African Forest Forum

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Public and private sector development in forest products industry of South Africa

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Public and private sector development in forest products industry of South Africa

Dave Dobson

ACRONYMS AND ABBREVIATIONS

AFF	African Forest Forum
B-BBEE	Broad-Based Black Economic Empowerment
CPA	Community Property Association
DAFF	Department of Agriculture, Forestry, and Fisheries
DTI	Department of Trade and Industry
FP&M SETA	Fibre Processing and Manufacturing Sector Educational and Training Authority
FSA	Forestry South Africa
FSC	Forestry Stewardship Council
MLE	Medium and Large Enterprises
NCT	Forestry Co-operative Limited
PAMSA	Paper Manufacturers Association of South Africa
PRASA	Paper Recycling Association of South Africa
QSE	Qualifying Small Enterprises
SAFCA	South African Forestry Contractors Association
SAWPA	South Africa Wood Preservers Association
SFP	Singisi Forest Products
SLIMF	Small Low Impact Management Forest
SME	Small and Medium Enterprises
SSA	Sawmilling South Africa
TWK	Transvaal Wattle Growers Co-operative Limited
UCL	UCL Company Limited

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EXECUTIVE SUMMARY

South Africa is faced with persistently high levels of poverty and unemployment. Forestry being a rurally based activity is ideally placed to contribute towards wealth generation and job creation in neighbouring communities.

Commercial timber growing is highly regulated for environment and water conservation reasons. The forest estate currently covers 1 265 811 hectares of highly productive exotic plantations. The resource is currently being underutilized with a reported annual harvest of 18.5 million m^3 in 2012/13 compared to a sustainable annual yield of 26 .4 million m^3.

Pulp, paper and board manufacture dominate the industry, accounting for 70% of the roundwood intake in 2012/13. This sector however is currently only operating at 81% capacity.

The forest products industry is export based and in nominal terms earned the country US$ 1.67 billion. Imports amounted to US$ 1.24 billion resulting in a positive balance of payments of US$ 0.43 billion.

The Forestry Sector Charter initiative undertaken in terms of the government's Broad-Based Black Economic Empowerment legislation has been negotiated and implemented with the objective of bringing about greater participation of black people, and particularly women, in the forestry value chain. The result of this initiative is that opportunities are being created for the rural poor who border on forest plantation estates. The development is discussed and a model that is evolving is presented.

An additional 140 000 hectares of land has been identified for further new afforestation. This land is communally owned and both licencing and community involvement is required in order for this afforestation to take place. A successful project in southern KwaZulu-Natal serves as a model for such an undertaking. However, further expansion of the area requires that a co-ordinated effort be made by companies, government, non-government organisations, rivals, and communities in order to capture the economic benefits on offer.

Individual private timber growers in South Africa are well organised and successfully market their timber co-operatively. This co-operative model and its achievements are well documented. The initiative affords members the ability to achieve economies of scale and access to down-stream processing. A similar arrangement is evolving in the non-timber forest products sector where a micro-franchising model is discussed, and a broader application proposed.

Processor growers keen to secure further raw material are entering into out-growers' agreements with small timber growers. This relationship is regulated in terms of a code of conduct negotiated and agreed within the Forestry Sector Charter.

1.0 INTRODUCTION

The African Forest Forum (AFF), for its 2016 Annual Work Plan, conducted studies in 22 countries in Africa with the broad aim of facilitating the development of public/private sector partnerships in forestry (from community forestry associations, small and medium scale enterprises to large companies) involved in value addition to wood and non-wood forest products, including the marketing and utilization of such products. The studies sought to identify and promote promising public, private partnership (PPP) models/approaches for forest compatible, and sustainable livelihood development and to strengthen the capacity of the industry to address both social and environmental concerns that contribute to more sustainable, equitable and effective private sector development.

This report focused on South Africa, which is faced with persistent high levels of poverty and unemployment. The country has been unable to produce adequate skills to meet the market demand. Twenty-point two percent (20.2 %) of the population lives below the poverty line. While the poverty situation is improving, inequality remains a challenge. The Gini coefficient measured in 2011 (where 0 is classed as being totally equal and 1 as totally unequal) was 0.69 based on income data. This level is reported as being the highest in the world (Statistics South Africa 2014).

This report deals with sustainable forest management and the use of forests to address poverty eradication and environmental protection. South Africa has a strong well-organised private sector managing its commercial forests. Being rurally based, forestry is faced with the challenge of poor marginalised communities bordering these plantations.

2.0 OBJECTIVES OF THE STUDY

The objective of the study was to facilitate the strengthening of the capacity of the forest industry in order to address both social and environmental concerns, and in doing so to identify promising private, public partnership models that will promote sustainable livelihoods.

The specific issues covered are:

i. To map out the key actors and identify the gender groups' representation in primary forest production and secondary forest production, including small and medium enterprises based on all forest types in the country.
ii. To collect information on tree species raised and managed, including their productivity and use, distribution by area, age class, total and merchantable volume as well as sustainable supply.
iii. To collect information for secondary production on industry type, installed capacity, product lines, capacity utilization, production volumes over the last five years, as well as raw material types and sources.
iv. For both primary and secondary forest production:

a. To evaluate employment opportunities, policies, regulations and other factors facilitating or constraining developments in the forest products industry, including undertaking a SWOT analysis;
b. To assess and identify gender specific inequalities;
c. To assess and identify the factors inhibiting and or promoting the full and equal participation of marginalised groups;
d. To assess and analyse gender based control and access to required assets/resources including specific opportunities, challenges, and privileges of involvement and participation in the sector;
e. To evaluate marketing and trade (domestic and international) in their products including volumes, production costs, revenues and prices of products traded in the last five years;

v. Evaluate the relationship and linkages among actors in primary production on the one hand and the relationship and linkages among actors in secondary forest production on the other hand; and how this can be organised to contribute to the growth of a well organised formal private sector in forestry;
vi. Evaluate the scope within the country, for public private partnerships in forestry including existing promising models/approaches that can enhance social inclusion, gender equitable practices, and forest compatible sustainable livelihoods development, in the different forest types and propose recommendations on the way forward;
vii. Provide past trends in production, trade, and consumption in timber and non-timber products in the country over the past five years. Also, provide forecasts of future production, trade, and consumption of the same; and
viii. Assess the contribution of these private forestry sector activities to local livelihoods and the national economy.

3.0 METHODOLOGY

3.1 Materials

The study was conducted using a structured interview process. A questionnaire was prepared covering the different aspects covered in the study. All participants were contacted telephonically so that the purpose of the questionnaire could be explained. (Appendix A). In addition, a review of relevant literature was also conducted.

3.2 Methods

The questionnaires were emailed to all participants and arrangements made for the replies to be either typed out and emailed back, or if preferred, a telephonic interview was conducted following the format in the questionnaire.

Follow up interviews were conducted for further clarification with some of the participants.

4.0 METHODOLOGY

4.1 Typology of sectors and key actors of the forest sector

South Africa is poorly endowed with indigenous forests. The country has a predominantly dry climate with a low average annual rainfall of 450 mm. The country's natural forests consist of a narrow belt of broken closed canopy forest situated along the southern and eastern seaboards while open savanna woodlands predominate in the interior of the country.

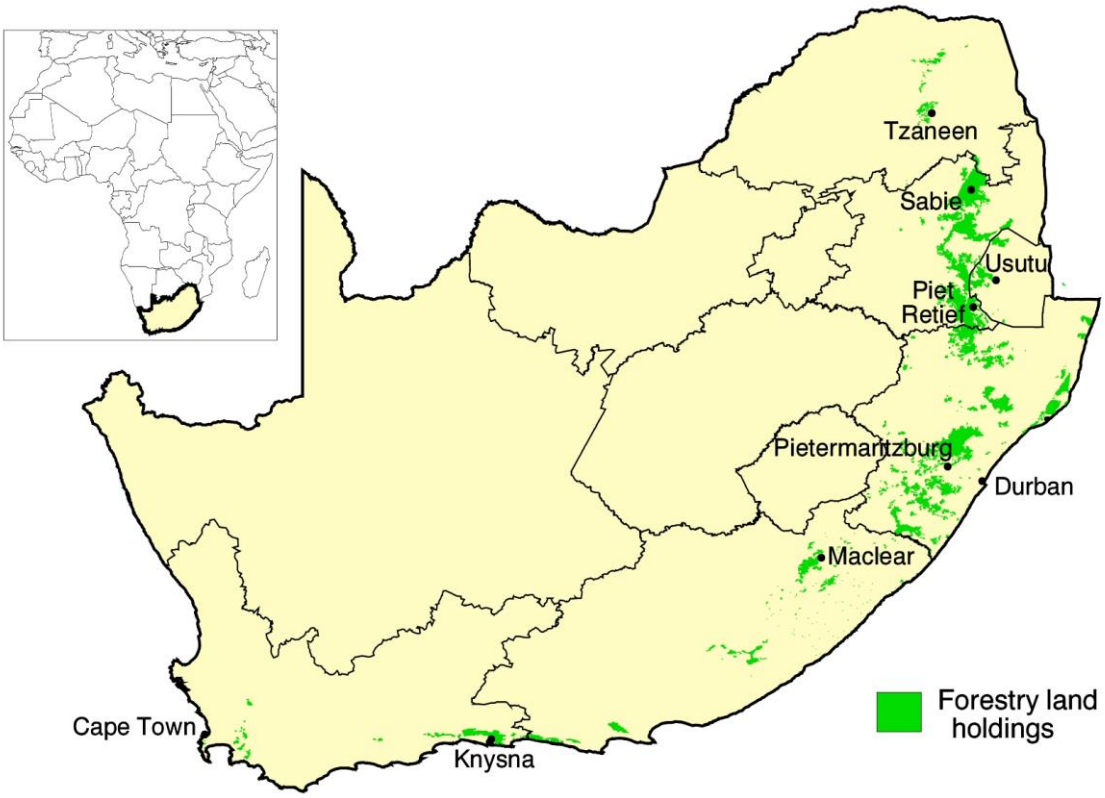
In order to conserve the remnants of the indigenous forests, exotic timber plantations of pine, eucalyptus and wattle were established. This has resulted in a thriving industry with some 1 265 811 hectares of managed exotic forest plantations. Initially, the State was responsible for developing the plantations but more recently, since the advent of democratic government, efforts are being made by the State to divest it of their commercial forest interests. Eighty three percent (83%) (1 054 690 hectares) of the commercial forest estate is in private ownership. The balance (17% or 211 121 hectares) is owned by the state. Of the privately owned area, thirteen point two percent (13.2% or 167 349 hectares of the plantation) is owned by individuals, partnerships or family trusts. The balance of privately owned forest plantations (886 919 hectares) is owned by companies (Forest Economics Services, 2015).

Assuming that the country's forest plantations are in cycle, that pine is being harvested on a twenty-year cycle, and hardwood (Eucalyptus) on a ten-year cycle, the estimated annual cut for 2012/13 was 26.4 million m^3. The reported round wood intake for the same period was 18.5 m^3 or 70% of the available timber. The resource provides raw material for 143 primary processing plants of which there are 71 sawmills, 3 veneer plants, 32 pole treatment plants, 14 mining timber manufacturers, 18 pulp, paper and board mills, 1 match factory, and 4 charcoal plants (Forestry Economics Services, 2015).

Exports of forest products in 2012/13 amounted to $1.7 billion resulting in a positive trade balance of $380 million. Wood pulp and paper products continue to dominate the industry, accounting for 55% of the sales value (Forestry Charter, 2015; Forestry Economics Services, 2015).

The sector employs an average of 170 000 people with 66 000 people being directly employed in forestry operations (Forestry Charter, 2015). This is similar to the employment figures given by Godsmark (2014) who estimated that the industry employed a total of 165 300 people with 62 100 being employed directly in forestry operations and the balance of 103 200 being indirectly employed.

Commercial afforestation in South Africa is situated predominantly in the summer rainfall region of the country along its eastern seaboard. Smaller patches of commercial afforestation are also to be found in the southern and western Cape. Figure 1 provides an overview of the commercial forest areas.



