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Fill the Nutrient Gap Kyrgyz Republic

Report

December 2022

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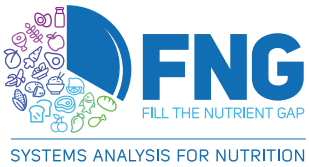

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Executive Summary

Background

The Kyrgyz Republic is facing a complex challenge in improving nutrition. Despite having made significant gains in prevention of childhood malnutrition in the past decade, impoverished households in the Kyrgyz Republic continue to struggle with basic food and nutrition security. As a result of poor diets, they also face a triple burden of malnutrition with individuals across all socioeconomic groups suffering from micronutrient deficiencies, overweight and non-communicable diseases. It is imperative for human capital development that the Kyrgyz Republic improves diets and nutrition outcomes by focusing on strengthening food systems, making social protection programmes nutrition-sensitive, and improving coordination across different sectors such as social protection, agriculture, education, and health.

In 2019, the government of the Kyrgyz Republic and the World Food Programme (WFP) conducted a Fill the Nutrient Gap (FNG) analysis to identify opportunities within the food system to improve access to, and affordability of, nutritious diets. Since then, the COVID-19 pandemic and macroeconomic fluctuations have impacted household livelihoods and food prices. Because of these changes and updates to national policies in response to these events, the Ministry of Agriculture of the Kyrgyz Republic and WFP reinitiated the FNG analysis in 2021 to update results on costs and affordability of diets, and to model interventions that could mitigate unaffordability.

Process and methods

The FNG analysis estimated the cost of energy-only and nutrient-adequate (or nutritious) diets, and the percentage of households that, given current food expenditure, would be unable to afford these diets. These indicators were calculated for the four seasons of 2020 for each of the seven oblasts (provinces) in the Kyrgyz Republic, and the two major cities (Bishkek and Osh). The costs of energy-only and nutrient-adequate diets are estimated using the Cost of the Diet linear optimization software.

Diet costs and non-affordability were estimated for a five-person modelled household comprising a breastfed child (12–23 months), a school-aged child (6–7 years), an adolescent girl (14–15 years), a breastfeeding woman, and an adult man. The estimations used retail prices collected by the National Statistical Committee (NSC) of the Kyrgyz Republic and expenditure data from the Kyrgyz Republic Integrated Household Survey (KIHS). The analysis was carried out between October 2021 and October 2022. In November 2022, in collaboration with the Ministry of Agriculture of the Kyrgyz Republic, stakeholders were convened to inform, validate and draw recommendations from the FNG analysis.

Main findings

1. Nutrient-adequate diets cost three times more than diets that meet only energy needs.

2. In 2020, almost all households in the Kyrgyz Republic were able to afford a diet that meets energy needs, but at least two in five households (38 percent) were unable to afford a nutritious diet.

3. Poor diets contribute to all forms of malnutrition in the Kyrgyz Republic. In children, rates of overweight are similar to rates of stunting and consumption of unhealthy foods is prevalent.

4. National social protection programmes are essential to supporting the most vulnerable households if they are to afford nutritious diets. However, without vertical and horizontal expansion, these programmes alone cannot close the affordability gaps.

5. School feeding offers an opportunity to prevent malnutrition in children. Micronutrient intake is improved by school meals that include fortified food items and foods from a diversity of food groups (such as cereals, animal source foods, pulses and vegetables).

6. Women of reproductive age suffer from micronutrient deficiencies, overweight and obesity. Micronutrient supplementation can improve nutrient intake which can support good nutrition.

7. Large scale food fortification is an effective mechanism to deliver essential micronutrients through commonly consumed staple foods. Adherence to fortification standards is essential to providing access to fortified foods. Improving national fortification standards within legislation can increase the impact of fortification on nutrition.

8. Bean and fish production has potential to grow. Increasing accessibility to these foods can support consumption and improve access to key micronutrients.

9. Household assistance programmes help households to cover the cost of a nutritious diet. By providing fortified products, in-kind assistance has more potential to cover the cost of a nutritious diet.

10. The impact of cash transfers on dietary quality can be maximized if a household uses the cash to purchase diverse nutritious foods. Social behaviour change (SBC) is needed to encourage households to do so.

11. There is no single solution to improving nutrition outcomes in the Kyrgyz Republic. Combining nutrition-sensitive interventions with social protection and assistance programmes can contribute towards closing affordability gaps.

Recommendations

The FNG stakeholder engagement process led to the development of recommendations that will feed into the Food Security and Nutrition Programme spearheaded by the Ministry of Agriculture of the Kyrgyz Republic. Based on inputs gathered during the workshops held in November 2022, stakeholders prioritized the following actions:

- **Strengthening capacity of public and private actors across sectors on nutrition integration and healthy diets** through strengthening ministerial capacities on nutrition-sensitive interventions and healthy diets; ensuring handover from development partners to government, building local capacities; developing a platform for sharing nutrition resources (research, data, policy updates) among government and private sector actors; and incentivizing public procurement of nutritious foods.
- **Promoting healthy behaviors** through social behavior change initiatives, development and use of informational materials on healthy diets and practices, introducing nutrition education, and promoting value chains for nutritious foods.
- **Leveraging social assistance to better support nutrition** by enabling households to purchase nutritious foods through vouchers or subsidies, considering the adequacy of current transfers, and advocating for nutrient-adequate in-kind food assistance.
- **Strengthening school feeding programmes** through clearer guidelines and regulation around nutritional content of school meals. This would require advocating for increased government financing, expanding school programmes to additional age groups such as pre-school children and adolescents, promoting fortification in school meals, disincentivizing sale of unhealthy foods to schoolchildren, and strengthening supply chains for procurement of nutritious foods for school meals.
- **Improving national fortification initiatives** through capacity strengthening for local millers, better monitoring of fortification compliance, and advocacy for raising fortification standards to WHO recommendations.
- **Promoting nutrition-sensitive agriculture** through realigning government policies for production of nutritious foods, and increasing government support for providing inputs for fruits, vegetables, and legumes and pulses to local producers.

Fill The Nutrient Gap **Kyrgyz Republic** | SUMMARY

Introduction to Fill the Nutrient Gap (FNG) Kyrgyz Republic

The Kyrgyz Republic is facing a complex challenge in improving nutrition. While stunting rates decreased from 18 percent to 7 percent between 2012 and 2021, the percentage of children and adults suffering from overweight and obesity and associated non-communicable diseases has increased dramatically[1] and micronutrient deficiencies persist (1-2). Poor diets are one of the root causes of all forms of malnutrition. Addressing this is challenging as it requires actions across the food system to enable households, including the most vulnerable, to be able to access and afford diverse, nutritious diets. This requires collective action by a range of stakeholders including agrifood stakeholders responsible for producing and distributing food, social protection programmes, and the health sector. The Fill the Nutrient Gap (FNG) analysis is designed to help identify opportunities to improve access to nutritious diets. By convening stakeholders from across sectors around a single analysis, FNG can identify how food systems can be strengthened to support nutrition, and which interventions should be prioritized to enable households' to access nutritious diets.

The FNG was first completed in Kyrgyz Republic in 2019. It accomplished its objectives of providing insights to inform the development of strategies to improve access to nutritious diets. According to the 2019 FNG, 57 percent of households would be unable to afford nutritious diets. Between the previous analysis and now, households in Kyrgyz Republic have been confronted with covariate shocks such as COVID-19 and inflation, which have impacted on their food and nutrition security. In this time, the government of

[1] The percentage of male children classified as overweight increased from 8 percent in 2000 to 16 percent in 2016. The percentage of women of reproductive age classified as overweight increased from 39 percent in 2000 to 48 percent in 2016. The percentage of women of reproductive age with diabetes increased from 7 percent in 2000 to 11 percent in 2014, with projections estimating that, this increased to 13 percent in 2020 (3).

Kyrgyz Republic and its partners have responded with new policies to support households economically. In 2021, using new data collected during the COVID-19 pandemic, a second FNG was conducted with the objective of assessing the changes in the cost of nutritious diets and re-assessing the extent of non-affordability of nutritious diets. The analysis had these additional specific objectives:

- Provide evidence to support the Ministry of Agriculture of the Kyrgyz Republic in the drafting of the new Food Security and Nutrition Programme, and advocate for a stronger monitoring mechanism of the programme and all its components.
- Provide an update on the cost of the diet and overall affordability in light of COVID-19, and the related increase in food prices.
- Generate evidence on how different interventions can improve access to nutritious diets, which can be used by WFP and partners for advocacy.
- Provide findings to integrate into planned capacity strengthening initiatives for the Food Security Unit at the Ministry of Agriculture.

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 diseases, 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. Using the CotD software, 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. In this way, the context-specific potential for impact of proven interventions can be quantified.

This report presents findings from the analysis and a discussion of its process, methodology and limitations. It also 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 Kyrgyz Republic in a sustainable way that is integrated across the country's food systems.

FILL THE NUTRIENT GAP: SITUATION ASSESSMENT FOR MULTISECTORAL 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 2022, FNG analyses were in process or completed in over 40 countries.

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

Process and Scope of the Analysis

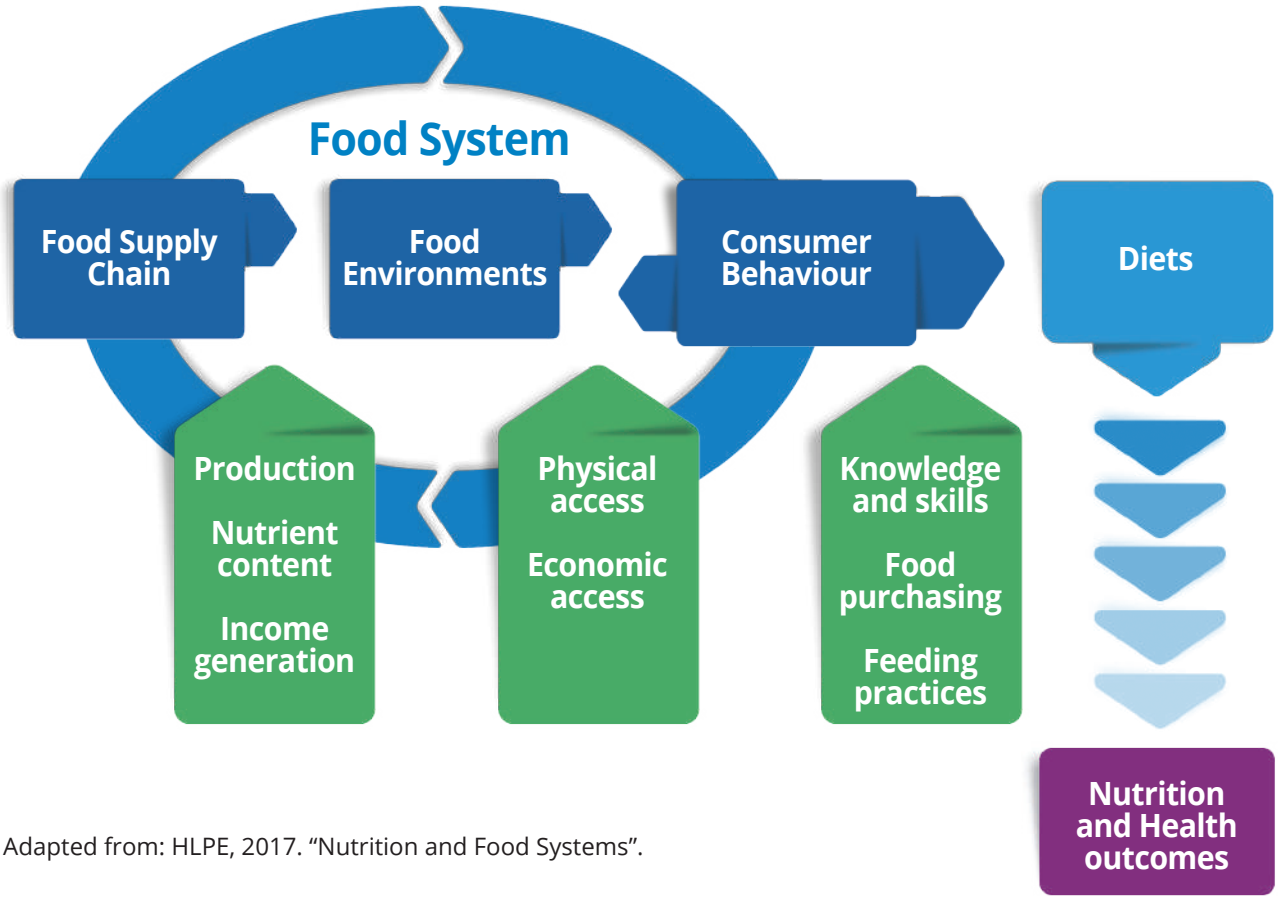
Process of the FNG analysis in Kyrgyz Republic

Figure 1: The Fill the Nutrient Gap (FNG) process followed in Kyrgyz Republic (2021/22)

Scope and Focus of the FNG Analysis

Long-term solutions to malnutrition require transformation of the food system along food supply chains, food environments and consumer behaviour patterns (Figure 2). The Kyrgyz Republic FNG focused primarily on the intersection of food environments and consumer behaviour with a focus on social protection programmes. The analysis also includes food fortification and agricultural production, which are important in national and sub-national food systems.

Figure 2: Food systems for diets and nutrition and health outcomes framework



Adapted from: HLPE, 2017. "Nutrition and Food Systems".

