WORLD FOOD ASSISTANCE 2017

Taking Stock and Looking Ahead

WFP

World Food Programme

wfp.org

July 2017

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Contents

WFP Public Information Assistant, Melese Awoke, WFP food aid monitor, Maria Suleiman, and WFP beneficiary, Zemzem Mohammed Musse at Sheddar Somali Refugee Camp, Jijiga, Ethiopia.
WFP/Giulio d'Adamo

Foreword

World Food Assistance 2017 is motivated by the vision of a world without hunger. This vision is encapsulated in Sustainable Development Goal 2 to End Hunger, Achieve Food Security and Improved Nutrition, and Promote Sustainable Agriculture. The report that follows explores how food assistance contributes to that vision.

By "food assistance" we do not mean old-style "food aid" handouts, but rather the full range of instruments, activities, and platforms that empower vulnerable and food-insecure people and communities so they can regularly have access to nutritious food.

More than 100 million people currently face severe food insecurity and almost 800 million suffer under chronic hunger, so *World Food Assistance 2017* could not be more relevant or timely.

The report demonstrates the range and depth of donor-funded food assistance measures coordinated by international groups such as WFP. But the report also makes clear that most food assistance is funded, designed, and implemented not by the international community but rather by national governments and their partners, some of whom may be international agencies like WFP.

At WFP, we are constantly seeking to improve our food assistance operations through reforms and innovations such as those captured in our new Strategic Plan 2017-2021, our Country Strategic Plan Policy of 2016, and our Financial Framework Review of 2016. Together, these initiatives boost WFP's contributions to the 2030 Agenda. But more important for those who are hungry are efforts by national governments to enhance and improve food assistance in working partnerships with the private sector and civil society. Through *World Food Assistance 2017* and related efforts, WFP is committed to a process to help establish a rigorous quantitative and qualitative understanding of these national investments so they can be most effectively leveraged toward Zero Hunger.

Effective food assistance is a core part of a long-term solution to hunger. But the most effective approaches are meaningless in a world torn apart by manmade conflict. Achieving Zero Hunger by 2030 will be impossible if the conflicts that plague areas with food insecurity continue. The humanitarian case for intensified efforts to resolve the political differences that spur conflict and generate vulnerability, food insecurity, and unfathomable suffering and destitution could not be clearer.

There should be no need for further justification. But recognizing that such justification may be useful in some contexts, *World Food Assistance 2017* provides estimations of the enormous economic benefits that would come if food assistance delivered by WFP alone were to be more accessible to those who need it. The broad food assistance-related peace and stability "dividend" would be much greater. Knowing this, we must rise more urgently to the challenge of peace-making and not allow the horrendous suffering of our brothers and sisters in so many places to continue to play out before our eyes.

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Acknowledgements

World Food Assistance 2017: Taking Stock and Looking Ahead was developed under the guidance of Ramiro Lopes da Silva, Assistant Executive Director of WFP's Operations Services Department, and Stanlake Samkange, Director of the Policy and Programme Division. Steven Were Omamo, Deputy Director of the Policy and Programme Division and Coordinator of Food Systems Strategy, Policy and Support provided technical and organizational oversight and leadership. Chelsea Graham, Lorenzo Motta, and Anna Twomlow comprised the analytical and drafting team.

Several WFP colleagues provided valuable input, support, and encouragement including: Denise Brown, Arif Husain, Bing Zhao, Tahir Nour, Brenda Barton, Parvathy Ramaswami, Chris Toe, Isabelle Mballa, Francois Buratto, Jon Brause, Marian Yun, Leighla Bowers, Fabio Giraldi, Sergio Regi, Monica Oberle, Filippo Pongelli, Nadine Lombardo, Paola Difrancesco, Caterina Kireeva, Dorte Jessen, Scott Ronchini, Yvonne Forsen, Giacomo Re, David Ryckembusch, Sarah Laughton, Jan Cherlet and Mattia Pinzone.

External reviewers of an earlier draft included: Shenggen Fan of the International Food Policy Research Institute, Joachim von Braun of the Center for Development Research at Bonn University, Jikun Huang of Peking University, Titus Awokuse of Michigan State University, Herbert Ainembabazi of the Alliance for a Green Revolution in Africa, Maximo Torero of the World Bank, Sheryl Hendriks of the University of Pretoria, Marshall Matz of Olsson Frank Weeda Terman Matz LLC, David Stevenson of the Howard G. Buffett Foundation, and Elon Gilbert, Georgia Shaver, Cheryl Richardson and Klaus von Grebmer.

Special thanks go to Corinne Woods, WFP's Director of Communications, for her strong support throughout; to the text editor, Mark Menhinick, and graphic designer, Anastasia Nadali, for their great skill and persistence; to Dana Sacchetti for helping to shape the messages and outreach strategy; and to Cristina Ascone for patiently managing the design, layout, and printing process.

Mary and her son, newly arrived South Sudanese refugees, share a bowl of porridge made with WFP Corn Soya Blend at the hot meals point in Imvepi Refugee Settlement, Northern Uganda. The settlement is the ninth to open in the West Nile region of Uganda.
WFP/Claire Nevill

Summary

World Food Assistance 2017 considers the measures pursued by national, regional and international actors to respond to, prepare for and prevent food crises. In 2017 alone such crises have made 108 million people worldwide severely food-insecure. The aim is to build understanding about: i) the scale, reach and composition of these "food assistance" measures over time and space; ii) current and emerging challenges and opportunities facing food assistance providers and participants; and iii) options for policy-making and investment to boost the relevance and impact of food assistance under the 2030 Agenda for Sustainable Development.

The report addresses three questions:

1. What are the levels, trends and patterns of food assistance at global, regional and national levels?
2. What are the primary challenges facing design and delivery of food assistance in different contexts of food system functioning?
3. How are these challenges being met? That is, what kinds of innovations in food assistance are being developed to address the challenges?

Three themes shape the narrative: i) food assistance at the intersection of humanitarian action and hunger reduction; ii) food assistance in food systems – the complex networks involved in producing food, transforming it and ensuring that it reaches hungry people; and iii) food assistance as a public endeavour built on many layers of commercial activity.

The portrayal and examination of food assistance thus extends well beyond the traditional view of "food aid" as transfers of food commodities to hungry people. Several other interventions that prevent hunger and address its many drivers and implications are considered. Food assistance seeks not only to save lives and protect livelihoods in the short term through in-kind food transfers, cash-based transfers, local and regional procurement of food and food system services, technical assistance measures and numerous support activities – it also seeks to combat the root causes of hunger in the medium term and long term.

Due to data limitations the report focuses on internationally facilitated food assistance as captured in the portfolio of the United Nations World Food Programme (WFP). Although WFP is the world's largest humanitarian agency addressing hunger and nutrition, its coverage of the food assistance landscape is far from complete. Nevertheless, its coverage is global and comprehensive. An examination of key features of WFP's food assistance portfolio is therefore highly informative of most relevant issues and contexts, and in cases where WFP is a dominant actor its view of the food assistance landscape is likely to be definitive. Future analysis will draw on data and information from other sources, especially national programmes whose collective investments in food assistance as defined here are likely to exceed those of international actors by several orders of magnitude.

Taking stock

The food assistance sector comprises a demand-side – as reflected in the geographic distribution and intensity of alternative forms of food assistance – and a supply side – as reflected in expenditures on food assistance at different times and in different locations.

DEMAND FOR FOOD ASSISTANCE

The huge demand for food assistance spans numerous contexts of national income, food system performance, hunger and stability.

- Four groupings of countries emerge in terms of stability and performance: i) relatively stable high performers; ii) relatively stable low performers; iii) relatively unstable high performers; and iv) relatively unstable low performers.
- Food assistance operations are concentrated in unstable low performers, most of which are low-income countries, but with significant representation of middle-income countries.
- Several countries with relatively high performing food systems – all of them middle-income countries – also express significant demand for food assistance as a result of relatively high hunger burdens or relatively high instability.

- Some countries registering relatively strong aggregate food system performance have significant pockets of vulnerability and food insecurity, and hence also express strong demand for food assistance.
- Relatively stable countries with relatively high performing food systems express relatively more demand for technical assistance and supportive activities such as early warning and preparedness, whereas in relatively unstable countries with low performing food systems demand is greatest for broad-based measures to avert starvation and protect livelihoods; unconditional food and cash transfers are examples. Measures such as conditional food and cash transfers that address the effects of underlying flaws in food systems are relevant in most contexts.

SUPPLY OF FOOD ASSISTANCE

Food assistance expenditure data covering the period from 2009 to 2015 reveal a multi-dimensional, multi-layered and dynamic supply side.

- Direct food assistance expenditures increased from US$2.2 billion to US$5.3 billion.
- All categories of assistance registered significant increases, but not uniformly so.
- The share of in-kind food transfers declined from 54 percent to less than 40 percent, but in-kind food remains the dominant transfer modality for food assistance in all regions except Latin America and the Caribbean.
- The share of cash-based transfers surged from less than 1 percent to 20 percent, but the increases were uneven in different regions: they were fastest in Latin America and the Caribbean, slowest in East and Central Africa.
- The share of expenditures devoted to technical assistance also rose significantly from less than 1 percent to 8 percent, but much more slowly than cash-based transfers.
- The share devoted to logistics also fell from 32 percent to 20 percent, reflecting the contraction in the share of in-kind food transfers; but this capacity remains vital everywhere because it supports food assistance and the entire humanitarian system.
- Two regions facing huge and complex food emergencies – East and Central Africa and the Middle East and North Africa – account for 70 percent of food assistance expenditures.
- Expenditures on food assistance in middle-income countries are greater than those in the much more numerous low-income countries; they are increasing most quickly in upper middle-income countries.

CHALLENGES FACING FOOD ASSISTANCE

The major challenges facing the demand and supply of food assistance spring from three sources:

i. those driven by **global and national trends and disruptions** that define the location and intensity of demand for food assistance – climate change, conflict, urbanization and inequality;

ii. those inherent in **humanitarian action** that define the volume and quality of food assistance delivered as a humanitarian response – financing, access, protection and security; and

iii. those emanating from the **structure and functioning of food systems** that define the volume and quality of food assistance delivered as a response to hunger and food insecurity – the "bad year" or "lean season" problem, the "last mile" problem and the "good year" problem.

SOLUTIONS AND INNOVATIONS BASED ON FOOD ASSISTANCE

Food assistance agencies have developed several solutions to these challenges.

Examples of solutions and innovations to address challenges related to climate change, conflict, urbanization and inequality include: i) disaster preparedness and early-warning systems; ii) sovereign risk pooling and risk-transfer instruments; iii) bundled risk-management instruments that enhance resilience; iv) leveraged cash-based transfers to refugees, internally-displaced populations and host

communities in conflict situations; v) food security assessment and monitoring tools adapted to urban contexts; and vi) gender-transformative frameworks and interventions.

Examples of solutions and innovations to address challenges linked to humanitarian financing, humanitarian access, protection and insecurity include: i) pre-financing and pre-positioning of food stocks; ii) project lending and cash flow financing; iii) digital innovations in assessment, sampling, targeting, delivery and monitoring and evaluation in remote areas; iv) development of capacities for awareness-raising, advocacy and negotiation; v) high-altitude airdrops; and vi) complaint and feedback mechanisms.

Examples of solutions and innovations to address challenges linked to bad-year, lean-season, last-mile and good-year problems in food systems include: i) nutrition-specific and nutrition-sensitive interventions; ii) food safety nets within shock-responsive social protection systems; iii) purchase-based support platforms for smallholder farmers and small-scale and medium-scale agrifood enterprises; iv) physical, technical and organizational upgrading of food retailers; v) digital innovations in value-chain integration and tracking; vi) physical, technical and organizational upgrading of public food reserves; vii) physical, technical and organizational upgrading of food supply chain infrastructure and services; viii) food safety and quality standards and regulations; and ix) market and trade policy reform.

Looking ahead

With 20 million people facing starvation in 2017 and several million more suffering extreme food insecurity as a result of conflict, adverse weather and other disruptions, the outlook for global food security is bleak. The need for effective food assistance is stronger now than at any time in recent history.

PAYOFFS RELATED TO FOOD ASSISTANCE

Three categories of significant payoffs (or dividends) could be generated if hunger and vulnerability solutions based on food assistance were enhanced and scaled up. Considering only WFP operations in 2015, these payoffs could include:

i. An "access" payoff of US$997 million per year – the cost savings to WFP that would be generated by improved humanitarian access in the 20 countries facing the most severe food crisis;

ii. A "stability" payoff of US$2.24 billion per year – the cost savings to WFP that would be generated by enhanced stability in the large number of countries in WFP's portfolio with high levels of instability, for example by allowing scarce public resources to be devoted to more productive uses, or by opening scope for scaling up successful innovations within the private sector; and

iii. A "performance" payoff of US$439 million per year – representing the cost savings to WFP related to improvements in the performance of the food systems in which it delivers food assistance.

Progress in all areas could yield a total payoff of US$3.45 billion per year. Access payoffs would be concentrated in the Middle East and North Africa and East and Central Africa, but stability and performance payoffs would be more evenly distributed around the world.

The food security sector accounts for 40 percent of international humanitarian assistance expenditures. An estimated total "multi-sectoral" humanitarian payoff of US$8.62 billion per year could be realized.

PRIORITIES AND RECOMMENDATIONS FOR CAPTURING THE PAYOFFS

These estimated payoffs linked to WFP's food assistance portfolio represent a small fraction of the potential food assistance-related payoffs available to the world. To fully capture those payoffs, leaders and policy-makers must achieve the imperatives below.

i. **Stabilize, increase and unleash humanitarian funding.** The growing funding gap must be bridged, partly by traditional donors and also from new sources such as middle-income countries and the private sector. Earmarking of funding and fragmented, duplicative and excessive reporting requirements must be reconsidered.

ii. **Confront the political drivers of vulnerability and hunger.** Fair, open and sustained dialogue and negotiation between warring parties based on accountability and adherence to international humanitarian law are fundamental to the creation of sustained openings to deliver food assistance and alleviate suffering.

iii. **Invest in high-quality food assistance programmes.** The attributes of effective food assistance include: i) rigorous assessment and targeting; ii) a diversity of instruments; iii) safe, high-quality nutritious food; iv) gender equality; v) digital innovations; vi) market-friendly interventions, with adaptation to urban settings where relevant; vii) accountability to beneficiary populations; and viii) strong government leadership.

iv. **Enhance national capacities and South-South cooperation.** National capacities are growing but they are still inadequate. In the era of the Sustainable Development Goals the primary focus of food assistance must be on: i) achieving interlinked and transformative results at the country level; and ii) promoting national ownership and South-South exchanges, with strong engagement by the private sector.

v. **Fill vast data gaps.** A comprehensive and verifiable global database on levels and flows of food assistance resources and activities is urgently needed. Subnational and disaggregated data that expose the different kinds and levels of vulnerabilities, risks, needs, assets, decisions and transactions of the hungry poor must be included.

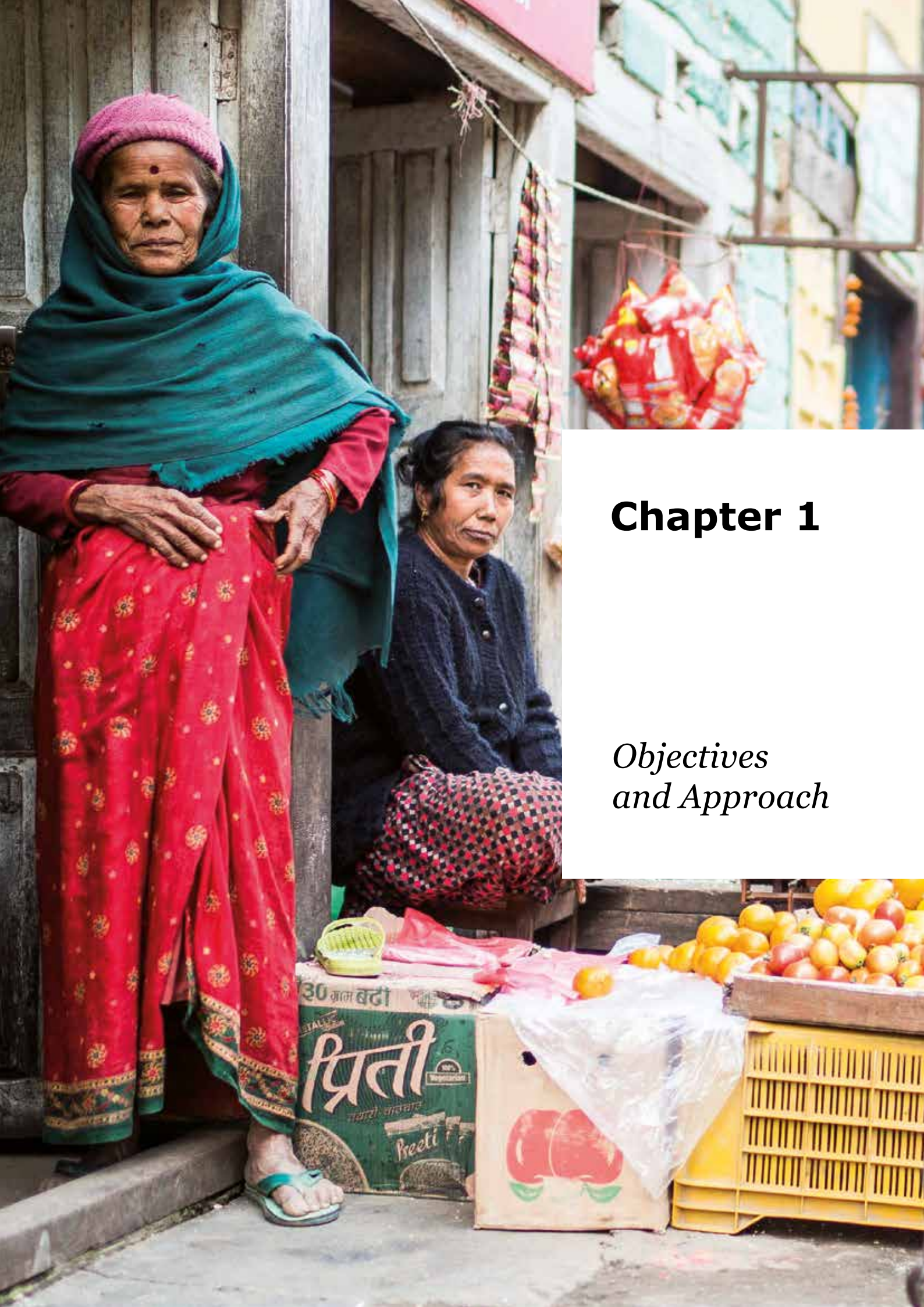
vi. **Frame and implement a practical research agenda.** Two related thrusts are required: a programme-level thrust to improve the design and implementation of specific food assistance interventions, and a system-level thrust to develop solutions based on food assistance that address systemic problems and optimize the performance of food systems.

The purely humanitarian justification for purposeful negotiation and action under each of these areas is crystal clear. The economic rationale is powerful. The political imperative is absolute.

The stock-taking captured in this report confirms food assistance as the quintessential sectoral approach to humanitarian assistance. It seeks to prevent or mitigate the effects of acute hunger, and it affirms food assistance as a major pillar of sector-level investments in sustainable development by national governments and their partners. A significant message of the report is that sector-specific assistance is not inimical to effective and efficient humanitarian action. On the contrary, it saves lives and livelihoods when it is aligned with national strategies, policies and investments that enhance resilience, and is hence vital to sustainable development.

The road ahead for food assistance is fraught with challenges. But it is also evident that there will be an ever-increasing number of potent opportunities for leverage and enhanced partnerships such as those related to digital technologies, expanding markets and steadily increasing local awareness and leadership.

Food assistance is a fundamental building block of humanitarian action. It is also an essential component of interventions that address vulnerability and food insecurity in transition and development contexts, boost the resilience and performance of food systems, and thereby help countries to achieve Zero Hunger under Agenda 2030.



Chapter 1

Objectives and Approach

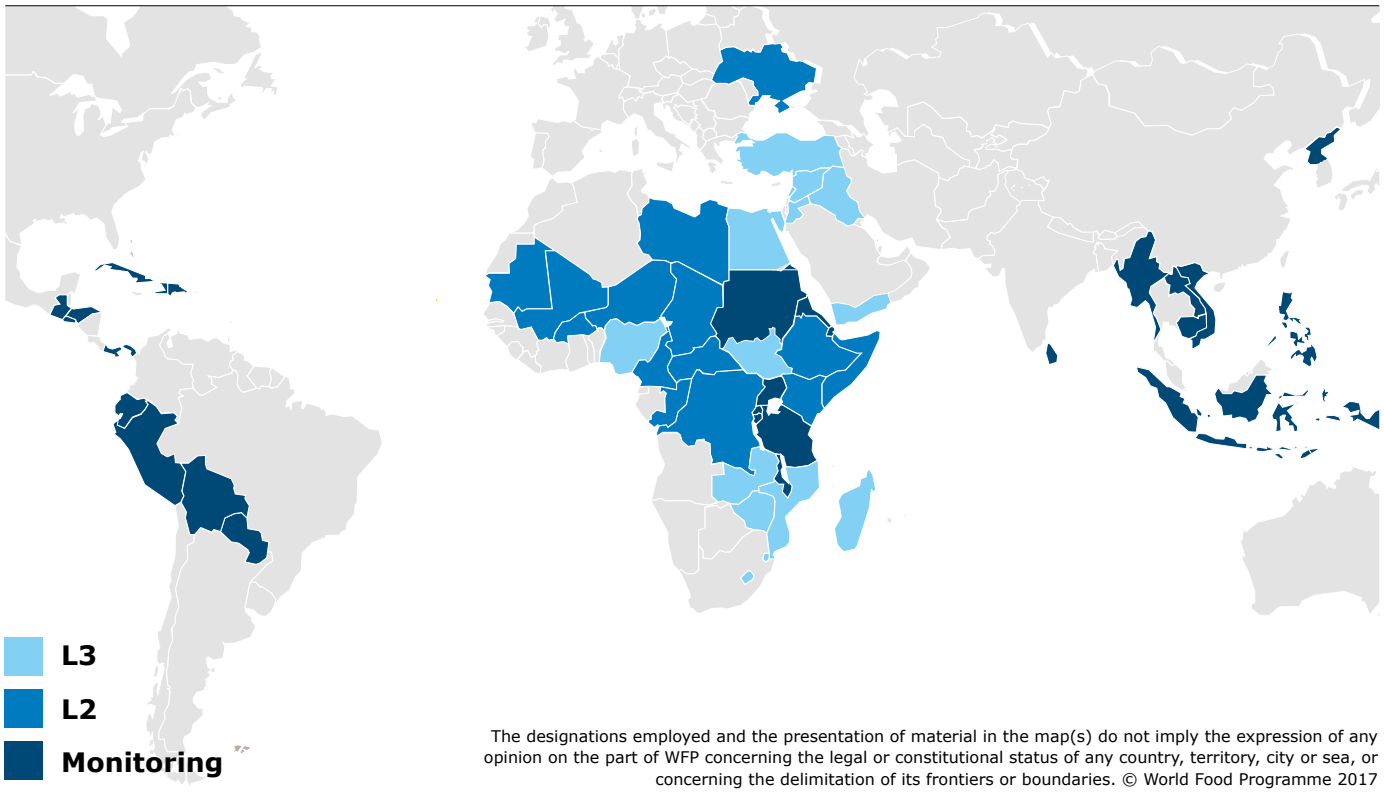
Local people in Jalbirey road,
Dhaday Khola, Nepal.
WFP/Samir Jung Thapa

The outlook for food security in many parts of the world is grave (see Figure 1.1): 108 million people face severe food insecurity, including 65.3 million who are forcibly displaced (FEWS, 2017; FSIN, 2017; UNHCR, 2017; WFP, 2017). The full impact on hunger and food insecurity of the civil war in South Sudan is clear: in February 2017 famine was declared in Unity State in the north, where 100,000 people face starvation and many are thought to have died from hunger already.[i] Severe food insecurity is affecting 4.9 million South Sudanese, many of whom will be permanently scarred (FSIN, 2017). Vulnerable people in other countries affected by conflict countries are similarly at risk: 14.1 million in Yemen, 8.1 million in Nigeria, 300,000 in Cameroon, 300,000 in Niger, 1 million in Chad, 7 million in the Syrian Arab Republic and surrounding countries, and 1.5 million in Iraq. And there are more (FSIN, 2017; Box 1.1).

Drought in the Horn of Africa is affecting a huge area covering parts of Ethiopia, Kenya, Madagascar, Somalia and Tanzania. Severe food insecurity is affecting 9.7 million people in Ethiopia and 1.3 million in Kenya; in Somalia, 2.9 million people face severe food insecurity until at least mid-2017 (see Box 1.1). Southern Africa, Botswana, Lesotho, Malawi, Namibia, Swaziland and Zimbabwe have not yet fully recovered from drought caused by El Niño, which pushed 39 million people into severe food insecurity.

This report considers measures put in place by national, regional and international actors to respond to, prepare for and prevent such food emergencies. World Food Assistance (WOFA) 2017 aims to build understanding about the scale, reach and composition of these "food assistance" measures over time and space, and about current and emerging challenges and opportunities facing food assistance providers and participants.

FIGURE 1.1: Food emergencies in 2017



Map Reference: WLD_Current_Emergencies_A4L	Data sources: WFP, UNGIWG, GAUL	**www.wfp.org** Prepared by: **HQ, OSEP GIS**	Date Created: **27 February 2017** Contact: **hq.gis@wfp.org**

Source: WFP.
Note: L3 = country facing a Level 3 emergency requiring mobilization of global augmentation of regional and country-level response capability; L2 = country facing a Level 2 emergency requiring regional augmentation of country-level response capability; M = country under active monitoring to ascertain need to declare an emergency.

BOX 1.1: The four countries facing famine in 2017

As this report goes to print, 20 million people in Nigeria, Somalia, South Sudan and Yemen face catastrophe.

Civil war in South Sudan broke out in December 2013 between competing factions in the ruling regime. Since then, the world's newest country has faced escalating food prices and increased food insecurity. In February 2017 pockets of famine were declared in Leer and Mayendit counties in the former Unity State. Economic collapse and inflation have made food inaccessible, and there are reports of rebel and government forces blocking deliveries of food assistance. Although large-scale and timely humanitarian interventions have averted famine in South Sudan over the last three years, providing humanitarian assistance has become increasingly challenging because of conflict and consequent lack of access. Currently 100,000 people face death from starvation, and it is likely that many have already died. Another 4.9 million are severely food-insecure.

Famine-like conditions have been reported in parts of north-eastern Nigeria, where poverty has been exacerbated by conflict between Nigerian military forces and Boko Haram militants. The conflict is driving millions of people to flee, and has left the area without food or functioning markets. Some areas are completely shut off from humanitarian assistance, leaving hundreds of thousands of people to suffer. The situation is compounded by major funding shortfalls. Severe food insecurity threatens 5.1 million people.

In Yemen, civil war is ongoing between a coalition backing the ruling regime against rebel troops and their allies. The conflict, which includes aerial bombing, is devastating households and driving up food prices; at the same time a trade blockade is preventing food and supplies from reaching civilians. Where food is available, it generally cannot be afforded. Humanitarian assistance is urgently needed by 80 percent of the population, and 7.3 million people are experiencing severe food insecurity; malnutrition is particularly affecting vulnerable groups in Yemen such as the disabled and the elderly.

Drought in Somalia has ruined the agricultural economy and left many people without food and water. Three consecutive seasons of poor rainfall have devastated livelihoods, particularly for herders, and driven tens of thousands of people from their homes to search for food. Some areas of the country are inaccessible because of conflict, leaving many people beyond the reach of humanitarian aid. Half of the Somali population need aid, and 2.9 million people face severe food insecurity.

Preventing or rolling back famine requires timely and sustained food and nutrition support, and healthcare, water and sanitation interventions. But funding shortages and access challenges limit the humanitarian response. WFP alone requires US$2 billion for Nigeria, Somalia, South Sudan and Yemen this year. Even with the necessary funding, however, limited humanitarian access in many cases prevents agencies from reaching people in need.

Of the 20 million people at risk of famine, WFP plans to target 17 million in 2017 should resources be available. In March, WFP assisted 3.6 million people in Yemen, 2 million in South Sudan, 1.67 million in Somalia and 1.2 million in north-eastern Nigeria. Without sufficient funding and access, people will starve to death or perish from related sickness as their immune systems become compromised. Some of the most vulnerable people are already dying from starvation and disease.

Sources: Various news outlets and UN websites in 2016 and 2017 (Al Jazeera, BBC, the Guardian, Human Rights Watch, the Independent, New York Times, Reuters, United Nations).

The intended audience for WOFA comprises three groups. First and most important are national policy-makers responsible for food and nutrition security. As custodians of this vital pillar of humanitarian response and long-term social and economic development, they should find data and analysis that build understanding of the actual and potential role of food assistance as a fundamental building block of humanitarian assistance. Rather than define an SDG related specifically to humanitarian action, heads of state and government decided to place risk and vulnerability at the core of Agenda 2030. They viewed management of crisis-related risks and reduction of vulnerability as both humanitarian imperatives for saving lives more effectively and development necessities for ensuring progress toward achieving the SDGs. That perspective is central to the "New Way of Working" for the humanitarian community (OCHA, 2017). It is also integral to WOFA. National food and nutrition security policy-makers should therefore also gain greater appreciation of the role and potential of food assistance as a key component of a range of interventions that can address vulnerability and food insecurity in transition and development contexts and thereby help their countries achieve Zero Hunger under the 2030 Agenda.

The second target group for WOFA are food assistance practitioners working in humanitarian and development agencies. WOFA 2017 provides a first view of food assistance as a sector with a demand side and a supply side that interact in logical ways. Food assistance practitioners should therefore gain a deeper appreciation of the challenges and opportunities affecting their agencies and for the food assistance sector.

The third target group comprises scholars, analysts, and students of humanitarian affairs, food and nutrition security, food systems and sustainable development. WOFA 2017 presents fresh data and analyses that shed light on several on-going debates while also motivating and informing new directions of research and inquiry.

WOFA 2017 provides a relatively broad and cross-cutting treatment of food assistance. This comes at a cost. First, a large number of technical, organizational, policy and political issues influencing food assistance are introduced, but not fully analysed. Second, as explained in detail below, major data limitations mean that the focus here is on internationally coordinated food assistance financed primarily by donor countries. Such assistance is massive by any standard, but preliminary evidence suggests that food assistance financed by host countries is not only significant but probably several orders of magnitude larger than internationally financed food assistance.

Take school meals programmes. In 2016, the UN World Food Programme (WFP), the largest humanitarian organization addressing the challenges of global hunger and nutrition, reached 16.4 million children in 76,500 schools in 60 countries. But in addition to this direct assistance, in 51 of the 60 countries WFP also provided technical assistance and enhanced the capacities of government school meals programmes. In nine other countries WFP provided technical assistance only. This indirect assistance for national efforts supported programmes that reached a further 45 million schoolchildren (WFP, 2016). Globally, 368 million children benefit from daily school meals.

Future analysis will be theme-based, featuring in-depth treatments of the issues, challenges and opportunities facing leaders and practitioners under these clearly-defined themes. These efforts will include analyses of both international and national data on food assistance measures, aiming for a truly comprehensive view of the food assistance sector at global, regional and national levels.

Food assistance defined

Food assistance is incompletely understood. A widely-held definition has yet to be embraced. A complete definition has several elements (see Table 1.1). Specifically, food assistance refers to multi-faceted efforts to empower vulnerable and food-insecure people and communities to access nutritious food. It seeks not only to save lives and livelihoods in the short term, but also to combat the root causes of hunger over the medium to long term. Food assistance thus includes instruments such as in-kind food, vouchers or cash transfers used to assure recipients' access to food of a given quantity, quality, or value. Focused food procurement is a powerful demand-side tool. These instruments are applied in specific programmes to pursue a range of objectives for targeted populations, such as nutrition improvement, increased agricultural productivity, gender equality, education expansion, or disaster risk reduction. Several supporting activities and institutional platforms such as early warning and preparedness systems, vulnerability analyses, needs assessments, supply-chain arrangements, information and communication technology, and capacity development of national agencies, safety nets and social-protection systems define the effectiveness and sustainability of these instruments relative to the objectives. Food assistance thus extends beyond the traditional view of "food aid" as transfers of food commodities to hungry people to include development and implementation of interventions to prevent hunger and address its myriad drivers and implications.

TABLE 1.1: Food assistance defined

FOOD ASSISTANCE		
Instruments	**Objectives and programmes**	**Supportive activities and platforms**

• In-kind food transfers
• Vouchers
• Cash transfers – physical and digital
• Cash vouchers – physical and digital
• Food purchases
	• Improved nutrition
	  - General food distribution
	  - Targeted supplementary feeding
	• Increased resilience
	  - Food and cash for assets, skills and public works
	• Increased agricultural productivity
	  - Pro-smallholder food procurement
	• Increased school enrolment
	  - School meals
	  - Take-home rations
	• Gender equality
	  - Food and cash for training and education
	• Disaster risk reduction
	  - Food and cash for assets and public works
		• Early warning and preparedness systems
		• Vulnerability analyses and mapping
		• Needs assessments
		• Supply chain arrangements
		• Information and communication technology
		• Capacity development for national agencies, safety nets and social-protection systems

Source: Adapted from Omamo et al. (2010).

Although WOFA is the first global report on food assistance as defined above, it is not the first report to present a global view of "food aid" in the narrower sense of food transfers. Until 2012, WFP facilitated the preparation and publication of the then annual Food Aid Flows Report, which provided an overview of trends in food aid deliveries by donor governments, non-governmental organizations (NGOs) and WFP on the basis of data in the International Food Aid Information System (INTERFAIS) database. The INTERFAIS database was not updated after 2016 due to lack of funding and insufficient interest from participating governments and organizations. Although limited by its narrow focus on tonnage of food delivered, the Food Aid Flows Report was the only source of regular, reliable and comprehensive information about food aid categories, modes of delivery, sales and terms of delivery (WFP, 2013a). Similar issues are examined in WOFA, but the analysis extends well beyond in-kind food aid.

The treatment of food assistance in WOFA differs significantly from that in the annual Global Humanitarian Assistance Report, which seeks to build understanding of financing for humanitarian crises: it asks how much humanitarian assistance there is, where it comes from, where it is spent and how it gets there. The Global Humanitarian Assistance Report shows that food assistance is the largest sector on which humanitarian resources are spent, second only to multi-sectoral funding, and that WFP is the primary channel through which those resources are delivered to needy populations (GHAR, 2016). But a full appreciation of the scale and depth of the food assistance sector and of the role and potential of food assistance in enhancing the performance of food systems is missing from the Global Humanitarian Assistance Report and from the Food Aid Flows Report. WOFA seeks to fill this knowledge gap.

WOFA 2017 is a valuable complement to the 2017 Global Report on Food Crisis, a collaboration of WFP, the European Union, the Food and Agriculture Organization of the United Nations (FAO), the United Nations Children's Fund (UNICEF), FEWS, the *Comité Permanent Inter-Etats de Lutte contre la Sécheresse dans le Sahel,* the Inter-Governmental Authority on Development and the Central American Integration System (FSIN, 2017). As its title suggests, the Global Report on Food Crisis focuses on current food emergencies with a view to raising awareness about their origins and dimensions, and, most important, the resources required to address them. WOFA 2017 has been developed and released with current food emergencies fully in view – but the focus is not on the food emergencies themselves. Rather, the emphasis is on actions and investments undertaken to prepare for and respond to such emergencies and on enhancing understanding of the rationale and effects of food assistance in different contexts and the associated challenges.

In choosing to develop and publish this report about food assistance as defined above, WFP is saying three things: i) food assistance is important in its own right, and it matters enormously to the world; ii) what happens in the world has a profound effect on food assistance – not only the need for it, but also its nature, coverage and intended and unintended impacts; and iii) as a response to the flaws, disruptions and breakages in food systems that force large numbers of people into vulnerability and hunger, food assistance constitutes the widest and longest bridge connecting humanitarian and development contexts. Food assistance is therefore an accessible, high-potential tool for leveraging global and national investments to achieve Zero Hunger. WOFA 2017 will have succeeded if the rationale and implications of these three motivations are clear and convincing.

