

Nyandeni Local Municipality



Forestry Sector Plan





Table of Contents

Chapter 1: Report Overview

1.1	Introduction	2
1.2	Purpose of the study	2
1.3	Methodology & Report Structure	2
1.4	Study Area	2

Chapter 2: Literature Overview

2.1	Introduction	4
2.2	National Spatial Development Perspective (NSDP)	4
2.3	National Forest Act, No 84 of 1998 (NFA)	4
2.4	Strategic Framework for Forestry Enterprise Development (FED)	4
2.5	Transformation Charter for the Forest Sector, 2009	4
2.6	AsgiSA and the National Industrial Policy Framework & Industrial Policy Action Plan	5
2.7	Land Reform Policy and Programmes	5
2.8	Integrated Strategy on the Promotion of Entrepreneurship & Small Enterprises, 2005	5
2.9	Provincial Growth and Development Plan (PGDP) 2004 – 2014	6
2.10	Eastern Cape Spatial Development Plan	6
2.11	ORTDM Integrated Development Plan (IDP 2014)	6
2.12	OR Tambo Environmental Management Plan 2010	6

2.13	Nyandeni Local Municipality Integrated Development Plan (IDP) 2013-2014	7
2.14	Other key documents & information sources	7
2.15	Synthesis	7

Chapter 3: Economic & Demographic Profiling

3.1	Demographic Profile	8
3.2	Economic Profile	9
3.3	Synthesis	11

Chapter 4: Overview of the Forestry Industry

4.1	International Industry Profile	12
4.2	National Industry Profile	12
4.3	Provincial	14
4.4	Local	15
4.5	Non-Timber Forestry Products	17
4.6	Synthesis	17

Chapter 5: Technical Feasibility Assessment

5.1	Specie considerations	18
5.2	Potential productive area	18
5.3	Nyandeni LM Forestry Spatial Analysis	21

Chapter 6: Considerations for Forestry Sector Development

6.1	Transport infrastructure	26
6.2	Timber prices	26
6.3	Fire protection	26
6.4	Land usage rights	27
6.5	Skills development and training facilities	27
6.6	Certification & Licensing	28

Chapter 7: Forestry Sector Plan

7.1	Nyandeni forestry SWOT analysis	30
7.2	Strategic framework	30

Chapter 8: Implementation

8.1	Implementation Guidelines	38
8.2	Support services required	38
8.3	Service delivery models	42

Figures

Figure 1.1: Nyandeni Local Municipality	3
Figure 3.1: Age and Gender	8
Figure 3.2: Education	9
Figure 3.3: Sector Contribution to GDP-R	10
Figure 3.3: Sector Contribution to GDP-R	10
Figure 4.1: Roundwood production levels (m ³)	13
Figure 4.2: Roundwood production by product	13
Figure 4.3: Existing forestry plantations in Eastern Cape	14
Figure 4.4: Areas of potential for forestry	14
Figure 4.5: Potential for additional forestry	15
Figure 4.6: Potential for additional forestry	16
Figure 5.1: Specie considerations	19
Figure 5.2: WMA 12	20
Figure 5.3: Spatial Analysis Methodology	22
Figure 5.4: Villages	23

Figure 5.5: Exclusionary Zones	23
Figure 5.6: Areas of Suitability	24
Figure 5.7: Areas under Cultivation	24
Figure 5.8: Existing plantations	25
Figure 5.9: Areas of Commercial Forestry Potential	25
Figure 6.1: Water Use Authorisation Process	28
Figure 7.1: Nyandeni Forestry Sector SWOT analysis	32
Figure 7.2: Strategic objectives and initiatives	33
Figure 8.1: Support services associated with development phases for small – medium sized forestry projects	39
Figure 8.2: Service delivery models for small and emerging growers involved in new afforestation projects	41
Figure 8.3: Service delivery models for small-scale producers of timber products	45
Figure 8.4: Service delivery models for large-scale forestry projects	49





Executive Summary

This draft forestry sector plan for the Nyandeni Local Municipality clearly showed that there is a considerable amount of land available for commercial and community scale forestry projects.

All available research has been consulted to determine the suitability profile of the land, what areas are unsuitable for forestry and what competing land uses may exclude forestry as a potential activity.

Two major areas of forestry suitability have been identified. The first is to the North of Libode and the second to the South and South-West of Ngqeleni. These areas incorporate large portions of land identified as suitable to forestry and that are not currently being cultivated by the local communities. These areas also include existing forestry plantations which will assist in the development of these areas as major forestry zones.

The technical feasibility analysis and sector plan have raised the importance of various key issues pertaining to the future development of the forestry sector in the Nyandeni LM. Such issues as fire protection services, road infrastructure, water drawing rights and land use have been discussed and responses to these have been proposed in the sector plan.

The final Nyandeni LM forestry sector plan will include responses to this initial draft and in addition feature:

- ❖ A detailed large format forestry suitability spatial analysis map
- ❖ Forestry sector value chain and analysis
- ❖ Area estimations of various indicated areas of forestry suitability
- ❖ Indication of which villages are in areas of high potential
- ❖ Further revisions to document text and incorporation of additional research

SECTION A

SITUATION ANALYSIS





Chapter 1

Report Overview

1.1 Introduction

Urban-Econ Development Economists has been commissioned by the Nyandeni Local Municipality to compile a specialist forestry sector plan for the Nyandeni LM. The outcome of the study will indicate whether there is a demand for increasing the extent of existing plantations as well as consider possible beneficiation development projects in the local forestry industry and determine if the current market can absorb such a developments.

Development of the Nyandeni Forestry Sector will involve many public and private sector stakeholders including the Department of Agriculture, Forestry and Fisheries (DAFF), the Department of Water Affairs and Forestry (DWAF), the OR Tambo District Municipality, public sector development institutions and funding bodies as well as commercial forestry sector businesses.

This **express purpose of this report** is to provide the Nyandeni Local Municipality with insight into the **potential for forestry** in the municipality as well as **plans and guidelines** for the municipality to develop a successful forestry sector.

This is a desktop study and no primary research or on-site scientific agricultural analysis has been undertaken. The findings and recommendations put forward in this report will need to be taken further by undertaking targeted scientific analysis of the forestry potential of individual sites as well as thorough community consultation.

1.2 Purpose of the study

The project Terms of References (ToR) indicates a requirement for a specialist market analysis regarding the feasibility of the market to sustain additional forestry and

timber production in Nyandeni Local Municipality. The outcome of this study should include the following:

- ❖ Delineated study area
- ❖ An economic overview of the proposed study area
- ❖ Socio-economic dynamics of the study area
- ❖ Profile of the forestry industry
- ❖ A forestry market potential assessment
- ❖ Identification of market gaps in the sector
- ❖ Development and impact assessment of forestry sector development projects
- ❖ Identify key stakeholders and strategic partners that are to be involved in forestry development including their roles and responsibilities.
- ❖ Provide implementation guidelines

The proposed interventions should not be seen to compete with other established enterprises in the region but rather build on their success and complement these existing operations.

1.3 Methodology & Report Structure

The methodology for this study is split broadly into the following seven steps:

- 1 Orientation & Work Plan
- 2 Market Potential Analysis
- 3 Project Development Concepts
- 4 Project Feasibility Analysis
- 5 Impact Evaluation
- 6 Project Packaging
- 7 Implementation Guidelines

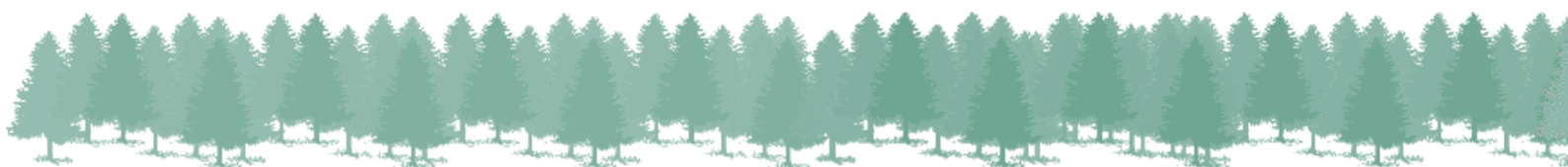
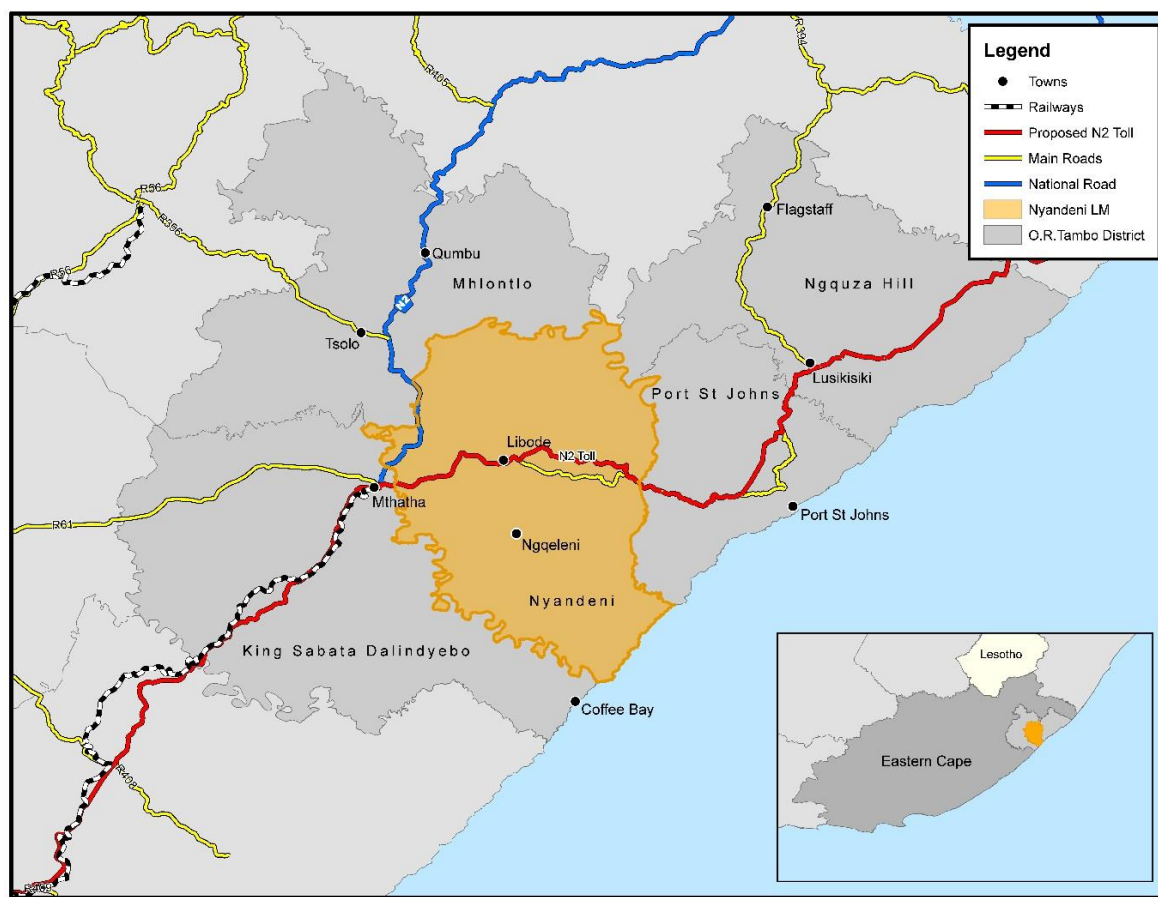


Figure 1.1: Nyandeni Local Municipality



Source: Urban-Econ GIS unit

In response to the above items, the report is structure as follows:

Section A	Situation Analysis
Chapter 1	Report Overview
Chapter 2	Literature Overview
Chapter 3	Economic & Demographic Profile
Chapter 4	Overview of Forestry Industry
Section B	Technical Feasibility Assessment
Chapter 5	Technical Feasibility Assessment
Chapter 6	Considerations for the Development of Nyandeni Forestry Sector
Section C	Forestry Sector Plan
Chapter 6	Forestry Sector Plan
Chapter 7	Implementation Guidelines

1.4 Study area

The Nyandeni Local Municipality lies within the OR Tambo District Municipality, in the eastern part of the Transkei region of the Eastern Cape Province. The Nyandeni Local Municipality consists of the two former magisterial districts of Libode and Ngqeleni.

The Municipality is bordered to the south-west by the King Sabata Dalindyebo Municipality, to the north by the Mhlontlo Municipality, to the east by the Ntabankulu, Ingquza Hill and Port St Johns Municipalities.

The municipality is serviced by the N2 national road which runs East-West across the municipality.

The towns of Libode and Ngqeleni are the only economic nodes of significance in the municipality of which the town of Libode is the largest as well as the administrative hub of the municipality.



Chapter 2

Literature Overview

2.1 Introduction

This section outlines the regulatory or policy framework that provide guidelines for forestry sector development in general and SMME development within the forest sector in particular.

National Framework

2.2 National Spatial Development Perspective (NSDP)

The NSDP provides a framework for deliberating the future development of the national spatial economy and recommends mechanisms to bring about optimal alignment between infrastructure investment and development programmes. However, it is not national development plan. Instead it utilise the principles and notions of need and potential as a common backdrop against which investment and spending considerations should be considered and made.

The NSDP draws attention to the fact that the North Eastern part of the Eastern Cape has high potential land for forestry and agriculture purposes. It goes further to explain how care needs to be taken to ensure that soil degradation caused by erosion, nutrient loading and over use of chemical inputs is curbed and that agriculture production is not negatively affected. Encroachment of other development on prime agricultural and forestry land should be strongly discouraged as agriculture is the main driver of rural growth and poverty reduction.

2.3 White Paper on Sustainable Forest Development in South Africa, 1996

The White Paper laid the foundation for supporting small-scale forest enterprises. It does so by highlighting the role of the Forest Sector in rural development “that will encourage

rural people to develop entrepreneurial skills and promote appropriate markets that will implement local economic development”.

The White Paper also introduces the concept of ‘community forestry’ that “can contribute to improving the environment, enriching the resources, and creating income opportunities in previously disadvantaged communities in rural, peri-urban and urban environments”.

2.3 National Forest Act, No 84 of 1998 (NFA)

Key elements of this policy framework outlined in the White Paper on Sustainable Forest Development in South Africa 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.

2.4 Strategy Framework for Forestry Enterprise Development (FED)

The first comprehensive framework to implement SMME development in the Forest Sector was outlined in the Strategy Framework for Forest Enterprise Development (FED), which was developed by the former DWAFF. This strategy seeks to develop “market driven, profitable business ventures involving previously disadvantaged communities and individuals, based on the sustainable use of forests and forest-based resources”.

2.5 Transformation Charter for the Forest Sector, 2009

This Charter was developed by sector stakeholders over a period of two years and was gazetted as Sector Codes, in terms of Section 9(1) of the Broad-Based Black Empowerment (B-BBEE) Act in May 2009. The Charter highlights the need for SMME development “in underpinning economic growth

and ensuring that black economic empowerment is broad-based”.

The Charter contains a number of undertakings by Government and Industry for creating an enabling environment for SMME development in the Forest Sector. Many of these undertakings reiterate and further detail the initiatives already identified in the draft Strategy Framework for Forestry Enterprise Development (FED).

2.6 AsgiSA and the National Industrial Policy Framework & Industrial Policy Action Plan

The Accelerated and Shared Growth Initiative for South Africa (AsgiSA), 2006, and the National Industrial Policy Framework (NIPF), 2007, both emphasise the importance of promoting and developing small enterprise as a strategy to stimulate growth in the 2nd economy and meeting the Millennium Development Goals.

Moreover, the Industrial Policy Action Plan (IPAP), 2007, emanating from the NIPF, identifies the forestry, pulp, paper and furniture sector as a growth sector of the economy that needs to be developed in support of the AsgiSA. The forestry, pulp and paper, and furniture sector is thus one of the four lead sectors that currently form the central focus for the implementation of the NIPF.

The IPAP provides for a sector growth strategy and action plan for the forestry, pulp, paper and furniture sectors in which the Department of Trade and Industry (DTI) and the former DWAF must jointly take the lead. In terms of actions to be taken, the IPAP text states that “in order to realise growth in this sector, government has committed itself to:-

- Expediting the afforestation licensing process;
- The confirmation of land rights for land holding communities;
- Technical and financial support to emerging small growers; and
- Improvements to transport infrastructure.

2.7 Land Reform Policy and Programmes

Because forestry is a land based activity, the nature and structure of the industry is greatly impacted upon by government’s land reform policy.

The reform programme has three principal components, which, despite changes of focus and priority, have guided it since 1994. These components and their relevance to SMME development in the Forest Sector are outlined hereunder:

(a) Land Redistribution - which aims to provide the disadvantaged and the poor with access to land for residential and productive purposes. Its scope includes the urban and rural very poor, labour tenants, farm workers as well as new entrants to agriculture.

