

Raza, Ahmed (Ed.); Soares, Fabio Veras (Ed.)

Working Paper

Leveraging food systems for poverty and malnutrition reduction

Policy in Focus, No. 46

Provided in Cooperation with:

International Policy Centre for Inclusive Growth (IPC-IG)

Suggested Citation: Raza, Ahmed (Ed.); Soares, Fabio Veras (Ed.) (2020) : Leveraging food systems for poverty and malnutrition reduction, Policy in Focus, No. 46, ISBN 978-92-5-133761-5, Food and Agriculture Organization of the United Nations (FAO) and the International Policy Centre for Inclusive Growth (IPC-IG), Brasilia, <https://doi.org/10.4060/cb2498en>

This Version is available at:

<https://hdl.handle.net/10419/248829>

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Policy in Focus

A publication of
The International Policy Centre for Inclusive Growth

Volume 18, Issue No. 1 • December 2020



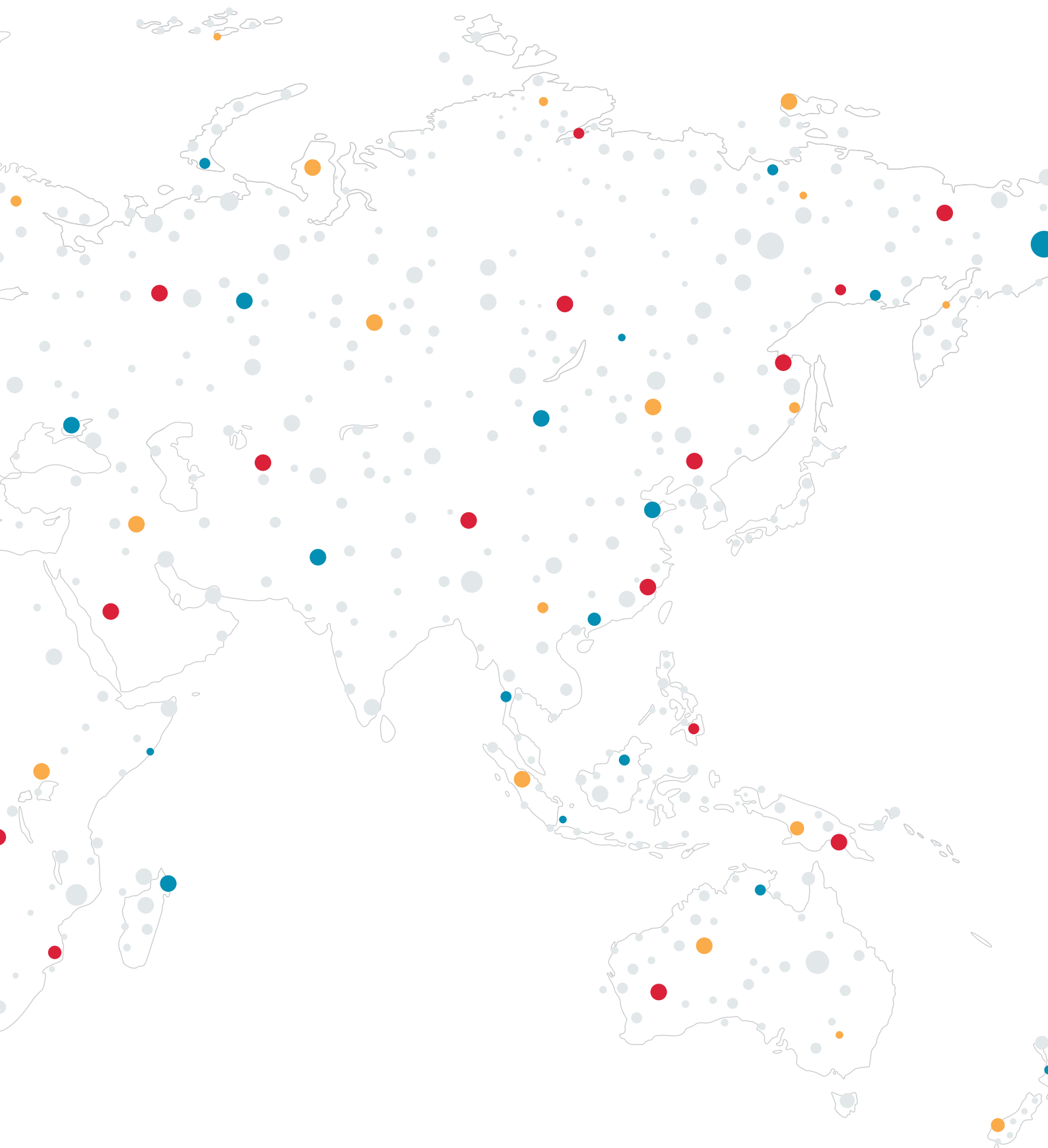
Leveraging food
systems for poverty and
malnutrition reduction



Food and Agriculture
Organization of the
United Nations







Policy in Focus



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Acknowledgements: The Editors would like to express their sincere appreciation to Mario Gyor (LSE), Lourdes Marie Orlando (FAO) and Charlotte Bilo (IPC-IG) for their generous and insightful contributions to this issue.

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DOI: <https://doi.org/10.4060/cb2498en>
ISBN: 978-92-5-133761-5 [FAO]

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Editorial

Even though substantial progress has been achieved worldwide in reducing both poverty and malnutrition, much is yet to be done. There are signs that the progress made in both dimensions has stalled in recent years.

Suboptimal diets have become a major driver for overweight and obesity and associated non-communicable diseases such as diabetes, heart diseases and some types of cancers. Conflict and climate vulnerability have been identified as major obstacles to reaching Sustainable Development Goal targets related to malnutrition, in all its forms, by 2030. In 2019, economic downturns and slowdowns hindered efforts even further. More recently, the COVID-19 crisis has imposed even harsher conditions to countries.

Poverty and malnutrition are inextricably linked, and therefore addressing one can help address the other. Given that most of the world's extremely poor people and stunted children live primarily in rural areas and rely mostly on agriculture, an agriculture and food

systems approach can offer opportunities to reduce both poverty and malnutrition. The food systems approach places equal emphasis on both the supply and demand dimensions that are critical for ensuring healthier diets and better nutrition for poor and vulnerable groups.

This special issue of *Policy in Focus* is dedicated to answering a crucial question: How can a food systems approach be used to design and implement policies and investments that reach those most vulnerable to poverty, hunger, malnutrition and suboptimal diets? We hope that the contributions contained in this volume, by leading academics and development practitioners, exploring the linkages between nutrition, food systems and poverty, can help food systems stakeholders and policymakers make inroads towards the promotion of food security and nutrition and the reduction of rural poverty.

Ahmed Raza and Fábio Veras Soares

Exploring synergies between poverty and malnutrition reduction efforts within the food systems transformation agenda

Ahmed Raza¹ and Fábio Veras Soares²

Poverty and malnutrition remain critical challenges for countries in their pursuit to achieve the Sustainable Development Goals (SDGs). Although considerable progress has been made in reducing both poverty and malnutrition, much remains to be done, as lower levels of poverty and malnutrition are actually much harder to bring down and require a broader and more coordinated set of policies and programmes to tackle them. In addition, there are signs that the progress made in both dimensions has stalled in recent years.

The 2020 'State of Food Security and Nutrition' (SOFI) has shown that an additional 60 million people have been affected by hunger since 2014. Extrapolating this trend, it means that by 2030, 840 million people will be undernourished. There are still about 144 million children under the age of 5 who suffer from stunting, and over 38 million children under the age of 5 and 337 million children and adolescents between the ages of 5 and 16 are overweight (UNICEF, WHO, and World Bank 2020; NCD-RisC 2017). In addition, suboptimal diets have become a major driver for overweight and obesity and associated non-communicable diseases such as diabetes, heart diseases and some types of cancers. The 2020 SOFI also shows that 3 billion people around the globe are unable to afford the cheapest forms of healthy diets and thus rely on suboptimal diets. Conflict and climate vulnerability have been identified since 2014 as major obstacles to reaching SDG targets related to malnutrition by 2030 (SDG 2). More recently, in 2019, economic slowdowns and downturns have further undermined the efforts to achieve these targets. In 2020, the COVID-19 crisis has emerged to make the situation even worse (FAO et al. 2020).

Similarly, the World Bank (2020) points out that progress towards poverty reduction was slowing down even before the COVID-19 crisis after an unprecedented trend towards poverty reduction. The extreme poverty rate fell on average by 1 percentage point per year between 1990 and 2015, but that reduction slowed down to 0.5 percentage points between 2015 and 2017. At this pace, the SDG target 1.1 of bringing down extreme poverty to less than 3 per cent will not be reached by 2030. Overall, 689 million people lived in extreme poverty (9.2 per cent of the global population) in 2017—52 million fewer than in 2015. However, this process has been uneven, and the rural population has become even more over-represented among those living in extreme poverty in this period so that, in 2017, 80 per cent of the people living in extreme poverty resided in rural areas.

Finally, estimates of the impacts of COVID-19 on poverty using 2017 data as a baseline suggest that between 88 million and 115 million people have probably fallen into extreme poverty due to the COVID-19 crisis, raising global poverty rates to 9.4 per cent and basically cancelling out the progress made between 2015 and 2017 (World Bank 2020). In addition to the immense task of fighting poverty and malnutrition in a context of conflict, climate change and economic slowdown, now the COVID-19 crisis has added a layer of complexity that will require strong responses at policy and programme levels from national governments and the international community.

From a policy and programme perspective, poverty and malnutrition are inextricably linked, meaning that addressing one can help address the other. Reducing malnutrition is vital to tackle the key determinants of poverty, and reducing poverty is a necessary condition for improving nutrition. In addition, given that most of the world's extremely poor

people and stunted children live primarily in rural areas and rely predominantly on agriculture (World Bank 2020; FAO et al. 2019), an agriculture and food systems approach offers an opportunity to reduce both poverty and malnutrition.

The food systems approach places equal emphasis on both the supply and demand dimensions that are critical for ensuring healthier diets and better nutrition for poor and vulnerable groups. On the supply side, this entails working along the food supply chain—the production, processing, storage and transportation of food—and making efforts to diversify food production, enhance the availability and affordability of nutritious foods and improve post-harvest management. On the demand side, this entails shaping consumer behaviour by promoting nutrition education, raising consumer awareness and influencing food and nutrition labelling regulations, policies and programmes.

The critical question, then, is how can a food systems approach be leveraged to design and implement coordinated and coherent policies, programmes and investments that reach those most vulnerable to poverty, hunger, malnutrition and suboptimal diets. The answer to this question will depend greatly on our ability to navigate the food system, as they are expansive and evolving rapidly. They comprise a range of activities, actors, institutions and enabling environment that are critical to the production, processing, marketing, consumption and disposal of food (FAO 2013).

This Special Issue aims to answer this question by supporting policymakers and development practitioners to identify conceptual, policy and programmatic linkages between nutrition, food systems and poverty. It will enable these stakeholders to build a common narrative on the role of food systems in promoting nutrition and reducing rural poverty.

“Despite their popularity, social protection schemes overwhelmingly focus on one form of malnutrition—i.e. undernutrition.



Photo: UNICEF Ethiopia/Ephrem Tamiru. Health extension worker assessing a child's nutritional status at Elala Health center, Fentale, Ethiopia 2020 <<https://clck.ru/QyQvQ>>.

Food supply chains play a critical role in transforming agriculture and food systems towards better nutrition outcomes for nutritionally vulnerable groups (Raza et al. 2020). In their article, Garrett and De La Pena present the effectiveness of adopting a nutrition-sensitive value chains approach to navigate the complexity of food systems by selecting individual agricultural commodities with the potential to both improve nutrition and raise incomes for farmers. To make their case, they provide examples from large-scale investment projects implemented by the International Fund for Agriculture Development (IFAD).

Small-scale producers are an essential part of different kinds of food systems: local, regional and global. According to some estimates, small- and medium-scale farms contribute to over half of the world's food production (Herrero et al. 2017); however, they often lack resources to compete in markets. In their article, Vicovaro, Puhac and Tartanac argue the need to consider the development of territorial markets and strong producer organisations to enable small-scale producers—who often tend to be women—to produce and market diverse foods which can meet the dual goals.

In addition to small-scale farmers, the private sector is fundamental to ensuring the availability of and access to a diverse diet in low- and middle-income countries. The private sector in these contexts comprises small and medium-

sized enterprises (SMEs), as argued by Santacoloma and Anta in their article. They propose that the potential of SMEs to increase the incomes of actors engaged in the food and agriculture sector and to reach vulnerable populations with healthy foods has been largely untapped.

For most consumers, in both urban and rural areas, markets and retail outlets are the key sources of food. These markets and retail outlets form part of the physical, economic, political and socio-cultural context—or food environment—in which consumers interact with food systems (HLPE 2017). However, food environments in low- and middle-income countries tend not to support nutritious foods and need to be shaped so that they promote the desirability and affordability of healthy diets. Shu Wen and colleagues explain how, to meet this objective, fiscal policies such as taxes on food items have the potential of promoting healthier consumption patterns and reducing social inequities related to health and nutrition.

Food environments in low- and middle-income countries are also characterised by poor food safety and quality standards, which are critical elements for achieving optimal nutrition. Effective food safety systems are also central to maintaining and adding value along the food value chain and reducing the incidence of food-borne diseases. Sridhar Dharmapuri provides an overview of the political commitment, institutional capacities and science-based processes needed

to set up a food safety system in resource-poor and populous contexts.

Consumers, citizens and households play a catalytic role in demanding healthy diets from food systems. In resource-poor and vulnerable settings, however, consumers face considerable challenges in accessing and consuming better diets. Social protection schemes that integrate complementary activities in the agriculture, health, labour and sanitation sectors are innovative poverty reduction measures that can address malnutrition challenges. These schemes, which often include cash or in-kind transfers, have the potential to contribute to overcoming the challenge outlined by the SOFI 2020 report of making quality and diverse diets affordable.

Despite their popularity, social protection schemes overwhelmingly focus on one form of malnutrition—i.e. undernutrition. Grinspun, Gyori and Rivera discuss the trends and determinants of the double burden of malnutrition and provide an overview of literature on the impact of cash transfers and other social protection programmes on overnutrition—i.e. overweight and obesity. Whereas El-Enbaby and Breisinger take a regional view by analysing how social protection programmes have been employed to tackle the effects of the COVID-19 pandemic in the Middle East and North Africa.

Given that women's empowerment and gender equality are critical to improving

nutrition outcomes, integrated social protection schemes that incorporate gender considerations can ensure optimal maternal health and nutrition, thereby promoting the well-being of the whole household. In their article on gender-responsive social protection, Gavrilovic, Kajula and Tirivayi summarise existing evidence on gender-responsive cash transfers to identify actions that work and areas which require further research.

Also highlighting the importance of empowering women for poverty alleviation and better diets, Maria Antonia Tuazon shares an example of good practice from Lao PDR. In her article, she attributes the success of the project to strong community involvement, multisectoral and stakeholder participation, targeting of nutritionally vulnerable groups, situational analysis and capacity development.

The food systems approach to promoting better diets and reducing rural poverty also entails effective coordination and coherence among sectors beyond the agriculture, labour and health sectors, and expanding the reach and success of social programmes. One example of integration across sectors available to governments and development practitioners is home-grown school feeding, which uses school settings as a way to bring about improvements in education, water, sanitation and hygiene. In their article, Vargas, Swenson and Carter provide an overview of how a holistic and coordinated approach around schools can support

synergies across sectors for long-term impact on poverty and malnutrition.

The monitoring and assessment of social programmes for their impact on poverty and malnutrition is an important aspect of meeting SDGs 1 and 2. In this regard, assessment tools which not only assess the effectiveness of policies and programmes but also foster coherence and coordination can be valuable. One such tool is the Inter-Agency Social Protection Assessment (ISPA) Tool for food security and nutrition, developed by the Food and Agriculture Organization of the United Nations (FAO) in collaboration with other development partners. Russell, Lorenzon, Perri, Khalidi and Louteiro explain their experience of implementing the ISPA Tool in three different contexts: Paraguay, Cambodia, and the West Bank and Gaza Strip.

Finally, Bin Liu provides an example of an innovative but yet to be fully realised approach of harnessing the potential of geographical indications (GIs) to promote healthy diets and reduce rural poverty. The article argues that the nutritional value of GI foods is higher than their non-GI counterparts, based on existing evidence, and that nutritional quality should be an important factor when considering candidates for the development of GIs. ●

FAO. 2013. *The State of Food and Agriculture. Food Systems for Better Nutrition*. Rome: Food and Agriculture Organization of the United Nations.

FAO, IFAD, UNICEF, WFP, and WHO. 2020. *The State of Food Security and Nutrition in the World 2020*. Rome: Food and Agriculture Organization of the United Nations.

Herrero, M. et al. 2017. "Farming and the geography of nutrient production for human use: a transdisciplinary analysis." *Lancet Planetary Health* 1(1): e33–e42.

NCD-RisC. 2017. "Worldwide trends in body-mass index, underweight, overweight, and obesity from 1975 to 2016: A pooled analysis of 2,416 population-based measurement studies in 128.9 million children, adolescents, and adults. NCD Risk Factor Collaboration (NCD-RisC)." *Lancet* 390(10113): 2627–2642.

Olinto, P., K. Beegle, C. Sobrado, and H. Uematsu. 2013. "The State of the Poor: Where Are the Poor, Where Is Extreme Poverty Harder to end and What is the Current Profile of the World's Poor." *Economic Premise Series*, No. 125. Washington, DC: World Bank.

Raza, et al. 2020. "Conceptual framework of food systems for children and adolescents." *Global Food Security*, Vol. 27, 100436. <<https://doi.org/10.1016/j.gfs.2020.100436>>. Accessed 25 November 2020.

UNICEF, WHO, and World Bank. 2020. *UNICEF/WHO/The World Bank Group joint child malnutrition estimates: levels and trends in child malnutrition: key findings of the 2020 edition*. New York: United Nations Children's Fund, World Health Organization, and World Bank Group.

World Bank. 2020. *Poverty and Shared Prosperity 2020: Reversals of Fortune*. Washington, DC: World Bank. <<https://openknowledge.worldbank.org/handle/10986/34496>>. Accessed 30 October 2020.

1. Food and Agriculture Organization of the United Nations (FAO).

2. Institute for Applied Economic Research (Ipea) and International Policy Centre for Inclusive Growth (IPC-IG).



Photo: Icaro Cooke Vieira/CIFOR. Changing diets in Kapuas Hulu, Indonesia, 2017 <<https://bit.ly/3kki05c>>.

“Consumers, citizens and households play a catalytic role in demanding healthy diets from food systems.”

Nutrition-sensitive value chain development and its role in improving nutrition and transforming food systems

James Garrett¹ and Isabel de la Peña²

Agriculture is the bedrock of food systems. How people engage with food systems plays a critical role in shaping their diets and provides the key link between agriculture, good health, nutrition and the environment.

Food systems as they are today fail to deliver the affordable, diverse, safe, healthy foods needed to address the world's nutrition problems. Better diets—which entail not

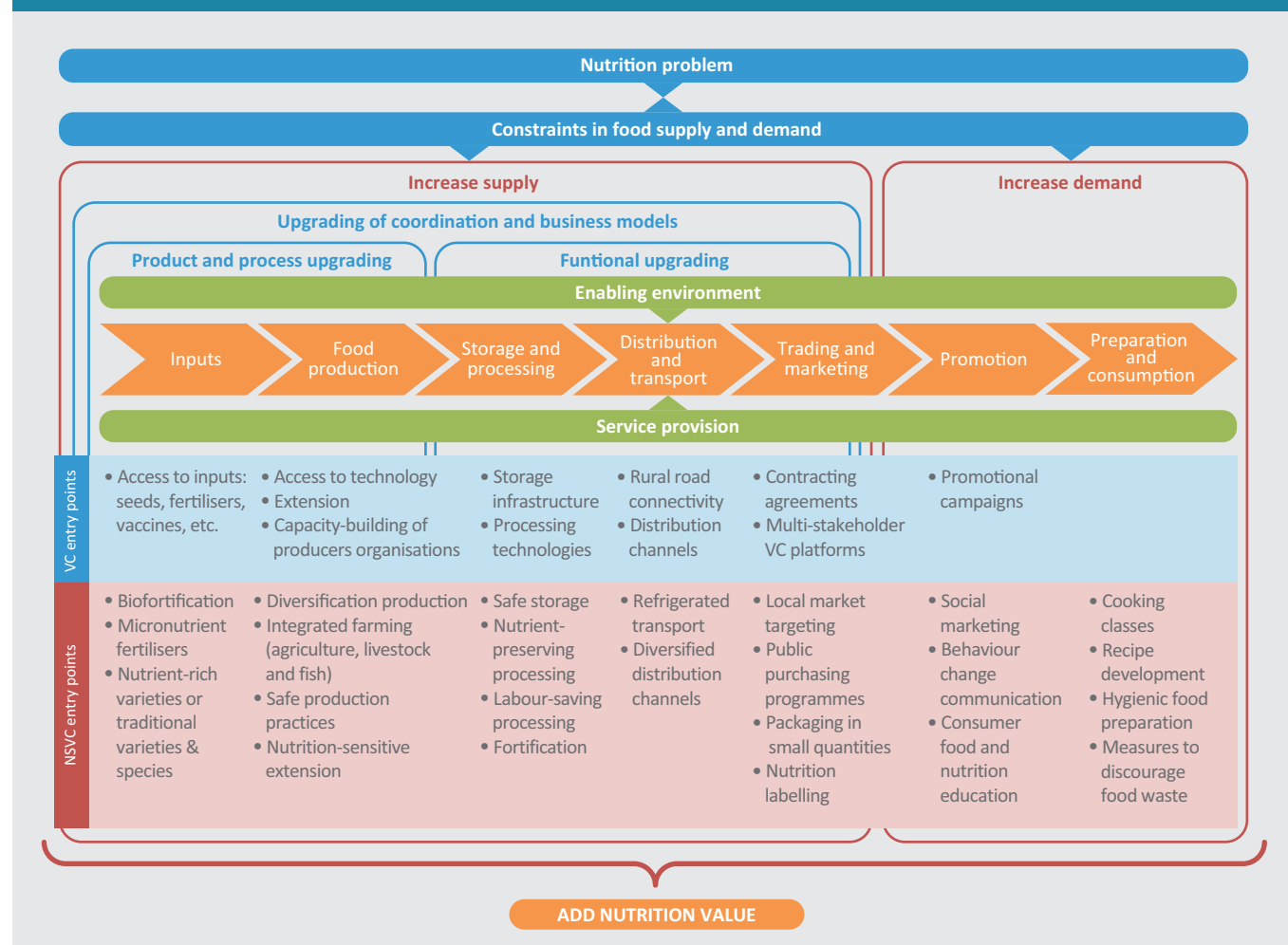
only a reduction in consumption of fats, sugars and salt but also an increase in intake of more nutritious foods, such as whole grains and fruits—could prevent one in five deaths globally (GBD 2017 Diet Collaborators 2019). This is true even in rural areas. Small-scale producers, for instance, increasingly rely on markets to feed their families, often abandoning local, traditional foods for diets high in processed and packaged foods.

To improve nutrition, food systems must be transformed from just supplying calories

to ensuring that they support access to high-quality diets, produced and delivered in ways that are economically, socially and environmentally sustainable (Global Panel on Agriculture and Food Systems for Nutrition 2016; HLPE 2017).

Food systems are quite complex by nature, comprising production, storage, processing, transportation, distribution and marketing activities across multiple commodities. Adding to complexity is the fact that one commodity can be the basis

FIGURE 1: The nutrition-sensitive value chain framework—strategies and examples of entry points



Source: De la Peña, Garrett, and Gelli (2018).



Photo: ACDI VOCA/David Osorio. Cocoa growers secure livelihoods through cocoa value chains, Colombia, 2013.

“Producers are most interested in having a sustainable and profitable livelihood.”

for many different products, each with its own value chain (VC).

These commodities and their respective VCs make up a food system. Governments and development partners frequently use a VC approach to design investments for increasing incomes of agricultural producers, often poor smallholder farmers. These projects have traditionally focused only on increasing economic returns for producers. Sometimes this approach encourages specialisation in a single crop, which can reduce agricultural biodiversity and thus increase a producer's vulnerability to climate change, price shocks, soil depletion and crop disease.

However, when implemented properly, VC development can shape food systems to be more nutrition-sensitive—that is, shape a food system to be economically, environmentally and socially sustainable and ensure that nutritious, diverse and safe foods are accessible to consumers and producers, thereby improving nutritional outcomes and diets.

By focusing on a particular food commodity, a VC approach can help unpack the otherwise overwhelming complexity of food systems. The nutrition-sensitive value chain (NSVC) framework developed at the International Fund for Agricultural Development (IFAD) (de la Peña, Garrett, and Gelli 2018) builds on work by Gelli et al. (2015) and identifies potential entry points, pathways and actions for developing a VC, from

production to consumption, to have a positive impact on nutrition.

A nutrition-sensitive approach turns the usual process of VC development on its head by beginning with an analysis of the nutrition problem in the target population, rather than starting with producers and considering market demand and income generation potential. The characterisation of the nutrition problem looks at the range of food systems the target population interacts with and identifies excessive or insufficient consumption of key foods and reasons why, such as availability or affordability. Specific food commodities can then be identified as having the potential to address the nutrition problem and improve diet quality. Applying this approach to multiple VCs can contribute to transforming the entire food system.

