

Taxing for health: taxes on sugar-sweetened beverages in east and southern African countries



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Cover photograph: A large advertising billboard placed on the walls of a major wholesaler in a low-income residential area in Harare, Zimbabwe © TARSC 2022

Executive summary

Sugar-sweetened beverages (SSBs) are one form of rapidly expanding ultra-processed foods associated with the rise in non-communicable diseases (NCDs) in east and southern Africa (ESA). The market for SSBs is growing and consumption of these beverages rising at all income levels, in both sub-Saharan Africa and in ESA countries. Applying an excise tax on SSBs is one within the proposed measures – legal, marketing control, labelling and information outreach – for tackling these public health risks, and is within the range of earmarked taxes currently being explored for domestic health financing.

This paper was commissioned by the Regional Network for Equity in Health in East and Southern Africa (EQUINET) and implemented through the Training and Research Support Centre (TARSC), to further explore SSB taxes and their role in a public health response to the challenges of rising consumption of SSBs. The paper outlines the global and regional standards, guidance and areas of legal or policy debate on the control of SSB health risks, particularly through taxation; it provides evidence on the design, taxation levels and products covered in SSB taxation in different regions globally and in ESA countries. It also discusses experiences of and issues around using SSB-related taxation for health in ESA countries. Drawing on the evidence identified, it proposes actions and issues for policy dialogue in ESA countries and in the region.

The paper is based on desk review and analysis of secondary sources of evidence on SSB taxes globally, and particularly in 17 ESA countries and draws on document searches from online libraries and databases covering 2010 to 2013, as well as evidence from World Health Organization (WHO) datasets, particularly the Obesity Evidence Hub dataset and the Global Database on the Implementation of Nutrition Action (GINA).

At international and regional level, WHO and the United Nations Children's Fund (UNICEF) have both provided a clear public health rationale for applying SSB taxes, given the evidence on rising intake, particularly by children and adolescents, and the country findings that an SSB tax that increased prices by 20%, reduced consumption by 20%, as well as generating significant savings in health care costs. The WHO thus recommends implementing SSB taxes to promote healthy diets as part of a policy package to achieve nine global targets for NCDs by 2030. The number of countries implementing SSB taxes globally has risen from 23% in 2017, to 44% by 2022. At regional level, Europe and the Americas have developed harmonised guidance supporting SSB taxes, and while WHO Afro has reinforced the WHO's global position, neither the Southern African Development Community (SADC) nor the East African Community (EAC) has provided specific guidance on them, despite both organisations seeking, in principle to harmonise tax policy and regulation regionally, including to prevent unfair competition and illicit trade between countries.

The application of excise taxes on SSBs for public health reasons has also been supported by the World Bank and the International Monetary Fund, alongside cautions over revenue potential and the need to avoid illicit trade. With industry interests likely to provide counter arguments to SSB taxation, the WHO calls for clear presentation of the health burdens and for a tax regime that can be accountably administered. For ESA countries, this implies the application of an excise tax based on sugar content/volume across all categories of SSBs to encourage consumers to substitute healthier untaxed alternatives and industry to reformulate lower sugar-content beverages. Notably both the World Trade Organization (WTO) and African Continental Free Trade Area Agreement (AfCFTA) rules that promote trade liberalisation and discourage additional tariffs that impede it, do allow for SSB taxes, when applied to protect public health.

A lower share of African countries have adopted SSB taxes. Adoption of the tax has also been later than in other regions, with the greatest growth in new SSB taxes in Africa coming between 2016 and 2022. While ad valorem SSB taxes (levied as a percentage of the value of the product) and specific excise SSB taxes (levied on the share of volume or weight of sugar content) are widely used globally, the tax levels vary widely. In the ESA region, Angola, Botswana, Eswatini, Lesotho, Malawi, Namibia and Zimbabwe had not, at the time of writing, applied any form of SSB taxation, while most of the other ten ESA countries had introduced them in the last decade.

These ESA countries have applied both ad valorem and specific excise SSB taxes, but at rates lower than a level that would translate to the recommended 20% price increase necessary to discourage consumption. ESA countries with SSB taxes have largely applied them on both sweetened and unsweetened beverages, with only the DRC, Mauritius, Mozambique, South Africa and Tanzania explicitly referring to sugar-sweetened beverages. Applying the tax in this way, suggests its use largely as a revenue raising measure, rather than for protection of health. This is reinforced by the fact that only Uganda and South Africa allocated a share of the SSB taxes collected in the consolidated revenue to health and, in both cases, with relatively low shares (1–2%). This contrasts with practice in other parts of the world where up to 60% of the collected SSB taxes are used to promote healthy foods, nutrition and access to safe water. Experience in the region and globally notes that when this revenue is transparently allocated to specific health programmes, there is reduced industry contestation and increased public acceptability. Thus the need to sustain SSB taxes within the AfCFTA regime may demand more focus on the public health motivation for and use of these taxes.

We propose four key areas to progress the introduction of SSB taxes. Firstly, we propose that it is essential that the public health rationale is made clear, and that evidence on SSB-related NCD and health burdens is provided to motivate their introduction within a wider set of measures for control of NCDs. Secondly, ESA countries are encouraged to design an SSB tax regime that can be accountably administered, applying an excise tax based on sugar content/volume across all categories of SSBs, to encourage consumers to switch to healthier untaxed alternatives and industry to reformulate beverages with lower sugar content. To achieve this, the findings point to the need for ESA countries to increase the current SSB taxes applied in ESA countries to reach the recommended 20% price increase to discourage consumption, as well as including all SSBs, while excluding unsweetened water products that are healthy alternatives.

On the introduction of SSB taxes, the findings point to the importance of prior cross-sectoral recognition and prioritisation of NCDs to provide leverage for their introduction. Also important is the potentially catalytic role of parliaments as convenors of wider stakeholder and public dialogue on SSB tax reform and to organise and communicate evidence on the need for and use of SSB taxes, including the use of media to mobilise stakeholder support. Finally, in implementing SSB taxes, good communication and a shared understanding between health and finance ministries is key. It should also be feasible to implement the selected tax design based on national administrative capacities. Its use or partial use in relevant NCD control measures should be publicly demonstrated by sharing information on the benefits achieved. The tax also needs regular review to take into account any changes in economic conditions. However, the findings also note a risk of interest lobbies advocating for the reversal of SSB taxes, even after their formal introduction, and the role of public information and alliances in countering this.

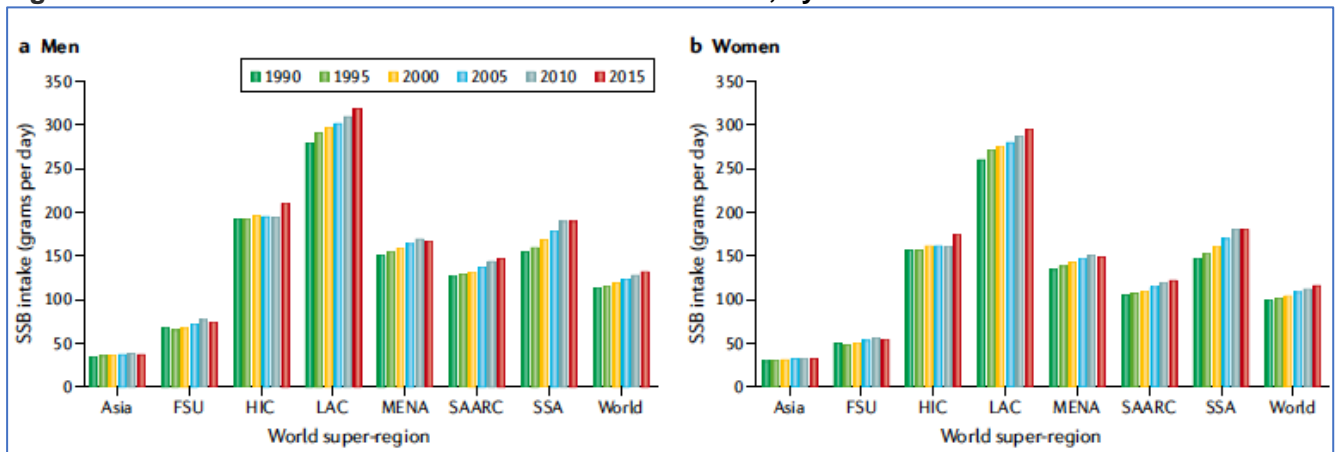
The evidence, information outreach, technical design and analysis, stakeholder and socio-political engagement across the stages of policy dialogue, design, introduction and implementation, involve a range of disciplines, actors, interests and capacities in a collaborative change pathway. Progress would be facilitated by regional co-operation, as has been the case in other regions globally, to domesticate global guidance and harmonise standards, support technical and information needs, and share learning to counter interest group pressures and ensure port health controls in cross border trade.

1. Background

The rising level of non-communicable diseases (NCDs) globally, and in the east and Southern Africa region, is of significant concern. It is driven, in part, by the commercial determinants of health, such as the increased production, marketing and consumption of ultra-processed foods in all age groups including children and adolescents, and countries (WHO, 2017; Bridge et al., 2020). Sugary drinks or sugar-sweetened beverages (SSBs) are one form of rapidly expanding ultra-processed foods. They are defined by the World Health Organization (WHO) as ‘all types of beverages containing *free sugars*’ such as ‘carbonated or non-carbonated soft drinks, fruit / vegetable juices and drinks, liquid and powder concentrates, flavoured water, energy and sports drinks, ready-to-drink tea, ready-to-drink coffee, and flavoured milk drinks’ (WHO, 2016:1). Free sugars include ‘monosaccharides (such as glucose, fructose) and disaccharides (such as sucrose or table sugar) added to foods and drinks by the manufacturer, cook or consumer, and sugars naturally present in honey, syrups, fruit juices and fruit juice concentrates’ (WHO, 2016:1).

