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Food Systems in Fragile Settings: Identifying gaps and opportunities to support access to improved diets Fill the Nutrient Gap



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Programme

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Fill the Nutrient Gap (FNG) and Fragile Settings

Introduction

Fragility is an umbrella term covering very different settings that may be considered fragile for a variety of reasons, but which are all characterized by weak institutions and deficits in the capacity of systems such as social protection, food, health, education and infrastructure. The main drivers of fragility include conflict, poor governance, and climate shocks such as drought or flooding. Fragility is often linked to a country's or region's dependence on foreign aid, as drivers of fragility can render the national capacity inadequate to meet a population's needs. In fragile settings, a large proportion of the population has low resilience and coping capacity, and repeated shocks lead to increased food insecurity, malnutrition and morbidity (ILO 2016, OECD 2015, World Bank 2015).

Defining Fragility

Chronically fragile contexts are found in countries affected by ongoing violence in the Middle East and across Africa, including Yemen, Syria, Afghanistan, Somalia, South Sudan, Sudan, the Democratic Republic of Congo and the Central African Republic.

Other contexts experience lower-intensity or no armed conflict but are impacted by political, societal, economic and/or environmental vulnerabilities, such as the Sahel (Chad, Burkina Faso, Mali, Mauritania and Niger) and other West African countries including Guinea-Bissau, Cameroon and Liberia; and East African countries including Ethiopia, Eritrea and Burundi. Fragile countries in other regions include Myanmar, Pakistan, Papua New Guinea, Haiti and Venezuela.

Many affected populations are rural and reliant on agricultural production for livelihoods and food security (SOFI 2017). Loss of agricultural livelihoods can lead to adoption of coping mechanisms that further exacerbate vulnerability, including sale of productive assets, migration, shifting production to subsistence crops, and overworking increasingly degraded land.

Recurrent shocks weaken systems and affect nutrition

Food price fluctuations and inefficiencies in food systems impact the affordability of nutritious diets in these contexts. Access to, and availability of, nutritious foods are impacted by decreased local production as land and assets are lost or destroyed and populations migrate; ruptured supply chains due to conflict and damaged infrastructure; and increased demand that can drive up food prices (LANSA 2017).

These disruptions throughout the food system lead to poor diets with low diversity, which in turn can contribute to all forms of malnutrition. At the same time service delivery can be limited by weak infrastructure and government capacity. This includes health services important to malnutrition prevention in women and children, such as immunization, pre- and post-natal care, and growth monitoring. Conflict may further disrupt access to these services in rural areas, while migration and displacement put pressure on services in urban areas or camps. The concurrence of conflict and climate-related natural disasters will likely increase with climate change, which not only magnifies problems of food insecurity and nutrition but can contribute to a spiral into protracted crisis.

Fragility requires policies that promote inclusive systems

Given the link between fragility and food insecurity, responses must be comprehensive with integrated humanitarian, resilience and development programming. The vast scale of humanitarian assistance required in fragile settings is due in part to the compounded disruptions or inefficiencies of food systems that don't link to, or support, service delivery. Multisectoral consensus and collaboration must aim to prevent malnutrition and pay particular attention to facilitating access to nutritious food and nutritional support for the most vulnerable groups.

The World Food Programme's Fill the Nutrient Gap (FNG) analysis focuses on identifying context-specific barriers and appropriate solutions across food, social protection and health systems to enable consumers to better access nutritious foods and address nutrient gaps. It is a process that emphasizes dialogue and integration across sectors to align stakeholder strategies and improve diets.



What is the Fill the Nutrient Gap analysis?

The FNG analysis aims to improve understanding of nutrition in local contexts by identifying bottlenecks, opportunities, and enabling factors that are linked to food insecurity and malnutrition across the food system. To do so, it examines diets and also availability, cost, and affordability of nutritious foods. The analysis identifies characteristics of households least able to access nutritious diets across food environments and seasons, the drivers of diet costs, and the nutritious foods that are most challenging to access and for whom. While it is typically done for the general population within a region or country, it also aims to understand nutritionally vulnerable groups such as children, pregnant and lactating women (PLW), adolescent girls and elderly people. In relevant contexts, FNG can focus on groups facing upheaval, such as refugees, migrants, or displaced populations, or on groups affected by medical conditions, such as individuals with HIV or tuberculosis.

