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# Fill The Nutrient Gap Zambia

## Short Summary Report

The problem of malnutrition and the need for investment in fortification and appropriate infant and young child feeding practices in Zambia

### Why does nutrition matter?

- **Malnutrition remains a serious concern in Zambia.** More than one in every three children in Zambia is stunted which impairs their cognitive and physical development and puts them at risk of chronic diseases later in life. Economic slowdowns caused by the COVID-19 pandemic and increased prices caused by the global food crisis are likely to have further exacerbated food and nutrition insecurity for the most vulnerable.
- **Malnutrition is too expensive to ignore.** Zambia Nutrition Profiles (2017) estimated that the economic productivity lost due to childhood stunting amounts to ZMW 181 billion ZMW (USD 18 billion) over one decade.
- **Nutrition is a good investment.** Generally, for every USD 1 invested in nutrition, there is a return of USD 16. Uniquely, nutrition impacts positively on a country's growth through its impact on human capital development in the form of better health, learning in school and adult productivity.

**Background on the Fill the Nutrient Gap analysis:** The Fill the Nutrient Gap Analysis estimated the lowest cost of a diet that meets macro and micronutrient needs (the 'nutritious diet') and the lowest cost of a diet that meets energy-only needs. It also estimated the proportion of households able to afford such diets based on food expenditure patterns in both the lean and non-lean seasons for each province of Zambia. Diet costs were calculated for a modelled household consisting of five individuals: a breastfed child, a school-age child, an adolescent girl, a lactating woman and an adult man. The analysis modelled various interventions for their potential impact on cost and affordability of a nutritious diet to compare the potential benefits of programmes and policies aimed at improving nutrition outcomes through diets. For sources used in the production of this brief, please refer to the Zambia Fill the Nutrient Gap Report (2021) available at [www.wfp.org/publications/2020-fill-nutrient-gap](http://www.wfp.org/publications/2020-fill-nutrient-gap).

## Affordability is the major barrier to accessing nutritious diets in Zambia.

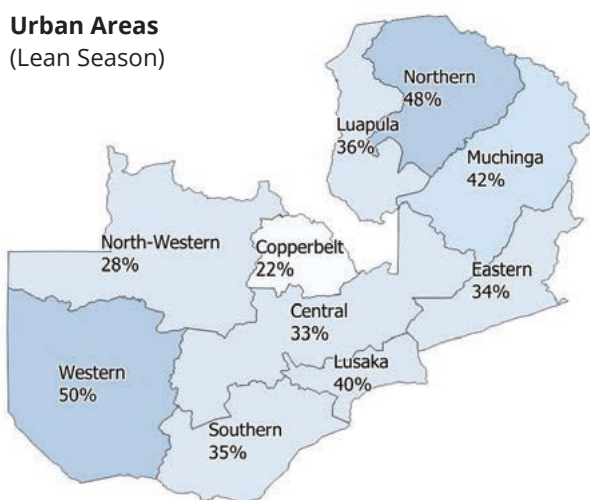
- The Fill the Nutrient Gap (FNG) analysis for Zambia in 2021, led by the National Food and Nutrition Commission and supported by the World Food Programme (WFP), found that **the lowest cost nutritious diet, covering both calorie and micronutrient needs, cost on average Zambian Kwacha (ZMW) 33 per five-person modelled household per day.** This is three times as much as an energy-only diet which meets just calorie needs.
- Over half the population (53 percent) would not be able to afford this lowest cost nutritious diet,

and one in eight (13 percent) would not be able to afford the energy-only diet.

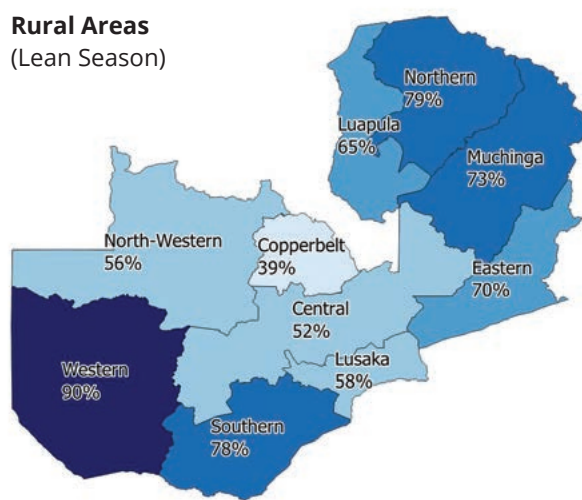
- Non-affordability of the nutritious diet varies significantly between regions and is higher in rural areas than in urban areas, as shown in Figure 1. In rural provinces such as Western and Northern, a third of households could not afford a diet covering only energy needs, and more than three quarters could not afford a nutritious diet.
- Food price inflation creates additional barriers to household access to nutritious diets. Between 2019 and 2021, the percentage of households that would not be able to afford a nutritious diet increased from 44 percent to 54 percent.

**Figure 1:** The percentage of households that are unable to afford a nutritious diet during the lean season, disaggregated by urban (left) and rural (right) areas

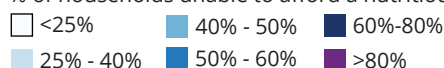
### Urban Areas (Lean Season)



### Rural Areas (Lean Season)



% of households unable to afford a nutritious diet



Despite good diversity of produce in markets, access to fresh foods is determined by location and constrained by high prices.

