



Fill the Nutrient Gap Ghana

Summary Report



World Food Programme



Ghana Health Service



Fill the Nutrient Gap Key Steps

- 1) **Define Focus:** identify target groups and geographical and/or seasonal elements from stakeholder consultation and national nutrition data
- 2) **Policy Analysis:** determine if there is an enabling environment for access to and availability of nutritious foods
- 3) **Analysis of Nutrient Availability and Access:** analyse factors including local preferences and practices, and estimate nutrient gaps for key target groups and context-appropriate interventions to fill nutrient gaps
- 4) **Recommendations** for interventions to fill nutrient gaps, identifying roles for different sectors and stakeholders

Fill the Nutrient Gap in Ghana




'Fill the Nutrient Gap' (FNG) is a situation analysis and decision-making tool developed by WFP, in collaboration with UC Davis, IFPRI, EPICENTRE and UNICEF to identify context-specific strategies for improving nutritional intake of vulnerable populations, especially during the first 1000 days. FNG uses secondary data review and linear programming analysis to understand a country or region's nutrition situation, compare the potential impact of interventions and identify programme and policy entry points to ensure nutrient adequacy.

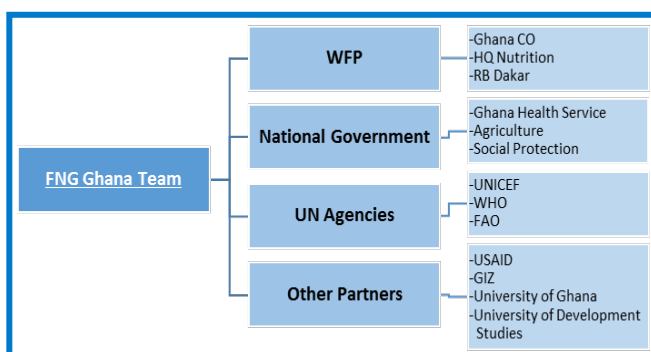
The FNG Ghana team (see below figure)¹ met in November and December 2015 to launch the FNG process and identify the focus of analysis. The team mapped available data, reviewed national policy and secondary data and ran linear programming analysis using Cost of the Diet (CoD) software. Stakeholders met again in April 2016 to discuss the findings and potential interventions for filling nutrient gaps.

1) Define Focus

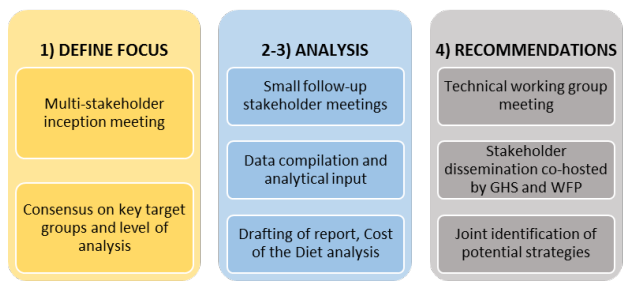
The key target groups for analysis were identified by stakeholders based on consideration of current malnutrition characteristics across

