

STATE OF FOOD ENVIRONMENTS IN THE GREATER ACCRA REGION OF GHANA

An assessment and recommendations

MEALS4NCDs project













Institut to Reciencia



Executive summary

"The MEALS4NCDs Project" (hereinafter the Project) was birthed to respond to the increasing burden of obesity and nutrition-related non-communicable diseases (NCDs) in Ghana. This is done mainly through the provision of Measurements, Evaluation, Advocacy/Accountability & Leadership Support (MEALS). Accordingly, and motivated by local (Ghana) recognition of the need for interventions to promote healthy diets, and anecdotal evidence indicating a preponderance of misleading marketing of such foods in both private and public-sector settings, the project aimed to generate data that support public sector actions that aim to create healthy food marketing and provision environments.

To accomplish these, the project team deployed multiple research, advocacy, and stakeholder engagement approaches: A Net-Mapping exercise was conducted to generate an "Influence Network Map" of the key actors who are closely engaged with or have influence in food provision and food promotion among children in Ghana; a Community Readiness Model (CRM), assessed community stakeholders' readiness to accept, and their capacity to implement obesity/NCD prevention interventions, adaptation and implementation of Food Provision and Food Promotion Modules of the INFORMAS, among others.

On engagement, the Project has since its inception in March 2019, actively engaged a broad range of stakeholders from government Ministries, Departments and Agencies, Lawmakers, policymakers, programme implementers, civil society organisations, United Nations Agencies (including WHO, UNICEF) based in Ghana, researchers within and outside Africa. The Project has made significant contributions to local capacity to advocate for implementation of food environment promoting interventions in Ghana and the wider African region – through its Africa Food Environment Research Network (FERN).

The Project aspired to, and did contribute to the activation of relevant food environment tools, policies, regulatory, fiscal, and legislative levers toward making unhealthy foods unaffordable and unattractive while making healthy food attractive and affordable. Evidence, insights, and recommendations from the Project motivated and supported the development of the "Healthier Diets 4 Healthy Lives Project", which is currently developing a set of double-duty food-based policies to improve food environments in Ghana. Following, we summarize the key studies implemented and associated policy and practice implications.

Study 1 assessed the nature and extent of unhealthy foods and non-alcoholic beverage promotion on television. The data from this study motivate/reinforce existing calls to:

- 1. Enact and enforce a legislation regulating the promotion, sponsorship, advertisement and sale of food and drinks with excessive levels of added sugar, salt, and saturated fatty acids/trans-fat in all media and in settings where children frequent
- 2. Compel through a legislation the declaration of all foods company that adverted foods product to declare nutrient composition exceeding the recommended threshold on advertisement and if possible, the associated health effect when consumed.
- 3. Ban food advertisement found to be misleading especially through the usage of inaccurate claims regardless of media platform or venue.

Study 2 mapped all outdoor food advertising and outlets within and around selected basic schools in the Greater Accra region.

Study 3: Assessed the healthiness of outdoor food advertising (identified from studies 1 and 2). Data from the two studies motivate the following policy recommendations.

- 1. Enactment and implementation of zoning laws restricting the siting of unhealthy food adverts (food and drinks with high levels of nutrients of concern (such as sugars, salt, saturated fats, and trans fatty acids) around schools.
- 2. Regulate, the promotion and sponsorship, advertisement and sale of with high levels of nutrients of concern (such as sugars, salt, saturated fats, and trans fatty acids) in school environment and other child-laden settings, enforceable with fine.

Study 4 aimed to answer the question: How healthy are modern food retail outlets? It presented data on the availability of healthy and discretionary ultra-processed foods in food retail outlets of selected districts in the Greater Accra region. Implications for policy and practice

- Government in partnership with other stakeholders should institute measures that improve the availability of healthy foods within supermarkets in Ghana.
- Government should also ensure that local authorities are equipped with the requisite resources to monitor unhealthy foods sold in supermarkets.

Study 5 analysed food provisioning policies and programmes in Ghanaian public sector basic schools (PSBS).

Study 6 determined the nutritional quality of foods and beverages sold or provided in child-serving institutions.

The data from these studies motivate the following recommendations:

- Establish and apply strong and comprehensive food-based and/or nutrient-based standards to the Ghana School Feeding Policy and Programme to provide a robust way of ensuring the nutritional quality of meals and beverages.
- Use language that is enforceable in policy documents and include sanctions for non-compliance
- Address food safety and food emergencies in the school food programme.
- Implement policies for regulating sold foods and other competitive foods and beverages within reach to pupils.
- Provide outlets for fresh drinking water and encourage the consumption of water as a replacement for SSBs.
- Provide training to school heads, teachers, catering team, and other school stakeholders to model healthy behaviours.

Study 7: Network Mapping of Stakeholders in Food Promotion and Provisioning among children in schools in Ghana.

Data from this study motivate the following recommendations:

- 1. Promote co-creation and co-actions among identified stakeholders.
- 2. Empower the media with adequate food environment and nutrition information.
- 3. Establish a coordination mechanism for promoting healthier diets in food environment.

Study 8: assessed the readiness of Ghanaians school community stakeholders to implement measures to improve children's food environments in the Greater Accra, and recommended that:

- Measures to improve community knowledge of existing local efforts, and, and to secure resources (e.g. funding) to support efforts
- Efforts should focus on addressing the concerns of community members that might be present as well as misinformation about the potential impacts of various food environment interventions (e.g., concerns about what alternative livelihoods could support owners of local shops selling foods and drinks considered to be unhealthy foods to children).

Academic outcomes

Students and early career researchers have received training throughout the project. One Postdoctoral Fellow, two doctoral students, two masters, and four early career researchers have received mentoring as part of this project. Additionally, a total 37 of research assistants (RAs) who supported the project's field activities, received training on the study protocol, on food environments, data collection tools, ethics and etiquette of field-based research involving humans.

Publications and open access project website.

The MEALS4NCDs study protocol has been published (here). A second paper on the Food Environment Research Priorities for Africa: Lessons from the Africa Food Environment Research Network (FERN) has been published by Advances in Nutrition and may be accessed using this link

A third paper articulating the concept of FERN has been accepted for publication by the Global Health Promotion journal.

Three other manuscripts currently undergoing peer-review have been submitted to a Special Issue to be published by Frontier in Public Health.

Thirteen other manuscripts are currently being drafted.

The project website (<u>https://www.meals4ncds.org/en/</u>) provides a one-stop shop for all information and outputs of the project.

Advocacy, Health and Social Impact

The project generated a wide range of evidence, which are being used by advocacy groups -Ghana NCD Alliance, Vision for Alternative Development (VALD), Institute of Leadership and Development (INSLA), Ghana Academy of Nutrition and Dietetics (GAND), Coalition of Actors for Public Health Advocacy (CAPHA) - to advocate for the review of polices and guidelines in relevant ministries and local government, and practices among nutrition and health stakeholders.

Policy briefs

Three policy briefs on Food Promotion, Food Provision and Community Readiness were developed from evidence generated form the MEALS4NCDs project. These briefs tailored to policymakers in Ghana suggest policy recommendations relating to the following areas:

- Improving the nutritional quality of sold and provided foods in Ghanaian schools: priority recommendations for policymakers and key stakeholders Policy Brief.
- Restricting the marketing of unhealthy food to Ghanaian children Policy Brief.

How ready are community stakeholders to address marketing and availability of unhealthy foods and drinks in and around basic schools in Greater Accra region? – Policy Brief.

Policy and practice outcomes and the policy bundle project.

The MEALS4NCDs convened, but also partnered with others to convene several consultative meetings. Held in September, 2021, in partnership with the Ministry of Health (MOH), this meeting engaged relevant stakeholders to obtain their inputs and buy-in for the double-duty food-based policy bundle project code-named "Healthier Diets 4 Healthy Lives (HD4HL) Project". Data from the MEALS4NCDs Project, and other earlier local food environment studies laid the foundation for the HD4HL Project. The project aims to build evidence and mobilize multi-stakeholder actions toward a policy bundle for healthier and more equitable consumer food environments that reduce the double burden of malnutrition in Ghana. The policies in the bundle include front of pack labelling policies, marketing restrictions policies, fiscal policies, and public food procurement policies, all of which will be undergirded by a fit-for-local purpose nutrient profiling model.

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Acronyms

САРНА	Coalition of Actors for Public Health Advocacy
СОНА	Cost of Hunger in Africa
CRM	Community Readiness Module
CSOs	Civil Society Organizations
DALYs	Disability-Adjusted Life Years
FBDGs	Food-Based Dietary Guidelines
FE	Food environments
FERN	Africa Food Environment Research Network
FGDs	Focus Group Discussions
Food-EPI	Healthy Food Environment Policy Index
GAND	Ghana Academy of Nutrition and Dietetic
GAR	The Greater Accra Region
HD4HL	Healthier Diets 4 Healthier Lives Project
HICs	High Income Countries
INFORMAS	International Network for Food and Obesity NCDs Research Monitoring and Action Support
INSLA	Institute of Leadership and Development
KIIs	Key Informant Interviews
LMICs	low- and middle-income countries
MEALS4NCDs	Measuring, Evaluation, Accountability, and Leadership Support for NCDs
MOH	Ministry of Health
NCDs	Non-Communicable Diseases
NGOs	Non-government Organizations
RA	Research Assistant
SSA	Sub-Saharan Africa
SSBs	Sugar-Sweetened Beverages
UN	United Nations
VALD	Vision for Alternative Development
WHA	World Health Assembly
WHO	World Health Organisation
WPs	Work Packages

THE NUTRITION LANDSCAPE IN SUB-SAHARAN AFRICA

The nutrition landscape in sub-Saharan Africa (SSA) has been traditionally skewed towards undernutrition programmes, but in the last two decades, research has revealed that SSA is undergoing a nutrition transition precipitated and facilitated by urbanization, globalization, economic development, technological advancement and shifts in agricultural food systems(Abrahams et al., 2011; Agyemang et al., 2015; Amuna & Zotor, 2008; Bosu, 2015; Global Panel on Agriculture and Food Systems for Nutrition (GLOPAN), 2017; Holdsworth et al., 2020a).