Food assistance and the 2030 Agenda for Sustainable Development

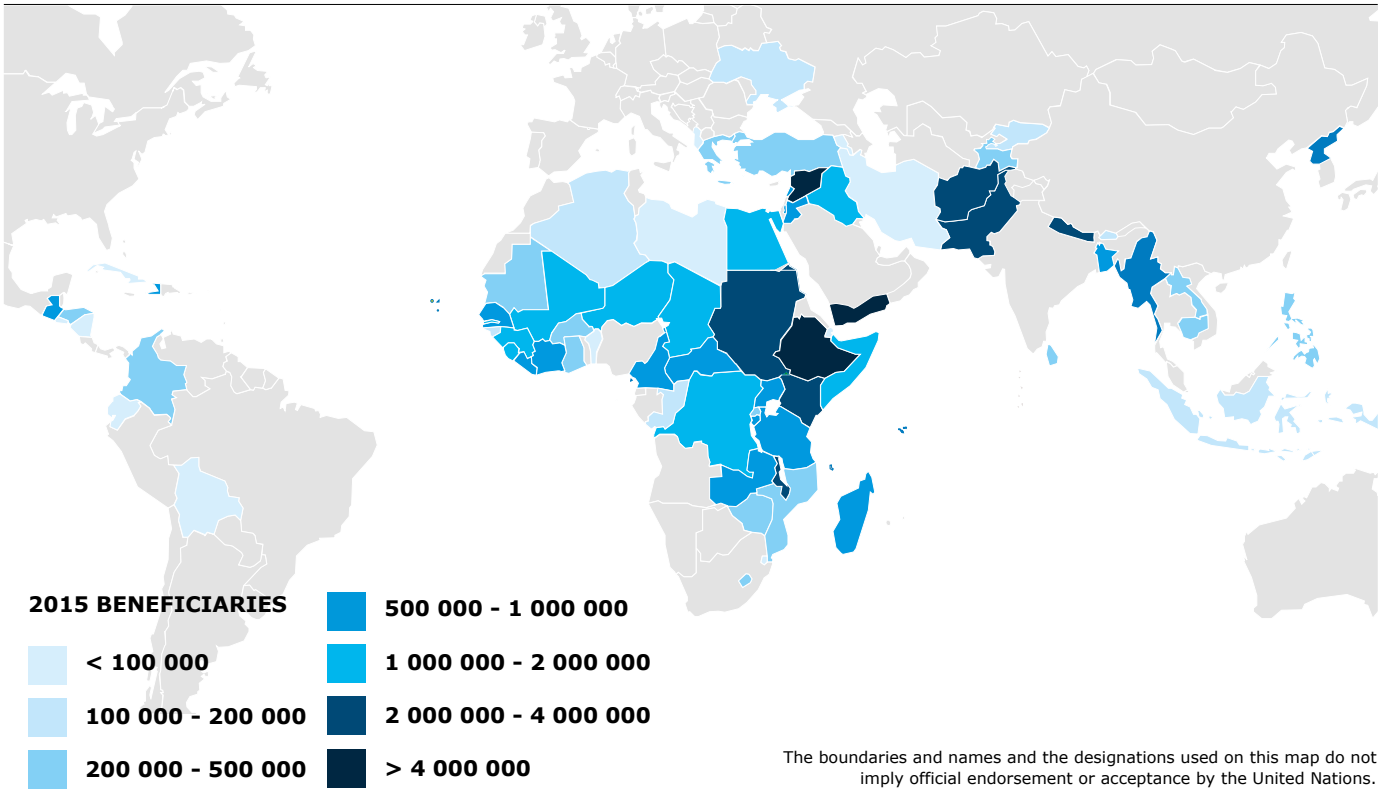
This is an opportune moment to launch a global report on food assistance. The 2030 Agenda for Sustainable Development envisions a world without poverty, hunger or inequality where those in greatest need are reached first and nobody is left behind. The 17 SDGs recognize the inter-connectedness of the social, economic and environmental dimensions of sustainable development. Conflict, climate change and economic shocks create disruption and displacement that complicate this agenda. Some countries, communities and people are more vulnerable than others. "Leaving

no one behind" means reaching everybody, with special attention to people living in extreme poverty, those facing discrimination, refugees, internally displaced people (IDPs), those living with disabilities, the infirm, the elderly as well as people affected by complex and protracted humanitarian crises, extreme violence and other disasters.

In 2015 humanitarian crises directly affected 125 million people: 65 million people were displaced of whom 21 million were refugees, 41 million were internally displaced and 3 million were asylum seekers (UNHCR, 2016b). The indirect impacts of dislocation and dispersion on such a vast scale reverberate strongly across the globe. Sustainable development cannot be achieved without effective humanitarian action. Nevertheless, rather than craft a Sustainable Development Goal related specifically to humanitarian action, heads of state and government chose instead to deliberately place risk and vulnerability at the core of the 2030 Agenda. Managing crisis-related risks and reducing vulnerability are as much a humanitarian imperative as they are a development necessity. They are vital to the SDGs, and particularly SDG 2 to end hunger.

In 2014 and 2015, WFP and its partners provided direct food assistance for an average 76 million people per year in 82 countries (see Figure 1.2).[ii] The scale of WFP's food assistance operations confirms that the basic needs of vulnerable populations caught in the grip of poverty, violence and environmental degradation are expressed through food systems that determine and reflect that vulnerability. "Leaving no one behind" means focusing not only on people dependent on food assistance, but also on how well food systems perform for vulnerable people. The imperative is to design and implement food assistance modalities that will enhance the performance of food systems that serve vulnerable groups.

FIGURE 1.2: Coverage of WFP food assistance in 2015



The boundaries and names and the designations used on this map do not imply official endorsement or acceptance by the United Nations.

Map Reference: WLD_Beneficiaries_2015_A2L

Data sources: WFP SPRs, UNGIWG, GAUL

www.wfp.org

Prepared by: **OSEP GIS**

Date Created: **20 March 2017**

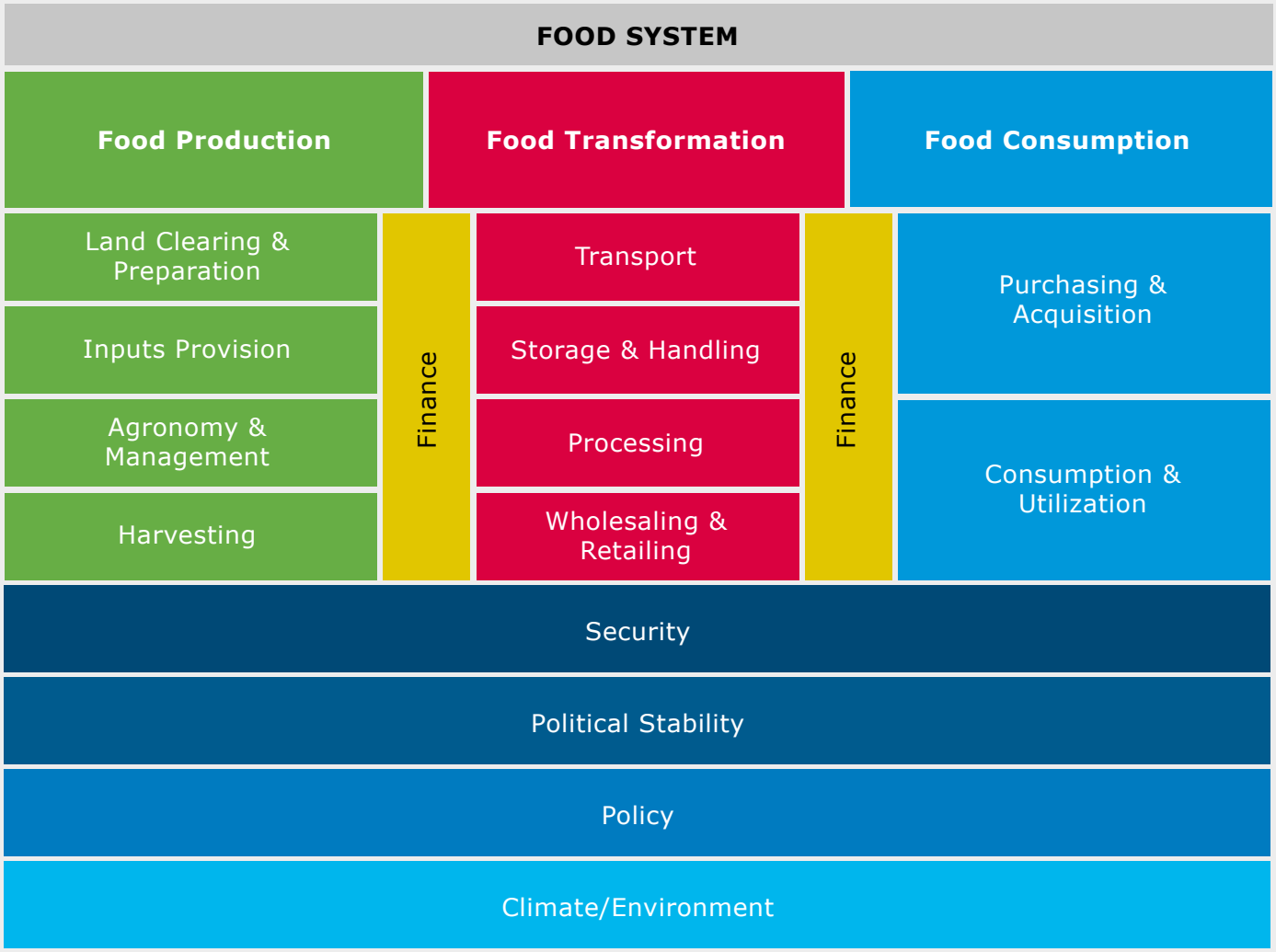
Contact: **hq.gis@wfp.org**

Women cleaning rice at a World Food Program Purchase for Progress (P4P) project site in Nyankpala in the Northern Region of Ghana.
WFP/Nyani Quarmyne

Food assistance and food systems

Food systems are interlocking networks of relationships that encompass the entire range of functions and activities involved in the production, processing, marketing, consumption and disposal of goods that originate from agriculture, forestry or fisheries. This includes inputs required and outputs generated at each step (FAO, 2013).[iii] The scope of food systems thus extends beyond physical food commodities, to cover the goods and services required for food production, transformation, and consumption – i.e., agronomy, farm input provision, product harvesting, transport, storage and handling, processing, finance, wholesaling and retailing. Security, political, policy and climatic factors impact the cost and efficacy of these functions and activities (see Figure 1.3).

FIGURE 1.3: A functional and contextual view of food systems



Source: WFP.

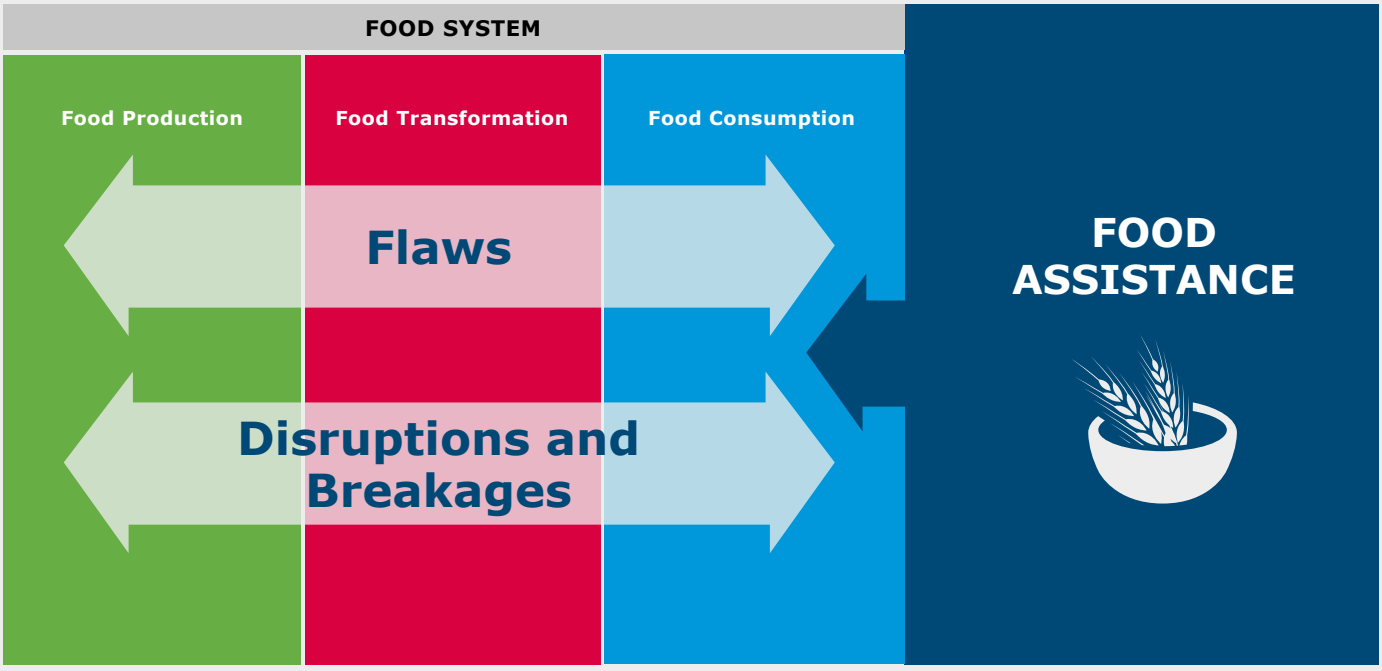
The historical record is clear that food systems lie at the core of economic growth and reductions in poverty, in both the long run and short run. In the long run, the food system is a key element of structural transformation, which historically has been the only sustainable pathway out of poverty. In the short run, the food system is the arena in which many of the poor make their living, and also where they face risks to their livelihoods – such as those linked to volatile food prices (Timmer, 2014).

High-performing food systems support the core functions of food production, transformation and consumption efficiently and predictably, providing adequate incentives and returns to food producers, processors, and distributors, and delivering sufficient, safe, and nutritious food to well-informed consumers, with minimum delay and spoilage (Annan et al., 2016; FAO, 2013; Jones, 1961; IFPRI, 2016; Reardon and Timmer, 2012). Such systems also support inclusive structural transformation of economies, boosting productivity and incentives that cut poverty and hunger (Johnston and Kilby, 1975; Timmer et al., 1983; Timmer, 2014). Food system failures spring from inadequate levels and qualities of basic food system services, and also from security, political economy, policy and climatic and environmental factors that buffet the broader socio-economic structures and processes within which food systems are embedded.

Food systems everywhere are changing rapidly and deeply as a result of such forces as urbanization, income growth, and shifting consumer diets brought on by broader structural transformation of economies (Reardon and Timmer, 2012; Timmer, 2014). Supply chain integration, capital-intensive technology change, expanded use of digital devices and internet access, and emergence and enforcement of private standards of quality and safety are spurring and accentuating the upheavals (Reardon, 2015; Reardon and Timmer, 2012 and 2014; Tschirley et al., 2015a and 2015b).

Many of these rapidly transforming food systems are disrupted by a range of covariate shocks, including those linked to climate change and economic globalization; a significant number are broken as a result of civil strife and conflict, sometimes for long periods (see Figure 1.4). Disrupted and broken food

FIGURE 1.4: Food assistance as a response to flawed, disrupted or broken food systems



Source: WFP.

systems are early indicators of humanitarian crises: they often define the extent and seriousness of the crises, and signal the locations and sizes of populations requiring assistance. In extreme cases food systems are arenas of oppression, subjugation and abuse of power.

But even in relatively stable contexts, food systems can be deeply flawed. Communication, transport, and storage facilities are often poor. Commercial markets – which are the primary channels through which most food is accessed – can be sharply segmented, and access to them is restricted for large numbers of people lacking purchasing power. Highly unequal social capital and financial bargaining power is often brought to exchanges between buyers and sellers. The spectre of 800 million chronically hungry people across the globe suggests that food systems do not always function in ways that meet the needs of a major segment of society.

Hunger looms large in the fragile contexts in which food assistance agencies are called to act; women and children are particularly at risk. Between 2010 and 2012 there were 366 million people living in fragile situations, of whom 129 million were undernourished – 19 percent of the global total of food-insecure people (FAO/IFAD/WFP, 2015). For food assistance agencies, therefore, food systems and food system performance are not abstract notions. The implications for hunger of failing food systems are real and urgent.

Questions

Subject to contextual specificities, food systems can register relatively high performance even in unstable contexts (WFP, 2017b). Almost by definition food assistance has to be delivered in just such unstable contexts. The potential for tailoring or leveraging food assistance to enhance food system performance would appear to be significant. Seizing that potential requires a full quantitative and qualitative understanding of food assistance. To that end WOFA 2017 addresses three questions:

1. What are the levels, trends and patterns of food assistance at the global, regional and national levels?
2. What are the primary challenges facing design and delivery of food assistance in different contexts of food system functioning?
3. How are these challenges being met? That is, what kinds of innovations in food assistance are being applied to address the challenges?

Analytical approach

The analytical approach to answering these questions combines quantitative and qualitative depictions of major aspects of food assistance. The quantitative dimension is incomplete because there are significant information gaps. As noted earlier, the INTERFAIS database is no longer being updated, and since it only tracked food aid deliveries – and that only in metric tons – it never included information that would yield a full picture of food assistance as defined here. Even an up-to-date INTERFAIS database would be inadequate.

A proper treatment of the quantitative dimension of food assistance would require inputs of data from a range of humanitarian and development actors employing a common framework for understanding demand for and supply of food assistance. WFP is committed to facilitating such a platform for data collection, management and analysis. The quantitative view of demand and supply of food assistance is built on data describing the food assistance activities of WFP and its partners between 2009 and 2016. This is supplemented by evidence and analysis from published and grey literature sources, and also draws from WFP's portfolio of partnerships, programmes and capacities.

WFP is the world's largest humanitarian agency addressing hunger and nutrition, but its coverage of the food assistance landscape is far from complete. Its coverage is nevertheless global in scope and comprehensive in breadth. An examination of key features of WFP's food assistance portfolio is therefore highly informative of the issues and contexts involved; in cases where WFP is the dominant actor, its view is likely to be definitive.

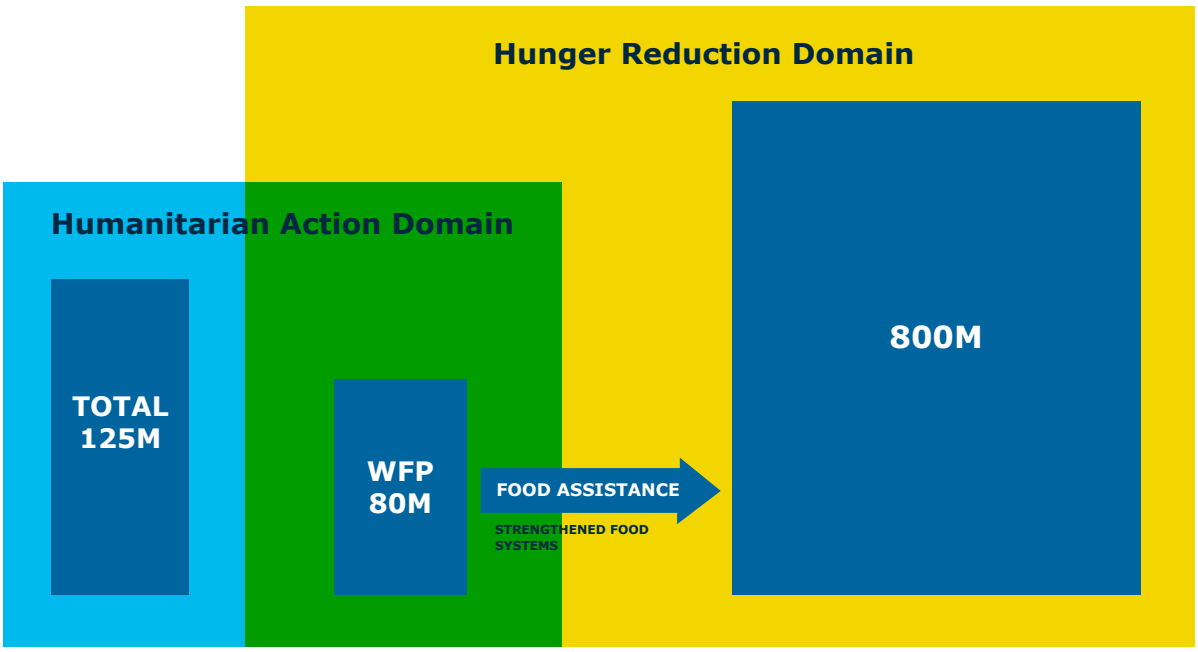
An essential theme of WOFA is the unique position and role of food assistance at the intersection of the domains of humanitarian action and hunger reduction (see Figure 1.5). Food assistance looms large in the humanitarian action domain, where the focus is on

the food and nutrition needs of vulnerable and food-insecure populations. Food assistance agencies are hence keenly aware of the full implications of broken, disrupted and flawed food systems. Measures to overcome, correct or attenuate the impacts of these food-system problems constitute the bridge between humanitarian action and hunger reduction.

WFP's portfolio of preparedness, emergency response, recovery and development interventions signals the nature and potential of bridging investments (see Figure 1.6). There is considerable evidence to support the concept of food assistance as a bridging investment at the interface of humanitarian action and hunger reduction.

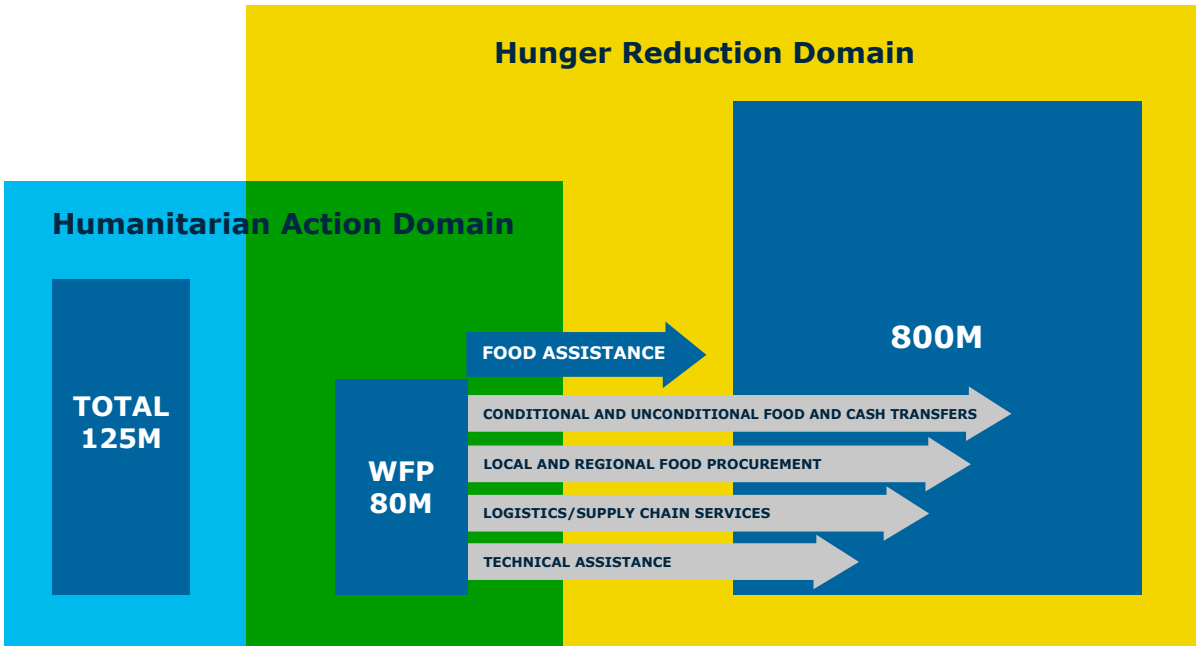
Conditional and unconditional transfers of food and/or cash have been shown to increase food and nutrition security at the household and community levels and to generate positive impacts in dimensions such as: i) increased quantity and quality of food consumed (Gilligan et al., 2009); ii) increased school enrolment (Hoddinott et al., 2008); iii) improved nutrition (Alderman and Bundy, 2012); iv) increased resilience (Gilligan and Hodinott, 2007); and v) improved gender equality (Gelli, 2015; Kazianga et al., 2015).

FIGURE 1.5: Food assistance, humanitarian action and hunger reduction: the case of WFP



Source: WFP.

FIGURE 1.6: Food assistance interventions as bridging investments: the case of WFP

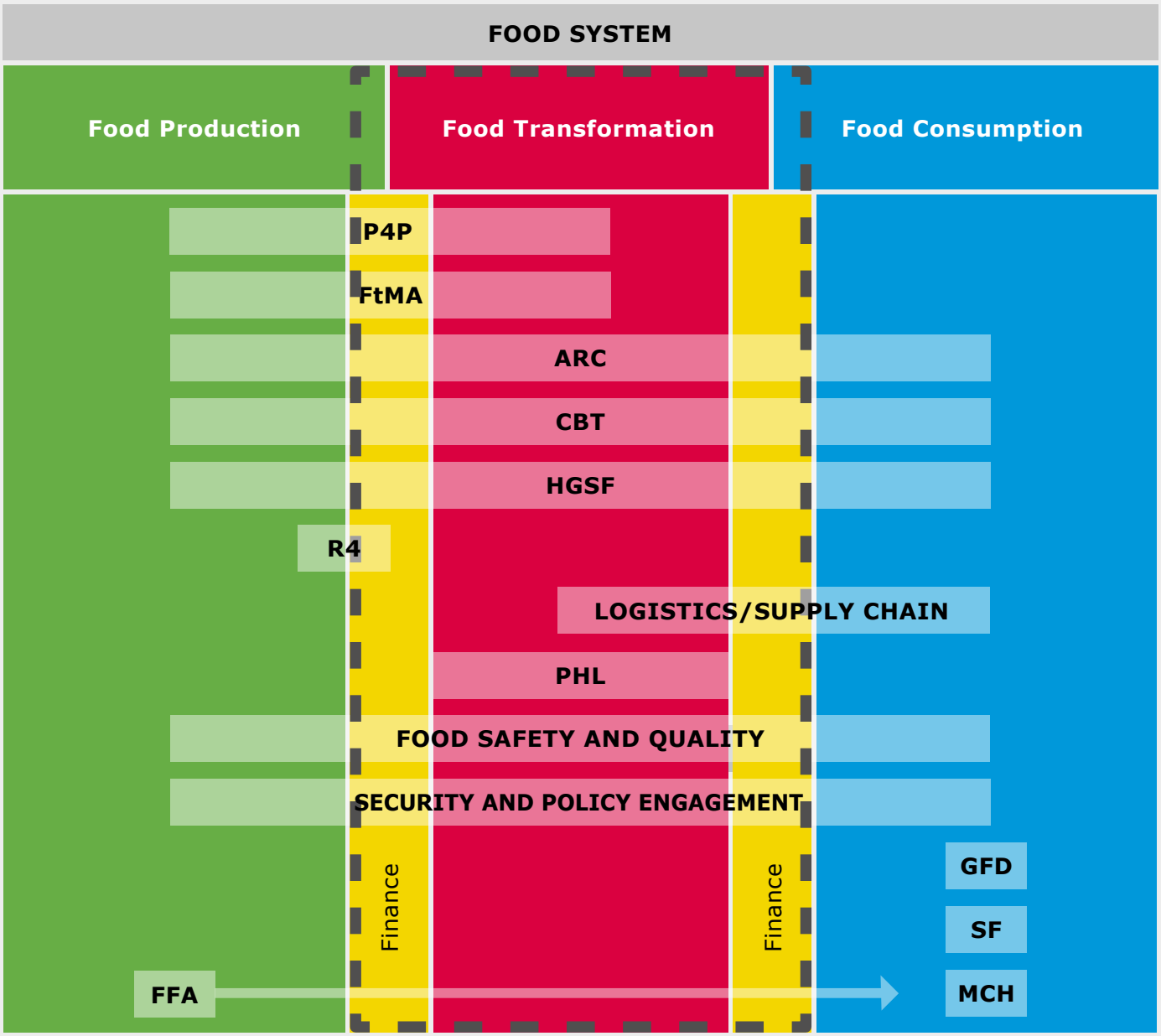


Source: WFP.

Local and regional food procurement for humanitarian response can significantly increase incomes in agrifood value chains (Tschirley et al., 2013). Humanitarian logistics and supply chain services ensure efficient and effective delivery of food assistance, and also inject cash and enhance physical infrastructure in local food systems (WFP, 2015b). Technical assistance seeks to optimize national systems by increasing organizational and policy capacities to address systemic barriers to food and nutrition security (WFP-Namibia, 2017).

A closely related second theme of WOFA is the importance of examining food assistance through a food-systems lens. Food assistance agencies must procure food and arrange for its distribution, either directly or through markets for food and food-related goods and services – the backbone of every food system. Food assistance agencies therefore view food systems from the demand side. That perspective requires that agencies take a holistic view of food systems, aiming to develop partnerships, programmes, and capacities that span these systems both horizontally and vertically. Figure 1.7 presents a view of the WFP portfolio from such a perspective.

FIGURE 1.7: A food systems perspective of WFP's partnerships, programmes and capacities highlighting the "midstream"



Source: WFP.
Key: FFA = food assistance for assets; FFT = food assistance for training; P4P = Purchase for Progress; FtMA = Farm to Market Alliance (formerly Patient Procurement Platform); PHL = post-harvest loss initiative; CBT = cash-based transfer; HGSF = home-grown school feeding; PAA = Purchase for Africa from Africans; R4 = Rural Resilience Initiative; GFD = general food distribution; SF = school feeding; MCHN = mother-and-child health and nutrition; ARC Replica = Africa Risk Capacity Replica; FoodSECuRE = Food Security Climate Resilience Facility.

The cross-cutting nature of the portfolio is clear. For food assistance agencies, short-term concerns about the functioning of food systems relate to the volume, value and quality of food in supply chains, the cost of secondary goods and services, security, and political and economic issues that govern opportunities for delivery of food assistance to target populations. Long-term concerns pertain to trends in biophysical, socio-economic and political conditions affecting food systems, and how they interact to determine the location, volume and cost of food production and processing; other concerns relate to the affordability, quality and safety of food on its way to vulnerable populations (WFP, 2017a).

A third theme is that food assistance is a public endeavour built on many layers of commercial activity. Most performance problems in food systems that require food assistance therefore spring from two sources, one with a private dimension and one with a public dimension. In the first case, performance problems are linked to inadequate levels and quality of private capacities in basic food system services, particularly in the "midstream" – that is the post-farm segment that covers various dimensions of food transformation such as transport, storage, processing and finance (Reardon, 2016).[iv] In the second, they spring from collective failures to address factors related to security, political economy, policy, climate and the environment that disturb the socio-economic structures and processes underlying food systems and food assistance (FAO/IFAD/WFP, 2015; Figure 1.7). Food assistance therefore constitutes a unique window through which to view current and emerging challenges and opportunities facing leaders, the business community and the general public.

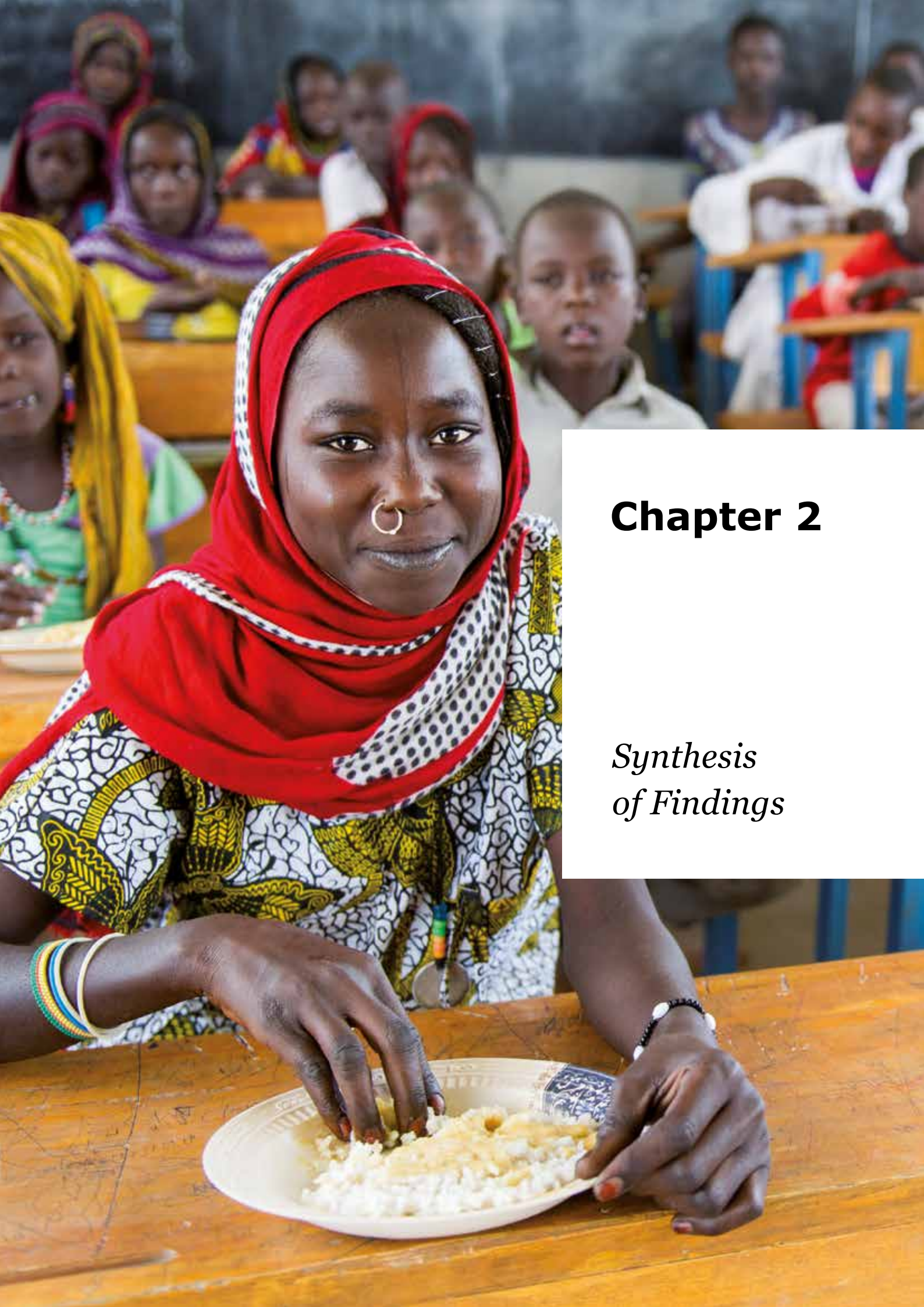
Organization of this report

The remainder of this report is organized as follows. Chapter 2 presents a synthesis of findings detailed in Chapters 3, 4 and 5. The aim is not a simple condensation of material presented in these three substantive chapters, but rather a true fusion of the report's findings and implications. Readers who proceed no further should have a full appreciation of the report's rationale, core arguments, results and messages.

Chapter 3 considers levels, trends and patterns of demand for and supply of food assistance. Demand is examined through publicly available data on national incomes, hunger, food system performance and instability viewed alongside selected descriptors of the needs of beneficiaries of WFP food assistance. The supply side is analysed using data from WFP's portfolio between 2009 and 2016. The aim is not to dissect the minutiae of the portfolio but to build understanding of recent developments in the food assistance sector as reflected in the portfolio.

Chapter 4 considers the principal challenges facing food assistance agencies, arguing that they emanate from three principal sources. The challenges are: i) those driven by global and national trends and disruptions that determine the location and scale of demand for food assistance – climate change, conflict, urbanization and inequality; ii) those inherent in humanitarian action, which define the volume and quality of food assistance delivered as a humanitarian response – funding, access, protection and security; and iii) those emanating from the structure and functioning of food systems that define the volume and quality of food assistance delivered as a response to hunger and food insecurity – the "bad year" or "lean season" problem, the "last mile" problem, and the "good year" problem. Innovations in food assistance are similarly clustered.

Chapter 5 sets out the potential of food assistance as a platform for enhancing the performance of food systems, highlighting the core elements of such "systemic food assistance."



Chapter 2

Synthesis of Findings

The quantitative and qualitative examination of food assistance as defined in this report is pioneering and revealing in several respects. Food assistance is framed in the context of hunger, food system performance, national incomes and instability. The result is enhanced appreciation of the extent and scale of demand for food assistance. The analysis of WFP's portfolio of partnerships, programmes and capacities provides a unique empirical understanding of food assistance, and also constitutes the first unified examination of the full range of activities of any food assistance agency. The result is enhanced understanding of the supply-side of food assistance and of the structure and dynamics of food assistance as a sector. Also revealed are the range of pressures on this pillar of humanitarian action and the potential contributions of food assistance measures to addressing the root causes of hunger.

A thorough quantitative analysis would be based on multivariate regression analysis employing multiple layers of geographically specific data linked to particular beneficiary groups. Lack of a full complement of such data prevents such an analysis here.[v] Chapter 3 undertakes a systematic examination of levels and changes in the variables to capture different aspects of demand and supply of food assistance. Correlations between these variables are examined; causation cannot be assumed, but important inferences can be drawn. The qualitative analysis in Chapter 4 affirms and amplifies several quantitative results.[vi] The priorities for policy, investment and research set out in Chapter 5 affirm a number of established imperatives and set out several that are less well known.