Key Target Groups

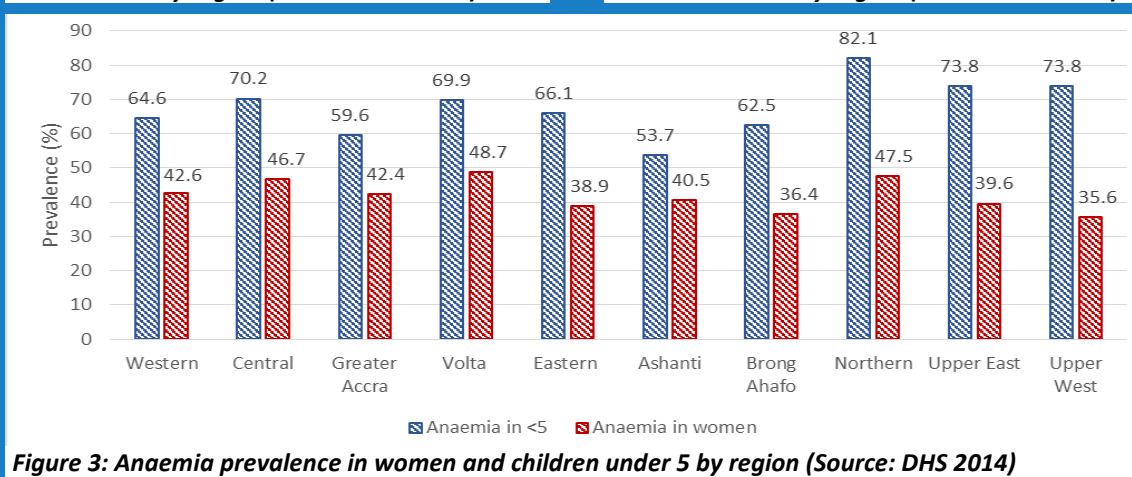
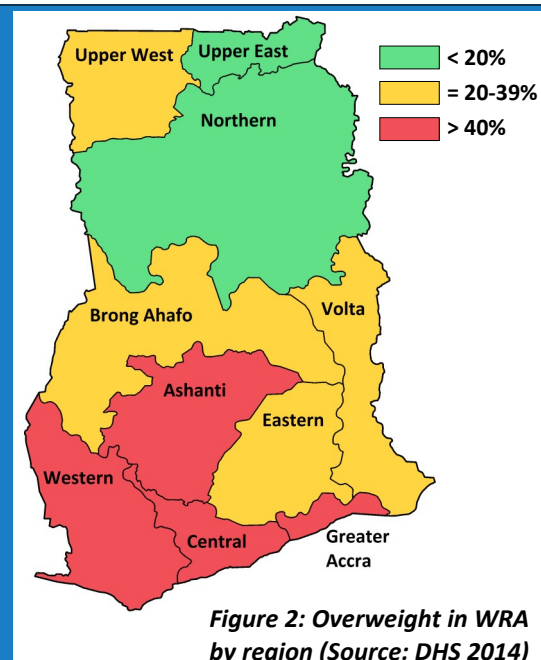
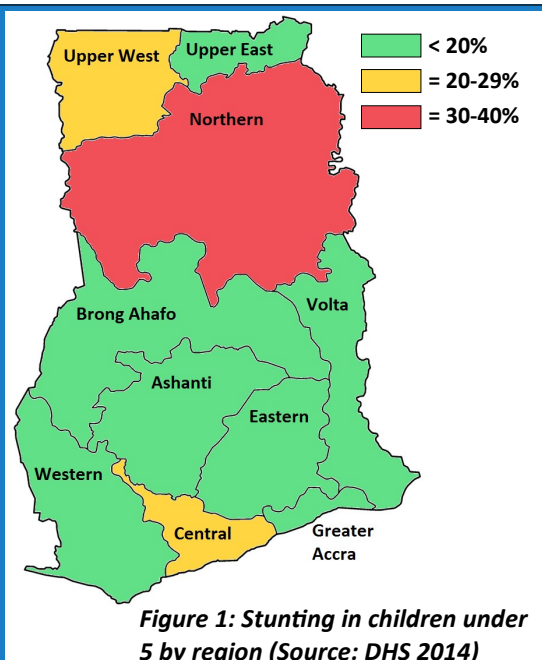
-  **Children 6-23 months**
 - ⇒ Stunting: 19% of children under 5 (Fig. 1)
 - ⇒ Anaemia: 70% of children under 5 (Fig. 3)
 - ⇒ Micronutrient deficiencies: of children under 12 months 17% are Vitamin A deficient and 69% are Zinc deficient
 - ⇒ Overweight: Rising among children under 5
-  **Pregnant and lactating women (PLW)**
 - ⇒ Overweight and obesity: nearly 40% among women of reproductive age (WRA, 15-49 years); lowest in Northern region and highest in Greater Accra (60%) (Fig. 2)
 - ⇒ Anaemia: 40% among WRA (Figure 3)
-  **Adolescent girls**
 - ⇒ Early pregnancy and high nutrient needs make adolescents a key subgroup of women of reproductive age



