



*The World's Largest Open Access Agricultural & Applied Economics Digital Library*

**This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.**

**Help ensure our sustainability.**

Give to AgEcon Search

AgEcon Search

<http://ageconsearch.umn.edu>

[aesearch@umn.edu](mailto:aesearch@umn.edu)

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

*No endorsement of AgEcon Search or its fundraising activities by the author(s) of the following work or their employer(s) is intended or implied.*

## A RAPID REVIEW OF KEY POLICIES AND PROGRAMS LINKED WITH NUTRITION AND HEALTH IN GHANA

Aryeetey R<sup>1\*</sup> and JB Coomson<sup>1</sup>



**Richmond Aryeetey**

\*Corresponding author email: [raryeetey@ug.edu.gh](mailto:raryeetey@ug.edu.gh)

<sup>1</sup>University of Ghana, School of Public Health, Legon, Ghana



## ABSTRACT

As part of the process by the government of Ghana to develop food-based dietary guidelines, a review of policies and programs was commissioned. The review aimed to identify and describe the policy environment, with a focus on identifying the type of existing policies, priorities, and programs related to nutrition and health between 2010 and 2020. The review also tracked the evolution of changes in policies and programs over the same period. Using a systematic rapid scoping review approach, policy and program documents were identified and classified according to relevant nutrition-specific and nutrition-sensitive sectors, including health, agriculture and food, human development, social protection, and trade. Data from included documents were extracted using an excel extraction tool. The extracted data including policies, programs, objectives, coverage of the policies/programs, intended outcomes, target groups, and agencies responsible for implementing these policies and programs. More than 70 government documents, plus other reports and literature sources describing government policy and programs with relevance for nutrition were identified. Most of these policies and programs were not designed to directly address malnutrition. This is because, the policies and programs neither referenced nutrition objectives, nor nutrition outcomes. However, the existing policies and programs had aspects that can be leveraged (either through redesign or implementation) to contribute to improved nutrition outcomes. A key challenge in the nutrition programming landscape is the non-existence of a comprehensive and costed national nutrition strategic plan to accompany the national nutrition policy. The key nutrition priorities of the Government of Ghana and its partners, as expressed in the documents reviewed included infant and young child feeding, stunting reduction, anemia, and food security. There were key nutrition-related issues which have not been prioritized, although current local and global evidence as well as stakeholder opinion suggests these have already become, or are rapidly becoming important priorities. These include overweight and obesity, diet-related chronic diseases, nutrition of school-age children, and nutrition of the elderly. These nutrition issues, if not appropriately addressed, will continue to exact significant human health, economic, and social costs for Ghana. There is need for a comprehensive nutrition strategy that leverages opportunities across multiple sectors to improve nutrition for today and for the future.

**Key words:** Policy, Nutrition, Ghana, Diet, Programs, Government, Priorities, obesity, anemia, stunting

## INTRODUCTION

Adequately funded policies and programs are necessary to drive initiatives to address malnutrition[1]. If designed appropriately, nutrition policies are important to frame the nutrition problem, characterize the context, identify the existing opportunities and threats, and eventually chart an evidence-informed pathway towards successful and impact-oriented interventions[2, 3]. Further, nutrition policy, as an expression of political will, is necessary to garner resources and capacity, necessary for actions to address the nutrition challenge at scale. On the other hand, the absence of an enabling policy environment limits progress towards achieving nutrition outcomes and reducing malnutrition[4].

This paper is the result of a review of policies and programs relevant to nutrition, that was carried out as part of the process for developing a food-based dietary guideline for Ghana. This policy review is not the first of its kind in Ghana; it builds on earlier reviews. In 2010, The World Bank published the report of a comprehensive nutrition policy and program analysis that outlined the trend and paradigms in national nutrition policy between 1957 and 2008[5]. This World Bank report provides a useful overview of the changes in policies, from the post-colonial era, through to the late 2000s, a period that was characterized by re-emerging interest and a better understanding of ‘what works’ in Nutrition interventions[6]. Subsequently, in 2011, the World Health Organization (WHO) published a report on the landscape analysis of readiness to address maternal and child undernutrition in Ghana which outlined the existing capacities, policies, and institutional arrangements for scaling up nutrition in Ghana[7]. Five years later, the USAID-funded Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING) project reviewed the policy and program landscape with a focus on maternal and child anemia in Ghana[8]. The SPRING project analysis resulted in the development of anemia control communication tools that were subsequently disseminated jointly by SPRING and the Ghana Health Service (GHS). More recently, in 2018, the International Institute of Tropical Agriculture (IITA), has analyzed completed an analysis of the National Nutrition Policy (NNP) that was developed in 2016[9] to identify priorities, gaps, and implementation effectiveness. And most recently in 2019, the Transform Nutrition West Africa Initiative (TNWA), has completed a review of Ghana’s nutrition policy and program transitions, to enable understanding of the ‘stories of change’[10, 11] regarding stunting and anemia among infants and young children in Ghana in the decade preceding 2019 [12].

Almost all of the above-mentioned reviews have identified gaps in policies and programs related to suboptimal intake of nutrient-rich diets[4]; unhealthy eating habits[7]; poor quality of the food environment[4]; sub-optimal infant diets[8, 12]; and increased exposure to energy-dense-nutrient-poor diets[4] that are linked with increasing overweight, obesity, and diet-related chronic diseases[13].

Food-based dietary guidelines (FBDG) have been used, globally, as an important communication and policy tool for addressing suboptimal diets, malnutrition, and overall wellbeing [14]. A national FBDG is typically designed as an evidence-informed guideline that provides recommendations on what constitutes a healthy diet. Usually,

the language is designed as non-technical, since it targets a lay population. However, it is also useful as a tool for influencing and guiding the development of food-based initiatives as well as their implementation by governments and other agencies. In the absence of FBDG, there is a lack of consistency in communication on diets among the general public. Such lack of consistency can lead to misperceptions concerning what constitutes a healthy diet, and thus create a situation of sub-optimal dietary behaviors.

The current effort to develop national dietary guidelines for Ghana recognizes the role that multiple agencies already contribute to nutrition, even if these contributions are not recognized or intentionally designed to address malnutrition. Because these agencies generate policies and programs that are often focused on outcomes that are not directly related to nutrition, it is important to ensure coherence across these policies. Thus, the current review was designed to identify and describe the range of policies, priorities, and programs related to nutrition and health, Agriculture and food, human development, social protection, and trade. The review has also tracked the evolution of changes in policies and programs over the past decade, starting from 2010.

## METHODS

A rapid scoping review approach was employed in this review. This landscape analysis included a desk review of existing policies and programs relevant to nutrition between 1990 and 2009. Other targeted reviews of nutrition policies have been completed thereafter[8, 15]. All available and accessible policy and program documents and reports relevant to nutrition were eligible for inclusion in this review if they were endorsed by the Government during the period between 2010 and 2020. Included documents were limited to the immediate past decade beginning from 2009. Although some policy and program documents were published earlier than 2010, they were still applicable and in use by the government. In such situations, the applicable document was eligible for inclusion. Since this was a scoping review, no exclusions were made based on document quality. By default, all relevant legislation was included in the analysis. Documents were considered applicable if the proposed policy or program was directly or indirectly linked with nutrition outcomes as indicated by the UNICEF malnutrition framework[16, 17].

An initial set of policy and program documents were polled from a database available to the first author covering multiple sectors relevant to nutrition. Further, relevant government and partner agencies were contacted to identify additional documents relevant for the review. Further, a systematic search was performed on the web pages of relevant government agencies to identify any policies or programs not obtained using the approaches indicated earlier, as well as to identify updated versions of the documents. All web-page searches were carried out between May 4<sup>th</sup> and 26<sup>th</sup>, 2020, using keywords including policy, strategy, diet, food, agriculture, water, sanitation, health, and nutrition, as well as relevant combinations of the keywords. In situations where newer versions of documents were identified, both the older and newer versions were included in the review.

During evidence review workshops that were held as part of the FBDG development processed, key stakeholders from a cross-section of government and partner institutions working in nutrition-relevant sectors in Ghana suggested additional documents for inclusion in the review. Relevant data from the documents were extracted using an excel template based on prior agreed topics and key issues, including agriculture and food, human development, social protection, and trade. The extracted information was synthesized summarized to answer each question. The summaries were organized by subgroups and across time, and presented in tables.

## FINDINGS

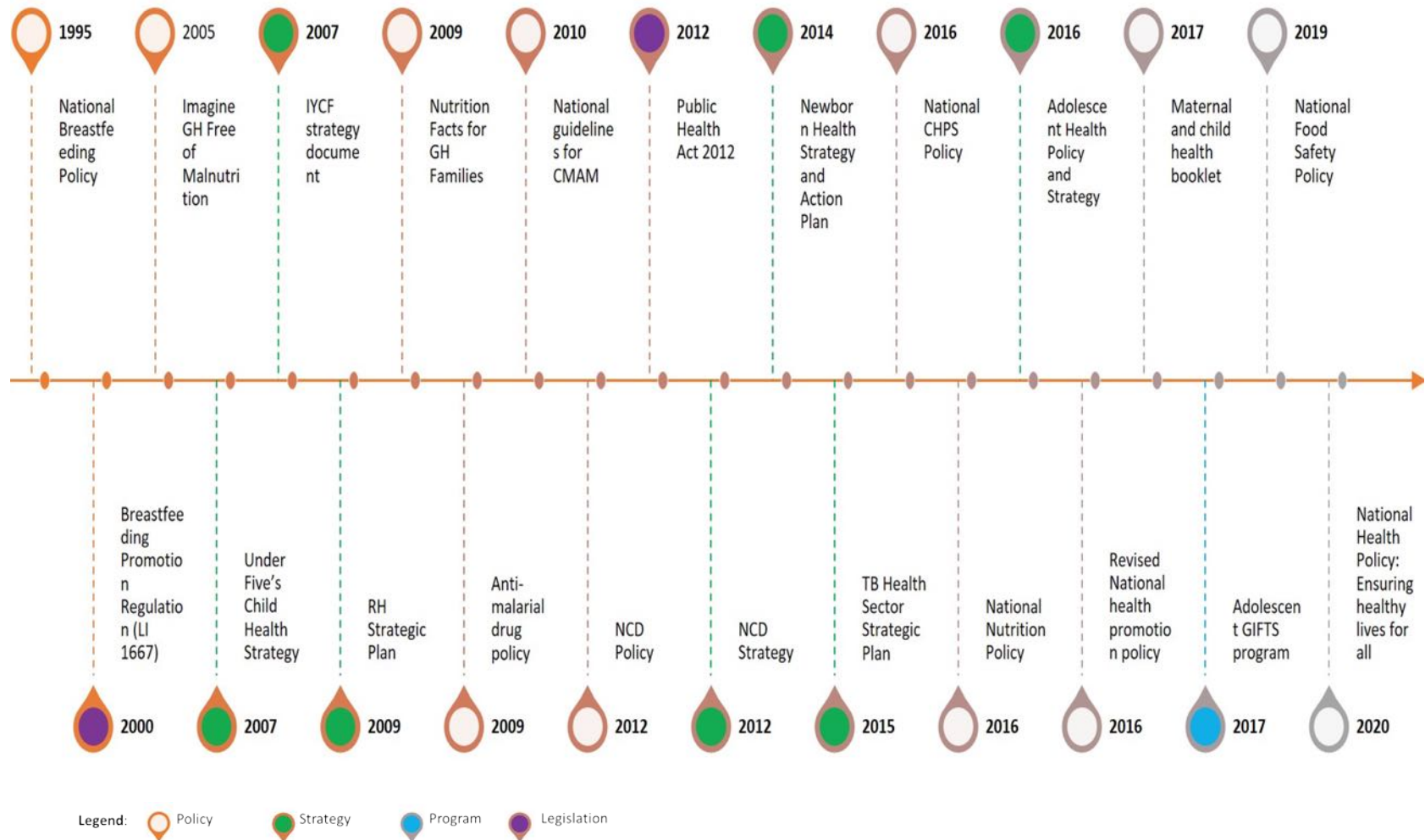
A wide range of documents (n= 75) was retrieved that are relevant to understanding the nutrition policy and program environment in Ghana (Box 1). In this section, we have classified and summarized these documents to show the chronological evolution of these documents, as well as the objectives of the policies/programs. The documents have been classified under three main categories: Health, Agriculture, and Human Development.

