Eastern Cape Forestry Sector Profile

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EASTERN CAPE FORESTRY SECTOR PROFILE

1 INTRODUCTION

The forestry sector in the Eastern Cape makes a significant contribution to the rural economy and local employment. Due to biophysical characteristics, there are substantial areas which are suitable for commercial afforestation, creating the opportunity for more than doubling the current plantation area.

The Department of Water Affairs and Forestry (DWAF) recognises the roles of the Provincial and Local Governments in stimulating and supporting economic development, and has commissioned the compilation of this profile to provide strategic level information about the forestry sector.

Situated in the mountainous areas of the province, mostly invisible from the major roads, the sector has received little attention in the past. With a looming national timber shortage, the dire need for rural economic development, and investment in major new wood processing capacity, it is becoming recognised that the forestry sector plays a legitimate and significant role in the local economy.

This profile reflects the locality, scale and extent of plantations, forests and forestry activities in the Eastern Cape Province. Based on inputs from officials and industry managers, economic and employment statistics are provided. These are then analysed at a local municipality level.

2 METHODOLOGY

This profile was compiled using existing datasets, information provided by management staff of various enterprises, the writer's previous experience, and various reports by other experts.

Information about the forestry plantations was obtained from management staff of the various DWAF management units and forestry sector companies. In an effort to minimize the processing of information for DWAF managers (in the absence of dedicated planning staff), compartment lists were obtained reflecting the most recent planning exercise. These were converted from text format to excel spreadsheets, and analysed. The managers from the private sector were provided with information frameworks which they filled in independently and in discussion with the writer. Further information was added from existing maps and the knowledge of the writer.

The National Forest Inventory was used as the basis for information about the natural forests. To reduce the number of records, forests were grouped into 'patrols' according to DWAF's organisation. Common sense was applied to the grouping of forests where they had not been divided into patrols, and the groups were named in relation to nearby known localities. Reliable information and maps about the extent and location of woodlands were unavailable despite numerous attempts to obtain this information from the offices of DWAF. In discussion with the Manager of Forestry Development, Nkosi Quvilie, it was agreed that it would not be possible to address the woodlands section in any detail.

The Strategic Environmental Assessment was used as a basis for information about the forestry potential. It is recognized, however, that there are some weaknesses, especially the overestimate of forestry potential in the mountainous areas west of Mount Fletcher.

Information about primary processing was obtained from various sources, namely DWAF management, the Small Sawmillers Association and sawmill managers. Some information was extrapolated on the basis of ratios from LHA (2004).

DWAF provided a list of activities which was compiled as part of a provincial survey.

Information about secondary wood processing was obtained from Furntec in the form of a list of furniture manufacturers in the province. The details did not include scale, employment or any economic information. Rough estimates of scale were made based on a discussion with Furntec staff.

Information related to employment and revenues was obtained mostly from the managers of the forestry departments and companies. As expected, details about revenues and cost components were unavailable. Estimates were therefore made based on knowledge of product prices and current timber yields. Detailed information about employees was provided by DWAF and by the company managers responsible for human resources. Extrapolations from this information were made where other information was unavailable, for example for small sawmillers and pole treatment plants.

The maps were compiled from a combination of existing Municipal and infrastructure data, the National Forest Inventory, the Strategic Environmental Assessment, and additional information provided by the writer regarding downstream processing.

A trip through the key forestry areas was undertaken, during which meetings were held with people who provided valuable information.

7 August - Stutterheim
9 August - Port Elizabeth
13 August - Tsitsikama, Kareedouw
18 September - Mthata, Butterworth, Port St. Johns
19 September - Mt. Ayliff, Bizana
20 September - Kokstad
3 October - Maclear, Ugie, Elliot
4 October - Engobo, Cofimvaba, Queenstown, Keiskammahoek, Hogsback and Katberg

It should be noted that the provision of information for this profile required work additional to that of the annual forestry sector information survey commissioned by DWAF. If this exercise were to be repeated in the future, it may be useful to extend the terms of reference of the DWAF survey to include the information presented in this profile, so as to avoid unnecessary duplication.

2.1 Limitations

This assignment was intended to be a desktop study. However, some details were simply not available and time did not allow for detailed research to be conducted. In order to provide a more coherent picture, estimates and extrapolations using conservative figures have been made so as to include information pertaining to scale, employment and economic activity.

As a result of the unusually high levels of temporarily unplanted areas, the stage of maturity of the plantations near Ugie/Maclear and unequal age-class distributions in most plantations, and the lack of industrial wood processing facilities, the employment and economic value of the forestry sector is lower than it would be under normal circumstances.

It is expected that many new job opportunities will be created as new afforestation and the rehabilitation of existing plantations gain momentum. As the industrial processing facilities in Ugie and Kokstad come on stream, there will be greater opportunity for harvesting and transport activities along with the wood processing benefits.

3 ACKNOWLEDGEMENTS

In a competitive business environment where the demands on managers for results are high, the provision of information for this report required work that is over and above the normal workload. The willingness and generosity of time from the following people is acknowledged gratefully: Willem Hatting, Fred Bassett, John Ferguson and David Ngubane (Singisi Forest Products); Gary Chaplin and Kobus Venter (P G Bison); John Rance and Louis de Kock (Amatole Forest Products); Cassie Carstens and Willem Jakobs (MTO); Nkosi Quvile, Sonwabile Menyelwa, Mawethu Mqalo, Shakes Soyiswapi, Lucky Katende, Tyrus Mbiko, Charlie Gcilitshana, Vuyani Kwindla and Dan Mtathi (DWAF Forestry); Sean Houdsen (Tekwani); Arthur West (Furntec); Fiona Lees (Small Sawmillers); and Martin Flavell (formerly E C Veneers).

Map 1 - Existing Forestry

Forestry Sector Profile - Eastern Cape

4 PLANTATIONS

In a global context, South Africa's plantations represent about 1% of the world's forestry plantations of 109.5 million ha (FAO, 2005). The plantations of the Eastern Cape, which total 129 334 ha in extent, represent 10% of South Africa's total forestry plantations.

Map 1 shows that the large majority of the Eastern Cape's plantations are located on the escarpment of the Amatola Mountains (near King William's Town and Stutterheim), Matiwane (west of Mthatha), Southern Drakensberg (Ugie, Maclear and Elliott) and other smaller ranges of hills and mountains. One large block of plantations is located in the Tsitsikamma area in the southernmost region of the Eastern Cape. There are many smaller plantations scattered in the areas formerly known as Ciskei and Transkei.

The wide and scattered distribution of forestry plantations within the Eastern Cape presents unique logistical and managerial challenges, as scale is an important factor in management efficiency, risk profile and the profitability of plantations. Map 1 shows the scattered distribution of the plantations, especially those under state management.