The cost of meeting a household's energy needs is relatively stable across Zambia. However, the cost of meeting nutrient and energy needs varies greatly across the provinces, ranging from ZMW 21 (Luapula) to ZMW 42 (Western, Lusaka) per five-person modelled household per day. These differences contribute to the variation in cost and non-affordability of nutritious diets shown in Figure 1. Animal source foods are among the most expensive commodities and their prices increased the most in 2020.

Fortification can support access to micronutrients, especially when access to nutritious foods is challenging.

Fortification is the process of adding micronutrients (vitamins and minerals) to food with little effect on taste and properties. For households significantly challenged by access to nutritious diets, fortification is an important opportunity to address micronutrient deficiencies and prevent their long-term consequences, such as underdeveloped cognitive ability, disease and night blindness. The unrefined maize meal typically found in Zambian diets is a relatively nutritious staple. Fortification of refined or unrefined maize meal could

increase availability of micronutrients like iron and vitamin A in the existing food environment, making them more readily available even for the most vulnerable. For adults, consumption of three portions per day of fortified unrefined maize meal could meet over 60 percent of iron needs and could provide significant portions of other micronutrients, such as vitamin B<sub>12</sub> and zinc. For children, the nutritious diet costs ZMW 4.0 per child per day; a school meal improved with fortified maize and bio-fortified pulses can reduce the cost to ZMW 3.2. This meal would meet more than 60 percent of micronutrient needs of a child aged 6–7 years with seven essential micronutrients (vitamins A, B<sub>1</sub>, B<sub>2</sub>, B<sub>6</sub>, folic acid, magnesium and zinc), and more than 40 percent of iron and vitamin B<sub>12</sub> needs.

### Nutrition-sensitive interventions and social and behaviour change (SBC) should be targeted to support the most nutritionally vulnerable individuals.

Pregnant and lactating women, adolescent girls, and children aged under two years are the most nutritionally vulnerable individuals within a household. The cycle of malnutrition starts with malnourished mothers, who are an important predictor of the health status of their children at birth.

Without adequate lactating and complementary feeding the cycle is continued, often causing malnourished infants and young children to become malnourished school-age children and adolescents. Seventy percent of lactating women practice age-appropriate lactating and only 30 percent of children under two receive a minimum acceptable diet. This indicates a need for interventions that help households afford diets and also social and behaviour change messaging on good infant and young child feeding (IYCF) practices.

### In the absence of healthy diets, provision of supplements and fortified products fill nutrient gaps.

Provision of in-kind interventions, such as fortified infant flours or micronutrient powder (MNP) for home fortification, can almost halve the cost of a nutritious diet for children under two while providing significant quantities of B<sub>12</sub>, iron, and vitamin A, among other micronutrients. For pregnant and lactating women, the daily cost of a nutritious diet (ZMW 8.1) could be reduced by 3 percent with in-kind provision of iron and folic acid (IFA) tablets, by 16 percent with calcium supplementation, and by 23 percent with lipid-based nutrient supplementation (LNS).

## Recommendations from the FNG

Recommendations	Action	Stakeholder identified priority actions	Relevant stakeholders
<b>Health and Maternal, IYCF</b>			
<b>Continue support for improved IYCF practices, including appropriate complementary feeding. Home fortification could be considered to support particularly vulnerable households.</b>	Capacity building	<ul style="list-style-type: none"> <li>Continue support for IYCF and promote nutritious local recipes and home fortification for children aged 6–23 months.</li> <li>Train health workers/volunteers on home fortification so they can train households.</li> <li>Provide instruction on home fortification to caretakers.</li> </ul>	Ministry of Health – implementation and evaluation Ministry of Finance and National Planning
	Coordination	<ul style="list-style-type: none"> <li>Engage non-health stakeholders through the technical working group coordinated by the Ministry of Health.</li> </ul>	National Food and Nutrition Commission (lead) with Ministry of Health Ministry of Science and Technology – investment to support local development of micronutrients
	Advocacy	<ul style="list-style-type: none"> <li>Messages should emphasise the state and cost of malnutrition in Zambia and the need for, and benefits of, adequate nutrition and dietary practices for the country's development.</li> </ul>	National Food and Nutrition Commission Ministry of Health



Recommendations	Action	Stakeholder identified priority actions	Relevant stakeholders
<b>Fortification</b>			
<b>Policy discussion to support commercial fortification of maize and other products needs to be strengthened.</b>	Capacity building	<ul style="list-style-type: none"> <li>Train food producers (small- and large-scale) on fortification methods.</li> <li>Provide technical support to the process of fortification throughout the value chain.</li> </ul>	Ministry of Agriculture Ministry of Science and Technology Ministry of Health National Food and Nutrition Commission National Scientific and Industrial Research Institute Academia
	Coordination	<ul style="list-style-type: none"> <li>Include topic of fortification during multisectoral policy discussions and identify platforms for engaging private sector in commercial food fortification.</li> <li>Draft and enforce mandatory fortification regulations.</li> </ul>	National Food and Nutrition Commission
	Advocacy	<ul style="list-style-type: none"> <li>Strengthen messaging on benefits of fortification to drive consumer demand for fortified foods.</li> <li>Provide incentives for fortification, such as tax reductions.</li> <li>Conduct necessary research to understand information gaps to inform advocacy, including on the current status and impact of home fortification and preferences for fortified foods.</li> </ul>	National Food and Nutrition Commission Ministry of Health Ministry of General Education



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