Source: Godsmark, 2014.

Figure 1. Location of South Africa's commercial forests

Broad Based Black Economic Empowerment (B-BBEE) is a programme that the South African government has introduced to bring about greater participation of black people in the economy. The government's B-BBEE strategy focuses on transforming the private sector, with the aim of reversing the systematic exclusion of black people from full participation in the economy. The programme is not about replacing white people with black people but about growing the overall size of the industry and making sure that opportunities previously enjoyed by a minority are extended to the majority. Provision is made in the legislation to develop industry transformation charters to fast-track B-BBEE. A Forestry Sector Charter was published in the Government Gazette number 32320 in June 2009.

4.2 Organisation of the forestry products sectors and gender groups represented in each sector

4.2.1 Primary forest production

The actors in the primary forest production are summarized in table 1.

Table 1: Identification of actors in the primary forest production of South Africa

Group	ISIC Class	Key actors
21	0210: Silviculture and other forestry activities	Government: Category B and C plantations State Owned Entities: Komatiland Forests Private: Company and individual owned plantations
	0220 Logging	Government: Own operations and contractors State Owned Entities: Contractors Private: Own operations, contractors
	0230: non-forest products	Private: Small, medium enterprises
	0240: Contracting	Private: Small, medium enterprises

Source: International Standard Industry Classification ISIC, 2006 Rev 4.

The primary forest products sector is well represented through Forestry South Africa (FSA). This Association's membership includes 11 corporate forestry companies, 1300 small and medium enterprises (primarily timber farmers) and some 20 000 small black growers. This membership accounts for 93% of the total commercial afforested area in the country. The balance is not affiliated to a formal representative association.

Forestry South Africa's structure mirrors its membership with three separate and distinct entities under the umbrella of an overall Executive Committee, namely:

- A Large Growers Group (representing corporate timber growers).
- A Medium Growers Group (representing timber farmers).
- A Small Growers Group (representing emergent black growers).

Each of these groups has its own committee structure with proportional representation on the Executive Committee. FSA is a Non-Profit Organisation (Forestry South Africa, 2016).

4.2.2 Secondary forest production

The secondary forest production sector is represented by various sector associations. These are:

- Pulp and paper represented by PAMSA (Paper Manufacturers Association of South Africa). This association promotes the interests of the South African Pulp and Paper Industry through supporting sustainable forest management and lobbying for fair and applicable legislation, promoting education and skills development as well as investing in research and innovation. Any employer involved in the manufacture of pulp paper, board and recycled paper may become a member. There are currently six members who belong to this association (PAMSA, 2016).
- The Paper Recycling Association of South Africa (PRASA) represents paper recyclers in the country (PRASA, 2016).

- Sawmilling South Africa (SSA) established in 2007, represents 74% of the formal sawmilling sector totalling some 38 sawmills (SSA, 2016).
- Pole treaters are represented by the South African Wood Preservers Association (SAWPA). This is a non-profit organisation formed in 1980 to promote wood treatment and treated products. Neither the pine nor the eucalyptus grown commercially in South Africa is durable and therefore needs to be treated in order to provide predictable long-term performance. The association has 58 members situated regionally throughout the country (SAWPA, 2016).

Other participants in the forest production sector such as mining timber manufacture, charcoal, and match manufacture are not organised. Mining timber manufacturers feel that they are more closely aligned to the mining sector than forestry. Charcoal producers show no interest in organising themselves, while match manufacture is conducted by a single entity.

4.2.3 Non-timber forest products

Enterprise development serves as a vehicle to develop small businesses within the forestry value chain. Examples of this activity are the collection of edible mushrooms and honey production.

Boletus mushrooms (*Boletus edulis),* introduced from Europe, and are collected in commercial pine plantations older than nine years. Two companies are active in this field. Klamath Investments (Pty) Ltd trading as Forest Fruits who collect mushrooms in the Merensky and Sappi pine plantations and Copasize (Pty) Ltd established by Mondi Zimele who collect mushrooms in the Mondi pine plantations.

African Honey Bee Kruger Park (Pty) Ltd is assisting Sappi to establish micro-franchise honey production businesses amongst community members bordering on Sappi eucalyptus plantations in the Zululand area (African Honey Bee, 2016; Smith, 2016a; Stubbs 2016).

4.3 Gender group representation in small and medium enterprises

Recognition is given in the Forestry Sector Charter scoring system for not only black people but also in particular black women. The Forestry Sector Charter scorecard is the main tool for setting standards for transformation, and against which individual enterprises are measured. In addition to setting out sector specific scorecards, the Charter commits government, industry, and labour to certain actions, or undertakings, that will enable businesses to achieve their BEE targets.

The Forestry Sector scorecard is based on the generic scorecard as set out in the Codes of Good Practice issued by the Department of Trade and Industry (DTI). The codes of good practice make provision for two scorecards: one for small businesses, called Qualifying Small Enterprises (QSE), whose turnover is between US$0.367 million and US$2.7 million, and another for Medium and Large scale Enterprises (MLE) with a turnover in excess of US$ 2.7 million. The Charter likewise includes scorecards for both QSE and MLE.

Table 2 shows the allocation of weighting points across the seven elements, or business areas, for both medium and large-scale enterprises and QSEs. The allocation of the points is a reflection of the relative importance of this element to B-BBEE. MLE are scored against all seven elements and QSEs are scored against any four of the seven elements.

Table 2: Forest Sector Scorecard: Relative weighting points of the elements and allocation of bonus points

	Description	Medium and large-scale enterprises	Qualifying small enterprises
1. Ownership	Measures effective ownership of enterprises by black people	20	25
Bonus points		5	3
2. Management control	Measures effective control of enterprises by black people	10	25
Bonus points		-	2
3. Employment equity	Measures initiatives intended to achieve equity in the workplace	15	25
Bonus points		3	2
4. Skills development	Measures initiatives intended to develop the competencies of black employees.	15	25
5. Preferential procurement	Measures the extent to which enterprises buy goods and services from B-BBEE compliant suppliers as well as black owned entities.	20	25
6. Enterprise development	Measures the extent to which enterprises carry out initiatives contributing to effective enterprise development.	15	25
7. Socio-economic development	Measure the extent to which enterprises carry out initiatives contributing to socio-economic development.	5	25
Bonus points		3	3
Total possible number of points		**111**	**110**

Source: Forestry Charter, 2010.

The basic method of implementing B-BBEE is through procurement. Any enterprise wishing to do business with state institutions will be required to have a good B-BBEE rating in order to comply. In turn, such enterprises are required to buy from suppliers with a good B-BBEE rating. The system is thus cascaded through business such that even enterprises that do not directly supply government are affected (Forestry Charter 2010).

In all the elements, save socio-economic development, an adjustment is made for gender in the points allocated on the MLE scorecard. In the QSE scorecard, an adjustment is made for gender in the points allocated for all the elements save preferential procurement and socio-economic development (Forestry Charter 2010).

Commercial woodlot owners are situated in rural areas. These people are not formally employed but derive some income from their own forestry enterprises. Many fall under the Small Grower Group represented by Forestry South Africa. While statistics are not available on details of the gender representation within this group, subjective observations indicate that the majority of these woodlot owners are female. This is supported by an estimate reported by Dlamini (2016) where some 24 000 people are estimated to be employed part-time managing woodlots. Of this number, 79% were female and very few were youth. Similar sentiments were expressed by Smith (2016) who observed that there was a greater participation by females than males in the Mondi woodlot programme, Khulanathi. Smith also supported the view that there was low participation by youth in the woodlot programme. Interestingly, Smith while expressing the view that there was no gender bias in woodlot afforestation, mentioned that this activity tends to be carried out by elderly females in female-headed households (ibid).

4.5 Analysis of technical and commercial organization of forestry production

4.5.1 Technical and commercial organisation of forestry production

South African forestry production is centred on planting of exotic tree species in commercial plantations. A survey of this resource is conducted and reported on annually. The survey unfortunately, does not include the small woodlot growers, of which there are 20 000 registered members of Forestry South Africa (Forestry South Africa, 2016). In addition, there is a large area of unlicensed planting in the Zululand region attributed to small woodlot growers that are not considered (Smith, 2016). While this timber is finding its way to the market the area involved is not reflected in the statistics in Table 5. The current statistics available cover the period 2012/13. More up to date statistics are currently being processed. However, given the conservative nature of the industry no major changes are expected between years.

On the assumption that all pine is felled on a twenty-year cycle and that the forest estate is in cycle, the utilizable mean annual increment for pine ($MAI_{(20)}$) is estimated as being 12 m^3 per hectare per annum. For hardwood (gum and wattle) assuming a ten-year cycle and that the forest estate being harvested is in cycle, the estimated utilizable mean annual increment ($MAI_{(10)}$) is 30 m^3 per hectare per annum. A complicating factor in the estimation of the annual yield from the commercial plantations is the vast area of jungle wattle, gum and pine estimated as being 859 839

hectares by Marais *et al* (2004) that, while producing logs for processing, is not included in the total afforested area.

The total potential annual yield from the commercial forest estate is 26.4 million m^3, of which only 18.5 million m^3 was harvested in 2012/2013.

Woodlands are reported on every four years. This covers land where there is more than 10% canopy cover. South Africa's woodlands are widespread and cover an estimated forty million hectares (Godsmark, 2014). The resource is used primarily for fuelwood, fruit, fodder, and non-timber products such as marula fruit (*Sclerocarya birrea).* Marula fruit harvesting is reportedly worth an estimated US$80 million to rural communities (Tibane and Vermeulen, 2016).

"Other" listed under main products refers to uses as firewood, charcoal, and matchwood.

South Africa's indigenous forests are reported on every four years. This resource comprises many small patches of forest plus one major forest situated in the Southern Cape. The indigenous forests are protected by law and have minimal economic value (Godsmark, 2014).

Table 3: Ownership and distribution categories

Category	Main species	Main products	Area (ha)	Challenges	Opportunities
Private and Public	Pine	Sawlogs	453 116	Diminishing supply of sawlogs. Lack of government support for formal sawmilling sector.	Improved lumber quality from younger trees Improved sawmill recovery
		Pulpwood	186 733		
		Poles	115		
		Other	2 444		
	E. grandis	Sawlogs	13 816	Genus exchange	Improved yields
		Pulpwood	219 266		
		Mining timber	46 294		
		Poles	17 840		
		Other	1 192		
	Other Eucalypts	Sawlogs	3 006	Genus exchange	Improved yields
		Pulpwood	214 379		
		Mining timber	4 785		
		Poles	3 640		
		Other	3 071		
	Wattle	Sawlogs	555	Bark harvesting	Improved yields
		Pulpwood	84 269		

Category	Main species	Main products	Area (ha)	Challenges	Opportunities
		Mining timber	2 075		
		Poles	3 521		
		Other	774		
	Other	Sawlogs	613	Poplar removal from riparian areas for environmental reasons	Veneer timber production
		Pulpwood	3 320		
		Mining timber	355		
		Poles	142		
		Other	490		
	Total area		1 265 811		

Source: Forestry Economics Services, 2015.

Table 4: Species breakdown

Genus	Total area (ha)	Age Classes			
		Jungle (ha)	<10 Years (ha)	10-20 Years (ha)	>20 Years (ha)
Pine	642 055	354	299 718	217 897	124 440
Eucalyptus	527 003	289	455 683	61 788	9 532
Other hardwood	4 871	49	2 355	1 399	1 117
Acacia	90 275	920	66 594	22 504	1 177
Total	1 265 816	1 612*	824 350	303 588	136 266

Source: Forestry Economics Services, 2015.

*Interestingly, Marais *et al* (2004) only reported on the clearing of invasive plants in South Africa. This is work done by the Working for Water programme, and estimates the area covered by invasive alien wattle, pine and gum as being 859 839 hectares. This is important since some of this timber is finding its way into the market in the form of logs for chips and pulpwood as well as charcoal.

