an appropriate enabling environment, small-scale communal forests in this country can follow these examples and make a permanent mark on this economy. Therefore, the belief from the researcher is that if such encouragement – to take the South African economy¹⁶ onto a higher road –, is heeded, productivity will be enhanced, investment stimulated, and entrepreneurship will flourish (DTI, 2005). Here the need is for sound extension advice and training (post-settlement), affordable credit and effective marketing — benefits that most small-scale communal forest growers or land-reform projects are still unable to access (Cousins, 2006).

Forest development needs to be consistent with the principles of some of the policies and legislation highlighted in the literature review: The National Forest Act (Act No.84 of 1998) (RSA, 1998a); the National Water Act (Act No. 36 of 1998) (DWAF, 1998); the National Development Plan (2011), the Forestry Sector Transformation Charter (DWAF, 2008), the B-BBEE Act (Act 53 of 2003), the Agricultural Policy Action Plan (2015–2019), etc.

All spheres of government (local, provincial, and national) have a key role to play in guiding the forestry development process and to provide support to poor communities in undertaking forestry enterprise initiatives. They should work together in doing so. Furthermore, government needs to facilitate and support a competitive yet fair and transparent process for forestry development that benefits rural communities.

Overall, forestry development projects should be socially, economically, and environmentally sustainable.

¹⁶ In 2005, the Department of Trade and Industry (DTI) defined South Africa's economy as diversified.

6.5 RECOMMENDATIONS

It is clear, however, that the small-scale communal forest grower has a strategic role to play in the future growth and development of the forestry industry in South Africa. This industry has the potential to contribute to an increased supply of timber, enhance job creation potential, increase confidence in rural economies, and even contribute to the emergence of a green economy.

The researcher has highlighted the key challenges, opportunities, and risks in the field of forest plantation that were identified in this study. It is imperative to also indicate the core competences required for a successful small-scale communal forest grower. Based on the findings of this study, the following recommendations are advanced:

6.5.1 Recommendations for practical implementation

6.5.1.1 *Skills Development and Community Empowerment*

There are many opportunities within the sector that have the potential to significantly transform the industry, create employment opportunities, and address poverty. Currently, the established private sector players are the dominant role players largely controlling the terms of these company-community out-grower schemes. The study showed that training in all the projects is limited to those who are employed in these community projects, and that there is no possibility for the entire community to be involved. This is consistent with the study by Botshabelo (1997), who indicated that the training in forestry production of growers and members of the community in general is inadequate. Thus, training would be necessary to empower members of the community to make the right decisions. In fact, Clarke (2018) considered training to be the key responsibility of government, especially in mediating the partnerships between the private sector role players and the new entrants, including the land reform beneficiaries, community trusts/CPAs, and small-scale growers. The other important issue, especially relevant to the youth is that communities need access to a range of accredited training services (i.e., short courses, learnerships and bursaries) that will

enable them to establish themselves as independent and effective owners, managers, and operators of their businesses.

Recommendations

- All government departments should play a much-increased role in educating and training rural communities in environmental and nature conservation issues. It should be mentioned that the Department of Agriculture, Land Reform and Rural Development; and the Department of Forestry, Fisheries and the Environment could contribute significantly. This view can be attributed to observations made in the study that showed that government is not presence on the ground but is, for instance, as in the case of DALRRD, viewed by communities as the custodian of the land.
- The Department of Forestry, Fisheries and the Environment should assist with subsidies to encourage the growers to form small grower cooperatives. The formation of small grower cooperatives, together with inputs from the strategic partners, could facilitate tree production in rural communities, thus contributing positively to community development.
- Community participation (not only those community members who are sitting on forestry development committees or who are forestry managers) should be prioritised so that the entire community is empowered and able to plant trees with minimal technical advice from the forestry company and even when strategic partners are no longer there with support.
- There is a need to promote equity and greater participation by black persons, especially women and the youth, in the establishment and management of forest plantations.

6.5.1.2 Replanting and Finance

The challenge facing some of the small-scale communal growers is that their plantations are woodlots or individual homestead plantations which are too small to be used for collateral for financial loans. For example, according to Ngubane (2005 and 2009) and Howard et al. (2005), woodlots or homestead plantations range from 0.5ha

to 50ha, whereas institutions such as the IDC are interested only in funding grower projects of 300ha or more (Forest Sector Charter Council, 2011). Therefore, woodlots might be too small to attract long-term loan finance (DAFF, 2010b). Long-term capital is essential for afforestation, especially in new afforestations, where the bulk of the income is generated only after the trees have reached maturity and have been harvested, and only after substantial costs have been incurred during the establishment of the forest, its maintenance, and the subsequent harvesting operations. In addition, some of the small-scale communal forest growers might find their plantations in the second coppice rotation, and because of a lack of funding, these plantations would not be maintained and properly replanted. This means that the plantations would not be marketable to the buyers of timber. The findings indicated that the establishment and initial operating costs of the projects were financed by land reform grants. The positive impact of this grant is that it is more rapidly incorporated into an enterprise than a loan, especially if the grant constitutes a huge proportion of the cost of the development.

Recommendations

- It would be necessary for small-scale communal forest growers to work together through strategic partners to secure the required funding (Forest Sector Charter Council, 2011).
- There should be an assessment of existing plantations that need replanting in order to gauge the impacts of replanting. Therefore, in cases where there is a need to replant, a once-off forestry grant, as indicated or proposed above, should be made available for the purpose of replanting, on condition that the subsequent replanting can be financed without having to resort to grant funding.
- Institutions such as the IDC should fund these small-scale communal growers on plantations with a size of at least 50ha or more.

6.5.1.3 *Involvement of local people*

There is no history of community participation in community development prior to the advent of democracy in 1994 in South Africa. During the apartheid era, the methods of government were highly centralised, and the denial of political rights also extended to the sphere of community development. As such, the black population was denied access to basic services (Williams, 2006). It was only when the Reconstruction and Development Programme (RDP) was presented by the ANC in 1994 (ANC, 1994), that a people-centred development philosophy was placed at the forefront as a foundation from which to respond to the needs of the people and thus to assure them of an improved quality of life. The Independent Development Plan (IDP) served as an extension of this trajectory for development. Thus, the participation of communities in development programmes goes back as far as the birth of the IDP, but with the disclaimer that the local governments in question had in fact been implementing the IDP processes to encourage communities to participate in their own development.

It is essential for local communities to participate in the sustainable use and successful management of natural resources, as in the case of, amongst others, the forest plantation. In the past, efforts to protect resources by preventing people from using them proved to be unsuccessful. According to DWAF (2001b), there has been a gradual recognition of the dependence of the local people on resources and of their growing interest in managing these resources, especially in relation to improving or promoting sustainable livelihoods for the poorest or disadvantaged groups. As a result, there is a growing awareness of collaborative forest plantation management systems based on local capacity and knowledge that is emerging throughout South Africa (DWAF, 2001b).