4.1 Existing Plantations

Most of the forestry plantations in the province were established by the state during the early parts of the previous century. Later, during the formation of the homelands, they were transferred to and managed by the various governments' agriculture and forestry departments. In the years prior to the abolishment of the homelands, Safcol was established as a state-owned company to manage the plantations in the "old" South Africa. Safcol later formed Mountain to Ocean (MTO), under which Safcol's Eastern Cape plantations were managed. After the abolishment of the homelands, the various government plantations were brought under the new government's Department of Water Affairs and Forestry (DWAF). A large new plantation was established in the Ugie/Maclear area by Anglo-American Corporation, and this has recently been acquired by P G Bison.

Table 1 shows that 51% of the province's plantations are privately owned, while 46% are state-owned (MTO and DWAF). 103 807 ha (81%) are Pine plantations. Until recently, the objective of these plantations was the production of sawtimber over long rotations (25 years and longer). With the operationalisation of the P G Bison chipboard plant in Ugie, the opportunity exists for the rotation length of some of the plantations to be shortened. Gum and wattle species are used mainly for local building, fencing and fuelwood purposes, although in some areas they have commercial uses, mainly for treated pole manufacture.

Ownership	Existing Forestry Area (hectares)				
	Pine	Gum	Wattle	Other	Total
Private	58733	5811	15	1923	66481
State	45094	13329	1206	306	59935
Community		2361	556		2917
Total	**103827**	**21501**	**1777**	**2229**	**129334**

Table 1 - Ownership of Existing Forestry Plantations

In addition to the information tabled, there are many areas in which plantation species, mainly wattle, exist in unmanaged jungles. It is estimated from discussions with people involved in the forestry sector that there are around 5 000 ha of such trees within the province. In some areas there is the potential to fell, re-establish and manage such stands for commercial or other purposes, whereas in other areas the stands may be subject to environmental constraints.

The distribution of age-classes is important in forestry management in that it reflects the sustainability of plantation timber production. Table 2 shows the age-class distribution of the Pine plantations in the province under private and state ownership. Of concern is that 49% of the state plantations are either Temporarily Unplanted (TU) or younger than 5 years old. This situation has arisen due to devastating fires in the Tsitsikamma area over the past few years, as well as from an inability to fully meet operational and management objectives within the cumbersome policy and procedural frameworks of government departments.

The variation in area within the age-class of private plantations is a result of the stage of maturity of the new plantations in Elundini, as well as the strident efforts at rehabilitation of restructured state plantations by the new private sector operators.

Age Class (Years)	Pine Area (hectares)		
	Private	State	Total
5	11299	11657	**22955**
10	6215	6901	**13116**
15	14926	4102	**19028**
20	15414	4923	**20336**
25	2827	1960	**4787**
30	3570	3809	**7379**
35	878	1248	**2125**
>35		657	**657**
TU	3605	9837	**13442**
Total	**58734**	**45093**	**103827**

Table 2 - Age-Class Distribution of Pine Plantations

Nearly 50% of the province's plantations are managed and operated by P G Bison (private) and MTO (state-owned). 23% of the plantations are managed and operated by DWAF. Other significant private sector operators are Singisi Forest Products (14%) and Amathole Forestry Company (11%).

113 549 ha (88%) of the plantations have been established for commercial purposes, as shown in
Table 3, while 15 785 ha (12%) have been established for building, fencing and fuelwood use by people living adjacent to the plantation.

Purpose	Ownership	Company/Section	Extent (hectares)
Commercial	Private	AFC	14862
		P G Bison	33131
		Singisi	18489
	State	DWAF KEI	8393
		DWAF MEG	8606
		MTO	30068
	Sub Total		113549
Woodlot	Community	Community	2917
	State	DWAF IFM	2003
		DWAF KEI	5067
		DWAF MEG	5798
	Sub Total		15785
Grand Total			129334

Table 3 - Purpose of Plantations

Table 4 lists the local and district municipalities within which the existing plantations are located. These are spread over 23 local municipalities, with Amahlati, Koukamma, Kouga, and Elundini having the highest concentration of forestry plantations.

District Municipality	Local Municipality	Ownership			
		Private	State	Community	Total
Alfred Nzo	Matatiele		400	8	408
	Umzimvubu	419	2812	203	3434
	Subtotal	**419**	**3212**	**211**	**3842**
Amathole	Amahlati	10950	2645		13595
	Buffalo City		474	53	526
	Mbashe		2432	30	2462
	Mnquma		820	543	1363
	Ngqushwa		57	15	72
	Nkonkobe	3911	110	39	4061
	Subtotal	**14862**	**6538**	**679**	**22078**
Cacadu	Kouga		10634		10634
	KouKamma		19434		19434
	Subtotal	**0**	**30068**	**0**	**30068**
Chris Hani	Emalahleni			145	145
	Engcobo		2012		2012
	Intsika Yethu		5167	510	5677
	Lukanji			111	111
	Sakhisizwe	9224	455		9679
	Senqu			122	122
	Subtotal	**9224**	**7634**	**887**	**17745**
ORT	Bizana	951			951
	KSD	6805	1572	387	8764
	Mbizana		376		376
	Mhlontlo	10314	2917	499	13730
	Mhontlo			50	50
	Ntabankulu		1140	3	1143
	Nyandeni		2718	105	2823
	Port St Johns		392		392
	Qaukeni		1892	43	1935
	Subtotal	**18070**	**11007**	**1086**	**30164**
Ukhahlamba	Elundini	23907	1476	54	25437
	Subtotal	**23907**	**1476**	**54**	**25437**
Grand Total		**66482**	**59935**	**2917**	**129334**

Table 4 - Distribution of Plantations within Local Municipalities

4.2 Potential for New Afforestation

The eastern portion of the Eastern Cape has large areas which are biophysically suitable for commercial forestry. In 2003, DWAF commissioned a Strategic Environmental Assessment (SEA) of areas that are biophysically suitable for forestry in Water Management Area 12 (WMA12) (Umzimvubu – Keiskamma). This area covers large portions of the district municipalities of Amathole, Ukahlamba, Alfred Nzo, O. R. Tambo and Chris Hani.

Although there are other areas with forestry potential within the province, WMA12 represented the area with the highest forestry potential and where the hydrological impacts are likely to be lowest. The area has one of the lowest total requirements for water in the country, due to relatively high rainfall and low levels of economic activity.

The assessment identified 1 751 478 ha within DWAF's Water Management Area12 (WMA12)[1] as having potential for commercial afforestation. 161 531 ha were identified as having "good" potential (Mean Annual Increments[2] of 22 for Pine, 35 for Gum and 10 for Wattle) and 1 589 947 ha as moderate (Mean Annual Increments of 15 for Pine, 15 for Gum and 8 for Wattle).