Globally, the SSB market sector is growing, with its market size valued at USD 221.6 billion in 2020 and projected to grow annually by 4.7% between 2021 and 2028 (GAIN, 2020). With different definitions making it difficult to assess trend data, one source identified a 27% growth in the value of the sector using comparable data between 2015 and 2019 (Williams and Marshall Strategy, 2022). The industry is increasingly targeting emerging markets, including in sub-Saharan Africa (SSA) through partnering or purchasing local companies, direct investment, aggressive marketing, use of informal vendors and low pricing (GAIN, 2020; Thow et al., 2021; Yang et al., 2017). The growth in SSB intake shown in *Figure 1* highlights the slowing or reducing consumption in higher income countries, against rapidly rising consumption in Latin America and sub-Saharan Africa, particularly in men, and notably in urban residents with higher education levels (Castor et al., 2020; Basu et al., 2013; Malik and Hu, 2022). The health impacts of the NCDs associated with this increasing SSB consumption present a cost for households, health services and for the economy. For example, cardio-vascular diseases alone were estimated to cost African countries USD 6 billion in 2010 (Thow et al., 2021).

Figure 1. Global trends in SSB intake for men and women, by sex 1990–2015



Source: Malik and Hu, 2022: 3

Key: Asia = east and Southeast Asia, FSU = former Soviet Union countries, HIC = other high-income countries, LAC = Latin America and Caribbean, MENA = Middle East and North Africa SAARC = South Asia, SSA = sub-Saharan Africa

The rising urbanisation, trade liberalisation and expansion of transnational company production and marketing of ultra-processed foods, including SSBs, as noted in other regions and in SSA in *Figure 1* are equally a challenge within East and southern African (ESA) countries, contributing to dietary transition and a rise in NCDs (Loewenson et al., 2022). While this trend is better documented in middle-income ESA countries like Kenya and South Africa (Igumbor et al., 2012; Wanjohi et al., 2021a), it is also noted in countries with lower income levels like Zambia and Zimbabwe (Mukanu et al., 2021; TARSC et al., 2022), as are the SSB associated health risks and rise in NCDs (Loewenson et al., 2022). The exposure of children and young people to advertising

and sale of SSBs in the ESA region raises a particular concern, as it implies longer-term, sustained consumption of these foods and, potentially, NCD outcomes at earlier ages (TARSC et al., 2022). The consumption of SSBs has been associated with the development of various NCDs, including obesity, cardio-vascular diseases such as hypertension, metabolic-related conditions including non-alcoholic fatty liver disease, diabetes and dyslipidaemia and cancers, among others (Malik and Hu, 2022; WHO, 2017). Sugar-sweetened beverages contribute to a rising burden of NCDs, with sub-Saharan Africa experiencing a 13% increase in NCDs' contribution to mortality between 2000 and 2019, and the number of people living with diabetes being expected to more than double from 19 million in 2019, to 47 million in 2045 (WHO, undated).

The health risks associated with SSB consumption call for a comprehensive public health response in both law and practice to control advertising and marketing – particularly that which targets young people – and to control and monitor the level of additives and sugars in beverages and ensure full and accessible labelling of SSBs. As a control measure, community health information outreach enables informed practices and the promotion, production and marketing of alternative locally processed natural foods and drinks (WHO, 2022c; TARSC et al., 2022). To incentivise and finance these control measures a number of countries globally have imposed an excise tax on SSBs that are ring-fenced for control measures and that also add a price disincentive to consumption (Bridge et al., 2020; United Nations, 2011; WHO, 2022c). As for other earmarked taxes, a tax on SSBs has been debated, and requires analysis of the elasticity of consumption, the risk of cheaper, more harmful products being smuggled, the availability of affordable, less harmful alternatives and the impact, particularly on lower income households (Hangoma and Surgey, 2019; Hoffer et al., 2014). Nevertheless, ESA countries facing the challenge of ensuring adequate domestic financing for health are increasingly exploring tax measures, with earmarked excise taxes being one of the options (Loewenson and Mukumba, 2022).

Aims: In response to this context, this paper was commissioned by the Regional Network for Equity in Health in East and Southern Africa (EQUINET) and implemented through Training and Research Support Centre (TARSC) to further explore taxes on SSBs and their role in the public health response to the challenges of rising consumption of SSBs. The paper outlines the global and regional standards, guidance and areas of legal or policy debate in control of SSB health risks, particularly through taxation, and provides evidence on the design, levels and products covered by SSB taxation in different regions globally, and in ESA countries. It also discusses experiences of and issues around adopting SSB-related taxation for health in ESA countries. Drawing on the evidence provided, it proposes actions and issues for policy dialogue in ESA countries and within the region.

2. Methods

The paper is based on a desk review and analysis of secondary evidence sources on SSB taxes globally, and particularly in ESA countries. In the latter case it covers the seventeen ESA countries namely: Angola, Botswana, the Democratic Republic of the Congo (DRC), Eswatini, Kenya, Lesotho, Madagascar, Malawi, Mozambique, Mauritius, Namibia, Seychelles, South Africa, Tanzania, Uganda, Zimbabwe and Zambia.

For the document review, an extensive online search was made for published papers from 2010–2023 on Google, Google Scholar, PubMed, Semantic Scholar and Medline databases, as well as in grey literature. The search terms used included truncations and synonyms of 'soft drink', 'sugar-sweetened beverage', 'sugary drinks', 'soda', combined with 'tax' and 'levy' and regional or geographical terms, such as 'East and southern Africa', 'southern Africa' and at the lowest level, country names as, for example 'Zambia'. Additional searches were made and documents included, by snowballing from references, online reports and databases of the WHO and World Bank. Other relevant documents were included based on a preliminary reading of each document, with the criteria that they cover positive and negative issues and policy debates related to SSB taxation, including policy, legal measures, design, products taxed, levels, implementation and impact.

This was not a systematic review, but rather a document review. Documents were systematically collated and categorised, and a thematic content analysis carried out using a structured template with provision for additional areas to be included if they arose from the documents sourced. This review was used to prepare the evidence reported in the findings on the thematic areas of the policy arguments for and debates on SSB taxation, particularly as a public health measure; the standards and guidelines applied globally and within specific countries; and the issues raised on introducing and implementing earmarked taxation on SSBs, particularly for public health purposes.

The taxes referred to were consistently indirect /consumption taxes, that is taxes imposed on goods or services that cause consumers to pay higher prices and may serve as price disincentives to consumers (WHO, 2022a). They include excise taxes that are consumption taxes targeting specific products to increase their price relative to other consumer goods, either as ad valorem excise taxes levied as a percentage of the value of a product, or as specific excise taxes levied as a monetary value according to a physical characteristic of the product, such as its volume or nutrient content. Excise taxes can be applied at a uniform or differential (tiered) rate based on product characteristics such as volume, sugar content, type of sweetener, or beverage type (WHO, 2022a).

The document reviews and databases sourced were also used to capture data in Excel tabulations for all countries globally applying excise/earmarked taxation of SSBs and its purpose. The USA was not included as these taxes are only applied at locality/city level (ChangeLab Solutions, 2018; Paarlberg, Mozaffarian and Micha, 2017). The table drew extensively on the WHO Obesity Evidence Hub dataset (WHO 2023a), using evidence and data from the other sources noted to address information gaps. For each country, the Excel table captured its regional classification (using the UN classification framework), when the SSB tax was introduced, the type, design and level(s) of the tax, products taxed, whether it was tiered or not based on sugar content, the tax revision history and any other pertinent issues relating to the implementation of the SSB for that country.

Limitations: The study faced various limitations. A WHO primary dataset provided binary (YES/NO) data on countries' responses to the question "Is your country implementing any of the following fiscal interventions? – taxation on sugar-sweetened beverages," limiting the information on the level and type of taxation or its use (WHO, 2023a). The dataset also only covered responses for 2017, 2019 and 2021 and, in addition, there were varying degrees of country coverage of the different datasets. This evidence gap was addressed using information from other WHO datasets (WHO, 2023b). Some sources did not capture the full trajectory of the tax, such as in Zambia, where the tax was applied, then removed and then re-applied a year later (Mukanu et al., 2021). As the taxes may be reversed or increased subsequent to the writing of the paper this limits the validity of the data sourced. We tried to address this by triangulating across different sources, but this was not always possible. We have, therefore, cited the source and year for all data presented. Public domain data on the amount of tax collected from SSB taxes and their use in public health measures was not available for many countries, so the evidence that was available is presented. There is scope to further validate and update the ESA data by presenting the results in a regional forum, which the authors plan to do when resources permit.

3. Findings: Global and regional standards and policies

The policy debates on SSBs, their risks to health and standards and measures for controlling these risks, are presented through a range of lenses, including health, economic / financial and trade-related lenses, , as well as the agencies responsible for these areas.

3.1. International guidelines, standards and policy debates

The WHO has developed evidence informed guidelines on the food environment and on fiscal policies aimed at 'supporting member states in establishing enabling food environments to promote healthy diets and improve nutrition' (WHO, 2022d). The organisation launched a public consultation on these guidelines in December 2022, with a February 2023 deadline for submission of comments.

In 2017, WHO presented a rationale for using taxes to control SSB consumption, providing evidence on the links between SSBs and NCDs, and the rising adolescent soft drink intake, and within this, on the actions governments can take to control SSB intake and the benefits of using tax measures to do so. The brief observes that an SSB tax that increased prices by 20% reduced consumption by 20%, and that a USD 1 cent per ounce tax on SSBs in the USA would result in more than USD 17bn savings in healthcare costs. In 2016, this could add USD 13bn that could be used to support the public health response (WHO, 2017).