4.5.2 Technical and commercial organisation in secondary forest production-2012/2013

Table 5 summarises information on timber processing, roundwood intake as well as employment statistics for the different sectors.

The sawmilling sector is facing challenges relating to their round log supplies. Sawmillers have to contend with smaller log sizes with the average log diameter having declined from about 27 centimetres in 2002 to the current 24 centimetres in 2013. Average sawmill recovery is currently standing at 47% and greater efficiencies are required.

Pulp paper and board mills are running at an average 81% capacity with some machines having been moth balled. Printing and writing paper have been particularly hard hit with that sector running at 62% capacity. Reasons for this state of affairs relate to the relatively small size of the paper market in South Africa, and general economic conditions in the country (Bothma, 2016a).

Table 5: Primary and secondary roundwood processing and employment

Type	Number	Total inputs	Total outputs		Number of employees
Forestry					92 100
Sawmilling and veneers	74	3 744 583 m^3	1 588 123 m^3		20 000
Pulp paper and board mills	18	12 087 392 m^3	Pulp (tons)	2 233184	20 000
			Board (m^2)	1 153878	6 000
Mining timber	14	637 292 tons	386 631 tons		2 200
Charcoal	4	238 351 tons	58 196 tons		
Chips and mill residue			2 284 994 tons		
Pole treating	32	416 975 m^3	407 265 m^3		
Match factories	1	32 698 m^3			
Firewood			50 253 tons		

Source: Godsmark, 2016; Tibane and Vermeulen, 2016; SAWPA, 2014.

Charcoal production appears to be under reported. The output of 28 196 tons is half of the estimated tonnage reported by JTT (2013).

4.6 Socio-economic analysis of primary and secondary forest production

4.6.1 Evaluation of marketing and trade opportunities in the forest sector

The South African forest industry is largely an export-based business and therefore exposed to the vagaries of the world markets and the current unfavourable economic environment. In nominal terms exports in 2013/14 generated US$ 1.67 billion while imports were recoded as US$ 1.24 billion, resulting in a positive trade balance of US$ 0.43 billion. Export of pulp and paper accounted for 73% of the country's forest products exports. Solid wood exports amounted to 24%, with matches and tanning extract accounting for 3%. (Godsmark, 2016).

Most commercial timber growers are able to access the market via association with primary processors. Co-operatives provide access to the market for the medium to small timber growers. Co-operative marketing enables these independent growers to jointly access value adding and the export markets. An example is NCT Forestry Co-operative Limited (NCT) that now owns four chipping plants and markets hardwood chips to Japan, India, Taiwan, and China. The volume traded in 2015 reached an eight-year high of 2.1 million tons of chips (NCT, 2016).

Eighty-four percent (84%) of South Africa's Forest plantations are FSC (Forestry Stewardship Council) certified. This provides the country with advantages in the market place. FSC certification not only ensures that forest owners manage their plantations responsibly but also assures the wellbeing of forest workers and local communities. The acceptance of group certification schemes for smaller commercial growers and the availability of local FSC auditors have contributed to the high percentage certification (FSC, 2014). Arrangements are in progress to introduce a new SLIMF (Small Low Impact Management Forest) certification system to accommodate the 20 000 small woodlot growers in South Africa.

4.6.2 Evaluation of policies and strategies facilitating or constraining the development of the forest products industry

Widespread destruction of tropical forests and unsustainable harvesting practices was brought to the world's attention in the mid-1980s. This received attention at the United Nations Conference on Environment and Development in Rio de Janeiro in 1992. Critical issues that came to the fore at this conference were forest destruction, declining productivity, loss of biodiversity and the undermining of forest-dependent communities. Sustainable forest management emerged as a management framework to ensure long-term forest health and productivity while providing continued social and economic benefits. The right of nations to profit from their own forest resources was recognised but it was recommended that this occurs within the framework of forest protection, management, and conservation (United Nations, 1992).

The National Forest Act, (Act number 84 of 1998) binds South Africa's forestry operations to principles of sustainable forest management in accordance with the Rio conference. The Act aims to create conditions for the restructuring of the State forests, provide measures for the protection of certain forests and trees, promote the sustainable use of forests for environmental, economic, educational, recreational, cultural, health, and spiritual purposes. Provision is also made to promote community

forestry and greater participation in all aspects of forestry and the forest products industry by persons disadvantaged by unfair discrimination. The South African government's Black Economic Empowerment Act has signalled the State's intention with regard to public/private participation in the forestry sector. The Forestry Sector Charter, negotiated between all the relevant parties serves as the vehicle to implement this partnership.

Commercial afforestation is strictly controlled with the requirement that all such afforestation is subject to licencing in order to control water use in the various catchments in the country. Currently new afforestation is only possible in two areas along the eastern seaboard, notably Eastern Cape and KwaZulu-Natal. 100 000 ha has been identified for new afforestation in the Eastern Cape and 40 000 ha in KwaZulu-Natal. The uptake of these licences has been extremely slow. Total new afforestation in the Eastern and Western Cape over the last ten years (2003/4 to 2012/13) amounted to 243 ha while in KwaZulu-Natal over the same period new afforestation totalled 14 452 ha. Conversion from forest to agriculture during this ten-year period was 13 325 ha resulting in a net gain of 1 370 ha countrywide (Godsmark, 2016). The major cause of the poor uptake in planting this area is poor infrastructure, the bureaucratic nature of the application process and the cost involved in making applications. Most of the small black growers who are supposed to benefit from this new afforestation simply cannot afford the additional costs required in order to apply. In addition, attempts by the Department of Water and Sanitation to regulate decisions to change the genus grown in a particular compartment on a forest estate have also constrained forestry development. Faced with the reality of a limited forest area, plantation owners are looking to improving yields and changing the product mix from their existing forests. Switching from pine to high yielding eucalypts is one such strategy. Bureaucratic intransigence that has lasted for sixteen years has inhibited this strategy. Fortunately, in July 2016, the matter was finally resolved, and draft genus exchange regulations were suspended (Peter, 2016).

There are signs that the inability to establish new plantations in the Eastern Cape might be changing. Sappi recently deployed a team of development foresters in the Pondoland area of the Eastern Cape to engage and partner with communities keen to revitalise existing and establish new plantations in the area. The focus will be on larger community projects involving tripartite agreements between Sappi, Community Trusts and the Department of Land Affairs and Rural Development as well as small grower projects (SA Forestry, 2012). In addition, organisations such as Umsonti and Rural Forest Management are making progress in promoting forestry and businesses in community settings (Umsonti, 2016).

With the restrictions placed on new afforestation and government favouring previously disadvantaged citizens, the large processor growers are turning to out- grower schemes in an effort to increase their raw material supplies. In the Zululand area of KwaZulu-Natal, Mondi reports an annual round wood intake of between 200 000 and 300 000 tons from this source. Many of the small black owned woodlots however are underperforming with mean annual increments of the order of five tons per hectare per annum as opposed to the potential yields of between fifteen and twenty tons per hectare per annum (Smith, 2016). Reasons for this are varied, ranging from cash flow requirements to disease, fire, and lack of understanding of the economics of tree

growing. Improving the yield from this source will have a significant impact in lifting the annual tonnage to between 300 000 and 400 000 tons per annum (Smith, 2016).

Funding and technical support form the basis of the out-grower strategy. Loans are repaid from the proceeds of the woodlots when they reach maturity and prices paid for the wood are competitive (Smith, 2016; Smith, 2016a). In this latter respect, the forest industry as part of the Forestry Sector Charter initiative has developed a code of conduct for emergent forest grower schemes. This code controls and directs the relationship between contracted growers and the companies involved (Forestry Charter, 2010).

While land reform is necessary, the redistribution process is impacting on fibre yields. On many of the smaller timber farms where the State has acquired both land and trees for redistribution to previously disadvantaged citizens the process has been slow and in many cases, the resource has been neglected or harvested by unscrupulous individuals. Once productive timber farms have become neglected and run down. In other instances where properties have been handed over to beneficiaries with the land and the resource residing in a Trust, corporate governance shortcomings are affecting the long- term effectiveness of the projects. Fortunately, though this is not generally the case as the forest industry has been able to negotiate a deal with the Land Claims Commission whereby the land in large estates is acquired by the State on behalf of the claimants who have in turn leased it back to the company involved. This has ensured that the asset remains productive while the beneficiaries are trained and mentored in preparation for the future acquisition of the trees.

Plans by the Department of Agriculture, Forestry, and Fisheries to privatise the category B and C plantations (smaller commercial plantations and community woodlots) has been slow with to date only one plantation having been handed over to the neighbouring communities. This is the 18 000 ha Mbazwane/Manzegwenya unit in KwaZulu-Natal. This asset vests in a community trust and unfortunately suffers from Corporate Governance shortcomings (Mack, 2016).

A significant strategy that has facilitated development has been the establishment of co-operatives to market medium and small grower's timber. One such example is Forestry Co-operative Limited (NTC) based in Pietermaritzburg. Established in 1949 as a marketing co-operative for private and independent timber growers, membership now stands at 1 800 representing 300 000 ha or 21% of the afforested land in South Africa. NCT is recognised as an international supplier of quality round wood and chips and is the largest forestry-marketing organisation in Southern Africa (NCT, 2016). Members not only benefit from a wide range of services that NCT offers but also share in the benefits derived from the co-operative's processing and marketing efforts. Co-operative marketing has not only enabled the smaller commercial timber growers and woodlot owners to achieve economies of scale in their operations but also to invest in research and development and to undertake costly feasibility studies aimed at attempting to beneficiate their round wood, a feat that would not have been possible individually.

Faced with the reality of limited expansion to the current forest area the industry has invested heavily in research and development. In a current unpublished review being conducted by Forestry South Africa the private sector is estimated to have spent about

US$ 9.54 million on research during 2015 (Peter 2016). The result of the ongoing research effort is that the industry now harvests 85% more timber from a hectare than in 1980. In present day values, this equates to US$ 0.59 billion per annum compared to US$ 0.32 billion that would have been the case without these improvements (Forestry South Africa, 2016).

4.6.3 Evaluation of the employment opportunities and wealth creation of the processing and marketing of timber and non- timber forest products

Commercial forestry in South Africa is a mature industry and is becoming more mechanised. Operations in the primary forestry value chain are being out-sourced and carried out by contractors. In the past, company foresters were expected to manage own operations; they are now managing the appointed contractors. Current membership of the South African Forestry Contractors Association stands at more than 300 and bears testimony to this trend (SAFCA, 2016). Contractor operations cover the full forestry value chain, from silviculture to harvesting and transport. This development has created opportunities within the forestry value chain enabling companies to create employment and wealth, in particular for black people, in conformity with the requirements of the Forestry Charter.

Progress in promoting Broad Based Black Economic Empowerment (B-BBEE) is measured in terms of seven indicators, namely, ownership, management control, skills development, employment equity, preferential procurement, enterprise development, and socio-economic development. Targets are set for each category, and these are monitored closely by the Forestry Charter Council (Forestry Charter, 2010).

Progress with the programme over the last three years has been disappointing. Ownership and management control in particular have performed poorly. In the case of ownership, the decline has been ascribed to acquisitions and mergers as well as a decline in profitability (Forestry Charter, 2015). Returns on investment in plantation forestry are traditionally low (2 – 3% internal rate of return) and equity investors are reluctant to commit funds in such investments when there are more attractive alternatives available. Management control by blacks is also far below the target of 10%. It is suggested that the reason for this is a poor focus on succession planning and the fact that it is a lengthy process (Forestry Charter, 2015). Forestry companies appear to be focussing on “softer options” such as employment equity, preferential procurement, enterprise development, and socio-economic development. Enterprise development in particular is important since it enables companies to develop businesses and create employment in their value chains. This has the added advantage of a positive spinoff for procurement since by out-sourcing value chain activities to black owned or managed businesses procurement points are earned.