The areas with forestry potential were identified on the basis of biophysical criteria after filtering out existing forestry, areas of high biodiversity, conservation value, socio-economic value, hydrological restrictions, infrastructural constraints, and urban and residential settlements. At this stage the areas are merely identified as being **suitable** for forestry (as opposed to available). If people with rights to the land with forestry potential

[1] Only areas in WMA12 that have forestry potential have been identified in this report.
[2] Mean Annual Increment is a measure of plantation growth in cubic meters per hectare per year

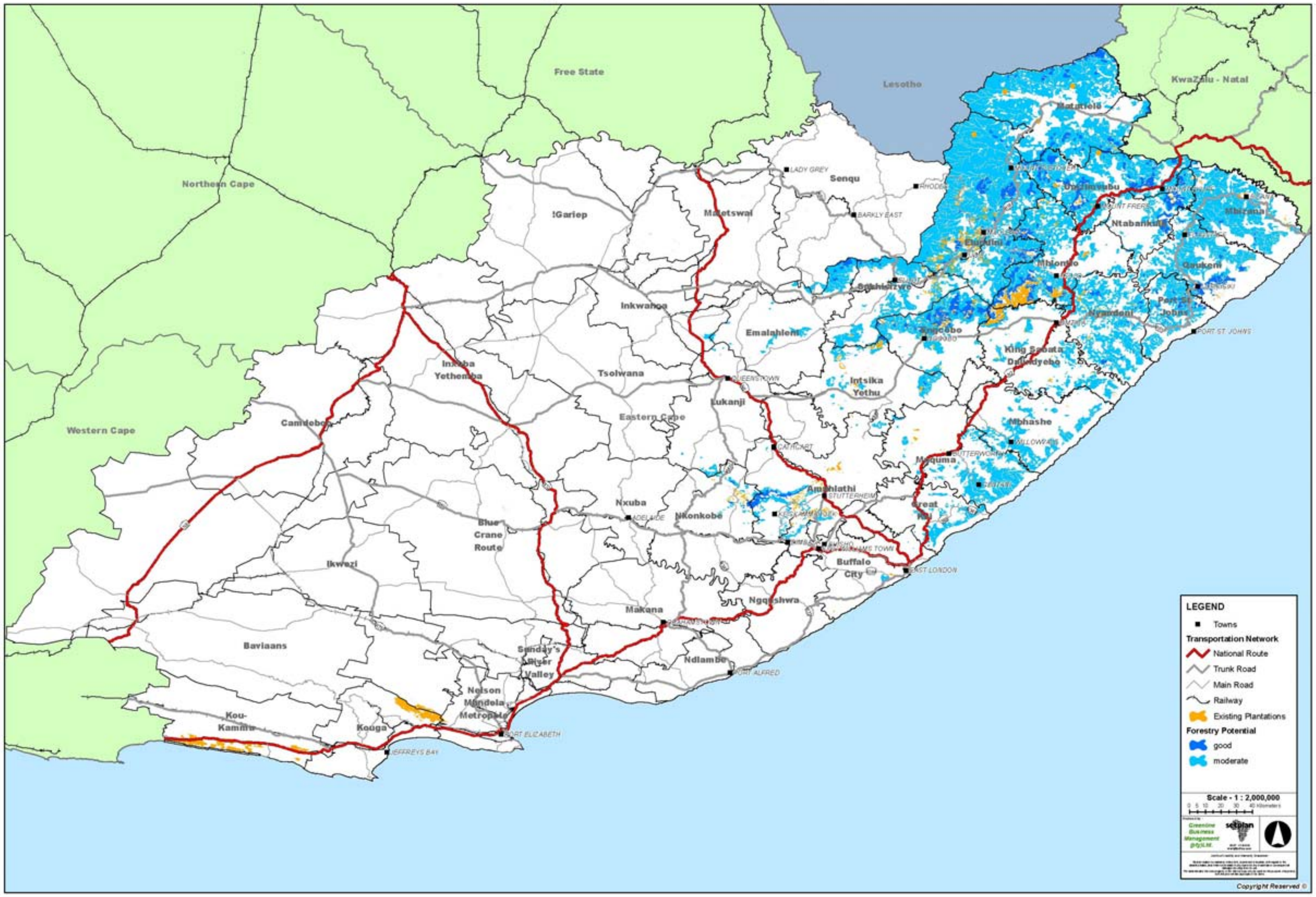
wished to participate in forestry, and decided to use 15% of this land for this purpose, then up to 262 722 ha of new plantations could be possible. The SEA assumed a more conservative target of 100 000ha as being realistic. Table 5 shows the forestry potential in each of the local municipalities, at 15% of the total suitable area. The forestry potential is also shown in Map 2.

District Municipality	Local Municipality	Forestry Potential (hectares)			
		Good	Moderate	Total	15%
Alfred Nzo	Matatiele	18310	250928	**269238**	40386
	Umzimvubu	27746	131288	**159035**	23855
	Sub Total	**46056**	**382217**	**428273**	**64241**
Amathole	Amahlathi	6587	15802	**22389**	3358
	Great Kei		23192	**23192**	3479
	Mbhashe		50982	**50982**	7647
	Mnquma	35	65640	**65675**	9851
	Nkonkobe	1358	4931	**6289**	943
	Nxuba		6	**6**	1
	BCM	6	3783	**3790**	568
	Sub Total	**7986**	**164336**	**172323**	**25848**
Chris Hani	Emalahleni	3656	27269	**30925**	4639
	Engcobo	21181	63697	**84878**	12732
	Inkwanca		1401	**1401**	210
	Intsika Yethu	1271	23740	**25011**	3752
	Lukanji	79	3250	**3329**	499
	Sakhisizwe	987	56494	**57481**	8622
	Tsolwana		71	**71**	11
	Sub Total	**27174**	**175923**	**203097**	**30464**
ORT	Mbizana	2590	119710	**122301**	18345
	Mhlontlo	16482	98735	**115217**	17282
	Ntabankulu	13467	35713	**49180**	7377
	Nyandeni	3659	101392	**105050**	15758
	Port St Johns	3984	50532	**54516**	8177
	Qaukeni	13584	83605	**97189**	14578
	KSD	2422	40363	**42785**	6418
	Sub Total	**56188**	**530050**	**586237**	**87936**
Ukahlamba	Elundini	23987	331406	**355393**	53309
	Maletswai		33	**33**	5
	Senqu	140	5982	**6123**	918
	Sub Total	**24127**	**337422**	**361549**	**54232**
Grand Total		**161531**	**1589947**	**1751478**	**262722**

Table 5 - New Afforestation Potential

Map 2 - Existing Plantations and Potential

Forestry Sector Profile - Eastern Cape



5 NATURAL FORESTS AND WOODLANDS

The National Forest Inventory (NFI) identified 226 997 ha of natural forest in the Eastern Cape. The NFI shows that 139 944 ha are named, and are assumed to be legally demarcated forests. 87 053 ha of forest, while shown on the NFI maps, are not identified by any names and are assumed to not be legally demarcated. For the purposes of this report, these unnamed groups of forests are referred to by the names of nearby localities.

These natural forests are owned and managed by the state (DWAF, DEDEA[3], municipalities), private farmers, traditional authorities and various conservation authorities. The greatest number of individual forests are managed by DWAF and clustered into “patrols”, as listed in Table 6.