Box 1: Government Ministries, Departments, and Agencies linked to identified policies, programs, and legislation

Government Unit	# of documents	% of documents
Ministry of Health	2	2.6
Ghana Health Service	23	30.7
Food and Drugs Authority	3	4.0
Ministry of Food and Agriculture/Fisheries	11	14.7
Ministry of Local Government and Rural Development	5	6.7
Ministry of Gender, Children and Social Protection	5	6.7
Ghana Education Service	5	6.7
Ministry of water resources Works and Housing	2	2.6
National Development Planning Commission	7	9.3
National Youth Authority	2	2.6
Attorney General's Department	4	5.3
Others	6	8.0



**Figure 1: Timeline of nutrition Policies and programs applicable/implemented in Ghana, 2010-2020**



## Health Sector documents

Within the health system, 29 documents were identified as relevant to nutrition (Figure 1; Appendix 1). Nine of the documents were policies and 15 are programs, plans, or strategies. Besides, we identified three implementation guidelines and two legislation documents. Twelve of the documents were published before 2011 (the year in which Ghana signed up with the global Scaling Up Nutrition movement), and six documents were published between 2011 and 2016. Five of the identified documents were specifically targeted at nutrition issues relevant to newborns, infants, and young children. One document was focused on adolescents and youth, and two were focused on women of reproductive age. Four documents were designed to address issues relevant to all age groups. Before 2010, it appears nutrition actions (mostly donor-funded projects) were mainly focused on infant and young child feeding promotion (Appendix 1). Beyond 2011, the documents suggest that the main nutrition initiative that was implemented by the health sector was the Girls Iron Folate Supplementation (GIFTS) initiative. Figure 1 shows the timeline of government health and nutrition policy and program documents included in this review.

Two of the documents were comprehensive nutrition policies covering a broad range of nutrition outcomes and interventions, including undernutrition (underweight, stunting, wasting, anemia low birthweight, food insecurity), and overnutrition (overweight, obesity, unhealthy food environments). *Imagine Ghana Free of Malnutrition (IGFM)*[6] was published in 2005 as a concept paper and served as the main government Nutrition policy and strategy framework between 2005 and 2011, and even beyond (when it expired in 2011, there was no official government policy document until 2013 when the *National Nutrition Policy (NNP)* was finalized and subsequently published in 2016[3].

Both the *IGFM* and the *NNP*, recognize the multi-dimensional determinants of malnutrition. As a result, both documents propose cross-sectoral interventions, including actions beyond the health sector, although they were developed by the Ghana Health Service (GHS). The fundamental difference between the *IGFM* and the *NNP* is that the *IGFM* included a costed strategic plan; the *NNP* did not. Currently, there is no estimate on how much resources (including financial, and human resources) are needed to implement nutrition interventions, routinely, as well as to initiate new programs in nutrition.

Eight of the identified health sector documents were unit-specific policies, strategies, or guidelines covering a broad range of nutrition-specific interventions such as infant and young child feeding (IYCF) promotion (n=2), micronutrient interventions (n=3), diet quality improvement (n=1), treatment of acute malnutrition (n=1) and food safety (n=1) (Appendix 1). All, except two of these documents, were designed to promote food-based solutions. Three of the documents targeted interventions for all population groups; four documents had interventions targeting young children, adolescents, and their caregivers.

Thirteen other documents focused on specific disease outcomes or health conditions but were not directly linked to nutrition. Some of these documents, however, expressed objectives, indicators, or strategies that are relevant to nutrition, including infection prevention and control (n=10), infant and young child feeding (n=6), micronutrient



nutrition interventions (n=5); maternity and reproductive health (n=5), and prevention and management of NCDs (n=4) (Appendix 1). The interventions referenced in these documents were targeted at the general population as well as a diverse range of population subgroups including women of reproductive age, and young children.

Four health sector policies and strategies that had a broad scope related to health care access, and coverage were also identified as relevant for increasing coverage and dissemination of nutrition interventions (Appendix 1). Specifically, the 2020 National health policy document (Health Policy: Ensuring Healthy Lives for all) promotes healthy eating and healthy food environments [18]. Two legislative documents were identified as relevant to nutrition. The Breastfeeding Promotion Regulation, enacted in 2000 as an adaptation of the International Code of Marketing of breastmilk substitutes focuses actions on promoting breastfeeding and protecting children from threats to optimal breastfeeding [7]. The National Public Health Law, which is broader in scope than the Breastfeeding Promotion regulation, covers a wider range of nutrition-relevant issues including food fortification standards, food safety, food advertising, and protection from exposure to tobacco[8].

Altogether, these documents demonstrate that the health system has prioritized policies and programs that directly address nutrition, as well as the implementation of programs that have an indirect benefit for nutrition. There is, however, no evidence demonstrating that the nutrition-sensitive interventions implemented in the health sector have successfully contributed to nutrition and what extent. A majority of the policy and program documents do not have specific nutrition objectives or actions.

### **Agriculture policies and programs**

Within the agriculture and food system, 15 documents were identified relating to food and nutrition security (Appendix 2) (Figure 2). Three of the documents were designed as comprehensive policies or strategies for the food production system. The main policy document guiding agriculture in Ghana is the Food and Agriculture Sector Development Policy (FASDEP II) [9]. The overarching objectives of FASDEP II are to enhance food security and improve growth in incomes. These policy objectives are further expressed in accompanying 5-year investment plans. Medium-Term Agriculture Sector Investment Plan (METASIP I) was the first of such investment plans that were implemented between 2007 and 2010 (not discussed further in this review since it was operational earlier than in 2010). METASIP II (2011-2015), the successor investment plan, outlined objectives related to increased food productivity and food security, improved nutrition outcomes, and increased incomes. Subsequently, METASIP III was published in 2018 and it aims to improve nutrition, increase the productivity of biofortified and high-nutrient crops, as well as promote the consumption of nutrient-rich diets through food-based dietary guidelines.

All the identified agriculture investment plans were aligned, by varying extents, with the Comprehensive African Agricultural Development Programme (CAADP). The CAADP framework enjoins participating African countries, to strive for agriculture-led economic growth towards eliminating hunger, reducing poverty and nutrition insecurity, and expanding exports. Ghana signed a commitment to CAADP in 2009 (Box 2)[9]. Aspects of the national policies and strategies, that are aligned to the four CAADP pillars, include improved food security, income growth and diversification,

and improved quality and standards in food value chains. More recently, a long-term (40-year) national food and nutrition security framework has been developed by the National Development Planning Commission (NDPC). However, there is no evidence of its application by any sector.

#### **Box 2: CAADP Pillars**

Pillar 1: Extending the Area Under Sustainable Land Management and Reliable Water Control Systems.

Pillar 2: Increasing Market Access Through Improved Rural Infrastructure and Other Trade-Related Interventions.

Pillar 3: Increasing Food Supply and Reducing Hunger Across the Region by Increasing Smallholder Productivity and Improving Responses to Food Emergencies.

Pillar 4: Improving Agricultural Research and Systems to disseminate appropriate new Technologies and increasing Support that is given to help Farmers adopt them.

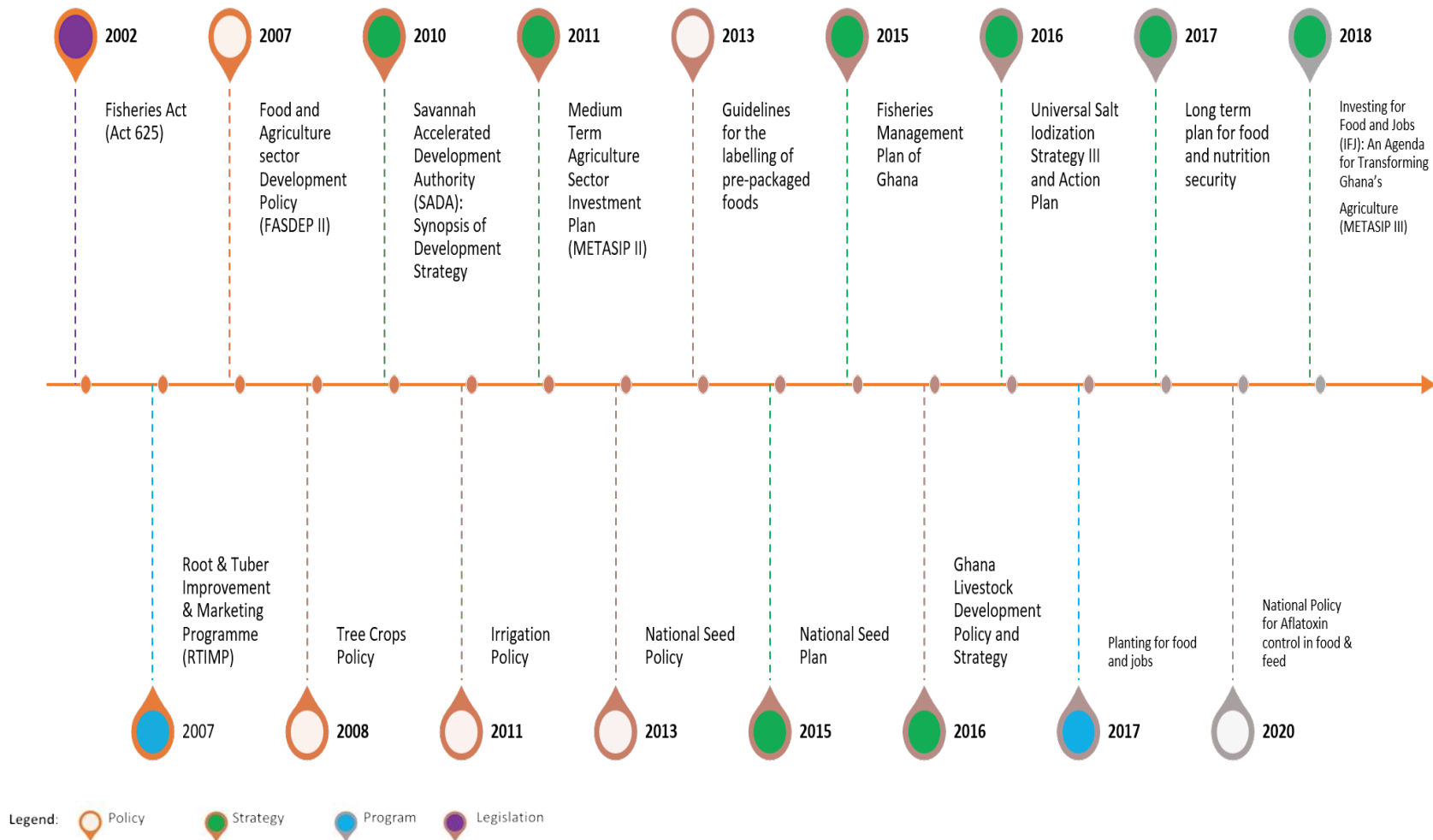
Of the remaining 11 documents in the agriculture and food sector, eight were focused on sub-sector actions (Appendix 2), including crop commodities, livestock, fisheries, and food quality. Apart from two of the documents, all were published post-2009. Five of these documents are focused on specific food commodities (Root and Tubers, Seeds, livestock, and fisheries). Only three of these documents expressed actions or outcomes related to nutrition. In all these cases, the focus was on commodity productivity and food security. Also, only the Livestock development policy and strategy directly express objectives related to nutrition security.