The future of forest plantations is dependent on the goodwill of the local communities. Their survival will be threatened if the potentially negative consequences of current planning are not addressed.

Recommendation

- The planning process should be re-opened, and consideration given to the ways local communities can more meaningfully participate in the formulation of plans for commercial forestry plantations. The success of forest plantations in communal areas will depend on how well a future plan effectively attends to people's needs, genuinely reflects their interests, and makes use of their knowledge and skills.
- It is not going to be enough to simply involve people in the planning process without their full consultation and participation in the decision-making process. Genuine participation requires more than the involvement of a few local people; it must cede power to the subjects of the decision-making processes. This means shifting authority from the national level to the local people.
- The sustainable use and management of forest plantations clearly requires the recognition of local communities' rights to their natural resources. Therefore, the involvement of local communities would encourage them to maintain their resources on a sustainable basis by applying indigenous knowledge systems.¹⁷

6.5.1.4 Support Services

Forestry is not an exact science, but experience has taught that a great deal of skill is required to obtain the best possible results. As such, a great deal of research has been conducted in South Africa on species selection, soil preparation and other specific aspects. The study showed that potential small-scale communal forest growers do not always have the necessary skills and knowledge to be classified as potential growers. Small-scale grower schemes have been introduced throughout the country and have met with different levels of success. In this study, the Mabandla project has shown itself to be the most successful of the projects. The challenges experienced by small-scale forest growers include an inadequacy of business acumen and marketing skills and of exposure to lucrative markets; a lack of silvicultural knowledge and skills; and

¹⁷ An indigenous knowledge system is part of a traditional management practice and is passed down orally from generation to generation (Breen et al., 1991)

inexperience in nurturing forest plantations and woodlots. These shortcomings need to be addressed.

Recommendation

- This could be in the form of management or second party input and advice.
- There is a need to improve the sustainability of small-scale communal forest growers. The level of support from industry in respect of these growers must therefore be considered. Unless small communities have “sponsors” or “mentors”, the possibility of making a success of such enterprises would be very limited.
- Invoke the precautionary principle described in NEMA, 1998. Since forestry is deemed to bring about a permanent and irreversible change in land use, certain proposed developments (i.e., planting in the water source or wetland) in the forestry sector cannot be encouraged or recommended.

6.5.1.5 Conflict Management and Post-settlement Support

The interviews with the households showed that they agreed that there was conflict amongst the stakeholders in three of the projects, namely, Sinawo (100%), Mkhambathi (88%), and Mbabandla (35.8%). No household from Ntywenka (0.00%) recognised any conflict in this project, although the perception was expressed that during the harvesting stage, when trees have matured, conflict could be expected. The study showed that community projects are generally plagued by conflicts and disputes between individuals or groups within the claimant communities or land reform beneficiaries (Mkhize, 2020). The conflicts that have flared up in these projects have emanated from the expectations of the communities that they would benefit from their restored land. The unfortunate part is that these conflicts emerged only after the land had already been restored to them, or during the post-settlement process (Binswanger-Mkhize, 2014). A multi-pronged approach is required to solve this challenge that faces communal projects.

Recommendation

- Develop conflict resolution mechanisms and support, by setting up decision-making, management and control systems that prevent conflict and which can resolve conflict when it does in fact occur.
- Make provision for project supervision through external management support and mentorship programmes. Provide communities with access to the services of skilled staff to assist them in the management and operations of their businesses. This must be done in such a manner that it results in the transfer of skills.
- Management authorities and other stakeholders should be involved at an early stage in the pre-settlement negotiation process to ensure that the settlement and governance options for the management authority and the new landowners are clearly stated and unambiguous. Particular attention should be directed to issues concerning access to the ensuing benefits and claims to a share in them¹⁸. The involvement of the traditional leaders and authorities during the pre-settlement stage should also be encouraged, especially in the administration of the land and the land tenure issues in the rural areas. This approach will also avoid post-settlement conflict between the traditional authorities and the trustees/ CPAs.

6.5.1.6 Conversion of existing Category B and C plantations and the Re-planting of Temporarily Unplanted Areas (TUPs) to commercially viable plantations

Category B and C plantations are the two remaining categories of State Forest plantations that are still managed by the DFFE. Already, the Department of Forestry, Fisheries and the Environment is acknowledging that South Africa is currently experiencing a shortage of timber and is constrained in meeting the national demand (DFFE, 2020a). The Department further mentioned that sawmilling is one subsector

¹⁸ This approach could help minimise the expectations of the new landowners in claiming benefits, during the post-settlement phase which on occasion results in conflict if their expectations are not met.

that has already been affected by the decline in timber supply. For example, between 1996 and 2004, there was an increase in the number of sawmills from 96 to 115, but then a decline was experienced which by 2010 had dropped to only 90 sawmills in the country (DAFF, 2015).

Given the lack of progress over the past 28 years – since 1994 – in transferring Category B and C State plantations, the then Department of Water Affairs and Forestry (DWAF) became directly responsible for the management of the commercial plantations (Category B) and community woodlots (Category C) that had previously been administered by the former homelands and self-governing administrations (DTIC, 2020). A proposal has already been made by the Department of Forestry, Fisheries and the Environment to transfer 64 000 ha of Category B plantation by planting the approximately 30 000 ha of currently fallow area (i.e., TUP) available. A strategic contribution could also be made to the timber supply to meet the needs along the value chain (DFFE, 2020b). In this proposal, the key focus areas have been identified as follows:

- To transfer the DFFE-managed Category B and C plantations to future land beneficiaries to promote BEE and socio-economic development at the local level;
- To transfer state forestland for the purposes of optimal land use;
- To transfer the management of natural forests to the appropriate agencies with the purpose of promoting sustainable forest management, BEE and socio-economic development at the local level; and
- To transfer non-forested state forestland for the purposes of optimal land use.

Therefore, one of the strategic outputs envisaged by the Department of Forestry, Fisheries and the Environment is the transfer of Category B and C plantations to future land beneficiaries to promote B-BBEE and socio-economic development at the local level (DTIC, 2020).

Recommendation

- The Department of Forestry, Fisheries and the Environment needs to reaffirm its commitment to transferring Category B and C plantations to the communities

with primary land rights. The rehabilitation and transfer of Category B and C plantations to communities and a reduction in the number of TUPs in the DFFE-managed plantations, especially those in the Eastern Cape and KZN, are called for. The said plantations could then be incorporated into new afforestation initiatives to form economically viable units (Clarke, 2018).

