

Illovo Sugar Africa (Pty) Ltd

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

This report is an updated Group-level report of the socio-economic impact Group assessment carried out for Illovo Sugar Africa and its subsidiaries in 2013 and 2017. The individual country-level subsidiary reports have also been updated. Both the Group and country-level 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.

"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](#)

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 Illovo Sugar Africa'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](#) at the end of this report and on Illovo Sugar Africa's [website](#).

NOTE: At the time social and environmental data was collected for this independent impact assessment (post the completion of the Illovo Sugar Africa 2020/21 financial year), Maragra Açúcar Sarl in Mozambique was operating normally, reporting an increase in sugar cane production and related revenues for the year. In the first quarter of 2023, the business suffered a catastrophic flood of its cane fields and agricultural infrastructure which has consequently resulted in a decision not to operate the mill in 2023.

Illovo, together with its key local stakeholders including Government, are working to assess the best way forward for the business over the longer term. In order to give a full account of Illovo Sugar Africa's combined impact across all of its businesses for the 2020/21 year, information, data and findings about Maragra are presented as is.

Illovo in Africa

- Africa's leading and diversified sugar Group with operations in seven countries: Eswatini, South Africa, Mozambique, Malawi, Tanzania, Zambia and most recently, Rwanda.
- 15 manufacturing plants located across sub-Saharan Africa, producing brown and refined sugar together with a range of high-value downstream products such as furfural and its derivatives, ethyl alcohol, lactulose and co-generated electricity.
- 1.6 million tonnes of sugar produced in 2020/21 with 77% being sold into domestic markets.
- Directly employs over 44,000 people in agriculture, manufacturing, finance, marketing and administration with almost 200,000 livelihoods supported when accounting for employee families and dependents.
- Outside of the sugar cane sustainably produced on the Group's own estates, more than 22 000 independent growers deliver their cane to its mills, underscoring the significant economic impact on farmer livelihoods through Illovo's value chain.
- 91% of the group's energy requirements provided by installed electricity generating capacity, primarily fuelled by renewable resources.

Summary of findings

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

Table 1: Key quantitative impact findings by pillar

In 2020/21, Illovo Sugar Africa's quantitative social, economic and environmental impacts included the following:	
Sugar market leader	<ul style="list-style-type: none"> • 1.58m tonnes of sugar produced with 77% to the domestic market • Total economic impact estimated at R28.6Bn, including R6.6Bn direct impact (gross value added) and the remainder in indirect & induced impact through multiplier effects in the supply chain and wider economy • R1.2Bn direct tax contribution and R4.2Bn indirect tax contribution (collected on behalf of the government) • 44,273 people directly employed including 12,109 permanent and 32,164 non-permanent roles. Illovo Sugar Africa contributes to supporting the livelihoods of an estimated 435,652 people once families and dependents are considered • Estimated total employment impact of 97,753 people, including direct, indirect and induced employment supported in grower communities and the wider economy
Sustainable agriculture	<ul style="list-style-type: none"> • 6,010,947 tons of cane sustainably produced on 71,476 ha of company-owned land • 24,948 independent growers with 178,461 ha of land under cane supplied 8,392,913 tonnes of sugar cane • 9,136 growers reached via development programmes
Value and quality-driven industry	<ul style="list-style-type: none"> • 91% of energy production from renewable sources • 1.5% decrease in scope 1 & 2 emissions (2019/20 to 2020/21) • R2.99m invested in safety training and a Lost Time Accident Frequency rate of 0.07 • R23.5m invested in training, with 12,270 employees trained • R213.5m invested in employee benefits including support for healthcare, pension funds and counselling • R13.9Bn spent on procurement with R6.65Bn going to non-cane local suppliers
Community connected	<ul style="list-style-type: none"> • R123.9m spent on the community through projects such as improving local education, providing emergency COVID-19 and other healthcare support, supporting infrastructure development and providing vital resources. • 17,145 COVID-19 voluntary vaccinations • 13% women in Illovo Sugar Africa's workforce with 20% in the management level

Sugar market leader

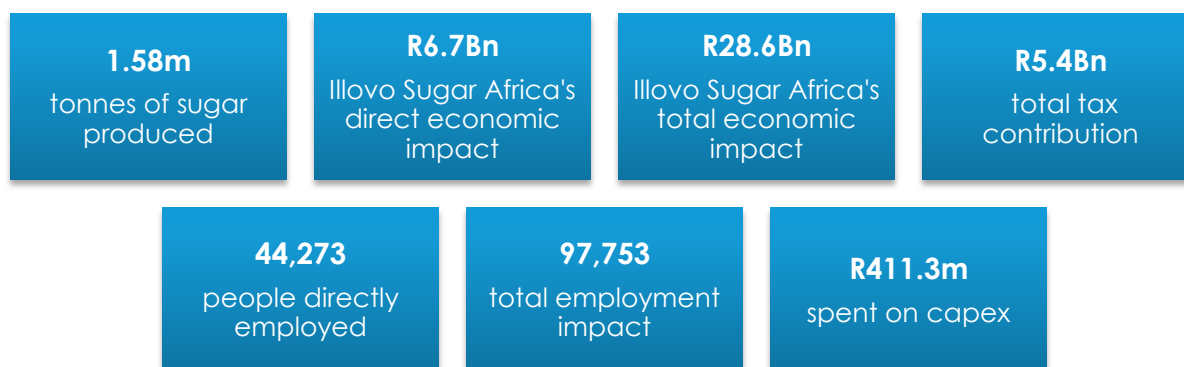
Building market preference through rich commercial insights, purpose and working together with production and distribution partners. Whilst constantly serving customers and consumers quality products in the formats they require and price they can afford. This underpins Illovo Sugar Africa's market, financial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

Key pillar findings:

Despite external challenges posed to the Group such as COVID-19 and climate-related disasters, Illovo Sugar Africa continues to be a significant contributor to the economies and employment in its six assessed operational locations. The Group's operations and wider value chain activities enable the creation and growth of connected economic and employment activities.

The Group's total economic impact has increased by 20% since our last report in 2016/17 benefitting a wide range of stakeholders within the business and its value chain including suppliers and growers, as well as wider economies. Despite an 8% decrease in sugar production since 2018/19 as a result of economic and climate pressures such as flooding, revenue has grown 26% since 2016/17. As a food and downstream products manufacturer, Illovo made a commitment at the commencement of the Covid-19 pandemic to where possible, maintain production at capacity in order to continue serving its local and export customers. Group revenues from both sugar and downstream segments in its traditional markets were thus largely maintained however, increased commensurately where Illovo was able to supply other deficit markets in strong demand due to the inability of existing producers to manufacture at capacity, or suffered other issues such as disrupted supply chains, border closures, etc (see graph below).

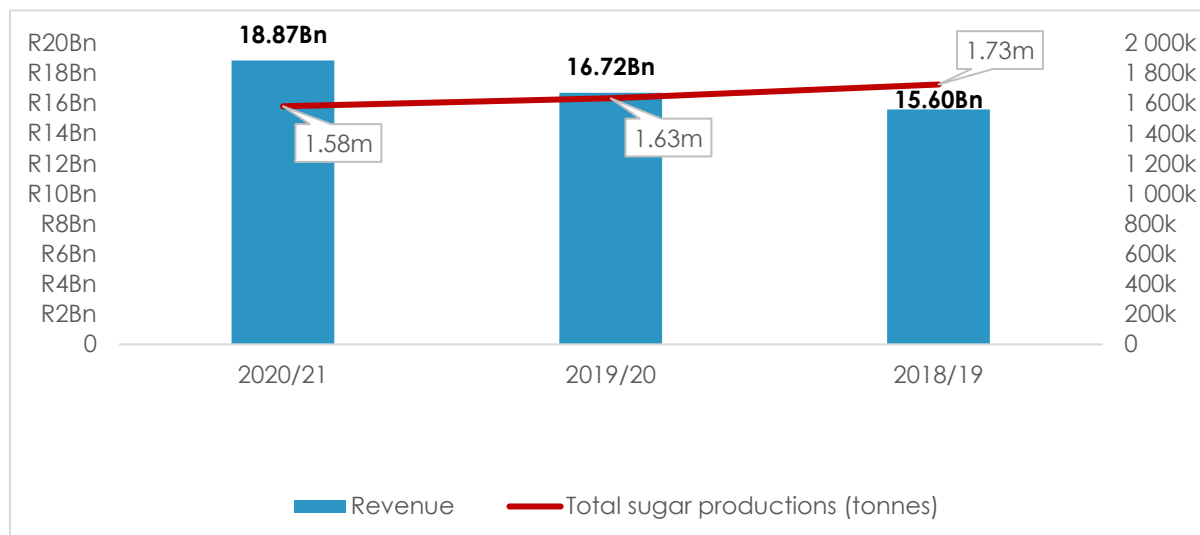
Total employment impact has also risen by 37% since 2016/17. While permanent employment figures have remained broadly stable, there has been a substantial 92% increase in non-permanent employees and 23% rise in grower engagement.



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

Meeting demand & beyond

Figure 2: Illovo Sugar Africa total sugar and downstream sales and sugar production volume, 2018/19 - 2020/21

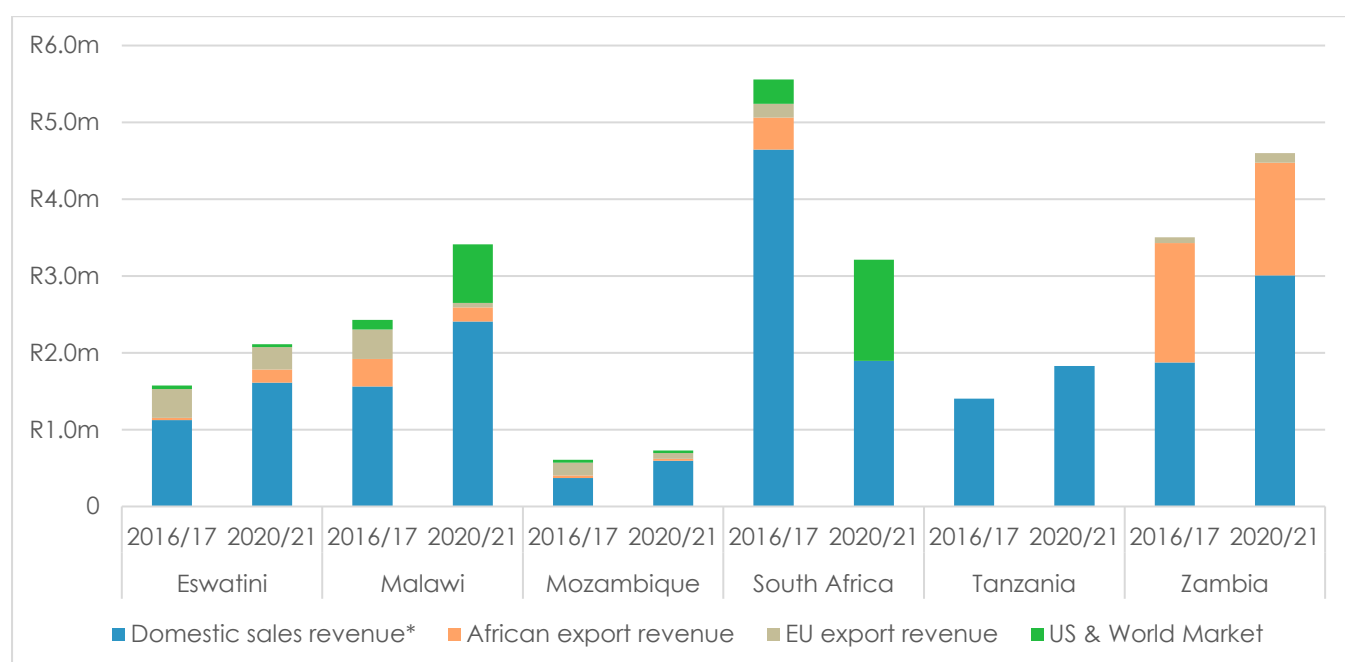


As the largest sugar producer on the African continent, Illovo Sugar Africa plays a key role in meeting the mostly local and regional demand for sugar. Since our last report in 2016/17, and as referred to above, the Group's sales have risen by almost R4Bn, marking a substantial 26% rise. Since our last assessment, there has been a continued strategic trend across the Group's operations towards meeting domestic and regional African demand. In 2020/21, 77% of revenue came from domestic sales and 22% came from regional sales, up from 73% and 16% respectively in 2016/17.

While overall sugar production has increased slightly from the 1.5m tonnes reported in 2016/17, there has been a slight 8% reduction from 2018/19, falling to 1.6m tonnes in 2020/21. We noted that climate change, severe weather, droughts and consequent economic pressures are making it difficult for growers to both grow and harvest cane to sell to Illovo, across its countries of operation.

Our analysis of each country of operation within the Group suggests that Illovo Sugar Africa has maintained financial resilience despite these pressures through a combination of product diversification, and capitalisation on key operational efficiencies. Another factor to consider in the increase of revenues against the decline in production is increasing levels of inflation across southern Africa.

Figure 3: Illovo Sugar Africa's sugar sales revenue by market segment for 2016/17 and 2020/21



* Domestic sales revenue in Eswatini includes revenue from both domestic and SACU sales

Product affordability

Ensuring affordability alongside the availability of sugar is important in all the Group's countries of operation, in which roughly 45% of people live below the poverty line of \$2.15 a day.¹ To ensure accessibility, country-level operations regularly review their routes to market to analyse how to increase penetration into less populated as well as impoverished areas and create market-specific initiatives. For example, to make sugar more affordable for low-income households, Illovo Malawi introduced a smaller lower-priced 90g pack size whilst Kilombero Sugar Company made available sugar in 50g sachets.

Economic contributions

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 Illovo Sugar Africa 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 Illovo Sugar Africa'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

¹ Figure calculated using the statistics reported in Table 1 of each country report.

