Illovo Sugar Africa (Pty) Ltd

Ubombo Sugar Limited (Ubombo Sugar) social, economic & environmental impact assessment

FY2020/2021

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Introduction

Illovo Sugar Africa (Pty) Ltd (Illovo Sugar Africa), a wholly owned subsidiary of Associated British Foods plc, is a Pan-African, consumer-centric agri-business with over 130 years in operation that has roots in growing and making sugar and related products, sustainably. The company is Africa's leading and diversified sugar Group with operations in Eswatini, South Africa, Mozambique, Malawi, Tanzania, Zambia and most recently, Rwanda.

The Group employs 44,000 people across its six locations, excluding Rwanda. As a significant employer, producer of sugar distributed to principally domestic markets and purchaser of agricultural raw materials, Illovo Sugar Africa can positively shape the socio-economic fabric of the economies and communities of which it is part.

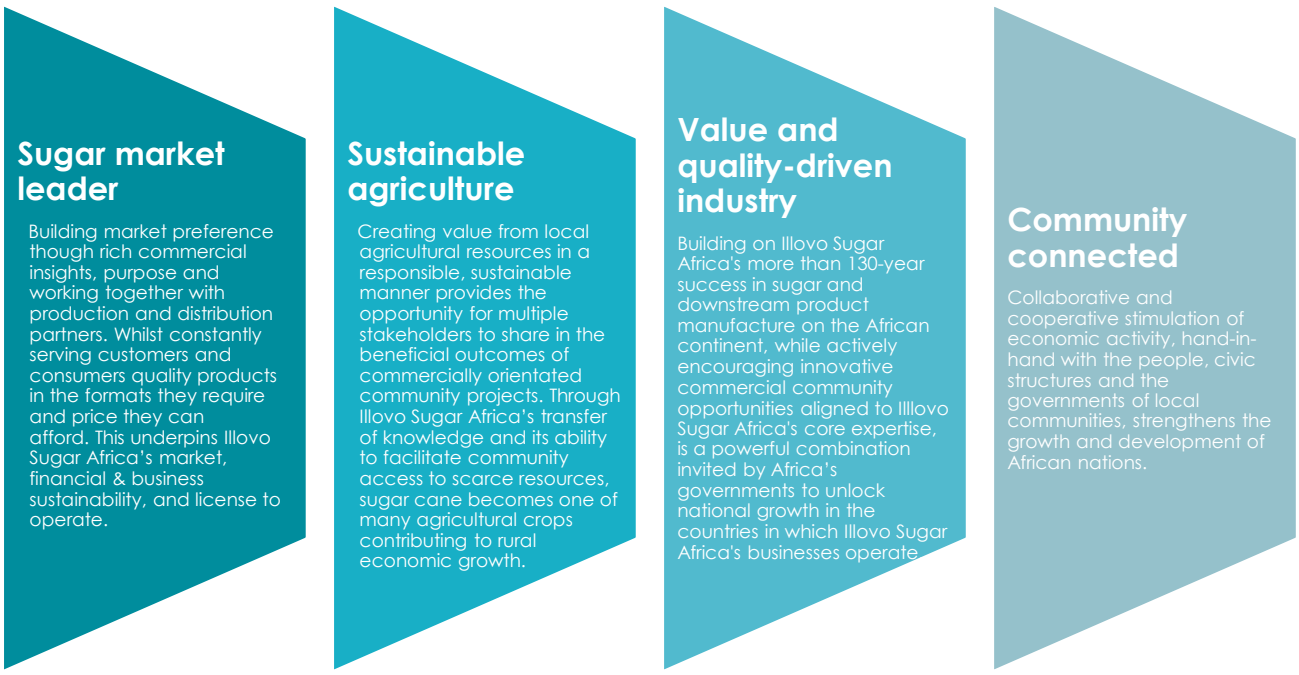
About this report

> "We recognize that a successful business on the continent is one that evolves alongside its host markets, whilst creating shared economic value in the countries where we operate and the communities surrounding our operations. This is the essence of our Illovo Sugar Africa purpose."
> - Illovo Sugar Africa

This report is an update of the socio-economic impact assessments carried out for Illovo Sugar Africa and its subsidiaries in 2013 and 2017. These reports are available on Illovo Sugar Africa's website. Illovo Sugar Africa commissioned Corporate Citizenship, an independent sustainability consultancy, to undertake these assessments to form a deeper understanding of the company's impact on its communities and use the insights to enhance the value it brings and achieve its self-identified company purpose to create thriving communities.

Illovo Sugar Africa's purpose is entrenched through its four key pillars:

Figure 1: Illovo Sugar Africa's sustainability pillars



This report is for the 2020/21 fiscal year (FY), which for Illovo Sugar Africa and its subsidiaries runs from September 1st to August 31st. Data from FYs 2016/17, 2018/19 and 2019/20 has also been provided in some sections for trend analysis purposes. Unless otherwise indicated, all years cited in this report refer to fiscal years.

Due to its recent establishment in 2019, Illovo Sugar Kigali (ISK) in Rwanda has not been assessed in the updated impact assessments.

Expanding on previous reports that focused on Ubombo Sugar Limited's socio-economic impacts, the 2022 assessment has been broadened to include additional information on Illovo Sugar Africa's direct and indirect environmental impacts. Key findings from the assessment are structured against Illovo Sugar Africa's four key pillars. Further information about this report including details on the methodology can be found in Annex I on Illovo Sugar Africa's website.

Illovo Sugar Africa in Eswatini

In Eswatini, Illovo Sugar Africa operates through its subsidiary, Ubombo Sugar Limited (Ubombo Sugar), which is one of the three sugar producers in the country. Illovo Sugar Africa holds a 60% share in Ubombo Sugar, with Tibiyo Taka Ngwane (Tibiyo) holding the remaining 40% share.

Ubombo Sugar produces 256,035 tonnes of raw and refined sugars and direct consumption sugars annually that are marketed and distributed by the Eswatini Sugar Association (ESA)[3]. Ubombo Sugar's direct consumption sugars make up 38% of ESA's annual marketed and distributed sugar output. The company operates an agricultural estate, factory and sugar refinery, located adjacent to the Great Usuthu River in the southeast of the country.

In 2011, Ubombo Sugar underwent a major factory expansion and power cogeneration project. Through its expansion, Ubombo Sugar also supported the development of the Lower Usuthu Smallholder Irrigation Projects (LUSIP), contributing significantly to the reduction of poverty in the Southern Lowveld of Eswatini. In 2022, Ubombo Sugar started a partnership with the Eswatini Water and Agricultural Development Enterprise (ESWADE) to develop LUSIP II. The programme is implemented through the Ubombo Sugar grower agriculture department and provides procurement and contracting support to small scale growers. When the programme is complete in 2026 it will have contributed 400,000 tonnes of sugar cane to be crushed making small scale growers collectively the biggest cane supplier of Ubombo Sugar.

Table 1: Eswatini demographic data

Eswatini country data[1]	
Economic Indicators	
Gross domestic product (GDP) at purchasing power parity (PPP)[2] (2021)	$4.94bn
GDP per capita (2021)	$4,214.9
Annual GDP growth rate (2021)	7.4%
Labour market Indicators	
Population (2021)	1.2m
Labour force (2021)	366,000
By occupation (2019)	Agriculture 12.1% Industry 23.4% Services 64.5%
Population location (2021)	Rural 76.0% Urban 24.0%
Unemployment rate (2021)	25.8%
Poverty Indicators	
Population living below $2.15 per day (2016)	36.1%
Population living below national poverty line (2016)	58.9%
Adult literacy rate (2018)	88%
Life expectancy at birth (2020)	61 years

[1] World Bank Open Data
[2] Eurostat The purchasing power parity is the exchange rate that removes price level differences between countries.
[3] Eswatini Sugar Association

Summary of findings

Ubombo Sugar continues to be a significant contributor to Eswatini's economy, and as the second largest sugar manufacturer in one of the world's leading countries in terms of sugar output, it plays an important role in Swazi communities. The company continues to maintain a strong financial position in the economy and has even redirected a sizable share of its exports to support other African economies where sugar is becoming harder to produce. Its economic success, compounded by Ubombo's strong approach to wages and labour standards is supporting valuable economic and employment opportunities for many people within the company's value chain and is particularly important for Eswatini's rural communities. Ubombo Sugar is also contributing to sustainable agricultural practices within its own operations but increasing support and development for grower communities remains a critical priority given the organisation's dependency on them as climate-related risks, particularly floods, continue to affect the sugar cane value chain.

The main findings for the fiscal year 2020/21 are summarised in the table below.

Table 2: Key quantitative impact findings by pillar

In 2020/21, Ubombo Sugar's quantitative social, economic and environmental impacts in Eswatini included the following:	
Sugar market leader	• 259k tonnes of sugar produced with 68% sold into the SACU region • Total economic impact estimated at E4.5Bn, including E1.04Bn direct impact (gross value added) and the remainder in indirect & induced impact through multiplier effects in the supply chain and wider economy • E46.1m direct tax contribution and E261.2m indirect tax contribution (collected on behalf of the government) • 3,525 directly employed including 1,056 permanent and 2,469 non-permanent roles. Through direct jobs only, Ubombo Sugar contributes to supporting an estimated 16,568 livelihoods once families and dependents are taken into account (based on an average household size of 4.7) • Estimated total employment impact of 5,616, including direct, indirect and induced employment supported in grower communities and the wider economy
Sustainable agriculture	• 9,222 ha of Ubombo Sugar-owned cropland, which produced 1,057,939 tonnes of sugar cane output (Ubombo Sugar-owned) • 12,673 ha of grower cropland, working with 136 independent growers who supplied 1,201,368 tonnes of sugar cane (52% of Ubombo Sugar's total sugar cane) • 124 growers reached via development programmes
Value and quality-driven industry	• 98% of energy production from renewable sources • 14% increase in scope 1 & 2 emissions (2019/20 - 2020/21) • E485k invested in safety training and a Lost Time Accident Frequency rate of 0.07 • E6.2m invested in training, with 1,381 employees trained • E32.1m invested in employee benefits including support for healthcare, pension funds and counselling • E1.9Bn spent on procurement with E1.54Bn (81%) going to local suppliers
Community connected	• E24.64m spent on the community through projects such as providing COVID-19 emergency support, supporting water cleaning and organise educational campaigns in partnership with Eswatini Environment Authority • 1,751 COVID-19 vaccinations • 13% women in Ubombo Sugar's workforce with 29% in the management level

Sugar market leader

Building market preference through rich commercial insights, purpose and working together with production and distribution partners. Whilst constantly serving customers and consumers quality products in the formats they require and price they can afford. This underpins Illovo Sugar Africa's market, financial & business sustainability, and license to operate.

Key pillar findings:

Ubombo Sugar has seen overall increases in revenue and sugar production since 2016/17, and while the company clearly maintains its status as a Swazi sugar market leader, one key change has been the increase in sales to the African market making it an important regional exporter. Pressures on the industry over the past three years, particularly floods and the increasing threat of flood risks have affected the industry, leading to a slight dip in sugar production. The company's total economic impact has increased substantially since 2016/17, rising by 47%, driven by the increase in revenues and its knock-on impact on direct, indirect and induced economic impact. Our assessment noted a decline in Ubombo Sugar's total employment impact compared to 2016/17, largely due to a decrease in the indirect employment of growers.

259k
tonnes of sugar produced

E1.04Bn
Ubombo Sugar's direct economic impact

E4.5Bn
Ubombo Sugar's total economic impact

E307.3m
total tax contribution

3,525
people directly employed

5,616
total employment impact

E45.1m
spent on capex

Note: *Definitions for direct economic impact, indirect economic impact, induced impact, total impact, and employment impact are provided on pgs. 8-9 and 11.*

Meeting demand & beyond

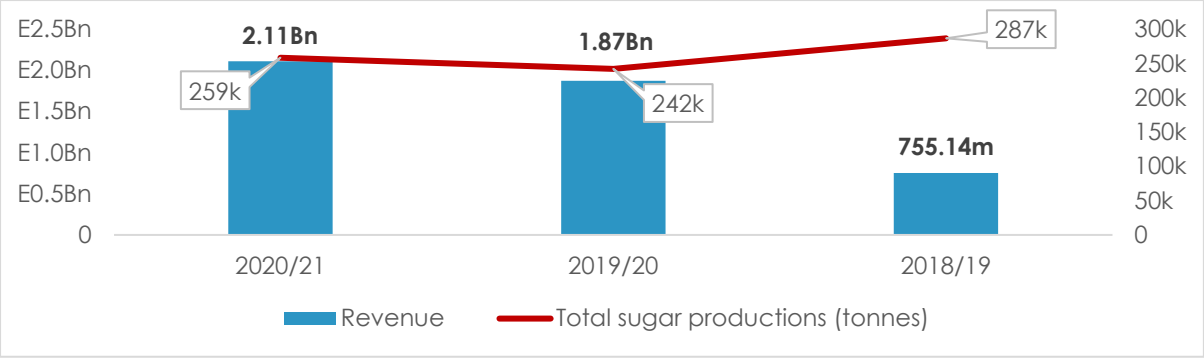
As one of the two largest sugar producers in Eswatini, which as a country is the fourth-largest producer of sugar in Africa, Ubombo Sugar plays an intrinsic role in meeting domestic and regional demand for sugar. Since 2016/17, Ubombo Sugar's sales from sugar production have increased by over E500k, an uptick of above 30%. In the last three years too, these sales have been steadily rising, from E755.1m in 2018/19, up 180% to E2.1Bn in 2020/21. In addition to rising revenues, Ubombo Sugar's output has increased from 2016/17, up 20% from 215,000 tonnes to 259,000 tonnes. This is in line with forecasts for

"Flooding has become an emerging risk. It would be great to receive training to integrate more resilient farming practises to ensure output."

- Mr Masuku
Representative small growers

growth in the Eswatini sugar sector.[4] It should be noted, however, that production in the past three years, though consistent, has dropped overall from 287k tonnes in 2018/19 to 259k tonnes in 2021. The drop in volume output was mainly driven by the unstable weather conditions (cyclones and drought), combined with the increase in input costs especially fertilizer and electricity which resulted in the decline in the number of growers and yields.