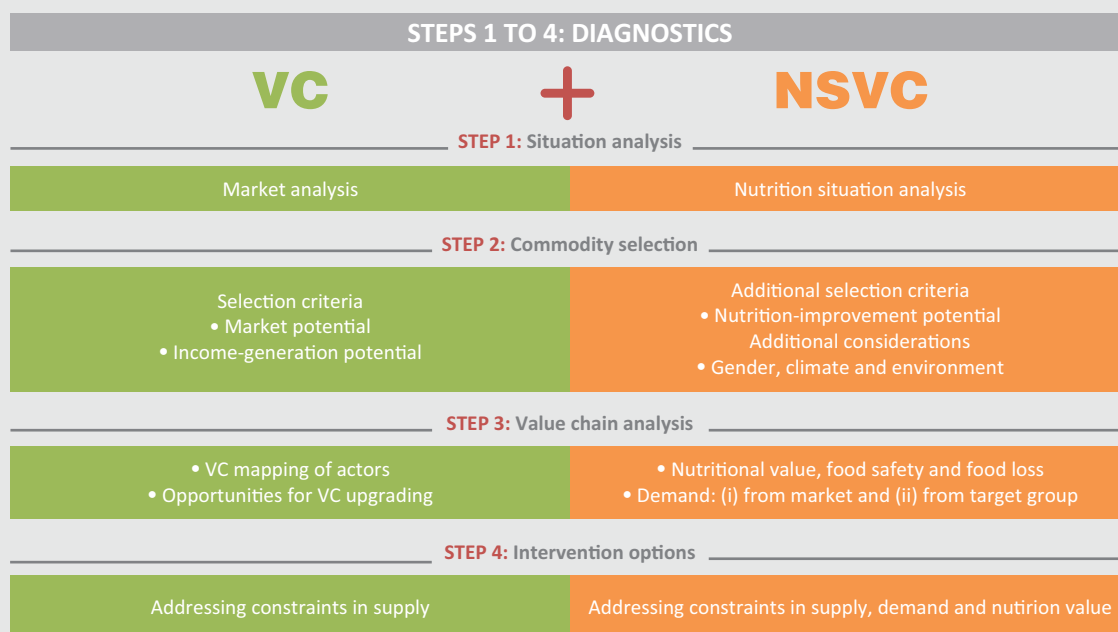
Of course, producers are most interested in having a sustainable and profitable livelihood. Food commodities selected for VC development must, therefore, not only improve nutrition but also make business sense. To promote sustainable and inclusive food systems, gender and economic, social and environmental sustainability must also be considered. Commodities prioritised for NSVC development should, therefore, have the potential to: i) address the nutrition problem; ii) respond to market demand; iii) generate income, including helping to reduce production risk, especially for small-scale producers and rural populations; and promote, and certainly

do no harm to, iv) women's equality and empowerment; and v) the environment.

Once commodities satisfying these criteria have been identified, a 'nutrition lens' can be applied to analyse constraints and opportunities in developing their respective VCs. Depending on the constraints and opportunities identified, NSVC development strategies can work to enhance the supply, demand or nutrition value of the chosen food commodities. Supply constraints may be related to availability, safety, food loss or waste. Demand may be affected by cultural beliefs, food preferences or limitations in purchasing power. While supply and demand strategies focus on improving the specific offer or consumption of the selected commodity, adding nutrition value means enhancing the nutrient value of the commodity through, for example, the choice of highly nutritious varieties (such as biofortified crops), nutrient-preserving processing or nutrition labelling, and can occur at different points along the VC.

Ultimately, a nutrition-sensitive VC analysis aims to identify entry points for investments at each stage of the VC and improve nutrition by enhancing the availability, affordability, diversity, nutritional quality, safety and acceptability of nutritious foods. Figure 1 pairs the strategies to the VC and identifies entry points and potential interventions.

FIGURE 2: Steps of developing a NSVC, with comparison to the typical VC approach



Source: De la Peña and Garrett (2018).

Figure 2 summarises the steps described above to develop a NSVC: (1) carry out a nutrition situation analysis to understand the nutrition problem, (2) select a group of commodities that respond to the nutrition problem, but are also profitable for producers, and promote, and certainly do no harm to, women's status and the environment, (3) undertake a VC analysis with a nutrition lens, and (4) identify intervention options (De la Peña and Garrett 2018).³ This process is detailed in IFAD's *Nutrition-sensitive value chains: A guide for project design* (De la Peña and Garrett 2018).

Case study: IFAD's experience in promoting NSVCs as a way to transform agri-food systems in Honduras

A new IFAD-funded project in Honduras (Project for the Economic and Social Inclusion of Small Rural Producers in Northeast Honduras—PROINORTE) is adopting the NSVC approach. PROINORTE is a USD46.9 million project implemented by the Ministry of Agriculture and Livestock, which aims to increase incomes and improve the nutrition of small rural producers, ultimately strengthening their resilience. To do so, it adopts a territorial sustainable food system approach to promoting VCs. The VCs selected for

investment must meet the different dimensions illustrated in the NSVC framework, therefore strengthening food and nutrition security while also ensuring economic, social and environmental sustainability.

The Alliance of Bioversity International and the International Center for Tropical Agriculture will support PROINORTE in carrying out food systems analyses to identify which VCs to develop. This will be done through a participatory regional consultation process in which VCs will be selected by the local population and authorities. VC selection often needs to respond to the priorities of

governments and other stakeholders. A multi-stakeholder consultation to discuss the benefits and trade-offs of certain commodity choices can ensure buy-in among different VC actors and local authorities.

The selected VCs will then be analysed through a multidimensional lens to identify investments that can enhance demand and supply for nutritious foods or add nutrition value. On the demand side, the project will develop awareness-raising campaigns for healthy and balanced diets for at least 15,000 beneficiaries, as well as promotional campaigns showcasing the nutritional benefits of specific products.

BOX 1

Joyce Njoro, IFAD Lead Technical Specialist for Nutrition:

"At IFAD, value chains are increasingly being developed with clear attention to improved nutritional outcomes in a variety of ways: investing in a range of nutritious foods that contribute to dietary quality; leveraging the potential of markets and the private sector for nutrition; valuing the potential of neglected and underutilized species and wild edibles; empowering women and youth; strengthening climate resilience and environmental sustainability; and from the demand side, investing in nutrition education to promote consumption of diversified and healthy diets."

BOX 2

Arnoud Hamелеers, IFAD Country Director for Honduras:

"A food system is only sustainable when you consider all aspects—economics as well as health and environmental and social sustainability. In Honduras, we have an extremely difficult situation with alarming levels of rural poverty, extreme exposure to climate change, violence, and high levels of obesity even in the rural areas. By starting with concerns about nutrition, through regional concertation we were able to find the balance between generating income for smallholders and promoting sustainable food systems for nutrition. Through this approach we clearly identified costs and risks you would not otherwise identify when focusing on economic benefits alone."

“ Safe and environmentally sustainable practices will be promoted to ensure production of diverse and safe foods.

On the supply side, safe and environmentally sustainable practices will be promoted to ensure production of diverse and safe foods. Storage and distribution activities will seek to reduce food contamination, loss and waste. At least five processing centres will be devoted to producing healthy foods. At the marketing stage, the project will develop sustainable commercial alliances between producers and buyers, with a particular focus on short VCs. Additionally, the school meals programme—supported by the World Food Programme—will be one of the key market outlets for the nutritious produce of smallholder producers.

In conclusion, analysing VCs from a nutrition perspective is a useful approach to help understand the complex food systems in which we all operate. To shape sustainable food systems to improve nutrition, the NSVC framework starts from nutrition needs and identifies a selection of commodities to address dietary gaps. To most effectively contribute to improving diet quality and poverty reduction in a sustainable way, a programme would need to comprehensively tackle the food system, intervening in a wide range of VCs. However, by using a framework that considers one VC at a time, the identification of investment opportunities for a project is simplified. For each food commodity selected, the analysis can identify the specific VC actors in that chain whose roles and motivations the project needs to address, ensure sustainable inclusion of small-scale producers and women, address issues of environmental sustainability and identify appropriate policies and investments that will transform the overall food system and enhance its capacity to deliver better nutrition outcomes. ●

De la Peña, I., and J. Garrett. 2018. *Nutrition-sensitive Value Chains: A guide for project design. Volumes I and II*. Rome: International Fund for Agricultural Development.

De la Peña, I., J. Garrett, and A. Gelli. 2018. "Nutrition-sensitive value chains from a smallholder perspective: A framework for project design." *IFAD Research Paper Series*. Rome: International Fund for Agricultural Development.

GBD 2017 Diet Collaborators. 2019. "Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017." *The Lancet* 393 (10184): 1958–1972.

Gelli, A., C. Hawkes, J. Donovan, J. Harris, S.L. Allen, A. De Brauw, S. Henson, N. Johnson, J. Garrett, and D. Ryckembusch. 2015. "Value Chains and Nutrition: A Framework to Support the Identification, Design, and Evaluation of Interventions." *IFPRI Discussion Paper*, No. 01413. Washington, DC: International Food Policy Research Institute.

Global Panel on Agriculture and Food Systems for Nutrition. 2016. *Food systems and diets: facing the challenges of the 21st century*. London: Global Panel on Agriculture and Food Systems for Nutrition.

HLPE. 2017. *Nutrition and food systems. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security*. Rome: Committee on World Food Security.

IFAD. 2018. *Proyecto de inclusión económica y social de pequeños productores rurales en la región noreste de Honduras, PROINORTE. Informe principal y apéndices*. Rome: International Fund for Agricultural Development.

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3. Further guidance on these steps is available through the Food and Agriculture Organization of the United Nations e-learning course 'Sustainable Food Value Chains for Nutrition': <<https://elearning.fao.org/course/view.php?id=566>>.

Understanding the potential of territorial markets to reduce poverty and promote healthy diets

Marcello Vicovaro, Ana Puhač
and Florence Tartanac¹

Smallholder farmers are responsible for most of the food consumed in the world and most of the investments made in agriculture (CFS 2016; FAO 2017a). Moreover, the vast majority of food transactions occur in domestic markets—local and national (Murphy 2010). Thus, local and national markets are crucial not only to ensure smallholder farmers' access to markets and sustaining their livelihoods but also for the food security and nutrition of the territories in which they are embedded (FAO 2015). The World Committee on Food Security (CFS) has defined these markets as 'territorial markets' and characterised them based on a number of criteria (see Box 1).

Despite increased awareness, limited data are available on territorial markets,² which often results in public policies that pay greater attention to global value chains while seldom supporting and incentivising territorial markets. For this reason, the CFS (2016) recommended to FAO and to the Rome-based agencies that greater focus be placed on these markets by filling existing information gaps. To respond to the recommendation, in 2017 the Food and Agriculture Organization of the United Nations (FAO), together with the Civil Society Mechanism of the CFS, launched a participatory process for the development of a methodology to gather information and data on territorial markets and to better understand their role within local and national food systems (FAO forthcoming). This methodology has been pilot tested by FAO and producers' organisations in three countries (Senegal, Burkina Faso and Peru),³ with the aim of mapping and collecting data on territorial markets. These data collection processes are intended to unveil the importance of

territorial markets in ensuring inclusive and healthy food systems and thus advocate for more policy support to these markets. The strong collaboration with producers' organisations strengthens their capacities to increase their bargaining power in market negotiations.

This article shows why and how territorial markets provide more benefits to small-scale farmers, particularly to poor farmers, and make healthy food accessible to different consumers. Existing evidence (Aiyeko et al. 2005; Roesel and Grace 2015; Crush et al. 2018) suggests that territorial markets play an important role in ensuring inclusive and sustainable food systems for healthy diets, and if policymakers want to transition to these systems, they should pay more attention to territorial markets.

Leveraging territorial markets to reduce poverty and improve livelihoods

Despite progress made in the last decades, over 2 billion people still live in poverty,

736 million of whom live in extreme poverty (World Bank 2018). A large majority of poor people are smallholders and family farmers, who depend on agriculture for their food and income (FAO 2017b). Despite limited assets and capitalisation, in Asia and sub-Saharan Africa smallholders produce an estimated 80 per cent of the food that is consumed (IFAD 2011), and the vast majority of food transactions occur in domestic markets (Murphy 2010). Almost every smallholder farmer already produces and sells food on markets. Hence, the issue is not market access in general, but rather access to inclusive and remunerative markets where smallholders can negotiate terms of access and sell at a fair price, and where the value of output is not only determined by volumes but also by other socio-cultural values and attributes that can foster more inclusivity (CFS 2016).

Markets cannot be considered just as formal agribusiness and value chains,

BOX 1: Criteria to define territorial markets

- They are directly linked to local and/or national food systems (most products, producers, retailers and consumers are from the territory concerned).
- They are more often characterised by horizontal relations (i.e. non-hierarchical) among the various stakeholders in comparison to other markets.
- They are inclusive and diverse in terms of their composition of stakeholders and products.
- They have multiple economic, social, cultural and ecological functions in their respective territories, and are not only limited to food supply.
- They are most remunerative for smallholder farmers by providing them with greater bargaining power over prices.
- They contribute to structuring the territorial economy, creating wealth and redistributing it within the territory.
- They can be formal, informal or a hybrid between the two.
- They can be located at different levels within territories (local, national or even cross-border).

Source: CFS (2016).



Photo: UN Women/Ryan Brown. Woman selling bananas, Seychelles, 2017 <<https://bit.ly/3l6kk5>>.

because that can lead to simplistic solutions, such as ‘market integration’ as the one size-fits-all approach to poverty reduction. Markets are “collective devices that allow compromises to be reached, not only on the nature of goods to produce and distribute but also on the value to be given to them” (Callon and Muniesa 2005). In other words, there is a plurality of markets that operate on different market rules. Moreover, the power relations among stakeholders in these diverse markets also influence their functioning. Therefore, we have to consider the different types of markets and the conditions for smallholders’ participation in them to be able to capture their respective potential for poverty reduction.

Since territorial markets are embedded in a territory, they have the potential to reduce distances, both geographic and socio-cultural, among supply chain actors. Furthermore, shorter distribution channels can enable smallholders to

acquire information more easily, reducing information asymmetries, and to negotiate better terms of participation in territorial markets. Well-functioning territorial markets go beyond economic transactions and offer a wide spectrum of services that are crucial for ensuring smallholder inclusion in markets. Territorial markets are spaces for knowledge exchange and information access, social cohesion, business ‘matchmaking’ and even political organisation.

Nevertheless, not all markets embedded in a territory are inclusive to all. Imbalances in power relations and access to productive resources can exist and hinder market inclusion, especially for the most vulnerable farmers. Therefore, the existence of well-organised producers’ organisations and networks is as vital as the existence of the market infrastructure itself to ensure territorial development, economic growth and poverty reduction. Being a member of an organised group or network, such as a

cooperative or a producers’ organisation, enables smallholder farmers greater opportunities for bargaining and advocacy, which can lead to enhanced prospects for fair market access (FAO 2018).

Role of territorial markets in shaping healthy diets

Lately, there has been a surge in diet-related health problems, such as obesity, diabetes and heart disease. These problems are linked to increased consumption of ultra-processed, energy-dense foods with low nutritional value, and insufficient consumption of nutrient-rich foods, such as fresh vegetables and fruits.

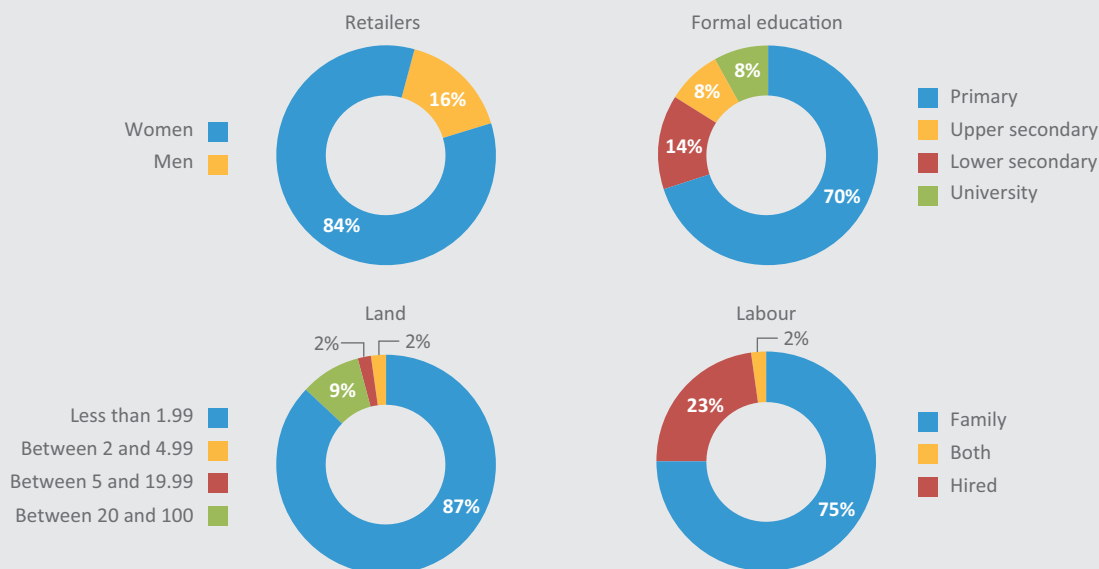
Food retail outlets, including supermarkets, open-air wet markets (a type of territorial market) and hawkers can play a significant role in influencing the diets and nutrition of consumers, through the quality and price of foods they sell. Although there has been a surge in the growth of supermarkets in developing countries over the past few decades, driven by rapid urbanisation and the expansion of the middle class, open-air wet markets and hawkers are still fundamental to the food retail system (Abrahams 2009; Del Pozo-Vergnes and Vorley 2015; Hawkes et al. 2017; Reardon et al. 2014).

For instance, in Ghana, open-air markets continue to dominate the food retail system, with 70 per cent of households reporting buying food from them ‘once a week’ or ‘more than once a week’ (Meng et al. 2014). In Nairobi, Kenya, only 10 per cent of urban households’ income is spent at supermarkets (Abrahams 2009). Similarly, the Zambia Central Statistics Office recognises that open-air wet markets are the preferred retail outlets of urban

TABLE 1: The most frequented food retail outlets and their influence on healthy diets in developing countries⁴

	Consumers	Pros in terms of healthy diets	Cons in terms of healthy diets
Supermarkets	Preferred by high-income and well-educated households	Exposure to several healthy food products, including non-traditional products that increase diet diversity	Exposure to high-calorie and ultra-processed food items
Territorial markets (e.g. open-air wet markets)	Preferred by non-college-educated households and large households	Mostly offer locally supplied foods, including in-season vegetables and fruits, live poultry and fish	Food safety concerns due to poor infrastructure
Hawkers	Preferred by low-income and less-educated large households, especially those with small children	Make foods widely available where the infrastructure is poor (including lack of storage facilities at home) and where consumers have variable income flows	Low food quality, mostly ready-to-eat foods

FIGURE 1: Characteristics of producers operating in four organic farmers' markets in Bolivia



Source: FAO and INRA (2016).

residents (ibid.). Thus, in many developing countries territorial markets, both formal and informal, and hawkers continue to be the main choice of urban consumers for purchasing and procuring food. Additionally, a large proportion of these consumers have low disposable incomes, and their shopping patterns are tied to low-value-added goods, with minimal processing and packaging (ibid.). Territorial markets remain essential food retail outlets where households can access most locally produced foods, including in-season and nutritious foods, such as fresh vegetables and fruits (as shown in Table 1).

Evidence from Bolivia

In a study conducted by FAO and the National Institute of Agricultural Research (INRA) in 2016, four organic farmers' markets⁵ (a type of territorial market) were analysed to understand their functioning mechanisms as well as products and consumer characteristics.

Results of the study show that short supply chains linked to the four markets were dominated by family farmers, particularly women. Figure 1 shows that 84 per cent of market operators were women, with the majority of them having received only primary education. Concerning access

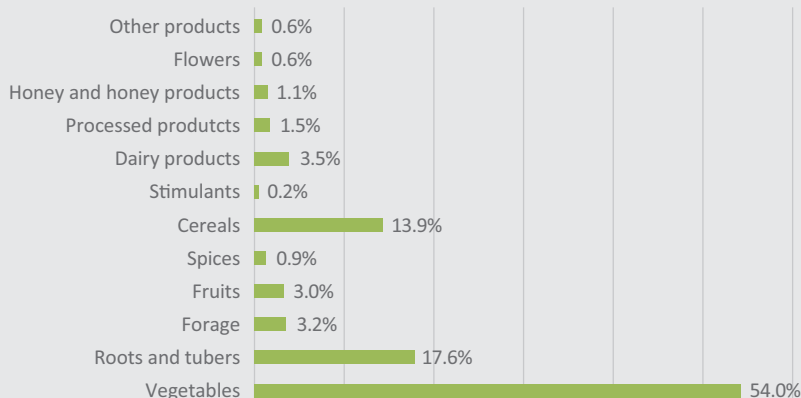
to productive resources, 87 per cent of the producers have farmland of up to 2 hectares, and 75 per cent mainly use family labour.

A total of 72 different products are sold at these farmers' markets, especially potatoes, vegetables and cereals. In terms of food product groups (Figure 2), the most typical product groups sold at these farmers' markets are vegetables, tubers and cereals. This figure is very relevant for Bolivia because

the country is experiencing an increase in adult overweight and obesity, while both availability and consumption of fruits and vegetables are below recommended quantities (Development Initiatives 2018).

Concerning consumers, women make up 85 per cent of all buyers. An analysis into the monthly income of consumers' households⁶ revealed that 1 per cent of households belong to the income bracket with less than BOB1,000 (USD145) per

FIGURE 2: Food groups sold in four organic farmers' markets in Bolivia



Source: FAO and INRA (2016).

month, 25 per cent to the income bracket BOB1,000–3,000 (USD145–435), 48 per cent to the income bracket BOB3,000–5,000 (USD435–725), 19 per cent to the income bracket BOB5,000–10,000 (USD725–1,450), and 5 per cent to the income bracket with more than BOB10,000 (USD1,450) (see Figure 3).

Approximately 27 per cent of consumers and households in the FAO study are living below or very close to the poverty line^{7,8}—i.e. households with a monthly income of less than BOB3,000.

Evidence from these four organic farmers' markets in Bolivia shows that not only do these markets make healthy and nutritious foods available, such as organic and agroecological fresh fruits and vegetables—foods that are usually under-consumed in national diets—but also that these markets are important retail outlets for households belonging to different income brackets, including those living below the poverty line.

Conclusion

Smallholder agriculture is the main source of income for the majority of the world's poor people who live in rural areas. Yet territorial markets where the majority of these smallholders operate are neglected and do not receive adequate support, limiting their contribution to food security and promotion of healthy diets.

Since poverty and malnutrition are multidimensional phenomena (FAO

2019b), interventions for reducing poverty, improving nutrition and promoting healthy diets need inclusive and systemic approaches based on reliable data that incorporate territorial markets, as they are physical and social spaces at the core of territorial food systems where production and consumption meet. Territorial markets can play an important role in ensuring inclusive and sustainable food systems, and if policymakers want to transition to these systems, they should pay more attention to these markets. ●

Abrahams, C. 2009. "Transforming the region: Supermarkets and the local food economy." *African Affairs* 109(434): 115–134.

Ayieko, M., D. Tschirley, and M. Mathenge. 2005. "Fresh Fruit and Vegetable Consumption Patterns and Supply Chain Systems in Urban Kenya: Implications for Policy and Investment Priorities." *Working Paper*, No. 16. Nairobi: Tegemeo Institute of Agricultural Policy and Development, Egerton University.

Callon, M., and F. Muniesa. 2005. "Peripheral Vision: Economic Markets as Calculative Collective Devices." *Organization Studies* 26(8): 1229–1250.

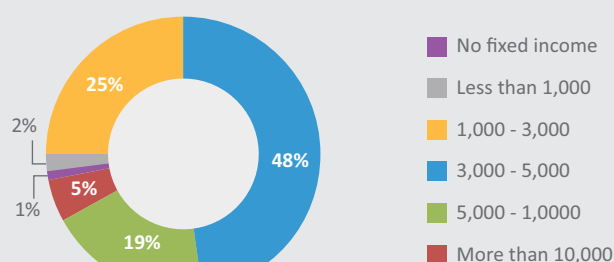
CFS. 2016. *Connecting smallholders to markets*. Rome: Committee on Food Security.

Crush, J., N. Nickanor, and L. Kazembe. 2019. "Informal food deserts and household food insecurity in Windhoek, Namibia." *Sustainability* 11(1): 37.

Development Initiatives. 2018. *Global Nutrition Report: Shining a light to spur action on nutrition*. Bristol, UK: Development Initiatives.

EAT-Lancet Commission. 2019. *Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems* 393(10170): 447–492.

FIGURE 3: Income bracket of consumer households buying at four organic farmers' markets in Bolivia (expressed in bolivianos—BOB)



Source: FAO and INRA (2016).

“Smallholder agriculture is the main source of income for the majority of the world's poor people who live in rural areas.

“ Territorial markets can play an important role in ensuring inclusive and sustainable food systems.



Photo: Dominic Chavez/World Bank. Members of an agriculture cooperative nurturing their fields of vegetables, Kieryaghin village, Burkina Faso, 2013 <<https://clck.ru/QyQvQ>>.

FAO. 2015. *Food outlook 2015*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2017a. *The state of food and agriculture*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2017b. *Supporting Family Farmers to reduce rural poverty*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2018. *Empowering People and Strengthening Rural Organizations*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019a. *Sustainable Healthy Diets: Guiding Principles*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019b. *The State of Food Security and Nutrition in the World 2019: Safeguarding Against economic slowdowns and downturns*. Rome: Food and Agriculture Organization of the United Nations.

FAO. forthcoming. *Mapping of territorial markets: a manual for data collection*. Rome: Food and Agriculture Organization of the United Nations.

FAO and INRA. 2016. *Innovative Markets for Sustainable Agriculture*. Rome: Food and Agriculture Organization of the United Nations.

Hawkes, C., J. Harris, and S. Gillespie. 2017. "Changing diets: Urbanization and the nutrition transition." *2017 Global Food Policy Report*, 34–41. Washington, DC: International Food Policy Research Institute.

IFAD. 2011. *Viewpoint: Smallholders can feed the world*. Rome: International Fund for Agricultural Development.

Meng, T., W. Florkowski, D. Sarpong, M. Chinnan, and A.V.A. Resurreccion. 2014. "Consumer's Food Shopping Choice in Ghana: Supermarket or Traditional Outlets?" *International Food and Agribusiness Management Review* 17: 107–129.

Murphy, S. 2010. *Changing perspectives: Smallscale farmers, markets and globalisation*. London and The Hague: International Institute for Environment and Development and Hivos.

Del Pozo-Vergnes, E., and W. Vorley. 2015. *Global or local food chains? Uncovering the dilemmas in Senegal and Peru*. London: International Institute for Environment and Development.

Reardon, T., D. Tschirley, M. Dolislager, J. Snyder, C. Hu, and S. White. 2014. *Urbanization, Diet Change, and Transformation of Food Supply Chains in Asia*. Ann Arbor, MI: Global Center for Food Systems Transformation, Michigan State University.

Roesel, K., and D. Grace (eds). 2015. *Food safety and informal markets: animal products in sub-Saharan Africa*. London: Routledge.

WHO. 2016. *Global Report on Diabetes*. Geneva: World Health Organization.

World Bank. 2018. *Poverty and Shared Prosperity 2018: Piecing Together the Poverty Puzzle*. Washington, DC: World Bank.

