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**SECO Local Economic Development Assistance  
Programme in iLembe – Value Chain and Cluster  
Development (VCD) Component:**

**Supplementary Report  
Sugar Value Chain**

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*Comments and suggestions on issues raised in this report are welcome and may be addressed to Fabio Russo at [f.russo@unido.org](mailto:f.russo@unido.org).*

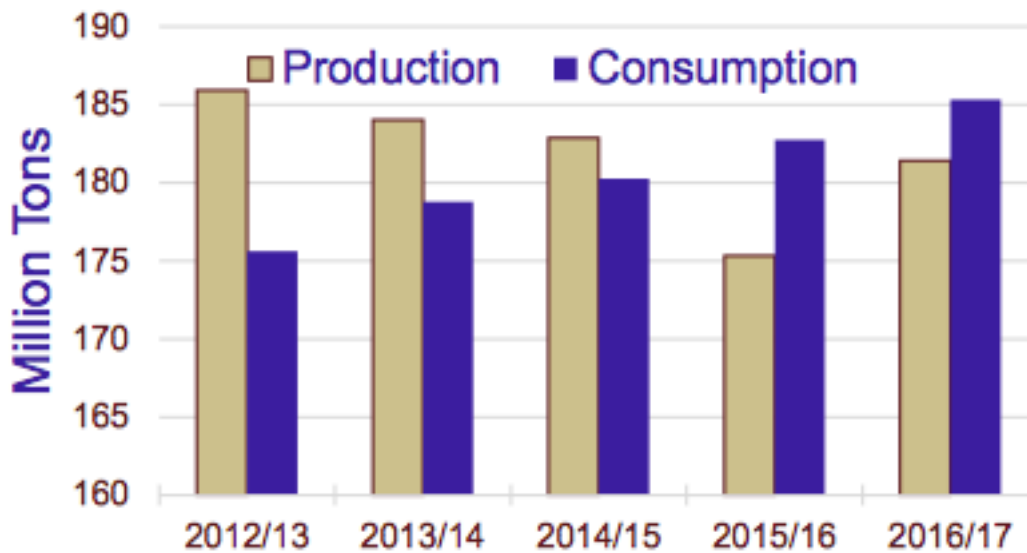
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## 1 International perspective

In terms of international markets as per Wynne (A T Wynne, 2009):

- 1) Global sugar demand essentially tracks population growth;
- 2) Markets in the past have been dominated in the past by the EU, Brazil and India and the supply and demand in these countries are major drivers of the world price, which can fluctuate widely;
- 3) Economic margins for sugarcane production are declining in real terms, placing pressure on farmers to expand, improve efficiencies and productivity and pursue additional revenue streams. This is particularly significant for small-scale producers;
- 4) Customers are becoming more conscious and concerned with social and environmental issues, which impacts the way sugar is produced and consumed;
- 5) The trends towards exploring bio-fuels and bio-energy creates opportunities for sugar-producing countries but requires policy certainty and technology innovation to ensure production efficiencies;
- 6) Processors are cautious to invest in 20-year time-horizon technologies for diversifying products (including ethanol and co-gen) if there is market and technology uncertainty.

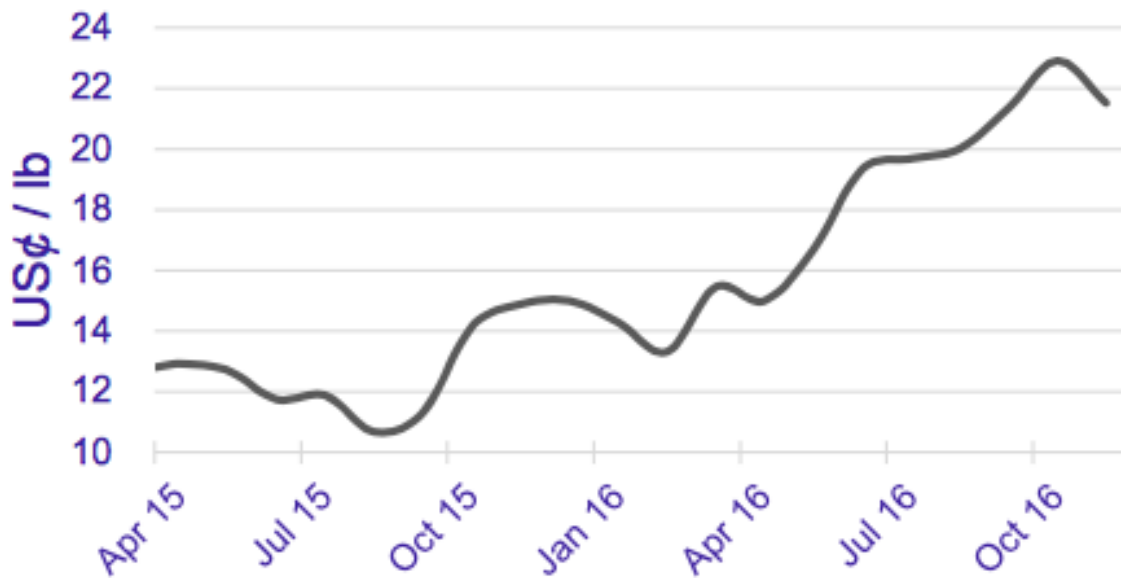
Recent world supply and demand imbalance indicates support for higher sugar prices as per the Figure 1 and Figure 2.



Source: LMC International

Figure 1: Global Production and Consumption of Sugar

Source: Tongaat Hulett, 2016



**Figure 2: World Market Raw Sugar Price**

*Source: Tongaat Hulett, 2016*

Predictions are for two consecutive years of sugar production deficit on world markets. In 2015/16 this amounted to some 7.5 million tons and prediction for the year to September 2017 is a further deficit of 4 – 5 million tons.

The shrinking deficit is on the back of an improved crop outlook in the EU, Mexico, Pakistan and the USA. This is further assisted by the release of Chinese strategic stocks and a switch in the sugar-ethanol mix in Brazil as a consequence of the low oil price. However, of note is a growing demand for ethanol in Brazil, which may result in another shift to more ethanol production especially with firmer oil prices, which will further support the future sugar price.

Global demand increases are projected to remain steady at 1.5% per annum and with the production shortages prices over the past 12 months have increased by some 50%. Projections are for a more stable price at current levels of 20 – 22 USD per lb over the next 18 months.

## 2 South African perspective

The Sugar Act 9 of 1978 and the associated Sugar Industry Agreement (SIA) of 2000, as administered by the Department of Trade and Industries (DTI) governs the industry. These together with the import duty imposed on sugar have created an institutional framework that brings a great deal of stability to the sector, within the context of an international sugar market where most, if not all sugar-producing countries have regulations, protecting their domestic industries, with international prices subject to sometimes severe swings if there is any imbalance in world supply and demand.

The duty<sup>1</sup> is calculated by a formula that was instituted in the early 2000's to guard against the price volatility prevalent in the internationally traded commodity. In 2016, there was a domestic

<sup>1</sup> <http://xa.co.za/customs-duties-reduced-on-sugar/>, accessed 1 May 2017

US dollar-based reference price for sugar of US\$566/ton. The customs duty for is calculated as the difference between the quoted domestic US dollar-based reference price and the 21-day moving average of the international price of that commodity. As the gap between the domestic dollar based reference price and the international price widens or shrinks, a new duty will be calculated. This is illustrated in Table 1.