Using Popkins description of this transition, research describes most low- and middle-income countries (LMICs) as rapidly accelerating from the third stage (receding famine) – characterized by decreasing carbohydrate and physical activity levels - to the fourth stage (nutrition-related non-communicable disease) - characterized by consumption of energy dense foods (high in fat, refined carbohydrates, sugar, and cholesterol and low in fibre) with decreasing physical activity levels (Abrahams et al., 2011; Popkin, 2003).

The shift from traditional diets to western-style diets (energy dense-nutrient poor), coupled with how people interact with food sources have been key contributors to the resultant triple burden of malnutrition, defined by chronic undernutrition, micronutrient deficiencies, and increasing prevalence of overweight, obesity, and nutrition-related non-communicable diseases, on the continent (Abrahams et al., 2011; Amuna & Zotor, 2008; Global Panel on Agriculture and Food Systems for Nutrition (GLOPAN), 2017).

One in five people (21% of the population) in SSA was facing hunger in 2020 – more than double the proportion of any other region (FAO, IFAD, UNICEF, WFP, & WHO, 2021). In addition to this overwhelming burden of undernutrition, the prevalence of obesity and nutrition-related non-communicable diseases (NCDs) is steadily rising on the continent, contributing substantially to morbidity and mortality (Abrahams et al., 2011; Bennett et al., 2018; Kengne et al., 2017).

The number of overweight children aged under 5 in Africa has nearly doubled between 1990 to 2014 (5.4 million to 10.3 million), with 25% of all overweight under 5 children living in Africa (WHO, 2016). Eight of the 20 countries of the world with the fastest rising rates of adult obesity are in Africa (FAO Regional Office for Africa, 2019). A graphical representation of the increasing prevalence of overweight/ obesity is shown below.



Figure 1 Change in overweight/obesity prevalence in LMICs from the 1990s to the 2010s

Source: Shekar, Meera, and Barry Popkin, eds. 2020. Obesity: Health and Economic Consequences of an Impending Global Challenge. Human Development Perspectives series. Washington, DC: World Bank. doi:10.1596/978-1-4648-1491-4. License: Creative Commons Attribution CC BY 3.0 IGO

A systematic review that examined 283 studies in SSA with the objective to investigate the evidence for an overweight/obesity transition in school-aged children and youth (5 to 17 years) recorded evidence of an increased of overweight/obesity among school age children in SSA (see figure 2). Further disaggregating the data per sex revealed that the increase was proportionally higher among girls than boys. In this same study, the weighted averages of overweight/obesity in boys and girls were estimated at 7.6% and 15.4% respectively whiles the weighted averages of obesity alone for boys and girls were estimated at 2.0% and 3.9% respectively. (Muthuri et al., 2014). (Gebremedhin, 2015) estimated the that in the 2010–2014 period in SSA, about 6.1 million and 4.6 million children were overweight and obese respectively, and that among the studied countries, Nigeria had the most affected (overweight obesity) children (2.3 million), followed by DR Congo (0.9 million), Tanzania (0.6 million) and Mozambique (0.5 million).

Figure 2 Proportion of overweight obesity and overtime among children



Source: (Muthuri et al., 2014). Note: bubble size is proportional to sample size

The consequences of the triple burden of malnutrition, comprising health, economic and environmental impacts, are devastating to the continent. Outcomes associated with undernutrition on the continent include increased risk of morbidity and mortality, developmental delays, diminished learning ability for children and reduced lifelong productivity (Shekar, Meera, & Popkin, 2020). The Cost of Hunger in Africa (COHA) series revealed that 8 - 44% of all child mortality is associated with undernutrition; and undernutrition costs the continent up to 17% in terms of GDP (World Food Programme, 2020).

The Global Burden of Disease study estimates that overweight/obesity- related disease causes about 4 million deaths a year, or about 7% of deaths from all causes (GBD 2015 Obesity Collaborators 2017). Obesity is a significant risk factor for various chronic health problems such as cardiovascular diseases, hypertension, stroke, type 2 diabetes mellitus, osteoarthritis, and certain cancers (Asfaw, 2006; Cappuccio et al., 2008), which contribute to an increased risk of morbidity and mortality. Overweight/ obesity also contributes approximately 120 million DALYs, or about 5% of DALYs from all causes.

In addition to these health implications, obesity-related conditions also contribute to undesirable economic impacts - reduced productivity and increases absenteeism, disability rates, higher health expenditures, and an increased risk of earlier retirement (Shekar, Meera, & Popkin, 2020). Regarding the environment, the shift in diets and activity patterns linked to overweight/obesity are also linked to important water and carbon emissions concerns (Shekar, Meera, & Popkin, 2020). This perpetuates what the Lancet Commission on Obesity calls the "syndemic of undernutrition, obesity, and climate change" (LCO 2019). The Lancet EAT Commission report advocates for a shift toward more sustainable plant-based diets to address both overweight/obesity and climate change.

Responding to these and related challenges, the Africa sub-region has formulated high level nutrition, agriculture, and health policies including the 2003 Maputo Commitments (African Union Commission, 2003), the 2014 Malabo Declaration (African Union Commission, 2014) the Africa Region Nutrition Strategy 2015-2025(African Union Commission, 2015a) and Agenda 2063(African Union Commission, 2015b). Unfortunately, these have focused almost exclusively on ridding the continent of food insecurity and hunger. If malnutrition in all its forms is not effectively addressed, the visions of Agenda 2025, and Agenda 2063 (e.g. the visions of assuring healthy Africa, and delivering on its goal for inclusive and sustainable development; an integrated, prosperous and peaceful Africa) will remain elusive. Thus, the challenge of improving the food environments, the nutritional status health, and overall health of the population needs urgent policy attention to accelerate socio-economic progress and development in Africa.

We outline next, the Ghanaian context, preceded by conceptual and definitional perspectives on food environments.

ABOUT FOOD ENVIRONMENTS

Swinburn et al. (2013) gives a detailed definition of food environment (FE) by describing it as the "collective physical, economic, policy and sociocultural surroundings, opportunities and conditions that influence people's food and beverage choices and nutritional status" (Swinburn et al., 2013b). It is the interface that mediates the acquisition of foods to people within the wider food system, is essential in shaping diets (Global Panel on Agriculture and Food Systems for Nutrition (GLOPAN), 2017). The food environment is influenced by actions and policies across the food system, which collectively determine the availability, accessibility, affordability, and desirability of foods to consumers (Turner et al., 2018). To ensure healthy food environments, healthy diets (diets meeting national dietary guidelines) must be widely available, affordably priced, and widely promoted. A recent systematic review of food environment research from low-and-middle-income countries (LMICs) revealed increasing evidence related to food environment literature from upper-middle-income countries, with lower-middle income and low-income countries receiving little attention (Turner et al., 2020).

THE GHANAIAN CONTEXT

Ghana, a lower middle-income country in West Africa, is experiencing a surge of diet-related NCDs alongside food insecurity, micronutrient malnutrition, and infectious morbidities (Bosu, 2012; Ghana Statistical Service (GSS); Ghana Health Service (GHS); ICF International, 2015; Ofori-Asenso et al., 2016). Among school children aged 5 – 16 years, the reported prevalence of childhood overweight and obesity is 47% and 21% respectively (Ganle et al., 2019). It has been estimated that over one-third of all adult deaths are due to NCDs (Kim Streatfield et al., 2014), and the proportion of the adult population that is overweight or obese in Ghana has increased from 10% in 1993 to 40% in 2015(Ghana Statistical Service (GSS); Ghana Health Service (GHS); ICF International, 2015).

Ghana's food environment is wrought with increasing availability, access, and consumption of affordable, ultra-processed food products such as energy-dense foods and excessively sugar-sweetened beverages (SSBs) (Booth et al., 2021; Holdsworth et al., 2020b)(Booth et al., 2021; Holdsworth et al., 2020b). A study on Accra's food environment reported more options for energy-dense nutrient poor foods from convenience stores and prepared food stands and limited options for nutrient-dense foods such as fruits and vegetables (Booth et al., 2021; Dake et al., 2016). The increased availability of and access to ultra-processed food options relative to healthy food products constrains consumer food choices and increases the burden of nutrition related NCDs (Booth et al., 2021; Dake et al., 2016). Findings from the Healthy Food Environment Policy Index (Food-EPI) exercise in Ghana that assessed the extent of implementation of food environment policies showed that there is limited government action to regulate the marketing and sale of SSBs and other unhealthy foods (Laar et al., 2020a).