The labeling guidelines on packaged foods and the draft guidelines of aflatoxins are the only documents that focus exclusively on post-production aspects of the food value chain in Ghana. The aflatoxin policy seeks to ensure safe food and feed value changes. There were also two documents with cross-cutting actions in the food sector. In addition to the labeling guidelines, the Food and Drugs Authority (FDA) has several other guidelines relating to the establishment and licensing of food manufacturing, food advertising, warehousing, and registration of food products<sup>1</sup>. The National Irrigation policy is intended to increase yield and productivity across food commodities in Ghana. The Savannah Accelerated Development Authority (SADA) aims to increase sustainable access to food resources but is targeted to Northern Ghana. There is also Fisheries legislation that is focused on regulating the fisheries industry in Ghana. Apart from ensuring the sustainability of fisheries resources in Ghana, it does not indicate any direct actions for linking fisheries to population dietary needs.

Altogether, the evidence shows that the main emphasis of government policy and programs in the food sector is to increase productivity and opportunities for agriculture-related revenues; there is limited focus on making the food system nutrition-sensitive.

<sup>1</sup> <http://www.fdaghana.gov.gh/operational-guide.php>

**Figure 2: timeline of Food system policies and programs relevant for nutrition in Ghana, 2010-2020**

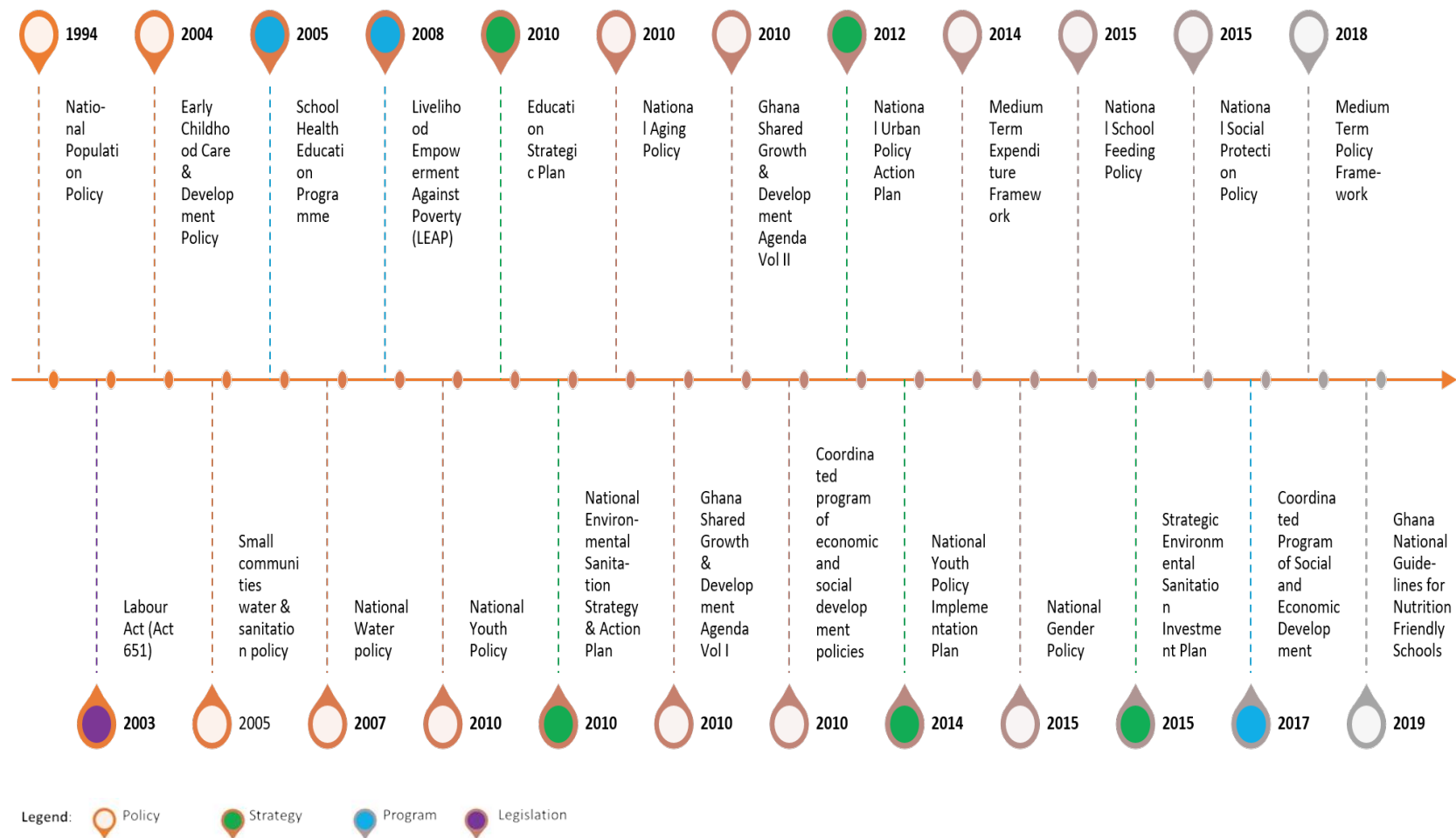


### **Human Development policies and programs**

We identified 26 human development policies and programs, and one legislation that is relevant to nutrition in Ghana (Appendix 3). Five of the documents were focused on Water, Sanitation, and Hygiene (WASH). Three of the WASH documents did not reference nutrition in their goals, indicators, or targets. The Livelihood Empowerment Against Poverty (LEAP) program, Social Protection Policy, and the Gender Policy was the only documents included that focused on social protection. Among the three, the LEAP program is the one that is more nutrition-sensitive as it allows ultra-poor beneficiaries to receive cash grants that have been shown to contribute to nutrition through the use of cash for food purchases and healthcare.

There were five documents focused on education and had nutrition-related components (Figure 3). The guidelines for nutrition-friendly schools are the most aligned to nutrition, based on its objectives and strategies. However, this guideline was only developed in 2019 and has been implemented in only 300 out of 19000 schools in Ghana, and for only a short duration. Similarly, the School Health Education Program (SHEP), Early Childhood Care and Development Council (ECCD), and School Feeding Program (SFP) have clear objectives relevant to nutrition. The ECCD program was developed earlier in 2004 and is currently undergoing a review. There were five policy documents related to population and demography. However, all these lacked focus on nutrition; this may be partly because all three documents were published before Ghana joining the SUN movement. Almost all medium-term national development plans included in this review prioritized nutrition among its objectives and strategies. However, the main focus was on addressing undernutrition and food insecurity.

**Figure 3: Timeline of Human Development Policies and Programs relevant/applicable for Nutrition in Ghana, 2010-2020**





Altogether, the current policy environment suggests a focus on addressing undernutrition even though there are new and emerging nutrition issues that are related to overnutrition, especially caloric overnutrition. Also, the nutrition policy environment is heavily focused on addressing health-related aspects of nutrition. Most of the identified policy documents which are not health-focused were not nutrition-sensitive.

### **Implementation of Programs and Projects**

Across all sectors, we identified 20 documents focused on programs and initiatives that are relevant to nutrition. Eight of these programs used food-based strategies, either for the general public or for specific sub-groups in the population (Table 1). The food-based nutrition interventions identified included behavior change communication of the four-star diet, mandatory fortification of wheat flour and vegetable cooking oil, and iodization of salt for human consumption. The four-star diet is promoted by the Ghana Health Service and it includes 1. Staple Foods (roots and tubers, cereals, grains, plantains, fats, and oils); 2. Animal-Source foods (fish, meat, eggs, dairy); 3. Legumes and nuts (beans, pulses, nuts); 4. Fruits, vegetables, and edible leaves (Appendix 4).

Programs that are targeted at improving infant and young child nutrition included the baby-friendly Hospitals initiative, community IYCF, growth monitoring and promotion, and vitamin A supplementation. Other nutrition-relevant interventions that are not linked with food included the safe mother/family planning program, LEAP, Expanded Program on Immunizations, malaria prevention, and control, and routine deworming of school-age children. As indicated in Table 1, except for the LEAP and School Feeding programs, all the programs and initiatives identified are currently scaled-up and implemented in all regions, although the implementation is not in every district/community.

Current actions in nutrition are heavily reliant on nutrition-specific programs. There is limited focus on nutrition-sensitive interventions to achieve nutrition outcomes. Furthermore, there is limited integration of nutrition with programs of nutrition-related MDAs which are not health-focused [4], although this was one of the gaps identified to be addressed by the 2016 NNP. Although there are nutrition-sensitive programs in place, they have not been designed nor implemented to address nutrition outcomes. For example, there are multiple policies and plans in the WASH sector that have relevance for nutrition. However, there are no deliberate and specific nutrition-related objectives and targets for these interventions.

Additionally, several donor-funded projects have been implemented in partnership with government agencies to address malnutrition (see Appendix 5). Within the health system, seven donor-funded projects were identified that were implemented in partnership with the GHS, Ministry of Health (MoH), and other stakeholders. Apart from the Food and Nutrition Technical Assistance (FANTA) project which focused exclusively on nutrition-specific actions and outcomes, all the others were implemented as integrated interventions with nutrition outcomes, including WASH, family planning, infection control, health systems strengthening, and nutrition-sensitive agriculture. The Ministry of Gender, Children and Social Protection (MGCSP) also led the

implementation of LEAP 1000 in selected districts in the Northern region through a project funded by donors to extend LEAP for children and women vulnerable to malnutrition during the first 1000 days of life (from conception to second birthday).

Altogether, the evidence demonstrates that three main nutrition-specific programs/initiatives are being implemented. In the health sector, interventions to address micronutrient deficiency disorders include Vitamin Supplementation for young children and Iron-Folic Acid Supplementation (IFA) supplementation for girls and pregnant women. There is also community-based IYCF promotion and support and complementary interventions such as the Baby-friendly Hospital Initiative (BFHI), and Monitoring of the International Code of Marketing of Breast milk substitutes. There is also a nation-wide program to manage acute malnutrition through a combination of community-based and facility-based care; the care option is based on nature of the case at the time of presentation.

Beyond the health sector, the agriculture sector's main interventions have been focused on enhancing the productivity of staple crops to ensure food security. In addition, social protection programs including the School feeding program, and cash grants through the LEAP initiative have been the primary nutrition-sensitive actions. In the last year, the education sector has rolled out the nutrition-friendly schools initiative. However, this initiative is currently only operational in a small promotion of schools.

Program implementation at subnational level lags behind what has been designed and reported at the national level. In particular, there is an inadequate supply of commodities and job aids at regional, district, and facility levels. The Community-based Management of Acute Malnutrition (CMAM) program has a major commodities supply challenge (including Ready to Use Therapeutic Food, Combined Mineral and Vitamin mix). Similarly, the GIFTS program frequently does not have regular supply of school registers for monitoring implementation. The Growth Monitoring and Promotion (GMP) program lacks an adequate supply of child health registers, and maternal and child health booklets. All these programmatic deficits point to sub-optimal financing of nutrition by the government as well as refocusing of priorities by donors away from key nutrition programs.

Based on the UNICEF malnutrition framework, the NNP identifies 27 intervention strategies linked with nutrition. As indicated in Table 1, 22 of these interventions are being implemented in Ghana across multiple MDAs; we did not find any evidence for implementation of 5 of these intervention strategies. Nine out of the 11 nutrition-specific interventions are being implemented and three of these were categorized as implemented with at high performance and high coverage. The NNP lists nine nutrition-sensitive programs. Only one of them is currently not being implemented in Ghana (ie no evidence of maternal mental health). There are seven listed actions aimed at building an enabling environment for nutrition. No evidence was found for deliberate actions for nutrition leadership development.

## DISCUSSION

The review of policies and programs has shown that there is a broad range of policies across multiple government Ministries, Departments and Agencies and represent a demonstration of political will to address malnutrition in Ghana. Most of the nutrition-relevant policies seek to address infant and young children nutrition and micronutrient deficiencies. However, the policies and programs related to these outcomes are mainly originated and driven by the health sector. This is probably a reflection of the low level of nutrition prioritization in Ghana. Although there are opportunities in other sectors to address malnutrition, the policies and programs from these other sectors have limited focus on nutrition. Without a policy focus on nutrition-sensitive actions, nutrition programs will have limited impact[19]. This is because the determinants of malnutrition are known to multi-sectoral and thus the solutions should have a multisectoral perspective [17].