**Table 1: SA Sugar Import Tariffs: February 2015 - April 2017**

Month	Duty per kg of sugar
February 2015	R2.07
May 2015	R2.43
October 2015	R3.04
April 2016	R2.40
August 2016	R1.44
September 2016	R0.32
April 2017	R0.6363

The sugar tax on sugar-sweetened soft drinks was expected to be introduced on 1 April 2017<sup>2</sup>. It expected to have a significant effect on the local sugar market. One comment received from an RCL marketer was that beverage companies were replacing sugar in cool drinks with artificial sweeteners and this could impact some 500,000 tons of locally produced sugar (roughly 25% of the local market), which will now have to find a home elsewhere.

The SA sugar value chain (refer schematic in Figure 5 for an illustration) reflects the considerable interdependence between value chain actors, especially millers and growers. There is no value to cane without a mill and transport logistic costs dictate where growers deliver to. As such there is a real threat to a mills survival if there is a fall-off in supply and should this occur there are consequent ramifications to the small towns that have developed around sugar mills.

With large investments tied up in sugar mills, millers are anxious to retain the production capacity of their mill supply areas. It is these interdependencies that drive initiatives to retain the sustainability of the whole value chain, from lobbying favourable policy outcomes through to retaining the productivity of even the smallest of land-holdings.

<sup>2</sup> Initially this was set at 20% (2.29 c/g but has since been adjusted to 2.1 c/g and charged when the sugar content exceeds 4 g/100 ml of beverage and only 50% of the rate for cordials. Source: <http://ewn.co.za/2017/02/22/govt-will-forge-ahead-with-sugar-tax-in-2017>

In terms of socio-economic impact the industry makes a significant contribution and punches above its weight (McCarthy, 2007). The importance of the South African sugar industry to ordinary South Africa's welfare, especially in KwaZulu-Natal and Mpumalanga, should not be under-estimated. The 2006 National Department of Agriculture, Forestry and Fisheries (DAFF) publication "Sugar", highlighted the employment impacts, by reporting that direct employment in the industry was 85 000 jobs and direct and indirect employment 350 000 jobs, yielding 1 million people dependent upon the sugar industry. More recently, in 2013, the SASA estimate is that there are 110 000 direct jobs in the industry. This social benefit is achieved through relatively little land. Despite some popular impressions, sugar cultivation is a small 'land consumer' in South Africa. The total land area under sugar cane in 2007 in SA was some 430 000 ha, which comprised only 0.35% of total SA land; or 2.6% of the potentially arable area of South Africa. More recently (2016) this declined to circa. 370 000 hectares as per Figure 3, with a concomitant decline in production, aggravated by the two to three-year drought from 2014 to 2016 as per Figure 4, indicating the industry sustainability is facing difficulties if this trend were to persist. Note that indications are that a recovery in production has occurred in 2016/17 to improve rainfall. An indicator of the level of recovery is illustrated by a Tongaat investor relations report<sup>3</sup>, which reported the group's historical peak production at 977,000 tons raw sugar, 2013/14 at 634,000 tons and 2015/16 at 323,000 tons. Projections are for a recovery to between 560,000 – 613,000 tons in 2017/18; compared to a processing capacity of 1,040,000 tons. At its lowest production was 33% of the peak and 31% of capacity and will be at about 54% to 59% of capacity in 2017/18 and an estimate of 48,000 ha additional cane land required to fill the mills. With a realization of \$420/ton and marginal additional cost of \$330/ton i.e. a margin of \$90/ton each additional ton of raw sugar the miller can produce will add directly to the bottom line.

Given that sugar contributes some 6% of the value of SA's agricultural output, this suggests that in terms of ratio of land area to output value, sugar punches significantly above its weight. Sugar, indeed, generates more than twice the average level of economic output as the average output from arable land in South Africa, and nearly twenty times the economic output of land in general in SA (McCarthy, 2007).

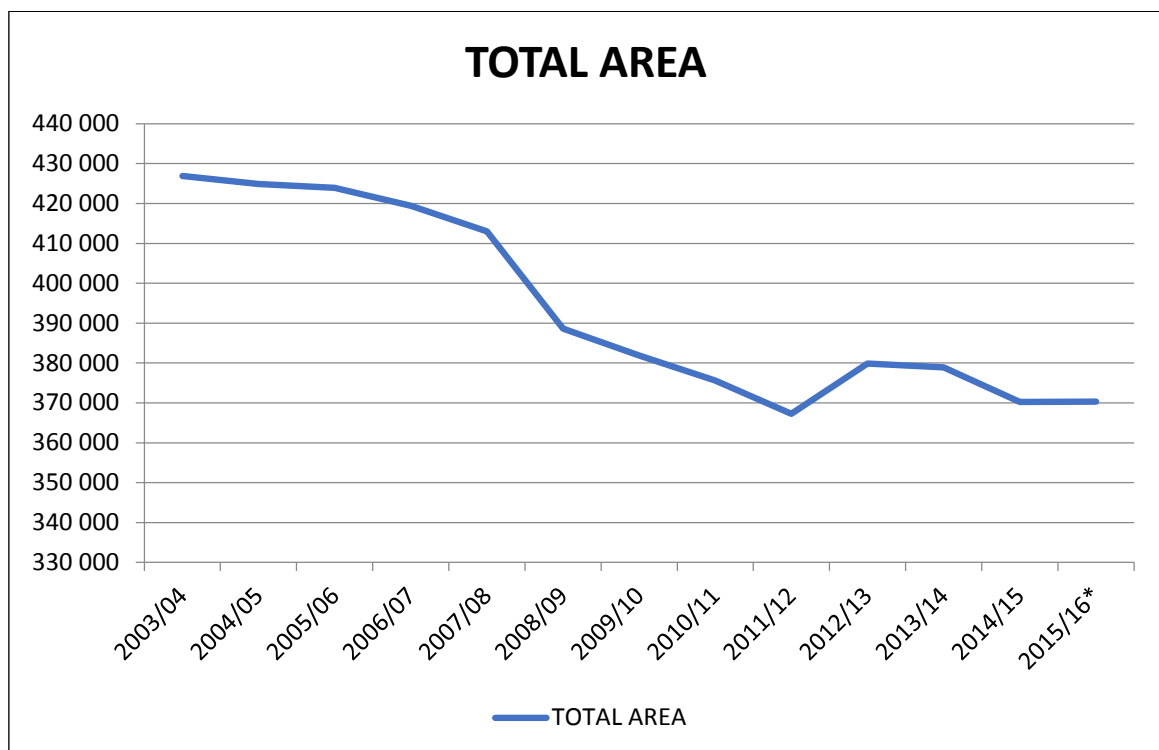
Examples of the negative impacts of a decline in a domestic sugar market are illustrated in the 2007 McCarthy report where it was noted then that: "In ... Fiji [the] sugar industry has been weakening. The authors use the Fiji computable general equilibrium model to simulate the economy-wide impact of a 30 percent reduction in sugar production. Amongst the key results the authors find that Fiji's gross domestic product will fall by around 1.8 percent p.a. and real welfare of the population will decline by some 1.5 percent p.a."