Mondi Zimele (2013) for example reported that by 2013, they were supporting eighteen businesses within the Mondi value chain and over forty community based small businesses trading within a fifty-kilometre radius of their plantations. The turnover of these businesses was in excess of US$ 22 million per annum and provided employment for in excess of 2 500 people (Zimele M, 2013). Employment opportunities for small and medium enterprises covered a wide range of activities from contracting, agriculture, the environment, bio-energy to community based small businesses.

Numerous forestry companies support and promote emerging grower afforestation. Sappi's Project Grow involves some 4 500 growers farming 19 000 ha. This programme, that supplies approximately 185 000 tons of hard wood pulpwood to the Sappi mills, provides employment for 1 800 people and 100 Small, Medium and Micro enterprises (Sappi, 2015). NCT reports similar success with black members supplying 181 000 tons of eucalyptus pulp wood and 87 000 tons of wattle pulpwood during the 2014/15 season. This equates to six chip vessels holding 42 000 tons of chips each (NCT, 2016). In addition to supplying wattle timber to NCT these growers have also supplied some 3000 tons of wattle bark to the three wattle extract factories in South Africa during the past season (2015/16). Timber and bark supplies in KwaZulu-Natal are estimated to generate some UD$ 41 million annually for these small growers and the economic footprint from this activity is significant.

Further, wealth creation is possible through training and mentorship of the existing emergent grower base. Smith (2016), as was mentioned earlier, estimated that with proper management 100 000 tons of extra timber could be supplied by small growers in the Zululand area of KwaZulu-Natal. This translates to an additional US$5.5 million over and above the average US$ 13.77 million that is being generated from this source. Although slow in coming, the afforestation programme in the Eastern Cape, if fully subscribed, will generate similar or possibly higher income for rural communities in this poor region.

4.6.4 Identification and assessment of the factors inhibiting and/or promoting the full and equal participation of marginalised groups

South Africa is a water scarce country and replacing veld with commercial timber plantations has placed a strain on the water resource. Afforestation has as a result been controlled since 1972 through a system of afforestation licencing. Most of the catchments in the high rainfall areas are now fully subscribed and only an additional 140 000 ha is available in KwaZulu-Natal and the Eastern Cape. Much of the land identified for new afforestation is communally owned and in addition to normal licencing requirements, negotiation with interested communities must be undertaken. In addition, small growers experience difficulty in accessing funds to plant and in many cases the projects are small and with high transaction costs, and associated risks (Smith, 2016a). Government has been approached to provide grant funding, but this has not yet materialised.

The planting of this new area has not progressed according to plan and the processors mindful of this, take active steps to safeguard their supplies. Access to the primary forestry value chain by marginalised groups for value added activities is therefore limited.

B-BBEE is the government's initiative to address the issue of participation of previously marginalised groups in the country's economy. However, as mentioned, progress with some of the elements used to measure the success of this programme has been disappointing. The survey conducted by the Forestry Charter Council (Forestry Charter, 2015) where they observed a decreasing interest in B-BBEE amongst survey respondents as well as the comment from some sources that B-BBEE was not beneficial to their businesses are cause for concern and need to be noted.

A number of forestry companies have however made significant inroads into creating jobs and wealth in neighbouring communities. One of these is Mondi Zimele. Mondi believes that they cannot operate efficiently without engaging with their neighbouring communities. As a result, there is strategic advantage in building sustainable beneficial relationships with such communities. Since the inception of this policy in 2007 to 2013, Mondi Zimele had extended support to over eighty small businesses with a collective turnover of in excess of US$ 67 million per annum and created employment for more than 4 200 people (Mondi Group 2013). Some examples of these activities include:

- A community owned forestry business, Siyathokoza Community Trust & Ikhasi (Pty) Ltd. This business does the silvicultural work on a forest estate of 1 500 hectares resulting from a post-land claim settlement between Mondi and the Siyathokoza Community Trust. Forty-five people are employed permanently in this business.
- Idube Forestry, a company that supplies a full range of silvicultural services to Mondi in the KwaZulu-Natal Midlands.
- Copasize (Pty) Ltd, a company that harvests *Boletus edulis* mushrooms in the Mondi plantations. This company employs fifty seasonal pickers and seven full time workers, Mondi Zimele (2014).

The success achieved in creating these businesses has encouraged Mondi to expand its involvement to include small businesses not directly related to value chain activities but operating within a fifty-kilometre radius of their plantations. For example:

- Mondi Zimele provided loans for Thuba Construction CC. to establish this building construction company;
- Assistance was provided to Big Imminent CC, a company that provides a range of environmental services in the Wakkerstroom and Piet Retief areas of South-East Mpumalanga province. This company has contracts to construct gabions and concrete weirs (Mondi Zimele, undated).

Singisi Forest Products (SFP) provides an interesting case study on how it progressed from a shareholding association with neighbouring communities to one of wealth and job creation through value chain activity. SFP purchased plantations in the southern KwaZulu-Natal area from the State. The land is vested in Community Property Associations (CPAs) set up by the various land claimants. SPF pay rental on the land, which is leased, from the CPAs. This rental is paid across to the Department of Agriculture, Forestry, and Fisheries who in turn pay this over to the CPAs. In addition to this SFP also established the Singilanga Directorate Community Trust, which owns 10% of the shares in SPF. Dividends are paid annually to the Trust. Unfortunately, the experience is that the dividend playouts become watered down and do not make a significant difference to the 162 participating community beneficiaries. In essence, the contribution is symbolic and emphasises the political and moral imperatives at play (Ojwang, 2008). This is a widespread problem encountered with many restitution projects in agriculture. SFP then began to look within their value chain in an attempt to address the expectations of their neighbouring communities. Two former black employees of SFP were provided with the opportunity to contract to SPF on a small outlier plantation (Dargle) 4 000 ha in extent. A five-year contract to provide silvicultural and harvesting services was signed. Mentorship and corporate governance support is provided by SFP. The success of this initiative led SFP to undertake further value chain business activities with the initiation of Owner-Driver transport schemes. Drivers in the

employ of SFP were encouraged and assisted in purchasing trucks and provided with long-term transport contracts to transport SFP timber. The success of both these schemes lay in the establishment of profitable businesses, which benefited both parties (Ojwang, 2008).

The problem reported with empowerment schemes is that only the better qualified in the communities are able to take up the business opportunities on offer while the poor less skilled are locked out. This has been likened to a BEE elite approach in rural areas (Ojwang, 2008; Tshidzumba *et al.,* 2018). However, also of importance is that not all individuals are entrepreneurial, many simply want jobs, and although this may be regarded as a criticism of the procedure it fulfils a need.

The co-operative efforts of NCT are a good example of the benefits that can be derived through co-operative marketing. Marginalised groups are able to join co-operatives and enjoy the benefits of co-operative marketing and economies of scale such as access to international markets, research and development and training (NCT, 2016).

The Forest Industry Codes of Conduct negotiated and agreed between representatives of the forest industry, in consultation with labour have ensured fair treatment for community and small woodlot growers when they enter into purchasing and supply agreements with large grower processors (Forestry Charter, 2010). Sappi, for example, offers these growers management and technical advice plus free seedlings. In exchange, the grower is expected to commit to supply the company between 60% and 70% of the final crop. The balance is to be offered to Sappi on “first refusal” basis. Prices paid to the growers are market related and linked to the NCT Durban Woodchips price (Sappi’s competitor in Southern KwaZulu-Natal).

4.6.5 Identification and assessment of gender-based control and access to required assets/resources for the development of the forest sector

The South African population is predominantly female, consisting of 51.2% females and 48.8% males. Generally, though a higher percentage of male babies are born than female babies (Statistics South Africa 2011).

The general feeling amongst people interviewed was that there was no intentional gender bias when accessing resources for the development of the forest sector.

However, in the small grower programmes much of the work is done by elderly females residing on the properties (Dlamini, 2016; Smith, 2016; Smith, 2016a). Dlamini (2016) estimated that 79% of the small entry-level growers were female. A problem that these elderly women have to contend with is tribal tradition where, if the male head of the household dies, the ownership of the trees grown on the property becomes a community decision and does not automatically vest with the wife (Smith, 2016).

Females are also under-represented in contracting and in leadership roles within the industry. Dlamini (2016) was of the view that possibly only 10% of the contractor businesses serving the industry were owned by females and that within the leadership ranks of the industry as little as 14% were female. The reason offered for this state of affairs was the cultural mind-set that males could not be led by females and that females were not readily exposed to leadership training.

The Forestry Sector Charter has as its vision an inclusive and equitable forest sector in which black men and women fully participate (Forestry Charter, 2010). There are practical problems associated with this vision as were articulated by Dlamini (2016) in dealing with rural communities and Davies (2014) in dealing with trained foresters. Davies, in an address to the Forestry Contractors Association lists a number of practical issues. These ranged from safety (living in remote areas) and family commitments that made it difficult to attend to fires at all times of the day. The result was that female foresters tended to move to softer options such as research and planning.

4.7 Evaluation of relationship/linkages between actors in primary and secondary forest production

4.7.1 Evaluation of the relationship/linkages amongst actors in primary forest production

The primary forest sector is organised and well represented. Forestry South Africa (FSA) whose membership accounts for 95% of the timber produced in the country does important work to the benefit of the industry as a whole. The benefits derived from the activities of this association cover three important areas. Firstly, it provides a lobbying platform for the growers and affords government a single contact point in negotiations. Secondly, the association provides for collective partnerships in particularly research and development. 70% of the association's budget amounting to R23.6 million in 2015 was spent on research and development. With restrictions on the further expansion of the area under plantation this spend has become extremely important. Lastly, the association is able to leverage funding from external sources to the benefit of growers as a whole. Examples that were mentioned for the 2015 financial year were training funds from the FP&M Seta and the Department of Agriculture Forestry and Fisheries funding for *Sirex* control (Forestry South Africa, 2016).

Marketing of round wood is an important function fulfilled by various organisations in the primary forest sector. The major processors generally contract small and medium growers in order to secure their timber. Co-operatives however also fulfil an important role in the marketing of small and medium grower timber. While there are a number of co-operatives that serve these growers, NCT is the largest with 1 800 members, accounting for 27% of the total forest area (NCT, 2016). Other co-operatives involved in marketing member's timber include TWK based in SE Mpumalanga, United Forest Products in the Nelspruit area and UCL in the KwaZulu-Natal Midlands.

4.7.2 Evaluation of the relationship/linkages amongst actors in secondary forest production

The various sectors in the secondary forest products are each represented by their particular associations. The association's core focus is lobbying and promoting the interests of their members.

- PAMSA (Paper Manufacturers of South Africa) represents the paper manufacturers in South Africa. This association promotes the renewability and recycling of paper products and aims to lobby on behalf of its members (PAMSA, 2016).

- SAWPA (the South Africa Wood Preservers Association) is a non-profit association whose aim is to promote timber treatment and treated products (SAWPA, 2016).
- SSA (Sawmilling South Africa) promotes the interests of sawmillers in the country and strives to encourage sustainable growth within the industry particularly for emergent sawmillers. The association also performs an important lobbying function on behalf of its members (SSA, 2016).
- SAFCA (the South African Forestry Contractors Association) represents the forestry contractors on various industry bodies. It also assists contractors regarding public liability, and other insurance as well as training and business-related assistance (SAFCA, 2016)).

***4**.7.3 Evaluation of the relationship/linkages between actors in primary forest production and secondary forest production to contribute to a sustainable development of the forest sector*

The Forestry Sector Charter Council serves as the over-arching body on which members of the primary and secondary forest sector are represented. It serves to implement the government's B-BBEE programme to ensure greater participation of black people in the economy and more specifically the forestry industry. This is of great importance to the growth and stability in South Africa where past discriminatory laws have excluded the majority of the population from actively participating in the economy and resulting in wide-spread poverty. The role of the Council is to monitor the implementation of the Forestry Charter and to ensure that the undertakings made by business and government are implemented.

4.8 Scope for public-private partnerships

A SWOT analysis was conducted to match external environmental changes with internal capabilities to assess how the forestry industry could capitalise on new opportunities and to defend itself against future threats. A summary of the SWOT analysis is presented in Appendix C.