STUDY RATIONALE

In recognition of this increasing burden, Ghana formulated the National NCD Prevention Policy and accompanying strategy, which recognizes the role the food environment needs to play to promote healthy diets (Ministry of Health, 2012a, 2012b). Specifically, there are recent indications from local

policymakers in Ghana that tackling unhealthy food promotion and improving food provision would be the most likely actions to address the problem of obesity and NCD risk factors, especially in children and adolescents (Laar et al., 2020b). Food provisioning and promotion/marketing have been shown to influence consumer food choices. Food promotion affects food preferences and purchase behaviour, purchase requests (of children)/pester power, and consumption habits (Hastings et al., 2007). These policymakers, however, acknowledge that food environment-related responses to NCD prevention are hampered by scarce resources, paucity and poor quality of data, limited human capacity, and lack of appropriate policies and interventions in Ghana (Nyaaba et al., 2020).

The proposed study is relevant to the local context, and there is evidence of policy-maker interest. The recent efforts at benchmarking food environment policies in Ghana (Laar et.al 2020b)) identified gaps, as well as interventions to improve the Ghanaian food environments. The top four recommendations were "Food promotion and Food provision"-related. The recommendations included requests for "the Government to pass a legislation to regulate the marketing (promotion, sponsorship, advertisement) and sale of food and drink with added sugars, and other nutrients of concern (saturated fatty acids/trans fats, salt) in all media, in the school environment, and other childladen settings. The Government should institute measures to remedy the deficiencies associated with the School Feeding Programme" (Laar et.al 2020b).

In addition, these actions are aligned with the World Health Assembly (WHA) Resolution WHA63.14 (World Health Organization, 2010)). "In May 2010, the World Health Assembly (WHA), through resolution WHA63.14, endorsed a set of recommendations on the marketing of foods and non-alcoholic beverages to children. The main purpose of the recommendations was to guide efforts by Member States in designing new policies, or strengthening existing policies, on food marketing communications to children in order to reduce the impact of marketing foods high in saturated fats, trans-fatty acids, free sugars, or salt. Following this, a framework has been developed in response to the mandate of resolution WHA63.14 and is aimed at policy-makers wanting to apply the recommendations in their individual territories" (World Health Organization (2012). Current evidence suggests that actions by governments and communities that address all components of marketing (product, place, promotion and price) effectively protects children from powerful, unhealthy food marketing in their everyday settings, with positive externalities to adults, and their communities.

This proposal pays heed – deriving motivation from the policy responses to NCDs in the region that have been limited in scope, scale, and success. Existing policies have mainly been informed by evidence from high income countries (HICs) and have paid little attention to African food environments. Indeed, over the years, high level continental nutrition and health policies and strategies (e.g. the 2003 Maputo commitments, the 2014 Malabo Declaration, the Africa Region Nutrition Strategy 2015-2025, and Agenda 2063) have all focused on ridding the continent of hunger and food insecurity. Unless the problem of obesity is effectively contained, the visions of Agendas 2025 and 2063 will remain elusive. Thus, the need for policy-influencing and policy-impacting evidence, which both local and regional policy makers can use to promote healthier food consumption in Africa is real, and calls for context-appropriate evidence, to aid policy makers in facilitating healthy food

environments and promoting nutrient-rich, healthy diets that have the potential to address the triple burden of malnutrition – particularly among children.

The MEALS4NCDs project

ABOUT THE PROJECT

The MEALS4NCDs (Measuring, Evaluation, Accountability, and Leadership Support for NCDs) project was launched in August 2019 in response to these needs outlined above. The aim of the project was to measure and support public sector actions that create healthy food marketing, retail, and provision environments for children in Ghana. The project adapted approaches developed by the International Network for Food and Obesity NCDs Research Monitoring and Action Support (INFORMAS) for Ghana to measure, benchmark, and support public sector actions that create healthy food marketing and provision environments for children and adolescents. Details about the MEALS4CNDs project are available on the project website - https://www.meals4ncds.org/en/.

INFORMAS is a global network of public-interest organisations and researchers that aims to monitor, benchmark, and support public and private sector actions to increase healthy food environments and reduce obesity and NCDs and their related inequalities. The areas that INFORMAS monitors are grouped under 'process', 'impact' and 'outcome' modules. Figure 2 below represents the modular framework along with the specific research questions and current lead organizations for each of the modules. The process modules focus on monitoring the policies and actions of public and private sector organizations related to food environments and obesity/NCD prevention, and the impact modules focus on monitoring the characteristics of food environments (Swinburn et al., 2013a)(Swinburn et al., 2013a).

The MEALS4NCDs Project focused on two INFORMAS impact modules – Food Promotion/ Marketing and Food Provision. The third module assessed by the project was Community Readiness Mapping (CRM) which, although a non-INFORMAS module, is necessary to gauge the readiness of and capacity of the studied community/stakeholders, as well as barriers and facilitators to implement food environment improvement interventions.

S		Public sector policies and actions						Private sector policies and actions			
ORGANISATION	PROCESSES	How much progress have (international, national, state and local) governments made towards good practice in improving food environments and implementing obesity/NCDs prevention policies and actions? (University of Auckland)				H envi	ow are priva ironments ar	te secto nd influ (Dea	or organisations aff encing obesity/NCI efforts? kin University)	ecting food Ds prevention	
		Food composition	Food labelling	m	Food arketing	Fo prov	od ision	Food re	tail	Food prices	Food trade & investment
FOOD ENVIRONMENTS	IMPACTS	What is the nutrient composition of foods and non- alcoholic beverages? (The George Institute)	What health- related labelling is present on foods and non- alcoholic beverages? (University of Oxford)	What is the exposure and power of promotion of unhealthy foods and non- alcoholic beverages to different population groups? (University of Wollongong)		What is the nutritional quality of foods and non- alcoholic beverages provided in different settings (eg. schools, hospitals, workplaces)? (University of Toronto)		What is availabilit healthy a unhealt foods and alcohol beverage communi and witt retail out (Universit Aucklar	the ty of and hy non- lic is in ities hin lets? ty of ad)	What is the relative price and affordability of 'less healthy' compared with 'healthy' diets, meals & foods? (University of Queensland)	What are the impacts of trade and investment agreements on the healthiness of food environments? (Australian National University)
IONS	NES	Popu	lation diet		Physio	ysiological & metabolic risk factors		olic risk	Health outcomes		comes
POPULAT	OUTCO	What is the o different po <i>(Universi</i>	juality of the diet o opulation groups? <i>ty of Sao Paulo)</i>	f	What are	e the burd other risl (W)	ourdens of obesity and risk factors? (WHO)		What are burdens of NCD morbidity and mortality? <i>(WHO)</i>		

Figure 3 INFORMAS module structure

Source: https://www.informas.org/about-informas/

PROJECT OBJECTIVES

Specifically, The MEALS4NCDs project seeks aimed to understand how food provisioning and promotion environments influence food choices, food intake, and thus, health outcomes. This was achieved via three (3) main project specific objectives:

- i. Evaluate the nutritional quality of foods and beverages sold or provided in basic schools.
- ii. Assess the capacity and readiness of community stakeholders to accept and implement interventions to improve food environments of children in Ghana.
- iii. Build regional capacity on food environment research and engage with stakeholders with a potential to influence policy.

WORK PACKAGES

The project was delivered through three interlinked work packages (WPs) over a period of three (3) years, with children aged 17 years or younger being the primary target beneficiaries. This choice was informed by three considerations:

- the global rapid rise in overweight/obesity among children and adolescents;
- calls from existing global public health resolutions, guidelines; and frameworks to tackle food promotion targeting children;
- requests from local/Ghanaian policy makers

Table 1 Work Packages (WPs) of the MEALS4NCDs Project

WP1 - Food Promotion:

Objective: Assesses the exposure and power of promotion of unhealthy foods and nonalcoholic beverages to different population groups.

Sub-objectives:	Methods
 Describe the nature and extent of unhealthy foods promotion on television, in stores, and in and around schools. Assess the frequency and level of exposure of children to unhealthy foods. Estimate the prevalence of unhealthy food advertisement within school zones. 	Collection and analysis of advertisement, publicity, and sales promotion of food to children via television, in stores, and outdoor advertisement within school zones (within 250m of schools).
WP2 - Food Provision:	
Answers the question: "What is the nutritional qu	ality of foods and non-alcoholic beverages
provided in different settings (e.g., schools) in the	Mathada
Sub-objectives:	Methods
• Describe the nutrition standards or guidelines that are in place to implement specific policies or programmes within public sector basic schools.	Monitoring of policy and programme implementation in public-funded school settings in a selected school.
• Determine the nutritional quality of foods provided or sold in child-serving institutions (focus on primary schoole)	
WP3 - Community Readiness	
Explores the readiness of stakeholders to accept and food environment of children in selected settings in	nd implement interventions to improve the n the Greater Accra Region of Ghana.
Sub-objectives:	Methods
• Assess the readiness of, and capacity of the studied community/stakeholders, as well as barriers and facilitators to implement food environment improvement interventions.	Stakeholder mapping using the IFPRI Net- Map methodology

In addition to these 3 WPs, the project sought to motivate action and generate evidence to support action on other aspects of the food environments e.g., the regulatory, legislative, and fiscal - levers of food environment policy (see Figure 3). Such actions including sensitization and advocacy were initiated and sustained via regional platforms such as the Africa Food Environment Research Network (FERN). The FERN engagements were convened by the MEALS4NCDs project (for more information on FERN, please visit https://www.meals4ncds.org/en/fern2021/).