Analyses have been undertaken – or are ongoing – in several types of fragile settings, including contexts affected by violent conflict and

those vulnerable to frequent shocks and/or undergoing protracted crises: Somalia, Democratic Republic of Congo, Burundi, Ethiopia, Uganda, the Sahel (Niger, Burkina Faso, Mali and Mauritania), Madagascar, Afghanistan, Bangladesh, Myanmar, Pakistan and Tajikistan.

How does FNG inform policy and programme development in fragile settings?

- FNG analysis identifies entry points for strengthening food systems by examining the agricultural, economic, geographic, political, environmental and cultural components of a given food system. The analysis is carried out in partnership with local stakeholders including governments, development corporations, UN organizations, nutrition clusters, the private sector, and NGOs, and is tailored to each specific context. This approach allows the FNG to better consider local determinants of the food system, like food availability affected by seasonality, and changing dynamics caused by insecurity, displacement, or environmental events.

Somalia

Ongoing political instability and recurrent natural disasters like drought and flooding have created immense challenges to Somalia's food and nutrition security situation. Somalia's food system is highly dependent on imports but there are opportunities to invest in diversifying and increasing agricultural yields, improving value chains, and fortifying staple foods. Some agricultural projects in Somalia are attempting to address post-harvest losses in the supply chain, where roughly 40% of produce is lost due to inadequate storage facilities.

WFP programming in Somalia aims to improve nutrition security by increasing the availability of fresh produce at markets through the use of solar-powered cold storage solutions, which can extend the life of perishable nutritious foods, reduce pre-sale losses, and provide potential reductions in the cost of food. Improvements along the value chain can be translated into increased household incomes, which in turn can reduce non-affordability of nutritious diets. The current absence of small and medium enterprises and other actors along the value chain is a missed opportunity for income-generation and for increasing local availability of nutritious foods. Increased production of nutritious food at the household level could be translated into sales in the local marketplace, which could have the additional positive outcome of increasing availability of nutritious foods for the greater community. Targeted interventions can also reduce non-affordability of the nutritious diet, but must necessarily be multisectoral, and should integrate both short- and long-term interventions.

- The two-pronged FNG process consists of a review of existing secondary data alongside specific intervention modelling using Save the Children’s Cost of the Diet (CotD) linear programming analysis tool. The FNG assesses the potential impact of market- and livelihoods-based activities, social protection, and targeted nutrition interventions on the ability of households and individuals to access nutritious diets.
- The secondary data review component of the FNG links existing data from all sources and uses them to enhance situational analysis on the barriers to nutrient intake and drivers. This includes linking FNG analyses to other assessments of nutrition and food security, such as WFP’s Research, Assessment and Monitoring (RAM) Division’s analysis on Minimum Expenditure Baskets.
- The FNG process facilitates a policy dialogue between development and humanitarian actors involved in nutrition, social protection, health, education, agriculture, and other sectors for coordinated decision-making based on analytical findings. In fragile contexts, the analysis and results can improve understanding of specific dynamics in urban versus rural environments, different livelihood zones, and situations of fragility within a broader national context. This can inform prioritization of limited resources and/or implementation capacity.
- By focusing on specific vulnerable groups that are often at higher risk of negative outcomes from conflict or shocks, including young children, women and adolescent girls, the analysis highlights their needs and the challenges of meeting their nutrient requirements.
- FNG also helps assess the potential of different systems, including health, social protection and education, to contribute to meeting nutrient requirements where these systems are functioning, as it assesses how they could improve their contribution to nutrition.