A final point drawn from the 2007 McCarthy report is that where the industry is damaged by production shocks that lead to mill closures, this leads to hardships imposed upon the residents of mill towns, and upon the farmers and workers who are without jobs because the demand for their cane planting, weeding and harvesting services have evaporated. Further the common themes in mill closure towns worldwide are:

- At least double and usually three times the numbers of employees in town besides those the Mill itself lose their jobs because of supplier relationships with the mill;
- Unemployment rates in the town often reach 50% and beyond;

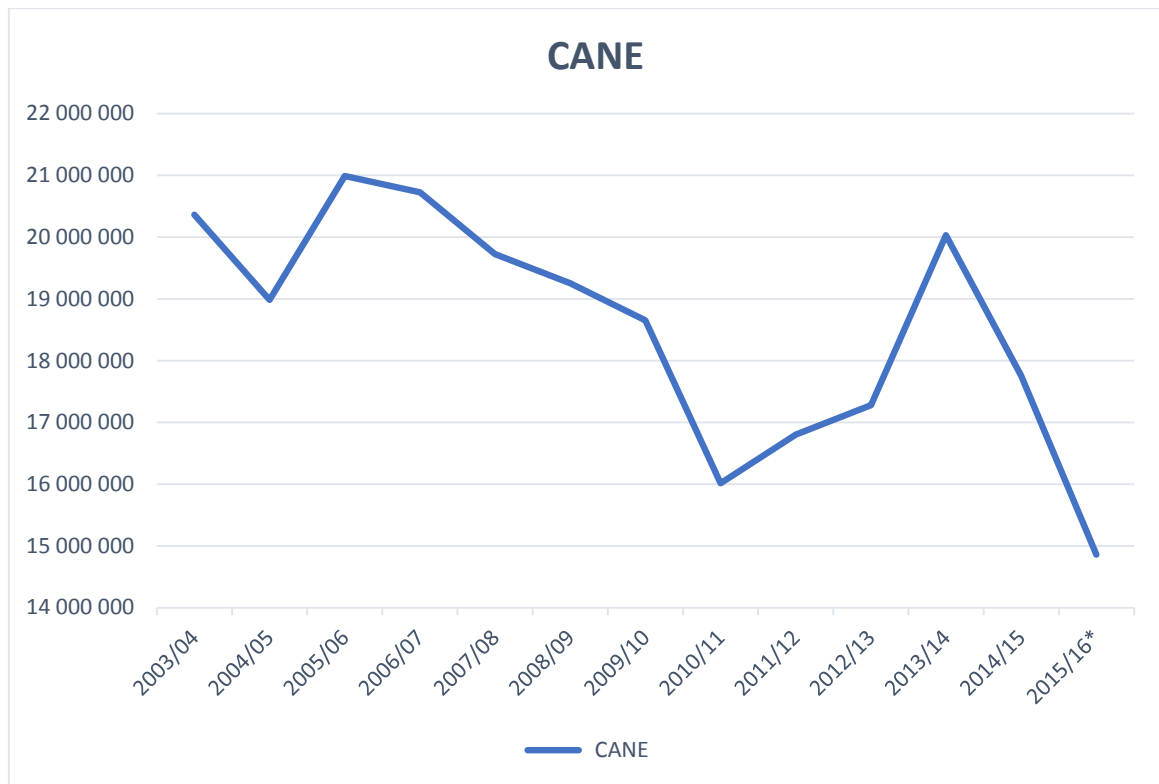
<sup>3</sup><http://www.tongaat.co.za/downloads/2016/Information%20Pack%20-%20November%202016.pdf>

- High proportions of retail firms close;
- Property (e.g. homes) values usually fall (at least in relative terms) often leaving residents financially “trapped” there;
- Unemployment and welfare benefits claims rise rapidly; and
- Property tax and rates revenues to the local authority often rapidly decline, usually leading in turn to an overall decline in community services levels.



**Figure 3: Total Land Area Under Cane: South Africa: 2003/4 - 2015/16**

*Source: CANEGROWERS, 2017*



**Figure 4: Tonnes cane harvested: South Africa: 2003/4 - 2015/16**

Source: CANEGROWERS, 2017

A factor that has impacted the area under cane and a significant challenge to the industry is the impact that the high level of land claims has when new land-owners are not able to sustain cane production at the level of the previous land owners and when small-scale growers go out of production. McCarthy (2007) reported six years ago that, going forward:

“The key issue [facing the industry] relates to the growing of cane to feed the mills. Indeed, the .... indications from CANEGROWERS<sup>4</sup> ..... give cause for concern in this regard. Their October 2007 Newsletter presents evidence of costs of production exceeding revenues, and small scale grower deliveries dropping to half of what they were ten years ago. Moreover, almost a half of commercial sugar farming land is now under claim, and CANEGROWERS’ 7 October 2007 ‘*Dossier on the Challenges faced by Canegrowers on Restitution and Land Reform and some proposed solutions*’, comments:

‘The process between the seller leaving the farm and the new owner taking over the farm, can take place at a critical part of the farming cycle with possible huge loss of income should this not be done efficiently.... There is no co-ordination between settlement and disbursement of grant. As a result claimants have waited longer than two years before receiving any capital that is essential to cover initial weed control and harvesting operations...’.

<sup>4</sup> <http://sacanegrowers.co.za/>



Measures have since been adopted within the industry to improve cane supply, partly through millers partnering with government in promoting growing in customary tenure areas and to resolve the land claims process to ensure a smoother transfer with concomitant funding to sustain the operation.

Weak governance within land restitution entities has also posed a challenge, threatening production levels and SASA embarked on a three-year capacity support programme in the three production areas of Mpumalanga, Southern and Midlands of KZN and the Zululand region (including that of iLembe, with the latter area's programme being finalized earlier in 2017). This programme targeting 27 land reform entities and undertaken in the three regions by Lima, Andisa Agri and Ubuqotho respectively, had the objective of providing hands-on tailored institutional development support, in various forms, with the aim of ensuring the entity's institutional sustainability, good governance and viability. The desired outcomes were; for the owners and managers of communal property institutions (CPI's) to have the necessary attitude, confidence, skills and knowledge plus the right business tools to be able to own and manage a sustainable business. Therefore, and based on the experience of this programme SASA is exploring a sustainability strategy to further support the farming sector.