Figure 4 Conceptual framework of the MEALS4NCDs project



Source: Laar et al 2021 / MEALS4NCDS Protocol

APPROACHES

Figure 4 summarizes the methods and project implementation plan including the work packages and data collection approaches. TV monitoring in WP 1 was done as a nationwide survey covering all 10 regions of Ghana. Six districts in the Greater Accra Region (GAR) were selected for the field work. Two hundred public sector basic schools were selected from the 6 districts to serve as the population sampling unit. The 3 WPs (Food promotion, Food provision, and CRM) were implemented in all 6 districts. The data collection methods employed for the work packages included outlet mapping, key informant interviews (KIIs), exit interviews, and focus group discussions (FGDs).

Figure 5 Project implementation plan



AED, Ada East District, ADM, Adentan Municipality; AMA, Acera Metropolitan Assembly; AR, Ashanti Region; ASM, Ashaiman Municipality; AWD, Ada West District; BAR, Brong Ahafo region; CR, Central Region; ER, Eastern Region; GCM, Ga Central Municipality; GEM, Ga East Municipality; Ga South Municipality; Ga West Municipality; GAR, Greater Acera Region; KKD, Kpone- Katamanso District; La Dade Kotopon Municipality; La Nkwantanang-Madina Municipality; LKM, Ledzokuku-Krowor Municipality; NPD, Ningo Prampram District; NR, Northern Region; Shai Doku District; TMA, Terna Metropolitan Assembly; UER, Upper East Region; UWR, Upper West Region; VR, Volta Region; WR, Western Region.

STAKEHOLDER ENGAGEMENTS

The project has engaged government and other food system stakeholders in ways that ensured acceptability of its findings, promoted optimal reach, implementation, and institutionalization of food environment improvement actions. Although the project was executed within a three-year period, the overreaching goal of the project -to measure and support public and private sector actions that create healthy food environments- holds requirement for sustained actions beyond the life of the project and beyond the work packages indicated. To this end, planned engagement with relevant stakeholders will continue even after completion of the project and involve the regulatory, legislative, and fiscal levers of the food environment arsenal.

Source: Laar et al 2021/ The MEALS4NCDS Protocol

Several stakeholder engagements were held over the duration of the project. Table 2 below lists the different stakeholder engagements held and table 3 gives an overview of the partners and collaborators for these events.

Table 2: Stakeholder engagementsEngagements

1. Project Advisory Board

2. Project Launch	
3. National Multi-Stakeholder Nutrition Forum and Ghana's first Nationa	l Nutrition Conference
4. Africa Food Environment Research Network (FERN) 2020 & 2021	
5. United Nations Food Systems (UNFSS) Dialogues (National & Indepen	ndent)
6. Developing a Food Policy Package for Healthier diets in Ghana: A Con	sultative Meeting
	0
Table 3 Project partners and collaboration	
Partners	Collaboration
University of Ghana; University of Health and Allied Sciences; Ghana	MEALS4NCDs details
Health Service; Africa African Population and Health Research Center	FERN2020 details
(APHRC), Kenva; National Research Institute for Sustainable	
Development (IRD), France; Amsterdam University Medical Centers,	
University of Amsterdam, Netherlands; Sciensano, Belgium, University of	
Toronto, Canada.	
Academics/INFORMAS Module Leaders, Civil Society, representatives of	project Advisory Board
UN Agencies (WHO UNICEE) Government of Ghana and Regulatory	details
Authorities (more details in acknowledgement)	dotano
radione details in active weedschieldy	
INFORMAS, UNESCO Chair in World Food Systems, REPSAO "Réseau	FERN 2021 details
de Recherche sur les Politiques et les Systèmes Alimentaires en Afrique de	
"Ouest" Drivers of Food Choices (DFC) Program Tufts University's	
Food Prices for Nutrition CDIA ANH Academy The African	
Population and Health Research Center (APHRC) Food and Agriculture	
Organisation (FAO) Rockerfeller Foundation ICLEL Africa City	
University London LMU-Munich University of Western Cape	
Onversity London, Line Indinen, Oniversity of Western Cape	
ANH Academy IEPRI led CGIAR The Rockefeller Foundation ed Food	United Nations Food
Systems Transformative Integrated Policy (FS-TIP) African Population	Systems (UNESS)
and Health Research Center (APHRC) Coalition of Actors for Public	Dialogue details
Health Advocacy (CAPHA) African Nutrition Society (ANS) Federation	Dialogue <u>details</u>
of African Nutrition Societies (EANUS) REDSAO DEC Drogram	
CGIAR Chronic Diseases Initiative for Africa (CDIA) he African Union	
Development Agency (AUDA NEPAD)	
Development rigency (robr-intrad)	

DFC, TACLED, the Stories of Change, and the Adolescent Food Environment Projects (all of the University of Ghana), the ROFE Project of Kwame Nkrumah University of Science and Technology, Ghana Strategy Support Program, SNV Netherlands Development Organisation, the University of Health and Allied Sciences, the Ghana Academy of Nutrition and Dietetics, International Food Policy Research Institute (IFPRI), and National Development Planning Commission (NDPC).

National Multi-Stakeholder Nutrition Forum and Ghana's first National Nutrition Conference <u>Details</u>

Ministry of Health, Ghana Health Service, Food and Drugs Authority, National Development Planning Council (NDPC), Coalition of Actors for Public Health Advocacy (CAPHA), University of Ghana, IFPRI

Developing a Food Policy Package for Healthier diets in Ghana: A Consultative Meeting

MEALS4NCDs Project Launch and Workshops

The MEALS4NCDs project was launched in August 2019 in collaboration with multidisciplinary and multi-sectoral stakeholders: Governments, Universities, research institutes, UN agencies, CSOs etc. These collaborations permitted the successful completion of the project and other related activities. A two-day workshop was held as part of the Project launch activities and was attended by project partners and collaborators. The objectives of the workshop were to strengthen the team's capacity to implement the project and to enable other participants to adopt and adapt the Food Promotion and Food Provision protocols and processes developed by INFORMAS for their respective countries. The workshop was structured around the project's three work packages; Food Promotion, Food Provision, and Community Readiness Mapping packages. The sessions were facilitated by project team members Dr. Stefanie Vandevijvere of the Scientific Institute of Public Health (Sciensano), Belgium, Professor Michelle Holdsworth of the National Research Institute for Sustainable Development (IRD), France, and the MEALS4NCDs Project Advisory Chair – Professor Mary L'Abbe, Department of Nutritional Sciences, Faculty of Medicine, University of Toronto, Canada.



Project collaborators and partners at the first capacity building workshop

National Multi-Stakeholder Nutrition Forum and Ghana's first National Nutrition Conference

The MEALS4NCDs Prevention Project, and other stakeholders on 21st January 2020 co-delivered a National Multi-Stakeholder Nutrition Forum and Ghana's first National Nutrition Conference in Accra, Ghana. The conference brought together researchers and key stakeholders from across various sectors in nutrition to discuss and share experiences of various nutrition research conducted in Ghana. The overarching goal of the Forum was to inform nutrition policy. The conference was themed 'Evidence-Informed Nutrition Policies and Programmes: Now and Beyond" and hosted presentations covering actual and potential contributions of studies on undernutrition, and the Food Environment in Ghana. About 100 individuals from various Ministries, Departments, and Agencies, NGOs, representatives of United Nations Agencies, Civil Society Organisations, Academia, and the media attended the conference.



Stakeholders at the National Multi-Stakeholder Nutrition Forum: From L – R: Professor Francis Zotor, Dr. Kingsley Pereko, Professor Richmond Aryeetey, Professor Reginald Annan, Professor Paul Amuna.

Africa Food Environment Research Network (FERN)

FERN is an initiative of the MEALS4NCDs project with a focus on capacity building. The initiative focusses on: 1) building research capacity for innovative food environment research in Africa, 2) improving South-South and North-South partnerships for robust implementation of food environment research and practice in Africa, and 3) sustaining dialogue around current and future needs for food environment research in Africa. <u>More details</u>

The 1st FERN meeting (FERN2020) was successfully implemented in November 2020. The meeting themed "Connecting Food Environment Researchers across Africa" welcomed about 160 participants each day from around the globe. 26 delegates shared their experiences, challenges, and opportunities for improving food environment research, policy, and practice, including advocacy for NCDs prevention in Africa. Delegates and participants also received training on two INFORMAS Modules (Food-EPI by Dr. Vandevijvere and the Food Prices by Professor Amanda Lee). <u>Watch FERN2020</u>



MEALSANCDs meals4ncds.org

The 2nd FERN meeting (FERN2021) themed "Leveraging Africa's Food Environment Research Network



(FERN) to transform Africa's food systems" was successfully implemented in November 2021; this time in collaboration with the International Network for Food and Obesity/Non-communicable Diseases Research, Monitoring and Action Support (INFORMAS)'s <u>Africa e-symposium series</u>. FERN2021 welcomed about 100 participants each day. The registrants included 24 eminent speakers from Africa, Asia, Australia, Europe, and North America. FERN2021 built on the progress made from the 1st meeting, and leveraged research, practice, and policy-making networks to contribute to the transformation of Africa's food environments and food systems as a whole. FERN2021 & INFORMAS e-symposium series hosted two capacity building sessions on two INFORMAS modules: Food Prices Module by Sally Mackay and <u>Food Prices for</u>

<u>Nutrition</u> by William Masters, and Food Labelling by Prof Rina Swart and her team. FEERN2021 also hosted <u>40 abstract presentations</u> on Food Environment research in Africa. The 3rd instal ment of the FERN initiative is due November 2022. Announcement/call for abstracts will be posted on the project social medial handle.