Methodology

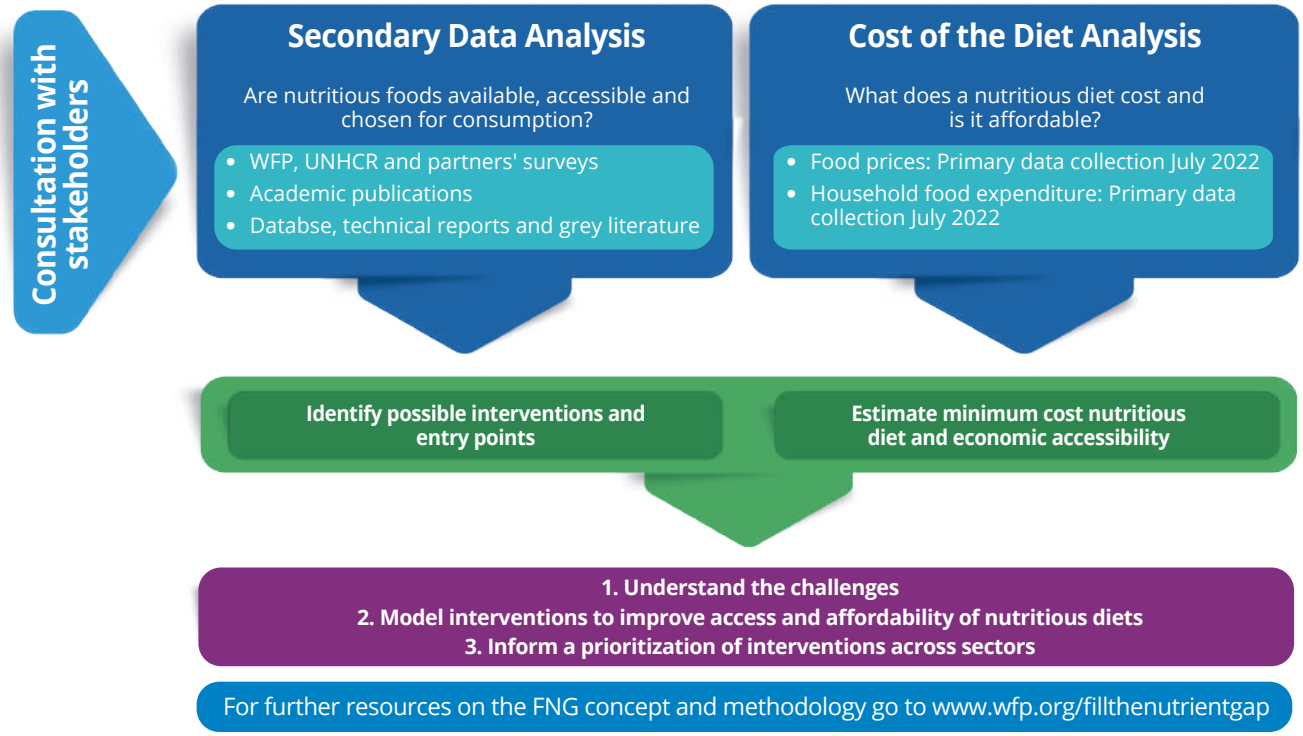
The FNG analysis is composed of a secondary literature review of the food system and the social protection and health sectors, focusing on entry points for current and potential nutrition interventions, and a CotD analysis which uses linear optimization to provide a detailed view of availability, cost and affordability of nutritious diets (Figure 3).

Secondary data analysis

The FNG secondary data analysis identifies barriers to accessing healthy diets, platforms for reaching nutritionally vulnerable groups in the population, and opportunities for policy and programme interventions to improve access to nutritious foods through multiple sectors, including agriculture, health, social protection and education.

In the Kyrgyz Republic FNG, the secondary data analysis included topics such as those related to the impacts of COVID-19 on households, agricultural production, food balances, consumption patterns, maternal and child nutrition outcomes, and socioeconomic drivers of nutrition. Findings from the secondary data review are included in relevant sections throughout this report. For the full report on the secondary data analysis please contact the WFP Country Office in the Kyrgyz Republic.

Figure 3: FNG analytical framework



Cost of the Diet (CotD)

COST OF THE DIET (CotD) ANALYSIS

The CotD software uses linear programming to understand the extent to which poverty, food availability and food prices may affect the ability of people to meet their nutrient needs. Using price data collected from markets or from secondary sources, the software calculates the amount, combination, and lowest possible cost of local foods that are required to provide individuals or households with their average needs for energy, and their recommended intake of protein, fat and micronutrients[1]. These diets are calculated within defined constraints to prevent the inclusion of unrealistic types or amounts of food and the provision of excessive amounts of nutrients.

The FNG approach defines the 'Staple Adjusted Nutritious Diet' as the lowest cost nutritious diet that includes a typical staple food and excludes foods that are prohibited[2]. This diet is referred to as the 'nutritious diet' throughout this summary. It meets requirements for nutrients, including protein, nine vitamins and four minerals, and does not exceed energy and fat requirements. The nutritious diet can be calculated for a range of individuals across the life cycle. The nutritious diet is conceptually similar to the 'nutrient-adequate' diet estimated as the second level of diet quality in the State of Food Insecurity (SOFI) report. It diverges from the methodology used in calculating the "healthy diet" in the SOFI report as the "healthy diet" is calculated using food-based dietary guidelines (FBDG) and not linear optimization. The reference individual for calculating the "healthy diet" is an adult with an energy balance at 2,330 kcal/day. While the FNG staple adjusted nutritious diet is strictly an economic benchmark for meeting micronutrient needs, the "healthy diet" is both an economic benchmark and is designed to reflect dietary customs.

Population expenditure data is compared to the cost of the nutritious diet and is used to estimate the proportion of the population that would not be able to afford it. This non-affordability can be estimated and compared across different regions, seasons or countries. The estimate of non-affordability is a conservative estimate of the share of households unable to afford the lowest cost nutritious diet, assuming optimized selection of nutritious foods. The real cost and non-affordability of a nutritious diet is likely to be higher, as reflected by a healthy diet, which includes foods from several food groups and has greater diversity within food groups.

[1] As defined by the Food and Agricultural Organization (FAO) and the World Health Organization (WHO).
[2] This diet is not intended to reflect what individuals or households are currently eating nor should it be used to develop food-based recommendations or dietary guidelines. Foods that are prohibited could be for customary or public health reasons, e.g., raw meat during pregnancy in some parts of the world.

Data sources for diet cost analysis

Geographic Scope:
The FNG analysis was carried out for each oblast in the Kyrgyz Republic and the two major cities. Because price data were not disaggregated by rural and urban areas, the costs of the diets are estimated at the oblast/city level. However, as disaggregated household expenditure data were available, the non-affordability for rural/urban areas is calculated assuming similar diet costs for the entire oblast. The final non-affordability figures presented in this report are an average of non-affordability for urban and rural areas within each oblast.

Seasonal scope:
Price and expenditure data enabled analysis at different times in the calendar year. This was important because the analysis aimed to understand what happened to cost and non-affordability during the different stages of COVID-19 in 2020. The following months were chosen for the analysis:

- January 2020 (pre-pandemic, winter)
- April 2020 (early pandemic, spring)
- August 2020 (pandemic, summer)
- October 2020 (pandemic, autumn).

Adjustments to data:
At the time of the baseline analysis in late 2021, food price data for 2020 were publicly available, therefore cost estimates reflect real food prices. Household food expenditure data for 2020 were not yet published and the only data on expenditure patterns were summary statistics on 2020 released by the NSC. To reflect changes in income and expenditure in 2020, the 2019 data were adjusted using changes in purchasing patterns between similar points in time (i.e., January 2019 and January 2020) within each wealth quintile.

Modelled household & main target groups for the analysis:
The Cost of the Diet analysis used an FNG standard modelled household comprising a breastfed child (12–23 months), a school-aged child (6–7 years), an adolescent girl (14–15 years), a breastfeeding woman, and an adult man. Cost estimates were calculated at the individual level and aggregated at the household level. Non-affordability estimates were estimated at the household level using food expenditure per capita.

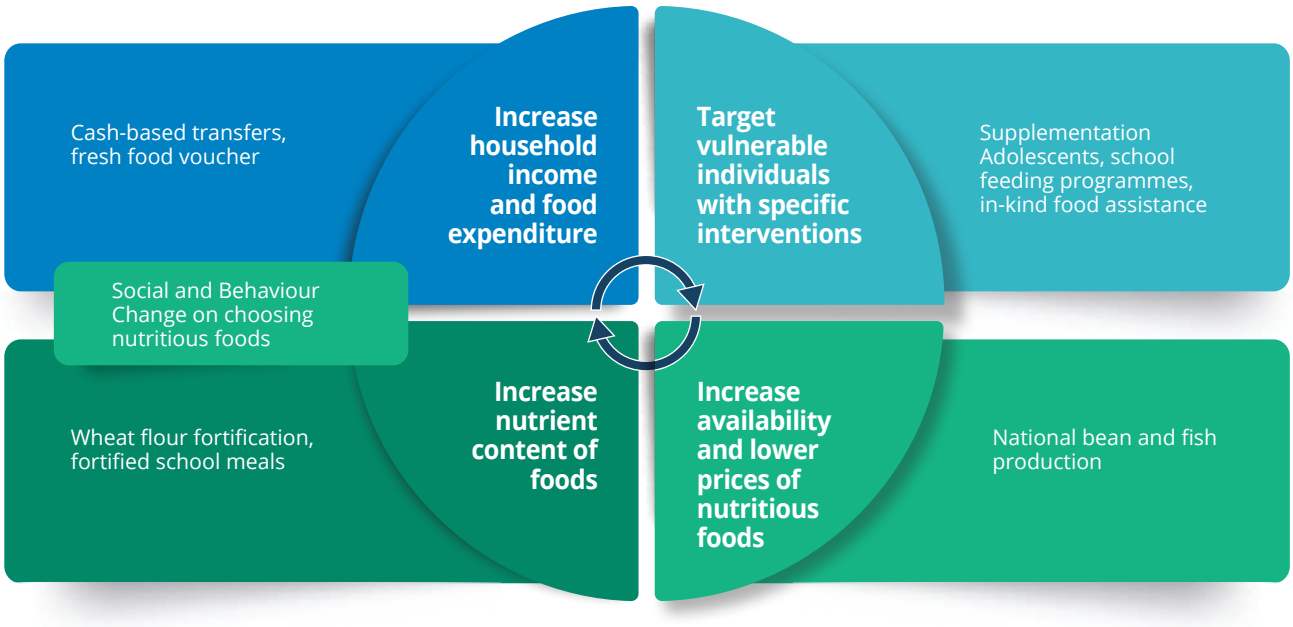
Staple adjustment

As described in Box 2 (Cost of the Diet), the FNG approach uses a staple-adjusted nutritious diet in order to better reflect consumption behaviours. Staples used in the 2022 analysis were aligned to the 2019 analysis and assumed that households consume bread made using unfortified wheat flour as a primary staple and potatoes as a secondary staple. Although wheat flour fortification is mandatory in the Kyrgyz Republic, unfortified wheat flour was selected as fewer than one third of households consume fortified wheat flour (2).

Intervention modelling

The primary objective of the FNG in the Kyrgyz Republic was to assess ongoing and potential programmes which strengthen food systems and improve access to nutritious diets. Interventions were identified by stakeholders during the baseline validation and modelling plan development workshop held in June 2022. They are shown in Figure 4.

Figure 4: Entry points and interventions modelled to estimate reduction in cost of a nutritious diet



Considerations for interpretation and data gaps

Price data:
The 2019 and 2021/22 FNG analyses are not directly comparable due to differences in data sources. In 2019, the FNG used food prices from the KIHS. Food prices or unit costs were calculated from households' reported food expenditure and are therefore based on the value households place on their own production and consumption. The food items are not the same in terms of their quality and, therefore, cost. The 2021/22 analysis used retail prices collected by the NSC directly from the market, therefore costs are for items of a particular quality. The food list used in the CotD calculation was shorter in the 2019 analysis and did not include all of the same foods (53 items were included in the 2019 analysis versus 62 items in 2021/22), which has potential to impact the cost estimates as longer food lists typically produce lower cost estimates.

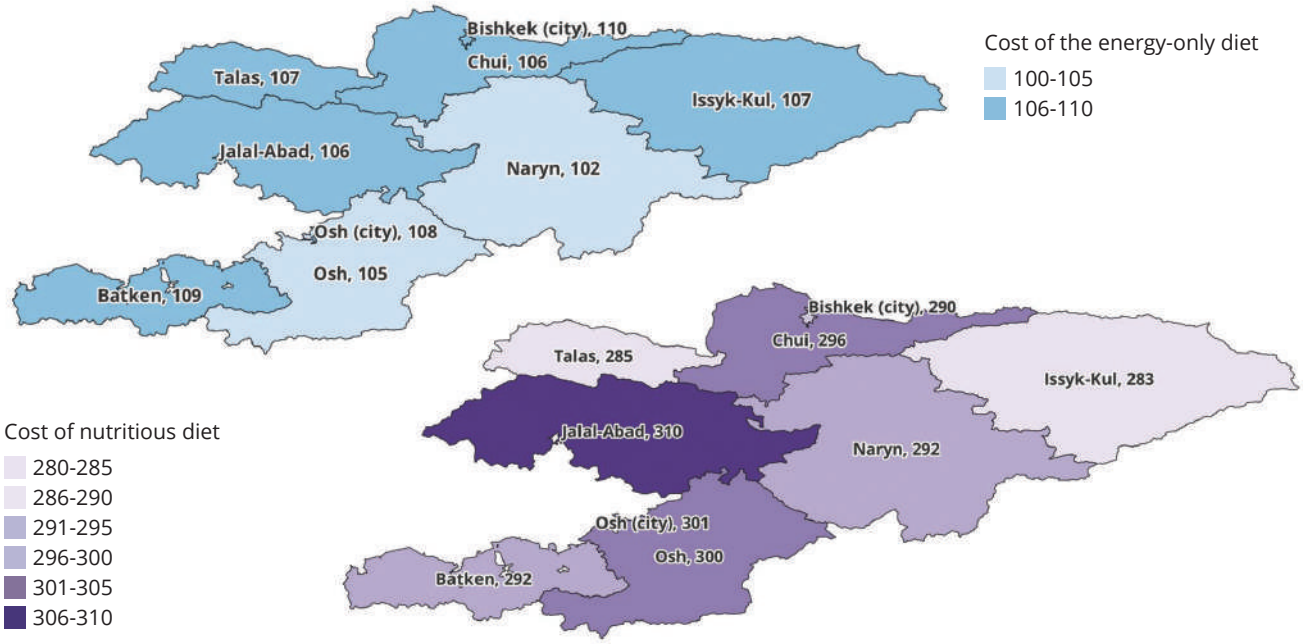
Expenditure data:
The 2019 and 2021/22 analyses use food expenditure data from the KIHS. The 2019 analysis used the 2017 KIHS while the 2021/22 analysis used the 2019 KIHS but adjusted for potential changes to expenditure in 2020 (discussed in Methodology on page 9 and figure 3).