- Before transferring Category B and C plantations to the communities, the DFFE should ensure that these plantations are bankable and comply with the legal requirements (e.g., those associated with Environmental Impact Assessments (EIAs). This proposal is consistent with what Clarke (2018) also signposted for institutions such as the Vumelana Trust and the IDC once the development phase and the associated enterprises at Mabandla and those in the Eastern Cape had been funded. This could be achieved through corporate governance in conjunction with the Department of Agriculture, Land Reform and Rural Development (DLRRD) and by recognising the rights of future land claim beneficiaries with land claims on state forests.
- The transfer of Category B and C plantations to communities, interested parties in communal areas, and others with expertise should be accompanied by funding for these projects, business development initiatives focusing on these plantations and ongoing maintenance of the forestry operations around them. For example, the sawmill manager of the Mabandla project indicated that he and his team were assisted with funds in the start-up and implementation phases, but that these funds were limited and would not suffice for the ongoing maintenance of the forestry operations.
- The forest products industry ranks among the top exporting industries of the country. Therefore, the state should still play a significant role to ensure adequate levels of investment, especially in the case of longer rotation timber/sawlog plantations.

6.5.1.7 *The conversion of Jungle Wattle to commercially viable wattle plantations*

The National Water Act (NWA, Act 36 of 1998) (DWAF, 1998), calls for an audit of the water balance in South Africa. The relevant calculations include a component for the

impact of invasive alien plants (IAPs) on the available yield for all South African catchments. The impact is assessed against the *status quo*, with the *proviso* that the vegetation is in its natural state. It is important to note that a catchment or a sub-catchment can be found to have an inadequate supply of water. The phrase to describe this condition is that the catchment or sub-catchment is “in deficit”. When a catchment is in deficit, it means that the catchment does not have the water reserves that it needs to meet the demand, and there is thus the danger that the government will fail to meet its equity obligations. The impact of IAPs could be part of the reason for that deficit, although in terms of the NWA (DWAF, 1998), IAPs are not users of water. As is the case with any type of vegetation, the IAPs do have an impact on the water reserves. They augment the ‘baseline’ water requirement¹⁹ to a new baseline (Mkwalo, 2011). It is this baseline which is used to determine how much water is available from a catchment. Thus, the eradication of IAPs could restore the old baseline vegetation and the baseline water requirements, thereby restoring the balance in the river system. This means that the water is brought back into the water reserve system for productive use.

The task of eradicating all invasive plants in South Africa to bring the water back into the common pool, is more than the initiative, Working for Water, can achieve on its own. According to the National Water Act (NWA, Act 36 of 1998), no further water-use licenses may be issued in catchments which are in a state of equilibrium or in deficit, because this would mean that the viability of the current lawful users would have to be diminished (DWAF, 1998). However, if the available yield of water could be increased by mitigating the impact of IAPs, then a new allocation of water could be considered, even if the catchment were still to be in deficit. Thus, the incentive to release water through the clearing of IAPs could in some cases result in water being made available to the landholder or to any other body responsible for that clearing.

An alien wattle jungle is defined as an area of invasive trees where the density and extent of the forest, and the age of invasion have impacted on the natural biodiversity

¹⁹ as established as the water use in the Acocks (1988) classification of vegetation cover

of the landscape, thus resulting in a permanently transformed jungle. Wattle jungle has invaded the landscape in many regions of South Africa. The riparian zones are those to be most readily affected and they need to be cleared. Owing to the frequent fires mentioned by households and forestry managers in their interviews, large areas are left open, denuded of their vegetational cover. There is evidence of serious wattle invasions across all the study areas, particularly in the areas surrounding the Ntywenka area (Figure 5.5 - 5.6). However, wattle jungle is not limited to the areas mentioned above. It also covers large areas of grassland, woodland, farmland, and grazing veld in South Africa, and on the other hand, often provides a valuable resource (e.g., fuelwood) in the rural areas. This puts strain on the natural forests and vegetation which, in the light of the prevailing circumstances, are being harvested as alternative sources of timber and fuel. Those areas that have been invaded by wattle jungle have lost their ecological integrity and are no longer of value in the quest to conserve biodiversity. The loss of biodiversity is often one of the major constraints to new afforestation and thus needs to be addressed.

In some areas, commercial farmers do not have the financial resources to clear the wattle from their farmlands. As such, the introduction of incentives granted to those removing the wattle could bring these areas under control and convert them into well managed stands. The granting of forestry licences would be the solution to this problem. The introduction of this measure in the case of land that has already been subjected to wattle invasions would allow for some expansion in the forestry estate without any reduction in the case of the remaining biodiversity capital. The benefits of introducing forestry licences would include the protection of the natural environment, a reduction in the areas under invasive species, control in respect of the further spread of invasive species, and a means of fulfilling the social needs of the community forestry growers. Licensing should be promoted only on condition that there are available supplies of water and that the needs of the environment and human beings are respected. Although the licensing of areas covered by invasive species can arguably be based on the improved availability of water through better management, this would not be equivalent to the amount of water which would be made available if all invasive species were to be eradicated. The main aim of this process would be to clear

unwanted wattle and other invasive species, which would bring about an increase in the water yield over and above its current prevailing availability in the catchment.

In conclusion, invasive alien plants must be controlled as their infestation in the study area has already shown deleterious effects, which will worsen if no action is taken. Secondly, if allowed to spread uncontrolled, invasive alien plants could cause significant reductions in runoff in catchments.

To clear these plants would generally involve significant financial costs. However, to do so would result in important benefits (e.g., conserving biodiversity, job creation, and limiting the risk of fires) in both rural and urban catchments.

Recommendation

- Wattle jungle in the entire country should be mapped. Invasions of wattle jungle have significantly affected all the study areas, particularly those surrounding the Ntywenka area. They have the potential to be converted into large properly managed wattle plantations. There are about 900ha or more of wattle jungles alone in the villages around the Ntywenka project that could be converted into fully fledged forest plantations.

6.5.2 Recommendations for further research

There is an urgent need for more empirical research on issues of integrating small-scale communal forest growers into the commercial forest sector. Further research needs to investigate how small-scale communal forests could feature in the entire value chain of, for example, agro-processing.

There were several issues that emerged during the course of this study and that are linked to it that the researcher feels were under-researched and that could, therefore, be investigated further:

- The utilisation of wattle jungle is an under-researched area in community development in South Africa. The wattle jungle is widely distributed across the country and could assist in community development, especially in the rural areas. The researcher observed several hectares of wattle jungle in areas surrounding the Ntywenka project and is of the opinion that it might be a worthwhile exercise to assess the impact of converting the wattle jungle in the villages of Ngxaza (eMtshezi), Sidakeni, Mbonisweni - an area next to Hopedale village - into a proper forest plantation (Figure 5.3 and 5.4). There is in fact an area of more than 900ha of wattle jungle that would be available for this purpose. Another important issue is upscaling agroforestry in the Ntywenka, Sinawo, and Mkhambathi projects as there are areas with the potential for expansion in the study. The researcher has also observed that there is a plateau of potential land, about 600ha in area, between the plantation and the Greenville Village at Sinawo that could be used for a forest plantation. The same applies to the Mkhambathi project.