(b) Land Restitution – which covers cases of forced removals which took place after 1913. They are being dealt with by a Land Claims Court and Commission, established under the Restitution of Land Rights Act, 22 of 1994.

(c) Tenure Reform – which is being addressed through a review of present land policy, administration and legislation to improve the tenure security of all South Africans and to accommodate diverse forms of land tenure, including types of communal tenure.

2.8 Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises, 2005

A key policy directive for developing a small enterprise development strategy for the Forest Sector is the DTI’s Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises which was approved by Cabinet in 2005. This follows on and updates the White Paper on National Strategy for the Development and Promotion of Small Business in South Africa (1995), which laid the foundation and a framework within which small enterprises can and must be promoted in South Africa. It identifies small enterprises as the model of development in the post 1994 South Africa.

The 2005 Strategy works from the basis that much is already known and accepted of “what” should be done to support small



enterprise development and that the main challenge is “how” this support should be rolled-out.

The Strategy emphasises the importance of cooperative and integrated approach to service delivery involving all spheres of government and the private sector. The Strategy calls for steps to co-locate as many small enterprise support agencies as possible, in order to create integrated access points for aspiring and existing entrepreneurs.

Provincial Framework/ Policies

2.9 Provincial Growth and Development Plan (PGDP) 2004–2014

This Plan was adopted by the Provincial Cabinet in June 2003 and sets out the vision and plan for the development of the Eastern Cape until 2014. The PGDP’s vision is “to make the Eastern Cape a compelling place to live, work and invest in”, which reflects its concern to increase its economic attractiveness.

The Framework concentrates upon addressing basic needs (fighting poverty) and livelihoods support (agrarian transformation and food security), but also includes strategic programmes that more explicitly respond to economic issues. One of these programmes is the Timber Industries Development Programme. This is prioritized in terms of the strategic objective of diversifying the manufacturing sector and promoting economic development in the underdeveloped former homeland areas of the Province.

This programme is aimed at (1) the rehabilitation of existing forestry plantations, (2) expansion of the forestry resource, (3) optimisation of existing processing capacity, (4) investment in new processing capacity (primary and secondary), and (5) building and supporting SMEs as suppliers and service providers.

2.10 Eastern Cape Spatial Development Plan (SDP)

The Spatial Development Plan (SDP) is intended as a co-ordinating document that sets out a broad framework for the investment of public funding and management of development in the Eastern Cape towards achievement of a common vision and set of objectives.

The EC SDP stresses the importance of forestry sector development and that successful development of sustainable and commercially viable forestry plantations will create opportunities for wood based industries, including sawmills, wood chips, chip board and panelling, building materials, arts and crafts, in the regions small towns.

Municipal Framework

2.11 ORTDM Integrated Development Plan (IDP 2014)

The situation analysis for the Integrated Development Plan (IDP) provides in-depth information regarding demographic, socio-economic, development, economic and social indicators. This is supported by natural environment and spatial analyses as well as information regarding institutional transformation, governance and public participation. Land issues, the status of land claims in the district, housing development, and the extended public works programme community and social services, special programmes, basic service delivery and infrastructure development are also discussed at-length. Under the themes of LED, agricultural development (including livestock), tourism, forestry and timber production, marine activity, trade, manufacturing and investment promotion, cooperatives and SMME support, skills development and ward based planning information systems are highlighted as critical focus areas.

2.12 OR Tambo Environmental Management Plan 2010

Provides key information regarding the state of electricity, transport, roads, storm-water and water services infrastructure in the district. Profiles of the state of the environment are also provided under the headings of freshwater resources, coastline and marine, agriculture and forestry, geology and mining, biodiversity, spatial planning and land use management, urban environment and atmospheric environment.

Given the rural nature of the district, coupled with the endowment of natural resources in the district, the environmental plan is very important in guiding the assessment of development potential.



2.13 Nyandeni Local Municipality Integrated Development Plan (IDP) 2013-2014

The Nyandeni Integrated Development Plan is a development plan that informs the creation of development programmes and projects by government, non-governmental organizations and the private sector. The IDP for 2013/14 has taken into account the National Development Plan which defines South Africa's development trajectory by amongst other things investing in a strong network of economic infrastructure designed to support the country's medium and long term economic and social objectives and improving the quality of education, skills development and innovation as well as the New Growth Path which is based on the following tenets: (a) Identifying areas where employment creation is possible on a large scale as a result of substantial changes in conditions in South Africa and globally (b) developing a policy package to facilitate employment creation and institutional developments required to take advantage of opportunities.

2.14 Other key documents & information sources

Numerous other studies, municipal reports and forestry industry publications have been reviewed and incorporated into this study. Some of the most notable are:

- ❖ South African atlas of agrohydrology and climatology
- ❖ Eastern Cape forestry sector profile
- ❖ ECDC Regional economic profile report
- ❖ United Nations food & agriculture organisation 'State of world forests reports 2007 & 2011
- ❖ DAFF strategy framework for forestry enterprise development 2005
- ❖ DAFF report on commercial timber resources and primary round-wood processing in South Africa
- ❖ DWAF strategic environmental assessment report WMA 12
- ❖ Joe Gqabi District Municipality Forest Sector Development Plan

Reports by,

- ❖ Forestry South Africa (Organised industry)
- ❖ Department of Land Affairs (DLA),

- ❖ DEDEA,
- ❖ Department of Agriculture, Forestry & Fisheries
- ❖ Forestry & Legal Branch of DWAF.
- ❖ Expert Agriculture & Forestry Development Consultants
- ❖ Commercial forestry companies
- ❖ Numerous rural agricultural and forestry case studies

2.15 Synthesis

The key outcomes from the various sources consulted relating to the Nyandeni LM, economic development and forestry development in the region are as follows:

- ❖ Agriculture & Forestry identified as priority sectors for economic development and employment growth by National, Provincial and District government.
- ❖ Agriculture & Forestry seen as major areas of opportunity for rural municipalities who lack the skills base and investment levels of larger economic centres.
- ❖ The Easter sections of the Eastern Cape Province is indicated as having moderate to high potential for forestry. This study will review this further





Chapter 3

Economic & Demographic Profiling

In order to develop effective strategies and plans to develop the forestry sector of Nyandeni it is imperative that the municipality has a thorough understanding of the economic and demographic environment in which these developments will be carried out.

This section serves to highlight the salient features and trends in the Nyandeni economy and socio-demographic landscape to assist in the development of effective strategies and plans that not only speak to the financial success of forestry projects, but also maximise the economic and demographic impact of these projects.

All figures presented here are in line with the Nyandeni Local Municipality Integrated Development Strategy (IDP 2013/2014).

3.1 Demographic Profile

Population & Age

The population of the Nyandeni LM is 290 390 according to the 2011 National Census. 41% (117 734) of the population

is under the age 15. 25% (71 823) lie between 15 and 25 years of age. That 67% of the Nyandeni LM population is under the age of 25 has serious implications for future planning with respect to housing, bulk public services, education, health-care and most importantly job creation. With high unemployment in the municipality (discussed later in this section) creating job opportunities for the future generation is of utmost importance.

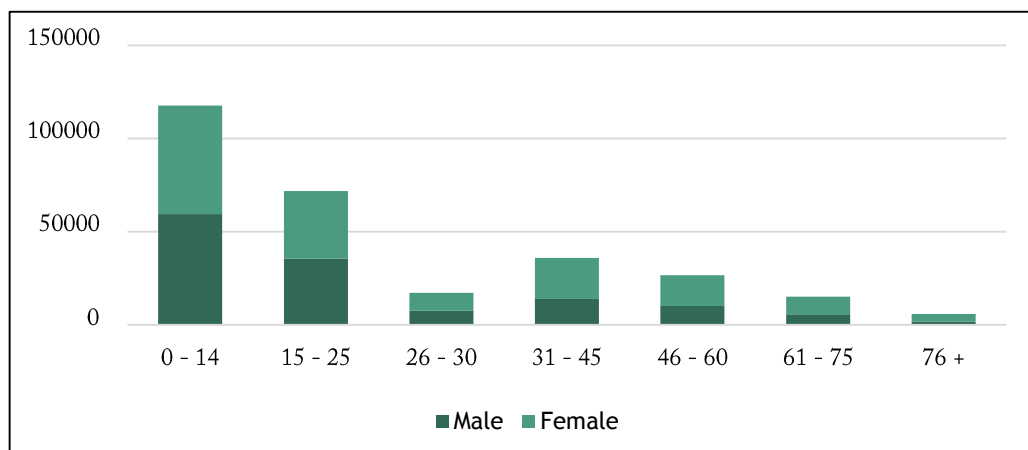
52% (151 580) of the Nyandeni population are in the primary working age categories, expressed here as those between the ages of 15 and 60 years.

The municipality's population is split amongst 61 647 individual households resulting in a relatively high number of persons per household of 4.8.

Education

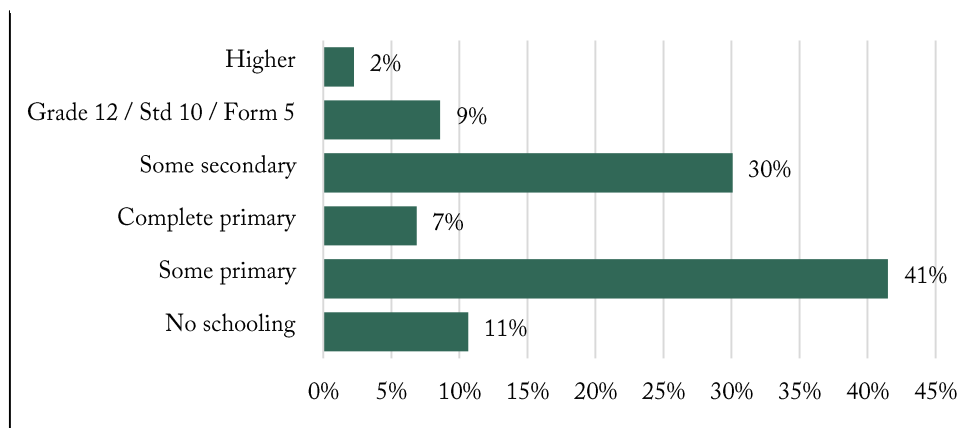
Levels of education present in a population can reliably be used as a proxy for general skill levels and employability, and are thus an important metric to consider when undertaking any development or planning project.

Figure 3.1: Age and Gender



Source: Census 2011

Figure 3.2: Education



Source: Census 2011

As employability is the primary consideration for this section, the education levels of the working age population of the Nyandeni LM will be assessed. The working age population is made up of those individual between the ages of 15 and 60. As seen in the previous section 52% of the Nyandeni population is in this working age-group.

Only 11% of the local population possess a Grade 12 or higher qualification. This is significantly lower than the national average of 29%. The number of working age individuals with very little (or no) education is higher than the national average. 52% of Nyandeni residents have not completed primary schooling, or not attended school at all. The national average is 33%.

These poor education statistics have negative implications for the employability of the local Nyandeni workforce as is seen in the low employment figures presented in the following section.

Employment

According to Census 2011 data, only 9% (28 910) of the Nyandeni working age population is employed in the formal sector. Due to the nature of the informal sector reliable statistics regarding its size and complexity not available. The informal sector is expected to be sizeable but not exceeding the size of formal sector employment.

Even factoring in a generous estimate of the size of informal sector employment total employment levels in the municipality are extremely low.

The low levels of education do certainly influence this low level of employment but it is not the only factor. Other issues such a historical lack of investment in the region, geographical location away from major markets, small size of private sector including small presence of private sector agriculture contribute to the low levels of employment.

Standard of Living (Including income)

The Nyandeni IDP covers the issue of living standards thoroughly providing key insights into the actual levels of welfare of the local population. The Human Development Index (HDI) provides a useful measure of living standards of a population. It takes various key factors affecting welfare into consideration including income, life expectancy and levels of education. The results of HDI calculations are represented as an index value between 0 and 1 with.

In 2011 the HDI index value for the Nyandeni LM was estimated at 0.40, significantly lower than the South African national average of 0.53.

This coincides with household income data from the 2011 Census which shows the average household income in the Nyandeni LM to be at the low level of ± R 3 000 per month inclusive of all sources of income.

3.2 Economic Profile

The following section provides an overview of the Nyandeni LM economy, highlighting key features and trends of the

economy that will assist in developing plans and projects in the Nyandeni forestry sector.

Figure 3.3 display the relative contribution of each economic sector to the municipality's GDP-R and figure 3.4 displays each sectors relative contribution to employment.

From figures 3.3 and 3.4 it can be seen that:

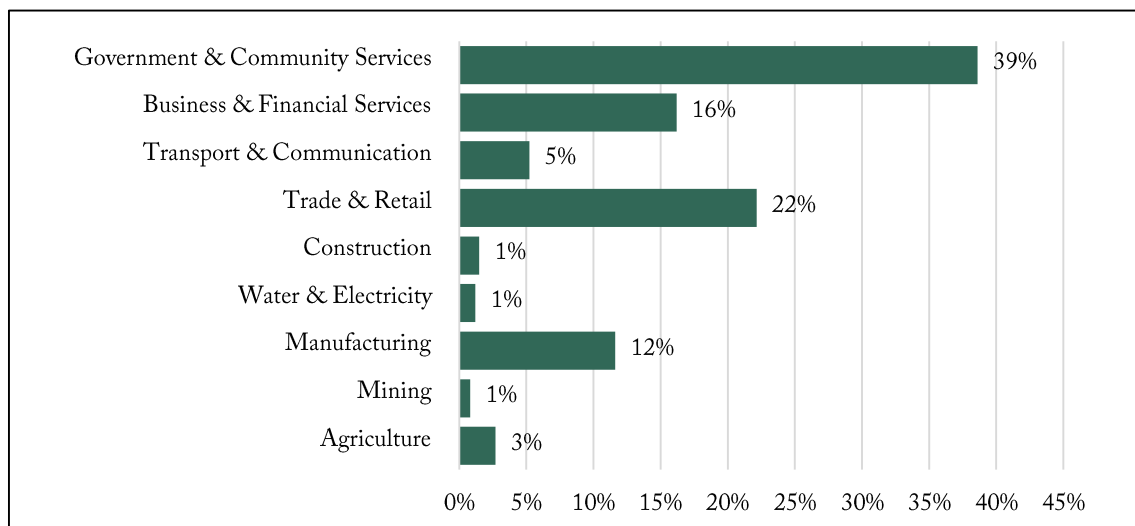
The Government & Community services sector is the primary driver of the economy. The provision of old-age pensions, child-care, disability and other grants provide much of the finances required to sustain the other economic sectors.

The next largest sectors are the Trade & Retail sector and the Business & Financial services sectors. These 'business' sectors are largely driven by the presence of income grants and municipal employment.

Agriculture has a relatively high level of employment in the municipality compared to other municipalities. The contribution of Agriculture to GDP should not be dismissed as it has a downstream economic impact.

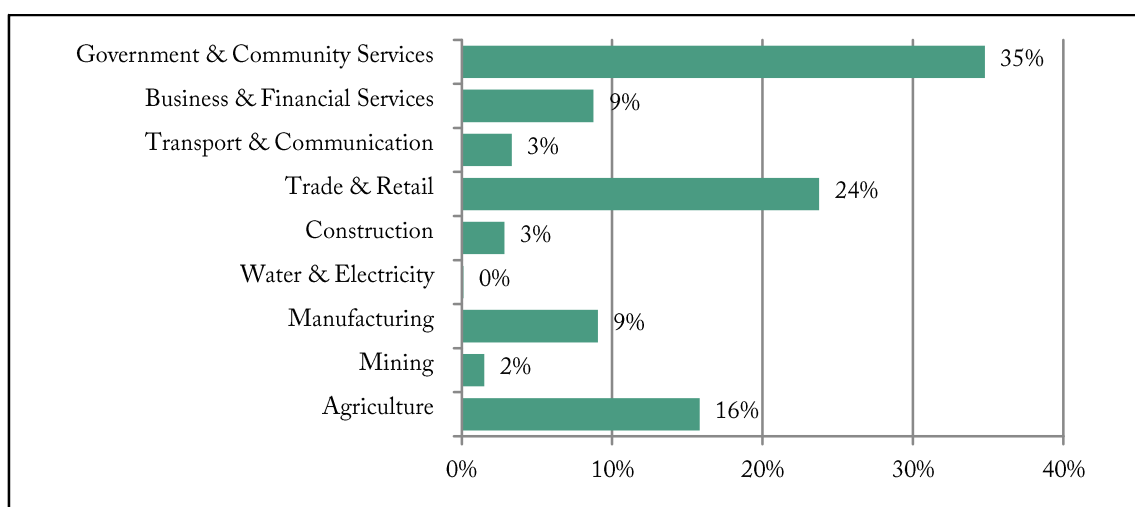
Overall the Nyandeni economy is relatively small, and without a major economic sector established to drive employment and economic growth.