WHO has recommended the implementation of fiscal (tax) policies to promote healthy diets as part of a policy package to achieve nine global targets for NCDs by 2030 (WHO, 2022a). In a 2022 policy brief, WHO noted that the share of countries implementing taxes on SSBs rose from 23% in 2017, to 38% in 2019, and to 44% by May 2022, with 60% of countries in the Americas region applying SSB taxes (WHO, 2022a). Modelling evidence, largely on SSB taxes, suggests that taxes on less healthy foods and beverages would bring about positive dietary changes, with growing evidence of this benefit from country experiences (WHO, 2022a). A commonly used argument that SSB taxes are financially regressive, with a negative impact on poorer people, is countered by the likely greater fall in consumption among lower-income groups after price increases, and the progressive nature of reduced health care expenditures associated with a fall in diet-related disease. This has been confirmed in countries such as Mexico and South Africa (WHO, 2022a). In Mexico, for example, two years after the introduction of an SSB tax, households with the fewest resources reduced their purchases of sugary drinks by 11.7%, compared to 7.6% for the general population (WHO, 2017).



In 2022, WHO provided guidance on SSB tax policy development, design, implementation and administration (WHO, 2022b;c). For each stage of the policy cycle it provides guidance on which considerations to address and possible strategies. As a political economy process, SSB excise taxation calls for practitioners to navigate its negotiation and implementation in the context of different interests and forces. The guidance thus provides the arguments used by industrial interests that oppose SSB introduction including financial arguments on the instability and loss of profit revenue caused by depressed sales; impacts on employment; the discrediting of scientific evidence on SSB risk or control measures, as well as on arguments for voluntary rather than legal measures, and on the regressive nature of SSB tax measures. Countering this are the health and economic justifications for SSB taxation, with evidence from countries that have implemented SSB taxes showing positive economic and health outcomes (WHO, 2022c). These debates imply careful thinking about the design of SSB taxes and on the processes for their introduction and implementation (WHO, 2022 a,b).

Within their detailed guidance, WHO notes that specific excise taxes are likely to be more effective than ad valorem excise taxes, “because they increase the price of all taxed foods and beverages by the same (absolute) amount, reducing the incentive for consumers to substitute a cheaper taxed product”; are easier to implement and less susceptible to price manipulation by industry (WHO, 2022a:8). They should, however, be regularly adjusted in line with inflation and income growth to remain effective. Basing specific SSB excise taxes on sugar content is likely to have a larger impact, because they “encourage consumers to substitute to healthier untaxed substitutes and encourage industry to reformulate, but simpler taxes (e.g. volume-based sugar-sweetened beverage taxes) may be more feasible in countries with weaker tax administration” (WHO, 2022a:8).

The guidance implies having clear evidence on and understanding of the additional health burdens of SSBs, and how feasible the taxes are from a political and technical point of view. It guidance recommends use of excise taxes instead of tied taxes based on sugar content, given the technical complexity in administration of the latter and the application of the tax to all

categories of SSBs. WHO provides policy guidance on effective administration, enforcement and co-ordination across sectors, and on monitoring impact (WHO, 2022c).

In terms of the products covered, the WHO recommends clearly defining and delineating taxable products and associated tax liabilities after considering the market size and contribution of SSBs to free sugar/caloric intakes (WHO, 2022b). Taxable products are defined in different ways, however, the WHO recommends countries consider the full spectrum of possible SSB products, as located across the Harmonised System Codes shown below (WHO 2022c).

- a. Sugar-sweetened beverages
 - i. Waters, including mineral waters and aerated waters containing added sugar, and other sweetening matter or flavoured
 - ii. Milk and cream; concentrated or containing added sugar or other sweetening matter
 - iii. Buttermilk, curdled milk and cream, yoghurt, kefir, fermented or acidified milk or cream
 - iv. Chocolate and other food preparations containing cocoa.
- b. Beverages with non-sugar sweeteners
 - i. Fruit juices (including grape must) and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter
 - ii. Whey and products consisting of natural milk constituents
 - iii. Extracts, essences, concentrates of coffee, tea or mate; preparations with a basis of these products; roasted chicory.
- c. Beverages that are not sweetened
 - i. Waters including natural or artificial mineral waters and aerated waters, not containing added sugar or other sweetening matter not flavoured; ice and snow
 - ii. Milk and cream; not concentrated, not containing added sugar or other sweetening matter
 - iii. Food preparations not elsewhere specified or included (WHO, 2022c).

Taxable products should thus include “carbonated or non-carbonated soft drinks, fruit/vegetable juices and drinks, liquid and powder concentrates, flavoured water – including coconut- and plant-based waters and yoghurt drinks – energy and sports drinks, ready-to-drink tea and coffee and flavoured milk drinks” to counteract substitution, as well as beverages sweetened with sugar substitutes, given their health risks and the risk of substitution (WHO, 2022c:52). SSB definitions should exclude water from SSB taxes to promote water as a healthy alternative.

Other UN organisations have provided more specific guidance on SSBs. For example, UNICEF situates its guidance within the UN Convention on the Rights of the Child and notes that unhealthy food environments, including SSBs, undermine children’s rights. Taxing SSBs is identified as having a positive impact on children’s health (UNICEF, 2022). Introducing an SSB tax calls for technical partnerships to model the tax and economic projections, the revenue opportunities and consumption changes (UNICEF, 2022). Drawing on high-income country experiences, this agency notes the need to have clear policy objectives in applying SSB taxation, specifying and defining the targeted products, and avoiding trade disputes around World Trade Organization (WTO) rules, as discussed further below (UNICEF, 2022).

International guidance notes that the public health purpose of the tax should also be made clear, such as to promote improved access to free, clean and safe drinking water and enabling the earmarking of the funds for this purpose, with effectively co-ordinated systems for enforcement, penalties for non-compliance and the monitoring of impact (UNICEF, 2019, 2022).

In 2020, in an analysis from an economic lens, the World Bank also provided international experiences on SSB taxation, design and application, but including some of the arguments against its implementation. Counter arguments noted the tax to be regressive, as burdens of price increase fall disproportionately on lower-income groups. Consumers are argued to substitute taxed products with similar untaxed products limiting the tax’s effectiveness, and tax-related falls in demand are perceived to harm the economy, result in job losses and a fall in the country’s

'doing business' ranking. Sugar-based beverage taxes are argued to encourage illicit trade and to be discriminatory and unconstitutional. However, the World Bank observes that these arguments are not supported by independent evidence (Hattersley et al., 2020b; World Bank, 2020).

In 2021, the International Monetary Fund (IMF) presented evidence supporting the use of taxes to fight obesity using the economic rationale of addressing negative externalities and market failure, as well as the benefit for improved revenues and health. However, the organisation is cautious about the effectiveness of these taxes as a revenue measure based on the share of GDP (Petit, 2021). The link to pricing discouraging consumption may be a more important economic argument than the overall revenue potential in the medium-term, particularly as, in the longer-term, production and consumption of harmful SSBs should decline significantly.

From a trade lens, the 1994 WTO General Agreement on Tariffs and Trade (GATT) is invoked, where SSB tax measures impose additional tariffs on goods (WHO, 2018). This implies that 'non-discriminatory' excise taxes are preferred for SSB taxes and other health taxes on goods, so that they are not seen as a form of 'Aid of State' and do not discriminate between imported and locally produced goods, or between different trading partners. Free trade agreements (FTAs) and bilateral trade agreements also potentially limit tariffs between the territories involved and may impose tighter restrictions on domestic regulation; customs unions eliminate trade restrictions between those involved, which may affect rights to impose a domestic SSB tax (WHO, 2018). The AfCFTA could thus influence application of domestic SSB taxes in Africa, if beverages are included (Parks, 2022). There have been disputes on SSB taxes at the WTO, such as the example below, but a dispute on a tax structure introduced on health grounds is limited by the GATT in article XXb, including an exception for measures, "necessary to protect human, animal or plant life and health" (WHO, 2018).

A dispute on SSB taxation was raised between Mexico and the USA at the WTO. In 2002, Mexico imposed a 20% tax on soft drinks and other beverages, and on syrups using any sweetener other than cane sugar. This taxed most USA drinks made with high-fructose corn syrup or beet sugar. In 2004, the USA raised a WTO dispute on this. The WTO dispute settlement body did not consider these taxes to be specifically raised for health, but to protect Mexican domestic production of cane sugar, and requested Mexico to bring the inconsistent measures into conformity with its obligations under the GATT 1994 (WTO, 2005). Specifically, this was not an SSB tax raised for health reasons, thus the decision does not contradict the exemption noted earlier.

3.2 Regional standards, guidelines and policy debates

The WHO Euro region has 2022 guidance for member states interested in implementing SSB taxes as part of the broad measures and actions in tackling NCDs. It includes measures to build stakeholder support for SSB tax implementation through identification of the key stakeholders and their shared interests, and guides how SSB tax should be framed, with practical measures for advancing the process of SSB tax implementation, compiling evidence, mapping the policy context, considering tax design, and the monitoring of impact (WHO, 2022b). The guidance builds on earlier 2015 guidance on using price and tax policies to promote healthy diets and disincentivise a range of unhealthy foods. The guidance shares the experiences of various European countries, including through taxes on saturated fats, sweets, ice-creams. SSBs and soft drinks, a public health product tax, as well as changes in value-added taxes (VAT) and supply-chain interventions to promote healthy foods (WHO, 2015).