UN Food Systems National & Independent Dialogues

The MEALS4NCDs Team provided technical support to the government of Ghana in her plan to organise a member state Food System Dialogue. The MEALS4NCDs project team in partnership with other regional actors (African Population and Health Research Center, "Réseau de Recherche sur les Politiques et les Systèmes Alimentaires en Afrique de l'Ouest", African Nutrition Society, Federation of African Nutrition Societies, Coalition of Actors for Public Health Advocacy) also convened an independent FS dialogue in May 2021. The independent dialogue was curated by Professor Anna Lartey And Dr. Namukolo Covic (details <u>HERE</u>). The dialogue welcomed 81 participants from around the world in various disciplines to examined how "Data, Advocacy, Accountability, Governance, Leadership, and Leadership Support" can be leveraged to contribute to the transformation of Africa's food systems.



Research Findings

Research Objective 1: Describe the nature and extent of unhealthy foods and non-alcoholic beverage promotion on television, in stores, and in and around schools (WP1)



Study 1: Assessing the nature and extent of unhealthy foods and non-alcoholic beverage promotion on television

Objectives

To describe the nature and extent of unhealthy foods and non-alcoholic beverage promotion on Ghanaian television.

Method

Sampling: Three free-to-air local/national television channels, in terms of children viewership, were identified and live programming on these channels were recorded. **Data collection**: The recording process began in February 2020 and ended in May, 2020 covering one school term (3 months) and one-month of vacation. TV recording for the selected channels on each of the selected minimum 4 days started at 6am and ended at 12am (06.00 to 24.00). Recordings on all three channels were done simultaneously. **Analysis**: The data were analysed as per the INFORMAS protocol.

Findings

A total of 4480 advertisements were recorded and 999 (23%) of these were of food adverts. The numbers of recorded food advertisements per TV channel ranged from 229 – 410. Among the program categories assessed, soap opera and miscellaneous entertaining (including variety shows, contest shows and spectacle) had the most occurrence of advertisements (26% each).



Between 229 to 410 food advertisements recorded per TV channel in Ghana

The proportion of food advertisement that featured unhealthy food were 58% compared to 26% and 16% of food advertisement, which were for healthy food and miscellaneous foods respectively. Of all food product categories, sugar sweetened drinks (26%) were the most frequently promoted food

product category followed by recipe additions (13%), b reads, rice and rice products without added fat, sugar or salt (9%), bottled water (8%), alcohol (8%). The most commonly used promotional techniques was promotional characters used in 37% food advertisements. Premium offers were used in 8% of advertisement.



SSBs were the most frequently promoted food product category on TV

Implication for intervention

- 4. Unhealthy food advertising on national broadcasting TV channels known to be watched by children should be regulated. These policies should specifically define permissible time when unhealthy food would be prohibited from airing on National Tv station, as done for alcohol advertisements.
- 5. Legislation that will compel all foods company that adverted foods product to declare nutrient composition exceeding the recommended threshold on advertisement and if possible, the associated health effect when consumed.
- 6. Food advertisement found to be misleading especially through the usage of inaccurate claims should be banned regardless of media platform or venue.
- 7. The usage of promotional strategies or techniques, such as including incentives, and popular children's personalities or characters should be regulated on products directed or likely to appeal to children.
- 8. Laws that prohibit the marketing of unhealthy foods such as ultra-process foods and foods products with excessive levels of added sugar, salt, and fat during peak viewing times for children.
- 9. Enact and enforce a legislation regulating the promotion, sponsorship, advertisement and sale of food and drinks with excessive levels of added sugar, salt, and saturated fatty acids/trans-fat print and electronic media, and in settings where children frequent



Study 2: Mapping of outdoor food advertising and outlets within and around selected basic schools in the Greater Accra region

Objectives

- To assess the density/hotspots of outdoor food advertisements, and outlets around schools.
- To examine the distribution of healthy vs unhealthy food advertisements around schools.

Method

Sampling: The project sample size was 200 public sector basic schools in 6 districts in the Greater Accra Region. **Data collection**: Zones earmarked for assessment were road networks within a distance of 250m from the main entrance of each school. Direct observation was use to locate all food advertisements and food outlets present within study zones. Data collection: Smartphones with built-in geo-positioning functions and predesigned template were used to map and record attributes of all advertisements and outlets. **Analysis**: Advertised foods were classified (core or noncore) in accordance with the INFORMAS food classification system.

Findings

A total of 5,887 advertisements were identified around the surveyed schools, 42% of which were for foods and beverages. Advertisements were most prevalent at food outlets (78% of all food advertisements) but also along roads, and on non-food structures. Overall, 70% of food advertisements featured non-core/unhealthy products,



78% of food advertisements were prevalent at food outlets while 12% and 14% had core/healthy and miscellaneous (including soup cubes, seasonings, tea) products respectively.

About 69% of the foods and beverages advertised were ultra-processed foods, 29% processed, 5%

processed culinary ingredients, and 19% unprocessed or minimally processed foods. Sugar-sweetened beverages were the most advertised food product type (32%). Promotional characters were found on 14% of all food advertisements, most were cartoons/manufacturer's characters (69%). About 8% of all food advertisements had premium offers, including price discounts and gift/collectables.

Figure 7 Hotspot map of food advertisements around schools



Figure 6 Hotspot map of food outlets around schools



Figure 8 Distribution map of food advertisement healthy (green) and unhealthy (red) around schools



Implications for policy and practice

- 3. The ratification and implementation of zoning laws restricting the location of unhealthy food adverts around schools.
- 4. Government should pass legislation to regulate, the promotion and sponsorship, advertisement and sale of food and drinks with added sugars, and other nutrients of concern (saturated fats, salt) in school environment and other child-laden settings, enforceable with fine.



Study 3: Assessing the healthiness of outdoor food advertising within and around public sector basic schools

Objectives

- The prevalence of outdoor foods, alcoholic and non-alcoholic beverages advertisements around a sample of public basic schools in the Greater Accra Region of Ghana.
- The nature of outdoor foods, alcoholic and non-alcoholic beverages advertisements around a sample of public basic schools in the Greater Accra Region of Ghana.

Methods

Sampling: We cross sectional surveyed 200 schools, covering six selected districts in Greater Accra Region. **Data collection**: All outdoor advertisements within school zones (250m road network distance from the schools' main entrance) were mapped. Food advertisement attributes– including advert setting, advert type, advert size, number of food products displayed, product/brand name, and promotional techniques used were recorded. **Analysis**: We categorized all adverts mapped as food and non-food. Foods advertised were categorized according to the INFORMAS food categorization system: core/healthy foods, non-core/unhealthy foods and miscellaneous.

Key findings

A total of 5,887 advertisements were identified around the surveyed schools. 42% (2,473) of advertisements observed within the school zones assessed were food advertisements. The median number of food advertisement per school was 14 (range 1 -124). There were more food advertisements in urbanized districts compared to rural districts. 70% of foods in the advertisements recorded were unhealthy. Ultra-processed foods amounted to 69% of the foods advertised. Sugar sweetened beverages and alcoholic beverage were the two most advertised products.



A median of 14 advertisement per school and most of these adverts were SSB and alcoholic beverages



Implications for policy and practice

- 1. Zoning regulations should be put in place in areas immediately around child- serving institutions like schools to protect children from exposure to unhealthy food commercial messages.
- 2. Comprehensive strategy that regulates all advertising media platform from unhealthy food advertising should be considered.
- 3. A clear guideline should be developed on foods that are permitted for advertisements and not permitted to children across all form of media platforms including outdoor advertisements.
- 4. Government must implement regulations to reduce the volume and influence of unhealthy food marketing reaching children.



Study 4: How healthy are modern food retail outlets? Availability of healthy and discretionary ultra-processed foods in food retail outlets of selected districts in the Greater Accra region

Note: Study information (below) was collected during MEALS4NCDs project and therefore presented along in this report. HOWEVER, this study is more relevant to the INFORMAS food retail module

Objective

To determine the healthiness of foods sold at supermarkets and mini-marts in the Greater Accra Region of Ghana.

Methods

Sampling: All eligible retail outlets located in six districts involved in the MEALS4NCDs Project were accessed. Local district offices were able to provide list of supermarkets found within their jurisdictions. Field data collectors were trained to identify and map supermarkets that may not have been captured in the district database. 67 out of 103 identified supermarkets/mini-marts consented to participate in the study. **Data collection**: In-store assessment i.e., the shelf length and breadth of all food products found in all consented supermarkets/mini-marts was measured. Digital photographs of the food products were also taken. **Analysis**: Eligible retail outlets with less than 200m² of floor area were categorized as mini-marts. Descriptive analyses were performed to generate the total areas occupied by the various food groups and the ratio of unhealthy to healthy foods. Healthiness of food was defined using NOVA classification and calory density. Ultra-processed food or food items which had >225 kcal/100 g were classified as unhealthy. The ratio of the area occupied by unhealthy to healthy foods was used to determine the healthiness of the supermarkets/mini-marts.