Further investigation into the following issues and areas would assist in generating an information platform from which strategic decisions could be taken for small-scale growers to guide the 'Making Forest Markets Work' adage for their small-scale communal forest projects:

- Investigate the relationship between plantations, natural forests or woodlands and the adjacent rural households in districts marked by a high incidence of poverty.
- Assess the points of leverage for unlocking the opportunities for resource use within the forests and woodlands to address poverty in these areas.
- Analyse the opportunities and requirements for environmentally and socially responsible afforestation in areas characterised by high poverty levels.
- Identify high-value market opportunities for the establishment of forestry-based enterprises to benefit the rural poor, particularly in the poorly developed non-timber forest-product sectors.

- Identify opportunities for the development of pro-poor enterprises in the value-adding operations within the forestry sector.
- Investigate the most appropriate mechanism for creating a linkage between the markets for forestry products and the rural poor, who have access to these products, and for the purpose of establishing effective demand and supply channels to support the establishment of sustainable forestry-based enterprises.
- Investigate the development of an appropriate mechanism or agency that provides the linkage between those with the technical and financial resources for establishing these enterprises, and the rural poor wishing to establish such enterprises.

Any research into the areas mentioned above can enhance an understanding of the connection between the quality of the process of participation and the impact of projects on the empowerment of community members and local economic development in general.

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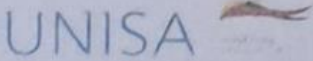
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ANNEXURE A: CONSENT LETTERS

Annexure A1: Ntywenka Project Consent Letter



1. Appendix Three: Consent Form

CONSENT FORM

TITLE OF RESEARCH PROJECT

Development of small scale forestry growers: opportunities, challenges and risk – towards a sustainable solution

Dear Mr/Miss/Miss/Ms THEMBELANI NYAMILE Date 22/01/2016

NATURE AND PURPOSE OF THE STUDY

The aim of this thesis will be to investigate the opportunities, challenges and risk of small forestry growers that are experienced by this sector and implications to the policy implementation.

RESEARCH PROCESS

A process will be followed to identify important stakeholders and key informants for the investigation. These will include but not be limited to:

- The project managers for these projects from companies (strategic partners) that are involved
- Forestry experts or specialists;
- Department of Agriculture, Forestry and Fisheries (DAFF) staff members in the provinces that deal with these selected projects;
- Managers of large private companies such as Mondi, Sappi and others;
- Managers of companies that deals with small scale growers such as NCT, Khulanathi and others that may be identified;
- Community leaders, members or households of the selected projects

NOTIFICATION THAT PHOTOGRAPHIC MATERIAL, TAPE RECORDINGS, ETC. WILL BE REQUIRED

I am aware that the interviews for this research will be recorded and transcribed. I also understand that the audio recordings are used only to assist the researcher in capturing what I say in context and everything I say will remain confidential and will be used for purposes of this research only.

CONFIDENTIALITY

All the information will be treated with strict confidence. I understand that my name will not be reflected in the thesis, nor will my name be discussed with anyone. I also understand that the information presented in this study may be used for research purposes, including publications in research journals. I am also aware that any publication of it either portion or in whole will respect my anonymity.

WITHDRAWAL CLAUSE

I can withdraw from the study at any time that I choose to do so. However, it is possible that I will find the interview beneficial to my understanding of the forestry industry. My story could also benefit other people who are involved in the forestry industry.

POTENTIAL BENEFITS OF THE STUDY

I understand that benefits of participating in this non-profit study are to further research and for academic purposes only. Neither will participants be paid for their participation. My participation will make a contribution to further understand opportunities, challenges and risks faced by the small scale forestry growers in South Africa

INFORMATION

PROJECT LEADER



MFAC Mkwalo

Registered Student

University of South Africa

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Cell No.: 082 542 0041

E-mail: eamkwalo@gmail.com

STUDENT SUPERVISOR



Prof Andre Horn

Department Geography

Tel: 011 471 2168

E-mail: hornac@unisa.ac.za

CONSENT

I, the undersigned, Thembelani Ngamile (full name) have read the above information relating to the project and have also heard the ~~oral~~ verbal version, and declare that I understand it. I have been afforded the opportunity to discuss relevant aspects of the project with the project leader, and hereby declare that I agree voluntarily to participate in the project.

I indemnify the university and any employee or student of the university against any liability that I may incur during the course of the project.

I further undertake to make no claim against the university in respect of damages to my person or reputation that may be incurred as a result of the project/trial or through the fault of other participants, unless resulting from negligence on the part of the university, its employees or students.

I have received a signed copy of this consent form.

Signature of participant: _____

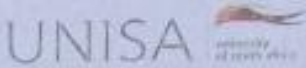


Signed at King William's Town on 22/01/2016

WITNESSES

1. [Signature]
2. [Signature]

Annexure A2: Mkhambathi and Sinawo Projects Consent Letter



I. Appendix Three: Consent Form

CONSENT FORM

TITLE OF RESEARCH PROJECT

Development of small scale forestry growers: opportunities, challenges and risk – towards a sustainable solution

Dear Mr/Mrs/Miss/Ms DY BLESSING KARUMBIDZA Date 05/01/2016

NATURE AND PURPOSE OF THE STUDY

The aim of this thesis will be to investigate the opportunities, challenges and risk of small forestry growers that are experienced by this sector and implications to the policy implementation.

RESEARCH PROCESS

A process will be followed to identify important stakeholders and key informants for the investigation. These will include but not be limited to:

- The project managers for these projects from companies (strategic partners) that are involved
- Forestry experts or specialists;
- Department of Agriculture, Forestry and Fisheries (DAFF) staff members in the provinces that deal with these selected projects;
- Managers of large private companies such as Mondi, Sappi and others;
- Managers of companies that deals with small scale growers such as NCT, Khulanathi and others that may be identified;
- Community leaders, members or households of the selected projects.

NOTIFICATION THAT PHOTOGRAPHIC MATERIAL, TAPE RECORDINGS, ETC. WILL BE REQUIRED

I am aware that the interviews for this research will be recorded and transcribed. I also understand that the audio recordings are used only to assist the researcher in capturing what I say in context and everything I say will remain confidential and will be used for purposes of this research only.

CONFIDENTIALITY

All the information will be treated with strict confidence. I understand that my name will not be reflected in the thesis, nor will my name be discussed with anyone. I also understand that the information presented in this study may be used for research purposes, including publications in research journals. I am also aware that any publication of it either partial or in whole will respect my anonymity.

WITHDRAWAL CLAUSE

I can withdraw from the study at any time that I choose to do so. However, it is possible that I will find the interview beneficial to my understanding of the forestry industry. My story could also benefit other people who are involved in the forestry industry.