The vegetation group referred to as “woodlands” has recently become the responsibility of DWAF with regard to the protection and promotion of equitable and sustainable use. The National Forest Act, according to Willis (2002), defines woodlands as “a group of trees which are not a natural forest, but whose crowns cover more than five per cent of the area bounded by trees forming the perimeter of the group”. A strategic framework for the implementation of a woodlands policy was formulated in 2005 (DWAF, 2005). Unlike the data pertaining to forestry plantations and, to some extent, natural forests, much work still needs to be done to carry out a reliable inventory of the woodlands.

[3] DEDEA (Department of Economic Development and Environmental Affairs)

District Municipality	Local Municipality	Extent (Hectares)
Alfred Nzo	Matatiele	1684
	Umzimvubu	4597
	Sub Total	**6281**
Amathole	Amahlathi	23435
	Buffalo City	16464
	Great Kei	4660
	Mbhashe	14281
	Mnquma	9418
	Ngqushwa	8087
	Nkonkobe	11825
	Nxuba	1260
	Sub Total	**89429**
Cacadu	Baviaans	10
	Blue Crane Route	2707
	Kouga	6470
	Kou-Kamma	16917
	Makana	3740
	Ndlambe	5201
	Sunday's River Valley	13657
	Sub Total	**48703**
Chris Hani	Emalahleni	1032
	Engcobo	9199
	Intsika Yethu	1893
	Lukanji	991
	Sakhisizwe	468
	Sub Total	**13583**
NMM	Nelson Mandela Metropole	4893
	Sub Total	**4893**
ORT	King Sabata Dalindyebo	5727
	Mbizana	3719
	Mhlontlo	8041
	Ntabankulu	3353
	Nyandeni	13199
	Port St Johns	18714
	Qaukeni	10599
	Sub Total	**63351**
Ukahlamba	Elundini	757
	Sub Total	**757**
Grand Total		**226997**

Table 6 - Natural Forests

6 FOREST-USE ACTIVITIES

6.1 Timber Products

The most significant commercial activities in the forestry sector arise from the processing of timber from the province's commercial forestry plantations. It is estimated that around 770 500 m^3 of timber is processed in the Eastern Cape each year, producing 328 700 m^3 of sawnboard which is mainly used in the construction sector. More than half of the raw material is processed in three large (>50 000 m^3/a), efficient sawmills that produce high quality, softwood lumber. 25% is processed by three medium (20-49 000 m^3/a), and 39 small (<20 000 m^3/a) sawmills. Two other sawmills process relatively small quantities of indigenous timber.

In addition to the sawmills there are 11 pole treatement plants, a small chipboard operation, and a veneer plant in the province.

Type	No.	Roundwod intake (m^3/a)	Production (m^3/a)
Sawmill Large	3	382500	191250
Sawmill Medium	3	93500	38900
Sawmill Small	39	97500	39750
Sawmill Indigenous	2	5000	2000
Chipboard	1	35000	14000
Pole Treatment	10	76000	30400
Charcoal	7	56000	9600
Veneer	1	25000	10000
Total	**66**	**770500**	**335900**

Table 7 - Wood Processing Activities

There is a large chipboard plant under construction at Ugie in the Elundini Local Municipality. The coming on stream of this plant will herald an important new era for the Eastern Cape forestry sector, as it will increase the viability of existing plantations which have been too far from markets for small-sized logs. It will also create greater market opportunities for fastergrowing hardwoods, and justify the management of plantations on shorter rotations, which are likely to hold more attractive prospects for communities who live on land which has afforestation potential.

It should be noted that due to the confinement of this report to the Eastern Cape Province, the large (and growing) wood-processing facilities in the Kokstad area have been excluded. In addition to two large sawmills, there is a new plywood plant and advanced plans for additional industrial wood processing facilities in this area.

A consistent theme throughout the information-gathering process was the looming shortage of timber resulting from fires, uncontrolled harvesting and a lack of timeous re-establishment after harvesting. Small sawmillers in particular are subject to threatened wood supplies, which are already beginning to manifest.

Table 8 shows the distribution of timber processing within the various municipalities of the province. Of particular interest is the high number of small sawmillers located in the Chris Hani DM (20%), in which fewer than 14% of the Province’s plantations are located.

The proliferation of pole treatment plants is a result of opportunities created around Gum plantations in areas where customer requirements are lower than South African Bureau of Standards (SABS) standards. Unlike the pressurized treatment processes used by large processors, many of the small plants merely dip logs into heated creosote, which results in minimal penetration levels that are well below SABS standards.

There are seven small charcoal manufacturing plants in the province which use Gum and Wattle as raw material. In total, 9 600 tons of charcoal are produced from 56 000 tons of roundwood. Some of the raw material is from managed plantations while the balance is from unmanaged wood 'jungles', some of which are being cleared by DWAF's 'Working for Water' Program.

Type	DM	LM	No.
Sawmill Large	Amathole	Amahlathi	1
	Cacadu	Koukamma	1
	ORT	Mholontlo	1
Sawmill Medium	Alfred Nzo	Umzimvubu	1
	Amathole	Amahlathi	1
	Cacadu	Koukamma	1
Sawmill Small	Alfred Nzo	Umzimvubu	3
	Amathole	Amahlathi	7
	Chris Hani	Intsika Yethu	19
	ORT	Mholontlo	3
	ORT	Qaukeni	6
	Ukhahlamba	Elundini	1
Sawmill Indigenous	Amathole	Amahlathi	2
Chipboard	ORT	Mholontlo	1
Pole Treatment	Amathole	Amahlathi	3
	Cacadu	Koukamma	1
	ORT	KSD	1
	ORT	Qaukeni	5
Charcoal	Amathole	Amahlathi	1
	Amathole	Mnquma	1
	Cacadu	NMM	2
	Chris Hani	Sakhisizwe	1
	ORT	Mholontlo	1
Veneer	ORT	Mholontlo	1
Total			**65**

Table 8 - Timber Processing in Municipalities

6.2 Furniture Manufacture

Although details of the individual business were not provided, Furntech listed 31 furniture operations in the Eastern Cape. Table 9 shows that more than half are concentrated in the NMM, despite the fact that most of the forestry resources and sawmills are located in the eastern parts of the province, more than 400 km away.

DM	LM	No.
Amathole	Amahlathi	2
	BCM	8
Cacadu	NMM	18
Chris Hani	Lukanji	3
Total		**31**

Table 9 - Furniture Manufacturers

6.3 Non-Timber Forest Products

Of less commercial although significant economic importance are the varieties of Non-Timber Forest Products (NTFP's) that are associated with the forestry sector.

Such 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

DWAF recorded two beekeeping operations that are associated with plantations in Isinja (Nyandeni Local Municipality) and Cengcane (Mhlonto Local Municipality). It also listed four basketry operations in the Port St John's Local Municipality.

The only forest fern and foliage operation of significance is based in Tsitsikamma, where Forest Ferns produces 300 tons of foliage per annum, mainly for the export market (Institute Of Natural Resources, 2003).