Findings

1.
Nutrient-adequate diets cost three times more than diets that meet only energy needs.

Nationally, the average daily cost of an energy-only diet for the five-person household was Kyrgyzstani Som (KGS) 107 (USD[2] 1.11). The average cost of a nutritious diet for the same household was nearly three times higher at KGS 296 (USD 3.07) per day. Costs of the energy-only and nutritious diet for each oblast are presented in Figure 5. The big difference between the energy-only diet and the nutritious diet results from the types of foods included in each. The energy-only diet is comprised of inexpensive staples such as wheat flour, sugar or oil, while the nutritious diet includes food items from a diversity of food groups such as cereals, animal source foods, pulses, and vegetables. For example, in Bishkek, the energy-only diet was comprised of wheat flour and sugar, while the nutritious diet was comprised of bread, wheat flour, potato, beans, peas, horse meat, sausage, milk, carrot, green leafy vegetables, and oil. In both the energy-only and nutritious diets, breastmilk was included for the child aged 12–23 months.

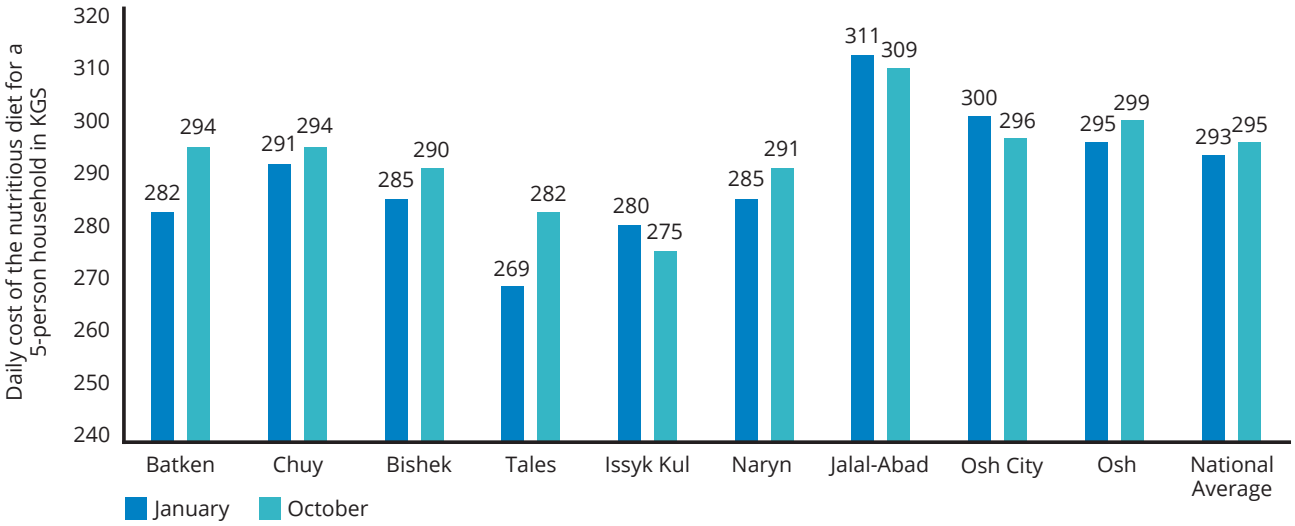
Figure 5: Cost of the energy-only diet (blue) and cost of the nutritious diet (purple) across the Kyrgyz Republic by oblast



Costs of the energy-only and nutritious diets were calculated at four times during 2020[3]. Figure 6 compares the cost of the nutritious diet in the pre-COVID period, represented by January 2020, and the COVID period, represented by October 2020. In six of the nine oblasts, the cost of the nutritious diet increased over time. The increase is consistent with findings that food prices increased over the course of the pandemic. A WFP report published in 2021 found that overall food prices increased by 19 percent for main food items between 2020 and 2021 (reference period of January to August), 69 percent for wheat and 18 percent for wheat flour, 58 percent for sugar, and 82 percent for vegetable oil (as of 24 September 2021 in comparison to February 2020) (4).

[2] Conversions made using February 2022 exchange rates.
[3] Results for each time period are available by request to the WFP Kyrgyz Republic country office.

Figure 6: Comparison of the cost of the nutritious diet between January 2020 and October 2020

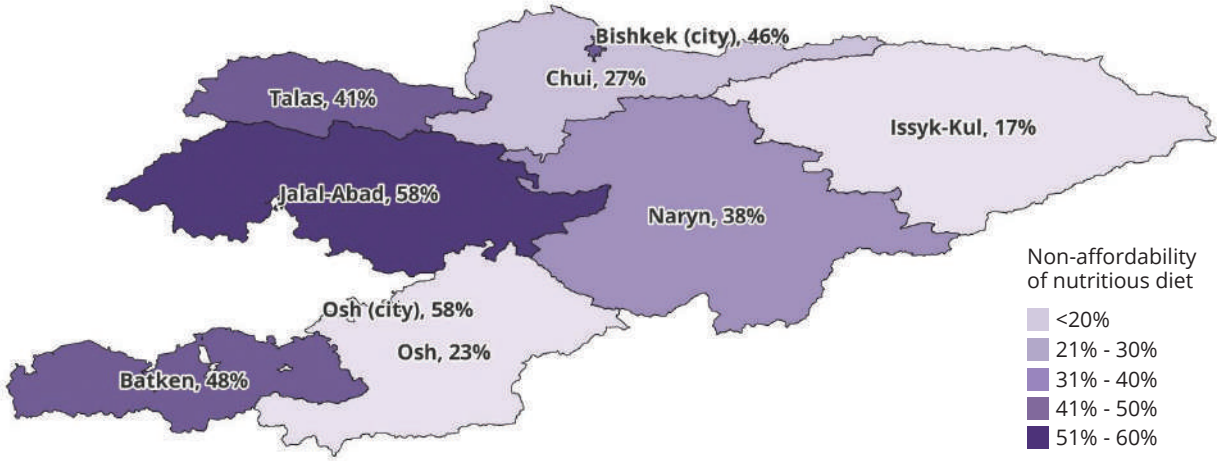


2.

In 2020, almost all households in the Kyrgyz Republic were able to afford a diet that meets energy needs, but at least two in five households (38 percent) were unable to afford a nutritious diet.

Non-affordability rate is defined as the percentage of households who would be unable to afford a diet given their current food expenditure. The FNG estimated that nationally at least 1 percent and 38 percent of households would be unable to afford the energy-only and nutritious diets respectively. Rates of non-affordability differ widely among the oblasts, with the highest rates estimated in Osh (58 percent), Jalal-Abad (58 percent) and Batken (48 percent), and the lowest rates estimated in Issyk-Kul (17 percent) (Figure 7).

Figure 7: Non-affordability of the nutritious diet across the Kyrgyz Republic by oblast

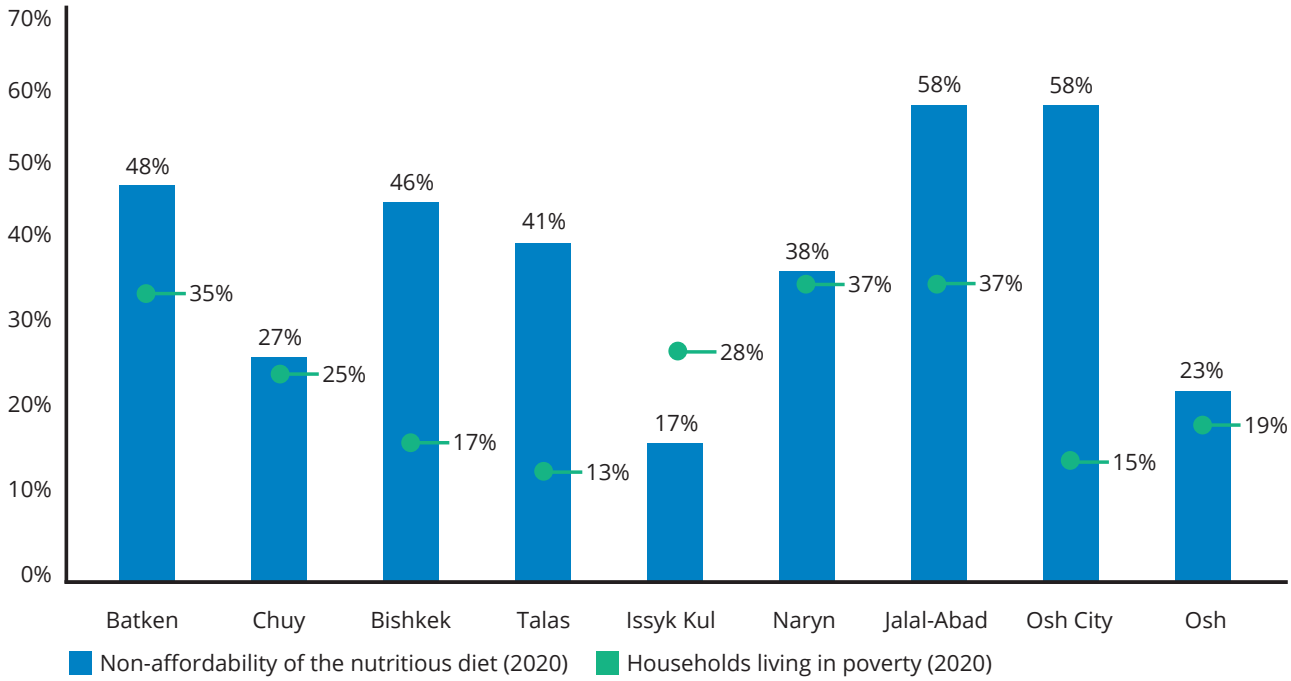


The pandemic has increased the numbers of newly poor and unemployed people, with poverty rates increasing from 20 percent in 2019 to 25 percent in 2020, and to 33 percent in 2021. During the pandemic, every third urban household reported job losses (30 percent), and three of five households experienced a reduction in income (58 percent) (4). In 2022, regional political instabilities and the Global Food Crisis will likely further exacerbate poverty and food insecurity.

Although linkages between poverty and non-affordability exist, rates of non-affordability do not align consistently with poverty rates.

Figure 8 compares the rates of non-affordability with the percentage of households living under the poverty line (USD 2.32 per capita) in 2020. In many areas, the two estimates align closely (Chuy, Naryn, and Osh). In other areas, the difference between the two estimates suggests that the rate of non-affordability is driven by the cost of the nutritious diet and not the wealth of households. In Osh City, for example, the percentage of households living under the poverty line is close to the national average, while the rate of non-affordability is higher than the national average due to the higher than average cost of nutritious diets in this area (5).

Figure 8: Comparison between the non-affordability of the nutritious diet and the percentage of households living under the poverty line (NSC) by area

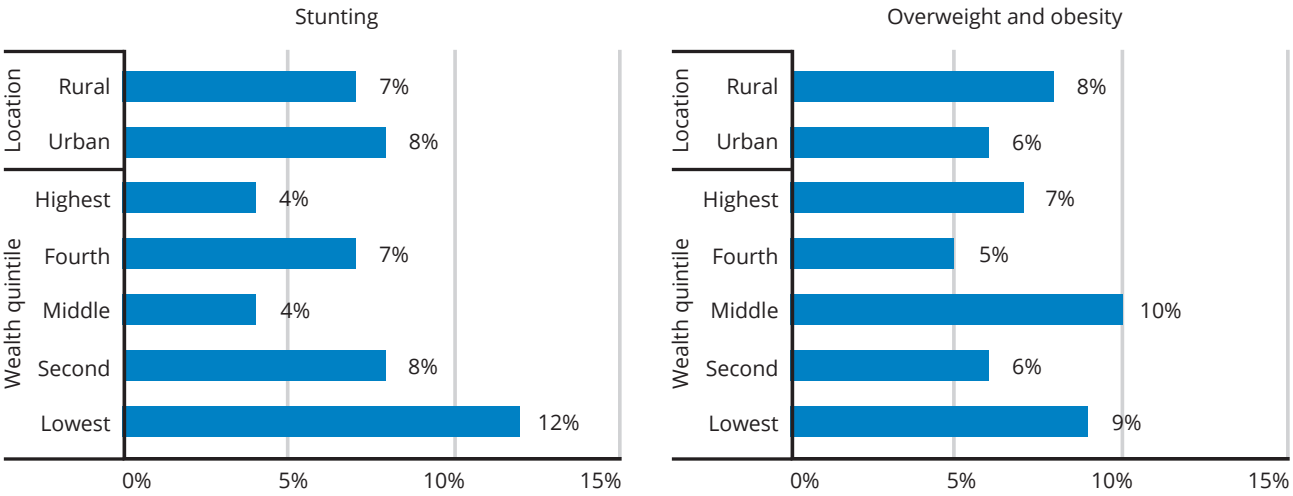


3.

Poor diets contribute to all forms of malnutrition in the Kyrgyz Republic. In children, rates of overweight are similar to rates of stunting and consumption of unhealthy foods is prevalent.

Dietary quality is among the most important determinants of undernutrition, micronutrient deficiencies and overweight and obesity. Undiversified diets, characterized by a preponderance of staple cereals and/or processed foods, can lead to shortfalls in micronutrient intakes simultaneously with over consumption of calories. Nutrition in the Kyrgyz Republic is a two-fold public health problem – national surveys have found that rates of stunting persist even as rates of overweight and obesity increase. Based on data from the National Integrated Micronutrient and Anthropometric Survey (NIMAS) 2021, rates of stunting and overweight and obesity are roughly equivalent among children aged 6–59 months, as shown in Figure 9. The poorest quintile appears to be especially vulnerable to substandard nutrition outcomes: their stunting rates are the highest and their rates of overweight and obesity are the second highest.