Students eating school meals provided by WFP in Yakoua, Lake Chad, Chad.
WFP/Giulio d'Adamo

Global trends and patterns of food assistance

The analysis in Chapter 3 shows that drivers of vulnerability and food insecurity are manifold and complex and have significant implications for demand for food assistance. The scale of WFP's portfolio confirms that this demand is huge and that it spans several contexts of national income, food system performance, hunger and stability. In a country typology based on measures of these variables in a sample of 77, four groupings emerge: i) 17 relatively stable high performers; ii) one relatively stable low performer; iii) 21 relatively unstable high performers; and iv) 38 relatively unstable low performers. The distribution of countries in the typology tallies with the spatial pattern of food assistance as captured in WFP's portfolio.

WFP food assistance operations are concentrated in unstable low performers, most of which are LICs, but with significant representation of MICs. Several countries with relatively high performing food systems, all of them MICs, also appear in WFP's portfolio as a result of relatively high hunger burdens or relatively high instability. Some countries registering relatively strong food system performance have significant pockets of vulnerability and food insecurity for which food assistance is required. More complete data would allow for in-depth analysis that would generate more comprehensive findings. The available information suggests that relatively stable MICs with relatively high performing food systems express relatively greater demand for technical assistance – for example for early warning and emergency preparedness – whereas in relatively unstable LICs with relatively low performing food systems demand is greatest for broad-based measures to address acute food and nutrition insecurity such as general food distributions. Measures such as school meals that address the effects of underlying flaws in food systems are relevant in most contexts.

The supply of food assistance is represented by expenditures on food assistance operations. Between 2009 and 2016, WFP's food assistance expenditures rose from US$2.2 billion to US$5.3 billion. To be fully understood these food assistance expenditures must be viewed in terms of: i) the form of assistance; ii) the objective of assistance; and iii) the context in which assistance is provided. The form and objective of food assistance are captured in WFP's major cost categories: cash-based transfers (CBTs), in-kind food transfers, technical assistance, logistics and programme support and administration.[vii] The context of food assistance is captured in WFP's functional areas: emergencies, recovery and transition, development and special operations, and a fifth area that is a composite of several fields of activity.[viii]

At issue is how the form and objective of food assistance – WFP's cost categories – vary with the context of food assistance – WFP's functional areas. Tables 2.1–2.3 illustrate significant patterns emerging from 84 WFP country offices between 2009 and 2016. Table 2.1 compares the composition of WFP's portfolio in 2009 with that in 2016 as represented by annual shares of the cost categories and functional areas for each country office. Table 2.2 examines correlations between annual shares of cost categories and functional areas for each country office and year between 2009 and 2016. Table 2.3 examines correlations between year-to-year changes in these shares over the same period.

The form and objectives of food assistance changed in significant ways between 2009 and 2016, but the contexts in which it was delivered were largely unchanged (see Table 2.1). The importance of the cost categories for CBTs and technical assistance grew in importance at the expense of those for in-kind food transfers, logistics and operations support and administration. Emergency and recovery and transition operations were the dominant functional areas in 2016, as in 2009; development and other operations were essentially unchanged in importance, but that of special operations grew marginally over the period.[ix]

A range of factors determines each variable, particularly the form in which resources for food assistance are provided to WFP and interactions between external and internal factors at the country level. A number of the correlation coefficients reported in Tables 2.2 and 2.3 are therefore moderate to low in

TABLE 2.1: The composition of WFP's food assistance portfolio in 2009 and 2016

	FOOD ASSISTANCE DIMENSION	% of portfolio		
		2009	2016	Change
Form and objective (WFP cost category)	CBTs	0.50	19.16	18.65
	In-kind food transfers	53.62	39.47	-14.15
	Technical assistance	0.64	7.95	7.31
	Logistics	31.98	20.33	-11.65
	Operations support and administration	13.26	13.09	-0.17
	TOTAL	**100**	**100**	**-**
Context (WFP functional area)	Emergency	41.71	41.58	-0.13
	Recovery and transition	46.01	42.84	-3.17
	Development	5.93	6.15	0.21
	Special operations	4.01	6.76	2.75
	Other	2.34	2.67	0.33
	TOTAL	**100**	**100**	**-**

magnitude. But many are large, and a clear majority are significant (shown in blue) and thus informative of underlying associations.

Considering only statistically significant coefficients, correlations between levels of food assistance expenditures in Table 2.2 indicate that:

- the higher the share of emergencies in the portfolios of WFP country offices, the greater the shares of CBTs, in-kind food transfers, technical assistance, logistics and operations support and administration;
- the higher the share of recovery and transition operations in country portfolios, the greater the shares of in-kind food transfers, technical assistance, logistics and operations support and administration;
- higher shares of development operations are associated with higher shares of in-kind food assistance and logistics; and
- higher shares of special operations coincide with higher shares of in-kind food transfers, technical assistance, logistics and operations support and administration.

TABLE 2.2: The composition of WFP's food assistance portfolio in 2009 and 2016

Context	FORM AND OBJECTIVE OF FOOD ASSISTANCE				
	CBTs	In-kind food transfers	Technical assistance	Logistics	Operations support and administration
Emergency	0.37*	0.67*	0.67*	0.59*	0.65*
Recovery and transition	0.05	0.64*	0.64*	0.65*	0.53*
Development	0.00	0.25*	0.25*	0.17*	0.10
Special operations	0.04	0.49*	0.49*	0.75*	0.80*
Other	-0.01	0.25*	0.25*	0.24*	0.08

*Note: * denotes statistical significance at 5% level.*

Again considering only statistically significant coefficients, correlations between year-to-year changes in food assistance expenditures in Table 2.3 indicate that:

- increases in shares of emergency operations are accompanied by increases in shares of CBTs, in-kind food transfers and logistics but decreases in share of operations support and administration;
- increases in shares of recovery and transition operations coincide only with increases in shares of CBTs;
- increases in shares of development operations appear alongside decreases in shares of CBTs and increases in shares of operations support and administration; and
- increases in shares of special operations coincide with increases in shares of technical assistance, but decreases in shares of in-kind food transfers and logistics.

WFP warehouse in La Guajira, Columbia.
WFP/Mike Bloem

TABLE 2.3: Correlations between year-to-year changes in shares of food assistance in portfolios of WFP country offices between 2009 and 2016

Context	FORM AND OBJECTIVE OF FOOD ASSISTANCE				
	Cash-based transfers	In-kind food transfers	Technical assistance	Logistics	Operations support and administration
Emergency	0.12*	0.13*	-0.05	0.13*	-0.27*
Recovery and transition	0.09*	-0.05	-0.09	0.01	0.05
Development	-0.14*	0.00	0.03	-0.03	0.10*
Special operations	-0.03	-0.19*	0.38*	-0.26*	0.09
Other	-0.14*	-0.04	-0.04	0.03	0.20*

*Note: * denotes statistical significance at 5% level.*

A comparison of differences in Tables 2.2 and 2.3 in the directions or significance levels of corresponding correlations is informative of the dynamics in the food assistance sector between 2009 and 2016. Three such differences stand out.

First, levels of shares of recovery and transition operations are not significantly associated with those of CBTs, but they are significantly and positively associated with those of in-kind food transfers, technical assistance, logistics and operations support and administration. The converse is true for year-to-year changes in these shares. The choice of food assistance instruments is driven by several factors (see Box 2.1), but the results suggest that at the margin CBTs appear to have been preferred by WFP country offices as transition instruments.

Second, although levels of shares of CBTs are uncorrelated with those of recovery and transition operations and development operations, year-to-year changes in shares of CBTs are significantly positively correlated with changes in shares of recovery and transition operations and negatively correlated with changes in shares of development operations. This suggests that where CBTs were newly applied they were devoted mainly to emergency and transition operations but not to development operations.

Third, the levels of shares of operations support and administration are positively correlated with those of emergency operations and recovery and transition operations but they are uncorrelated with those of development operations. Conversely, year-to-year changes in shares of operations support and administration are negatively correlated with emergency operations but uncorrelated with changes in shares of recovery and transition operations and development operations. This suggests that economies of scale associated with expanded emergency operations do not translate into transition interventions, nor do they appear to emerge in development operations.

Women exchange vouchers for food at a market in Bangui, Central African Republic.
WFP/Bruno Djoyo

BOX 2.1: Food, cash, conditions and restrictions – what the evidence says

Food assistance entails several instruments such as in-kind food transfers, commodity vouchers, physical or digital cash transfers and cash-value vouchers. Long at issue are the relative effectiveness and costs of alternative transfers and the conditions and restrictions placed on CBTs.

Food vs. cash

Recent studies show that on average differences in the effects of cash and food on food security are moderate. The effectiveness of cash or food transfers varies according to the profile and "initial conditions" of beneficiaries. Transfer performance is driven not by

inherent merits of a given modality but by complex interactions among several contextual factors. The effectiveness of cash and in-kind is comparable, but efficiency generally favours cash. Food tends to be at least twice as costly to deliver as cash – but that does not mean that cash is always the preferred option. Few evaluations have accounted for transaction costs such as travel expenses and waiting time, and few have tracked the evolution of cost structures over time or accounted for economies of scale. Delivery is only one dimension of cost assessment, and hence available cost analyses are indicative of relative efficiency, not definitive.

Conditionality

Conditionality pertains to prerequisite or qualifying conditions that a beneficiary must fulfil to receive a cash transfer or voucher – for example attending school, building a shelter, attending nutrition screenings, doing work or being trained. A growing body of evidence suggests that conditional cash transfer programmes can have marked positive effects on a range of beneficiary welfare indicators such as increased school enrolment and educational achievement, improved mother-and-child nutrition and health, protection, financial inclusion and, in the long term, increased productivity and income. But evidence also identifies drawbacks such as increased complexity and administrative costs, costs and challenges affecting beneficiaries in meeting conditions, misaligned beneficiary preferences and corruption. The effect of conditionality hence depends on several interacting factors. While debates as to whether "to condition or not to condition" are too simplistic, considerable efficiency gains in conditional cash transfers can accrue from improved design.

Restrictions

A restriction refers to the utilization of a transfer once it has been received by a beneficiary. It is distinct from conditionality, which refers only to prerequisite conditions. A restricted transfer requires the beneficiary to use the assistance provided to access specific, pre-determined goods or services. Vouchers are restricted by default. Recipients of unrestricted cash transfers have been found to consume more diverse and higher quality diets and purchase more non-food items than recipients of vouchers. In some contexts, unrestricted cash allows beneficiaries to hunt for bargains, allowing them to take transportation costs and convenience into account. But as is the case for food vs. cash comparisons, findings of positive impacts are specific to context and beneficiary characteristics – e.g., urban populations served by well-functioning communication networks, financial systems, markets and supermarkets.

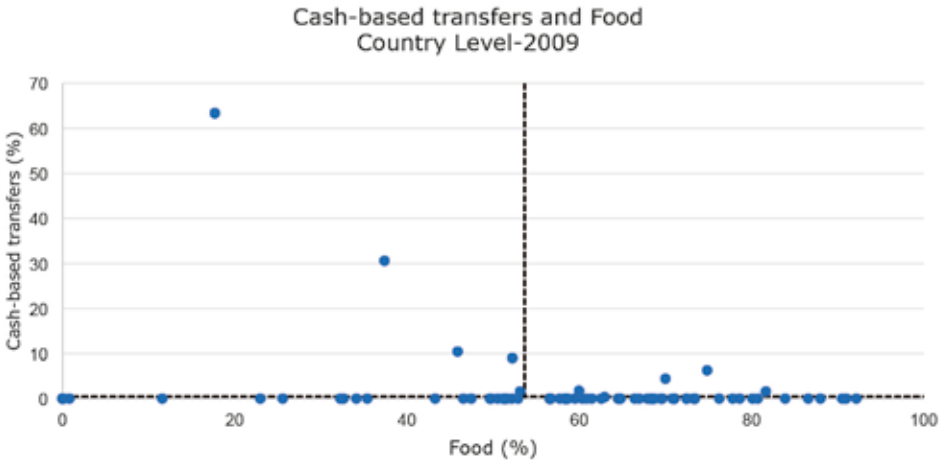
The weight of evidence suggests that there is no single "right" transfer modality or approach and no a priori "first-best" option. Such first-best options are specific to context and sector, and they emerge from analysis of responses. The main factors to consider in deciding on transfer modalities include programme objectives, the level of market functionality, predicted cost-effectiveness, implementation capacity, political economy, beneficiary preferences, resource availability and the management of risks related, for example, to protection and gender. Whether in terms of effectiveness or efficiency, the use of combined transfers seems a promising but under-evaluated programme model. Relative effectiveness can only be gauged on a case-by-case basis and is a function of the objectives of an intervention, the way they are measured, the characteristics of the target population, programme design, market conditions and other contextual issues.

Sources: de Janvry and Sadoulet (2006); EU (2016); Gentilini (2014 and 2016); Hidrobo et al. (2012); Hoddinott and de Brauw (2012); Hoddinott et al. (2013); WFP/BCG (2016); World Bank (2016b).

CBTs have become an integral part of food assistance, and WFP has been a leading actor in the scale-up. In 2009, CBTs accounted for less than 1 percent of the portfolio and were not used in most countries (see Figure 2.1). By 2016 the figure stood at 19 percent: 9.5 million people in 54 countries were reached, and the transfer value was US$1 billion. When year-to-year changes in the CBTs share between 2009 and 2016 are considered, a more nuanced picture emerges (see Figure 2.2). Although the transition has been significant and broad-based – most observations are above the horizontal dotted lines – it has been uneven. A significant number of country offices experienced years with reductions in CBT shares, and some of the reductions occurred alongside increases in shares of in-kind food – observations below the horizontal line and to the right of the vertical line. Nevertheless the trend toward more cash and greater diversification and hence effectiveness of the overall portfolio is clear and likely to gather pace as more is learned, delivery platforms improve and incomes grow (see Figure 2.3).

FIGURE 2.1: Shares of CBTs vs. in-kind food transfers in WFP country office portfolios

(A) 2009 SHARES



(B) 2016 SHARES

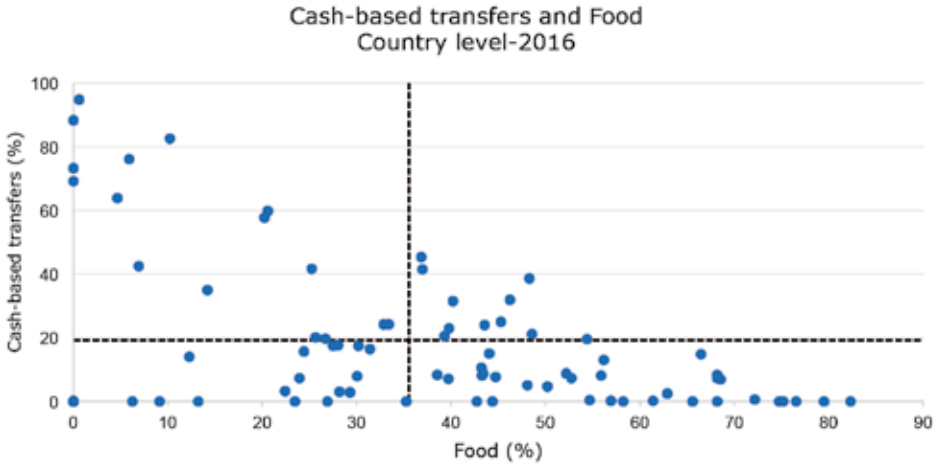
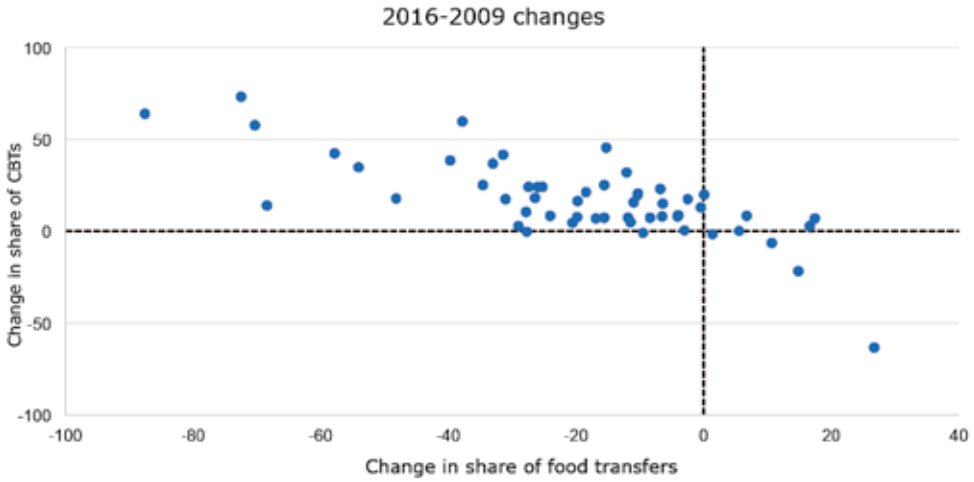


FIGURE 2.2: Total and year-to-year changes in shares of CBT and in-kind food transfers WFP country office portfolios – 2009-2016

(A) TOTAL CHANGES BETWEEN 2009 AND 2016



(B) YEAR-TO-YEAR CHANGES

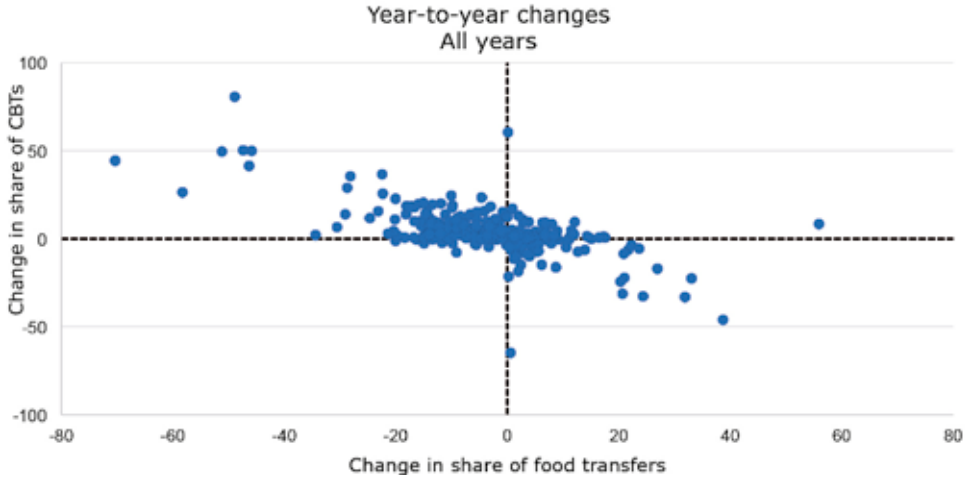
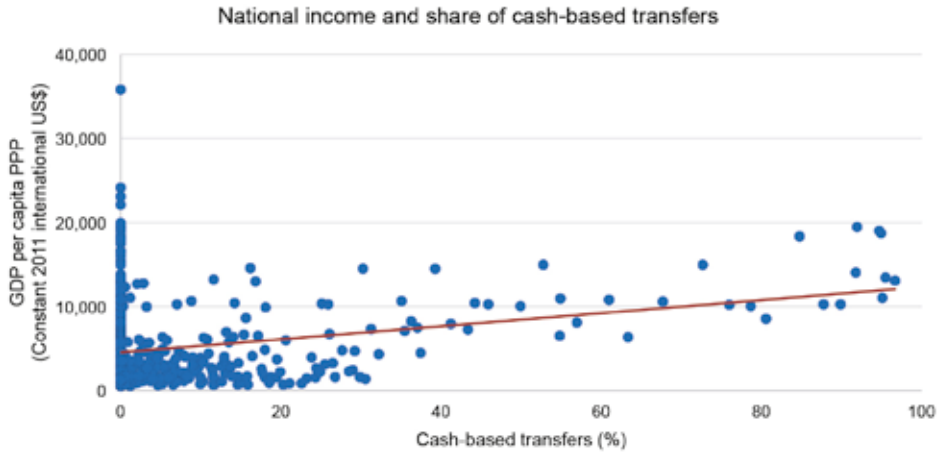
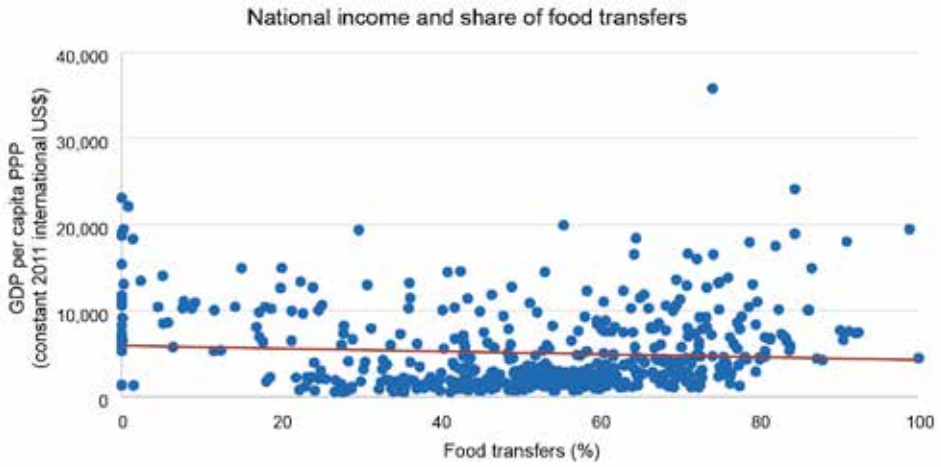


FIGURE 2.3: The relationship between national income level and shares of in-kind food and CBTs transfers in WFP's portfolio, 2009-2016





Note: The fitted lines are significant at 5% level.

Similarities and differences across regions

WFP's 84 country offices are organized under six regional bureaux comparable in definition to those of other United Nations agencies (see Table 2.4): Asia and the Pacific (APR), East and Central Africa (ECA), Latin America and the Caribbean (LAC), the Middle East and North Africa (MENA), Southern Africa (SA) and West Africa (WA).[X] All regions, except fast-growing and relatively stable APR, registered significant increases in food assistance expenditures between 2009 and 2016. The differences among the regions in terms of the scale and density of operations are stark (see Table 2.4). At one extreme are the huge operations in MENA and ECA, where conflicts in Iraq, Somalia, South Sudan, the Sudan, the Syrian Arab Republic and Yemen are combining with other disruptions to cause significant upheaval and displacement, fuelling widespread food insecurity. At the other extreme is LAC, where vulnerability and food insecurity are strongly linked to inequality and where large-scale emergencies are linked to relatively infrequent natural hazards. In between are APR, SA and WA, where challenges spring from various combinations of civil strife, natural disasters and entrenched poverty and inequality.

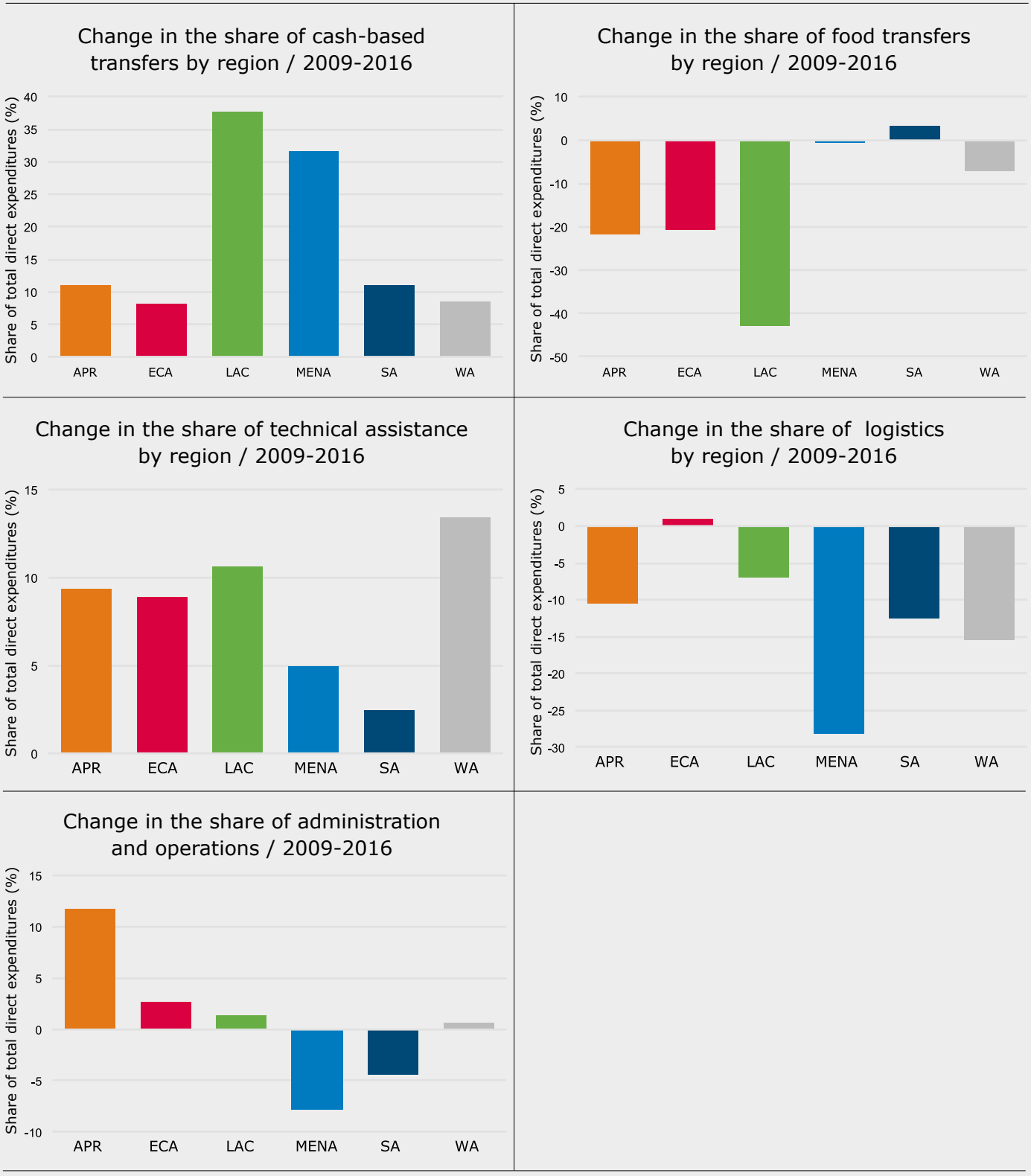
TABLE 2.4: Regions and countries in WFP's portfolio

Region	No. of countries	Total food assistance expenditures in 2016 (US$millions)	Average expenditure per country office in 2016 (US$millions)	% change in food assistance expenditures, 2009–2016
APR	16	431	26.9	- 7
ECA	8	1 369	171.2	+ 137
LAC	12	161	13.4	+ 89
MENA	18	1 899	105.5	+ 270
SA	10	504	50.4	+ 161
WA	19	564	29.7	+ 173

Note: These expenditure figures do not include WFP's 7 percent indirect support costs.

Despite the differences in the size of operations, several similarities emerge (see Figure 2.4). Between 2009 and 2016 shares of CBTs increased in all regions, especially in the relatively more urbanized LAC and MENA. Shares of in-kind food in 2016 were below 2009 shares in all regions except MENA and SA, where market conditions or host-country requirements in major emergencies precluded CBTs. Similarly, the share of logistics fell in all regions except ECA, where access challenges remain severe as a result of poor infrastructure. The share of technical assistance increased in all regions as capacity development for national food assistance systems increased. Costs linked to operations support and administration show no clear pattern.

FIGURE 2.4: Changes in the composition of WFP food assistance expenditures by region, 2009–2016



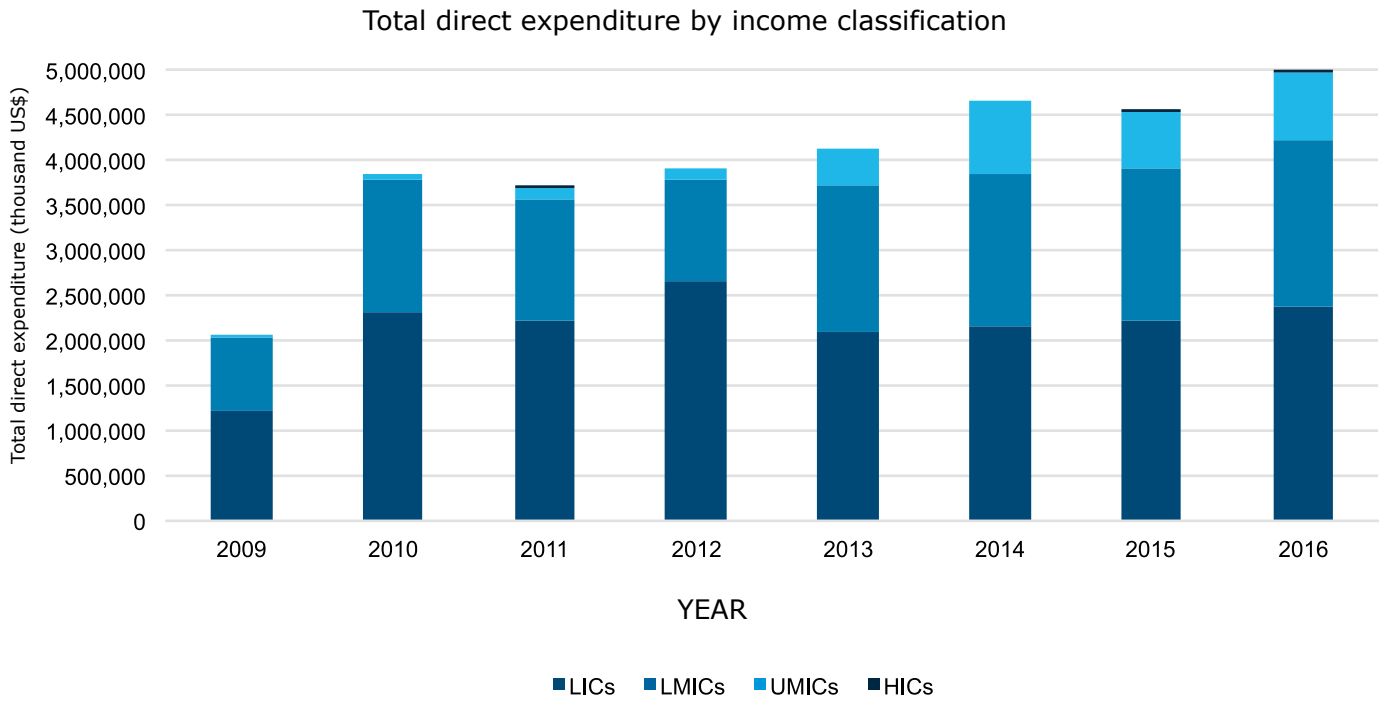
Source: WFP.

Similarities and differences across income levels

The combined share of WFP's food assistance expenditures in lower middle-income countries (LMICs) and upper middle-income countries (UMICs) surpasses that in LICs (see Figure 2.5). Beginning in 2013 as crises in the MENA region spread and intensified, the expenditure share in UMICs surged. A number of LICs graduated to LMIC status between 2009 and 2016 but continued to require support from WFP to address various forms of vulnerability and food insecurity – these were Bangladesh, Kenya and Zambia. Several UMICs have sizable populations that require internationally facilitated food assistance: Colombia, Iraq and Jordan are examples.

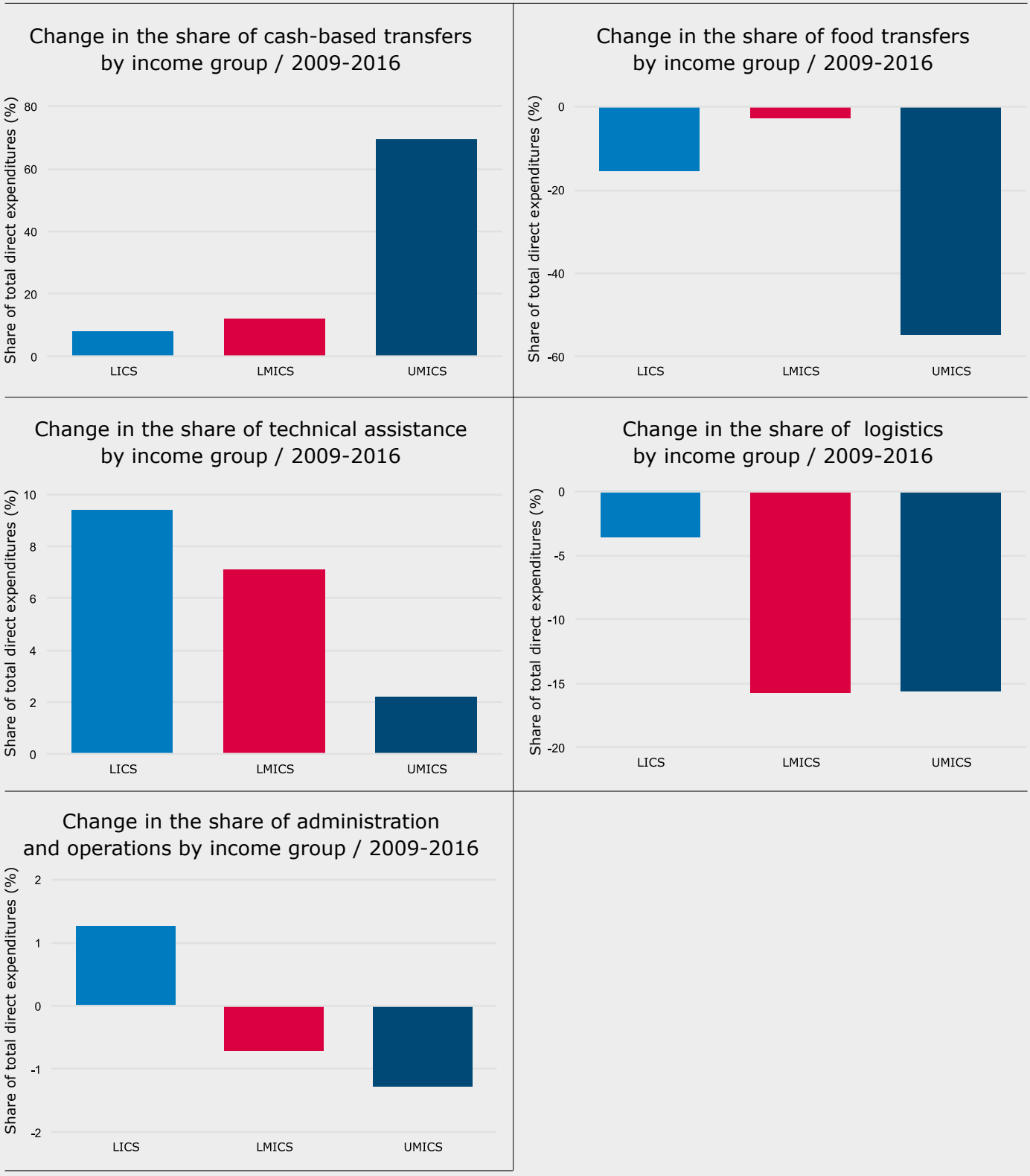
Most of the world's undernourished people live in MICs (IFPRI, 2015). This group of countries is likely to account for larger shares of food assistance in the future, though their demands are different from those of LICs (see Figure 2.6). Between 2009 and 2016 the share of CBTs increased for all income classes, with the main increase in UMICs. Conversely, shares of in-kind food transfers fell for all groups, with the main decline in UMICs. Shares of technical assistance increased for all groups, with LICs registering the largest increases. The fall in shares of in-kind food transfers pulled down shares of logistics expenditures, especially in MICs, which registered the largest declines in shares of operations support and administration costs because of their relatively high domestic capacities.

FIGURE 2.5: The composition of WFP food assistance expenditures by income classification, 2009–2016[xi]



Source: WFP.

FIGURE 2.6: Changes in the composition of WFP food assistance expenditures by host country income level, 2009–2016



Source: WFP.

Toward a typology of food assistance

These findings point to three dimensions of food assistance and one country characteristic as highly informative comparative descriptors of particular food assistance portfolios and the food assistance sector. A preliminary typology of food assistance is suggested below.

The three dimensions of food assistance are: i) scale – as an indicator of the magnitude of underlying demand for food assistance; ii) emergency emphasis – as an indicator of the urgency of that demand; and iii) cash intensity – as an indicator of supply-side dynamism, innovation and diversification. This is not to imply that CBTs are inherently preferred to in-kind food transfers: that is an empirical matter (see Box 2.1). The argument is that CBTs not only expand the food assistance toolkit available to country offices, they also entail development and implementation of new delivery platforms, the formation of new partnerships and the acquisition of new skill sets that enable operations to respond to wider sets of needs. The country characteristic is income level – as an indicator of both underlying demand for food assistance and available capacity to accommodate alternative ways of supplying it. Table 2.5 presents the variables used to capture the four phenomena and the thresholds that underpin the typology.

Food assistance operations are classified as small if annual expenditures are below US$10 million, medium if they are between US$10 million and US$50 million, and large if they are above US$50 million. These thresholds capture clearly the size distribution of WFP's portfolio, in which a relatively small number of countries – Afghanistan, the Democratic Republic of the Congo, Ethiopia, Iraq, South Sudan and the Syrian Arab Republic – have very large operations, whereas a relatively large number have much smaller portfolios by comparison. Taking the mean as the threshold would result in a distorted picture of the size distribution of WFP's portfolio. These three thresholds result in a 40:30:30 distribution that meshes well with reality. The emergency emphasis of food assistance is low or high depending on whether the share of expenditures devoted to emergency operations is below or above the global mean. Cash-intensity is low or high depending on whether the share of expenditures devoted to cash-based transfers is below or above the global mean. Income levels are based on thresholds defined by the World Bank for low income, lower-middle, upper-middle, and high income countries.