Stakeholder Engagement Process



1. Please see full report for a complete list of stakeholders from various sectors. 2



2) Policy Analysis

An enabling policy environment provides entry points for nutrition interventions and promotes eventual implementation. While Ghana has a wide range of policies and national programmes, coverage and compliance vary widely. Key policies and programmes by entry point are:

National Policy and Legal Framework

- o National Nutrition Policy (2013): draft awaiting approval
- o Mandatory fortification: compliance varies by region and is only 39% for salt (lower in the North)
 - Flour—vitamin A, B vitamins, iron, zinc
 - Oil—vitamin A
 - Salt—iodine
- o Food quality and safety: regulation is weak

Fortified Complementary Foods and Specialised Nutritious Foods

- o Local production: regulation and monitoring need strengthening, especially kitchen scale
- o Public-private partnerships exist to increase availability and affordability: Kidifeed (GAIN

and Yedent), InstaTom (Affordable Nutritious Foods for Women)

Social Protection

- o LEAP cash transfers to the extreme poor
- o Pilot of LEAP 1000 being scaled up
- o Targeting is not specific to FNG target groups

Health and Nutrition Services

- o Community level: CHIPS (Community-based Health Planning and Services), nutrition counselling, growth monitoring
- o Supplementation: Vitamin A (children under five years, Lactating Women)

School Feeding

- o National School Feeding Programme in all regions, focus on deprived communities
- o Coverage: <10% among children attending primary school

Nutrition-Sensitive Agriculture

- o Ministry of Food and Agriculture promotes nutrition education through agricultural extension workers
- o Farm Radio International project to promote orange-fleshed sweet potato



3) Analysis of Nutrient Availability and Access

Food security and nutrition in Ghana vary by season and region. During lean seasons food prices rise, especially in the regions of the North, and poorer households struggle to access food, suggesting that Minimum Acceptable Diet maybe particularly low at this time. Seasonality and affordability of complementary foods affect feeding patterns and care practices; affordable foods may not be perceived as healthy or convenient.

Availability

- Seasonality: particularly affects dietary diversity for the poorest households, who rely on their own food production
- Local capacity for production of specialised nutritious foods exists, and ranges from industrial to kitchen-scale.
- Locally available complementary foods are often fortified inadequately or inconsistently.
- Aflatoxin contamination is a persistent concern for staples including maize and groundnuts.

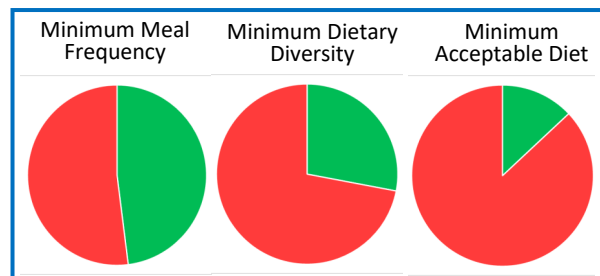
Access

- Regional variation is high, and Food Consumption Score (FCS) are generally higher in the South than the North.
- Seasonal affects are strong: one study found > 50% of households in two regions of the north regions unable to provide three meals per day for all members during the lean season.
- Market access is poor in many regions (Western, Eastern, Upper West, Northern), with up to three days travel in some areas.