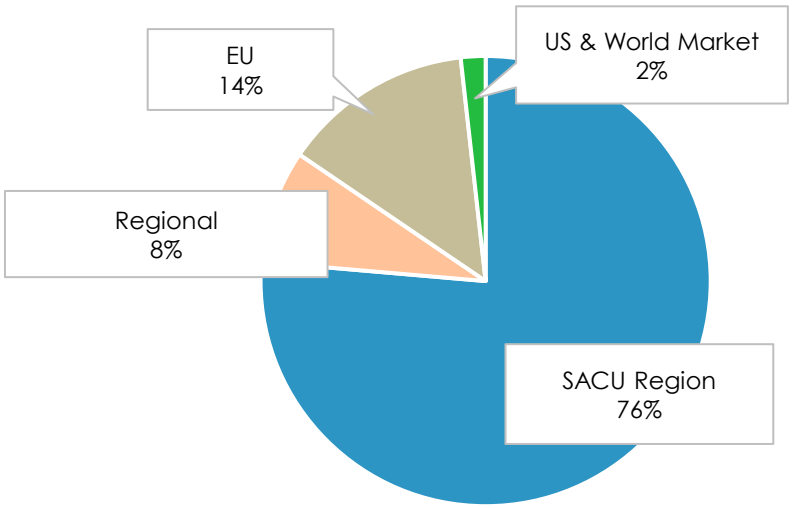
Figure 2: Ubombo Sugar sales and production volume, 2018/19 - 2020/21



Sales by segment

In 2020/21, 76% of sales were in the SACU market. Of the regional exports, the majority go to South Africa, where severe climate-related challenges, particularly floods, are significantly impeding domestic production.

Figure 3: Ubombo Sugar's sales by market segment for 2020/21



Ubombo Sugar also creates revenue through the sale of co-generated electricity, totalling E118m in 2020/21, a figure which has been steadily rising over the past three years, up 11% from 2018/19.

[4] US Dept. of Agriculture (2022), *Sugar Annual, Eswatini*

Product affordability

Ensuring affordability alongside the availability of sugar is important in a market such as Eswatini, where 36.1%[1] of people live below the poverty line of $2.15 a day. Ubombo Sugar's direct consumption of sugar is marketed by the Eswatini Sugar Association (ESA). Sugar pricing is determined by the ESA whose mission is to consider the requirements of the sugar industry and customers to "provide quality products in a cost-effective manner".[5]

Economic contributions

As one of the largest of Eswatini's sugar manufacturers, which also sources 53% of its sugar cane from external growers, Ubombo Sugar plays a significant role in the nation's sugar sector. Sugar cane growing and production is relatively labour intensive compared to other crops and there are a large number of small-scale growers in the value chain, which causes significant economic multiplier effects. The majority of the effects are felt by the rural populations, who grow and harvest the sugar cane, as well as the supporting industries that supply to Ubombo Sugar and small local businesses that have grown around the sugar estates (e.g. transportation, harvesting, retail). The three main areas of impact are:

1. **Direct impacts**, through Ubombo Sugar's direct employment of workers on farms and in factories, as well as tax payments, interest spending, shareholder dividends, investments and other payments;

2. **Indirect impacts** in the value chain. A significant contributor to indirect economic impact is the large number of independent growers in Illovo's supply chain who deliver and are paid for their cane via cane supply agreements with Illovo's mills. Other indirect impacts include payments to other suppliers and distributors, as well as impacts on those selling Illovo Sugar Africa products or using them in their businesses;

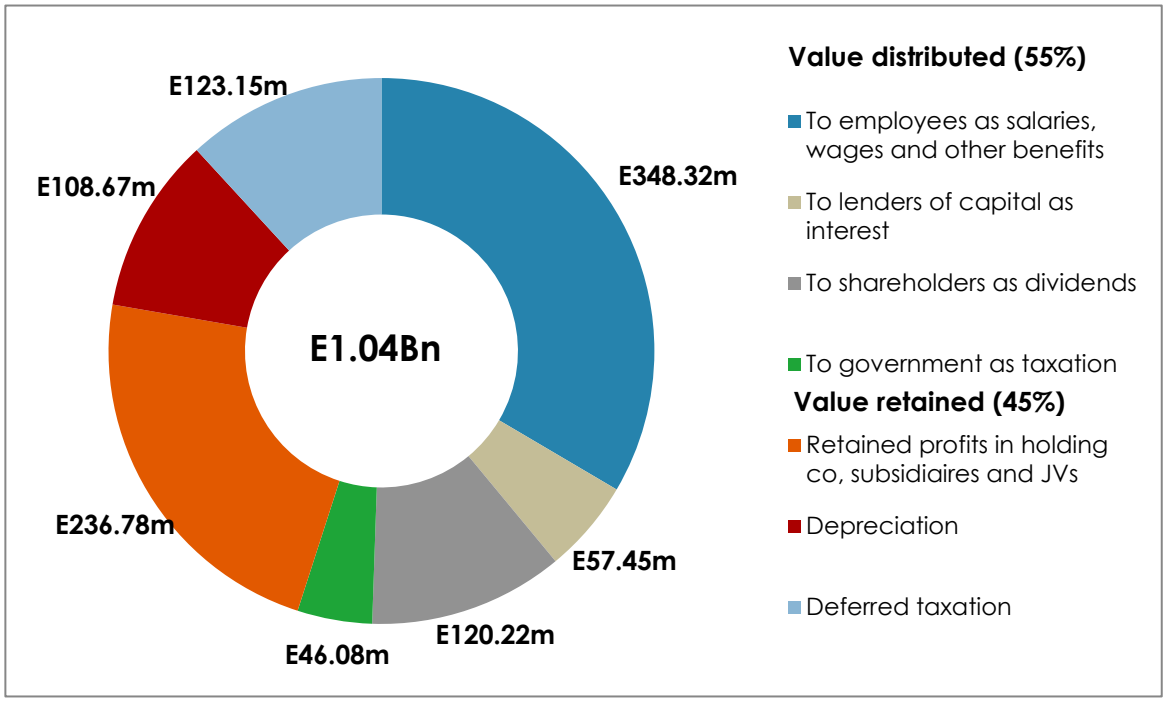
3. **Induced impacts**, through spending by direct and indirect employees, leading to increased consumption and employment elsewhere in the economy. This also includes the employment and additional service providers operating on grower farms, which exist in the rural economy as an indirect result of the Illovo value chain and include the creation of Small to Medium-sized (SME) service providers, themselves also rural employers.

Direct economic impact

Ubombo Sugar's direct contribution to the economy of Eswatini, measured in terms of gross value added, was E1.04Bn in 2020/21. This number is calculated as the difference between revenues and outgoings and is a measure of the company's contribution to GDP. Of this, 55% was distributed to stakeholders, namely employees, shareholders, and the government. The other 45% was retained in the business, an increase from the 8% retained in 2016/17.

[5] ESA (2022), *Mission Statement*

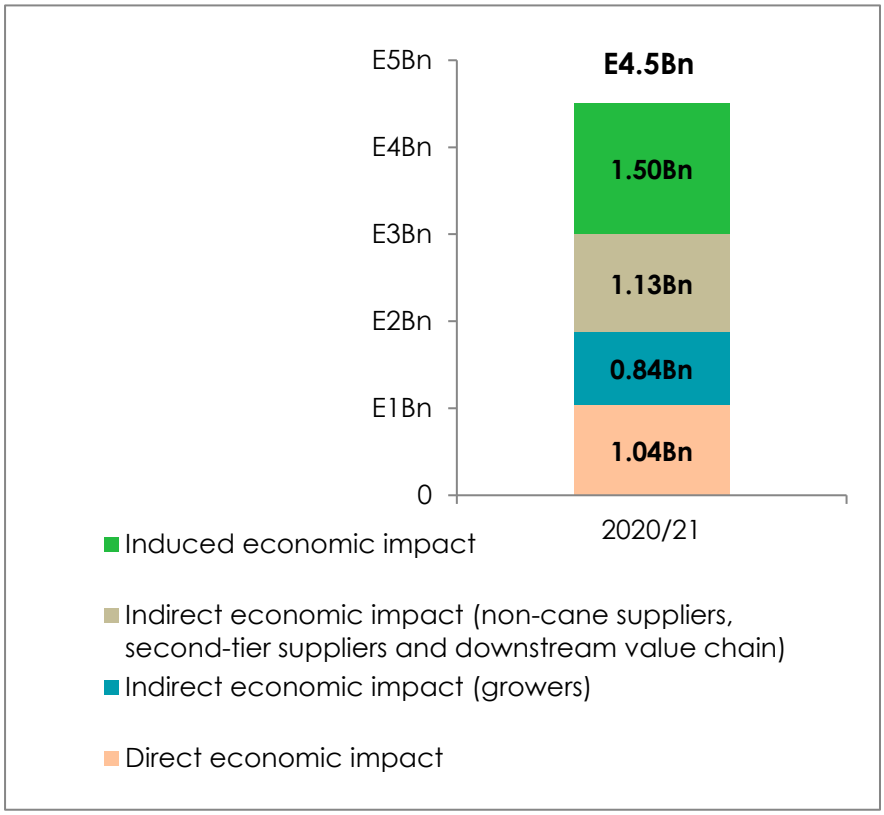
Figure 4: Ubombo Sugar's direct economic impact, 2020/21 (distribution of gross value added)



Total economic impact

Ubombo Sugar's total economic impact – including direct, indirect and induced impacts – is estimated at E4.5Bn for 2020/21.

Figure 5: Ubombo Sugar's total economic impacts in Eswatini (estimated), 2020/21



This E4.5Bn total economic impact marks a 47% increase on the E3.07Bn total impact reported in 2017.

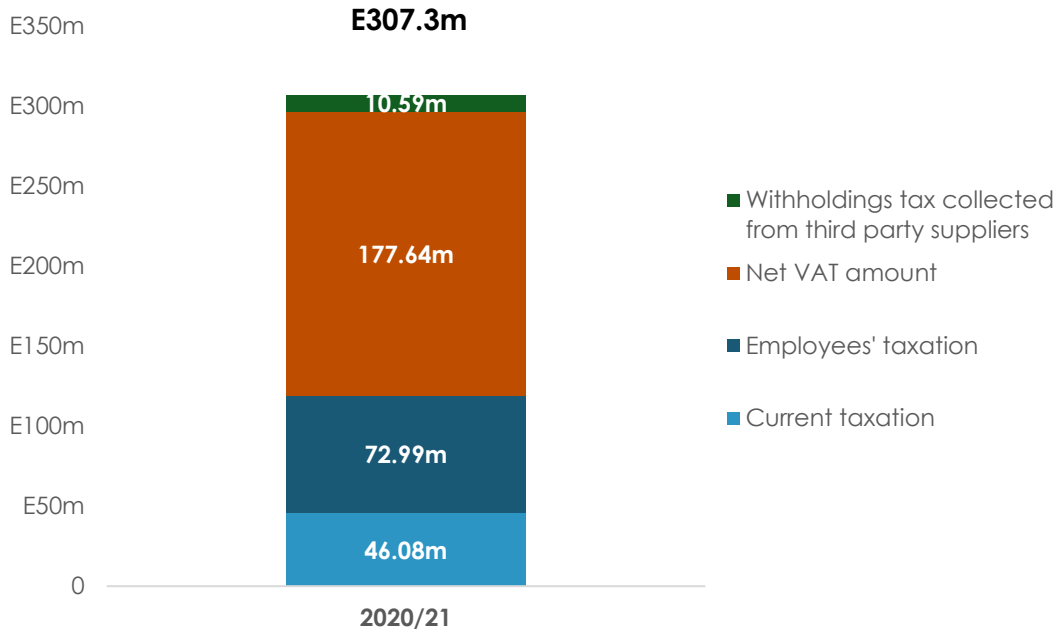
Tax contributions

As a major player in Eswatini's sugar industry, Ubombo Sugar is an important contributor to Eswatini's tax revenues. In 2020/21, Ubombo Sugar's direct tax payments amounted to E46.1m, while indirect taxes (which are collected on behalf of the government) totalled E261.2m.

Indirect taxation includes employee tax, withholdings tax and VAT.

The total of E307.3m represents a 35% increase on the E227.8m total tax payments made in 2016/17, largely due to the 171% increase in withholdings tax and 8% increase in VAT tax payments.

Figure 6: Ubombo Sugar's tax payments, 2020/21

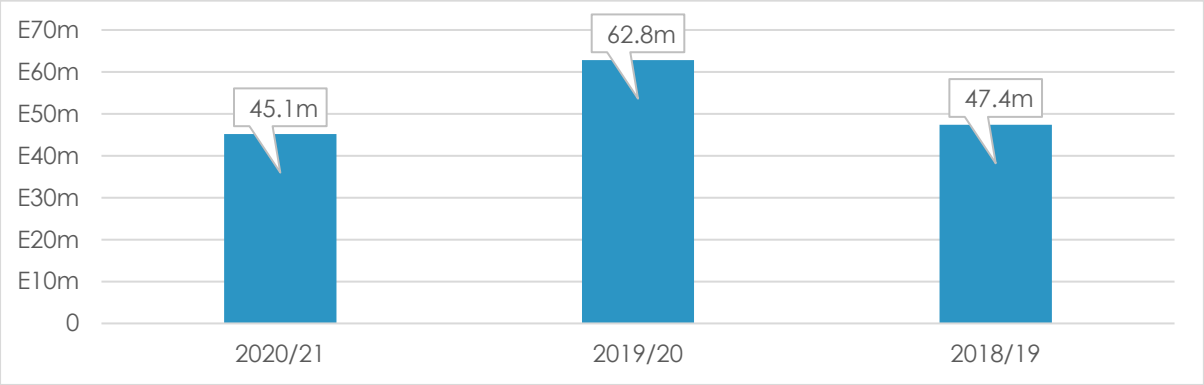


Capital expenditure

Ubombo Sugar's capital expenditure between 2019-2021 has decreased marginally since the total spent in 2015-2017, falling by 4% from E161.9m to E155.3m.

It also decreased between 2018/19 and 2020/21, down 5% from the E47.4m spent in 2018/19 to E45.1m in 2020/21. This is largely because there were not any major capital projects implemented in 2021. In 2019/20, a major project (TA 6 Turbine Diaphragm Replacement, E18m) and a core capital project (AF Centrifugals Replacement (Phase 1 of 2), E11m) were implemented. In 2018/19 there was a capital project spend of E12m for the Ubombo Drip Conversion Project (Phase 2 – 6).

