



# Fill the Nutrient Gap Ethiopia

Summary



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MINISTRY OF HEALTH, ETHIOPIA



World Food  
Programme

July 2021

This summary and further information can be found electronically at: [wfp.org/fillthenutrientgap](http://wfp.org/fillthenutrientgap)

### **Suggested citation:**

Ethiopian Public Health Institute and World Food Programme (2021).  
Fill the Nutrient Gap, Ethiopia.  
Addis Ababa: Ethiopia.

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# Foreword



**Dr Getachew Tolera (M.D, MPH)**  
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Nutrition is a crucial pillar in the development of a healthy and productive nation. Good nutrition enhances physical and cognitive development, prevents disease, and increases the potential of the workforce and the society. Fill the Nutrient Gap (FNG) initiative was brought to Ethiopia by UN World Food Programme (WFP). FNG is an analytical process comprised of a secondary literature review in combination with Cost of the Diet linear optimization to understand local drivers that affect the availability, cost and affordability of a nutritious diet. So far FNG analysis was completed in 32 countries and on-going in 12 countries.

According to the Global Nutrition Report, one in every nine people is hungry or undernourished worldwide. The trend shows that the progress is very slow to meet the global targets by 2025. The progress observed in many of the developing countries including Ethiopia is not acceptable. Though, Ethiopia has witnessed encouraging progress in reducing malnutrition over the past decades, the levels of malnutrition remain so high that the country must continue to make significant investments in nutrition. To tackle this problem a lot of tasks, commitment and evidence based information are needed for further action.

The findings of FNG study in Ethiopia are very timely and useful. The results and the recommendations brought forward will help decision makers in planning nutrition interventions aimed at reducing malnutrition and ensuring food security in Ethiopia. Studies of such kind can enable us to make informed decision and provide evidence to support and scale up our existing interventions.

I would like to thank the WFP for the technical leadership and financial support to perform Fill the Nutrient Gap study. I would also like to thank the FNG team at the WFP Ethiopia country office, regional bureau in Nairobi and headquarters in Rome for providing training and continuous support and mentoring the team at EPHI.

I would like to congratulate the EPHI research team for accomplishing this task. Further, I wish to extend my thanks to the multi-sectoral participants who have actively participated and provided inputs during the inception meeting in 2019, the consultation meeting at different occasions and during the validation workshop; and contributed to the success of this project.



A handwritten signature in black ink, written over a horizontal line. The signature is stylized and appears to be "Getachew Tolera".

**Dr Getachew Tolera (M.D, MPH)**  
July 2021

# Executive Summary

Over recent decades, Ethiopia has made considerable progress in reducing the prevalence of stunting, yet, 37 percent of children under five years of age remain affected. Stunting generates an economic loss of ETB 55.5 billion (USD 1.8 billion) every year, equivalent to approximately 16 percent of Ethiopia's Gross Domestic Product (GDP) (1). Persistent rates of child wasting, widespread micronutrient deficiencies and poor quality of diets for both children and adults are among some of the nutrition related challenges faced by Ethiopians. In an effort to understand and address factors determining access to nutritious diets in Ethiopia, and building on the findings of the Cost of Hunger Study of 2013 and the Zero Hunger Strategic Review of 2019, the Ethiopian Public Health Institute (EPHI) of the Ministry of Health, with technical assistance from the World Food Programme (WFP), conducted a Fill the Nutrient Gap analysis (FNG) in 2020. The analytical process sought to understand local drivers that affect the availability, cost and affordability of a nutritious diet.

## Process

The FNG process began at the end of 2019, through a multi-stakeholder inception meeting and was followed by a technical training of EPHI and partners. Identification of data, analysis and modelling was conducted from January to October 2020, with technical discussions and validation of results with stakeholders conducted between October and December 2020.

## Methodology

The two-pronged FNG approach consists of a review of existing secondary literature and a Cost of the Diet analysis (which uses linear programming for lowest cost diet optimization). Consumer Price Index food prices (November 2018 - October 2019) were used to estimate the minimum cost of energy sufficient and nutritious diets at zonal and regional level. Expenditure data from the Ethiopian Socioeconomic Survey (ESS) of 2015-2016 was used to assess the extent to which Ethiopian households are able to access these diets.