Although the collection of woody material, medicinal plants and edible fruits is common, this is mostly informal and for household purposes. In some areas, however, there is large-scale, illegal exploitation for commercial purposes. The use of such forest produce is widespread in areas where forests occur. The value to households of such produce is variable, and attempts at quantification usually include areas that are regarded as woodland and grassland.

Hiking trails in the province which traverse forestry areas include Hogsback, Amatola and Tsitsikamma. In addition, many managed plantation areas offer picnic, fishing and mountain-biking facilities to the public.

7 CONTRIBUTION TO EMPLOYMENT

From the information available, 8 158 people are estimated to be directly employed in the forestry sector. A further 1 057 people are estimated to be employed in furniture manufacture (925), ferns and foliage (120), basketry (8) and beekeeping (4).

If anything, the figure is conservative as it does not account for people who may be involved in non-remunerative work in community plantations, non-DWAF employees in natural forests and woodlands, and other activities that have not been included in this report. It also excludes the figure of at least 200 people who will be employed in the new chipboard plant at Ugie.

Activity	Employees
Private Plantation	2375
State Plantations	1760
Natural Forests	334
Sawmill Large	1263
Sawmill Medium	583
Sawmill Small	975
Sawmill Indigenous	23
Chipboard	158
Pole Treatment	342
Veneer	106
Charcoal	240
Total	**8158**

Table 10 - Employment in Forestry

Most of these jobs are provided in the rural areas, which are generally classified as the poorest in South Africa. Table 11 shows a breakdown of employment numbers per local municipality, with details for plantations, natural forests and downstream processes.

District Municipality	Local Municipality	Plantations	Downstream	Forests
Alfred Nzo	Matatiele	7		
	Umzimvubu	118	310	3
Amathole	Amahlati	517	1220	
	Buffalo City	33		96
	Mbashe	79		54
	Mnquma	25	30	31
	Ngqushwa	0		1
	Nkonkobe	144		
Cacadu	Kouga	100		
	NMM		120	
	KouKamma	500	532	
Chris Hani	Emalahleni	0		
	Engcobo	47		18
	Intsika Yethu	158	245	
	Lukanji	0	0	
	Sakhisizwe	188	15	
	Senqu	0		
ORT	Bizana	16		
	KSD	478	162	27
	Mbizana	25		21
	Mhlontlo	715	878	
	Ntabankulu	68		
	Nyandeni	88		29
	Port St Johns	0	0	34
	Qaukeni	98	157	20
Ukhahlamba	Elundini	731	20	
Total		**4135**	**3689**	**334**

Table 11 - Forest Sector Employment in Municipalities

Based on information provided by managers and administrators, women make up more than 30% of all employees (excluding beekeeping, furniture and basketry, for which there were no estimates). Nearly half of the employees are below the age of 35. There is an anomaly in the state operations, however, where nearly 70% of all employees are older than 35. 97% of the natural forests employees belong to this group.

Segment	Men		Women		Employees
	<35 yrs	>35yrs	<35 yrs	>35yrs	
Timber Processing	1540	1168	534	447	**3689**
State Plantations	227	568	331	634	**1760**
Private Plantations	861	878	191	445	**2375**
Natural Forests	5	190	2	137	**334**
Total	**2633**	**2804**	**1058**	**1663**	**8158**

Table 12 - Gender and Age Analysis

It is well known that significant portions of forestry plantations in the Eastern Cape have been subject to damage by fire and sub-optimal management over the past few decades. In spite of the credible efforts at rehabilitation of these plantations, particularly by privately managed operations, it will take some time for all to be rehabilitated and to realise their yield potential. A large plantation (nearly 35 000 ha) is only now reaching maturity. Once the existing forestry plantations have been rehabilitated and are being harvested on a sustainable basis, they are likely to employ over 5 000 people (excluding processing).

8. CONTRIBUTION TO THE ECONOMY

The contribution of the forestry sector to the province's economy has yet to be fully established. Without detailed analysis of the income statements and costing reports of companies and government departments, the impact can be partially estimated with regard to revenues generated, and salaries and wages.

Based on conversion recoveries of between 40% and 50%, and product prices as shown in Table 13, it is estimated that annual revenues of R 612 million are generated from the primary conversion of plantation products within the forestry sector in the province.

Sector Component	Annual Production (t,m^3/a)	Price (R/t,m^3)	Revenue (R mil)
Sawmill Indigenous	2000	3000	6.0
Sawmill Large	191250	2000	382.5
Sawmill Medium	38900	1900	73.9
Sawmill Small	39750	1500	59.6
Chipboard	14000	1500	21.0
Pole Treatment	30400	1200	36.5
Veneer	10000	3000	30.0
Charcoal	9600	210	2.0
Total			**611.5**

Table 13 Revenue Generated in Forestry Sector

Based on conservative plantation yield estimates of $11m^3$/ha/a for commercial plantations and $9m^3$/ha/a for woodlots, it is estimated that annual revenues of R 291 million are generated from the sale of plantation products in the province.

DM	LM	Area (ha)		Revenue (R million)		
		Commercial	Woodlots	Commercial	Woodlots	Total
				(@$11m^3$/ha/a @R230/m^3)	(@$9m^3$/ha/a @R22/m^3)	
Alfred Nzo	Matatiele		408	0.0	0.1	**0.1**
	Umzimvubu	3149	285	8.0	0.1	**8.0**
Amathole	Amahlati	13595		34.4	0.0	**34.4**
	Buffalo City		526	0.0	0.1	**0.1**
	Mbashe		2462	0.0	0.6	**0.6**
	Mnquma		1363	0.0	0.3	**0.3**
	Ngqushwa		72	0.0	0.0	**0.0**
	Nkonkobe	3911	149	9.9	0.0	**9.9**
Cacadu	Kouga	10634		26.9	0.0	**26.9**
	KouKamma	19434		49.2	0.0	**49.2**
Chris Hani	Emalahleni		145	0.0	0.0	**0.0**
	Engcobo	1866	146	4.7	0.0	**4.8**
	Intsika Yethu	3882	1794	9.8	0.4	**10.3**
	Lukanji		111	0.0	0.0	**0.0**
	Sakhisizwe	9224	455	23.3	0.1	**23.4**
	Senqu		122	0.0	0.0	**0.0**
ORT	Bizana	951		2.4	0.0	**2.4**
	KSD	6805	1959	17.2	0.5	**17.7**
	Mbizana		376	0.0	0.1	**0.1**
	Mhlontlo	12536	1244	31.7	0.3	**32.0**
	Ntabankulu	1051	92	2.7	0.0	**2.7**
	Nyandeni		2823	0.0	0.7	**0.7**
	Port St Johns		392	0.0	0.1	**0.1**
	Qaukeni	1416	519	3.6	0.1	**3.7**
Ukhahlamba	Elundini	25095	343	63.5	0.1	**63.6**
Total		**113549**	**15785**	**287.3**	**3.8**	**291.1**

Table 14 - Annual Revenues from Plantation

At current employee levels, Table 15 shows that remuneration of R 277 million per annum is generated within the sector, most of it in the rural areas.