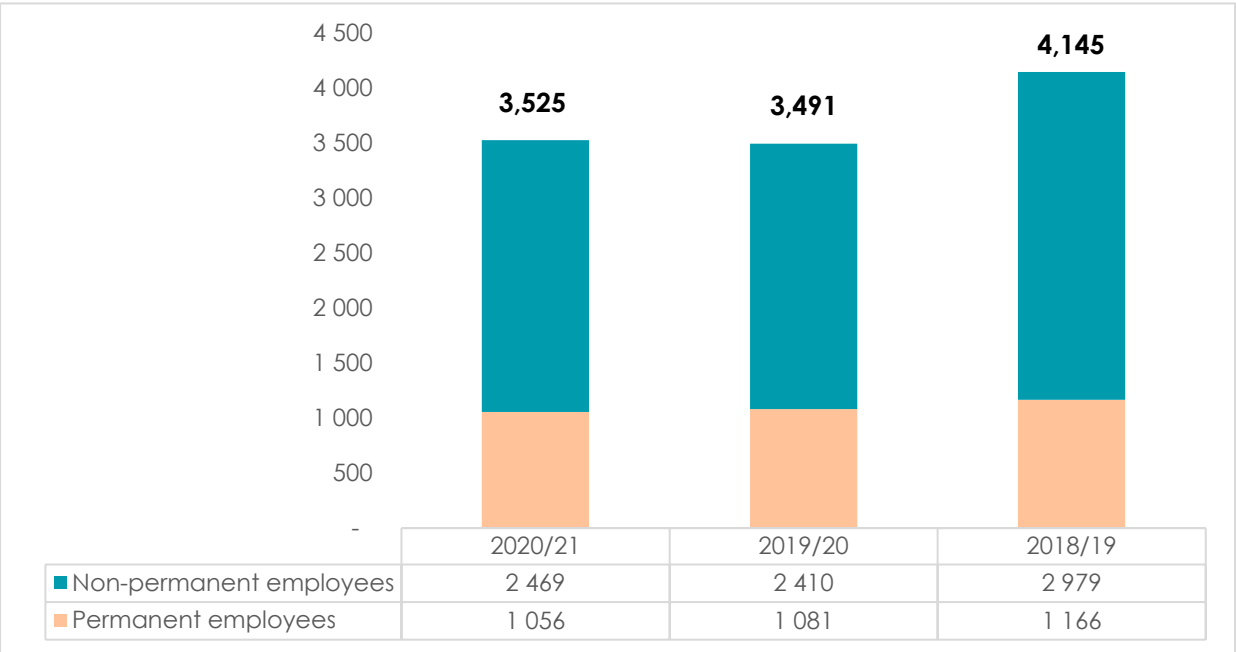
Figure 7: Ubombo Sugar's capital expenditure, 2018/19 – 2020/21



Employment

Our engagement with Ubombo Sugar's stakeholders revealed that one of the most important impacts valued by local leaders, community organisers and Ubombo Sugar employees is the employment opportunities Ubombo Sugar has created.

Figure 8: Ubombo Sugar direct employment, 2018/19 – 2020/21



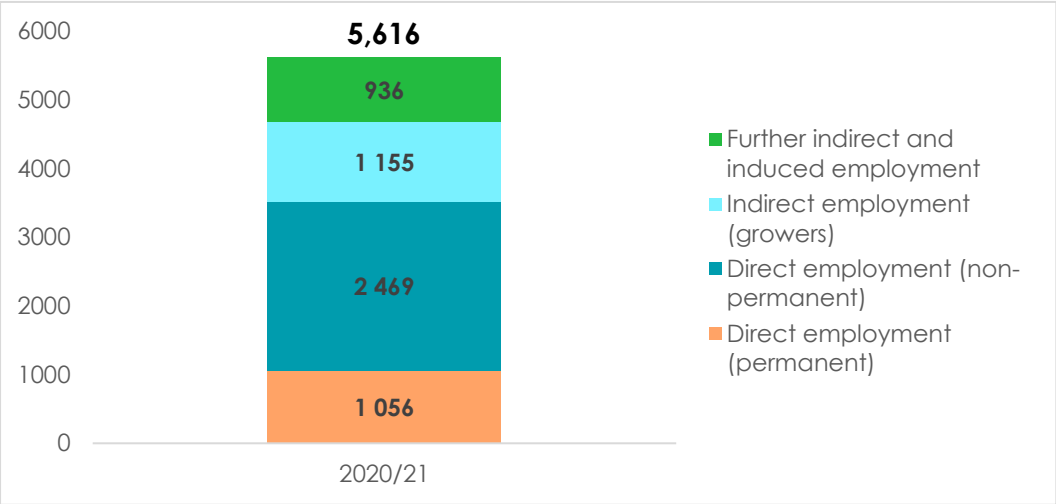
	2020/21	2019/20	2018/19
Non-permanent employees	2 469	2 410	2 979
Permanent employees	1 056	1 081	1 166

In 2020/21, Ubombo Sugar directly employed 1,056 permanent employees and 2,469 non-permanent/seasonal employees at peak periods. Since our last assessment, permanent employee numbers have remained broadly stable, with a small decreasing trend over the last five years. However, there has been a slight rise in non-permanent employees up by 8% compared to 2016/17. The drop in seasonal employees from 2018/19 to 2019/20 was largely due to the outsourcing of cane cutters and other seasonal jobs. However, overall these trends reflect a fairly stable demand for seasonable employees who are largely contracted employees hired to support seasonal agricultural and factory roles during the planting and harvesting season.

Ubombo Sugar paid a total of E348.3m to employees in 2020/21, across direct salaries, wages, and other benefits. This was 15% lower than the amount paid in 2016/17.

In addition to direct employees, 136 independent growers deliver their cane to Ubombo Sugar, thereby contributing significantly to indirect economic impacts within Illovo's value chain. The business also contributes to further indirect and induced employment in Eswatini. We estimate Ubombo Sugar is supporting the employment of at least 5,616 people in total in Eswatini, based on a conservative multiplier for the sugar industry. This means that for every direct employee of Ubombo Sugar, at least 0.6 other workers are supported through grower communities and in the wider economy.

Figure 9: Ubombo Sugar's total employment impacts in Eswatini (estimated), 2020/21



We estimate these direct jobs provided by Ubombo Sugar also contribute to supporting the livelihoods of 16,568 people once families and dependents are considered. This is based on an average household size of 4.7 in Eswatini.[6] The amount to which Ubombo Sugar supports livelihoods will vary between households – for some, such as direct employees and growers, Ubombo Sugar may well be the main contributor to household income, while in others Ubombo Sugar's support will be a factor among many.

The total employment impact in 2021 decreased from an estimated 7,363 jobs in 2016/17, with the biggest contributing factor being the 60% fall in the number of agricultural employees engaged. We noted from our interviews that growers are currently facing challenges such as affordable electricity, water, and climate-related issues such as flood risk which make it difficult to maintain a stable livelihood as a grower, causing some growers to seek alternate employment.

[6] UN Department of Economic and Social Affairs (2022), *Household Size & Composition Eswatini*

FUTURE FACING CHALLENGES

Diversifying its output will be important for Ubombo Sugar to consider. The company currently only earns revenue on processing sugar and selling electricity back to the national grid. As world markets increase consumption of sugar-based products such as ethanol, considering production of such downstream products will help keep Ubombo Sugar's financial position solid.

As growing sugar cane becomes more difficult due to flood risk, other options include partnering with the government for diversified crops and opening market channels for domestic and regional export opportunities. Financial and training opportunities need to be provided to a wider range of potential growers. Ubombo Sugar will also need to consider upskilling current workers to learn how to operate and maintain new sustainable technology.

We noted that Ubombo Sugar's employment impact declined on the basis of its reduced numbers of agricultural employees engaged employed. Considering current dependency on cane, the suggestions for diversification above should assist in elevating Ubombo Sugar's employment impact as well as ensure it remains a market leader. Identifying opportunities here would be a good reason to increase capital expenditure which has remained quite low for the past few years.

Sustainable agriculture

Creating value from local agricultural resources in a responsible, sustainable manner provides the opportunity for multiple stakeholders to share in the beneficial outcomes of commercially orientated community projects. Through Illovo Sugar Africa's transfer of knowledge and its ability to facilitate community access to scarce resources, sugar cane becomes one of many agricultural crops contributing to rural economic growth.

Key pillar findings: Ubombo Sugar has made significant investments in sustainable agriculture research and improvements, particularly in starting the transition to both mechanised and green-cane harvesting and drip irrigation. Support is being provided for growers across several key areas through the company's grower development programme. However, growers identified a need for improved support for increased agricultural productivity and sustainable practices. Climate impacts are starting to be felt, with concerns over water scarcity, flooding, and increasingly variable weather. Some initiatives are in place to address these issues, however, there is room for more concentrated efforts.

9,222 ha of Ubombo Sugar-owned cropland

12,673 ha of grower cropland

136 growers in the supply chain

1,057,939 tonnes sugar cane output (Ubombo Sugar-owned)

1,201,368 tonnes sugar cane output (growers)

124 growers reached via development programmes

Ubombo Sugar's agricultural practices

Ubombo Sugar has influence not only over the practices of the land it manages but also over the growers with whom it works. Many of the potential environmental and social impacts from sugar cane farming relate to land-use change from converting land which may otherwise be used for other purposes, such as subsistence farming, or biodiverse wild habitats. For this reason, much of Illovo Sugar Africa's overall approach to improving farming sustainability is to focus on increasing vertical growth through achieving higher yields per hectare of existing cropland, held both by Illovo Sugar Africa and growers. This drives the positive social and economic impacts of sugar cane production while minimising additional environmental impacts from expanding land conversion.

Water use and crop irrigation

Eswatini has suffered from climate-related impacts on weather and water systems, leading to increases in droughts, floods, and heat waves.[7] Drought impacts agriculture via reduced

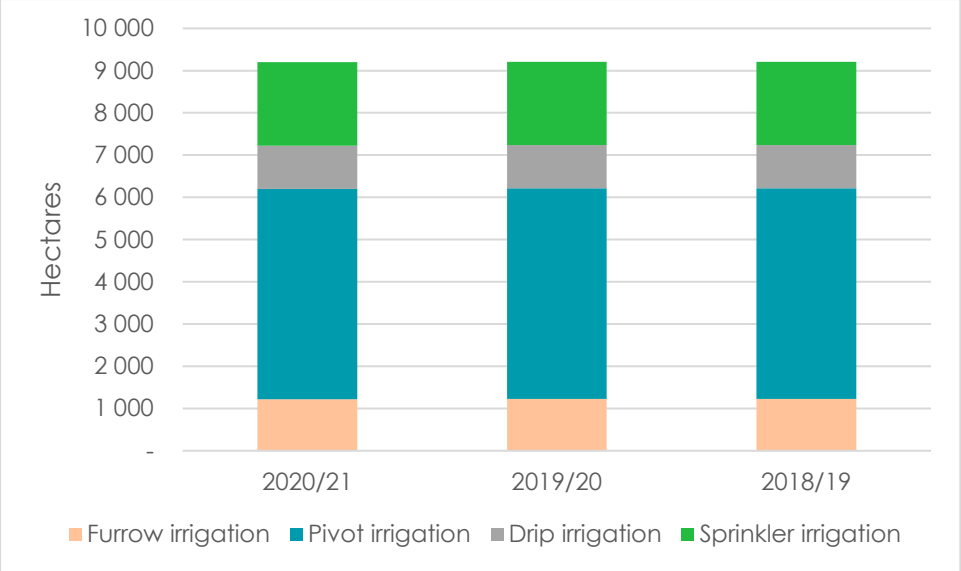
[7] The Kingdom of Eswatini (2021), *Initial Adaptation Communication to the United Nations Framework Convention on Climate Change (UNFCCC)*

production due to water scarcity, while flooding is particularly harmful to sugar cane crops. Over the coming years, climate change is likely to worsen these impacts, making water usage and efficiency a priority for Ubombo Sugar.

During 2020/21, 100% of Ubombo Sugar's cropland was irrigated by various methods, making water security a prominent issue in light of future climate concerns.[8] During 2020/21, pivot irrigation was the most used (54%), followed by sprinkler irrigation (43%), furrow irrigation (13%) and drip irrigation (11%). Table 3 highlights the benefits of the various irrigation methods.

Our previous 2017 report highlighted that Ubombo Sugar had committed ZAR29 million (E29 million) to the first phase of a project to convert existing irrigation systems to drip irrigation, which is more effective and efficient in terms of water use. Our engagement this time found that the transition towards drip irrigation has been successful across some areas (see figure 10), with a potential 30% decrease in the water footprint of crops with access to drip irrigation compared to other methods. Ubombo Sugar is working toward a target of a 30% reduction in end-to-end supply chain water footprint by 2030, from a 2018 base year, and efforts to maximise the efficiency of water use through irrigation contribute towards this goal. The company's target is to convert all furrow irrigation systems on Illovo Sugar Africa land to drip irrigation by 2027, however, the primary barrier to implementation is the high cost of the infrastructure and installation.