The European Union (EU) notes that such taxes should not be discriminatory or hinder free circulation of goods, clash with VAT rules or even be considered an 'Aid of State', given EU Treaty principles of free movement and competition law for the EU common market (Almendral, n.d.; Finn and Davis, 2018). When Catalonia introduced an SSB tax in 2017, industry players contested it as breaching EU rules, arguing that taxing only SSBs is discriminatory, since many other sugar-laden products also contribute to obesity and should therefore also be taxed. This may be viewed as a valid argument so if SSB taxes are introduced first, this may be seen as a first phase of wider sugar taxation, particularly if backed by evidence of relatively high consumption and thus greater health impacts of SSBs. While health is protected under EU law, a

further legal argument was raised that SSB taxation conflicts with EU VAT rules that prohibit other general taxes on consumption, although case law decisions suggest that since the EU does have existing general taxes on consumption, member states could, instead of creating new taxes, just increase existing VAT on SSBs by amending the definition of foodstuffs for VAT purposes (Almendral, n.d.).

The Pan American Health Organization covering the Americas produced an extensive technical reference in 2020 to assist policymakers to implement SSB taxes, providing the economic rationale in detailing the costs associated with obesity and guiding on tax types, bases and rates. The guidance projects the implications for price, demand, and substitution of other beverages and the potential tax revenue, with potential responses to frequent questions about the economic impacts of SSB taxation (PAHO, 2020).

Within the ESA region, countries have applied taxes for health. The SADC identifies excise taxes as important in raising revenue and influencing consumption to manage harmful products, albeit only referring to alcoholic beverages and tobacco, and not to SSBs (SADC, 2016). SADC calls for better co-ordination in policy formulation and implementation across member states, while the SADC Protocol on Finance and Investment aims to harmonise the finance and investment policies of member countries, explicitly including “carbonated drinks such as soft drinks and bottled mineral water”, which are subject to excise taxes in seven of the SADC countries (SADC, 2006:7). SADC guidelines encourage use of excise tax on an ad valorem basis (SADC, 2016; 2006).

Tax harmonisation is also a goal of the East African Community (EAC, 2001). Some EAC countries, including Burundi, Kenya, Tanzania, Rwanda and Uganda apply excise taxes on SSBs, but this is not yet harmonised across the EAC (Petersen, 2009). Soft drinks manufacturers in Uganda were reported to have called for harmonisation of excise duty to avoid unfair competition, while also lobbying the Parliament of Uganda to reduce the local tax by 20% in the 2023/24 budget to limit price distortions and smuggling of SSBs from Kenya (Esiara, n.d).

In its preamble, the African Union’s AfCFTA gives countries flexibilities in achieving policy objectives in public health, safety, environment, public morals and the promotion and protection of cultural diversity (AU, 2018). To promote economic integration, it calls for the elimination of tariff and non-tariff barriers to trade and investment, except where, “necessary to protect human, animal or plant life or health” (AU, 2018: 27), among other exceptions. This exception could be used by State Parties to apply SSB taxes, as this will be construed as ‘justifiable discrimination’ to protect human health.

The WHO Africa Region office (WHO Afro) produced a Nutrient Profile Model as a tool for controlling obesogenic food environments and controlling the marketing of food and non-alcoholic beverages to children (WHO, 2009). It includes fiscal measures, such as SSB taxation, as one measure for this, defining an SSB as having excessive free sugars if their contribution in grammes or kcal is over 5% of the total free sugar content (WHO, 2009).

4. Findings: Current practices on SSB taxation

4.1 SSB taxation in different global regions

Globally, by end of 2022, and excluding North America, 103 countries are applying SSB taxes, 48% of the 219 identified (See *Table 1*). Some, such as Denmark and Norway, applied SSB taxes in the past but have since repealed them. This number is larger than the 85 reported by WHO, because the latter excludes 11 countries in Oceania, which apply SSB taxes at the same level as taxes applied on bottled water, while the authors include them. WHO also excludes those using import tariffs seen to be less effective for health goals, which are included here.

Table 1 indicates that a reasonably large number of 40–50% of African, Asian, European, Latin American and the Caribbean, countries are applying some form of SSB tax, although it needs to be noted that not all of these taxes may be at a level that disincentivises consumption, or that the

revenues are earmarked for health. SSB taxes were mostly newly introduced in 2016 to 2022, as shown in *Table 2*. European countries adopted SSB taxes earlier, with Africa and Asia adopting at higher rates in the years after 2011.

Table 1: Countries applying/ not applying SSB taxes by UN region, 2022

UN Region	Total countries	Countries (N=219)	Number	%
AFRICA – countries applying SSB taxes	55	Benin, Burundi, Chad, Democratic Rep. of the Congo, Ethiopia, Liberia, Madagascar, Mali, Mauritania, Mauritius, Morocco, Mozambique, Niger, Nigeria, Rwanda, Sao Tome and Principe, Senegal, Seychelles, South Africa, Togo, Tunisia, Uganda, Tanzania, Zambia	26	47
AFRICA – countries NOT applying SSB taxes		Algeria, Angola, Botswana, Burkina Faso, Cabo Verde, Cameroon, Central African Republic, Comoros, Congo, Cote d'Ivoire, Djibouti, Egypt, Equatorial Guinea, Eritrea, Eswatini, Gabon, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Lesotho, Libya, Malawi, Namibia, Reunion, Sierra Leone, Somalia, South Sudan, Sudan, Eswatini, Zimbabwe	29	53
ASIA – countries applying SSB taxes	48	Bahrain, Bangladesh, Brunei Darussalam, India, Iran, Israel, Malaysia, Maldives, Nepal, Oman, Pakistan, Philippines, Qatar, Saudi Arabia, Sri Lanka, Tajikistan, Thailand, Turkey, United Arab Emirates	19	40
ASIA – countries NOT applying SSB taxes		Afghanistan, Armenia, Azerbaijan, Bhutan, Cambodia, China, Cyprus, Democratic People's Rep. of Korea, Georgia, Indonesia, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lao People's Democratic Rep, Lebanon, Mongolia, Myanmar, Republic of Korea, Singapore, Syrian Arab Republic, Timor-Leste, Turkmenistan, Uzbekistan, Viet Nam, West Bank and Gaza, Yemen, Japan*	21	60
EUROPE – countries applying/have applied SSB taxes	44	Albania, Belgium, Croatia, Denmark, Estonia, Finland, France, Hungary, Ireland, Latvia, , Monaco, Montenegro, Norway, Poland, Portugal, Spain, United Kingdom, St Helena*	18	41
EUROPE – countries that have NOT applying SSB Taxes		Andorra, Austria, Belarus, Bosnia and Herzegovina, Bulgaria, Czechia, Germany, Gibraltar, Greece, Iceland, Italy, Liechtenstein, Lithuania, Luxembourg, Malta, Netherlands, Republic of Moldova, Romania, Russian Federation, San Marino, Serbia, Slovakia, Slovenia, Sweden, Switzerland, The Former Yugoslav Republic of Macedonia, Ukraine	26	59
LATIN AMERICA and CARIBBEAN – countries applying SSB taxes	46	Argentina, Barbados, Belize, Bolivia, Brazil, Chile, Costa Rica, Dominican, Ecuador, El Salvador, Guatemala, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Saint Kitts and Nevis, Saint Vincent and the Grenadines, Suriname, Uruguay	21	46
LATIN AMERICA AND THE CARIBBEAN – countries NOT applying SSB taxes		Anguilla, Antigua and Barbuda, Aruba, Bahamas, British Virgin Islands, Cayman Islands, Colombia, Cuba, Dominica, Falkland Islands (Malvinas), French Guiana, Grenada, Guadeloupe, Guyana, Haiti, Jamaica, Martinique, Montserrat, Netherlands Antilles, Puerto Rico, Saint Lucia , Trinidad and Tobago, Turks and Caicos Islands, Venezuela (Bolivarian Republic of), Virgin Islands (USA)	25	54
NORTH AMERICA	4	Bermuda, Canada, Greenland, United States of America	nc	nc
OCEANIA – countries applying SSB taxes	23	American Samoa, Cook Islands, Fiji, French Polynesia, Guam, Kiribati, Marshall Islands, Micronesia, Nauru, New Caledonia, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, Vanuatu, Wallis and Futuna, Northern Mariana Islands*	19	83
OCEANIA – countries NOT applying SSB taxes		Australia, New Zealand, Papua New Guinea, Tokelau	4	14

Sources: Authors from Abdool Karim et al., 2021; McDonald, 2015; APCCP, 2021; GoZ, n.d; Zimbabwe Revenue Authority, n.d; National treasury of the Republic of South Africa, 2016; Caro et al., 2018; Charles, 2021; Carriedo et al., 2021; Crosbie et al., 2022; Cuadrado et al., 2020; Deane, 2015; Foodnavigator – asia.com, 2019; Hattersley et al., 2020; Hongoma and Surgey, 2019; Israel tax authority, online; Mukanu, 2021; NCD Alliance, 2016; 2022; PAHO, 2020; Pfinder et al., 2016; Republic of Benin, 2011; Ruhara et al., 2021; Stacey et al., 2021; Staff, 2016; Teng et al., 2020; 2021; The Global Food Research Programme, 2021; Thow et al., 2011; 2021a; Tirana Times, 2018, WHO, 2021, 2022a, b, c, d 2023b.

Total applying SSB taxes =103 (48%); nc = not covered

* Does not appear in the UN countries by region listing but is mentioned in literature on SSBs

Table 2: Progress in countries applying SSB taxes from 1960 to 2022

Number of new countries applying SSB taxes in each time period						
Time period	Region					Total
	Africa	Asia	Europe	LAC	Oceania	
1960–2000	1	0	3	5	3	12
2001–2010	3	1	1	6	8	19
2011–2015	5	4	6	5	4	24
2016–2022	17	14	8	5	3	47
TOTAL	26	19	18	21	18*	102**
Share (%) of total new countries applying SSB taxes in specific time period by region						
Time period	Region					% Total
	Africa	Asia	Europe	LAC	Oceania	
1960–2000	4	0	17	24	17	12
2001–2010	12	5	6	29	44	19
2011–2015	19	21	33	24	22	24
2016–2022	65	74	44	24	17	46

Sources: As in Table 1.

