The Kenyan and other Nutrient Profiling Models

A comparative study and implications for UPF regulatory policies in Kenya

January 2026

African Population and Health Research Center

UNIVERSITY of the WESTERN CAPE

Global Food Research Program
UNC-Chapel Hill

KEY FINDINGS

- **The Kenyan and WHO AFRO NPMs will have the largest share of products being non-compliant**
- **The SA FOPL and PAHO NPMs will have the lowest regulatory burden**
- 4% of the Kenyan beverage supply complies with the Kenyan NPM but **contains non-sugar sweeteners (NSS)**, a proportion that is **expected to increase if NSS are not included in the NPM**
- A considerable share of Kenyan food and beverage products analyzed were **missing information on trans fats (63%), saturated fats (21%), sodium (20%) and total sugars (12%)**

RECOMMENDATIONS

- **Strengthen mandatory nutrition labeling to support effective implementation, enforcement, and monitoring.**
- To lower the regulatory burden and to be aligned with policy goals, **exempt products from Kenyan NPM if minimally processed**, or do not contain any added sweeteners, added sugars, added sodium, or added fats
- To **avoid an increase in non-sugar sweeteners** in the food and beverage supply, **update the Kenyan NPM to restrict NSS**

Like many other African nations and low-middle income countries worldwide, Kenya is experiencing a nutrition transition.[1] **As pre-packaged, energy-dense food and beverage products replace traditional, mostly plant-based diets, non-communicable disease (NCDs) are becoming a growing concern**.[2] 39% of deaths in Kenya are now attributed to NCDs, up from 27% in 2014.[3] At the same time, dietary shifts are contributing to a double burden of malnutrition among individuals or households. Recent studies based in Kenya reported that 19% of adults in a rural setting experienced micronutrient deficiency while being overweight,[4] while in an urban setting, 43% of mothers who were overweight had children who were stunted.[5] **Proactive action is thus needed to improve diets and stem the rise in the double burden of malnutrition and NCDs.**

Nutrient profile models (NPM) are a tool used to design policies that discourage production and consumption of ultra-processed products containing nutrients or ingredients of concern. Kenya's Nutrient Profile Model (KNPM), published in July 2025,[6] was adapted from the World Health Organization Regional Office for Africa (WHO AFRO) NPM.[7] Whereas the WHO AFRO NPM was designed to establish restrictions on marketing of certain unhealthy products to children, the KNPM is also intended to establish criteria for front-of-package warning labeling to assist consumers in identifying products containing excess total fat, saturated fat, total sugar, and sodium. Products containing non-sugar sweetener (NSS) and trans-fat are currently not included in the KNPM.

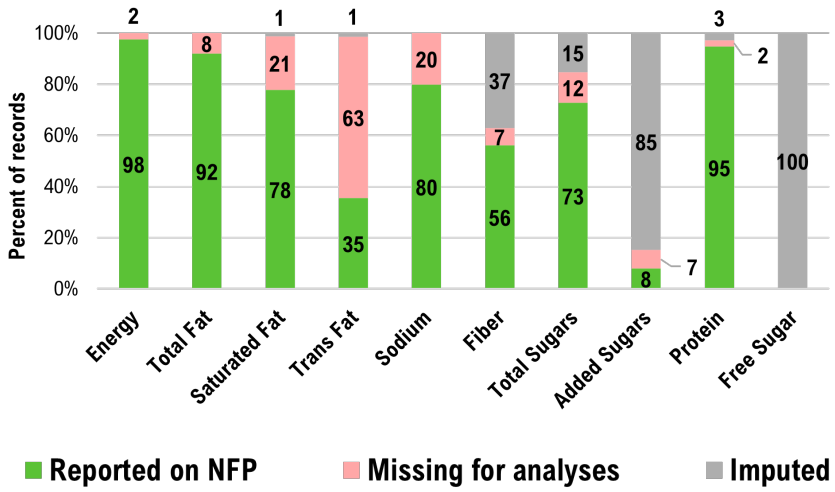
This brief will report on how feasibly and comprehensively the KNPM identifies products of concern compared to other NPMs under consideration in the African region.

Methodology: Ghana, Kenya, Nigeria, Tanzania and South Africa have all identified nutrition policy priorities that require a NPM to inform practical policy implementation.[6,8-11] This study applied several NPMs proposed for use to a set of 28,609 total packaged food and beverage products from the five countries between 2020-2023, obtained from the Mintel Global New Product Database. Missing nutrient values were imputed where possible. Records were assessed on nutrition labeling information **(Figure 1)**, rates of product exemption and compliance with each NPM **(Figure 2)**, and compliance by NSS criteria inclusion **(Figure 3).** The NPMs studied included:

1) the Kenyan NPM[6]
2) the World Health Organization (WHO) Africa Region NPM (hereafter WHO AFRO)[7]
3) the South African NPM for front-of-package labeling, with a free sugar criteria (hereafter SA FOPL)[11,13]
4) the Pan American Health Organization (PAHO) NPM[12]