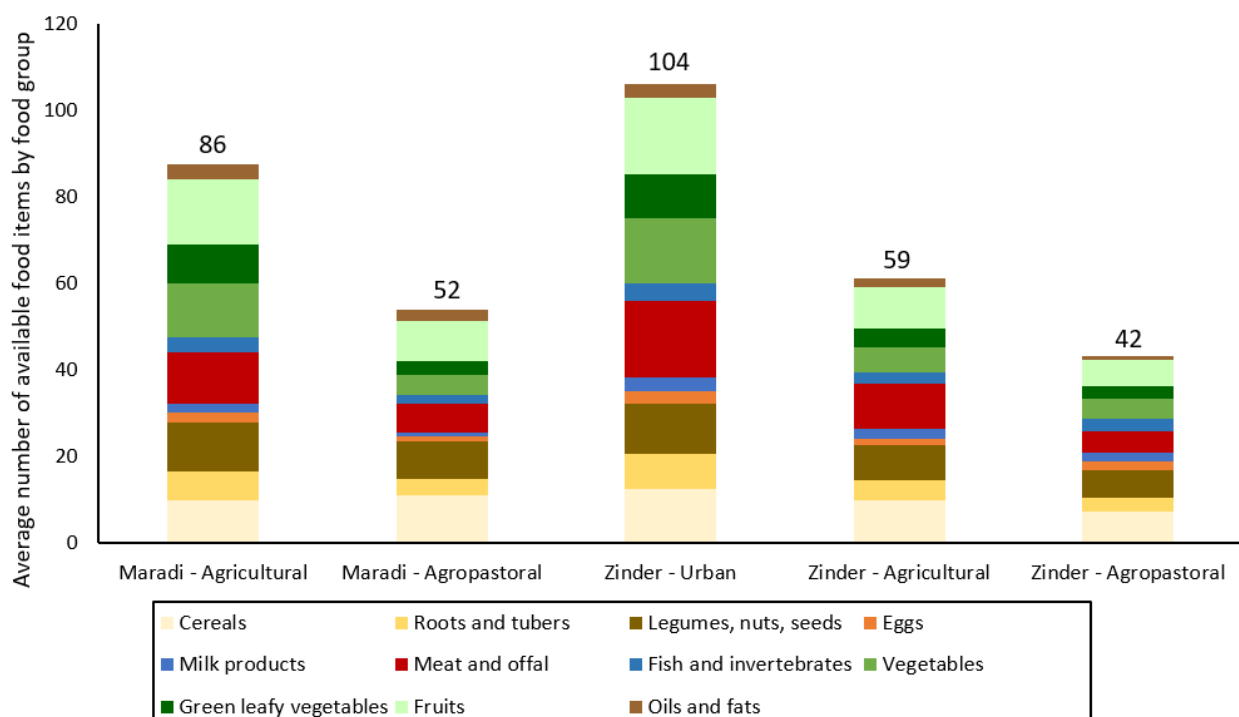
- The CotD analysis undertaken in the scope of FNG contributes to filling data gaps around the availability and affordability of nutritious foods. Where market monitoring is insufficient or absent, price data collected for FNG analysis provides information on the availability or absence of nutrient-dense fresh foods in local markets, using a list of 60-80 foods that includes all food groups. The analysis also highlights the differences in cost between energy-dense staple foods and nutritious fresh foods, and assesses whether the food expenditure of households is sufficient to purchase a diet that meets their nutrient needs and energy requirements.

The market price data and secondary information collected can be used to inform humanitarian programming, including food assistance and transfer modalities, and provides evidence for longer-term resilience programming. This includes identifying and assessing integrated packages that overcome the barriers related to availability of, or access to, nutritious foods. The analysis enables policymakers and programme managers to evaluate and compare the potential contribution of interventions across sectors, informing national dialogue for increased resilience and improved nutrition and health.

From Assessment to Programming

- Evidence generated through the CotD and secondary data analyses can contribute to identifying, framing, and generating advocacy messages that can be used by stakeholders for policy and programming.
- FNG collaborates internally with colleagues focused on nutrition integration and operations in order to find cohesive, realistic solutions, and collaborates with colleagues at country and regional levels to ensure relevant programming analysis.

Figure 1: Average number of unique foods available in markets by livelihood type in the Maradi and Zinder regions of Niger (2019)



Take-aways from FNG analyses in fragile settings

Market analysis of availability of nutritious foods

Price data collected for FNGs in the Democratic Republic of Congo (DRC), Karamoja (Uganda), Somalia, Mali, Burkina Faso, Maradi and Zinder (Niger), and Burundi have shown that markets in certain contexts, particularly rural and pastoral zones, have fewer and less diverse foods available, especially fresh foods.