Figure 3.3: Sector Contribution to GDP-R



Source: Quantec – Standardised Regional 2013

Figure 3.3: Sector Contribution to GDP-R



Source: Quantec – Standardised Regional 2013

3.3 Synthesis

The results of the economic and demographic profiling have the following bearing on this report:

- ❖ Low levels of average household income in Nyandeni LM and low living standards indicate need for economic and social interventions.
- ❖ Low levels of education limit the employability of the future workforce.
- ❖ Low levels of formal sector employment result from low levels of education, low levels of investment and the small size of productive economic sectors.
- ❖ The Nyandeni LM has a relatively small population and low population density but this population is spread out relatively evenly across the municipality.
- ❖ The economy is dominated by the Government and Community Services sector with relatively little activity in the productive economic sectors. Interventions (such as those related to forestry development) aimed at increasing the size of the productive sectors and increasing economic diversification are required to boost employment and economic growth.
- ❖ Agriculture (Including forestry) is traditionally labour absorptive and can create a great impact on the socio-demographic landscape of the Nyandeni LM.
- ❖ The low levels of education present in the population means that the prospects of finding employment in secondary and tertiary sectors is inhibited as these sectors tend to employ skilled labour relatively intensively.
- ❖ Forestry is a primary sector industry which makes intensive use of unskilled as well as semi-skilled labour and is thus well suited to the current challenges facing the Nyandeni LM.





Chapter 4

Overview of the Forestry Industry

Plantation forestry provides the raw materials for all downstream activities associated with the forestry industry such as pulp milling, paper manufacturing, saw milling and certain furniture manufacturing. The development of plantation or indigenous forestry can also play an important role in environmental services such as through the conservation of soil; water and biological diversity.

4.1 International Industry Profile

The international forestry industry was estimated to contribute in excess of \$ 144 billion to the world economy in raw production alone not accounting for the multitude of downstream industry value-adds.

In 2000 the industry was estimated to employ over 13 million people in plantation management and felling alone. 500 000 of these people were employed in the African forestry industry.

In Africa the vast majority of forestry production is for local consumption with Africa only representing 2% of the world timber export market.

4.2 National Industry Profile

The total commercial timber plantation area in South Africa in 2011 was 1.2 million hectares, 0.2% higher than in 2010. This equates to only 1.0% of the total land cover in South Africa compared to 0.3% for natural forests. The majority of these plantations are situated in KwaZulu-Natal and Mpumalanga which collectively account for 80.2% of total afforested areas in South Africa.

Though plantations have a legacy of state ownership only 17.0% of the total plantation area in South Africa is currently under government control. The large grower category of

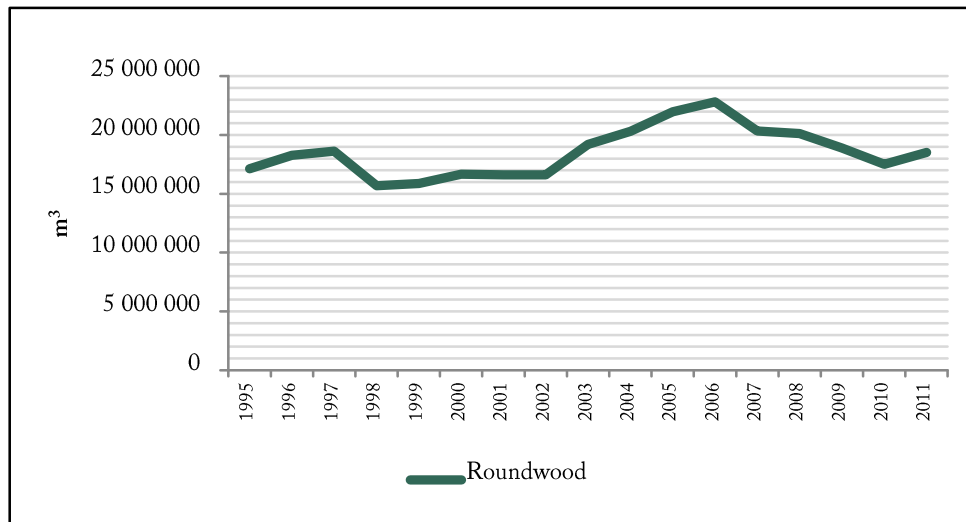
plantation ownership (i.e. greater than 5 000 hectares) is highly concentrated with these owners controlling 70.8% of the total plantation area in South Africa. The medium growers (i.e. plantation size of between 200 and 5000 hectares), owned 25.8% of all plantations in 2011. The approximately 518 individuals, partnerships, and trusts classified as small growers (i.e. plantation size of less than 200 hectares), own the remaining 3.5%.

The plantation market is defined by a large degree of vertical integration with the major plantation owners in many cases also being the major processors and buyers of wood. Examples of this are Mondi and Sappi in the case of purchases of wood for pulp and paper, Masonite in the case of fibreboard, and Global Forest Products and Hans Merensky for sawmilling. Given this industry structure, a large majority of the wood produced is removed from the open market which results in the dominance of few large buyers.

Short rotation hardwood – mostly eucalyptus and some wattle, and the type of wood required for paper-making and woodchip exports – accounts for 48.4% of the total planted area in South Africa. Softwood species, namely pine, accounts for some 51.1% of total plantations. Rotation periods for softwood species vary between 12 to 15 years for the manufacture of pulpwood; and 27 to 30 years for sawn timber products. The variation in rotation periods plays a critical role in the commercial viability of small grower schemes.

Due to its shorter rotation and higher yield, annual hardwood production outstrips that of softwood. Of the approximately 18.5 million m³ of wood produced in South Africa during 2011, hardwood comprised 10.4 million m³ (about 56.2%) while softwood accounted for only 8.1million m³ (Forestry SA, 2012).



Figure 4.1: Roundwood production levels (m³)

Source: Forestry SA 2012

Total South Africa roundwood production volumes have however shown poor growth over the 1995 to 2011 period with average annualised growth over the period of only 0.5%. Total roundwood production peaked in 2006 at 22.8 million m³ before declining 18.9% to its current 2011 levels.

In terms of pulpwood and sawlogs produced, the 2011 demarcation was as follows: 10.3 million m³ of pulpwood and 4.1 million m³ of sawlogs, with the remaining 4 million m³ allocated to mining timber, poles, charcoal and other uses. Thus 55.8% of all timber produced in 2011 was pulpwood,

22.6% was sawlogs, and the remaining 21.6% of production was split between other uses, such as mining timber (3.1%) and poles (2.3%).

The production of pulpwood relative to sawlogs has increased markedly over the past two decades. This is indicative of the fact that new afforestation over the past 17 years has been mainly for pulp production purposes (Forestry SA, 2012). The

Figure 4.2: Roundwood production by product

Product	1995	2011	% growth (1995-2011)
Sawlogs & Veneer Logs (m ³)	5 106 055	4 179 100	-1.2
Pulpwood (tons)	7 457 873	10 337 799	2.1
Mining Timber (tons)	1 466 095	573 142	-5.7
Poles (m ³)	623 169	432 623	-2.3
Matchwood (tons)	19 142	-	-
Charcoal a and Firewood (tons)	137 696	233 069	3.3
Other (tons)	101 857	102 489	0.0
	17 133 939	18 517 492	0.5

Source: Forestry SA 2012

Figure 4.3: Existing forestry plantations in Eastern Cape

	Existing hectares	Percentage (%)
Cacadu	32 876	23.2
Amathole	24 140	17.1
Chris Hani	19 402	13.7
Joe Gqabi	27 813	19.7
O.R. Tambo	32 981	23.3
Alfred Nzo	4 201	3.0
Eastern Cape	141 413	

Source: Forestry SA 2012

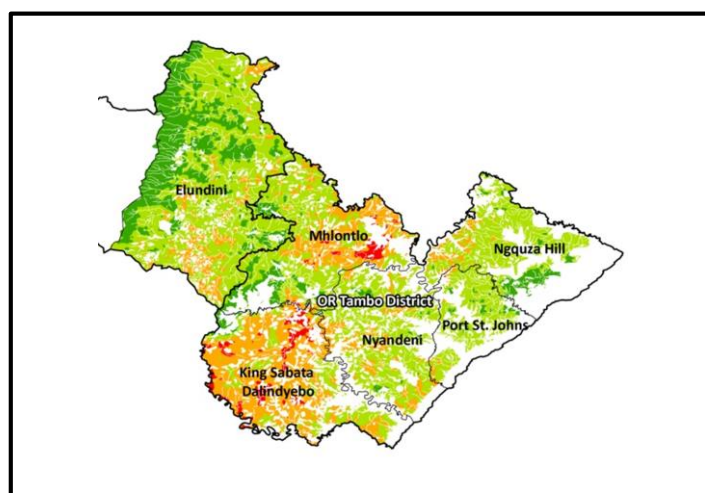
growth in pulpwood area can be attributed to the strong demand for paper and paper products on local and international markets. Furthermore, the shorter rotation period required provides growers with the incentive of a more regular cash flow.

The total value of plantation forestry products in 2011 was estimated at R 7 billion, a 3.2% year-on-year increase. Of this value, R 4.9 billion (69.9%) was generated from pulpwood and a further R 1.6 billion (23.8%) from sawlogs and veneer logs production. Since 1995 the total value the plantation forestry industry has risen from R 1.6 billion to R 7.0 billion in 2011, equating to a real growth rate of 3.2%.

4.3 Provincial profile

The Eastern Cape accounted for approximately 11.1% (141 413 hectares) of total afforested area in 2011, making it the third largest province in terms of area under plantation. Of these plantations 75.0% are privately owned with the remaining 25% being state owned. Forestry plantations in the Eastern Cape are primarily located in the eastern part of the province in the Joe Gqabi (Elundini), Alfred Nzo, O.R. Tambo (Mhlontlo, Port St. Johns, Ngquza Hill) and Amathole District Municipalities. There is also a large block of plantations located in the Tsitsikamma area in the southernmost part of the Cacadu District Municipality.

Figure 4.4: Areas of potential for forestry within the region



Source: Forestry SA 2012

Figure 4.5: Potential for additional forestry

District	Potential (Hectares)		Total
	Good	Moderate	
Cacadu	-	-	-
Amathole	7 98-6	164 336	172 322
Chris Hani	27 1-74	175 923	203 097
Joe Gqabi	56 188	530 050	586 238
O.R. Tambo	24 127	337 422	361 549
Alfred Nzo	46 056	382 217	428 273
Eastern Cape	161 531	1 589 948	1 751 479

Source: Forestry SA 2012

These plantations account for an estimated 141 000 hectares of land with a further 230 000 hectares of land containing natural forests. In addition to this forestry land, there are many areas in which plantation species, mainly wattle, exist in unmanaged plantations. It is estimated that there are a further 5 000 hectares of such trees in the province.

Based on Figure 4.5, the O.R. Tambo District Municipality accounts for approximately 23.3% of the total area under forestry plantation in the Eastern Cape.

In 2011 the Eastern Cape produced approximately 1.2 million m³ of roundwood which equated to 6.5% of total South African output. The majority of this roundwood was in the form of sawlogs (51.6%), pulpwood (27.4%) and poles (11.0%). The value of this roundwood production was estimated at approximately R 457.7 million in 2011.

4.4 Local profile

Figure 4.5 indicates the areas within the OR Tambo district municipality that has 'good' to 'low' potential for forestry developments.

In 2007 the Department of Water and Environmental Affairs conducted a strategic environmental assessment of the Eastern Cape to determine the biophysical suitability of the province for additional forestry plantations. This assessment identified 1 751 478 hectares of land as having potential for

additional afforestation. Of this figure 9.2% was indicated as having good potential, while the remaining 90.8% was indicating as having moderate potential. Table 5.8 indicates this potential per district municipality.

The areas with forestry potential were identified on the basis of biophysical criteria after removing existing forestry, areas of high biodiversity, conservation value, socio-economic value, hydrological restrictions, infrastructural constraints, and urban and residential settlements. The study however only indicated what land was suitable for forestry and not what was available, that is, was potentially subject to land claims etc. The department's estimates indicated that if the owners of the land wished to engage in forestry and used 15% of the land for such a purpose 262 722 hectares of new plantations could be realised. The Strategic Environmental Assessment assumed a more conservative target of 100 000 hectares as being more realistic.

Figure 4.6 displays the potential for new afforestation in the Nyandeni LM specifically.

Here it is seen that a large amount of land is identified as being moderately suitable for forestry but a relatively small amount of land in Nyandeni classified as 'good'

A total of 105 050 hectares of land has been broadly identified in Nyandeni for possible forestry expansion. This does not

take into account various restrictions on forestry suitability such as impact on water table, land ownership and other constraints.

Due to a historical lack of investment in the municipality there are no commercial forestry businesses in operation in the Nyandeni LM and only 2 853 ha of state owned plantations. This is very small considering the potential of the areas.

4.5 Non-Timber Forestry Products

Although this report is predominantly aimed at the growth and development of plantation forestry and traditional forestry practices there are likely to be numerous opportunities for the exploration of non-timber forestry activities in the Nyandeni local municipality. These non-timber forestry products (NTFP's) are of less commercial value but can offer a significant number of employment opportunities.

The major NTFP's include:

- ❖ Beekeeping and honey production
- ❖ Basket-making
- ❖ Picking and packaging of edible plants

- ❖ Ferns, foliage and flowers
- ❖ Hiking trails
- ❖ Medicinal plants
- ❖ Picking and packaging of mushrooms

Broad plans and policies to frame the development of NTFP practices will be provided later in the report.

Synthesis

It is clear that the Nyandeni LM has, at least at a broad level, large amounts of land which can be put to forestry. When considering the size of the forestry sector in the regions bordering it is clear that at the very least the plantations currently in place could be more effectively utilised.

The following sections will provide a more thorough analysis of the technical feasibility of forestry in the Nyandeni LM.

Figure 4.6: Potential for additional forestry within the Nyandeni LM

Sector Segments	Number	Scale/Extent (ha)	Employees	Revenue
Commercial plantations	0	0	0	0
Woodlot plantations	25	2 853	88	R 0.7 million p/a
Total existing				
Afforestation potential – moderate	-	101 392	-	-
Afforestation potential - good	-	3 659	-	-
Total potential		105 051	-	-
Natural forests (groups)		13 199	29	
Sawmills	0	0	0	0
Chipboard	0	0	0	0
Veneer	0	0	0	0
Pole treatment	0	0	0	0
Charcoal	0	0	0	0
Total Processing	0	0	0	0

Source: Forestry SA 2012

SECTION B

TECHNICAL FEASIBILITY ASSESSMENT





Chapter 5

Technical Feasibility Assessment

This section presents a technical assessment of the development suitability for forestry in the Nyandeni Local Municipality. Issues covered include suitable species for the area, ecological considerations and the calculation of the potential productive area available.

5.1 Specie considerations

One key issue when considering forestry development is what specie is best suited and/or most economically suitable to the forestry sector in question. There are three basic species to consider in the South African context – Pine (*Pinus taeda*), Gum (*Eucalyptus grandis*) and Wattle (*Acacia mearnsii*). Figure 5.1 discusses the benefits and drawbacks of each specie.

Pine – Has a very long growth time of 25 -30 years. This makes it increasingly unattractive to South African forestry organisations due to the increased risk of fire. In fact the South African forestry sector is fast changing existing pine plantations to gum to avert this fire risk, despite pine being a higher value timber than gum.

Eucalyptus – Eucalyptus (gum) is the main alternative to pine in the South African forestry sector. It is a high value timber with a short growing time than pine (8 – 10 years) making its fire risk rating considerably lower.

Wattle – Wattle is an invader species, i.e. not an indigenous plant variety. It is found growing in dense ‘jungle’ pockets throughout South Africa. It is a low value product but is well suited to community owned/led initiatives. Wattle has many uses including charcoal production, building supplies, furniture and household firewood.

Due to the length of the growth cycles and the risks associated with this, as well as other factors, Pine is not recommended for growth in the Nyandeni Local Municipality. It is

recommended that Eucalyptus be prioritised for large and medium scale projects together with wattle for small community driven projects.

5.2 Potential productive area

Nyandeni LM falls within Water Management Act Area 12 of South Africa (WMA 12) as outlined by the Department of Agriculture Forestry and Fisheries (DAFF). WMA 12 runs along the coast of the Eastern Cape Province from the Mzimbuvu River in the North to the Keiskamma River in the South and as far inland as the Kingdom of Lesotho.