Figure 10: Ubombo Sugar-owned cropland area under different irrigation methods, 2018/19 – 2020/21



[8] Climate Change Knowledge Portal (2022), *Eswatini Country Profile*

Table 3: Comparison between different irrigation methods

	Definition	Benefits	Limitations
Furrow irrigation[9]	Establish long surface trenches, making use of gravity to let water run down between crops on the ground	• Low-cost, low-tech method • Well suited to broad-acre row crops such as sugar cane	• Risk of evaporation losses • Can distribute water unevenly across row crops • Can be labour-intensive
Pivot irrigation[10]	Movable pipe structure rotating around a centre pivot, with water dripping from the top of the cane to the roots	• High efficiency • High uniformity • Ability to irrigate uneven terrain • Low capital, maintenance and management costs	• Risk of evaporation losses • Can achieve uneven application of water to crops • Wind interference
Sprinkler irrigation[11][12]	Distribution of water through the pipe system, spraying the water into the air through sprinklers	• Easy to set up • Water efficient • Less land loss • High and frequent application • Automation	• Risk of evaporation losses • High operating costs • Wind interference
Drip irrigation[13]	Development of pipe system, running along with the soil to apply water on the roots of the crops	• No evaporation, highly efficient • Directs water and nutrients to plant root system • Precise and controlled application possible • Soil erosion and weed growth are reduced • No labour cost after development	• Double the cost per acre than pivot irrigation • Can require disruptive/labour-intensive installation • Clogging of tubes can occur

Crop harvesting and the move to green-cane

Currently, Ubombo Sugar harvests much of its own sugar cane using cane burning methods followed by manual harvesting. Cane crops are burned to remove brownleaf from the crop without damaging any of the inner sugar content. Burning the cane enables cane cutters to harvest the cane stalks using cane knives. Without pre-burning, the cane must be stripped of its leaves and other plant material (called trashing) in order to facilitate infield loading and transport operations, and optimal processing of the cane in the factory. While efficient, the burning process creates air pollution that could be eliminated via mechanised green-cane harvesting. The cane burning process also emits some greenhouse gases, although these may be seen to be balanced out through carbon sequestration by the cane as it grows. It is recommended that Ubombo Sugar explores measuring and reporting the impact of these biogenic cycles in more detail in future, with reference to a methodology such as the Greenhouse Gas Protocol's emerging guidance specifically for land sector and removals[14].

Mechanised green-cane harvesting can offer various environmental benefits, primarily the reduction of air pollution from burning, the improvement of soil health through increased crop residues being left to decompose and return to the soil, and increased feedstocks for

[9] Greenmatters (2020), *Furrow irrigation can help save water, but is it worth the labor?*
[10] Waller & Yitayew (2016), *Center Pivot Irrigation Systems*
[11] FAO (2022), *Sprinkler irrigation*
[12] Artificial Plants (2018), *10 advantages and disadvantages of sprinkler irrigation system*
[13] Sharaf, B. (2022), *Advantages and disadvantages of drip irrigation*
[14] Greenhouse Gas Protocol (2022), *Land Sector and Removals Initiative*

renewable energy generation. The company has already begun transitioning to green-cane harvesting, currently covering an area of roughly 311 hectares on its own land, with the aim of increasing this area in the future. In addition to harvesting green (unburned) cane, the company has also introduced mechanised harvesting of burnt cane on other sections of its own cropland.

While the shift to mechanised harvesting may present a long-term risk around shifting employment patterns for seasonal cane cutters employed by the company, our engagement with the Agriculture team indicated that Ubombo Sugar is aware of the risk and managing such a transition carefully has been highlighted as a priority for the company. Ubombo Sugar's cane cutters are also hired through external contracting companies, so mitigation plans will have to be implemented through those respective contractors.

Chemical inputs: pesticides and fertilizers

Ubombo Sugar currently uses selected chemical inputs for sugar cane farming. The use of chemical inputs such as fertilizers and pesticides must be balanced between the need to increase yields without expanding land conversion, with also minimising negative impacts on the soil and runoff into waterways.

There are various motivations for the company to reduce the usage of chemical inputs where possible, including the rising costs of agricultural inputs, reducing human interactions with potentially harmful chemicals, preserving soil health and reducing environmental impacts. Ubombo Sugar currently has various methods for reducing the negative impacts of chemical inputs, including the use of biodegradable chemicals and preventing run-off via careful timing of irrigation and pesticide application.

Biodiversity

Ubombo Sugar's intensive economic development and agricultural intensification puts pressure on land and natural bush in the surrounding areas. However, Ubombo Sugar is aware of the pressures on biodiversity and natural areas. A biodiversity programme is in place to reduce biodiversity impacts, including maintaining biodiversity corridors throughout its estates. Ubombo manages the Mhlosinga Nature Reserve which comprises an area of more 15 000 hectares of land dedicated to the preservation and care of natural biodiversity within the Big Bend area. This initiative, including the cogeneration of electricity from renewable resources to feed both its own operations and the wider Eswatini power grid, water-use efficiency investments, and many other environmental and social impact activities undertaken by the company, is a vital part of Ubombo's ESG commitments to mitigate the impacts of climate change. In 2016 Van Eck Dam and surrounds within the Mhlosinga Nature Reserve was added to the Ramsar List of Wetlands of International Importance (Site Number 2122).

Grower livelihoods and agricultural practices

Grower livelihoods

Ubombo Sugar works with a total of 14 commercial growers, 10 medium-scale growers and 112 small-scale growers. These growers supply 52% of Ubombo Sugar's sugar cane, with the remainder coming from the company's own land.

These growers are independent farmers within the areas surrounding the company mills. Ubombo Sugar purchasing from these growers provides income in rural areas where ~36% of the rural population is considered poor.[15] Poverty continues to be an issue in Eswatini, largely driven by high unemployment and reliance on subsistence agriculture. It is therefore essential

[15] World Bank Group (2022), *Poverty & Equity Brief: Eswatini*

that growers receive appropriate support, not only for their livelihoods but to ensure Ubombo Sugar continues to have a resilient and stable supply of cane. As such, Ubombo Sugar plays a key role in providing agricultural income opportunities in areas where they otherwise may not exist.

Figure 11: Volume of sugar cane from company and grower land, 2018/19 - 2020/21

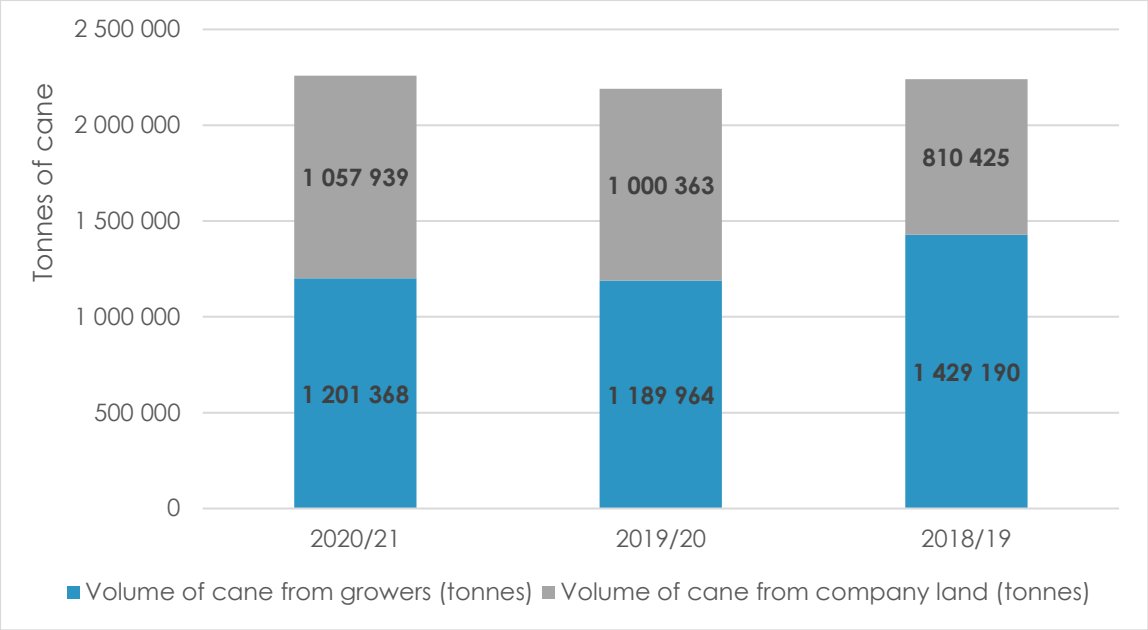
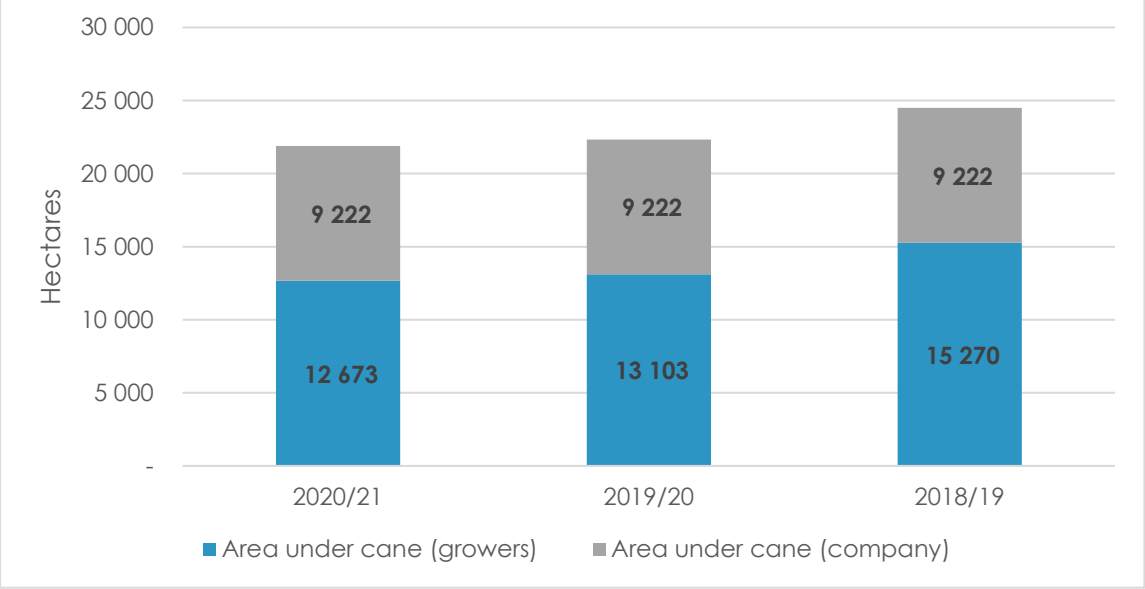


Figure 12: Area of land under cane for both growers and company land, 2018/19 - 2020/21



There has been a trend over the past three years where the land area dedicated to growing sugar cane by Ubombo Sugar's growers has decreased. This may partly be explained due to increasing costs of agricultural inputs such as fertiliser and electricity putting pressure on growers' long-term business model.

Grower agricultural practices

Ubombo Sugar has a role in the community to not only provide employment but also to influence sustainable practices. In 2020/21, 124 growers benefited from grower development programmes organised by Ubombo Sugar. Ubombo Sugar stands to benefit from improved grower support, as this offers the opportunity for greater productivity and improved sustainability across 12,673 ha of grower-owned cropland.

> *"Ubombo Sugar is doing its best to support growers. However, it would be great to receive further training on issues such as flooding and water."*
>
> - Mr Masuku
> Representative small grower

Our engagement with a sugar cane grower who supplies Ubombo Sugar, indicated growers benefit significantly from their relationship with the company. For example, the company provides multiple forms of training, including how to grow cane, how to apply fertilizer, crop immunisation and others. Ubombo Sugar also works to provide other forms of support, including a cane logistics management system which ensures efficient cane collection from growers.

However, our engagement with the cane growers highlighted that there are several challenges they face. Growers would like additional support, specifically in the following four key areas:

- **Water-related issues**: many growers are concerned about water scarcity and would like support for improved irrigation methods.
- **Chemical inputs:** support for improved precision of chemical input application.
- **Improving resilience to climate change impacts:** leading to changes in weather patterns (rainfall, droughts, flooding), diseases and pests.
- **Affordability of programmes**: growers indicated that many programmes (e.g., biodiversity programmes) are expensive, making it difficult to implement them.

FUTURE FACING CHALLENGES

While Ubombo Sugar has made significant investments in sustainable agriculture, including in mechanised cane harvesting and drip irrigation, there are several key challenges for future consideration.

The impacts of climate change, while already felt, are likely to worsen in coming years with increasingly unpredictable weather patterns, extreme events (droughts, floods). The impacts of both water scarcity and flooding are particularly relevant, with strategies needed to address these concerns.

Our engagement with growers highlighted a need for further support in key areas: increased resilience to climate change impacts, such as weather, water, irrigation methods, and affordability of sustainable agriculture programmes. Addressing these challenges will be important to ensure a stable supply of sugar cane for Ubombo Sugar into the future.

Value and quality-driven industry

Building on Illovo Sugar Africa's 130-year success in sugar and downstream product manufacture on the African continent, while actively encouraging innovative commercial community opportunities aligned to Illovo Sugar Africa's core expertise, is a powerful combination invited by Africa's governments to unlock national growth in the countries in which Illovo Sugar Africa's businesses operate.

Key pillar findings:

Ubombo Sugar has maintained its efforts to lead in sustainable business practices and adhere to circular economy principles. These include factories producing their own renewable electricity and utilising waste products from the sugar production process. Ubombo Sugar stands out as a value and quality-driven Swazi employer, particularly when it comes to minimum wage standards. The company pays its lowest paid employees at least 500% more than the national minimum wage, and even more above the World Bank's Global Poverty Line.

The company's approach to training its employees is strategic, by identifying and providing opportunities for employees to upskill and progress, though this could be further extended to seasonal workers and growers in the future. However, seasonal employees do enjoy some of the employment benefits offered by Ubombo Sugar, particularly medical care. After an increase in injury rates as a result of a drop in safety training investment, Ubombo Sugar increased its spending in safety training which resulted in the injury frequency rate once more declining. However, with a fatality suffered in 2021, the company should pay close attention to occupational health and safety standards in future developments.

Environmental impact of operations

Ubombo Sugar drives sustainable best practices throughout its operations. This includes promoting circular economy principles and innovation within business operations, such as the generation and use of renewable, non-fossil fuel sources for energy production.

98%
of energy production from renewable sources

14% increase
in scope 1 & 2 emissions (2019/20 to 2020/21)

213,313 MWh
of renewable energy generated

Energy use and generation

Ubombo Sugar, like the rest of Illovo Sugar Africa's operating countries, generates renewable electricity as a by-product of its sugar processing operations. During 2020/21, 98% of Ubombo Sugar's energy production came from renewable, non-fossil fuel sources in the form of bagasse (65% of renewable energy), a fibrous residue left over after sugar cane crushing, and wood fuel (34% of renewable energy). The remaining energy (<2%) came from coal, imported electricity and small amounts of LPG, petrol and diesel.