Figure 2: Ratio of the cost of the nutritious diet to the cost of the energy-only diet in five diverse fragile contexts

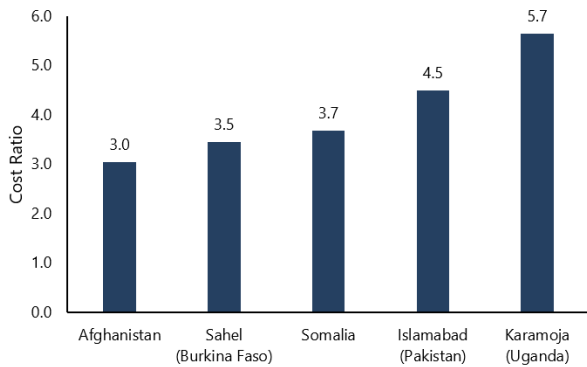


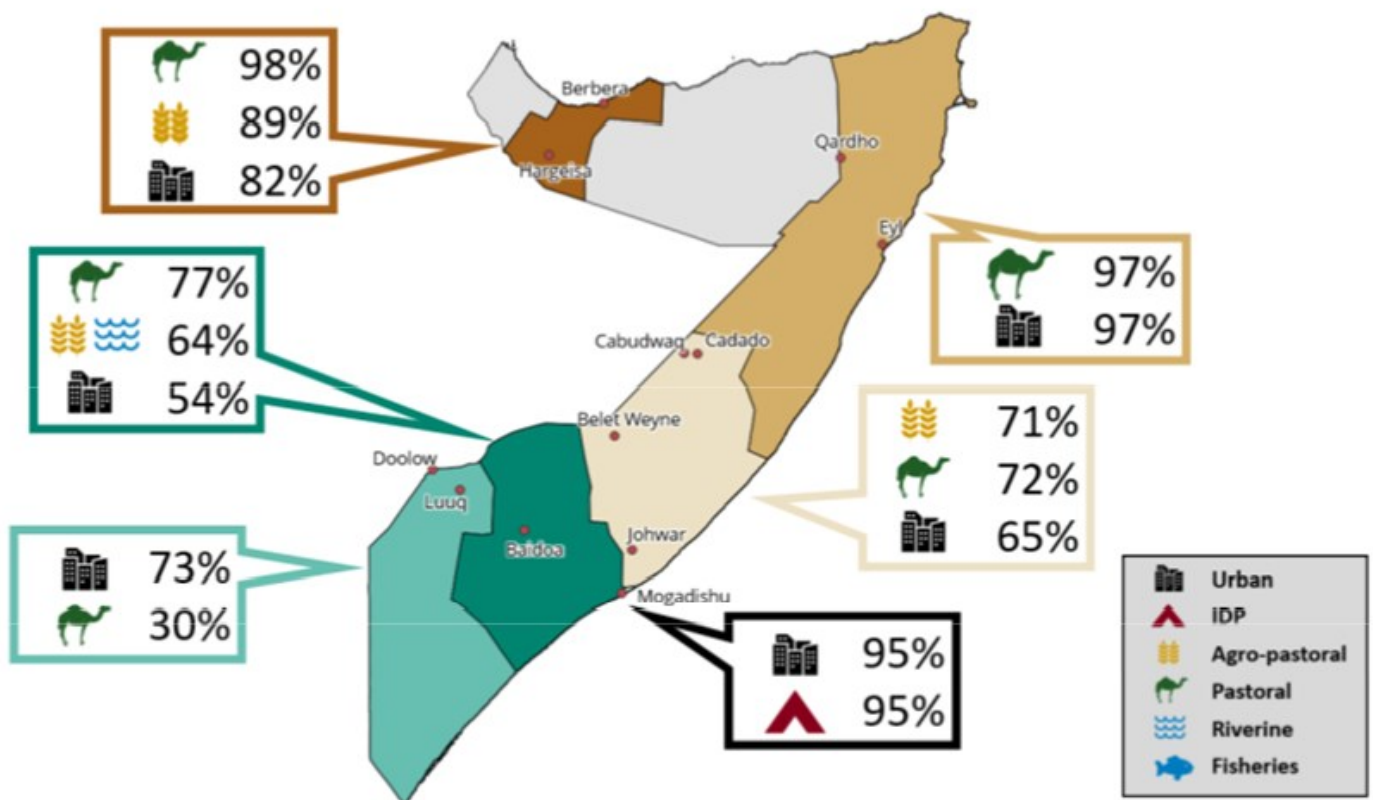
Figure 1 shows the number of unique foods (by food group) available in markets in Niger’s Maradi and Zinder regions. There is greater availability in urban centres of both regions and fewer foods on the market in agropastoral and pastoral livelihood zones. In conflict-affected areas of Somalia and in particularly fragile rural

territories of Tanganyika in DRC, availability of fresh nutritious foods was so limited that it was not even possible to meet all the nutrient requirements with only foods purchased in local markets.