Key findings

Of the 67 retail outlets assessed, 86.6% were mini-marts. 85% of the total shelf area was occupied by food categorized as unhealthy. Refined grains and refined grain products were the most available food groups occupying 30.0% of the total shelf space occupied by food. The second most available, sugar-sweetened beverages occupied 20.1% of total shelf space. The least available food group–unprocessed staples, was found in only one low poverty incidence district, and occupied 0.1% of the total food shelf space. Supermarkets/mini-marts in two districts did not sell fresh fruits or fresh/unsalted canned vegetables. 68% of all 3952 food products available were ultra-processed foods. Across supermarkets/mini-marts, the ratio of unhealthy-to-healthy foods, or ultra-processed-to-unprocessed foods ranged from 2.5 to 6.7 with an average (SD) of 5(2).



Refined grain and refined grain products were the most available food groups followed by SSBs. 68% of all 3952 food products were ultraprocessed foods and for each healthy food sole there are up to 6 unhealthy food offered along side

Implications for policy and practice

- 1. Government in partnership with other stakeholders should institute measures that improve the availability of healthy foods within supermarkets in Ghana.
- 2. Government should also ensure that local authorities are equipped with the requisite resources to monitor unhealthy foods sold in supermarkets.

Research Objective 2: Describe the nutrition standards or guidelines that are in place to implement specific policies or programmes within public sector basic schools in the Greater Accra region (WP2)



Study 5: Analysis of Food Provisioning Policies and Programmes in Ghanaian public sector basic schools (PSBS)

Method

Figure 9 Component I: Identification and Description
Identification of food provision policies and programmes
Literature searches
Step 1
Step 2
Description of the characteristics of identified food provision policies and programmes
Desk review of policy and programme documents
Appraisal of existing policies and programs
Policy rating

Figure 10 Component II: Quality assessment and rating

Step 1	Appraisal of existence of nutrition policies/programmes and their implementation Interviews with school heads and other key school stakeholders
Step 2	Review of available monitoring and evaluation data Desk review of available monitoring and evaluation data
Step 3	Assessment of nutritional quality of provided and/or sold foods Interviews with caterers and venders, and on-site inspections
\searrow	

Findings

Table 4 Component I: Identification and Description

	Policy/Programmes Identified					
Ghana School Feeding P	Ghana School Feeding Policy					
Ghana School Feeding P	rogramme					
Descrip	tion and Details of the Ghana School Feeding Program					
Jurisdiction and sector	Government Kindergarten and primary schools in deprived					
	communities					
Type of participation	No details about type of participation and school selection					
Implementation	Resources available for catering staff					
support						
Monitoring framework	Monitoring framework available					
Type and details of	No clear details about nutrition standards/guidelines "to provide					
nutrition	children in public primary schools and kindergartens with one hot					
standards/guidelines	nutritious meal, prepared from locally grown foodstuffs, on every					
applied	school-going day", "30% RDA standard through the one, hot,					
	nutritious meal"					

Table 5 Component II: Quality assessment and rating

	School food and nutrition program and school meals							
	Comprehensiveness score:4/12							
	Strength score: 2/21							
	Areas addressed Areas for improvement							
-	Provision of nutritious meals - Details nutrition standards/guidelines							
-	Some application of food standards - Food safety and food emergencies							
-	Provision of free, accessible, clean and - School meal environment							
	safe water - Seat time							
-	Nutrition training for catering - Sanctions for non-compliance personnel							
-	- Purchasing of local food for school							
	meal							
	Nutrition standards for sold and other competitive food and beverages							
	Comprehensiveness score:0/13							
	Strength score:0/13							

Areas A	ddressed	Areas for improvement
None	- F h	egulation of sold food and beverages during school ours
	- A c	pplication of nutrition standards/guidelines to sold and ompetitive foods
	- F a	egulation of food and beverages served at class parties nd others celebrations
	- A	ssurance of compliance and sanctions for non-
	C	ompliance
	Wellness promotion and	food and beverages marketing

Comprehensive scores: 0/11					
Strength score: 0/11					
Areas addressed		Areas for improvement			
None	-	Modelling of healthy eating beverages by staff			
	-	Physical activity			
	-	Marketing within the immediate school environment			
	-	Marketing in curricula and other educational materials			
	-	Marketing at fundraise and corporate sponsors events			
Implementation, Accountability, Monitoring and Evaluation, and Communication					
Comprehensiveness score:8/12					
Strength score:2/12					
Areas addressed		Areas for implementation			
- Ongoing implementation committee at	-	Provision of implementation framework for schools			
district level	-	Implementation support for school staff			
- Community-wide representation in	-	M&E support for school staff			
district implementation committee	-	M&E support and tools for catering staff			
- Provision of monitoring framework					
- Periodic assessment of district					

implementation

Implications for policy and practice

- Establish and apply strong and comprehensive food-based and/or nutrient-based standards to the Ghana School Feeding Policy and Programme to provide a robust way of ensuring the nutritional quality of meals and beverages.
- Use language that is enforceable in policy documents and include sanctions for non-compliance
- Address food safety and food emergencies in the school food programme.
- Implement policies for regulating sold foods and other competitive foods and beverages within reach to pupils.
- Implement policies for regulating and restricting marketing of unhealthy food and beverage within and around schools.
- Document standards and guidelines for the provision and sale of foods and make them available to school heads and other stakeholders.
- Provide outlets for fresh drinking water and encourage the consumption of water as a replacement for SSBs.
- Create an environment that encourages the consumption of healthy foods and adoption of healthy habits through the use of 'nudges'.

- Provide training to school heads, teachers, catering team, and other school stakeholders to model healthy behaviours.

Research Objective 3: Evaluate the nutritional quality of foods and beverages sold or provided in public sector basic schools (WP2)



Study 6: The nutritional quality of foods and beverages sold or provided in child-serving institutions

Objectives

To evaluate the nutritional quality of foods and beverages sold or provided in public sector basic schools

Methods

The selected 200 PSBS from six districts in the Greater Accra Region were visited and food outlets along road network buffers of 250m from the main entrance of the schools and those located inside the school compound were mapped. School caterers contracted by the Ghana School Feeding Programme (GSFP) and a sample of food vendors operating within the school compounds were interviewed. Details of food provided, or sold were recorded.

Findings

Forthcoming!

Implications for policy and practice Forthcoming!

Research Objective 4: Are community stakeholders ready to accept, and do they have the capacity to implement interventions to improve children's food environments in the Greater Accra region? (WP3)



Study 7: Network Mapping of Stakeholders in Food Promotion and Provisioning among children in schools in Ghana

Objective

To identify, and describe key stakeholders (individuals and institutions) who influence food promotion and provisioning among children and adolescents in Ghana.

Methods

Relevant stakeholders were identified using the IFPRI Net-Map methodology (10 informants for food promotion and 9 informants for food provision) and interviewed. The interview was virtual and conducted in 4-steps participatory conversation that included 1-actor mapping, 2-linking actor networks, 3-influence mapping and 4-identifying champions/opinion leaders. The interview was recorded and transcribed to complete the map. Facilitators and note takers -trained by in-house experts- supported the interview sessions. Each tool was pretested prior to interviews. Consent was obtained from each participant prior to the interview.

Findings

Diverse actors are involved in the promotion and provision of food for children/adolescents in Ghana and government agencies are the most influential. However, there exist untapped opportunities for engagement.

Figure 11 Network mapping of Stakeholders in Food Promotion and Provisioning in Ghana



Promotion



Implications for policy and intervention

- 4. Promote co-creation and co-actions among identified stakeholders.
- 5. Empower the media with adequate food environment and nutrition information.
- 6. Establish a coordination mechanism for promoting healthier diets in food environment.



Study 8: The readiness of Ghanaians community to implement changes to improve children's food environments in the Greater Accra

Aims

- Determine the stage of readiness of communities to address the marketing and availability of unhealthy foods and drinks in and around public basic schools in the Greater Accra Region, and
- Gain qualitative insights into community factors that could affect the implementation of interventions targeting unhealthy food and beverage marketing and availability.

Methods

The CRM incorporates quantitative and qualitative insights into a community's readiness. In this study, "The community" was operationally defined both over geographic space (geographic community) and according to stakeholders of interest (interest community). Geographically, the focus was on the Greater Accra Region of Ghana. The interest community comprised individuals and key informants from both within and outside the geographic community, known to wield influence and/or play a leadership role in promoting healthy food environments. Individual community readiness mapping informants were selected purposively to represent a wide range of sectors/programmes (regulatory authorities, schools, commerce, health (e.g., MoH, GHS), religious institutions, school feeding programmes, children/youth clubs, urban planners) as well as policy areas in question – TV marketing, outdoor marketing, food provision, etc. In total, 18 key informants were interviewed between March and August 2021.

The CRM tool applied in this Project adapted an existing protocol, building on the previous use of CRM in deprived communities in Ghana (Plested et al., 2006; Pradeilles et al., 2019). The CRM serves as a theoretical framework for understanding and improving community readiness for interventions. The CRM tool consists of 36 open questions addressing five readiness dimensions: community knowledge of efforts, leadership, community climate, community knowledge of the issue, and resources (Plested et al., 2006).

Findings

The Greater Accra region is at the Pre-Planning stage (overall readiness score=4) which means that while efforts are ongoing to address the marketing and availability of unhealthy food and drinks in and around schools, there is a clear recognition among community members that more needs to be done to address the issue of marketing and availability of unhealthy foods in and around schools.