It fully encompasses the Nyandeni Local Municipality and the catchment areas for the rivers that pass through it.

The Strategic Environmental Assessment (SEA) of WMA 12 indicated that forestry, alongside agriculture and tourism, is thought to offer a viable opportunity for development in WMA 12 area.

The potential for forestry development is broadly recognised but not quantified or qualified within sustainable parameters.

A macro analysis of the topography of the Nyandeni Local Municipality was undertaken to examine if and where any extreme topographical features may exist that could preclude the development of forestry in the municipality.

The Nyandeni Local Municipality slopes gradually from above 1000m in the North West to the sea in the South East of the municipality.

In terms of the development of forestry the elevation and slope profile of the land is relatively well suited for the development of forestry with relatively few areas ruled out be excessively steep slopes.



Figure 5.1: Specie considerations

Factors being considered regards suitability to communities in the NLM	Pine (Pinus Tadea)	Gum (Eucalyptus Grandis)	Wattle (Acacia mearnsii)
Growth cycle to harvest	25-30 years	8-10 years	<5 years
Value	Very high	High	Low
Fire threat	High	Medium	Low
Economic sustainability	Very difficult to maintain economic sustainability	Sustainability an issue but less so if integrated with other cash crop options	Highly sustainable, but considerably less valuable
Accessible markets in NLM	Fair	Excellent	Good
Ability to engage JV partners	Very poor	Excellent	Fair
Distance to markets	Poor	Good	Fair

The topography of the Study Area is highly variable with elevations running from mean sea level along the coast to over 3 000 metres in the foothills of the Drakensberg. Elevations along the coastal escarpment range from sea level to approximately 250m extending inland by +/- 10km. This area is deeply incised by major river valleys with very steep sides and narrow valley bottoms. Topography in the middle of the Study Area is sloping to steeply sloping with valley bottoms of +/- 500m rising to +/- 1 250m above sea level along broad ridges. Ridges generally have a northeast to southwest orientation but local topography is varied and dependent upon the local geomorphology. The northern perimeter of the WMA 12 is characterised as steeply sloping along the upper catchments.

Most settlements occur on relatively flat lands along plateaus and eroded ridge tops with the associated side slopes used for farming activities. Steeper lands are typically utilised for grazing and forestry activities or comprised of indigenous vegetation. Floodplains in the valley bottoms are typically narrow in the upper portions of the Study Area with steeply incised valley walls throughout much of the coastal escarpment.

The climate of the Study Area is subtropical, with the areas at higher elevations characterised by a cooler, more temperate climatic regime. The wettest areas within the Study Area occur below the escarpment and along the coast. In contrast, large river valleys can be hotter and drier than the surrounding landscape. The region receives most of its rainfall in the summer, sometimes accompanied by thunderstorms. Typically, passing cold fronts, which are associated with most rainfall events, will be accompanied by soft soaking rains and a drop in temperature. Mean Annual Precipitation (MAP) in the Study Area increases towards the coast, and to the east, ranging from an average of 500mm to greater than 1 000mm per annum. The South African National Biodiversity Institute (SANBI) identifies a total of 41 vegetation types within the study area with grasslands and bushveld being the most extensive. However, there are vegetation types that have high conservation value due to their biodiversity while others, such as coastal swamps and indigenous forests are protected by legislation. The Nyandeni LM falls within the so-called Pondoland Centre of Endemism.

The Xorana, Mbashe and Nqabara river catchment areas are the primary catchment areas and cover most of the actual potential production basin for the NLM. Headwaters for

these rivers generally start in the footslopes of the lower Drakensberg to the North and generally drain in a Southeast direction towards the Indian Ocean. Of this area the only catchment areas that prove to be problematic are the Mthatha catchment areas of T20A & T20B. Consult map below for more details.

The Mthatha Catchment (T20) maintains a large forestry area already and increasingly this will result in the Reserve not being met. With respect to the T20B catchment, afforestation above the Mthatha dam will reduce flow that may conflict with other planned uses. Afforestation below the Mthatha dam, in the Nyandeni region is less likely to create any undue pressure on the existing reserve. More consultation is required to determine the availability.

Ecologically sensitive regions

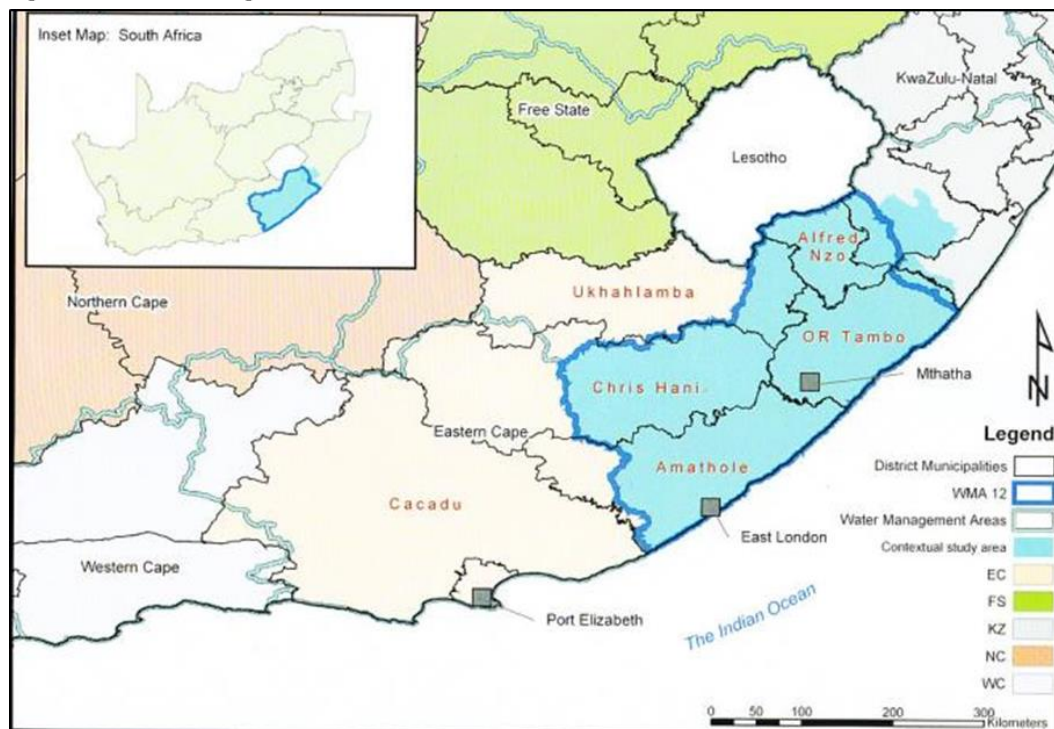
The map below depicts the area in terms of ecological sensitivity. The areas where no new significant development should take place is represented as “Exclusionary Zones” whilst those with significant development potential is demarcated as “Precautionary Zones”. Also depicted on the map is the so-called “No Restriction Zones” or areas where

there is no data to suggest that environmental sensitivity will be a constraint to development but site specific conditions should be considered and these may still dictate modifications to project plans.

Features or conditions that were considered Exclusionary included:

- Areas identified as no or low potential to afforestation (per the Fractal Forests data set)
- Existing settlements and a 100 meter buffer (a 100 meter buffer was used for settlements to account for inaccuracies in the map data and the scale of the mapping used under normal SEA conditions.
- Existing forest plantations (State owned and private)
- Existing lands under current commercial agricultural production
- Protected areas
- Perennial streams and a 100 meter buffer (a 100 meter buffer was used for perennial streams and a 30 meter buffer used for intermittent streams to account for inaccuracies in the map data and the scale of mapping used.

Figure 5.2: Water Management Area 12 (WMA 12)



Source: DAFF

- Areas of protected vegetation types (e.g. indigenous forests)
- A four kilometre wide coastal strip
- Priority Conservation Areas identified by the CSIR Systematic Conservation Plan (CSP). Note only Pondoland has been mapped to date.
- Areas identified as Critically Endangered and Vulnerable per the Subtropical Thicket Ecosystem Programme (STEP) data set.
- Areas of scenic landscape diversity and heritage sites (scenic and sensitive landscapes considered Exclusionary for projects that may result in large-scale landscape alteration).

Features or conditions that were considered Precautionary included:

- Centres of Endemism
- Wild Coast Planning Domain
- South African National Biodiversity Institute (SANBI) Grassland Priority Zones
- Quarterly catchments with an Ecological Importance and sensitivity (EIS) Rating of Very High and High.
- Quarterly Catchments with a Recommended Ecological Category (REC) of A, A/B, B, or B/C.
- Areas of Scenic and Sensitive Landscapes (Precautionary for projects that may result in small-scale landscape alteration) but also identified as Exclusionary for development that is landscape intensive such as commercial forestry or agriculture.

5.3 Nyandeni LM Forestry Spatial Analysis

This section seeks to combine the data consulted up to this point relating to the Nyandeni LM and the potential for forestry development in the municipality into one unified map of forestry potential. This map can in itself be used as a tool by the municipality for identifying areas for forestry projects, identifying the communities affected by a forestry project and evaluating proposals for forestry projects by private sector parties.

The starting point of the forestry potential map spatial analysis was a basic overview of the Nyandeni Local Municipality complete with major roadways upon which was placed two individual data layers.

The first of these is the land ownership types currently employed in the municipality. Small pink areas surrounding the towns of Libode and Ngqeleni are the only municipally owned portions of land in the municipality. The rest of the land in the municipality falls under the various traditional leadership houses in the municipality.

The second layer added was that of the various villages and settlements in the municipality indicated by the brown areas on the map. As can be seen in figure 5.4 the population of the Nyandeni LM is scattered amongst many villages. Together with the issue of traditional land ownership models this represents a challenge to the development of large scale forestry operations. The reason for this is that a large private sector forestry concern would ideally wish to negotiate with one party, the municipality for instance. Investing in the Nyandeni LM would necessitate numerous engagements with land owners and individual communities to establish land-use agreements before any developments can take place.

The next step was to overlay data from the Strategic Environmental Assessment of WMA 12 on exclusionary zones. These zones are areas where forestry developments are not feasible. The resulting map is shown in Figure 5.5. Here it is seen that large swathes of land across the Nyandeni LM are deemed not feasible. The most notable area indicate here is the stretch of land along the coast which although forestry plantations could be implemented successfully, Wild-Coast planning restrictions and other environmental policies exclude the development of forestry.

The third step was to overlay data on land suitability to forestry for the Nyandeni LM. This data was abstracted from maps and data presented in DWAF publications. The darker green areas are classified as 'good', or reasonably suited to the development of forestry while the lighter green indicate areas of 'moderate' suitability to forestry. These moderate areas are still technically feasible for forestry (from a macro perspective, pending on site verification) but are not expected to produce

the same yields as areas identified as ‘good’ or ‘excellent’ for forestry.

From Figure 5.6 it is seen that all remaining land of the Nyandeni LM is at least moderately suitable for forestry with numerous large pockets of land well suited to forestry.

This raises additional questions regarding the actual ‘real-world’ suitability of this land to the inception of forestry sector projects. Portions of land seemingly unused and very well suited to forestry from a macro perspective may currently be used by local communities for crop farming or as prime grazing land for livestock and these communities may not wish to give up this land to forestry.

Figure 5.7 adds information on land currently being cultivated for subsistence farming by local communities. If all of this land was to be excluded, this would drastically reduce the overall amount of land available to forestry in the Nyandeni LM, however this is unlikely to be the case as communities may wish to give up some portion of their land which they are currently farming towards some sort of forestry operation and secondly, a large private or public sector forestry initiative may boost the productivity of local agriculture through increased agricultural services in the region, improved infrastructure, skills development and local private/publicly funded agriculture assistance programs.

It is likely that even if these cultivated sections of land are not excluded completely, that negotiations for land-use for forestry will take a long time and agreements between all of the various community stakeholders and public or private forestry stakeholders may be difficult to achieve.

Figure 5.8 highlights existing plantations in the Nyandeni LM. These are represented by the orange areas on the map. Figure 5.9 indicates areas (circled in white) of the Nyandeni LM where large sections of land well suited to forestry are located, where there are relatively few villages and relatively little land identified as being cultivated by local communities. These sections represent the highest likelihood for large scale forestry initiatives to be developed in the near to medium term. These areas comprise both concentrations of existing

plantations and areas identified by this study as suitable for forestry and on vacant land.

A detailed version of this composite map will be included as an annexure in the final version of this report. This map will:

- ❖ Clearly highlight all of the areas discussed in this section
- ❖ Include municipal roads
- ❖ Provide the names of individual villages

Figure 5.3: Spatial Analysis Methodology

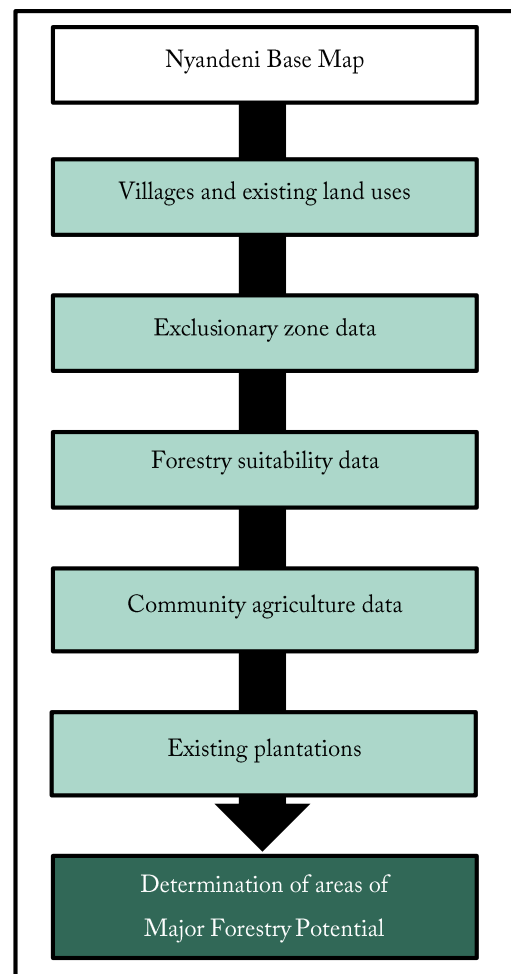
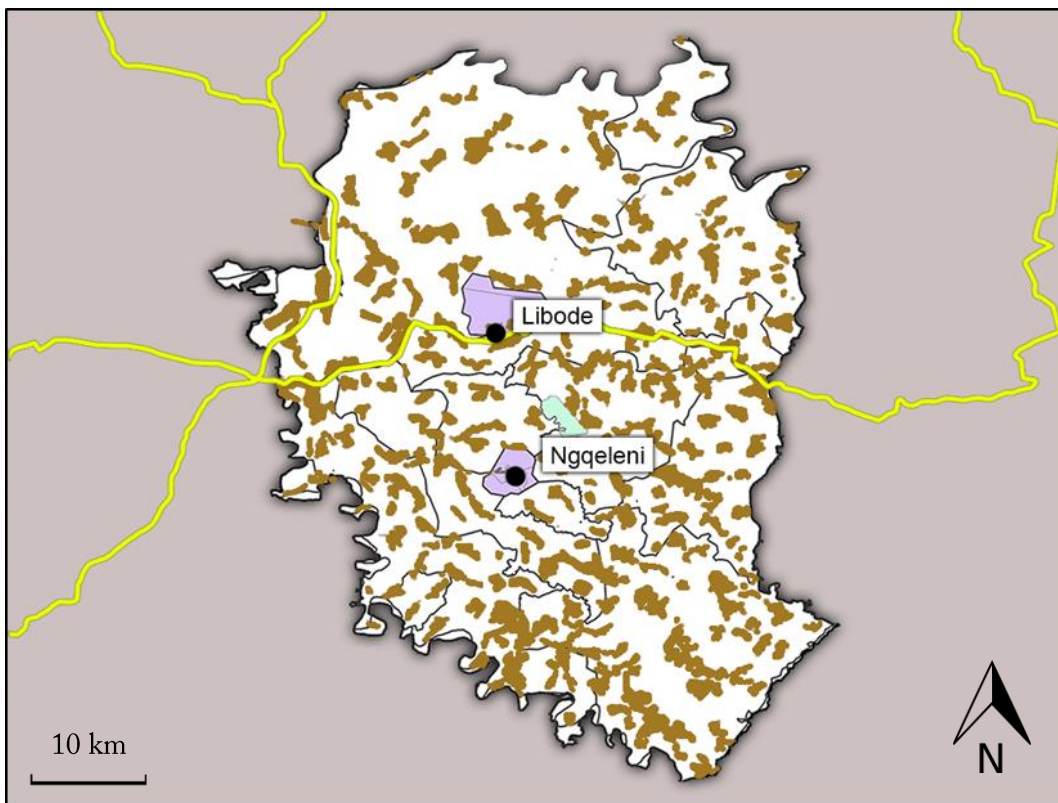
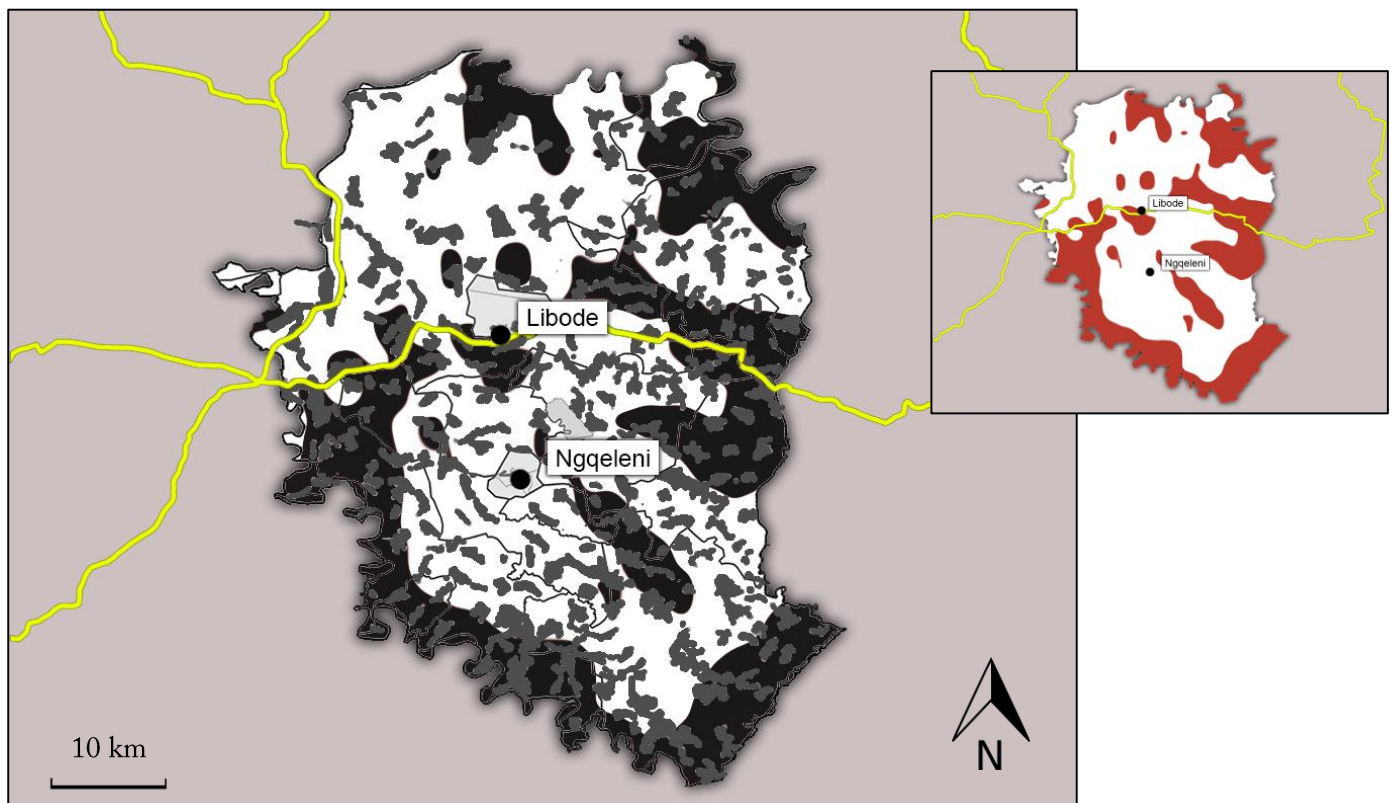