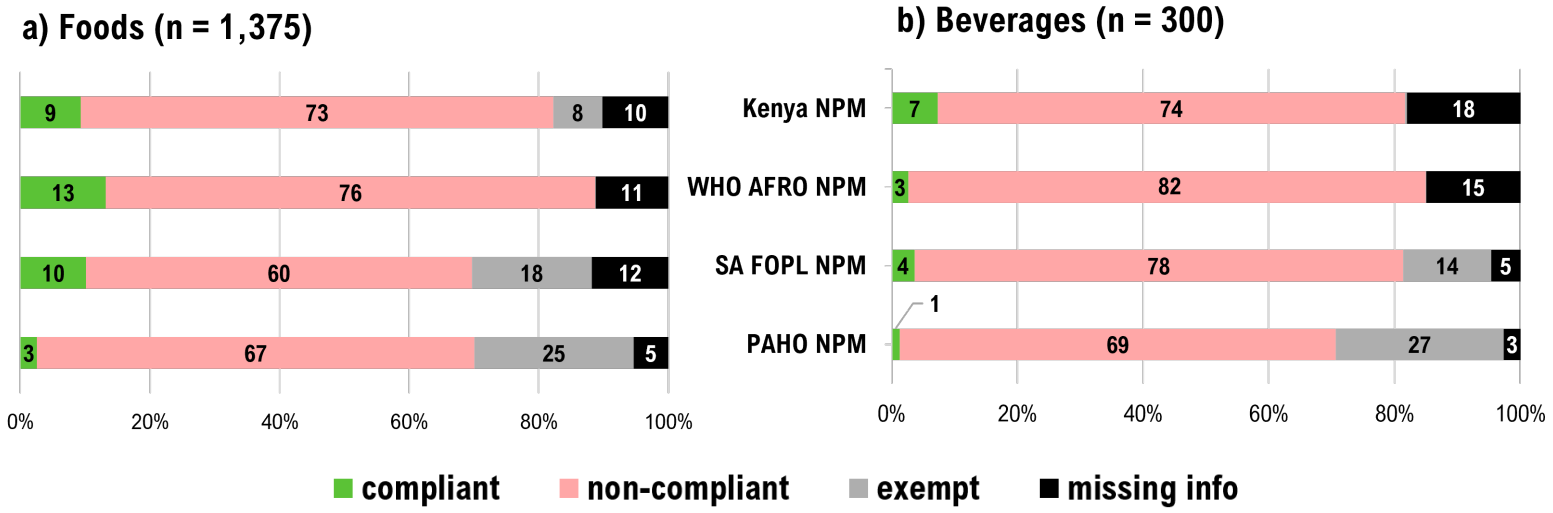
Brief descriptions of each NPM and their key characteristics are listed in **Table 1**.

FIGURE 1: AVAILABILITY OF NUTRITION INFORMATION AMONG PRODUCTS IN KENYA



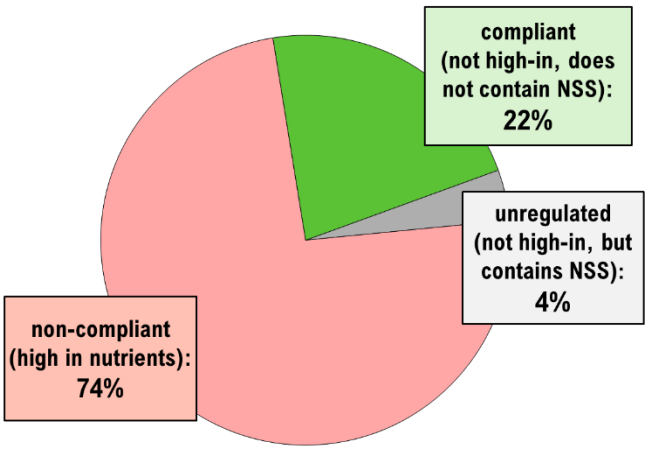
Among the 5 countries studied, Kenya has the largest share of records missing information on trans fats, saturated fats, and sodium. Mandatory nutrition labeling needs to improve. In the interim, policies based on the Kenyan NPM should assume that products that do not report on targeted nutrients or ingredients are non-compliant. This approach will encourage improvements in nutrition labeling.

FIGURE 2: COMPLIANCE OF KENYAN PRODUCTS BY NPM



The Kenyan and AFRO NPMs will have the largest share of products non-compliant among these NPMs, i.e., the most products subject to regulation. To lower the regulatory burden for KEBS and to better align with policy goals, products that are minimally processed, do not contain added sugar or other sweeteners, added sodium or added fats should be exempt

FIGURE 3: NON-SUGAR SWEETENERS AND NPM COMPLIANCE AMONG BEVERAGES



The current Kenyan NPM does not include criteria for regulating non-sugar sweeteners (NSS). As a result, approximately 4% of beverages in the Kenyan market would remain unregulated, despite containing added sweeteners. Evidence from other countries that have implemented front-of-pack labeling or marketing restriction policies without simultaneously restricting NSS use shows that such gaps can lead to reformulations with more NSS.[14] Therefore, unless the Kenyan NPM is updated to incorporate restrictions for NSS, regulatory policies based on the current model are likely to drive a rise in their use.