A review of the literature shows that the priority nutrition problems in Ghana include overnutrition and diet-related non-communicable diseases [13, 20, 21]. However, the existing policies does not demonstrate prioritization of these outcomes. A recent national consultation of experts from multiple sectors have called for multiple food system and food environment policies and programs to address diet-related drivers of obesity in Ghana [15]. Although the NNP and the NCD strategy identifies sub-optimal diet as a key driver of overweight and obesity and DR-NCDs, there are currently no government-funded initiatives to address these drivers of malnutrition.

Another important dimension of the findings is that only a few of the interventions have high coverage. This is because nutrition-related programs in Ghana lack adequate funding. Although there is expressed political will, this does not translate into funding and resources needed to implement interventions [22]. As a result, most nutrition programs are implemented with the financial and technical support of external donors. This lack of sustained funding for nutrition limits the potential to reach the goals expressed in the national nutrition policy [9].

Despite these gaps, there are opportunities within existing programs to address diets in Ghana. For example, the existing opportunities and capacities in multiple sectors can be leveraged to address some of the outcomes that are currently not addressed. For example, existing community-based maternal and child health clinics can be redesigned to extend beyond the current focus on reproductive health services to also focus on dietary counselling. However, this additional task will require retraining of existing personnel. Similar redesigning and capacity building can be used for other health system programs like the GIFTS to reach adolescents to improve their diets[23]. Within the social protection sector, the LEAP program [24] can be redesigned to include behavior change communication on diets with the cash grants that currently is the focus of the program.

Finally, the policies and their associated programs will be more efficient if there is adequate coherence and coordination of efforts (capacity, resources, logistics) across sectors [25]. Previous studies have reported that coherence across programs, sectors,

and administrative levels remains suboptimal [26]. Studies in multiple settings have identified frameworks and best practices of successful multisectoral action [27-29]. Application of these frameworks and best practices will be useful for more efficient implementation of the existing policies and programs in Ghana and in similar settings.

## CONCLUSION

Nutrition-relevant policies and programs exists across multiple sectors in Ghana. However, the policies and programs are not comprehensive to address key priority nutrition issues. A redesign of existing policies and programs as well as enhanced coherence and coordination across sectors is needed to achieve greater efficiency of nutrition and program implementation in Ghana.

**Table 1: Implementation status of key intervention strategies in Ghana**

Intervention options	Implementation approach	Implementation status
<b>Nutrition-specific interventions and programmes</b>		
Adolescent health and preconception nutrition	-School- and community-based IFA supplementation	High performance, High Coverage
	-Nutrition-friendly schools initiative	High performance, Low Coverage
Maternal dietary supplementation	No evidence of implementation	Non-existent
Micronutrient supplementation	-IFA supplementation for pregnant women	High performance, High Coverage
Micronutrient fortification	-Wheat flour fortified with 9 micronutrients- -vegetable cooking oil fortified with Vitamin A; available, nationwide via commercial products	High performance, Low Coverage
Breastfeeding and complementary feeding	-Baby-Friendly Hospitals Initiative	High performance, Low Coverage
	-Community-based promotion of infant and young child feeding	
	-Code of marketing of Breastmilk Substitutes	
	- Nationwide, through health facilities, and community service delivery	
Dietary supplementation for children	No evidence of implementation	Non-existent
Dietary diversification	-Integrated in antenatal care for pregnant women -Integrated in extension services by MoFA, school nutrition by GES	Low performance, Low coverage
Feeding behaviours and stimulation	Integrated in community-based promotion of Infant and young child feeding	Low performance, High coverage
Treatment of severe acute malnutrition	Community-based management of acute malnutrition with both in-patient and out-patient care	Low performance, Low coverage



Disease prevention and management

-Facility case management

High performance, High coverage

Nutrition interventions in emergencies

-Prevention strategies- through SBCC, WASH, LLIN distribution -through health facilities, home visiting  
Distribution of food rations; Localized based on need

High performance, Low coverage

### **Nutrition-sensitive programmes and approaches**

Agriculture and food security

-Subsidies on inputs; irrigation, markets  
-Varying levels of coverage based in specific strategy  
-biofortification- sweet potato, cassava, maize, etc  
  
-value addition, food fortification

Low performance, High coverage

Low performance, Low coverage

Low performance, Low coverage

Social safety nets

-Livelihood Empowerment against Poverty (LEAP) cash grants  
-School feeding  
-Health insurance  
-Targeted communities and households

Low performance, High coverage

Early child development

Early childhood development centers; mainly by private providers

Low performance, Low coverage

Maternal mental health empowerment

No evidence of implementation  
Mainstreamed into various government programs

Non-existent

Low performance, Low coverage

Child protection

Legislation and enforcement, orphanages, LEAP for orphans and vulnerable children

Low performance, Low coverage

Classroom education

Universal access to basic and high school education  
-School meals  
-Target communities

Low performance, high coverage

Low performance, Low coverage

Water and Sanitation	Potable water supply to communities Nationwide but coverage is not 100% Community based Sanitation services, community-led total sanitation	High performance, high coverage Low performance, Low coverage
Health and family planning services	Family planning commodity supply Behavior change communication	High performance, Low coverage
<b>Building an enabling environment</b>		
Rigorous evaluations	No evidence of routine evaluation of programs	Non-existent
Advocacy strategies	Implemented through political and other influential champions	High performance, Low coverage
Horizontal and vertical coordination	At national level, fragmented and barely functional; non-existent at subnational level	Low performance, Low coverage
Accountability, incentives regulation, legislation	some legislation need revision (eg labour law on maternity protection; breastfeeding promotion law); there is need for new legislation/regulations regarding marketing/promotion of unhealthy foods highly depending on external donors	Low performance, Low coverage
Leadership programs	No evidence of this	Non-existent
Capacity investments	Focused mainly on in-service training; no system for sustainability; Institutional capacity is suboptimal Highly dependent on external donors	Low performance, Low coverage
Domestic resource mobilization	Very low investment by government	Low performance, Low coverage

IFA- Iron-Folic Acid, MOFA – Ministry of Food and Agriculture, GES – Ghana Education Service, SBCC – Social and Behavior Change Communication, WASH – Water, Sanitation and Hygiene, LLIN- Long-Lasting Insecticidal Net

## REFERENCES

1. **Ginsburg C, Griffiths PL, Richter LM and SA Norris** Residential mobility, socioeconomic context and body mass index in a cohort of urban South African adolescents. *Health & Place* 2013; **19**:99-107 109p.
2. **Hill R, Gonzalez W and DL Pelletier** The formulation of consensus on nutrition policy: policy actors' perspectives on good process. *Food & Nutrition Bulletin* 2011; **32**:92S–104S.
3. **Benson T** Improving nutrition as a development priority: addressing undernutrition in national policy processes in Sub-Saharan Africa. Washington, DC: IFPRI; 2008.
4. **Nwafor M** Review of Nutrition Policy Environment and Implementation Effectiveness in Ghana. In., vol. Draft Report. Accra; 2018.
5. **Ghartey AB** Nutrition Policy and Programs in Ghana : The Limitation of a Single Sector Approach. In., vol. Health, Nutrition and Population Discussion Paper. Washington, DC: World Bank; 2010.
6. **Mozaffarian D, Rosenberg I and R Uauy** History of modern nutrition science-implications for current research, dietary guidelines, and food policy. *BMJ* 2018; **361**:k2392.
7. **Brantuo M, Okwabi W, Adu-Afuawuah S, Agyepong E, Attafuah N, Brew G, Gomez V, Dawson A and J Ashong** Landscape Analysis of Readiness to Accelerate the Reduction of Maternal and Child Undernutrition in Ghana. *SCN News* 2009; **37**(31-37).
8. **Strengthening Partnerships Results and Innovations in Nutrition Globally (SPRING), Ghana Health Service (GHS).** Ghana: Landscape Analysis of Anemia and Anemia Programming. In. Arlington, VA: Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING); 2016.
9. **Government of Ghana.** National Nutrition Policy. In. Edited by Health Mo. Accra: Government of Ghana.,; 2016.
10. **Bailey H** Stories of Change. In. Brighton, United Kingdom: Insitute of Development Studies; 2015.
11. **Gillespie S and M van den Bold** Stories of Change in nutrition: An overview. *Global Food Security* 2017; **13**:1-11.
12. **Aryeetey R, Atuobi-Yeboah A, Van Den Bold M and N Nisbett** Understanding the Differences between Child Stunting and Anemia Reduction and Identifying Outstanding Challenges. In: *Stories of Change in Nutrition*. IFPRI; 2020: 1-8.

13. **Ghana Statistical Service (GSS), Ghana Health Service (GHS), ICF International.** Demographic and Health Survey 2014. In. Rockville, Maryland, USA: GSS, GHS, ICF International; 2015.
14. **Herforth A, Arimond M, Álvarez-Sánchez C, Coates J, Christianson K and E Muehlhoff A** Global Review of Food-Based Dietary Guidelines. *Adv Nutr* 2019; **10(4)**:590-605.
15. **Laar A, Barnes A, Aryeetey R, Tandoh A, Bash K, Mensah K, Zotor F, Vandevijvere S and M Holdsworth** Implementation of healthy food environment policies to prevent nutrition-related non-communicable diseases in Ghana: National experts' assessment of government action. *Food Policy* 2020; **93(101907)**:1-12.
16. **Black R, Allen L, Bhutta Z, Caulfield L, de Onis M, Ezzati M, Mathers C, Rivera J, Maternal and Child Undernutrition Study Group.** Maternal and child undernutrition: global and regional exposures and health consequences. *Lancet* 2008; **371(9608)**:243-260.
17. **Black RE, Victora CG, Walker S, Bhutta Z, Christian P, de Onis M, Ezzati M, Grantham-Mcgregor S, Katz J, Martorell R, Uauy R, Alderman H, Gillespie S, Haddad L, Horton S, Lartey A, Mannar V, Ruel MT, Victora C, Walker S and P Webb** Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet* 2013; **382(9890)**:427-451.
18. **Ministry of Health (MoH).** National Health Policy: Ensuring healthy lives for all. In. Accra: MoH; 2020.
19. **Bhutta ZA, Das JK, Rizvi A, Gaffey MF, Walker N, Horton S, Webb P, Lartey A and RE Black** Evidence-based interventions for improvement of maternal and child nutrition: what can be done and at what cost? *Lancet* 2013; **382(9890)**:452-477.
20. **Ecker O and P Fang** Economic Development and Nutrition Transition in Ghana: Taking Stock of Food Consumption Patterns and Trends. In: *Achieving and Nutrition Revolution for Africa: The Road to Healthier Diets and Optimal Nutrition*. Edited by Covic N, Hendriks SL, vol. ReSAKSS Annual Trends and Outlook Report: International Food Policy Research Institute (IFPRI); 2016.
21. **Ofori-Asenso R, Agyeman AA, Laar A and D Boateng** Overweight and obesity epidemic in Ghana-a systematic review and meta-analysis. *BMC Public Health* 2016; **16(1)**:1239.
22. **Laar A, Aryeetey RN, Akparibo R and F Zotor** Nutrition sensitivity of the 2014 budget statement of Republic of Ghana. *Proc Nutr Soc* 2015; **74(4)**:526-532.