Figure 5.4: Villages within the Nyandeni LM



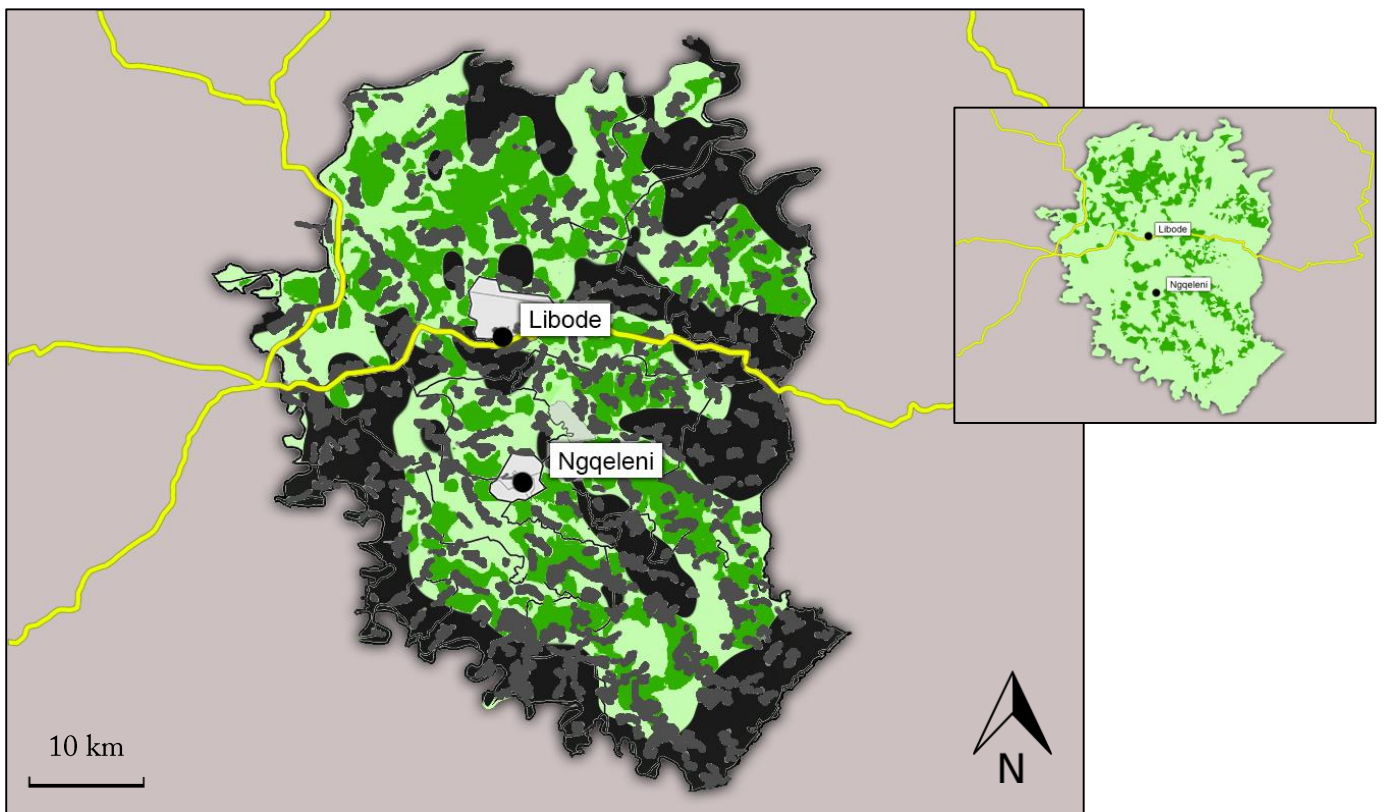
Source: Urban-Econ GIS Unit

Figure 5.5: Forestry development exclusionary zones



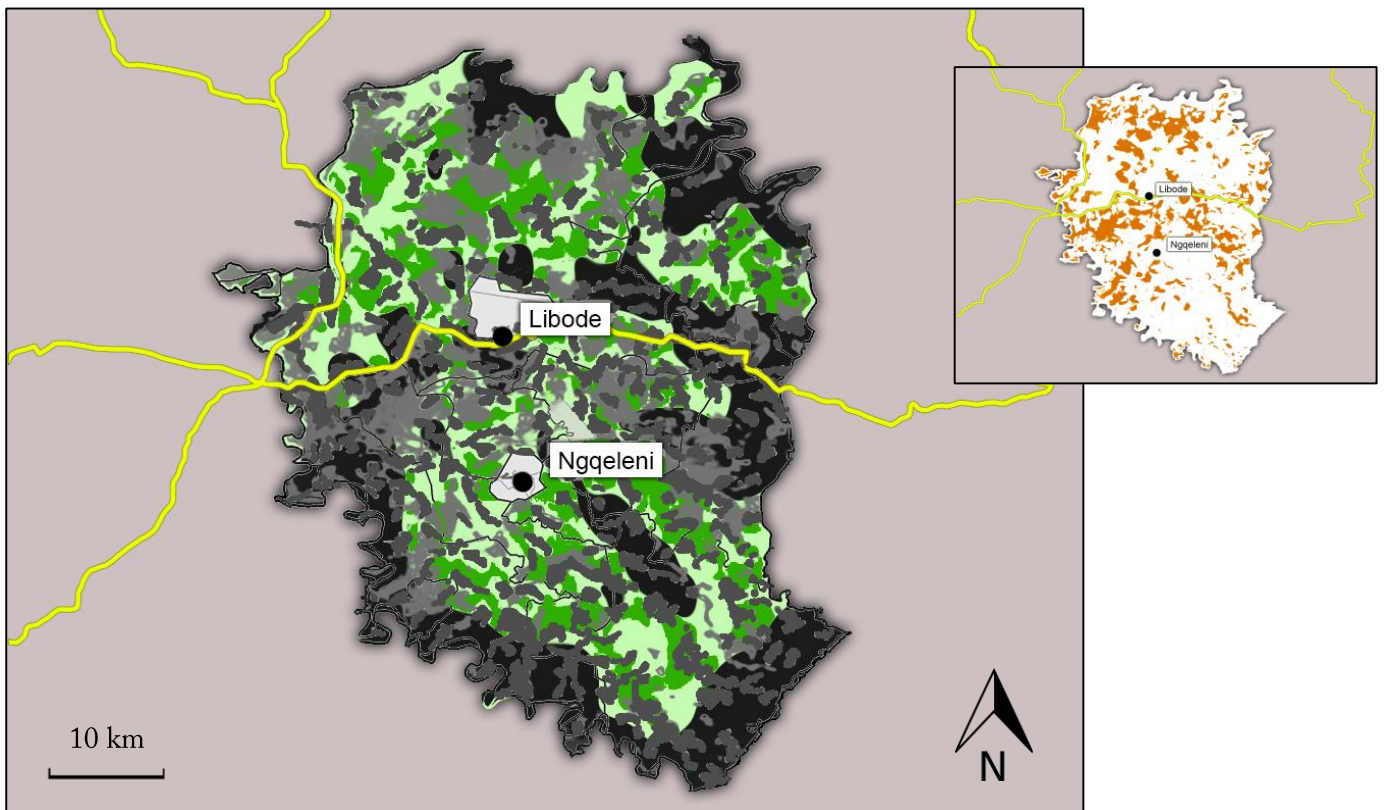
Source: Urban-Econ GIS Unit

Figure 5.6: Areas of forestry suitability



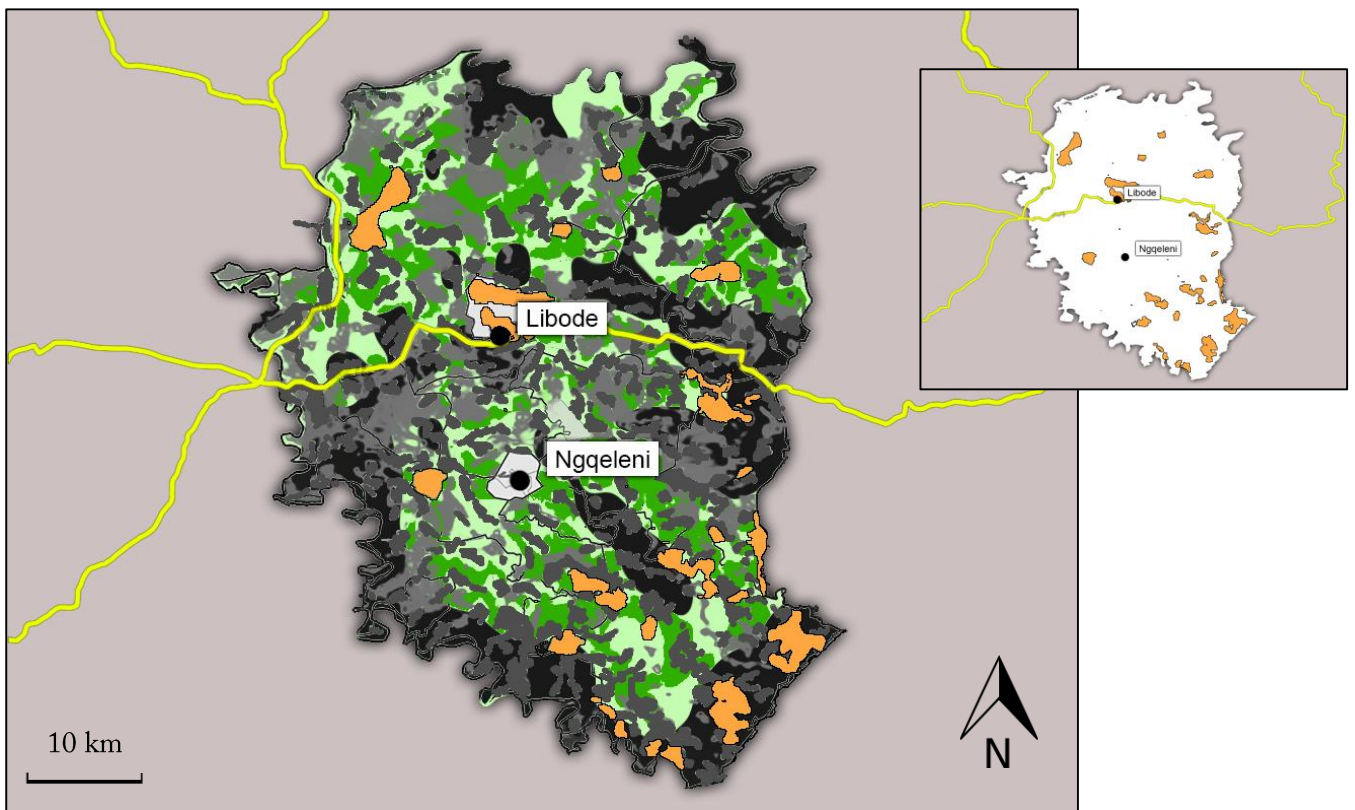
Source: Urban-Econ GIS Unit

Figure 5.7: Areas under cultivation by local communities



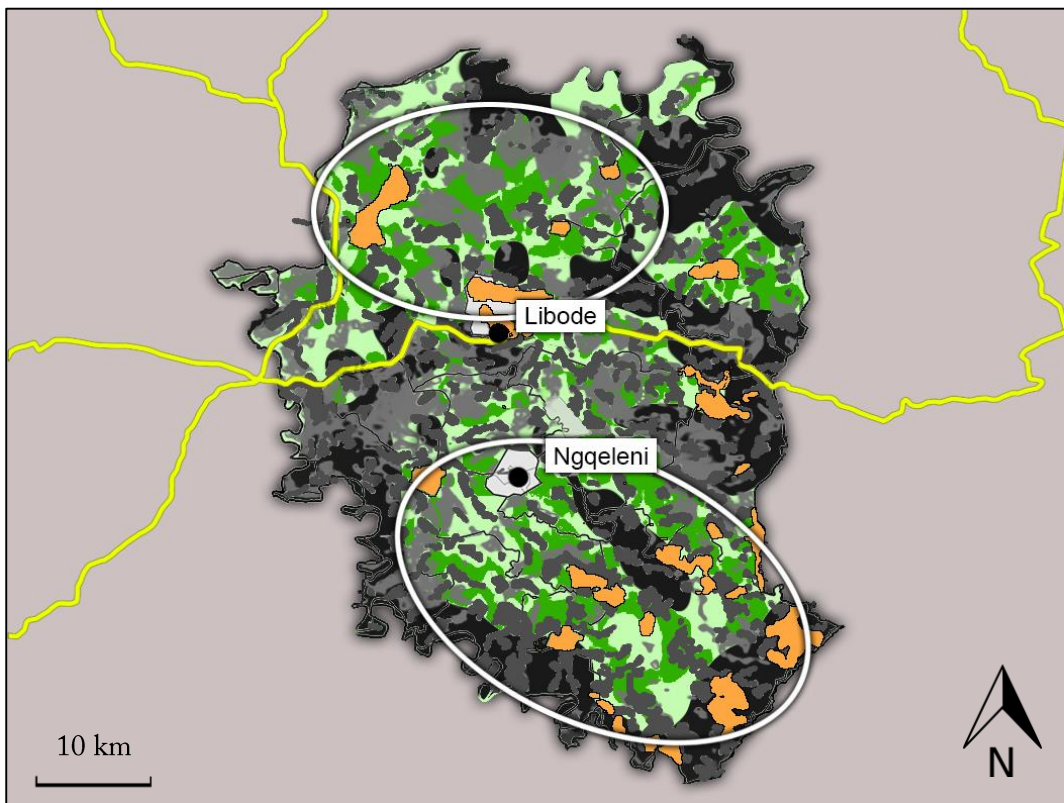
Source: Urban-Econ GIS Unit

Figure 5.8: Existing forestry plantations



Source: Urban-Econ GIS Unit

Figure 5.9: Areas of major forestry potential



Source: Urban-Econ GIS Unit



Chapter 6

Considerations for Forestry Sector Development

This section discusses various critically important topics which will build on the research presented previously in this report and will form part of the development of the various goals, objectives and initiatives proposed in the forestry sector plan.