Sector Component	No of Employees	Remuneration	
		Employee Ave. (R/month)	Total (Rmil/a)
Commercial Plantations	1920	2500	58
Woodlot Plantations	2207	3500	93
Natural Forests	334	3500	14
Sawmill Indigenous	23	2500	1
Sawmill Large	1263	3000	45
Sawmill Medium	583	2500	18
Sawmill Small	975	2000	23
Chipboard	158	3000	6
Pole Treatment	342	2500	10
Veneer	106	3000	4
Charcoal	240	2000	6
Total	**8150**		**277**

Table 15 - Employee Remuneration in Forestry Sector

On the conservative assumption that 20% of revenue is expended within the province on non-employee costs, a further R 180 million could be contributed to the economy.

In total, it is estimated that annual revenues of almost R1 billion (R 902 million), are generated, with R 277 million spent on employee costs and R 180 million spent on local supplies and services (a total of R 457 million).

Taking into consideration the coming on stream of the new chipboard plant, and the possible new afforestation of 100 000 ha (almost doubling the existing plantation area), the sector has the potential to contribute at least a further R 1 billion per annum to the provincial economy.

The impact of NTFP’s has not been quantified. Shackleton et al (DWAF, 2006) estimate that the use of natural resources is valued at an average of R 3 154 per household (in 2001), now estimated to be worth about R 4 349.

District Municipality	Local Municipality	Sawmills				Chip board	Treated Poles	Veneer	Charcoal	Total Revenue (R mil)
		Indig	Large	Medium	Small					
	Price/t,m3	3000	2000	1900	1500	1500	1200	3000	210	
Alfred Nzo	Matatiele									**0.0**
	Umzimvubu			13500	3600					**31.1**
Amathole	Amahlati	2000	47500	14000	18350		7200		2400	**164.3**
	Buffalo City									**0.0**
	Mbashe									**0.0**
	Mnquma								1200	**0.3**
	Ngqushwa									**0.0**
	Nkonkobe									**0.0**
Cacadu	Kouga									**0.0**
	KouKamma		68750	11400			6800			**167.3**
	NMM								4800	**1.0**
Chris Hani	Emalahleni									**0.0**
	Engcobo									**0.0**
	Intsika Yethu				9800					**14.7**
	Lukanji									**0.0**
	Sakhisizwe								600	**0.1**
	Senqu									**0.0**
ORT	Bizana									**0.0**
	KSD						14400			**17.3**
	Mbizana									**0.0**
	Mhlontlo		75000		1800	14000		10000	600	**203.8**
	Mhontlo									**0.0**
	Ntabankulu									**0.0**
	Nyandeni									**0.0**
	Port St Johns									**0.0**
	Qaukeni				5400		2000			**10.5**
Ukhahlamba	Elundini				800					**1.2**
Total (cubic m or tons)		**2000**	**191250**	**38900**	**39750**	**14000**	**30400**	**10000**	**9600**	**611.5**

Table 16 – Annual Revenues from Processing

8 TRENDS IN THE SECTOR

8.1 Forestry Licences

Plantation forestry is considered by DWAF as a Stream Flow Reduction Activity (SFRA), which means that 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, and the local socio- economy. It requires approval from the Department of Land Affairs (DLA), DEDEA, Department of Agriculture and the Forestry Branch of DWAF. While this licensing process is a mechanism for ensuring that forestry is applied in a responsible manner, it is seen by proponents and applicants as frustrating.

Between 1997, when the new licensing process was introduced, and the end of July 2007, there have been a total of 204 licensing applications in the Eastern Cape, covering 19 560 ha.

The applications for new plantations cover a total of 8 053 ha, of which 65% are for Pine plantations, 33% for Gum plantations, and the balance for Wattle. 82 (11 507ha) of the applications are to convert from Pine to Gum species.

Over the past 10 years, a total of 70 licenses (of the 204 applications) have been issued. The average number of months taken for a license to be issued is 21, although some have taken up to 89 months. At the time of this report, 128 applications were “In Progress”, with the average having been in the process for 9 months.

The momentum for forestry applications picked up considerably during 2006, when 36 applications (5 083 ha) were made. A further 87 (12 338 ha) were made between January and the end of July 2007. These applications represent a total of 17 421 ha.

8.2 Fire Damage

Plantations are at risk from various factors, including disease, drought, wind, snow, flooding, fire, livestock and vandalism.

The most critical factor is fire. Over the past 10 years, the province has recorded the burning of some 44 690 ha of plantations. The worst fires were in 2005, when nearly 15 000 ha in the Koukamma and Kouga Local Municipalities were burnt.

The economic losses that result from fires are not limited to the wood that is burnt. If plantations are old enough, some of the burnt timber may even be harvested, although in some cases the timber is damaged beyond utilisation. In forestry, with rotations of between 10 and 30 years, the burning of plantations which are younger than harvesting age require felling, clearing and replanting (cost duplications), and incur the loss of growth that has already taken place. Processing enterprises that are dependent on the timber resource are adversely affected if the timber supplies become unsustainable or sub-optimal.

There are many plantations in the Eastern Cape that are no longer able to sustain the production of wood (eg. Nomadamba, Katberg, Ntsubane Amanzamnyama block). The economic impact on employees, contractors and small sawmillers will be sorely felt in the near future.

According to information from the forestry operators, some 44 472 ha have been replanted over the past decade. Although much of this replanting has been in areas damaged by fires, the figure also includes those plantations that were harvested according to normal management practices. The private companies and MTO have been planting at accelerated rates to ensure the re-establishment of burnt areas and areas left unplanted by DWAF management prior to the restructuring of plantations.

Table 17 shows the areas burnt and replanted over the past 10 years.

OWNERSHIP	OPERATOR	ESTATE	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
	Burnt											
Private	**Sub Total - Private**		**231**	**200**	**371**	**1730**	**2690**	**758**	**3523**	**5334**	**498**	**346**
State	MTO		11	3444	1480	780	17	3	46	6	14627	0
	DWAF/ SAFCOL (est.)	Sandile				44		55	108			
		Zingcuka							345			
	DWAF	DWAF KEI	No response - estimate based on current Temp unplanted areas and assumed replanting rate									3658
		DWAF MEG										4188
	Sub Total - State		**11**	**3444**	**1480**	**803**	**17**	**58**	**499**	**6**	**14627**	**7846**
Total			**242**	**3644**	**1851**	**2533**	**2707**	**816**	**4022**	**5340**	**15125**	**8192**
	Planted											
Private	**Sub Total - Private**		**1905**	**2855**	**2249**	**2392**	**2449**	**1955**	**2107**	**2208**	**3545**	**7503**
State	MTO		874	1013	1630	1694	1880	840	681	531	428	1874
	DWAF/ SAFCOL (est.)	Sandile										
		Zingcuka										
	DWAF	DWAF KEI	345	323	206	323	101	344	192	205	2	165
		DWAF MEG	95	217	319	493	151	110	41	110	167	168
	Sub Total - State		**1314**	**1553**	**2155**	**2510**	**2132**	**1294**	**914**	**846**	**597**	**2207**
Total			**3219**	**4408**	**4404**	**4902**	**4581**	**3249**	**3021**	**3054**	**4142**	**9710**

Table 17 - Areas Burnt and Replanted

8.3 Reforestation and New Plantations

As indicated in the previous section, some 44 472 ha have been planted over the past decade. The bulk of this planting has been to re-establish areas after harvesting or fire damage. Planting of new plantations has been minimal, although it is expected that the pace will increase over the next decades.