Nutrient Intake

- Nearly all children are breastfed, but practices are suboptimal:
 - Early initiation is 60%
 - 52% are exclusively breastfed

- Duration falls short of the recommended 24 months (90% breastfed until 12-15 months)



- Minimum Acceptable Diet in children months is very low, reflecting low dietary diversity.
- The nutrient requirements that women and children U2 have difficulty meeting are: calci-

GHS programme	Children (6-59 months)	Women
Vitamin A	65%	68% (postpartum)
Iron Folate		≤89% ² (≥90 days)
Deworming	38%	39% (pregnant)
Not national programme		
Iron	24%	

- um, zinc, B vitamins, and iron (& vit C for U2).
- Supplementation coverage often varies by region and urban/rural locality:

Local Preferences and Practices

- Cultural food taboos vary by region and include no eggs for children or PLW, and no plantains for lactating women.
- Local beliefs sometimes dictate delaying introduction of solid foods until a child can walk.
- Key influencers of decisions on infant and young child feeding: health workers, then mothers

Modelling Dietary Improvement





The secondary data on availability and access, as well as actual nutrient intake and influencing cultural factors, informed affordability modelling and intervention recommendations. Results from two linear programming analyses were used to examine whether optimised diets with locally available foods could meet nutrient needs for target groups.

An **Optifood** analysis for children 6-23 months in two sites (one in Northern Region, one in Central) found that the current dietary patterns make it difficult to meet nutrient needs using local foods. Improving availability of affordable nutrient dense foods in these areas have the potential to improve the current nutrient intake of this target group.

Cost of the Diet analysis was conducted using secondary data on market prices from the Ministry of Food and Agriculture and household composition and expenditures. The software calculates the lowest cost locally available diet that meets nutrient needs when constrained for local staples (the SNUT diet). Regional unaffordability of SNUT ranged from 10% (Greater Accra) to 78% (Northern Region), with correlation between unaffordability and stunting prevalence.

Four types of potential interventions to improve affordability were modelled based on the secondary data analysis, current or planned national interventions, and stakeholder suggestions: The North and the South were analysed separately, given the higher rates of stunting in the former north and the higher rates of overweight in the latter, as well as the larger average household size

Interventions Modelled

-  Locally available nutritious foods (vouchers)
-  Fortified wheat flour and vegetable oil (market)
-  Specialised nutritious foods (in-kind)
-  Cash transfers

in the North. The most effective interventions for each target group were as follows:

- **Children 6-23 months:** Of seven specialised nutritious foods modelled based on analysis of local markets, **vouchers for Kidifeed** led to the greatest reduction in cost of SNUT, from GHC 0.30 to 0.11 in the **North** and GHC 0.61 to 0.13 in the **South**.

- **Pregnant and Lactating Women:** In the **North**, **vouchers for Super Cereal Plus (SC+)** reduced cost of SNUT from GHC 3.89 to 3.13. In the **South**, **vouchers for locally available nutritious foods** (fruit, vegetables, dried fish, and eggs) reduced cost of SNUT from GHC 5.89 to 3.66.
- **Adolescent girls:** In the **North**, where the average household size is larger, **vouchers for multi-micronutrient tablets (MMTs)** reduced cost of SNUT from GHC 6.99 to 2.53.

These interventions were combined to form packages, as shown on page 7. Although the diets modelled are theoretical and any package would require complementary behaviour change interventions, the models show the possibility of improving economic access to nutrients through food-based interventions.

4) Recommendations

Recommendations were formulated during stakeholder discussions and informed by the secondary data analysis and Cost of the Diet modelling. They include programme and policy measures to address: 1) access, 2) availability and 3) demand for nutrients and nutritious foods. The team's recommended actions have the potential to increase consumption of nutrient dense foods, especially by vulnerable target groups: children 6-23 months, PLW and adolescent girls.

Recommended interventions are presented on pages 8-9 and organized by entry point: community-level health services, schools and school feeding programmes, markets and the private sector, social protection, agricultural extension, community mobilisation and organisations and infrastructure. A key overarching recommendation is for the Cabinet to approve and enact the National Nutrition Policy. Successfully launching the policy

Key Recommendations



Approve and implement the National Nutrition Policy



Address demand, availability and access for nutritious foods and products for key target groups

could act as a catalyst to implement a series of interventions addressing nutrient gaps in vulnerable groups throughout Ghana.