23. **Ghana Health Service (GHS), Ghana Education Service (GES).** Iron & Folic Acid (IFA) Supplementation for Adolescent Girls and Women. **In.** Accra: GHS; 2017.
24. **Ministry of Gender CaSPM.** Livelihood Empowerment Against Poverty (LEAP). **In.** Accra: MGCSP; 2020.
25. **Gillespie S, Haddad L, Mannar V, Menon P and N Nisbett** The politics of reducing malnutrition: building commitment and accelerating progress. *Lancet* 2013; **382(9891)**:552-569.
26. **Pinto RF** The Nutrition Area in Ghana Institutional Assessment. **In.** Accra, Ghana; 2011.
27. **Garrett J, Kadiyala S and N Kohli** Working Multisectorally to Improve Nutrition: Global Lessons and Current Status in India. **In.**, vol. POSHAN Policy Note #1. New Delhi, India: International Food Policy Research Institute; 2014.
28. **Levinson FJ and B Yarlini** Addressing Malnutrition Multisectorally: 'What have we learned from recent international experience?'. **In:** Vol. UNICEF Nutrition Working Paper. New York: UNICEF and MDG Achievement Fund; 2013.
29. **Pomeroy-Stevens A, Viland H and S Lamstein** Recommendations for multi-sector nutrition planning: Cross-context lessons from Nepal and Uganda. **In:** *Field Exchange*. vol. 54: Emergency Nutrition Network; 2017: 90.



## Appendix 1: Health and Nutrition Policies and Programs

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
1	National Nutrition Policy	2016	Ensure optimal nutrition of all people living in Ghana	None indicated	All persons in Ghana, across entire life cycle	<ul style="list-style-type: none"> <li>- Increase coverage of nutrition-specific &amp; nutrition-sensitive interventions</li> <li>- Prioritize nutrition as a multi-sectoral development issue</li> </ul>	Advocacy, implementation scale-up, capacity building, supply of job aids, fundraising, technical support from UN/Donors, strengthened vertical & horizontal Coordination	Food-based strategies, optimal BF, CF, diverse diet, food fortification, food safety, food affordability, food production, optimal school meals
2	Imagine Ghana Free of Malnutrition	2005-2011	<ul style="list-style-type: none"> <li>- Reduce underweight, stunting, iron &amp; vitamin A deficiency, anemia, overweight &amp; diet-related disease; address nutrition as a public health &amp; development problem</li> <li>- Increase EBF</li> <li>- Address inequities in malnutrition in Ghana</li> </ul>	<ul style="list-style-type: none"> <li>- Increase EBF to 80% by 2011</li> <li>- Reduce stunting to 20% by 2011</li> <li>- Reduce prevalence of anaemia by 30 % in all physiological groups by 2010</li> </ul>	All persons in Ghana across the life cycle	BF & CF promotion; baby friendly facilities, growth promotion supplementary feeding, school meals program, quality institutional feeding, food fortification, micronutrient supplementation, supply ITNs, deworming, NACS for PLWHA, nutrition rehabilitation, reduce overweight	Multisectoral coordination, collaboration, partnership, continuous M&E, resource mobilization, community engagement, information, education & communication (IEC)	IYCF communication, food fortification, improved diet quality, SFP
3	National BF Policy	1995	Improve MCH through promotion, protection, & support of optimal BF & appropriate complementary feeding	None indicated	<ul style="list-style-type: none"> <li>- health care providers, community-based extension workers,</li> <li>- civil society, employers</li> </ul>	BF, CF, BFHI, maternity protection, pre-lacteal feeds, pre-service & in-service education, curricula update in medical & nursing schools	BCC, capacity building, legislation, M&E, community engagement (mother-to-mother-support group)	BF, CF
4	Vitamin A Supplementation Programme	1995	Reduce vitamin A deficiency among children 6 months to 5 years through vitamin A sustained capsule supplementation & food-based strategy	None indicated	Children 6-59 months	High-dose supplementation for pre-school children & postpartum mothers using a child-to-child strategy, GMP, food-based strategy, use of vitamin A in treatment of measles	Institutional collaboration, M&E, community engagement & surveys, capacity building	Food-based strategy, vitamin A supplementation

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
5	National Food Fortification Program	1996	Reduce micronutrient deficiencies among vulnerable populations	None indicated	Children 2-5 years, women 15-49 years	Food accessibility, affordability, utilization of fortified foods, enforcement of legislation to iodized salt	Social marketing campaign, advocacy, M&E, stakeholder engagement	Food-based strategy
6	IYCF strategy document	2007	<ul style="list-style-type: none"> <li>- Reduce anaemia prevalence in pregnant women &amp; children U5</li> <li>- Reduce anaemia prevalence in children 0-14 years.</li> <li>- Specific objectives:</li> <li>- To ensure that the target groups consume foods fortified with iron, vitamin A, &amp; B vitamins.</li> <li>- Ensure WIFA, preschool &amp; primary school aged children consume adequate quantities of iron-rich &amp; vitamin C-rich foods</li> <li>- Promote EBF &amp; timely/appropriate CF</li> </ul>	<p>Reduce anemia by 25%</p> <p>Ensure 60% of (WIFA), preschool &amp; primary school aged children produce &amp;/or consume iron-rich &amp; vitamin C-rich foods</p>	Children, adolescents, women	EBF, BF, timely/appropriate CF, food groups, feeding in emergencies, GMP, BFHI, ICMBS, food fortification	Communication & strategies & guidelines targeting health workers	BF, CF, food groups, feeding in emergencies, formula feeding, food fortification
7	Nutrition Facts for Ghanaian Families	2009	None indicated	None indicated	General population	BF, CF, family diets, eating during pregnancy & lactation	Mass media communication, extension, capacity building	BF, CF, family diets, eating during pregnancy & lactation
8	Interim national guidelines for community-based management of severe acute malnutrition in Ghana	2010	None indicated	None indicated	Children & women	Acute malnutrition, community-based management, facility-based management, technologies for managing acute malnutrition (RUTF)	Communication, case identification, referral, Capacity building, M&E, reporting, quality improvement, supervision, job aids	Ready to use therapeutic foods, BF, CF
9	Adolescent iron-folate distribution program	2017	Reduce anaemia among adolescent girls & menstruating women	Reduce anemia by 20% among adolescent girls in school by 2019	Adolescent girls in JHS & SHS & TVET institutions	Weekly IFA supplementation	BCC, supply & distribution of IFA, malaria prevention & treatment, food safety, WASH	Nutrient-rich diversified diets
10	National Food Safety Policy	2019-2024	Build a sensitive responsive & resilient food safety system that assures right to quality food	None indicated	government & non-government agencies related to food safety	Food safety, food sustainability,	Research, communication, policy dissemination & advocacy strategy, resource mobilization	Food safety, food sustainability

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
11	National Malaria Control Program	1999-2020	None indicated	<ul style="list-style-type: none"> <li>- 100% of HH own at least one ITN</li> <li>- 80% of population sleep under ITNs</li> <li>- Increase in U5 &amp; pregnant women sleep under ITN to 85%</li> <li>- 100% pregnant women on 2+ IPT</li> <li>- 90% of caretakers &amp; parents recognize early symptoms &amp; signs of malaria</li> <li>- 90% of U5 with fever receive appropriate ACT within 24 hours</li> </ul>	Women, children, general population	Malaria prevention, ITN by children & women, sanitation, mosquito-proofing of houses, in-door residual spraying & larviciding	M&E, operational research, capacity building, communication, infrastructure, logistics, financial management, community systems strengthened	None indicated
12	Under Five's Child Health Strategy	2007-2015	<ul style="list-style-type: none"> <li>- Improve coverage of newborn &amp; child health interventions</li> <li>- Improve demand for antenatal care services</li> <li>- Increase # of baby-friendly hospitals</li> <li>- Increase % of women receiving at least 2 doses of IPT</li> </ul>	<ul style="list-style-type: none"> <li>- 90% of pregnant women receive 2 doses of IPT</li> <li>- 80% of neonates are EBF</li> <li>- 75% of children EBF till 6 mo</li> </ul>	Women in reproductive age & young children	Antenatal care, delivery care, postnatal care, immunization, BF, CF, vitamin A supplementation, addressing stunting, control of malaria, pneumonia, & diarrhea	Program planning & implementation, BCC, community capacity building, logistic management, financing coordination, M&E, private sector partnerships	BF, CF, vitamin A
13	Anti-malarial drug policy	2009-2014	Prompt, safe, effective & appropriate anti-malaria treatment to entire population	None indicated	All relevant population groups	Anemia, malaria treatment	Logistic management, capacity building, promotion, quality improvement, safety monitoring, public-private partnerships	None indicated

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
14	Reproductive Health Strategic Plan	2009-2011	<ul style="list-style-type: none"> <li>- Reduce morbidity &amp; mortality among WIFA</li> <li>- Increase access to micronutrient supplements</li> <li>- Increase knowledge of maternal &amp; child nutrition among caregivers &amp; pregnant women</li> </ul>	60% of infants initiate BF within 1 <sup>st</sup> hour of birth	Health care workers, caregivers, civil society organizations	Maternal nutrition, diet of pregnant women, micronutrient supplementation (iron, vitamin A),	Integration & coordination of MIS, BCC, research, M&E, job aids, capacity building, scale-up of neonate facilities with special care in districts	diet of pregnant women, diet of young children
15	National Policy for the Prevention and Control of Chronic Non-Communicable Diseases in Ghana	2012-2016	Reduce incidence & prevalence of NCDs, as well as its risk factors	None indicated	pregnant women, newborns, infants, children, adolescents, youth, adults & elderly	Improved diets, physical activity & healthy lifestyles, food environment, WASH, preventive health screening, immunization of children	Early detection, clinical care, capacity building, surveillance, integration of services, partnerships, financing, research & development, M & E	Promote intake of fruits vegetables, high fibre foods; reduce energy-dense foods, salt, trans fatty acid & sugar in diet; reduce alcohol intake; discourage marketing of soda
16	Strategy for the management, prevention and control of chronic NCDs in Ghana	2012	<ul style="list-style-type: none"> <li>- Reduce exposure to risk factors of NCDs</li> <li>- Reduce % of adults who drank alcohol 4 or more times in past 7 days</li> <li>- Reduce % of inactive adults in past 7 days</li> <li>- Promote healthy eating &amp; healthy diet</li> <li>- Reduce overweight &amp; obesity</li> <li>- Reduce consumption of salt b</li> <li>- Reduce % of adults eating &lt;5 vegetable or fruit servings</li> <li>- Prevent vaccine preventable NCDs</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce alcohol consumption to 16% (males) &amp; 6% (females) by 2013</li> <li>- Reduce inactivity from 53% to 48% (females) &amp; from 27% to 22% (males) by 2013</li> </ul>	All age groups	Immunization, diet quality improvement, screening for NCDs, treatment of NCDs, physical activity & active lifestyle	Behavior change communication, clinical care, improving access to care, improved quality of care, surveillance; taxation of unhealthy food	Vegetable & fruit consumption,
17	Strategic Plan for the Prevention and Control of Non-Communicable Diseases in Ghana	2019	<ul style="list-style-type: none"> <li>- Reduce exposure to risk factors that contribute to NCDs</li> <li>- Strengthen early detection &amp; management to reduce morbidity &amp; mortality associated with NCDs</li> <li>- Strengthen the Health System for NCD Prevention &amp; Control</li> </ul>	<ul style="list-style-type: none"> <li>- Scale-up of MICN strategy by 2024</li> <li>- 50% of regional level facilities with alcohol &amp; other substance abuse</li> </ul>	General population	BCC on risk factors for NCDs (diet, alcohol, tobacco use, physical inactivity, air pollution) mental health, oral health & injuries including RTAs, health education in schools on all NCDs, Public education on Hepatitis B, HPV & SCD, implementation of maternal, infant & young child	Monitoring & evaluation, multisectoral coordination, collaboration, community engagement, communication,	Maternal, infant & young child feeding communication, improved diet quality, & physical activity