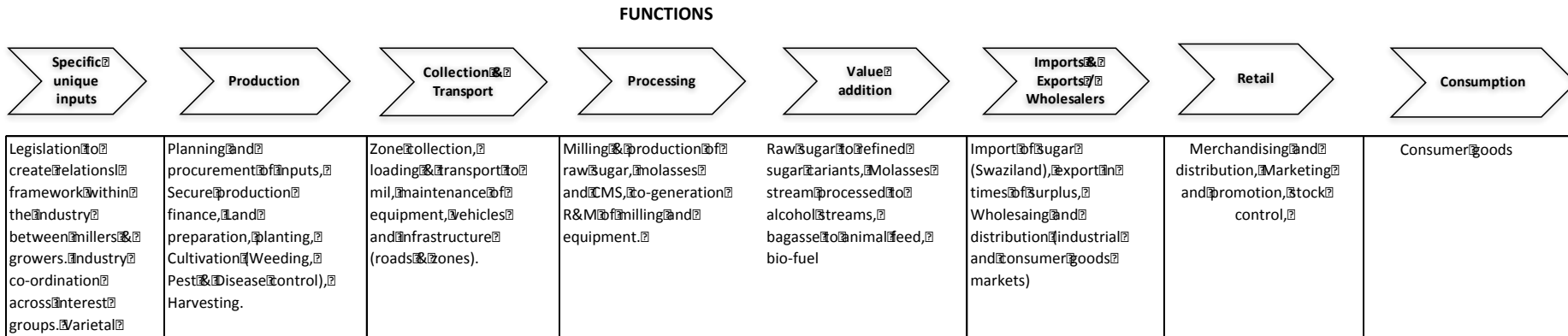
The industry has and does receive significant support from government, directed at the smallholder and land reform beneficiaries. This is illustrated in Table 2 showing the projects managed through Tongaat Hulett and the quantum of government funding received.

**Table 2: Tongaat Hulett Farmer Support Programmes with Government funding**

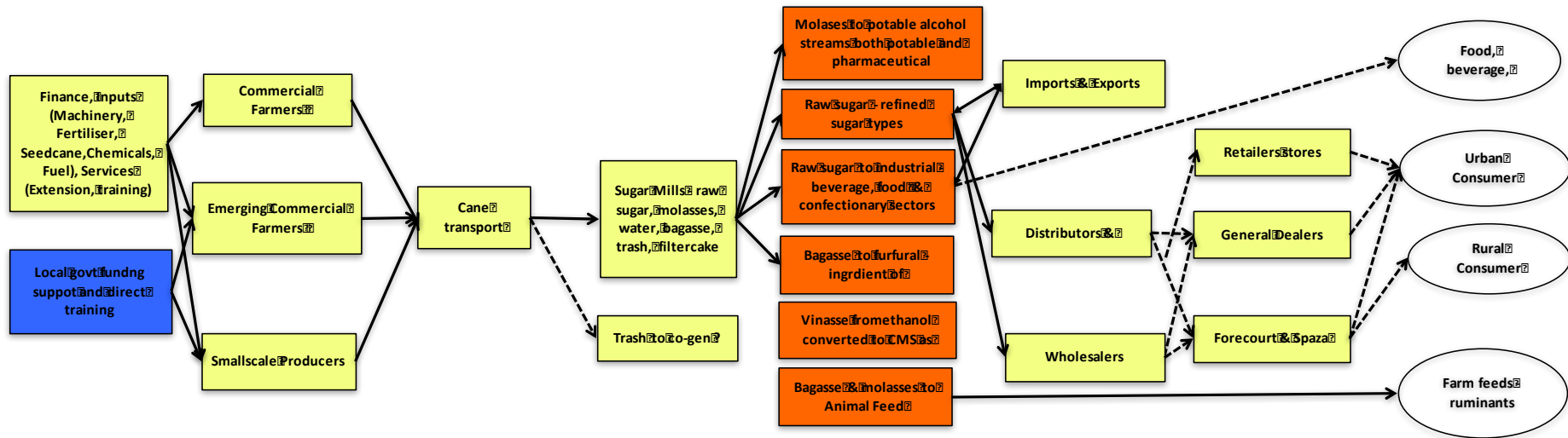
Type of Funding	Approved	Cash Received To Date	Date - cash first received	Application of Funding
Comprehensive Agricultural Support Programme (CASP)	R43 million	R32 million	2008, project ongoing	Planting, replanting, ratoon management, irrigation and infrastructure repairs.
Recapitalisation and Development Program (RADP)	R110 million	R99 million	2011, project ongoing	Planting, infrastructure, ratoon management and farm equipment.
Small Enterprise Finance Agency (SEFA)	R50 million	R35 million	2014, project ongoing	Combination of new cane establishment and improving farming operations.
DBSA - The Jobs Fund	R150 million	R102 million	2014, project ongoing	Job creation and new cane establishment.
Small-scale grower support	R51 million	R51 million	2011	Drought relief, seed cane subsidies and sugar industry payments.
Drought relief support 2015/16 season	R31 million	R31 million	2016	Drought relief for farmers supplying Tongaat Hulett.
MAFISA	R13 million	R7 million	2012, project ongoing	Planting of cane for small-scale growers.
<b>Total</b>	<b>R448 million</b>	<b>R357 million</b>		

**Figure 5: Sugar Value Chain**

**SUGARCANE VALUE CHAIN**



**CATEGORIES OF OPERATORS AND LINKAGES**



### 3 iLembe perspective

The sugar VC in the district is dominated by Tongaat Hulett Sugar (THS), with three mills drawing cane from the District. One mill (Darnall, at the small town of Darnall, is located within the District) and the other two outside the District. The Maidstone (near Tongaat) falls just outside to the south and Amatikulu, near the town of Gingingdlovu is north of Mandeni. Gledhow Sugar Company<sup>5</sup> has its Gledhow mill near Stanger (KwaDukuza).

In terms of both THS and Gledhow:

- a) THS is a significant local and regional producer and processor of sugarcane; employs about 40,000 people across 20 sites in 6 countries (South Africa, Botswana, Namibia, Zimbabwe and Mozambique. Maidstone draws practically all its cane from the District with a small volume from the northern parts of the eThekweni metro area to the south. All the Darnall mill cane comes from within the District and Amatikulu has part of its catchment supply area north of Mandeni. The group has a central refinery in Durban, which processes the raw sugar from these mills. Voermol animal feed company, a subsidiary of THS, run their operations from the Maidstone mill in Tongaat, drawing from the bagasse and molasses as ingredients.
- a) Gledhow operate a mill at Stanger. This mill was previously owned by Illovo, who sold out to Ushukela, a BEE sugar company owned by Mr. P.Sokhela (funded by Land Bank) in circa 2007. In 2009 Illovo bought back 30% of the shares and local growers acquired a 25.1% stake in the operation.
- b) The Glendale valley was for years known for the Lonhro sugar mill, which also produced potable alcohol and was supplied by several smallholder sugar irrigation schemes funded by Ithala and what was then the Financial Aid Fund (now Umthombo Agricultural Finance) of the South African Sugar Association (SASA). The remaining smallholders now supply to Gledhow and the potable alcohol plant is still operational but has been relocated to the Illovo facilities in Durban, where the Gledhow raw material product stream for alcohol production is shipped for further processing.

On average, the rain-fed cane growing areas of the district receive rainfall of between 1,000 mm to 1,300 mm per annum. Most cane is burnt prior to harvesting but there are attempts to encourage green harvesting, which results in trash residue being available for composting or as biomass for alternative processes to that of sugar milling. Most cane is cut by hand at a cost of circa R 35/t with limited mechanical harvesting options due to hilly terrain. Where green stalk harvesting is practiced (usually only when seed cane is cut) a premium of circa R 3/t is paid to cane cutters. Generally, mills are equipped to receive burnt cane and are not actively promoting the receipts of cane tops. Transport to the mill is by tractor-trailer or Hilo road transport if the cane is first transported by tractor/trailer to a transshipment loading zone. Average yields are some 60 tons per ha.