4.8.1 Identification of current capabilities of public private partnership in forestry

Co-operative marketing, the industry codes of conduct developed for the forest sector at the Forestry Sector Charter Council covering contracting, emergent forest grower schemes, and employment practices are strengths that could assist the industry to address environmental changes in the short term. However, the need for collateral and the bureaucratic afforestation procedures that inhibit new afforestation by black growers could continue to have a negative impact on empowerment. Unless these matters are addressed, progress in afforesting the 140 000 ha available for new afforestation will continue to constrain the industry.

Empowerment, wealth, and job creation are opportunities well within the capabilities of both the private and public sectors. Partnerships and a focussed endeavour are required to build on the opportunities presented. To this end, financial support for emergent growers needs to be addressed urgently. Failure to address this matter could inhibit the immediate advantages on offer in terms of the B-BBEE legislation and new afforestation.

The overall position of the industry is generally favourable, and the opportunities offered through the B-BBEE legislation, the State's disinvestment from commercial afforestation and potential new afforestation are well within the capabilities of the industry. The inhibiting influence of low returns from timber growing requires creative thinking if the full benefit of black empowerment is to be realised. The success exhibited by co-operative marketing highlights the importance of participation in the value chain. However, in order to achieve this goal skills training and business incubation is vital.

4.8.2 Analysis of promising public private partnership models/approaches

B-BBEE legislation and the Forestry Sector Transformation Charter provide a platform for the development of all-inclusive forest compatible, sustainable livelihood development. Only business can create wealth and sustainable jobs. It does this by generating profits and scaling its operations. Governments harvest wealth and redistribute the results but in doing so need to invest in enabling investments such as the skills of its citizens, business incubation, and infrastructure. The key opportunities offered by South Africa's B-BBEE legislation are materialising in the fields of skills and enterprise development.

A key afforestation project in south-west KwaZulu-Natal (near uMzimkhulu) provides a model for successful intervention in community afforestation. This is the Umgano project undertaken by the Mabandla community. The Mabandla community is typical of rural communities in this region. A survey completed amongst community members, for example, indicated that 15% of the people were illiterate and that, on average, members had seven years of schooling. One third of the households live under the World Bank's purchasing power parity level of US$1.9 (Bainbridge, 2016).

The Mabandla Tribal Authority approached Mondi Corporate Responsibility Programme (which is encouraged by the BEE legislation) for assistance in developing an afforestation project on 2 166 ha of land that had at the time been recently acquired. This was freehold land and an important decision was taken not to settle on the land but to use it to provide employment opportunities for members of the community. Mondi, since they had an interest in afforestation in the area, provided assistance from their Community Forestry Assistance Programme in the form of planning, environmental impact assessment, and licencing applications. Afforestation went ahead in 2000 with the result that 1 320 hectares have now been established. The community currently has plantings of eucalypts maturing between 2010 and 2015 and pine maturing between 2024 and 2030. This afforestation now provides a significant and sustainable source of income and wealth to the community. The money is used to fund other employment and wealth-generating activities such as eco-tourism, a recently commissioned sawmill, livestock, transport, land care, and training (Ballantyne and Nixon, 2015). Consideration is now being given to establish a furniture manufacturing company in order to add further value to their sawn timber and to generate additional employment opportunities. Permanent jobs have been created for about 100 members of the community who now no longer need to become migrant labourers in order to support their families.

The lessons learned from this project are:

- The importance of strong leadership and vision within the community. From the outset, the project (called the Umgano Project) was aimed at benefitting the community through the sustainable use of the land to provide business and employment opportunities.
- Sound development planning. The development plan that is based on the intent expressed by the traditional leaders of the Mabandla incorporates best-practice management principles for environmental conservation in addition to commercial development based on sound business principles.
- Sufficient resources in terms of manpower, land and financial. Grant funding was acquired from the state amounting to US$ 0.82 million. This was enough to cover 80% of the budgeted cost for carrying the project for ten years until harvesting could commence. The balance of the funding was acquired by way of a loan from the Land Bank to make up the total requirement of US$ 1.03 million. The total area planted was 1 320 hectares and the funds were used solely to pay wages (minimum wage), salaries, and management costs associated with planting and maintenance of the trees until they were ready for harvesting.
- Meaningful support from official organisations. The project was well supported by a number of organisations, for example, the provincial nature conservation body Ezemvelo/KZN Wildlife, who provided assistance with the environmental aspects of the project and the Department of Agriculture and Environment Affairs who assisted with agricultural requirements.
- The presence of an efficient team of advisors. The project has been able to afford an experienced and technically competent team of dedicated advisors in whom the leadership and the community have been able to place their trust.
- Education and training. Some members of the community have benefited directly from the provision of education and training with the trained individuals contributing to the ongoing future of the project.
- Sound corporate governance, budgeting and financial reporting. A clear distinction between the roles and responsibilities of the beneficiary trust and the operating company is necessary (Bainbridge, 2016; Baleni, 2016; Ballantyne and Nixon, 2015).

Socio-economic development is prominent in South African forestry's approach to addressing poverty. However, enterprise development is now also an important factor in dealing with societal issues. There are a number of examples of this development in the South African forestry context and they follow a general template. The first stage is to assess the product to see how this might address societal needs. The second stage is to look within the company value chain to assess whether this can be reconfigured to address societal needs. Finally, a cluster of dependent businesses is developed around this core activity.

From a purely marketing perspective, small woodlot growers are a good example. Their product, timber, is readily accommodated in the existing co-operative value chain. This has enabled these growers to achieve economies of scale and to be competitive in not only the local market but also world markets. Large grower processors on their part have been able to accommodate these growers in their supply chains by providing technical and financial aid in exchange for secure markets for the timber.

A further example similar to co-operative marketing is the micro-franchising business opportunity offered by African Honey Bee Kruger Park (Pty) Ltd. The company provides the secure base of a reliable honey supply and marketing with small independent honey enterprises being established to expand the supply base. Mentorship and training is provided by African Honey Bee. Profits are shared on a patronage basis (Stubbs, 2016; African Honey Bee, 2016). Sappi are promoting this activity amongst communities bordering their eucalyptus plantations in Zululand. While providing opportunities for entrepreneurs this activity is beneficial to Sappi in that, it reduces the fire risk to their plantations.

Out-sourcing value chain activities constitute another product (silviculture, harvesting and transport, for example). In this instance, companies have reconfigured their value chains (out-sourcing) in order to meet the societal needs of neighbouring communities of providing wealth and jobs. Mondi Zimele has been at the forefront of this development (Mondi Zimele, 2013). Interestingly, an important point arising from the exercise is that few individuals are truly entrepreneurial. The majority simply wish to be employed. Identifying the entrepreneurs and providing them with the necessary business skills required to be successful is an important aspect of achieving success.

Mondi Zimele is developing its community involvement by expanding its influence beyond immediate value chain activities to assisting small businesses within a fifty-kilometre radius of its plantations thereby encouraging cluster development. Businesses cited included seamstresses, and bakers. This provides the opportunity to out-source certain inputs (working overalls and food, for example) in such a manner that individuality and flexibility is maintained, and a need fulfilled.

Government is also partnering with businesses such as sawmillers and board manufacturers in the Harry Gwala region of KwaZulu-Natal to provide a furniture-manufacturing platform that will facilitate further growth in the forest value chain. It is government's responsibility to invest in its citizens. Basic skills' training is an example of such an investment. This skills training and incubation project is being undertaken in collaboration with Furntech, a highly acclaimed furniture training service provider with a factory and training facilities at uMzimkhulu in Harry Gwala. The project forms part of the local government's initiative to create businesses away from the main industrial centres of Pietermaritzburg, Durban, and Richards Bay. The region has been identified as having a comparative advantage in terms of commercial timber production and processing. Unemployed youth from the region are being offered the opportunity to undergo training in furniture manufacture and business incubation in preparation for the establishment of a furniture-manufacturing cluster in the region.

4.9 Trends in production, trade, and consumption of timber and non-timber products

4.9.1 Trends in production, trade, and consumption of timber and non-timber products over the last 5-years

The recorded timber intake over the five-year period from 2008/9 to 2012/13 is presented in Table 6. Comments regarding the performance of each of the sectors follow in the graphic representation of this data.

Table 6: Timber intake over 5-years 2008/09 to 2012/13 (m^3)

Intake (m^3)	2008/09	2009/10	2010/11	2011/12	2012/13
Sawmills	4 135 599	3 898 741	3 912 760	3 675 883	3 744 583
Pulp paper and board mills	12 898 033	12 588 459	13 098 089	13 613 110	12 087 392
Mining timber	758 586	800 177	819 140	771 598	637 292
Poles (treating)	442 095	401 378	405 999	396 695	416 975
Matches	26 305	28 409	31 040	21 744	32 698
Charcoal	264 055	284 316	306 348	273 545	238 351

Source: Godsmark, 2016.

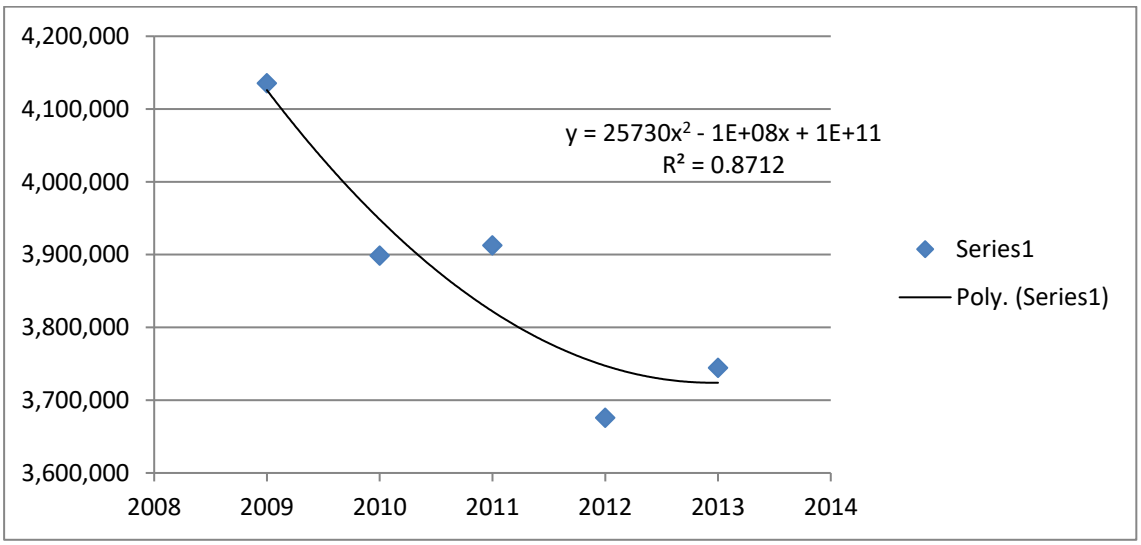


Figure 2: Sawmilling and veneers intake

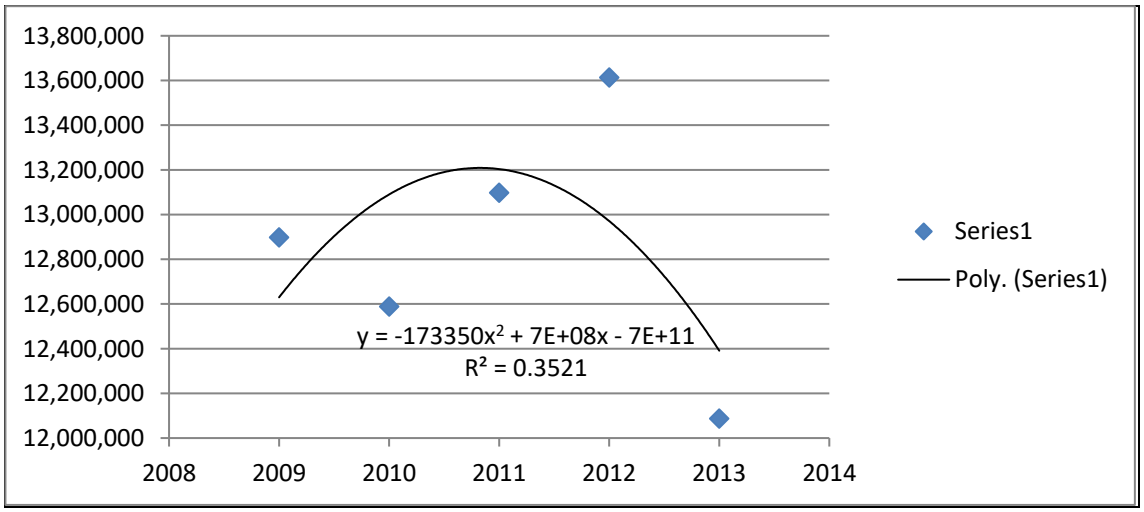


Figure 3: Pulp, paper and board intake

Sawmilling has shown a general downward trend in production occasioned primarily by a shrinking supply base (Southey, 2016); and as seen in Fig.2.