Cost of the Diet Modelling

Average cost of the diet for key target groups in Northern and Southern Ghana with different interventions (Figure 1 child 12-23 months; Figure 2 adolescent girl; Figure 3 PLW)

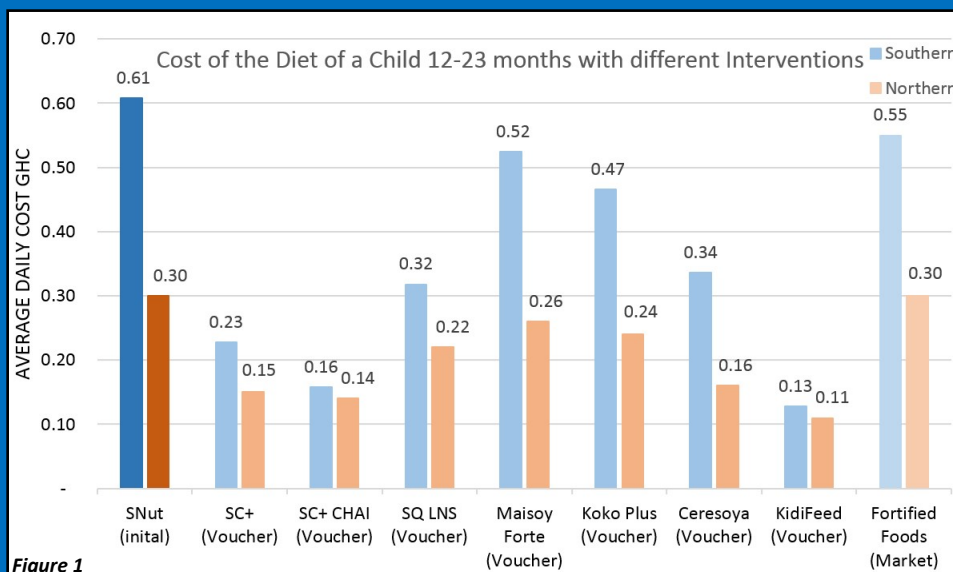


Figure 1

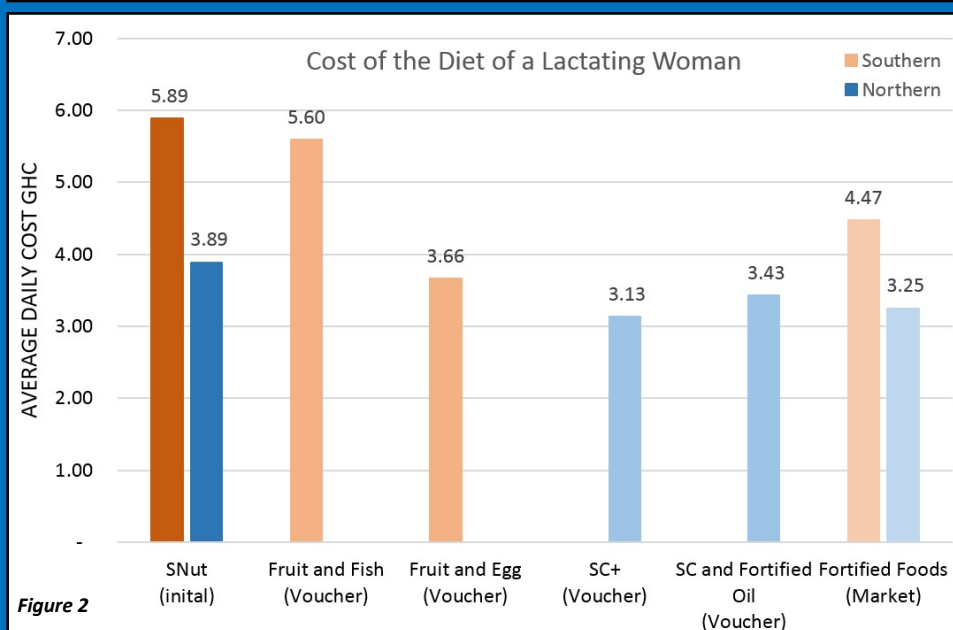
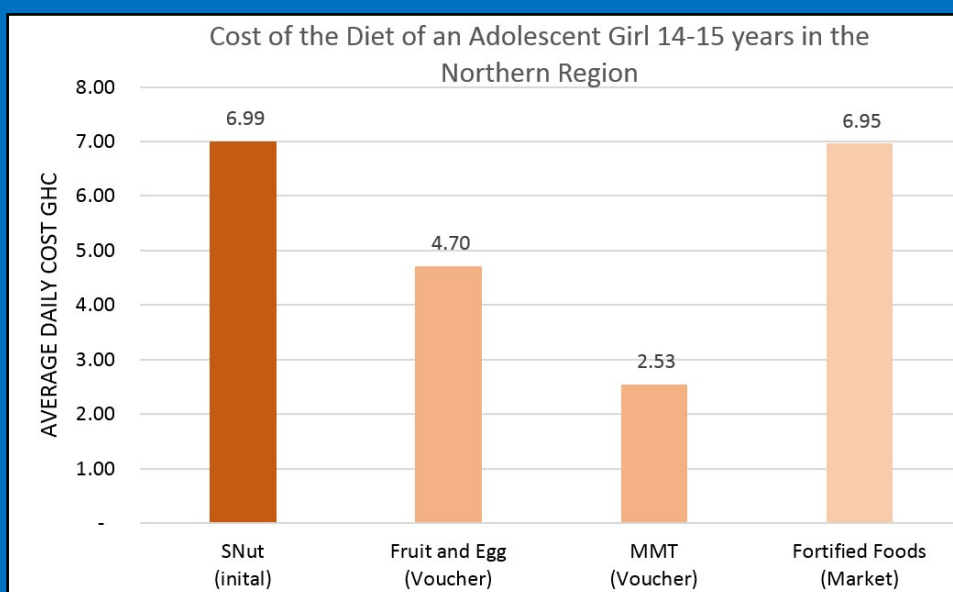


Figure 2



Cost of the Diet Modelling

Macro-region specific intervention packages and potential effect on economic access to nutrients for key vulnerable groups

Southern Ghana

In the South an intervention package of one daily portion of KidiFeed for children 6-23 months and vouchers for one daily portion of fruit and egg for PLW led to on average a 10 percentage point reduction in the number of households that could not afford SNUT (Figure 4). A cash transfer comparable to the amount provided by LEAP (38 GHC) reduced non-affordability by an additional 4 percentage points. Fresh foods and cash for PLWs were chosen due to high rates of overweight.