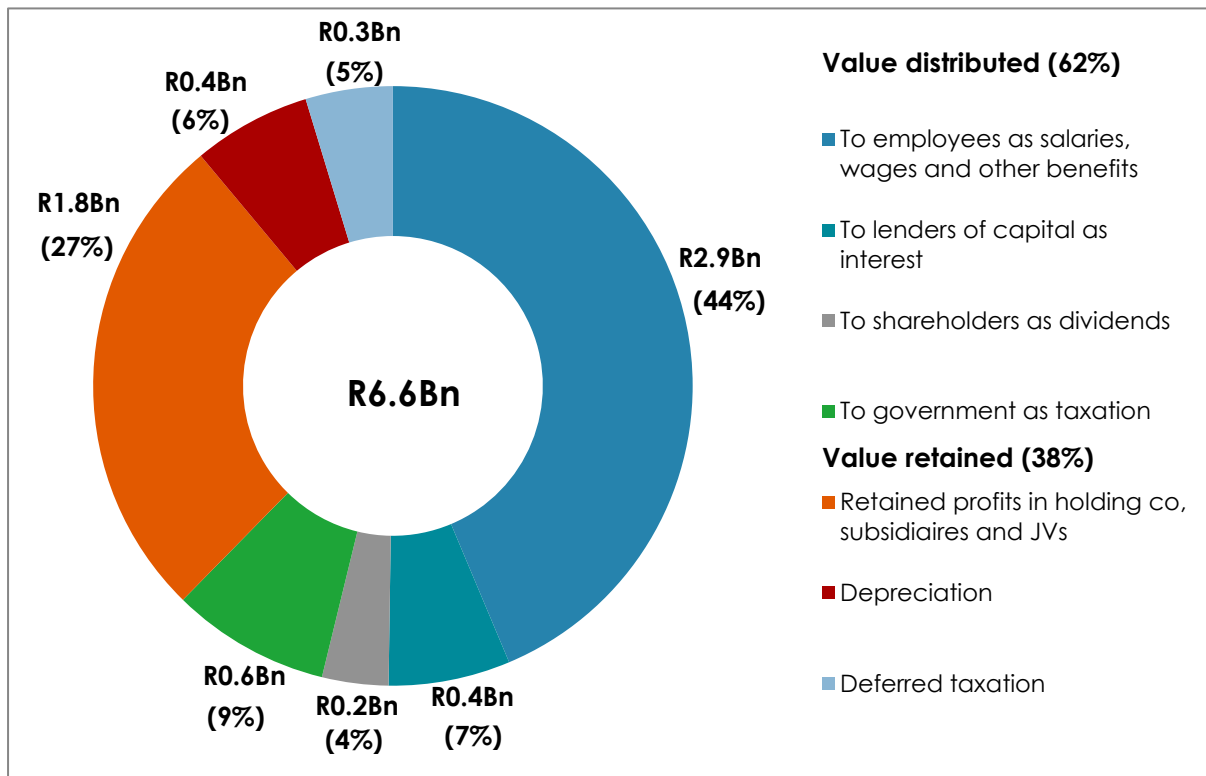
indirect impacts include payments to other suppliers and distributors, as well as impacts on those selling Illovo Sugar Africa products or using them in their businesses;

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

The Group's overall direct contribution to the economies it operates in, measured in terms of gross value added, was R6.6Bn 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, 62% was distributed to stakeholders, namely employees, shareholders, and local governments. The other 38% was retained in the business, an increase from the 22% retained in 2016/17.

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



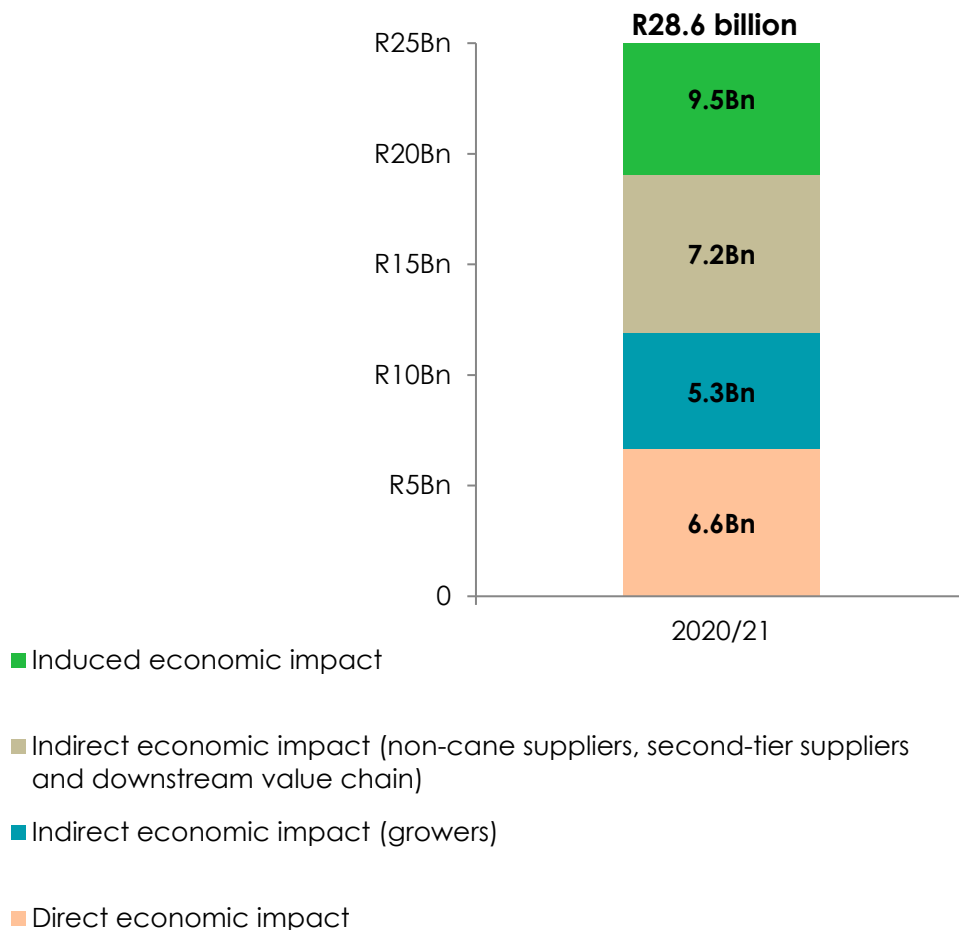
Total economic impact

The Group's total economic impact – including direct, indirect and, induced impacts – is estimated at R28.6Bn for 2020/21. For comparison purposes, this figure is greater than the GDP contribution of Eswatini's and Zambia's agricultural sectors combined.²

² [World Bank, 2021](#): Calculated through data from the World Bank, using conversion rates provided by Illovo Sugar Africa.

It also marks a 20% increase from the R23.8Bn reported in 2016/17, with increases in all three of these areas of impact, particularly its direct and indirect impact on non-cane suppliers and the downstream value chain. This rise is demonstrative of the business's growth and increased payments to growers.

Figure 5: Illovo Sugar Africa's total economic impacts (estimated), 2020/21



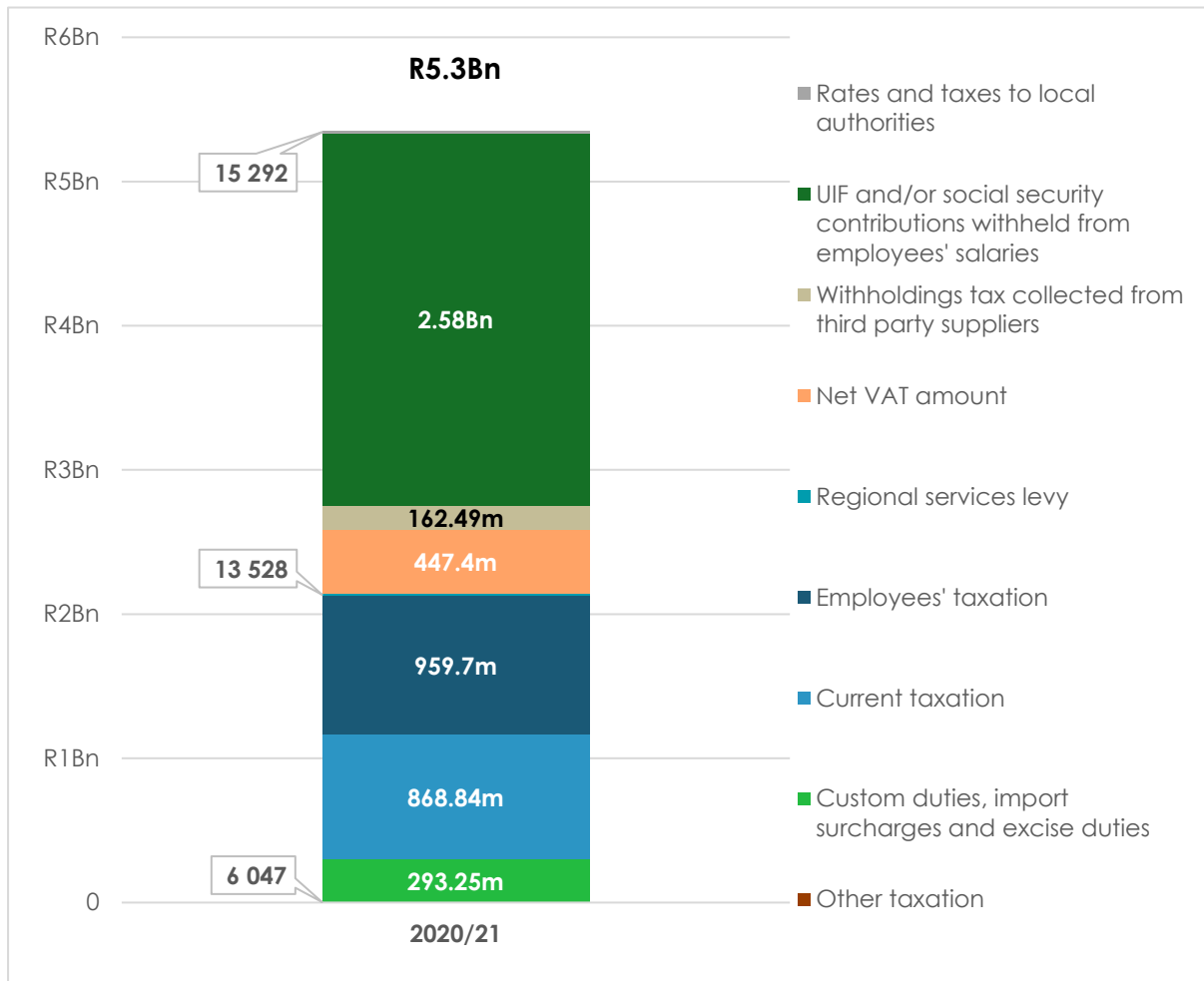
Tax contributions

As a major player in each country's sugar industry, the Group is an important contributor to respective tax revenues. In 2020/21 Illovo Sugar Africa's direct tax payments amounted to R1.2Bn, while indirect taxes (which are collected on behalf of the government) totaled R4.2Bn.

Indirect taxation includes employee tax, withholdings tax, forms of social security contributions, and VAT.

In all, this total of R5.3Bn represents a large 274% increase in the tax paid by the Group in 2016/17 with the largest drivers being the rise in current (corporation) tax and social security contributions, reflecting the sustained financial growth of the business.

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

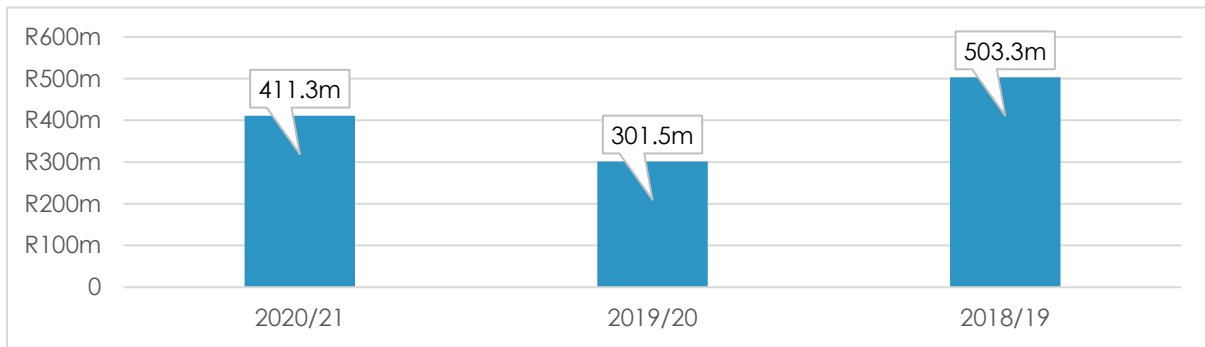


Capital expenditure

The Group's capital expenditure between 2018/19 and 2020/21 totalled R1.22Bn. Expenditure was predominantly spent on improvements to operational efficiency and sustainability, with a range of projects across the Group looking at upgrading agricultural infrastructure, factory boilers, and the reduction of its carbon footprint. In Tanzania for example, KSCL has invested in enhancing its healthcare provision, distribution and irrigation facilities, in addition to a significant sum earmarked for its expansion project.

While overall capital expenditure of R411.3 million in 2020/21 has fallen notably compared to the R2.7Bn capital expenditure reported between 2014/15 and 2016/17, this is due to the significant investment related to a major capital investment in 2015/16. Additionally, our engagement across the Group indicated that strategic reprioritisation and reduction of capital expenditure were required due to the financial pressures of COVID-19.

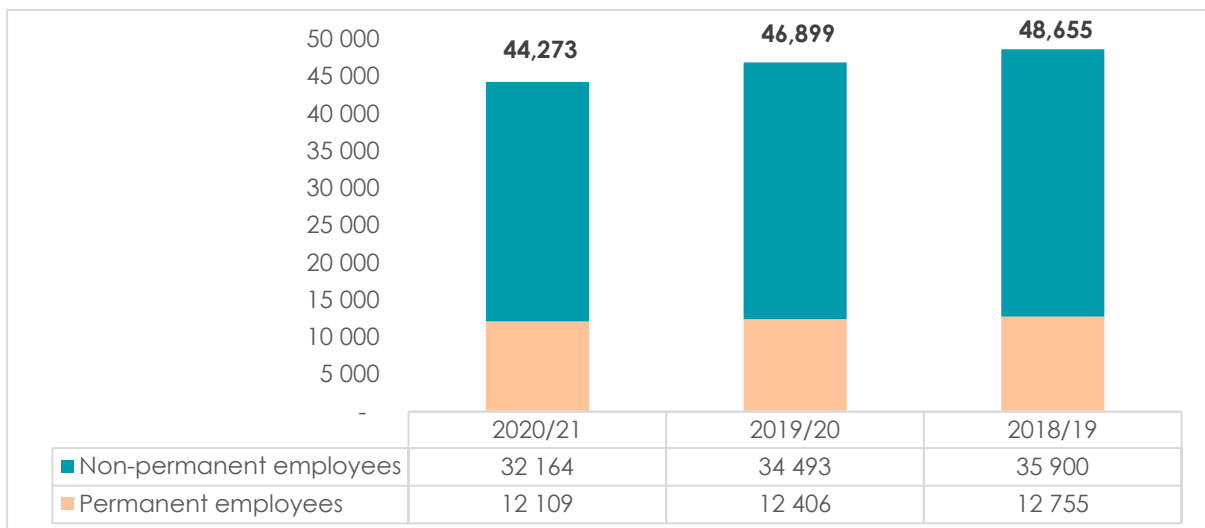
Figure 7: Illovo Sugar Africa's capital expenditure, 2018/19 – 2020/21



Employment

Our engagement with the Group's stakeholders revealed that one of the most important impacts valued by local leaders, Illovo Sugar Africa's employees and wider communities, is the employment opportunities the business has created both directly and through the value chain.

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



"Arguably our biggest social contribution is our role as an employer.... Almost every single type of profession from farmer to HR to engineer works in our business."