1. Food and Agriculture Organization of the United Nations (FAO).
2. Based on the CFS criteria, the main typologies of territorial markets are wet markets, neighbourhood food markets and farmers' markets. Many other typologies can exist though, depending on the context.
3. Conseil National de Concertation et de Coopération des Ruraux (CNCR) in Senegal; Confédération Paysanne du Faso (CPF) in Burkina Faso; and Asociación Nacional de Productores Ecológicos (ANPE) and Terra Nuova in Peru.
4. Table 1 summarises results from different studies conducted in several developing countries (Meng et al. 2014; IDS 2015; Del Pozo-Vergnes and Vorley 2015).
5. Bio-Achocalla in La Paz, Bio-Tiqui and ECO Feria in Cochabamba, and Bio Tarija in Tarija.
6. Considering a four-member household.
7. According to the World Bank (2018), living on less than USD3.20 per day reflects the poverty line in lower-middle-income countries.
8. Given that the average household size is four members, USD3.20 per person per day means USD12.80 per household per day, and USD384 per household per month.

The role of small- and medium-sized enterprises in addressing the malnutrition challenge: reflections from project implementation in Ghana, Kenya and Viet Nam

Pilar Santacoloma and Manuel Anta¹

The immense malnutrition challenge of today calls for a transformation of the food system, and a critical understanding of the driving forces and actors that can play a role in promoting better diets and optimal nutrition. Among the various forces and actors which comprise food systems, the private sector is one of the most important. It is critical to enhancing access to and the availability and affordability of safe, diverse and nutritious foods.

A major proportion of private-sector entities in many countries are small and medium-sized enterprises (SMEs). Although they are a major vehicle for nutrition within food systems, they face many challenges to survive as a subsector, not least due to being erroneously considered missing and broke (AGRA 2019). This paper discusses the relevance of SMEs in addressing the malnutrition challenge, with illustrations from a field project on the development of SMEs led by the Food and Agriculture Organization of the United Nations (FAO).

What are SMEs?

SMEs participate in all stages of food supply chains, including production (input providers, technical, research and financial institutions), processing, transportation, branding and packaging, and retailing, as key actors such as wholesalers, vendors, restaurants and traders (Demmler 2020). However, there is no international standard for defining SMEs, as the criteria for definition vary according to country contexts and sectors. Most commonly though, SMEs are defined according to the number of employees, capital assets, turnover in the post-production stages, or the size of plots used during production. For instance, in the European Union, the upper limit designating SMEs is 250 employees (European Commission 2003). For low- and middle-income countries, the United Nations Industrial Development Organization (UNIDO) defines SMEs as those that have 5–99 employees, with small firms defined as those with 5–19 employees, and medium-sized firms as those with 20–99 employees. At the production stage, and depending on the context, SMEs are characterised as those

with landholdings of 2–100 ha, 5–100 ha or 5–20 ha (Lowder, Scoet, and Raney 2016).

While there are many definitions of SMEs, what is commonly agreed is that entrepreneurship is a driving force behind them. The European Commission defines it as follows: “Entrepreneurship is the mindset and process to create and develop economic activity by building risk-taking, creativity and/or innovation with sound management, within a new or an existing organization” (OECD 2006). Driven by entrepreneurship, the contribution of SMEs to employment, growth and sustainable development is now widely acknowledged. Their development can deepen the manufacturing sector and foster competitiveness, and can help achieve a more equitable distribution of the benefits of economic growth, thereby helping alleviate problems associated with uneven income distribution (Boto and La Peccerella 2009).

In low- and middle-income countries, the available evidence suggests that SMEs have played a major role in the growth and development of all leading economies in



Photo: Cristina Aldehuela. A woman prepares green peppers to sell at this small stand in Agbogbloshie market. Ghana, 2016.

“The immense malnutrition challenge of today calls for a transformation of the food system.”

Asia and is the key sector in the agricultural transformation in Africa (AGRA 2019). For example, we know that post-farm SMEs are the primary buyers of produce from small-scale farmers and are also suppliers of food for poor and vulnerable consumers (Demmler 2020).

The role of SMEs in nutrition

A rapid transformation is taking place in food systems worldwide, driven by rapid urbanisation, higher incomes, changing technology, increasing women's participation in wage employment, and trade liberalisation (FAO 2019). This transformation has placed heavy pressure on food systems to deliver safe, diverse and nutritious foods (ibid.). For instance, in African countries there has been a rapid rise in the consumption of processed foods, which now represent 40–65 per cent of total urban and rural food purchases (Tschirley et al. 2015). Similarly, it is important to note the rise in consumption of non-staple foods (meat, fish, milk, fruits, vegetables, lipids and roots/tubers, the latter mainly in West Africa), which form 50–70 per cent of urban and rural diets in Africa (AGRA 2019).

These developments have immense relevance for the SME sector, as they produce between 30 per cent and 65 per cent of all the food consumed globally, and even more—between 75 per cent

and 90 per cent—in sub-Saharan Africa (Demmler 2020). It is at this stage of food systems where the availability, affordability, diversity and safety of food are shaped. Further, it is estimated that almost 95 per cent of small-scale farmers in Africa supply the SMEs involved in processing directly or via small-scale wholesalers (AGRA 2019). The processing stage—also mainly composed of SMEs in low- and middle-income countries—is fundamental to increasing food quality and safety and reducing the probability of contamination and losses of nutrient content of fresh products. It is estimated that nearly a third of total food production is lost in production and post-production (HLPE 2014). Furthermore, processing helps to enhance shelf life, increase palatability and convenience of food and increase nutrient content (Demmler 2020). It is estimated that nearly 40 per cent of all agricultural output is generated in the processing stage (AGRA 2019). Therefore, to support an inclusive agricultural transformation, the linkages between small-scale farmers and SMEs engaged in processing need to be fostered and strengthened through investment.

Similarly, the food retail stage—also composed mostly of SMEs—is highly relevant for food security and nutrition, as it not only links food with consumers but also because it is the transmitter

of demand from consumers upstream to farmers. In sub-Saharan Africa, food retailing is believed to generate about 20 per cent of the total value of the agri-food sector (ibid.).

A critical question then is how SMEs, which produce, process and market shelf-stable and nutrient-rich products, can make use of wholesale and retail networks to outsource their raw materials from small-scale producers, market their products effectively, make a profit and, at the same time, reach low-income consumers. SMEs face serious challenges in this endeavour in terms of access to finance, quality of supply, a skilled labour force, compliance with food quality and safety standards and infrastructural conditions (see Box 1). Maestre et al. (2017) note that another key challenge in the marketing of nutrient-rich foods is their credence characteristic—that is, their nutrient value is not observable by consumers. Demand for these foods, therefore, depends on distinctive labelling of food quality and marketing.

Up to now, most of the efforts to leverage the private sector to deliver better diets have focused on incentivising large national and multinational companies. The role of SMEs in nutrition has been less discussed, despite their importance in linking smallholder producers, markets and consumers in both rural and urban areas (HLPE 2017).

BOX 1: Main constraints for SMEs delivering nutritious foods in Ghana

Under the project GLO/GCP/712/JPN, FAO undertook a 'Net-Map' workshop to identify bottlenecks and opportunities for supporting SMEs in delivering more nutritious products. The respondents interviewed are engaged in activities such as production, processing, and supply of raw materials. Commodities produced by the respondents included mushrooms, peppers, tomatoes, maize, cassava, table eggs, poultry, including chicken and guinea fowl, sheep and goats. Most of the respondents sell their commodities to urban dwellers, with a few also selling to rural residents, suggesting a lack of service to rural consumers and, consequently, limited food environments.

According to the respondents, financing from banks is their most significant challenge. The reasons for this include: higher interest rates from banks; difficulty in accessing loans or high collateral requirements; banks requiring immediate repayment and perceiving agriculture-related businesses as risky; and the unwillingness of banks to lend money to SMEs due to poor repayment histories of some of their counterparts. The second major challenge is the expensive and inconsistent supply of inputs, particularly the small capacity of locally

manufactured machines used in production and the high duty costs of imported ones. The third major challenge is a lack of workers with the required skills, implying costly training and supervision costs to accomplish given tasks. Lastly, marketing of their products also appeared to be a particular weakness. Some respondents mentioned that they do not provide any information about the quality of their products to potential consumers, and only a few advertise using public media outlets.

The project collaborates with the University of Ghana, the Association of Ghana Industries (AGI) and the National Board for Small Scale Industries (NBSSI) to generate a capacity-building strategy for selected SMEs and raise awareness at the government level on the need to support SMEs with specific incentives and policies. Similar activities are also being implemented in Viet Nam and Kenya in partnerships with local universities. To reinforce these activities, an e-learning course designed for policymakers, SME associations and development partners on leveraging the potential of SMEs to support nutrition-sensitive food systems is under development.

Source: FAO and IFPRI (2020 forthcoming).



Photo: Giulio Napolitano. Women filling jars with diverse and nutrient-rich foods. Swaziland, 2016.

“A rapid transformation is taking place in food systems worldwide, driven by rapid urbanisation, higher incomes, changing technology, increasing women’s participation in wage employment, and trade liberalisation.

Policy recommendations

SMEs along the food supply chain have considerable potential to supply safe, diverse and nutritious food to most populations but particularly to the most vulnerable. However, several restrictions need to be overcome for them to be able to reach their potential. The following policy recommendations are based on good practices from the FAO-led field programmes; they can support a vibrant SME sector and their contribution to better diets:

- Ease the barriers to doing business for SMEs along the food supply chain through infrastructure development, such as building and improving roads, electrification and wholesale markets, to enhance linkages between input suppliers, farmers, processors and retailers via reduced transaction costs and improved productivity.
- Promote collaboration among stakeholders, including the participation of stakeholders and actors from the public and private sectors, to create business-friendly conditions and encourage the development of joint strategies to better address the multiple challenges faced by SMEs.
- Enhance the capacities of SMEs to invest in equipment by establishing incentives through grants, credits, subsidies or tax breaks or by facilitating imports of processing equipment with low tariffs.

- Establish public nutrition awareness and education programmes on the importance of healthy diets for SMEs.
- Provide training and mentoring campaigns to SMEs on food safety regulations and standards, and designate specific credit lines to support the upgrading of infrastructure and equipment. ●

AGRA. 2019. “The Hidden Middle: A Quiet Revolution in the Private Sector Driving Agricultural Transformation.” *Africa Agriculture Status Report*, Issue 7. Nairobi, Kenya: Alliance for a Green Revolution in Africa.

Boto, I., and C. La Peccerella, 2012. “SMEs: Resources on the opportunities and challenges for SMEs in the agricultural sector of ACP countries.” *Brussels Rural Development Briefings: a Series of Meetings on ACP–EU Development Issues*, No. 13. Brussels: CTA. <<https://brusselsbriefings.files.wordpress.com/2012/10/reader-br-9-smes-eng.pdf>>. Accessed 30 October 2020.

Demmler, K. 2020. “The Role of Small and Medium-sized Enterprises in Nutritious Food Supply Chains in Africa.” *GAIN Working Papers Series*, No. 2. Geneva: Global Alliance for Improved Nutrition. <<https://www.gainhealth.org/sites/default/files/publications/documents/gain-working-paper-series-2-the-role-of-small-and-medium-sized-enterprises-in-nutritious-food-supply-chains-in-africa.pdf>>. Accessed 30 October 2020.

European Commission. 2003. *Recommendation concerning the definition of micro, small and medium-sized enterprises*, 6 May 2003. Doc. 2003/361/EC. Brussels: European Commission. <http://europa.eu/eur-lex/pri/en/oj/dat/2003/L_124/L_12420030520en00360041.pdf>. Accessed 30 October 2020.

FAO and IFPRI. 2020 (forthcoming). *Approaches for Leveraging Small and Medium Enterprises to Improve Nutrition. Net-Map assessment of actors and activities in Ghana*. Rome: Food and Agriculture Organization of the United Nations.

Herrero, M. et al. 2017. “Farming and the geography of nutrient production for human use: a transdisciplinary analysis.” *Lancet Planet Health* 1(1): e33–e42.

HLPE. 2014. *Food losses and waste in the context of sustainable food systems*. Rome: Food and Agriculture Organization of the United Nations, 117.

Lowder, S.K., J. Scoet, and T. Raney. 2016. “The number, size, and distribution of farms, smallholder farms, and family farms worldwide.” *World Development* 1(87): 16–29.

Maestre, M., N. Poole, and S. Henson. 2017. “Assessing food value chain pathways, linkages and impacts for better nutrition of vulnerable groups.” *Food Policy* 68: 31–39.

OECD. 2006. *The SME financing gap. Vol. 1: Theory and Evidence*. Paris: OECD Publishing. <https://www.oecd-ilibrary.org/finance-and-investment/the-sme-financing-gap-vol-i_9789264029415-en>. Accessed 30 October 2020.

Tschirley, D., T. Reardon, M. Dolislayer, and J. Snyder. 2015. “The rise of a middle class in urban and rural East and Southern Africa: Implications for food system transformation.” *Journal of International Development* 27(5): 628–646.

UN DESA. 2018. “World Urbanization Prospects.” United Nations Department of Economic and Social Affairs website. <<https://population.un.org/wup/Download/>>. Accessed 30 October 2020.

1. Food and Agriculture Organization of the United Nations (FAO).

Taxes as a policy measure to promote healthy diets

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Setting the scene: Malnutrition and the affordability of healthy food

Addressing malnutrition involves increasing financial and physical access to health-promoting, nutrient-rich and culturally appropriate foods, in addition to educational efforts. This can be a challenge in under-resourced locations and among those experiencing poverty and food insecurity. Under the current global threat of COVID-19 and its associated immediate and long-term economic, health and social impacts, we are faced, more than ever, with the dire need to reform the food system.

One illustration of the troubled food system is the imbalance between the affordability of unhealthy foods and of healthy options. From 1990 to 2016 the affordability of sugar-sweetened beverages (SSBs) increased in most low-, middle- and high-income countries. This happened more rapidly in low- and middle-income countries (LMICs) than in high-income countries, largely due to the higher rate of income growth in those countries rather than a decline in the real price of SSBs (Blecher et al. 2017). Additionally, food price data from 176 countries in 2011 show that healthy

foods, especially most animal-sourced foods and fortified infant cereals, were generally expensive in low-income countries, while most non-cereal foods, including sugar- and fat-rich foods, were relatively cheap in high-income countries (Headey and Alderman 2019). It was also very telling that milk prices were found to be positively associated with stunting prevalence, while SSB prices are negatively associated with overweight prevalence.

Thus, the food systems transformation agenda needs to include policies aimed at addressing affordability in the short term by creating incentives to promote healthy diets and changing norms around the desirability of unhealthy foods compared to healthy options, in addition to complementary efforts regarding physical access to healthy foods and education over time. Taxation could help support these efforts because it can serve three functions. A well-designed policy can: 1) create financial disincentives for consumers and producers regarding unhealthy items; 2) generate tax revenue to support healthy food production and diets among poor households; and 3) send consistent messages to the population on the importance of healthy foods and diets. These effects are likely to be larger in LMICs than in high-income

countries, as well as among low-income populations within countries (Cornelsen et al. 2015).

To date, over 45 countries, cities or regions within countries worldwide have instituted taxes on SSBs, with a few also imposing taxes on ultra-processed foods (UPFs) that exceed certain nutrient thresholds. Excise taxes have been adopted more quickly on SSBs than on UPFs because SSBs clearly do not provide nutrients of value, do not provide a feeling of satiation (thus resulting in excess consumption) and are associated with many diseases (WHO 2016). More recent research provides strong support for the extremely detrimental health effects of UPFs (Lawrence and Baker 2019; Vandevijvere et al. 2019). Meanwhile, UPF sales and consumption are increasing very rapidly across most LMICs, forming a growing share of the diets of very poor people and now reaching infants and pre-schoolers (Pries, Filteau, and Ferguson 2019; Pries 2016). While SSBs represent about 2–7 per cent of food purchases and 4–10 per cent of kcal/day, UPFs (which includes SSBs), represent between 17 per cent and over 25 per cent of purchases (15–60 per cent of kcal/day) depending on age group, gender and country. Therefore, it is also critical to adjust the prices of unhealthy UPFs relative to healthy foods.

In this article we provide examples of places where such taxes have been implemented, to illustrate how they can help with this goal and how they might be further improved. We then discuss future options that recent research suggests are needed in fiscal policy to truly improve diets and, subsequently, all nutrition-related non-communicable diseases (NCDs).

Mexico's SSB and junk food taxes: A pioneer, but further action needed

With some of the world's highest prevalence of obesity and NCDs, Mexico introduced an excise tax of MXN1 per litre (a price increase of about 9–10 per cent if fully approved) on SSBs, as well as an 8



Photo: Bart Verweij / World Bank. Nutritious meals, Laos, 2012 <<https://bit.ly/2GMNNOC>>.



Photo: Shu Wen Ng. Drinks stand in Mexico City, 2014.

“Evaluations of Mexico’s taxes have shown that they have helped reduce the purchase, manufacturing and sales of the taxed items, particularly among low-income Mexicans and those who were previously high consumers of these unhealthy products.”

per cent *ad valorem* tax on non-essential foods with over 275 kcals per 100g (termed a non-essential food tax) in 2014. This was one way to begin addressing the growing imbalance between the prices of unhealthy foods and of healthy foods in the country, particularly for lower-income households (Colchero et al. 2019).

Evaluations of Mexico’s taxes have shown that they have helped reduce the purchase, manufacturing and sales of the taxed items, particularly among low-income Mexicans and those who were previously high consumers of these unhealthy products. This was the case for the taxes on both SSBs and non-essential foods (Colchero et al. 2016; Ng et al. 2018; Batis et al. 2016). Meanwhile, purchases of untaxed beverages (such as water) increased, and shifts in demand meant that employment in the beverage and non-essential food sectors were not adversely impacted, as their production portfolios appeared to have shifted. This was also the case among retailers (Guerrero-López, Molina, and Colchero 2017). Based on the findings on SSB reductions alone, the predicted 10-year reductions in poor health outcomes include: 189,300 fewer cases of type 2 diabetes, 20,400 fewer incidents of strokes and myocardial infarctions, 18,900 fewer deaths, global savings of around USD983 million (Sánchez-Romero et al. 2016), and a 2.54 per cent reduction in obesity prevalence, with the largest reductions found in populations with the lowest income (Barrientos-Gutierrez et al. 2017). Thus, these taxes (particularly as part of a

larger package of interventions) have the potential to prevent many new cases of NCDs, especially among those least able to access treatment.

One major missed opportunity in Mexico was the use of the tax revenue generated by the scheme. Early in the implementation phase, there were discussions and pushes by public health advocates for some of the revenue to be used to build potable water stations in rural schools (especially where water quality is poor) and to promote the local production of healthier foods (economic development). This did not occur, however, and the revenue was instead directed towards the general budget, with no specific earmarking. Although the use of revenues to cover general government expenses helps to correct some negative externalities of unhealthy diets, it would be better to earmark those expenses to obesity prevention efforts and to provide potable water to marginalised communities. Educating the public about the purpose of such taxes can help keep them relevant and enhance their health effect.

Chile’s SSB tax restructuring and food labelling and marketing regulations: Early promise and opportunities for policy integration and enhancement

As part of a concerted obesity and NCD prevention effort, in October 2014, Chile shifted its beverage tax structure from a 13 per cent *ad valorem* tax to: no taxes on plain water and plain dairy-based drinks;

“The current COVID-19 pandemic has created considerable shocks around the world, with those in the informal sectors of the economy most immediately impacted.



Photo: Oxfam International. Children in Mexico, 2012 <<https://clck.ru/QyQvQ>>.

10 per cent on all non-alcoholic beverages with sweeteners and under 6.25 g of sugar; and 18 per cent on all non-alcoholic beverages with sweeteners and 6.25 g or more of sugar. Due to the relatively small increase (plus 5 percentage points) and decrease (minus 3 percentage points) in prices, evaluations of this tax restructuring have shown that the price changes were muted (i.e. partially absorbed by suppliers), and purchase changes were consequently small (Caro et al. 2018). In June 2016, Chile began implementing ground-breaking food labelling and marketing regulations, including mandatory warnings when products are ‘high’ in sugar, saturated fats, sodium or energy (products can have up to four warning logos). Additionally, products with at least one warning logo were not allowed to be marketed to children through any media (including digital) or in schools.

This provides a good opportunity to further policy integration efforts. Simulations of expanding the tax to include UPFs show that if Chile were to implement an unhealthy UPF tax, in line with its food labelling and marketing regulations, household purchases of these items would fall dramatically. These substitutions could result in reductions in nutrients of concern such as sugar (-5 g/capita/day) and sodium (-23 mg/capita/day), and calories (-42 kcals/capita/day), which are linked with the most common NCDs (Caro et al. 2017). Moreover, simulations show that such an unhealthy UPF tax, in addition to the removal of

Chile’s current 19 per cent value-added tax on fruits and vegetables, would result in a net welfare gain and subsidy transfer for the average household, with low-income households gaining more than high-income households (Caro et al. 2020). Therefore, if Chile were to integrate its tax policy with its labelling and marketing policy, and further adjust the relative prices of healthy foods by removing an existing tax, these measures could lead to important equity- and health-promoting outcomes.

The way forward: Fiscal policies to support healthy diets

The current COVID-19 pandemic has created considerable shocks around the world, with those in the informal sectors of the economy most immediately impacted and thus facing enormous, long-lasting and potentially generational consequences for their overall well-being, including food and nutrition insecurity, educational attainment, and future earnings and upward economic mobility. The health crisis also presents opportunities for change and to reassess how different types of food and those who produce them should be valued, as well as our engagement with food. Fiscal policies can help nudge this re-framing of our relationship with food by adjusting the prices of healthy foods relative to unhealthy foods, and they can be used as an income transfer approach to redistribute resources and address existing economic and health inequities.

At this critical time, increasing the population's ability to afford healthy foods—as opposed to just any type of food—should be prioritised. This can be especially effective when targeting lower-income populations, because it can serve a double purpose of addressing equity concerns—particularly when paired with tax policies—and providing reinforcing messages about healthier food options vs. unhealthy ones. These could include regulating/restricting the marketing of unhealthy foods and beverages that may be gaining popularity due to their longer average shelf life, and promoting healthier options and how to store them safely (e.g. freezing or canning). In many countries, cash transfers have been the primary tool used to bolster purchasing power. They typically target specific subpopulations that need to meet eligibility criteria (e.g. income and asset ownership, age or health condition). Efforts to aggressively supplement and augment these programmes are needed.

Using a system such as Chile's, which identifies unhealthy UPFs and taxes them, and using the resulting funds to create food stamps or subsidies for low-income households to obtain healthy food options can be a progressive way to address the double burden of malnutrition² and build healthier food and eating norms. This would create a multipurpose set of laws that reinforce each other, as recommended by the World Bank (Shekar, Popkin, and Barry 2020).

Even in higher-income countries, such taxes can serve equity-enhancing roles. In the few places in the United States with SSB excise taxes, many have included the creation of local commissions or committees tasked with identifying ways to determine the use of the revenues generated. This includes funding existing programmes as well as new ones, such as adding potable water stations in schools, and educational programmes for pre-diabetic adults on lifestyle changes. More recently, in response to the COVID-19 pandemic, Seattle has redirected its SSB tax revenues, which were previously directed at purchasing fresh fruit and vegetables for households in their subsidised pre-school programmes, towards providing supermarket vouchers to 6,250 families living in poverty.

Many more families and individuals around the world are facing economic uncertainties and constraints. The public and private sectors and individuals must work together to identify, develop and act on meaningful policies that can change the post-COVID-19 food system to better support healthy diets while addressing rising inequities. Creative fiscal policies, including taxes and repurposing their revenue, can provide part of the solution. ●

Barrientos-Gutierrez, T., R. Zepeda-Tello, E.R. Rodríguez, A. Colchero-Aragón, R. Rojas-Martínez, E. Lazcano-Ponce et al. 2017. "Expected population weight and diabetes impact of the 1-peso-per-litre tax to sugar sweetened beverages in Mexico." *PLOS ONE* 12(5):e0176336. doi: 10.1371/journal.pone.0176336.

Batis, C., J.A. Rivera, B.M. Popkin, and L.S. Taillie. 2016. "First-year evaluation of Mexico's tax on nonessential energy-dense foods: an observational study." *PLOS Medicine* 13(7):e1002057. doi: 10.1371/journal.pmed.1002057. PubMed Central PMCID: PMC4933356.

Blecher, E., A.C. Liber, J.M. Drope, B. Nguyen, and M. Stoklosa. 2017. "Global Trends in the Affordability of Sugar-Sweetened Beverages, 1990-2016." *Preventing Chronic Disease* 14:E37-E. doi: 10.5888/pcd14.160406. PubMed PMID: 28472607.

Caro, J.C., S.W. Ng, L.S. Taillie, and B.M. Popkin. 2017. "Designing a tax to discourage unhealthy food and beverage purchases: The case of Chile." *Food Policy* 71:86-100. doi: <<https://doi.org/10.1016/j.foodpol.2017.08.001>>. Accessed 30 October 2020.

Caro, J.C., P. Valizadeh, A. Correa, A. Silva, and S.W. Ng. 2020. "Combined fiscal policies to promote healthier diets: Effects on purchases and consumer welfare." *PLOS ONE* 15(1):e0226731. doi: 10.1371/journal.pone.0226731.

Caro, J.C., C. Corvalán, M. Reyes, A. Silva, B. Popkin, and L.S. Taillie. 2018. "Chile's 2014 sugar-sweetened beverage tax and changes in prices and purchases of sugar-sweetened beverages: an observational study in an urban environment." *PLOS Medicine* 15(7):e1002597. doi: 10.1371/journal.pmed.1002597. PubMed Central PMCID: PMC6029755.

Colchero, M.A., C.M. Guerrero-López, M. Molina, and M. Unar-Munguía. 2019. "Affordability of Food and Beverages in Mexico between 1994 and 2016." *Nutrient* 11(78).

Colchero, M.A., B.M. Popkin, J.A. Rivera, and S.W. Ng. 2016. "Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study." *BMJ* 352:h6704. doi: 10.1136/bmj.h6704. PubMed Central PMCID: PMC4986313.

Cornelsen, L., R. Green, R. Turner, A.D. Dangour, B. Shankar, M. Mazzocchi et al. 2015. "What Happens to Patterns of Food Consumption when Food Prices Change? Evidence from A Systematic Review and Meta-Analysis of Food Price Elasticities Globally." *Health Economics* 24(12):1548-59. doi: 10.1002/hec.3107.

Guerrero-López, C.M., M. Molina, and M.A. Colchero. 2017. "Employment changes associated with the introduction of taxes on sugar-sweetened beverages and nonessential energy-dense food in Mexico." *Preventive Medicine* 105:S43-S9.

Headey, D.D., and H.H. Alderman. 2019. "The Relative Caloric Prices of Healthy and Unhealthy Foods Differ Systematically across Income Levels and Continents." *The Journal of Nutrition* 149(11):2020-33. doi: 10.1093/jn/nxz158.

Lawrence, M.A., and P.I. Baker. 2019. "Ultra-processed food and adverse health outcomes." *BMJ* 365:l2289. doi: 10.1136/bmj.l2289.