Area under cane (AUC) for the three mills combined have seen a decline from a high of over 93,000 ha in 2003/04 to a low of 75,500 ha in 2013/14, which has recovered to 77,900 ha in 2015/16 as per Figure 6.

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<sup>5</sup> This Company was founded in 2009 with Ushukela Milling – 34.9%, Illovo Sugar (Illovo) – 30%, Gledhow Growers Share Trust - 25.1% and Sappi – 10%

In 2003/04 smallholders had 16,984 ha (18% of the total cane area) under cane and at present 7,859 ha, indicating Smallholders now account for only 10% of the AUC and contribute just above 6% to total deliveries, indicating their lower per unit productivity levels compared to other segments.

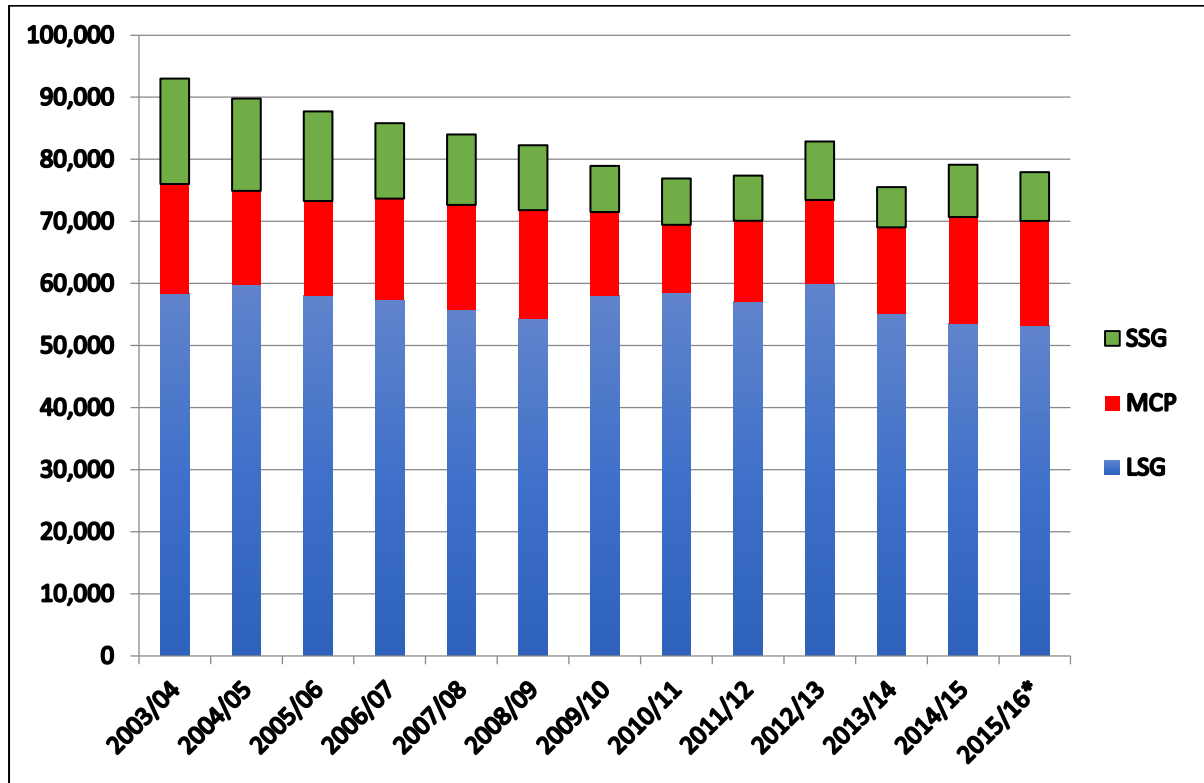


Figure 6: North Coast (Maidstone, Gledhow & Darnall) Sugar Mills Canes Supply Area – Area Under Cane (AUC)

The numbers of farmers per the category of large scale growers (LSG, miller-cum-planter (MCP) and small-scale growers (SSG) and their deliveries in 2015/16 is shown in Table 3. Significantly in the small-scale segment there are 972 registered but only 423 made any deliveries in 2015/16 (i.e. 44%) and they only delivered 137 738 tons (6.8% of total deliveries).

Whilst SSG contribute only some 6.8% of total cane supply at the margin of miller profitability they are very important suppliers and as such from a financial and a socio-economic perspective, the industry has supported the development of small farmer suppliers from as far back as the early 1970s.

The economics of sugar cane growing places pressure on all growers to reduce costs and increase revenue. For better financially resourced growers this has meant an increase in farm size to remain sustainable but there are limited opportunities for smaller producers, whose best option is to either lease their land to a co-operative that can farm on a larger consolidated area made up of smaller land parcels or diversify. Canegrowers as organization is encouraging smaller producers to consider diversification into crops such as vegetables with mixed success (B Nothard, *pers. comm.*).

Smallholders have struggled to survive for several reasons; including, lack of expertise, civil unrest in the 1980's and early 1990's, insufficient returns on small individual units to warrant dedicated management (i.e. inadequate scale of production to cover overheads), lack of access to working capital finance and spells of adverse weather conditions, which make it difficult for producers without sufficient wealth to cushion such shocks. These factors combined have resulted in a general decline in production and decline in supply to especially the Maidstone Mill.

**Table 3: Numbers of cane farmers and their deliveries in iLembe; by category**

REGION	2015/16*		
	Numbers Registered	Number with deliveries	Cane delivered (t)
<b><u>DARNALL</u></b>			
M.C.P.	2	2	52 433
LARGE SCALE GROWERS	89	85	358 285
SMALL SCALE GROWERS	187	124	46 664
<b>TOTAL</b>	<b>278</b>	<b>211</b>	<b>457 382</b>
<b><u>GLEDHOW</u></b>			
M.C.P.			
LARGE SCALE GROWERS	117	110	902 148
SMALL SCALE GROWERS	338	105	34 549
<b>TOTAL</b>	<b>455</b>	<b>215</b>	<b>936 697</b>
<b><u>MAIDSTONE</u></b>			
M.C.P.	3	3	323 858
LARGE SCALE GROWERS	58	52	244 747
SMALL SCALE GROWERS	447	194	56 535
<b>TOTAL</b>	<b>508</b>	<b>249</b>	<b>625 140</b>
<b><u>NORTH COAST TOTAL</u></b>			
M.C.P.	5	5	376 291
LARGE SCALE GROWERS	264	247	1 505 180
SMALL SCALE GROWERS	972	423	137 748
<b>TOTAL</b>	<b>1 241</b>	<b>675</b>	<b>2 019 219</b>

The consequence of declining smallholder cane areas by industry and government was the launch of Operation Vuselela<sup>6</sup> (OV), a project aimed at supporting small-scale sugar cane growers north of Durban, supplying the Maidstone, Amatikulu and Felixton mills (the latter two being outside the iLembe District). The project was co-funded by the KwaZulu-Natal Department of Economic Development, Tourism and Environmental Affairs (EDTEA) and THS. The project commenced in the 2009/2010 growing season and implementation was completed in late 2016/early 2017, with the full project specified as a 10-year programme. This project has a value of approximately R125 million, if indirect contributions by THS, directly attributable to their

<sup>6</sup> Vuselela is an *isiZulu* word meaning *revival*

support to OV are included. Approximately 3,061 individual beneficiaries have benefited from this project.