This section covers key issues including:

- ❖ Transport infrastructure
- ❖ Timber prices
- ❖ Fire protection
- ❖ Land usage rights
- ❖ Skills development and training

6.1 Transport infrastructure

Transport of timber to markets represents a large cost component in timber production and poor road conditions negatively impact on the profitability of emerging grower operations. Poor road conditions also limit growers' ability to fight fires and salvage damaged stock.

The Nyandeni LM has few tarred roads other than the N2 national road and the state of most municipal dirt roads are insufficient to the needs of large scale forestry and will need upgrading to ensure the successful development of forestry.

It is important that the transport needs of the forestry sector are incorporated into road upgrading and maintenance plans for the municipality and district. The active involvement of forestry stakeholders in road planning and management should be encouraged to ensure issues are identified, and rectified as soon as possible. It is also important to identify road upgrading and maintenance needs during the targeting and scoping of areas suitable for afforestation.

6.2 Timber prices

Forestry is a long term business and although wood prices are currently subdued, all indications are that a substantial increase in timber prices can be expected in the medium to long term. This means that private sector operations, who view the long term potential of a project when considering an investment, are unlikely to be dissuaded by the current low price levels. Low price levels do, however, present less of an incentive for communities and individual farmers to enter the forestry industry.

Nevertheless no business can protect itself fully against the volatility in the timber market and prices. Should the timber market contract it would be natural for companies to cut back on the timber supplies they source from independent growers. Fortunately the risk this holds for growers in the timber industry can be mitigated to the extent that the harvesting of timbers can be delayed for years under adverse market conditions.

However this risk also points to the need to diversify the local forest economy: to support the development of alternative timber products and markets that will enable growers to diversify crop production. At present growers in the North-East Eastern Cape region are dependent on PG Bison for the purchase of wood fibre and Merensky Holdings for the purchase of saw logs. It is necessary to introduce other role-players and product lines (such as pole production) to diversity the local forest economy.

6.3 Fire protection

The north-eastern Cape and rural Transkei regions are prone to fires fanned by strong westerly and north-westerly winds. Every year large tracks of plantation are lost to or damaged by



fires. Fire protection services therefore play an important role in support of forestry development. Moreover the conversion of grasslands to plantation forest increases the fire risk because of the increase in combustible biomass.

The municipalities can greatly assist in providing / supporting fire protection through the following interventions:

- Many fires originate in the built-up areas or spread to neighbouring farms and plantations. The absence of fire breaks around waste disposal sites and townships is a contributing factor. The local municipality to implement fire protection measures in towns.
- The incidence of uncontrolled fires is high in rural areas. The local or district municipality needs to become actively involved in promoting fire protection in these areas
- The municipalities need to participate in fire-fighting initiatives and must ensure that the required fire-fighting equipment and staff is available to support the other members of the fire protection association in fighting runaway fires.

6.4 Land usage rights

The development of Forestry in the Nyandeni Local Municipality will require that large portions of land are made available by local communities and the municipality for forestry plantations.

Due to the nature of forestry sector investments and the lengthy growing cycles of timber land usage agreements which secure the usage of land for forestry for long time periods are of high importance.

Apart from portions of land surrounding the towns of Libode and Ngqeleni, all land in the Nyandeni LM is under the jurisdiction of the various traditional houses in the area. Traditional leadership must thus be included in the planning of any forestry initiatives.

Various land use models exist for the development of forestry initiatives these include:

- Commercial forestry companies – engagement options

- Cooperative solutions – small scale industries or collection points
- Private SME type services to industry – e.g. harvesting, haulage, part processing
- Municipal to private sector partnerships

6.5 Skills development and training facilities

The skills level in the Nyandeni Local Municipality is extremely low. Lack of skills is recognised as a major to the establishment of a forest sector in the region and P.G. Bison has experienced great difficulty in sourcing skilled labour locally.

The local and district IDPs and LED strategies all recognise the importance of skills development and incorporate programmes for LED skills development. However, indications are that this has been met with limited success. The lack of accredited facilities and training providers in the area has been identified as a major constraint in this regard.

The establishment of local training centre that will service both the forestry and agriculture sectors should be prioritised because this will provide an integrated service to independent growers who are also usually engaged in farming operations.

Skills development courses are required to develop the skills base of the local workforce to ensure absorption into the Nyandeni forestry sector. Examples of these skills courses are:

- Nursery related skills courses
- Silvicultural related skills courses
- Harvesting related skills courses
- Mechanical related skills courses
- Technical related skills courses
- Administrative related skills courses
- Security related skills courses
- Fire-fighting and fire related skills courses
- Managerial related skills courses
- Health and Safety related skills courses
- Environmental protection related skills courses
- Agriculture & community development related skills courses
- Contractor development related skills courses



- Entrepreneurial related skills courses

6.6 Certification & Licensing

Plantation forestry is considered by DWAF as a Stream Flow Reduction Activity (SFRA).

Any new afforestation requires a license to be issued by DWAF. The licensing process is comprehensive in that it assesses the impact of the new afforestation on:

- The hydrology of the water catchment,
- The natural environment,
- The local socio- economy.

Gaining the necessary certification for undertaking stream flow reducing activity, in this case forestry, requires approval from the following bodies:

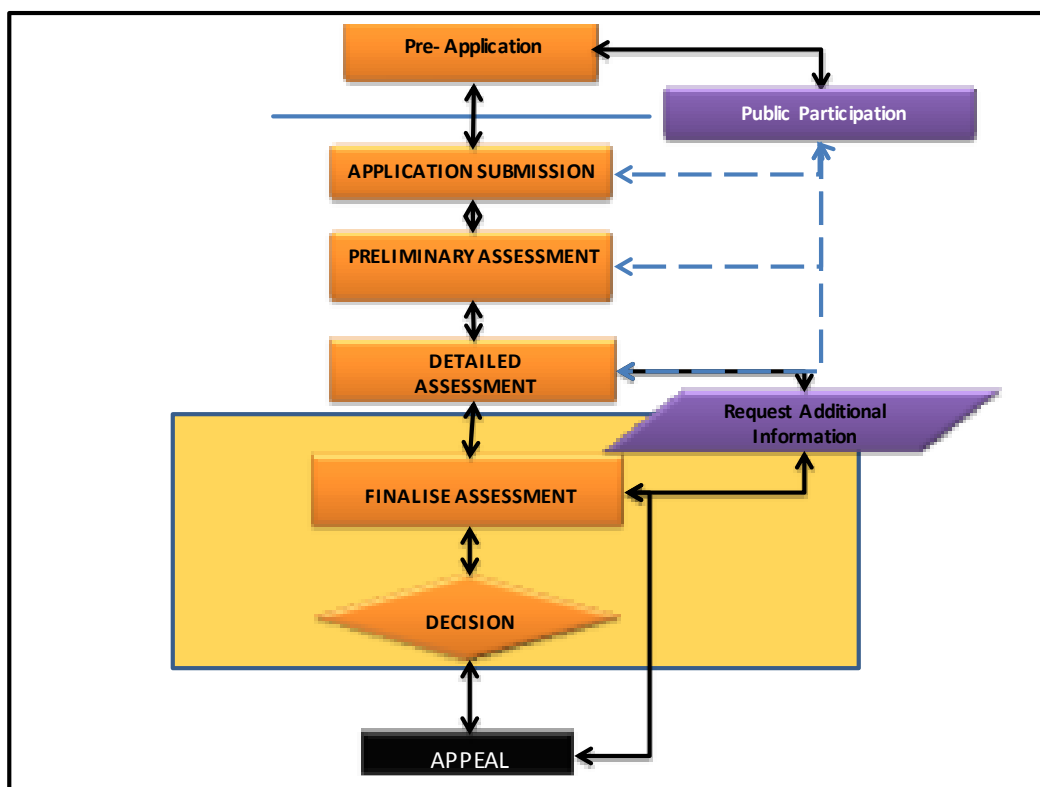
Department of Land Affairs (DLA),

- DEDEAT,
- Department of Agriculture
- Forestry Branch of DWAF.

The average number of months taken for a license to be issued is 21 months with some licenses taking up to 89 months to be approved. This is predominantly due to the complexity and scale of Environmental Impact studies which must be undertaken in each instance.

Figure 6.1 depicts the water use authorisation process:

Figure 6.1: Water Use Authorisation Process



Source: DWAF

SECTION C

FORESTRY SECTOR PLAN





Chapter 7

Forestry Sector Plan

This section follows on from the technical feasibility assessment to develop a strategic forestry sector plan for the Nyandeni Local Municipality that it may initiate, facilitate and manage the growth and development of the sector.

This section begins with a **SWOT analysis**, summarising the research undertaken earlier in the report to concisely reflect the strengths, weaknesses, opportunities and threats of the forestry sector. This analysis is then used to develop the various goals and objectives for the sector in the **strategic framework** section.

7.1 Nyandeni forestry SWOT analysis

Strengths

Inherent strengths (competencies or attributes) that the Nyandeni LM and/or Nyandeni forestry sector possesses that are advantageous for the development of the forestry sector in the municipality.

Weaknesses

Disadvantages, challenges and other weaknesses of the Nyandeni forestry sector that will work against the continued development of the forestry sector in the municipality.

Opportunities

Areas of potential or opportunity that are not currently regional strengths, but may through selected interventions form the basis for future growth and development of the Nyandeni forestry sector.

Threats

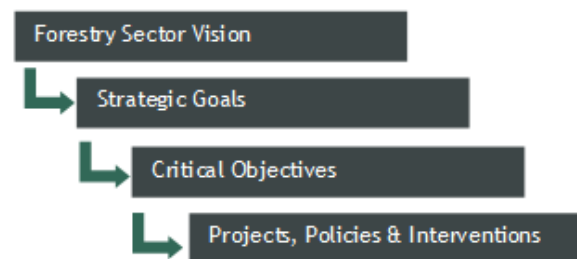
Trends whose momentum or direction are outside of the scope of control of economic participants in the greater Nyandeni local municipality region, but may nonetheless

create threats to the development of the Nyandeni forestry sector.

7.2 Strategic framework

Forestry Sector Vision

A concise, singular vision statement for the Nyandeni Forestry Sector is necessary to clearly indicate the municipalities approach to forestry, what it wishes forestry to achieve and how it should benefit the municipality and its people.



In developing a draft vision statement for the Nyandeni Forestry Sector the following key elements were considered; that forestry should:

- ❖ Provide large scale permanent employment
- ❖ Provide opportunity for large, medium and small scale forestry concerns including community driven and managed initiatives
- ❖ Assist the municipality in achieving its developmental and service delivery goals
- ❖ Generate growth in downstream industries in the Nyandeni LM.
- ❖ Assist in improving the skills and training of the local Nyandeni workforce
- ❖ Assist in developing the economies and subsistence activities of rural communities

Nyandeni Forestry Sector Draft strategic vision is presented below:

“A robust and inclusive forestry industry that provides sustainable economic growth and employment and economic opportunity for all.”

Sector Goals

The strategic goals for the forestry sector take their cue from the forestry sector vision statement, the various elements listed above and the key issues identified in the sector SWOT analysis. They are as follows:

- ❖ Assess the private sector interest in investing in the Nyandeni forestry sector within **1 – 2 years**.
- ❖ Assess the attitudes towards forestry of individual local communities/villages and embark a scheme to educate villages on the opportunities of forestry and the time-lag between plantation establishment and revenue generation: **1 – 2 years**.
- ❖ Grow forestry sector employment by 10 times its current level (88 employed at present) within **5 years**.
- ❖ Rehabilitate and achieve 100% productive utilisation of existing forestry plantations within **5 years**.
- ❖ Identify suitable portions of land, form agreements with communities and submit SFRA applications for in excess 15 000 ha of new plantations within **5 years**.
- ❖ Facilitate the formation of 50 village based wattle / small scale forestry projects within **5 years**.

❖ Facilitate the establishment of a sawmill and wood-processing facility within **10 – 15 years**.

❖ Facilitate the construction of a timber sector manufacturing facility within **20 years**.

Strategic Objectives

The critical sector objectives stem from the sector strategic goals, each objective acting to realise the stated goal. These objectives are derived from the key issues uncovered in the study and especially the sector SWOT analysis.

The five broad objectives identified are:

1. Optimise the development potential of existing forestry plantations.
2. Establish new plantations were economically and environmentally feasibly.
3. Utilise wattle jungle and other wooded areas to support job creation, enterprise development and forestry.
4. Create an environment conducive to the sustainable growth and development of the forestry sector
5. Encourage the development of a diversified small-scale local timber processing industry
6. Facilitate the growth and development of NTFP entities.

Projects, Policies & Interventions

These strategic objectives have been deconstructed into their individual elements to provide the municipality with specific interventions to realise the growth and development of the forestry sector. The strategic objectives and initiatives are presented in Figure 7.2 below.



Figure 7.1: Nyandeni Forestry Sector SWOT analysis

Strengths	Weaknesses	Opportunities	Threats
Large portions of suitable forestry land	Poor road conditions in identified areas of potential	Nearby forestry centres specialising in various forestry products ensures purchase of all Nyandeni timber	Environmental threats - Drought / Climate Change
Large potential labour force	Disperse nature of villages increases complexity of land-use negotiations for private sector	Nearby large private sector forestry businesses increases likelihood of private sector investment in Nyandeni.	Slump in timber markets can have major impact on small / medium sized forestry operations
Relatively close to major timber centres i.e. Hans Merensky at Langeni, PG Bison at Ugie.	No existing forestry support services within the municipality.	Increased number and standard of roads linked to forestry benefit nearby villages.	Risk of forest fires can decimate plantations and thus potential revenue after years of investment.
N2 & proposed N2 extension provides excellent connectivity to nearby markets.	Insufficient fire service. No specialist forest fire training/skills within the Nyandeni LM.	Presence of private sector forestry likely to yield benefits to nearby agriculture through improved infrastructure and skills transfer.	Lack of community agreement on issues pertaining to land use and forestry can delay large scale forestry developments indefinitely.
Existing wattle forests can provide income and employment opportunities to local communities	No forestry skill/training facilities present in municipality.	Necessary development of support infrastructure yield benefits to local population	Large delays in acquiring forestry certification coupled with long growing periods can set back operation of new forestry developments many years.
Existing underutilised forestry plantations allow forestry sector to start production levels in near term. Not wait for certification and lengthy growth period.	No suitable medical facilities with trauma units present in Nyandeni LM	Gaps in forestry production of certain products, e.g. timber poles and charcoal in OR Tambo region provide opportunity of small-medium sized forestry operations.	Lack of provincial / national support for forestry infrastructure development
Large amounts of land under traditional leadership jurisdiction ensures interests of community will be served		Small industry opportunities (charcoal production, furniture manufacturing etc.) with potential assistance / funding from developmental bodies / aid groups.	