Exports of pulp and paper have shown the ability to recover following the worldwide recession in 2008/2009. At the peak achieved in 2012, the sector was operating at about 81% of its capacity. Subsequent to that, production has come under pressure (Fig.3), due to policy uncertainty, rising utility costs and a constrained energy supply (PAMSA, 2015).

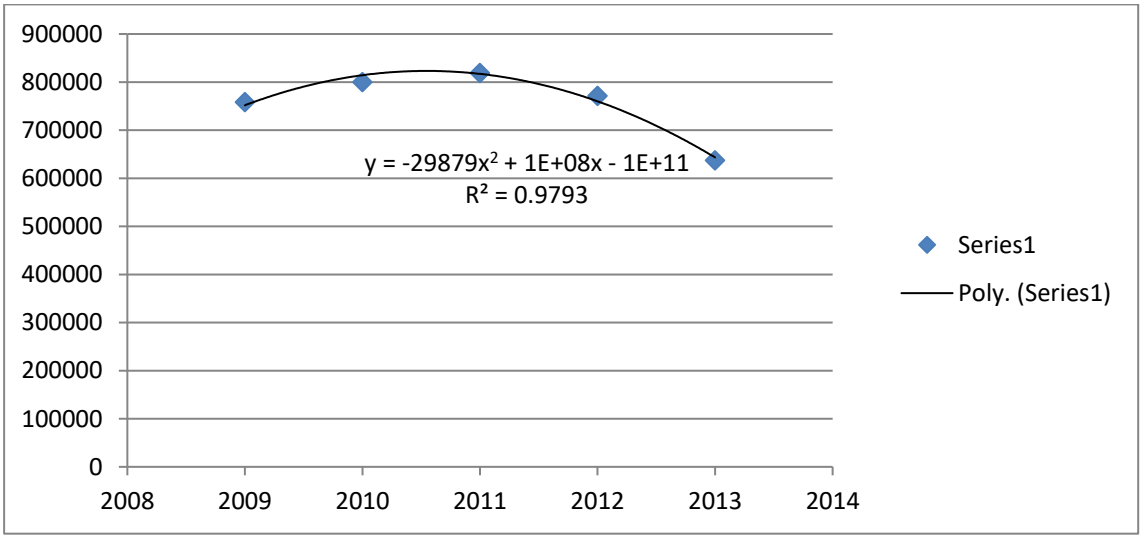


Figure 4: Mining timber intake.

Mining timber demand is closely related to mining activity in the country and the small decline in production (Fig.4) is due to workers'strikes at the mines and the closure of shafts. Mining timber manufacturers are able to supply in accordance with demand (Maritz, 2016).

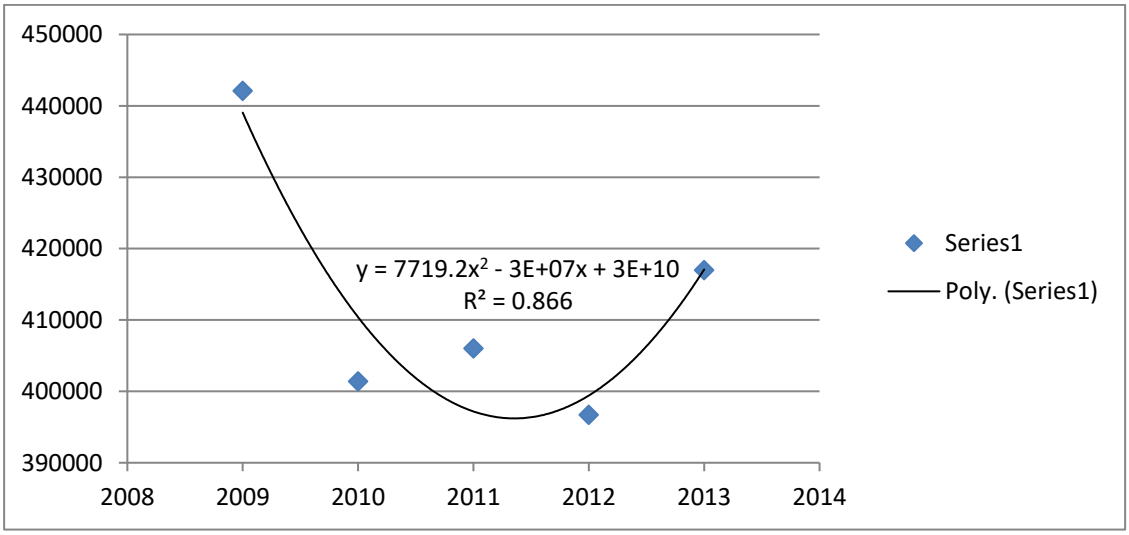


Figure 5: Treated pole intake.

In recent years, there has been a good local demand for treated poles. Recovery (Fig.5) is on the back of the huge export potential into Africa where electrification is taking place (Eggers, 2016).

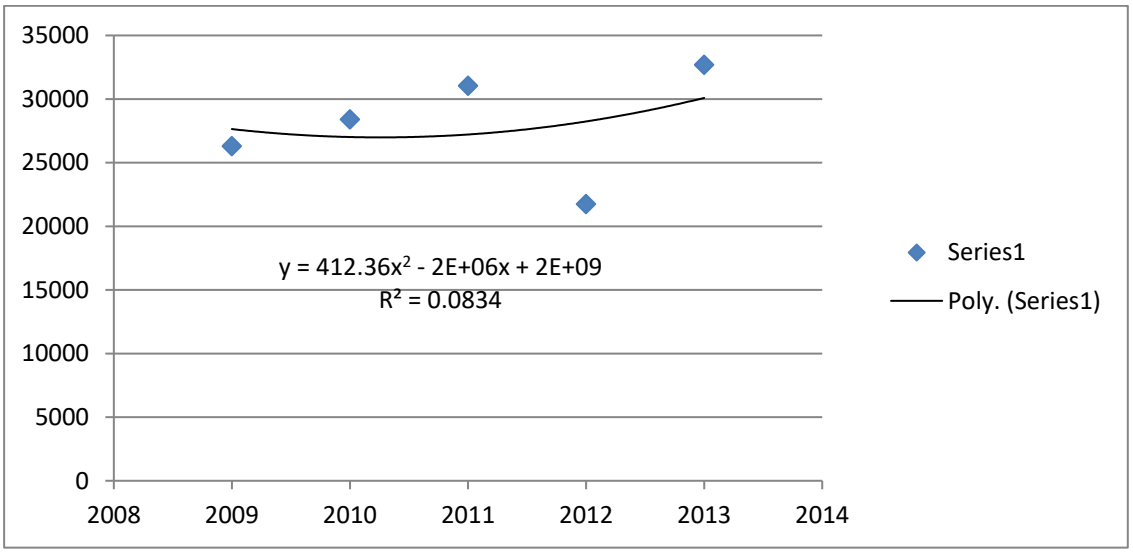


Figure 6: Matchwood intake

The matchwood industry is changing. Poplar, which was traditionally used for match production is no longer used. Pine veneers have superseded the species. The slight reduction in demand observed (Fig.5) is due to technical reasons and demand is expected to remain constant (Churchill, 2016).

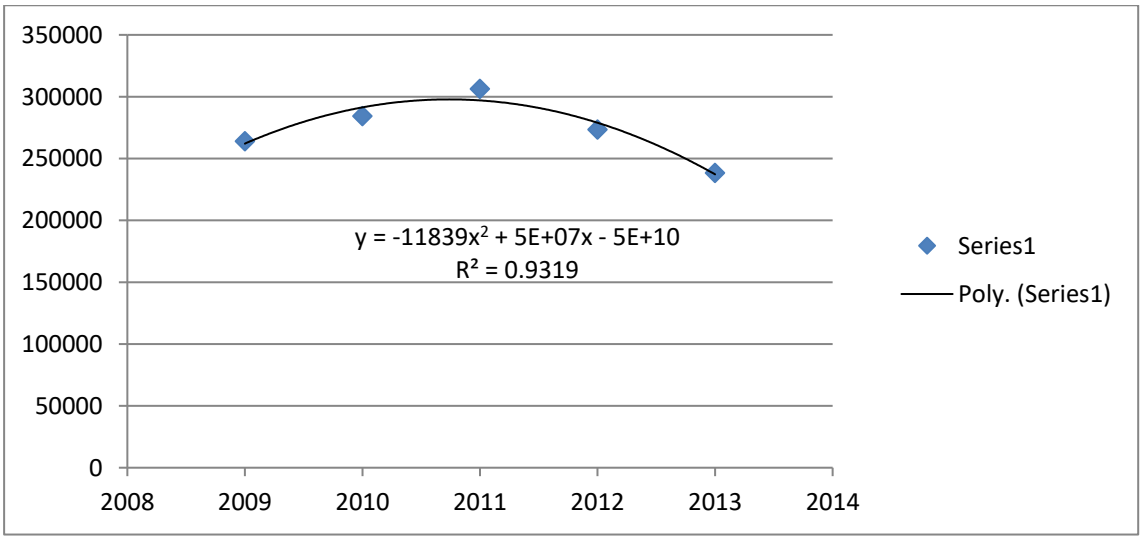


Figure 7: Charcoal intake

Silicon Smelters are the single large producers and consumers of industrial charcoal, accounting for 50% of the total production. The balance is sold into the household barbeque market both locally and abroad. Charcoal is sourced locally and from neighbouring countries. Wattle and gum jungles as well as *Prosopis* and *Dichrostachys* are used in production (JTT, 2013).

(The charcoal intake is not being properly recorded, as the production appears to be twice as high as reported.)

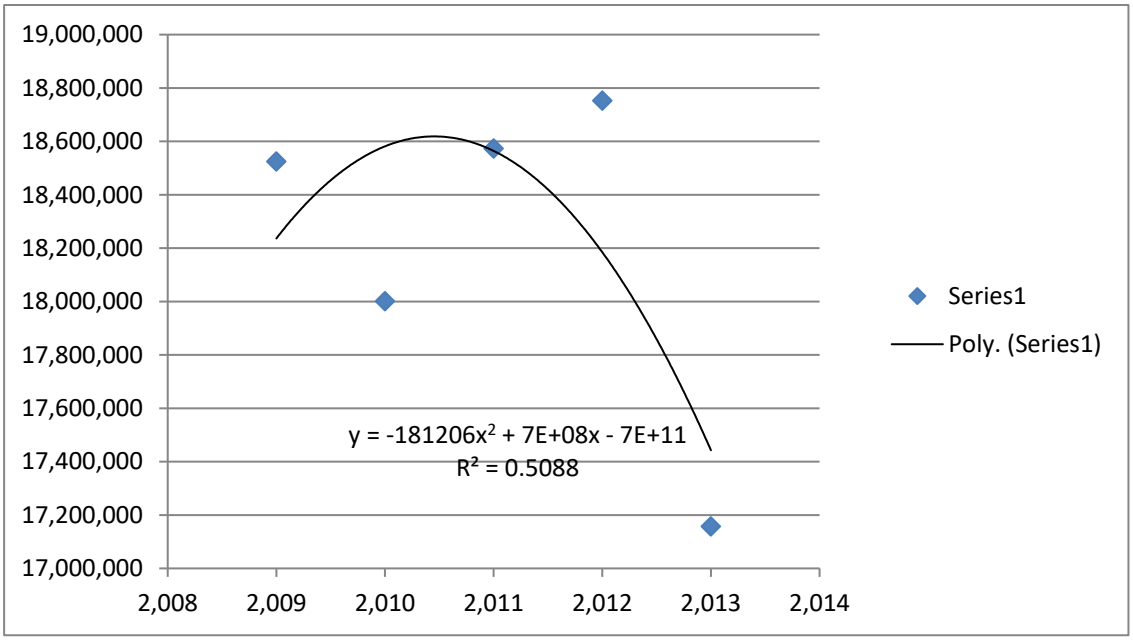


Figure 8: Total roundwood intake

Generally, the total roundwood intake appears to be tracking the country's GDP (Fig.8). Pulp and paper although predominately export orientated is affected by the general constraints affecting business in South Africa (policy uncertainty, rising utility costs and a constrained energy supply).