- Oswald Magwenzi,
Managing Director
Zambia Sugar

In 2020/21, Illovo Sugar Africa directly employed 12,109 permanent employees, compared with the 12,885 reported in 2016/17 and 32,164 non-permanent/seasonal employees, compared with 16,778 in 2016/17. Employee numbers have remained broadly stable since our last assessment, but the overall increase in non-permanent employees since then has been largely driven by the need to address seasonal agricultural challenges such as increases in pests and diseases, and negative changes to soil health and weather

patterns. Seasonal workers are hired to mitigate these challenges through activities ranging from weed control to irrigation management.

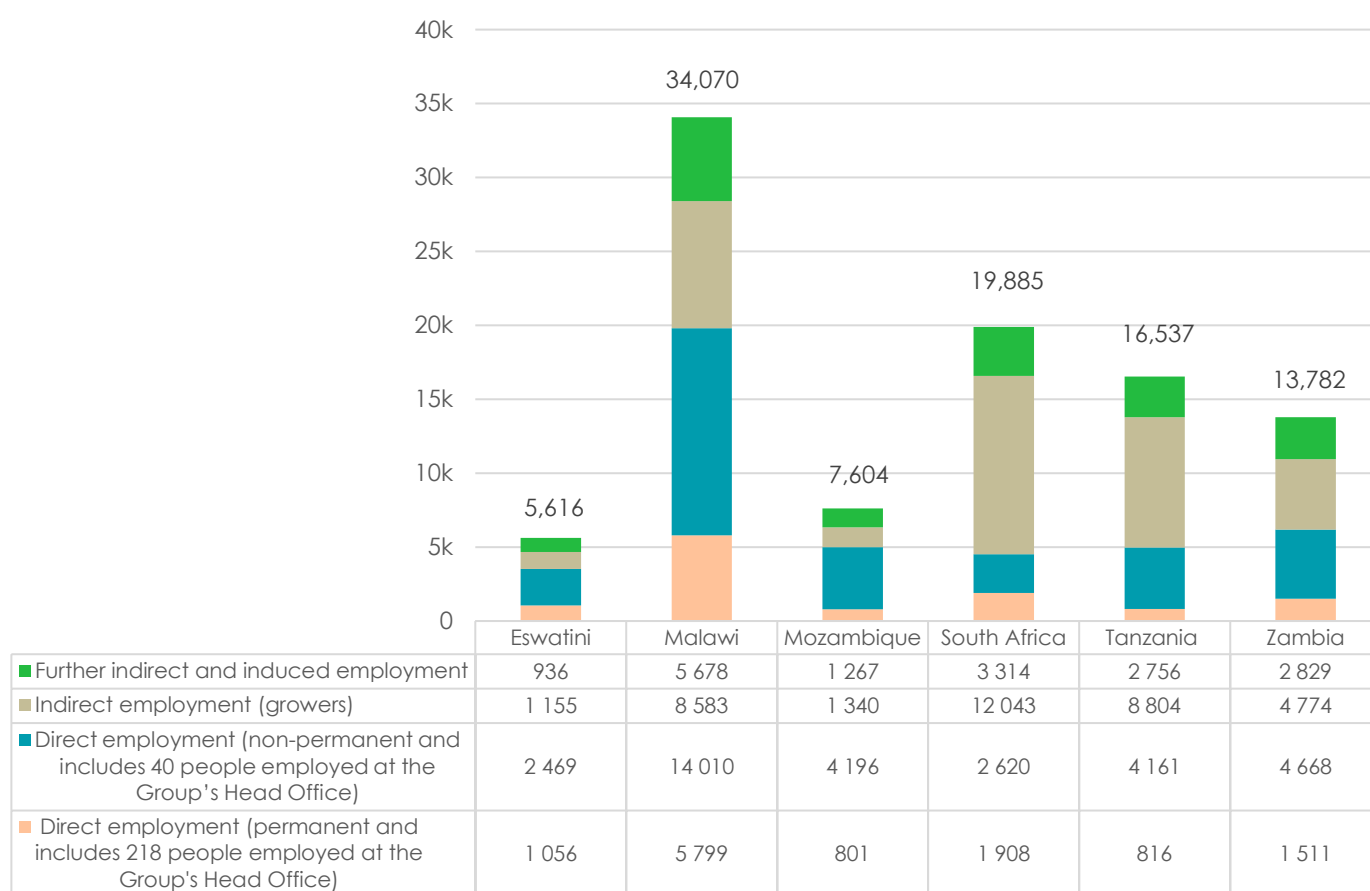
In addition to direct Illovo employees, approximately 24,948 independent small, medium and large-scale growers deliver their cane to Illovo's mills. Together with the growers' associated

employment of seasonal agricultural workers, the indirect economic impact of the employment of 36,699 people across Illovo's supply chain in total, is significant. The business also contributes to further and induced employment in its six countries of operation.

We estimate that the Group is supporting the employment of at least 97,753 people in total across the six countries assessed and as well as the Group's head office operations, based on a conservative multiplier for the sugar industry. This is over a 35% increase compared to the 71,443 total jobs supported in 2016/17 reflecting a rise in non-permanent employees and grower engagement.

This means that for every direct employee of Illovo Sugar Africa, at least 1.2 other workers are supported through grower communities and in the wider economy.

Figure 9: Illovo Sugar Africa's total employment impact (estimated), 2020/21



We estimate these direct jobs provided also contribute to supporting the livelihoods of 435,652 people once families and dependents are considered. This is based on an average household size of 4.5 across the countries assessed.³ The amount to which the Group supports livelihoods will vary between households – for some, such as direct employees and growers, the Group may well be the main contributor to household income, while in others its support will be a factor among many.

³ This figure has been taken as the average of each country's average household size. Please see country reports for sources on regional average household sizes.

FUTURE FACING CHALLENGES

While the Group's value chain does create extensive positive economic impacts, its influence and operating contexts also present a unique set of challenges. As efforts to combat climate change and decrease operational emissions in the industrial sector call for changes in labour, agriculture and other industrial practices, Illovo Sugar Africa will need to strategically invest in proactive mitigation activities. These could include further diversification of product offerings, resilient agricultural practices (explored further in the next section of this report) and training for employees and growers.

Supporting its operations to become more financially and environmentally sustainable, despite tougher operating contexts, is crucial to secure the long-term success of Illovo Sugar Africa's own business as well as the economies of the communities and countries it operates within.

While economic and employment activities are largely created and implemented at the country level, the Group should consider creating a standard set of Key Performance Indicators (KPIs) that all operations must report against. Creating a core impact framework with a consistent set of social, economic and environmental KPIs will help Illovo Sugar Africa identify current performance and impact trends, know where to invest resources and promote knowledge sharing between different operating locations and operational efficiencies.

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.

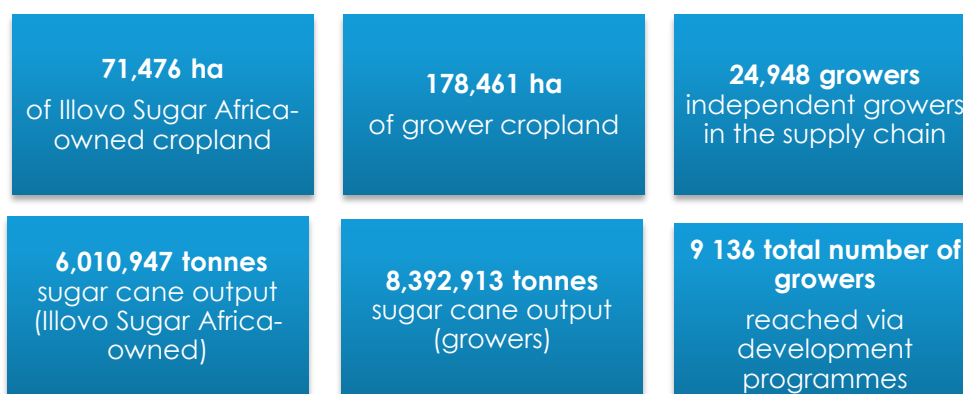
Key pillar findings:

There are opportunities to reduce air pollution, improve soil health and increase renewable energy production feedstocks through gradually transitioning from manual cane cutting to mechanised green cane harvesting in places, and some countries are already beginning this transition. However, this transition presents upfront costs, and must be handled carefully to minimise risks to local employment. The suitability of mechanised harvesting also varies by geographic conditions in different countries.

Crop irrigation on its own estates is one area where Illovo Sugar Africa is driving greater water efficiencies by transitioning to water-efficient drip systems in some countries. While this requires upfront installation costs, drip irrigation for example, can offer greater climate resilience in the face of changing weather patterns and risk of drought, while maximising "crop for drop". While drip may not be suitable for all countries (e.g., Mozambique), progress is uneven in some areas, with South Africa suffering from droughts and serious challenges currently preventing any irrigation.

All countries are already experiencing climate-related changes to varying extents, including changing weather patterns such as increased floods and drought, and increased pests and diseases. Illovo is pursuing innovative adaptation techniques such as exploring climate-resilient seed varieties, new pest control methods, and investing in flood-resistant infrastructure; such efforts will remain critical to ensure long-term sustainable farming.

Illovo Sugar Africa's agricultural practices



Illovo Sugar Africa has influence not only over the practices of the land it manages but also over the growers whom they work with. Many of the potential environmental and social impacts from sugar cane farming relate to land-use change, in particular to the conversion of land that might have been used for other purposes (such as subsistence farming, or biodiverse wild habitats) to sugar cane farming. For this reason, much of Illovo Sugar Africa's overall

approach to improving farming sustainability is to focus on increasing vertical growth, that is, achieving higher yields per hectare (ha) of existing cropland. 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

All of Illovo Sugar Africa's operating countries irrigate part of their crops via various methods, except South Africa which is fully rain-fed. Sugar cane crop irrigation can offer benefits including higher yields, and greater climate resilience in the face of changing weather patterns such as higher frequency of droughts. Illovo Sugar Africa adheres to parent company AB Sugar's target to reduce water consumption by 30% by 2030, from a 2018 base year⁴ and is implementing water-saving efficiencies throughout the production process.

Drip irrigation is one of the most water-efficient and is stated to offer up to 25% higher efficiency in Illovo's operating regions. Moving to more efficient, low loss irrigation has been identified as one priority opportunity for Illovo Sugar Africa to decrease water wastage and losses in operations while maximising yields⁵. The amount of company-owned land with drip irrigation has increased from 3% in 2018/19 to 5% in 2020/21 as a result of efforts in Malawi, Eswatini, Tanzania and Zambia to increase the implementation of this technology, and further plans are underway for future implementation. For example, in Zambia, the country has a 14-year plan in place to shift to a more efficient system of either drip, pivot or alternate low loss, highly uniform irrigation, with an initial upgrade planned for around 600ha.

The majority of Illovo Sugar Africa's land is still irrigated by furrow irrigation (26%) while the second largest share remains rain-fed (22%). This highlights an opportunity for Illovo Sugar Africa to implement more efficient irrigation systems in future, where appropriate, which can help increase the climate resilience of crops and maximise yields. For example, at Kilombero in Tanzania, there are some plans to convert dryland cane to irrigated farms. However, in South Africa, where droughts are considered South Africa's most climate-related hazard in terms of cane cultivation, challenges to irrigation include obtaining legal water rights to draw from water-scarce catchments, aside from cost.

⁴ <https://www.abf.co.uk/content/dam/abf/corporate/AR-and-RR-website-updates-2022/responsibility/ABF-ESG-Insights-Water-2022.pdf.downloadasset.pdf>

⁵ <https://www.absugar.com/sustainability/case-studies/more-crop-per-drop-ab-sugars-approach-to-water-stewardship>

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

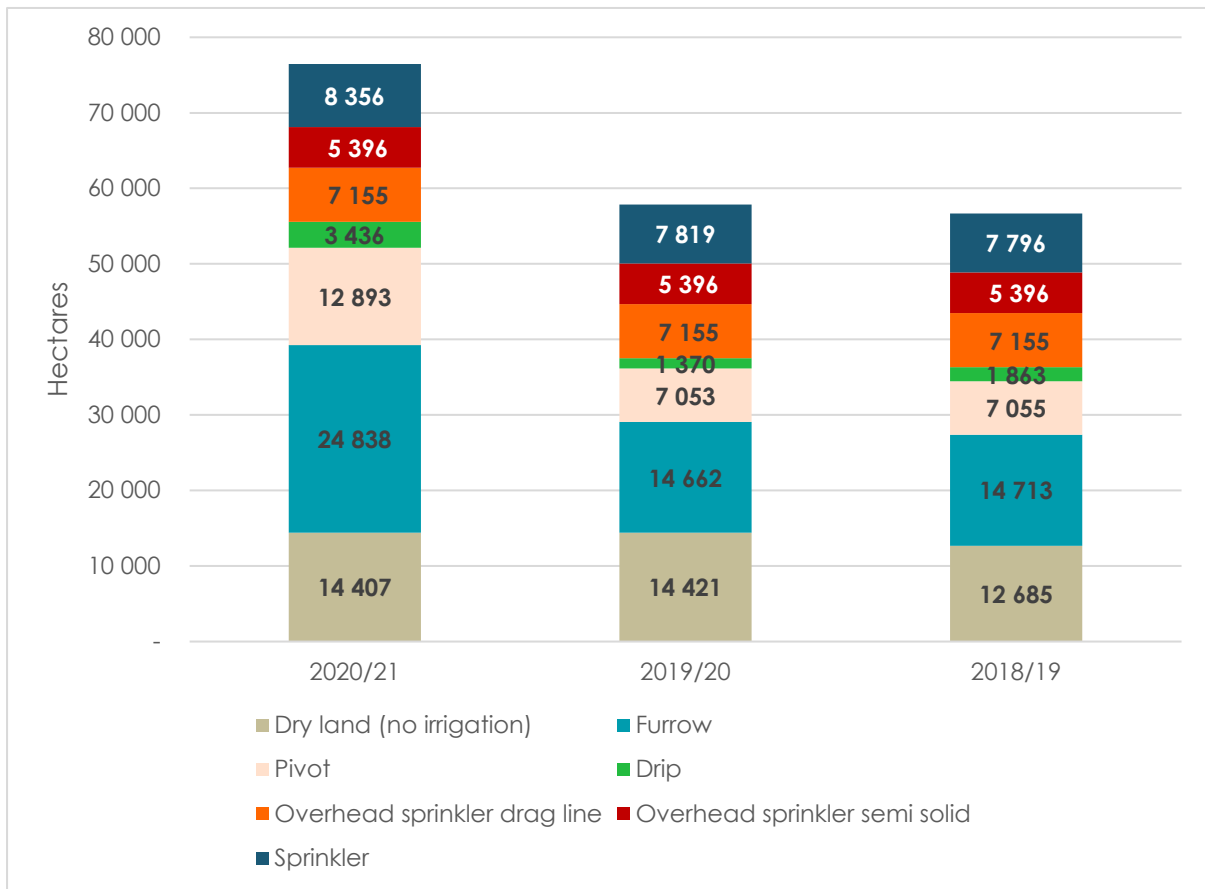


Table 2: Comparison between different irrigation methods

	Definition	Benefits	Limitations
Furrow irrigation⁶	Establish long surface trenches, making use of gravity to let water run down between crops on the ground	<ul style="list-style-type: none"> • Low-cost, low-tech method • Well suited to broad-acre row crops such as sugar cane • Low energy use 	<ul style="list-style-type: none"> • Risk of deep percolation(seepage) losses • Can distribute water unevenly across row crops • Can be labour-intensive
Pivot irrigation⁷	Movable pipe structure rotating around a centre pivot, with water irrigated from above the cane to the roots	<ul style="list-style-type: none"> • High efficiency • High uniformity • Ability to irrigate uneven terrain • Low capital, maintenance and management costs 	<ul style="list-style-type: none"> • Risk of relatively high evaporation losses • Can achieve uneven application of water to crops • Wind interference