Ng, S.W., J.A. Rivera, B.M. Popkin, and M.A. Colchero. 2018. "Did high sugar-sweetened beverage purchasers respond differently to the excise tax on sugar-sweetened beverages in Mexico?" *Public Health Nutrition* 22(4):750-6. doi: 10.1017/S136898001800321X.

Pries, A.M., S. Filteau, and E.L. Ferguson. 2019. "Snack food and beverage consumption and young child nutrition in low- and middle-income countries: A systematic review." *Maternal & Child Nutrition* 15(54):e12729. doi: 10.1111/mcn.12729.

Pries, A.M., S.L. Huffman, I. Adhikary, S.R. Upreti, S. Dhungel, M. Champeny et al. 2016. "High consumption of commercial food products among children less than 24 months of age and product promotion in Kathmandu Valley, Nepal." *Maternal & Child Nutrition* 12:22-37. doi: 10.1111/mcn.12267.

Sánchez-Romero, L.M., J. Penko, P.G. Coxson, A. Fernández, A. Mason, A.E. Moran et al. 2016. "Projected Impact of Mexico's Sugar-Sweetened Beverage Tax Policy on Diabetes and Cardiovascular Disease: A Modeling Study." *PLOS Medicine* 13(11):e1002158. doi: 10.1371/journal.pmed.1002158.

Shekar, M., and B.M. Popkin. 2020. *Obesity: Health and Economic Consequences of an Impending Global Challenge*. Washington, DC: World Bank.

Vandevijvere, S., L.M. Jaacks, C.A. Monteiro, J.C. Moubarac, M. Girling-Butcher, A.C. Lee et al. 2019. "Global trends in ultraprocessed food and drink product sales and their association with adult body mass index trajectories." *Obesity Reviews*.

WHO. 2016. *Taxes on sugary drinks: Why do it?* Geneva: World Health Organization, 4.

1. University of North Carolina at Chapel Hill.
2. The coexistence of undernutrition with overweight and obesity.

Building a food safety culture in Bangladesh

Sridhar Dharmapuri¹

Food safety refers to all hazards—whether chronic or acute—that may make food injurious to the health of the consumer. There is no food security without food safety. Safe food is the product of an effective food control system, which, in turn, is based on scientific principles and guidelines, addressing all sectors of the food chain. This is particularly important for developing countries as they seek to achieve improved food safety, quality and nutrition, but it requires a high level of political and policy commitment, as well as comprehensive capacity-building (FAO and WHO 2003).

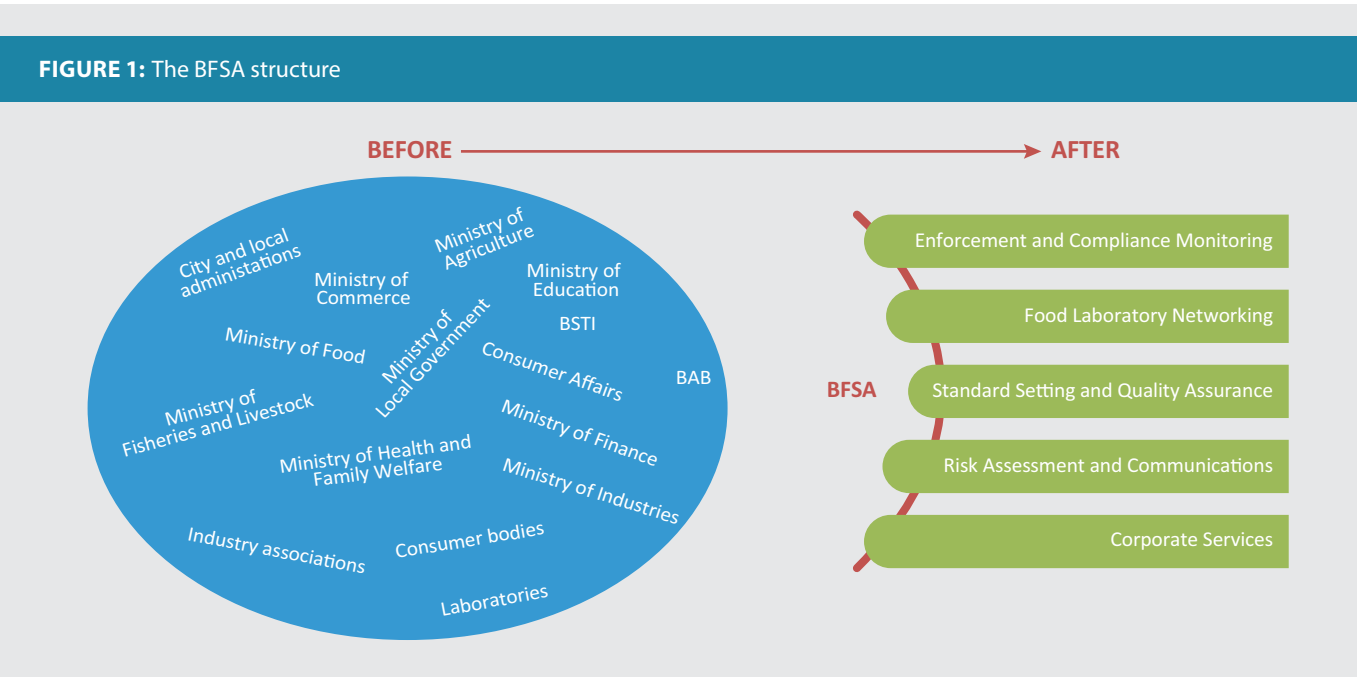
Bangladesh is one of the world’s most densely populated countries, with over 1,000 people per km² (Ritchie 2019). This places enormous pressure on its limited natural resources and infrastructure and across the farm-to-fork chain. The arable land is being lost to urbanisation and climate change. Awareness is low among producers and supply chain actors regarding good hygiene practices, among others, leading to contaminants—physical, chemical and biological—entering the chain at various

points. Moreover, agricultural produce is hard pressed to reach markets, as dedicated transport and storage are not easily available. This fuels the unethical and dangerous practice of adulteration and translates into food that is unsafe for consumption and the cause of frequent illnesses, such as diarrhoea, lowering productivity and impacting the economy in a major but subtle way. The print, electronic and social media in Bangladesh are rife with incidents and news articles related to unsafe food (Dhaka Tribune 2019; Daily Star 2019). Reports of export rejections and the presence of contaminants in Bangladeshi products in other countries do the country’s image no favours (Emran, Taslim, and Taslim 2015).

A decade ago, food safety management actions carried out by authorities were based almost solely on media reports, rather than on science and evidence. This was further compounded by a fragmentation of responsibilities for food control across multiple ministries and agencies. The lack of involvement of the private sector, particularly micro, small and medium-sized enterprises, including the millions of street food vendors, as well as of

civil society more generally, in food safety was particularly glaring in a country of 160 million people and thousands of well-functioning non-governmental organisations (NGOs).

Bangladesh is a development success story, for the most part. Its economy continues to grow at a very healthy rate, and its human development indicators are among the best in South Asia. It was also one of the high achievers of the Millennium Development Goals due to its notable progress in addressing hunger. Safe food is essential for ending hunger and all forms of malnutrition and for promoting economic growth, which follows as a result of the population’s good health. Its progress towards the Sustainable Development Goals (SDGs), most notably SDG 2 (“end hunger, achieve food security and improved nutrition and promote sustainable agriculture”) hinges crucially on ensuring food safety. Moreover, as Bangladesh seeks to become a middle-income country, incorporating good practices and standards for food safety across agriculture and food chains will increase their attractiveness on the international market and realise greater values through trade, both domestic and



Source: Author’s elaboration.



Photo: Danny McL. Bangladeshi man selling vegetables at market, London, United Kingdom, 2019
<<https://is.gd/LNU8l4>>.

“Incorporating good practices and standards for food safety across agriculture and food chains will increase Bangladesh's attractiveness on the international market.

foreign. To this end, a science-based food control system had to be established.

Food safety—everyone's business

Against this backdrop and in light of concerns being voiced by development partners and donors, the Food and Agriculture Organization of the United Nations (FAO), with generous support from the Kingdom of the Netherlands and the United States Agency for International Development (USAID) instituted the two largest capacity-building projects ever on food safety between 2012 and 2014, costing a combined total of more than USD20 million.

These projects focused on strengthening the building blocks of food safety and enabling the technical workforce to enforce and implement food safety measures. They set up, operationalised and developed the corporate governance structure of the Bangladesh Food Safety Authority (BFSA), as mandated under the Food Safety Act, 2013. Multisectoral collaboration between various line ministries (Agriculture, Fisheries and Livestock, Commerce, Industries, Local Government, Home and Finance), agencies (Bangladesh Standards and Testing Institution, Bangladesh Accreditation Board, National Board of Revenue) and more than 35 technical institutions, including universities, laboratories and research centres, as well as private entities were established. A network of NGOs, the Bangladesh Food

Safety Network (BFSN), was founded. It now has 5 founding and more than 20 associate members and has become the BFSA's main civil society organisation partner, representing the 'voice of the people' on food safety. The private parties that were directly linked to activities in agricultural supply and value chains were co-opted into implementing food safety awareness and training programmes. Nationwide information, education and communications campaigns were carried out. A multisectoral alliance across government, the private sector and civil society was thus forged. The principle of risk and risk management based on data and evidence was institutionalised.

Institutionalisation and national commitment

At the institutional level, the projects supported the formulation of the Food Safety Act, 2013 and set up the governance structure of the BFSA in 2015. The BFSA started with a five-member board headed by a Chairperson. It has now grown into an organisation with 22 senior officials on deputation and 106 staff recruited through a competitive process, all fully funded from the government's budget. The recruitment of a further 371 officials is currently under way. The BFSA was assisted to organise itself into five divisions: enforcement and compliance; food laboratory networking; standards-setting and quality assurance; communications and risk assessment; and corporate services. Memorandums of Understanding were facilitated with

six food control authorities, including consumer affairs and one NGO. A five-year strategic plan envisioning 'safe food for all to protect health and life', in line with policies to strengthen transparency and accountability of all government institutions, was formulated and is currently being implemented. Seven regulations and three rules have been developed regarding key food safety priorities, such as hygiene, chemical contaminants, labelling and food additives. District-level food safety courts were set up under the Food Safety Act, and the project trained 70 magistrates to prosecute cases related to food safety.

Building the technical workforce

The flagship achievement was the establishment and operationalisation of the state-of-the-art National Food Safety Laboratory, obtaining international accreditation (ISO17025) in 5 years. A further 10 laboratories were enhanced with equipment and training. Two mobile laboratories for field-testing travel across the country, conducting field tests in the various districts. The national laboratory network (now with more than 35 member institutions) conducted the first-ever widespread survey of food commodities to ascertain the presence of key chemical and microbial contaminants in more than 3,000 samples of commodities most commonly consumed by Bangladeshis. This was the first systematic effort to gather data and inform the regulators and the general public regarding the hazards present in food. Importantly, it showed that the main problem is the presence of micro-organisms, such as *E. coli* and *Salmonella*. The study also demonstrated the presence of anti-microbial-resistant food-borne pathogens in wet markets (Al Mamun et al. 2017).

The national discourse, therefore, needed to shift from the constant concerns about chemical contaminants (pesticides and heavy metals) to the lack of hygiene and the need to roll out programmes on good hygiene practices (GHP). Messages about food safety at home, in school and in the workplace were disseminated through a massive print and media campaign. This included consumer-oriented messages on national television that reached almost the entire population, and direct-to-consumer campaigns through 13,070 community clinics in



Photo: Holly Holmes/WorldFish. Woman preparing vegetables, 2013 <<https://clck.ru/QyQvQ>>.

481 subdistricts and to children in 20,000 schools. The consumer campaigns were delivered by the BFSN. Codes of practice and GHP guidelines for all stages of the horticulture, fisheries and poultry value chains were developed by national experts, and a force of 1,500 trainers from the government, the BFSN and international NGOs, such as *Solidaridad*, was assembled. These trainers reached more than 200,000 farmers through Farmers' Field Schools nationwide.

This massive capacity-building programme enabled safe and traceable supplies, providing increased incomes for producers through contracts with buyers and safer food for the consumer. Innovative ways to use safe food waste as animal feed were developed (Das 2018). The standout result was the first-time export of fresh mangoes to Walmart in the UK, just a year after a formalin² scare threatened to cause long-term damage to the reputation of Bangladeshi mangoes worldwide.

Recognising the importance of street food in providing nutrition and livelihoods to low-income groups, vending and monitoring systems were set up in six urban areas, in collaboration with city authorities. Around 1,200 hygienic street food carts were distributed, and over 4,000 food vendors and restaurant workers received training in GHP.

Basing action on science and evidence

In 2013, following media reports of formalin being sprayed on fresh mangoes

to increase their shelf life, law enforcement authorities Bangladesh decided to install checkpoints to verify formalin levels using a hand-held meter. If the value was over an arbitrary number (there is no standard for formaldehyde in food), the affected mangoes would be crushed by road rollers. Fruit suppliers incurred heavy losses and appealed to the High Court of Bangladesh for relief. By order of the Court, the National Food Safety Laboratory (with FAO's support) collected samples of fresh mangoes and devised a reliable test to detect formaldehyde in food. This was also published in an international peer-reviewed journal (Wahed, Dharmapuri, and Corrales 2016) and was the first such publication from the new laboratory. The test showed that the level of formaldehyde being consumed was too low to pose a risk to human health. Simple measures, such as rinsing with water, completely remove the chemical; therefore, there was no need to destroy tonnes of valuable fresh fruit on a whim. Moreover, the hand-held meter previously used by law enforcement authorities was ruled as unfit for this purpose. Consequently, restrictions and checks on the movement of mangoes were lifted. The BFSN released an advisory note, echoing FAO's guidance on the issue and assuring citizens of the low level of risk. The project, aware that malpractice does exist in the chain, then worked closely with fruit producers and other members of the supply chain on good agricultural practices from tree to retail. A year later, thanks to linkages enabled by

the project between trained farmers and local and international buyers, mangoes were sold directly through Walmart outlets in the UK.

Food safety can build and rebuild livelihoods

Consumers in the city of Khulna, the gateway to the Sunderbans delta in south-west Bangladesh, now have access to hygienic street food. In partnership with the Khulna City Corporation (KCC), 500 street food vendors received new street food carts, licensed by the KCC, designed to minimise food contamination during preparation. Vendors were trained in GHP and continuously monitored by the KCC food safety team, which was trained by FAO. The KCC team is further supported by a watchful group of students and teachers from more than 20 schools who have been trained to monitor street carts in their vicinity. The efforts have significantly bolstered consumer confidence and raised vendors' incomes. Parvin, a female vendor, lost her husband in cyclone Sidor in 2007, leaving her as the sole breadwinner in her household, with a two-year-old son. She and her father started a street food business using a dilapidated wooden cart with poor hygienic practices, which used to earn BDT150–BDT200 a day. After receiving a modern hygienic food cart and training on GHP from the KCC, her business started attracting more customers. She now makes BDT400–BDT500 a day, and her son is able to attend school.

Conclusion

Bangladesh is representative of the South Asian regional context, with a fast-growing economy and a large aspirational population. Placing the country on the path to sustaining food safety for all in the face of rapid urbanisation and climate change requires a sustained multisectoral approach, which was demonstrated by the two projects described in this article. They addressed critical areas of an effective food control system, strengthening linkages between food safety measures, food and nutrition security, and public health outcomes. This is having a significant impact, as evidenced by the results at technical and grass-roots levels.

Food safety is a fast-moving field, and constant improvement is essential. In the last 2 years, online retail and food delivery services have grown rapidly. The BFSA needs to respond to the challenges posed by these developments. The city of Dhaka has recognised that food safety is also intrinsically linked to infrastructure and urban development. Again, with generous support from the Kingdom of the Netherlands, a USD12.5 million project to model the Dhaka food system has been operationalised, encompassing 4 city corporations and over 20 million people. The focus is now on developing an urban food agenda that will ensure food security and safe and nutritious diets for all Bangladeshi citizens. ●

1. Food and Agriculture Organization of the United Nations (FAO) Regional Office for Asia and the Pacific.
2. A solution including formaldehyde, often used as a food preservative.

Al Mamun, S.M., L. Kabir, M.M. Islam, S.K.M. Lubna, S. Islam, T.A.H.M. Akhter, and M.M. Hossain. 2017. "Molecular identification and characterization of *Salmonella* species isolated from poultry value chains of Gazipur and Tangail districts of Bangladesh." *African Journal of Microbiology Research* 11: 474–481.

Daily Star. 2019. "Lead, bacteria in milk, curd." *Daily Star*, 9 May. <<https://clck.ru/RnF5i>>. Accessed 22 October 2020.

Das N.G., K.S. Huque, S.M. Amanullah, S. Dharmapuri, and H.P.S. Makkar. 2018. "Study of chemical composition and nutritional values of vegetable wastes in Bangladesh." *Veterinary and Animal Science* 5: 31–37.

Dhaka Tribune. 2019. "Fresh DU study again finds antibiotics in milk samples." *Dhaka Tribune*, 13 July. <<https://clck.ru/RnF3x>>. Accessed 22 October 2020.

Emran, S.J., Q.N. Taslim, and M.A. Taslim. 2015. "Standards as trade barriers: the case of shrimp export of Bangladesh to EU." *Journal of Development Studies* 17(1): 36–45.

FAO and WHO. 2003. "Assuring food safety and quality—Guidelines for strengthening national food control systems." *FAO Food and Nutrition Paper*, No. 76. Rome: Food and Agriculture Organization of the United Nations.

Ritchie, H. 2019. "Which countries are most densely populated?" Our World in Data website, 6 September. <<https://clck.ru/Rrk8J>>. Accessed 22 October 2020.

Wahed, P., S. Dharmapuri, and M. Corrales. 2016. "Determination of formaldehyde in food and feed by an in-house validated HPLC method." *Food Chemistry* 202: 476–483.

“Food safety is a fast-moving field, and constant improvement is essential.”



Photo: WorldFish . Woman cleaning mola, a nutritious small fish in Jessore, Bangladesh <<https://is.gd/LNU8l4>>.

Ending malnutrition in all its forms: social protection and the growing prevalence of overweight, obesity and diet-related non-communicable diseases

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and Rodrigo Rivera³

The double burden of malnutrition

A rapid shift in our diets has reconfigured the global nutrition profile in just one generation. Child undernutrition has reached its lowest level since 1990, although it still persists, and progress has now stopped. At the same time, **overweight and obesity** in all age groups show levels not seen previously. Today, the situation can be characterised as a double burden of malnutrition: the coexistence of undernutrition—stunting, wasting, underweight and micronutrient deficiencies—together with overnutrition—overweight and obesity—and a host of diet-related non-communicable diseases.

Development Initiatives (2020) estimates that 124 countries out of a sample of 143 are experiencing this double burden. Importantly, it is not only countries and communities that can experience the simultaneous presence of under- and

overnutrition: they can also be present in the same household (stunted children living with overweight adults), and even the same person over time: evidence shows that undernutrition early in life may increase the risk of overweight and non-communicable diseases later.

Globally, there has been a rapid growth of overweight and obesity in recent decades. Between 1975 and 2016, the prevalence of overweight grew from 20 per cent to 39 per cent among adults, and from 4 per cent to 18 per cent among children and adolescents aged 5–19 years. Overweight in children under 5 years of age also increased, although more slowly. Overall, roughly 30 per cent of the world's population—2.4 billion people—are overweight. Obesity, the most severe form of overweight, is increasing much faster. Since 1975, the prevalence of obesity in adults has tripled (Figure 1), and increased more than eightfold in school-age children and adolescents. At present, one in nine individuals of 5 years or older in the world is obese.

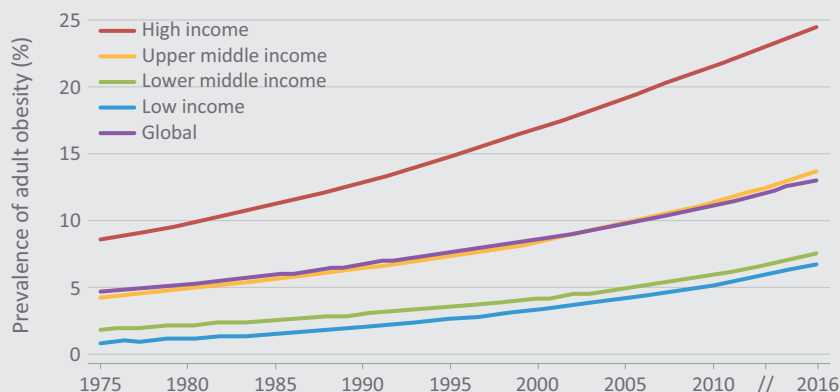
Global aggregates hide asymmetries in the prevalence of overweight and obesity between countries and specific population groups. Overweight among adults is more pronounced in regions with higher levels of per capita income. Adults in relatively more prosperous areas are overweight more frequently than adults in lower-income regions, such as South Asia or sub-Saharan Africa (Figure 2).

Bodyweight disparities also manifest themselves by sex and geographic region. Overweight and obesity rates are significantly higher among women than men, especially in low- and middle-income countries, whereas obesity is more frequent in men in high-income countries (Jaacks et al. 2019). The average Body Mass Index (BMI) has been typically higher in urban than rural areas in most countries, especially high-income, although accelerating growth rates in rural BMI have contributed to close this gap, close this gap. Rural BMI has also been the main driver of the increase in total BMI in low- and in low- and middle-income countries over the last three decades (NCD Risk Factor Collaboration 2019).

Determinants of overweight and obesity

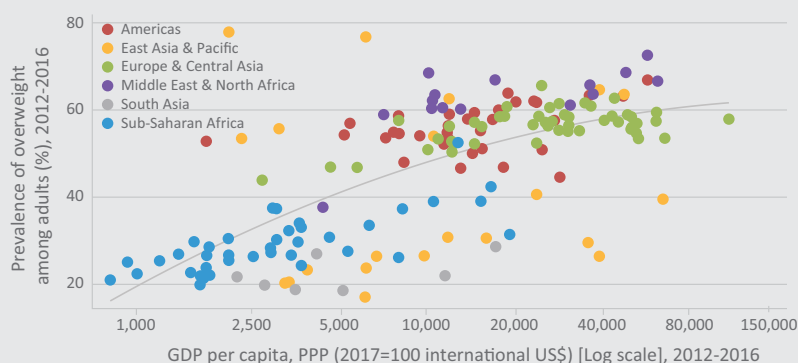
Overweight and obesity are primarily the result of an energy imbalance between calories consumed and calories expended (WHO 2020a). Reasons for **growing diet imbalances** include the rapid changes in global, national and local food systems, greater economic access to food, changing lifestyles that result in major reductions in physical activity due to the introduction of activity-saving technologies, restrictions on the availability of time for the preparation of traditional dishes, and even the increasing share of food consumption through purchases rather than own production as countries become more urban (Popkin et al. 2020; Shekar and Popkin 2020).

FIGURE 1: Prevalence of obesity among adults (18+ years), by per capita income and income group, 1975–2016



Source: Author's elaboration based on World Health Organization and World Bank data.

FIGURE 2: Prevalence of overweight among adults (18+ years), by per-capita income and income group, 2012-2016



Source: Author's elaboration based on WHO and WB data.

Food systems play an essential role in delivering affordable, safe and sustainable diets that, combined with other factors (living conditions, basic infrastructure and water and sanitation facilities, food preferences and feeding practices, access to health services), ultimately determine nutrition outcomes.

Over the past decades, however, **food systems** have undergone radical transformations that have changed the way we access and consume food. There has been an exponential growth in the availability of retail food, supermarket penetration and the market power of agribusinesses and food retailers, manufacturers and food service companies (Popkin et al. 2020). This, accompanied and sustained by aggressive branding and marketing, has made cheap, ultra-processed food widely available around the world.

Growth in per capita income and variations in relative prices have also transformed food patterns. Both healthier and unhealthier foods become more affordable as countries develop (Headey and Alderman 2019). This partly explains differences in food patterns between countries with varying levels of development. Access to nutritious foods such as milk, eggs, fruits and vegetables is usually more limited in low-income countries, whereas access to cheap, energy-dense but nutrient-poor foods is more frequent in middle- and high-income countries. **Food prices** are also critical to

explain diet quality. FAO, IFAD, UNICEF, WFP and WHO (2020) estimate that 3 billion people in the world could not afford a healthy diet in 2017, as it cost almost five times as much as a diet that would meet minimum energy needs.

Inequality in food access contributes to the disparities in overweight rates observed between poor and wealthier households. Recent evidence suggests that the prevalence of overweight and obesity progressively shifts from affecting families at the top of the income distribution to those at the bottom as the economy develops (Popkin et al. 2020). Data from low- and lower-middle-income countries, mainly in sub-Saharan Africa and South Asia, show that overweight is predominantly linked to high-income households. By contrast, in upper-middle-income economies such as China, Brazil and Mexico, overweight affects low-income households more frequently.

Overweight and obesity impose substantial costs on societies, families and individuals. They are a major determinant for the development of **non-communicable diseases**, including heart failure, type 2 diabetes and several types of cancer, which altogether are responsible for approximately 70 per cent of all deaths globally (WHO 2020b). The odds of developing non-communicable disease vary across population groups. The risk of cardiovascular disease and cancer is higher among low-income households, especially

“ A rapid shift in our diets has reconfigured the global nutrition profile in just one generation.

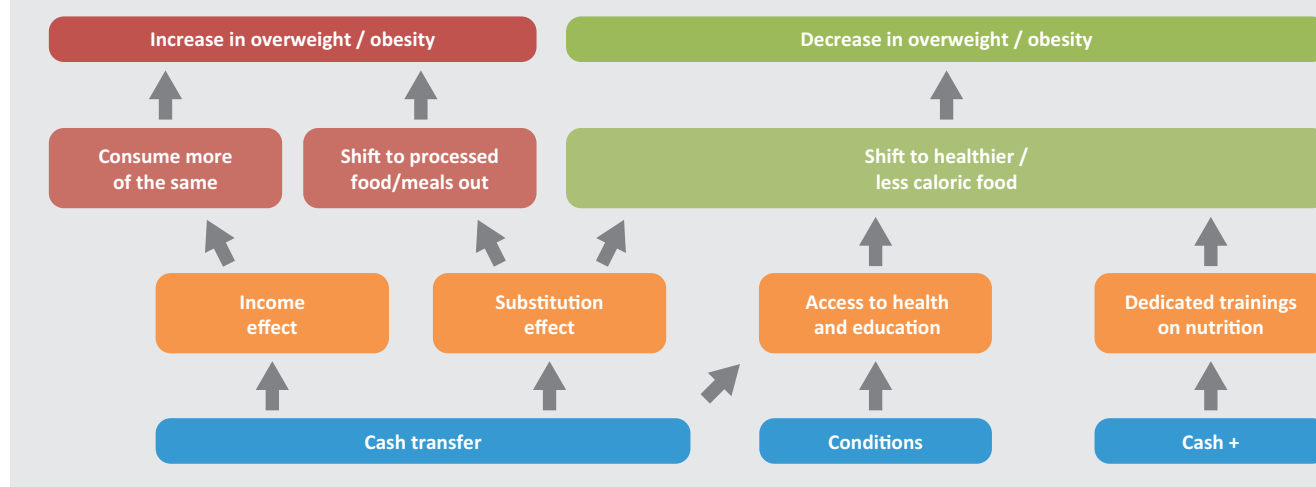
in low- and lower-middle-income countries (Williams et al. 2018). In the USA, being black, female, young or having low income or educational attainment increases the risk of obesity, and racial and class differences have been associated with the risk of **premature death** (Lincoln et al. 2014).