POTENTIAL BENEFITS OF THE STUDY

I understand that benefits of participating in this non-profit study are to further research and for academic purposes only. Neither will participants be paid for their participation. My participation will make a contribution to further understand opportunities, challenges and risks faced by the small scale forestry growers in South Africa.

INFORMATION

PROJECT LEADER



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STUDENT SUPERVISOR



Prof Andre Horn

Department Geography

Tel: 011 471 2168

E-mail: hornaa@unisa.ac.za

CONSENT

I, the undersigned, *Dr Blessing Kuvshinda* (full name) have read the above information relating to the project and have also heard the verbal version, and declare that I understand it. I have been afforded the opportunity to discuss relevant aspects of the project with the project leader, and hereby declare that I agree voluntarily to participate in the project.

I indemnify the university and any employee or student of the university against any liability that I may incur during the course of the project.


I further undertake to make no claim against the university in respect of damages to my person or reputation that may be incurred as a result of the project/trial or through the fault of other participants, unless resulting from negligence on the part of the university, its employees or students.

I have received a signed copy of this consent form.

Signature of participant: 


Signed at *Sappi Forestry KZN* on 02.02.2014

WITNESSES

1. *Ms Bole Ngrams* 

2. *Sphing*  _____

Annexure A3: Mabandla Project Consent Letter

UNISA 

I. Appendix Three: Consent Form

CONSENT FORM

TITLE OF RESEARCH PROJECT

Development of small scale forestry growers: opportunities, challenges and risk – towards a sustainable solution

Dear Mr/Ms/Miss/Mr MAYFORD JACA Date 20/12/2015

NATURE AND PURPOSE OF THE STUDY

The aim of this thesis will be to investigate the opportunities, challenges and risk of small forestry growers that are experienced by this sector and implications to the policy implementation.

RESEARCH PROCESS

A process will be followed to identify important stakeholders and key informants for the investigation. These will include but not be limited to:

- The project managers for these projects from companies (strategic partners) that are involved
- Forestry experts or specialists;
- Department of Agriculture, Forestry and Fisheries (DAFF) staff members in the provinces that deal with these selected projects;
- Managers of large private companies such as Mondi, Sappi and others;
- Managers of companies that deals with small scale growers such as NCT, Khulamathi and others that may be identified;
- Community leaders, members or households of the selected projects.

NOTIFICATION THAT PHOTOGRAPHIC MATERIAL, TAPE RECORDINGS, ETC. WILL BE REQUIRED

I am aware that the interviews for this research will be recorded and transcribed. I also understand that the audio recordings are used only to assist the researcher in capturing what I say in context and everything I say will remain confidential and will be used for purposes of this research only.

CONFIDENTIALITY

All the information will be treated with strict confidence. I understand that my name will not be reflected in the thesis, nor will my name be discussed with anyone. I also understand that the information presented in this study may be used for research purposes, including publications in research journals. I am also aware that any publication of it either portions or in whole will respect my anonymity.

WITHDRAWAL CLAUSE

I can withdraw from the study at any time that I choose to do so. However, it is possible that I will find the interview beneficial to my understanding of the forestry industry. My story could also benefit other people who are involved in the forestry industry.

POTENTIAL BENEFITS OF THE STUDY

I understand that benefits of participating in this non-profit study are to further research and for academic purposes only. Neither will participants be paid for their participation. My participation will make a contribution to further understand opportunities, challenges and risks faced by the small scale forestry growers in South Africa.

INFORMATION

PROJECT LEADER

Mr AC Mkwata
Registered Student
University of South Africa
Tel: 012 309 5782
Cell No.: 082 542 0041
E-mail: amkwata@unisa.ac.za

STUDENT SUPERVISOR



Prof. Andre Horn
Department Geography
Tel: 011 471 2168
E-mail: ahornacj@unisa.ac.za

CONSENT

I, the undersigned, Liza Mayford Jaco (full name) have read the above information relating to the project and have also heard the verbal version, and declare that I understand it. I have been afforded the opportunity to discuss relevant aspects of the project with the project leader, and hereby declare that I agree voluntarily to participate in the project.

I indemnify the university and any employee or student of the university against any liability that I may incur during the course of the project.

I further undertake to make no claim against the university in respect of damages to my person or reputation that may be incurred as a result of the project/trial or through the fault of other participants, unless resulting from negligence on the part of the university, its employees or students.

I have received a signed copy of this consent form.

Signature of participant: _____

Signed at Mabandla on 30/12/2015

WITNESSES

1. _____
2. _____

ANNEXURE B: HOUSEHOLD QUESTIONNAIRE

HOUSEHOLD QUESTIONNAIRE
INTERVIEW SCHEDULE
A.C. MKWALO – UNIVERSITY OF SOUTH AFRICA

STUDY VILLAGE:

INTERVIEW SCHEDULE NO:

DATE:

INTERVIEW:

A. INTRODUCTION

1. Interviewee: Male [] Female []

2. Position in the household:

3. What is your level of education? Grade 1-7 [] Grade 8-12 [] Tertiary (Diploma or Degree) []

B. KNOWLEDGE OF AND ACTIVITIES IN THE PROJECT

4. Do you know of the existence of this small-scale forestry grower project in this area?
If Yes [.....] or No [.....] Why?

5. Are you involved in the activities of this small-scale forestry grower project in the area? If
“Yes”, could you please elaborate?

6. How long have you been involved in this small-scale forestry grower project? _____

7. Has the number of people from the community working in this project increased over the
last few years? Could you please explain?

8. How important are plantations to you? (On a scale of 1-10, 1 being the least and 10 the most important)

9. What were conditions in the area like before these plantations were established? Could you please explain?

C. PARTICIPATION

10. Are you participating in the management of these plantations? Yes [.....] No [.....]
If "Yes"/ "No", Why?

11. Do you see the need for community participation in this project? Yes [.....] No [.....]
If "Yes"/ "No", Why?

12. In your thinking, in which way can the community be involved in the management of these plantations?

13.

Activities	Do you think it is possible?	Would you be interested in participating?
Silviculture	[] Yes [] No	[] Yes [] No
Harvesting	[] Yes [] No	[] Yes [] No
Agroforestry	[] Yes [] No	[] Yes [] No
Bee keeping	[] Yes [] No	[] Yes [] No
Mushroom cultivation	[] Yes [] No	[] Yes [] No
Selling timber products	[] Yes [] No	[] Yes [] No

14. Do you think that by participating in the management of these plantations, poverty can be reduced? [.....] Yes [.....] No

15. If "Yes", how?

D. HOUSEHOLD INCOME

Is there any contribution that trees can make to household budgets?

16. Please rank the most important income sources of the homestead in order of importance, and explain why each is important?