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
			<ul style="list-style-type: none"> <li>- Strengthen multi sectoral collaboration for NCD Prevention &amp; Control</li> <li>- Ensure sustainable funding &amp; other resources for NCD prevention &amp; control</li> </ul>	<ul style="list-style-type: none"> <li>- rehabilitation services by 2024</li> <li>- 70% of schools implementing nutrition friendly guidelines by 2024</li> <li>- 15% reduction in salt content of processed food by 2024</li> </ul>		nutrition program, provision of safe & enabling environment for physical activities		
18	Ghana National Newborn Health Strategy and Action Plan	2014-2018	<ul style="list-style-type: none"> <li>- Reduce neonatal mortality</li> <li>- Prevent neonatal infections</li> </ul>	<ul style="list-style-type: none"> <li>- 65% of infants initiate BF within first hour of birth</li> <li>- 80% of neonates exclusively BF</li> </ul>	Newborns & infants	EBF, Immunization, vitamin K at birth, skin-to-skin contact at birth (KMC), care of pre-term or LBW baby, management of illness, newborn & infant nutrition	Leadership, coordination, care standards, advocacy, BCC, community engagement, partnership building, supervision, financing, capacity building, quality improvement, monitoring & evaluation	EBF
19	National Tuberculosis Health Sector Strategic Plan for Ghana	2015-2020	None indicated	<ul style="list-style-type: none"> <li>- Provide therapeutic feeding to malnourished TB patients,</li> <li>- prevent TB infection,</li> <li>- treat TB cases</li> </ul>	Population at risk of TB, TB patients	Nutrition assessment of TB patients, nutrition guidelines for TB management, ready to use therapeutic foods	Resource mobilization, capacity strengthening, multi-sectoral coordination, superior screening & algorithm & diagnostic tools, WHO protocol - evidence	ready to use therapeutic foods, dietary guidelines, food supplements
20	Adolescent Health Policy and Strategy	2016-2021	None indicated		Adolescents	Anemia, sub-optimal diets, NCDs, SRH, family planning, substance abuse	Financing, partnerships, services, supervision, M&E	None indicated
21	Maternal and child health booklet	2017	Provide information on caring for mothers & young children	None indicated	Caregivers of infants & young children	diets for pregnant women, infants & young children (4-star diet); child immunization; vitamin A supplementation for young children; health care seeking, family planning; water & sanitation guidance	Communication, advocacy, & service delivery related to birth weight measurement, & growth monitoring, capacity building	4-star diet, BF, CF
22	Ghana National Newborn and Child Health Advocacy	2019-2023	- Improve Implementation of Essential Newborn Care (ENC)	- Increase early initiation of BF from 52% in	Infants & children	Under 'Essential care for all babies':	Scale up of interventions including nutrition components, tools- job aids,	BF, human milk fortifiers & preterm formulas

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	and Communication Strategy and Year One Work Plan		<ul style="list-style-type: none"> <li>- Increase early initiation of BF (within 1 hour of birth).</li> <li>- Increase EBF up to 6 months.</li> <li>- Increase documentation of birthweight of babies in institutions/facilities.</li> </ul>	<ul style="list-style-type: none"> <li>2017 to 70% in 2023.</li> <li>- Increase EBF from 43% in 2017 to 70% in 2023.</li> <li>- Increase documentation of birthweight of babies from 50.9% in 2017 to at least 80% in 2023.</li> <li>- Reduce neonatal mortality rate from 25 to 18 per 1,000 live births by 2023</li> <li>- Reduce stillbirth rate from 15 to 10 per 1,000 by 2023</li> <li>- Reduce neonatal mortality rate by at least 40% by 2023</li> </ul>		<p>Skin-to-skin contact, early initiation of BF within 1 hour, counseling on preventive care, BF, identification of problems, &amp; care seeking.</p> <p>Under 'Special care for at-risk, small &amp; sick newborns, Special Care Newborn Unit (SCNU): supplies for feeding babies who cannot swallow or suck properly.</p>	<p>manual, promotion of EBF &amp; continued BF &amp; support, promote adherence to WHO ICBMS, explore accreditation processes, prioritization of recording keeping of maternal &amp; neonatal information</p>	
23	Ghana Reproductive Maternal Neonatal Child and Adolescent Health and Nutrition Strategic Plan	2020-2025	<ul style="list-style-type: none"> <li>- Universal access to better &amp; efficiently managed quality services</li> <li>- Eliminate avoidable maternal, child &amp; adolescent deaths &amp; disabilities</li> <li>- Increase access to responsive clinical &amp; public health emergency services for RMNCAH&amp;N</li> <li>- Ensure that women, babies &amp; children do not only survive deaths &amp; disabilities but are in the best state of health within an</li> </ul>	<ul style="list-style-type: none"> <li>- Reduce anemia prevalence: <ul style="list-style-type: none"> <li>• from 26.4% in 2018 to 19% by 2030 (adolescents)</li> <li>• from 21.7% in 2018 to 14% by 2025 (WIFA)</li> </ul> </li> <li>- Prevalence of stunting among U5 from 21.4% in 2018 to 14% in 2025</li> </ul>	Newborn, infant, child, adolescent, women	<p>Safe motherhood, family planning, Information &amp; counselling on human sexuality, responsible sexual behaviour, responsible parenthood, pre-conceptional care &amp; sexual health, nurturing care &amp; early childhood development in facilities &amp; communities, school health &amp; nutrition services, prevention &amp; management of malnutrition at community &amp; facility levels, preventive &amp; promotive services for children,</p>	<p>Enabling environment for BF &amp; CF, optimal maternal nutrition, anaemia &amp; other micronutrient deficiencies among WIFA &amp; children, monitoring &amp; evaluation, multisectoral coordination &amp; collaboration, increase advocacy for improving social systems to support women, Institutionalization of BFHI in all health facilities, awareness &amp; enforcement of regulation of marketing of breast- milk</p>	<p>promote optimal child BF, CF, diverse diet, infant &amp; young child feeding communication</p>



	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
			enabling environment	<ul style="list-style-type: none"> <li>- Prevalence of overweight in women from 24.5% in 2018 to 17% by 2025</li> <li>- Prevalence of obesity in women from 14.5% in 2018 to 7% by 2025</li> </ul>		including adequate equipment & supplies, adequate supply of essential health & nutrition supplies, including paediatric formulations of medicines for treating childhood illness	substitutes, SBCC strategies on infant feeding through mass media & social mobilization Community & religious bodies engagement	
24	National Community-Based Health Planning Services Policy	2016-2021	<ul style="list-style-type: none"> <li>- Prevent &amp; control spread of communicable &amp; NCD &amp; promote healthy lifestyles</li> <li>- improved nutrition</li> <li>- WASH</li> <li>- family planning</li> <li>- vaccination</li> <li>- treatment of diseases</li> </ul>	None indicated	Health system	Inequities in health care & nutrition services, water & sanitation, growth promotion, antenatal care	Scale-up of physical access to health care, especially in rural settings, resource mobilization, surveillance, Communication, capacity building	None indicated
25	Revised National Health Promotion Policy	2016-2021	<ul style="list-style-type: none"> <li>- to strengthen the health promotion capacity</li> <li>- empower communities to improve their health</li> </ul>	None indicated	General population	Food security, nutrition information & WASH,	BCC, social mobilization, advocacy, funding, capacity building	None indicated
26	National Health Policy: Ensuring Healthy Lives for all	2020	Promote healthy eating Promote good nutrition status Improve access to optimal WASH	None indicated	Health system	Water, sanitation & hygiene, social protection, healthy eating, & nutrition promotion, family planning food environment, nutrition disorders	Coordination, collaboration, setting targets, multi-sectoral policy planning & implementation, budgets & resource mobilization, research, capacity building, community ownership & participation, BCC, monitoring & evaluation	Healthy eating & diets, food environment
27	Ghana's Roadmap for Attaining Universal Health Coverage	2020-2030	Universal access to better & efficiently managed quality health care services  Reduce unnecessary maternal, adolescent & child deaths & disabilities	<ul style="list-style-type: none"> <li>• Attain 100% health insurance coverage for primary level services</li> <li>• Reduce maternal mortality ratio by 2/3 over 2017 figures</li> </ul>	Poor & vulnerable – children, adolescents, women & the aged	WASH, vaccination, nutrition supplementation, family planning, anaemia, non-communicable diseases, growth monitoring & promotion	M&E, collaboration, coordination, community engagement, resource mobilization	Nutrition supplementation

	Document name	Year(s)	Nutrition relevant objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
			Increase access to responsive clinical & public health emergency services	<ul style="list-style-type: none"> <li>• Reduce new-born, infant &amp; child mortality rates by 1/2 over 2017 figures</li> <li>• Reduce by 1/3, pre-mature mortality from NCDs &amp; mental health</li> </ul>				
28	Breastfeeding Promotion Regulation 2000 (LI 1667)	2000	Promote, protect, & support optimal BF	Not indicated	Infants & young children	<ul style="list-style-type: none"> <li>- Prohibition of promotion of BMS</li> <li>- Protection against conflict of interest</li> <li>- Guidance on communication of BMS</li> </ul>	Punitive actions, administrative requirements	Optimal BF
29	Public Health Act 2012 (Act 851)	2012	Promote & protect health of the population	Not indicated	General population	Promoting safety of food for sale, protection from exposure to smoke inhalation & tobacco, food quality, food adulteration, mandatory food fortification, food standards, promotion & advertising of food	Punitive actions, administrative requirements	Food quality, food environment, food safety
<p>- BCC- Behavior Change Communication; CF-Complementary feeding; BFHI- Baby Friendly Hospitals Initiative; BMS- Breast Milk Substitutes; EBF- Exclusive BF; IEC- Information Education and Communication; GMP-Growth Monitoring and Promotion; HH- Households, ICMBIS-International Code of Marketing of Breastmilk Substitutes; IFA- Iron &amp; Folic Acid; IPT- Intermittent Preventive Treatment; IYCF-Infant and Young Child Feeding; JHS- Junior High School; KMC- Kangaroo Mother Care; NACS- Nutrition Assessment, Care &amp; Support; MCH- Maternal and Child Health; M&amp;E- Monitoring &amp; Evaluation; MICN-Maternal Infant Child Nutrition; MIS-Management Information Systems; LBW- Low Birth Weight; NCD- Non-communicable diseases; PLWHA- Persons Living With HIV/AIDS; RUTF-Ready to Use Therapeutic Foods; SBCC- Social Behavior Change Communication; SFP- School Feeding Program; SHS-Senior High School; SRH- Sexual and Reproductive Health; TB- Tuberculosis WASH- Water, Sanitation &amp; Hygiene; TVET-Technical and Vocational Education and Training; WHO- World Health Organization; UN-United Nations; WIFA- Women in Fertile Age; PLWHA- Persons Living with HIV/AIDS</p>								



## Appendix 2: Food system and food environment policies and programs in Ghana

	Document name	Year published	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
1	Food and Agriculture sector Development Policy (FASDEP II)  (But under review)	2007	Improved food security & emergency preparedness especially among at risk groups  Improved food safety  Promote access to nutritious food, & nutrition & health information	None indicated	Farmers & farming households, consumers	Introduce high-yielding & short-duration crops varieties Production diversification, Value addition, food fortification, farming input support, capacity building, sustainable resource management, growth in incomes	Collaborations, coordination across sectors, use of technology, BCC, agro-processing, advocacy	Food security, food safety
2	Medium Term Agriculture Sector Investment Plan (METASIP II)	2011-2015	Improved food productivity & food security Improved nutrition Increased income growth Awareness creation	Underweight & stunting reduced by 50%, reduce post-harvest losses of staple foods by at least 20% of baseline food insecurity reduce by 20% of baseline	Farmers & farming households, consumers	food fortification, food storage & distribution, Diversification of livelihoods, Reduce post-harvest losses, agro-processing, food safety,	Irrigation, mechanization, farming input support, Target vulnerable groups with grants/subsidies, capacity building, sustainable resource management, coordination	Food security, food safety, diet quality
3	Investing for Food and Jobs (IFJ): An Agenda for Transforming Ghana's Agriculture (METASIP III)	2018-2021	Improved nutrition	None indicated	Farmers & farming households, consumers	-Improve production efficiency & yield Improve post-harvest management -Develop bio-fortified high-nutrient crops & link to school feeding programme. - Develop & promote food-based dietary guidelines livestock & poultry development for food & nutrition security	Subsidies, input supplies; digital technologies across value chain, extension support, increased investment	Food safety, value addition to food, diet quality,
4	Social Development Strategy for the Long-term National Development Plan for Ghana (2017-	2017-2057	-Progressively eliminate poverty -Promote adequate dietary energy consumption -Decrease childhood wasting	-All Ghanaians to become food and nutrition secure by 2057 -Improve maternal and child nutrition by 2021	Infant and young children  Women of reproductive age  youth	Increased yield through inorganic fertilizer; aquaculture; agro-biodiversity	Advocacy, increased food productivity, public private partnerships, capacity strengthening, leverage ICT	healthy lifestyles; promote local foods; school nutrition programming,