## Main findings

1. Almost all households in Ethiopia would be able to afford to meet their energy needs (93%). However, only one out of four households (26%) would potentially have access to a nutritious diet. Based on the results of the Cost of the Diet analysis, diets meeting the needs of multiple nutrients would cost between three to five times the cost of energy sufficient diets. A nutritious diet was estimated to cost at least five times more than what a household in the lowest expenditure decile spent on food.
2. Current diets in Ethiopia are poor and non-diverse, with little inclusion of animal-source foods, vegetables and fruit. Nutritious, diverse and nutrient-rich diets are a prerequisite for preventing malnutrition. In Ethiopia consumption is largely based on staple grains and oil.
3. Adolescent girls and pregnant and lactating women are most at risk of having inadequate diets, as the cost of meeting nutrient requirements are highest for these groups. Diet costs are predominantly driven by requirements for micronutrients such as vitamin B12, iron and calcium, for which animal-source foods are key sources, although expensive. Providing a daily or weekly MMT or IFA doses to pregnant and lactating women or adolescent girls, respectively, could drastically reduce the cost of meeting nutrient requirements.
4. Diets of breastfed and non-breastfed children are suboptimal. Encouraging age-appropriate breastfeeding and providing access to diverse and nutritious complementary foods could reduce the cost of meeting nutrient requirements.
5. The availability and intake of non-nutritious, processed foods is increasing, especially for children and adolescents in urban areas. The real cost of nutritious diets would be higher when energy-dense and micronutrient-poor snack foods are frequently consumed.
6. Households mostly depend on markets for access to fresh, nutritious foods, such as vegetables, fruits, and meat, whilst grains are sourced from own production. Rural households mostly rely on homestead production for eggs and dairy products, although consumption is limited. Prices of these nutritious foods have increased in recent years, whilst grain, sugar and oil prices have decreased; meaning access to nutritious diets could be more difficult.
7. Improving access to nutritious diets and associated changes to consumption patterns can have implications for climate outcomes as well as nutrition. Enabling and promoting nutritious, sustainable, diets should be a priority.
8. Agricultural production is largely focused on staples, whilst the supply and availability of fresh, nutritious foods, such as fruit and vegetables, is insufficient. Current levels of domestic production are not able to adequately meet the nutrient requirements of a growing population.

9. Agricultural production is largely small-scale and subsistence-based, with limited opportunity for growth and development. Innovating agricultural practices, diversifying production and adopting high quality seeds and biofortified and fortified commodities could improve access to nutritious diets.
10. Infrastructure and access to markets for sale and purchase also determine household ability to access nutritious, diverse diets. Investment in road networks, transport and market functionality could positively impact nutrition outcomes.
11. Post-harvest, large-scale fortification could improve access to key nutrients that are low in national food supply or unaffordable for most households. Biofortification through improved seeds and soil fertilizers could improve nutrient intake.
12. Poverty is a basic cause of malnutrition and limits households' access to nutritious diets. Shocks can significantly hamper progress towards poverty reduction and further limit nutritious diet access. If nutrition sensitive, safety nets could increase resilience and access to nutritious diets.
13. School meals have the potential to improve nutritious diet access for children and adolescents. However, greater inclusion of micronutrient-dense foods is needed to meaningfully contribute to children's nutrient needs.

## Stakeholder identified priorities by sector

During a series of virtual thematic workshops held in December 2020 and attended by the wider group of stakeholders involved in the FNG process, the main findings of the FNG analysis were shared and discussed with participants to identify priority areas for action. Based on the sector recommendations, the study team summarized the following prioritized interventions and activities by sector.

### Health and nutrition

- Prioritize advocacy and education to change the focus from diets that are just focused on meeting energy needs to diets that are rich in multiple (micro)nutrients. Stimulate the demand for nutritious foods (e.g. fruit and vegetables).
- Address increasing consumption of, and access to, ultra-processed and unhealthy snack foods.
- Promote behaviors and actions that contribute to good nutrition (e.g. SBC and focus on vulnerable groups).