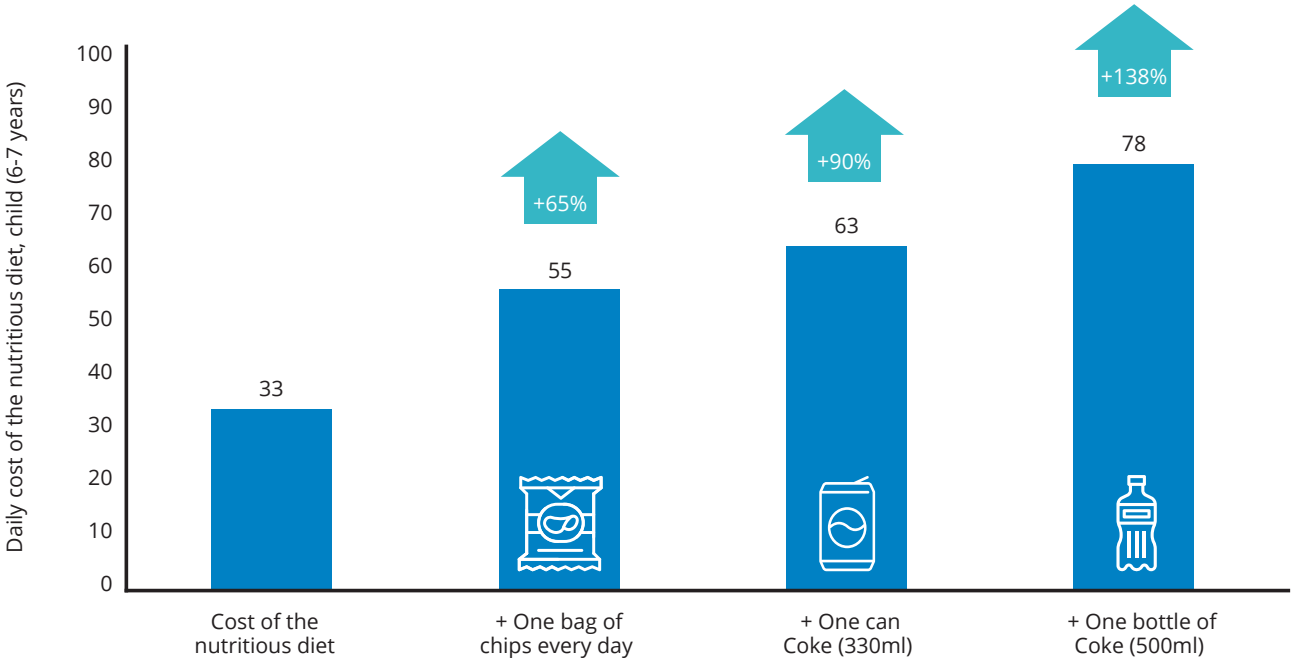
Figure 9: Rates of stunting and overweight and obesity among children 6-59 months in the Kyrgyz Republic (NIMAS 2021)



Although affordability is a major obstacle to households' ability to provide nutritious foods to children, behaviours also determine nutrition outcomes. The Childhood Obesity Surveillance Initiative (COSI) study (2017/2018) surveyed parents of school-aged children on their consumption behaviours. Daily consumption of healthy foods was low at only 18 percent, and 31 percent of children consumed fruits and vegetables each day. With respect to animal source foods, 2 percent of children ate fish every day and 52 percent ate meat daily. However, consumption of processed food is common: parents reported that at least four times per week 28 percent of children consume sugar sweetened beverages, 45 percent consume sweet snacks, and 20 percent consume processed fast foods (6).

The FNG modelled the consumption of unhealthy foods and how they impact on the cost of the nutritious diet. Figure 10 shows the change in the daily cost of the nutritious diet for a child aged 6-7 years after consumption of one bag of chips, one 330ml can of soda, and one 500ml bottle of soda. In each scenario, the cost of the nutritious diet increases, as each unhealthy food item provides calories but does not contribute to covering micronutrient needs. The CotD software therefore must reoptimize to select micronutrient-dense foods, which drives up the cost of the nutritious diet because these foods are typically more expensive.

Figure 10: The cost of the nutritious diet for a child aged 6–7 years in different consumption scenarios of unhealthy foods (results presented are for individual consumption and are not cumulative)



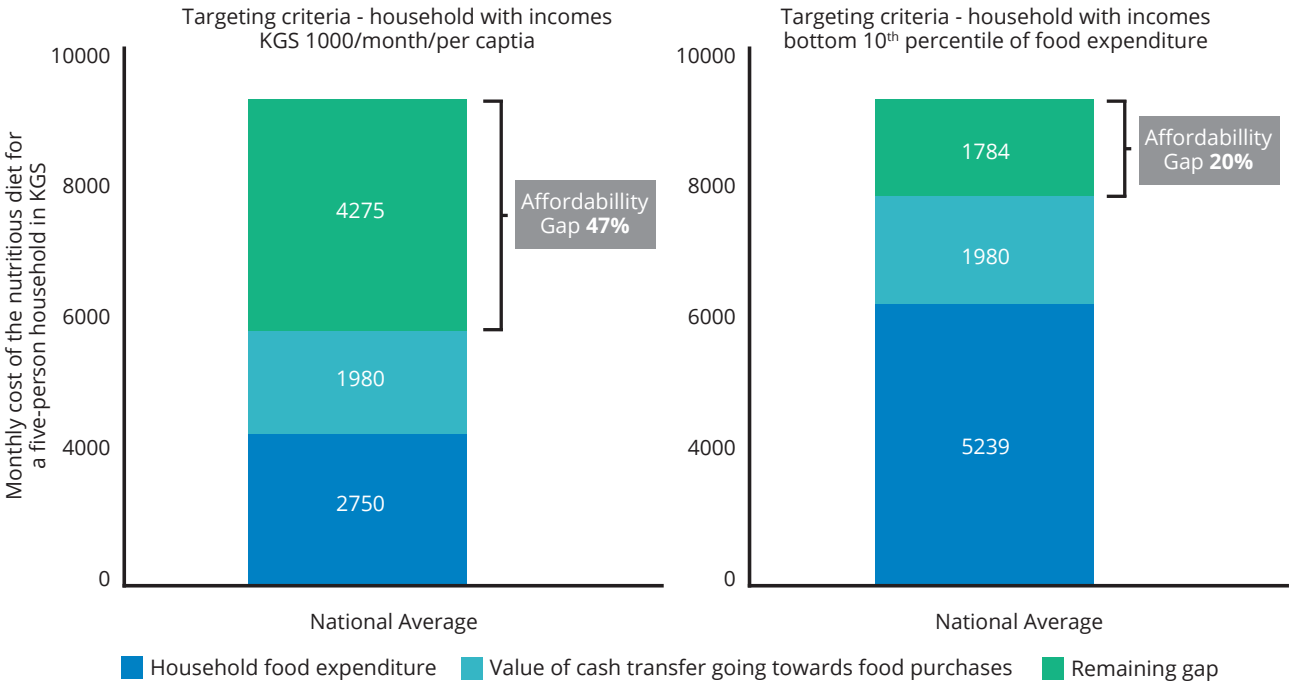
4.

National social protection programmes are essential to supporting the most vulnerable households if they are to afford nutritious diets. However, without vertical and horizontal expansion, these programmes alone cannot close the affordability gaps.

The FNG modelled the adequacy of national social protection programmes to assess their potential for improving nutrition. The analysis focused on three government programmes: Ui Buloogo Komok (UBK) - Benefit for Poor Families with Children aged 16 years or younger, the disability allowance, and the Active Labour Market Programme (government programme supported by WFP). Under the UBK programme, households with a per capita income of less than KGS 1,000 per month are provided with a cash transfer of KGS 1,200 per child per month. Assuming that 55 percent of this transfer goes towards food purchases, as shown in Figure 11, the transfer value would reduce the cost of the nutritious diet by 22 percent.

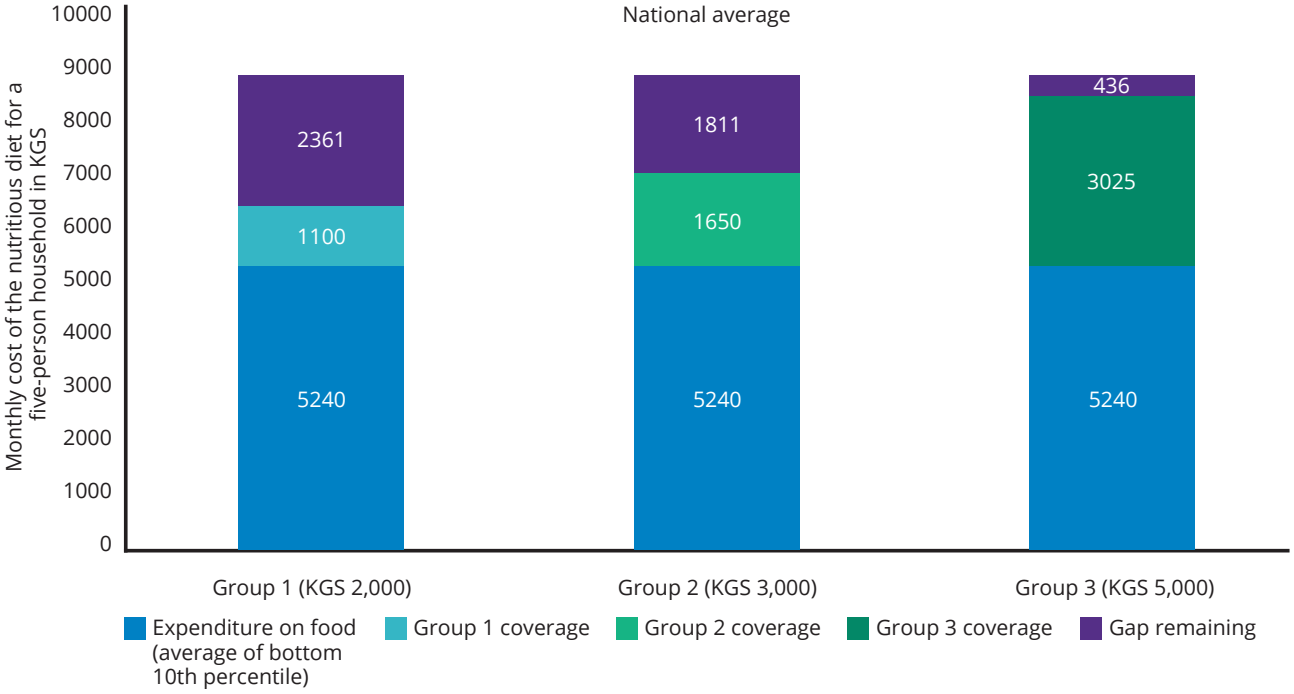
Even with the cash transfer, the household would continue to have an affordability gap of 47 percent of the nutritious diet cost. Figure 11 also shows a household with food expenditure equivalent to the food expenditure of the bottom 10 percentile of households. Such a household would ordinarily be ineligible for the UBK transfer. However, assuming that the UBK transfer was provided to this household, it would continue to face an affordability gap of 20 percent. This indicates that expanding the current targeting of the UBK could benefit additional households in the Kyrgyz Republic that are unable to fully meet the cost of a nutritious diet from their own resources.

Figure 11: Monthly cost of the nutrient-adequate diet covered by UBK cash transfer for a five-person household with three children under 16 years old; national average.



A similar analysis was carried out for the disability benefit. The current disability allowance has three monthly transfer values depending on classification of an individual's degree of disability: KGS 2,000, KGS 3,000 and KGS 5,000. Modelling assumes that 55 percent of the transfer value goes towards food purchases. The modelling shown in Figure 12 considers the contribution of each transfer value to covering the affordability gap when added to an existing level of food expenditure (the average of the bottom 10th percentile of households' food expenditure). It is important to note that modelling assumes that households have other sources of income; in households with people living with disability without additional means for food expenditure, the disability allowance would leave a larger affordability gap for each group.

Figure 12: Monthly cost of the nutrient-adequate diet covered by disability allowance for a five-person household



The FNG also considered the adequacy of the Active Market Labour Participation Programme, which is provided to individuals of working age who are unemployed but actively seeking work. The programme is a cash transfer of between KGS 1,800 and KGS 3,600 per month. Assuming that 55 percent of the transfer value goes to food purchases and that households have no other source of income for food expenditure, the programme would cover between 11 and 22 percent of the total monthly cost of the nutritious diet for a five-person household.

5.

School feeding offers an opportunity to prevent malnutrition in children. Micronutrient intake is improved by school meals that include fortified food items and foods from a diversity of food groups (such as cereals, animal source foods, pulses and vegetables).

In the Kyrgyz Republic, only four out of five children have ever attended school, and about 85 percent of those received state-funded school meals (2). School meals provide an excellent platform to contribute towards the micronutrient needs of school-aged children and to build healthy eating behaviors. According to the NIMAS 2021, roughly half of school-going children receive a hot meal each day, and 30 percent of children receive a bun and tea or bun and compote meal each day. To assess the impact of each meal, the FNG modelled the cost of the nutritious diet for a child aged 6–7 years after consumption of each type of meal five times per week, as shown in Figure 13. If a child receives a diverse hot meal five times per week, the cost of the diet can reduce by 21 percent. If a child receives a bun and compote five times per week, the reduction in the cost of the nutritious diet is comparatively less, at 6 percent.

The hot meal and the bun and compote can help to fill essential nutrient gaps for the school-aged child group. The bigger reduction in the cost of the nutritious diet from the hot meal versus the bun and compote is because the hot meal provides protein and key micronutrients like vitamin A and B_{12}, which are found in foods that are comparatively expensive. As shown in Figure 14, the bun and compote provide a good quantity of micronutrients assuming the bun is made of fortified wheat flour. The hot meal, comprised of a variety of ingredients detailed in Figure 13, also fills nutrient gaps although it is not fortified.