Rank order	Name of homestead	Income source	Cash earned/month	Reason for importance

17. What types of livestock are owned by members of this homestead?

Types of livestock	No of livestock currently owned	Number of sales in the past year	Number of purchases in the last year	Number of births in the last year	Number of deaths in the last year	Number slaughtered in the last year
Cattle						
Goats						
Sheep						

Donkeys						
Pigs						
Chickens						
Other (specify)						

18. Are you working? Yes No

19. Are you working in the plantation? Yes No

20. Are you working as a seasonal temporary contracted permanent worker?

21. If you are not working on the plantation, where are you working? What are you working as? (e.g., teacher, nurse, etc.)

22. What is your monthly salary?

≤ R 500.00 R 500.00 – R2000.00 R2000.00 – R5000.00
 ≥ R5000.00 .

23. Do you ever use the money from selling trees to pay off other household debts?

24. Skills that your household possesses (Please indicate those from which you have acquired an income)

Skills	Tick all that apply	Tick the appropriate skills from which your income was generated
Forestry		
Construction		
Carpentry		
Farming		
Traditional healing		
Plumbing		
Roofing		
Mechanics		

Fishing		
Other (specify)		

E. AGROFORESTRY AND LIVELIHOODS

25. What land-use practices are most important for consumption and what are important for sale?

Plant/ crop	Consumption rank (1,2,3...10)	Sale rank (1,2,3..10)
Forestry		
Maize		
Beans		
Potatoes		
Vegetables		
Fruits		
Cotton		
Wheat		
Tea		
Groundnuts		
Other (specify)		

26. Do you have enough agricultural land for your whole family Yes [.....] No [.....]
If "No", how do you generate your food supply?

Food supply	Tick the one that is most applicable to your household
Food from the garden	
Gather food from the forest	
Purchase food	
Receive food from grants	
Other (specify)	

27. Did you have rights to use this land before trees were planted in this area?

28. Have those rights changed after the planting of these trees? If "Yes", could you please explain?

29. What was the land used for before it was planted with trees?

30. Do you have permission to use this land for activities other than for planting trees (e.g, for planting crops, keeping livestock, etc.)?

31. Does planting trees provide you with a greater opportunity to access more land? If so, how?

32. Do you think the community wants to increase the size of the plantation? What might be the reasons?

33. How has growing trees made a difference to your household's livelihood and food security?

F. BENEFITS AND CHALLENGES

34. Could you please list the benefits of having a plantation in your area?

35. In your view what are the challenges of having a plantation in your area? Could you please list them?

G. CONFLICTS AMONGST STAKEHOLDERS

36. Do you think that there are any community members specifically opposed to tree planting?
[.....] Yes [.....] No Why do you think this is so?

37. If yes, what forms of conflict exist?

38. What should be done to manage these conflicts?

ANNEXURE C: COMMUNITY LEADERS' QUESTIONNAIRE

COMMUNITY LEADERS' QUESTIONNAIRE

AC MKWALO – UNIVERSITY OF SOUTH AFRICA

INTERVIEW SCHEDULE

STUDY VILLAGE:

INTERVIEW SCHEDULE NO:

DATE:

INTERVIEW:

A. INTRODUCTION

1. Interviewee: Male [] Female []

2. Are you involved in this small-scale grower company in the area? If yes, please elaborate.

3. How long have you been involved in small-scale forest growing or in the company?

4. To what extent are you involved in decision making and planning of the project?

Highly [.....] Average [.....] Limited[.....]

5. Could you please elaborate briefly on your involvement?

6. How important are the plantations to you? (On a scale of 1-10, 1 being the least and 10 being the most important)

7. Has growing timber in the area made a difference to you and the community? Provide a few examples of the difference made.

8. Are there any changes in the area made by the establishment of plantations? Could you please elaborate?

9. Could you please list the challenges facing a small-scale tree/plantation grower? Could you put the challenges in an order of priority? (a scale of 1-10)

10. Could you please list the opportunities of being a small-scale forestry grower? Could put them the opportunities in an order of priority? (a scale of 1-10)

11. Could you please list the risks of being a small-scale grower?

12. Has the number of people from the community working in the company increased over the last few years? Please elaborate.

B. SOCIAL ASPECTS

13. Was the land obtained through the Land Reform Project? Is it traditional communal land? Could you please elaborate?

14. What was the land used for before it was planted with trees?

15. Do you have permission to use this land for activities other than planting trees (e.g., for planting crops, keeping livestock, etc.)?

16. Does the planting of trees provide you with a greater opportunity to access more land? If so, how?

17. How; large (area in number of hectares) is the plantation?

18. Do you think the community wants to increase the area/size of the plantation? What might be the reasons?

19. What do you think are the positive and negative effects of forestry plantations on your community?

Positive effects	Negative effects

20. Do you think there are any community members specifically opposed to tree planting? Why do you think this is so?

21. Have you attended any training courses to help you with managing your trees?

22. If you were sent on a training course, were you sent as a community member or as an individual working on the plantation?

23. Who supplied the training? Was it helpful? In what ways do you think this training could be improved?

24. Is there any company assisting with your financial records? Or is there any treasury from the community trust/CPA that keeps those records?

25. If it is a person from the Trust/ CPA, how often does she / he attend training?

26. Do you keep any financial records (i.e., records of income and expenditure)?

27. Do you think the project makes a profit from growing the trees?

28. If "Yes", do you use these records to calculate your income from the trees and use this information to judge whether growing trees is the most profitable use for your land?

29. How do you feel about negotiating with timber companies about the volume of timber harvested and the price per tonne? Are you confident in this area of business? Why?

C. ECONOMIC ASPECTS

30. Do you have any information about the financial contribution that the project makes to the local economy? Please comment or append a relevant document.

31. Have you ever asked for a loan for this project – before it started up or during its operation? If “Yes”, what was it for? You asked for the loan as an individual or as a trust? How much was the loan for and in which year was it requested?

32. Have you received a loan advance from the timber company or a financial institution? Why did you need/not need this advance?

33. Are there any material/items that you sell to the community? Yes/No? Could you please list the materials/items?

34. Are there any benefits that communities can claim on the grounds of being community members (Pro-poor provision)?

USE OF CONTRACTORS

To check how far the issue of employment is spread. (Is it through the family or the community?)

35. Are the people from outside the community allowed to work on the project, either as contractors or in other capacities.? Could you please elaborate?

36. Is there any reason for employing forestry experts other than the contractor?

D. PROVISION OF MARKETS

37. Since planting trees, have you had any offers from other timber companies to buy your timber? (i.e., competition)

38. What price does the timber company give you per hectare of harvested timber?

39. At what price in this project do you sell the timber? Who determines the prices? And are you allowed to sell to other companies than the one that you have a contract with?

40. How many times have you harvested your timber? How many rotations have you had? What tonnage did you harvest? How much were you paid for each tonne?