During 2020/21, Ubombo Sugar's factory produced 213,313 MWh of renewable electricity from bagasse, including 3 001 MWh from hydro. This was mostly used to power the company's own operations during 2020/21, however, the company also exported 82,089 MWh of renewable energy to the local grid, representing 5.5% of its total renewable energy generated in the reporting year. By producing its own renewable energy, Ubombo Sugar cuts costs and reduces reliance on the national grid electricity supply.

Operational emissions

Ubombo Sugar currently measures its greenhouse gas (GHG) emissions from scope 1, 2 and some scope 3 activities. 99% of Ubombo Sugar's carbon footprint comes from scope 1 activities, and this category is dominated by emissions from burning bagasse. While emissions from bagasse are here reported as the majority of Ubombo Sugar's overall footprint, research suggests that bagasse can be considered a "greenhouse gas neutral" renewable fuel, due to the carbon absorbed during photosynthesis of sugar cane in the field.[16] The potential impacts of this greenhouse gas sequestration are not yet measured or reflected in Ubombo Sugar's emissions reporting. It is recommended that the company explores how to measure these impacts, for example using the Greenhouse Gas Protocol's Agricultural Guidance[17], or emerging guidance for land sector activities and carbon dioxide removals[18].

In addition to bagasse, other emission sources include diesel, petrol, and emissions from burning biomass materials such as sugar cane and wood (scope 1); emissions from imported electricity (scope 2); and some fuel emissions from 3rd party transport and distribution (scope 3). Ubombo Sugar's total scope 1, 2 & 3 carbon emissions for 2020/21 were 948,682 tCO2e, which represents 20% of Illovo Sugar Africa Group's total carbon emissions in 2020/21.

Currently, Ubombo Sugar only measures emissions from selected scope 3 activities, limited to third-party transportation and distribution services. In future, it is recommended that Ubombo Sugar assesses its full scope 3 emissions in accordance with the GHG Protocol's 15 categories[19], to understand the full climate impacts of its value chain, and associated climate-related risks and opportunities.

(See graph below)

[16] O'Hara & Mundree (2015), *Cogeneration of sugarcane bagasse for renewable energy production*
[17] Greenhouse Gas Protocol (2022), *GHG Protocol Agricultural Guidance*
[18] Greenhouse Gas Protocol (2021), *Update on GHG Protocol Carbon Removals and Land Sector Initiative*
[19] Greenhouse Gas Protocol (2022), *Corporate Value Chain (Scope 3) Standard*

Figure 13: Ubombo Sugar's GHG emissions by source over time (tCO2e), 2018/19 - 2020/21

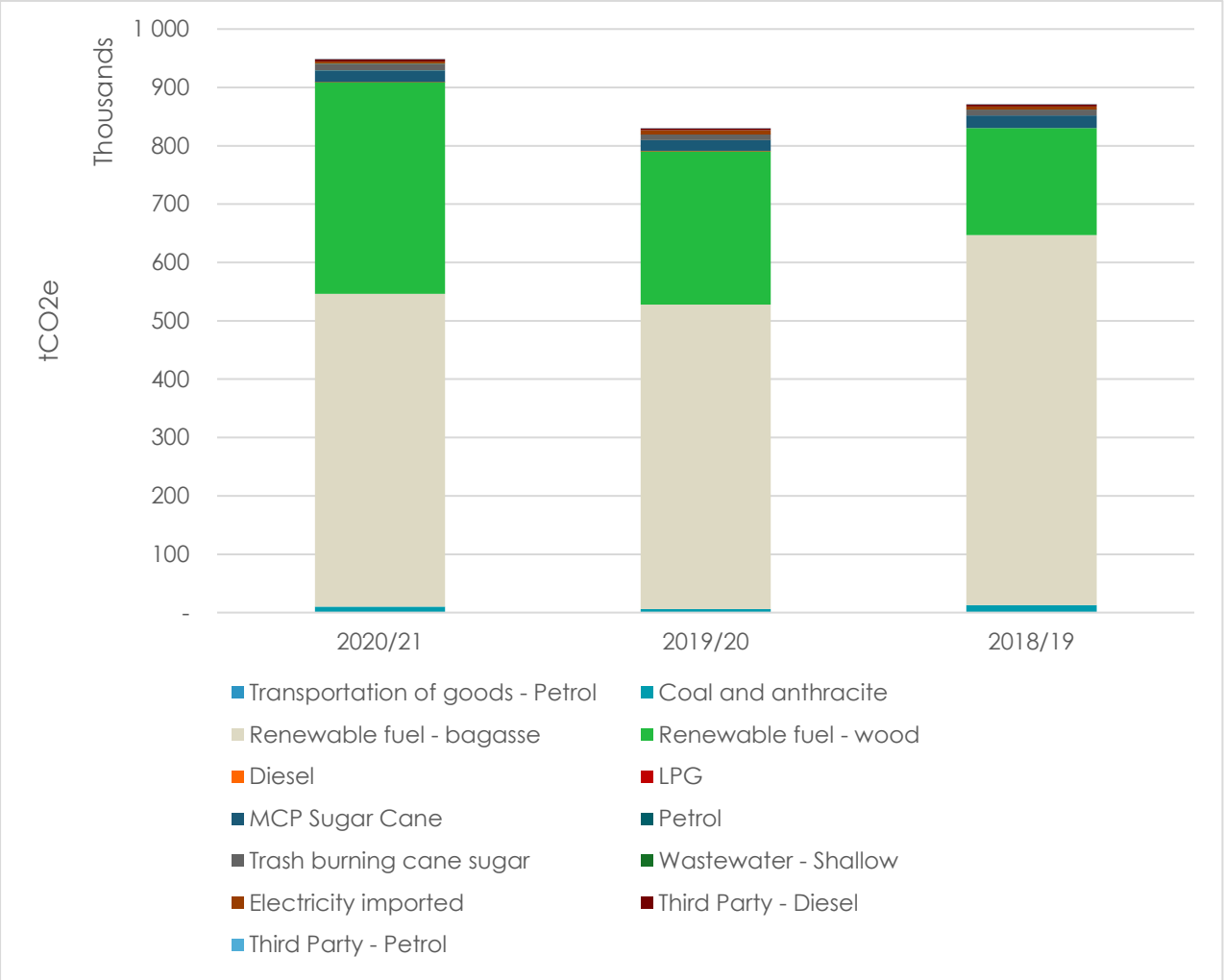
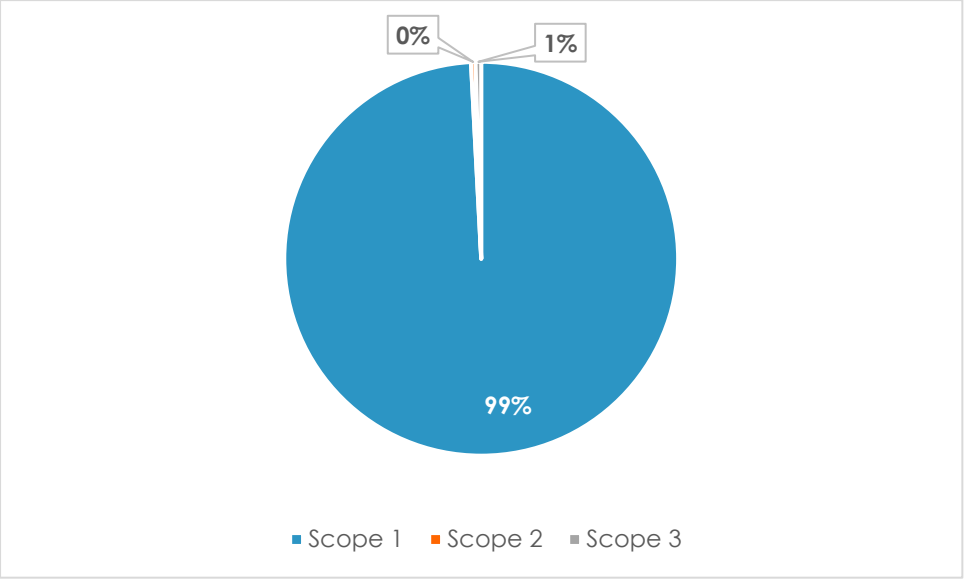


Figure 14: Ubombo Sugar's GHG emissions by scope (tCO2e), 2020/21



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Air quality

Particulate air pollution emissions from Ubombo Sugar's factory are monitored by a South African company annually. Particulate emissions are generated from onsite boilers, some of which currently have wet scrubbers which capture emissions. However, some boilers are older, and a strategy is in place to replace these with more efficient models which will help reduce particulate emissions in future.

Water use and discharge

During 2020/21, 173,770 megalitres of water were abstracted, 100% of which was surface water. Ubombo Sugar's factory aims to recycle water used within its operational processes as much as possible. Water that has been used in factory processes is analysed for effluent after use, with effluent recovered and reused. To increase water efficiency, all effluent is recycled within the factory for the wet scrubbers, reducing energy costs and water usage. Two boilers have wet scrubber systems which "clean" emissions to minimise pollution that comes from the boilers into the air. Cooling water and condensate are subsequently used for irrigation because it is not contaminated.

Operational waste

Many aspects of Ubombo's factory operations embody circular economy principles. Generally, there is little waste in the sugar cane industry, with only what cannot be reused sent to landfill. For example, bagasse from sugar production is used for energy production. Currently, there are segregation bins at the factory where recyclable paper materials are collected and sent for recycling. At the Sifiso landfill, some of the recyclable materials that come with the waste from all the sections/villages are salvaged and sent to a recycler in Matsapha. Given that about 62% of Ubombo Sugar's total domestic waste comes from residential villages, the company explained that it plans to extend the waste segregation practice to villages to improve recycling. All organic waste is collected by Ubombo Sugar's waste management service provider and disposed of at the organic landfill.

Decent work and quality of jobs

As a direct employer of over 3,500 people in Eswatini, Ubombo Sugar needs to ensure it is driving best practices to create high-quality jobs that attract and retain staff. The nature of the industry means there is a need for seasonal and contract workers alongside higher-skills roles such as engineers, technicians and business management professionals.

E2,883 Ubombo Sugar monthly minimum wage	**5.9x higher** than Eswatini minimum wage	**E485k** invested in safety training	**0.07** Lost Time Accident Frequency Rate
E6.2m invested in training	**1,381** employees trained	**E32.1m** invested in employee benefits	**E1.9Bn** spent on procurement

"We consider ourselves an employer of choice due to the benefits we provide for our workforce."

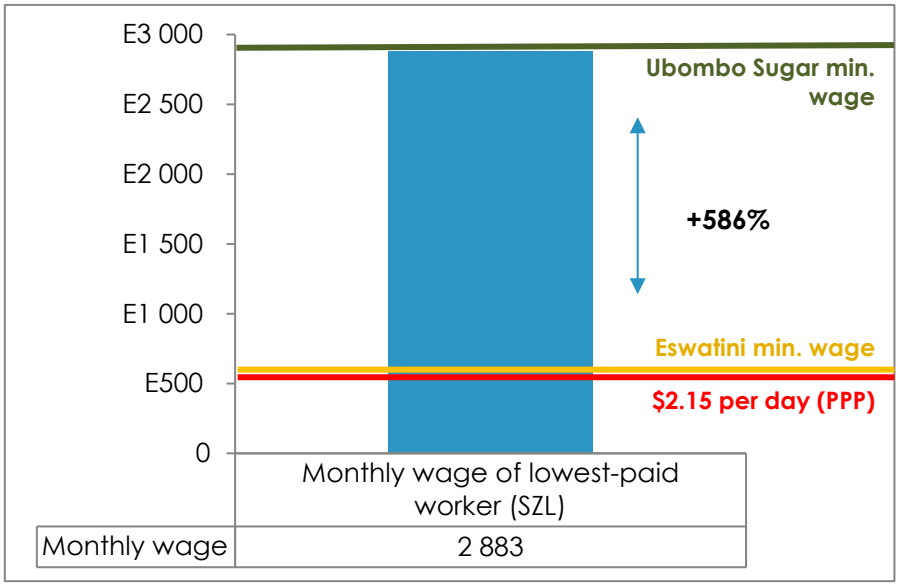
- Sihle Motsa
Ubombo Sugar

Minimum wage

Ubombo Sugar monitors salary levels to ensure that it is not only compliant with in-country legislative requirements, but that the lowest paid workers' minimum wage exceeds Eswatini's minimum wage.

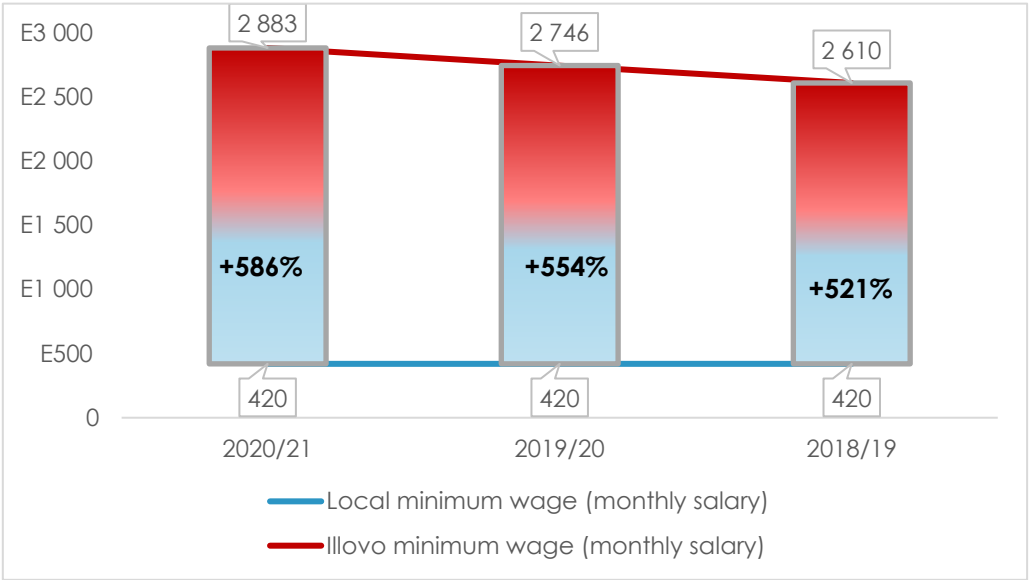
Ubombo Sugar's minimum wage also far exceeds the global poverty line set by the World Bank at $2.15 purchasing power parity.[20]

Figure 15: Ubombo Sugar's lowest monthly wage against the national monthly minimum wage, 2020/21



Ubombo Sugar's monthly minimum wage has increased steadily over the last three years since 2018/19, currently paying a minimum of E2,883. Meanwhile, Eswatini's minimum wage has remained flat at E420. This means that the minimum wage Ubombo Sugar pays its workers over the national average has not only remained substantially higher than the Eswatini national average but that this gap has been growing since 2018/19, currently at 586%.

