

Potential impact of an increase in the current level of the Health Promotion Levy



Key messages

01

Based on the Baseline outlook and the projected impact of changes to the HPL, the South African sugar industry will continue to experience considerable strain. If not addressed proactively and managed effectively, the industry will experience an accelerated decline with long lasting impact on the livelihoods of many communities dependent on far reaching activities of the sugar value chain. The loss of household income as a result of the continued reduction in area under cane significantly affects food affordability, food security and poverty incidence within the regions.

02

Under Baseline micro and macro economic indicators and projections, and current local market conditions, it is expected that the SA cane area will decline by 26 400 hectares over the next 10 years up to 2031. With changes to the HPL projected to reduce the local refined sugar demand by a further 160 000 tonnes (between 2023 and 2025) the cane area is projected to decrease by an additional 27 400 hectares. The industry stands to lose an estimated 53 800 hectares over the next ten years, with the bulk of hectares going out of cane production 2023-2025, followed by a slight recovery and then a gradual decline, in line with the Baseline.

03

Changes to the HPL that further reduce local demand and consumption of refined white sugar will have significant adverse consequences for the milling sector, the growers and the rural community. The projected impact of 160 thousand tone reduction in demand is equivalent to the refined output of one of the local refineries and equates to the raw sugar production (allocated to refining) of two of the twelve local sugar mills.

04

Summary of key changes in industry metric from current to Baseline and HPL forecasts

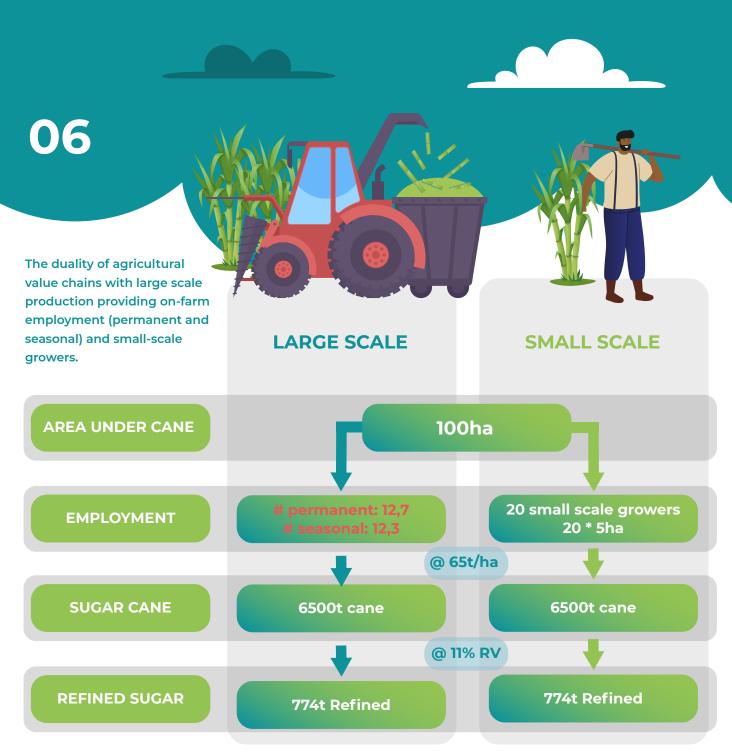
	2022 (Actuals)	2031 Baseline Outlook	2031 Health Promotion Levy Scenario
Tonnes of Sugar	2,036 mil T	2,037 mil T	1,909 mil T
Tonnes of Cane	18,81 mil T	17,568 mil T	16,457 mil T
Area Under Cane	348 288 ha	321 909ha	294 463ha
Number of on-farm Jobs	66 160	64 038	59 987
Number of SSG	21 518	20 060	18 627

	Farm Level Employment	2022 (Actuals)	Reduction under Baseline 2031	2031 Health Promotion Levy Scenario	Net Reduction by 2031
Industry	Permanent	32,523	-1,142	-1,975	-3,117
Total	Seasonal	33,636	-980	-2,076	-3,055
. 3 (4)	Small Scale	21,518	-1,350	-1,630	-2,979

05

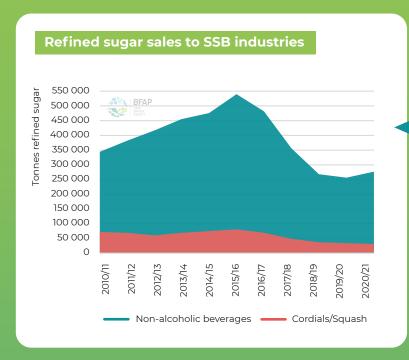
In 2020 the Masterplan for the South African Sugarcane Value Chain was developed by industry, labour and government with the vision of "A diversified and globally competitive, sustainable and transformed sugarcane-based value chain that actively contributes to South Africa's economic and social development, creating prosperity for stakeholders in the sugarcane value chain, the wider bio-economy, society and the environment.