Figure 7.2: Strategic objectives and initiatives

Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
Strategic Objective #1: Optimise the development potential of existing forestry plantations.					
Rehabilitate existing plantations where required	Conduct a study to determine the state of existing forestry plantations and what needs to be done to rehabilitate plantations	DAFF / ICFR / FABI / Saasveld / UKZN		Short term	Very High
	Develop small local employment initiatives to undertake work to rehabilitate plantations	Nyandeni LM / EPWP Working for Water		Short term	Very High
Facilitate the commencement of utilisation of existing plantations.	Identify possible private sector or community parties interested in some or all of the following: <ul style="list-style-type: none"> • Non-timber forestry projects • Managing plantation • Felling of timber • Transport of timber 	Nyandeni LM / Merensky / PG Bison / Sappi / Steinhof / Cape Pine		Short term	Very High
	Identify markets for felled timber and facilitate the formation of business agreements with timber buyers / service suppliers	Nyandeni LM / Merensky / PG Bison / Sappi / Steinhof / Cape Pine		Short term	Very High
	Identify opportunities for communities and small local business owners to become involved in management and operation of existing forestry plantations and associated downstream activities.	Nyandeni LM / Private Sector/ SMME's	<ul style="list-style-type: none"> • Identify LED project for co-funding • Incorporate projects into IDP process 	Short term	Very High
Strategic Objective #2: Establish new plantations where economically and environmentally feasibly.					
Establish new plantations where economically and environmentally feasibly.	Target specific portions of land suitable for forestation	DAFF / ECDC / ECRDA / Nyandeni LM	Provide spatial development framework for planning	Short term	Very High
	Gauge support for forestry development in local communities / identified locations	DAFF / ECDC / ECRDA / Nyandeni LM	<ul style="list-style-type: none"> • Promotion and awareness creation 	Short term	Very High



Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
			<ul style="list-style-type: none"> Interface with community structures 		
Stakeholder consultations & project identification	Facilitate communications with private sector forestry concerns and related stakeholders to attract investor interest to Nyandeni LM	DAFF / ECDC / ECRDA / Nyandeni LM / Merensky / PG Bison / Sappi / Steinhof / Cape Pine	Engage with timber companies	Short term	High
	Consult communities to identify parties interested in involvement into small – medium sized forestry projects	ECDC / ECRDA / SEDA / Nyandeni LM	Interface with community structures	Medium term	High
	Assist interested parties in negotiating governmental and other legal pre-approval and certification processes	DAFF / ECDC / ECRDA	Facilitate access to business support services	Medium term	Moderate
	Support local businesses interested in entering Nyandeni forestry sector in developing business concepts, accessing funding, acquiring infrastructure etc.	ECDC / ECRDA / Nyandeni LM / Private Sector / SMME's		Medium term	Moderate
Planning and Resourcing (communal land)	Quantify operational, economic and business implications – preparation of business plan	ECDC / ECRDA / DAFF / Nyandeni LM	Facilitate access to business planning services	Medium term	Moderate
	Establish legal entities for communities / assist communities in structuring forestry organisations.	ECDC / ECRDA / DAFF / Nyandeni LM	Interface with community structures	Medium term	Moderate
	Secure financial and 3 rd party support for community / municipal forestry projects		Facilitate access to funding and 3 rd party support	Medium term	Moderate
	Support projects with preparation of Environmental Impact Assessments to secure SFRA licenses prior to start-up		Provide additional funding for EIA's	Medium term	Moderate
Project implementation	Provide technical, administrative and	ECDC / ECRDA / DBSA / IDC / Nyandeni LM	Facilitate access to support and mentorship	Medium term	Moderate



Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
Support	management support and mentorship to projects				
	Provide / Facilitate skills development and training	FP&M Seta / ICFR / FABI / Saasveld / UKZN	Oversight	Medium term	Moderate
Strategic Objective #3: Utilise wattle jungle & other wooded areas to support job creation, enterprise development & forestry.					
Conversion of wattle jungles to managed plantations	Assist in establishing commercial plantations in areas wattle jungles are convertible	ECDC / ECRDA / DAFF / Nyandeni LM	Provide spatial development framework for planning process	Medium term	Moderate
Development of new enterprises & job creation through the eradication of problem areas (blocked waterways etc.)	Create job intensive clearing projects linked to the Working for Water programme	Nyandeni LM / WfW	Leadership and coordination	Short term	High
	Investigate opportunities for the marketing and processing of wattle timber	Nyandeni LM / WfW	Leadership and coordination	Short term	Moderate
Strategic Objective #4: Create an environment conducive to the sustainable growth and development of the forestry sector.					
Create timber marketing conditions that are conducive to forestry development	Create linkages with nearby timber market role-players to create forestry policies and support mechanisms that will aid sector development		Engage with timber companies	Medium term	Moderate
Develop Fire Protection services to support forestry development	Develop a forestry specific fire protection association with the assistance of nearby public and private forestry sector role-players	Nyandeni LM, FFA, EPWP: Working for Fire	<ul style="list-style-type: none"> • Leadership and coordination • Interface with community structures 	Medium term	High
	Improve fire protection measures in built-up areas and communal areas.	Nyandeni LM, FFA, EPWP: Working for Fire	Leadership and coordination	Short term	High
	Improve municipal fire-fighting capacity through procurement of new equipment and employment skilled staff	Nyandeni LM	<ul style="list-style-type: none"> • Develop municipal firefighting capacity • Funding 	Medium term	High



Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
	Provide cost effective and affordable fire insurance for small growers	DAFF / Nyandeni LM	Lobbying for fire insurance assistance	Medium term	Moderate
Improve road infrastructure to support forestry development	Identify road upgrading and maintenance needs during the targeting and scoping of areas suitable for forestry development	Nyandeni LM / Department of Roads and Public Works	<ul style="list-style-type: none"> • Leadership and coordination • Interface with community structures • Funding 	Medium term	High
	Resolve between interested private sector forestry businesses, provincial and local government to ensure that road upgrading and maintenance needs for forestry are incorporated into the IDP, District and Provincial Transport Plans	Nyandeni LM / O.R. Tambo DM / Department of Roads and Public Works	<ul style="list-style-type: none"> • Coordination and interface with local forestry industry and Province • Incorporate forestry needs into IDP and Transport Plans 	Medium term	Moderate
Provide forestry extension support for small and medium sized emerging growers and other forestry concerns	Encourage large forestry companies to provide extension support services to small and independent growers	Nyandeni LM / Merensky / PG Bison / Sappi / Steinhof / Cape Pine	Facilitate access to extension support	Medium term	Moderate
	Encourage the establishment of a timber grower and marketing cooperative sector in the district that can provide extension support services to members	Nyandeni LM / Merensky / PG Bison / Sappi / Steinhof / Cape Pine	<ul style="list-style-type: none"> • Facilitate involvement of existing cooperatives in the region • Cooperate with other DMs 	Long term	Low
Establish a local training and resource centre to service the forestry and agriculture sector	Support private sector initiatives to establish local training and resource centre to service the forestry and agriculture sector	ECDC / ECRDA / ICFR / FABI / Saasveld / Forestry Solutions / FP&M Seta / Nyandeni LM	Lobby for the establishment of the centre and collaborate with centre to implement LED training programme.	Long term	Low



Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
Strategic Objective #5: Encourage the development of a diversified small-scale local timber processing industry					
Support the establishment of small-scale pole treatment industry	Conduct a pre-feasibility study for the establishment of a pole treatment plant(s)	ECDC / ECRDA / Nyandeni LM	Leadership and coordination	Medium term	Moderate
	Develop a conceptual business plan for the establishment of a pole treatment plant(s)	ECDC / ECRDA / Nyandeni LM	Leadership and access to funding for study	Medium term	Moderate
	Use the conceptual business plan to solicit expressions of interest in such a venture	ECDC / ECRDA / Nyandeni LM	Marketing	Medium term	Moderate
Support the establishment of small-scale sawmilling operations	Develop an appropriate model for the establishment of small-scale sawmilling operations	ECDC / ECRDA / Nyandeni LM / Furntech	Leadership and coordination	Medium term	Moderate
	Conduct a pre-feasibility study for the establishment of small-scale sawmilling operations	ECDC / ECRDA / Nyandeni LM / Furntech	Leadership and access to funding for study	Medium term	Moderate
	Identify potential funding and entrepreneurs for the establishment of small-scale sawmilling operations	ECDC / ECRDA / Nyandeni LM / Furntech	Facilitate access to financial and 3rd party support	Medium term	Moderate
Investigate the establishment of small-scale charcoal production projects	Conduct a pre-feasibility study for the establishment of charcoal production projects	Nyandeni LM / WfW	Leadership and access to funding for study	Medium term	Moderate
	Develop a conceptual business plan for the establishment of charcoal production projects	Nyandeni LM / WfW	Leadership and coordination	Medium term	Moderate
	Use the conceptual business plan to solicit support and funding for the venture	Nyandeni LM / WfW	Marketing	Medium term	Moderate
Investigate the establishment of small-scale furniture manufacturing facilities	Develop a conceptual business plan for the establishment of small-scale furniture manufacturing facilities	Nyandeni LM / DTI / SEDA / Furntech	Leadership and coordination	Long term	Moderate
	Use the conceptual business plan to solicit expressions of interest in such a venture	Nyandeni LM / DTI / SEDA / Furntech	Marketing	Long term	Moderate



Interventions	Actions	Role Players	Role of Nyandeni LM	Time Frame	Importance
Investigate the establishment of a woodcraft and curio products industry	Identify the skills base available for developing local handcrafts and curios timber products	Nyandeni LM / DSRAC / IDC: Craft Fund	Survey	Long term	Low
	Identify potential champions for the development of the industry	Nyandeni LM / DSRAC / IDC: Craft Fund	Marketing	Long term	Low
	Prepare a business plan to securing funding for handcraft and curio making projects	Nyandeni LM / DSRAC / IDC: Craft Fund	Facilitate access to financial and 3 rd party support	Long term	Low
Strategic Objective #6: Facilitate the growth and development of NTFP entities.					
Investigate the farming/harvesting of medicinal plants	Develop system for registration of harvesters' associations with forest management authorities	Nyandeni LM / THO	Facilitation	Short term	Low
	Develop model system for issuing and managing permits allocated to registered harvesters' associations	Nyandeni LM / THO	Management	Short term	Low
	Provide assistance to emerging businesses in identifying and accessing markets for products.	Nyandeni LM / THO	Marketing and Funding	Short term	Low
Investigate the development of bee keeping / honey production concerns	Create awareness of forestry enterprise development initiatives and the bee-keeping for poverty relief programme	Nyandeni LM / Makana Meadery / Honeybadger	Facilitation	Short term	Low
	Provide assistance to emerging businesses in identifying and accessing markets for products.	Nyandeni LM / Makana Meadery / Honeybadger	Marketing and Funding	Short term	Low





Chapter 8

Implementation Guidelines

8.1 Implementation Guidelines

This section outlines the roles and responsibilities of the municipality in implementing the plans, policies and interventions discussed in the previous chapter.

This section firstly outlines the various support elements involved in forestry development projects and then proceeds to outline specific guidelines for the municipality to implement the identified forestry sector initiatives.

This section relies largely on the proposals of the DAFF Integrated Small Enterprise Development Strategy for the Forestry Sector in South Africa. Which provides concrete proposals on the range of support services required for different forest sub-sectors and defining appropriate delivery models for each of the support services required. These guidelines work effectively in the SMME context as well as the large scale forestry context with only small differences in the municipalities approach.

The approach followed by the DAFF strategy is to identify the most suitable models for the delivery of support services was to: (1) build on existing best practices and use and upscale existing delivery mechanisms that work, rather than creating new delivery mechanisms; (2) focus on locally and provincially based delivery institutions that are “closer to the ground”; and (3) apply government resources leverage private sector participation in SMME support. In doing so the strategy is guided by the Integrated Strategy on the Promotion of Entrepreneurship and Small Enterprises which was approved by Cabinet in 2005. This Strategy emphasises the importance of a cooperative and integrated approach to service delivery involving all spheres of government and the private sector. This strategy also calls for steps to co-locate as many small

enterprise support agencies as possible, in order to create integrated access points for aspiring and existing entrepreneurs.

This section relies heavily on the proposals contained in the Integrated Small Enterprise Development Strategy for the Forest Sector in South Africa and may need be reviewed once the final strategy has been development.

8.2 Support services required

Key support services required during the various development phases of small – medium sized forest projects is diagrammatically presented in Figure 8.1.

Project initiation phase

External support is usually required to initiate community-type projects and within the forest this applies to grower and non-timber forestry projects (NTFP). The following support services are required during this phase:

- (a) Assistance with project identification and preliminary investigations, including screening and assessing areas suitable for afforestation;
- (b) Assistance with stakeholder consultation (initial local government and community consultations to establish interest);
- (c) Assistance with the development and adoption of the project concept by the community; and
- (d) Applications for water use licenses and other authorizations, including the studies necessary to obtain these.



Figure 8.1: Support services associated with development phases for small – medium sized forestry projects

Project development phase	Areas of support
Project initiation	Project identification & preliminary investigations
	Stakeholder consultation
	Formulation & adoption of project concept
	Water use license & other afforestation authorisations
Project preparation & establishment	Community awareness & development
	Business advisory & planning support
	Business finance (grants &/or loans)
Initial project implementation	Technical, management and administrative support and mentorship
	Skills development & training
Ongoing project implementation	Skills development & training
	Representation and advocacy
	Communication and information services
	Timber marketing & value adding services
	Fire protection and insurance
	Public infrastructure and services

Source: DAFF – Integrated Small Enterprise Development Strategy for the Forestry Sector

Project preparation and establishment phase

The following support services are required during this phase:

- (a) Community development (establishment of community structures, tenure arrangements and legal entities to implement the project). This support usually applies to community project (grower and NTFP projects) only
- (b) Business advice and planning (preparing technical information on agro-forestry options, the preparation of operational business plans, operational management structures and identifying potential strategic partners and funding sources); and
- (c) Securing funds to implement projects, including negotiations with potential funders. The funding support could include grant funding, loan funding or a combination of both, depending on the type of project

It is important to note that the first two phases in the project cycle have to be completed prior to the presentation of a bankable project.

Initial project implementation phase

The following support services are required during this phase:

- (a) Technical, management and administrative support and mentorship play a critical role during the initial project implementation phase. For grower projects this is usually required throughout the first crop rotation and into the second rotation. Arrangements for management and mentorship usually forms part of the funding conditions of financing institutions and needs to form part of the business plan.
- (b) Skills development and training. Much of the need for capacity building can take place through having good mentors in place, but professional training is necessary to complete the process. Emerging entrepreneurs need access to a range of accredited training services (short courses, learnerships and bursaries) that will enable them to establish themselves as independent and effective owners, managers and operators of their business. Although skills development and training needs to start during the initial project implementation phase, it continues, albeit at a lower level of intensity thereafter.

Ongoing project implementation phase

The following support services are required during this phase:

(a) Forestry extension services. In addition to skills development and training there is a need to provide individual advice and hands-on support to small growers through forestry extension services. Extension support is needed with regard to the following topics:

- The role and potential of forestry in livelihoods and business development.
- Different tree growing practices appropriate to different circumstances, including agro forestry.
- Correct site/species matching.
- Purchasing of genetically improved plant material.
- Land preparation, tree planting, coppicing, silviculture and harvesting.
- Marketing.
- Appropriate fire protection management.
- Business management and financial management.
- Cost management and accounting.

(b) Representation and advocacy. A key constraint to small grower development is the lack of organisation in the sub-sector, which restricts the sub-sector's ability to engage with industry and government role players to collectively bargain and lobby for its needs and interests. This is recognised in the Transformation Charter for the Forest Sector, which contains the undertaking to "strengthen sub-sector organisations where they exist to increase representivity, effectively lobby on behalf of members, facilitate access to support services particularly for small and emerging enterprises." Available evidence points to the need to establish strong small growers associations within each of the grower districts/regions of the country, and for these regional associations to be affiliated to national growers associations.

(c) Communication and information. This refers to the sharing of information and experience between enterprises within industry sub-sectors (growers, sawmillers etc.) and providing them access to general information on best practices, policies, programmes and products & services relevant to the industry. This information is disseminated in

various forms through stakeholder workshops, information sessions, field days, information pamphlets, newsletters, manuals and information posted on the Internet.

(d) Timber marketing & value adding services. Because of small volumes produced by SMME's they are usually at a disadvantage when it comes to marketing their products. The same applies to value adding; because of large capital investment requirements SMME's are also often at a disadvantage in adding value to their produce. In South Africa timber marketing cooperatives such as the Wattle Growers Association (SAWGU), NTC and TWK play an important role in enabling independent and small growers to jointly market and add value to their timber. This could also apply to the timber production subsectors such as sawmilling, charcoal and pole production. For example there are opportunities for small sawmillers to pool their resources to add value to their timber through the establishment of a centrally located kiln drying and treatment plant, marketing of timber waste and value adding through small-scale furniture manufacturing. Providing timber marketing and value adding services is important for the development of a vibrant small forest enterprise sector.

(e) Fire protections and insurance. Fire losses are a huge risk for all growers. Much can be done to prevent fires through the active participation of growers, farmers and municipalities in local Fire Protection Associations. Growers also need to be insured against fire losses. The fact that few small-growers are insured against fire makes it difficult for them to secure investment finance and limits their ability to recover from fire losses. To provide cost effective and affordable fire insurance for small growers, the Forest Sector Charter proposes the establishment of an insurance cell for small growers with seed funding from Government. Such a cell enables small growers to pool their risk and to reduce their insurance premiums.