Figure 12 Numerical representations of readiness (9 stages of readiness) within the Greater Accra Region



1. No awareness

Implications for policy and practice

Figure 13 Scores of readiness measured for each CRM dimension



- improving community knowledge of existing local efforts before new interventions are implemented, and securing resources (e.g. funding) to support efforts
- Efforts should focus on addressing the concerns of community members that might be present as well as misinformation about the potential impacts of various food environment interventions (e.g., concerns about what alternative livelihoods could support owners of local shops selling foods and drinks considered to be unhealthy foods to children).
- Information dissemination in the communities should be done using influential figures such as religious leaders, political figures, community health workers, and local celebrities, as well as popular media platforms such as television, radio, and social media to convey simple but understandable messages about the links between unhealthy food environments and poor diets.

Academic outcomes TRAINING OF STUDENTS & EARLY CAREER RESEARCHERS

Students and early career researchers have received training throughout the project. Their scope of work/bio/ area of expertise is presented below. Visit the project website for more information. <u>Early</u> career researcher and <u>Supported Graduate Students</u>.

Table 6: Students and staff trained on the project

Dr. Phyllis Addo (PhD) MEALS4NCDs Postdoctoral Fellow



Department of Family and Community Health, School of Public Health, University of Health and Allied Sciences (UHAS). Her interest is childhood obesity, infant and young child feeding practices, trans fatty acids, diet and diseases and nutrition advocacy. She has supported and contributed to the implementation of community- and national-based nutrition projects in Ghana. Notable among them are the TRIUMF (Trial for reduction of infant undernutrition through modified feeding) and Measurement Evaluation, Accountability and Leadership Support (MEALS) for NCDs Projects. She has also led Childhood Obesity and Trans fatty acid exposure projects. Aside from lecturing, she is involved in education and awareness campaigns. Currently, she is contributing to advocacy campaigns for trans-fat policies in Ghana.

Dr. Phyllis Ohene-Agyei (MD) MEALS4NCDs Project Associate



Phyllis is a medical doctor with further training in Public Health. Her research & professional practice focus on Public Health Nutrition with emphasis on Maternal & Child Nutrition and Health. She has experience working in the West Africa sub-region with health institutions, NGOs and academic institutions. Her relevant expertise includes project management, nutrition & health research, and report writing.

Dr. Krystal Rampalli (PhD) Postdoctoral Research Associate



Dr. Krystal Rampalli is a Postdoctoral Research Associate for the Drivers of Food Choice Program in the Department of Health Promotion, Education and Behavior at the University of South Carolina, USA. Her research interests are in adolescent health and nutrition, particularly amidst changing food environments in low and middle-income countries. For her dissertation, Krystal explored perspectives on healthy and unhealthy food and eating practices, food marketing, and body image perceptions among junior high school students in Greater Accra as part of the MEALS4NCDs Project team. Prior to pursuing her PhD, Krystal worked on various global health research projects for both public sector and nonprofit organizations in Zambia and India.

Ms. Akua Tandoh (Doctoral student) Project Associate



Akua holds an undergraduate degree in Nutrition and Food Science and a master's degree in Human Nutrition (Public Health Option). She is currently a third-year doctoral student at the School of Public Health, University of Ghana, and a Project Associate on the MEALS4NCDs project.

Her research interests fall within maternal and child health and nutrition; food systems and population health; and implementation science in nutrition. Akua has over seven years of experience working on various interdisciplinary research projects. Recent research she has supported include the Dietary Transitions in Ghanaian Cities Project (<u>DFC</u> and <u>TACLED</u> projects)

Ms. Wilhemina Quarpong (Doctoral student) Project Associate



Wilhemina has a background in Nutrition and Food Science from the University of Ghana, and Public Health from the University of Nottingham. Her research interests include population-based approaches to reduce undernutrition, overweight/obesity, and nutrition-related non-communicable diseases especially among women and children in low-resource settings. She has experience supporting the design and implementation of research projects focused on improving maternal and child nutrition outcomes and food systems globally. As a Project Associate on the MEALS4NCDs Project, she supported the design of research tools, data collection processes, and dissemination of the Project's findings. Wilhemina is currently pursuing a doctoral degree in Nutrition & Health Sciences at Emory University.

Mr. Gideon Senyo Amevinya (MPH) Monitoring and Evaluation Specialist



Gideon Amevinya has academic training in Biochemistry Cell and Molecular Biology and currently holds a Master of Public Health Degree from the University of Ghana. He is a food systems researcher with a strong passion for using empirical data to inform programmatic decisions and interventions. He has comprehensive knowledge and experience in research implementation and management gained through academic and practical experiences. In the last five years, he has worked with the School of Public Health, University of Ghana on several internationally funded research projects centered on the food environment such as the UK-AID/ Bill and Melinda Gates Foundation-funded "Dietary Transitions in Ghanaian Cities", and an IDRC-funded project, the MEALS4NCDs Project, which aims at providing Measurement Evaluation, Accountability and Leadership Support (MEALS) for NCDs prevention in Ghana and beyond. His research experience and interest focus on nutrition and diet-related non-communicable diseases (NCDs) and particularly investigating the nexus between how the food environment influences health.

Ms. Akosua Pokua Adjei (MPH) Research Assistant



Akosua Pokua Adjei: is a Master of Public Health graduate from the University of Ghana with a background in Biological Sciences from the Kwame Nkrumah University of Science and Technology.Having worked with the TB-DOTS department at Weija- Gbawe Municipal Hospital, she has expertise in screening patients for tuberculosis and contact tracing. She has also been engaged in phlebotomy, specimen analysis in hematology and serology. Currently affiliated to the MEALS4NCDS Project, she is very much interested in research that focuses on nutrition, non-communicable diseases and women's health

Ms. Zuwera Zankawah (MPH) UG school of public health



Ms. Zuwera Yakubu Zankawah has background in Nursing from the University for Development Studies. Recently she graduated from university of Ghana with a Master degree of Public Health with support from the MEALS4NCDs Project. Ms. Zuwera Yakubu Zankawah has interest in reproductive and sexual health issues, environmental and nutritional related issues and communicable diseases.

Mr. Silver W. H. Nanema (MSc. Bioethics student) Research Assistant



SN is a graduate student in Bioethics at the School of Public Health University of Ghana with academic background in Nutrition and Food Science. Currently SN is supporting the MEALS4NCDs project -an NCDs prevention project in Ghana. SN has also served as a support staff for a malnutrition (SAM and MAM) management program for under-five children and adolescents in Burkina Faso. SN has a profound interest in malnutrition prevention and Africa Food Systems transformation programs driven by evidence informed policies.

A total 37 of research assistants (RAs) also received training on the study protocol, data collection tools, ethics and etiquette of field-based research involving humans supported the data collection aspects of the project.



RA (Research Assistant) selected and trained during the project data collection

PUBLICATIONS

The manuscript for the MEALS4NCDs study protocol has been published (<u>here</u>).. The paper may be accessed using this link. Two papers related to the FERN-initiative (FERN Concept, and food environment research priorities generated from the maiden FERN meeting) have been accepted for publication by Global Health Promotion, and Advances in Nutrition journals.

Other manuscripts are at different stages of the drafting and publication process (see Table 7).

Table 7: List of manuscripts expected for publication from the project Manuscript Theme/Topic

- 1. Mapping of outdoor food advertising and outlets within and around public sector basic schools.
- 2. Assessing the healthiness of outdoor food advertising within and around public sector basic schools.
- 3. Assessment of promotional strategies used in supermarkets around public sector basic schools.
- 4. Post purchase interviews the shopping experience of parents patronising supermarkets around public sector basic schools.
- 5. An exploration of children's nutritional knowledge, food choices, and awareness of school food and nutrition policies/programmes and food marketing strategies used within and around their schools.
- 6. What are Ghanaian children's perceptions of their school food environments?).
- 7. Assessing the nature and extent of unhealthy foods and non-alcoholic beverage promotion on Ghanaian television.
- 8. A review of government of Ghana policies and programmes on food provision in public sector basic schools.
- 9. Monitoring and evaluation of the implementation of food provision policies and programmes in public sector basic schools.
- 10. Food safety, water, sanitation and hygiene practices of food vendors and school meal providers in and around public sector basic schools.
- 11. Assessing the healthiness/nutritional quality of foods provided/sold to children within public sector basic schools.
- 12. Discriminant validity of select nutrient profiling models/food classifications systems (NOVA, WHO, INFORMAS) in the assessment of the healthiness of foods provided and sold within public sector basic schools.
- 13. Barriers and facilitators to implementing food provision programmes in Ghanaian public sector schools: qualitative interviews with school head, caterers, and commercial food vendors
- 14. Net mapping of the key actors in nutrition, health, and food environment landscape in Ghana.
- 15. Assessing community readiness to accept, and capacity to implement interventions to improve children's food environment in the Greater Accra region of Ghana.
- 16. How healthy are our supermarkets? Availability of healthy and unhealthy, ultra-processed foods in supermarkets of selected districts of Greater Accra region, Ghana.