41. Does your membership in the scheme offer you a share in timber processing/exporting? Is this important to you?

E. PARTICIPATION

42. Do you participate in the management of these plantations? Yes [.....] No [.....]
If "Yes"/ "No", Why?

43. Do you see the need for community participation in this project? Yes [.....] No [.....]
If "Yes"/ "No", Why?

44. In your thinking, in which way can the community be involved in the management of these plantations?

45.

Activities	Do you think it is possible?	Would you be interested in participating?
Silviculture	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Harvesting	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Agroforestry	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Bee keeping	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Mushroom cultivation	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Selling timber products	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No

46. Do you think that by participating in the management of these plantations, poverty can be reduced? [.....] Yes [.....] No

47. If "Yes", how?

F. ENVIRONMENTAL ASPECTS

Water resources

48. Do you plant trees in this area? Do you expect the plantation to expand? Why?

49. Can you provide any assurance about the sustainability of this project? If so, how?

50. Is there any area that you can think of that can be used for planting trees (e.g., silviculture)?

51. If yes, how big is the area?

52. Are you aware of the impact of planting trees in wetlands, riparian zones, etc. on water quantity?

53. Is there sufficient water in the area to meet the needs of your community?

54. Do you have a license for this plantation? Yes [.....], No [.....]

55. If "No", Why not? Please elaborate.

56. If "Yes", how long did take you to get a license?

57. Was there any assistance provided by any company or individual? If so, what type of assistance were you given?

58. Were there any challenges in getting a license for this plantation? If so, could you please elaborate?

59. Are there any problems of fires or pests and diseases to threaten the plantations? How frequent are those fires/ pest and diseases? How much damage did you experience? How do you treat the pests and diseases/ recover from the fire? Is it not expensive to recover from such problems? Provide the costs (R)

60. Is there any insurance for the plantation? If "No", who is assisting you with such insurance?

ANNEXURE D: FOCUS GROUP DISCUSSION QUESTIONNAIRE

FOCUS GROUP DISCUSSION QUESTIONNAIRE
AC MKWALO – UNIVERSITY OF SOUTH AFRICA
INTERVIEW SCHEDULE

STUDY VILLAGE:

INTERVIEW SCHEDULE NO:

DATE:

INTERVIEW:

A. INTRODUCTION

1. [] Group [] No. in Group []

2. What was your view initially when you were told that the land that belongs to the trust will be planted with trees?

3. If "Yes", what type of publicity (negative or positive) did this issue receive? Could you give reasons for your answer?

4. What do you think is the current perception amongst the public regarding forestry? Why does the public hold this perception?

5. What can be done to promote forestry in rural areas?

6. How would you define the identity of the forestry industry?

B. USE OF ARABLE LAND

What is the best land-use practice in this area that would meet the subsistence needs of the people?

7. Are you aware of forestry land under claim in the area? Yes [.....] No [.....]

8. If “Yes”, how do you know about it?

Government	
Community	
Public consultation	
Other (specify)	

9. Given that you were involved in forestry development, what form of engagement would you prefer?

Sales and lease back	
Project grow	
Plantation and management plan	
Management assistance plan	
Timber supply agreement	
Lease agreement	
Joint venture	
Resumption lease	
Total package	
Funded purchase of trees	
Conventional lease	
Other (specify)	

10. How do you think forestry would benefit your household and community?

Benefits	Rank (1,2,3..10)
Job creation	

Food security	
More money for the local markets	
Improved social services	
Would not benefit	
Other (specify)	

11. What type of benefits were you expecting to get from the forest company with the current set-up?

Increased income through indirect employment (i.e., crops, wood, construction materials)	
Better infrastructure (roads, schools, hospitals)	
Availability of fuelwood	
No benefit to our household	
Other(specify)	

12. What do you think are the positive and negative effects of the project in this area?

Positive effects	Negative effects

13. How do you think the plantation affects the community?

Unavailability of land for residential purposes	
Unavailability of land for crops and animal pastures	

Hinders communal development (i.e. no place to build schools, hospitals , etc.)	
Does not affect the community in any way	
Other (specify)	

14. What factors would you make to allow for forestry plantations to continue as an important form of land use in your area?

15. How do you compare land claim/ redistribution in forestry and commercial agricultural land?

C. PARTICIPATION

Check the roles played by either women or youth in forest management

16. Do you participate in the management of these plantations? Yes [.....] No [.....]
If "Yes"/"No", Why?

17. Do you see the need for community participation in this project? Yes [.....] No [.....]
If "Yes"/ "No", Why?

18. In your thinking, in which way can the community be involved in the management of these plantations?

19.

Activities	Do you think it is possible?	Would you be interested in participating?
Silviculture	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Harvesting	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Agroforestry	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Bee keeping	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Mushroom cultivation	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No
Selling timber products	[<input type="checkbox"/>]Yes [<input type="checkbox"/>]No	[<input type="checkbox"/>] Yes [<input type="checkbox"/>]No

20. Do you think that by participating in the management of these plantations, poverty can be reduced? [.....] Yes [.....] No

21. If "Yes", how?

22. Are there any specific reasons for you as a woman to participate in this forest plantation?

23. Do you think the number of women involved in this forest plantation is increasing or decreasing? Why do you say so?

24. Are there any activities specifically reserved for women only in this forest plantation?

25. As a woman, do you think that the forest plantation supports your social life or does it support men more than it supports you?

a. It's a place for men because of crime	
b. It's open to all population groups	
c. I don't know	

Specifically for youth

26. Do you think youth in the community are aware of the benefits or opportunities of forest plantations in the area? Yes / No? Could you please support your answer?

27. Do you think that as a young person, you are being accommodated in the management of this plantation? Yes/ No? Could you please support your answer?

28. What can be done to involve youth in forestry development?

D. CONFLICTS AMONGST STAKEHOLDERS

29. Do you think that there are any community members specifically opposed to tree planting?

[.....] Yes [.....] No Why do you think this is so?

30. If "Yes", what forms of conflict exist?

31. What should be done to manage these conflicts?

E. TRANSPORT

32. After harvesting, to which place do you transport your timber?

33. Is there a sawmill in the area? How many kilometres from here?

34. What was the road infrastructure like before the plantation was established?

35. Do you think there has been an improvement compared to conditions in the past?

F. ENVIRONMENTAL ASPECTS AND RISKS

To check the problem of fires, pests, and diseases

36. Are there any problems of fires, pests, or diseases in the plantation? How frequently have these fires, pest infestations and disease outbreaks occurred? And how much damage did you experience?

ANNEXURE E: STRATEGIC PARTNERS AND DAFF MANAGERS

STRATEGIC PARTNERS (i.e., SAPPI, ECRDA, MONDI and NCT) AND DAFF MANAGERS QUESTIONNAIRE

AC MKWALO – UNIVERSITY OF SOUTH AFRICA

INTERVIEW SCHEDULE

STUDY VILLAGE:

INTERVIEW SCHEDULE NO:

DATE:

INTERVIEW:

A. INTRODUCTION

1. Company/ organisation [.....] Mondi [.....] Sappi [.....] ECRDA [.....] DAFF

2. What is your position in the company? _____

3. Is the project still running? Yes / No?

If "No", what caused it to fail?