Figure 16: Rate of growth between Ubombo Sugar's minimum monthly wage against the national minimum wage, 2018/19 - 2020/21

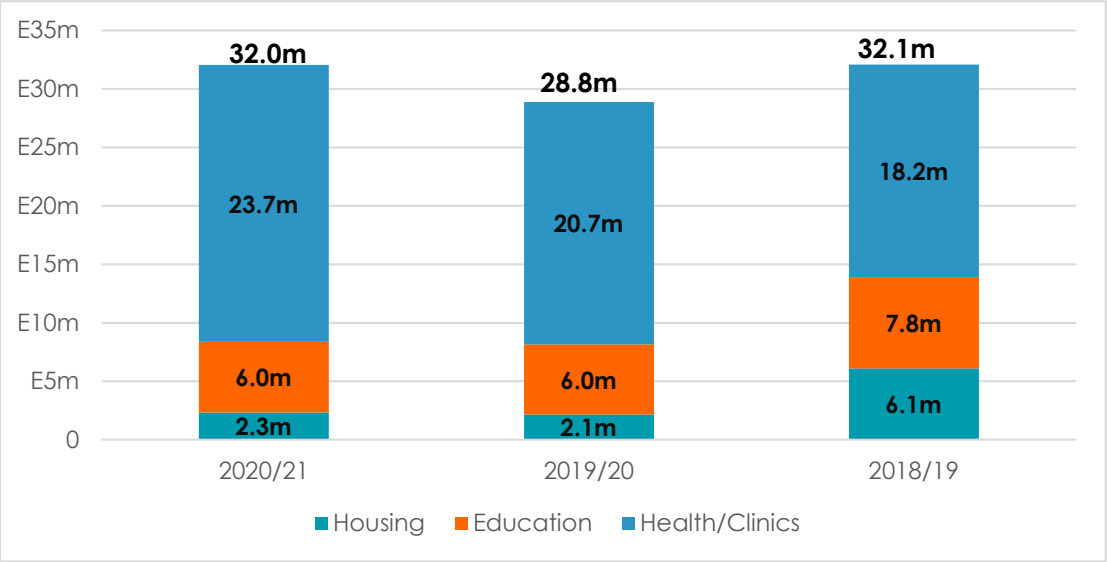


Employee Benefits

Ubombo Sugar employees are entitled to a number of different benefits in addition to salaries, including primary healthcare, pension funds and counselling.

[20] World Bank (2022), *An Adjustment to Global Poverty Lines*

Figure 17: Total spend on benefits offered to employees and their dependents, 2018/19 – 2020/21



Ubombo Sugar spent E32.1m on employee benefits in 2020/21. Over the past three years, this has remained largely stable, except for a slight dip to E28.9m in 2019/20. COVID-19 was the key driver of this decline, as Ubombo Sugar was spending more on materials around managing the pandemic, such as healthcare and sanitisers. This data was not reported in 2016/17, so we were unable to compare spending over a longer period.

Spotlight: Ubombo Sugar Medical Benefits

Ubombo Sugar offer E20,000-E25,000 in healthcare insurance to each employee and their dependents, as well as free HIV and TBK support. The company's on-site hospital provides pre-employment, periodic, and exit examinations for both employees and contractors. Employees have access to physiotherapy, occupational therapy, dental care and immunizations for their children under 5. Notably, Ubombo Sugar offers a weekly counselling service on site. The company is looking to improve further upon these services towards more fully functioning assisting services beyond work in areas such as financial counselling.

In addition to the above, Ubombo Sugar offers other benefits such as an education allowance plan of 35% of basic pay up to 100%, a performance bonus rewarded based on company performance, that is, financial and physical performance, and housing for casual, seasonal and permanent workers.

Occupational health, safety & development

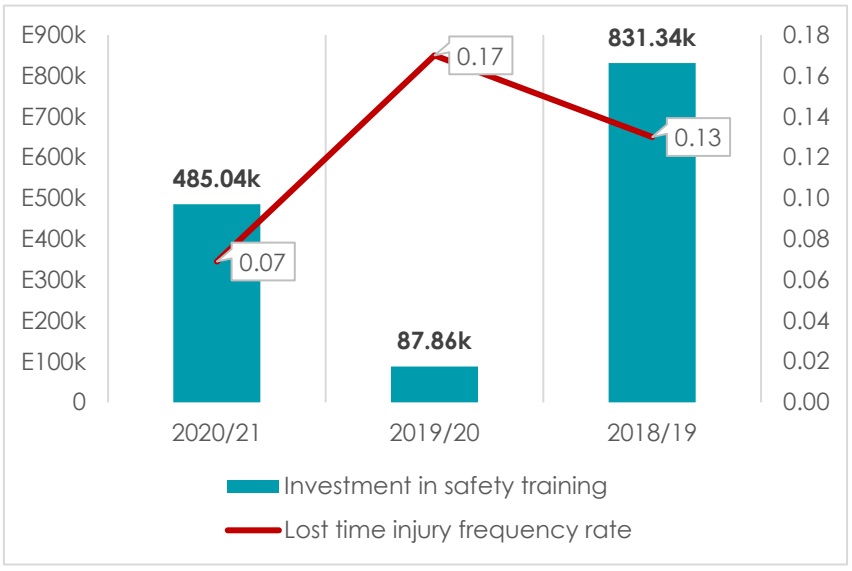
Our engagement with Ubombo Sugar did not uncover a lot of detail on its policy towards occupational health and safety, but with a declining injury rate, in addition to the presence of well-funded hospitals and clinics on site, we did note an existing safety infrastructure present.

> *"We can draw upon learnings from other Illovo Sugar Africa sites, such as the fatalities at Kilombero Sugar Company, to ensure we tackle the right areas in our training."*
>
> - Maqhawe Ndlovu
> Ubombo Sugar

Safety training

Ubombo Sugar invested E485k in safety training in 2020/21, a sharp decline in investment of 42% from 2018/19 when E831k was invested mainly due to COVID-19 restrictions. The lost time injury frequency rate has nevertheless decreased since 2018/19, down from 0.13 to 0.07 LTIs per 200,000 hours. Our analysis uncovered a potential correlation between these data points, whereby the sharpest drop in investment towards safety training in 2020 led to a rise in LTIFR while increasing it again in 2021 led the LTIFR to decrease. However, we were informed that Ubombo Sugar suffered one fatality in 2021, reinforcing the need to maintain stringent health and safety standards at all times across the company's operation.

Figure 18: Ubombo Sugar's total investment in safety training (E) and LTIFR, 2018/19 - 2020/21



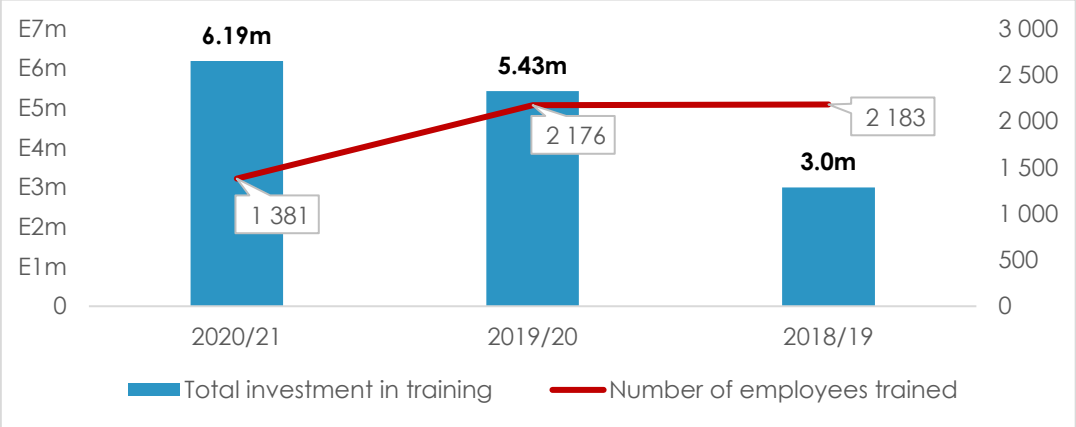
Other training & job opportunities

Ubombo Sugar also invests in training for employees. In 2020/21, Ubombo Sugar invested E6.19m in training and development, involving 1,381 employees. Investment in training opportunities has risen notably year-on-year since 2018/19, a 106% increase from the E3m spent then.

Ubombo Sugar proactively seeks to identify chances for learning and training by monitoring teams and providing opportunities to employees. Employees then receive training from their OEM providers.

The company also operates a talent review programme identifying 'cover managers' and developing them for critical management roles. The company has launched a leadership development programme with the purpose to enable and empower managers with a fit-for-purpose programme which addresses the behaviours required to lead and manage teams.

Figure 19: Ubombo Sugar's total investment in training (E) and number of employees trained, 2018/19 - 2020/21



Value chain impacts

One of Ubombo Sugar's more significant opportunities is the socio-economic impact it can create within its value chain, including both upstream (through procurement from suppliers) and downstream (through retailers of Ubombo Sugar's products).

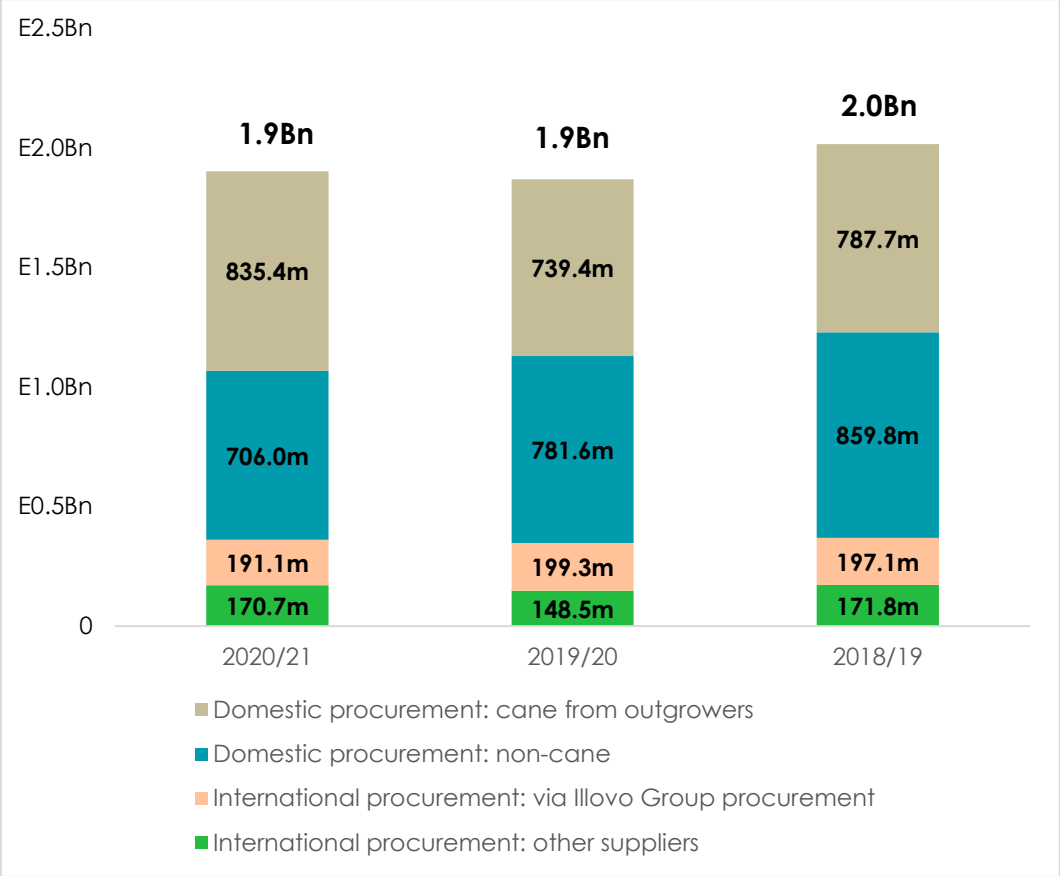
Procurement

In 2020/21, Ubombo Sugar spent a total of E1.9Bn on procurement, with E835.4m on cane from growers and E706.0m on domestic non-cane procurement.

Local sourcing is a strategic priority for Ubombo to foster the local and domestic economy and livelihoods, and our analysis indicates that the bulk of procurement spending is primarily on domestic suppliers. In 2020/21, E1.54Bn was spent on local suppliers as opposed to the much lower E362m spent on international suppliers.

(See graph below)

Figure 20: Ubombo Sugar's supplier spending, 2018/19 – 2020/21



Retail and distribution

While Ubombo Sugar's direct consumption sugar is marketed and distributed by the ESA, it still has a significant, while indirect, downstream economic impact, as domestic sales involve many distributors/agents, wholesale chain stores, independent wholesalers, sub wholesalers, grocers, and tabletop vendors, who act as resellers to consumers.

FUTURE FACING CHALLENGES

While many aspects of Ubombo Sugar's operations embody circular economy principles, there are some opportunities to improve operational environmental impacts and reporting. In particular, the company can aim to upgrade boiler infrastructure to bring air pollution levels within regulatory limits, and to expand emissions measurement and reporting to cover full scope 3 emissions, and to analyse bioenergy emissions, including GHG sequestration from sugar cane.

With a fatality suffered at Ubombo Sugar in 2021, coupled with an overall decline in safety training investment, it is important that the company allocate the resources required to preventing this from happening again. Our data indicates a correlation between amount spent on safety training and the lost time injury frequency rate, which would indicate that with sufficient investment, fatalities can be avoided. A safe working environment is a keystone of a quality-driven industry, one which Ubombo Sugar must ensure is always firmly in place.

Community connected

Collaborative and cooperative stimulation of economic activity, hand-in-hand with the people, civic structures and the governments of local communities, strengthens the growth and development of African nations.