TABLE 2.5: Variables and thresholds for the food assistance typology

Phenomenon	Variable used	Level	Classification criteria
Scale of food assistance operation	Total expenditures*	Small Medium Large	Below US$10 million US$10 million – US$50 million Above US$50 million
Emergency emphasis of food assistance	% of expenditures devoted to emergency operations*	Low High	Below mean of 22.64 Above mean of 22.64
Cash intensity of food assistance	% of expenditures devoted to CBTs*	Low High	Below mean of 17.71 Above mean of 17.71
Income level of country	Gross national income (GNI) per capita**	Low Lower-middle Upper-middle High	Below or equal to US$1,025 US$1026 – US$4035 US$4036 – US$12 475 Equal to or above US$12 476

*Sources: *WFP expenditure data; ** World Bank (2017).*

The results are summarized in Tables 2.6 and 2.7. It is important to recognize two limitations. First, comparisons across countries are relevant only for WFP country portfolios. The "emergency-emphasis" of, say, Uganda's 2016 portfolio was "low" relative to, say, Niger's, and the "cash-intensity" of, say, Haiti's 2016 operation was "high" compared to, say, Pakistan's only within the context of WFP's portfolio. These country comparisons should not be extended to the country operations of other organizations without qualification. Second, a full analysis would consider multiple years of data, aiming to ensure that a country's position in the typology reflects conditions and decisions over life spans of typical food assistance operations. Complications raised by migration of countries across income classes precluded such a treatment. Nevertheless, the more limited analysis yields several important insights with wide relevance.

High cash intensity appears in all scales of operation, but low cash intensity tends to accompany small-scale operations. It is rare for an operation to be small and cash intensive: only one small operation in an LIC has high cash intensity. A majority of small operations have low cash intensity as well as low emergency emphasis. Income level matters to cash intensity. Medium-scale operations span a range of contexts but when they have relatively high cash intensity, they are in MICs. Most medium-scale operations in LICs have low cash intensity. Operations in most LICs have relatively low emergency emphasis and low cash intensity. Most operations with relatively low emergency emphasis and low cash intensity are small. Only one small operation in an LIC with low emergency emphasis is cash-intensive.

Hamdiya, a Somali refugee, buys fresh vegetables at a local market with WFP cash assistance, Sheddar Somali Refugee Camp, Jijiga, Ethiopia.
WFP/Kiyori Ueno

TABLE 2.6: The distribution of WFP host countries according to the food assistance typology

Emergency emphasis	Cash intensity	Income level	Scale of operation		
			Large	**Medium**	**Small**
High	High	UMICs	Iraq, Jordan, Lebanon, Turkey	Ecuador	Fiji, Paraguay
		LMICS		Egypt	Bolivia
		LICs	Haiti	Nepal	
	Low	UMICs		Libya	
		LMICs	Cameroon, Nigeria, Syrian Arab Republic, Yemen	Ukraine	Republic of the Congo, Papua New Guinea, Swaziland
		LICs	Central African Republic, Niger, Republic of South Sudan		
Low	High	UMICs		Colombia	
		LMICS	Kenya	Bangladesh, Guatemala, Honduras, Lesotho, Myanmar, Palestine	El Salvador, Ghana, Sri Lanka
		LICs	Somalia, Zimbabwe	Burundi, Rwanda	Senegal
	Low	UMICs		Algeria	Cuba, Dominican Republic, Iran (Islamic Republic of), Peru
		LMICs	Pakistan, Sudan	Cambodia, Côte d'Ivoire, Lao People's Republic, Mauritania, the Philippines	Armenia, Bhutan, Djibouti, India, Indonesia, Kyrgyzstan Morocco, Nicaragua, São Tomé and Príncipe, Tajikistan, Timor-Leste, Tunisia, Zambia
		LICs	Afghanistan, Chad, Democratic Republic of the Congo, Ethiopia, Mali, Malawi, Uganda	Burkina Faso, Guinea, Democratic People's Republic of Korea, Liberia, Madagascar, Mozambique, Sierra Leone, Tanzania	Benin, The Gambia, Guinea-Bissau, Togo

Source: WFP.

These conclusions are confirmed by the correlations shown in Table 2.7. As captured by relatively high cash-intensity, greater diversification of portfolios coincides with high emergency emphasis in UMICs but not in any other income grouping. Such diversification increases significantly with operation size in all income groups, and most strongly in UMICs. The higher the income of the host country, the greater the apparent scope for innovation and diversification. In most LICs and LMICs there would appear to be significant scope and need for innovation and diversification in operations with relatively low emergency emphasis.

TABLE 2.7: Interactions between WFP food assistance cash intensity, emergency emphasis and operation size at different income levels of host countries

Income group	CORRELATIONS	
	Cash intensity and emergency emphasis	Cash intensity and operation size
LIC	0.31	0.66*
LMIC	0.19	0.53*
UMIC	0.91*	0.91*

** Statistical significance at the 5% level.*

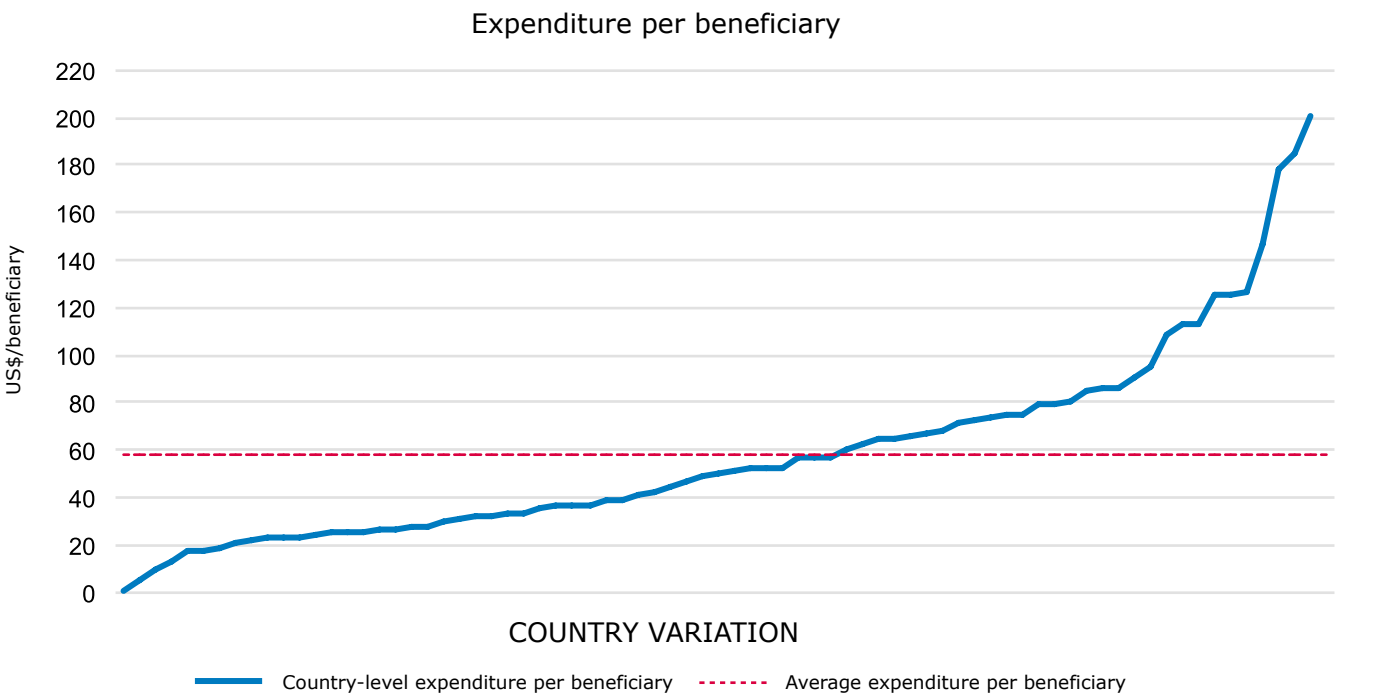
Preparation for food distribution at Hadew village, Jijiga district, Ethiopia.
WFP/Michael Tewelde

Payoffs related to food assistance

Insecurity and conflict, lack of infrastructure, inclement climate, rough terrain, bureaucratic restrictions or requirements and attacks by armed groups limit access to vulnerable populations. Where access is possible, delivery of assistance is often costly. These challenges are daily realities for WFP, and are often associated with the broken, disrupted and flawed food systems through which food assistance must be delivered.

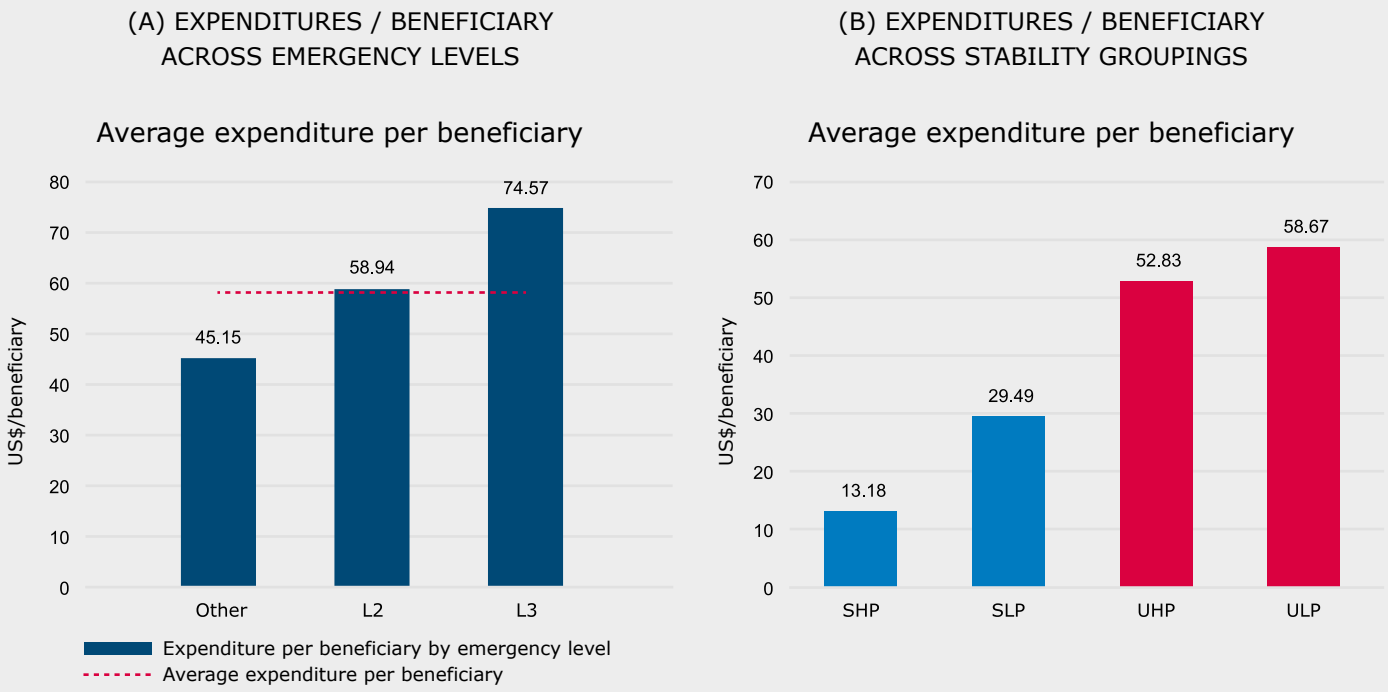
Taking expenditures per beneficiary as a composite measure of access and delivery costs, the costs vary significantly across WFP's portfolio from a low of US$0.52 per beneficiary in Greece to a high of US$201.07 per beneficiary in Lebanon (see Figure 2.7).[xii]

FIGURE 2.7: WFP expenditure per beneficiary: all countries



Access and delivery costs also vary significantly in terms of the severity of the emergency: they average US$75 per beneficiary in countries with Level 3 emergencies, US$59 per beneficiary in countries with Level 2 emergencies, and US$45 per beneficiary in others (see Figure 2.8). Costs also differ on the basis of the overall stability of host countries and the performance of their food systems. Unstable countries have higher average costs than stable ones, and countries with low-performing food systems have higher costs than those with low-performing food systems. Instability is a stronger driver of costs than low performance. Unstable low performers have the highest costs, followed in descending order of costs by unstable high performers, stable low performers and stable high performers.

FIGURE 2.8: WFP expenditures per beneficiary in different contexts[xiii]



SHP = stable high performer; SLP = stable low performer; UHP = unstable high performer; ULP = unstable low performer.

These cost differentials allow consideration of three categories of food assistance-related foregone (or potential) benefits: i) those related to **improved access –** as captured by differences in costs in Level 3 and Level 2 countries vs. costs in other countries; ii) those related to **increased stability** – as captured by differences in costs in relatively unstable countries vs. costs in relatively stable countries; and iii) those linked to **enhanced food-system performance** – as captured by differences in costs in countries with relatively high-performing food systems vs. costs in countries with relatively low-performing food systems.

Food assistance-related benefits derived from **enhanced access** can be computed by multiplying the 42.8 million beneficiaries of Level 3 and Level 2 responses by the US$23.29 gap between the average cost per beneficiary in these countries and the average cost per beneficiary in all other countries.

Food assistance-related benefits derived from **increased stability** can be computed by: i) multiplying the 73.9 million beneficiaries in unstable low-performing countries by the US$29.18 gap between the average cost per beneficiary in these countries and the average cost per beneficiary in stable low performing countries; and ii) adding the result of this multiplication to that obtained by multiplying the 2.02 million beneficiaries in unstable high-performing countries by the US$39.65 gap between the average cost per beneficiary in these countries and the average cost per beneficiary in stable high-performing countries.

Food assistance-related benefits derived from **improved food-system performance** can be computed by: i) multiplying the 73.9 million beneficiaries in unstable low performing countries by the US$5.84 gap between the average cost per beneficiary in these countries and the average cost

per beneficiary in unstable high-performing countries; and ii) adding the result of this multiplication to that obtained by multiplying the 473,000 beneficiaries in unstable high-performing countries by the US$16.31 gap between the average cost per beneficiary in these countries and the average cost per beneficiary in stable high-performing countries.

A unified benefit estimate emerges from adding the total benefits related to improved access to the stability and performance benefits linked to cost differentials associated with instability and low performance as compared to the levels in the stable high-performing category.

Table 2.8 summarizes the results, with the foregone (or potential) benefits framed as "payoffs" (or dividends) – i.e., an access payoff, a stability payoff and a performance payoff.

The estimated access payoff of US$997 million per year pertains to cost savings to WFP emerging from successful efforts to negotiate improved humanitarian access such that food assistance can be more easily delivered in the 20 countries with Level 3 and Level 2 operations that dominate WFP's food assistance expenditures.

The estimated stability payoff of US$2.24 billion per year is linked to cost savings to WFP that would result from successful efforts to reduce the high levels of instability common to most of the 80-plus countries in which WFP operates.

The estimated performance payoff of US$439 million per year is associated with cost savings to WFP due to improvements in the performance of food systems in these countries.

The unified food-related payoff of US$3.45 billion per year is connected with cost savings to WFP from integrated and sustained efforts that overcome the three sets of impediments.

TABLE 2.8: Food-related and multi-sector access, stability and performance payoffs

Outcome	**Cost gap** (US$/beneficiary) **[A]**	**Relevant number of beneficiaries [B]**	**Computed food-related payoff** (US$ million) **[C=A+B]**	**Imputed multi-sector payoff** (US$ million) **[D=C/0.4]**
Access	23.29	42 821 446	997	2 493
Stability				
ULP – SLP	29.18	73 899 174	2 156	5 391
UHP – SHP	39.65	2 020 804	80	200
Total			2 237	5 591
Performance				
ULP – UHP	5.84	73 899 174	432	1 079
SLP – SHP	16.31	473 082	8	19
Total			439	1 098
		Unified	**3 449**	**8 623**

SHP = stable high performer; SLP = stable low performer; UHP = unstable high performer; ULP = unstable low performer.

The food sector accounts for 40 percent of international food assistance expenditures (GHAR, 2016). The imputed multi-sector payoffs are: i) in terms of access, US$2.49 billion per year; ii) in terms of stability, US$5.6 billion per year; and iii) in terms of performance, US$1.1 billion per year. The imputed unified multi-sector payoff is US$8.62 billion per year.

These estimates are based on the assumption that expenditure per beneficiary is a reasonable measure of access and delivery costs. Conceptually, this assumption is justifiable. WFP expenditures consist of a combination of costs linked to access and delivery: food transfers and associated activities, cash-based transfers and associated activities, logistics, technical assistance and operational support and administration. Although the resulting estimates cannot be interpreted as fully definitive, they are within reasonable range of several published figures and are hence informative as to the magnitude of benefits related to food assistance that would accrue as a result of progress in improving humanitarian access, efficiency, stability and low performance of food systems (see Table 2.9).

TABLE 2.9: Computed food-related and imputed multi-sector access, stability and performance payoffs for 2015

Context	**Total direct expenditures in 2015** (US$ million)	**Payoff**	**Computed food assistance-related payoff** (US$ million)	**Payoffs as % of 2015 expenditures**
L3 + L2	2 930	Access	997	34
Unstable countries	4 442	Stability	2 236	50
Low-performing Countries	4 349	Performance	439	10
All WFP countries	4 513	Unified food-related	3 449	76
United Nations humanitarian system	28	Unified multi-sector	8 623	31

Note: These expenditure figures do not include WFP's 7 percent indirect support costs.

The computed food-related access payoff of US$997 million per year is equivalent to a third of actual expenditures by WFP in countries with Level 3 and Level 2 responses in 2015. This figure is 60 percent of the US$1.6 billion spent by WFP in other emergencies.

The computed stability payoff of US$2.24 billion per year is equivalent to 50 percent of actual expenditures by WFP in the unstable countries that dominate its portfolio. This is twice as large as the US$938 million spent on the protection and safety and security sectors of humanitarian assistance funded through United Nations appeals in 2015 (GHAR, 2016).

The computed performance payoff of US$439 million per year is equivalent to 10 percent of actual expenditures by WFP in countries with low-performing food systems in 2015. This is 50 percent more than the US$301 million that WFP devoted to development activities that year.

The computed unified food-related payoff of US$3.45 billion per year is equivalent to 76 percent of WFP's total direct expenditures in 2015. It is also close to the US$3.16 billion gap between WFP's assessed needs in 2015 and the funding it actually received that year (WFP, 2016b).

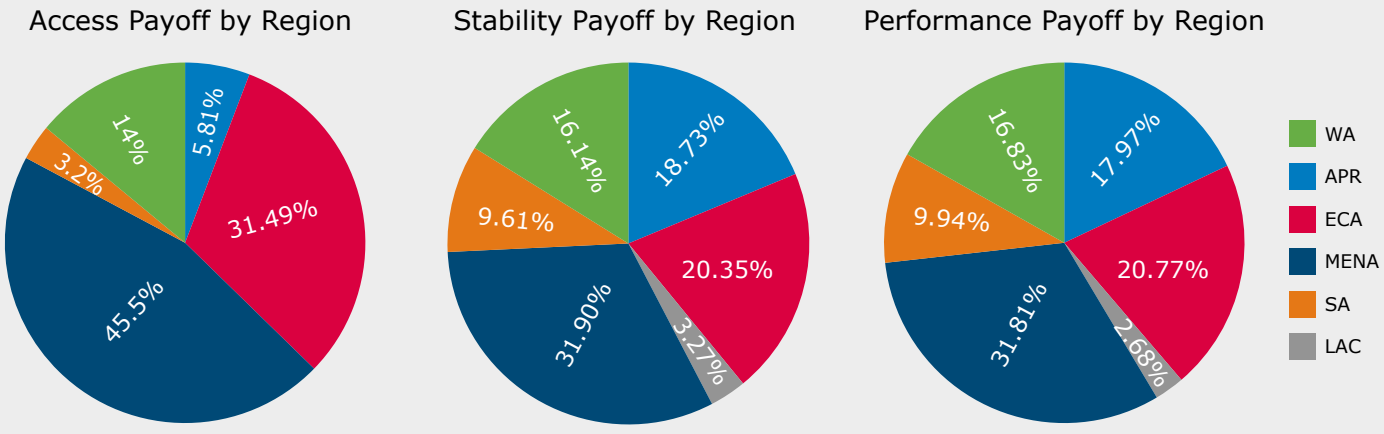
The imputed unified multi-sector payoff of US$8.62 billion per year is equivalent to 31 percent of total humanitarian assistance funded through United Nations appeals in 2015, and 40 percent more than the US$6.17 billion spent on the multi-sector component of this assistance (GHAR, 2016).

The regional distribution of the payoffs reflects underlying conditions of access, stability and performance (see Table 2.10 and Figure 2.9). The largest total payoff would accrue to MENA and ECA which house the most complex and protracted crises. These two regions would capture the bulk of the access payoff, but the stability and performance payoffs would be more evenly distributed, reflecting the widespread natures of instability and low food system performance.

TABLE 2.10: Regional distribution of total food assistance-related payoff

Region	**Regional payoff** (US$)	**Share of total** (%)
APR	555,690	15.13
ECA	860,400	23.42
LAC	84,967	2.31
MENA	1,306,920	35.58
SA	290,483	7.91
WA	574,585	15.64

FIGURE 2.9: Regional distribution of access, stability and performance payoffs



Capturing the payoffs: priorities and recommendations

The overall message of this report is that food assistance is not only a fundamental building block of humanitarian assistance, it is also a key component of a range of interventions addressing vulnerability and food insecurity in transition and development contexts. The world is changing rapidly, and food assistance is shifting just as quickly and innovating in ways that expand capacity to meet emerging challenges and embrace opportunities.

The vision is of food assistance agencies that are results-oriented and forward-looking. They will avert starvation and save lives during crises, focusing on needy populations facing major livelihood challenges, and they will address the barriers in food systems that disadvantage women and children. They will also adopt systemic approaches, demonstrate and catalyse models for hunger reduction and – critically – partner with governments and the private sector to scale up effective approaches.

The access, stability and performance payoffs constitute the economic potentials of that vision. But there is no natural dynamic moving the food assistance sector in that direction: the payoffs must be articulated and proactively captured. Several priorities and recommendations emerge related to funding, political engagement, food assistance policy and programming, national capacity development, data collection and research.

STABILIZE, INCREASE AND UNLEASH FUNDING

The access, stability and performance payoffs are relevant notions only in the context of funded initiatives. Major funding challenges must be overcome: even as funding for international food assistance reaches record levels, the needs far outweigh the available resources and there is little likelihood that they will fall in the near future. The large and growing funding gap must be bridged (HLPHF, 2016). Part of the required increment must come from traditional donors with long-established systems and processes for humanitarian financing. But new sources of funding must also emerge, especially from the middle-income countries that are themselves in need of increased support from international sources. If the financial burden is shared more equitably among countries it will be easier for the governments of donor countries to justify their continued expenditure on overseas humanitarian assistance. It will also spread risk and create the conditions for a humanitarian system that is even more assertive and principled (WHS, 2016).

The potential for gathering greater contributions from the private sector and individuals is under-utilized. WFP's experience with its SharetheMeal initiative reveals a potentially fruitful source of funding from this sector (WFP, 2017g). The risk-management dimensions of financing food assistance should be expanded with a view to leveraging public and private finance through modern mechanisms such as impact bonds, contingency funds, community financing and risk-pooling and risk-transfer instruments (UNHCR, 2017a).

Like all humanitarian sectors, food assistance would benefit greatly from significantly increased un-earmarked funding (GHAR, 2016; WHS, 2016). Such funding enables organizations to prioritize funding for life-saving activities in countries that are critically underfunded and receive little donor support or media attention. The financial restrictions affecting agencies should also be reconsidered. These include: i) inflexible scheduling of payments into multiple tranches; ii) delayed payments; iii) requirements to return unspent balances; iv) short expenditure eligibility windows, particularly for budgetary surpluses allocated at the end of donor fiscal years; and v) limited flexibility to negotiate no-cost extensions or re-allocations of funds to adapt to changed humanitarian and operational circumstances (IASC, 2016; WHS, 2016).

CONFRONT THE POLITICAL DRIVERS OF VULNERABILITY AND HUNGER

Capturing the access, stability and performance payoffs requires sustained pressure on the political

A girl eating a WFP school meal in Yakoua, Lake Chad, Chad.
WFP/Giulio d'Adamo

drivers of division, exclusion and conflict, which generate so much of the world's vulnerability and hunger (WFP, 2017i). This "negotiation imperative" could not be more urgent. Each of the "four famines" of 2017 have conflict and insecurity at their roots. One-fifth of the world's food insecure people live in fragile situations (FAO/IFAD/WFP, 2015). The bulk of the world's 65.3 million displaced people have been forcibly dislodged. If political differences do not spur the conflict and violence that drive so much vulnerability and food insecurity around the world, they almost invariably sustain it.

Lying as it does at the heart of humanitarian assistance, food assistance is strongly affected by security concerns. Food assistance agencies routinely devise local solutions to the insecurity that impedes the delivery of food assistance, sometimes with fatal outcomes (WFP, 2016c). These may bear fruit in a given place and at a particular moment, but in general they are inadequate and unsustainable (Rohwerder, 2015). More strongly, food assistance agencies and other humanitarian actors should not be called upon to devise such solutions.

Recognizing that Zero Hunger and the SDGs are not achievable in a world continually rocked by violence and insecurity, the United Nations system and key regional organizations are engaging with all parties in countries affected by conflict with a view to creating sustained openings for delivery of the assistance needed to alleviate suffering (AUC, 2016; Sanchez, 2010; United Nations, 2017; Williams, 2017). The challenges linked to ensuring neutrality, impartiality and independence while also seeking to increase accountability and adherence to international humanitarian law are immense (Kumar, 2011). Progress will probably continue to be slow, and setbacks are almost certain (Hopp-Nishanda, 2012). But the magnitude of the access and stability payoffs

suggests that high returns may be derived from intensified and sustained engagement. Quite apart from the powerful humanitarian justifications, the economic rationale for such engagement is powerful.

INVEST IN HIGH-QUALITY FOOD ASSISTANCE PROGRAMMES

But the promotion of peace and stability must extend beyond negotiation to action and investment. There is an equally important and more immediate "kinetic imperative" to be grasped, with food assistance at its core.

The starting point is high-quality food assistance measures. Effective food assistance measures anticipate and mitigate the effects of flawed, disrupted and broken food systems with a view to ensuring that vulnerable groups have access to the right food at the right time. The rise of complex and protracted emergencies highlights the ways in which climatic, cultural, demographic, socio-economic and political factors can combine to undermine the capacities of food-system actors, thereby generating sustained and widespread vulnerability and food insecurity. Vital infrastructure is often destroyed, commercial trade and markets are disrupted and essential services such as schools and hospitals are rendered non-functional.

Evidence and experience suggest several features of effective food assistance in most contexts:

- The choice of food assistance instruments is not driven by theory, assumptions or value judgments. It is determined by programme objectives, market conditions, cost-effectiveness, implementation capacity, risk, political and economic considerations, and – most important – beneficiaries' preferences.
- The most effective food assistance portfolios feature a diverse set of instruments, exploiting openings for innovation introduced by CBTs.
- Food quality – in terms of both nutritional content and safety – is a fundamental platform of food assistance efficacy and impact.
- Women and children require and receive special attention, particularly in nutrition-specific and nutrition-sensitive interventions.
- The physical and organizational underpinnings of the food assistance supply chain are important assets in the humanitarian, transition and development contexts at all levels; they also have positive effects in sectors such as health, sanitation and security.
- Digital technology is fundamental to the business processes of food assistance agencies. It underpins innovations for saving lives, enhancing logistics, reducing exclusion and delivering more efficient and personalized interventions.
- Market failures induce many food assistance interventions, but markets for food and food system services are also prime conduits and mechanisms for delivering food assistance to vulnerable populations in a range of contexts.
- The increasingly urban nature of food emergencies entails multi-layered approaches to identify vulnerable populations, assess their needs and provide assistance through complex livelihood strategies.
- Accountability to affected populations is critical. People in need have a right to be involved in decisions that affect their lives, and food assistance is more effective if agencies are accountable to beneficiaries.
- Governments guide and coordinate food assistance efforts, the private sector drives change and innovation, and civil society boosts participation, transparency, responsiveness and consensus.

STRENGTHEN NATIONAL CAPACITY AND SOUTH-SOUTH COOPERATION

Greatly enhanced national capacities are required. In the SDG era, the primary focus of food assistance must be on achieving interlinked and transformative results at country level and promoting national ownership. The landscape of local actors is diversifying. Countries are eager to move beyond the traditional donor-and-recipient approach to assistance. Many LICs are transitioning to MIC status, and their needs are shifting away from direct implementation support to technical assistance, organizational capacity development and policy reform, often featuring South-South exchanges.

In addition to basic food system infrastructure, such as warehouses, roads, railways, irrigation systems, and marketplaces, high-priority areas for national investment in partnership with international actors include:

- effective early-warning and response systems managed by local authorities that also encompass densely populated urban areas;
- strengthened and sustainable funding mechanisms, technical capacities, and organizational arrangements in national food assistance agencies, ideally featuring nutrition-specific and nutrition-sensitive interventions embedded within shock-responsive national social protection systems;
- transparent and reliable food market data-management and information-management systems; and
- practical and implementable food quality and safety standards.

The private sector has a vital role in food assistance (Benedek, 2014). Even in the most challenging circumstances, businesses will offer services as long as the expected return on investment is sufficiently high to cover a required level of risk-adjusted return. Opportunities for private actors to effectively and constructively operate and invest in fragile environments must be expanded. Authorities must be encouraged to avoid unexpected and arbitrary changes in government policies, and especially to grant and renew licenses and permits expeditiously, aiming to reduce risks related to uncertainties in regulation and policy. Support for reconstruction of basic infrastructure such as roads, power, and other utilities is urgently required. Again, opportunities for South-South cooperation must be created and seized.

The better food markets and food-system services function, the more efficient and effective food assistance will be in humanitarian, transition, and development contexts. Even as market coordination failures are addressed, the principle must be to avoid ill-timed, poorly implemented and hence ineffective public interventions in food markets. The priority must be to reform food market and trade policies such as export bans, domestic movement restrictions, price controls, and food-stock management that distort incentives and create openings for corruption and damaging behaviour.

FILL VAST DATA GAPS

Capturing the access, stability and performance payoffs requires significantly improved analysis and knowledge management. Food assistance is as old as human civilization (Morley, 2005). Yet despite its ancient roots and its current immense scale, understanding of food assistance as an area of action and investment is patchy because vital data are lacking.

A comprehensive and verifiable global database on levels and flows of food assistance resources and activities is urgently needed. WOFA 2017 demonstrates that WFP's database is highly informative but inadequate, and must itself be better organized for analysis and communication. Despite its many limitations and declining relevance, the demise of INTERFAIS is regrettable. Collective action to develop and sustain a replacement is essential, ideally employing a similar consensus-based approach with strong stakeholder participation. The principal stakeholders will be national governments. WFP must lead and coordinate the required global action, for which significant in-house investment in technical and organizational capacity will be required.

A challenging but exciting agenda for sampling, targeting, monitoring and impact assessment is emerging at national and sub-national levels. This must be systematically exploited. The growing complexity of humanitarian crises in an increasingly interconnected world raises significant challenges and opportunities affecting the design and implementation of food assistance interventions. Urban areas are increasingly prominent in crises, and populations requiring assistance are increasingly on the move. Information needs are increasing, and tools and methods for data collection and analysis in increasingly sophisticated knowledge management systems are being upgraded accordingly. These tools and methods must be embraced and aggressively applied.

A vendor in a local market in La Guajira, Colombia.
WFP/Mike Bloem

A premium must be placed on sub-national and disaggregated data that expose the different kinds of vulnerabilities, risks, needs, assets, decisions and transactions of the hungry poor. Relevant new capacities in national statistical agencies must therefore be enhanced. The urban dimension of hunger must be correctly captured: this must include differences in household opportunities, informal systems and unintended consequences. Qualitative approaches that build contextual understanding are also vital, especially in urban settings.

FRAME AND IMPLEMENT A PRACTICAL RESEARCH AGENDA

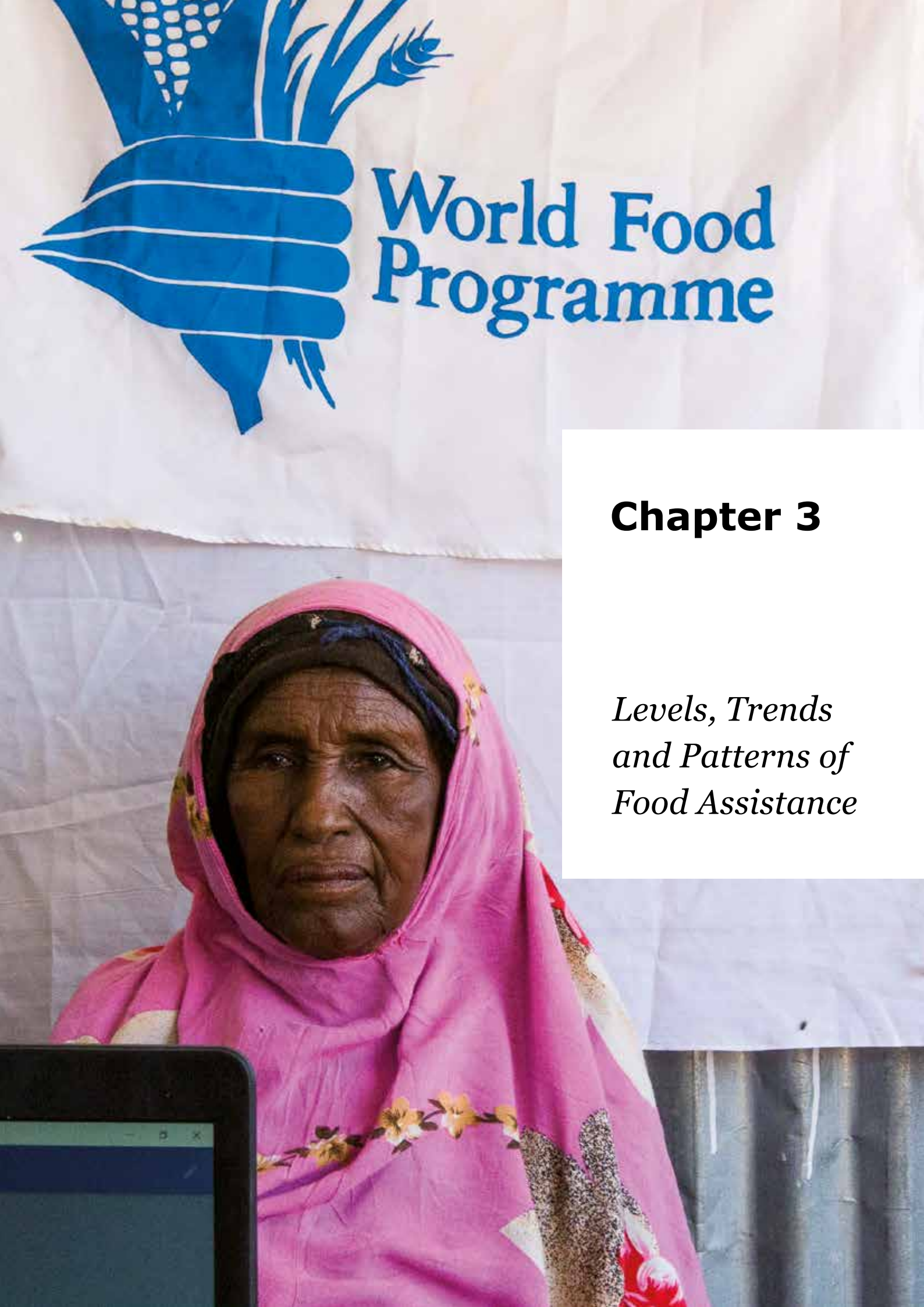
A comprehensive yet practical research agenda on food assistance as defined in WOFA has yet to be framed. The challenges and opportunities associated with food assistance identified in Chapter 4 signal the potential size and scale of an applied research agenda. The need for focus is obvious. The fundamental questions in designing and implementing food assistance measures are clear: Who are the hungry and vulnerable? Where are they? Why do they find themselves in that situation? What are they themselves doing to combat hunger and vulnerability? Would they benefit from food assistance – and if so which type of assistance is relevant, and in what form and through which mechanisms can it best be delivered? What are the major drivers of outcomes and sustainability in different contexts?