The potential role of social protection in tackling the obesity epidemic

While a large number of studies have shown that cash transfers can reduce undernutrition,⁴ we know surprisingly little about their impact on overweight and obesity. This could be because **many social assistance programmes** prioritise lifting households out of extreme poverty and protecting them from food insecurity and hunger, rather than addressing overnutrition. Brazil's *Bolsa Família*, for instance, was at the core of the government's Zero Hunger strategy.

Overnutrition, however, is no longer a concern merely for rich people, but increasingly affects poor and vulnerable populations. Since social assistance programmes have been expanding in many countries to cover larger numbers of poor and vulnerable households beyond those living in extreme poverty, the proportion of social assistance recipients who are, or are at risk of being, overweight or obese will almost inevitably increase. Even at the outset of *Bolsa Família* in 2005, overweight and obesity were already as prevalent as undernutrition among programme beneficiaries.

FIGURE 3: Cash transfers and obesity—conceptual framework



Source: Authors' elaboration based on the literature cited in this article.

Dispensing cash to poor households increases their purchasing power, which will lead to both **income effects**⁵ and **substitution effects**.⁶ The former predicts that households will consume more of what they were already consuming before, while the latter implies that households will substitute the consumption of cheaper goods for more expensive ones. The **income** effect can be expected to lead to an increase in the daily amount of calories consumed. Indeed, there is ample evidence showing that food consumption accounts for the largest share of expenditures that households around the world incur from the cash transfers they receive (Fiszbein and Schady 2009). The **substitution** effect could incentivise households to switch from healthy to unhealthy food (e.g. increasing consumption of fast food or ultra-processed foods), help them afford a more balanced and healthy diet (e.g. switching from simple carbohydrates to more protein sources, vegetables and fruit) or even increase expenditures on non-food items. This will depend on a host of factors: dietary habits and preferences, the household's initial income level, time poverty, food prices, public health education.

Apart from direct consumption effects, there are a number of ways in which social protection programmes, in particular cash transfers, can help address overnutrition (see Figure 3). Evidence shows that the

income boost provided by cash transfer programmes lowers the **financial barriers** that prevent households from accessing social services, most notably health care and education. More frequent contact with health professionals and use of health services can help in the early diagnosis and treatment of nutrition-related conditions. At the same time, expanding access to education might help caregivers and children of beneficiary households make more informed dietary choices, although there is limited evidence that it does. The potential positive effects of greater access to health services and education could be reinforced if a cash transfer programme incorporates **conditionalities** or **strong messaging** around health and education.

Few studies have explicitly examined these links empirically. Fernald, Hou and Gertler (2008a; 2008b) show that participants of Mexico's *Oportunidades* had a significantly lower BMI and prevalence of obesity than non-participants, but the programme's cash component led to higher BMI, higher prevalence of overweight and obesity, and higher levels of blood pressure. Likewise, two studies on Colombia's *Familias en Acción* (Attanasio et al. 2005; Forde et al. 2012) found that this programme also increased both BMI and the odds of being obese. A number of observational studies have reached similar conclusions, but they need to be interpreted with caution, as they are not showing any causal effects of cash transfers. These include a cross-

sectional study of *Bolsa Família* that found children in beneficiary households three times more likely to consume junk food (Saldiva, Silva, and Saldiva 2010), studies of Egypt's *Tamween* food subsidy scheme (Ecker et al. 2016) and the US Supplemental Nutrition Assistance Program (Leung et al. 2013).

There is little evidence, however, that cash transfers or other anti-poverty programmes have managed to address overnutrition among their participants. A recent study by Levasseur (2019) found an overall decrease in obesity related to *Oportunidades*, although it suggests that this decrease was caused not by the cash transfer but by the programme conditionalities, which included training sessions (*pláticas*) focusing on healthy nutrition and young child feeding practices. By contrast, Leroy et al. (2013)'s study of Mexico's *Programa de Apoyo Alimentario*, launched in 2003 to assist very poor and vulnerable rural households who could not be reached by *Oportunidades*,⁷ found that both the food basket and cash transferred by the programme led to an increase in BMI even when accompanied by nutritional training. This effect was higher among women who were already obese at baseline.

This limited evidence about the impacts of social protection on overweight and obesity suggests that policymakers, programme designers and evaluators have been slow to recognise the extent

to which overnutrition is affecting rising numbers of poor people. Consequently, programmes around the world have seldom made overnutrition a priority. The studies by Leroy et al. (2013) and Levasseur (2019) point to the need for more research to identify other contributing factors and how **complementary nutrition sessions** can effectively induce changes in dietary habits, food use and feeding practices among beneficiaries of cash transfers. It is possible—and a matter for further research—that cash transfers are helping poor households gain greater access to food but falling short of providing them with choices and the ability to afford healthy diets. We also need to know more about the **long-term impacts** of these programmes, particularly the generational impacts of investing in children's health and education: the few existing studies do not examine their effects on overweight and obesity (Molina Millán et al. 2019).

Countries have been experimenting with the provision of complementary interventions alongside cash—commonly referred to as 'cash+'—ranging from social and behavioural change interventions aimed at improving knowledge and practices around health and nutrition to the distribution of vegetable seeds and training in home gardening, food storage and preparation to promote more diverse, nutritionally rich diets. Linking social protection with **nutrition-sensitive agricultural interventions** also offers the prospect of increasing the productive

capacity of smallholder farmers, which can help them diversify and enrich their diets by either consuming what they harvest or procuring healthy foods in the market with the proceeds from the crops they sell. However, there is no empirical evidence yet on their impact on overweight and obesity.

Social protection can clearly contribute to create an environment that enables and promotes **healthy diets** by improving physical and economic access to food. These schemes have already been shown to be a useful tool to reduce child and maternal undernutrition, but they may not be sufficiently well suited to address the rising prevalence of overweight and obesity that is increasingly affecting not just rich people but growing numbers of poor households around the world. The design and implementation of existing programmes could be revisited so that they can simultaneously address the nutritional deficiencies for which they were originally intended, but also emerging problems such as obesity and diet-related non-communicable diseases (Hawkes et al. 2020).

Addressing the growing prevalence of overnutrition will be difficult for the social protection sector to tackle on its own, given current economic and demographic trends (urbanisation, rising incomes), changes in dietary habits (search for convenience food) and food system transformations globally (supermarket penetration, disruptions in local food

systems and the increasing ubiquity of cheap, ultra-processed food and obesogenic food environments) While we need to learn more about how social protection can promote better dietary and nutritional outcomes, **broader changes in public policy and consumer awareness and behaviour** will be needed too, if progress towards addressing overweight and ending all forms of malnutrition is to materialise in the near future. ●

Attanasio, O., E. Battistin, E. Fitzsimons, and M. Vera-Hernandez. 2005. "How effective are conditional cash transfers? Evidence from Colombia." *Institute for Fiscal Studies Briefing Note*, No. 54. London: Institute for Fiscal Studies.

Development Initiatives. 2020. *2020 Global Nutrition Report: Action on equity to end malnutrition*. Bristol, UK: Development Initiatives.

Ecker, O., P. Al-Riffai, C. Breisinger, and R. El-Batrawy. 2016. *Nutrition and economic development: Exploring Egypt's exceptionalism and the role of food subsidies*. Washington DC, International Food Policy Research Institute. <<https://doi.org/10.2499/9780896292383>>. Accessed 5 November 2020.

FAO, IFAD, UNICEF, WFP, and WHO. 2019. *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns*. Rome: Food and Agriculture Organization of the United Nations.

FAO, IFAD, UNICEF, WFP, and WHO. 2020. *The State of Food Security and Nutrition in the World 2020. Transforming food systems for affordable healthy diets*. Rome: Food and Agriculture Organization of the United Nations. <<https://doi.org/10.4060/ca9692en>>. Accessed 5 November 2020.

Fernald, L.C., P.J. Gertler, and X. Hou. 2008a. "Cash component of conditional cash transfer program is associated with higher body mass index and blood pressure in adults." *The Journal of Nutrition* 138(11): 2250–2257.

Fernald, L.C., X. Hou, and P.J. Gertler. 2008b. "Oportunidades program participation and body mass index, blood pressure, and self-reported health in Mexican adults." *Preventable Chronic Diseases* 5(3): A81.

Fiszbein, A., and N. Schady. 2009. "Conditional Cash Transfers. Reducing Present and Future Poverty." Washington, DC: World Bank. <<https://doi.org/10.1596/978-0-8213-7352-1>>. Accessed 5 November 2020.

Forde, I., T. Chandola, S. Garcia, M.G. Marmot, and O. Attanasio. 2012. "The impact of cash transfers to poor women in Colombia on BMI and obesity: prospective cohort study." *International Journal of Obesity* 36(9): 1209–1214.

GBD 2017 Diet Collaborators. 2019. "Health effects of dietary risks in 195 countries, 1990–2017: a systematic analysis for the Global Burden of Disease Study 2017." *Lancet* 393(10184): 1958–1972. <[https://doi.org/10.1016/S0140-6736\(19\)30041-8](https://doi.org/10.1016/S0140-6736(19)30041-8)>. Accessed 5 November 2020.



Photo: Juan Carlos Huayllapuma/CIFOR. Children from La Roya community, Peru, 2015 <<https://bit.ly/3koicQW>>.



Photo: World Food Programme. Food distribution to displaced children, Colombia, 2005 <<https://bit.ly/3phsVj>>.

Gertler, P. 2004. "Do conditional cash transfers improve child health? Evidence from PROGRESA's control randomized experiment." *The American Economic Review* 94(2): 336–341.

Gitter, S.R., and N. Caldes. 2010. "Crisis, food security, and conditional cash transfers in Nicaragua." *Working Paper*, No. 2010-07. Towson, MD: Towson University, Department of Economics.

Hawkes, C., M.T. Ruel, L. Salm, B. Sinclair, and F. Branca. 2019. "Double-duty actions: seizing programme and policy opportunities to address malnutrition in all its forms." *Lancet* 395 (10218): 142–155. <[https://doi.org/10.1016/S0140-6736\(19\)32506-1](https://doi.org/10.1016/S0140-6736(19)32506-1)> Accessed 5 November 2020.

Headey, D., and H. Alderman. 2019. "The Relative Caloric Prices of Healthy and Unhealthy Foods Differ Systematically across Income Levels and Continents." *The Journal of Nutrition* 149(11): 2020–2033. <<https://doi.org/10.1093/jn/nxz158>>. Accessed 5 November 2020.

HLPE. 2017. *Nutrition and food systems. A report by the High-Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security*. Rome: Food and Agriculture Organization of the United Nations.

Jaacks, L., S. Vandevijvere, A. Pan, C. McGowan, C. Wallace, F. Imamura, D. Mozaffarian, B. Swinburn, and M. Ezzati. 2019. "The obesity transition: stages of the global epidemic." *Lancet Diabetes & Endocrinology* 7(3). <<https://clck.ru/RyCgu>>. Accessed 5 November 2020.

Lagarde, M., A. Haines, and N. Palmer. 2009. "The impact of conditional cash transfers on health outcomes and use of health services in low- and middle-income countries." *Cochrane Database of Systematic Reviews*, Issue 4, No. CD008137. <<https://doi.org/10.1002/14651858.CD008137>>. Accessed 5 November 2020.

Leroy, J.L., P. Gadsden, T.G. de Cossío, and P. Gertler. 2013. "Cash and in-kind transfers lead to excess weight gain in a population of women with a high prevalence of overweight in rural Mexico." *The Journal of Nutrition* 143(3): 378–383.

Leung, C.W., S.J. Blumenthal, E.E. Hoffnagle et al. 2013. "Associations of food stamp participation with dietary quality and obesity in children." *Pediatrics* 131: 463–472.

Levasseur, P. 2019. "Can social programs break the vicious cycle between poverty and obesity? Evidence from urban Mexico." *World Development* 113: 143–156.

Lincoln, K., C. Abdou, and C. Lloyd. 2014. "Race and Socioeconomic Differences in Obesity and Depression among Black and Non-Hispanic White Americans." *Journal of Health Care for the Poor and Underserved* 25(1) February: 257–275. <<https://clck.ru/RrmeK>>. Accessed 5 November 2020.

Macours, K., N. Schady, and R. Vakis. 2012. "Cash transfers, behavioral changes, and cognitive development in early childhood." *American Economic Journal: Applied Economics* 4(2): 247–273.

Maluccio, J., and R. Flores. 2005. *Impact evaluation of a conditional cash transfer program: The Nicaraguan Red de Protección Social*. Washington, DC: International Food Policy Research Institute.

Molina Millán, T., T. Barham, K. Macours, J. Maluccio, and M. Stampini. 2019. "Long-Term Impact of Conditional Cash Transfers: Review of the Evidence." *The World Bank Research Observer* 34(1) February: 119–159. <<https://doi.org/10.1093/wbro/lky005>>. Accessed 5 November 2020.

NCD Risk Factor Collaboration. 2019. "Rising rural body-mass index is the main driver of the global obesity epidemic in adults." *Nature* 569(7755): 260–264. <<https://www.nature.com/articles/s41586-019-1171-x.pdf>>. Accessed 5 November 2020.

Popkin, B., C. Corvalan, and L. Grummer-Strawn, L. 2020. "Dynamics of the double burden of malnutrition and the changing nutrition reality." *Lancet* 395(10217): 65–74. <<https://clck.ru/RrmdJ>>. Accessed 5 November 2020.

Popkin, B., S. Du, W. Green, M. Beck, T. Algaith, C. Herbst, R. Alsukait, M. Alluhidan, N. Alazemi,

and M. Shekar. 2020. "Individuals with obesity and COVID-19: A global perspective on the epidemiology and biological relationships." *Obesity Reviews* 21(11): 1–17. <<https://doi.org/10.1111/obr.13128>>. Accessed 5 November 2020.

Ruiz-Arranz, M., B. Davis, M. Stampini, P. Winters, and S. Handa. 2002. "More calories or more diversity? An econometric evaluation of the impact of the PROGRESA and PROCAMPO transfer programs on food security in rural Mexico." *ESA Working Paper*, No. 02-09. Rome: Agricultural and Development Economics Division, Food and Agriculture Organization of the United Nations. <<http://www.fao.org/3/ae028e/ae028e00.htm>>. Accessed 5 November 2020.

Saldiva, S.R.D.M., L.F.F. Silva, and P.H.N. Saldiva. 2010. "Avaliação antropométrica e consumo alimentar em crianças menores de cinco anos residentes em um município da região do semiárido nordestino com cobertura parcial do programa bolsa família." *Revista de Nutrição* 23: 221–229.

Shekar, M., and B. Popkin (eds). 2020. "Obesity: Health and Economic Consequences of an Impending Global Challenge." *Human Development Perspectives Series*. Washington, DC: World Bank. <<https://openknowledge.worldbank.org/handle/10986/32383>>. Accessed 5 November 2020.

UNICEF. 2019. *The State of the World's Children 2019. Children, Food and Nutrition: Growing well in a changing world*. New York: United Nations Children's Fund.

WHO. 2020a. "Noncommunicable diseases. Key facts." World Health Organization website. <<https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>>. Accessed 5 November 2020.

Williams, J., L. Allen, K. Wickramasinghe, B. Mikkelsen, N. Roberts, and N. Townsend. 2018. "A systematic review of associations between non-communicable diseases and socioeconomic status within low- and lower-middle-income countries." *Journal of Global Health* 8(2): 020409. <<https://doi.org/10.7189/jogh.08.020409>>. Accessed 5 November 2020.

1. Food and Agriculture Organization of the United Nations (FAO).
2. London School of Economics and Political Science.
3. FAO.
4. See, for example, Gertler (2004), (Macours et al. 2012), Maluccio and Flores (2005), Gitter and Caldes (2010), Attanasio et al. (2005), Ruiz-Arranz et al. (2002) and Lagarde et al. (2009).
5. We define the income effect as a proportional increase in the consumption of food or other goods when incomes rise.
6. We define the substitution effect as a change in the composition of a household's consumption bundle in response to an income change.
7. In 2017 the *Programa de Apoyo Alimentario* was finally merged with Prospera, the successor to *Oportunidades*.

Social protection responses to COVID-19 in the Middle East and North Africa: the case of Egypt

Hoda El-Enbaby¹ and Clemens Breisinger²

Food subsidies and cash transfers in the Middle East and North Africa

A social protection system is most effective if, in addition to protecting poor people, it can also respond to shocks and crises in an efficient and timely manner. In a world impacted by COVID-19, social protection has once again moved to the centre of attention as an important measure to shield the most vulnerable people from adverse impacts. Across all countries in the Middle East and North Africa (MENA) region, responses to the pandemic have included lockdowns, the closure of retail outlets and restaurants, the shutdown of airports and the halting of tourism and trade, among others. Governments have been fighting the pandemic while trying to balance health and economic considerations. As economic losses can severely impact the poorest households, social assistance is crucial to protect their livelihoods. Recent analysis estimated that an additional 140 million people could fall into extreme poverty worldwide (according to the World Bank's USD1.90 per day poverty line) as a result of the pandemic if no relief actions are taken, such as fiscal stimulus or expansions of social safety nets (Laborde, Martin, and Vos 2020). Analysis from Egypt suggests that poor people living in rural areas may be hit especially hard by an expected reduction in remittances (Breisinger et al. 2020).

Therefore, now is a good time to assess the current state of social protection in the region, to shed light on the potential role of existing social protection programmes as response mechanisms to COVID-19. In this article we focus on (food) subsidies and cash transfer programmes, as the majority of MENA countries have food subsidy systems and/or cash transfers currently in place. Nearly three quarters of all countries in the region allocated part of their

budget to food and energy subsidies (Machado et al. 2018). Spending on social assistance is generally less than on subsidies in MENA, yet countries in the region also have a wide range of social assistance schemes, including cash transfers, contributory and non-contributory pensions, school feeding programmes and public works projects.

Food subsidies are considered an important tool in ensuring access to food for poor people. For instance, they are essential for ensuring a minimum caloric intake, particularly during food price fluctuations (Rahman 2016). Yet food subsidies have considerable shortcomings: even though they are usually more progressive than energy subsidies, they are mostly badly targeted and suffer from leakages. This is particularly the case since many of the subsidies were first introduced as universal. In Jordan it is estimated that only 13 per cent of the subsidised bread is consumed by the poorest households, while 12 per cent is consumed by the wealthier segments, and 25 per cent of subsidised flour goes to the production of non-subsidised bread or other bakery products (Duwayri 2016). In Egypt, the leakages were estimated at 28 per cent, when comparing the difference between quantities supplied by government agencies and quantities consumed by households (Sdralevich et al. 2014). These factors have prompted countries to consider reforming their food subsidy systems.

National cash transfer programmes are not yet commonplace in MENA. Almost all countries have programmes that target specific groups of people (such as widows, people with disabilities, elderly people, orphans etc.), but in the aftermath of the Arab Spring, governments have been trying to reform their social assistance schemes. Following the successful examples of Latin America, some countries have introduced new cash transfers programmes, including Egypt,

Tunisia and Morocco. However, most have made little progress, leading to continued inadequate support for the bottom quintile of the population, while a large number of better-off households keep benefiting from social protection programmes (Jawad 2016; Loewe 2017).

Countries have taken several measures to respond to the pandemic. The most common response in the region has been to introduce a new emergency cash transfer (IBC-SP and IPC-IG 2020). Several countries have also expanded existing cash transfer programmes, while others have topped up payments or done both, among other measures (ibid.). In Jordan, for instance, it was announced that the government had started registering households for a Bread Subsidy Cash Compensation Programme using the existing cash transfer programme forms, and had launched a temporary emergency cash transfer programme to support poor households affected by COVID-19. In-kind support is also being provided to vulnerable families through food parcels, while the universal bread subsidy was increased (Gentilini et al. 2020).

Iraq also launched an assistance package for the most vulnerable people, who have been affected by the curfew and lockdown measures imposed, and started distributing food baskets to some poor households (ibid.). Tunisia introduced a series of one-off cash transfers for households with family members in the informal sector and not covered by any social assistance programme, those covered in the social security system, those hosting elderly individuals or people with disabilities, and those fostering children without parental support. The country also made progress in launching a unified digital payment platform (ibid.).

Apart from the cash and in-kind transfers, some countries introduced other mechanisms to support the incomes

of households and businesses. In Tunisia, health insurance was maintained for all workers, pension payments were topped up, contributory unemployment benefits were announced, and businesses were allowed to waive their contributions to the social security scheme.

In Bahrain, the government decided to cover utility bills for individuals and businesses, and exempted households from paying municipality fees on their first residence. The government is also paying the salaries of private-sector employees for 3 months from the unemployment fund, and paying 50 per cent of salaries of Bahrainis in the most affected sectors for a further 3 months (ibid.). All these measures are helping mitigate the effects of the pandemic on those most vulnerable and worst affected.

In the next section we highlight Egypt's experience as a successful example of introducing a national cash transfer programme and how it is used as a response to the pandemic.

From food to cash transfers— The case of Egypt

Egypt has a long history of providing social assistance programmes, covering both cash and in-kind transfers. Currently, the most important ones are *Tamween* (a food subsidy) and *Takaful* and *Karama* (TKP, a cash transfer). *Tamween* dates back to the Second World War (Ramadan and Thomas 2011), while TKP was introduced

in 2015 as part of larger macroeconomic reforms. TKP was introduced to invest in human capital while mitigating the effects of the economic reforms that the Egyptian government was undertaking. It consists of two subprogrammes, as the name indicates; *Takaful*, which is a conditional cash transfer targeting poor households with children, and *Karama*, which is an unconditional cash transfer targeting poor elderly people, people with disabilities, and orphans.

Tamween plays an important role in ensuring food security, and has benefited from restructuring. As Figure 1 shows, the food subsidy still represents a larger share of government spending in Egypt, covering more people than the cash transfer programme. *Tamween* has had almost universal coverage since its inception. In 2011, subsidised food accounted for nearly a fifth of poor households' food expenditure, and subsidised *Baladi* bread accounted for 71 per cent of the bread they consumed. It has been estimated that a removal of food subsidies could have pushed national poverty estimates from 25.2 per cent to 34 per cent in 2010-2011 (Breisinger et al. 2013). Yet, in its previous structure—with the provision of only calorie-rich food—it was shown that the subsidy system has contributed to the prevalence of the so-called double burden of malnutrition (Ecker et al. 2016). This refers to the co-existence of under- and over-nutrition within a population, a household or even

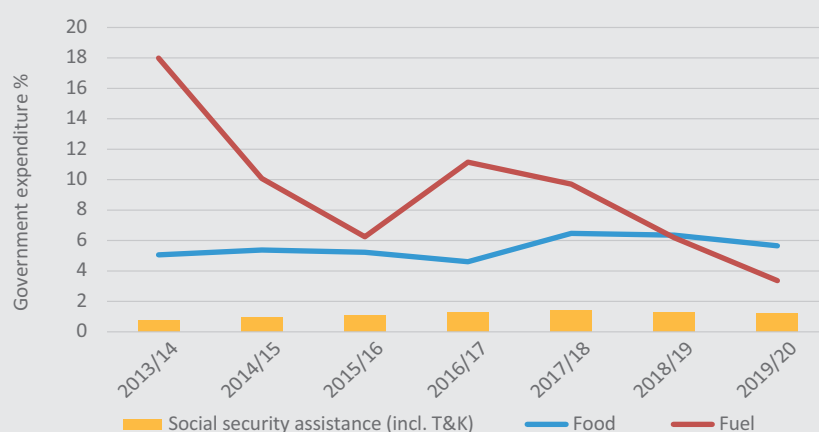
the same individual (e.g. having a stunted child who is also obese). Ecker et al. (2016) estimated that 22 per cent of children are stunted with an overweight mother, and 21 per cent of children are both stunted and overweight.

In 2019, nearly 73 million people benefited from the bread subsidy, and 64 million (with a total of 22.5 million cards) of Egypt's 100 million citizens benefited from the food ration cards (Egypt MSIT 2020). The system has undergone several reforms and innovations. It now has two components: the *Baladi* bread and the ration cards. Prior to the most recent wave of reforms, the ration card system used to cover a specific list of food items, most of which are calorie-rich, such as cooking oil, sugar, rice and pasta. Households purchase their subsidised food using a smart card, loaded with EGP50 per registered individual in the household, which can be allocated to either food or non-food items. Meanwhile, each beneficiary of the bread subsidy also receives a bread allowance of five loaves of bread per day, at EGP0.05 per loaf (Ecker et al. 2016; Kassim et al. 2018; Al-Masry Al-Youm 2019). Currently, the two subsystems are interlinked, as beneficiaries are allowed to use their unspent *Baladi* bread allowance for the consumption of a range of other products.

TKP has an increasingly important role within social protection in Egypt. With good targeting, *Takaful* has succeeded in improving household consumption and welfare. Targeting for TKP is conducted using proxy means testing, and through geographical targeting, as the programme was first launched in the poorest districts in the poorest governorates in Egypt. Beneficiary selection also includes other exclusion factors. TKP beneficiaries are also subject to recertification every 3 years, to ensure their continued eligibility. A recent study (Kurdi et al. 2018) that looked into *Takaful's* targeting, as the largest of the two subprogrammes, revealed that more than half of the applicants in the lowest income quintile are rejected, while 13 per cent of applicants are in the highest quintile, which is considered efficient relative to other social programmes.