Figure 13: The cost of the nutritious diet for a child aged 6–7 years in different school meal consumption scenarios

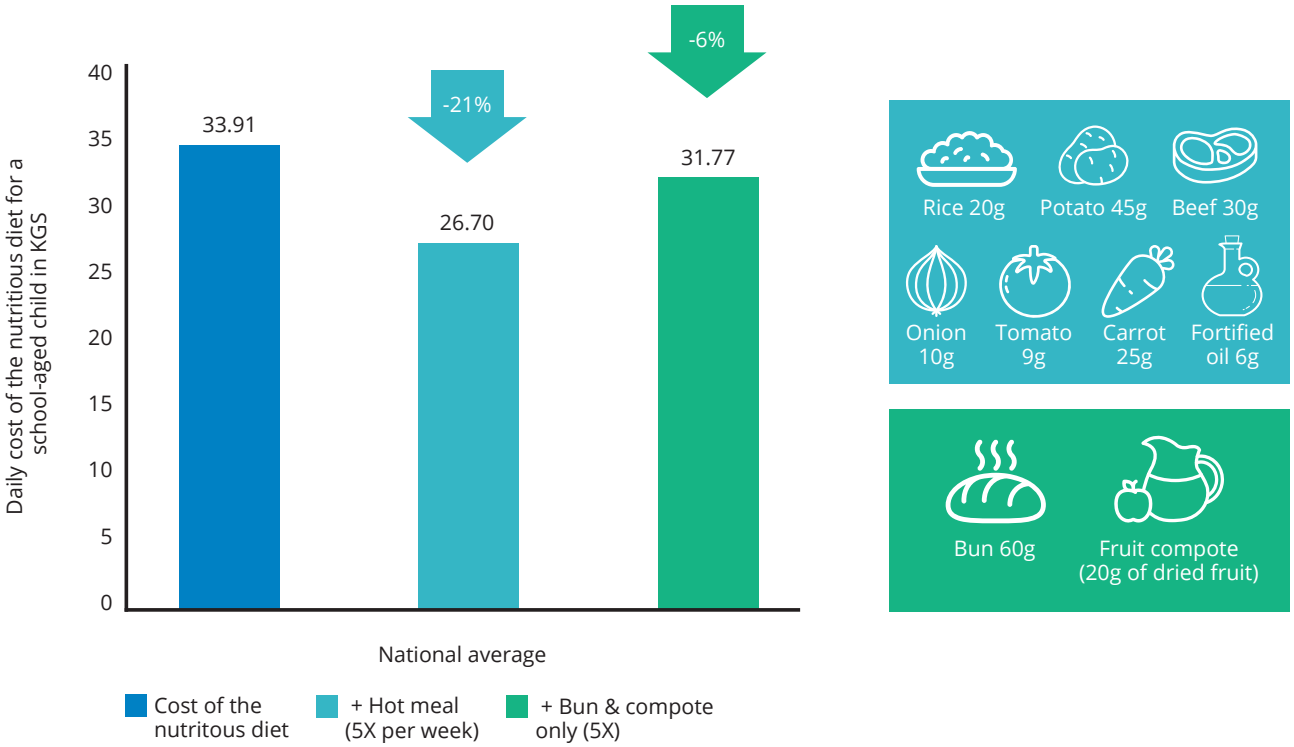


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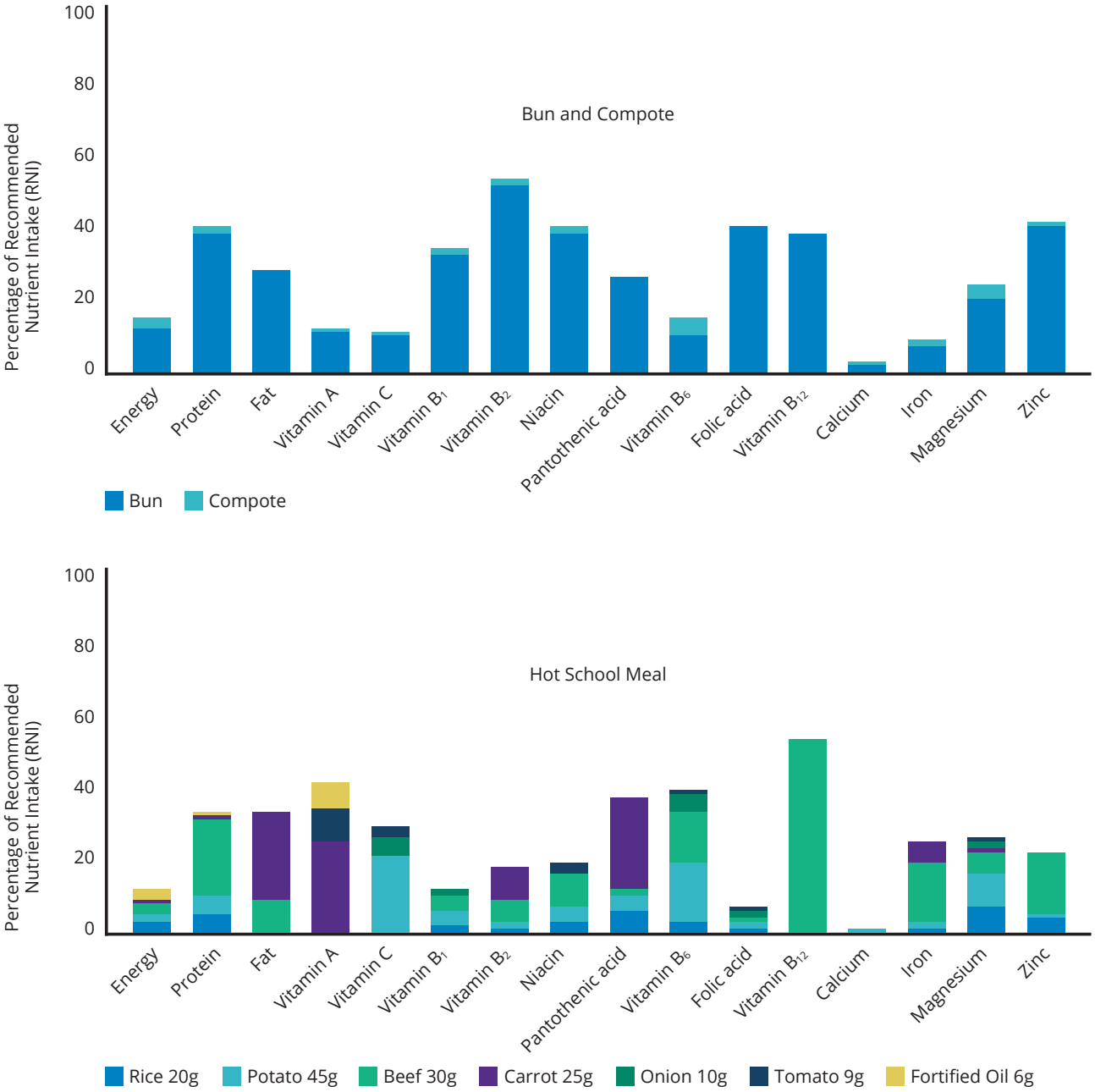
Figure 14: Weekly coverage as a percentage of recommended nutrient intake (RNI) for a child aged 6-7 years, provided by a nutritious hot meal and bun and compote breakfast five times per week

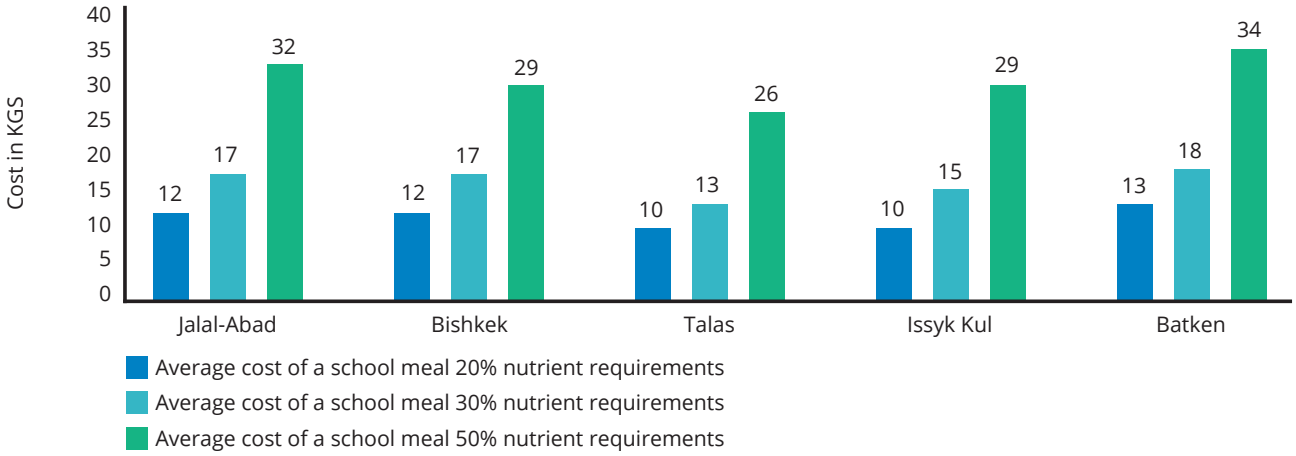


Under the current school feeding strategy of the Kyrgyz Republic, schools receive a daily budget to purchase ingredients for meals. To assess if the current daily cash allotment of KGS 7 or KGS 10 per child per day is sufficient for a nutritious diet, costs were analysed using WFP's PLUS tool. This uses retail food price data to calculate the lowest cost school meal menu that can meet the micronutrient needs of a school-aged child at a threshold set by the user. Modelling was carried out for a child aged 6–12 years (either sex) for the following three models:

- Model 1: Calorie needs are met at 30 percent (550 Kcal) and micronutrient needs are met at 20 percent.
- Model 2: Calorie needs are met at 30 percent (550 Kcal) and micronutrient needs are met at 30 percent.
- Model 3: Calorie needs are met at 30 percent (550 Kcal) and micronutrient needs are met at 50 percent.

Figure 15 shows the minimum cost of a school meal per day per child in each modelling scenario. A meal meeting at least 20 percent of micronutrient requirements would cost between KGS 10 and 13, depending on the area, indicating that the current budget allocation per school meal would be insufficient to meet even this target. The cost of a meal increases with higher micronutrient requirement targets. To meet 30 percent of requirements, a meal would cost KGS 13–18 and to meet 50 percent of requirements the cost would nearly double to KGS 26–34.

Figure 15: Minimum cost of a school meal that meets three levels of minimum nutrient requirements in selected oblasts

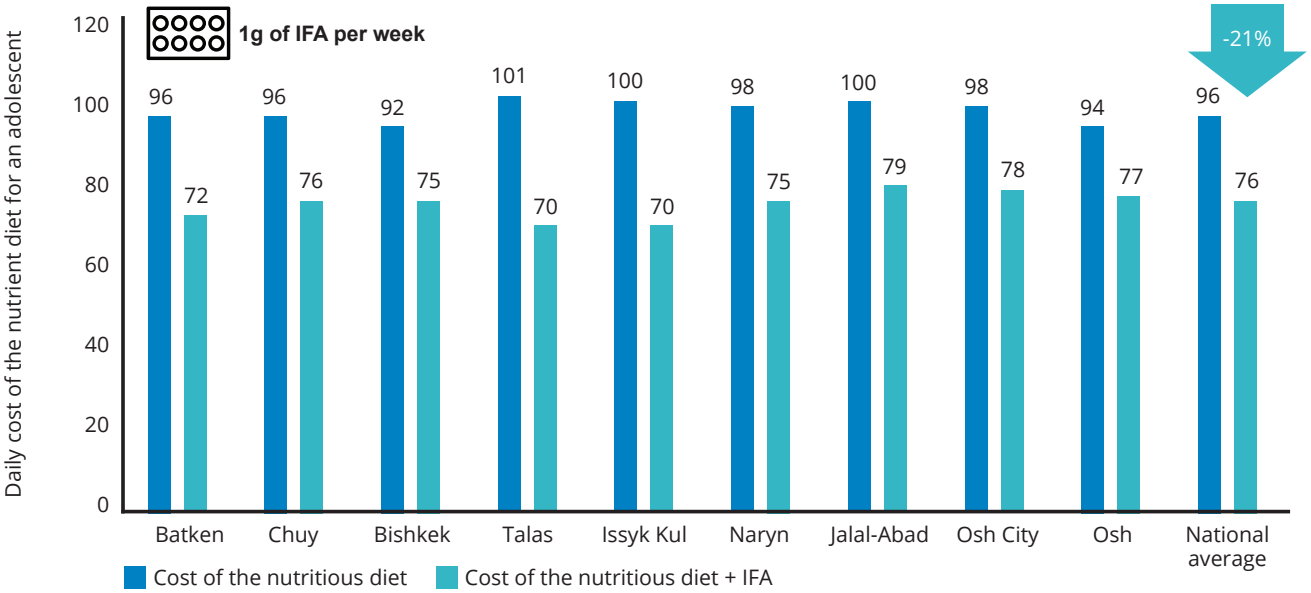


6.
Women of reproductive age suffer from micronutrient deficiencies, overweight and obesity. Micronutrient supplementation can improve nutrient intake which can support good nutrition.

A complex nutritional crisis exists in the Kyrgyz Republic for women of reproductive age: a quarter of them suffer from anaemia, as do half of all pregnant women. At the same time 44 percent of women are overweight, 26 percent have heightened blood pressure and 13 percent suffer from diabetes (1,3). Women and girls have specific nutritional needs and, compared to adult men and boys, have elevated needs for micronutrients like iron, vitamin B_{12} and folate. Their higher needs are reflected in their comparatively high costs of nutritious diets: together, the adolescent girl and the breastfeeding woman account for 60 percent of the household's cost of the nutritious diet. Women and girls living in households unable to afford a nutritious diet and those household that are just above the threshold to meet the cost of a nutritious diet, may not be able to meet their nutrient needs, putting them at an elevated risk of deficiencies. This has implications not only for the individuals themselves but also for the health of future generations.

For households without means to access healthy and nutritious diets, micronutrient supplementation can support prevention of micronutrient deficiencies among women of reproductive age, including adolescent girls. Iron and folic acid tablets (IFA) target their specific nutrition vulnerabilities. The FNG modelled the potential impact of providing IFA to adolescent girls on a weekly basis in schools or through community-based health centres, as shown in Figure 16. On average, the IFA supplements could lower the daily cost of the nutritous diet by over one fifth.