The stated aims of Vuselela were to:

- Contribute to the socio-economic development of rural areas
- Secure and increase cane supplies to THS sugar mills
- Create employment in rural areas (726 permanent and 6,000 seasonal jobs envisaged over a ten-year period)
- Replant 3,700ha of cane lands to establish 2,500 new cane growers (the original target was 3,543ha, but this was increased to 3,700 in the third addendum to the Service Level Agreement).
- Create SMME services for the small-scale cane growing sector.

The project was originally envisaged to have an implementation lifespan of 3 years, but this was extended to 6 years for implementation of the target area (due to drought), with an additional four years of post-project monitoring i.e. a 10-year programme.

Within the Maidstone Mill catchment area some 19 co-operatives were formed with the aim of addressing the issue of scale constraints experienced by individual smallholder producers, with some of these co-ops having combined individual lands, resulting in several operations exceeding 300 ha, using contractors for most of the farming operations (i.e. land preparation, planting, weeding, harvest and transportation).

As an illustration of the difficulties to make a return from small farms, without concessionary assistance in pricing and/or services, the benchmark industry costs of production (CoP) for the Maidstone Mill supply area, as provided by Canegrowers, is provided in the following table. The industry has been affected by droughts in several seasons between 2010 and 2014 and this is reflected in the returns reported.

**Table 4: Industry benchmark costs and returns from cane farming**

Industry Benchmark Profitability	2009/10	2010/11	2011/12	2012/13	2013/14
RV Price/t (R)	<b>2,248.20</b>	<b>2,572.14</b>	<b>3,017.51</b>	<b>3,197.32</b>	<b>3,137.87</b>
<b>Maidstone</b>					
- RV%	12.00	12.75	10.69	11.08	11.66
- Income/t (R)	293.26	349.96	329.36	364.86	365.88
- Direct costs/t (R)	219.94	265.80	247.63	314.35	399.04
- Cane transport/t (R)	26.36	36.24	24.54	32.23	42.34
- Fixed costs/t (R)	46.61	63.89	54.06	57.29	60.72
- Net Return/t (R)	0.35	-15.97	3.12	-39.01	-136.22

This explains the push by farmers for a greater share in the value-add commodities derived from the cane stalk and trash, given their price is determined based on RV (i.e. the quality of sucrose derived from cane delivered), which they argue does not reward them for the fibre and trash, which can and does get used to manufacture other product lines. Millers on the other hand argue they must make the investment in the technology development and production capacity to convert the whole stalk and trash into products and the existing revenue-share arrangements based on the RV price is fair.

Extracting from the Vuselela assessment report (EDTEA, 2014) the experiences with the co-operative model, supported by the mill and EDTEA funding is instructive in informing the benefits and challenges in any proposed SME support programme that could result from this study as provided by respondents:

### Benefits

- The revival of sugar cane farming in all targeted rural communities and bringing land into full production as a result many rural household have benefited from seasonal jobs and rental income. Some households reported being able to pay school fees, school uniforms, built and renovated houses. Some farmers have also been able to pay historical debts.
- The programme has established multiple platforms of dialogue and collaboration amongst members of the co-operatives, community institutions and external stakeholders, mainly THS.
- Co-operatives have experienced access to public sector subsidies/funding. This has come in the form of inputs, training and capacity building and mentorship (extension services) provided by THS. Training and supervision of co-operatives and their diverse experiences have enhanced their technical and basic enterprise management skills.
- The co-operative approach has lowered cost of production through shared costs with concomitant improvement in production.

### Key challenges

In general key challenges relate to governance, management and distribution of financial rewards to co-operative members.

- Co-operative leadership struggles to command authority over members, which may be a consequence of the co-operative legal capacity.
- Co-operatives are trapped into accepting processes dictated by the mill, the EDTEA and the agreed development approach of the programme. The co-operatives have not used their collective strength to negotiate for improved participation in the decision-making processes. Currently they feel powerless to motivate for structural changes such as the employment of contractors, delivery of inputs, hauling of harvest and payment by Umthombo. This is a consequence of early-stage co-operatives not being institutionally ready to challenge the status quo and to propose improvements to the established system.
- There was a declining level of participation of ordinary members in decision-making processes, which destabilises co-operatives, with the executive committee struggling to get the larger part of the membership to meetings. This tends to delay co-operative taking appropriate and/or required action. The unintended consequence of this

phenomenon has been the growing tension between the executive committees and ordinary members. The legitimacy and authority of the executive committee is continuously challenged, as well as the decisions they make.

- Governance and management skills of the executive committees were found to be weak. Ordinary members are elected through a democratic process to take executive roles and are expected to have necessary pre-requisite expertise to run an effective executive committee. Due to lack of these pre-requisite skills such as leadership and managerial ability, co-operatives struggle to engage other actors and supporters in the value chain. Governance and management tools were found to be non-existent in many cases, pointing to the need for their development over an extended period.
- The co-operatives felt that the contractor approach is disempowering to them and that it is designed to keep them trapped where they are currently are. Some co-operatives believe that they have better skills than of the contractors. It is alleged that in some instances the members of the co-operatives find themselves correcting sub-standard work of contractors.
- Co-operatives are expected to farm without equipment. They have no tractors and associated implements. They cannot deal with fires. There is no system or arrangement for the co-operatives to hire tractors and the required implements from the community. However, there are some community members that own the necessary equipment but are discouraged by the tendering system. Ironically some contractors would hire equipment from the same communities after winning tenders. This betrays the expectations of the open tendering system. This has also created more problems for the co-operatives when the owners of tractors and equipment are not paid fairly by the contractors.
- There has been poor management of expectations regarding the relationship between rewards and corresponding responsibilities of ordinary members of the co-operatives, resulting in poor attendance to meetings, poor communication and unresolved issues contributing to negative perceptions about the support programme.
- The payment and input procurement systems were not well understood resulting in frustrations with delays in procurement and receipt of rentals owed through cane sales. These frustrations were sometimes manifested in members burning the cane early and even allowing cattle to graze in cane fields.
- There was a lack of ownership by co-operatives of their own strategic intent and therefore the programme implementers and government are perceived as the owners of the programme and hence those that should solve the problems.
- Logistics planning and execution by SME contractors is poor and cane is either cut and delivered too immature (reducing yields and revenue) and sometime not in a timely manner, leading to declines in quality, thereby negatively affecting RV and price the farmer receives. The payment model also does not penalise the contractor for poor performance as he is paid on tons' cane delivered, not on quality of cane.
- The land owner in this model is virtually a price taker after everyone else (miller, contractor) have taken from the gross revenues, leaving them with very tight margins.
- Co-operatives are aware of the relationship between themselves, the THS and Umthombo Fund. However, they are complicated and co-operatives are frustrated by the role and the behaviour of Umthombo. Specific frustrations raised by the co-



operatives relate largely to payments and financial matters, which are elaborated below:

More recently (2014) TH has embarked on a Jobs Fund supported programme<sup>7</sup> to assist land reform beneficiaries. Under this R 300 m programme the Jobs Fund will provide R 150 m grant capital and TH the balance. In addition, TH has committed R 71.6 m in-kind contributions to socio-economic development, community consultation and project management.