Extensive replanting has been undertaken by private companies and MTO in order to replant burnt areas, rehabilitate burnt and felled areas left unplanted by DWAF before restructure, and replant areas felled after normal harvesting.

Large areas managed by DWAF have been unplanted after fire damage and harvesting operations. Despite valiant attempts by management to correct this situation, the constraints imposed by departmental bureaucracy and budget limitations have frustrated successful implementation.

It has not been possible, from the information available, to reflect levels of plantation reductions or new plantations over the past 10 years. However, given the low number of forestry licenses granted (1037 ha in the past 10 years), the new plantation establishment levels are likely to be relatively insignificant.

8.4 Deforestation of Indigenous Forests

It is generally known that many of the province's indigenous forests have incurred damage as a result of the over-harvesting of resources, and clearing for agricultural and residential purposes.

DWAF, which is responsible for the management of the majority of forests, has initiated a programme through which damage and deforestation is quantified. The results as yet are inconclusive, due to the methodological challenges associated with this type of assessment.

One of the requirements of this assignment was to collate the scale of natural forest deforestation. There was unfortunately insufficient information to do so.

8.5 Plantation Yields

It is well known in the sector that most of the plantations in the province have, over the past decade, been managed in ‘abnormal’ (in technical forestry terminology) situations. It thus follows that plantation yields do not reflect the yield potential of the land or desirable management practices.

Reasons for this situation include the following:

- The integration of restructured state plantations into private sector management units required rehabilitation and re-planning to move towards normal yields and sustainable harvesting regimes.
- Some areas in one of the largest plantation resources (NECF) are reaching maturity, with the only harvesting to date being that of burnt plantations.
- DWAF plantation harvesting has largely been in areas that have been burnt, and many areas have been subject to unplanned over-harvesting;
- In the Koukamma and Kouga Local Municipalities, virtually all of the harvesting over the past 2-3 years has been of burnt trees.

A recurring theme arising from discussions with forestry managers has been the sub-optimal yield resulting from the impact of fires and from management weaknesses over the past decade.

9 MUNICIPALITIES

One of the purposes of this sector profile is to provide information about the forestry enterprises, activities and potential within local municipalities for economic development planning purposes.

The municipalities that are described below are those which have been identified as having significant areas of land with commercial forestry potential within their boundaries.

The tables below summarises the extent of existing and potential forestry, and the numbers and scale of forestry activities. They also provide estimates of employment numbers and revenue generation within the plantations and existing wood processors.

9.1 Amathole District Municipality

9.1.1 Amahlati Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	6	13595	517	34.4
Woodlot Plantations	0	0		0
Total Existing	**6**	**13595**	**517**	**34.4**
Afforestation Potential - Moderate		15802		
Afforestation Potential - Good		6587		
Total Potential		**22389**		
Total Plantations		**35984**		
Natural Forests (Groups)		23435	0	
Sawmills - Large	0	47500		
Sawmills - Medium	1	1400		
Sawmills - Small	7	18350		
Sawmills - Indigenous	2	2000		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	3	7200		
Charcoal	1	2400		
Total Processing	**14**	**78850**	**1220**	**164**
Grand Total			**1737**	**198.4**

Table 18 - Summary for Amahlati Municipality

9.1.2 Great Kei Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations				0
Woodlot Plantations				0
Total Existing		**0**	**0**	**0**
Afforestation Potential - Moderate		23192		
Afforestation Potential - Good		0		
Total Potential		**23192**		
Total Plantations		**23192**		
Natural Forests (Groups)		4660	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**0**	**0**

Table 19 - Summary for Great Kei Municipality

9.1.3 Buffalo City Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	7	526	33	0.1
Total Existing	**7**	**526**	**33**	**0.1**
Afforestation Potential - Moderate				
Afforestation Potential - Good				
Total Potential		**0**		
Total Plantations		**526**		
Natural Forests (Groups)		16464	96	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	1200		
Total Processing	**0**	**1200**	**0**	**0.3**
Grand Total			**33**	**0.4**

Table 20 - Summary for BCM Municipality

9.1.4 Mbashe Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	28	2462	79	0.6
Total Existing	**28**	**2462**	**79**	**0.6**
Afforestation Potential - Moderate		50982		
Afforestation Potential - Good		0		
Total Potential		**50982**		
Total Plantations		**53444**		
Natural Forests (Groups)		14281	54	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**79**	**0.6**

Table 21 - Summary for Mbashe Municipality

9.1.5 Mnquma Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	41	1363	25	0.3
Total Existing	**41**	**1363**	**25**	**0.3**
Afforestation Potential - Moderate		65640		
Afforestation Potential - Good		35		
Total Potential		**65675**		
Total Plantations		**67038**		
Natural Forests (Groups)		9418	31	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	1	1200		
Total Processing	**1**	**1200**	**30**	**0.3**
Grand Total			**55**	**0.6**

Table 22 - Summary for Mnquma Municipality

9.1.6 Nkonkobe Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	1	3911		9.9
Woodlot Plantations	6	149	144	0
Total Existing	**7**	**4060**	**144**	**9.9**
Afforestation Potential - Moderate		4931		
Afforestation Potential - Good		1358		
Total Potential		**6289**		
Total Plantations		**10349**		
Natural Forests (Groups)		11825	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**10.0**
Grand Total			**144**	**19.9**

Table 23 - Summary for Nkonkobe Municipality

9.2 Chris Hani District Municipality

9.2.1 Emalahleni Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	13	145	0	0
Total Existing	**13**	**145**	**0**	**0**
Afforestation Potential - Moderate		27269		
Afforestation Potential - Good		3656		
Total Potential		**30925**		
Total Plantations		**31070**		
Natural Forests (Groups)		1032	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**0**	**0**

Table 24 - Summary for Emalahleni Municipality

9.2.2 Ngcobo Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	4	1866		4.7
Woodlot Plantations	4	146	47	0
Total Existing	**8**	**2012**	**47**	**4.7**
Afforestation Potential - Moderate		63697		
Afforestation Potential - Good		21181		
Total Potential		**84878**		
Total Plantations		**86890**		
Natural Forests (Groups)		9199	18	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	
Grand Total			**47**	**4.7**