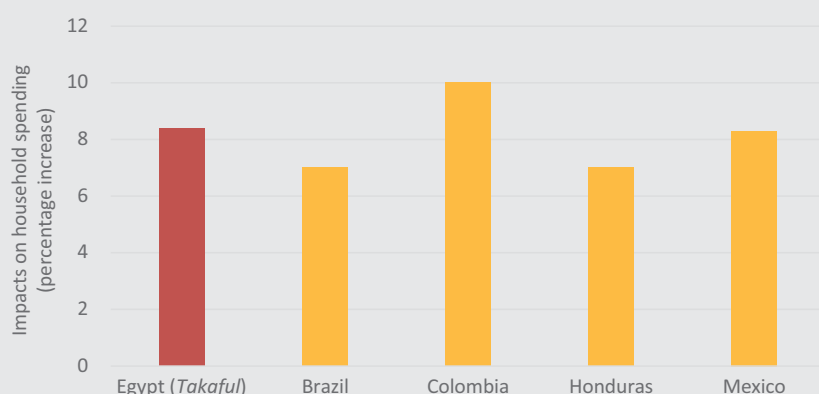
Takaful's impact on household spending is also comparable to other successful conditional cash transfer programmes

FIGURE 1: Social spending as a share of government expenditure



Source: Authors' elaboration based on Egypt Ministry of Finance's Financial Monthly Bulletins.

FIGURE 2: *Takaful's* impact on household spending compared to other conditional cash transfer programmes



Source: Breisinger et al. (2018b).

worldwide (Figure 2), with beneficiaries spending 8.4 per cent more than non-beneficiaries. *Takaful* beneficiaries consume more food—particularly meat, poultry and fruits. This indicates that the transfer has helped households diversify their diets, which may have a positive impact on their nutrition and on reducing the double burden of malnutrition. In addition, the probability of a beneficiary household living in poverty decreased by 11 per cent, for the group of beneficiary households with incomes near the poverty line (Breisinger et al. 2018a). The positive experiences from *Takaful* have likely encouraged the government to take further measures regarding the targeting of *Tamween*, such as re-certifying existing beneficiaries and introducing stronger exclusion criteria. There are also suggestions to remove 40 million beneficiaries from the system (Enterprise Press 2019), and to move households to cash transfers.

In response to COVID-19, the Egyptian government made use of its existing social protection mechanism to protect those affected. The government added 160,000 new households to TKP (Gentilini et al. 2020). Their quick and efficient incorporation resulted from the automation of registration, as the Ministry of Social Solidarity has a database for all programme applicants—including those who were not accepted. Therefore, these additional households were able to be automatically integrated into the

cash distribution system. In addition, the government is distributing a one-off payment of EGP1,500 (USD96) in three tranches to support seasonal workers who lost their income due to the pandemic (Ahran Online 2020; Gentilini et al. 2020). Those funds are expected to cover 1.9 million individuals, out of 4.4 million applicants. The Employees Emergency Fund was also activated to cover the salaries of individuals in businesses affected by the pandemic and the curfew, such as the tourism sector (Gentilini et al. 2020). Furthermore, EGP50 million has been allocated to seasonal workers, through a national fund supported by donations from Egyptian citizens (Moneim 2020). In addition, the government used its existing food subsidy network to make it obligatory for *Tamween* beneficiary households with four or fewer registered members to buy one mask per household, and to make it optional for households with three or fewer members. Having a large distribution network across the country under the management of the Ministry of Supply and Internal Trade (MSIT) made such an initiative possible (Al-Masry Al-Youm 2020).

Conclusion

The COVID-19 pandemic has served as a strong reminder of the importance of social assistance. Countries have employed a range of policies to respond to the pandemic and the resulting lockdowns. These included providing emergency payments to those affected

“*Takaful's* impact on household spending is also comparable to other successful cash transfer programmes worldwide, with beneficiaries spending 8.4 per cent more than non-beneficiaries.

by the pandemic, adding people to social assistance schemes, increasing the transfer amounts of existing programmes, distributing in-kind transfers and expanding unemployment benefits. Some of the key highlights of the response mechanisms were leveraging existing databases and infrastructure, and the increasing use of technology and digital systems (IBC-SP and IPC-IG 2020). The success in responding to such a crisis in a timely manner depends on the speed and efficiency of reaching the most vulnerable and those affected by the crisis. The pandemic should be taken as an opportunity for governments to continue to improve the targeting and design of their social assistance programmes, especially of food subsidy programmes, and to consider introducing more efficient cash transfers. ●

Ahran Online. 2020. “Egypt to pay out the first of three grants totalling EGP 1,500 for seasonal workers on Monday.” *Ahran Online*, 11 April. <<http://english.ahran.org.eg/News/367046.aspx>>. Accessed 30 October 2020.

Al-Masry Al-Youm. 2019. “Egypt’s cabinet implements automatic prices on oil products.” *Egypt Independent*, 7 July. <<https://egyptindependent.com/egypts-cabinet-implements-automatic-prices-on-oil-products/>>. Accessed 30 October 2020.

Al-Masry Al-Youm. 2020. “Selling one obligatory mask to *Tamween* beneficiaries due to in compliance with wearing masks.” *Al-Masry Al-Youm*, 1 September. <<https://www.almasryalyoum.com/news/details/2025236>>. Accessed 30 October 2020.

Breisinger, C., A. Abdelatif, M. Raouf, and M. Wiebelt. 2020. “COVID-19 and the Egyptian

“The pandemic should be taken as an opportunity for governments to continue to improve the targeting and design of their social assistance programmes, especially of food subsidy programmes, and to consider introducing more efficient cash transfers.



Photo: Mona El Azzazy/Worldfish. Family eating lunch, Egypt, 2015 <<https://clck.ru/QyQvQ>>.

economy: Estimating the impacts of expected reductions in tourism, Suez Canal revenues, and remittances." *MENA Policy Note*, No. 4. Washington, DC: International Food Policy Research Institute. <<https://doi.org/10.2499/p15738coll2.133663>>. Accessed 30 October 2020.

Breisinger, C., D. Gilligan, N. Karachiwalla, S. Kurdi, H. El-Enbaby, A. Jilani, and G. Thai. 2018a. "Impact evaluation study for Egypt's Takaful and Karama cash transfer program: Part 1: Quantitative report." *MENA RP Working Paper*, No. 14. Washington, DC: International Food Policy Research Institute. <<http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/132719>>. Accessed 30 October 2020.

Breisinger, C., H. ElDidi, H. El-Enbaby, D. Gilligan, N. Karachiwalla, Y. Kassim, S. Kurdi, A.H. Jilani, and G. Thai. 2018b. "Egypt's Takaful and Karama cash transfer program: Evaluation of program impacts and recommendations." *IFPRI Policy Brief*, October. Washington, DC: International Food Policy Research Institute. <<https://doi.org/10.2499/9780896295964>>. Accessed 30 October 2020.

Breisinger, C., P. Al-Riffai, O. Ecker, R. Abuismail, J. Waite, N. Abdelwahab, A. Zohery, H. El-Laithy, and D. Armanious. 2013. "Tackling Egypt's rising food insecurity in a time of transition." *Country Policy Note*. Washington, DC: International Food Policy Research Institute and World Food Programme.

Duwayri, M. 2016. "Rethinking food subsidy in Jordan." Arab Food and Nutrition Security Blog, IFPRI Egypt, 27 January. <<https://clck.ru/Rrn77>>. Accessed 30 October 2020.

Ecker, O., P. Al-Riffai, C. Breisinger, and R. El-Batrawy. 2016. *Nutrition and economic development: Exploring Egypt's exceptionalism and the role of food subsidies*. Washington, DC: International Food Policy Research Institute. <<http://dx.doi.org/10.2499/9780896292383>>. Accessed 30 October 2020.

Egypt Ministry of Finance (several issues). *The Financial Monthly Bulletin*. Cairo: Ministry of Finance. Accessed 30 October 2020. <<https://clck.ru/Rrn6v>>.

Egypt MSIT. 2020. "Sum of 2019 Accomplishments." Ministry of Supply and Internal Trade website, 28 January. <<http://www.msit.gov.eg/details.html?topicID=574>>. Accessed 30 October 2020.

Enterprise Press. 2019. "Supply Ministry to begin third phase of purging Egypt's subsidy rolls in April." *Enterprise Press*, 19 March. <<https://clck.ru/Rrn5d>>. Accessed 30 October 2020.

Gentilini, U., M.B.A. Almenfi, P. Dale, R.J. Palacios, H. Natarajan, G.A. Galicia Rabadan, Y. Okamura, J.D. Blomquist, M. Abels, G.C. Demarco, and I.V. Santos. 2020. "Social Protection and Jobs Responses to COVID-19: A Real-Time Review of Country Measures (September 18, 2020) (Vol. 2): Global Database on Social Protection and Jobs Responses to COVID-19 (English)." *Working Paper*, No. 153102. Washington, DC: World Bank Group. <<https://clck.ru/Rrn6G>>. Accessed 30 October 2020.

Jawad, R. 2016. *Social Protection and Social Policy Systems in the MENA Region: Emerging Trends*. New York: United Nations Department of Economic and Social Affairs. <<https://clck.ru/RrnAU>>. Accessed 30 October 2020.

Kassim, Y., M. Mahmoud, S. Kurdi, and C. Breisinger. 2018. "An agricultural policy review of Egypt: First steps towards a new strategy." *MENA RP Working Paper*, No. 11. Washington, DC and Cairo: International Food Policy Research Institute. <<http://ebrary.ifpri.org/cdm/ref/collection/p15738coll2/id/132788>>. Accessed 30 October 2020.

Kurdi, S., C. Breisinger, H. ElDidi, H. El-Enbaby, D. Gilligan, and N. Karachiwalla. 2018. "Targeting social safety nets using proxy means tests: Evidence from Egypt's Takaful and Karama program." In *Boosting growth to end hunger by 2025: The role of social protection*, edited by F.S. Wouterse and A.S. Taffesse, 135–153. Washington, DC: International Food Policy Research Institute. <https://doi.org/10.2499/9780896295988_10>. Accessed 30 October 2020.

Laborde, D., W. Martin, and R. Vos. 2020. "Poverty and food insecurity could grow dramatically as COVID-19 spreads." International Food Policy

Research Institute Blog. <<https://clck.ru/Rrn6i>>. Accessed 30 October 2020.

Loewe, M. 2017. "Pension schemes in MENA: generous—but not to the poor!" *Policy in Focus: Social protection after the Arab Spring* 14(3): 11–14. Brasília: International Policy Centre for Inclusive Growth.

Machado, A.C., C. Bilo, F.V. Soares, and R.G. Osorio. 2018. *Overview of Non-contributory Social Protection Programmes in the Middle East and North Africa (MENA) Region through a Child and Equity Lens*. Brasília and Amman: International Policy Centre for Inclusive Growth and UNICEF Middle East and North Africa Regional Office.

Moneim, D.A. 2020. "How is Egypt supporting seasonal workers amid the coronavirus crisis?" *Ahram Online*, 25 March. <<https://clck.ru/Rrn5d>>. Accessed 30 October 2020.

Rahman, A. 2016. "Universal food security program and nutritional intake: evidence from the hunger prone KBK districts in Odisha." *Food Policy* 63: 73–86.

Ramadan, R., and A. Thomas. 2011. "Evaluating the impact of reforming the food subsidy program in Egypt: a mixed demand approach." *Food Policy* 36: 638–646.

Sdravovich, C., R. Sab, Y. Zouhar, and G. Albertin. 2014. *Subsidy Reform in the Middle East and North Africa Recent Progress and Challenges Ahead*. Washington, DC: International Monetary Fund Middle East and Central Asia Department. <<http://www.imf.org/external/pubs/ft/dp/2014/1403mcd.pdf>>. Accessed 30 October 2020.

IBC-SP and IPC-IG. 2020. *Social Protection Responses to the COVID-19 crisis in the MENA/Arab States Region*. Brasília: Regional UN Issue-Based Coalition on Social Protection and International Policy Centre for Inclusive Growth. <<https://clck.ru/Rrn6N>>. Accessed 30 October 2020.

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Enhancing maternal nutrition through cash transfers: what does the evidence say?

Maja Gavrilovic, Lusajo Kajula and Juliana Nyasha Tirivayi¹

Malnutrition remains a major health and developmental challenge. Globally, an estimated one in three children under 5 years old are malnourished, 144 million of whom suffer from stunting (UNICEF, WHO, and World Bank 2020). Growth deficits in utero and poor nutrition in the first 2 years of a child's life are largely irreversible, although there is evidence that growth can catch up in childhood and adolescence² (Black et al. 2013; Fink and Rockers 2014). Women's health and nutritional status during pregnancy and lactation is a critical determinant of children's survival and growth outcomes in later life (WHO 2013). Therefore, interventions that aim to improve children's nutrition should also prioritise maternal health and nutrition.³

Cash transfers, particularly when designed as 'cash plus' interventions,⁴ are viewed as a promising tool for addressing children's malnutrition (de Groot et al. 2017). Even though cash transfers can affect women's nutritional status, maternal nutrition is often the least prioritised objective in these programmes, and maternal nutrition outcomes are overlooked in impact evaluations (Bhutta et al. 2013; WHO 2013). This article examines how maternal nutrition, and women's nutrition more broadly, is considered in the design of cash transfer programmes, detailing the various mechanisms through which they can address key determinants of maternal malnutrition, and highlighting the evidence of impact.

The links between maternal and child nutrition

The link between maternal and child nutrition is well acknowledged in research (Van der Bold, Quisumbing, and Gillespie 2013; UNICEF 2013). Mothers influence their children's growth directly in utero through their own nutritional and health status. Maternal undernutrition during pregnancy, signified by short stature, anaemia and low Body Mass Index (BMI), has been associated with adverse pregnancy

outcomes, including premature delivery, low infant birthweight and increased risks of maternal and child mortality (Bhutta et al. 2013; WHO 2013). Caregivers can also affect children's nutrition indirectly through child-care practices. Women may lack nutritional knowledge, sufficient time or decision-making power to care well for themselves and their children (WHO 2013; Debela et al. 2017).

At the same time, women's needs for energy, protein and micronutrients increase significantly during pregnancy and lactation. In many contexts, however, women consume less than their minimum requirements and enjoy poor nutritional intake, due to several reasons, including poverty, unequal intra-household food distribution and inadequate feeding and hygiene practices, resulting in micronutrient deficiencies and insufficient weight gain during pregnancy (Peterman et al. 2019). An estimated 469 million women worldwide are anaemic, and at least half of these cases are attributable to iron deficiencies, parasitic infections and inherited health disorders (WHO 2013).

The potential role of cash transfers in tackling maternal nutrition

Both unconditional and conditional cash transfer programmes have expanded rapidly in recent years as a key poverty reduction strategy across the developing world. Although they vary in coverage and design features, cash transfers generally aim to improve household poverty and food security, as well as the health, nutritional and educational status of children (Davis 2016). Some incorporate specific objectives to improve child nutrition outcomes. For example, child grant programmes typically cover the 'window of opportunity' for nutrition interventions—targeting pregnant and lactating mothers with a combination of health and nutrition services during the first 1,000 days in a child's life for maximum impact (de Groot et al. 2017).

While cash transfers often focus on children, they may include gender-

sensitive elements that are significant for women's nutritional status and broader well-being (FAO 2018). Women, in their role as caregiver, are often designated recipients of cash, and this may increase their resources for personal expenditure, such as on food or health care. Cash transfers may also use specific behavioural features, such as conditionalities, messaging or educational nudges, to induce positive changes in women's care practices. These 'cash plus' design elements aim to incentivise women's uptake of health and nutrition services (e.g. antenatal check-ups, provision of supplements) and enhance their nutritional knowledge regarding diets and feeding practices, which ultimately contribute to the improvement of maternal and children's health and nutritional status.

Ways in which cash transfers may impact maternal nutrition

Cash transfer programmes have the potential to address the multifaceted determinants of women's nutrition in three core ways.⁵ First, such programmes directly increase household income, which can be spent to buy or produce a greater quantity and better quality of food to improve household food security (Davis 2016). Providing cash to women directly may increase their bargaining power and control over household budgets, allowing them to spend funds on their own food and health expenses, and improving nutritional intake (Armand et al. 2020; Owusu-Addo, Renzaho, and Smith 2018).

Second, an increase in household purchasing power can reduce financial barriers and opportunity costs (loss of income due to health-seeking activities) that poor households face in accessing health services and improving their living conditions (WHO 2013). Cash, particularly when designed with soft conditionalities, can improve women's demand for, and uptake of, essential antenatal and postnatal care, while complementary behavioural programming may expose them to health and nutrition education and dietary advice. Household

improvements to water, sanitation and housing facilities may result in reduced labour burdens for pregnant and lactating women, improving their health and general quality of life.

Finally, improved maternal nutrition can emerge through increased resources for maternal care.⁶ By reducing household poverty-related stress, cash transfers may positively impact the mental and emotional states of caregivers and improve their agency, autonomy and status in the household, resulting in a more positive outlook on life and investments in self-care (e.g. food, health care, education, more time for leisure etc.) (Peterman et al. 2019). When a woman's food and nutrient intake is improved in combination with investments in better maternal care and health, a positive effect on her nutritional status can be expected.

Evidence of impacts of cash transfers on maternal nutrition

Global evaluations of large-scale cash transfer programmes consistently show positive effects on household food security, including large gains in food consumption and improved food diversity (de Groot et al. 2017; Hidrobo et al. 2018). While gender-specific evidence is generally very limited, a recent review of social safety nets, including cash transfers in Africa, by Peterman et al. (2019) found promising impacts on women and girls' dietary diversity and reduced stress related to food poverty. Evaluations in Ethiopia, Lesotho and Niger also confirm that cash transfers, particularly when combined with dietary advice, generally enable pregnant women to enhance their diets by diversifying food choices and eating more frequently (Carneiro et al. 2019; Owusu-Addo, Renzaho, and Smith 2018).

Nevertheless, food security gains at the household level do not necessarily translate into improved food intake⁷ and changes in long-term nutritional status⁸ for women (Peterman et al. 2019). The available studies reveal that cash transfers do not have a significant impact on nutritional biomarkers (Maffioli and Field, 2019; Carneiro et al. 2019; Peterman et al. 2019). In contexts where disease burdens and inadequate access to health services and maternal knowledge as well as unequal food allocation remain



Photo: Dominic Chavez/World Bank. Mother comforts baby, Sierra Leone, 2015 <<https://clck.ru/QyQvQ>>.

essentially unchanged, cash is unlikely to generate sizeable improvements on women's nutritional status and may lead to unintended effects, such as overweight and obesity in adult women (see Leroy et al. 2013).

In terms of health, cross-country evidence shows that cash transfers can significantly increase the use of antenatal care by pregnant women, improving their access to critical nutritional information and treatment in case of maternal anaemia and malnutrition. An evaluation of Mexico's *Oportunidades* programme found that women's access to iron supplements, received during conditional antenatal visits, led to a reduction in maternal anaemia (Bhutta et al. 2008, cited in Glassman et al. 2013). General evidence of the uptake of postnatal check-ups and institutional birth delivery is less promising (Glassman et al. 2013; Lagarde, Haines, and Palmer 2009). The inadequate supply and quality of postnatal care, excessive work burdens, and discriminatory gender norms around women's access to reproductive health and mobility are critical barriers to the uptake of these services.

However, some design features—including information delivered through either phone text messages or behaviour change communication strategies in combination with cash top-ups—appear to be effective at addressing structural obstacles that women face in accessing health care. Such design features were found to enhance the effects of cash transfers on

maternal practices related to institutional birth delivery, iron tablet consumption and handwashing practices (Maffioli and Field 2019). Finally, there is some indication that a combination of cash benefits with antenatal visits, nutritional supplements and information sessions on maternal nutrition reduced maternal mortality and morbidity rates in Bolivia, Mexico and The Philippines (de la O Campos 2015; Holmes and Jones 2013). Generally, further research and data are needed to understand the links between the effects of cash transfers on health care utilisation and changes in women's health and nutrition status.

Evidence is limited on how cash transfer programmes affect women's care practices during pregnancy and lactation, and their relationship with maternal nutrition outcomes. The bulk of evidence exists on cash transfers and women's empowerment, although results are generally mixed (Van der Bold et al. 2013).⁹ Data show that transferring cash directly to women can reduce their dependence on male income, resulting in increased access to resources and improved ability to make expenditure decisions with less interference (Owusu-Addo et al. 2018). However, in some settings where discriminatory gender norms remain pervasive, giving benefits directly to women does not necessarily increase their ability to control the use of resources, particularly for their personal needs for food, health care and education (Armand et al. 2020; Peterman et al. 2019).

On a positive note, evidence suggests that greater income security resulting from cash transfers can reduce adolescent pregnancy in certain contexts, which is encouraging considering that adolescent pregnancy has adverse effects on the health outcomes of pregnant teens and development outcomes of unborn children (Owusu-Addo et al. 2018; WHO 2013). Regarding psychosocial well-being, there is strong evidence that cash transfer programmes improve the mental health of beneficiaries and lead to reduced levels of intra-household conflict (Haushofer and Shapiro 2016; Eyal and Burns 2016; Baird, De Hoop, and Özler 2013). Studies also show that these programmes may decrease domestic violence, which has important implications for maternal and child health, pregnancy outcomes and reduced risk of stunting among children (de Groot et al. 2017).

Conclusion and research implications

Cash transfers, particularly through complementary programming, can play a significant role in addressing various determinants of maternal malnutrition. Reviewed evidence, albeit scant, shows that they can improve women's food consumption, dietary diversity, and health-seeking behaviour during pregnancy, as well as create important gains in maternal care, such as mental health, greater influence on family decision-making and reductions in early pregnancy and intimate partner violence.

Nevertheless, more research is needed, including medium- and long-term studies, to measure changes across all domains of women's nutrition and generate data at the individual level. This includes efforts to understand the ways in which improvements in underlying determinants affect women's food intake and health status, and ultimately manifest in positive anthropometric outcomes, as well as how shifts in women's decision-making capacity, nutritional knowledge and time use lead to improved nutrition outcomes for both women and their offspring.

Finally, a stand-alone cash transfer is unlikely to bring about sizeable improvements across all vital aspects of maternal nutrition to achieve sustainable impacts. The 'cash plus' components, including behaviour change communication sessions on nutrition and health, the provision of

micronutrients and health insurance, as well as linkages of cash to broader services in food security and agriculture, education and water, sanitation and hygiene practices are needed to increase the effects of material resources.

This evidence is critical to inform our understanding of how programmes can be modified to move towards gender-transformative approaches and improve nutritional outcomes for women and their children. ●

Almås, I., A. Armand, O. Attanasio, and P. Carneiro. 2018. "Measuring and changing control: Women's empowerment and targeted transfers." *The Economic Journal* 128(612): F609–F639.

Armand, A., O. Attanasio, P. Carneiro, and V. Lechene. 2020. "The Effect of Gender-Targeted Conditional Cash Transfers on Household Expenditures: Evidence from a Randomized Experiment." *The Economic Journal*. <<https://doi.org/10.1093/ej/ueaa056>>. Accessed 22 October 2020.

Baird, S., J. De Hoop, and B. Özler. 2013. "Income shocks and adolescent mental health." *Journal of Human Resources* 48(2): 370–403.

Bassett, L. 2008. *Can conditional cash transfer programs play a greater role in reducing child undernutrition? Social Protection Discussion Paper*, No. 0835. Washington, DC: World Bank.

Bhargava, A. 2016. "Protein and micronutrient intakes are associated with child growth and morbidity from infancy to adulthood in the Philippines." *The Journal of Nutrition* 146(1): 133–141.

Bhutta, Z. et al. 2013. "Evidence-based Interventions For Improvement of Maternal and Child Nutrition: What Can Be Done and At What Cost?" *Lancet* 382(9890): 452–477.

Black, R. et al. 2013. "Maternal and child undernutrition and overweight in low-income and middle-income countries." *Lancet* 382(9890): 427–451.

Carneiro, P. et al. 2019. *Nigeria Child Development Grant Program Evaluation. Endline Technical Compendium*. Oxford: Oxford Policy Management and ITAD.

Chakrabarti, A., S. Handa, L. Natali, D. Seidenfeld, and G. Temboon. 2020. "More evidence on the relationship between cash transfers and child height." *Journal of Development Effectiveness*. doi: 10.1080/19439342.2020.1731568.

Crookston, B.T. et al. 2013. "Postinfancy growth, schooling, and cognitive achievement: Young Lives." *The American Journal of Clinical Nutrition* 98(6): 1555–1563.

Davis, B. (ed.). 2016. *From Evidence to Action: The Story of Cash Transfers and Impact Evaluation in sub-Saharan Africa*. Oxford: Food and Agriculture Organization of the United Nations, United Nations Children's Fund, and Oxford

University Press. <<https://clck.ru/RronH>>. Accessed 3 October 2020.

De la O Campos, A.P. 2015. "Empowering Rural Women through Social Protection." *Rural Transformations—Technical Papers Series*, No. 2. Rome: Food and Agriculture Organization of the United Nations.

Debela, B.L., K.M. Demmler, R. Rischke, and M. Qaim. 2017. "Maternal nutrition knowledge and child nutritional outcomes in urban Kenya." *Appetite* 116: 518–526.

de Groot, R., S. Handa, L.P. Ragno, and T. Spadafora. 2020. "Child malnutrition, consumption growth, maternal care and price shocks: new evidence from Northern Ghana." *Development Studies Research* 7(1): 18–30. <<https://clck.ru/RroRt>>. Accessed 3 October 2020.

Engle, P.L., L. Lhotska, and H. Armstrong. 1997. *The care initiative: Assessment, analysis and action to improve care for nutrition*. New York: United Nations Children's Fund.

Eyal, K., and J. Burns. 2016. "Up Or Down?: Intergenerational Mental Health Transmission and Cash Transfers in South Africa." *SALDRU Working Paper*, No. 165. Rondebosch, South Africa: Southern Africa Labour and Development Research Unit, University of Cape Town.

FAO. 2015. *Nutrition and Social Protection*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2018. "Introduction to Gender-Sensitive Social Protection Programming to Combat Rural Poverty: Why Is It Important and What Does It Mean?" *Technical Guide*, No. 1. Rome: Food and Agriculture Organization of the United Nations.

Fink, G., and P.C. Rockers. 2014. "Childhood growth, schooling, and cognitive development: further evidence from the Young Lives study." *The American Journal of Clinical Nutrition* 100(1): 182–188.

Glassman, A. et al. 2013. "Impact of Conditional Cash Transfers on Maternal and Newborn Health." *Journal of Health, Population and Nutrition* 31(4) Suppl 2: S48–S66.

Haushofer, J., and J. Shapiro. 2016. "The short-term impact of unconditional cash transfers to the poor: experimental evidence from Kenya." *The Quarterly Journal of Economics* 131(4): 1973–2042.

Hidrobo, M., J. Hoddinott, N. Kumar, and M. Olivier. 2018. "Social Protection, Food Security, and Asset Formation." *World Development* 101: 88–103.

Holmes, R., and N. Jones. 2013. *Gender and social protection in the developing world: Beyond mothers and safety nets*. London: Zed Books.