⁶ [Greenmatters \(2020\), Furrow irrigation can help save water, but is it worth the labor?](#)

⁷ [Waller & Yitayew \(2016\), Center Pivot Irrigation Systems](#)

Sprinkler irrigation ^{8, 9}	Distribution of water through the pipe system, spraying the water above the cane through sprinklers	<ul style="list-style-type: none"> • Easy to set up • Water efficient • Less land loss • High and frequent application • Automation 	<ul style="list-style-type: none"> • Risk of relatively high evaporation losses • High operating costs • Wind interference • Labour intensive
Drip irrigation ¹⁰	Development of pipe system, running along the top or within the soil to apply water in the root zone of the crops	<ul style="list-style-type: none"> • Little evaporation, highly efficient • Directs water and nutrients directly to plant root system • Precise and controlled application possible • Soil erosion reduced 	<ul style="list-style-type: none"> • Significantly more costly per hectare compared to pivot irrigation • Can require disruptive/labour-intensive installation • Clogging of tubes can occur • Requires significant management and monitoring • Prone to poor uniformity

Country spotlight: Shire Valley Transformation Project (SVTP) in Malawi

Illovo Malawi is partnering with the Government of Malawi and funders of the Shire Valley Transformation Project (SVTP), a 14-year initiative (2018-2031), to increase irrigation in the Shire Valley. The project will develop irrigation canals and pipelines to transport water to 43,370 hectares of land in the valley after it is abstracted from the Shire River at Kapichira dam. 9,995 hectares of Illovo Malawi's Nchalo Estate will benefit from access to this canal irrigation water, while one of the company's key growers, Kasinthula, will also benefit from 1,429 hectares with access to the irrigation pipeline. Illovo Malawi is financially supporting the ongoing development of the SVTP as the project's anchor tenant.

These ambitious plans will, if successful, help to reduce the quantity of water needed for sugar cane production, reducing vulnerability to the impacts of climate change. Additionally, the SVTP project will distribute water to Illovo Malawi and its growers' cropland flowing downhill using the power of gravity, which will reduce the company's reliance on more energy-intensive forms of uphill irrigation systems, lifting water from river sources. This in turn will reduce Illovo Malawi's energy consumption and enable more of the country's grid electricity to be consumed elsewhere.

Crop harvesting and the move to green cane

Currently, Illovo Sugar Africa's group harvests most of its own sugar cane using cane-burning methods followed by manual harvesting. While cost-effective and efficient, the burning process creates air pollution that could be significantly reduced via mechanised green cane harvesting.

⁸ [FAO \(2022\), Sprinkler irrigation](#)

⁹ [Artificial Plants \(2018\), 10 advantages and disadvantages of sprinkler irrigation system](#)

¹⁰ [Sharaf, B. \(2022\), Advantages and disadvantages of drip irrigation](#)

Mechanised green-cane harvesting can offer various environmental benefits, primarily the reduction of air pollution, improved soil health through increased crop residues being left to decompose, and greater water retention in the residue blanket. However, while efficient, moving towards mechanised harvesting presents a risk towards Illovo's substantial employment of seasonal manual cane cutters, who manually cut the cane following crop burning. Illovo Sugar Africa is aware of this potential risk to employment, and is committed to handling such a transition carefully if it does move towards mechanised harvesting in selected countries. The company is conscious that the benefits to local employment of manual cane cutting may outweigh the environmental advantages of mechanisation, in some areas.

Some countries have already begun implementing or preparing to transition to mechanised harvesting on their cropland. Eswatini already uses mechanised harvesting on 22% of its cropland (harvesting a mixture of green and burned cane), and Tanzania has introduced a 3-year mechanised green cane harvesting pilot project which covers ~40% of its land area under cane, due to begin in 2022. Other businesses including Malawi and Zambia see mechanised harvesting as a long-term opportunity, but have not yet committed to fixed plans to retain current employment patterns.

While the shift to mechanised harvesting may pose a risk to the existing employment of manual cane cutters, various interviewees from our engagement highlighted that different employment opportunities may be created as part of the transition, such as skilled operators of the machinery.

Climate risk and resilience

The impacts of climate change were noted as significant in our engagement with all countries, both as a present hazard and future risk. Prominent characteristics noted include changing weather patterns, with increasing frequencies of both droughts and flooding posing challenges to sugar farming for both Illovo Sugar Africa-owned lands as well as that of growers. Rising temperatures were also noted to have led to increasing and new varieties of pests and diseases (see "Chemical inputs" section below).

Various initiatives are being implemented to increase the company's resilience to climate-related changes, such as developing climate- and disease-resilient cane varieties in Tanzania and Zambia, trialling new methods of disease and pest management, or increasing flood defences in Mozambique. As climate-related impacts are manifesting themselves differently in different countries, Illovo Sugar Africa will need to continue implementing locally-specific climate adaptation plans to ensure that sugar farming may continue in a sustained way. However, knowledge and resource sharing between countries, such as around new climate-resilient seed cane varieties, may also be highly beneficial.

Chemical inputs: pesticides and fertilizers

Illovo Sugar Africa currently uses selected chemical inputs for sugar cane farming, both to increase yields through fertilizer, and combat pests and diseases through pesticides. The use of chemical inputs must be balanced between the need to increase yields without expanding land conversion and minimising negative impacts on the soil and runoff. A further driver to minimise use of chemical inputs is rising costs in many countries.

Our engagement indicated that various processes are in place to reduce and monitor chemical inputs. For example, Zambia and Tanzania both use sun-hemp as a nitrogen-fixing cover crop to improve soil health. Tanzania also re-uses the Condensed Molasses Solids (CMS) by-product from its sugar production process and blends this with nitrogen to create the desired fertilizer blend. To reduce the impacts of pesticides, Malawi and Tanzania are both exploring integrated pest management solutions, with Tanzania running a trial using beneficials to target particular pests. With several different methods being used in each country,

knowledge sharing may be highly beneficial between countries, particularly regarding results from various trials and pilots.

Country spotlight: Innovative pest management in Tanzania

The increased population of existing and emerging pests has posed a new challenge for agriculture in Tanzania. This recent change can be partly attributed to climate change and rising temperatures, and therefore may be expected to worsen in future. At the time of this report's engagement, yellow sugar cane aphids were highlighted as particularly challenging for sugar cane agriculture.

Kilombero Sugar Company Limited (KSCL) is working towards integrated pest management, which involves integrating different methods of pest control to reduce agrochemical usage. For example, yellow sugar cane aphids can be managed through "beneficial" insects which feed specifically on the aphids. These beneficials can be used for spot treatment of pest outbreaks. A small programme has been run to test the effectiveness of this method, by harvesting beneficials and then manually moving them into the affected field. There is potential for drone application of beneficials in the future for more efficient dispersal. KSCL is also exploring the possibility to apply agrochemicals using drone sprayers in future, which would enable more efficient, targeted application. All usage of drones for any purpose by KSCL must adhere to protocols set out by the Government of Tanzania.

Biodiversity

Illovo Sugar Africa's operating countries are aware of the pressures that their economic development places on nearby landscapes and nature and, have established guidelines to protect biodiversity as part of general environmental management policies. Depending on each country's operating and geographical context, the type of initiatives in place vary based on the types of landscape and local species of wildlife. For example, Zambia's Nakambala estate falls within the Kafue Flats wetland area, which is a listed Ramsar site of international importance for high biodiversity. Zambia's policies aim to minimize risks to wildlife for example by driving slowly, to reduce dust emissions and risks of colliding with animals. Tanzania's farming operations are also situated in an area of significance for local biodiversity, as they are surrounded by three protected areas: Udzungwa Mountains National Park, Magombera Nature Forest Reserve, and Nyerere National Park, along with some community forests. These environments are home to several endemic species and therefore a careful approach to maintaining local biodiversity while farming is of high importance.¹¹ Protective measures KSCL have put in place include employing specially trained control officers who can safely remove animals from cropland and return to their habitat, mapping out key nesting areas for birds, and tree planting initiatives both on and beyond the company's estate.

¹¹ [African Wildlife Foundation \(2020\), Protection of Biodiversity Takes Center Stage at Kilombero Cane Farmers' Day 2020](#)

Country spotlight: partnership with African Wildlife Foundation (AWF) in Tanzania

Established in Tanzania in 1962, the African Wildlife Foundation (AWF) is an international organisation focused on conserving Africa's wildlife and wild habitats. AWF first began collaborating with KSCL in 2016 on the conservation of the Magombera Forest. Magombera is a lowland forest at the foot of the Udzungwa Mountains, and home to several endangered plant and animal species, such as the Udzungwa red colobus monkey. Part of the forest was located on KSCL-owned land, but in partnership with AWF, KSCL released the forest to become a fully protected nature reserve.

AWF's current collaboration with KSCL aims to share best practice around sustainable farming and vertical growth, which minimises the need for extra land conversion which may affect local biodiversity. Initiatives that AWF and KSCL have collaborated over to promote sustainable farming in the region include a project increasing nursery provision to make more seed canes available to local communities, AWF-led trainings for KSCL's extension support officers to share best practice in agronomy and agricultural management and AWF technical support for growers with business plans and access to financing.

Grower livelihoods and agricultural practices

Grower livelihoods

Illovo Sugar Africa generates significant indirect employment in the countries in which it operates, with 24,948 independent growers indirectly employed across its six countries. Illovo Sugar Africa depends on this network of growers to provide a diversified and steady supply of cane to sustain production, and it is therefore in the company's interests to ensure that growers are supported to maintain and grow their businesses in the long term.

The extent to which Illovo Sugar Africa depends on growers for sugar cane supply varies by country, with most countries sharing a split between 40-60%. Exceptions are South Africa, which receives 92% of its cane supply from growers, and Malawi, which conversely receives only 23% of its cane supply from growers.

Due to the rural nature of the locations Illovo Sugar Africa's companies operate within, they typically provide an important role in providing employment opportunities, in areas where rural poverty is increasing, and where other agricultural income opportunities may not otherwise exist.

Country spotlight: Rolling Thunder International Ltd in Zambia

Rolling Thunder International Ltd (RTI) is a Zambian family business that offers diversified products and services across the agricultural value chain. These include cane cutting, haulage, transportation, grain storage, milling, feed lotting, and abattoir management, in addition to producing diversified crops including sugar cane. Zambia Sugar is RTI's biggest customer. RTI has provided sugar cane to Zambia Sugar for 25 years, as well as services of cane haulage, transportation, and employing cutters. During cane cutting season, RTI can employ more than 1 600 people, and 400-500 during off-season.

"A lot of Rolling Thunder's success and growth is a result of Zambia Sugar. We are conscious that we are responsible for the employment of many people, and we rely on Zambia Sugar to achieve and sustain that."

- Chucky D Cantlay, Rolling Thunder, Director of Operations [Zambia](#)

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

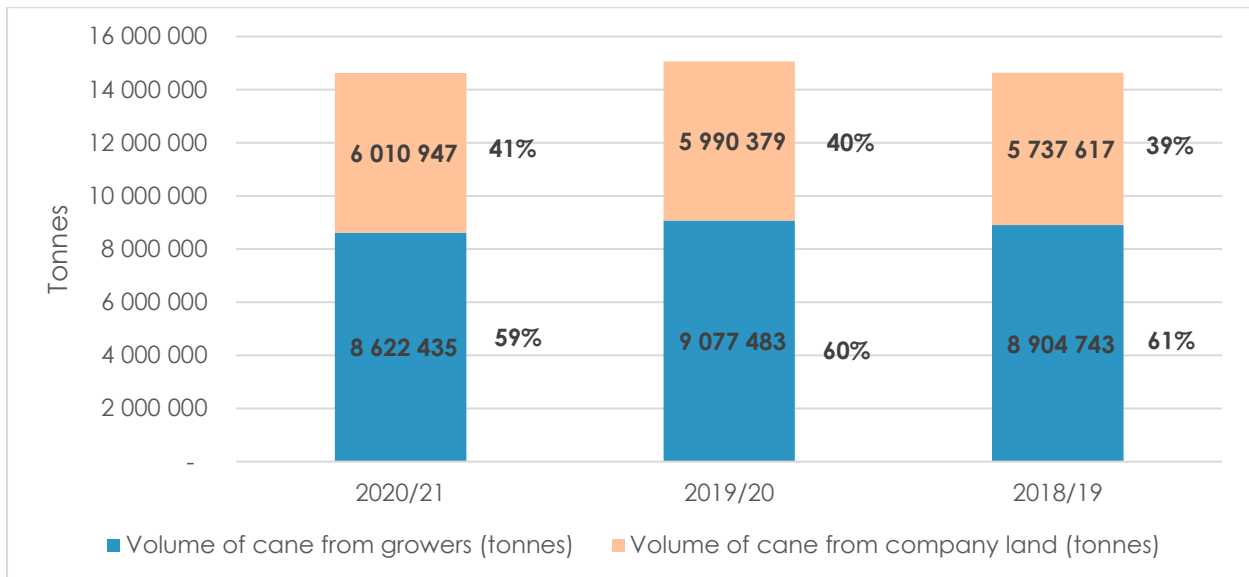
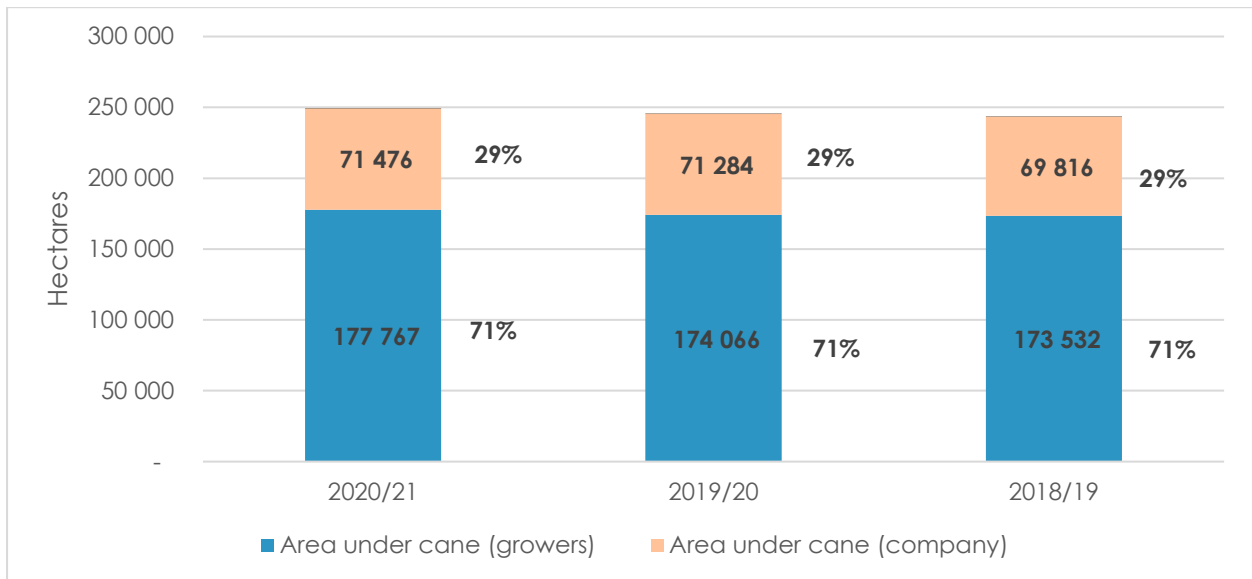


Figure 12: Area of land under cane for both growers and company land, 2018/19 - 2020/21



Grower agricultural practices

Illovo Sugar Africa has a role in the community to not only provide employment but also to influence sustainable practices. In many countries, the company's operations run extension support programmes which deliver tailored support to growers, to help sustain and grow their businesses. The nature of support provided varies by country, but includes initiatives such as capacity building, providing business administration and financial skills training, sharing agronomy and sustainable agriculture best practices, and sharing access to resources such as good seed cane, financing options, and bulk discounted chemical inputs.