Some progress has been made towards the objectives but implementation of a **proposed** increase to the HPL in 2023/2024 will have a significant affect on the industry's ability to deliver against the objectives of employment protection, small-scale grower retention and transformation while putting increased pressure on the industry to develop diversification strategies that address alternative markets for cane and sugar, and an alternative to cane production as area under cane continues to decline.



Health Promotion Levy

In 2018, the South African government introduced a Health Promotion Levy (HPL) on sugar sweetened beverages (SSB) with a sugar content of more than 4 grams of sugar per 100ml. The rate was fixed at 2.1 cents per gram of sugar content that exceeds four grams per 100ml. The tax is charged on non-alcoholic sugary beverages, except fruit juices, and results in an effective rate of about 10%-11% per litre of the drink (Lancet, 2021).



The graph illustrates how the sale of local refined sugar to non-alcoholic beverage producers declined from 2016 following Treasury's announcement. The HPL aimed to reduce the consumption of sugar-sweetened beverages (SSBs), but it also mandated beverage producers to replace cane sugar with alternative or artificial sweeteners. This resulted in a compound effect on the sugar industry, with reduced demand not only due to the higher cost of SSBs, but also due to the mandated reduction at the manufacturing level.

The Masterplan for the South African Sugarcane Value Chain has an agreed moratorium negotiated against changes to the HPL for 3 years. The moratorium will end in 2023 and there have been new proposals to increase and expand the levy. The government has submitted new proposals to increase and expand the tax, including an inflationary adjustment, lowering the threshold to 2g per 100ml, removing the threshold, and expanding the tax to other food products.

A SASA survey amongst industry sugar users revealed:

- · An inflationary adjustment is unlikely to lead to significant reductions in demand
- Citing policy uncertainty, some manufacturers have continued reformulation objectives that are likely to result in another 50 000 tonnes sugar demand reduction in the near future.
- Due to the cost of investement / research in reformulation, most manufacturers would see a 50% reduction the same as a 100% reduction.
- Lowering the threshold would result in significant decline in demand due to reformulation
- · Some would require a 2-year adjustment period to implement changes.

Given beverage companies' responses regarding the HPL and reformulation strategies and the fact that the non-alcoholic beverages and squash & cordials producers currently still annually buy about 300 thousand tonnes of refined sugar, SASA has prosed a scenario where an increase and or expansion of the HPL result in:

A 125 000 tonnes local refined sugar demand reduction in 2023/2024, followed by an additional 35 000 tonnes reduction in 2024/2025.

SA sugarcane sector - Baseline Outlook



According to the OECD-FAO Outlook (2022) for 2022-2031, global sugar consumption is projected to increase over the next decade, due to population growth, urbanisation and income gains in especially Asia and Africa, and despite a projected decrease in per capita sugar consumption in high-income countries.

Baseline projection 2022-2031





Under the Baseline, it is expected that the SA cane area will decline (driven by various macro and micro economic factors explained previously) by 26 400 hectares over the next 10 years. With a 125 000 tonne reduction in demand for local refined sugar in 2023/24 and an additional 35 000 tonnes in 2024/25, the cane area is projected to decrease by an additional 27 400 hectares.



When beverage companies replace sugar as sweetener in SSBs and consumers buy less SSBs due to the higher HPL, the local demand for sugar decreases, and if there is no alternative local market for raw or refined sugar, more sugar has to be exported into a world market where prices are below the local price level and often below the local production cost.