4. Why is it a success?

5. Why was this project initiated by your company?

6. What is the history of the project? Please attach the documentation - if available.

7. In which year did the project start? _____

8. How many households are members of this project? _____

9. What is the total area under the scheme? _____

10. How many growers did you have at the start of the project? And how many now?

11. Do you think this project will meet its basic goal? If so, how?

12. How do you think the community will benefit from the project?

13. Is there capacity for further expansion of the scheme?

14. Where are the likely geographical areas for future expansion?

15. What are the good things that impress you about this project?

B. CHALLENGES, OPPORTUNITIES AND RISKS (PARTICIPATION)

16. What role does your company play in the community?

17. Does SAPPI/DAFF contribute to ensure the success of the project? If “Yes”, how?

18. Does your company offer any kind of insurance? If yes, please elaborate. If “No”, why not?

19. What do you say are the most common complaints made to you by growers?

20. Could you please list challenges that your company is faced with in assisting in this project? You can list them in order of priority (on a scale of 1-10).

21. Can you elaborate briefly on the factors that constrain the development of this project?

22. What are the risks to partnering with small-scale growers?

C. ECONOMIC ASPECTS

23. Do you have any information about the financial contribution that the project makes to the local economy? Please comment or append a document.

24. What are the implications of a weak Rand for small-scale growers?

25. Did the 2008, 2012 and 2017 global economic crises affect the project? If “Yes”, how?

26. How has this affected your company/association’s relationship with the growers?

27. Have you ever asked for a loan for this project on behalf the community - before it started or during its operation? If “Yes”, what was it for?

28. How much was asked and in which year?

D. PROVISION OF MARKETS

29. Does your company assist the growers in marketing their timber?

30. Since planting trees, has your company had any offers to buy timber from the growers? In which year was that?

31. What price does your company give per hectare of harvested timber?

32. Do you think small-scale growers have skills to market their timber?

33. How many times has timber been harvested? How many rotations have you had? What tonnage did you harvest? How much were you paid for each tonne?


E. SKILLS DEVELOPMENT

34. Does your company provide training to the employees on this project?

35. If so, what type of training was provided?

36. How many of your employees have been given training so far?

ANNEXURE F: ETHICAL CLEARANCE CERTIFICATE



UNISA GENERAL RESEARCH ETHICS REVIEW COMMITTEE

Date: 19/02/2018

Dear Mr Mkwalo

NHREC Registration # : REC-170616-051
ERC Reference # : 2018/CAES/024
Name : Mr AC Mkwalo
Student # : 44653131

**Decision: Ethics Approval from
16/02/2018 to 31/01/2019**

Researcher(s): Mr AC Mkwalo
44653131@mylife.unisa.ac.za

Supervisor (s): Prof A Horn
hornac@unisa.ac.za; 011-471-2168

Working title of research:

Development of small-scale communal forestry growers in South Africa: opportunities, challenges and risks - towards a sustainable solution


Qualification: PhD Geography

Thank you for the application for research ethics clearance by the Unisa CAES General Research Ethics Review Committee for the above mentioned research. Ethics approval is granted for a one-year period. After one year the researcher is required to submit a progress report, upon which the ethics clearance may be renewed for another year.

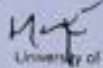
Due date for progress report: 31 January 2019

Please note the points below for further action:

1. The selection criteria for participants are not stated - what is the exclusion and inclusion criteria that will be implemented?
2. The constitution and number of focus groups are not stated and requires clarification.
3. Field observations are mentioned as one of the data collection tools, but no observation checklist was included in the application. The researcher is requested to clarify this aspect of the methodology - what will be observed? Furthermore, the observation checklist must be submitted to the Committee for record purposes.



Open Rubric



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Pretter Street, Muckleneuk Ridge, City of Tshwane
PO Box 392 UNISA 0003 South Africa
Telephone: +27 12 429 3111 Facsimile: +27 12 429 4150
www.unisa.ac.za

4. The data storage section in the ethics application form was not completed. How will the data be stored?
5. Data analysis needs to be clarified – what regression methods will be used?
6. The Committee recommends that the title be amended to reflect the areas that are targeted.
7. The Committee recommends that research objective four should be reworded, and objective three should be elaborated on.

The low risk application was reviewed by the CAES General Research Ethics Review Committee on 16 February 2018 in compliance with the Unisa Policy on Research Ethics and the Standard Operating Procedure on Research Ethics Risk Assessment.

The proposed research may now commence with the provisions that:

1. The researcher(s) will ensure that the research project adheres to the values and principles expressed in the UNISA Policy on Research Ethics.
2. Any adverse circumstance arising in the undertaking of the research project that is relevant to the ethicality of the study should be communicated in writing to the Committee.
3. The researcher(s) will conduct the study according to the methods and procedures set out in the approved application.
4. Any changes that can affect the study-related risks for the research participants, particularly in terms of assurances made with regards to the protection of participants' privacy and the confidentiality of the data, should be reported to the Committee in writing, accompanied by a progress report.
5. The researcher will ensure that the research project adheres to any applicable national legislation, professional codes of conduct, institutional guidelines and scientific standards relevant to the specific field of study. Adherence to the following South African legislation is important, if applicable: Protection of Personal Information Act, no 4 of 2013; Children's act no 38 of 2005 and the National Health Act, no 61 of 2003.
6. Only de-identified research data may be used for secondary research purposes in future on condition that the research objectives are similar to those of the original research. Secondary use of identifiable human research data require additional ethics clearance.
7. No field work activities may continue after the expiry date. Submission of a completed research ethics progress report will constitute an application for renewal of Ethics Research Committee approval.

Note:
The reference number **2018/CAES/024** should be clearly indicated on all forms of communication with the intended research participants, as well as with the Committee.

Yours sincerely,


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DRERC 25.04.17 - Decision template (V2) - Approve

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ANNEXURE G: LANGUAGE EDITING CERTIFICATE

CERTIFICATE

This serves to confirm that I, Venessa de Boer, identity number 4607060025085, and residing at 59 Kelvin Road, Bramley, Johannesburg, was responsible for the paraphrasing of certain sections, and the language editing and proofreading of the entire thesis, for the Degree

Doctor of Philosophy in Geography

entitled

“Empowerment of small-scale communal forest growers, based on four case studies: opportunities, challenges, and risks – towards a sustainable solution”

by

Andile Churchill Mkwalo

Thesis submitted in accordance with the requirements for the degree

DOCTOR OF SCIENCE (DPGGR00)

in

GEOGRAPHY

at the

University of South Africa

Supervisor : Dr A C Horn

Date : 23 July 2023

Signed on computer : *V de Boer*