Through our engagement, it was noted that extension support programmes were engaging with growers to varying extents in different countries. Mozambique and Tanzania had actively grown their extension support programmes in recent years, while in countries such as Zambia, growers had requested a need for more engagement through this channel.

Regardless of support received, growers highlighted a range of challenges they face in maintaining their agricultural businesses in the long term. Concerns included the rising cost of chemical inputs, made more problematic by increasing pests and diseases in recent years; the impact of climate change on changing weather patterns such as droughts and flooding; challenges financing irrigation systems; increasing women's participation in agricultural businesses; and access to finance.

These varied challenges highlight the value of Illovo's existing extension support programmes in providing a vehicle for knowledge and best practice sharing, as well as sharing access to agricultural resources. With challenges related to climate change on the increase, there is an opportunity for Illovo's countries to maintain and potentially grow these channels of support, to further ensure a sustainable supply of cane to feed its operations and maintain the indirect employment benefits the company provides.

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

- Mr Masuku
Small growers' representative to
Ubombo Sugar
Eswatini

FUTURE FACING CHALLENGES

The impacts of climate change are already being felt by Illovo's operating countries and by growers, particularly through changing weather patterns such as increased flooding and droughts, and increased pests and diseases. While many countries are already undertaking innovative adaptation measures, such as climate-resilient cane varieties, flood-resistant infrastructure, and new pest control measures, it will be critical to maintain these efforts into the future to ensure sustainable farming in the long-term. Illovo should also consider sharing best practice in this area more consistently between countries, and as part of grower extension support programmes. Similarly, continuing to invest in water-efficient irrigation systems such as drip irrigation will help strengthen resilience to water scarcity.

One key issue facing the Group is the question of moving towards mechanised green cane harvesting, from current manual burning and harvesting methods. While mechanised green cane harvesting offers efficiency improvements and environmental benefits, it poses a risk to the mass employment of seasonal manual cane cutters, affecting Illovo's social license to operate. As some countries begin piloting mechanised harvesting, the Group can learn from these experiences and assess the benefits of rolling out this technology further. It may also consider expanding alternative employment opportunities, such as skilled operator roles, or other diversified roles within its product portfolio.

Finally, Illovo depends on its network of growers, with 59% of its sugarcane coming from grower land. To ensure that sugarcane farming remains an attractive option in light of climate change challenges and rising costs of inputs, Illovo should continue investing in extension support programmes, and promote best practice for sustainable sugar cane agriculture.

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:

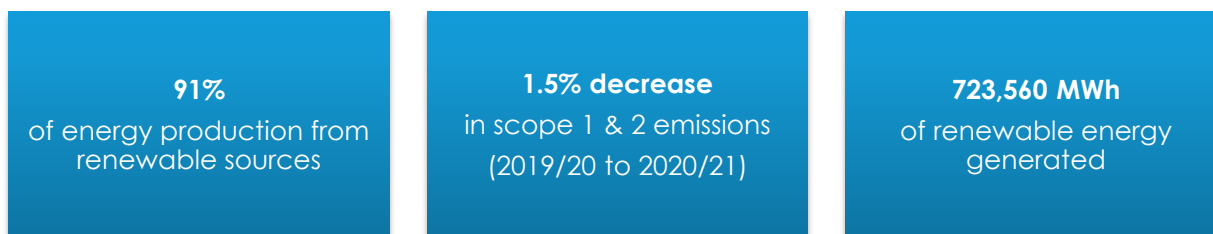
In the global sugar industry, adopting a circular approach includes making the most out of every stick of cane and root of beet so that wherever possible there is minimal waste by producing co-products, generating renewable energy and reusing. Illovo Sugar Africa embodies circular economy principles in its production process, notably through powering the majority (91%) of its operations using bagasse, a renewable fuel and by-product of sugar production. Illovo's self-generation of renewable energy reduces demand on the local grid and minimizes waste. There is an opportunity for Illovo to increase energy generation capacity and explore exporting surplus energy to the grid, benefitting the communities in which it operates and providing an additional revenue stream.

Despite this impressive feat, Illovo's emissions reporting currently does not reflect the renewable nature of bagasse burning, with this dominating its scope 1 emissions. It is recommended that Illovo reports biogenic emissions in line with the GHG Protocol's guidance in future to more accurately reflect these efforts. The company also currently only assesses some scope 3 activities, and assessing and disclosing its full scope 3 footprint is recommended in future, to fully understand its climate related risks and opportunities.

Illovo Sugar Africa makes efforts to ensure high-quality labour standards in its workforce, across its countries of operation. In each, employees are paid a fair wage monitored against national and international benchmarks, with the minimum wage across the Group far exceeding local national minimum wages. There is active social dialogue between the Group and its employees, with high unionisation rates and engagement with union representatives. Illovo Sugar Africa also demonstrates a strong culture of safety, keeping within its Group target for lost time injury rate and embedding safe practice across its operations.

A strategic focus on domestic procurement continued from our last report in 2017, with 88% of spending going towards local suppliers. Not only does this create positive opportunities for organizations within the Group's value chain, but Illovo Sugar Africa has taken active measures where feasible to promote the support of smaller-scale businesses which are prone to struggling financially.

Environmental impact of operations



Energy use and generation

All of Illovo Sugar Africa's sugar factories generate renewable electricity as a by-product of processing sugar cane into commercial sugar. Bagasse, a fibrous residue from sugar cane crushing, is recovered and used as a fuel source, and this supplied 82% of the Group's electricity consumption during 2020/21. Supplementary renewable fuel sources were also used to a lesser extent, such as wood or trash, meaning that 91% (723,560 MWh) of the Group's overall energy consumption came from renewable sources. Illovo's use of bagasse to power the majority of its operations represents an example of a circular economy in practice, whereby the waste by-product of its operations is converted to energy. This enables Illovo to minimise its demand for local grid electricity and lets other regional customers benefit from that energy.

During 2020/21, Illovo consumed the majority of its self-generated renewable electricity, with a total of 1% of this being exported to the national grid as surplus, from Eswatini (82,089 MWh), South Africa (320 MWh) and Mozambique (719 MWh) respectively. In future, if Illovo upgrades its equipment to increase energy generation capacity, there is an opportunity to grow electricity exports further, which would represent an additional revenue stream, and benefit the communities in which it operates through renewable electricity. Tanzania has plans to develop such an expansion, as part of its K4 factory growth which is predicted to provide 10 MW of surplus power beyond the power needs of the estate.

Operational emissions

Illovo Sugar Africa currently measures its GHG emissions from scope 1, 2, and some scope 3 activities. In 2020/21, 96% of Illovo Sugar Africa's carbon footprint came from scope 1 activities, and this category is dominated by emissions from burning bagasse (76% of the overall scope 1, 2 and 3 combined footprint). While emissions from bagasse are here reported as the majority of Illovo Sugar Africa's overall footprint, research suggests that bagasse can be considered a "greenhouse gas neutral" renewable fuel, due to the carbon that is sequestered in the cane as it grows.¹² The potential impacts of this greenhouse gas sequestration are not yet measured or reflected in Illovo Sugar Africa'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,¹³ or emerging guidance for land sector activities and carbon dioxide removals.¹⁴ This will help to more accurately reflect the environmental benefits of Illovo using this renewable energy source.

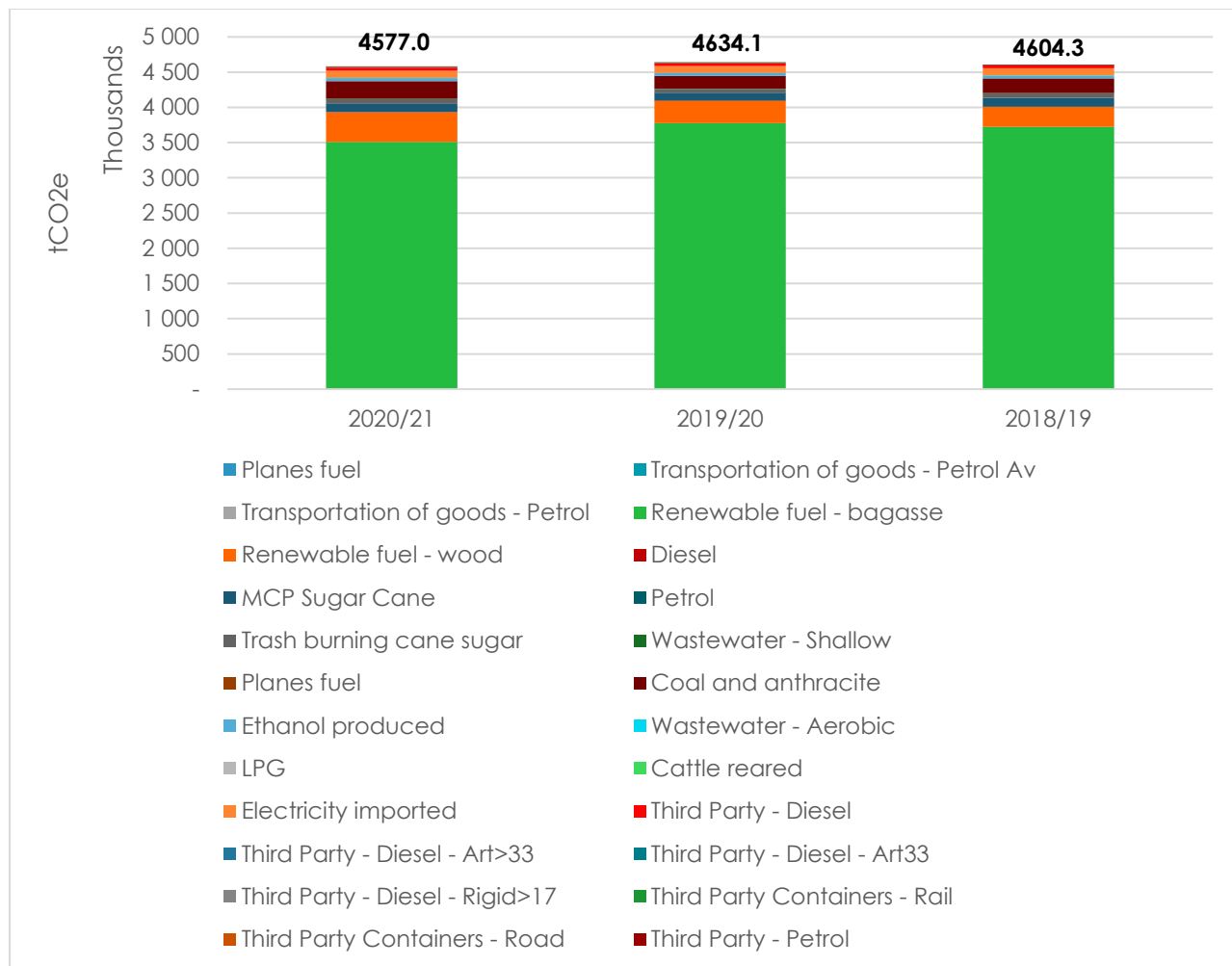
¹² [O'Hara & Mundree \(2015\), Cogeneration of sugarcane bagasse for renewable energy production](#)

¹³ [Greenhouse Gas Protocol \(2022\), GHG Protocol Agricultural Guidance](#)

¹⁴ [Greenhouse Gas Protocol \(2021\), Update on GHG Protocol Carbon Removals and Land Sector Initiative](#)

Illovo Sugar Africa's total measured scope 1, 2 and 3 greenhouse gas emissions for 2020/21 were 4,646,244 tCO₂e. However, currently, Illovo Sugar Africa only measures emissions from selected scope 3 activities, including third-party transportation and distribution services, meaning that its scope 3 footprint is incomplete. In future, it is recommended that Illovo Sugar Africa assesses its full scope 3 emissions in accordance with the GHG Protocol's 15 categories,¹⁵ to understand the full climate impacts of its value chain, and associated climate-related risks and opportunities.