Cost of meeting nutrient requirements is much higher in fragile contexts

The cost of a diet that meets energy needs is always lower than the cost of a diet that covers both energy and nutrient requirements. This is because energy needs can be met with inexpensive, energy-dense staples, while nutrient needs are to be met with a diverse diet including plant and animal-source foods that come at higher cost. This difference in cost is often much greater in fragile contexts such as those highlighted in Figure 2, where the cost of an adequately nutritious diet was 2 – 6 times higher than that of an energy-only diet. While there are some zones within fragile states that show a more regular ratio of approximately 2 between the cost of the two diets, fragile settings are particularly vulnerable to high costs. Among the reasons for this are food systems weakened by recurrent shocks or emergencies, physical access to food being disrupted by natural disasters, fractured infrastructure networks, and increased distances to functioning marketplaces. External events that abruptly reduce the supply of nutritious foods, or simply the lack of adequate infrastructure to ensure sufficient supply, can lead to lower availability which significantly drives up the cost of diets that meet nutrient needs. This means that meeting nutrient needs from locally available foods is out of reach of many people in fragile settings, more so in rural areas where markets have lower diversity of foods than in urban areas, and even more so for the individuals with the greatest needs such as women, young children and adolescent girls.

Figure 3: Percentage of households unable to afford a nutritious diet in Somalia, by market and livelihood





Unaffordability of diets meeting nutrient requirements is high in many fragile contexts

In addition to higher costs and lower availability of nutritious foods in these environments, household spending on food is also likely to be limited. This is reflected in the very high non-affordability of a nutritious diet in many fragile contexts, such as South Madagascar, the Tanganyika region in DRC, Karamoja in Uganda and parts of Mali, Burkina Faso, Afghanistan, Burundi, and Somalia (shown in Figure 3), where a nutritious diet would be unaffordable for nearly all households (more than 80%). In places where it is so difficult to access affordable, adequately nutritious diets, there is a need for

integrated responses that work to transform the food system and improve economic access.

In addition to economic constraints, FNG's secondary data review considers various other factors which may restrict a household's access to nutritious foods, including physical barriers that hinder access to markets or limit movement of nutritious foods. These may include limited transport capabilities due to lack of infrastructure or insecurity along roads, or physical obstacles caused by natural disasters.

Burkina Faso

Although politically stable since the late 1980s, Burkina Faso has experienced insecurity since the mid-2010s and has seen a significant increase in the presence of IDPs in the past year. The combination of violence and displacement, coupled with a lack of modernization in agricultural operations, has created increased challenges to local food production, particularly in the northern parts of the country. High costs of a nutritious diet in Burkina Faso are strongly correlated with a region's distance from agricultural production zones, which are located in the south and west.

High non-affordability is most visible in regions directly affected by violence, particularly the northern region of Sahel. Regions hosting high numbers of IDPs, particularly Centre-Nord, also show high costs of a nutritious diet and high non-affordability. Low dietary diversity hinders progress in nutrition, and the food system is weakened by compounding problems of climate change, limited access to credit and financial resources, and poor infrastructure. In fragmented food systems, households can face challenges in accessing a range of food groups. Compared to its regional neighbours, iron-rich animal-source foods are expensive in Burkina Faso, making it more difficult for households to purchase them. This is particularly problematic for women and girls, as roughly half of all women of reproductive age suffer from anaemia. With approximately 80% of the population employed in agriculture, developing this sector is crucial to advancing nutrition in Burkina Faso. For this analysis, FNG partnered with International Fund for Agricultural Development colleagues in-country to identify entry points for improving access to nutritious diets. The collaboration identified the significant potential benefits from improving harvests of staple foods and cash crops across a range of livelihood zones, including the agricultural zones and the north and eastern parts of the country. With improved harvest of staples, households were able to better cover their basic food security needs, freeing up income for nutritious food purchases, and with the sale of surplus staple foods and cash crops they were able to increase income, thereby attaining a higher level of purchasing power.