Figure 16: Reduction in the cost of the nutrient-adequate diet after weekly provision of in-kind IFA for the adolescent girl



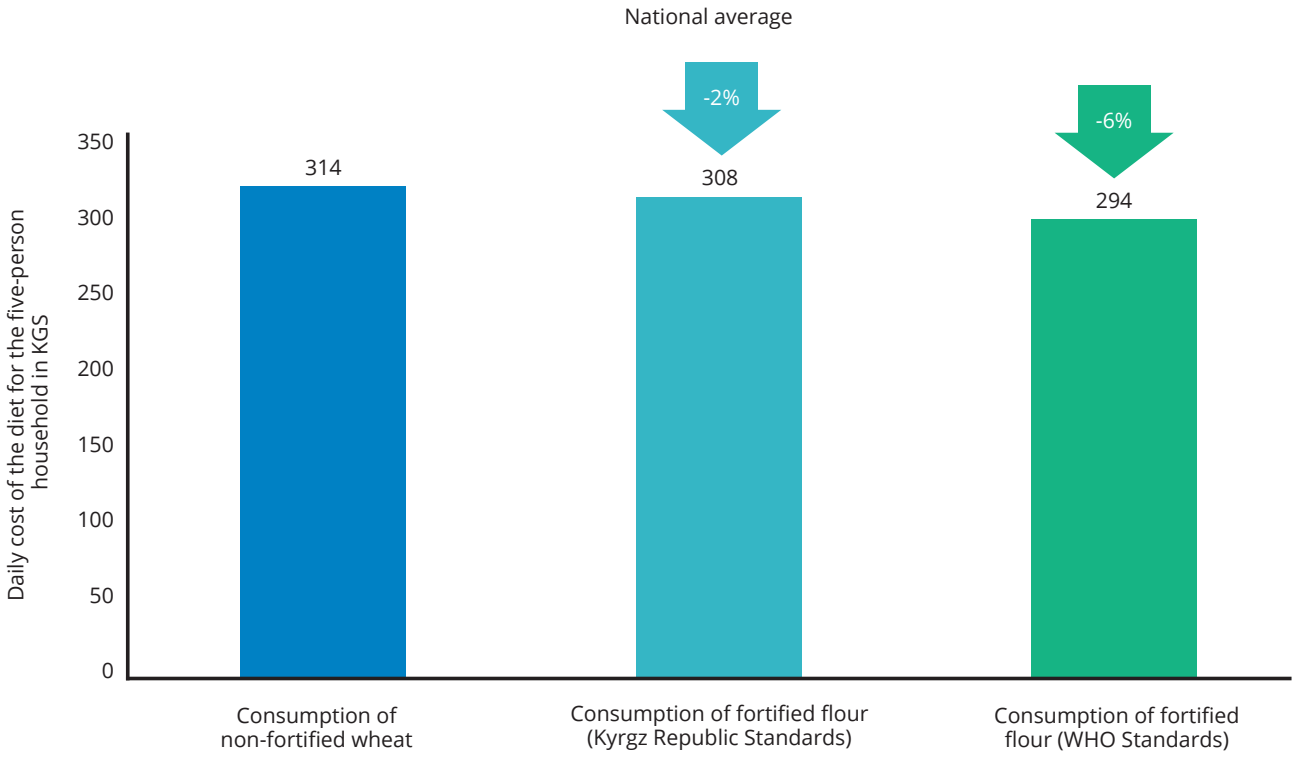
7.

Large scale food fortification is an effective mechanism to deliver essential micronutrients through commonly consumed staple foods. Adherence to fortification standards is essential to providing access to fortified foods. Improving national fortification standards within legislation can increase the impact of fortification on nutrition.

Large-scale fortification of staple foods such as wheat flour is a cost-effective intervention to prevent micronutrient deficiencies. Fortified wheat flour is a good pathway to improving nutrient intake as 96 percent of the population uses wheat flour at home (2). In Kyrgyz Republic, wheat flour fortification has been mandatory since 2009, however, the NIMAS 2021 study found that 48 percent of households owned flour which purported to be fortified, but only 24 percent of samples collected for testing were fortified. In reality, only one third of households consume fortified flour and only 2 percent of households had flour that was fortified according to national standards.

The FNG modelled the impact on a household's cost of a nutritious diet when unfortified wheat flour is replaced by wheat flour fortified at standards set out in Kyrgyz Republic (Figure 17). The model assumed the cost of fortified wheat flour to be 5 percent higher than the cost of unfortified wheat flour. On average, nationally the cost of a nutritious diet for a household would fall from KGS 314 per day to KGS 308 per day. The Kyrgyz Republic wheat flour fortification standards are different from WHO recommendations with lower levels of B_1, B_2, niacin, folic acid, and iron. If the household were to replace the unfortified flour (also at 5 percent price increase) with flour fortified to WHO specifications, the cost of the nutritious diet falls further, to KGS 294 per household per day (an additional reduction of five percent on average).

Figure 17: Reduction in the cost of the nutritious diet when including fortified wheat flour, in different fortification specification scenarios



The additional contribution of micronutrient coverage provided by fortification is shown in Figure 18. Consumption of flour fortified to Kyrgyz Republic fortification specification significantly improves intakes of vitamins B_1 and B_2, folic acid, and zinc. Raising the fortification standard to WHO levels can further increase coverage for vitamins B_1 and B_2, niacin, folic acid, and iron (Figure 19).

Figure 18: Weekly coverage as a percentage of recommended nutrient intake (RNI) for a five-person household provided by unfortified wheat flour, wheat flour fortified to Kyrgyz Republic specifications, and wheat flour fortified to WHO specifications

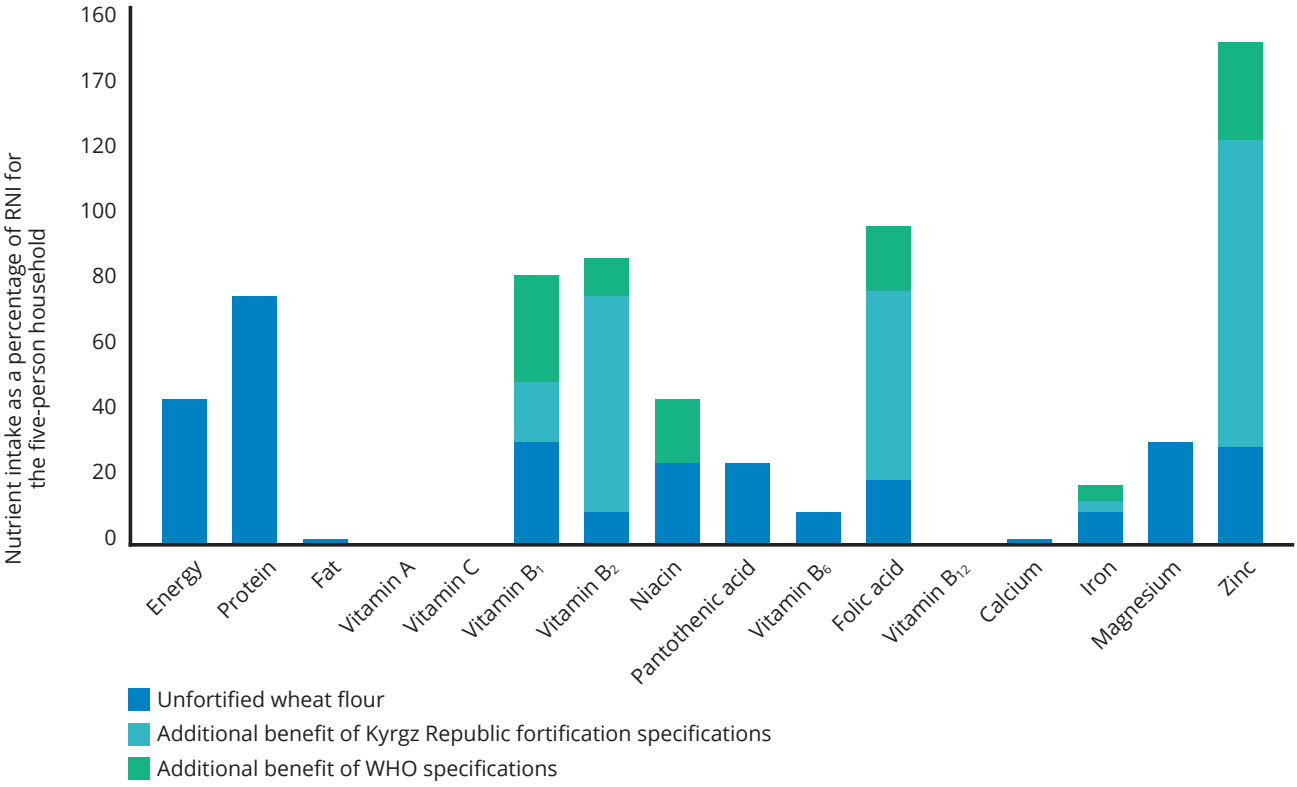
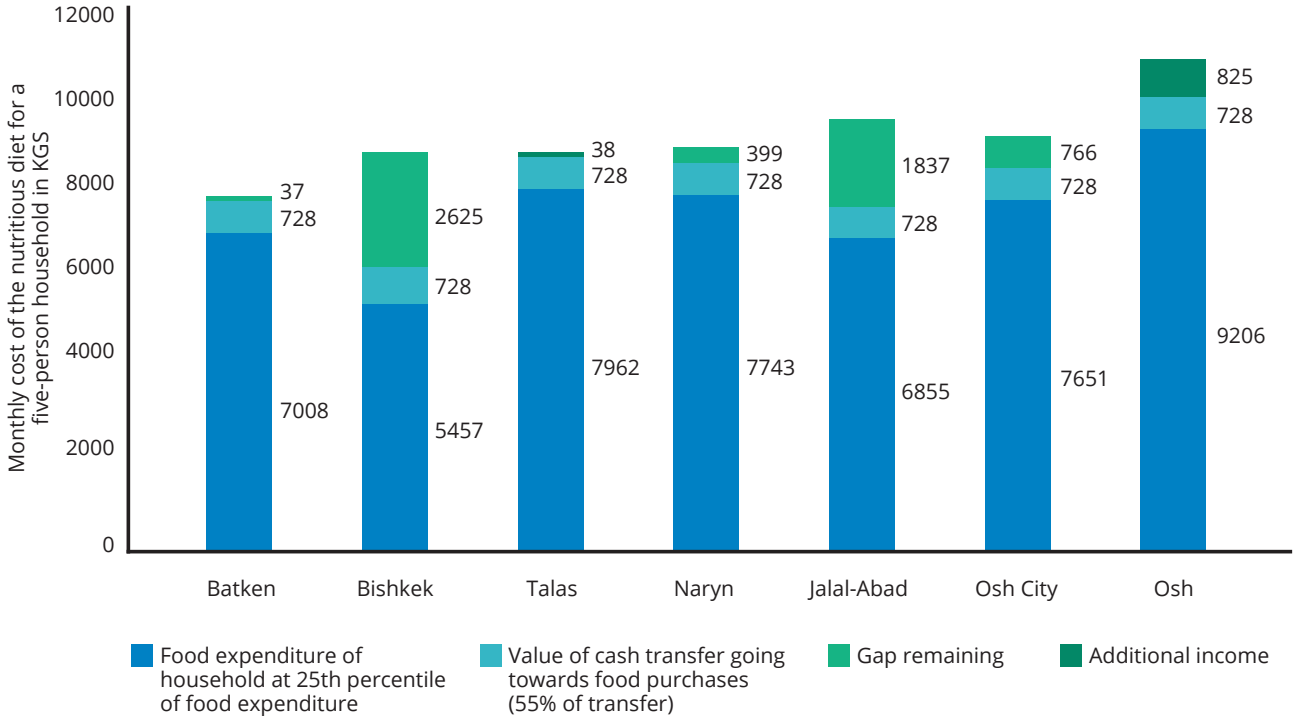


Figure 19: Contribution of cash transfer to covering affordability gap for households at 25th percentile of food expenditure across oblasts



8.

Bean and fish production has potential to grow. Increasing accessibility to these foods can support consumption and improve access to key micronutrients.

Stakeholders in the FNG analysis identified beans and fish as two commodity value chains with potential for improvement to support better nutrition. Most recent data on national food supply from 2019 shows that per person availability of fish was 3g of fish per day, which is strikingly low compared to the global average of 52g, and is lower than other neighbouring countries. Similarly, availability of beans for consumption was 4g per person per day, half of the global average of 8g, and lower than other neighbouring countries (7).

The government has made signifcant commitments to scale up fish production. In 2019, the Fisheries and Aquaculture Development Program in the Kyrgyz Republic was introduced and accepted. Production continues to be small, but is increasingly organized and conducive to creating econmies of scale. On the consumer side, demand for fish is growing, although daily intake of fish (2.4 percent of households) was low compared to intake of meat (52 percent) (8).

Bean production is geographically constrained and primarily located in Talas oblast. A review of the bean sector (9) found that bean producers lack knowledge and information to initiate or improve bean production, and production capabilities are limited by poor farming practices (lack of crop rotations, slow technological change). The sector is also characterized by a predominance of small producers without structured cooperatives. This curtails progress towards economies of scale. Add the fact that domestic demand for beans is low, which disincentivizes producer investments.

The FNG modelled interventions that could increase the demand for fish and bean production which could trigger investment in the form of a fresh food voucher that could guarantee producers a marketplace. This could improve micronutrient intake of vulnerable households for whom these food products may not be accessible. The hypothetical voucher was modelled in Chuy oblast at two levels (KGS 600 and KGS 1,200 per month), targeted to households.

Based on retail prices of fish and beans in Chuy, the voucher would purchase 500g of beans and 400g of fish from KGS 600 per month, and could purchase 100g of beans and 800g of fish under the level 2 scenario of KGS 1,200 per month. The level 1 and level 2 scenarios could cover 3 percent and 7 percent of the monthly cost of the nutritious diet for housheold respectively (Figure 20) given improved nutrient intake of household members, as shown in Figure 21. The contribution is minimal because the food modelled is for one month and is divided among 5 people.