Table 25 - Summary for Ngcobo Municipality

9.2.3 *Intsika Yethu Local Municipality*

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	2	3882	158	9.8
Woodlot Plantations	33	1794		0.4
Total Existing	**35**	**5676**	**158**	**10.2**
Afforestation Potential - Moderate		23740		
Afforestation Potential - Good		1271		
Total Potential		**25011**		
Total Plantations		**30687**		
Natural Forests (Groups)		1893	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	19	9800		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**19**	**9800**	**245**	**14.8**
Grand Total			**403**	**25**

Table 26 - Summary for Intsika Yethu Municipality

9.2.4 Sakhisizwe Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	1	9224		23.3
Woodlot Plantations	2	455	188	0.1
Total Existing	**3**	**9679**	**188**	**23.4**
Afforestation Potential - Moderate		56494		
Afforestation Potential - Good		987		
Total Potential		**57481**		
Total Plantations		**67160**		
Natural Forests (Groups)		468	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	1	600		
Total Processing	**1**	**600**	**15**	**0.1**
Grand Total			**203**	**23.5**

Table 27 - Summary for Sakhisizwe Municipality

9.3OR Tambo District Municipality

9.3.1 KSD Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	1	6805		17.2
Woodlot Plantations	27	1959	478	0.5
Total Existing	**28**	**8764**	**478**	**17.7**
Afforestation Potential - Moderate		40363		
Afforestation Potential - Good		2422		
Total Potential		**42785**		
Total Plantations		**51549**		
Natural Forests (Groups)		5727	27	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	1	14400		
Charcoal	0	0		
Total Processing	**1**	**14400**	**162**	**17.3**
Grand Total			**640**	**35**

Table 28 - Summary for KSD Municipality

9.3.2 Mbizana Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	2	951	25	2.4
Total Existing	**2**	**951**	**25**	**2.4**
Afforestation Potential - Moderate		119710		
Afforestation Potential - Good		2590		
Total Potential		**122300**		
Total Plantations		**123251**		
Natural Forests (Groups)		3719	21	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**25**	**2.4**

Table 29 - Summary for Mbizana Municipality

9.3.3 Mhlontlo Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	9	12536		31.7
Woodlot Plantations	39	1244	715	0.3
Total Existing	**48**	**13780**	**715**	**32**
Afforestation Potential - Moderate		98735		
Afforestation Potential - Good		16482		
Total Potential		**115217**		
Total Plantations		**128997**		
Natural Forests (Groups)		8041	0	
Sawmills - Large	1	75000		
Sawmills - Medium	0	0		
Sawmills - Small	3	1800		
Sawmills - Indigenous	0	0		
Chipboard	1	14000		
Veneer	1	10000		
Pole Treatment	0	0		
Charcoal	1	600		
Total Processing	**7**	**101400**	**878**	**203.8**
Grand Total			**1593**	**235.8**

Table 30 - Summary for Mhlontlo Municipality

9.3.4 Qaukeni Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	1	1416		3.6
Woodlot Plantations	11	519	98	0.1
Total Existing	**12**	**1935**	**98**	**3.7**
Afforestation Potential - Moderate		83605		
Afforestation Potential - Good		13584		
Total Potential		**97189**		
Total Plantations		**99124**		
Natural Forests (Groups)		10599	20	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	6	5400		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	5	2000		
Charcoal	0	0		
Total Processing	**11**	**7400**	**157**	**10.5**
Grand Total			**255**	**14.2**

Table 31 - Summary for Qaukeni Municipality

9.3.5 Ntabankulu Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	3	1051		2.7
Woodlot Plantations	6	92	68	0
Total Existing	**9**	**1143**	**68**	**2.7**
Afforestation Potential - Moderate		35713		
Afforestation Potential - Good		13467		
Total Potential		**49180**		
Total Plantations		**50323**		
Natural Forests (Groups)		3353	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**68**	**2.7**

Table 32 - Summary for Ntabankulu Municipality

9.3.6 Nyandeni Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	25	2853	88	0.7
Total Existing	**25**	**2853**	**88**	**0.7**
Afforestation Potential - Moderate		101392		
Afforestation Potential - Good		3659		
Total Potential		**105051**		
Total Plantations		**107904**		
Natural Forests (Groups)		13199	29	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**88**	**0.7**

Table 33 - Summary for Nyandeni Municipality

9.3.7 Port St Johns Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	2	392	0	0.1
Total Existing	**2**	**392**	**0**	**0.1**
Afforestation Potential - Moderate		50532		
Afforestation Potential - Good		3984		
Total Potential		**54516**		
Total Plantations		**54908**		
Natural Forests (Groups)		18714	34	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**0**	**0.1**

Table 34 - Summary for Port St Johns Municipality

9.4 Ukhahlamba District Municipality

9.4.1 Elundini Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	8	25095		63.5
Woodlot Plantations	7	343	731	0.1
Total Existing	**15**	**25438**	**731**	**63.6**
Afforestation Potential - Moderate		331406		
Afforestation Potential - Good		23987		
Total Potential		**355393**		
Total Plantations		**380831**		
Natural Forests (Groups)		757	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	1	800		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**1**	**800**	**20**	**1.2**
Grand Total			**751**	**64.8**

Table 35 - Summary for Elundini Municipality

9.5Alfred Nzo District Municipality

9.5.1 Umzimvubu Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	6	3149		8
Woodlot Plantations	26	285	118	0.1
Total Existing	**32**	**3434**	**118**	**8.1**
Afforestation Potential - Moderate		131288		
Afforestation Potential - Good		27746		
Total Potential		**159034**		
Total Plantations		**162468**		
Natural Forests (Groups)		4597	3	
Sawmills - Large	0	0		
Sawmills - Medium	1	13500		
Sawmills - Small	3	3600		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**4**	**17100**	**310**	**31.1**
Grand Total			**428**	**39.2**

Table 36 - Summary for Umzimvubu Municipality

9.5.2 Matatiele Local Municipality

Sector Segment	Number	Scale/Extent (ha, m3/a or t/a)	Employees	Revenue (Rm/a)
Commercial Plantations	0	0		0
Woodlot Plantations	5	408	7	0.1
Total Existing	**5**	**408**	**7**	**0.1**
Afforestation Potential - Moderate		250928		
Afforestation Potential - Good		18310		
Total Potential		**269238**		
Total Plantations		**269646**		
Natural Forests (Groups)		1684	0	
Sawmills - Large	0	0		
Sawmills - Medium	0	0		
Sawmills - Small	0	0		
Sawmills - Indigenous	0	0		
Chipboard	0	0		
Veneer	0	0		
Pole Treatment	0	0		
Charcoal	0	0		
Total Processing	**0**	**0**	**0**	**0**
Grand Total			**7**	**0.1**

Table 37 - Summary for Matatiele Municipality

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Appendix A Forestry Plantations

Appendix B Natural Forests

Appendix C Employees in Plantations

Appendix D Utilisation Activities