In addition to this programme-level research agenda related to design and implementation of specific food assistance interventions and initiatives, a higher-level research agenda is in view related to food-system performance, systemic problems and food assistance-based solutions. At issue are: Which problems of performance in food systems are most readily addressed through food assistance, especially in the unstable settings in which food assistance is most important? What are the impacts of given food assistance interventions on food-system performance, including both quantitative dimensions and qualitative ("soft infrastructure") elements?

Progress entails describing and analysing food systems in rigorous but accessible ways. Several perspectives and judicious simplification are required. WFP's work and partnerships in early warning and preparedness and vulnerability assessment and monitoring demonstrate the potential high returns. These can be achieved by visualizing spatial similarities and differences in the extent, distribution and intensity of interacting drivers of food production, trade and consumption (WFP, 2017a). Areas in which similar problems appear can be identified with a view to locating attributes that constrain or enable performance-enhancing food assistance options. Given the complexity of food systems and the rapidly changing contexts of food assistance, the capacity to model alternative scenarios of design, implementation, outcomes and impacts will produce high returns. Modelling approaches that combine analysis of vulnerability, livelihoods and market prices, on one hand, with analysis of supply-chain costs and returns, on the other, are likely to be especially effective for building understanding of system-level dynamics.

EMBRACE FOOD ASSISTANCE AS A BRIDGING INVESTMENT

Clearly, the road ahead for food assistance is fraught with immense challenges. But the landscape through which the road must be built is dotted with an ever-increasing number and range of potent opportunities. The stock-taking captured in WOFA 2017 confirms food assistance as the quintessential sectoral approach to humanitarian assistance, seeking to prevent or ameliorate impacts of acute manifestations of a particular form of human suffering: hunger. It also affirms food assistance as a vital pillar of sectoral investments in sustainable development. Sector-specific assistance is not inimical to effective and efficient humanitarian action. On the contrary, an implicit message of this report is that sector-specific humanitarian assistance is not only life-saving and livelihood-protecting, where it is aligned with national strategies, policies and investments that strengthen resilience at multiple levels, it is vital to sustainable development.



Chapter 3

Levels, Trends and Patterns of Food Assistance

This chapter examines the demand and supply sides of food assistance over the period 2009 to 2016. The aim is not to provide a definitive portrayal of how all aspects of food assistance unfolded over that period. Rather, using data from both the public domain and WFP operations, the section has two objectives: first, to build an understanding of demand-side dimensions of food assistance, as reflected in the geographical spread of WFP operations viewed alongside other features of national economies and food systems; and, second, to identify trends and patterns that describe core aspects of the supply of food assistance as a sector of human activity and investment based on how different aspects of WFP operations have evolved in recent years.

A woman registers on WFP's SCOPE system in Mogadishu, Somalia.
WFP/Kabir Dhanji

The demand for food assistance: multiple contexts, myriad drivers, and global

Levels and trends in food-system performance and hunger are components and indicators of long-term transformations of economies and societies (Timmer, 2014). They also determine and reflect more immediate challenges and hazards that breed the disruption and instability that fuel and mirror humanitarian crises featuring food assistance (WFP, 2016). But not every hazard ends in a crisis or food emergency. Emergencies arise when severe hazards encounter deep vulnerability, high risk exposure and insufficient capacity or measures to reduce or cope with the potential negative consequences (IFAD, 2011).

Anecdotally, food-system performance, national income, hunger, and instability would appear to be closely intertwined, jointly driving "demand" for food assistance. As shown in Figure 1.2 in Chapter 1, that demand is broad-based and significant. But looking across the globe, is there an empirical basis on which to understand the different contexts in which food assistance is demanded?

To answer that question, measures of national income, food-system performance, hunger and instability are examined in 77 countries with a view to identifying significant associations. The selection of countries ensures global coverage subject to practical considerations of data availability, especially for the variables measuring food-system performance (Table 3.1).

TABLE 3.1: Countries included in the demand-side analysis

Region	Countries	Count
APR	Azerbaijan, Bangladesh, Cambodia, China, India, Indonesia, Kazakhstan, Republic of Korea, Lao People's Democratic Republic, Malaysia, Myanmar, Nepal, Pakistan, the Philippines, Sri Lanka, Tajikistan, Thailand, Uzbekistan, Vietnam	19
LAC	Argentina, Bolivia, Brazil, Chile, Colombia, Costa Rica, the Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Mexico, Nicaragua, Panama, Paraguay, Peru, Uruguay, Venezuela	19
MENA	Algeria, Egypt, Jordan, Kuwait, Morocco, Oman, Saudi Arabia, Sudan, the Syrian Arab Republic, Tunisia, Turkey, Republic of Yemen	12
ECA	Burundi, Ethiopia, Kenya, Malawi, Rwanda, Uganda	6
WA	Angola, Benin, Burkina Faso, Cameroon, Chad, the Democratic Republic of the Congo, Côte d'Ivoire, Ghana, Guinea, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo	15
SA	Botswana, Madagascar, Mozambique, South Africa, Tanzania, Zambia	6
	TOTAL	**77**

Income level is captured by gross national income (GNI) per capita in 2016:[xiv] a higher value represents higher income. Food-system performance is captured by the global food security index (GFSI) for 2016:[xv] a greater value represents a higher level of food-system performance. Hunger is captured by the prevalence of underweight among children in the most recent available year:[xvi] a greater value represents a higher level of hunger. Instability is captured by the index for risk management (INFORM) for 2016:[xvii] a greater value represents a higher level of instability.

A four-dimensional typology of the 77 countries is developed on the basis of food-system performance, hunger and instability, with each one disaggregated by income level (Table 3.2).[xviii] Countries are classified as having "high" or "low" food-system performance if their GFSI score is above or below the average of 51.84. Countries are classified as having "high" hunger if child underweight is above 25 percent, "medium" if it is between 5 percent and 25 percent, and "low" if it is below 5 percent. And they are classified as having "high" instability if the INFORM risk score is above 5.0, "medium" if it is between 3.5 and 5.0, and "low" if it is below 3.5.

TABLE 3.2: Typology for examining linkages of food system performance, hunger and instability

Phenomenon	Variable used	Level	Classification criteria
Food-system performance	GFSI*	Low	Below sample index mean of 51.84
		High	Above sample index mean of 51.84
Hunger	Prevalence of child underweight**	Low	Below or equal to 5 percent
		Medium	Between 5 percent and 25 percent
		High	Above 25 percent
Instability	INFORM index***	Low	Below 3.5 points
		Medium	Between 3.5 and 5 points
		High	Above 5 points
Income level	GNI per capita****	Low	Below or equal to US$1 025
		Low-middle	Between US$1 026 and US$4 035
		Upper-middle	Between US$4 036 and US$12 475
		High	Equal to or above US$12 476

*Sources: * Economist Intelligence Unit (2016); ** WHO (2016); *** INFORM (2016); **** World Bank.*

One would expect higher levels of income to coincide with higher levels of food system performance, lower hunger burdens and greater stability, and vice versa. Higher levels of food system performance should also be associated with lower hunger burdens and greater stability, and vice versa. Higher hunger burdens should accompany lower stability, and vice versa. Correlation analysis confirms these relationships at the global level (see Table 3.3);[xix] the national-level picture captured in Table 3.4 is more nuanced.

Four groups of countries emerge on the basis of stability and food-system performance (see Table 3.4): 16 relatively stable high performers, one relatively stable low performer, 22 relatively unstable high performers and 38 relatively unstable low performers. The groups are colour coded in the table.

TABLE 3.3: Global correlation coefficients

	Food-system performance	**Hunger**	**Instability**	**Instability**
Food-system performance	1.00			
Hunger	-0.70*	1.00		
Instability	-0.60*	0.64*	1.00	
Income level	0.91*	-0.69*	-0.61*	1.00

** denotes statistical significance at 5% level. / Sources: WFP, based on World Bank (2015), WHO (2015), EIU (2016).*

Refugee families use WFP vouchers to purchase food at La Finca Market, Ecuador.
WFP/Berta Tilmantaite

TABLE 3.4: Distribution of countries in the typology, showing totals

Food-system performance	Hunger burden	Income status	Instability				Total
			Low	Medium	High	Subtotal	
High	Low	High	4			4	**24**
		Upper middle	5	10	1	16	
		Lower middle	4			4	
		Low				-	
	Medium	High	2			2	**13**
		Upper middle	2	3		5	
		Lower middle		5	1	6	
		Low				-	
	High	High				-	**1**
		Upper middle				-	
		Lower middle		1		1	
		Low				-	
		Subtotal	17	19	2	38	**38**
Low	Low	All Levels				-	**0**
	Medium	High				-	**25**
		Upper middle		1		1	
		Lower middle	1	6	5	12	
		Low		7	5	12	
	High	High				-	**14**
		Upper middle				-	
		Lower middle		1	5	6	
		Low		3	5	8	
		Subtotal	1	18	20	39	**39**
		Total	**18**	**37**	**22**	**77**	**77**

Source: WFP.
Note: green = stable high performers; dark blue = stable low performers; light blue= unstable high performers; orange = unstable low performers.

Although 24 of the 38 countries with high-performing food systems have low hunger burdens, 14 of them – 35 percent – have medium to high hunger burdens. Of the 18 relatively stable countries, 17 register high food system performance. Only 11 relatively unstable countries – medium to high instability – register high food-system performance and low hunger burdens. Low food-system performance is registered in 38 relatively unstable countries, but 21 such countries have relatively high performance. And although 48 of these unstable countries have medium to high hunger burdens, 11 have low burdens. No LIC registers high food system performance or low hunger. Only one of the 22 UMICs is a low performer: 16 of them register low hunger burdens and the rest medium hunger burdens. Of the 29 LMICs, a strong majority of 18 are low performers, seven of them with high hunger burdens. Only four LMICs have low hunger burdens.

Obviously a static country-level analysis of this kind cannot fully capture complex interactions among phenomena that are inherently dynamic and expressed at the sub-national level. But a number of preliminary conclusions can be drawn. Although low income tends to coincide with low-performing food systems, such low performance appears to continue well into middle-income status. It appears to be difficult – if not impossible – to register low hunger in the absence of high-performing food systems, but high overall food-system performance seems not to be sufficient for low hunger. Stability clearly counts, though perhaps not necessarily decisively. Instability is probably damaging but may not necessarily be debilitating. Relatively low aggregate levels of hunger appear to be achievable in unstable settings, but pockets of high vulnerability and food insecurity may remain.

Most important for this report, the distribution of countries in the typology resonates strongly with the geography of food assistance as captured in WFP's portfolio (see Figure 1.2). WFP has food assistance operations in all 38 of the unstable low performers. Most of them are LICs, but a significant number are MICs. WFP also has a significant presence in Ghana, the single stable low performer in the sample. Several countries with relatively high performing food systems, all of which are MICs, appear in WFP's portfolio as a result of relatively high hunger burdens – El Salvador, for example – or relatively high instability – the Philippines, for example. Some countries registering relatively strong food-system performance on aggregate contain significant pockets of vulnerability and food insecurity for which food assistance is required; Colombia is an example.

Table 3.5 confirms that the nature of demand for food assistance varies significantly in the typology. The table compares the value, total beneficiary caseload and shares of beneficiaries receiving general food distribution (GFD) and school meals in 2015 for five countries in all four segments of the typology. In contexts of high vulnerability and disruption GFD is the typical food assistance modality; school meals are relevant in many contexts but are especially important in transition and development contexts. The results resonate with the logic of the typology.

At one extreme is Paraguay, a relatively stable UMIC with a high-performing food system in which WFP's activities in 2015 centred on technical assistance for early warning and emergency preparedness and was valued at only US$127,000; there were no direct beneficiaries. In Ghana, a relatively stable LMIC with a relatively low-performing food system, WFP's operation was much larger: there were numerous direct beneficiaries, but few of them received GFD.

At the other extreme is South Sudan, a highly disrupted LIC where the massive 2015 operation was valued at US$518 million; there were 2.9 million beneficiaries, most of whom received GFD. Another country at this extreme is the Syrian Arab Republic, a highly disrupted LMIC with a similarly massive portfolio and an even greater need for GFD.

In between is Egypt, a relatively unstable UMIC with a relatively high-performing food system. Most direct beneficiaries in a moderately-sized portfolio were school children in a programme embedded in the Government's social safety net.

TABLE 3.5: Demand for food assistance across country context, 2015

FEATURE	COUNTRY CONTEXT				
Stability	**Relatively stable**		**Relatively unstable**		
Performance	**Relatively high**	**Relatively low**	**Relatively high**	**Relatively low**	
Income level	**UMIC**	**LMIC**	**LMIC**	**LMIC**	**LIC**
Example	**Paraguay**	**Ghana**	**Egypt**	**Syrian Arab Republic**	**South Sudan**
Operation size (US$thousands)	127	8 149	29 226	364 588	518 170
Direct beneficiaries	0	260 416	1 142 864	4 950 933	2 908 637
GFD beneficiaries (%)	0	3.3	7.6	98.7	66.9
School meals beneficiaries (%)	0	32.8	99.3	6.4	8.3

Note: Shares total more than 100 percent because beneficiaries can participate in more than one programme in a given year.

The supply of food assistance: multi-dimensional and dynamic

The framework employed to examine the supply-side of food assistance has four dimensions and three lenses (see Figure 3.1). Taking WFP country offices or their host countries as the basic unit of aggregation, the four dimensions comprise:

i. food assistance expenditures measured in US$ per year;[xx]

ii. direct beneficiaries of food assistance measured as the number of people receiving in-kind food or CBTs from WFP in any year;

iii. the form and objective of food assistance measured as expenditures on food assistance in WFP's five cost categories of food assistance: in-kind food transfers, CBTs, technical assistance, logistics and operational support and administration;[xxi] and

iv. the context of food assistance measured as expenditures of food assistance in WFP's five functional areas: emergencies, recovery and transition, development, special operations and a fifth area that is a composite of several small activity areas.[xxii]

Each of the dimensions is examined through three lenses:

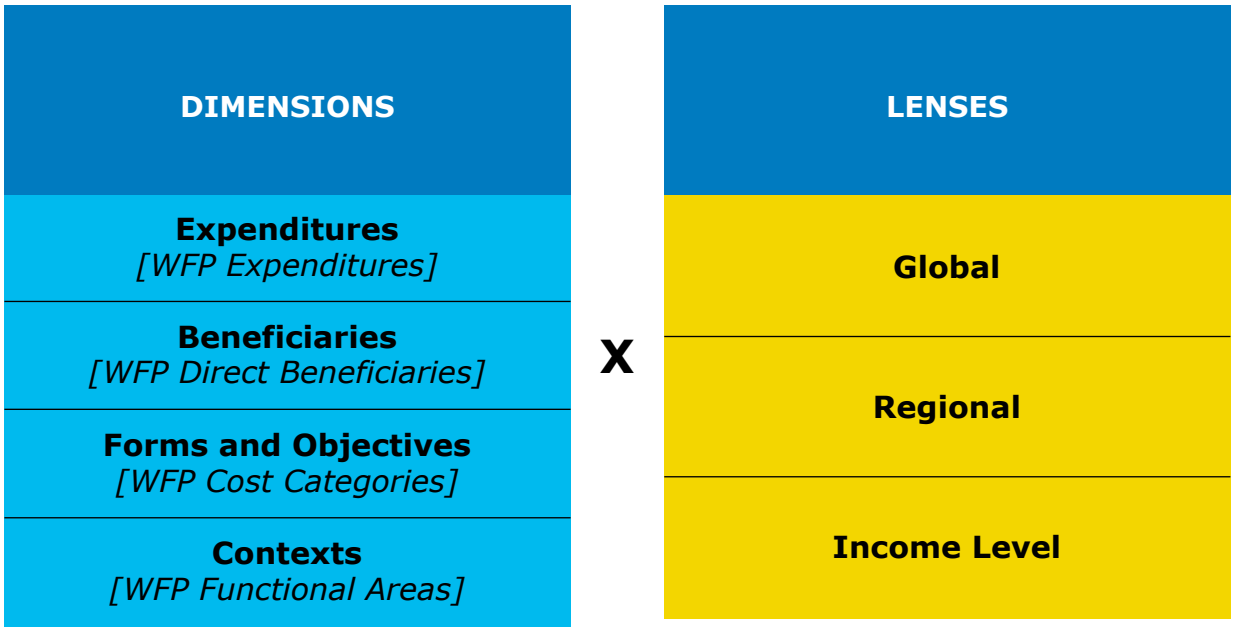
i. globally;

ii. regionally; and

iii. according to host country income levels.

Figures 3.2 to 3.21 detail the findings. Underlying data for each WFP country operation are presented in the Statistical Annex, along with detailed technical notes.

FIGURE 3.1: Framework for analysing the supply-side of food assistance



FOOD ASSISTANCE EXPENDITURES AND BENEFICIARIES

FIGURE 3.2: Since 2009, expenditures on food assistance have more than doubled

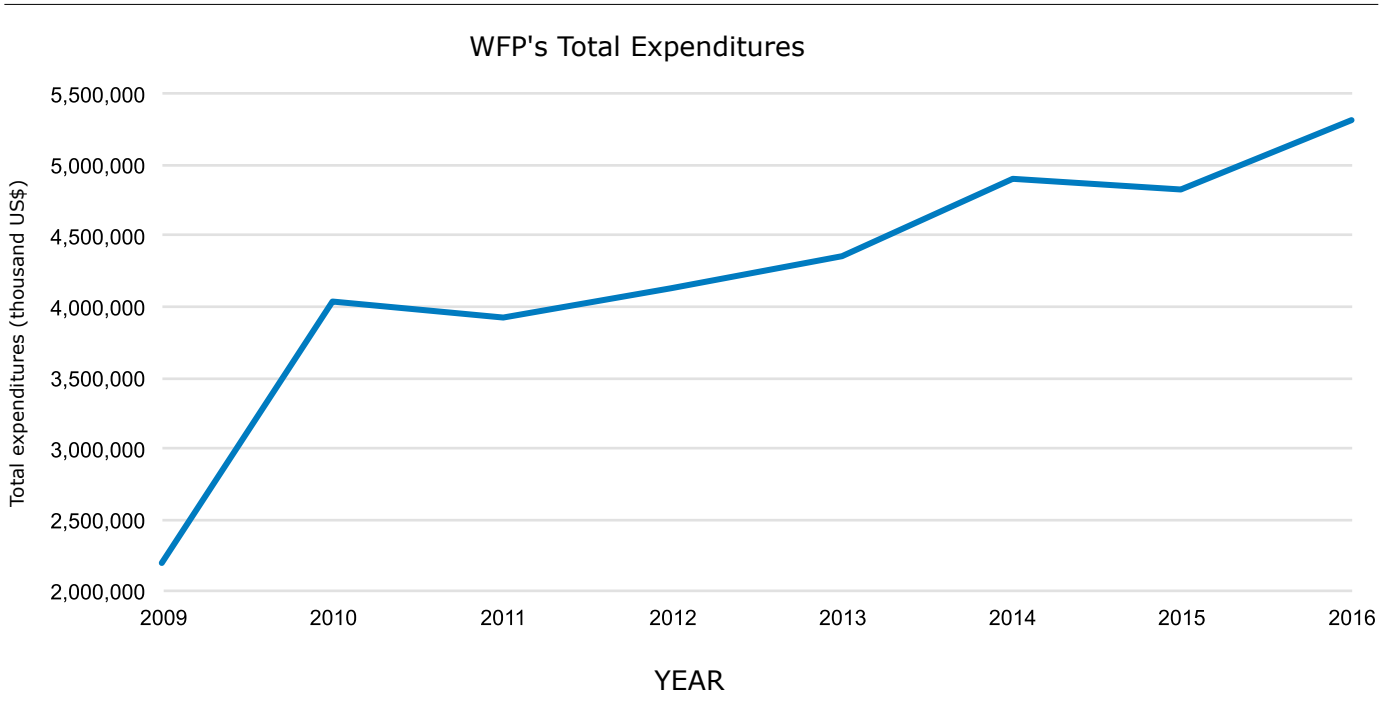
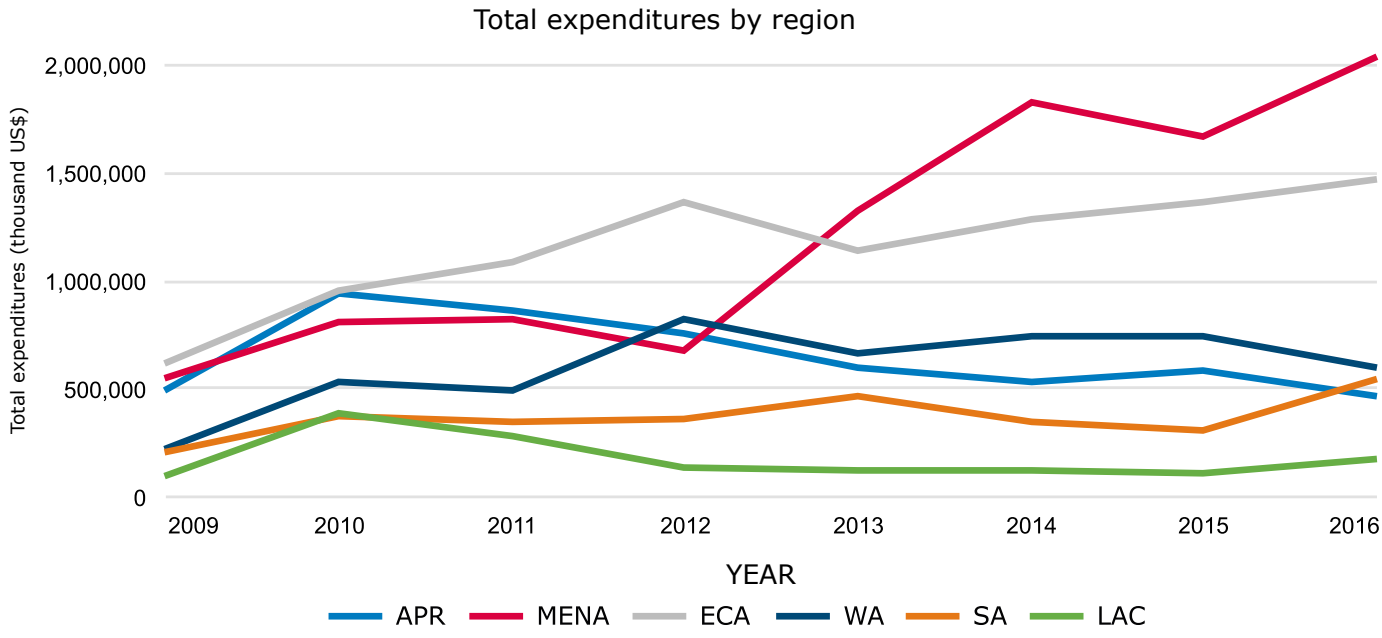
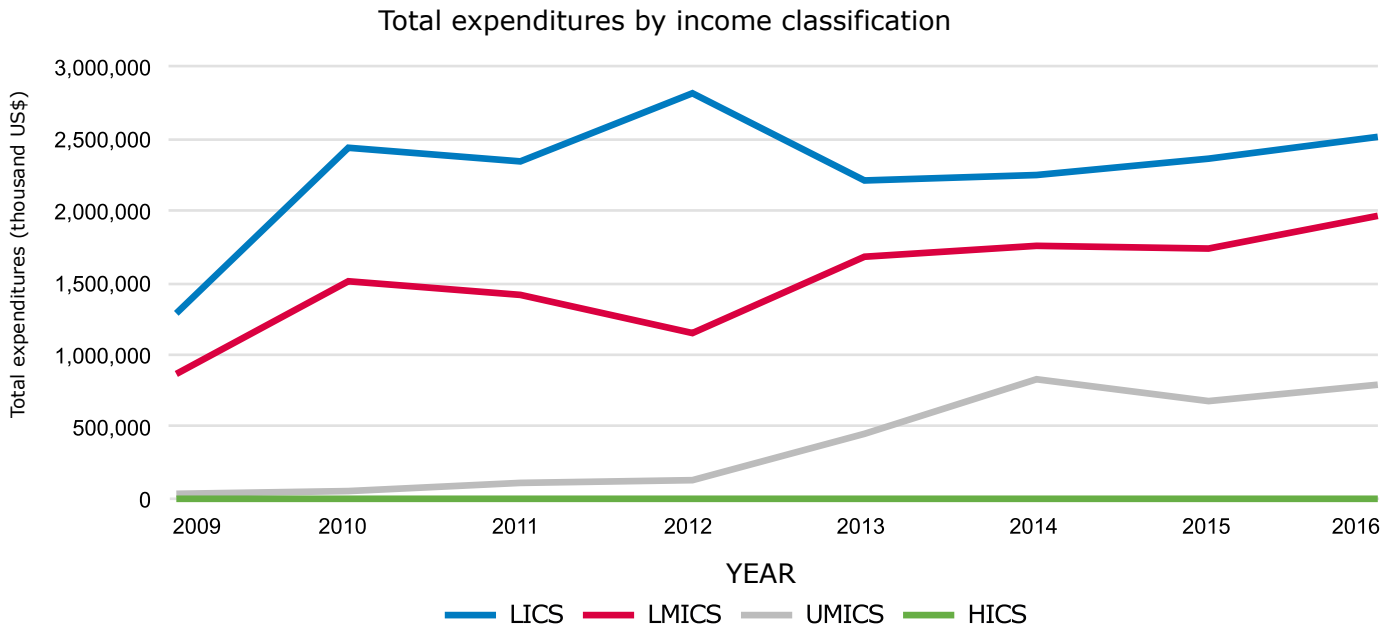


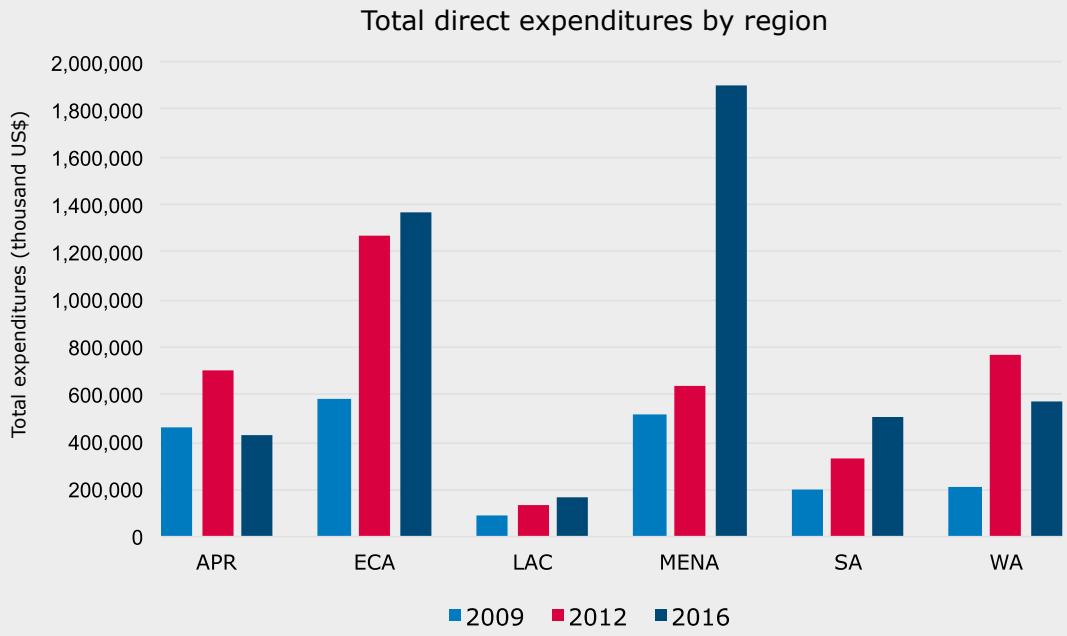
FIGURE 3.3: Expenditures grew in all regions and all income levels. By 2016, the MENA and ECA regions together accounted for 70 percent of expenditures, with those in MENA beginning to increase markedly in 2012. Expenditures in other regions were relatively flat. Throughout, LICs had the largest single share of expenditures, but since 2014, when combined, MICs have been dominant.

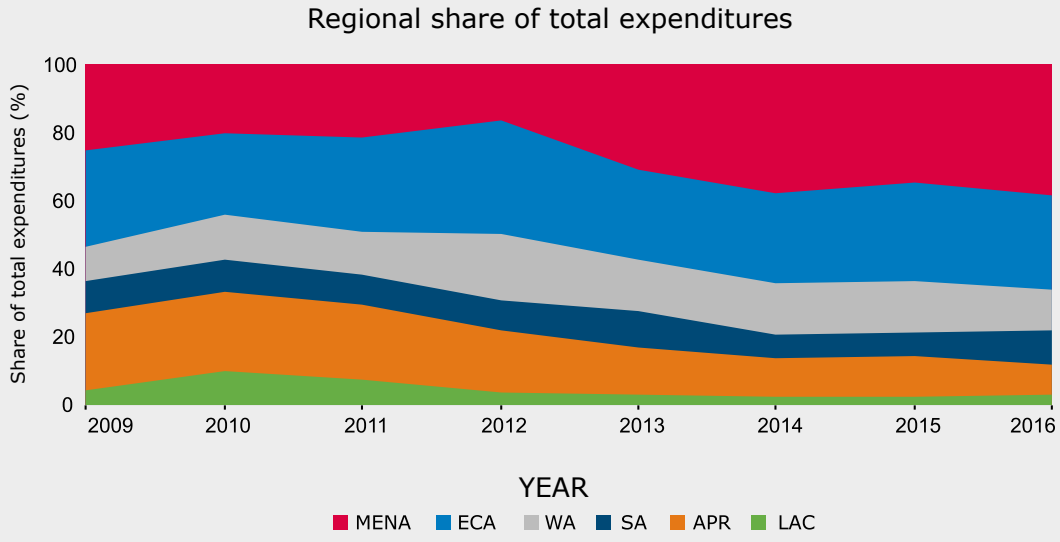




Note: Both direct expenditures and indirect support costs are included.

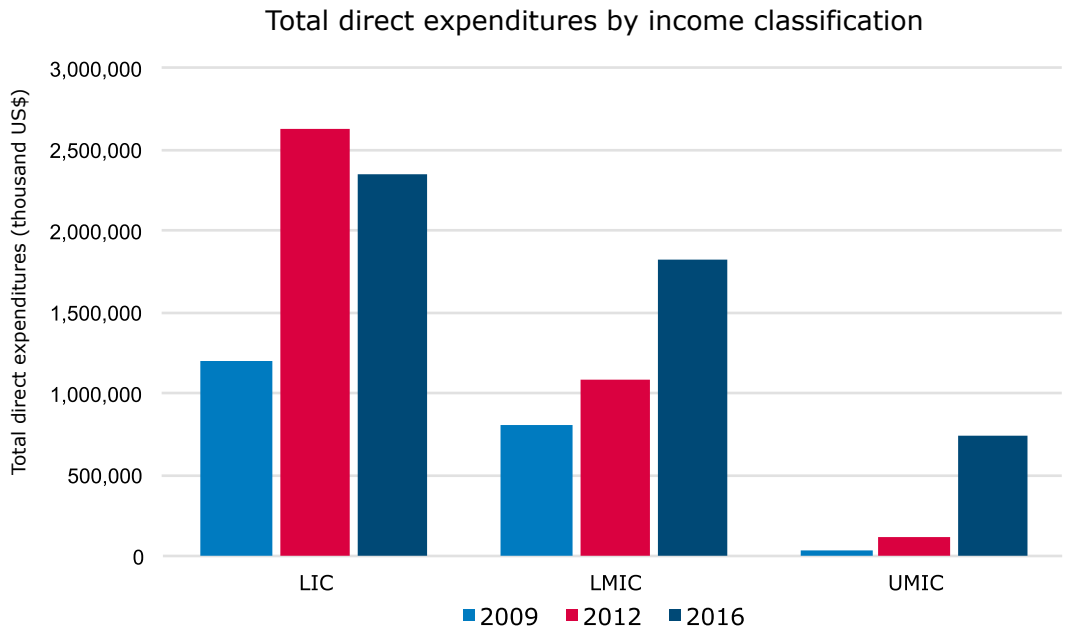
FIGURE 3.4: Expenditures have increased in all regions except APR and WA. In these regions they fell between 2012 and 2016. MENA has progressively captured a greater share of expenditures at the expense of all other regions except ECA. The decline in shares has been sharpest for APR.

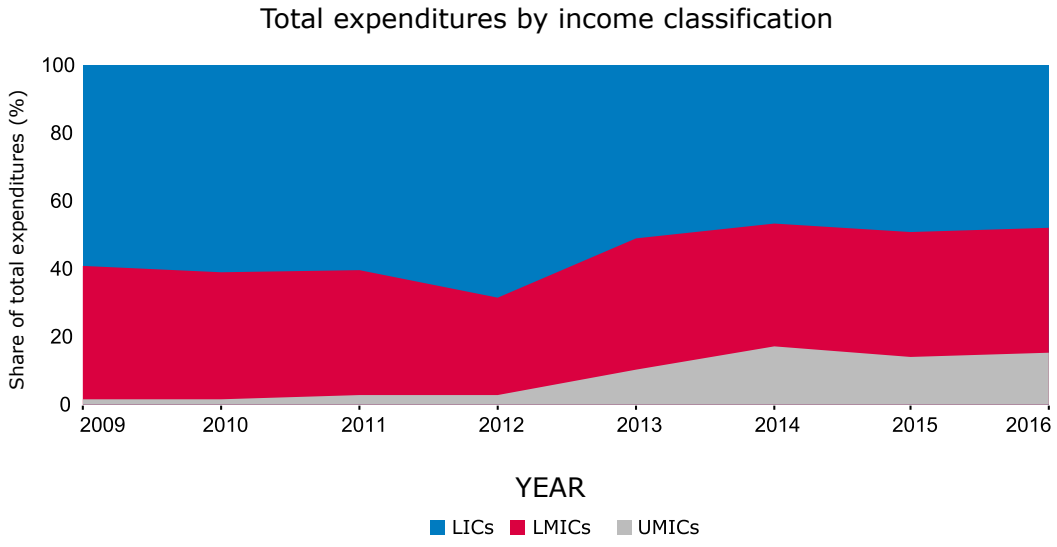




Note: Both direct expenditures and indirect support costs are included.

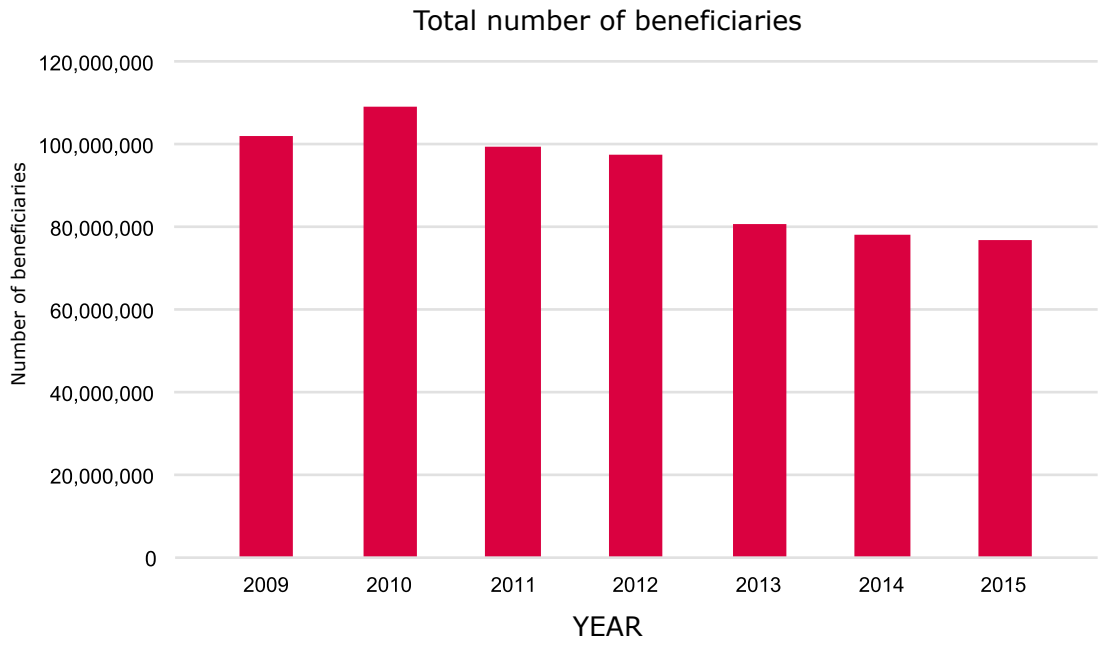
FIGURE 3.5: Expenditures in MICs have increased, especially in UMICs. In UMICS the share surged between 2012 and 2014. Expenditures in LICs dipped slightly between 2012 and 2016 but remain the largest in terms of value and share for any single income group.





Note: Both direct expenditures and indirect support costs are included.

FIGURE 3.6: The total number of direct beneficiaries of food assistance has been falling. It has, however, stood consistently at 10 percent of the global population of undernourished people.