Figure 12: Illovo Sugar Africa's GHG emissions by source over time(tCO₂e), 2018/19 - 2020/21



¹⁵ [Greenhouse Gas Protocol \(2022\), Corporate Value Chain \(Scope 3\) Standard](#)

Figure 13: Illovo Sugar Africa's GHG emissions by scope(tCO2e), 2020/21

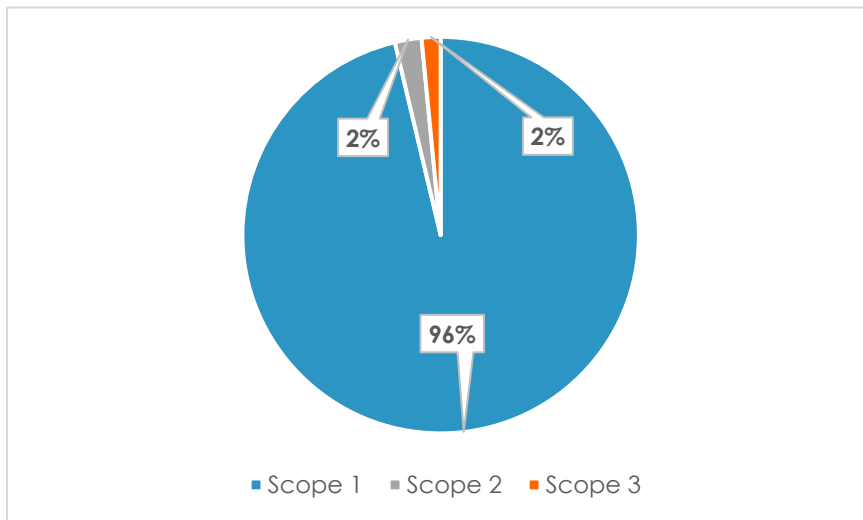
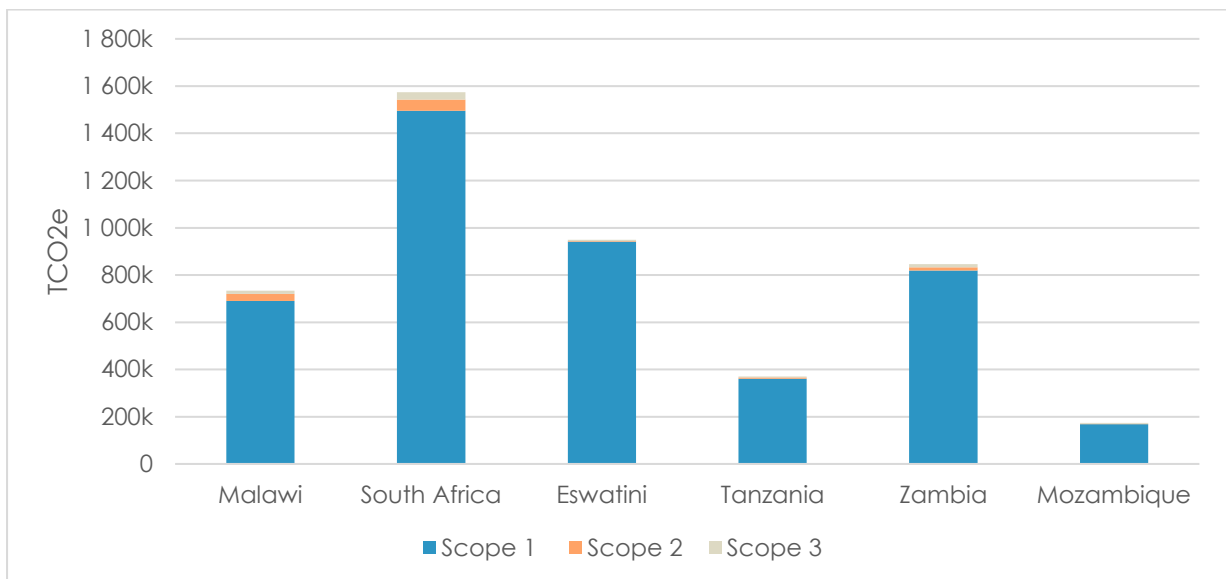


Figure 14: Illovo Sugar Africa's GHG emissions by scope and country (tCO2e), 2020/21



Water use and discharge

During 2020/21, Illovo Sugar Africa's operating countries withdrew 831,011 megalitres of water, 99% of which was surface water. On top of this, Illovo reused 219,286 megalitres of wastewater for its operations, amounting to 26% of the total water abstracted. Illovo Sugar Africa's factories aim to recycle water used within operational processes as much as possible. Water that has been used in factory processes is analysed for effluent after use, and in Tanzania, Eswatini, and Malawi, this is then diverted back to crop irrigation. Mozambique's operations have long-term plans to reuse and divert factory wastewater towards irrigation, and South Africa is also in the process of exploring ways to repurpose wastewater more effectively in future. Any water that may be returned to the water source, is tested for contamination before leaving the company's estates, per local regulations.

Operational waste

Many aspects of Illovo Sugar Africa's factory operations embody circular economy principles, whereby by-products of production are re-purposed as part of various other operations. By-products of the sugar-production process that are created along with bagasse fuel for renewable electricity, include fly ash, molasses, potable ethanol, and carbon dioxide. These by-products are being re-used to varying extents in different countries. For example, molasses is processed into alcohol or ethanol, applied to road surfaces to suppress road dust, or mixed with nitrogen to create fertilizer.

Among these uses of diverting potentially wasted by-products, various countries have identified further commercial or innovative opportunities to maximise value from these resources. With Tanzania's K4 factory expansion, they anticipate more excess molasses, and so are considering commercialising the fertiliser product they currently create, while Zambia Sugar is looking at the prospects of setting up a local ethanol plant to meet the potential demand for local distribution as well as exporting to the Democratic Republic of Congo (DRC). These diverse applications of waste by-products highlight numerous commercial and resource-efficiency opportunities. It may be beneficial for countries to share best practice innovations with each other so that all countries may benefit.

Decent work and quality of jobs

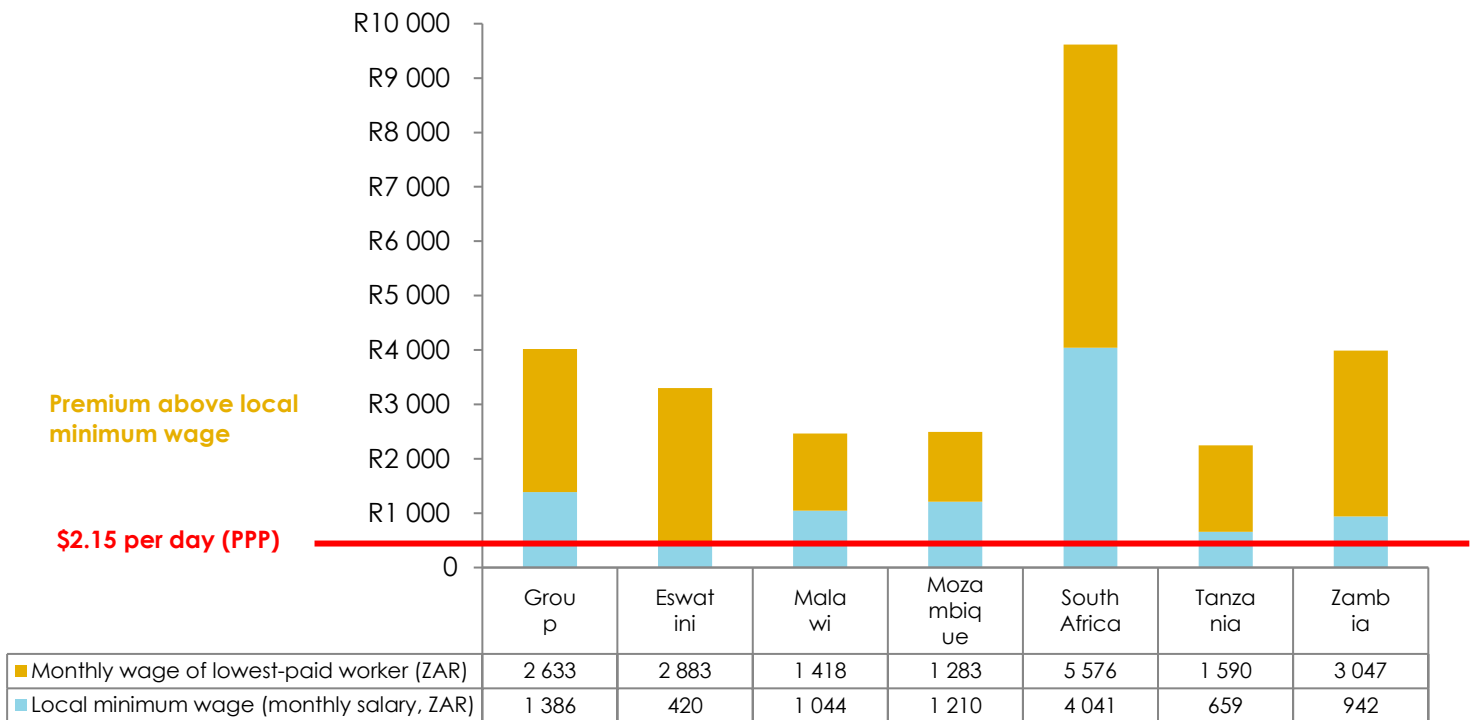


Minimum wage

Illovo Sugar Africa 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 local national minimum wages. Each of the Group's countries of operation exceeds local minimum wages and far exceeds the global poverty line set by the World Bank at \$2.15 purchasing power parity.¹⁶

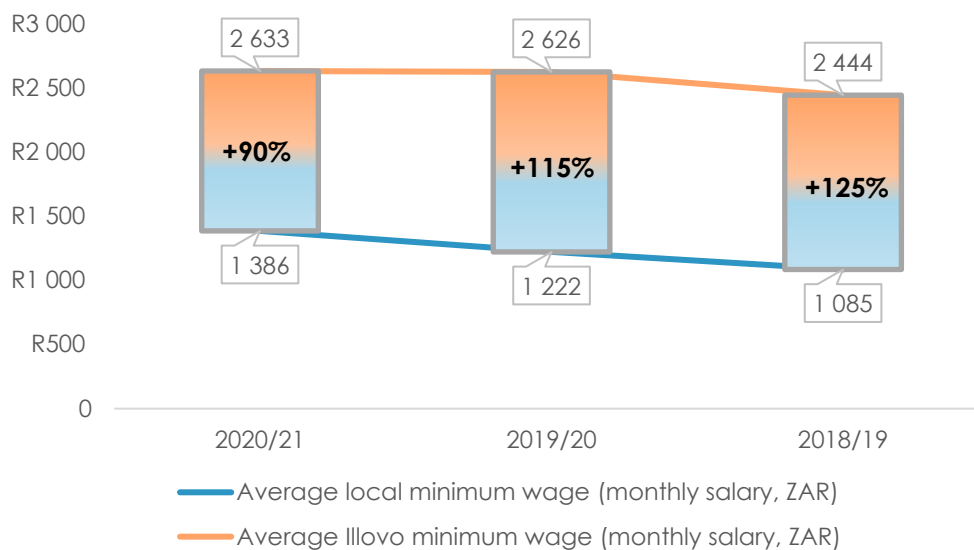
¹⁶ [World Bank \(2022\), An Adjustment to Global Poverty Lines](#)

Figure 15: Illovo Sugar Africa's lowest monthly wage against national monthly minimum wages, 2020/21



Illovo Sugar Africa's monthly minimum wage as an average across the Group has increased over the last three years since 2018/19, currently paying a minimum of R2,633. The average local minimum wage across its countries of operation has also grown from around R1,085 to R1,386. While this does mean that Illovo Sugar Africa is still paying its workers substantially more than local national minimum wages, the difference between the two figures is narrowing, having been a 125% difference in 2018/19 with a 90% difference in 2020/21.

Figure 17: Rate of growth between Illovo Sugar Africa's minimum monthly wage against the national minimum wage, 2018/19 - 2020/21



Employee Benefits

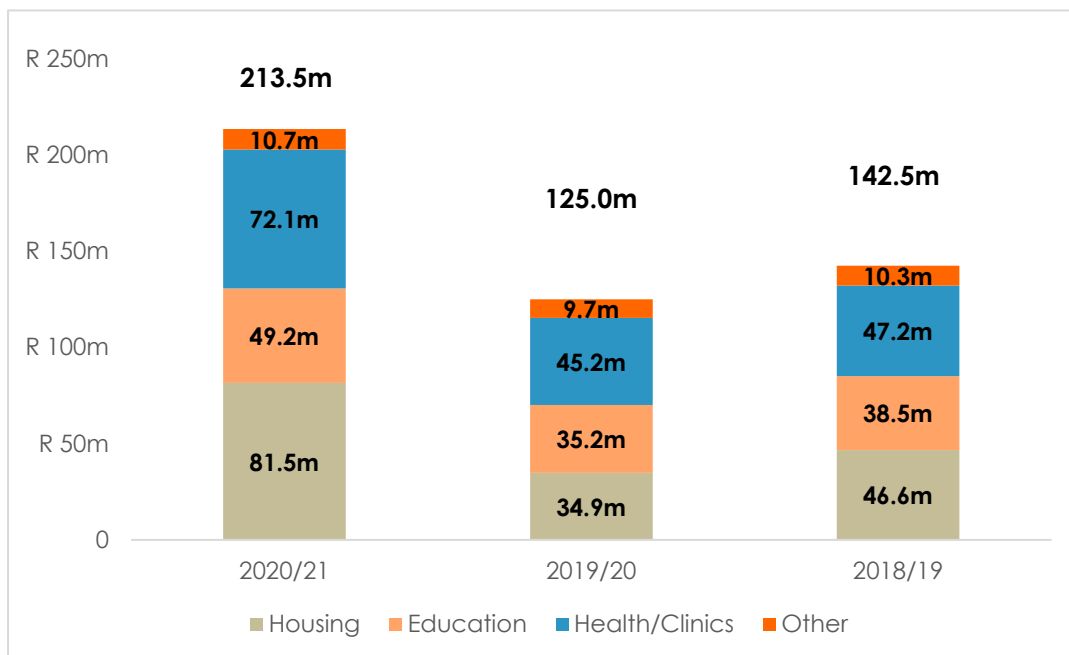
Illovo Sugar Africa employees are entitled to a number of different benefits across housing, education and healthcare, in addition to their salaries. The most significant areas of expense in 2021/22 were housing and healthcare with employees and their dependents receiving support with accommodation and access to hospitals and onsite clinics.

The Group's expenditure on benefits has risen markedly in the three years to R213.5m in 2020/21, however, it is slightly lower than the R230 million reported in the 2016/17 assessment.

Country spotlight: Ubombo Sugar Medical Benefits in Eswatini

Ubombo Sugar offer E20,000-E25,000 in healthcare insurance to each employee and their dependents, as well as free HIV and TB 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 and help in new areas that will benefit its employees, for example financial counselling.

Figure 16: Total spend on benefits offered to employees and their dependents, 2018/19 – 2020/21



Occupational health, safety & development

Our engagement with representatives at a country level revealed a strong focus on health and safety across the Group, with a particular emphasis on safety prevalent from our visit to Zambia Sugar. There we could see a strong safety infrastructure embedded in the company culture, including opportunities for employees to make suggestions for Safety, Health Environment, Risk & Quality (SHERQ), and its "4 Steps to Safety" plan evident across the estate.

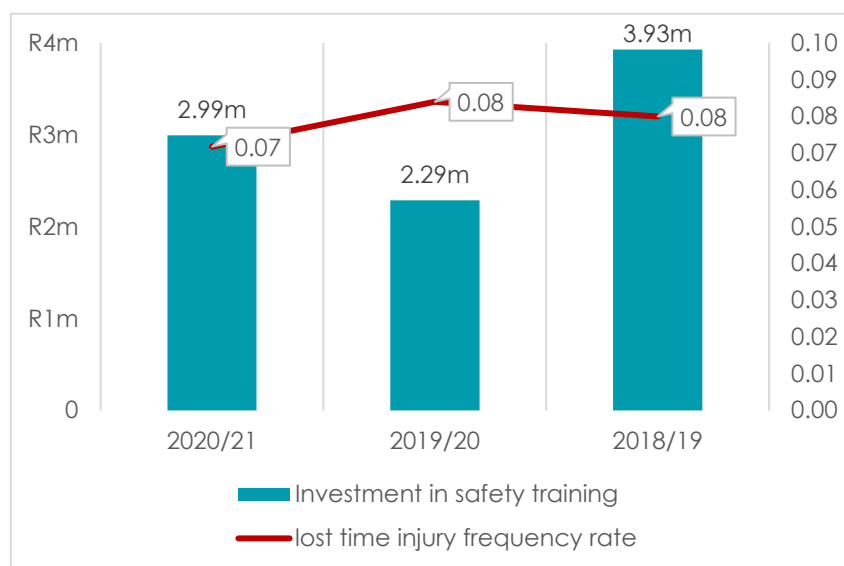
“SAFETY, MY RESPONSIBILITY, OUR WAY OF LIFE”

-Zambia Sugar Safety Slogan

The lost time injury rate across the Group remained broadly consistent between 0.08 and 0.07 hours lost to injury per 200,000 hours worked, within the Group's target of 0.09. There were 2 fatalities reported across the Group during the period of our assessment: one was the result of an accident at the Ubombo Sugar factory, and the other was the victim of a criminal attack at Maragra Açúcar SA.