Policy and practice outcomes

Consultative meeting for policy bundle development

The Ministry of Health (MOH), with support from MEALS4NCDs Project, and the Coalition of Actors for Public Health Advocacy (CAPHA) convened a meeting on the 30th of September, 2021 in Accra, to explore the possibility of developing a food policy bundle for healthier diets in Ghana. This was in response to the valuable data produced from the MEALS4NCDs project. Over sixty relevant stakeholders from Academia, Government institutions, United Nations agencies, and Civil Society Organizations (CSOs) participated in the meeting. Country experiences in developing nutrient labelling system were reviewed prior to deliberation on the policy bundles. The options considered for the development of the policy package included "food composition policies, food marketing policies, food labelling policies, food retail policies, fiscal policies, food provisioning and public procurement policies. These policies when implemented as individual policies show promising results, and will even be more impactful when delivered as a cluster of interventions. As part of the meeting, delegates also received updates from previous



and ongoing research projects and initiatives in Ghana, and update on the currently being developed Food-Based Dietary Guidelines FBDGs for Ghana. There were also discussions to update the existing Food database for Ghana to provide more specific nutrient information in accordance with Ghana's food guidelines. The MEALS4NCDs contributed to and was acknowledged in Ghana's Food Systems Dialogues outputs.

Policy Bundle Project

The project, titled "Developing evidence and action toward a double-duty food-based policy bundle to assure healthier diets in Ghana", is due to start in February 2022. The project's main objective is to build evidence and mobilize multi-stakeholder actions toward a policy bundle for healthier and more equitable consumer food environments that reduce the double burden of malnutrition in Ghana. The project is timely since by 2030, NCDs are predicted to become the leading cause of death in Africa, amidst prevailing challenges of infectious diseases, undernutrition, and micronutrient deficiencies. Also, unhealthy food environments hinder progress to overcoming this double burden of malnutrition and there is increasing evidence for, and recognition of the effectiveness of a set of policies that change consumer food environments and promote more nutritious diets. Globally, an increasing number of countries are implementing such policies, although few from Africa have done so till date. Recent food systems analysis and dialogues among high level government agencies and other food systems stakeholders in Ghana have led to a consensus on policy action. Data from the MEALS4NCDs Project, and earlier local food environment studies laid the foundation for the policy bundle project.

Policy briefs

Three policy briefs on Food Promotion, Food Provision and Community Readiness were developed from evidence generated form the MEALS4NCDs project. These briefs tailored to policymakers in Ghana, present a synthesis of Ghana's food environment and provide recommendations regarding appropriate policies to implement to make Ghana's food environment healthier and more equitable. The policy/research briefs developed are presented below:

- Improving the nutritional quality of sold and provided foods in Ghanaian schools: priority recommendations for policymakers and key stakeholders Policy Brief.
- Restricting the marketing of unhealthy food to Ghanaian children Policy Brief.
- How ready are community stakeholders to address marketing and availability of unhealthy foods and drinks in and around basic schools in Greater Accra region? Research Brief.

Advocacy, Health and Social Impact

The project generated a wide range of evidence, which are being used by advocacy groups -Ghana NCD Alliance, Vision for Alternative Development (VALD), Institute of Leadership and Development (INSLA), Ghana Academy of Nutrition and Dietetic (GAND), Coalition of Actors for Public Health Advocacy (CAPHA) - to advocate for the review of polices and guidelines in relevant ministries and local government, and practices among nutrition and health stakeholders.

The partnerships established during the MEALS4NCDs Project facilitated the development of an advocacy proposal. Title, "Creating a favourable environment and stakeholder buy-in for food-related fiscal policies in Ghana", the project aims to:

- Identify a realistic legal pathway to enact SSB tax in Ghana.
- Generate, curate, and avail evidence to support advocacy, scholar activism, and to counter opposition from food & beverage industry actors.
- Strengthen the coalition-building, stakeholder sensitization, media advocacy, policy advocacy, and evidence dissemination capacity of coalition members toward SSB tax advocacy.
- Implement communication and media advocacy in support of the most appropriate and feasible pathway to enact an SSB tax in Ghana.

The study evidence and recommendations if utilized/implemented, cumulatively will contribute to mitigating unhealthy food consumption, and ultimately improving Ghana's food environment. This will result in a well-nourished population with better capacity for the cognitive development and participation in the labour market which will eventually impact positively on economic development.

Challenges

Expansion of project scope, and impact of COVID-19 pandemic on project timelines and budget Project Support Staff cost of USD6,087.00 is lost to the pandemic. This expenditure covering salaries for project support staff was made from March 2021 to August 2021 - during the COVID-19 pandemic. However, personnel were only 50% efficient during the stated period.

Unbudgeted/unexpected research expenses total USD 25,450.00. These extra expenditures have been precipitated by two things. First, the significant change in study sample size (number of schools changed from 9 to 200). Second, the COVID-19 pandemic led to extra expenditures as explained below.

Refresher training of first 37 Fieldworkers for Wave 1, and recruitment of a new set of 25 Fieldworkers for the second Wave of data collection.

- Infection prevention/control and measures to limit the transmission and safeguard fieldworkers from contracting COVID-19 were put in place by the project team. These measures originally not budgeted for were necessitated by the COVID-19 pandemic. The project purchased Personal Protective Equipment such as Hand sanitizer, Face-shields, nose masks, disposable gloves as well as a thermometer gun, for field workers (for Wave 1 and Wave 2 data collection).
- Transcription of interviews that were initially planned to be conducted one-on-one but switched to virtual interviews due to COVID-19. 200 audio files of interviews had to be transcribed at a cost of USD17.5 per file.
- Incentivizing participation. Incentives were procured to motivate pupils, school head teachers, and district education directors, and encourage their participation in the study's data collection activities during the pandemic. These incentives included MEALS4NCDs-branded souvenirs and personal protective equipment for participating school heads pupils and district education directors. For each pupil that took part in the Focus Group Discussion, three (3) MEALS4NCDs-branded exercise and a T-shirt were given. The participating school Head teachers had one (1) hand sanitizer and three (3) MEALS4NCDs branded Poloshirts and exercise books. The district directors were given MEALS4NCDs branded Poloshirts and exercise books (as shown below).



Recommendations

Level of	Recommendation
Implementa	
tion	
Food	1. Unhealthy food advertising on national broadcasting TV channels known to be
promotion	watched by children should be regulated. These policies should specifically define
Promotion	permissible time when unhealthy food would be prohibited from airing on National
	Ty station, as done for alcohol advertisements.
	2. Legislation that will compel all foods company that adverted foods product to declare
	nutrient composition exceeding the recommended threshold on advertisement and
	if possible, the associated health effect when consumed.
	3. Food advertisement found to be misleading especially through the usage of
	inaccurate claims should be banned regardless of media platform or venue.
	4. The usage of promotional strategies or techniques, such as including incentives, and
	popular children's personalities or characters should be regulated on products
	directed or likely to appeal to children.
	5. Laws that prohibit the marketing of unhealthy foods such as ultra-process foods and
	foods products with excessive levels of added sugar, salt, and fat during peak viewing
	times for children.
	6. Enact and enforce a legislation regulating the promotion, sponsorship,
	advertisement and sale of food and drinks with excessive levels of added sugar, salt,
	and saturated fatty acids/trans-fat print and electronic media, and in settings where
	children frequent
	7. Advertising within certain public places known to be frequented by children should
	be regulated by enacting zoning laws. These laws should specifically define zones that
	must be prohibited from siting of advertisements.
	8. Government should pass legislation to regulate, the promotion and sponsorship,
	advertisement and sale of food and drinks with added sugars, and other nutrients of
	concern (saturated fats, salt) in school environment and other child-laden settings,
	enforceable with fine.
F 1	
Food Description	Policy recommendations
PTOVISION	1. Establish and apply strong and comprehensive food-based and/or nutrient-based
	standards to the Ghana School Feeding Policy and Programme to provide a robust
	2 Use language that is enforceable in policy documents and include sanctions for non
	compliance
	3. Address food safety and food emergencies in the school food programme
	4. Implement policies for regulating sold foods and other competitive foods and
	beverages within reach to pupils.

Table 8 List of policy recommendations arranged per work package

	5. Implement policies for regulating and restricting marketing of unhealthy food and beverage within and around schools.
	Implementation of policies and programmes
	6. Document standards and guidelines for the provision and sale of foods and make them available to school heads and other stakeholders.
	7. Provide outlets for fresh drinking water and encourage the consumption of water as a replacement for SSBs.
	8. Create an environment that encourages the consumption of healthy foods and adoption of healthy habits through the use of 'nudges'.
	9. Provide training to school heads, teachers, catering team, and other school stakeholders to model healthy behaviors.
CRM	1. improving community knowledge of existing local efforts before new interventions are implemented, and securing resources (e.g. funding) to support efforts.
	2. Efforts should focus on addressing the concerns of community members that might be present as well as misinformation about the potential impacts of various food environment interventions (e.g., concerns about what alternative livelihoods could support owners of local shops selling foods and drinks considered to be unhealthy foods to children).
	3. Information dissemination in the communities should be done using influential figures such as religious leaders, political figures, community health workers, and local celebrities, as well as popular media platforms such as television, radio, and social media to convey simple but understandable messages about the links between unhealthy food environments and poor diets.

ACKNOWLEDGEMENTS

The project was successfully implemented, thanks to multiple collaborating institutions and individuals listed below.

Government of Ghana and Agencies

Ministry of Health Ghana Health Service Ghana Education Service Ministry of Food and Agriculture Food and Drug Authority National Development Planning Commission Ghana School Feeding Programme

Project investigators and their respective institutions/ Universities

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Funder acknowledgment

This work was carried out with the aid of a grant from the International Development Research Centre, Ottawa, Canada. The views expressed herein do not necessarily represent those of IDRC



Centre de recherches pour le développement international

Canada

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