The plan is to plant 12 000 ha and create 2 850 new jobs in rain-fed cane areas, with some targeted areas within the iLembe District. Implementation has been bedeviled by the drought in 2016.

Tongaat also have implemented what is termed the Simamisa<sup>8</sup> Model whereby some 2 193 ha of land is under a 9-year 11-month lease from communal owners at 10% of the cane revenue, with TH administering the operations and contractors engaged to deliver farming services. Simamisa Farming is an agricultural service company contracted to TH for the implementation of the Jobs Fund and Simamisa models.

To illustrate the value of these initiatives a quick calculation of the estimated upside potential return for TH from these initiatives can be derived from the targeted area to re-establish and published figures from TH on their milling margins. At a margin of \$90/t and the redevelopment of 15 700 ha of cane land at 40 t/ha this could translate to as much as 628 000 tons additional throughput for TH mills, adding \$56.52 million to revenue before accounting for the additional investment required. Even assuming 50% of the land area is producing thereby reducing the full marginal impact this would add \$28.26 million (circa R 367 million) to the TH bottom line.

### **Opportunities for diversification**

There are opportunities for smaller sized cane producers to diversify production and Canegrowers for example have several initiatives to encourage this. Canegrowers have developed proposals for diversification, namely:

#### **1) NovaCane seedcane propagation:**

The need for true-to-type disease free seedlings for sugarcane has been a long-term project for the industry. Although labs are currently being erected to produce seedlings, an adequate “plant hardening” facility was unaffordable. To-date a quote for hardening seeds has been given by a nursery located far from the SASRI lab (R1.20 per plant). This however makes it unaffordable to sell commercially. Should the industry produce seedlings commercially, a hardening facility needs to accommodate an estimated 1 million plants per annum.

- This project will be launched on the North Coast. There are several potential sites including farmers who would partner in the venture (e.g. Kim Haggeman of Bethany Farm). It would however be preferable to erect the structure within the AgriPark area (centrally located for iLembe growers).
- The infrastructure required to execute the project follows at a cost of circa R 9.4 million:

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<sup>7</sup> Tongaat Hulett, 2016. Jobs Fund Partnership: Partnering to create sustainable rural communities - Case Study. <http://www.tongaat.co.za/downloads/Jobs%20Fund%20case%20study.pdf>

<sup>8</sup> Simamisa can be translated as “Lift you up” in isiZulu

Project: Insect-proof hardening-off facility (20,000m2)			
Subject: Costing			
Date: July 2016			
Revision No.: 01			
Item no.	Description	Unit	Quantity Rate Amount
1	Earthworks Sum		1 R 400 000.00 R 400 000.00
2	Drainage Sum		1 R 100 000.00 R 100 000.00
3	Concrete to foundation	m3	413.865 R 2 600.00 R 1 076 049.00
4	Concrete to columns	m3	20.25 R 2 600.00 R 52 650.00
5	Reinforcement to foundation and columns	t	39.07035 R 17 500.00 R 683 731.13
6	Structural steel to Roof and side cladding	t	13.75 R 45 000.00 R 618 750.00
7	Masonry	m2	495 R 520.00 R 257 400.00
8	Side cladding	m2	462 R 360.00 R 166 320.00
9	Roofing	m2	10000 R 390.00 R 3 900 000.00
10	Irrigation Sum		1 R 200 000.00 R 200 000.00
11	Electricity Sum		1 R 150 000.00 R 150 000.00
12	Benching (Bricks and lintels) Sum		1 R 250 000.00 R 250 000.00
13	Preliminary and General Sum		1 R 520 000.00 R 520 000.00
			<b>R 8 374 900.13</b>
	Dam Construction (40x40x4 with plastic lining)		1 R 950 000.00 R 950 000.00
	<b>Total Infrastructural Investment Required</b>		<b>R 9 324 900.13</b>

- The project can be initiated as soon as funding is available. Permission to erect a dam would firstly need to be given but this can happen in conjunction with the infrastructural build.
- The project would be managed in partnership by the South African Research Institute, Womoba (a company owned 100% by farmers both commercial and small-scale) and Zululand Nurseries (experts in plant hardening). The ownership would be all farmers through Womoba and Zululand Nurseries.
- The municipality would be required to support in dam construction licensing, or alternate access to water for irrigation purposes.
- Operational cost would be borne by Womoba and Zululand Nurseries. This would be a significant contribution given labour costs would be high.
- This facility would employ a significant amount of labour but the most important contribution would be to the Sugarcane Farmers who would benefit significantly from cheaper Novacane. Also, a large proportion of the profits would flow directly back to all famers in the industry through subsidisation of Industry costs and services. Note: the Sugar industry in iLembe has approximately 60,000 direct household dependents.
- Once commercially viable, there would be need to significantly increase Novacane Seedling production. A shortage of Novacane supply is a risk factor (from both the SASRI lab and Dube TradePort lab). Pest & Disease risks are minimalized due to the type of hardening facility being erected. Opportunities for disease free and true to

type seedlings would become a commercial reality for the industry.

## 2) Juicing Plant

- The South African Cane growers have identified a need to add value to farmers cane crop. Currently profitability levels are low for farmers and making sugarcane juice is something that other sugarcane growing countries have done to great success (e.g. Mauritius, Brazil, etc.). The idea originated from a previous staff member but has been further explored by our Innovations committee at CANEGROWERS. Unfortunately due to a lack of funding, no plant has yet been allocated funding for erection.
- This plant is envisaged to form part of the Agri-Park located near Umhlali on the North Coast.
- At this early stage of the feasibility project, capital costs are very difficult to determine. Investigations into similar scale plants and a desktop review of plant pricing suggests a total of approximately R12.5m. This includes the following facilities: Cane crushing plant, Water treatment plant, Tunnel pasteurisation plant, Filling and canning plant
- As above approximately R12.5m (excluding the Biogas Plant which will each cost an additional R2 million). Total of Juicing factory + 1x Biogas Plant = R14.5 million.
- Investigations are currently underway and should be concluded by the end of 2016 early 2017. The construction will depend on the launch date of the AgriPark.
- This is a Private project but will be implemented and managed by Womoba (a company owned 100% by farmers both commercial and small-scale).
- With a new product on the market, the Municipality would be required to support both the marketing of the juice within iLembe as well as buy-in and allowances regarding electricity generated (albeit on a small-scale).
- There may be a requirement to raise funds to support the operational costs of the project through the grower community.
- Cane growers are looking to stimulate the local economy through inclusion of other agricultural products (being sourced from rural farmers). These would also be juiced and added to the product line. With a 100% grower shareholding, all profits made would go directly into the pockets of farmers (both commercial and small-scale). The initial task is to off-set Industry levies making organisations like CANEGROWERS a free service to farmers.
- The biggest risk is marketing of the product. The technology is proven and raw material readily available. However, in other sugarcane growing countries, this type of product is readily available and become a popular product.
- There may be a delay in setting up the AgriPark but if this is the case we would find alternative land within iLembe. There would also be need to bring in expertise regarding the juicing process to ensure production risks are minimised.