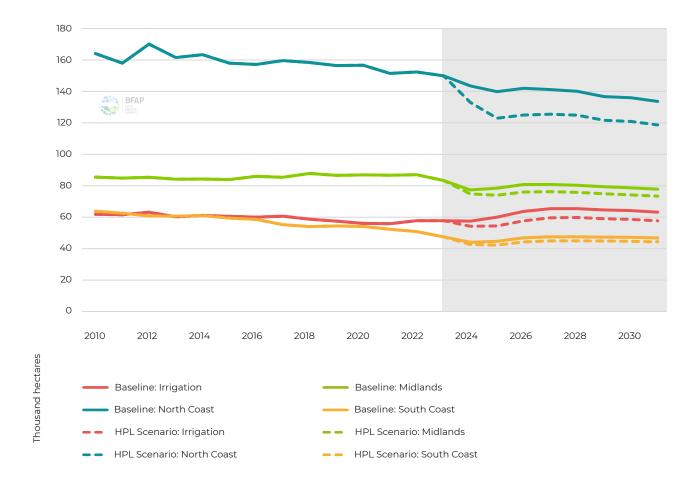


Additional exports results in a lower realised sugarcane producer price and ultimately in a decrease in cane profitability and hence a reduction in cane area, crushed cane and cane sector employment.



The industry stands to lose an estimated 53.8 thousand hectares over the next ten years, with the bulk of hectares going out of cane production 2023-2025, followed by a slight recovery and then a gradual decline, in line with the Baseline.

Regional cane area - projected impact of 160 000 tonnes reduction in local demand



- If an increase in the level or coverage of the HPL results in a 160 000 tonne reduction in local refined sugar demand, it is projected that the cane area on the North Coast will decrease by a total of 33 600 hectares (22%) with the Baseline conditions responsible for 18 700 hectares and the HPL for 14 970 hectares.
- The Midlands is projected to lose 13 600 hectares, of which 4 470 hectares are attributed to an increase in the HPL.
- The South Coast region, which lost 27% of its cane area between 2005 and 2020, is expected to lose another 6 496 hectares, of which 2 461 is due to the HPL increase.
- The 5 400 hectares expansion in irrigated sugarcane projected under the Baseline will be cancelled out by the HPL increase.

Projected decline in tonnes of cane for the Baseline outlook and impact of HPL

Region	Expected tonnes cane change under Baseline by 2025	Expected additional tonnes cane change under HPL by 2025	Total expected change by 2025
North Coast	-760,532	-530,423	-1,290,955
Midlands	-652,559	-135,950	-788,509
Irrigation	+200,193	-188,680	11,513
South Coast	-313,506	-73,412	-386,918
Total	-1,526,403	-928,465	-2,454,869

Sugar Master Plan & Impact

In 2020 the South African Sugarcane Value Chain Master Plan was developed by industry, labour and government with the vision of "A diversified and globally competitive, sustainable and transformed sugarcane-based value chain that actively contributes to South Africa's economic and social development, creating prosperity for stakeholders in the sugarcane value chain, the wider bio-economy, society and the environment."

The core strategic themes focus on "Restructuring the industry to be competitive and sustainable while setting the foundations for diversification":

Restore the local market and offtake commitments

Small-scale grower retention and support

Producer price restraint and certainty

Transformation

Strategic trade protection

Managed industry restructuring

Employment protection and mitigation

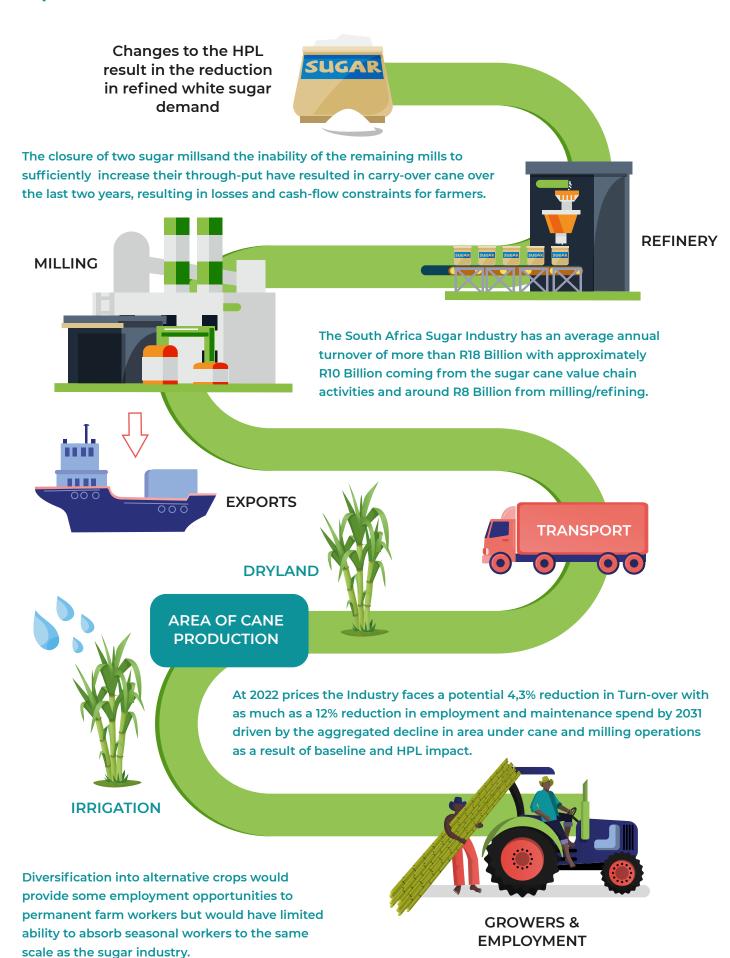
There has been progress made towards various strategic objectives, but the implementation of a proposed increase in the HPL will have a significant impact on the industry's ability to achieve its objectives of employment protection, retention of small-scale growers, and transformation. It will also put additional pressure on the industry to invest in diversification strategies.