### Social protection

- Further action is needed to make the Productive Safety Net Programme (PSNP) more nutrition sensitive.
  - Target PSNP households with SBC.
  - Consider cost and affordability of nutritious diets when selecting transfer values and content.
  - Take actions to diversify diets of beneficiary households, such as introducing conditions that promote nutrition (e.g. fresh food vouchers). Prioritize complementary interventions for households that have children under 2 years/ individuals within the first 1000 days to address stunting.

### Education

- Improve the nutrient content of school meals.
  - Estimate the cost of interventions for improving school meals to ensure that they are more nutrient-rich.
  - Include multiple micronutrient powders in school meals for vulnerable children.
  - Diversify school meals through school garden initiatives and increased procurement of nutritious foods through home grown school feeding programmes.
- Improve nutrition knowledge through school curriculum and in collaboration with religious leaders.

### Agriculture

- Prioritize production of and access to nutritious foods.
  - Revise horticulture products prioritized under government extension services.
  - Encourage crop diversification through extension services for mid and small-scale producers, including home and school-level gardens.
  - Support the establishment or scale-up of poultry production or horticulture within the proximity of schools to ensure supply of nutritious foods for school meals.
  - Ensure short dairy value chains and best practices around production of milk for school consumption.
  - Improve and increase agricultural extension services, including quality of training and number of trained staff.
  - Monitor effective implementation of the National Nutrition Sensitive Agriculture (NNSA) Strategy.

- Address issues of poor productivity in the agricultural sector, especially regarding nutritious food (improved seeds, fertilizer, technology, mechanization, post-harvest technology, food safety regulations etc.).
- Promote climate smart agriculture (incorporate feasible technologies and knowledge sharing into extension services).
- Encourage increased participation in and inclusion of women in agricultural production (e.g. through scale-up of extension services).

### Infrastructure

- Improve infrastructure related to access to and provision of power and water, including solar, to facilitate production, processing and transport of nutritious foods.
- Improve infrastructure associated with markets and access to markets (transport, roads, cold chain, storage and facilities) in order to improve access to nutritious foods and encourage/increase demand for production of these foods.

### Private sector (public sector engages, enables and regulates)

- Improve the micronutrient content of staple foods and pulses.
  - Share evidence to promote efficacy of fortification and biofortification from global and national experience.
  - Consider the feasibility and benefits of introducing mandatory fortification of cereals and other staple foods to improve micronutrient content.
  - Introduce legislation to support the adoption of biofortified varieties of grains, pulses, and other foods to increase micronutrient content.
  - Support local supply of seeds and inputs for production of biofortified foods.
- Encourage the local production of nutrient supplements (iron and folic acid and multiple micronutrient supplements) and fortified special foods.
- Encourage or support activities that would increase the availability of nutritious convenience or healthy snack foods.





## Fill The Nutrient Gap Ethiopia | SUMMARY

# Introduction to Fill the Nutrient Gap (FNG) Ethiopia

The Government of Ethiopia is highly committed to tackling the issue of malnutrition and has developed several multisectoral policies and initiatives to end all forms of malnutrition by 2030. These include the Seqota Declaration, the National Nutrition Programme (NNPI and NNP II), the Nutrition Sensitive Agriculture policy, and the recently adopted National Nutrition Policy and Strategy. These policies recognize that malnutrition is a multifaceted, complex challenge that requires coordination and commitment across sectors.

Over recent decades, Ethiopia has made considerable progress in reducing the prevalence of stunting yet 37 percent of children under five years of age remain affected. Stunting generates an economic loss of 55.5 billion Ethiopian Birr (ETB) every year (USD 1.8 billion), equivalent to approximately 16 percent of Ethiopia's Gross Domestic Product (GDP)(1). Persistent rates of child wasting, widespread micronutrient deficiencies, and poor quality of diets for children and adults are among some of the nutrition challenges faced by many Ethiopians.