Table 1. Key differences between Kenyan NPM and other NPMs

		Kenya NPM[6]	WHO Afro NPM[7]	SA FOPL NPM, free sugar criterion[13]	PAHO NPM[12]
Year		2025	2019	2021	2016
Inclusion criteria		Applies to all packaged foods and beverages (as consumed)		Applies to all packaged food and beverages (as consumed) with free sugar, added sodium, added saturated fat, or NSS	Applies to all processed and ultra-processed foods and beverages (based on NOVA classification)
Standardized unit of measure		Nutrient per 100g (solids) or 100ml (liquids)			Percentage energy (kCal)
Threshold Approach		Varies according to food group *(11 categories, 25 subcategories)*	Varies according to food group *(18 categories, 10 subcategories)*	Threshold applied across-the-board	
Regulated Nutrients	**Energy**	×	✓	×	×
	Total fat	✓	✓	×	✓
	Saturated fat	✓	✓	✓	✓
	Trans-fat	×	✓	×	✓
	Total sugar	✓	✓	✓	×
	Added sugar	×	✓	×	×
	Free sugar	×	×	×	✓
	Sodium	✓	✓	✓	✓
	NSS	×	✓	✓	✓

† The SA FOPL NPM with the free sugar criterion differs from the current NPM proposed in South Africa's Draft Regulation related to food labelling in that it treats all sugar equally, regardless of source (i.e. sucrose, fruit juice, etc.)[13]

References

1. Bosu WK. An overview of the nutrition transition in West Africa: implications for non-communicable diseases. *Proceedings of the Nutrition Society*. 2015;74(4):466-477. doi:10.1017/S0029665114001669
2. Nel JH, Steyn NP. The Nutrition Transition and the Double Burden of Malnutrition in Sub-Saharan African Countries: How Do These Countries Compare with the Recommended LANCET COMMISSION Global Diet? *International Journal of Environmental Research and Public Health*. 2022;19(24):16791.
3. Republic of Kenya Ministry of Health. *National Strategic Plan for the Prevention and Control of Non-Communicable Diseases*. Disease DoN-C; 2021. Accessed October 15, 2025. https://www.iccp-portal.org/sites/default/files/plans/Kenya-Non-Communicable-Disease-NCD-Strategic-Plan-2021-2025.pdf
4. Fongar A, Gödecke T, Qaim M. Various forms of double burden of malnutrition problems exist in rural Kenya. *BMC Public Health*. 2019/11/21 2019;19(1):1543. doi:10.1186/s12889-019-7882-y
5. Kimani-Murage EW, Muthuri SK, Oti SO, Mutua MK, van de Vijver S, Kyobutungi C. Evidence of a Double Burden of Malnutrition in Urban Poor Settings in Nairobi, Kenya. *PLOS ONE*. 2015;10(6):e0129943. doi:10.1371/journal.pone.0129943
6. Ministry of Health. *Kenya Nutrient Profile Model*. State Department for Public Health and Professional Standards/Division of Nutrition and Dietetics; 2025. Accessed August 25th, 2025.
7. World Health Organization. *Nutrient Profile Model for the WHO African Region: a tool for implementing WHO recommendations on the marketing of foods and non-alcoholic beverages to children.* 2018. Accessed August 25th, 2025. https://www.who.int/publications/i/item/9789290234401
8. Tassy M, van Dijk R, Eldridge AL, Mak TN, Drewnowski A, Feskens EJM. Nutrient Profiling Models in Low- and Middle-Income Countries Considering Local Nutritional Challenges: A Systematic Review. *Current Developments in Nutrition*. 2025/01/01/ 2025;9(1):104530. doi:https://doi.org/10.1016/j.cdnut.2024.104530
9. Resolve to Save Lives. *Policy and Legal Landscape Analysis for Front-of-Pack Labeling and Salt Target Setting in Nigeria*. 2023. https://avehealthsense.com/wp-content/uploads/2024/10/Policy-and-Legal-Analysis-FOPL-and-Salt-Target-Nigeria_CB_REVISED.pdf
10. United Republic of Tanzania Prime Minister's Office. *National Multisectoral Nutrition Action Plan*. 2021. Accessed August 7th, 2025. https://www.pmo.go.tz/uploads/documents/sw-1646121553-NMNAP.pdf
11. Department of Health. Regulations relating to the labelling and advertising of foodstuffs (Draft). R 3337. Pretoria, South Africa2023.
12. Pan American Health Organization. *Pan American Health Organization Nutrient Profile Model*. 2016. https://iris.paho.org/handle/10665.2/18621
13. Frank T, Thow A-M, Ng SW, Ostrowski J, Bopape M, Swart EC. A Fit-for-Purpose Nutrient Profiling Model to Underpin Food and Nutrition Policies in South Africa. *Nutrients*. 2021;13(8):2584.
14. Zancheta Ricardo C, Corvalán C, Smith Taillie L, Quitral V, Reyes M. Changes in the Use of Non-nutritive Sweeteners in the Chilean Food and Beverage Supply After the Implementation of the Food Labeling and Advertising Law. *Front Nutr*. 2021;8:773450. doi:10.3389/fnut.2021.773450