Key pillar findings:

Ubombo Sugar has a significant role as a business in providing support to its employees and families on its estates, along with addressing challenges such as human rights, child labour and diversity in its own operations and in the value chain. While the company has started creating policies and partnerships to make it easier for women to participate in the workforce, it should consider creating more targeted programmes to give women the opportunity for higher-paying and skilled jobs. Our assessment found a small decrease in women at management level compared to 2017. Ubombo Sugar has developed partnerships with local communities, civic organisations, and NGOs to help address some of the key social and economic challenges facing the wider community. Our engagement with external stakeholder indicated there are some key areas for future support, in particular access to water as it relates to hygiene and improved resilience to climatic events.

1,751 COVID-19 vaccinations	**13%** women in the workforce	**E24.64m** spent on the community	**90%** of Ubombo Sugar's employees are unionised

There are many elements to creating thriving communities. Ubombo Sugar's impacts range from how the business provides support to its employees and families on its estates, to how it addresses challenges such as human rights, child labour and gender diversity within its own operations and in the value chain. Ubombo Sugar must also play an active role within the wider communities around its estates, including regular stakeholder engagement to understand local concerns and challenges, along with working with partners to address these.

Human rights and labour standards

Given the rural nature and range of informal work settings that make up the sugar supply chain, it is challenging to gain insight into the working conditions of employees and the risks of child labour, can exist. Ubombo Sugar, as part of the wider Illovo Sugar Africa group, is committed to preventative measures against human rights abuses, including land rights, in line with the United Nations Global Compact (UNGC) and the United Nations Guiding Principles on Business and Human Rights (UNGP). This is applied to all suppliers and growers.

Through established collective bargaining agreements with unions, employees can raise grievances through formal means, in a programme called 'Speak Up'. 90% of Ubombo Sugar's employees are unionised, down from 94% in 2016/17, but nevertheless still the highest rate of any Illovo Sugar Africa subsidiary.

Land rights

Illovo Sugar Africa's Group Code of Conduct and Business Ethics states that it is committed to respecting internationally recognised human rights and has adopted policies and practices to protect against human rights abuses, including land rights, in line with the United Nations Global Compact (UNGC) and the United Nations Guiding Principles on Business and Human Rights (UNGP). All suppliers and Group operations are required to follow both the Code of Conduct and the Group Guidelines on Land and Land Rights that specifically commits to a zero-tolerance approach to land grabs. This is monitored through impact assessments, stakeholder engagement through local authorities, providing technical and financial support to local partners, and participating in programmes to redistribute land to the appropriate communities.

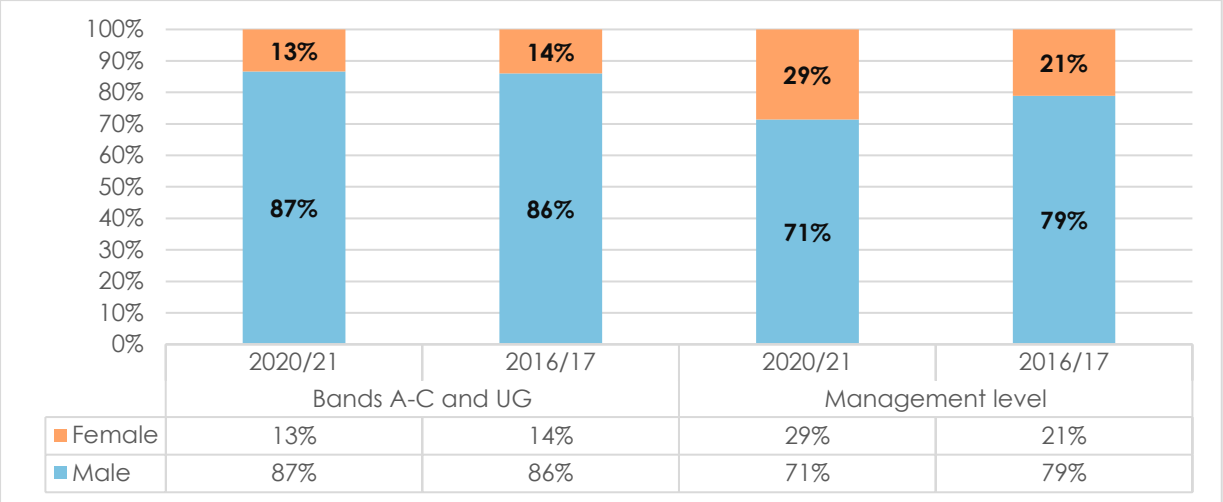
Employee diversity & inclusion

Diversity, equity, and inclusion (DEI) especially as relates to gender is a topic at the forefront of the agenda for most companies globally. As a leading company within Eswatini, Ubombo Sugar has a key role in promoting DEI across its own workforce and within the grower and broader community it interacts with.

In the workforce

Ubombo Sugar has created policies designed to make employment more accessible for women. There is a DEI policy in place to encourage gender considerations during hiring. In addition, those working in human resources are made aware of company-wide targets of increasing female representation in the business by 10% annually, particularly in senior management roles. Since 2016/17, the data has shown a slight negative trend amongst the general workforce, however, there is an increase in women represented at the management level. There is still some way to go to reach gender equality within Ubombo Sugar and a proactive approach will be required.

Figure 21: Ubombo Sugar's permanent employees by gender, 2016/17 - 2020/21



	Bands A-C and UG		Management level	
	2020/21	2016/17	2020/21	2016/17
Female	13%	14%	29%	21%
Male	87%	86%	71%	79%

Community resources and services

Ubombo Sugar provides various benefits, resources and services for employees, their families, and the wider community outside the regions in which it operates.

The Ubombo Sugar estate

Ubombo Sugar has created an agricultural estate where its permanent and seasonal employees can live with their families. Ubombo Sugar provides potable water, electricity, and other municipal services to 2,723 housing units accommodating over 3,700 people.

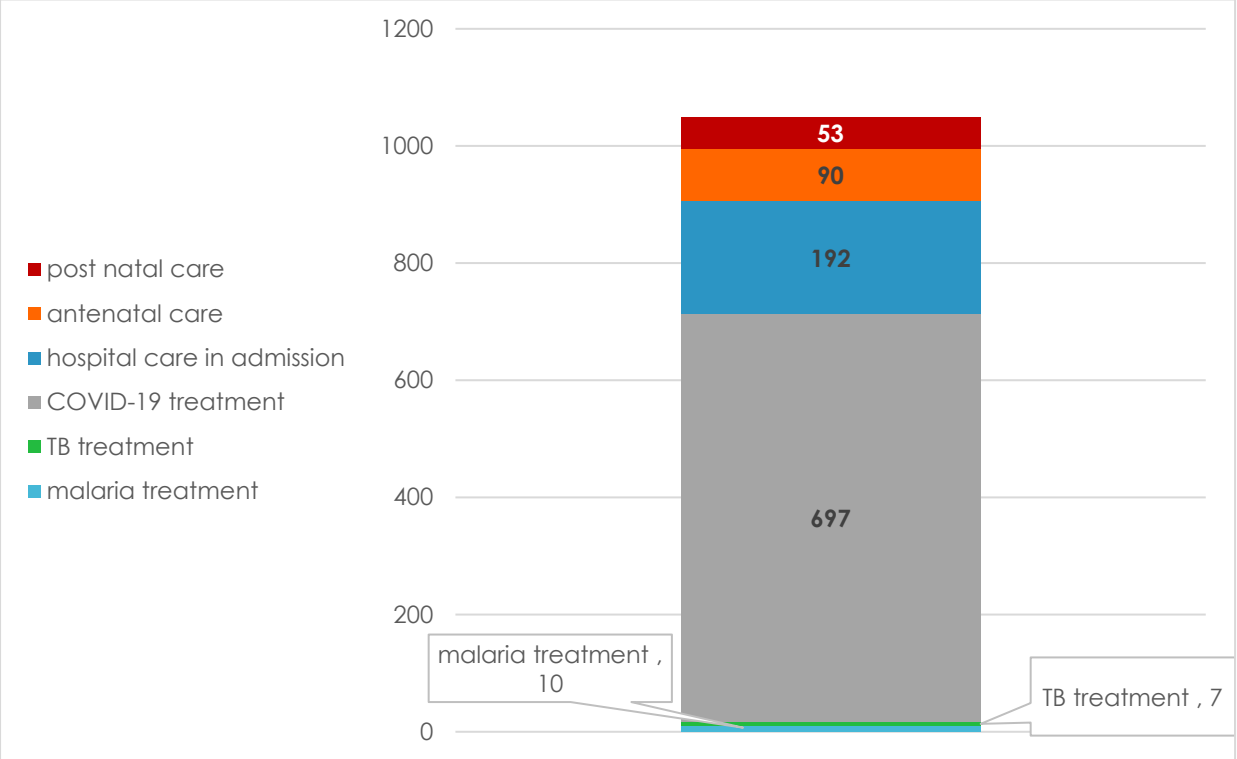
Education

In addition, the estate is home to one primary school, two high schools and one pre-school.

Healthcare facilities

The wider community has access primarily to clinics, including on agricultural farms.

Figure 22: Ubombo Sugar's healthcare services by number of people receiving treatment, 2020/21



Inclusive stakeholder engagement

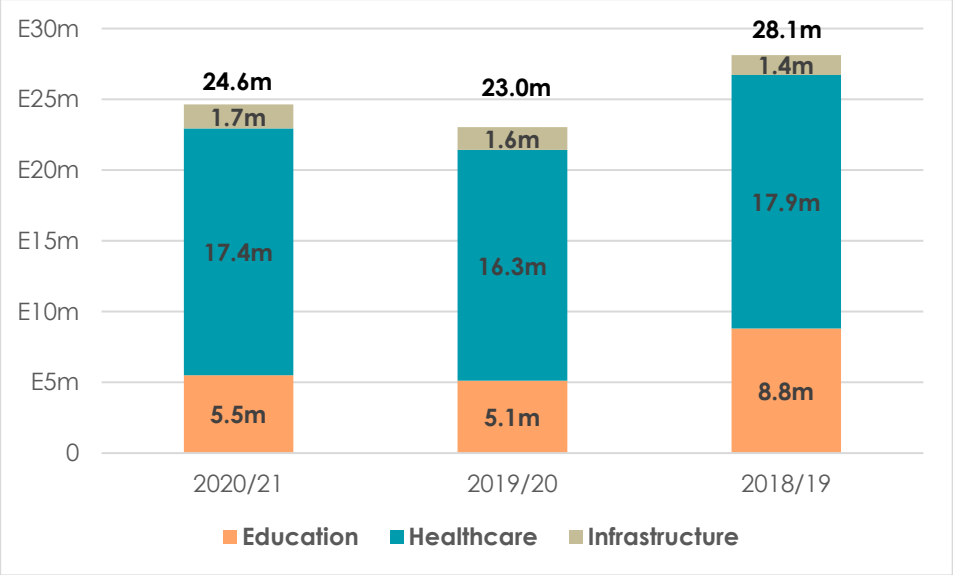
The company's communicative and collaborative relationship with the community extends to the local government efforts. Ubombo Sugar invests in the broader community beyond the estates, totalling E24.64m in 2020/21 and spread across education (E5.5m), healthcare (E17.4m) and infrastructure (E1.7m).

The 2021 investment is also a 25% decrease from 2018/19, with decreases in spending on healthcare and education, while the spending on infrastructure increased due to upgrades in facilities to cater for the emerging health risk of COVID-19. In the context of rising rural poverty, these investments provide essential support to the broader community and help Ubombo Sugar to maintain positive stakeholder relationships.

"In July, we organised a fundraising event – mountain hiking to raise funds for projects aimed at assisting underprivileged people in the surrounding communities."

- Winile Masinga
Ubombo Sugar

Figure 23: Community investment in infrastructure, education and healthcare, 2018/19 - 2020/21



From our engagement with the National Disaster Management Agency (NDMA), we learned that Ubombo Sugar has played a positive role in the community when disasters have taken place. Ubombo Sugar has assisted via donations (e.g. food, water, COVID products), which included strong employee engagement.

A particular issue facing the community is water, spanning consumption, hygiene and irrigation needs (as discussed earlier). The NDMA highlighted that access to water for consumption is a key issue, as boreholes can break down easily. In these instances, Ubombo Sugar often provides handpumps to ensure access to water. In addition, water is often unclean and unsuitable for consumption, so the company has provided support for cleaning efforts. Ubombo launched the clean-up campaign to improve the overall outlook of the estate and promote a culture of cleanliness. The clean-up campaign included company employees, schools and the surrounding local communities. Activities consisted of clean-up days, road shows and other education campaigns. Some activities were delivered in partnership with the Eswatini Environment Authority.

Currently, community engagement is conducted to address immediate issues impacting surrounding communities. For example, during COVID-19, to ensure the company provided helpful and responsive assistance to the communities in need, the Office of the Regional Administrator conducted stakeholder engagement. Findings from the engagement were conveyed to Ubombo Sugar who in turn provided help in the form of services and supplies such as water tanks, purified water and food parcels as requested by communities.

However, some further key ongoing issues were raised as areas for potential future support. This includes extending support on water issues to include access to hygiene, sanitation, and other areas. Another key issue is the impacts of climate change on the community, with flooding leading to loss of livelihoods and displacement. This should be a key focus area for continued support over the coming years. Additionally, continuous engagement with all stakeholders is needed to understand the role of the company within the community and how best support can be provided.

FUTURE FACING CHALLENGES

Ubombo Sugar has made efforts towards improved diversity in the workforce and has relatively high workforce diversity in comparison with other countries where Illovo Sugar Africa operates. However, diversity remains a significant challenge to be addressed, especially in the permanent labour pool. While the company recognises that change is needed, continued efforts are required to improve workforce diversity.

While Ubombo Sugar has already provided essential support within the wider community, there are further opportunities for continued positive impact. Communities are already struggling from the impacts of climate change, with flooding causing displacement, polluting water sources and ultimately contributing to the loss of livelihoods. Additional community investment would help regional development, along with governmental and NGO partnerships.