Safety training

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



Illovo Sugar Africa invested R2.99m in safety training in 2020/21. The decrease in investment from 2018/19 was driven largely by COVID-19 and spending on training has encouragingly begun to increase again.

Other training & job opportunities

The Group also invests in training for employees including notable training programmes such as talent reviews for seeking management talent, proactive identification of training opportunities, technical skills training and internships. Across its countries of operation, the Group also partners with local institutions of education, such as with a university and state department in Mozambique, and through the facilitation of government training initiatives in Tanzania. In 2020/21, Illovo Sugar Africa invested R23.5m in training and development, involving 12,270 employees.

Country Spotlight: Illovo Sugar South Africa (ISSA) training opportunities

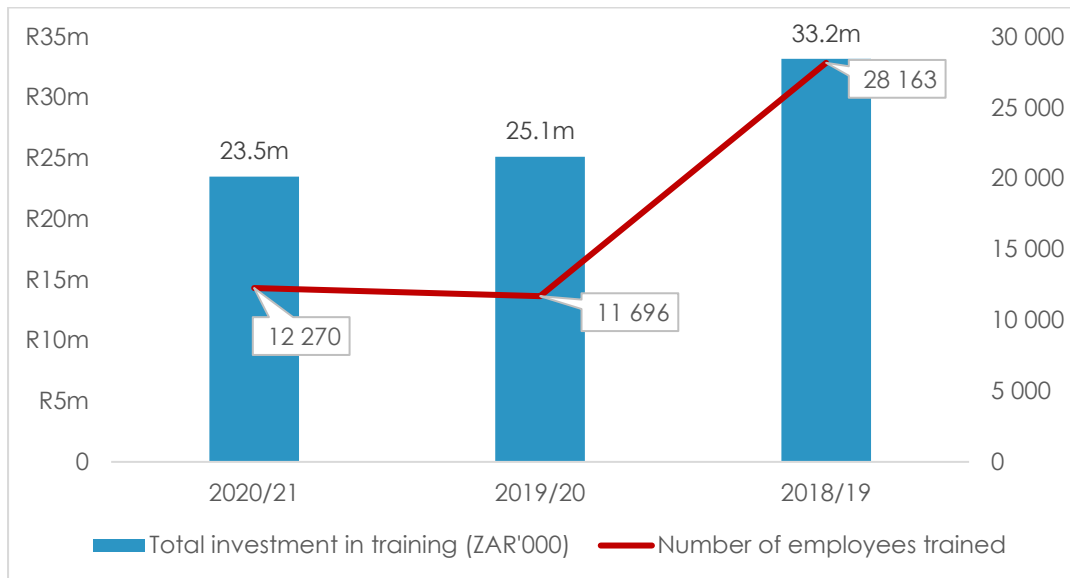
Illovo Sugar South Africa (ISSA) offers an extensive suite of training opportunities covering programmes for all levels of employees including:

- Competence development of the sales representatives and regional sales managers;
- Supply chain development;
- Management & leadership development;
- Unemployed youth development initiatives e.g., Learnerships, Apprenticeships, In-service Trainees Graduates and Bursaries;
- Training of unemployed youth living with disabilities;
- Statutory compliance training;
- Supporting sustainable cane supply;
- Engineer-in-training (EIT) programme.

In addition to the above, ISSA stressed their commitment to integrating its approach to training with its wider ESG ambitions, particularly around a strategy of economic inclusion.

Despite these efforts, investment in training opportunities has fallen year-on-year since 2018/19, a 29% decrease from R33.2m. As with the trends in safety training in the section above, a key driver of this fall was the need to adjust typical spending due to the pandemic.

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



Value chain impacts

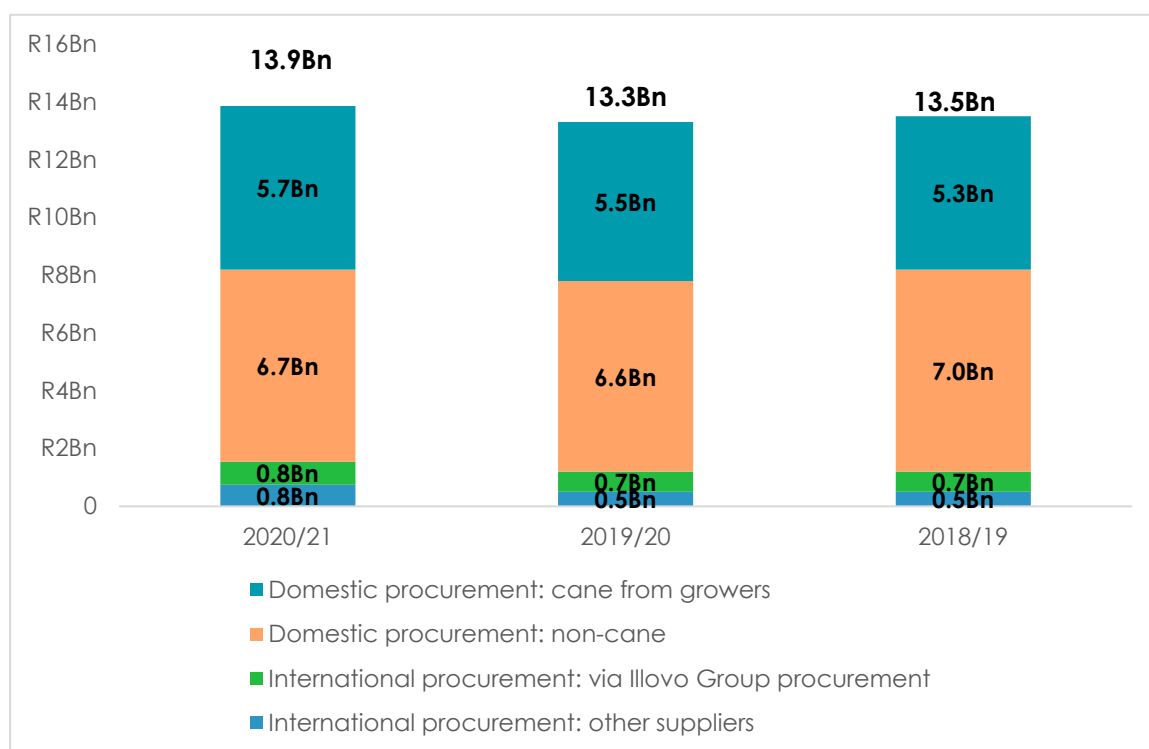
One of Illovo Sugar Africa's more significant opportunities is the socio-economic impact it can create within its value chain, including both upstream (through procurement from suppliers) and downstream (through retailers of the Group's products).

Procurement

In 2020/21, the Group spent a total of R13.9Bn on procurement, with R5.7Bn on cane from growers and R6.7Bn on domestic non-cane procurement. This is R500m up from the total R13.4Bn reported in 2016/17.

Local sourcing is a strategic priority for the Group to foster the local and domestic economy of its countries of operation and the livelihoods of people in them, and our analysis indicates that the bulk of procurement spending is primarily on domestic suppliers. For example, Illovo Malawi in particular expressed that it has an active policy to procure locally to empower small-scale businesses where feasible. As a group, in 2020/21, R6.65Bn (82%) was spent on non-cane local suppliers as opposed to the much lower R1.55 Bn (18%) spent on international suppliers.

Figure 20: Illovo Sugar Africa's supplier spending, 2018/19 - 2020/21



Retail and distribution

Across the Group, there is a varied approach to retail and distribution, largely driven by each country's own strategy and the landscape of their respective sugar sectors. Zambia Sugar, for example, has adopted a route-to-consumer strategy designed to create more sustainable customer service through relationship-building throughout the value chain. Overall, however, we noted that the Group tends to produce a significant downstream economic impact as its domestic sales involve distributors, retailers, wholesalers and other resellers who bring sugar to consumers.

FUTURE FACING CHALLENGES

As the financial pressures of the pandemic continue to ease, Illovo Sugar Africa has the opportunity to review its investment strategy with regard to the quality and values of its workforce. One critical challenge the Group is facing is the amount it spends on training for its employees. We noted across its countries of operation instances where adjustments to spending meant opportunities previously afforded to employees, such as fully subsidised educational programmes, had to – understandably – be recalled. However, given Illovo Sugar Africa's continued financial resilience, we suggest that increasing spending on employee training is an area which will benefit and help future-proof the Group. There are many excellent talent identification and development programmes already in progress, which given the chance and financing to develop further, would lead to improvements both for individual employees and the wider business.

Illovo Sugar Africa demonstrates circular economy principles through its operations, notably by self-generating renewable energy from bagasse, a sugar production by-product, and aiming to reuse and recycle as many resources as possible. There are opportunities for the Group to achieve greater consistency among some examples of best practice, for example diverting wastewater to irrigation in all countries, which may help combat water security issues in light of climate change. The Group should also aim to update its greenhouse gas accounting approach, to reflect biogenic cycles and to assess its full scope 3 footprint, which should give a fuller overview of the company's climate risks and opportunities.

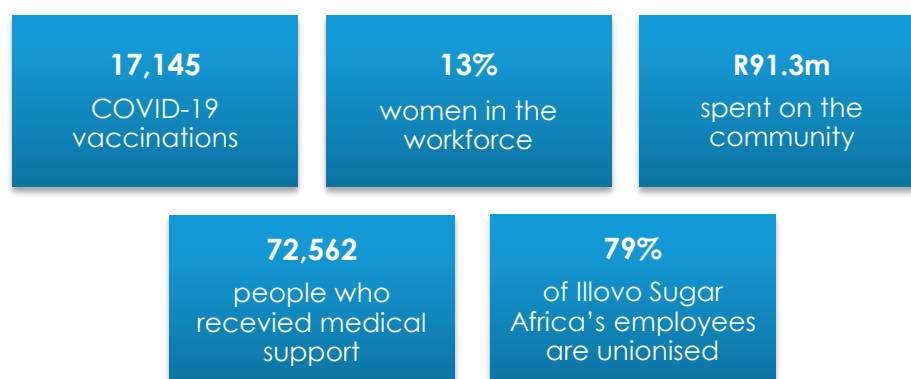
Community connected

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:

Illovo Sugar Africa 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. To help address these challenges it has developed partnerships with local communities, civic organisations and NGOs. Key focus areas have been preventing child labour, protecting land rights, providing medical care, and tackling the severe impacts of the COVID-19 pandemic.

On the topic of diversity, equity & inclusion (DEI), the company has started creating policies and partnerships to make it easier for women to participate in the workforce at the country-level, however, the workforce is still largely male-dominated. While DEI is a challenge for most companies operating in the manufacturing and agriculture sectors, Illovo Sugar Africa as a leader could do more to accelerate progress in the space. The company should consider creating a Group-wide approach to hiring and supporting women in the workplace with more structured elements to encourage country-level adoption and success including a policy, programmes, KPIs and on-going reporting of progress.



There are many elements to creating thriving communities. Illovo Sugar Africa'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. Illovo Sugar Africa 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. Illovo Sugar Africa has committed to preventative measures against human rights abuses, including land rights, in line with the United Nations Global Compact

(UNGIC) 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'. 79% of the Group's employees are unionised, down from 82% in 2016/17. Illovo Malawi was the only operation that reported an increase in union membership with 87% of its employees unionised, up from 78% in 2016/17. While the reason for the decline in union membership across the other five locations is unclear, our engagement indicated that the downward trend may be reflective of Group-wide staff reorganisations under the Fit4Future initiative which focused on driving efficiency improvements along the Group's value chain.¹⁷ Zambia Sugar explained that the merging of roles following Zambia Sugar's operating model's reset, led to the elevation and consolidation of some roles, decreasing union membership.

Country spotlight: Maragra Açúcar SA's employee engagement survey in Mozambique

In partnership with Illovo Sugar Africa and AB Sugar, Maragra Açúcar SA has developed an employee engagement survey to receive feedback from all permanent employees across the different employee bands. To ensure all employees can respond, the company has actively reached out to employees by improving accessibility. By providing phones for employees who don't have access, giving guidance to difficult questions, translating the survey into the local languages and tracking responses with technology like QR codes, actions are being prioritised to make Maragra Açúcar SA a better place to work.

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 (UNGIC) 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

Country spotlight: preventing child labour in Malawi

According to the International Labour Organization, many children are still working in sugar cane cultivation facing hazardous conditions. Illovo Malawi has found success in preventing child labour in its supply chain through a robust policy to not hire children and through detection systems. The hiring process consists of mandatory ID checks to ensure people are of appropriate age. Illovo Malawi also conducts internal and external audits to ensure its child labour practices are adhered to.

¹⁷ [Illovo Sugar Africa - About Us](#)

partners, and participating in programmes to redistribute land to the appropriate communities.

Employee diversity, equity & inclusion

Diversity, equity and inclusion (DEI) especially as relates to gender has risen up the agenda for all companies globally. As a significant employer with 44,000 employees across its operation locations, Illovo Sugar Africa has an important role in promoting DEI across its own workforce and within the grower and broader community it interacts with.