*18 total instead of 19 due to lack of data on year of SSB tax introduction for Solomon Islands

**102 total countries instead of 103 due to missing data for Solomon Islands

LAC = Latin America and Caribbean

As reported in *Section 3.1*, WHO recommends the use of excise taxes for SSB taxation, rather than of VAT, sales tax or import duties, as they can be more specifically applied to products for the purpose of inducing price and behaviour changes (WHO, 2022c). The different options for excise taxes are ad valorem (levied as a percentage of the value of a product), or a specific excise tax, levied as a monetary value according to a physical characteristic of the product, such as its volume or nutrient content at a uniform or tiered rate depending (in the latter case) on the level of content; or in a mixed form, combining ad valorem and specific excise tax features (WHO, 2022a). *Table 3* indicates issues to consider in adopting each form.

Table 3: Issues to consider in selection of different forms of SSB taxes

Dimension	Ad valorem		Specific			Mixed
	Uniform value-based tax	Value-based tax-tiered by sugar content	Tax based on SSB volume	Volume of sugar-content based tax, tiered by sugar content	Sugar-content based tax	Combines any of the tax designs under ad valorem and specific
Country example, Tax level at	Kiribati: 40% of market wholesale value	Chile: 10% on SSBs with <6.25 g of sugar/100 ml; 18% on SSBs with sugar above this level.	French Polynesia: Tax set per litre for domestic SSBs and 50% higher per litre for imported SSBs	UK: Tax rate/ litre for SSBs with 5–8 g total sugar/ 100 ml, 33% higher for SSBs with sugar above this level.	Mauritius: 0.03 Mauritian rupees per gram of sugar	Ecuador: US18c/100g sugar for SSBs >2.5g of sugar/100 ml. 10 % tax for SSBs below this level.
Administrative capacity needed/ burden	Burden to administer: needs monitoring of tax avoidance using strategic pricing	Burden to administer: needs monitoring of tax avoidance using strategic pricing	Simple to administer	Requires technical capacity to administer and monitor beverage sugar content	Requires technical capacity to administer and monitor beverage sugar content	Depends on combination or specific taxes mixed in the design

Dimension	Ad valorem		Specific			Mixed Combines any of the tax designs under ad valorem and specific
	Uniform value-based tax	Value-based tax-tiered by sugar content	Tax based on SSB volume	Volume of sugar-content based tax, tiered by sugar content	Sugar-content based tax	
Impact of inflation on the tax	Real value will not be affected by inflation	Real value will not be affected by inflation	Adjust periodically for inflation to protect real value	Adjust periodically for inflation to protect real value	Adjust periodically for inflation to protect real value	
Behavioral responses	Encourages trading down, substitution towards cheaper tax products	May encourage trading down, substitution towards cheaper tax products	Does not encourage trading down	Does not encourage trading down	Does not encourage trading down	
Reformulation incentives, e.g. lower sugar content	Does not encourage product reformulation	Encourages product reformulation	Does not encourage product reformulation	Depending on thresholds, may encourage product reformulation	Encourages product reformulation	
Revenues and ability to be fully passed through to prices	Susceptible to underreporting of value on which the tax is based (undervaluation), though may generate more revenue where there are large price gaps. Less likely to be fully passed through to prices/		More predictable revenues- less susceptible/vulnerable to price manipulation. More likely to be fully passed through to prices			

Source: Adapted by Authors from WHO, 2022c:57

Table 4 shows the variation of the types of taxes used internationally within and across regions. Specific excise and uniform ad valorem taxes are widely used, but there is wider use of tiered taxes in Europe and import tariffs in Oceania. Tax levels also vary widely from ad valorem rates of 1–100% across regions, and excise tax rates from USD 2–30c per litre.

WHO recommends a broad scope for taxed sugar-sweetened products to prevent consumers substituting taxed with non-taxed products. The recommendation is for taxes to be applied on ‘all categories of SSBs including sugar-sweetened carbonates, fruit-flavoured drinks, fruit juices, sports and energy drinks, vitamin water drinks, sweetened iced teas and lemonades and sugar-sweetened milk drinks and yogurts, as well as powders, concentrates or syrups used to make SSBs by adding water or carbonated water, but should exclude bottled water’ (WHO, 2022c:62). While there were variations on the products taxed within and across regions, as shown in Table 4, SSB taxes are commonly applied on sweetened carbonate, sports, energy and fruit-flavoured drinks and fruit juices. There thus seems to be scope to broaden this to a common, comprehensive set of products taxed, especially at regional level. There was inadequate evidence to include report of the earmarking or use of the SSB taxes collected.

Table 4: Issues relating to tax design: type, levels and products covered

Region	Types of taxes applied	Level of taxes	Products taxed*	Tax administration
Africa	Ad valorem excise tax – 15 countries; specific excise tax – 7 countries; 3 countries use a mixed regime and 1 (Morocco) combines VAT and a specific excise tax. Specific excise taxes are mostly applied per volume and content. Four countries use tiered SSB taxes.	Ad valorem tax rates range from 2% to 39%, with Rwanda the highest, and most between 10–15%. Specific excise taxes range from USD2–3c per litre.	Vary across countries. Overall, sweetened carbonates, fruit-flavoured drinks, fruit juices, sports and energy drinks, minus sweetened iced teas, lemonades, sugar-sweetened milk drinks, yogurts, powders, concentrates or syrups. Four countries tax sugar and other foods	Limited data on tax administration. Of the 7 countries with data on share of revenues to GDP, in 5 it is <0.05%, and in two > 0.1%, i.e. 0.14% (Uganda) and 0.16% (Rwanda).
Asia	Ad valorem in 10 countries, specific excise tax in 7, mixed s in 1 country and import tariffs in 1 country. Specific excise taxes mostly by volume. Five countries apply tiered taxes	Ad valorem tax rates range from 14–100%, with a 100% rate on energy drinks in 3 countries. Excise tax rates range from USD12–30c/litre.	Wide range but mainly carbonated, sports and energy drinks, moderate application on vegetable and fruit juices and milk drinks	Limited data. In Iran, 60% of collected income paid to the health ministry for prevention and treatment of diabetic patients and 40% to the sports and youth ministry for sports
Europe	High usage (15 countries) of specific excise tax and low usage of other tax designs: mixed regime, sales tax and VAT are each used by 1 country. Specific excise taxes are by volume. High application of tiered taxes in 11 countries.	Variable tax rates for specific excise taxes, which are tiered, but higher rates applied for concentrates.	Sugar-sweetened carbonates, fruit-flavoured drinks, fruit juices, energy drinks, sweetened iced teas, lemonades, milk drinks and yogurts, powders, concentrates or syrups used to make SSBs. Some taxes on other sugar containing foods	Limited data For all four countries with available data, the share of SSB tax revenues to GDP < 0.06%.
LAC	Mainly ad valorem – 10 countries; specific excise tax, 5 countries; and mixed regimes in 5 countries. Specific excise taxes by volume and some sugar content rating. Eight countries apply tiered taxes.	Ad valorem tax rates range between 4– 30%, with most at 10%. Specific excise taxes vary and are tiered.	Sweetened carbonates, energy drinks. Some cover fruit-flavoured drinks, fruit juices, sweetened iced teas, lemonades, sugar-sweetened milk and yogurts, concentrates or syrups used in SSBs.	Limited data. Two countries report SSB tax: GDP ratios of 0.07% and 0.10%
Oceania	2 countries use ad valorem taxes; 3 use specific excise taxes; 4 use import tariffs, while 7 use mixed regimes combined with sales tax. Volume and sugar content-based designs.	Ad valorem rates range from 1– 30%. Variation in specific excise and other taxes	Varies, wider coverage of sugar-sweetened carbonated drinks, some coverage of syrups, flavoured milk, juices, powdered concentrates. Some tax on other sugar containing foods.	No data

Source: Authors from secondary sources. *The number of countries and products indicated are as extracted from literature. LAC= Latin America and Caribbean

4.2 SSB taxation in the ESA regions

While the previous section covered the Africa region, this section, reports the findings from the review of the seventeen ESA countries. *Table 5* summarises the findings which show that twelve of the seventeen are applying some form of SSB taxes as of the end of 2022. The five who are not applying some form of SSB taxation are Angola, Botswana, Eswatini, Lesotho, Malawi, Namibia and Zimbabwe. Botswana and Namibia are both reported to be considering it under their

NCD prevention strategies (Thow et al., 2021) while in Zimbabwe, the Minister of Finance introduced a flat rate excise duty on energy drinks only, at a rate of USD 5c per litre as a ‘revenue enhancing measure’, in the 2022 national budget (GoZ, 2021:33; ZIMRA, online). The revenue from this tax along with funds generated from excise duty on cigarettes was indicated to be ring-fenced for the treatment and support of cancer, diabetes and hypertension in an NCD Fund.

For the ten countries that have introduced SSB taxes, the majority did so between 2013 and 2019. Six of these ESA countries are using specific excise taxes, while others are using ad valorem or mixed taxes. The taxes are largely volume-based, with the DRC basing them on the type of drink, and Mauritius and South Africa on the sugar content.

Technical and political contexts, and the intended health, economic and socio-behavioural goals guide decisions on SSB tax levels. High-income countries are estimated to have an SSB price elasticity of 0.8, which rises to 1.59 in low- and middle-income countries (WHO, 2022c.). This implies that a 1% increase in the price of a taxed SSB leads to a decrease in consumption of between 0.8–1.59%. However, this is also impacted by the cost to consumers and how much of the tax increase is reflected in the final price paid by the consumer, as opposed to retailers, wholesalers or manufacturers. The evidence suggests that consumers meet about 82% of this cost increase (WHO, 2022c). If tax rates are too low, price increases may also be small and have little impact on consumption, particularly during periods of rising incomes. There is thus an argument for higher taxation to raise prices to levels that discourage consumption (Andreyeva et al., 2010; WHO, 2016; Berardi et al., 2012).