Recommendations

Recommendation 1

Investment in climate agriculture and infrastructure
Increasingly volatile and irregular weather patterns, with more frequent flooding, droughts and other events will inevitably continue. This is likely to impact agricultural productivity and livelihoods. Ubombo Sugar could benefit from further investment in climate-resilient agriculture and infrastructure to prevent some of the worst impacts of climate events on agricultural productivity and livelihoods. Examples may include measures such as developing or sourcing drought-resistant seed varieties, continuing to develop irrigation systems and exploring ways to support growers to access similar technologies to improve their climate resilience. Importantly, this work can be done with regional partners (e.g. major NGOs and governments) as these are issues affecting multiple stakeholders.

Recommendation 2

Investment in climate-resilient communities
Our engagement indicated that the impacts of increasing weather extremes are significant issues of concern for the wider community. Flooding not only impacts livelihoods but also housing, water quality, food security and many other areas. Interviews indicated that as a result of flooding,-individuals had experienced displacement. As these impacts are only likely to worsen in the coming years, Ubombo Sugar should consider increased action and investment in this area. Projects focusing on climate resilience can integrate both sustainable agriculture (as discussed above) and broader community resilience. Again, this work should integrate stakeholders at all levels for greater success.

Annex 1: Methodological note

Overview of methodology

Corporate Citizenship's process for this project involved analysing financial and management information provided by each Illovo Sugar Africa (ISA) country team. This also included site visits to Tanzania and Zambia, to visit the operations and their surrounding communities, as well as interview senior management and key stakeholders affected by the business. The stakeholders interviewed varied by country but included sugar cane farmers, small-holder association representatives, employees, local suppliers, doctors, community groups and other beneficiaries of ISA's social investment spend. Corporate Citizenship also conducted its own desk-based research and analysis. Case studies and quotes are based on site visits and interviews. The data presented within this report is based on internal financial and management information provided by key personnel within ISA and has not been audited by Corporate Citizenship.

Exchange rates used

Data for each country are reported in local currency, while the group report uses only the South African Rand (ZAR). We have used exchange rates provided by ISA's group finance for each year where conversion is required.

	ABF Budget Rates FY21	ABF Budget Rates FY20	ABF Budget Rates FY19	ABF Budget Rates FY17
MWK / Rand	47.87	59.2	61.44	51.05
ZMW / Rand	1.115	0.942	0.831	0.708
TZS / Rand	151.83	159.85	174.77	172.58
MZN / Rand	3.99	4.43	4.79	4.86
Rand / USD	16.16	15.36	13.01	7.82

Estimating wider impacts

ISA has significant impacts on the economy and employment, not only through its direct operations but also through its value chain and the wider community. Its total impact falls under the following main categories[21]:

[21] Note that in each case, "impact" refers to ISA's gross rather than net impact, and therefore does not take into account displacement (i.e., labour, land and capital are used by ISA which would otherwise have been used by other companies) or leakage (i.e. some indirect and induced spending will "leak" overseas). While both of these effects are important, they are not readily quantified, and are not usually included in impact assessments of this nature.

- **Direct** impacts, through ISA's direct employment of workers on farms and in factories, as well as investments, tax payments, interest spending, shareholder dividends and other payments;
- **Indirect** impacts in the value chain in Africa, through purchasing sugar cane from farmers, payments to suppliers and distributors, as well as impacts on those selling ISA products or using them in their businesses. Re-spending of the money paid by ISA generates further economic activity and employment;
- **Induced** impacts, through spending by direct and indirect employees leading to increased consumption and employment throughout the economy;
- **Secondary** effects, through infrastructure and other benefits provided by ISA to its local communities, such as building infrastructure, schooling and healthcare.

The scale and extent of these impacts mean that they can only be estimated. As far as possible, Corporate Citizenship has collected data directly from ISA, including specific information on local employment and spending with local suppliers. Secondary effects have been described qualitatively but have not been estimated, due to the large number of assumptions required.

Impact measurement

To estimate ISA's full macroeconomic impacts in each country, Corporate Citizenship conducted a thorough landscape review to identify new research and studies conducted since our last assessment. This was to gather information from various academic studies into the economic impacts of the sugar industry in southern Africa, including "multipliers" which estimate, for example, the amount of indirect and induced employment created per direct employee in the sugar industry.

The various multipliers referred to in this report are outlined below. While multipliers are useful tools, it should be stressed that their reliability depends heavily on the quality of the data available. They may also be context-specific, varying across countries and even within an industry in a specific country.[22] The studies published to date on multipliers in southern Africa have not covered every country considered in this report, and so some assumptions have had to be made regarding the other countries in which ISA operates.

In all cases, a range of multipliers from different sources has been used to inform calculations, in line with the recommendations of the International Finance Corporation.[23]

The range of studies referred to is as follows:

- Conningarth Economists (2013), 'Growing the Sugar Industry in South Africa', *National Agricultural Marketing Council.*
- Department of Agriculture, Forestry and Fisheries (South Africa) (2011), 'A Profile of The South African Sugar Market Value Chain'.
- Hess et al. (2016), 'A sweet deal? Sugar cane, water and agricultural transformation in Sub-Saharan Africa'.

[22] IFC (2013), IFC Jobs Study: Assessing Private Sector Contributions to Job Creation and Poverty Reduction
[23] *ibid.*

- Imani-Capricorn (2001), *The Socio-Economic Contribution Of The South African Sugar Industry: A report prepared for the South African Sugar Association.*
- Chikuba, Z. et al. (2013) 'A 2007 Social Accounting Matrix (SAM) for Zambia', *Zambia Institute for Policy Analysis and Research (ZIPAR)*.
- Cruz A. S. et al. (2018) 'A 2015 Social Accounting Matrix (SAM) for Mozambique', *WIDER Working Paper 2018/20*.
- Kaliba, A. R et al. (2008), 'Economic multipliers for Tanzania: implications on developing poverty reduction programs', *Global Trade Analysis Project (GTAP)*.
- Lea and Hanmer (2009), 'Constraints to Growth in Malawi', *The World Bank (Southern Africa Poverty Reduction and Economic Management Unit)*.
- Levin and Mhamba (2007), 'Economic growth, sectoral linkages and poverty reduction in Tanzania', *World Bank*.
- McCarthy and Owusu-Ampomah (2007), 'Study to assess the impact of sugar mills on the surrounding communities as well as the impact of the South African Sugar Association's social spend (Part 1: The Broader Socio-Economic Impacts Of The SA Sugar Industry – An Overview)'.
- National Department of Agriculture (South Africa) (2006), *Commodity Profile: Sugar*.
- Oxford Business Group (2012), *The Report: South Africa 2012*.
- South African Sugar Association (2016), *Industry Directory 2016-17*.
- Kavese, K. & A. Phiri, (2020), 'Micro-simulations of a dynamic supply and use tables economy-wide Leontief-based model for the South African economy', *South African Journal of Economic and Management Sciences*, vol 232(1).
- Mulanda. S. (2020), 'Structural Characteristics of Zambia's Agricultural Sector and the Role for Agricultural Policy: Insights from SAM based Modelling', Stellenbosch University, South Africa.
- Phoofolo, M. L. (2018), 'Analysis of the economic impact of a disaggregated agricultural sector in South Africa: A Social Accounting Matrix (SAM) multiplier approach', Stellenbosch University, South Africa.

Impacts on GDP

The main method of estimating economic multipliers is by using macro- and micro-economic data and technical procedures to create a Social Accounting Matrix (SAM). We have identified three main studies which have applied this method to the sugar industry in southern Africa, described below:

- Conningarth Economists (2013) used a SAM-based model for South Africa in 2010, estimating the sugar industry's direct impact on South African GDP at R2,191 million, its indirect impact at R1,316 million and its induced impact at R2,287 million. This implies an indirect multiplier of 0.60 and an induced multiplier of 1.04 giving an overall multiplier (including direct, indirect and induced impacts) of 2.64.
- Kaliba et al. (2008) created a 2004 SAM for Tanzania in order to estimate economic multipliers for a number of sectors. The study found that agro-processing industries had the highest economic multipliers (greater than 3), while sectors with the lowest multipliers (at or close to 1) included export-oriented agricultural sectors, such as coffee, cotton, tobacco and cashew nuts. The multiplier estimated for sugar cane growing is 1.51 (including an indirect multiplier of 0.22 and an induced multiplier of 0.29), while the multiplier for the

processed food sector is 3.10 (indirect 0.88, induced 1.22). The overall multiplier for the sugar industry as a whole is therefore assumed to be somewhere between the two.

- Phoofolo (2018) built upon a SAM for South Africa conducted in 2014, a more recent model than that of Conningarth Economists. His study quantified the economic impact of the disaggregated agricultural sector within the South African economy using this SAM multiplier model, calculating a combined indirect and induced impact for financial stimulation in both the sugar crops (cane, beet, beet seeds etc.) and refined sugar sectors. These were 1.61 and 1.2 respectively, so when an average is taken between the two and aggregated with direct impact, the overall multiplier across both sectors is assumed to be around 2.4.
- Mulanda (2020) conducted a SAM-based multiplier analysis for Zambia, providing country-specific data not available for the previous impact assessment. His analysis produced a combined indirect and induced impact for the Zambian sugar cane sector of 1.4, making the overall multiplier (including direct impact), 2.4.

These multipliers, since they are based on the sugar industry on the whole, only account for forwards and backwards linkages with other industries, and so do not account for the multiplier effects of ISA's purchases of sugar cane from growers. In our reports, grower spending is therefore accounted for before the multipliers are applied.

The following table outlines the economic multipliers used in this report. These have been based conservatively on the findings of the studies outlined above. Looking at the most recent studies (2018, 2020), the average overall multiplier in the sugar sector is 2.4. Additionally, since the 2001 study by Imani-Capricorn referenced in the 2016/17 impact assessment, there has been a slightly decreasing trend in the induced multiplier across the countries analysed. We have therefore made a slight adjustment to the 2020/21 induced multiplier, reducing it by 0.1, bringing the overall multiplier to 2.4.

Direct multiplier	+	Indirect multiplier	+	Induced multiplier	=	Overall multiplier
1		0.6		0.8		2.4

While reliable studies for Malawi, Mozambique, or Eswatini are not available, the multipliers for these countries can be assumed to be roughly similar, but dependent on the proportion of domestic versus international procurement and sales in each country. Given that international procurement is often primarily in South Africa and other neighbouring countries, multipliers have not been adjusted. However, some leakage may not be accounted for.

Impacts on employment

As noted above, the sugar industry is relatively labour-intensive and creates significant opportunities for small-scale growers , meaning that it has high employment multipliers.

Levin and Mhamba (2007) use economic modelling in order to estimate the impact on employment and poverty of various industries in Tanzania. They find that overall, agriculture has the largest impact on employment of all sectors. Within the agricultural sector, sugar has the third-highest total employment multiplier, after cashew nuts and fishing. However, sugar also has the highest impact in terms of "pro-poor" (poverty-reducing) employment, and is also found to have one of the highest impacts of all industries on female employment.

We conducted additional desk-based research to identify any studies academia published after 2017 to supplement our analysis of employment multipliers in southern Africa. Several studies have estimated indirect and induced employment for the sugar industry, again mainly in South Africa, including an additional 2020 study. These are described below:

- Imani-Capricorn (2001) estimated direct employment in sugar cane farming, milling, refining and support institutions at 136,671, and indirect employment in upstream and downstream industries at 118,000 (using 2000 figures from the Board on Tariffs and Trade). This implies an indirect employment multiplier of 0.86.
- Conningarth Economists (2013) offer two alternative sets of figures:
    - Their own SAM-based model gives direct employment (including small- and large-scale farms; mills; and industry support organisations) of 93,990, indirect employment of 7,356 and induced employment of 11,663, giving an indirect employment multiplier of 0.08 and induced of 0.12 (giving a combined multiplier of 0.2).
    - Meanwhile, figures provided by the South African sugar industry put direct employment at 106,796 and indirect/induced employment at 21,915, giving a similar combined indirect/induced multiplier of 0.21.
    - The difference between these two sets of multipliers is due to the assumptions used to estimate farm employment. The industry used a figure of 0.23 jobs per hectare under cane, whereas Conningarth Economists assumed a more conservative figure of 0.17 per hectare.
- Kavese & Phiri (2020) offered a revised set of figures for the agricultural sector in South Africa as a whole, estimating the indirect multiplier to be 1.119 and the induced 0.345. While their analysis gave a regional breakdown of different employment multipliers, including KwaZulu-Natal, they were not specified to be agriculture and have not been considered.
- South Africa's National Department of Agriculture (2006) estimates that the sugar industry directly employs 85,000 people and indirectly employs a further 265,000, implying an indirect employment multiplier of about 3.12. The total figure of 350,000 jobs has been widely quoted, including in subsequent reports by the South African Sugar Association and Department of Agriculture, Forestry and Fisheries, as well as by McCarthy and Owusu-Ampomah (2007), Conningarth Economists (2013) and Hess et al. (2016). However, the methodology used to arrive at the figure is not made clear. McCarthy and Owusu-Ampomah (2007) state that it was calculated using the Imani-Capricorn (2001) GDP multiplier of 3.2, rather than an employment multiplier. It has therefore not been used in this report.

After reviewing the studies gathered from both our 2017 and 2021 reports, we noted that there was little change overall to employment multipliers in the southern African sugar sector. Our reports, therefore, continue to use the Conningarth Economists' (2013) SAM-based multipliers in order to give a conservative estimate of indirect and induced employment. As with the economic multipliers, these have been applied to ISA's own employment in each country, plus estimates of employment through growers.

Direct multiplier	+	Indirect multiplier	+	Induced multiplier	=	Overall multiplier
1		0.2		0.86		2.06

Impacts on dependents

The sugar industry's impact on livelihoods does not end with those whom it employs. The poor, rural areas in which the sugar industry is primarily based means that there is a significant impact on workers' dependents (i.e., immediate and extended family).

The following table shows data on average household sizes, taken from the national statistics of each country. Where possible, figures are for the region(s) in which ISA operates. In the case of Eswatini, no national data sources are available, so a figure has been taken from the World Health Organisation.

Country	Region	Average household size[24]
Malawi	Rural	4.3
Mozambique	Maputo City	4.4
South Africa	KwaZulu-Natal	3.3
Eswatini	National average	4.7
Tanzania	Morogoro Region	4.9
Zambia	Southern Province	5.1

[24] Sources for each country can be found in the corresponding country report.