Lagarde, M., A. Haines, and N. Palmer. 2009. "The impact of conditional cash transfers on health outcomes and use of health services in low and middle income countries." *Cochrane Database of Systematic Reviews*, Issue 4.

Leroy, J.L., P. Gadsden, T. González de Cossío, and P. Gertler. 2013. "Cash and in-Kind Transfers Lead to Excess Weight Gain in a Population of Women

“Cash transfers, particularly through complementary programming, can play a significant role in addressing various determinants of maternal malnutrition.



Photo: Son of Groucho. Mother and child, Yucatan, Mexico, 2014 <<https://clck.ru/RuceB>>.

with a High Prevalence of Overweight in Rural Mexico." *The Journal of Nutrition* 143(3): 378–383. <<https://doi.org/10.3945/jn.112.167627>>. Accessed 22 October 2020.

Maffioli, E.E., and E. Field. 2019. "The Impact of Maternal Cash Transfers on Child Malnutrition in Myanmar." New Haven, CT: Innovations for Policy Action.

Manley, J., S. Gitter, and V. Slavchevska. 2012. *How Effective are Cash Transfer Programmes at Improving Nutritional Status? A Rapid Evidence Assessment of Programmes' Effects on Anthropometric Outcomes*. London: EPPI-Centre, University of London. <<https://assets.publishing.service.gov.uk/media/57a08a7540f0b652dd00073a/Q33-Cash-transfers-2012Manley-rae.pdf>>. Accessed 22 October 2020.

Owusu-Addo, E., A.M.N. Renzaho, and B.J. Smith. 2018. "The impact of cash transfers on social determinants of health and health inequalities in sub-Saharan Africa: a systematic review." *Health Policy and Planning* 33(5): 675–696.

Peterman, A., N. Kumar, A. Pereira, and D.O. Gilligan. 2019. "Towards Gender Equality: A review of evidence on Social Safety Nets in Africa." *IFPRI Discussion Paper*, No. 01903. Washington, DC: International Food Policy Research Institute.

UNC. 2016. *Malawi's Social CashTransfer Programme: A Comprehensive Summary of Impacts*. Chapel Hill, NC: Centre for Social Research at the University of Malawi and UNICEF Office of Research–Innocenti.

UNICEF, WHO, and World Bank. 2020. *Levels and trends in child malnutrition: Key findings of the 2020 Edition of the Joint Child Malnutrition Estimates*. Geneva: World Health Organization. <<https://data.unicef.org/resources/jme-report-2020/>>. Accessed 22 October 2020.

Van der Bold, M., A.R. Quisumbing, and S. Gillespie. 2013. "Women's Empowerment and Nutrition An Evidence Review." *IFPRI Discussion Paper*, No. 01294. Washington, DC: International Food Policy Research Institute.

WHO. 2013. *Essential Nutrition Actions: improving maternal, newborn, infant and young child health and nutrition*. Geneva: World Health Organization.

1. UNICEF Office of Research–Innocenti, Social and Economic Policy Unit. Authors would like to thank Amber Peterman and Luisa Natali (Innocenti) for their very useful feedback on draft versions of this article.
2. Stunting leads to impaired cognitive development, poor school performance, and lower economic productivity in adulthood.
3. A focus on maternal nutrition in cash transfers is not only important for instrumental purposes of enhancing outcomes for children, but it has a broader intrinsic value of improving women's nutrition and health more broadly.
4. 'Cash plus' programmes combine cash with complementary basic services to maximise development outcomes. They are increasingly advocated as a more effective strategy than stand-alone cash transfers for addressing multifaceted drivers of malnutrition (de Groot et al. 2017).
5. We adapt UNICEF's conceptual framework of child nutrition originally developed by Engle, Lhotska and Armstrong (1997) to explore the relationship between women's nutritional determinants and cash transfers.
6. Maternal care encompasses women's physical and psychological status, labour burdens during pregnancy and lactation, and women's knowledge, preferences and beliefs related to health and nutrition.
7. Food intake is measured by food quantity (for example, meal frequency) and consumption of different food groups proposed by the WHO (de Groot et al. 2017).
8. Anthropometrics are measured by height, weight, BMI, anaemia and Mid-Upper Arm Circumference (MUAC).
9. Various indicators are used to measure women's empowerment. Here we use women's agency, involvement in decision-making, exposure to intimate partner violence and early pregnancy as direct and indirect indicators of empowerment.

Empowering women for poverty alleviation and improved nutrition outcomes: from anecdotes to evidence

Maria Antonia Tuazon¹

In 2010 the Food and Agriculture Organization of the United Nations (FAO), with funding from the Italian government, implemented an 18-month pilot project on capacity-building for food security and better nutrition in Lao People's Democratic Republic (PDR). At the time the project was carried out, chronic malnutrition in the country stood at 40 per cent, with no observable decline over the previous 10 years. It was apparent that despite the government's efforts, the country was still far from achieving its vision of "a prosperous country, free from malnutrition, food insecurity and poverty" as stated in the National Nutrition Strategy (Ministry of Public Health 2009).

In response to the nutrition challenge, a holistic and integrated approach was developed that would bring various sectors and stakeholders together in a common platform. This led to the implementation of a multisectoral, multi-stakeholder project led by the Ministry of Health with support from the Ministries of Agriculture and Education, the National Planning Commission, mass organisations such

as the Lao Women's Union and civil society organisations such as the Sustainable Agriculture and Environment Development Association (SAEDA) and the Poverty Reduction and Development Association (PORDEA). The project's objective was to implement and validate a nutrition-in-development approach (i.e. nutritional well-being of all people is a precondition for the development of societies and is a key objective of progress in human development) and to document good practices that could then be integrated into existing interventions and scaled up.

Gender disparities occur in many aspects of Laotian life, ranging from access to education, employment, capital or credit, natural and productive resources and services, to governance—all of which can have consequences not only for individuals and their families but also for society in general. In recent decades, there has been an increasing trend towards encouraging greater women's participation in economic endeavours as well as in development activities.

The focus on women stems from the recognition that gender equality matters

for achieving positive nutrition outcomes and, conversely, that improvements in nutrition matter for gender equality. As in other developing countries, women in Lao PDR were at a disadvantage when it comes to accessing assets (such as planting materials and credit) and services (such as agricultural extension) that can help improve their nutritional status and that of their families, specifically young children.

Project components

Targeting of food-insecure and nutritionally vulnerable groups

A major element of the nutrition-in-development project approach is the capacity development of various actors, specifically women and smallholder farmers, in three provinces of Lao PDR: Louangnamtha, Bolikhamxay and Sekong. The three provinces represented three different agro-ecological settings. The project sites (from province to district to villages) and beneficiaries were selected based on socio-economic, health and nutrition indicators, complemented by some practical considerations, such as the willingness of community leaders to take part in the project.

A participatory situational analysis was conducted in all project areas and was triangulated with data from key informant interviews and focus group discussions, which allowed for a greater understanding of the causal factors determining undernutrition. It was found that across the three provinces, women lacked knowledge of proper care practices for infants and young children. Most of them had limited knowledge of *posanakan*,² proper food selection and preparation and simple food-processing techniques. This was compounded by a lack of access to planting materials for the kitchen garden for which the women were responsible, while men had to look after farms or work as hired farm labourers.



Photo: Project ID GCP/LAO/016/ITA, Lao PDR, 2010.

“ Employment or livelihood activities may ease household budget constraints by providing additional resources.



Photo: Project ID GCP/LAO/016/ITA, Lao PDR, 2010.

Low and seasonal income was repeatedly mentioned as a factor affecting the lack of dietary diversity and inadequate food intake. While the women expressed an interest in engaging in livelihood activities to augment the family budget, they also stated that these activities could effectively limit the time allocated to crucial aspects of family life and childcare. Therefore, unless these competing tasks and responsibilities were reconciled, women were reluctant to participate in some of the training activities.

Training of women and smallholder farmers

Employment or livelihood activities may ease household budget constraints by providing additional resources. However, employment can also effectively limit the time that might otherwise be spent on crucial inputs to household welfare, including childcare. Based on this, most mothers would not take part in marketing activities. In addition, with the observed gender distribution of work in a typical Lao household, encouraging greater participation of women in the labour force may create a void inside homes that needs to be somehow filled by other members of the household or by market-based mechanisms.

Using a participatory training needs assessment, a strategy was put in place considering the needs of the targeted women. A series of needs-oriented training activities on various topics was launched. Training materials in

Lao and pictographs (to include illiterate women) were also developed.

Given the evidence demonstrating that horticultural interventions can promote dietary diversity and improve nutritional status, they were considered important interventions in Lao PDR's National Plan of Action for Nutrition (Ministry of Public Health 2009). Hence, training on integrated kitchen gardens targeted both men and women. Using a farmer-to-farmer approach, civil society organisations such as PORDEA and SEADA led the training on organic kitchen gardening, which promoted planting a variety of vegetables and fruits and raising small animals, such as poultry. Organic kitchen gardens are a cashless and self-sustaining way for families to feed themselves, as they plant and harvest every day once production starts.

Initially, inputs such as seeds and small animals were provided by the project. Rollover schemes were also put in place to ensure that all beneficiaries received animals, and community nurseries were established to provide a steady supply of planting materials.

The District Agricultural Extension Office also provided technical support and, together with the communities, developed seasonal food calendars, each specific to the three provinces, providing guidance on which horticultural crops to grow and wild foods such as edible insects, which can be gathered from the forests.

Simple food-processing techniques were also introduced. New recipes were developed, and existing ones were improved through the introduction of nutrient-rich ingredients (such as rice noodles enriched with green and yellow vegetables). The Lao Women's Union used indigenous, locally available, cheap but nutritious foods. For food processing, women's groups were organised according to proximity of houses and interests and to facilitate the adoption of the Trials of Improved Practices (TIPs) methodology (FAO 2011). The training built on women's pre-existing knowledge and household cooking equipment they already possessed. Additional cheap and labour-saving cooking equipment was provided to each group to teach mothers how to standardise recipes and to ensure the quality and safety of finished products. Recipes for food processing were introduced based on the seasonal food calendar developed. At the end of each training, mothers were taught simple costing procedures and to demonstrate the economic potential of the skills acquired. The promise of additional income eventually served as an incentive for more women to learn simple food processing.

Two types of training were held: training of trainers was conducted for 5 days, while training of beneficiaries lasted for up to 3 days. The trainers also serve as technical backstopping teams in the locality.

Support activities were also put in place. Women with young children were encouraged to bring their children, and some community volunteers, such as elderly women, served as carers in *ad hoc* day-care facilities that were set up while women took part in the training.

Programme outcomes and impact

A year after the project's end, the women and men who participated in the capacity development activities continued applying the knowledge gained and skills acquired. The home-based vegetable gardening and animal-rearing programme was intended for the family's own food consumption and not for commercial purposes. However, with the increased yield, women started selling the surplus produce and generating additional income.

The civil society organisations involved in the project also included these components in their community-based development activities in much the same way that the Lao Women's Union introduced the recipes and TIPs to other villages, thereby achieving the necessary multiplier effect. Convinced of the positive outcomes, the Ministry of Public Health eventually earmarked investments to sustain the gains from the programme.

One of the programme's key components was strong community engagement throughout the entire cycle. Training for both the kitchen gardens and food processing was not only demand-driven but also later gained recognition as being crucial for ensuring food security and promoting dietary diversity.

At the end of the 18-month period, the programme documented health, nutrition and economic benefits. For example, in Bolikhamxai alone, the variety of crops increased from 3 or 4 to around 16 varieties. Average vegetable production increased from around 50 kg per family to about 75 kg per family. The vast majority (85 per cent) of the households claimed to first consume the vegetables, especially for their children, and then sell the surplus. Poultry production increased, and, by the end of the programme, each family had around 25 chickens and ducks, with around 4 reserved for family consumption or for laying eggs. As a result, the average income from sales of chicken and ducks was reported at LAK515,654 (USD65) per household. Animal diseases also decreased, as reported by 68 per cent of the target households. Additional income reported ranged from LAK759,000 (USD95) to as much as LAK3,600,000 (USD450). Similar results were found in the other provinces (Ministry of Public Health 2015).

The TIPs recipes, which made use of produce from home gardens and which were originally developed for three provinces, have been introduced in other provinces, such as Luang Prabang, and other districts in Louangnamtha, Oudomxay and Bokeo (FAO 2012) and are being widely used as an alternative to ready-to-use therapeutic food (RUTF), a donated food commodity. Eventually,

the Ministry of Public Health, convinced of the positive outcomes of the project on nutrition, promoted the national adoption of the TIPs approach and recipes.

There was also the promise of sustainability. The training laid the foundation for integrating nutrition considerations and promoting women's empowerment as part of the training agenda of the LAO Women's Union. Trained mothers trained other women in their village. Many started setting up their own small businesses to sell jams, squash and morning glory chips in the village, near schools and bus stations. Due to the increased production of some vegetables, mothers also sold the surplus production to nearby restaurants and markets. Incomes derived from sales were then used to purchase cooking equipment, enabling mothers to start their own small businesses.

The lessons learned—including the knowledge products developed in this programme—served as inputs for other projects, including the integration of nutrition into Farmer Field Schools and the World Bank's Community Nutrition Project. ●

FAO. 2011. *Trials of Improved Practices (TIPs). Guiding Notes for TIPs Trainers and Implementers*. Phnom Penh, Cambodia: FAO Representative Office in Cambodia. <<http://www.fao.org/3/am868e/am868e00.pdf>>. Accessed 8 October 2020.

FAO. 2012. "Terminal Report, 2012. Lao PDR." GCP/LAO/016/ITA. Rome: Food and Agriculture Organization of the United Nations (unpublished).

Ministry of Public Health. 2009. *National Nutrition Strategy and Plan of Action for Nutrition 2010–2015*. Vientiane: Government of the Lao People's Democratic Republic. <<https://extranet.who.int/nutrition/gina/sites/default/files/LAO%202010%20National%20Nutrition%20Strategy%20and%20Plan%20of%20Action.pdf>>. Accessed 8 October 2020.

Ministry of Public Health. 2015. "Nutrition Center Report." Vientiane: Government of the Lao People's Democratic Republic (unpublished).

1. Food and Agriculture Organization of the United Nations (FAO).

2. Lao word for nutrition.

The potential of policy and programmatic synergies for impacting poverty and nutrition outcomes through schools¹

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Poverty and malnutrition heavily undermine sustainable development. Both conditions can affect each other in a cyclical manner (World Bank 2006; Development Initiatives 2017) and have multidimensional causes. Improving nutrition is critical for combating poverty, and in many cases addressing poverty can bring some improvement to nutrition outcomes. However, these relationships are complex and depend on many other factors; therefore, no isolated intervention for addressing one condition will be enough for the other, unless holistically and coherently tackling the most important causal pathways. For instance, while economic slowdowns and downturns will affect undernourishment in a population, increasing household income will not be sufficient to improve nutritional status. On the other hand, in low- and lower-middle-income countries, food-insecure households are less likely to be overweight or obese, while in upper-middle- and high-income countries, those experiencing food insecurity are more likely to be overweight or obese (FAO et al. 2019).

These issues have multiple manifestations spanning across vulnerable population groups. Schoolchildren from poor households are a vulnerable population group, and they often suffer from at least one form of malnutrition, which has adverse effects on their health, school performance and ability to learn, thus reducing their future productivity and earning potential and, as a corollary, their country's human capital (Walker et al. 2007; Bundy et al. 2017). Furthermore, in rural areas, many of these vulnerable households are headed by smallholder farmers, who in turn are some of the most affected by both poverty and malnutrition, partly because they often depend on self-provisioning, are more vulnerable to crises and shocks, and experience significant challenges in gaining market access

and eliciting benefits to support their livelihoods (HLPE 2013).

Governments around the world are increasingly implementing approaches based on complementary interventions in school policies and programmes to address some of these interconnected challenges, such as school-based food and nutrition education programmes that go beyond school settings and combine activities at the food environment level (e.g. restricting sales and marketing practices, setting nutrition standards for school food, among others) to drive behavior change. Many other examples can be found in the Food and Agriculture Organization of the United Nations (FAO) School Food and Nutrition Framework (see Box 1). One prominent approach is home-grown school feeding (HGSF), which can result not only in educational and food security gains for children but also in livelihood gains for smallholder farmers and local communities (FAO and WFP 2018).

Despite the progress with HGSF and other multicomponent school programmes, there are still key challenges that hinder their effectiveness. Particularly, synergies between food and agriculture, nutrition, health, education and social protection are not being fully realised. Impact is not usually assessed rigorously due to the cross-sectoral nature of the programmes and the complexity and methodological challenges of measuring various outcomes

for different beneficiary groups,³ and efforts are often small-scale or fragmented. In addition, policy implementation, multisectoral and multi-stakeholder collaboration mechanisms and funding are often inadequate in institutionalising effective initiatives. Greater coherence and investment at various levels are required to bring such initiatives to scale (FAO 2019a).

As such, there is increasing demand from governments for investment and context-sensitive guidance on implementing cost-effective school-based and school-linked policy and programmatic options that can enhance food security and nutrition outcomes of schoolchildren, and at the same time support local food systems and economic inclusion and development (as a strategy to support poverty reduction).

Based on scientific evidence and good practices from the field, the following policy and programmatic options have been identified as key measures to foster synergies:

- Using multi-level data analysis, modelling and visualisation to identify specific gaps and attract opportune and targeted investments for improving income generation and the supply (in terms of productivity and prevention of losses, value chain diversification and market access) and demand (in terms of main dietary needs and food practices) for nutritious school food.

BOX 1: FAO's school food and nutrition approach

As a direct response to the international call for improved nutrition and food systems, and in the context of the Second International Conference on Nutrition (ICN2) and the United Nations Decade of Action on Nutrition (2015–2025), FAO has devised a holistic approach for action in schools. The approach leverages and purposely creates complementarities between four main areas of work that are at the heart of the organisation's mandate and capacity: (i) promoting a healthy school food environment and adequate and safe school food; (ii) integrating effective food and nutrition education throughout the whole school system; (iii) stimulating inclusive procurement and value chains for school food; and (iv) creating an enabling political, legal, financial and institutional environment (FAO 2019b).

BOX 2: The example of Ethiopia

Currently, there are two ongoing HGSF programmes in Ethiopia: a pilot initiative established in 2012 and an emergency programme established in 2015. The latter was set up to supply food to selected drought-affected areas to curb drought-induced school dropouts. It currently covers 10 regions, benefiting around 1.8 million children.

Both programmes aim to support education outcomes, as well as agricultural development and income generation, through the procurement of food from local smallholder cooperatives.

Various initiatives are being implemented by the government—with the support of FAO and other partners—to strengthen these programmes. For example, a multisectoral committee (with members from the Ministry of Education, the Ministry of Agriculture, the public procurement authority, FAO and WFP, among others) was established to support the development of a conducive public procurement regulatory framework and the revision of the related legislation and regional directives (see Swensson 2019).

In the Southern Nations Nationalities and People's Region an impact evaluation is being undertaken to assess the benefits of the HGSF pilot initiative for small-scale producers accessing school market outlets. Furthermore, complementary activities to enhance the nutrition quality and safety of school meals are being carried out, including the development of nutrition recommendations for the meal menus; the adaptation of the World Food Programme's Food Quality, Hygiene and Safety Guide for the local context; and the training of school staff and health services.

Although still at a preliminary stage, these are relevant efforts towards strengthening the nexus between nutrition, agriculture and social protection through school-based programmes, to improve poverty and nutrition outcomes.

- Aligning and complementing school procurement policies with agricultural development initiatives to strengthen smallholder farmers' capacity to organise themselves into cooperatives or other forms of associations, produce and commercialise their products and meet required nutrition and food safety standards (drawing on support from concerned authorities to help ensure the safety and quality of school food along the supply chain, from production to preparation) (FAO 2018; FAO and WFP 2018).
- Assessing the public procurement regulatory framework and identifying legal instruments that can be developed, used or adapted to support school food procurement from local smallholder farmers (see the example of Ethiopia in Box 2), focusing on nutritious products (FAO and WFP 2018; Swensson 2018; 2019).
- Developing or revising nutrition guidelines and standards for school food through a multi-stakeholder process, considering production systems data, agricultural seasons, agroecological zones, local cultures, food habits and preferences, and criteria compatible with smallholder production (FAO 2019c).
- Promoting complementary measures within social protection systems—for instance, linking social protection measures such as cash transfers, which can support access to education for children by removing financial barriers to school systems (uniforms, fees etc.), with school meals, which, in turn, can address other barriers, ensuring access to food and—when available—nutrition education (Alderman 2015; Spray 2015).
- Extending effective school-based food and nutrition education to the most vulnerable communities in combination with school, home and community garden programmes (Tamiru et al. 2016; Marquis et al. 2018).
- Channelling school food service employment opportunities to the most vulnerable community members, combined with regular and well-designed nutrition and food safety training schemes (FAO and WFP 2018; FAO et al. 2019; Drake et al. 2016).



Photo: Pep Bonet/NOOR for FAO. School cooks in Guatemala.

Conclusion

To capitalise on and consolidate the options outlined in this article, we recommend developing a theory of change that highlights the evidence-based pathways to enact changes in nutrition and poverty outcomes, and outline possible risks and mitigation mechanisms. Nevertheless, key programmatic gaps still remain regarding the right mix of components for the best possible outcomes and the best way to manage trade-offs. Evidence gaps also remain on differential impacts of the various programmatic components (e.g. farmers' access to school markets with and without capacity development and provision of inputs, and home/ community/school gardens with and without nutrition education).

From a policy and legal perspective, the adoption of a holistic approach is highly recommended to ensure policy coherence and to foster institutional coordination for effective action (Cruz 2020). Coherent legislative measures can target and protect those who are most vulnerable to food insecurity by defining clear legal entitlements for guaranteeing children's access to food at school and providing poor people with effective grievance redressal mechanisms in case of violations. Furthermore, legislative obligations lay the foundations for the provision of adequate funding to support policy action to reduce poverty and malnutrition, while ensuring school-based programmatic continuity. In addition, policy and legislative frameworks should provide incentives for responsible private-sector engagement and foster multi-stakeholder mechanisms enabling the inclusive and participatory involvement of all sectors—particularly the poor, marginalised and most vulnerable people (FAO 2019d). ●

Alderman, H. 2015. *Leveraging social protection programs for improved nutrition. Summary of evidence prepared for the global forum on nutrition-sensitive social protection programs*. Washington, DC: International Bank for Reconstruction and Development and World Bank Group.

Bundy, D.A.P., N. de Silva, S. Horton, D.T. Jamison, and G.C. Patton. 2017. "Child and Adolescent Health and Development." *Disease Control Priorities* 3(8). Washington, DC: World Bank.

Development Initiatives. 2017. *Global Nutrition Report 2017: Nourishing the SDGs*. Bristol, UK: Development Initiatives.

Drake, L., A. Woolnough, C. Burbano, and D. Bundy. 2016. *Global school feeding sourcebook: lessons from 14 countries*. London: Imperial College Press.

FAO. 2018. *Evaluation of Zambia's Home Grown School Feeding program and of its combination with the Conservation Agriculture Scale-Up project*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019a. "Strengthening sector policies for better food security and nutrition results." *Education Policy Guidance Note*, No. 13. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019b. *School Food and Nutrition Framework*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019c. *Nutrition guidelines and standards for school meals: a report from 33 low and middle-income countries*. Rome: Food and Agriculture Organization of the United Nations.

FAO. 2019d. "Legal measures to eradicate rural poverty." *Legal Brief for Parliamentarians*



Photo: Benedicte Kurzen/NOOR for FAO. Woman farmer in Senegal.

in Africa, No. 7. Rome: Food and Agriculture Organization of the United Nations. <<http://www.fao.org/3/ca3524en/ca3524en.pdf>>. Accessed 30 October 2020.

FAO and WFP. 2018. "Home-Grown School Feeding. Resource Framework." *Technical Document*. Rome: Food and Agriculture Organization of the United Nations.

FAO, IFAD, UNICEF, WFP, and WHO. 2019. *The State of Food Security and Nutrition in the World 2019. Safeguarding against economic slowdowns and downturns*. Rome: Food and Agriculture Organization of the United Nations.

HLPE. 2013. *Investing in smallholder agriculture for food security. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security*. Rome: Food and Agriculture Organization of the United Nations.

Cruz, L. 2020. "Legal Guide on school food and nutrition—Legislating for a healthy school food environment." *FAO Legal Guide*, No. 2. Rome: Food and Agriculture Organization of the United Nations.

Marquis, G.S., E.K. Colecraft, R. Kanlisi, B.A. Aidam, A. Atuobi-Yeboah, C. Pinto, and R. Aryeetey. 2018. "An agriculture-nutrition intervention improved children's diet and growth in a randomized trial in Ghana." *Maternal Child Nutrition* 14 Suppl. 3.

Spray, A. 2105. *Leveraging social protection programs for improved nutrition. Report of the Global Forum on Nutrition-Sensitive Social Protection Programs*. Washington, DC: International Bank for Reconstruction and Development and World Bank Group.

Swensson, L.F.J. 2018. "Aligning policy and legal frameworks for supporting smallholder farming through public food procurement: The case of home-grown school feeding programmes." *IPC-IG Working Paper*, No. 177. Rome and Brasília, International Policy Centre for Inclusive Growth and Food and Agriculture Organization of the United Nations.

Swensson, L.F.J. 2019. "Aligning public procurement rules and practices to support

the implementation of home-grown school feeding (HGSF) initiatives: The case of Ethiopia." Rome: Food and Agriculture Organization of the United Nations.

Swensson, L.F.J., and F. Tartanac. 2020. "Public food procurement for sustainable diets and food systems: The role of the regulatory framework." *Global Food Security* 25: 10366.

Tamiru, D., A. Argaw, M. Gerbaba, A. Nigussie, G. Ayana, and T. Belachew. 2016. "Improving dietary diversity of school adolescents through school based nutrition education and home gardening in Jimma Zone: Quasi-experimental design." *Eating Behaviours* 23: 180–186.

Walker, S.P., T.D. Wachs, J. Meeks Gardner, B. Lozoff, G.A. Wasserman, E. Pollitt, and J.A. Carter. 2007. "Child development: risk factors for adverse outcomes in developing countries." *Lancet* 369(9556): 145–157.

World Bank. 2006. *Repositioning Nutrition as Central to Development: A Strategy for Large-Scale Action*. Washington, DC: International Bank for Reconstruction and Development and World Bank Group.

1. Acknowledgements are extended to the FAO School Food and Nutrition Task Force members Cristina Scarpocchi, Luisa Cruz and Dirk Schulz, as well as to Ana Ocampo and Jessica Owens for their valuable inputs.