¹ The scope of this analysis is limited to the effect on the cost of a nutritious diet. Cash transfers can have positive side effects on local economies (not captured in this analysis) as cash can be remobilized in local marketplaces.

Modelling Approach in Fragile Contexts

In places where non-affordability is high, meeting nutrient needs requires the convergence of various sectors, and often requires complementary strategies with multiplicative benefits. FNG modelling aims to identify actions that contribute to reducing non-affordability across different modalities, and that can be implemented to support immediate and long-term solutions to malnutrition prevention. The actions can include social protection via cash-based transfers or vouchers, resilience-building programmes for income-generation, or in-kind food assistance.

By focusing on specific vulnerable groups that are at higher risk of negative outcomes, including young children, women and adolescent girls, the analysis highlights their needs and the challenges of meeting their nutrient requirements. The modelling seeks to maximize meeting nutrient requirements from all available platforms. Adequate care and feeding practices are promoted by a) modelling inadequate practices such as suboptimal breastfeeding to highlight that they increase the difficulty of meeting good nutrition in groups with the highest needs, and b) by modelling increased consumption of locally available nutrient-dense foods.

Based on the findings of the FNG and complementary assessments, stakeholders define context-appropriate packages of actions or interventions and prioritize these for implementation.

Strengthening market monitoring

Ongoing and completed FNG analyses in fragile settings rely primarily on market price data collected specifically for the analysis. In fragile settings, market monitoring systems are often weak or absent which limits the understanding of food availability, prices, and changes across seasons or years. What monitoring is undertaken usually does not include fresh foods such as

vegetables, fruits, and animal-source foods, which are important components of a nutritious diet but more susceptible to shocks. Understanding the availability and prices of these foods leads to understanding household access and enables the design of programmes that increase not just demand for them, but consumption too. It also strengthens emergency preparedness. In the Sahel countries, partnerships with the national market monitoring agencies have served to develop and reinforce their capacity for expanded market price data collection.

FNG Country Case Studies

Strengthening social protection systems for nutrition

In Burundi and similar settings where poverty is a significant driver of the inability of households to access a nutritious diet, social protection measures were identified as a potential strategy for improvement. In Burundi's challenging market environment, FNG analysis found that a cash transfer alone would have limited impact on reducing the cost of the diet.¹

Figure 4: Percentage of households unable to afford a nutritious diet in Burundi, without and with a cash transfer or a package of interventions²

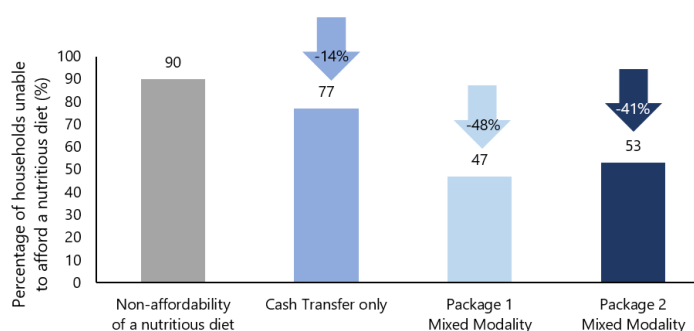
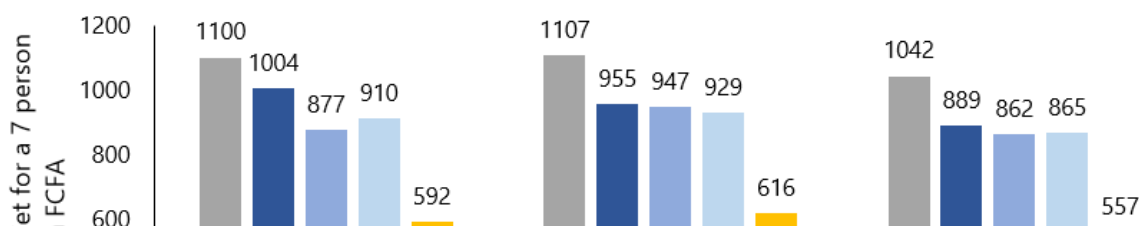


Figure 5³: Reduction in the cost of the nutritious diet with individual and combined agricultural resilience interventions



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