The outputs for the various commodities track the intake that appears in Table 7. Timber product imports and exports are presented in Table 8. The data are only available in monetary terms and the rand values have been converted to US$ using the average relevant conversion rate for the year in question

Table 7: Timber outputs over 5-years 2008/09 to 2012/13

Product	2008/09	2009/10	2010/11	2011/12	2012/13
Sawn timber (m^3)	1 908 347	1 880 498	1 568 004	1 443 105	1 588 558
Pulp (tons)	2 279 697	2 317 088	2 378 643	2 567 848	2 233 184
Mining timber (tons)	463 324	428 096	386 031	376 788	386 112
Panel products (m^2)	625 228	540 526	551 564	1 228 421	1 153 878
Poles (m^3)	442 633	401 307	397 182	380 633	417 580

Charcoal (tons)	13 865	50 605	52 496	63 911	57 919
Chips and mill residue (tons)	3 994 840	3 195 455	3 034 602	2 390 268	2 298 506
Firewood (tons)	30 987	49 966	49 063	46 358	50 253

Source: Godsmark, 2016.

There has been a noticeable increase in pulp exports. This is attributable to the major contribution from dissolving pulp where Sappi plays a dominant role in the world market. In the paper segment, there has been a trend away from the local production of uncoated wood free paper because of the relatively small South African market.

Table 8: Imports and exports (US$ million).

	2009		2010		2011		2012		2013	
Product	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports	Imports	Exports
(R:US$)	8.42		7.32		7.26		8.2		9.64	
Pulp	47	510	58	755	66	974	58	718	92	716
Paper	840	624	956	640	1050	636	1025	575	1060	732
Solid wood	247	306	227	368	332	377	331	327	393	449
Other	2	40	2	61	2	77	3	68	1	83
Total	1136	1480	1243	1824	1450	2064	1417	1688	1546	1980

Source: Godsmark, 2016.

Non-timber forest products

Forest mushroom production is not reported. While production of up to 350 000 kg per annum appears to have been harvested at times, yields are variable and dependent on weather conditions. For example, in one region harvest yields varying from 58 640 kg to 6 010 kg were recorded over a five-year period. Forest mushroom harvesting is seasonal and variable, making this an opportunistic activity. “Off season” work is provided by employing the pickers to clear weeds and stack pruning slash in order to clear the forest floor to facilitate future harvesting.

Honey production is still in its infancy. It is estimated that South Africans consume about 3 000 tons of honey annually but only produce 1 000 tons (African Honey Bee, 2016). This activity is also seasonal and needs to be supplemented with additional work opportunities.

4.9.2 Forecast future production, trade, and consumption of timber and non-timber products over the next 10 years

The industry is currently under-felling its timber resource. Estimates, assuming the forest estate is in cycle and that softwood is being felled on a twenty-year rotation and hardwood on a ten-year rotation, are that 26.4 million m^3 of timber is currently (2012/13) available to harvest. The reported roundwood intake for 2012/13 was 18.5 million m^3 or 70% of the annual potential (Forestry Economics Services, 2015).

Over the last 10 years from 2002/03 to 2012/13, there has been a steady conversion out of pine to higher yielding eucalyptus. The current position is that 51% of the commercial forest resource is planted with softwoods, with the balance of 49% planted with hardwoods (Forest Economics Services, 2004 and 2015). In 2002/03, the ratio was 52% softwoods, 48% hardwoods. Assuming this trend continues the ratio should reach 50%:50% by 2022/23. In addition to this, while the utilizable $MAI_{(20)}$ for softwoods has remained constant at 12 m^3/ha/annum, the utilizable $MAI_{(10)}$ for hardwoods has increased from 30 m^3 to 32 m^3/ha/annum. Assuming that the total forest area remains constant, and taking into account the adjustment in the ratio of softwood to hardwood together with the increase in hardwood yield, the annual allowable cut can be expected to increase by 5% to 27.8 million m^3 by 2022/23.

South Africa has the resource base to increase trade and consumption in timber products over the next ten years. Sappi's introduction of new dissolving pulp lines at its Umkomaas and Ngodwana mills will position this company well to take advantage of its dominant position in the world market. Pulp, paper and board manufacturing are currently at 81% of installed capacity. Assuming this lag is quickly contained, the industry can grow at a rate of 4.5% per annum over the next ten years. Treated pole production and exports into other African countries are expected to grow as these countries continue with their planned electrification programmes. This sector could grow at an annual rate of 4.5% per annum over the next ten years. Although the demand for sawn timber is expected to grow in line with GDP, growth in supply will be challenging. The resource base is shrinking and sawmillers are attempting to mitigate this trend by upgrading their sawmills in order to improve efficiency and process smaller logs. For purposes of the ten-year projection, it will be assumed that sawmill roundwood intake remains constant at 3.87 million m^3 per annum. Mining timber and matches are projected to remain constant over the next ten years. The charcoal production is under-reported in the statistics. It would appear to be twice as high as the reported figure (JTT 2013). For this reason, charcoal production is estimated at 550 000 m^3 round wood intake and this figure is expected to remain constant over the ten-year projection period. South Africa exports a significant tonnage of hardwood chips. Japan has been the primary destination for South African hardwood chips but with additional markets having been opened in India, Taiwan, and in China the export of chips is projected to grow by an annual 4.5% over this period. The projected annual timber availability and roundwood intake is summarised in Table 9.

The major off-take will be for pulp, paper, and board manufacture. There is currently excess capacity in this sector, and increased intake will depend on both world markets and local economic conditions. Increasing processing capacity normally occurs in steps and it can be expected that there will be further increases in total processing capacity during the next ten-year period.

Increases in intake are expected for treated poles and chip exports while sawn timber, mining timber, matches, and charcoal are expected to remain constant for reasons given in section 5.9.1.

Table 9: Projected roundwood intake and consumption over ten years (million m^3)

Product	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Roundwood production	26.5	26.7	26.8	27	27.1	27.2	27.4	27.5	27.7	27.8
Sawmills	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87	3.87
Pulp paper & board	13.7	14.3	15	15.7	16.4	17.1	17.8	18.5	19.2	19.9
Mining timber	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76
Poles	0.43	0.46	0.48	0.50	0.53	0.55	0.57	0.59	0.62	0.64
Matches	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03
Charcoal	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55	0.55
Chips	1.41	1.49	1.56	1.64	1.71	1.78	1.86	1.93	2.01	2.08

4.10 Evaluation of the contribution of these private sector activities to local livelihoods and the national economy

4.10.1 Contribution of these private sector activities to local livelihoods

It is reported that some 879 000 tons of hardwood timber was delivered by small growers and contractors to the major processors (Sappi, Mondi, and NCT) during the last financial year. This would have contributed some US$52 million in turnover in local communities. In addition, Mondi Zimele (2014) estimate that value chain activities contribute a further US$22 million to rural communities making the total contribution from forestry related activities to over US$74 million.

If the timber delivered was all acquired from woodlots and community plantings the area involved could be between 100 000 and 110 000 hectares in cycle. Using manpower estimates of nine permanent jobs per one hundred hectares of plantation in cycle (Umsonti, 2013) it is estimated that this small grower activity generates some 9 000 to 10 000 permanent jobs in rural communities.

The only non-wood forest products being harvested from commercial plantations are forest mushrooms (*Boletus edulis).* This activity is not reported but it is estimated that the activity could be generating between US$165 – 192 million per annum for local communities. Further, non-timber forest products include marula fruit (*Sclerocarya birrea)* which is estimated to generate US$ 80 million per annum and fuelwood, fruit and fodder for which there are no estimates (Tibane and Vermeulen, 2016).

4.10.2 Contribution of these private forestry sector activities to the national economy

The total value of roundwood sales from processing plants in 2012 is presented in Table 10; and was US$1.52 billion. The majority of the processing is taking place in KwaZulu-Natal where most of the pulp mills and chipping plants are located. There is a higher proportion of pine sawlog plantations in Mpumalanga where large state-owned plantations are located, making roundwood sales of sawlogs highest in this province.
Table 10: Roundwood sales by product and province 2012 (US$ million. Exchange rate R8.2: US$1).

Province	Pulp/Board/Chips	Sawn Timber	Other
KwaZulu-Natal	1514	90	56
Mpumalanga	288	213	53
Eastern Cape	53	94	2
Limpopo	3	50	41
Weastern Cape	0	51	11
Total	1858	498	163

Source: (Godsmark, 2014)

Marketing in Limpopo province is challenging because of long distance to markets. Sawn timber and poles are the main products produced in this province.

The strong balance of payments differential for pulp (Table 11) is underpinned by a major contribution from dissolving pulp. The negative balance of payments for the paper segment is reported to be because of a continued trend towards less value-added products being produced i.e., less uncoated wood free paper. Capacity utilization rates for the uncoated wood free paper segment are close to 50% (PAMSA, 2014).

Table 11: Imports and exports for 2013 were recorded as follows (US$ billion; at exchange rate R9.64: US$1)

Product	**Imports**	**Exports**
Pulp	0.1	0.72
Paper	1.06	0.73
Solid wood and others	0.4	0.54
Total	1.56	1.99
Trade Balance: US$ 0.43 billion		

Source: Godsmark, 2014.

The global economic crisis of 2007/08 has continued to have a negative impact on South Africa's economic growth with the subsequent recovery in manufacturing production being insufficient to return to pre-2007/08 levels. In general, a strong global economy supports South Africa's exports and consequently its economic growth (Statistics South Africa 2016).

Table 12: Forestry's contribution to South Africa's GDP US$ million

Sector	2008	2009	2010	2011	2012
R:US$ exchange	8.26	8.42	7.32	7.26	8.2
Total RSA GDP	360 964	361 232	440 243	457 490	413 605
Agriculture, Forestry & Fisheries GDP	10 471	9 621	9 546	10 459	9 073
Manufacturing GDP	50 537	48 391	55 060	54 627	48 322
Forestry GDP	992	936	1 070	1 074	848
Forest Products GDP	3 016	2 942	3 268	3 001	2 477
Forestry as % of Agriculture, Forestry & Fisheries GDP	9.5	9.7	11.2	10.3	9.3
Forest Products as % Manufacturing GDP	6.0	6.1	5.9	5.5	5.1
Forestry and Forest Products as % of Total GDP	1.1	1.1	1.0	0.9	0.8

Source: Business Tech, 2015; Godsmark, 2016.

5.0 CONCLUSIONS AND RECOMMENDATIONS

Commercial forestry is rurally based and ideally positioned to contribute to socio-economic upliftment in poor rural communities adjoining plantations. The industry is in a mature phase with slow growth and a product that is well established. Competitors are anxious to protect their markets and access to the raw material resource for additional value chain activities is limited. In addition, mechanisation of forestry operations is occurring, and jobs require a more skilled workforce.