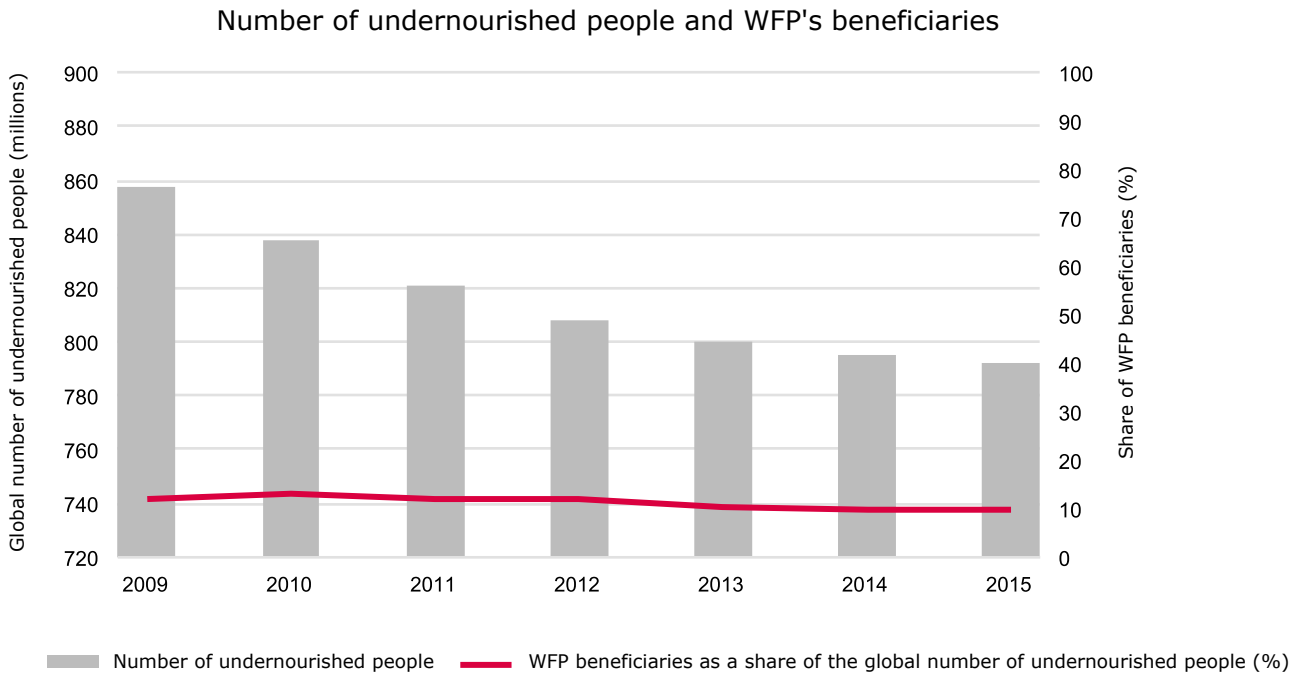
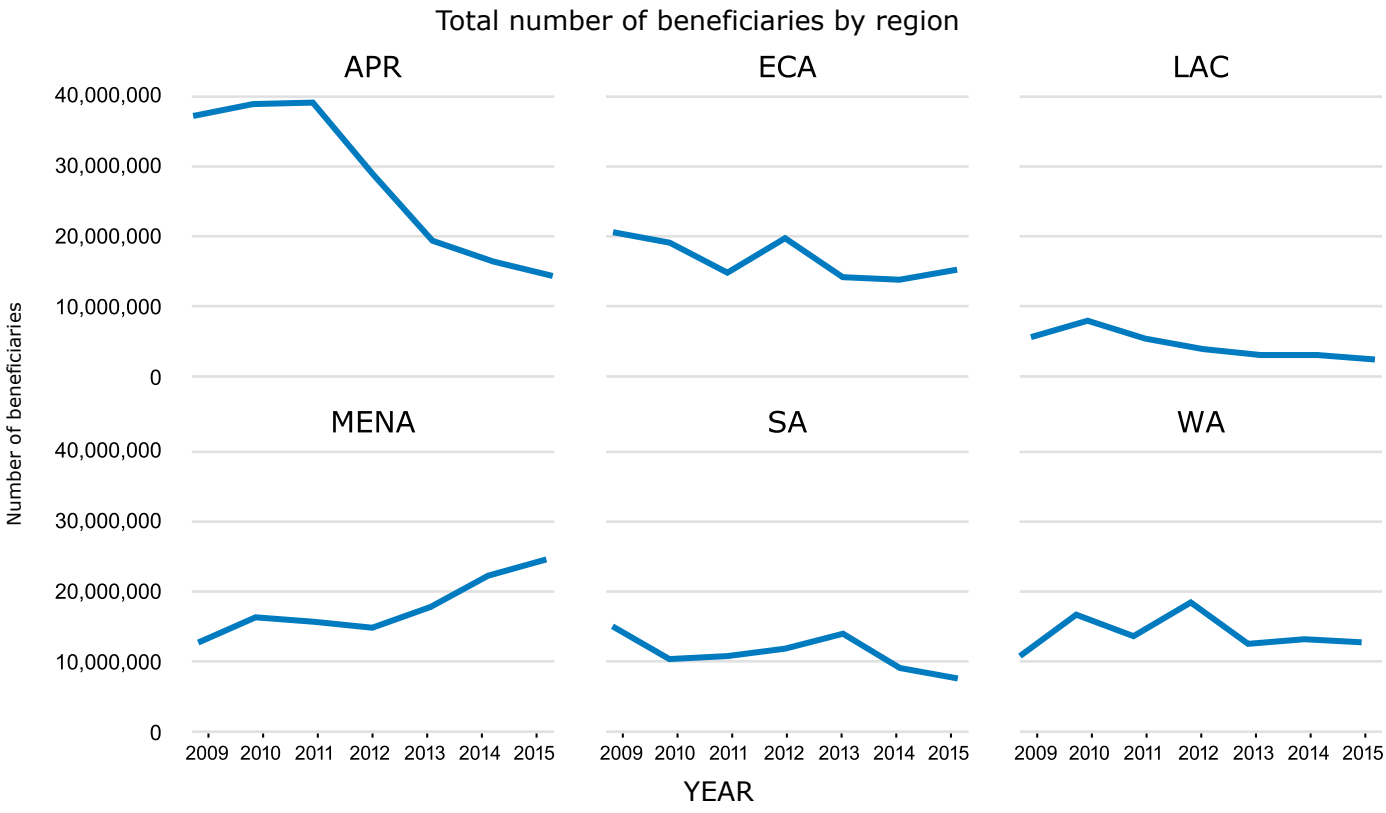


FIGURE 3.7: The decline in beneficiary numbers has been global, except in MENA. The decline has also cut across gender, but it has not affected gender distribution: women consistently account for 51 percent of expenditures.



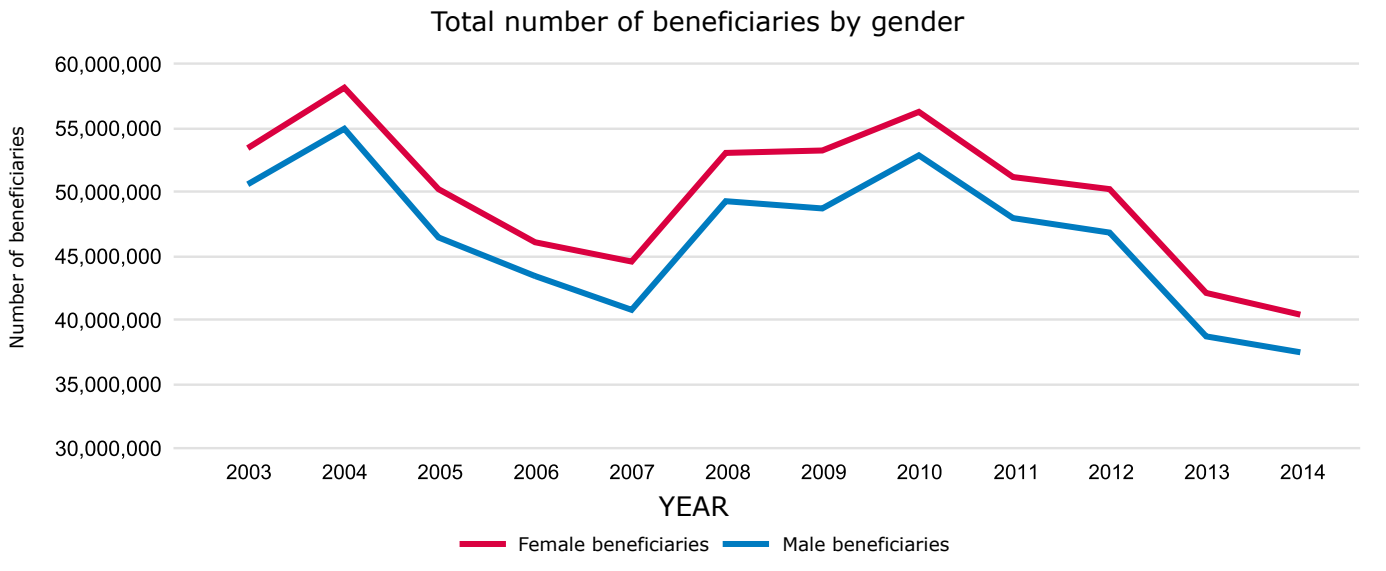
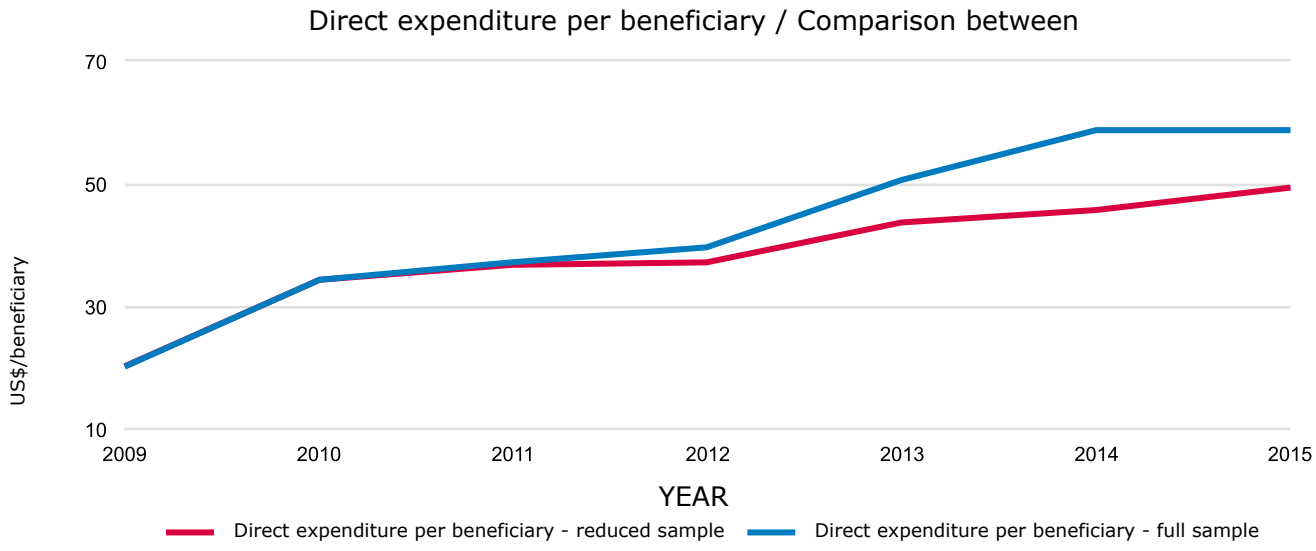
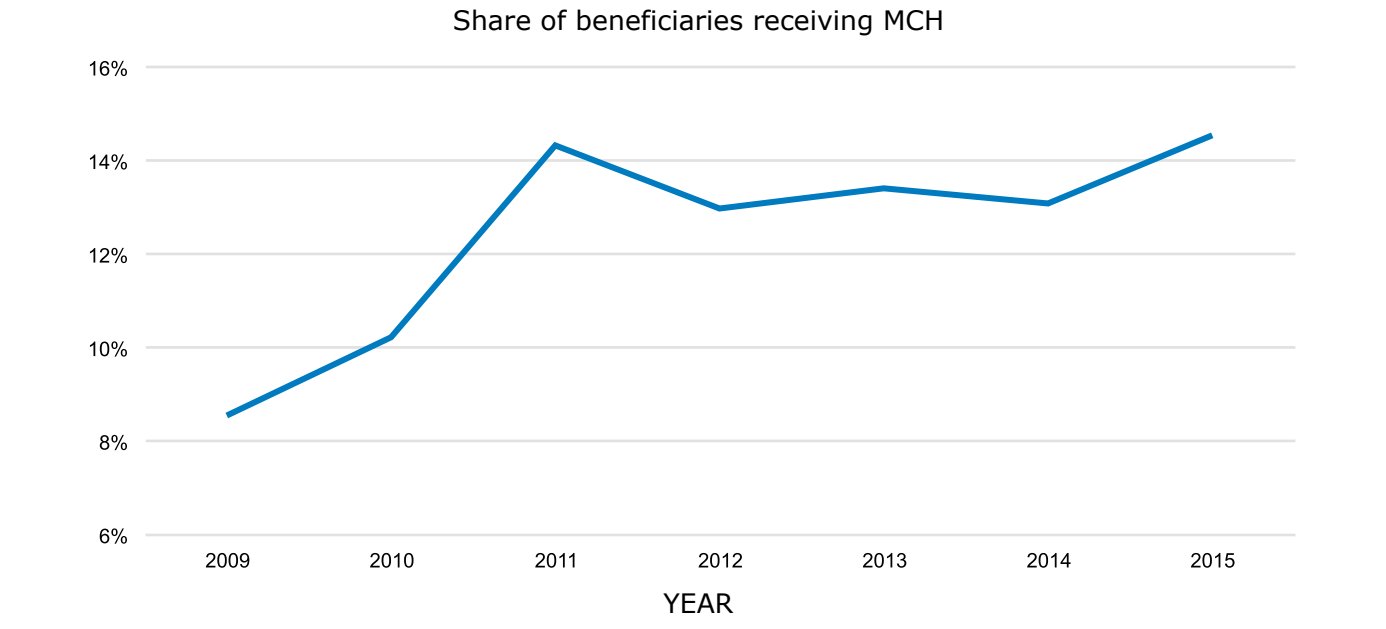
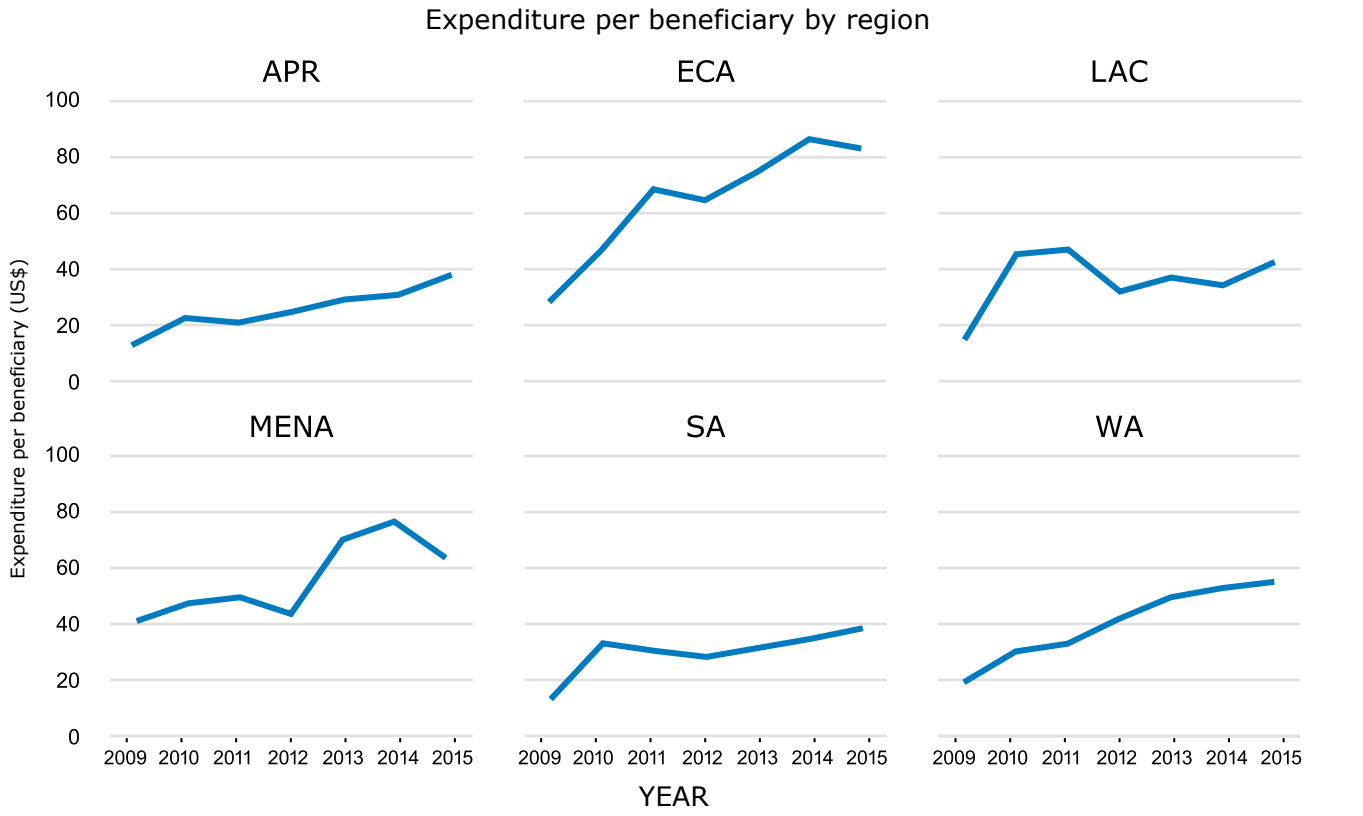


FIGURE 3.8: Expenditure per direct beneficiary has increased globally. This is largely due to increasingly complex emergencies with high access costs, but it is also due to increasing use of special nutritious products. The level of expenditure per beneficiary in 2015 is US$10 lower when costs related to the emergency in the Syrian Arab Republic and the South Sudan crisis are excluded. The increase in expenditure per beneficiary has occurred in all regions, but especially in: i) ECA where in-kind food dominates transfers and where distribution costs are high because of insecurity and poor infrastructure; ii) in MENA where access costs are high as a result of insecurity; and iii) in WA where the share of beneficiaries receiving high-quality interventions such as special nutritious products for mother-and-child health (MCH) programmes has increased in recent years, albeit with interruptions.






Expenditure per beneficiary by region
APR
ECA
LAC
MENA
SA
WA
Expenditure per beneficiary (US$)
0
20
40
60
80
100
2009 2010 2011 2012 2013 2014 2015
YEAR

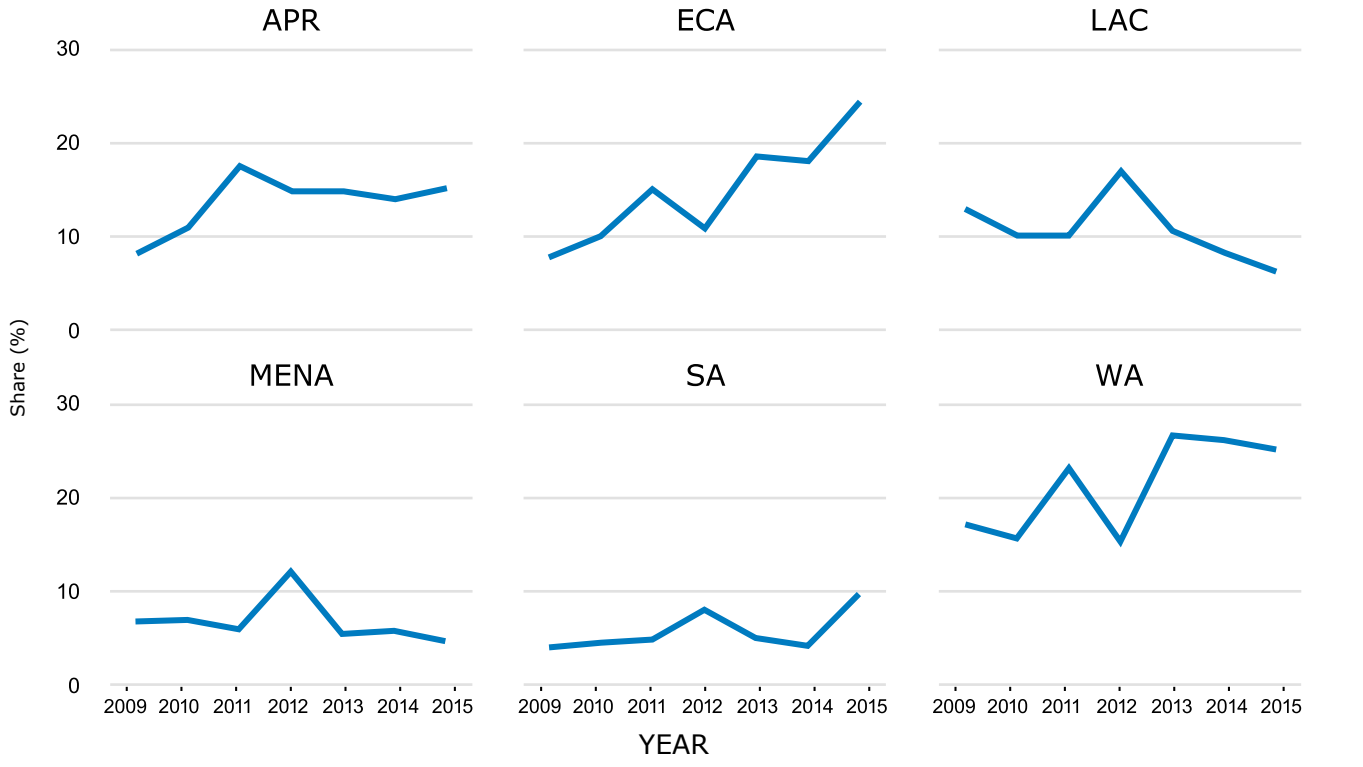
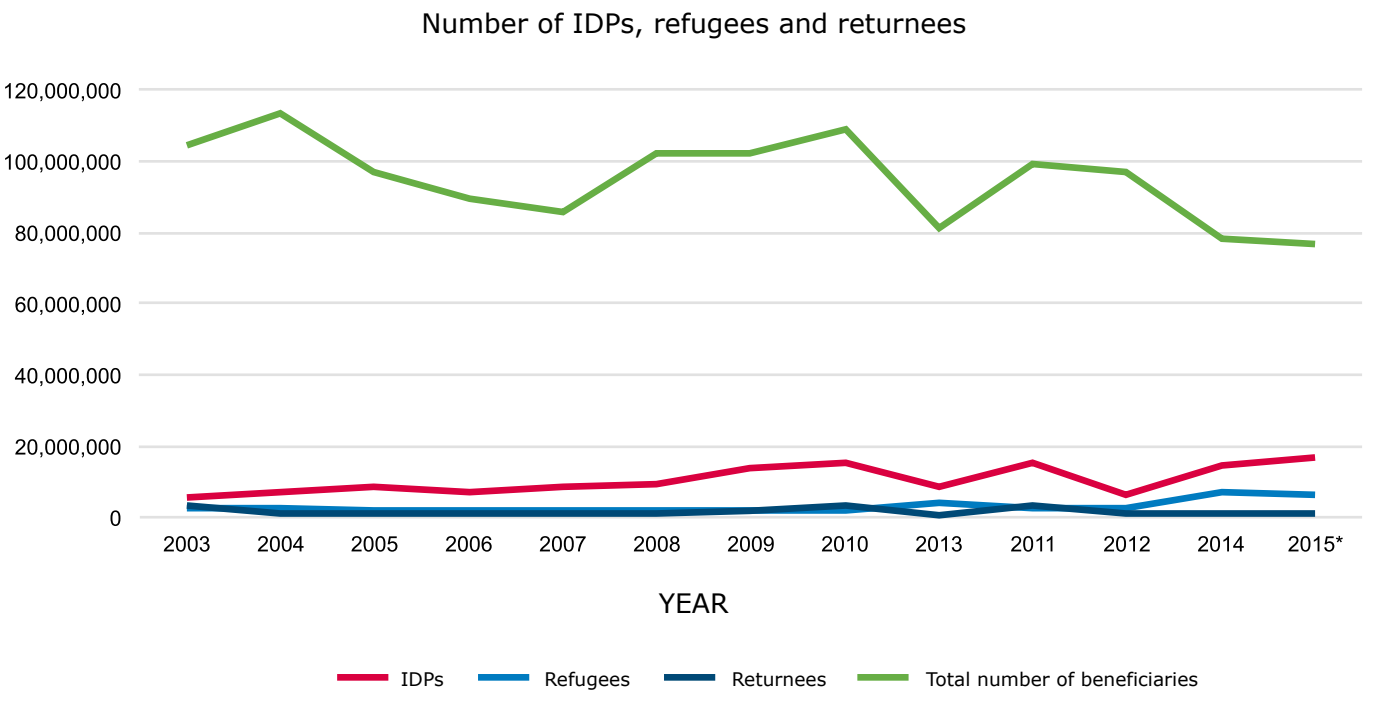

Share of beneficiaries receiving MCH by region
APR
ECA
LAC
MENA
SA
WA
Share (%)
0
10
20
30
2009 2010 2011 2012 2013 2014 2015
YEAR

FIGURE 3.9: Numbers of refugees, IDPs and returnees receiving food assistance have grown steadily. They still account for only 30 percent of the total, however. Of these three groups, IDPs are by far the most numerous.



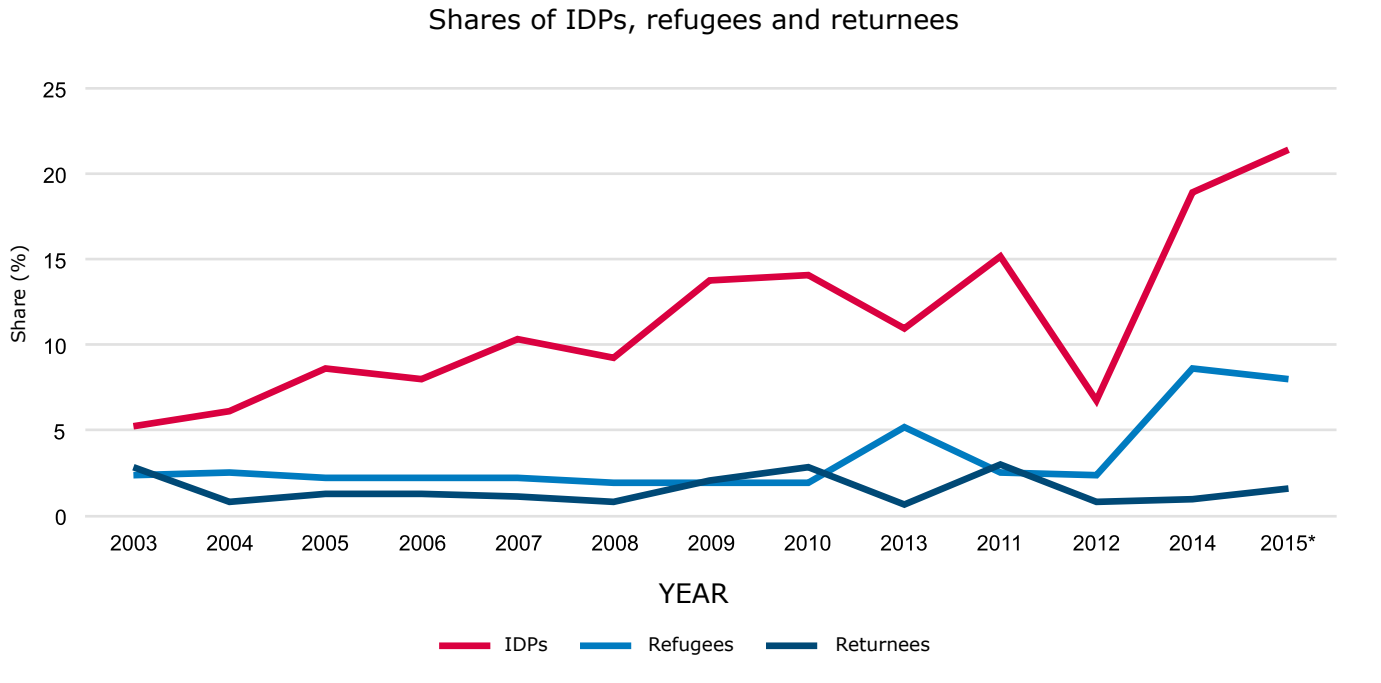
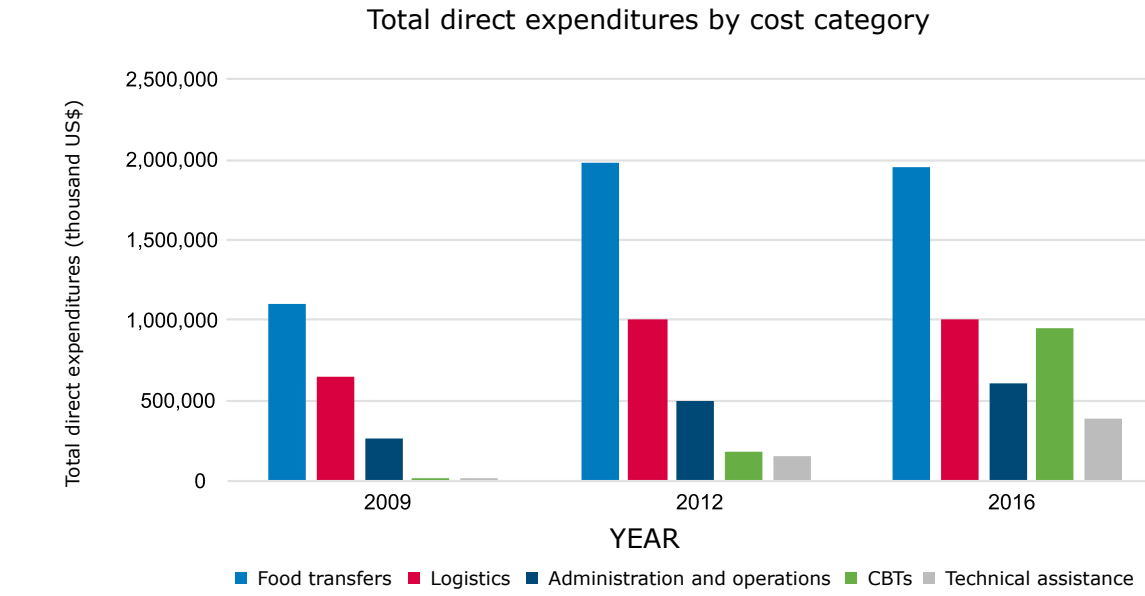


FIGURE 3.10: CBTs and technical assistance have grown in importance as cost categories in WFP's portfolio. This has been at the expense of in-kind food transfers, logistics and operational support and administration.



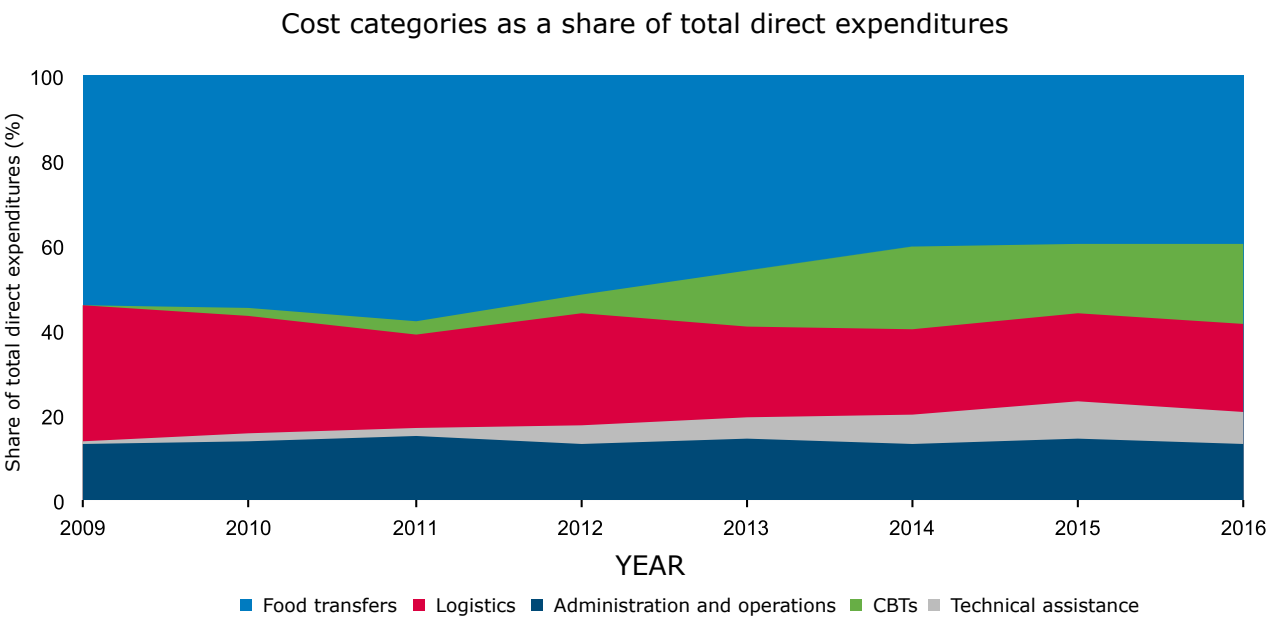
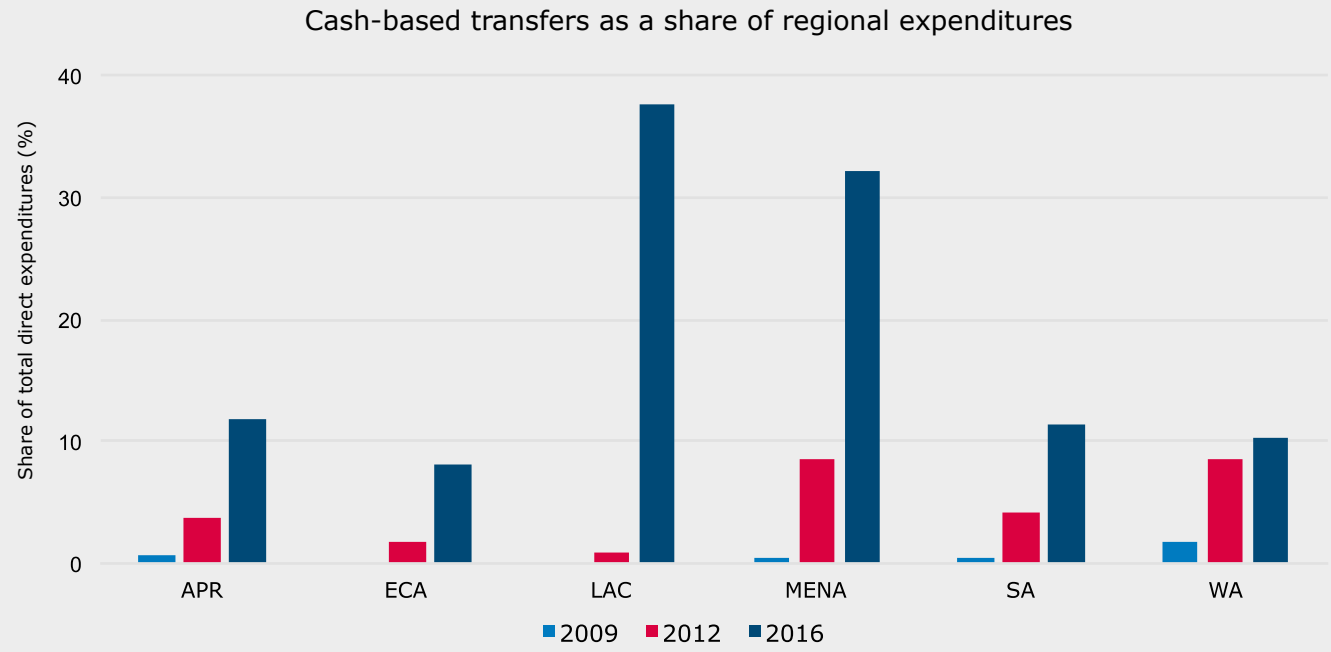


FIGURE 3.11: The cash revolution. The increase in CBT use has been greatest in LAC, where cash plays an important role in social assistance, and in MENA, where cash is a particularly appropriate transfer modality in the many urban areas affected by crises. The share of in-kind food transfers has fallen in all regions except MENA and SA because of market conditions and official requirements.