Figure 20: Monthly cost of the nutrient-adequate diet covered by two levels of fresh food vouchers for fish and beans for a five-person household

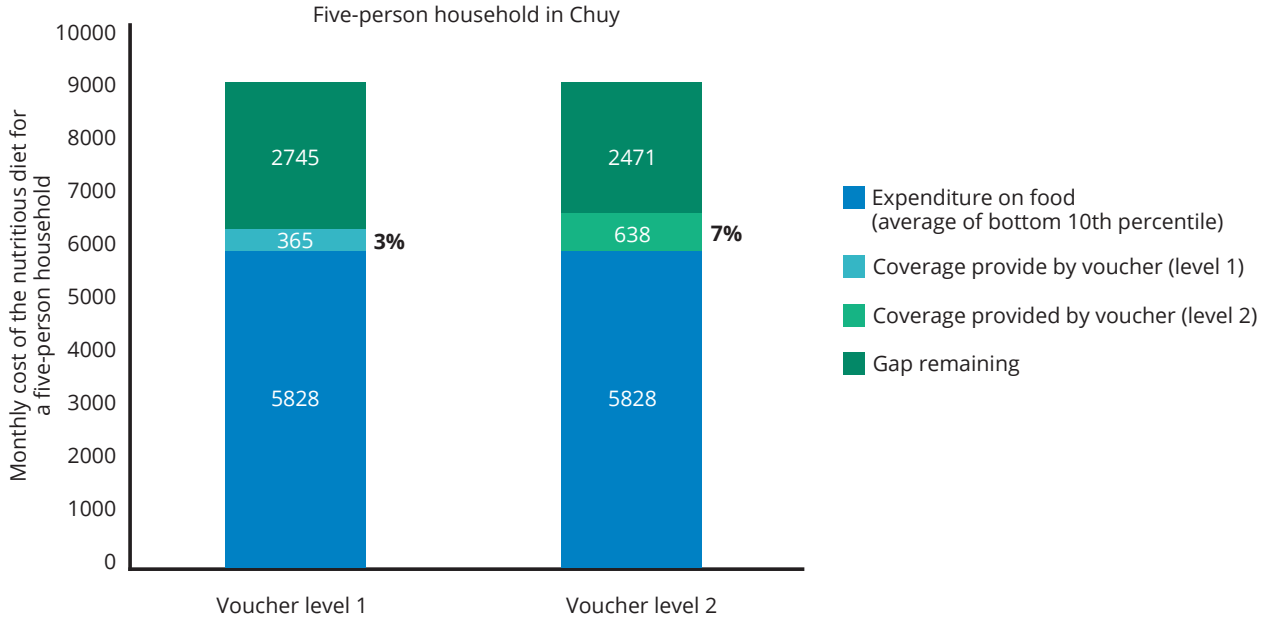
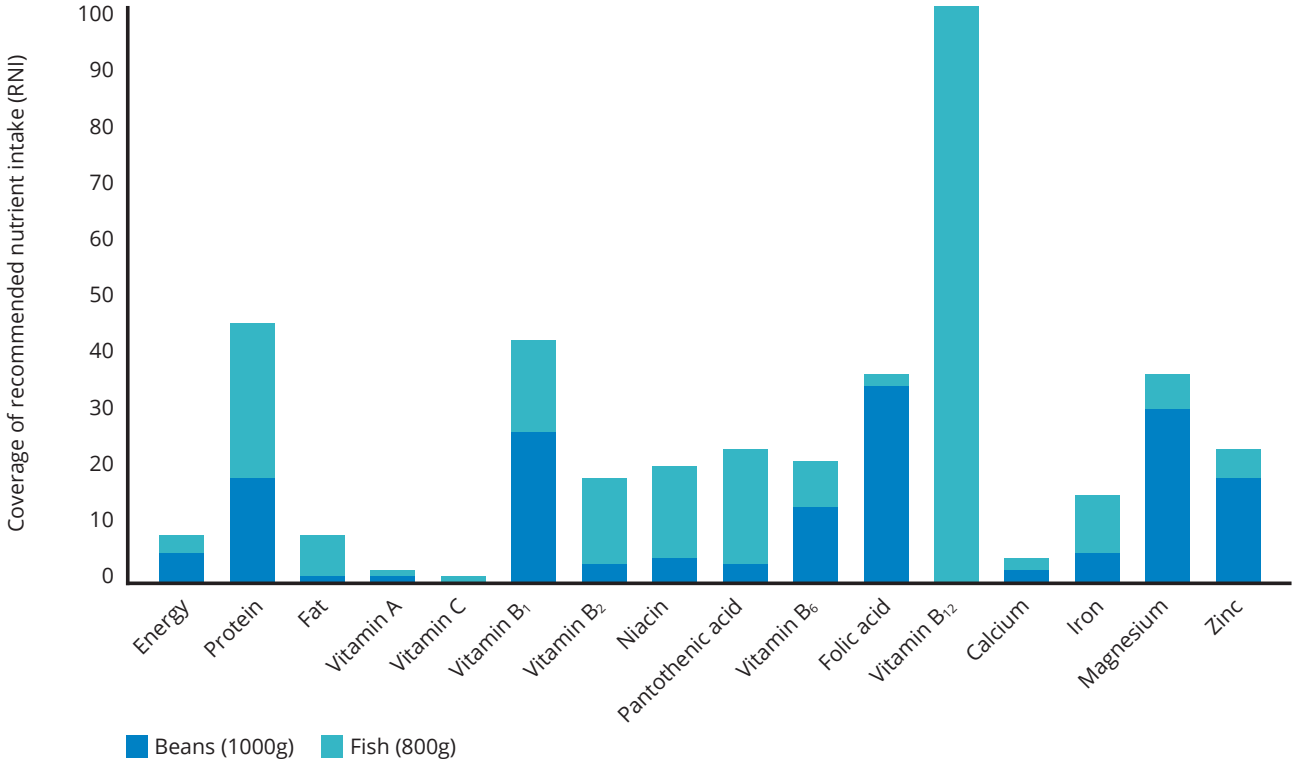


Figure 21: Coverage as a percentage of recommended nutrient intake (RNI) for a five-person household provided by 1,000g of beans and 800g of fish



9.

Household assistance programmes help households to cover the cost of a nutritious diet. By providing fortified products, in-kind assistance has more potential to cover the cost of a nutritious diet.

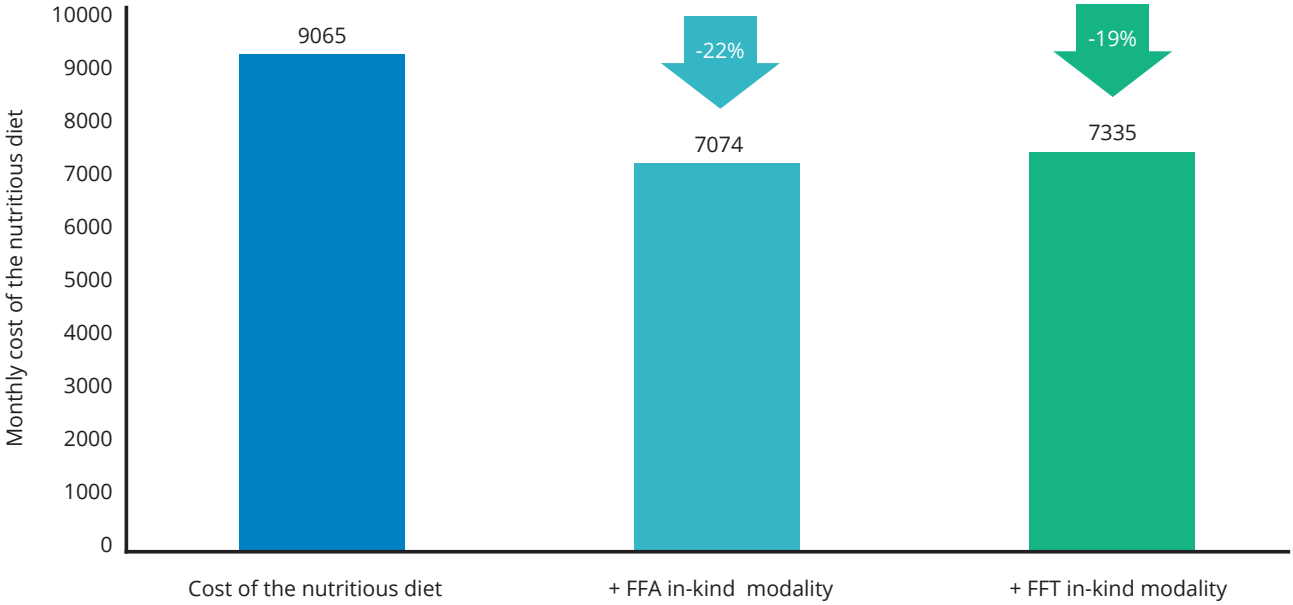
WFP supports the government of the Kyrgyz Republic with two assistance programmes: asset creation activities (FFA) and knowledge transfer activities (FFT). The aim of each of these programmes is to support vulnerable and food insecure households living below the poverty line with food or cash to ensure adequate daily calorie intake. The rations cover households' kilocalorie gap to meet immediate food consumption and first-need non-food requirements, so the poor could free up resources and invest in their livelihoods to improve food security and escape chronic poverty. Table 1 details the quantities of food and cash provided by each programme.

Table 1: Details of the WFP Food for Assets (FFA) and Food for Training (FFT) programmes

	Asset creation activities (FFA) annual transfer	**Knowledge transfer activities** (FFT) annual transfer
In-kind food-based modality	300kg fortified wheat flour and 30kg oil	150kg fortified wheat flour and 15kg oil
Cash-based modality	KGS 15,900	KGS 7,950

Figure 22 shows the reduction in the monthly cost of the nutritious diet for a five-person household after receiving the FFA in-kind ration and the FFT in-kind ration respectively. Although the FFA ration is twice that of the FFT, the reduction provided by the FFT is similar to that of FFA because, after a certain quantity of fortified flour and oil, other foods need to be included in the nutritious diet to meet remaining nutrient gaps, and therefore more flour and oil does not meet additional needs and provide an additional reduction in the cost of the nutritious diet.

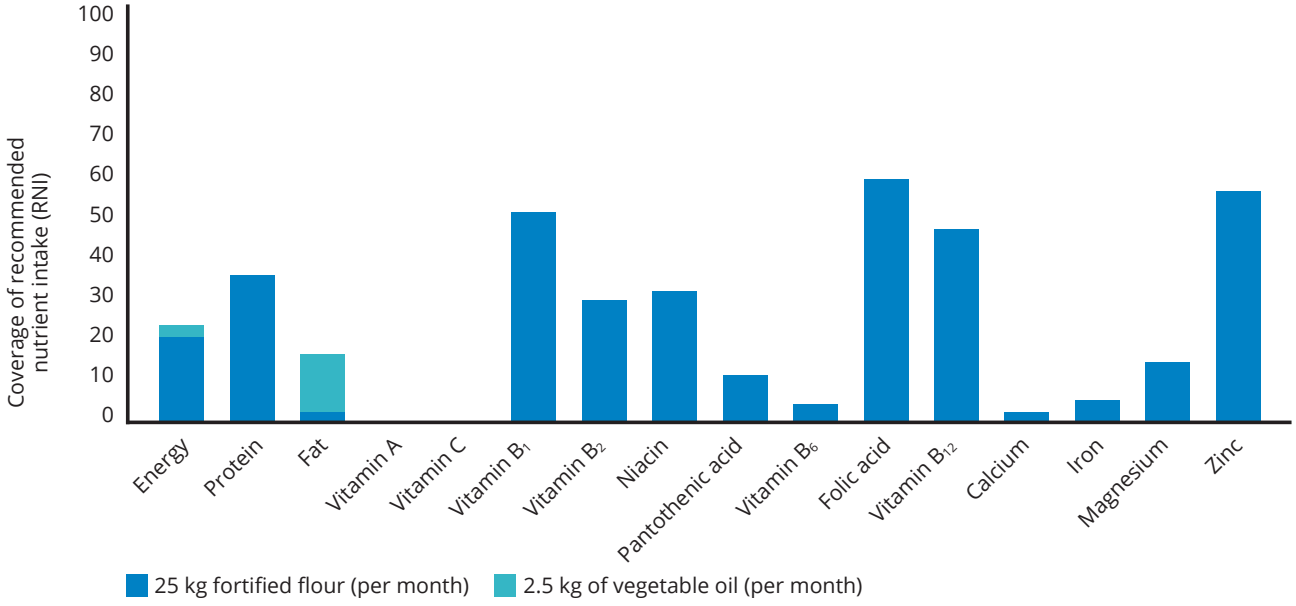
Figure 22: Reduction in the monthly cost of the nutritious diet after household consumption of FFA and FFT in-kind food transfers; average across modelling zones



The sizeable impact of the FFT and FFA in-kind modalities on reducing the cost of the nutritious diet is because it is free of cost – the micronutrient coverage is due to wheat flour being fortified.

As shown in Figure 23, fortified flour, in addition to covering a big share of energy needs, contributes to covering over 40 percent of vitamin B_1, folic acid, vitamin B_{12} and zinc.

Figure 23: Coverage as a percentage of recommended nutrient intake (RNI) for a five-person household provided by the FFA in-kind transfer



The FFA and FFT cash modalities also show good potential to help households contribute towards the costs of nutritious diets. If spent optimally (i.e. household select foods which meet needs at the lowest possible cost), the FFA and FFT cash modalities respectively cover 8 percent and 4 percent of the cost of the nutritious diet, assuming that 55 percent of the transfer is spent on food and the remaining on non-food items. FFA and FFT transfers target poor and food insecure households, including those which have some source of income. The model assumed the household can partially meet their own needs by including the food expenditure equivalent to the average food expenditure of the bottom 25th percentile of households. In most of the oblasts targeted by the programmes, the modelled households continue to face an affordability gap even after receiving the FFA cash transfer. However, in some areas like Osh and Talas, the cash transfer allows households to cover the cost of the nutritious diet and, in some cases, exceed it.

10.

The impact of cash transfers on dietary quality can be maximized if a household uses the cash to purchase diverse nutritious foods. Social behaviour change (SBC) is needed to encourage households to do so.