## 3) Biogas from cane tops and leaves (CTL)

- A biogas plant can generate 30KW of continuous renewable energy from 2 tons of CTL per day and produces 3 m<sup>3</sup> of organic fertiliser per day, saving growers R 250 000 in annual costs.

#### 4) Diversification into horticulture

In addition, Canegrowers in consultation with growers have produced a number of other business plans to diversify cane production. The recently formed farmer development organization, the South African Farmer Development Association (SA-FDA) is a break-away small group of farmers from Canegrowers and too has an objective of encouraging cane farmers to diversify.

One of the main members of SA-FDA is the Qwabe Secondary Co-operative located in the Glendale Valley and is a useful case study as illustration of challenges emerging cane farmers experience.

##### Box 1: Qwabe Secondary Co-op

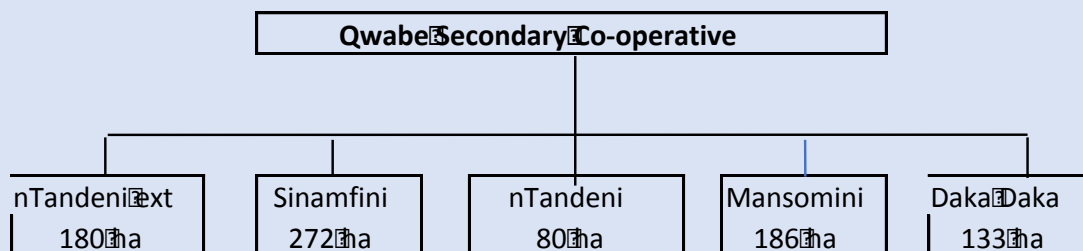
The Qwabe Secondary Co-operative operates in the Glendale Valley, supplying cane to the Gledhow Sugar Company.

##### *History of the valley*

The Glendale Mill was originally built in 1880 and from 1920 to 1960 was owned by the Paruk family who sold it in 1962 to the London Rhodesian Company (Lonrho). Lonrho produced raw sugar and potable alcohol. In the late 1970s and early to mid 1990s Lonrho, Ithala, FAF (Financial Aid Fund, now Umthombo Agricultural Finance) financed and developed several smallholder irrigation projects, starting with mThandeni, then. Daka Daka followed by Mansomini and Sinomfini. These projects consisted of smallholders, previously farming subsistence dryland crops; who agreed to combine their land-holdings into either a co-operative of farmer association, where revenue and capital loans were apportioned in proportion to the size each family contributed. By the early 1990s these farmers supplied 40% of the mill throughput. The projects received technical, extension and irrigation management support from Lonrho. These projects in the main were successful, achieving yields of 80 – 90 t/ha per annum. In 1997 Illovo Sugar acquired the whole Lonrho business, including the Glendale mill and closed the mill in 1997, keeping only the alcohol plant operational. Cane was then diverted to the Gledhow mill at Stanger. Illovo then sold Gledhow to the P Sokhela family Trust's Ushukela Milling Company in 2004 and due to financial difficulties the majority shareholding was acquired in 2009 by a consortium of farmers through the Gledhow Growers Trust (25.1%), Sappi (10%) and Illovo (30%) and uShukela Milling (34.9%).

##### *Qwabe Secondary Co-op*

With the changes in mill ownership the level of support to smallholder growers dropped off and with a series of droughts and low river flows the irrigation projects deteriorated to such an extent that theft of irrigation equipment became rife. The farming leadership then proposed the development of a secondary co-operative, amalgamating all 5 schemes in the valley. This was agreed and the following institutional structure was developed, with associated administrative and operational support functions, supported by Balanced Consulting and Nohari Farms (mentoring on the new vegetable growing initiative).



Recently the co-op has embarked on cabbage and bean production and do a small amount of growing out of chickens

##### *Challenges and opportunities*

The co-ops challenges are to redevelop cane that has been damaged by drought, recapitalise the damaged irrigation infrastructure and find ways of providing cheaper electricity (biogas becomes an option here) and to diversify crops.

## 4 Conclusions

The combination of market demand, export potential, mill excess capacity/throughput requirements, enthusiastic government support, large numbers of existing and potential smallholder cane growers, low risk for new value chain entrants, the new thrust towards collaborative public/private partnerships, and most importantly the need for smallholder farmers to diversify into other cash crops such as fresh vegetables means that this is a very fruitful area for the SECO/UNIDO programme to launch an implementation support programme over the next four years.

This programme should be based on the agglomeration of smallholder sugar farmers in parts of iLembe, thereby creating the necessary scale. The best option would be for an aggregation model of production of cane and tomatoes/peppers. With such a support programme these sugar smallholder farmers could be introduced to tomato production as an additional crop sustainably grown alongside sugar cane albeit on a smaller scale.

The diversification programme would aim to boost overall income levels by creating a new cash crop serving local markets and supermarkets as well as improving sugar cane yields through increasing farmer capabilities and upgrading their production skills.

These hubs create opportunity for smallholder black enterprises. However, in many if not most instances, they have “sweated” their machinery to a point where they need to recapitalize but can’t because of financial constraints. Smallholder contractors are not effective in getting quality cane to the mills in a timely manner. This has a significant negative impact on growers’ net incomes. A programme, or project to investigate this weakness in the value chain and recommend a remedial intervention programme should be considered. Such a project would have to include re-visiting the remuneration policy for contractors to incentivise them to cut and deliver quality cane.

The focus on the need for diversification of smallholder activities has also yielded other ideas for smaller sized cane producers to diversify production. There is a need to produce true-to-type disease free seedlings for sugarcane. Although labs are currently being erected to produce seedlings, an adequate “plant hardening” facility was unaffordable. Should the industry produce seedlings commercially, a hardening facility needs to be created. The industry has also identified adding value to cane through making sugarcane juice, as has occurred in Mauritius and Brazil. There is a proposal to build a juicing plant as part the Agri-Park located near Umhlali on the North Coast, but alternative land in iLembe could be procured for such a project.

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## 6 Annexure A – Interviews

No.	Name	Organisation	Tel	email
1.	Trevor Millstead	Sugar & Macadamia farmer	082 898 3957	
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17.	Dumisani Dlamini	Mshikashika Co-op - Member	073 501 1210	
18.	Sthembiso Dube	Daka Daka Irrigation Scheme	078 438 2221	
19.	Khumbuzile Ntombela	Ezibadleni Co-operative	072 376 8819	
20.	Bongiwe Maneka	Qwabe Development Co-operative	084 806 6658	
21.	Sithethevelo Zondi	Gledhow Sugar Company – Intern	063 719 8324	<a href="mailto:Sthe.zondi10@gmail.com">Sthe.zondi10@gmail.com</a>
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26.	M Ngena	Maqumbi Co-op – Exec Member	073 550 4016	
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32.	Dave Wise	Macadamia & Sugar farmer	082 898 3957	
33.	Micky Robert	Sugar & Macadamia Farmer	082 892 9362	