Table 5: SSB taxes and tax design in ESA countries, 2022

Country	Has SSB Tax?	Year introduced	Tax type and level (% or USD)	Tax design	Tiered?
Angola	No	na	Na	na	na
Botswana	No	na	Na	na	na
DRC	Yes	2018	Ad valorem 5–10%	Type of drink	YES
Eswatini	No	na	Na	na	na
Kenya	Yes	2015	Mixed: ad valorem 10%; Specific excise 5–10c per litre	Volumetric	
Lesotho	No	na	Na	na	na
Madagascar	Yes	2016	Ad valorem 2.5–10% (b) changed from specific excise	Volumetric	NO
Malawi	No	na	Na	na	na
Mauritius	Yes	2013	Specific excise 3c/gm	Sugar content	NO
Mozambique	Yes	2017	Specific excise 1–2c /litre	Volumetric	YES
Namibia	No	na	Na	na	na
Seychelles	Yes	2019	Specific excise 5–7c/litre (c)	Volumetric	NO
South Africa	Yes	2018	Specific excise 15-17c/gm sugar	Sugar content	NO
Tanzania	Yes	2018 (a)	Specific excise 0.1c–10c /litre	Volumetric	NO
Uganda	Yes	2018	Ad valorem 12–15%	Volumetric	NO
Zambia	Yes	2019	Specific excise 0.5–3% or 3c/litre	Volumetric	NO
Zimbabwe	No	na	na	na	na

Sources: Authors from Abdool Karim et al., 2021; McDonald, 2015; APCCP, 2021; GoZ, n.d; Zimbabwe Revenue Authority, n.d; Caro et al., 2018; Charles, 2021; Carriedo et al., 2021; Crosbie et al., 2022; Cuadrado et al., 2020; Deane, 2015; Foodnavigator- asia.com, 2019; Hattersley et al., 2020; Hongoma and Surgey, 2019; Israel tax authority, online; Mukanu, 2021; NCD Alliance, 2016; 2022; PAHO, 2020; Pfinder et al., 2016; Republic of Benin, 2011; Ruhara et al., 2021; Stacey et al., 2021; Staff, 2016; Teng et al., 2020; 2021; The Global Food Research Programme, 2021; Thow et al., 2011; 2021a; Tirana Times, 2018, WHO, 2021; WHO 2022a,b,c,d; 2023b; Wanjohi; 2021a; Yang et al., 2017; (a) Likely to have been introduced earlier. Data sources refer to the revision of the tax (b) 2.5% for local and 10% for imports (c) USD.27c import tariff on all beverages containing >5 g sugar/100 ml (d) 1% Sugar levy noted in Uganda.

Kenya, Mozambique, Seychelles and Tanzania local currencies converted to US\$ using a historical currency converter, with year of introduction 30 June being used as the exchange rate date.

WHO recommends a tax design that leads to a 17.5–20% increase in the price of SSBs to discourage consumption, given a 0.8 to 1.59 price elasticity in SSBs (WHO, 2022b). Ad valorem tax rates of between 2.5–15% in ESA countries are below this recommended increase, as shown in *Table 5* on the previous page, although price elasticities may lead to the 15% rate being adequate if the guidance from WHO noted above is considered.

The products covered by SSB taxes in ESA countries are shown in *Table 6*. Referring to the WHO recommendations of products and tax liabilities noted in *Section 3.1*, the table indicates wider coverage for products in categories a(i), b(i) and c(i) in most countries and only limited coverage of products in the other classes. Mauritius, Kenya and Uganda also tax other sweetened products such as confectionary, sugar and powdered milk.

The taxes in some countries such as Tanzania, Madagascar and Zambia are applied at different levels for domestically produced SSBs compared to imported SSBs, a measure that may be being applied to protect the domestic food industry.

Compared to the other regions, particularly Europe and Oceania, ESA countries tax a narrower range of SSBs and could expand the products taxed, such as including SSB products in categories a(ii) and (iii), b(iii) and c(ii) in the Harmonised System Codes listed in *Section 3.1*. The range of SSBs taxed could also be harmonised across ESA countries such as in SADC and the EAC.

Table 6: SSB products taxed, ESA countries applying SSB taxes, 2022

Country	Products and rates of taxes applied
Democratic Republic of the Congo	Drinks based on fruit or vegetable juices, lemonades, other sweetened drinks, flavoured or not: Natural/ artificial mineral water, treated and /or packaged, aerated or not: Fruit or vegetable juice (100% or not), unfermented, no added spirit, whether containing added sugar or other sweetening or not, containing chemical sterilising agents.
Kenya	Fruit and vegetable juices, unfermented, without added spirit, whether or not containing added sugar or other sweetening; Food supplements; Waters and other non-alcoholic beverages not including fruit or vegetable juices. Also, taxes sugar and confectionary
Madagascar	Applied to mineral, aerated or flavoured waters, fruit and vegetable juice drinks either 100% or less, syrups, powders or concentrates
Mauritius	Lactose and lactose syrup, maple sugar and maple syrup, glucose and glucose syrup, fructose (pure or otherwise), food preparations, concentrate for dilution into ready to drink beverages. Water, including mineral and aerated water, containing added sugar or other sweetening or flavoured, and other non-alcoholic beverages, not including fruit or vegetable juices, in plastic bottles or cans: soya milk, fruit drinks and others.
Mozambique	Beverages, flavoured water; waters, including mineral waters and aerated waters, containing added sugar or other sweetening matter or flavoured and other non-alcoholic beverages, other than fruit or vegetable juices
Seychelles	Fruit and vegetable juices, unfermented and not containing added spirit, whether or not containing added sugar or other sweetening matter. Water, including mineral and aerated water, containing added sugar or other sweetening matter or flavoured, and other non-alcoholic beverages, not including fruit or vegetable juices. Import tariff on SSB with >5 g sugar/100 ml except fresh, locally produced drinks without additives and plain milks.
South Africa	SSBs containing > 4g sugar/litre excluding fruit / vegetable juices.
Tanzania	Locally produced fruit juices (100% or with added sugars) from domestic fruits; imported fruit juices; locally produced mineral and aerated waters; imported bottled drinks; waters, mineral and aerated waters, containing added sugar, other sweetening or flavoured
Uganda	Non-alcoholic beverages; Fruit and vegetable juice except juice made from at least 30% of pulp from fruit and vegetables grown in Uganda; Powder for reconstitution to make juice or dilute- to - taste drinks, excluding pulp
Zambia	Non-alcoholic or aerated beverages, fruit and vegetable juices and drinks with added sugars, 100% fruit and vegetable juices

Source: Authors from document review: Excludes Angola, Botswana, Eswatini, Lesotho, Malawi, Namibia and Zimbabwe, as these countries do not have an SSB tax in place.

SSB tax collection in ESA countries appears to be primarily to enhance revenue except for a few, such as South Africa, that explicitly link the tax to health goals and reduced consumption of SSBs. However even there, as in most of the ESA countries, the tax revenues are not ring-fenced on collection and flow into the consolidated revenue fund, limiting transparent allocation for health programmes. As a result, in 2001, sources reported that less than 1% of South Africa's SSB tax was spent on health promotion (Daniel, 2001). In Uganda, only 2% of SSB taxes are pooled with other revenues into the AIDS Trust Fund, for HIV prevention and treatment programmes (Ahaibwe et al., 2021).

The purpose of the taxes can sometimes be inferred from the contestations around their introduction, or the amendments made to the tax design. For example, three ESA countries revised the design and structure of their taxes seemingly to achieve economic goals. In a measure that appeared largely set to protect domestic producers, in 2022, Madagascar reviewed its tax to distinguish imports and locally manufactured beverages and changed from applying a specific excise rate of USD1 cent to an ad valorem tax regime of 2.5% on locally produced beverages and 10% on imports (WHO 2023b). Tanzania reviewed its SSB excise tax in 2018, keeping the rate on locally produced fruit juices at Tsh 9 per litre, but raising the rate on imported fruit juices from Tsh221 per litre to Tsh232 per litre (WHO 2023b). In Zambia, after the repeal of the 25% ad valorem tax in 2015, the new excise tax introduced in 2019 similarly distinguished between locally produced and imported goods, with a rate of 3% being applied on imported beverages and 0.5% on local products (Thow et al., 2021). While these measures appear to focus more on protection of domestic processing than on health, they may enable more control over content among local producers. However, they raise a further area that will be affected by and may need to be addressed in, the AfCFTA negotiations.

South Africa is reported to have applied excise taxes on SSBs to enhance revenue, rather than for health purposes in 1993, which it then abolished in 2002. In 2018, the country reintroduced SSB taxes in a 'Health Promotion' levy. While the revenues are not formally earmarked, policy makers raised options for 'soft-earmarking' to meet health promotion activities across government (Stacey et al., 2019). In 2018/9, this tax had raised approximately USD 141 175 000, or about 0.15% of South Africa's total tax revenue in that fiscal year and USD 200 million in the first two years (Stacey et al., 2019; WHO, 2022c). Limited evidence was found in published literature on the overall level of resources mobilised from SSB taxes in other ESA countries.