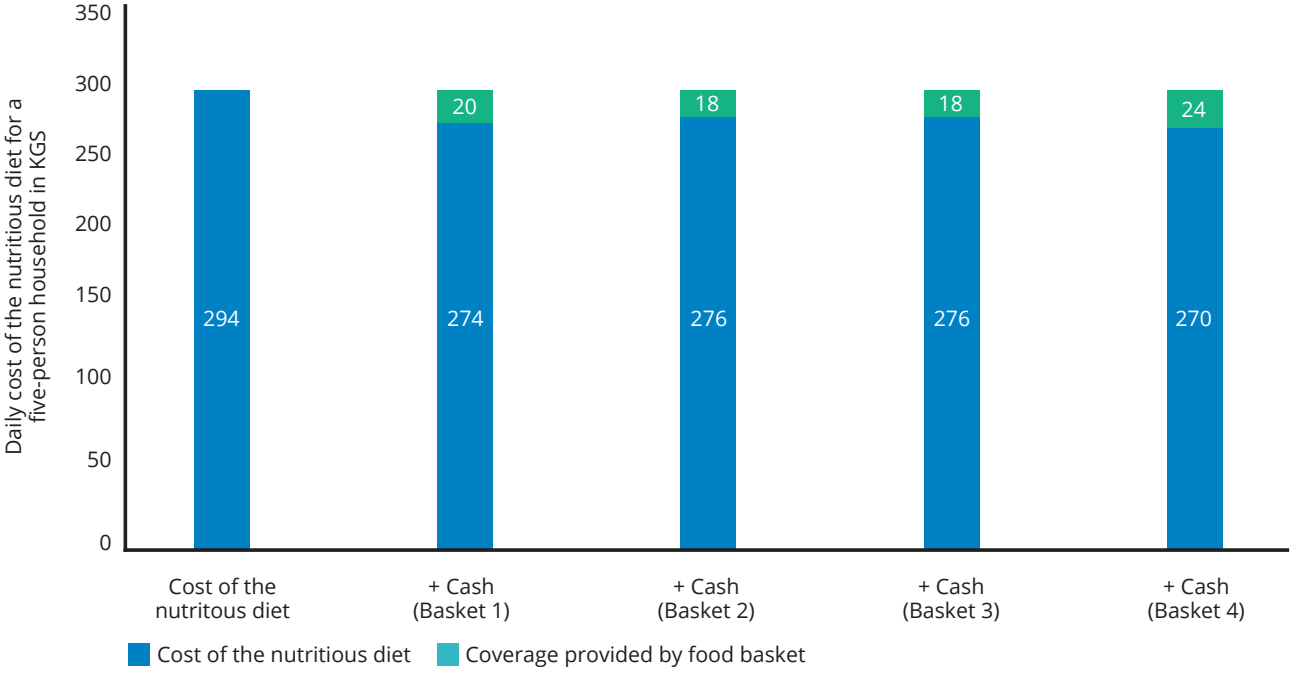
How households choose to spend cash transfers determines the impact they have on nutrition outcomes. To showcase the importance of SBC communication as a complement to cash transfers, the analysis modelled baskets of varying diversity and micronutrient content which could be purchased using the value of the FFA cash transfer.

The model assumed that the household would spend the cash transfer (adjusted for the proportion of cash going towards food purchases, 55 percent) between household members on a weekly basis. Based on retail prices for Batken, four baskets were modelled:

- Basket 1: 500g of potato and 500g of wheat flour
- Basket 2: 220g of milk and 200g of eggs
- Basket 3: 200g of egg, 130g of onion 130g of beetroot, 130g of carrot
- Basket 4: 500g of milk, 200g of onion 200g of beetroot, 300g of carrot, 250g of apple.

Basket 4 had the greatest impact in covering the household cost of the nutritious diet because it included a wider range of micronutrients. Basket 1, comprised only of starchy staples, provided the least coverage of the cost of the nutritious diet, as it did not meet the wider range of micronutrient needs covered by the other baskets. Although baskets 2 and 3 are also diverse, the high cost of eggs limits the amount that can be purchased, and their contribution to covering micronutrients is limited. The coverage provided by each basket is shown in Figure 24.

Figure 24: Coverage as a percentage of recommended nutrient intake (RNI) for a five-person household provided by the FFA in-kind transfer



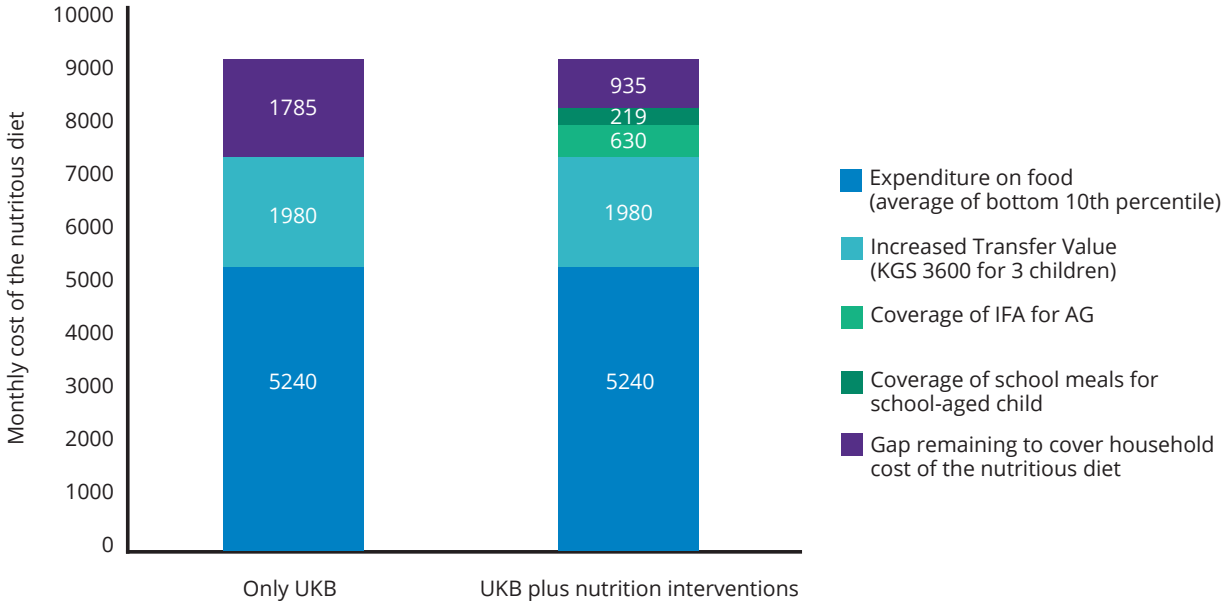
11.

There is no single solution to improving nutrition outcomes in the Kyrgyz Republic. Combining nutrition-sensitive interventions with social protection and assistance programmes can contribute towards closing a household's affordability gap.

The Kyrgyz Republic has comprehensive social protection programmes which cover different vulnerabilities within the population, including school-aged children, children of impoverished households, people with disabilities, the elderly, and the unemployed. In addition, development partners like WFP support the Kyrgyz population with assistance programmes intended to ensure basic levels of food security. By ensuring these programmes are adequate (i.e holistically help cover costs of purchasing and improving availability of nutritious diets) and comprehensive with respect to nutritional vulnerability (programmes include nutrition-sensitive components), they can contribute towards improving nutrition.

The FNG modelled an example of how social protection programmes that are linked to, or combined with, other programmes, can help poor households cover the cost of the nutritious diet. Figure 25 shows the monthly cost of the nutritious diet for a household in two scenarios. In the first scenario (on the left), the modelled household receives the UBK cash transfer only. Given current food expenditure (using the average value of a household in the bottom decile of food expenditure), an affordability gap of KGS 1,785 (20 percent) remains. The graph on the right represents the second scenario in which the adolescent girl living in a household receiving the UBK transfer receives IFA once per week, and the school-aged child gets a hot meal for lunch five times per week. The affordability gap shrinks by more than half, to KGS 849 or 48 percent, as the additional interventions targeted at specific individuals help to cover the overall household cost of the nutritious diet. SBC initiatives implemented alongside the cash transfer and in schools should also be part of this package of interventions as it can nudge households towards spending their cash transfer on nutritious foods. In schools, it can develop healthy eating behaviours among children and help address the country's growing problem of overweight and obesity.

Figure 25: Coverage as a percentage of recommended nutrient intake (RNI) for a five-person household provided by the FFA in-kind transfer



Recommendations

Results from the FNG analysis were presented to stakeholders from different sectors such as agriculture, social protection, and health, in a series of workshops held in Bishkek in November 2022. Following the presentation, a moderated discussion was held where participants used the FNG findings to develop recommendations for different sectors. These recommendations are summarized below.

Strengthening capacity of public and private actors across sectors on nutrition integration and healthy diets

- Strengthen the capacity of Ministry of Health, Ministry of Agriculture and Ministry of Labour, Social Security and Migration on healthy diets to assist them to make their programmes nutrition-sensitive.
- Ensure programmes supported by development partners have an exit strategy and include initiatives to strengthen government capacity to take over.
- Engage and build capacity on healthy diets among local supply chain actors such as producers and retailers.
- Develop a dashboard which aggregates resources on nutrition such as polices and laws, data, research studies, etc., that can be accessed by different government agencies and private actors. To ensure its use and uptake, the dashboard should be launched with the support of the government and the SUN Business Network.
- Introduce incentives via legislation or the procurement process for public institutions (such as schools, hospitals, local government offices) to procure healthy food items for their canteens to improve consumption and stimulate demand to incentivize local producers. Use these institutions as a platform for nutrition awareness programmes to promote healthy eating habits and behaviors.

Promoting healthy behaviors

- Social behavior change initiatives that focus on improving healthy practices and promoting healthy eating behaviors should be implemented at community level, including in rural and small communities through Republican Centres for Health Strengthening.
- Develop recipe books and other information materials that can promote healthy eating habits.
- Introduce nutrition education in schools focusing on promoting good eating habits and hygiene practices among schoolchildren to ensure behavior change across different individuals in a family.
- To stimulate the consumption and supply of fish, promote the tradition of eating a fish a day through wide advertising campaigns.

Social assistance

- To overcome barriers related to affordability of nutritious diets and enable purchase and consumption of healthy and nutritious foods, food vouchers or subsidies targeted at vulnerable populations should be considered.
- Use the FNG findings on the adequacy of social assistance transfers (such as UBK and disability allowances) to advocate for piloting increased transfer sizes, especially for those populations with significant affordability gaps. Pilots should be accompanied by effectiveness research to assess the impact of larger transfer values on actual diets.
- Advocate for improving the nutrition adequacy of food baskets when providing in-kind assistance (including the WFP's FFA and FFT).
- Explore the feasibility of including fresh nutritious foods in food baskets through vouchers and/or school gardens.

School feeding

- Review the existing regulations for school meals to propose options for making school meals more nutritious, including the use of fortified foods.
  - Use latest data from NIMAS on rates of triple burden of malnutrition to advocate for these revisions.
  - Advocate for increased government financing for school meals and explore opportunities for funding from development partners and the private sector.
- Develop clear guidelines and toolkit for schools to assess the quality of locally produced foods included in school meals.
- Expand the coverage of school meal programmes to additional age groups, including pre-school children and adolescents.
- Assess issues related to supply chain and procurement of nutritious foods in the national legislation and implementation arrangements, and focus on resolving them when strengthening the national capacities for delivering nutritious school meals. Include pilots that may also rely on WFP procurement and logistics support at the outset.
- Explore the feasibility of introducing school gardens as a source for fresh nutritious foods in school meals and resolve any specific challenges in implementing this model.
- Develop guidelines for creating healthy school environments to disallow the sale of unhealthy snacks in school cafeterias and areas around the school premises.

- Develop regulations for parental contributions to school meals, but ensure provision for exemption for households unable to afford this additional expense. For in-kind contributions from parents, develop guidelines to ensure the food meets quality standards.
- Build an information system under the Ministry of Education and Science of the Kyrgyz Republic that brings together data on school meals for improved monitoring and evaluation and learning.
- Support establishment of school nutrition unit at the Ministry of Emergency Situations of the Kyrgyz Republic.

Fortification

- Use the FNG findings to advocate for continuing the imposition of fortification requirements for imported wheat flour and for joint fundraising for WFP support in the local wheat supply chain (including the State Material Reserve), especially where locally produced wheat flour is fed into social assistance programmes.
- Advocate for revising wheat flour fortification standards to match the WHO standards due to their higher coverage of nutrient requirements.

Agriculture

- Government policies and support should be realigned to incentivize the production of legumes (chickpeas and beans) and nutritious foods such as fruit and vegetables.
- At local level, incentivize production of fruit and vegetables through seed distribution or seed discounts, in particular for vegetables and fruit in limited supply.
- Increase support for the local production of lentils and fish for increased availability in local markets.

References

1. National Statistical Committee of the Kyrgyz Republic, Ministry of Health, and ICF International. Kyrgyz Republic Demographic and Health Survey 2012. Bishkek, Kyrgyz Republic: NSC, MOH, and ICF International. 2013.
2. Ministry of Health, UNICEF, WFP, FAO, WHO, USAID, Advancing Nutrition-USAID, Mercy Corps-USDA, and GroundWork. National Integrated Micronutrient and Anthropometry Survey 2021. Bishkek, Kyrgyz Republic. 2022.
3. Development Initiatives. Global Nutrition Report – Kyrgyzstan. 2022.
4. WFP. Poverty, Food Security and Nutrition Analysis in the context of COVID-19 and the role of Social Protection in the Kyrgyz Republic. 2021.
5. National Statistical Committee of the Kyrgyz Republic. Calculation of poverty rates. 2021.
6. WHO. Childhood Obesity Surveillance Initiative (COSI): Kyrgyzstan. 2017/2018.
7. FAO. FAOSTAT Kyrgyz Republic. 2022.
8. UNEP. Fisheries and Aquaculture Development Program in the Kyrgyz Republic for 2019-2023. 2019.
9. University of Central Asia. Production and Exports of Kidney Beans in the Kyrgyz Republic: Value Chain Analysis. 2018.

Acronyms

COSI	Childhood Obesity Surveillance Initiative
CotD	Cost of the Diet
FAO	Food and Agricultural Organization of the United Nations
FFA	Asset Creation Activities
FFT	Knowledge Transfer Activities
FNG	Fill the Nutrient Gap
IFA	Iron and folic acid
KGS	Kyrgyzstani Som
KIHS	Kyrgyz Republic Integrated Household Survey
NGO	Non-governmental organization
NIMAS	National Integrated Micronutrient and Anthropometric Survey
NSC	National Statistical Committee
SBC	Social behaviour change
USD	United States Dollars
UBK	Ui Buloogo Komok
WFP	World Food Programme

Contributors

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