In the workforce

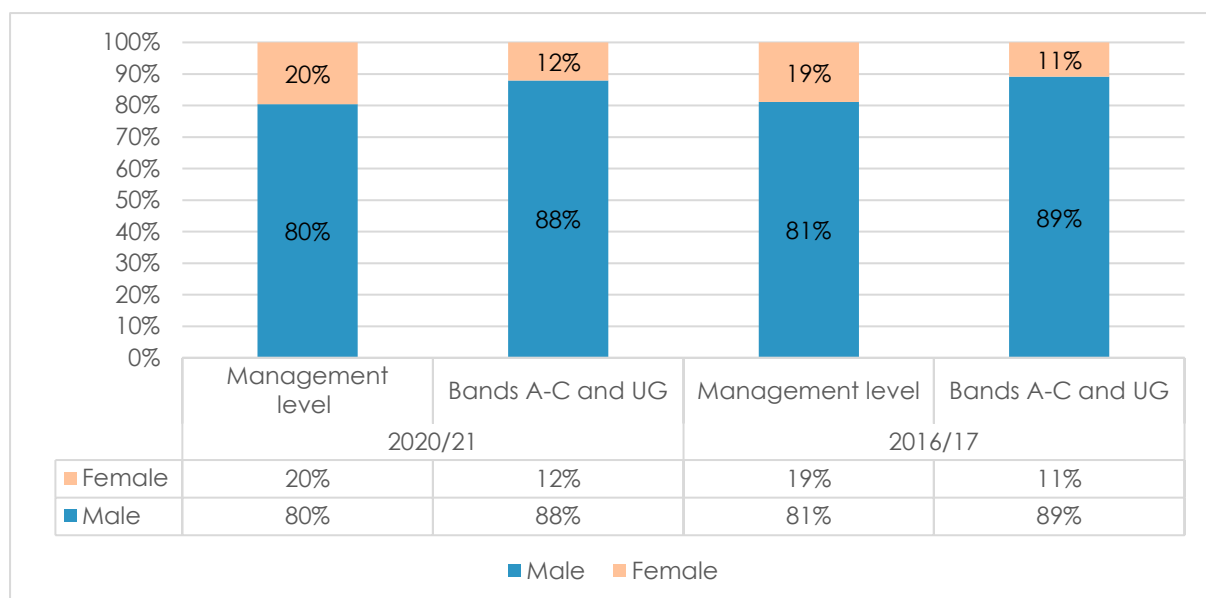
Through our engagement with the country-level HR departments, we found that many of Illovo Sugar Africa's country operations have started to take steps to improve gender diversity. For example, Illovo Malawi has partnered with the Malawi Institute of Science and Technology to promote women in STEM roles and has also launched the Illovo Women in Leadership (IWIL) Forum as a platform that oversees the strategies, policies, processes, and inclusion practices relating to the advancement of women in leadership roles within the business. In Tanzania, a flexible breastfeeding policy is in place that allows nursing mothers two hours per day at the time of their choosing to attend to their baby.

"The flexible working hours policy is very helpful as a mother. If my children are sick, I can leave work and go and help them and finish my hours later."

- Salome Milingo
Warehouse Clerk
KSCL

While these initiatives are a step in the right direction, Illovo Sugar Africa's permanent workforce is still male dominated. Women represent 13% of the total workforce, with 12% representation in non-management positions and a higher 20% representation in the smaller pool of management positions. While this marks a slight increase from our 2017 assessment, up from 11% women in non-management positions and 19% in management positions. Illovo Sugar Africa does not yet have a Group-wide strategic requirement for female-specific hiring or career-development programmes formalised via policy. This would be an important step to accelerate progress and help Illovo Sugar Africa to do more to address the structural barriers facing women accessing career opportunities in the industry.

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



Women in the community

Our engagement with local community organisations across the Group indicated that Illovo Sugar Africa has a strong track record of engaging with women and promoting women's economic development both within its operating estates and the communities that surround them.

For example, Zambia Sugar provides essential resources and expert support to a local women's group that was established on their estate in 1969. Support includes specialised community outreach coordinators who connect local women with capacity-building services for setting up businesses such as chickens, homemade textile goods, vegetable patches, and food vending.

In South Africa, through its partnership with Raizcorp, ISSA has developed Thuthuka Nathi, an enterprise and supplier development programme, aiming to help upskill local start-up business owners to support the local communities where ISSA operates. A total of 20 youth and women business owners, in two communities, participated in a 12-month learning programme to develop business skills such as sales, marketing, strategy and finance. Over the last 2 months, a competition was held where participants could pitch their business model to a group of judges compiled from Raizcorp and ISSA.

Community resources and services

Illovo Sugar Africa provides various benefits, resources and services for employees, their families and the wider communities across their operating locations.

The Illovo Sugar Africa's estates

Across the majority of the Group's estates, the respective companies provide housing, community centres, security, health services, schools and utilities to permanent employees who reside there. Seasonal temporary employees such as cane cutters are also provided housing on the estates for the duration of their employment.

Education

Many of the estates are home to preschool, primary and high schools where employees' children can attend. Illovo Sugar Africa's investment in community education often extends beyond its estates. In South Africa, where schools are not on the estate, ISSA invests in community education through the 'adoption' of high schools in the regions in which it operates. These high schools pass on further support to an additional two schools, allowing ISSA to extend its reach with improved educational resources and better teaching. In Malawi, the Nchalo and Dwangwa Illovo Malawi estates have their own schools and also support some government schools nearby. Combined, these schools house over 13,500 pupils. Our interview with Illovo Malawi's head of human resources highlighted that some individuals grow up on their respective estates and even progress to working for the company.

Healthcare facilities

Across the Group, Illovo Sugar Africa provides essential healthcare facilities to both its staff and the local communities that surround its operating estates. In addition to providing essential day-to-day health services, all of the Group's operating locations also assist regional public health efforts to tackle wider issues including malnutrition, malaria, HIV/AIDS and the COVID-19 pandemic.

Examples of these services include:

In Tanzania, KSCL provides members of the community treatment for illnesses such as TB, COVID-19, and Malaria as well as ante & post-natal care. In addition, KSCL has provided support for COVID-19 awareness through educational campaigns and visits.

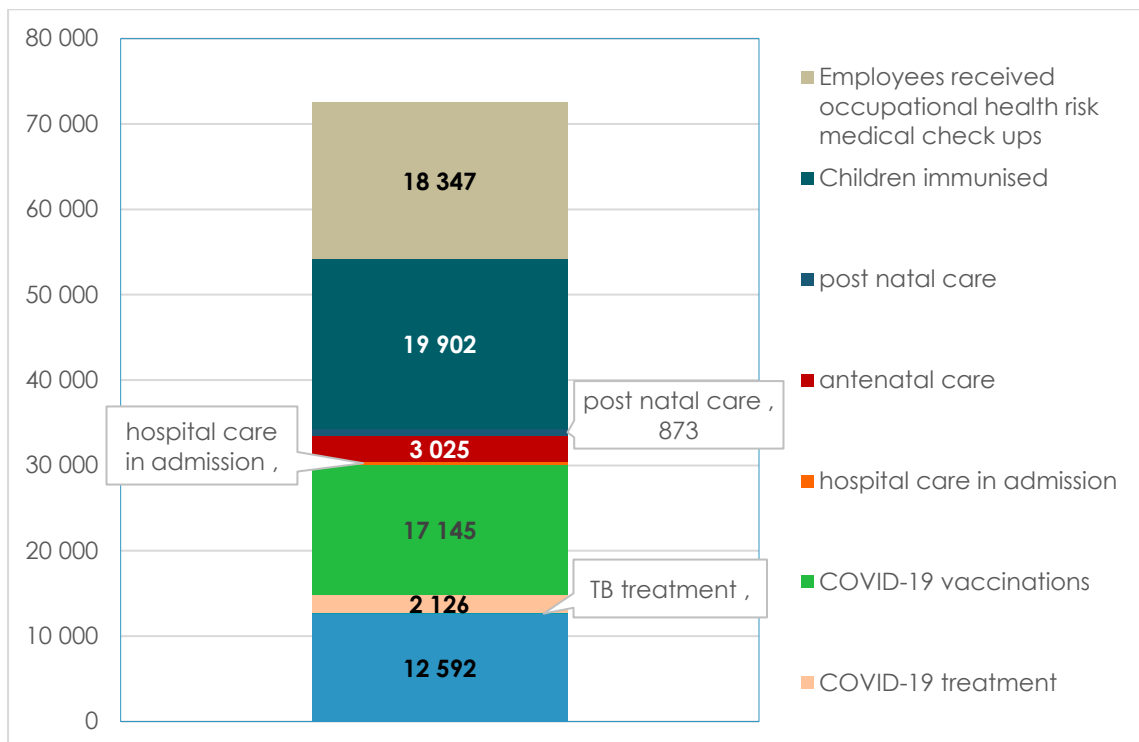
Employees at Zambia Sugar have access to HIV/AIDS counselling and voluntary testing in their clinics. In 2020/21, 2 931 employees received this support, and 439 were treated for the disease.

Illovo Malawi treats, on average 25,000 patients (both employees and members of the wider community) every month for basic healthcare needs, with many additional services provided. This includes various programmes to control outbreaks of malaria, bilharzia and HIV/AIDS and anti-retroviral drugs are dispensed on behalf of the government through the clinic network.

Country spotlight: COVID-19 response in Mozambique

During the COVID-19 pandemic, the company established a COVID task force for clinical and non-clinical interventions. Once vaccinations were available, an in-house clinic was established with 80% of the workforce vaccinated within 3 weeks. As well, the company initiated a campaign to educate the broader community on COVID prevention and constructed a Transitional Isolation Ward for patients with moderate symptoms.

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

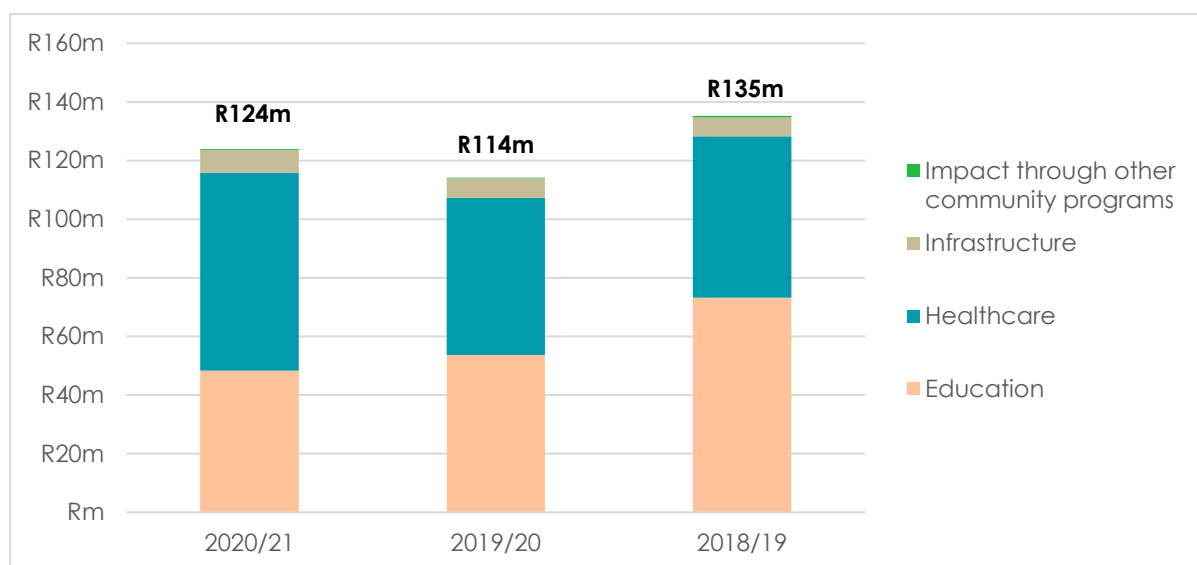


Inclusive stakeholder engagement

The Group places a strong focus on local stakeholder engagement and each country's operation has developed collaborative relationships with key external stakeholders including government officials, traditional leaders, NGOs and other community-based organisations. Throughout our engagement, Illovo Sugar Africa employees highlighted how important it was to consult and partner with a broad range of stakeholders to not only ensure operational success but to understand the company's role and opportunities for addressing wider community development issues such as poverty alleviation, national food security and health and wellbeing.

Illovo Sugar Africa's investment in the broader community beyond the operating estates totalled R123.9m in 2020/21 spread across education (R48.4m), healthcare (R67.5m), infrastructure (7.7m) and investment in other community programmes (R0.3m).

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



FUTURE FACING CHALLENGES

While country-level efforts towards improved diversity in the workforce are in place across its operations, diversity remains a significant challenge to be addressed across Illovo Sugar Africa, especially in the permanent labour pool. While the company recognises that change is needed, a Group-level policy and comprehensive approach is required to improve workforce diversity.

Across its operating locations, Illovo Sugar Africa has provided essential support within the wider community. However, depending on the operating location, it can be a challenge to determine the company's role in the broader community and to identify where the company's responsibility starts and ends and where local governments and entities can step in. This is exacerbated by the plethora of interlinked social, economic and environmental issues facing communities in all six countries.

Most communities are increasingly struggling from the impacts of climate change including displacement as a result of natural disasters such as flooding, polluted water sources, decreased crop yields and loss of livelihoods. Other challenges across communities surrounding operations include high rural poverty rates, increased crime and unemployment. To best understand where Illovo Sugar Africa can best support the communities for maximised impact, additional engagement with stakeholders community investment would help regional development, along with governmental and NGO partnerships.

Recommendations

1. Gender diversity focus

While Illovo Sugar Africa is starting to prioritise initiatives for gender inclusion that are being implemented to varying degrees of success on the country level, we found that as a whole, the Group has not made substantive policy or process changes across all countries to encourage gender diversity. Given the consistently low representation of women in the workforce, particularly in management, we maintain that Illovo Sugar Africa should develop a Group-wide strategic approach to gender diversity in the workplace that prioritises the delivery of social investment programmes focusing on women's empowerment, invests in specific education and training for female employees, suppliers and business partners and builds partnerships with local organisations.

2. Investment in climate-resilient communities (activities)

Due to the influence of climate change, increasingly volatile and irregular weather patterns such as extreme flooding, are only likely to continue. These events have started and will continue to impact agricultural productivity and livelihoods. Illovo Sugar Africa 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. We suggest on one hand a regional approach focusing on working together with governments, NGOs etc. for tackling the issues affecting regional stakeholders. On the other hand, a group approach can create efficiencies and provide learning from the different regions to ensure effective responses.

3. Creating an impact measurement framework

Since our last assessment in 2017, Illovo Sugar Africa has taken important steps to support its vision of building thriving communities. These include updates to its impact reports, the Fit for Future reorganisation, data reporting for ABFs creating value together initiative, and the recent creation of Illovo Sugar Africa's four sustainability pillars. While Illovo Sugar Africa is making good progress, our experience from the impact assessment process has indicated that additional work is needed to accelerate and embed the sustainability agenda at the country level. Key challenges include developing an impact framework with consistent KPIs, impact definitions efficient data collection, and a common understanding of priority issues that also reflect local contexts and regulatory requirements. This will help to improve data quality across core impact areas and enable Illovo Sugar Africa to drive continued performance improvement in line with its new ambitious sustainability goals.

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
<i>MWK / Rand</i>	47.87	59.2	61.44	51.05
<i>ZMW / Rand</i>	1.115	0.942	0.831	0.708
<i>TZS / Rand</i>	151.83	159.85	174.77	172.58
<i>MZN / Rand</i>	3.99	4.43	4.79	4.86
<i>Rand / USD</i>	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:¹⁸

¹⁸ 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.¹⁹ 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.²⁰

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'.
- Imani-Capricorn (2001), *The Socio-Economic Contribution Of The South African Sugar Industry: A report prepared for the South African Sugar Association*.

¹⁹ [IFC \(2013\), IFC Jobs Study: Assessing Private Sector Contributions to Job Creation and Poverty Reduction](#)

²⁰ [ibid.](#)

- 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 ²¹
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

²¹ Sources for each country can be found in the corresponding country report.