Overview of volumes and area under cane for 2022 season and projected outlooks

	2022 (Actuals)	2031 Baseline Outlook	2031 Heath Promotion Levy Scenario
Tonnes of Local Sugar	2,036 mil T	2,037 mil T	1,909 mil T
Tonnes of Cane	18,81 mil T	17,568 mil T	16,457 mil T
Area Under Cane	348 288 ha	321 909 ha	294 463 ha
Number of on-farm Jobs	66 160	64 038	59 987
Number of SSG	21 518	20 168	18 539

The beverage companies' plan to continue reforming their products due to the proposed increase in the HPL is expected to decrease demand for refined sugar, which is in line with the goals of the HPL. However, this reduction will negatively affect the livelihoods of thousands of individuals who depend on the agricultural value chain that supports the Sugar Industry.

The impact of a reduction in the local demand for refined white sugar goes beyond just farm-level impact. The decline in sugar cane volumes, as area goes out of cane production, impacts the entire value chain.



Potential impact on milling

The milling operations have significant **economic and social contributions** within the regions in which they operate. At an aggravated level sugar milling and refining annually **contributes around R1,6 Billion to employment** and a further R1 Billion in the form of maintenance and other services which benefit the local communities.

At 2022 prices the Industry faces a potential **4,3% reduction in turnover, with as much as a 12% reduction in employment** and maintenance spend by 2031 driven by the aggregated decline in area under cane and milling operations as a result of baseline conditions and HPL impact.

Economic Contributions of the Sugar Industry			
	3-year average	% of total Turnover	% reduction by 2031 (based on nominal cost assumption)
Industry Turn Over	R 18 Billion		
Sugar Cane Turn Over	R 10 Billion	56%	-4,3%
Milling Turn Over	R 8 Billion	44%	-4,3%
Industry Contribution to Employment & Maintenance	R 4,8 Billion	25%	-12%
Sugar Cane Employment spend	R 2,1 Billion	11%	-21%
Milling Employment spend	R 1,6 Billion	9%	-4,3%
Milling Maintenance & Services spend	R 1 Billion	5%	-4,3%

The combined affect of the challenging macro economic factors driving the global and local sugar markets and the reduction in local demand linked to various measures targeting the reduction in human sugar consumption (without a clear diversification strategy for the use of cane) has already resulted in the closure of two local sugar mills due to financial and operational conditions that are not economically viable.

It is estimated that if the reach and extent of the HPL is increased refined sugar sales will decline by a total of 160 000 tons over a two-year period as reformulation continues. A decline of this magnitude is equivalent to the refined output of one refinery of the four that are currently operational and equates to the raw sugar production, allocated for refining, of two of the twelve local sugar mills. A reduction in demand of this magnitude will place significant risk on the on-going operation of multiple mills and refineries.

The loss in demand affects both the operational efficiency and the financial sustainability of operations. A reduction of 160 000 tonnes (11% of the local refined sugar market) will decrease the industry turn over by more than R600 million per annum as the equivalent volume of raw sugar will have to be exported at lower world sugar market prices, thereby reducing industry profitability for the millers and the growers.

According to the South African Sugar Mills Association, the closure of additional mills and refining capacity would put approximately 1 000 factory jobs at risk.

To understand the impact on livelihoods within specific regions, BFAP (in collaboration with SASA and its members) has developed a relative measure of the sugar industry's production risk per cane production ward.

The risk model allocates an index value to production areas (wards) based on yield potential, soil potential and a slope index value. By evaluating the risk, the model can identify the areas most likely to be affected when faced with increased pressure on profitability and productivity.