Strong relationship linkages exist amongst the actors in the primary forest production sector. All commercial timber growers are well represented through Forestry South Africa. It is estimated that 95% of the commercial forest estate is represented through this body. The benefits derived through this representation are, amongst others, the performance of a lobby function, collective research and development, and providing growers with the ability to leverage funding from external sources to the benefit of the sector as a whole.

Independent growers are fortunate in having direct access to efficient and successful co-operative marketing bodies. This enables these parties to achieve economies of scale in their marketing efforts as well as research and development, and processing.

Relationship linkages in secondary forest production are restricted to sector associations that provide members with a base from which to lobby for their particular interest groups, product promotion, and in some instances technical information and assistance.

The concept of Broad-Based Black Economic Empowerment is enshrined in the South African Constitution and has been put in place to bring about greater participation of black people and women in the economy. The Forestry Sector Charter that was produced after extensive negotiation with industry stakeholders deals with the forest industry specifically and commits the industry to agreed transformation goals. The goals that have been agreed upon have provided opportunities to enhance social inclusion of black people and in particular women in the forest industry. Sustainable models for social inclusion in forest compatible development are emerging from this initiative. Industry codes of conduct, particularly as this relates to out-grower schemes and contractors support this action.

The scope for private-public-partnerships to enhance social inclusion and gender equitable practices in forestry compatible livelihoods is extensive. The South African forest industry is largely an export-based business and with a high proportion of the forest estate being FSC certified is well positioned in the world markets. However, the sector is exposed to the vagaries of the world markets as well as local economic conditions and policy decision making. The raw material is available to increase export sales of wood chips, paper, pulp, and treated poles. Unfortunately, particularly in the case of pulp and paper, the industry is not performing to its full capacity. This is because of not only the world market conditions but also local issues relating to policy uncertainty, rising utility costs and a constrained and unreliable energy supply.

Commercial afforestation in South Africa is strictly controlled in order to protect the natural environment and the country's valuable water resources. Land has been identified for further afforestation, all of which is communally owned. Although making slow progress, a suitable model is emerging that will promote this activity.

5.1 Recommendations

The Forestry Charter initiative has signalled the government's wishes in terms of the inclusion of previously disadvantaged black people in the forestry value chain.

The contribution of the private forestry sector activities to local livelihoods and the national economy are well documented. Various initiatives have surfaced that can serve as models for a wider application in the industry.

- One hundred and forty thousand (140 000) ha has been identified in community owned land that can be afforested. Progress in planting has been slow and an environment needs to be created where the private, public and community sectors combine to develop infrastructure and trust to open the way for the afforestation to take place. The Forestry Sector Charter Council should initiate this discourse. Forestry South Africa, who represents the majority of the timber growers, needs to be closely involved in the initiative. Funding for the initiative should come from both the private and the public sectors. In addition, the effort needs to be all-inclusive to avoid the advent of "free riders."
- Experience with existing afforestation projects and the woodlot programme in Zululand clearly identifies the need to provide grant funding to small and emerging timber growers. Grant funding to cover the costs of establishment, maintenance, and protection during the growing cycle of the initial crop is necessary to assist in making the venture attractive to rural people who wish to plant trees commercially and to carry the crop through to maturity. The state should provide this incentive since taxes generated by sales when the trees are harvested would, within a few years, cover the cost of the grant.
- The forest growing sector is well serviced by co-operatives with an established track record. These structures must be supported and their service to small black growers reinforced. Linking a grant system to marketing through the co-operatives will assure these growers of a fair price for their timber.
- Grower processors who provide technical assistance and free seedlings to small black growers in exchange for supply contracts should also be included in the grant system as long as assurance is provided that such suppliers are assured a fair price for their timber. The code of conduct developed by the Forestry Charter Council provides the basis for such as assurance.
- Micro franchising, that is being used to develop a secondary forest product business is similar to the co-operative model in that profit sharing is enabled. The micro franchise operation is structured in a manner that provides for a stable base supply of the product after which growth is encouraged via independent suppliers who share in the profits on a patronage basis. This model should be considered in cases where an existing processor (sawmill for example) wishes to expand its raw material base. Once the processor has reached its breakeven point in terms of throughput, and fixed costs have been covered, additional tonnage simply increases the profit margin, which can then be shared with the supplier.

- Land reform initiatives in the forestry sector have primarily revolved around the acquisition of the land, which is then leased, back to the owner of the trees with certain requirements relating to training and mentorship. While the use of this rental money cannot be dictated, it does form a strong base from which to develop further employment and wealth in rural communities. The Mabandla afforestation programme discussed under item 5.8.2 is a good example that should be followed in this respect.
- Local government in KwaZulu-Natal has embarked on a project aimed at creating a platform of furniture-manufacturing skills based on the comparative advantage provided by commercial afforestation and the existence of a world-class training facility in the Harry Gwala region. This intervention should act as a model for other skills development models in communities neighbouring commercial forests.
- The development of new businesses in company value chains, for entrepreneurs in rural communities bordering on forest estates, is proving to be an important contributor to wealth and job creation. The businesses need to be profitable and up scalable. Further attention needs to be given to this effort and in particular, the possible strategic advantage that can be achieved by the participating companies in such an initiative.

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APPENDIX A

Questionnaire

1. Employment comment on:
    a) Opportunities.
    b) Regulations.
    c) What is constraining or promoting development in employment.
2. What factors inhibit or promote full participation of marginalised groups.
3. Comment on gender-based control and access to assets/resources including specific opportunities, challenges, and privileges of involvement in the sector.
4. Comment on marketing and trade (both domestic and international) in forest products including volumes, production costs, revenues, and prices in the last 5-years.
5. Comment on linkages/relationships across the primary forest production and the secondary value chains. How can this be organised to contribute to growth of a well-organised private forestry sector?
6. What is the scope within SA for private partnerships in forestry? In particular:
    a) Existing promising models that can enhance social inclusion and gender equitable practices and forestry compatible livelihoods.
    b) Comment on a way forward.
7. Assess the contribution of these private sector activities to local livelihoods and the national economy.

APPENDIX B

List of respondents

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APPENDIX C

Summary of the Strengths, Weaknesses, Opportunities, and Threats identified for the SWOT analysis.

Factor	Strengths	Weaknesses	Opportunities	Threats
Capital				• Low Internal Rate of Return for plantation forestry • Collateral for Small Growers
Labour			• Training and mentorship	• Mature industry - mechanisation
Technical & Commercial			• 140 000 ha new afforestation immediately available. • Improved yields & productivity	
Government Policy			• B-BBEE legislation • Value chain development • State divesting from commercial forestry	• Bureaucratic legislation (Water use licensing)

Factor	Strengths	Weaknesses	Opportunities	Threats
Marketing	• Co-operative marketing • Code of conduct • FSC brand • Non-forest products			
Operations		• Capital requirements		
Research & Development	• Well supported & good success	• Poor yields from Small Grower plantings		
Socio-Cultural	• Empowerment schemes	• Job of last resort • Land reform structures – Beneficiary Trusts		
Legal		• Licence to afforest		
Economic conditions	• Good internal markets • Organised marketing	• Slow economic growth		
Finance	• Co ability to support emerging growers	• Small grower ability to access finance		
Human relations	• Wealth and job creation	• Youth uninterested in non-employment rural activities • Job of last resort		

SWOT Analysis

The identified strengths, weaknesses, opportunities, and threats are collated in a matrix. A scoring mechanism is applied in order to provide clarity in assessing which environmental changes are most critical, the impact the changing external environment will have on strengths, and the internal element that will be most influenced by external change.

Impact analysis for the forest industry.

Environmental change	Next Twelve Months										
	Opportunities					Threats				Total score	
	Training & mentorship	New afforestation	Improved yields and productivity	B-BBEE	State divesting commercial forestry	Low IRR	Collateral	Mechanisation	Licencing	+	–
Strengths											
Co-op marketing	0	+2	+1	+3	0	+2	0	0	0	+8	0
Code of conduct	+3	+3	0	+3	+3	0	0	0	0	+12	0
FSC brand	+1		-2	+2	0	-1	0	0	+2	+5	-3
R&D	0	0	+3	0	0	+1	0	+3	0	+7	0
Empowerment	+3	+3	0	+3	+3	0	-3	0	-3	+12	-6
Internal markets	0	+3	+3	0	+2	0	0	0	0	+8	0
Wealth and job creation	+3	+3	+3	+3	+3	-3	-3	+2	0	+17	-5
Weaknesses											
Financial support for emerging growers	0	-3	-3	-3	-3	-3	-3	0	0	0	-18
Capital requirements	0	-3	0	-3	-3	-2	-2	0	0	0	-13
Low yields small growers	+1	0	+3	+1	0	-2	0	0	0	+5	-2

Environmental change	Next Twelve Months										
	Opportunities					Threats				Total score	
	Training & mentorship	New afforestation	Improved yields and productivity	B-BBEE	State divesting commercial forestry	Low IRR	Collateral	Mechanisation	Licencing	+	–
Job of last resort	+2	+2	0	+1	0	-2	-1	-2	0	+5	-5
Land reform structures beneficiary trusts	+2	0	-1	+3	+3	-2	0	0	0	+8	-3
Licence to afforest	0	-3	0	-3	0	0	0	0	0	0	-6
Slow econ growth	-1	-1	-1	-2	0	-2	0	0	0	0	-7
Youth disinterested	-2	-2	-2	-2	0	0	0	0	0	0	-8
Environmental impact scores	+15	+16	+13	+19	+14	+3	0	+5	+2		
	-3	-12	-9	-13	-6	-18	-12	-2	-3		

Jacobs *et al* (1998)

- A positive score (+) denotes that strength would help take advantage of or counteract a problem arising from environmental change or a weakness that would be offset by the environmental change.
- A negative score (-) denotes that a strength would be reduced by the environment change or a weakness would prevent the industry from overcoming the problems associated with an environmental change or be accentuated by the change.
- A zero (0) score indicates that the current strength or weakness would not be affected by an environmental change.

Interpretation of SWOT

Strengths

Strengths remain strengths and will help the industry react to environmental change. However, the need for collateral and licencing requirements for new afforestation will continue to have a negative impact on Empowerment. Unless these matters are

addressed the uptake of the 140 000-ha available for new afforestation will continue to hamper the industry.

Empowerment, wealth and job creation, feature strongly and are aided by co-operative marketing and the various industry codes of conduct. Where the opportunity arises, these elements should be embraced.

Weaknesses

Generally, weaknesses remain weaknesses. Financial support for emerging growers and the high capital requirement for forestry investments need to be addressed as a matter of urgency. If this matter is not dealt with, the industry will be unable to capitalise on the opportunities presented by the B-BBEE legislation, new afforestation, and yield improvements.

Overall position

The overall position of the industry as shown in the “environmental impact scores” at the foot of the table indicate a generally favourable industry position in terms of the immediate future with a positive aggregate score against most of the likely environmental changes. The existing weaknesses in terms of the low internal rate of return for plantation forest investments, the need to address the matter of collateral and afforestation licencing are highlighted. B-BBEE offers a significant advantage for black people to access the forestry value chain. However, access to finance, licencing, slow economic growth and a disinterested youth will need to be addressed if this opportunity is to be realised.

The licencing issue needs to be dealt with decisively if the 140 000 ha of new afforestation is to be achieved. There are encouraging indications that some of the large companies are endeavouring to deal with this matter but government departments need to become proactive in this matter as well.

The inhibiting effect of the low internal rate of return from a forestry plantation investment will require creative thinking and a different business model if this weakness is to be overcome. The success exhibited by co-operative marketing where growers have been able to develop their own markets and thus setting prices independently of the local market indicate a potential avenue to pursue.

The matter of collateral and equity can be addressed in one of two ways:

a) Through grant funding and land ownership, a matter that is tied up in traditional authority and that requires a political resolution.
b) Business mentorship and incubation. Emerging entrepreneurs require guidance in establishing their businesses and building up retained earning so that they reach a position where they become eligible for bank loans in order to grow their businesses.

African Forest Forum



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