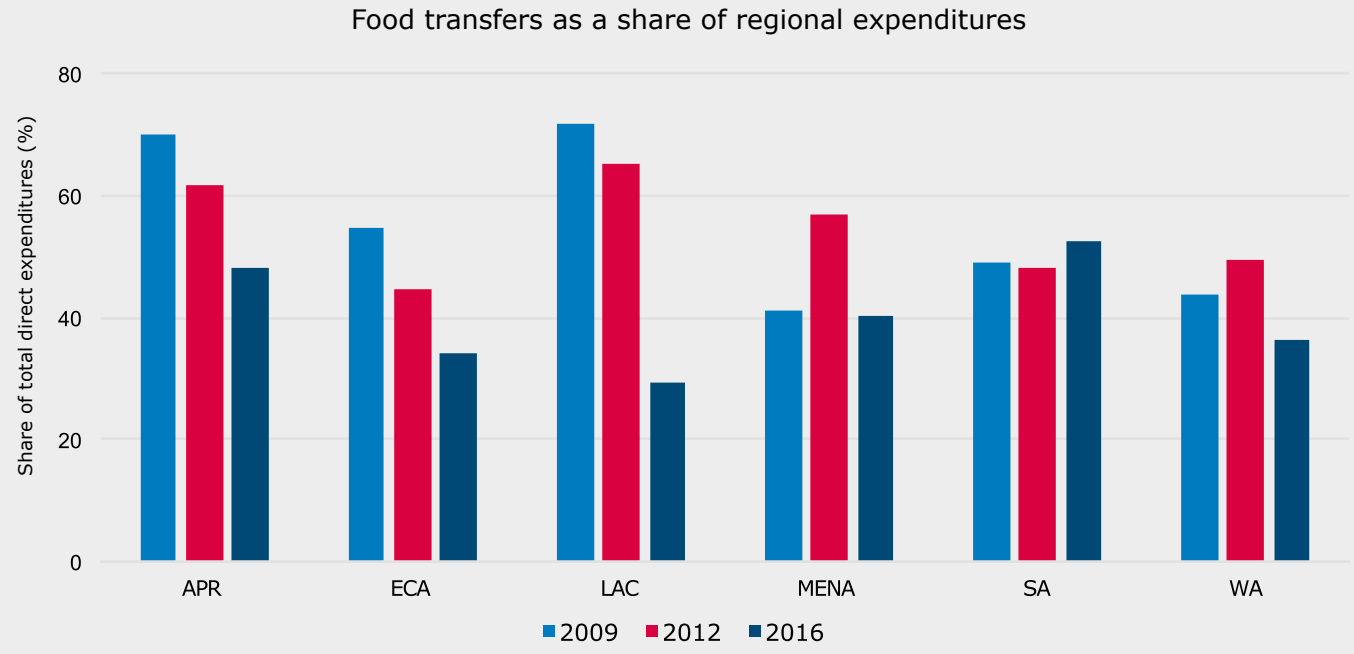
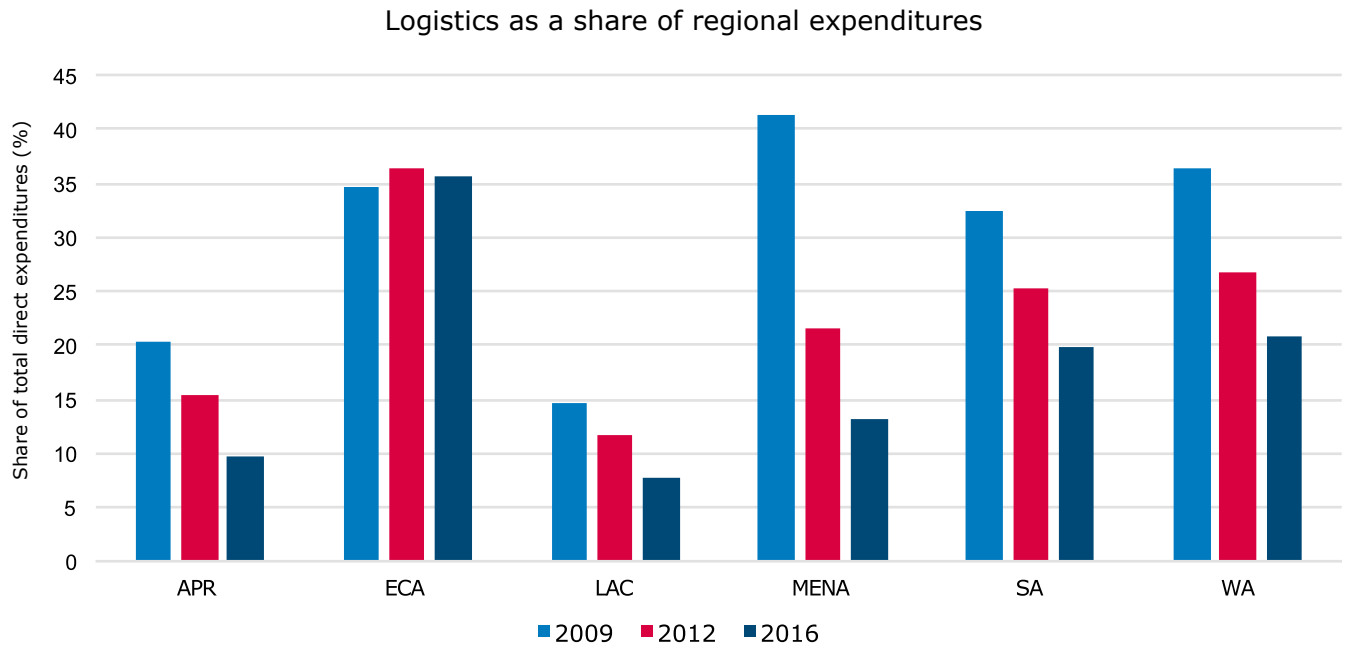


FIGURE 3.12: The shares of expenditure on logistics and in-kind food have fallen. They remain high in ECA, however, where in-kind food is important and distribution costs are high. The level and share of expenditures devoted to technical assistance has increased steadily in all regions as governments increasingly express demand for support to address the root causes of vulnerability and hunger.



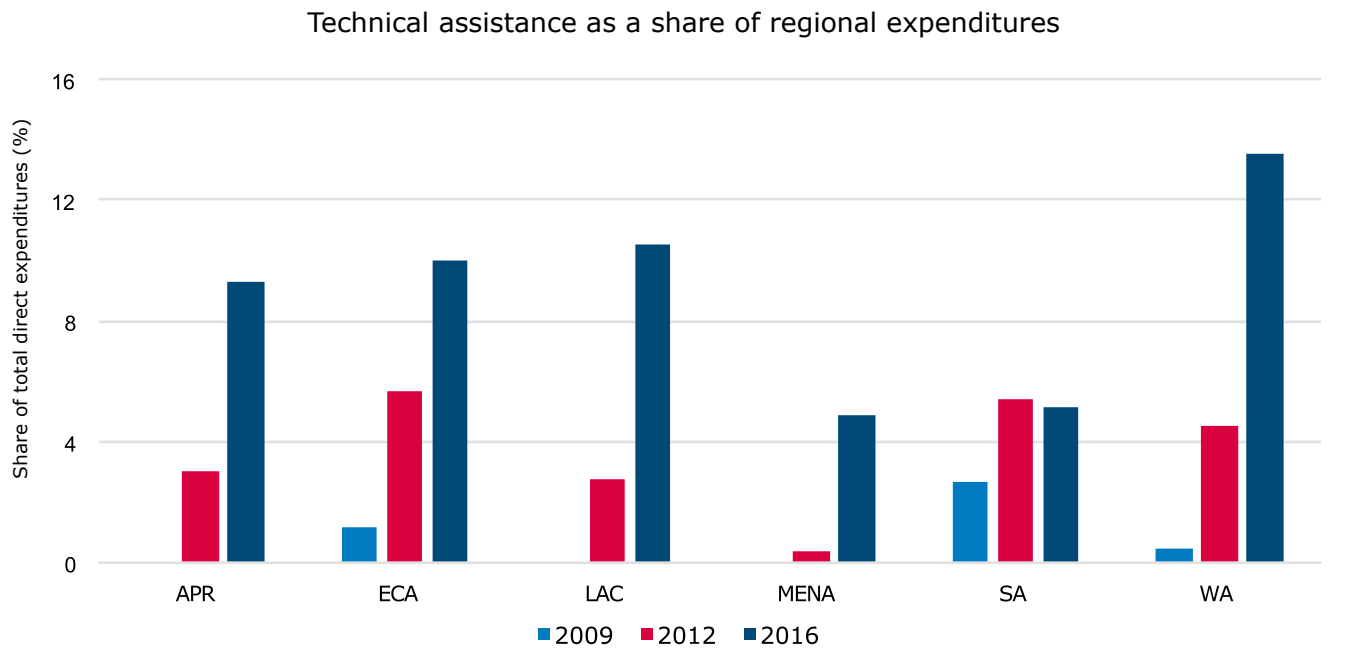
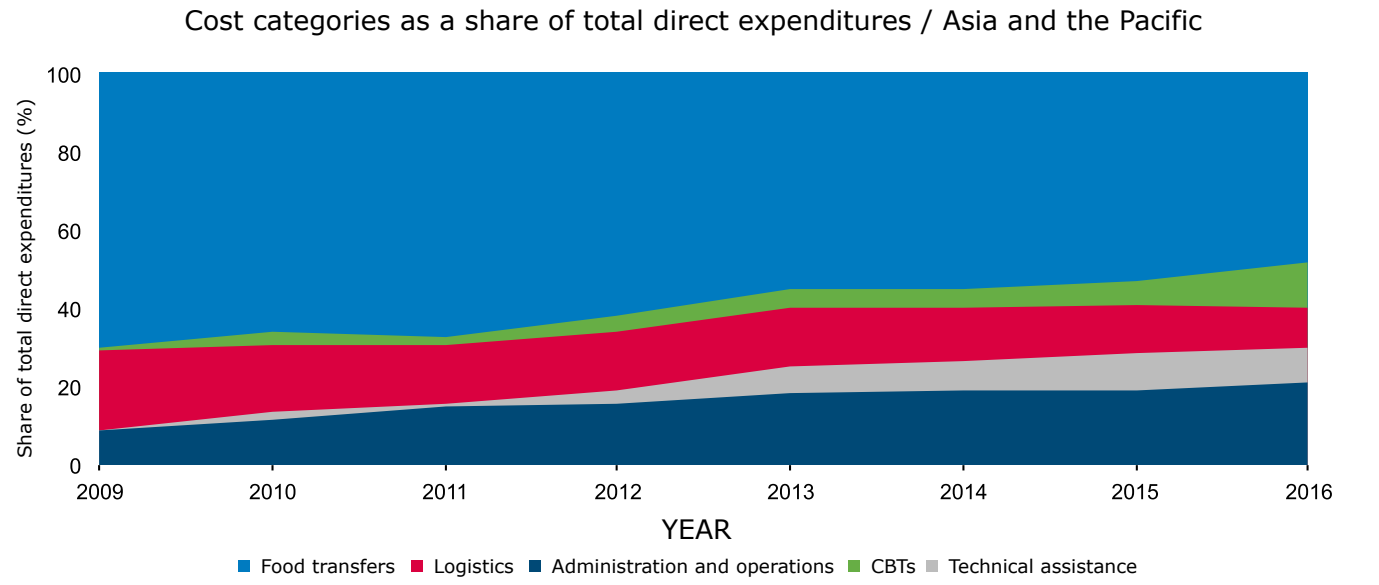


FIGURE 3.13: In APR, in-kind food transfers dominate CBTs, but the balance is shifting rapidly toward the latter. Technical assistance has also expanded while the share of logistics has fallen alongside in-kind transfers. In LAC, the other relatively small region in WFP's portfolio, save for a dip in 2012 following the earthquake in Haiti that required massive in-kind food transfers, the share of CBTs has grown steadily, surpassing in-kind food transfers in 2016, and accompanied by equally steady expansion of technical assistance.



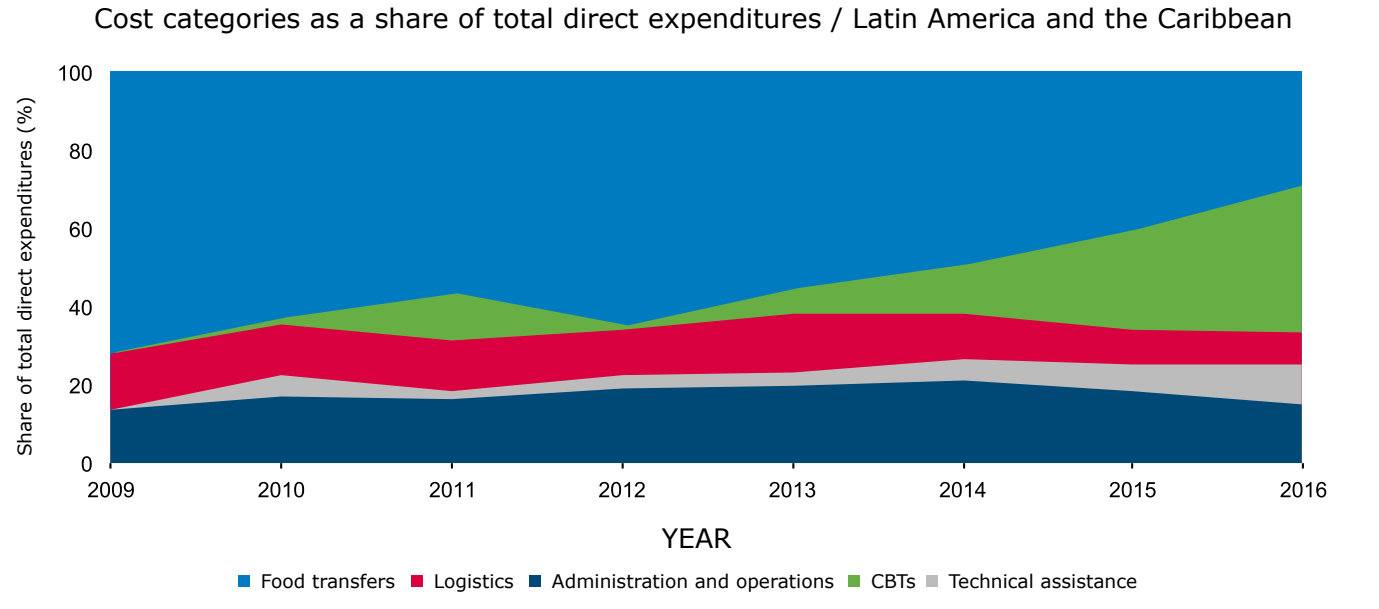
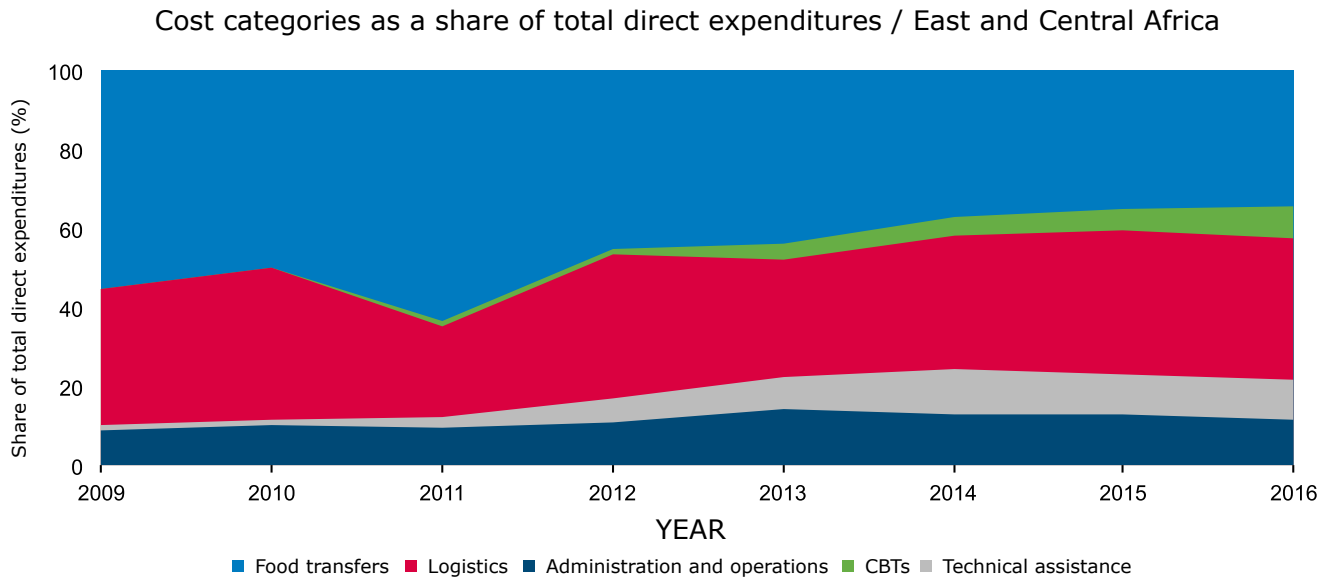


FIGURE 3.14: The surging portfolios in ECA and MENA have been based on sharply different forms and objectives of food assistance. In ECA in-kind food has decreased significantly since 2009, but it remains central, implying consistently high logistics costs and the growing but still limited role of CBTs. In MENA, in-kind food has retained its overall weight in the portfolio, but CBTs have surged at the expense of logistics. Technical assistance is increasing in both regions.



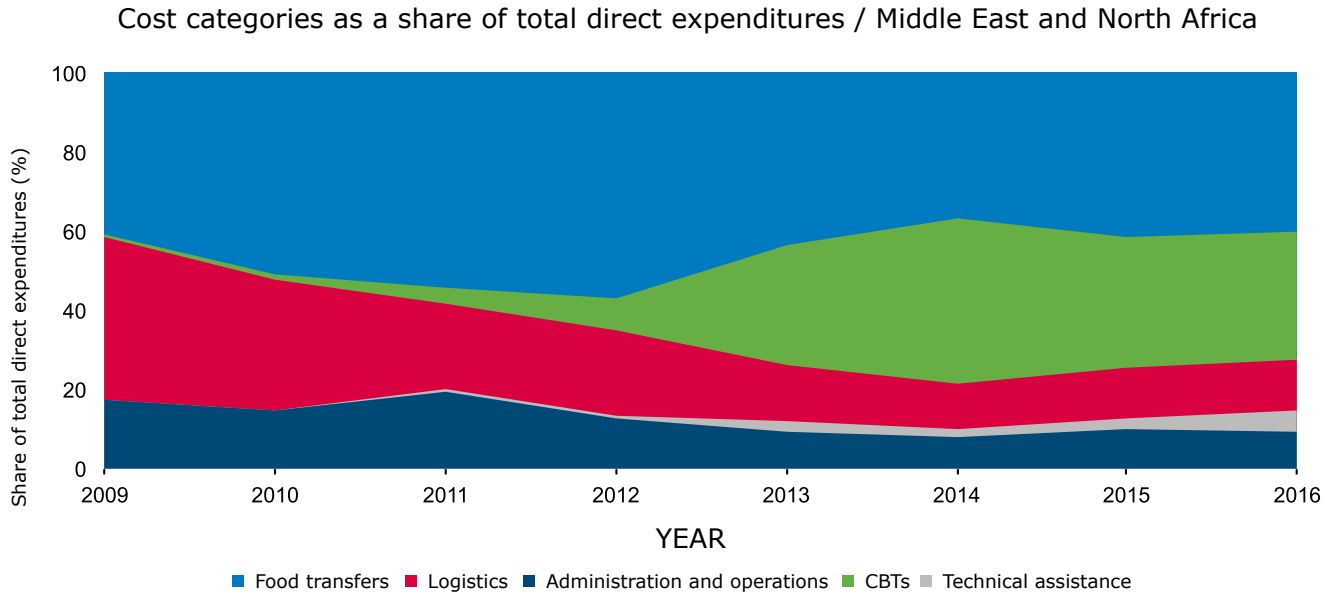
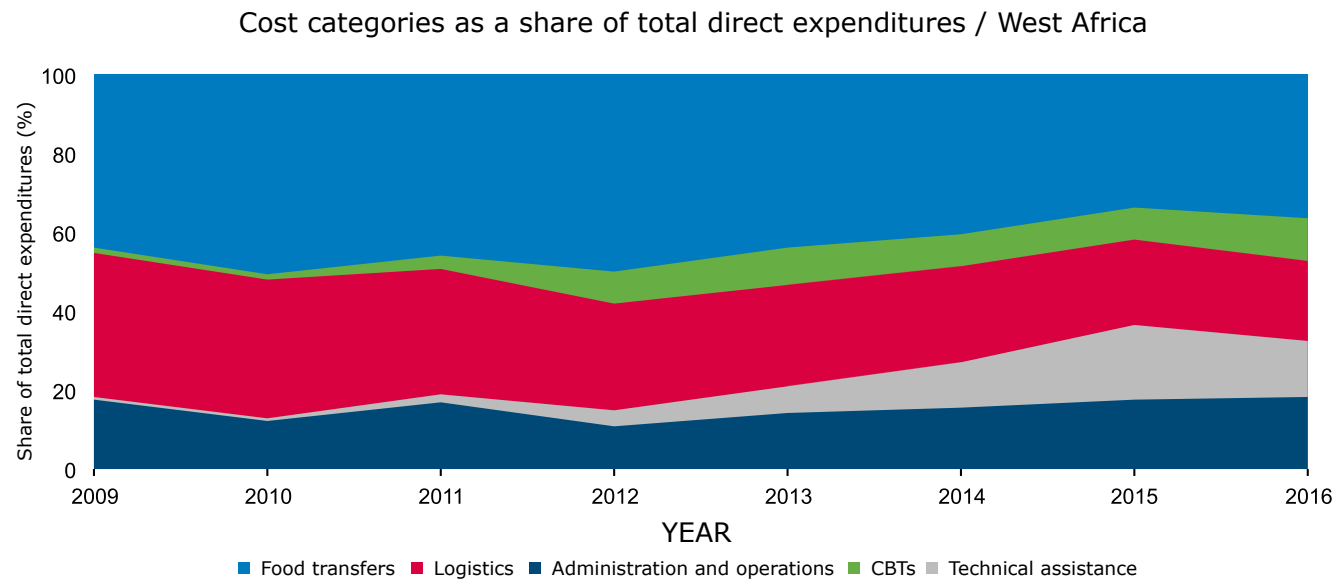


FIGURE 3.15: The forms and objectives of food assistance in SA and WA are very similar. The use of CBTs is growing, but in-kind food remains dominant; logistics accounts for a smaller share of costs. Technical assistance is expanding overall, but it dipped in 2016 as did all categories except in-kind food.



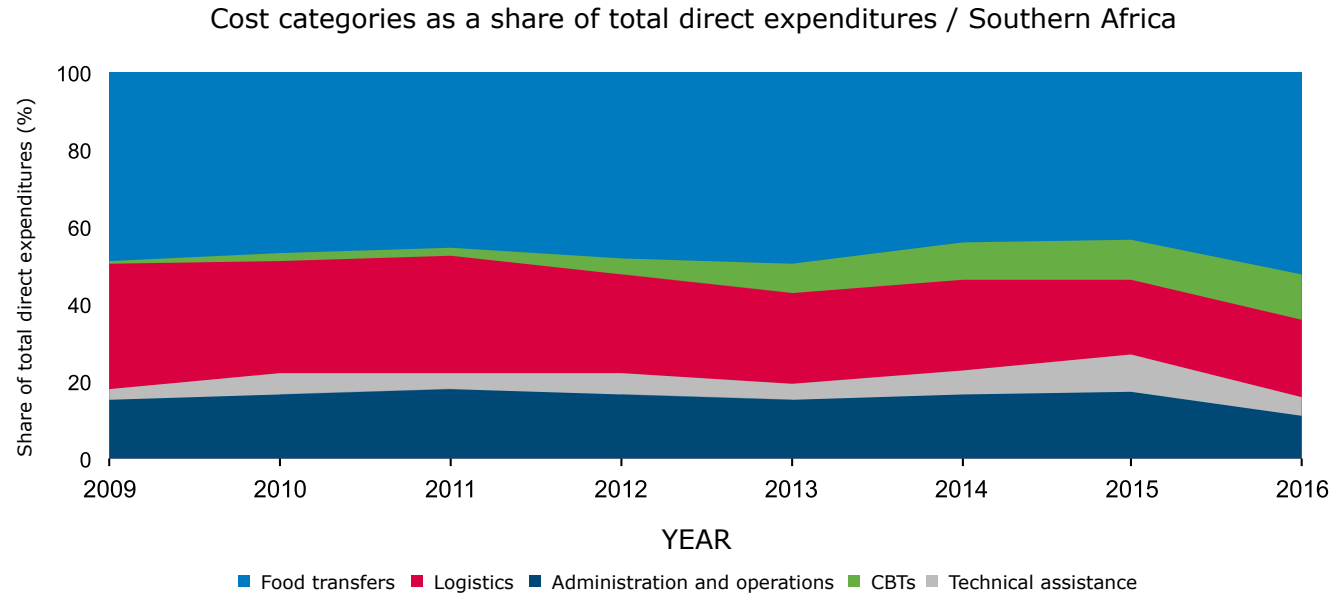
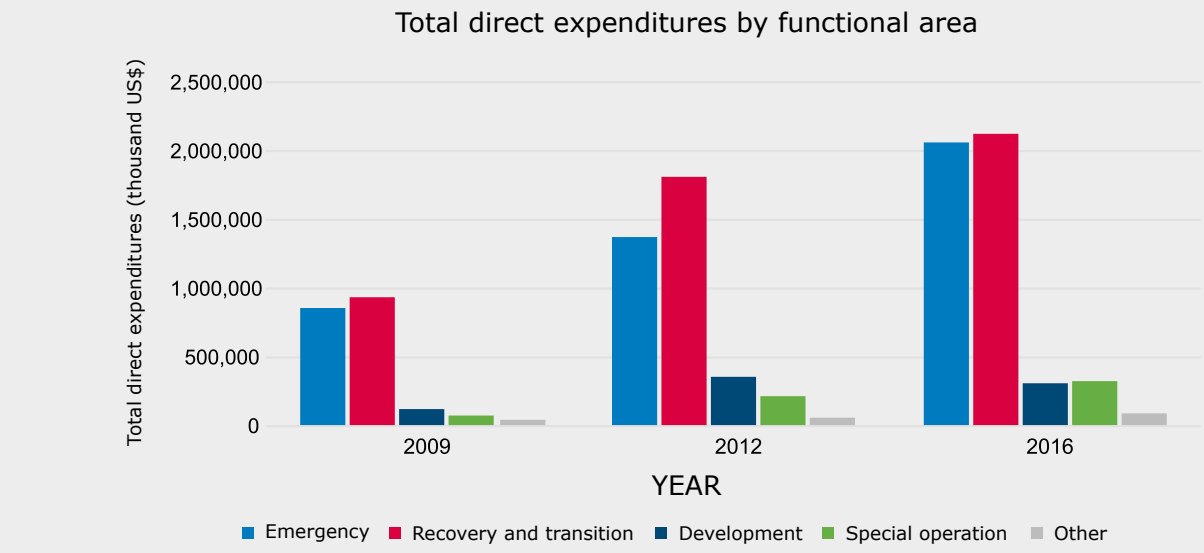


FIGURE 3.16: In absolute terms, expenditures in all functional areas increased between 2009 and 2016. This was not the case in development operations, however, which fell slightly between 2012 and 2016. Emergency and recovery and transition operations have consistently accounted for more than 80 percent of the portfolio.



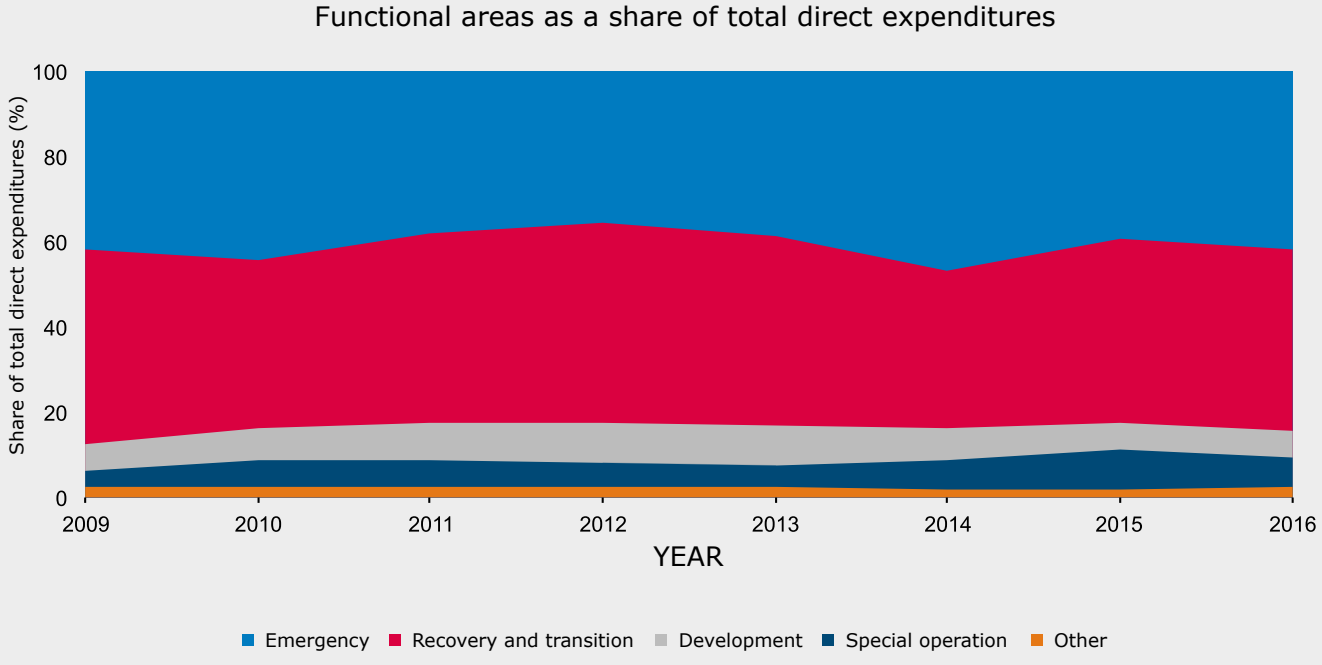
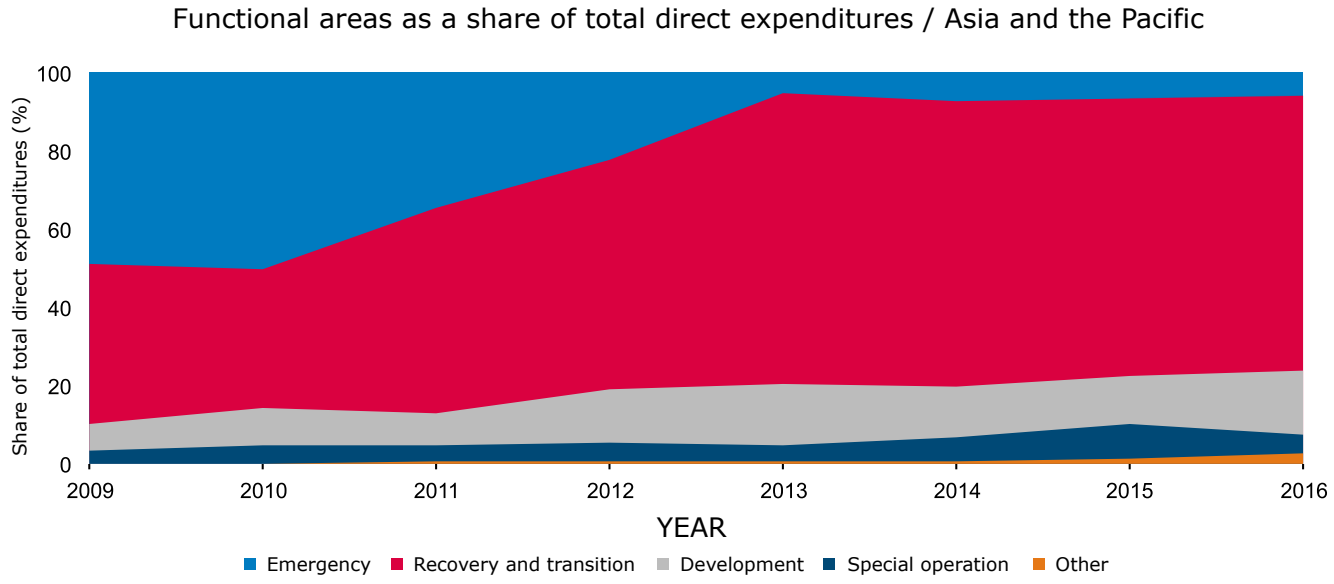


FIGURE 3.17: In APR recovery and transition operations began to supplant emergencies as the dominant functional area in 2010. Development overtook emergencies in 2013. In view of LAC's high exposure to natural hazards, the functional composition of its portfolio has changed markedly as emergencies and special operations surge and decline. Recovery and transition operations account for the greatest share of expenditures, but development has increased steadily.



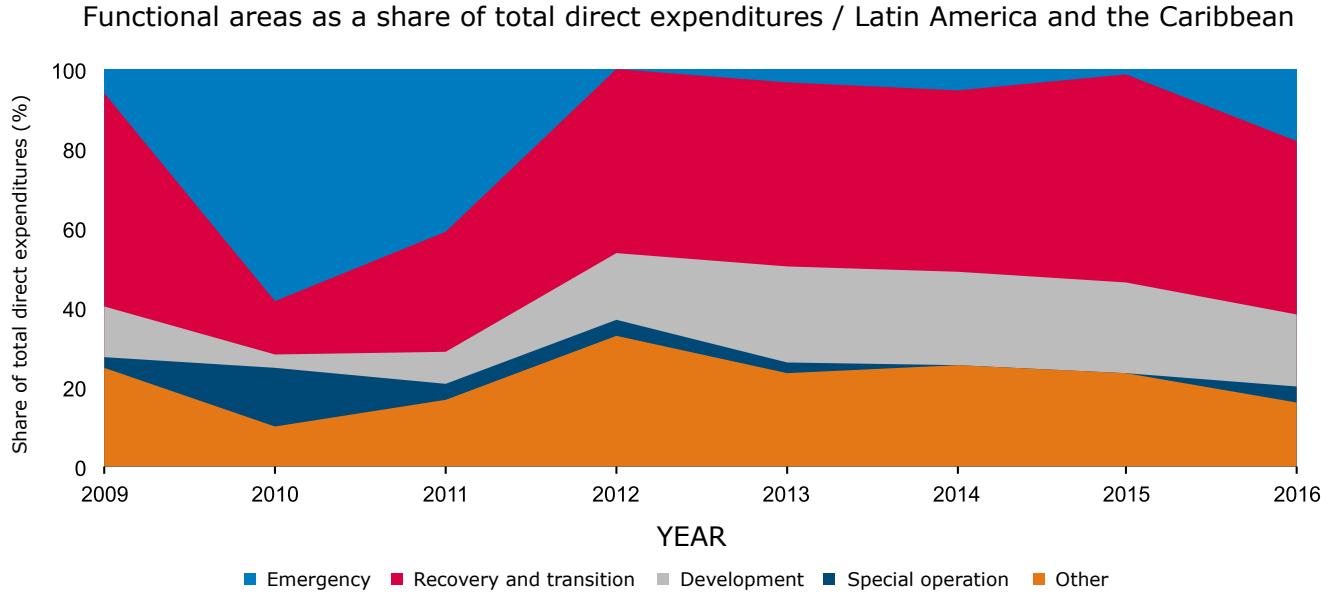
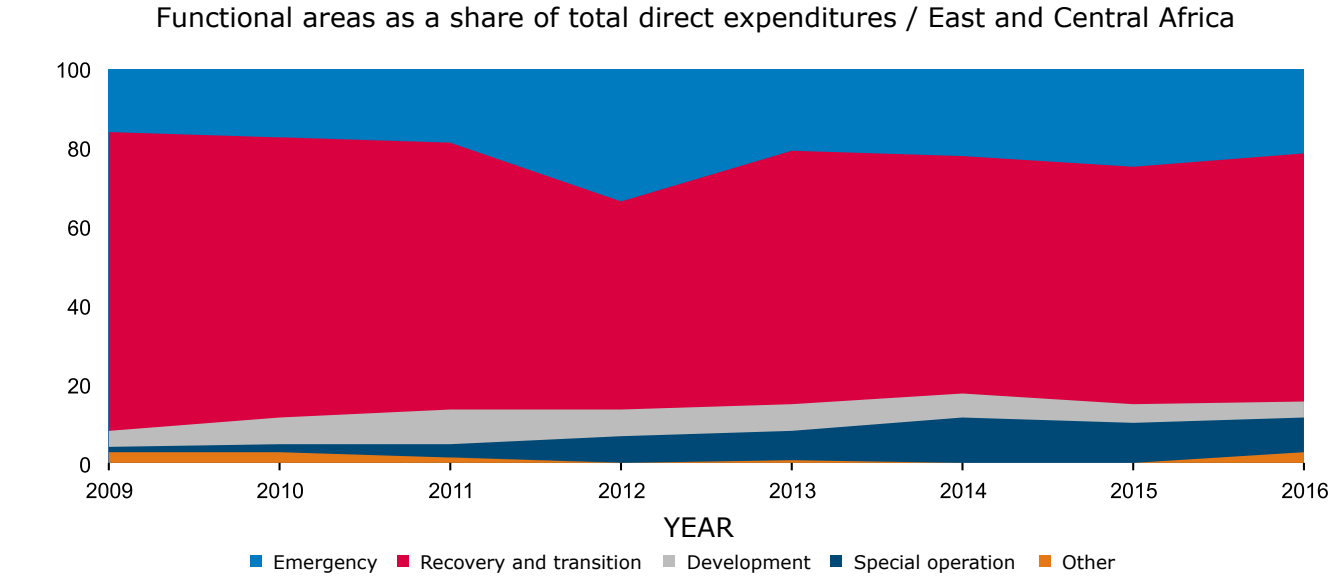


FIGURE 3.18: Though several orders of magnitude larger than APR's, ECA's portfolio is similarly devoted to recovery and transition operations, but with emergencies relatively more important and a shrinking share devoted to development – the opposite to the situation in APR. MENA's portfolio is dominated by emergencies.