There is some documentation of the contestations around the introduction of SSB taxes, which is discussed further in the next *Section 5.1*. South Africa and Zambia repealed earlier SSB taxes due to strong opposition from industry. In South Africa, the excise taxes levied on SSBs in 1993, albeit for revenue generation goals, were repealed in 2002 while in Zambia, a 25% ad valorem tax was repealed in 2015 following strong opposition from Coca-Cola, with threats to pull out of the country, despite government providing economic reasons for their decision to apply the tax (Gov. South Africa, 2016; Mukanu et al., 2021). Both countries restated their policies when reintroducing the taxes. South Africa introduced its new SSB excise tax as a 'Health Promotion' levy and Zambia reintroduced its SSB tax as a specific excise tax in 2019 (Gov. South Africa, 2016; Mukanu et al., 2021). These experiences and the contestation from powerful and often transnational business interests, point to the issue raised earlier that the introduction of an SSB tax is a political economy exercise as well as an, technical and administrative exercise. This is further discussed in the next section.

5. Discussion: Learning on implementing SSB taxation in ESA

The evidence reviewed indicates that there is global level support and guidance for taxes on SSBs, as a fiscal measure to promote healthy diets and manage NCDs, including for ESA. There is growing evidence of their effectiveness in reducing production and uptake of unhealthy products. However, global guidance calls for the context, political, technical and trade-related dimensions to be considered in developing, designing, implementing and administering SSB taxes. It is argued that determining the multi-sectoral roles for their implementation demands evidence generation, consensus building and negotiation. WHO thus recommends framing SSB taxes within national health goals and providing evidence, such as on the levels and costs of

rising NCDs, to justify them and counter interests and arguments against them. As a design, and after considering national economic contexts and health targets, basing the excise tax on sugar levels in beverages in a manner that increases prices by 20% and applying the tax to the full spectrum of SSBs may be broadly more effective in achieving targeted health outcomes.

While some regions thus have guidelines similar to global positions reflected in *Section 3.1*, the ESA region has yet to set clear guidance or harmonised standards in this area, despite a general policy intention to do so. With the AfCFTA measures currently under negotiation, providing clearer guidance to support SSB taxes and noting the exception for public health benefit at regional level is important, to ensure that countries have the latitude to implement these taxes and apply them in a harmonised manner that does not encourage unfair competition or illicit trade across countries in the region.

The findings in ESA countries indicate that Angola, Botswana, Eswatini, Lesotho, Malawi, Namibia and Zimbabwe do not yet apply any form of SSB taxation in the ESA region. Most other ESA countries introduced either specific excise taxes or ad valorem taxes after 2013. The products covered and revenue collection records indicate that SSB taxes in ESA countries are largely applied for general revenue enhancement, with limited or no ring-fencing of the funds for health or stated links to reduced SSB consumption. The exceptions are Uganda and South Africa, that do make this link, yet only 1–2% of the revenue collected is explicitly hypothecated for health programmes. This contrasts with experiences in other countries globally. For example, in Iran, 60% of the collected SSB tax revenues are paid to the Ministry of Health, Treatment and medical education for the prevention and treatment of diabetes and 40% to the Ministry of Sports and Youth for the development of sports. Mexico has used SSB tax revenues to finance healthy food incentives and improve nutrition for children in school settings, while others have used the revenue to fund access to drinking water and health services.

The evidence indicates areas for policy and technical attention in introducing, maintaining and using SSB taxes in ESA countries.

5.1 Making the public health rationale clear

International guidance and experience from countries suggests that SSB taxes be introduced within a wider set of measures for control of NCDs, and particularly their food-related causes that include consumption of SSBs. These measures include accessible nutrition labelling, marketing and advertising controls, health promotion and the promotion of health foods in general, and particularly for children and adolescents, as well as early screening and management of conditions such as hypertension and diabetes. Further, SSBs are one of a group of foods that have harmful levels of sugar, trans-fats and other additives within the group of ultra-processed foods.

This is pertinent to the industry argument that taxing only SSBs is discriminatory, since many other sugar-laden products also contribute to diseases and should therefore also be taxed, combined with the argument against additional tax burdens. While using such taxes for health may improve their public acceptability, there are those who discourage earmarking as leading to rigidities and inefficiencies in public finance management (WHO, 2022b). SSB taxes thus need a clear public health rationale along with evidence on the impact of control measures, to inform the argument for earmarking them for health. If SSB taxes are introduced first, it is suggested that this be promoted as a first phase of wider sugar taxation, particularly if backed by evidence of relatively high consumption of SSBs and their negative health impacts in ESA countries. Introducing SSB taxes thus also implies improved monitoring and public reporting of evidence of disease burdens due to consumption of these foods, and wider socio-political awareness of their costs to households, services and the economy, as well as the measures needed to control them.

Many ESA countries have noted gaps in the necessary evidence. For example, in Kenya limited action on SSBs was linked in part to the unavailability of evidence on consumption patterns (Wanjohi and Asiki, 2021), while an absence of public health screening for NCDs may lead ESA countries to underestimate their rising prevalence. Applying the SSB taxation with clear health interventions with proven benefit for reducing NCDs, or other measures to promote healthy food

alternatives, including from local agriculture and processing, are important for the transparency, accountability and public acceptability of an SSB tax within the wider measures for NCD control. The findings suggest that having a clear public health basis for SSB excise taxes and demonstrating this in the way the funds are used, even if in part, is important to sustain such excise taxes as the AfCFTA has applied in the continent.

5.2 Design of SSB taxation

The WHO has noted the need for an SSB tax regime that can be accountably administered. For ESA countries this implies applying an excise tax based on sugar content/volume across all categories of SSBs, to encourage consumers to switch to healthier untaxed substitutes and industry to reformulate lower sugar-content beverages.

Both ad valorem SSB taxes (levied as a percentage of the value of the product) and specific excise SSB taxes (levied on the share of volume or weight of sugar content) are applied across ESA countries. To apply the latter, accurate information on free-sugar levels is required, through food operator disclosure obligations, backed by public sector capacities to sample and verify the information provided. Whichever method is selected, in order to reduce consumption of harmful SSBs and sugar and encourage processors to reduce sugar levels calls for an increase in SSB taxes in ESA countries at rates that achieve the recommended price increase of 20% to discourage consumption, or to levels that will achieve this, taking into account price elasticity. With ESA countries largely applying current SSB taxes on both sweetened and unsweetened beverages, it is also important to cover all sugar-sweetened beverages and to exclude unsweetened water products to encourage healthy substitution.

The findings indicate that policy choices for the design, introduction and implementation of SSB taxes call for technical evidence and capacities including for food analysis, as well as an understanding of the socio-political context, stakeholder interests and power. Having regional directives, harmonised regulatory frameworks and guidance can assist in this, including the sharing of capacities, as noted in the evidence from other regions globally. To achieve harmonised regulation and capacity development, the gap in SSB taxation policy guidelines in SADC and the EAC is a deficit that needs to be addressed, as well as supporting the sharing of relevant evidence and econometric analysis.

5.3 Introducing SSB taxes

The design of and motivation for SSB taxes are necessary but insufficient for their introduction. The findings point to resistance from industry and other economic actors if the taxes are viewed as suppressing production or employment or encouraging smuggling or unfair competition.

An evaluation of the implementation of SSB taxes in 16 countries, including two from the ESA region (South Africa and Seychelles), reported that cross-sectoral recognition and prioritisation of NCDs by governments, as reflected in national policies and plans, provided leverage for the introduction of SSB taxes (Mulcahy et al., 2022). Prioritising NCDs in sectoral policies beyond the health sector, such as in agriculture, industry and commerce, was reported to assist in reducing conflict between the health and economic sectors in negotiations on SSBs in African countries, and to build synergy between social and economic goals (Thow et al., 2021). Ongoing tax reforms also offer a strategic opportunity for the introduction of new SSB tax measures. Nine of the 16 countries had ongoing tax reforms that provide a window of opportunity for new SSB tax measures, including the Seychelles (Mulcahy et al., 2022).

The South African experience demonstrates the potentially catalytic role of parliaments as a convenor of wider stakeholder and public dialogue on SSB tax reform. The South African parliament played an active role during the initial phase of the dialogue on SSB taxes, with two rounds of public hearings on SSB proposals in 2016 and 2017, based on a paper produced by the Treasury, with inputs from the dialogues feeding into the drafting of the pertinent Bill and further public hearings prior to its adoption (Kruger et al., 2021).

As discussed earlier on policy design, it is important to grow capacities to generate, analyse and communicate contextually relevant evidence from multiple sources, including the ability to assess

consumption, the impact of price elasticities and the equity or otherwise of different options from within the country and the region. This also helps inform stakeholder dialogue and to counteract resistance not based on evidence. In South Africa, for example, government department documents provided evidence drawn from academia, civil society, professionals and others on the contribution of sugar consumption to NCDs, and fiscal options to address it (Kruger et al., 2021). The evidence generated interest and stimulated dialogue on the tax options, including in the media, that helped support the introduction of the tax and shape joint messaging on it (Kruger et al., 2021).

5.4 Implementing SSB taxes

Finance ministries play a key role in SSB tax reform and in its implementation, and good communication between the health and finance ministries is important in both introducing and administering it. Health ministries play a key role in building public support for the tax and in effectively using SSB tax resources for public health interventions that impact on health outcomes and sustain public support and accountability. After the 2015 repeal, the Zambia tax propositions were, for example, led by lobbying by the Ministry of Health; in Uganda, links from the SSB tax to a 2% HIV/AIDS Trust Fund were made (Thow et al., 2021).

The findings indicate that the selected tax design should be feasible to implement given national administrative capacities. Countries with lower administrative capacity may apply an ad valorem tax, but if capacity exists to validate food processor information, then applying an excise tax based on sugar content/volume across all categories of SSBs, is both effective and administratively manageable. Arguing that the tax will be collected to address NCD and public health challenges builds public support, provided the implementation does reduce consumption and provides meaningful levels of revenue to programme areas addressing NCDs. This requires hypothecation (ringfencing of tax revenue) or public reporting by the finance ministry, of the share of tax applied for these purposes and reporting of the effective and equitable use of the funds by the health ministry.