(f) Public infrastructure and services. The provision of public infrastructure and services, such as roads, telecommunication, electricity, housing, schools and clinics are important for creating an enabling environment for economic investment and development. A good road system and access to fire protections services are of particular importance for the



development of the forest industry. Transport of timber to markets represents a large cost component in timber production and poor road conditions negatively impact on the profitability of emerging grower operations. Poor road conditions also limit growers' ability to fight fires and salvage damaged stock. The importance of fire protection services

has already been highlighted. To this end it is necessary to ensure that Fire Protection Associations are in place and that adequate fire-fighting services are provided by municipalities.

Figure 8.2: Service delivery models for small and emerging growers involved in new afforestation projects

Project phases	Support required	Service delivery models
Project initiation	Project identification and preliminary investigations	<ul style="list-style-type: none"> • Municipalities provide spatial development framework for project identification • Municipalities facilitate interface with community structures • Technical support implemented through a programme managed by selected provincially based public development agency co-funded by DAFF and Provincial government; or • Forestry companies subject to Forestry Development Protocols
	Stakeholder consultation	
	Formulation and adoption of project concept	
	Water use licence & other afforestation authorisations	
Project preparation & establishment	Community awareness and development	<ul style="list-style-type: none"> • Municipalities facilitate interface with community structures • Independent facilitators funded through a programme managed by selected provincially based public development agency co-funded by DAFF and Provincial government; and/or • Forestry Companies subject to Forestry Development Protocols; or • Independent facilitators funded through LRAD "Planning Fund" in the case of land redistribution projects; or • Independent facilitators funded through the Restitution Settlement Grant in the case of restitution projects
	Business advisory and planning support	
	Financial grants	DAFF Forestry Grant
	Financial loans	<ul style="list-style-type: none"> • Development Finance Institutions (e.g. IDC or DBSA) in first instance • ECDC / ECRDA for top-up funding of not more than 15%
Initial project implementation	Technical, management and administrative support and mentorship	<ul style="list-style-type: none"> • Independent facilitators funded through loans from Development Finance Institutions; or • Support from forestry companies subject to the Industry Codes of Good Conduct for Emerging Forestry Growers Schemes
	Skills development & training	
Ongoing project implementation	Skills development and training	Industry and FIETA funded programmes with matching grant from DAFF, implemented through Growers' Associations
	Extension support services	<ul style="list-style-type: none"> • Grower cooperatives with matching grant from DAFF; or • Support from forestry companies subject to the Industry Codes of Good Conduct for Emerging Forestry Growers Schemes
	Communication and information	Collective responsibility of Growers' Associations, DAFF, Forest Sector Charter Council, FIETA and grower cooperatives
	Timber marketing and value adding	Timber Cooperatives with capital funding from Development Finance Institutions



	Fire protection and insurance	<ul style="list-style-type: none"> • Fire Protection Associations: land owners with the support from DAFF and municipalities • Grower funded fire insurance through 'insurance cell' with seed funding from DAFF
	Growers representation & advocacy	Regional Small Growers Associations affiliated to the National Growers Association
	Public infrastructure and services	<ul style="list-style-type: none"> • Public road: provincial government and municipalities depending on the status of the road. (internal plantation roads is the responsibility of the land owners) • Fire-fighting services: municipalities need to provide this service, but as a joint responsibility with land owners

Source: DAFF – Integrated Small Enterprise Development Strategy for the Forestry Sector

8.3 Service delivery models

The range of support services required and the service delivery models to be applied are not the same for all sub-sectors within the forest sector. A major distinction needs to be made between support services and delivery models for the grower sub-sector and the forestry processing sub-sectors and NTFPs. For the purpose of this report service delivery models are presented for small and emerging growers involved in new afforestation projects and for small-scale producers of timber products (sawn timber, poles and charcoal).

Small & emerging growers involved in new forestry projects

The support services require and the proposed models for delivery are outlined in the following explanation is given in this regard:

Project initiation services

- Municipalities need to provide the spatial development framework for project identification. I.e. they need to ensure that projects fit into the SDF as provided for in the IDPs. This includes the responsibility of the District Municipality to ensure that the projects identified fit into Area-based Land Reform Plans for the district.
- Municipalities have a key role to play in facilitating access to community structures during project initiation. Local and district municipalities need to clarify amongst themselves as to who should be doing what.

c. A structured programme is required to provide technical support during the initiation phase of new afforestation projects. I.e. up to the point where Development Finance Institutions and potential strategic partners can be called on to fund and support project implementation on terms and conditions acceptable to the project participants. Some forestry companies are prepared to assist communities in this regard and to make such an investment at "own risk". This should be encouraged, but subject to adherence to the Forestry Development Protocols (which are currently being updated by DAFF). However there is a need for alternative support secured with funding from government.

Various options were considered in the draft Integrated Small Enterprise Development Strategy for the Forest Sector in South Africa. The preferred option proposed is a cooperative governance and outsourcing arrangement whereby a support programme is managed and executed by selected provincially based public development agencies and co-funded by DAFF and Provincial Government. This model could be applied to provinces where the scale of afforestation and forestry transfers would justify such an arrangement, notably the Eastern Cape and KZN. The rationale for this model is that both DAFF and the Provincial Government in Eastern Cape and KZN have a direct interest in supporting forestry development. In the Eastern Cape the selected development agency would have been AsgiSA-EC but now either the ECDC or ECRDA. The development agency could then either become directly involved in facilitating the establishment of projects or make or make use of accredited

service provides, including municipal development agencies, to provide this service.

Project preparation & establishment services

a. Municipalities have a key role to play in facilitating assess to community structures and mobilising during project preparation and establishment. Local and district municipalities need to clarify amongst themselves as to who should be doing what.

b. Where communities are the beneficiaries of land reform projects there is a system to provide community development and business advisory and planning services. The Restitution Settlement Grant that can be used to provide community development and business advice and planning services to restitution beneficiaries. A similar but smaller planning grant is available for land redistribution project under LRAD. However, this is not the case where project are initiated outside the land reform programme. The model proposed for the delivery of this service is the same as outlined in par. (a) c above.

c. There is a need for the establishment of a once-off forestry grant for afforestation projects, which can be applied as a matching grant to long term loan funding, and can be secured from Development Finance Institutions. DAFF is in the process of negotiating the establishment of such a grant with Treasury and intends to deliver on this by concluding a Memorandum of Agreement with IDC to disburse the grants. This delivery model ensures that IDC delivers the grant as part of its overall forestry financing package. It is proposed that the same model be applied to other Development Finance Institutions that are willing to fund forestry projects.

d. Business loans for forestry projects can be accessed through Development Finance Institutions such as the IDC, DBSA and some commercial banks. In the case of short term capital requirements and smaller loans, funds can be sourced from a number of institutions such as Samaf and numerous retail financial institutions. Some of these retail financial institutions receive support from Khula, which serves as a wholesale finance institution to support the development of SMME's. AsgiSA-EC had indicated that it would consider

the provision of equity funding where the loan funding capacity of Development Finance Institutions is only able to provide 85% or more of finance required.

Initial project implementation services

a. Technical, management and administrative support and mentorship can be funded as part of the operating capital requirements of forestry projects through loans from Development Finance Institutions. Small operators could enter into formal relationships with 3rd parties such as independent experts or private sector companies to secure these services. Support from private companies would need to be subject to Industry Codes of Good Conduct for Emerging Forestry Growers Schemes, which still needs to be put in place.

b. The bulk of the funding for accredited training services (short term courses and bursaries for learnerships) is provided by FIETA. Accredited short courses are implemented by Industry Associations (such as FSA and Amahlathi) that present project proposals to FIETA and appoint accredited service provider to implement the training. Learnerships and bursaries are arranged through training institutions. Not all of the learnerships and bursaries are funded by FIETA and forest companies and DAFF also fund a certain number of learnerships and bursaries every year.

The abovementioned delivery model works well, except for the need for improved strategic planning and coordination in the delivery of training services by different implementing agencies and the need for additional funding to bring the programme of scale. Improved planning and coordination needs to be effected through the development of an integrated Sector Skills Plan for the Forest Sector. Such an undertaking is already contained in the Transformation Charter for the Forest Sector and FIETA through its Forestry, Paper and Pulp and Timber Chamber is responsible for the preparation of this plan.

As far as the funding issue is concerned, additional industry funding could be raised by allocating a portion of company spend on skills development and enterprise development required in terms of the B-BBEE scorecard for this purpose.



However it is anticipated that the funds that can be generated in this manner would not be sufficient to finance the scale of skills development and training required for small growers.

Additional government funding is required and it is proposed that this be made available by DAFF as matching grants to industry spend on training. The Sector Skills Plan for the Forest Sector would be the correct instrument to plan for this demand.

Ongoing project implementation services

a. Historically, extension support for black emerging growers was provided by forestry companies (particularly Sappi and Mondi) through their outgrower schemes in KwaZulu Natal. This model has been successful in establishing a large number of small growers by providing them with seedlings, finance, transport, technical and managerial expertise, as well as to get licenses, prepare soils for plantation and other basic activities and requirements. However, the operational model encouraged dependence on external inputs and there has been inadequate transfer of skills and organisational capacity to enable growers to take on key responsibilities themselves. The outgrower model has lost much of its appeal, with Mondi closing down and Sappi scaled back on their outgrower programmes. The gap in extension support is increasingly being filled by timber marketing and grower cooperatives.

Currently forestry extension services are successfully delivered by timber grower and marketing cooperatives. This model works well but relies on a membership mix that has large proportion resource-strong medium growers compared to resource-poor small growers to finance extension support. With the anticipated growth in small grower membership, cooperative would require additional public funding to continue to provide and expand this service. It is proposed that government supports the cooperative model. This could best be structured as a matching government grant from DAFF to grower cooperatives' spending on extension services, subject to the achievement of measurable deliverables.

It must be however be recognised that it will take a number of years before the independent and small grower sector has developed in the Eastern Cape to the point where timber

grower and marketing cooperatives become a local feature. Until then it will be necessary to encourage large forest companies that operate in the north-eastern Cape (PG Bison and Merensky Holdings) to provide forestry extension services to new growers. However, to avoid the problems with the previous outgrower models, this needs to be implemented in a way that empowers emerging growers. The Forest Sector Charter provides for the establishment of an Industry Code of Conduct to regulate this relationship, but this Code still needs to be developed.

b. Communication and information services for small growers refers to the sharing of information and experience between growers and providing growers access to general information on best practices, policies, programmes and products & services relevant to the industry. These services are provided by various institutions, notably grower associations, DAFF, Forest Sector Charter Council, FIETA and grower cooperatives.

c. Timber marketing and value adding activities that can be delivered through grower cooperatives. Grower cooperatives can source funds from existing Development Finance Institutions to develop value adding enterprises.

d. The active participation of growers, farmers and municipalities in local Fire Protection Associations is necessary to reduce the risk of fires. At the same time growers need to be insured against fire losses. The Forest Sector Charter contains an undertaking by industry to promote the development of a cost effective and affordable fire insurance scheme for emerging growers and an undertaking by government, through DAFF, to provide seed funding for such a scheme.

Small-scale producers of timber products

Figure 8.3 on the following page summarises the nature of support services required by small-scale producers of timber products (sawn timber, poles and charcoal), together with the proposed models for the delivery of these services. The following explanation is presented in this regard:

(a) As with other small-scale industrial enterprises, small-scale producers of timber products have access to the DTI



network of financial and business support services available for SMME's required during the project preparation and establishment phase. There is no need for additional support services in this regard.

(b) There is a need for accredited training services (short courses and learnerships/bursaries). FIETA provides funding for skills development and training and additional industry funding could be raised by allocating a portion of companies' skills development and enterprise development spend required in terms of the B-BBEE scorecard for this purpose. Insufficient information is available to confirm whether these funding sources will be sufficient and the Sector Skills Plan for the Forest Sector would be the correct instrument to determine the need for skills development and the funding requirements. If industry funding is not sufficient, it is proposed that additional government funds be made available as matching grants to industry spend on training. The processing of timber products is an industrial activity and it is proposed that such funding be provided by the DTI.

(c) There is also a need to provide technical, management support and mentorship to small-scale producers of timber products. This service can be provided by through existing DTI programmes operated under SEDA. The SEDA

Technology Programme provides technology and business development support services to small enterprises, which includes the establishment of incubator programmes and Technology Business Centres. The necessary arrangements would need to be made with the local SEDA office to provide this support and this could be implemented through the municipalities' LED programmes.

(d) Joint marketing and value adding services can be implemented either through small scale producer cooperatives or as a joint venture between large and small-scale operators. For example, there could be a business agreement in terms of which small sawmillers utilise available kiln capacity of large sawmillers. Two sources of funding are available for this purposed: loan funding from Development Finance Institutions and grant funding to meet start-up capital requirements for cooperatives under DTI's Co-operative Incentive Scheme (CIS).

e) The need for communication and information services, as well as representation and advocacy, can be met in the same way as for small and emerging growers as discussed previously in this report.

Figure 8.3: Service delivery models for small-scale producers of timber products

Project phases	Support required	Service delivery models for small saw-millers
Project preparation & establishment	Business advisory and planning support	SEDA and established funding institutions
	Financial grants	Not critical
	Financial loans	Samaf, Khula intermediaries and other established funding institutions. Note: long term timber supply contract are required to secure access to loan funding
Initial project implementation	Technical, management support and mentorship	SEDA
	Incubator programme for small-scale enterprises	SEDA Technology Programme
	Skills development & training	Industry and FIETA funded programmes with matching grant from the DTI, implemented Industry Associations
Ongoing project implementation	Skills development & training	Industry and FIETA funded programmes with matching grant from the DTI, implemented Industry Associations
	Communication and information	Collective responsibility of Industry Associations, DTI, DAFF, Forest Sector Charter Council, FIETA and timber cooperatives

	Joint marketing and value adding	Small-scale producers cooperatives or joint ventures between large and small-scale producers with capital funding from Development Finance Institutions and DTI grant funding under the Co-operative Incentive Scheme (CIS)
	Representation and advocacy	Regional associations affiliated to the national industry Association. Note: Small producers do not have the resources to fully fund the staffing and operations of regional associations. It is proposed that national industry associations provide financial and technical support to regional associations

Source: DAFF – Integrated Small Enterprise Development Strategy for the Forestry Sector

8.4 Large-scale forestry projects

The formation of large-scale forestry projects are largely driven by the private sector and the scale of investment in a project from the private sector is usually much larger than any associated public sector investment. This does not, however, diminish the municipality's role in realising private sector forestry projects or infer that the private sector should be left alone to fund and develop projects without input from the municipality. The municipality can, and should, provide assistance to private sector organisations in many key areas in

which they are more capable than the private sector, may allow the private sector to operate more successfully or that may assist in achieving the municipality's other economic and social development goals.

Figure 8.4 presents guidelines for the Nyandeni Local Municipality's roles in engaging with commercial forestry sector investors.

Figure 8.4: Service delivery models for large-scale forestry projects

Project phases	Support required	Service delivery models
Initial contact	Development of municipal/private-sector working agreement	<ul style="list-style-type: none"> • Municipalities facilitate interface with community structures • Technical support implemented through a programme managed by selected provincially based public development agency co-funded by DAFF and Provincial government; or • Forestry companies subject to Forestry Development Protocols • Municipalities include development infrastructure requirements into IDP. <p>Additional funding through ECDC, ECRDA, District and Provincial Government.</p>
	Undertaking of project potential economic and environmental impact	
	Determination of scope of municipal assistance	
	Facilitation of land-use agreements	
	Water use licence & other afforestation authorisations	

Project preparation & establishment	Community awareness and development	<ul style="list-style-type: none"> • Municipalities facilitate interface with community structures • Independent facilitators funded through a programme managed by selected provincially based public development agency co-funded by DAFF and Provincial government; and/or • Forestry Companies subject to Forestry Development Protocols; or
	Business advisory and planning support	<ul style="list-style-type: none"> • Independent facilitators funded through LRAD “Planning Fund” in the case of land redistribution projects; or • Independent facilitators funded through the Restitution Settlement Grant in the case of restitution projects
	Financial loans	<ul style="list-style-type: none"> • ECDC / ECRDA / OR Tambo District Municipality
Initial project implementation	Infrastructure provision	<ul style="list-style-type: none"> • Development of certain roads and other necessary infrastructure to facilitate successful development of commercial forestry operation. • Ensure effective communication between private sector and community interest groups, handle any disputes that may arise.
	Community liaison	
Ongoing project implementation	Community liaison	Ensure effective communication between private sector and community interest groups, handle any disputes that may arise.
	Infrastructure management	Assist the functioning of the commercial forestry sector through efficient infrastructure management
	Fire prevention	Municipality supported private/public fire prevention program. Use municipal platform to spread awareness for fire safety and provide assistance to private sector fire prevention services.

Source: DAFF – Integrated Small Enterprise Development Strategy for the Forestry Sector