	Document name	Year published	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	2057): Food and Nutrition Security		-Eliminate infant hunger through adequate breastfeeding and complementary feeding -Reduce post-harvest food losses -Sensitization on good food consumption to eliminate child and adult overweight and obesity -Improve infant and young child feeding -Promote dietary diversification -Promote consumption of micronutrient rich foods	Improve nutritional value and food safety along value by 2025 -Chain and improve on childhood stunting by 2025 -Diversification for healthy diets by 2029 -Enhanced food system resilience by 2057				
5	Ghana Livestock Development Policy and Strategy	2016	Improved food & nutrition security; enhance supply (production & productivity) of meat, livestock & dairy products & income; enhance value addition	None indicated	Farmers & general population	Increased supply of animal source foods	Input supply livestock health capacity building	Food & nutrition security, increased animal source food supply
6	Planting for food and jobs	2017-2020	improved productivity & intensification of food crops	None indicated	Farming household & consumers	Timely access to quality seeds, availability & use of fertilizer,	Access to extension service, address price volatility, improved governance & targeting, improved marketing	Food security
7	Tree Crops Policy	2008	Ensure food security	None indicated	Farming household & consumers	Increased production & productivity of tree crops Promote product quality Promote biodiversity	Extension & GAPs mechanization, capacity building, processing, coordination infrastructure enhancement,	Food security
8	Fisheries Management Plan of Ghana	2015-2019	Improve food security	None indicated	Stakeholders in fish value chain	Availability & sustainability of fish/marine resources	Governance of fisheries resources, sustainability of fish & marines resources	Food security
9	National Seed Policy	2013-2018	None indicated	None indicated	researchers, farmers, producers, processors or consumers (traders, administrators,	None indicated	Coordination, capacity building, multisectoral collaboration	Food security, seed security

	Document name	Year published	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
					managers, instructors, students)			
10	National Seed Plan	2015-2020	None indicated	None indicated	researchers, farmers, producers, processors or consumers (traders, administrators, managers instructors, students)	None indicated	Coordination, capacity building, multisectoral collaboration	Food security, seed security
11	Root & Tuber Improvement & Marketing Programme (RTIMP)	2007-2014	Enhance income & food security to improve the livelihoods of the rural poor	None indicated	Rural poor	None indicated	Coordination, monitoring & evaluation, support to root & tuber production, enhancing root & tuber processing, capacity building (business & market skills), networking, technology transfer	Food security
12	National Policy for Aflatoxin control in food & feed	2020 (draft)	<ul style="list-style-type: none"> <li>-To promote food &amp; feed safety</li> <li>-Strengthen research &amp; technology transfer on aflatoxins</li> <li>-Strengthen surveillance systems for the detection of aflatoxin-related foodborne diseases</li> <li>-Increase public awareness, advocacy, communication &amp; demand for aflatoxin-safe food &amp; feed</li> <li>-Develop mechanisms for strengthening consumer protection</li> </ul>	None indicated	General population	<ul style="list-style-type: none"> <li>-Increase public awareness, advocacy, communication &amp; demand for aflatoxin-safe food &amp; feed</li> <li>-Develop mechanisms for strengthening consumer protection</li> <li>-Testing for aflatoxin in food &amp; feed</li> <li>-Grading of grains</li> <li>-Packaging &amp; labelling of grains</li> </ul>	Research, surveillance, increase public awareness, advocacy, communication and demand for aflatoxin-safe food and feed, develop mechanisms for strengthening consumer protection, testing for aflatoxin in food & feed, packaging & labelling of grains  GAP from pre-harvest to storage	Food safety, food security
13	Guidelines for the labelling of pre-packaged foods	2013	None indicated	None indicated	Pre-packaged food importers & exporters, food manufacturers, producers & processors, consumers	None indicated	Appropriate packaging, clear/ visible labelling, relevant label information	Food safety, labelling, packaging
14	Food Safety Guidelines For Metropolitan, Municipal and	2020	Mainstream food safety in government institutions and operational by-laws	None indicated	Ministries, Departments, Agencies Market women/men, Trade Associations,		Behavior change communication, standards, M&E	

	Document name	Year published	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	District Assemblies in Ghana				Regulatory institutions			
15	Universal Salt Iodization Strategy III and Action Plan	2016-2020	-Salt for human and animal consumption meets quality and iodization standards -Households know about & consume adequately iodized salt	-90% of households use adequately iodised salt by 2020 -60% of salt producers use appropriate technology -all salt for human and animal consumption is adequately iodized by 2020	Extension workers (health, education, etc); households; salt producers, importers, and marketers, media	Increase iodized salt production, promote iodized salt consumption	Establish salt Unit in MoTi, legislation enforcement, quality assurance, BCC, advocacy, promote technology uptake by producers, District salt plans, iodization sites at major markets, capacity building, penalties	Increase iodized salt consumption
16	Irrigation Policy	2011	Improved food security Intensified & diversified production	None indicated	Non indicated	improved, responsible productivity	Environmental management, private sector investment, funding, capacity building,	Food security
17	Savannah Accelerated Development Authority (SADA): Synopsis of Development Strategy	2010-2030	Improve access to food & sustainable livelihoods security	None indicated	Inhabitants of northern savannah ecological zone – poor peasants especially women	Improve access to food & sustainable livelihoods, men & women empowerment, sustain food crop production management of flood-prone riverbeds	Community engagement, M&E, collaboration, capacity building, resource mobilization	Food security
18	Fisheries Act (Act 625)	2002	None indicated	None indicated	General population	None indicated	Licensing of fishing, closed seasons, Authorization and prohibitions, M&E	Fisheries sustainability
GAP-Good agriculture Practices; M&E- Monitoring & Evaluation								



### Appendix 3: Human development policies relevant for nutrition in Ghana

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
1	Small communities water & sanitation policy	2005	Improve public health & economic well-being of communities through provision of adequate, safe & sustainable water	Improve coverage of potable water to 85 % of the populace by 2015	men, women & children	None indicated	Monitoring & evaluation	None indicated
2	National Water policy	2007	To ensure entire population, particularly the poor vulnerable, will have access to adequate & potable water	None indicated	Women, girls & children, men (& boys)	None indicated	Monitoring & evaluation	Food security & income generation
3	Environmental Sanitation Policy	2010	raise awareness of benefits of improved environmental sanitation, related to health, food hygiene and general environment	None indicated	individuals, households and communities	None indicated	Behavior change communication	Food safety, environmental sanitation
4	National Environmental Sanitation Strategy & Action Plan	2010	None indicated	None indicated	vulnerable people, women & children, the poor	None indicated	Advocacy & communication	None indicated

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
5	National climate change adaptation Strategy	None indicated	Promote farming technologies that enhances productivity of agriculture (food security) Increased availability of water for agriculture Ensure healthy population Improved nutritional status	None indicated	None indicated	Promote fish farming	M&E, fish farming, enhance agricultural productivity, environmental sanitation improvement,	Food security,
6	Strategic Environmental Sanitation Investment Plan	2015	None indicated	None indicated	None indicated	None indicated	None indicated	None indicated
7	Water sector strategic development plan	2012-2025	Maximise health benefits through integration of WASH education interventions	-Increase urban water coverage to 100% in 2025 -60% households in rural communities and small towns practise hand-washing with soap -Increase sanitation	Government agencies involved in water sector	Service delivery in rural and urban areas	Capacity Development, Governance, Finance, Knowledge Management, Gender, M&E, Water Resource Management	None indicated

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
				coverage 100% by 2025				
8	Livelihood Empowerment Against Poverty (LEAP)	2008	Improve basic households consumption and nutrition. Increase access to welfare services (health, productive capacity)	None indicated	Ultra-poor households; unemployed elderly (65+), severe disability	Access to health care	Cash grants, health insurance premiums, school enrolment for young children, vaccinations, targeting of beneficiaries	None indicated
9	National Social Protection Policy	2015-2031	Reduce proportion of men, women & children of all ages living in poverty in all its dimensions.	Reduce by at least 50% the proportion of men, women & children of all ages living in poverty in all its dimensions by 2030	men, women & children of all ages	None indicated	Monitoring & evaluation, advocacy,	None indicated
10	National Gender Policy	2015-2020	Enforce implementation of existing health & nutrition programs	None indicated	Disadvantaged women, men, adolescents & children	None indicated	M&E, advocacy	None indicated
11	National Plan of action for orphans and	2010-2020	-Mothers provided with food rations to remain in	Food rations to 3150 PLWHIV by 2012	Orphans, households with orphans, caregivers of	Food rations; Linkage with LEAP	Capacity strengthening, improved quality of	Providing food rations;

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	vulnerable children		good health and supported to care for their children -Food and nutrition support to parents and children infected or affected by HIV -Identify & link extremely poor families to LEAP	20% reduced mortality of parents by 2012  45% of LEAP households have OVC	Orphans and vulnerable children, persons infected with HIV		services, empower support groups	food security
12	Ghana National Guidelines for Nutrition-Friendly Schools	2019	Provide a framework to address double burden of nutrition-related ill health & to connect all school-based health & nutrition programs.	None indicated	school-aged children, cooks & caterers, domestic bursars, teaching & non-teaching staff, parents & the community	BCC for optimal nutrition, SHR, physical activity & hygiene, health & nutrition services, safe & supportive environments Provision of fruits & vegetables,	food demonstrations, BCC, M& E, supervision, capacity building, community engagement, sensitization & advocacy, reporting & data management, advocacy	School health & nutrition, food safety, food environment, food quality

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
						School meal standards,		
13	Education Strategic Plan	2010-2020	None indicated	None indicated	Boy/girl, pupils/students	None indicated	Monitoring & supervision	None indicated
14	School Health Education Programme	2005	Promote healthy diet & lifestyles Avoid exposure to alcohol & tobacco Provide nutrition & food safety education Food vendors & cooks are medically certified	None indicated	school -aged children	Food safety & quality, nutrition education, regular assessment of children's nutritional status.	Advocacy & decentralized implementation	Food safety & food hygiene
15	National School Feeding Policy	2015	Foster local economic development through capacity support for local enterprises involved in food production, marketing & processing	None indicated	children	None indicated	Monitoring, Evaluation & Information-Sharing	None indicated
16	Early Childhood Care &	2004	Promote nutrition & household food security	-immunization of at least 80% of	Children, women, parents, caregivers, pre-school teachers	Reduce childhood malnutrition,	Capacity building. collaboration, coordination,	promote optimal child BF,

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	Development Policy		Promote the survival, growth & development of all children (0-8 years) leading to the realization of a healthy nation	infants (0-11 months) by 2005 -reduce infant mortality rate from 57 to 50/1000 births -decrease LBW from 8% to 5% by 2003; -increase EBF to 50% by 2006		promote BF, immunization, growth promotion services, IYCF & nutrition & health standards	advocacy, resource mobilization, M&E	CF, diverse diet, food security
17	National Aging Policy	2010	Improving health, nutrition & well-being of older persons	None indicated	elderly men & women	Control of diarrhea diseases, malaria control	Service provision, M&E	None indicated
18	National Youth Policy	2010	None indicated	Promote participation of youth modern agriculture as a viable career opportunity	Youth	None indicated	M&E	None indicated
19	National Youth Policy	2014-2017	None indicated	None indicated	Youth	None indicated	Advocacy	None indicated