Bridge et al. (2020) suggest a gradual increase in the level of SSB tax over time, rather than a 'big bang' approach, introducing high levels of the tax from the onset. They argue that this approach allows SSB manufacturers to reformulate and reduce the sugar content of their products over a reasonable period and may also increase stakeholder acceptability of the tax, as was the case in Thailand. It may also enable a process of increasing the capacity to absorb and manage the funds for specific health programmes using the SSB tax income. At the same time, the windows of opportunity for tax reform are not always open and if the revenue flow is too low, the impact may also be too limited to affect health burdens or suppress consumption of SSBs and sustain public and institutional support. Others suggest that, learning from the introduction of tobacco taxes, taxes should be raised substantially and quickly to address both public health and revenue objectives and reduce health disparities (WHO, undated; Fenton 2021). Regular reviews of SSB taxes are also necessary to maintain relevance and effectiveness in reducing SSB consumption and to adjust for inflation. In South Africa, for example, a 2019 review raised the SSB tax by USD 10 cents to align it to a 5.2% inflation rate (Gov of South Africa, 2016; Kruger et al., 2021).

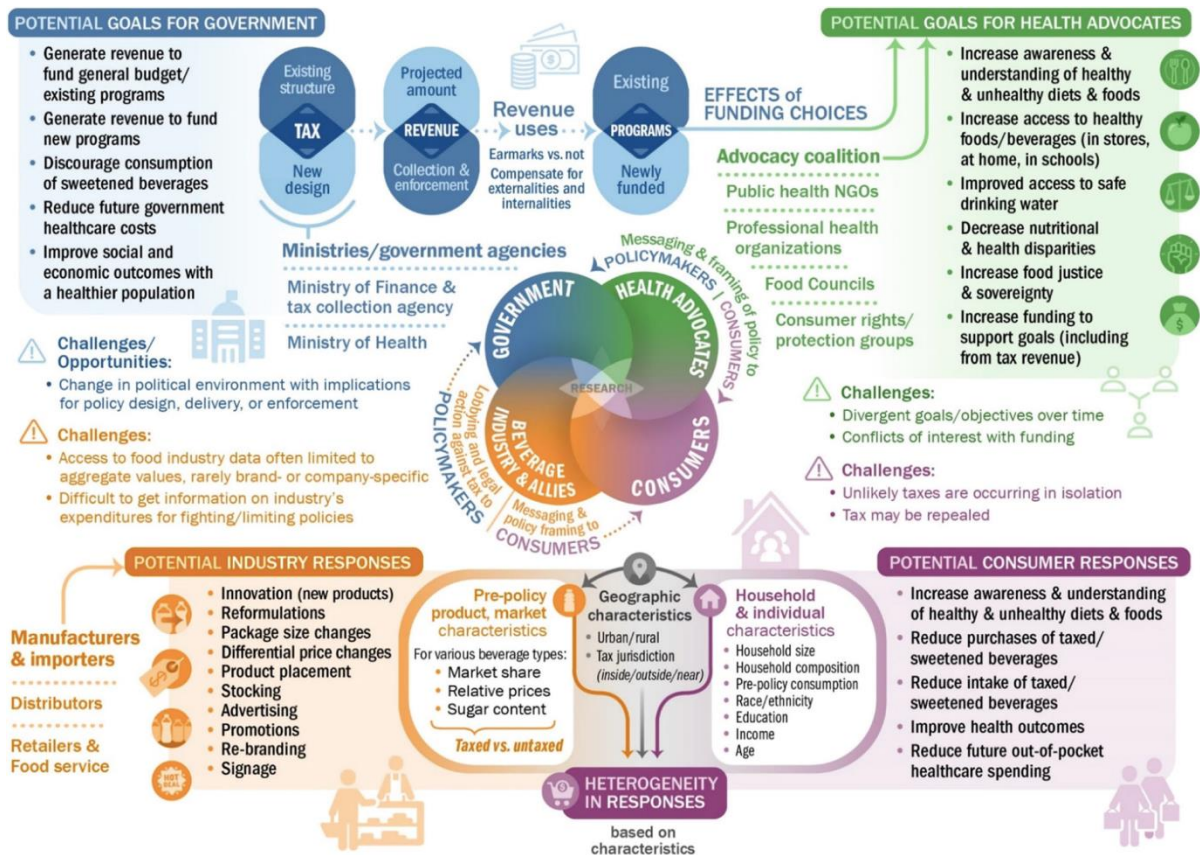
In implementing SSB taxation, the administering finance and health institutions also need to note that contestation around SSB taxes does not end after their formal adoption and introduction. For example, multinational actors may keep up sustained pressure for their reversal, as happened when South Africa's earlier SSB tax was reversed in 2002 (Kruger et al., 2021). In Uganda, the soft drink industry is argued to have successfully lobbied for the downward revision of SSB tax rates to maintain its competitiveness in the region (Ahaibwe et al., 2021), an argument that was also used in Tanzania to lobby against SSB taxes (Thow et al., 2021). Zambia was similarly reported to have faced threats that Coca-Cola would leave the country for applying its 25% excise tax on soft drinks, and the tax was repealed in 2015, with government citing economic justifications (Mukanu et al., 2021). Part of the process of implementing the tax is thus to demonstrate the health and programme benefits gained from it, to broaden public information and awareness, and sustain alliances across different actors and professional groups to prevent its reversal (Thow et al., 2021). Civil society alliances have been reported to play an important role in

supporting SSB taxes in the face of industry opposition, as in the example of Uganda's Tax Justice Network (Bridge et al., 2020; Ahaibwe et al., 2021).

6. Conclusions

The previous section indicated that applying SSB taxes for health calls for evidence, information outreach, technical design and analysis, stakeholder and socio-political engagement across the stages of policy dialogue, design, introduction and implementation. This requires a change pathway involving collaboration across the range of disciplines, actors, interests and capacities involved in the process, as suggested by Ng et al.(2021) and shown in *Figure 2*.

Figure 2: SSB tax change pathway



Source: Ng et al., 2021:5

These demands may discourage the implementation of SSB taxes in ESA countries, but there are also strategic opportunities for implementing and better use of SSB taxes. Global advice from health and economic institutions shows that SSB taxes are a useful public health measure within a wider package of measures.. At the right levels, they can depress consumption of a product that is clearly associated with public health risk and can promote industries' shift to less harmful products, as well as funding health and other interventions to promote healthy food practices. Applying SSB taxes on public health grounds is important in sustaining this revenue source as the AfCFTA is operationalised. The rising level of NCDs in the ESA region associated in part with SSBs and other ultra-processed foods, and the rising SSB consumption in young people in the region also suggest an urgent need to act.

The design and introduction of SSB taxes calls for diverse evidence, analysis, and capacities. While some ESA countries may only need to review and reorient existing SSB taxes for their greater application to health, in ten other ESA countries the process for their introduction is at an earlier stage. Facilitating their introduction in these countries would be benefit from regional co-operation, as has been the case in other regions globally. Such co-operation may mean domesticating global guidance on SSBs at regional level, the provision of relevant public health evidence and analysis, support for econometric and other analysis for decisions on tax design,

sharing capacities for technical inputs and exchanging learning on applying them. Regional regulatory harmonisation of SSB tax levels is also important to prevent unfair competition across countries, while port health capacities need to be capacitated to prevent illicit cross border trading to evade SSB tax regimes. Regional data on free-sugar levels in products traded across the region will also support countries in choosing and enforcing SSB tax design options, while regional co-operation on standards and evidence may also help counter pressure from powerful multinational SSB-producer lobbies and, in extreme cases, to avoid SSB products prohibited on public health grounds in one country from being marketed and sold in another.

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Acronyms

AfCFTA	Africa Continental Free Trade Area
EAC	East African Community
EU	European Union
ESA	East and Southern Africa
GATT	General Agreement on Tariffs and Trade
GINA	Global database on the Implementation of Nutrition Action (WHO)
NCD	Non-Communicable Diseases
SADC	Southern African Development Community
SSA	Sub-Saharan Africa
SSBs	Sugar sweetened beverages
WHO	World Health Organization
WTO	World Trade Organization
UN	United Nations

Equity in health implies addressing differences in health status that are unnecessary, avoidable and unfair. In southern Africa, these typically relate to disparities across racial groups, rural/urban status, socio-economic status, gender, age and geographical region. EQUINET is primarily concerned with equity motivated interventions that seek to allocate resources preferentially to those with the worst health status (vertical equity). EQUINET seeks to understand and influence the redistribution of social and economic resources for equity-oriented interventions. EQUINET also seeks to understand and inform the power and ability people (and social groups) have to make choices over health inputs and their capacity to use these choices towards health.

EQUINET implements work in a number of areas identified as central to health equity in east and southern Africa, including

- Protecting health in economic and trade policy, in extractives
- Local production of health technologies
- Urban health and wellbeing
- Building universal, participatory, primary health care oriented health systems
- Equitable, health systems strengthening responses to pandemics
- Fair Financing of health systems
- Promoting public health law and health rights
- Social empowerment and action for health
- Monitoring progress on equity and equity analysis

EQUINET is governed by a steering committee involving institutions and individuals co-ordinating theme, country or process work in EQUINET from the following institutions: TARSC, Zimbabwe; CWGH, Zimbabwe; CEHURD Uganda; SEATINI, Zimbabwe; REACH Trust Malawi; University of Zambia, Zambia; IWGSS Kenya and South Africa; Innovations for Development, Uganda, SATUCC Botswana and Tax Justice Network Africa, Kenya

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