2. Food and Agriculture Organization of the United Nations (FAO).

3. For example, while there is evidence on the effects of HGSF on child-level education and food security outcomes, the evidence base for agriculture-related changes is thinner and, until more recently, has received less attention. Nevertheless, an increasing number of studies have also been showing positive impacts of HGSF on the livelihoods of smallholder farmers and local communities. FAO is currently supporting the development of methodology guidelines to assess the impact evaluation of HGSF programmes, and developing monitoring and evaluation guidance on school food and nutrition.

The Inter-Agency Social Protection Assessment Tool for food security and nutrition: what it is, and how it was applied in Cambodia, the State of Palestine, and Paraguay

lean Russell,¹ Flavia Lorenzon,² PirroTomaso Perri,³ Raja Khalidi⁴ and Ana C. Loureiro⁵

The main objective of the Inter-Agency Social Protection Assessment Tool for food security and nutrition (ISPA-FSN Tool)⁶ is to support national and subnational governments in assessing how social protection programmes can be harnessed to improve food security and nutrition (FSN) outcomes. The Tool aims to identify gaps and areas for further improvement based on the right-to-food and the right-to-social-protection approaches. It assesses social protection programmes against seven pre-established criteria: (1) explicit FSN objectives and indicators; (2) inclusiveness and accessibility; (3) adequacy of benefits, duration, timing and predictability; (4) responsiveness; (5) inter-sectoral coherence in operational and governance structures; (6) sustainability; and (7) rights and dignity.

After its development, the ISPA-FSN Tool was piloted in Paraguay, Cambodia and the State of Palestine. The pilots gathered stakeholders from across various sectors, in particular food security, nutrition and social protection, and identified design and implementation features that have the potential to enhance the impact of social protection programmes on FSN. In doing so, it also raised awareness of food security and nutrition within the social protection sector.

Adapting the ISPA-FSN Tool for Cambodia

Background

The Council for Agricultural and Rural Development (CARD) of the Royal Government of Cambodia conducted the ISPA-FSN assessment in Cambodia jointly with the Food and Agriculture

Organization of the United Nations (FAO and the German Cooperation Agency (GIZ). After examining the prospects for applying the Tool to various social protection programmes, the Home-Grown School Feeding Programme (HGSF), a social protection programme with demonstrated effects on FSN around the world (Vargas, Swensson, and Carter 2020—see page XX of this Special Issue), was selected for piloting the tool. This choice was also supported by the Ministry of Education, Youth and Sport and the World Food Programme.

The HGSF provides children enrolled in school with food that is mostly produced and purchased locally. It links school feeding to rural development, stimulating local agricultural growth by purchasing food from local producers to supply school kitchens, thereby contributing broadly to positive FSN outcomes.

In 2017 the HGSF was implemented in four provinces of Cambodia, covering 84 primary schools and 17,218 students, of whom 8,482 were girls. The timing of the pilot supported some critical decisions that were being made about HGSF in Cambodia during the assessment and contributed to an internal review process. The programme has expanded substantially since.

Implementation

The ISPA-FSN was directed by a formal inter-ministerial Task Force established by CARD. The Task Force initially spent 2 days reviewing the guidelines and discussing the pre-established criteria. This information was augmented by interviews with key informants, a desk review and information collected in the field. The field assessment involved 18 primary schools in three provinces. Interviews

were conducted with representatives of provincial and local governments, school committees, school directors, teachers, cooks, parents, students and suppliers.

The assessment criteria were addressed using semi-structured questionnaires during face-to-face interviews, focus group discussions and other formal discussions with the broad groupings of stakeholders. Formal meetings of the Technical Working Group for Social Protection and Food Security and Nutrition and the Task Force meetings served for both consultation and validation of results at the national level. The results of the assessment were brought directly to the attention of policymakers.

The direct participation of government staff in the collection and analysis of information meant that the process had to conform to their thought processes, practices and limited availability. Recognising the trade-off between research quality and ownership and given that the Task Force was officially appointed by CARD, it was preferable to employ methods more akin to 'action research'. Action research offers the advantages of developing insights into a situation particularly for the research team itself. For effective action research, the team is selected from those directly involved in programme delivery, problem-solving and decision-making. Participants understand the results and can incorporate the information directly in their work.

Main findings

Results showed that the HGSF programme was serving as an effective mechanism for linking social protection and FSN activities in Cambodia. Areas for improvement identified included strengthening measures to address shocks affecting FSN and improving the

monitoring and evaluation mechanisms. Limited funding and capacity-building were identified as key challenges for scaling up. The sustainability of HGSP is limited by the commitment of the national budget, given the many competing needs for the education sector. However, the HGSP model is the government's and the community's preferred model for school feeding.

Follow-up

After the assessment, the government included HGSP in the framework for social assistance for Cambodia and recognised the programme as the preferred model for school feeding in the country. The government recognised the need to allocate resources to deal with shocks and scale up the programme. Greater investment in training was made possible by a grant from the US Department of Agriculture to support further development.

Adapting the ISPA-FSN Tool for the State of Palestine

Background

Following a request from the Ministry of Agriculture (MoA), in agreement with the Ministry of Social Development (MoSD), and with support from the FAO Country Office and the FAO–European Union FIRST programme,⁷ the State of Palestine was selected to pilot the implementation of the ISPA-FSN Tool in the first half of 2018.

Two programmes were analysed, which were primarily managed by the MoSD:

- **The Cash Transfer Programme:** The main poverty alleviation social protection programme in the State of Palestine, established as a part of the social protection strategy in 2010 and funded by the State of Palestine, as well as key donors such as the European Union and the World Bank. It provides cash assistance every 4 months to extremely poor and vulnerable households.
- **The Deprived Families Economic Empowerment Programme (DEEP):** A poverty alleviation scheme aimed at promoting livelihoods. It provides an inclusive approach for targeting vulnerable yet productive households and engages their members in sustainable income-generating

activities, mainly through micro- and small enterprise development, to provide employment and bridge their consumption and income poverty gaps.

Implementation

The Palestine Economic Policy Research Institute (MAS) was selected to undertake the implementation of the ISPA-FSN Tool, in close cooperation with senior officials from the MoSD and the MoA. The Tool, which lies firmly at the centre of Sustainable Development Goal (SDG) 1 (“end poverty in all its forms everywhere”) and SDG 2 (“end hunger, achieve food security and improved nutrition and promote sustainable agriculture”), saw the engagement of the National Working Groups for SDG 1 and SDG 2, with the objective of bridging these interrelated goals by promoting food security and nutrition-sensitive social protection programmes.

The implementation of the Tool in the State of Palestine was based on a consultative process, which began with a preparatory phase consisting of a desk review, familiarisation with the components of the tool by the National Working Groups, and forming the ISPA-FSN Tool Task Force. The desk review helped provide important background material that was then used in an inception workshop. This workshop proved to be an important opportunity for members of the Task Force to familiarise themselves with the methodology for the implementation of the Tool and fine-tune the related questionnaire. Through a comprehensive review of the questionnaire, the participants highlighted the need to refine some of the components.

In the data collection phase, the tools used were agreed with the Task Force, and a total of nine interviews were conducted, in addition to focus groups discussions with local organisations belonging to the FSN sector as well as beneficiaries of the two programmes. The findings were validated during a multi-stakeholder workshop, which included local and international organisations, where participants discussed the way forward.

Main findings

The ISPA-FSN process resulted in a list of recommendations. Three main findings were deemed the most relevant:

- **Policy coherence sphere:** There was a lack of inter-sectoral coherence in operational and governance structures, partially due to the absence of a formal agreement to support different institutions working together. The formalisation of the cooperation between the MoSD and the MoA was recommended.
- **Programmatic support to DEEP:** This key programme proved to bear positive results when beneficiaries happened to be working in agriculture. One suggestion was to specifically target poor farmers and those in marginalised areas, in cooperation with the MoA.
- **Programmatic interventions should be aligned** with the National Investment Plan (NIP) for Food and Nutrition Security and Sustainable Agriculture (FNSSA) 2020–2022 and the National Food and Nutrition Security Policy (NFNSP) 2030.

Follow-up

The NFNSP 2030 and the NIP for FNSSA 2020–2022, submitted by the MoA, as the institution in charge of meeting SDG 2 commitments, to the Council of Ministers in November 2019, were endorsed in October 2020. The endorsement of the NFNSP and the NIP is fully in line with the ISPA-FSN recommendations mentioned earlier.

Further, the NFNSP and the NIP foresee the establishment of a National FSN Council at the inter-ministerial level to: (a) coordinate NFNSP/NIP interventions; (b) oversee NFNSP implementation and the achievement of results; and (c) provide services (for example, the elaboration of dossiers, supported by the SDG 2 Working Group as technical secretariat) for the higher-level political deliberative body. The NIP also includes dedicated priorities and investments for nutrition-sensitive programming and socio-economic inclusion of poor and vulnerable people.

Adapting the ISPA-FSN Tool for Paraguay

Following a request from Paraguay's Ministry of Social Development (Ministerio de Desarrollo Social—MDS), the ISPA-FSN



Photo: Fani Llauradó/WorldFish Cambodia. Family having lunch, 2018 <<https://clck.ru/QtyQvQ>>.

Tool was implemented as a pilot in 2017–2018, with support from FAO. The goal was to carry out a qualitative assessment regarding the incorporation of the FSN theme into the *Tekoporā*⁸ programme, contribute to the implementation of public social policies and promote development for vulnerable families, who live primarily in rural areas.

Tekoporā is the country's largest social protection programme, covering all 17 departments and the capital, reaching 167,000 families in 248 districts, of which 28,173 families are indigenous. It is implemented by the MDS and seeks to improve the quality of life of the populations living in poverty and vulnerability through conditional cash transfers. The programme aims to fulfil the rights of these populations, especially the rights to health, education and food. In addition, the programme carries out follow-up visits to vulnerable families and communities, aiming to break the intergenerational cycle of poverty.

During the implementation of the ISPA-FSN assessment, methodological adjustments were made to the Tool, adapting it to the country's context for appropriate application at the local level, making it possible to analyse the *Tekoporā* programme's performance regarding the FSN status of its beneficiaries. This process was carried out with the participation of key actors, such as policymakers, technicians and beneficiaries.

Main findings

The results obtained through the application of the Tool highlighted the need to incorporate indicators in the programme to demonstrate the benefits of linking the objectives of social protection with those of FSN.

The use of the Tool revealed the need for a review and a redesign of the *Tekoporā* programme. Soon after it was adjusted, aspects linked to FSN and women's participation were included, and although their incorporation increases budget costs, it is hoped that effective implementation will reach the entire population living in a vulnerable situation.

According to the pilot project report, a large proportion of the MDS field team did not possess sufficient technical knowledge to tackle the themes of food and nutrition. Moreover, it identified a need to strengthen linkages with institutions working on women's empowerment, as they were not envisaged during the planning, execution and evaluation stages of the *Tekoporā* programme.

Follow-up

The ISPA-FSN Tool has helped place FSN on the public agenda. Both the Social Protection System and the National Plan for the Reduction of Poverty, recently approved by the Government of Paraguay, envision FSN as one of their crucial aspects. In light of the problems facing the country, this limited but crucial progress is extremely important for vulnerable

populations and to achieve the SDGs such that no one is left behind.

Conclusion

Social protection systems play a crucial role in helping countries achieve better FSN outcomes. However, these systems can be effective when greater efforts are made to integrate FSN considerations into social protection and agricultural interventions. In this regards, the ISPA-FSN Tool can enable countries, as illustrated by pilots in Cambodia, the State of Palestine and Paraguay, to: (i) improve coherence at the policy level between food security, nutrition and social protection policies so that they can jointly address the consumption and production needs of poor rural households; (ii) promote coordination between sectors to achieve better FSN outcomes; and (iii) develop programmatic approaches to bring together different interventions in support of improved nutrition. ●

FAO and GIZ. 2018. *Report on a pilot application of the ISPA-FSN tool for the Home-Grown School Feeding Programme in Cambodia*. Phnom Penh, Cambodia: Food and Agriculture Organization of the United Nations and Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH.

MAS. 2017. *Strategic Review of Food and Nutrition Security in Palestine 2017*. Ramallah: Palestine Economic Policy Research Institute.

Vargas, M., L. Swensson, and D. Carter. 2020. "The potential of policy and programmatic synergies for impacting poverty and nutrition outcomes through schools." *Policy in Focus Special Issue*. Brasília: International Policy Centre for Inclusive Growth.

1. Food and Agriculture Organization of the United Nations (FAO), Cambodia.
2. FAO, Egypt.
3. FAO, the State of Palestine.
4. Palestine Economic Policy Research Institute (MAS), Ramallah, the State of Palestine.
5. FAO, Paraguay.
6. The Inter-Agency Social Protection Assessment (ISPA) Initiative, established by members of the Social Protection Inter-Agency Cooperation Board (SPIAC-B), aims to develop a set of practical tools that can assist countries in improving their social protection system. These tools can be useful in analysing the strengths and weaknesses of social protection systems, and can offer options for further action. FAO leads the working group on the development of a tool aimed at assessing the contribution of social protection programmes to food security and nutrition outcomes (FSN-ISPA).
7. See: <<http://www.fao.org/europeanunion/eu-projects/first/en/>>.
8. In the Guarani language, *Tekoporā* means 'good living'.

The potential role of geographical indications in promoting healthy diets and reducing rural poverty

Bin Liu¹

Nutrition has been put high on the development agenda through a series of high-level events and initiatives, including the Second International Conference on Nutrition (ICN2) in 2014, the Sustainable Development Goals adopted by the United Nations General Assembly in 2015, and the United Nations Decade of Action on Nutrition 2016–2025.

Nutrition challenges faced worldwide are complex. Most countries are burdened by multiple forms of malnutrition: undernutrition, micronutrient deficiencies, overweight or obesity, which may co-exist within the same country, household or individual (CFS 2016). A population's nutritional status is determined by many factors, but most critically by their diet, and there is unequivocal evidence that the global malnutrition pandemic is caused by poor diets. Current diets in many parts of the world are high in unhealthy foods such as ultra-processed food rich in sugar, salt and calories and low in nutritious foods such as nuts, fruits, vegetables and legumes. These trends are driven partly by rapid urbanisation, increasing incomes and inadequate accessibility of nutritious foods. In addition, food production for such diets is pushing the Earth's environmental systems beyond safe boundaries (Willett et al. 2019).

The role of traditional foods, diets and food systems is mentioned in some important documents, such as the ICN2 Framework for Action and Rome Declaration on Nutrition (FAO and WHO 2014b; 2014a). Moreover, the High Level Panel of Experts on Food Security and Nutrition (HLPE 2017) provided a good overview of the capacity challenges of current food systems to provide nutritious foods, with chapters specifically discussing traditional food systems and diets.

Some products (mostly food products but also other types such as handicrafts, leather etc.) have a long history of production and are deeply linked to the culture, history and environment of their place of origin. They possess characteristic qualities that result from the interaction between the local people and the environment, thus becoming inseparable from many elements that belong only to that place. A number of measures have been developed to protect origin-linked, characteristic products. The most common modern-day practice is to associate the product with a geographical indication (GI), which is treated as collective intellectual property rights (see Box 1).

GI foods, being the best examples of traditional foods and successful products of traditional food systems, have great potential to contribute to improved nutrition and combat non-communicable diseases. However, nutrition has received limited attention in the GI literature. An upcoming report from the Food and Agriculture Organization of the United Nations (FAO), 'The Nutrition and Health Potential of Geographical Indication Foods', reviews the nutritional values of several GI foods from Europe, Asia and Africa—notably meats, fermented products and rice. The study finds that the contents of beneficial compounds such as polyunsaturated fatty acids, vitamins, minerals and flavonoids are

higher in the GI foods examined than in their non-GI counterparts. This can be attributed to several factors linked to the unique materials and processes used for production and the natural environment of the geographical origins.

Because of the great potential in value addition to local products, GI has been frequently suggested and applied as a tool for poverty alleviation, improving the economic well-being of producers and their communities. Among the many successful stories around the world (Box 2), recent research demonstrates that the adoption of GI has enhanced rice farmers' livelihoods and reduced rural poverty in India and Thailand, using examples of basmati and jasmine rice (Jena et al. 2015). Similar conclusions were also drawn in Albania for chestnut farmers (Bardhi and Kapaj 2017).

However, this impact should not be automatically assumed and should be approached and assessed carefully, because the GI process may contain inherent conditions that actually impede it (Bonanno, Sekine, and Feuer 2019). Among the successful factors of GI's potential in rural development, some authors emphasise exogenous factors such as market access, marketing channels, the cultural and economic role of the product in the local context and the structure of the supply chain (Pacciani et al. 2001).

BOX 1: Definition of geographical indication

A GI is a symbol used on products that have a specific geographical origin and possess qualities or a reputation that are due to that origin. To function as a GI, a symbol must identify a product as originating in a given place. In addition, the qualities, characteristics or reputation of the product should be essentially due to the place of origin. Since the qualities depend on the geographical place of production, there is a clear link between the product and its original place of production.

Source: WIPO (2020).

BOX 2: Examples of positive economic impacts of GI processes

A study analyses nine GI processes and confirms the existence of positive economic impacts, including Colombian coffee, Darjeeling tea (India), Futog cabbage (Serbia), Kona coffee (United States), Manchego cheese (Spain), Penja pepper (Cameroon), Taliouine saffron (Morocco), Tête de Moine cheese (Switzerland) and Vale dos Vinhedos wine (Brazil). The introduction of GI leads to higher prices paid to growers and processors, improved product quality, an increase in the number of permanent jobs, and resilience against price fluctuations on the international market. The major elements contributing to these impacts are:

- specific characteristics linked to the geographical place of origin of the product;
- effective collective decision-making by a strong producers' organisation;
- an effective marketing strategy at both the individual and collective levels of the GI value chain; and
- support from the public sector.

Source: FAO (2018).

Central to the effectiveness of GI development in contributing to poverty reduction is to guarantee that the increased profits of GI products flow to producers. A few studies argue that the distribution of benefits of GI products is linked to the ownership of production inputs. If some of the critical, specialised inputting factors (e.g. land, raw materials, key elements of the production technology) are owned by the producers, they may benefit more (Moschini, Menapace, and Pick 2008). As an opposite example, if it is impossible for farmers to share land ownership at all, all benefits may go to landowners (Kolady, Lesser, and Ye 2011).

Researchers have suggested the following recommendations for better leveraging GI for rural development and poverty reduction:

- Carefully choose the product to be developed. It should have domestic and/or market potential, be representative of local context and be produced sustainably.
- Promote farmers' organisations.
- Pay special attention to ensure that the benefits are distributed to producers. Choosing products that need farmers' own production inputs may be one strategy.

Nutritional advantages could be a potential appeal of some types of GI

foods, thus enhancing the profits and eventually benefiting producers, but this aspect has not been thoroughly researched. The nutritional content of local products should be determined first, and their potential contribution to healthy diets could be assessed subsequently. Nutritional quality should also be an important factor when considering candidates for GI development. ●

Bardhi, R., and I. Kapaj. 2017. "The Contribution of Geographical Indications in Sustainable Rural Development (Evidence from Northern Albania)." *European Journal of Business, Economics and Accountancy* 5(6): 71–79. <<https://clck.ru/Rrrt6>>. Accessed 30 October 2020.

Bonanno, A., K. Sekine, and H. Feuer. 2019. "Introduction [Geographical Indication and Global Agri-Food]." In *Geographical Indication and Global Agri-Food: Development and Democratization*, 1–19. London: Routledge.

CFS. 2016. "Inclusive Value Chains for Sustainable Agriculture and Scaled Up Food Security and Nutrition Outcomes—Background Document." Rome: Committee on World Food Security (CFS) 43rd Session. <<http://www.fao.org/3/a-mr587e.pdf>>. Accessed 30 October 2020.

FAO. 2018. *Strengthening Sustainable Food Systems through Geographical Indications: An Analysis of Economic Impacts*. Rome: Food and Agriculture Organization of the United Nations. <www.fao.org/3/a-i8737en.pdf>. Accessed 30 October 2020.

FAO and WHO. 2014a. *Framework for Action. Conference Outcome Document*. Rome: Food and Agriculture Organization of the United Nations. <www.fao.org/3/a-mm215e.pdf>. Accessed 30 October 2020.

FAO and WHO. 2014b. *Rome Declaration on Nutrition. Conference Outcome Document*. Rome: Food and Agriculture Organization of the United Nations. <www.fao.org/3/ml542e/ML542E.pdf>. Accessed 30 October 2020.

“Central to the effectiveness of GI development in contributing to poverty reduction is to guarantee that the increased profits of GI products flow to producers.

HLPE. 2017. "Nutrition and Food Systems. A Report by The High Level Panel of Experts on Food Security and Nutrition." *HLPE Report*, No. 12. Rome: Food and Agriculture Organization of the United Nations. <www.fao.org/3/a-i7846e.pdf>. Accessed 30 October 2020.

Jena, P.R., C. Ngokkuen, D.B. Rahut, and U. Grote. 2015. "Geographical Indication Protection and Rural Livelihoods: Insights from India and Thailand." *Asian-Pacific Economic Literature* 29(1): 174–185. <<https://doi.org/10/ghdwwq>>. Accessed 30 October 2020.

Kolady, D.E., W.H. Lesser, and C. Ye. 2011. "The Economic Effects of Geographical Indications on Developing Country Producers: A Comparison of Darjeeling and Oolong Teas." *The WIPO Journal* 2(2): 157–172. <<https://clck.ru/Rrrt6>>. Accessed 30 October 2020.

Moschini, G., L. Menapace, and D. Pick. 2008. "Geographical Indications and the Competitive Provision of Quality in Agricultural Markets." *American Journal of Agricultural Economics* 90(3): 794–812. <<https://doi.org/10/d8k5s2>>. Accessed 30 October 2020.

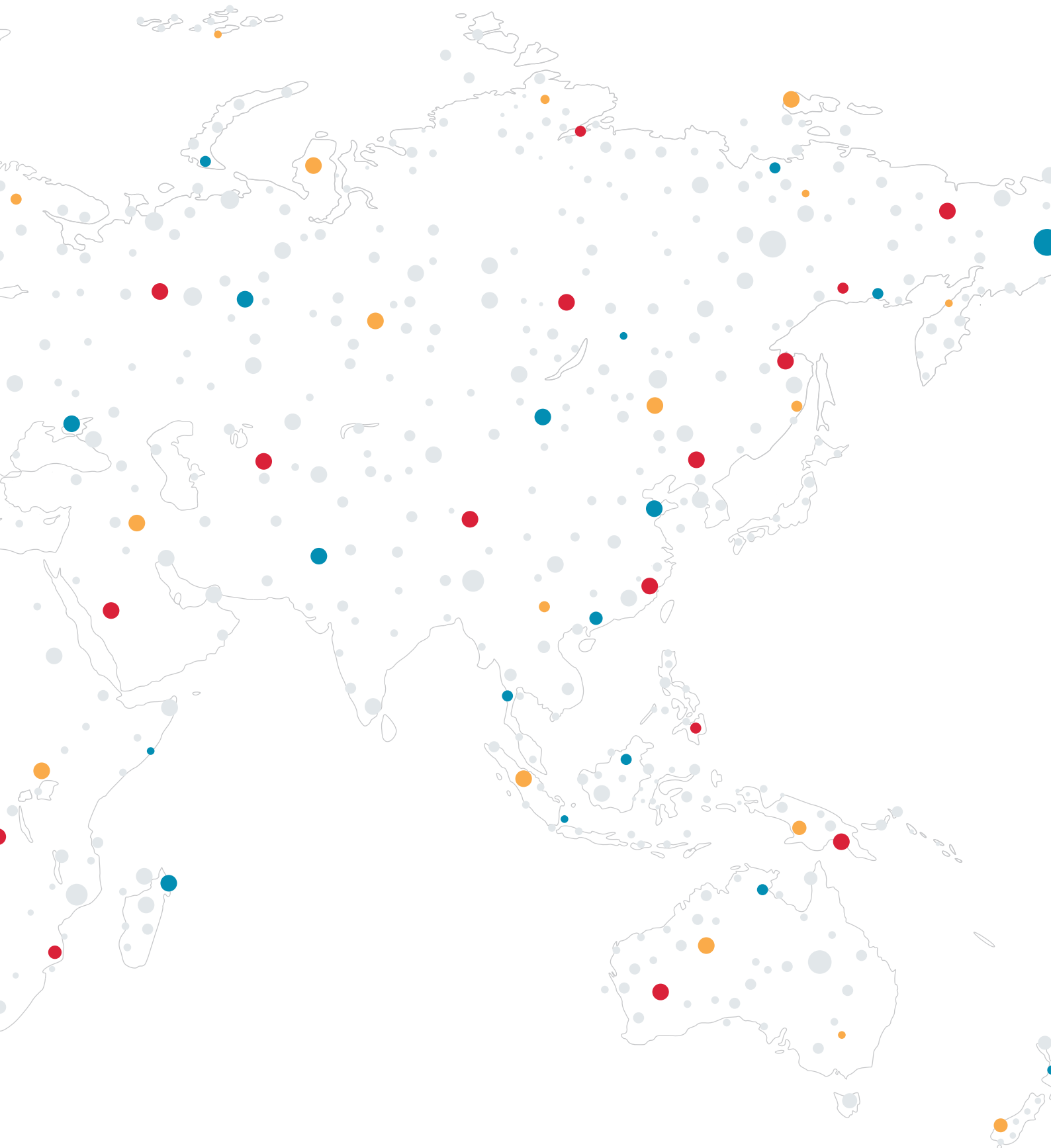
Pacciani, A., G. Belletti, A. Marescotti, and S. Scaramuzzi. 2001. "The Role of Typical Products in Fostering Rural Development and the Effects of Regulation (EEC) 2081/92." Paper presented at the 73rd Seminar of the European Association of Agricultural Economists, Ancona, Italy.

Willett, W., J. Rockström, B. Loken, M. Springmann, T. Lang, S. Vermeulen, T. Garnett et al. 2019. "Food in the Anthropocene: The EAT–Lancet Commission on Healthy Diets from Sustainable Food Systems." *Lancet* 393(10170): 447–492. <<https://doi.org/10/gft25h>>. Accessed 30 October 2020.

WIPO. 2020. "Frequently Asked Questions: Geographical Indications." World Intellectual Property Organization website. <<https://clck.ru/Rrrrp>>. Accessed 30 October 2020.

1. Food and Nutrition Division, Food and Agriculture Organization of the United Nations (FAO).





The food systems approach places equal emphasis on both the supply and demand dimensions that are critical for ensuring healthier diets and better nutrition for poor and vulnerable groups.

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Fábio Veras Soares and Ahmed Raza

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Pilar Santacoloma and Manuel Anta



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© 2020 International Policy Centre for Inclusive Growth
ISSN: 2318-8995

ISBN 978-92-5-133761-5



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CB2498EN/1/12.20



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