## Building consensus for improved nutrition

Nutrition is a crucial pillar in the development of a healthy, productive nation. Good nutrition enhances physical and cognitive development, prevents disease, and increases the potential of the workforce and society. Improving diets, especially of children and

women, brings immediate and long-term health, education and economic benefits. The two Lancet series (2013 and 2021) on maternal and child undernutrition identified a variety of nutrition interventions that have proven effective. Improving the nutrition situation in a country requires coordinated actions across the food, social protection, health and education systems, that are grounded in a good understanding of the local context, its opportunities and bottlenecks, and a synthesis of global and local evidence.

Fill the Nutrient Gap (FNG) is an analytical process comprised of a secondary literature review in combination with Cost of the Diet (CoTD) linear optimization to understand local drivers that affect the availability, cost and affordability of a nutritious diet. Solutions of interest for improving availability of nutritious foods, lowering their cost and/or increasing income are then assessed for their potential to improve affordability, using the CoTD software. In this way, the context-specific potential for impact of proven interventions can be quantified.

This summary report presents findings from the analysis and a discussion of its process, methodology and limitations. It highlights recommendations and priorities identified by stakeholders. By identifying and contextualizing new findings, the FNG analysis contributes towards building consensus around a vision and a path forward for improved nutrition in Ethiopia in a sustainable way that is integrated across the country's food systems.

## FILL THE NUTRIENT GAP: SITUATION ASSESSMENT FOR MULTI-SECTORAL DECISION-MAKING ON THE PREVENTION OF MALNUTRITION

Malnutrition has two direct causes: inadequate dietary intake and disease. The FNG assessment focuses on gaps in dietary intake to inform national policies and actions that can be taken across food, social protection, and health systems to improve nutrition, with a focus on the most vulnerable populations. The FNG considers whether nutritious foods are available, accessible, and affordable in a specific context, and identifies the barriers that lead to gaps in nutrient intake. The analysis focuses on the extent to which vulnerable people have choices in the foods they consume and how those choices are made. The FNG process identifies and models the impacts of context-appropriate interventions to improve diets and nutrient intake across food, health, education, and social protection systems. The results are used to identify entry points across systems, to refine programmes, and to make recommendations to policymakers.

The assessment comprises two components:

1. A country-specific review of secondary data and information on factors that reflect or affect dietary intake. This includes malnutrition trends over time, characteristics of the food system and food environment, and population behaviour related to food and feeding.
2. An assessment of the extent to which economic barriers prevent adequate nutrient intake. This uses the Cost of the Diet (CotD) linear programming software developed by Save the Children (UK), and includes modelling of the economic impact of possible interventions to increase nutrient intake and fill nutrient gaps.

Preventing malnutrition, including through improved access to nutritious foods, cannot be achieved by one sector alone. FNG is designed to inform multisectoral decision making and therefore engages stakeholders from all sectors including food, health, agriculture, education, and social protection.

It is the stakeholders who define the scope and focus of the assessment. They contribute data and sources of information for identification of context-specific barriers and entry points and together with the analytical team develop a shared understanding of the issues and possible solutions. They then identify appropriate nutrition-specific and nutrition-sensitive interventions that can be implemented by different sectors using their existing delivery platforms. These could be social safety nets, food processing and markets, antenatal care, school feeding programmes, etc.

The FNG methodology has been developed by WFP with technical support from partners including the University of California Davis, the International Food Policy Research Institute (IFPRI, Washington DC), Epicentre (Paris), Harvard University (Boston), Mahidol University (Bangkok), Save the Children (UK), and UNICEF.

Between 2016 and early 2021, FNG analyses were completed in 32 countries and, at the time of writing in March 2021, were ongoing in 12 countries with more in the pipeline.

For more information on the concept and the method of the analysis, see Bose I, Baldi G, Kiess L, de Pee S, The 'Fill the Nutrient Gap' Analysis: An approach to strengthen nutrition situation analysis and decision-making toward multisectoral policies and systems change. *Matern Child Nutr* 2019; DOI: 10.1111/mcn.12793

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