With a higher/wider HPL mandate resulting in a lower local sugarcane price, areas with higher input costs, lower productivity and smaller profit margins will increasingly become unsustainable and ultimately stop producing cane.

Mill and region specific large-scale and small-scale area under cane as % of national area

Mill	Modelling Grouping	LSG	SSG	#SSG
Malelane	Irrigation	3%	1%	971
Komati	Irrigation	5%	2%	1296
Pongola	Irrigation	4%	0%	194
Umfolozi	North Coast	4%	1%	2480
Felixton	North Coast	4%	2%	4673
Amatikulu	North Coast	8%	2%	6801
Maidstone	North Coast	7%	1%	708
Gledhow	North Coast	9%	1%	317
Eston	Midlands	9%	0%	797
Noodsberg	Midlands	8%	1%	2056
UCL	Midlands	6%	0%	12
Sezela	South Coast	11%	1%	1214
TOTAL				21 518

The largest reduction in the area under cane cultivation is in the North Coast Region, and this is where the majority of small-scale growers are located.

This table highlights the number of permanent and seasonal jobs impacted (calculated using the regional cane farm labour multipliers per 1000 tonnes of cane) and the small-scale growers at risk based on allocation of the decline in area under cane

Employment Impact due to reduction in area under cane

Region	Employment	2022	Reduction under Baseline (2031)	Heath Promotion Levy Scenario (2031)	Net Reduction by 2031
North Coast	Permanent	13,044	-819	-1,013	-1,831
	Seasonal	15,571	-977	-1,209	-2,186
	Small Scale	14,979	-1,378	-1,268	-2,646
Midlands	Permanent	6,836	-428	-370	-798
	Seasonal	2,637	-165	-143	-308
	Small Scale	2,864	-145	-118	-264
Irrigation	Permanent	7,258	+242	-350	-107
	Seasonal	9,463	+316	-456	-140
	Small Scale	2,462	+188	-192	-4
South Coast	Permanent	5,385	-138	-242	-380
	Seasonal	5,965	-153	-268	-421
	Small Scale	1,214	-15	-51	-66
Total	Permanent	32,523	-1,142	-1,975	-3,117
	Seasonal	33,636	-980	-2,076	-3,055
	Small Scale	21,518	-1,350	-1,630	-2,979

Household level impact of job losses

Overview of the socio-economic spectrum in South Africa (2021)



Low income (LI) households (Expenditure Decile (ED) 1 to 3) represents the least affluent 30% of households in South Africa, representing approximately 6% to total household income in SA. These households typically allocate 33% of their total expenditure to food and non-alcoholic beverages (NAB).

Lower-middle income (LMI)

households (ED 4 to 6) (i.e. 30% of households in SA). These households typically allocate 32% to 26% of their total expenditure to food and NAB. Their typical monthly expenditure on food and NAB is up to 308% higher compared to an ED 1 household.

Upper-middle income (UMI)

households (ED 7 and 8) (i.e. 20% of households in SA). These households typically allocate 22% to 16% of their total expenditure to food and NAB. Their typical monthly expenditure on food and NAB is up to 427% higher compared to an ED 1 household.

Affluent (AFF) households (ED 9 and 10) (represents the most affluent 20% of households in SA. These households typically allocate 11% to 6% of their total expenditure to food and non-alcoholic beverages (NAB).

Workers' households will typically be classified within the following socio-economic levels:

- ED 2 to ED 3 if employed part-time (single income source, 50% employment);
- ED 4 if employed full-time (single income source);
- ED 5 to ED 6 for a dual income household with one full-time and one part-time general farm worker income source:
- · ED 7 for a dual income household with two full-time general farm worker income sources.



Linking the impacts of a loss of income based on the regional socio-economic sub-sectors back to the potential impact of the HPL it is assumed that most significant job losses are expected for general wage-earning workers and small-scale farmers.

To evaluate a household's ability to afford health food, BFAP developed the **Thrifty Healthy Food Basket (THFB)** which measures the cost of healthy (nutritionally balanced) eating in the South African context. The methodology takes into consideration national nutrition guidelines, typical food intake patterns of lower-income households, official Stats SA food retail prices and typical household demographics.