	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
	Implementation Plan							
20	National Urban Policy Action Plan	2012	Attend to the hygiene & quality of food for the urban public. Strengthen & enforce regulations to ensure safe public foods & protection of consumer health.	None indicated	None indicated	None indicated	Develop logistic capacities, M&E	Food security
21	National Population Policy	1994	None indicated	Reduce infant mortality from 66 to 22/1000 births by year 2020	Women, men, children	None indicated	M&E	None indicated
22	Medium Term Expenditure Framework	2014-2016	Improve access to quality maternal, neonatal, child & adolescent health & nutrition services	Reduce Under-five malnutrition rate to 8% by 2014	Children, pregnant women	None indicated	Planning, Budgeting, M&E	None indicated
23	Coordinated program of economic and social development policies	2010-2016	Ensure a healthy population capable of contributing to national socio-economic development through food & nutrition security	None indicated	General population	prevent food losses, locally grown nutrient rich food,	Resource mobilization, research, communication & stakeholder engagement,	food & nutrition security

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
						eliminate overweight	coordination, monitoring & evaluation, use of evidence, community engagement & involvement,	
24	Ghana Shared Growth & Development Agenda Vol I	2010-2013	-Reduce malnutrition-related disorders & deaths among infants & young children & WIFA -Promoting consumption of locally available & nutritionally adequate food -increased food security & social protection for vulnerable households	None indicated	Elderly, infants & young children & Women in their Reproductive Ages	healthy lifestyles & diet; Promote balanced diet in deprived communities	M&E	Food security
25	Ghana Shared Growth & Development Agenda Vol II	2010-2013	improved agricultural productivity; • promote selected crop development for food security, export & industry;	None indicated	infants & young children & Women In their Fertility Ages	Reducing malnutrition-related disorders & deaths among children and WIFA	M&E	Food security

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
			<ul style="list-style-type: none"> <li>• promote livestock &amp; poultry development for food security &amp; income;</li> <li>• promote fisheries development for food security &amp; income; &amp;</li> </ul>			<ul style="list-style-type: none"> <li>• promote local food</li> <li>• address food security &amp; social protection for vulnerable households</li> <li>-mitigate impacts of rising food prices as</li> </ul>		
26	Labour Act (Act 651)	2003	None indicated	None indicated	Employers and employees	- maternity protection	Feeding breaks for nursing mothers; sanctions, fines and sanctions	IYCF
	Coordinated program of Economic and Social Development Policies	2017-2024	<ul style="list-style-type: none"> <li>-Ensure food security</li> <li>-Promote good nutrition</li> <li>-Institute measures to prevent food losses</li> <li>-promote production and use of local nutrient-rich foods</li> </ul>	None indicated	Young children, adults	None indicated	Planning, M&E, intersectoral actions, PPP,	Food security, nutrition promotion, nutrition research

	Document name	Year published or initiated	Nutrition relevant Objectives of document	Nutrition relevant policy or program targets	Target group	Specific nutrition-relevant actions outlined in policies or programs	Implementation approaches	Diet, food or food systems aspects of policies or programs
			-Eliminate child and adult overweight and obesity -Promote research and development in food and nutrition security (FNS)					
27	Medium term policy framework	2018-2021	-End Hunger and all forms of malnutrition, including overnutrition -ensure food and nutrition security Promote good nutrition -strengthen food and nutrition security governance		Infants, adults	Prevent food losses, production of diversified, nutrient-rich food, health lifestyles, nutrition-sensitive interventions	Data and information systems, strengthen multi-sector platform, social mobilization, advocacy, capacity building, legislation and regulations, budget tracking, nutrition-sensitive trade and investments	Food security, nutrition promotion, nutrition research

BF-breastfeeding; CF-Complementary Feeding; EBF- Exclusive Breastfeeding; IYCF-Infant and Young Child Feeding; LBW-Low Birth Weight; M&E- M&E-Monitoring and Evaluation; WIFA- Women in Fertile Age;

#### Appendix 4: Nutrition Programs implemented between 2010 and 2020 in Ghana by the Ministry of Health and Ghana Health Service

	intervention	Nutrition issue of interest	Implementation platform(s)	Target group	Status	Coverage	Implementing agency(ies)	Reported gaps
1	Behavior change communication on diets (Four Star diet)	Address sub-optimal diets and malnutrition, including overweight and obesity	GoodLife initiative	General public	Currently not being implemented	Nationwide	Ghana Health Service	
2	Mandatory Food fortification (wheat flour and vegetable cooking oil)	Multiple micronutrient deficiencies-particularly iron	Prepackaged market products	General public	Currently being implemented	Nationwide	Ghana health Service Food and Drugs Authority Flour mills	Sub-optimal fortificant levels in market survey Non-promotion of fortification
3	Universal Salt iodization	Iodine deficiency disorders	Packaged iodated salt on the market	General public	Currently being implemented	Nationwide	Ghana health Service Ministry of Trade and industry	Unavailability of testing kits High cost of KIO <sub>3</sub> suboptimal enforcement of legislation
4	Code of marketing of breastmilk substitutes	Unethical exposure to breast milk substitutes	Communities and health systems	Manufacturers, health workers, caregivers	Currently being implemented	nationwide	GHS FDA	Sub-optimal monitoring
5	Community Infant and Young Child feeding and counseling	Sub-optimal child feeding	Child welfare clinics (CWC)	Caregivers of young children <24 months	Currently being implemented	nationwide	GHS, supported by CHV	Early attrition to CWC
6	School meals programs	School enrollment and participation, acute hunger	schools	Basic school children	Currently implemented	Targeted communities	GES, SFP, MLGRD	

	intervention	Nutrition issue of interest	Implementation platform(s)	Target group	Status	Coverage	Implementing agency(ies)	Reported gaps
						s and schools		
7	Planting for food and jobs	Low agricultural yield and productivity	Farming communities	Farm households	Currently implemented	nationwide	MoFA	
8	Vitamin A supplementation	Poor vitamin A status	CWC	children<60 months	Currently implemented	nationwide	GHS, supported by CHV	Early GMP attrition
9	Community-based management of Acute malnutrition (CMAM)	Acute malnutrition	Community case search, home-based or facility-based management	Children <60 months	Currently implemented	nationwide	GHS	Limited availability of CMAM commodities
10	Baby friendly-Hospitals Initiative	Sub-optimal breastfeeding practices	Maternity service-providing health facilities	Pregnant and lactating mothers	Currently being implemented	Nationwide	GHS	Low coverage; only 1/3 of maternity facilities are baby friendly
11	Growth monitoring and promotion (GMP)	growth faltering among young children	Child welfare clinics	Caregivers of young children and children<60 months	Currently being implemented	nationwide	GHS, supported by CHV	Early GMP attrition
12	Expanded Programme on immunisation (EPI)	Vaccine-preventable Infectious diseases	CWC	Children <24 months	Currently implemented	nationwide	GHS	Early GMP
13	Routine deworming	Intestinal worm infestation	Schools		Currently implemented	nationwide	GHS	
14	Iron folate supplementation	Anemia and micronutrient deficiencies	ANC	Pregnant women	Currently implemented	nationwide	GHS	Suboptimal ANC attendance



	intervention	Nutrition issue of interest	Implementation platform(s)	Target group	Status	Coverage	Implementing agency(ies)	Reported gaps
15	Adolescents girls iron folate supplementation	Anemia and micronutrient deficiencies	Basic and high schools	Adolescents girls	Currently implemented	nationwide	GhS GES	
16	Intermittent preventive treatment for malaria (IPT)	Malaria infection	ANC	Pregnant women	Currently implemented	nationwide	GES	Suboptimal ANC attendance
17	Focused Antenatal care	Maternity Complications	ANC	Pregnant women	Currently implemented	nationwide	GES	Suboptimal ANC attendance
18	Maternity protection (maternity leave)	Breastfeeding challenges	Workplace	Lactating working women	Currently implemented	nationwide	MELR, workplaces, trade unions	Inadequate duration of maternity leave, ILO convention not ratified
19	Livelihood Empowerment Against Poverty	Poverty and limited access to resources	Community-based, health facilities	Disabled, ultra-poor	Currently implemented	Targeted communities	MGCSP, GHS,	
20	Family planning	Unplanned pregnancies and maternal malnutrition	Health facilities	Women and men in reproductive age	Currently implemented	nationwide	GHS	Low coverage, cultural misperceptions regarding modern contraceptives

## Appendix 5: Nutrition Projects implemented across sectors between 2010 and 2020

	Project name	Implementing agencies	Implementation coverage	Main government partner	years	Nutrition objectives	strategies	Key outcomes
1	Communicate for Health (C4H) Project	FHI360 (funded by USAID)	Upper West, Upper East, Northern, Greater Accra, and Central	GHS	2015-2018	influence positive behavior change in health and nutrition; strengthen local BCC capacity	Refreshed Goodlife brand; increased coverage of SBCC, target life stages; technical assistance	Exposure to EBF did not change; exposure to CF reduced at end-line; exposure to WASH message, designated handwashing place, intention to wash hands with soap and water increased marginally,
2	SPRING/Ghana Project	JSI Inc., UNICEF, RING	Northern and Upper East Regions	GHS	2014-2018	Increase delivery and demand for high-impact nutrition services in order to reduce anemia and stunting	Multisectoral action focused on first 1000 days of life, MTMSG, community mobilization, SBCC	Reduced stunting, increased exposure to nutrition information, improved child diets and food safety
3	Behavior change support (BCS) project	JHCCP, CARE, PLAN,		GHS	2009-2014	To achieve MDG through sustained and coherent BCC	GoodLife Initiative; blend community, interpersonal, and mass media	

	Project name	Implementing agencies	Implementation coverage	Main government partner	years	Nutrition objectives	strategies	Key outcomes
							approaches; delivered using multiple media (radio, TV, print); systems and 4capacity strengthening;	
5	Nutrition and Malaria Control for Child Survival		5 regions (Northern, Upper West, Upper East, Volta, and Central Regions)	GHS, MoH	2007-2013	improve utilization of selected community-based health and nutrition services for children under the age of two and pregnant women in selected districts	Essential Nutrition actions, Malaria prevention, institutional strengthening,	Improved child feeding, malaria prevention (LLIN use),
6	Food and Nutrition Technical Assistance (FANTA) Project	FHI360		GHS	2007-2013	To introduce CMAM, NACS, and to strengthen maternal and child nutrition services	Evidence-based guidelines development, of evaluation tools, job aids, capacity strengthening, access to supplies,	1,023 facilities provide CMAM services; 15,025 children treated for SAM; 83 facilities provide NACS services; 5,533 PLHIV received

	Project name	Implementing agencies	Implementation coverage	Main government partner	years	Nutrition objectives	strategies	Key outcomes
							intersectoral coordination	RUTF; 18,688 PLHIV received NACS; 132 tutors trained on updated curriculums
7	USAID FOCUS Region Health Project (Health)			GHS	2009-2014			118 trainers and 1738 health care providers trained in aspects of nutrition service delivery
8	Systems for Health Project			GHS	2014-2019			808 Trained regarding Essential Nutrition Actions 661 trained regarding lactation management 339 training regarding Community-based management of acute malnutrition 196 trained regarding prevention, diagnoses, and management of anemia

	Project name	Implementing agencies	Implementation coverage	Main government partner	years	Nutrition objectives	strategies	Key outcomes
9	Mother Baby friendly hospitals Initiative Project	UNICEF	Upper East region	GHS, NHIA	2016-	Increase breastfeeding; Improved governance and policies for breastfeeding	Community mobilization, coordination, quality improvement,	Development of assessment tools, quality improvement tools
10	Food Security and environment Facility Project	MLGRD	Three northern regions	GAC	2008-	Improve food security and food safety	Drip Irrigation, efficient cook stoves, Aquaculture, livestock production, staple food production; solar dryers; storage	Improved productivity; increased shelf life, reduced mortality of livestock, innovation adoption
GAC-Global Affairs Canada ; GHS-Ghana Health Service; MLGRD- Ministry of Local Government and Rural Development ; NHIA- ; National Health Insurance Authority; UNICEF- United National Children's Fund; USAID- United States Agency for International Development								