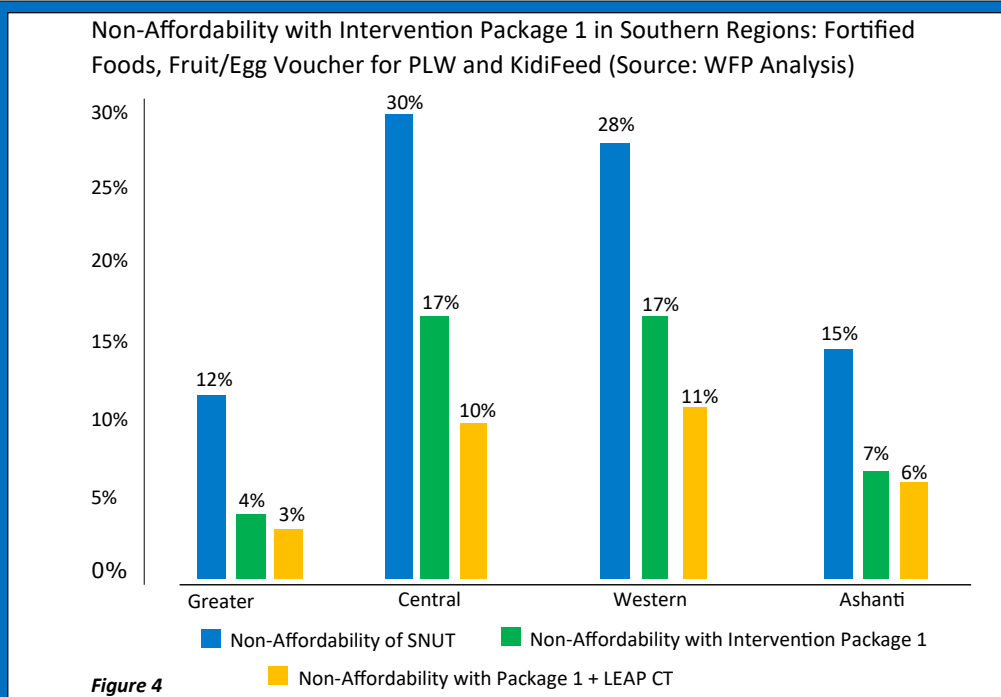


Figure 4

Northern Ghana

In Northern Region high costs for adolescent girls and general low income are responsible for high non-affordability of SNUT (Figure 5). KidiFeed for children 6-23 months, a voucher for Super Cereal Plus for PLW (selected due to the higher prevalence of undernutrition) and an MMT-voucher for adolescent girls reduced non-affordability of SNUT from 78% of households to 44%. A cash transfer of 38 GHC further reduced non-affordability to 35%.

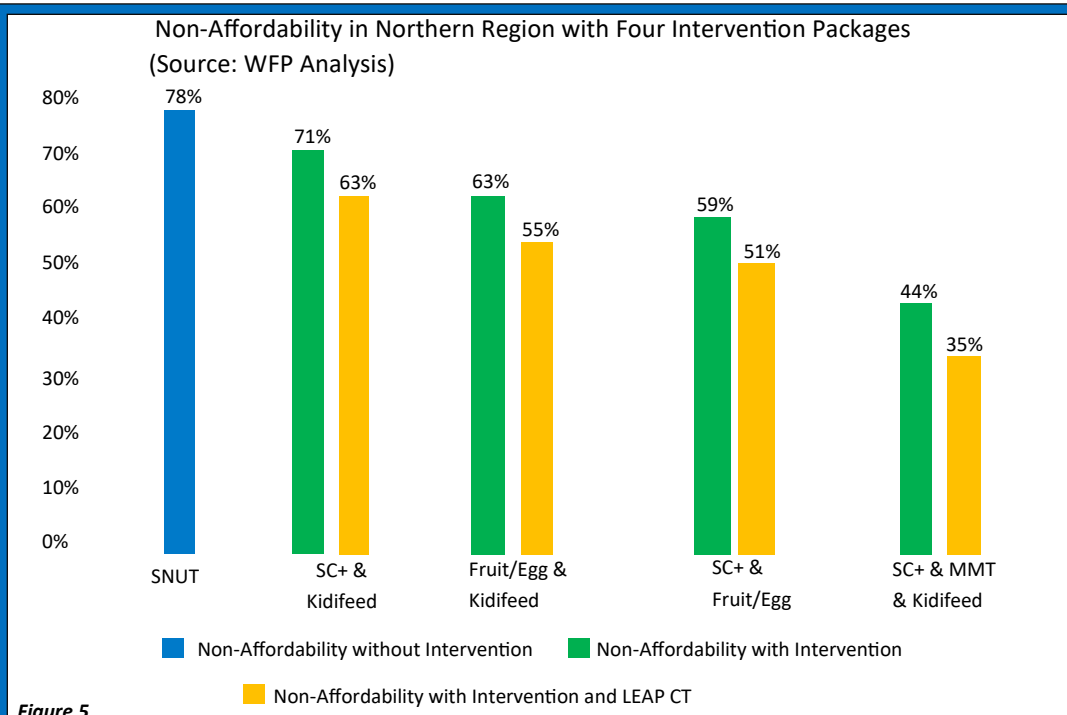


Figure 5

Summary of Recommendations by entry point (see Ghana Country Report for Full List)