The **impact of 3 different job loss scenarios** where evaluated:



Impact Scenario 1: The impact on household income and food affordability if a household with 2 full-time industry wages (plus two child support grants) loses 1 full time industry wage

		Initial situation:	Post-impact situation:
Income sources		2 Full-time sugar industry wages plus two child support grants	1 Full-time sugar industry wage plus two child support grants
Estimated Gross Monthly Hous	sehold Income	R9 953	R4 977
Estimated Expendicture Decile	е	ED 7 (Upper middle-income segment)	ED 5 (Lower middle-income segment)
Estimated food expenditure	45% food	R4 479	R2 240
and affordability of basic healthy eating	expenditure share	(Can afford the THFB with R830 to spare)	(Short R1 409 to afford THFB, with children also receiving school meals) (Thus only have funds for 61% of the THFB cost)
TYPICAL FOOD EXPENDITUR	E:		
Food groups dominating typical food expenditure (Note: Percentages in brackets - % of total food expenditure allocated to particular food group)		Animal source foods (39%); Bread & cereals (26%); Vegetables (9%) (Least staple dependent among households in the scenario analysis)	Animal source foods (36%); Bread & cereals (30%); Vegetables (10%)



Impact Scenario 2: The impact on household income and food affordability if a household with 1 full-time industry wages (plus two child support grants) is reduced to 1 part-time industry wage

		Initial situation:	Post-impact situation:
Income sources		1 Full-time sugar industry wage plus two child support grants	1 Part-time sugar industry wage plus two child support grants
Estimated Gross Monthly Hou	sehold Income	R4 977	R2 968
Estimated Expendicture Decil	е	ED 5 (Lower middle-income segment)	ED 2 (Low-income segment)
Estimated food expenditure 45% foo	45% food	R2 240	R1 336
and affordability of basic healthy eating	expenditure share	(Short R1 409 to afford THFB, with children also receiving school meals) (Thus only have funds for 61% of the THFB cost)	(Short R2 313 to afford THFB, with children also receiving school meals) (Thus only have funds for 37% of the THFB cost)
TYPICAL FOOD EXPENDITUR	E:		
Food groups dominating typical food expenditure (Note: Percentages in brackets - % of total food expenditure allocated to particular food group)		Animal source foods (36%); Bread & cereals (30%); Vegetables (10%)	Bread & cereals (35%); Animal source foods (32%); Vegetables (12%)



Impact Scenario 3: The impact on household income and food affordability if a household with 1 full-time industry wages (plus two child support grants & 1 COVID grant) loses the full-time industry wage

		Initial situation:	Post-impact situation:
Income sources		1 Full-time sugar industry wage plus two child support grants	No wage income (unemployed) plus two child support grants & COVID grant
Estimated Gross Monthly Hou	sehold Income	R4 977	R1 310
Estimated Expendicture Decile	е	ED 5 (Lower middle-income segment)	ED 1 (Low-income segment)
Estimated food expenditure	45% food	R2 240	R1 336
and affordability of basic healthy eating	expenditure share	(Short R1 409 to afford THFB, with children also receiving school meals) (Thus only have funds for 61% of the THFB cost)	(Short R3 060 to afford THFB, with children also receiving school meals) (Thus only have funds for 16% of the THFB cost) (CANNOT even afford a hypothetical 'maize meal only' basket [R857/4 people/month in 2022] to obtain adequate energy but not adequate dietary diversity)
TYPICAL FOOD EXPENDITUR	E:		
Food groups dominating typical food expenditure (Note: Percentages in brackets - % of total food expenditure allocated to particular food group)		Animal source foods (36%); Bread & cereals (30%); Vegetables (10%)	Bread & cereals (37%); Animal source foods (30%); Vegetables (13%) (Most staple dependent among households in the scenario analysis)

The above analysis highlights that across a range of household income scenarios that are indicative of the socio-economic demographics in KwaZulu-Natal and Mpumalanga **the loss** of income as a result of future reduction in area under cane due to changes in the HPL will significantly affect food affordability, food security and poverty incidence within the regions.

NOTES on the analytical approach:

The BFAP Partial Equilibrium (PE) model used in this analysis is a dynamic and recursive framework that is based on balance sheet principles. The model has been developed and refined over 15 years and captures intricate market and policy details to establish supply and demand equilibrium. The PE model is able to simulate the price impacts of alternative scenarios and the dynamic responses of supply and demand over time. The current situation, or Baseline projection, assumes that current international and domestic agricultural policies will be maintained throughout the period under review (2022-2031), and production and consumption assumptions are based on the OECD-FAO Outlook 2022. For more information, please refer to the 2022 BFAP Baseline document. This document presents an updated October 2022 sugarcane baseline as the current situation forecast.



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