National Policy and Legal Framework

- A multi-sectoral National Nutrition Policy to be approved
- Foster Public-private partnerships to improve availability and affordability of nutritious foods for key target groups through the market
- Standards & regulation for complementary foods, fortified foods and snacks to be formulated, endorsed, monitored
- Regulation of food environment around schools
- SBCC for healthy diets and lifestyle, including through schools

Health

- Support & strengthen:
 - ⇒ Iron and Folic Acid supplements;
 - ⇒ Fortification of wheat flour, vegetable oil, iodized salt
 - ⇒ Counselling on Essential Nutrition Actions (ENA) & Infant and Young Child Feeding (IYCF)
 - ⇒ Targeted Supplementary Feeding Programme (TSFP) of PLWs in the North
 - ⇒ Malaria control
- New Interventions to Explore:
 - ⇒ Multi Micronutrient Tablets (MMT) for PLW
 - ⇒ Rice fortification
 - ⇒ Essential Nutrition Actions (ENA) & IYCF also through Social Protection/LEAP—emphasize quality diets to avoid overweight/obesity
 - ⇒ Increase access to nutritious foods through Social Protection e.g. by using vouchers
- Specific Interventions for Children Under 5:
 - ⇒ Vitamin A Supplementation continued
 - ⇒ Growth Monitoring strengthening
 - ⇒ SBCC focus on home preparation of safe nutritious Complementary Foods
 - ⇒ Shift MAM treatment to prevention of undernutrition, using blanket distribution of Complementary Foods in North and targeted distribution through Social Protection in South.

Education

- School Feeding:
 - ⇒ Strengthen and improve menu planning for healthy diets
 - ⇒ Add MNPs to school feeding programmes including for secondary schools
 - ⇒ Educate school caterers & cooks on nutrition & hygiene
- Explore & Strengthen: Nutrition Education, Physical Exercise across all ages

Market/Private Sector

- Support increasing availability & affordability of nutritious foods for women and community milling & fortification
- Improve supply chain, including cold storage, of nutritious foods (meat, fish, vegs), linking MOFA, private companies, international organizations
- Improve supply & quality of affordable complementary foods, through markets in the South, by linking with Social Protection in the North (i.e. stronger market segmentation)
- Demand creation for good nutrition & healthy lifestyles – mix traditional and mass media / social marketing channels

Social Protection

- Add nutrition objective to LEAP (e.g. LEAP 1000); cash transfer is small; strengthen by adding conditionality during 1000 days (ANC attendance, immunization, SBCC)
- 6-23 months, add vouchers for specific nutritious foods
- Include People Living with HIV (PLHIV), explore targeting specific groups such as adolescents with MMT

Agriculture

- Small holder farmers:
 - ⇒ Nutrition education
 - ⇒ Promote production of orange flesh sweet potato
 - ⇒ Increasing access to agricultural inputs
 - ⇒ Improve post-harvest handling
 - ⇒ Dry season gardening / Homestead Food Production
- Water harvesting & improved irrigation
- Bio-fortification

Infrastructure

- Increase access to markets by improving road infrastructure
- Increase access to safe water at community level

Community

- Income generation
- Asset creation as seasonal livelihood programming, in particular in the Northern regions where seasonality effects on food security and nutrition are greater

For more information please refer to “Fill the Nutrient Gap Report Ghana”
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