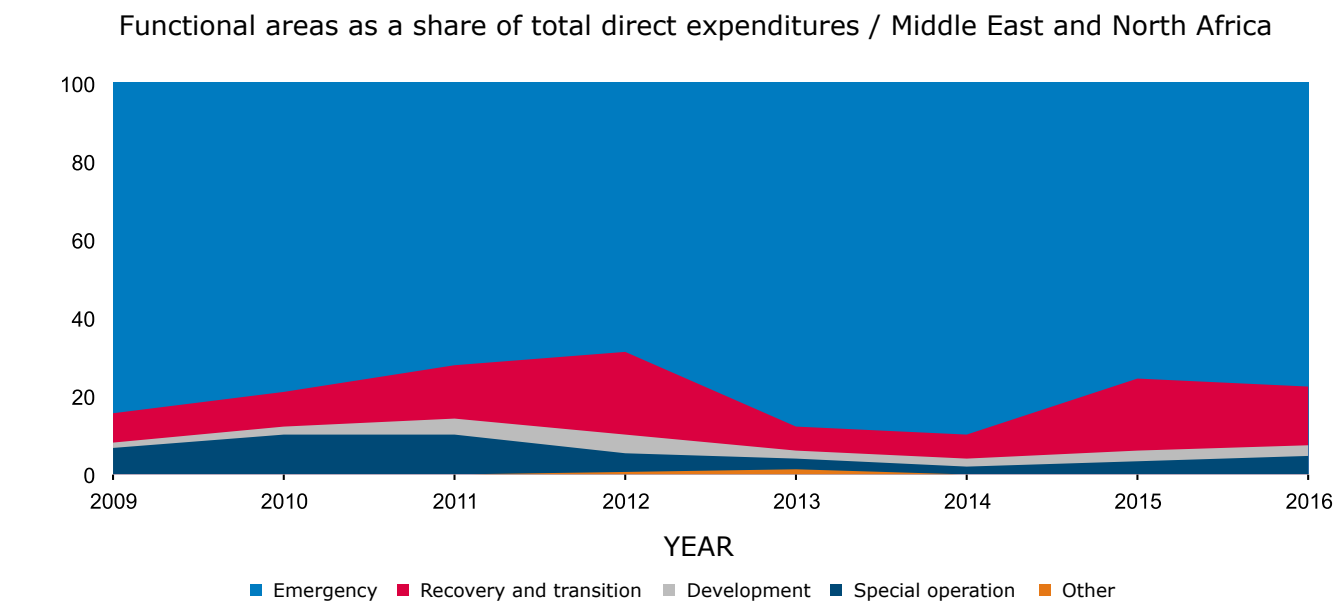
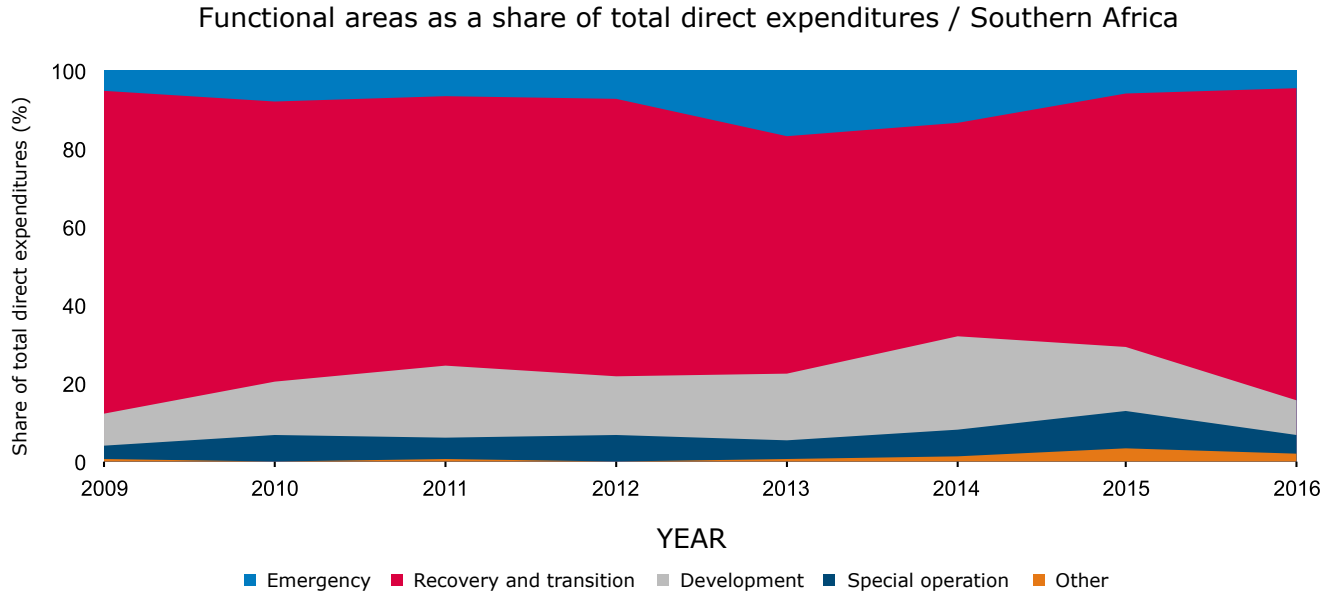
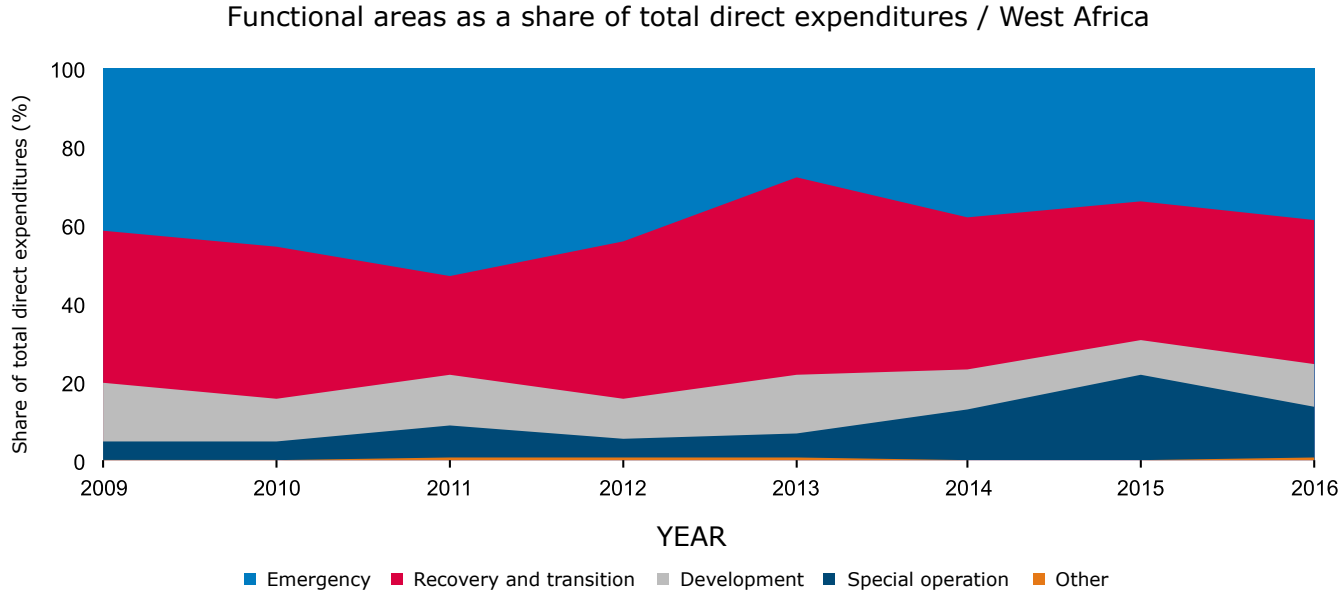


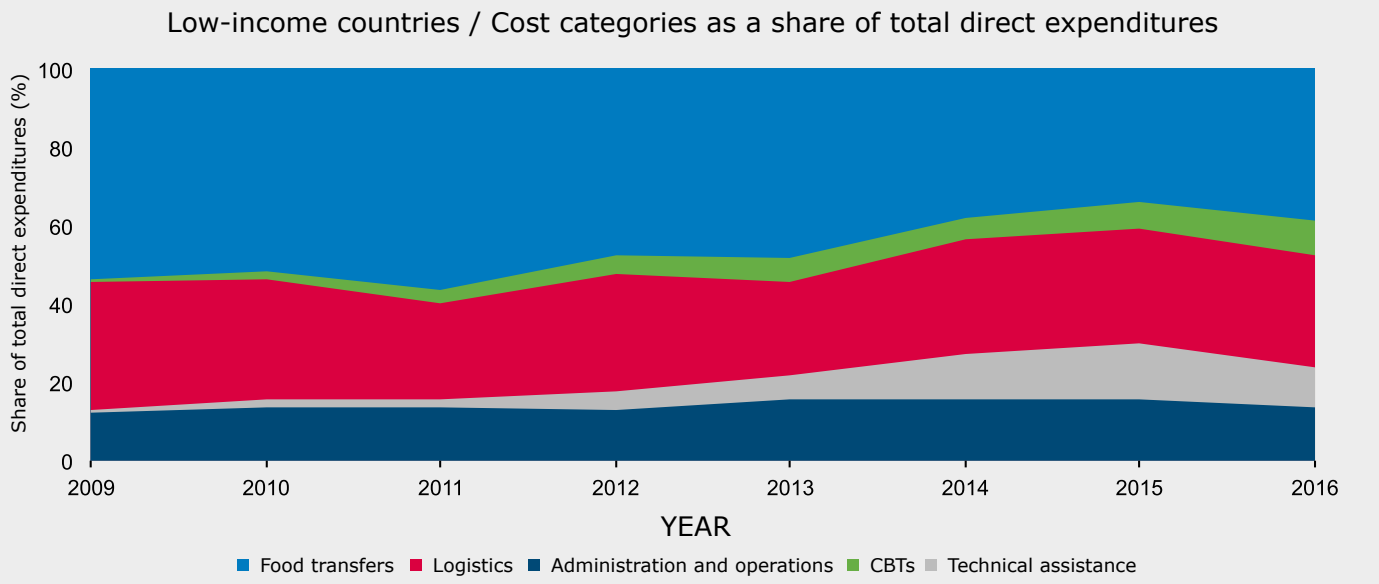
FIGURE 3.19: The functional composition of the SA portfolio between 2009 and 2016 is very similar to that of APR from 2013 to 2016. That is to say that it is overwhelmingly devoted to recovery and transition operations: there are relatively few emergencies and, except for a dip in 2016, technical assistance is expanding. The WA portfolio is similar to WFP's global portfolio, with roughly equal shares devoted to emergencies and transition and recovery operations, which together account for 80 percent of expenditures. The Ebola crisis in 2014 and 2015 brought a surge in special operations in WA as WFP placed its supply chain apparatus at the disposal of the humanitarian community in the affected countries.

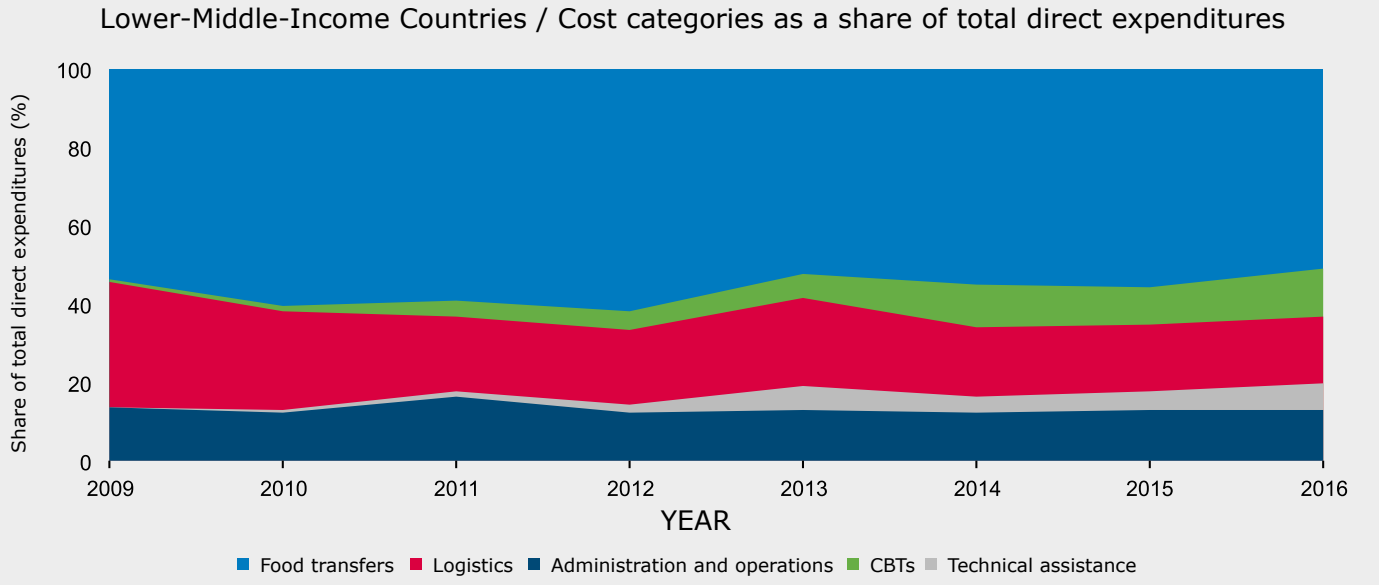




FOOD ASSISTANCE ACROSS INCOME GROUPS

FIGURE 3.20: In LICs, CBTs and technical assistance have grown steadily. In-kind food transfers and logistics are dominant, however, with the latter especially so. This is driven largely by the ECA countries, which are all LICs where physical distribution costs are high. The composition of food assistance in LMICs is very similar to that in LICs, but with lower logistics costs despite a higher share of in-kind food. This is due to better infrastructure and a slightly higher share of CBTs. Food assistance in highly urbanized UMICs is based primarily on CBTs delivered to growing numbers of refugees, IDPs and returnees.





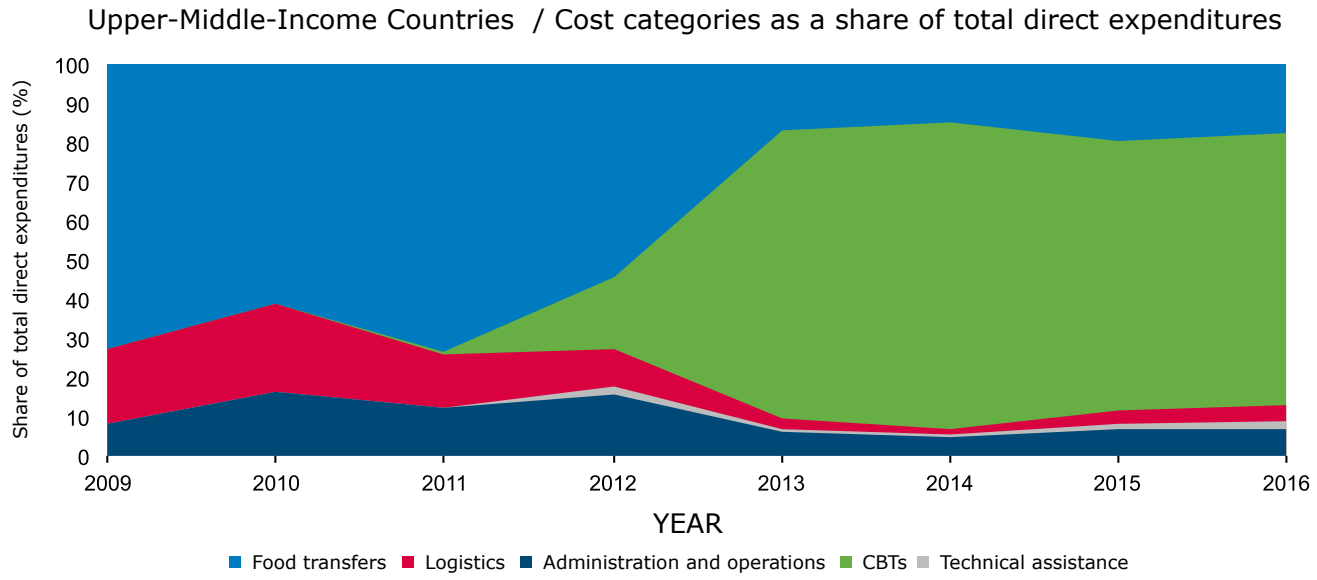
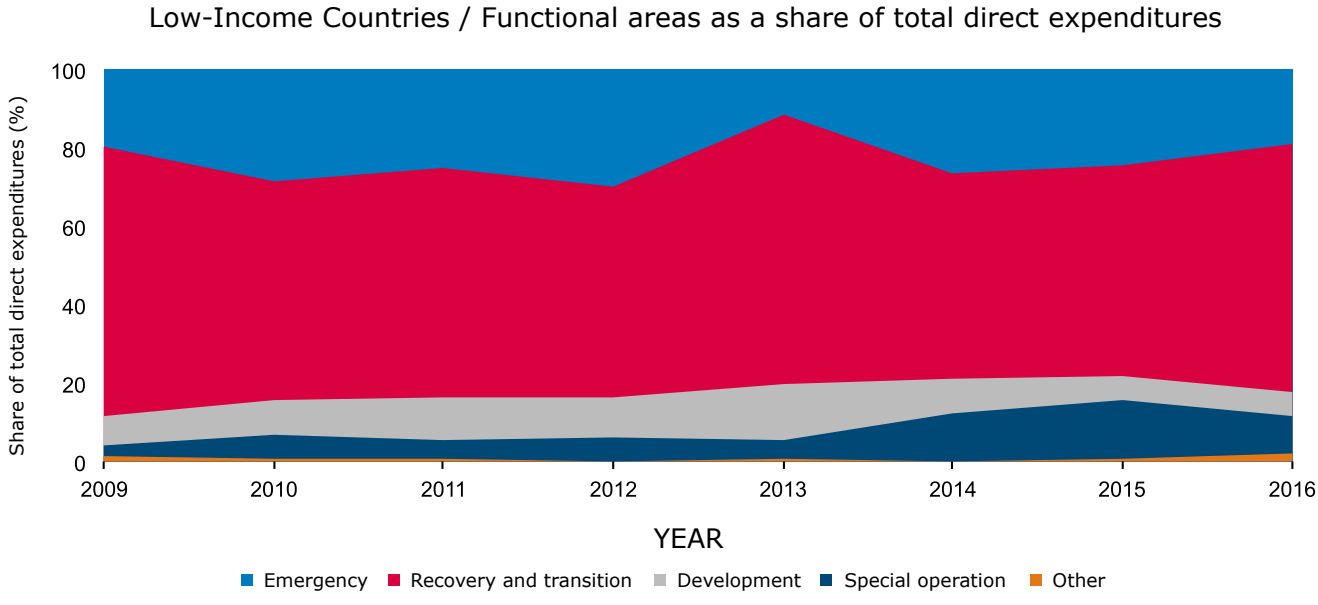
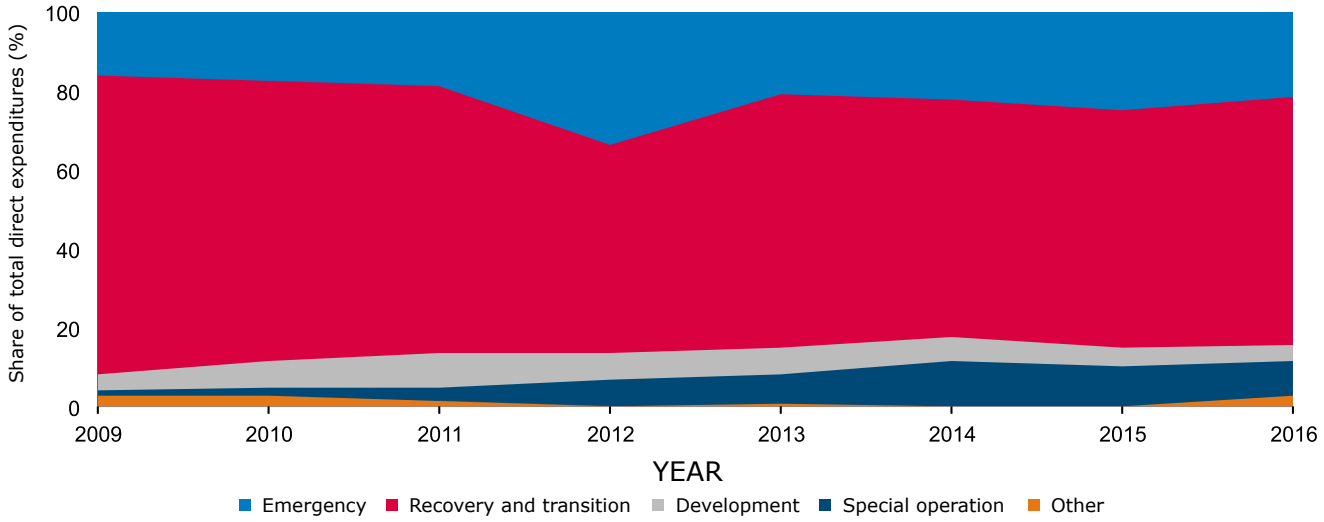


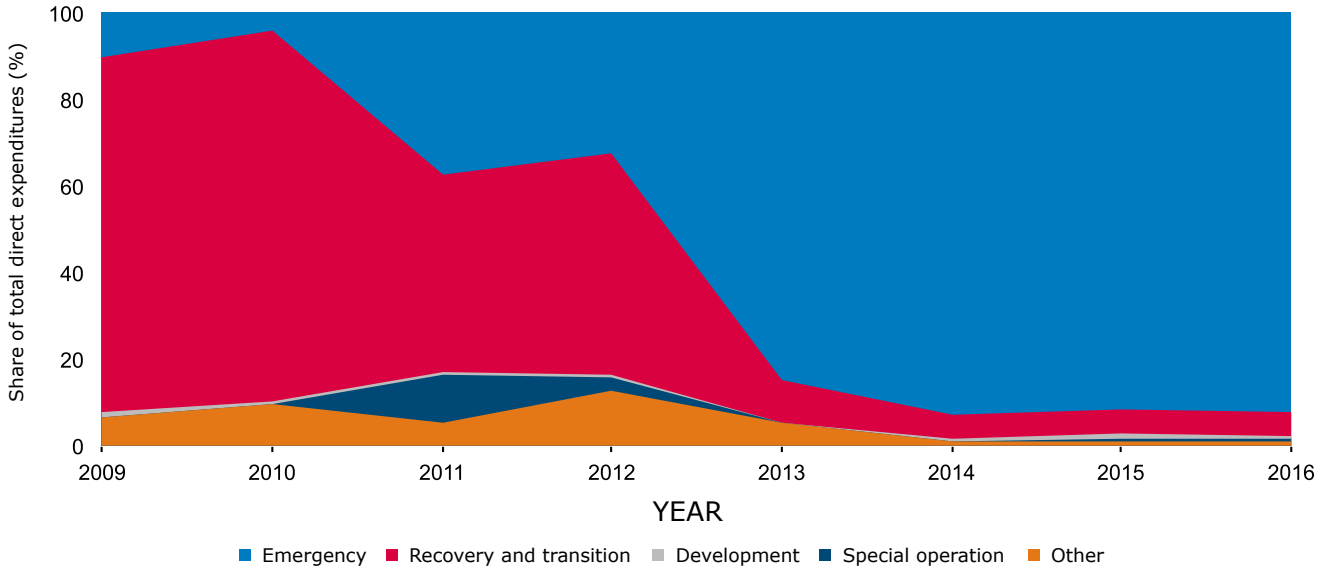
FIGURE 3.21: Recovery and transition operations dominate LIC portfolios. On the other hand, emergencies loom large in LMICs and UMICs. The high concentration of complex Level 3 emergencies in UMICs boosts expenditure in this functional area.



Lower-Middle-Income Countries / Functional areas as a share of total direct expenditures



Upper-Middle-Income Countries / Functional areas as a share of total direct expenditures



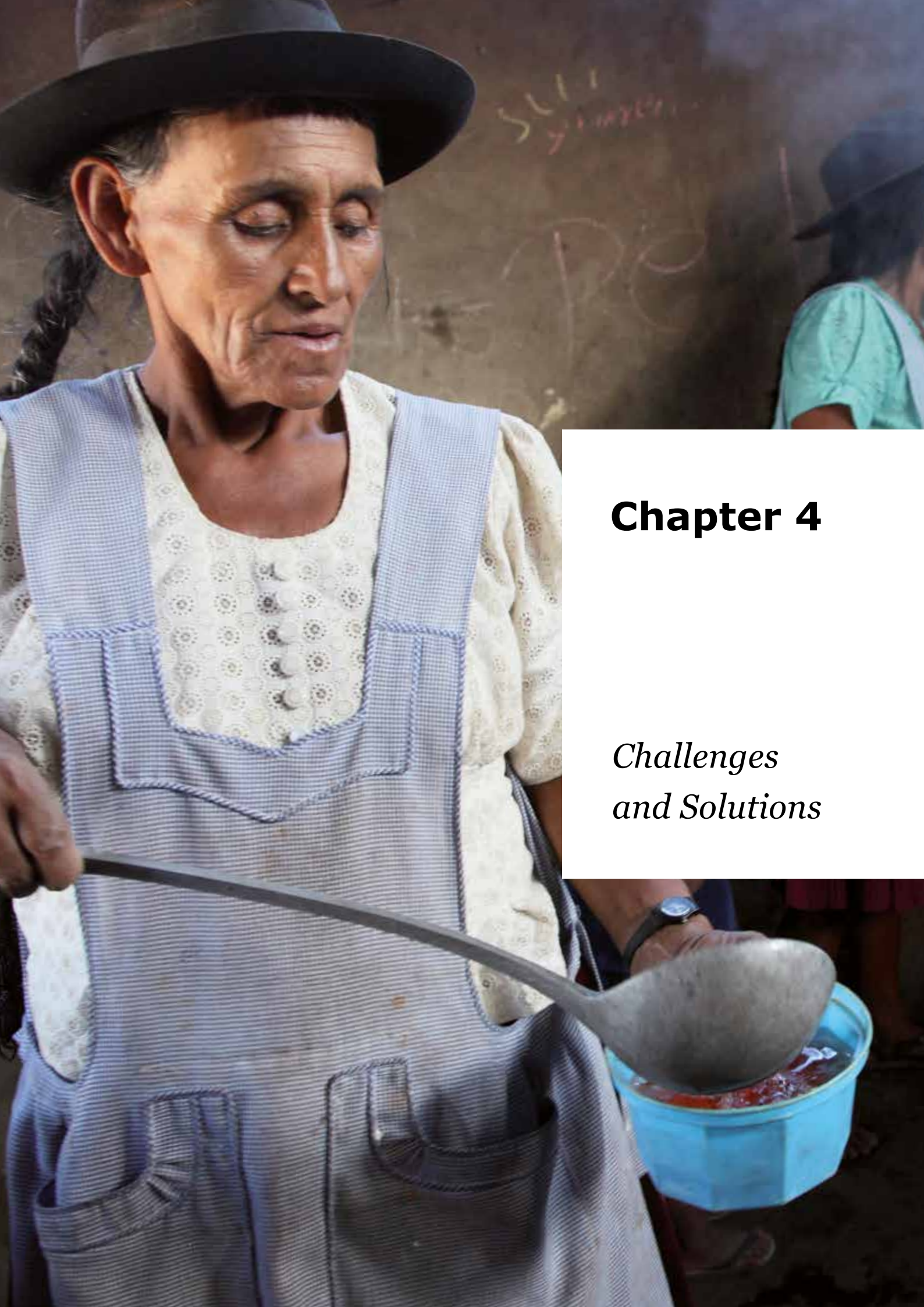
Participants in the post-harvest loss project smile at their high-quality grain, Uganda.
WFP/Brett Rierson

Summary and conclusions

The view of food assistance as a multi-layered, multi-dimensional and dynamic sector is clear. The value of examining the demand and supply sides of food assistance is confirmed. On the demand side, the available data suggest – as was expected – that relatively stable countries express relatively more demand for technical assistance and measures that address the root causes of hunger, whereas in relatively unstable countries, demand is greatest for measures to avert starvation.

On the supply side, the data show that the international food assistance sector is growing quickly in absolute terms, and that the expansion is comprehensive. All categories of food assistance have more than doubled in value since 2009. But the expansion has not been uniform across categories: the share of CBTs has surged, the share of in-kind food has contracted but remains dominant in most contexts. The share of technical assistance is expanding, but slowly. The share of logistics is falling, but supply chain capacity remains vital everywhere.

Other differences are evident on the supply side. The volume, intensity and composition of food assistance vary significantly in different regions and countries with different income levels. Two regions facing huge and complex food emergencies – ECA and MENA – account for 70 percent of food assistance expenditures by WFP and its partners. Expenditures on food assistance in MICs are greater than those in LICs, and they are increasing sharply in UMICs. Although CBTs have surged everywhere, they have done so unevenly in different regions. In all regions except LAC, in-kind food transfers remain a core transfer modality.



Chapter 4

Challenges and Solutions

Two women prepare and cook food for distribution at the local school for WFP's School Meals programme, Thaku Pampa, Bolivia.
WFP/Boris Heger

The trends and patterns of food assistance detailed in the previous section reflect wider conditions that define demand for food assistance and the ways in which it can be delivered. Those conditions also shape the nature of innovations in food assistance required to overcome the challenges. In this case food assistance is defined as resource transfers that save lives and livelihoods in the short term, and also the full set of instruments, programmes and support systems that combat the root causes of hunger in the medium term and long term.

It is suggested here that the major challenges facing food assistance agencies have three origins: i) those driven by global and national trends and disruptions that define the location and intensity of demand for food assistance; ii) those inherent in humanitarian action, which define the volume and quality of food assistance delivered as a humanitarian response; and iii) those emanating from flaws, disruptions and breakages in food systems, which define the volume and quality of food assistance delivered to address hunger and food insecurity. The large and growing number of innovations in the design and implementation of food assistance interventions map to these challenges (see Table 4.1). Each category of challenges is addressed below, along with several of the most important food assistance-based solutions.

TABLE 4.1: Framework for analysis of challenges and innovations in food assistance

Origin	Systemic challenge	Selected solutions based on food assistance
Global and national trends and disruptions	Climate change	• Disaster preparedness and early-warning systems • Sovereign risk pooling and risk transfer instruments • Bundled resilience-enhancing risk-management instruments
	Conflict	• Leveraged CBTs for refugees, IDPs and host communities
	Urbanization	• Food security assessment and monitoring tools adapted to urban environments
	Inequality	• Gender transformative frameworks and interventions • Conditional food and cash transfers
Humanitarian action	Funding problems	• Pre-financing and pre-positioning of food stocks • Project lending and cash flow financing
	Access, protection, and security problems	• Digital innovations in assessment, sampling, targeting, delivery, monitoring and evaluation in remote areas • Awareness raising, advocacy and negotiation capacity development • High-altitude airdrops • Complaint and feedback mechanisms
Food system structure and functioning	"Bad year/lean season" problems	• Nutrition-specific and nutrition-sensitive interventions • Food safety nets in shock-responsive social-protection systems
	"Last mile" problems	• Purchase-based support platforms for smallholders and small and medium agrifood businesses • Physical, technical and organizational upgrading of food retailers • Digital innovations in value-chain integration and tracking
	"Good year" problems	• Physical, technical and organizational upgrading of public food reserves • Physical, technical and organizational upgrading of food supply chain infrastructure and services • Food safety and quality standards and regulations • Market and trade policy reform

Global and national trends and disruptions

Recent years have witnessed an expanding array of social, political and economic disruptions that undermine food and nutrition security for millions of people at a time, often for long periods. Prominent among these are economic disruptions that breed unemployment and underemployment; environmental degradation, which disrupts production systems; and inter-linked financial and fuel price crises that cause extreme food price spikes and volatility (CFS, 2015). The global and national trends and disruptions currently posing the greatest challenges for food assistance and thus imposing the greatest needs for innovation are: climate change, conflict, urbanization and inequality (WFP, 2016). Each generates or multiplies hunger-inducing hazards that undermine livelihoods and cause vulnerability and displacement at massive scales.

CLIMATE CHANGE

Climate change is expected to increase the need for humanitarian assistance in the coming decades, with significant financial and resource implications for food assistance agencies. Between 2003 and 2012, for example, almost half of WFP emergency and recovery operations responded to climate-related disasters and promoted subsequent recovery (WFP, 2017d). These operations had a combined budget of US$23 billion. During this period many countries repeatedly called on WFP to respond to climate disasters – countries with some of the most persistently high levels of hunger in the world with climate change compounding existing vulnerabilities and threatening future food security. In the last decade natural disasters affected 1.7 billion people and killed 700,000 people (CRED, 2017). Since 2008 an average of 26.4 million people per year have been displaced by natural disasters, of which 80 percent were climate-related (IDMC/NRC. 2015). Climate disasters regularly cause US$100 billion of economic losses a year, a figure that is projected to double by 2030 (UNISDR, 2011).

Food-insecure people already struggle to ensure an adequate nutritious diet for themselves and their families. Four out of five of them live in countries that are prone to natural disasters and have high levels of environmental degradation. Their lives are made harder by floods, droughts and storms that destroy assets, land, livestock, crops and food supplies; these disasters also make it difficult for people to reach markets, thereby aggravating care responsibilities and damaging social support networks. Climate risks combine with conflict, gender inequalities, environmental degradation, poor access to health services, sanitation, education, population growth and weak markets to drive hunger and malnutrition. The poorest people are more exposed to climate risks than the average population, and they lose much more of their wealth when hit by climate-related shocks (World Bank, 2015).

Food consumption already accounts for 60 percent of total spending by poor households. In Africa the effects of climate change could increase food prices by as much as 12 percent by 2030, and 70 percent by 2080 (World Bank, 2015). In MENA poor consumers in rapidly growing urban areas are particularly vulnerable because of income insecurity and limited access to safety nets and basic services. The impacts of climate shocks on national and regional food markets may also have effects on food procurement, government food reserves and safety nets (WFP, 2017d).

Numerous studies show the severe impacts of climate disasters on health and nutrition. In Bangladesh, wasting rates among children are high in areas affected by cyclones and floods, and there is strong statistical evidence that stunting rates are higher after droughts. In the Philippines in the last two decades, 15 times as many infants died in the 24 months after a typhoon than during the typhoons themselves; 80 percent of these deaths were infant girls (Del Ninno et al., 2003; WFP, 2015).

Climate change can affect nutrition through a complex set of interlinked factors that includes: i) availability of essential foods and nutrients; ii) increased disease affecting the availability and health of crops, livestock and wild foods; iii) increasing scarcity of water; iv) deterioration of water quality and sanitation conditions as a result of shocks; v) environmental degradation; and vi) decisions as to allocating time and care-giving resources (HLPE, 2012). Decreased water availability and quality, for instance, increase health and sanitation problems such as diarrhoeal disease, which – together with changes in patterns of vector-borne disease – have the potential to increase malnutrition and undermine food utilization. Climate change might also affect feeding practices by reducing the availability of food or by increasing prices (WFP, 2017d).

Slow-onset changes in the climate and environment are major long-term challenges. Agricultural seasons are shifting, with patterns of precipitation and temperature changing in ways that significantly affect crops and livestock. Rising sea-levels, desertification, salinization and glacial melt all have slow but significant effects on livelihoods. Slow-onset climate change affects the kinds and nutritional content of crops grown and livestock raised and has direct effects on diets, nutrition and disease patterns. The resulting long-term and possibly transformational changes will

contribute to protracted food crises and exacerbate the risks of instability and conflict. Such changes will most likely become visible when extreme weather events result in major crises, amplified by the progressive stress that slow-onset changes put on the most vulnerable people and their livelihoods (WFP, 2017d).

Resilience is the ability of a system, community or society to resist and recover from the effects of hazards. The recovery should be prompt and efficient, and it will involve the preservation and restoration of basic structures and functions. It is a vital focus of humanitarian assistance. With increasing climate risks driving food insecurity and vulnerability, food assistance expertise can be put to use to help populations to recover from shocks, prevent them from destroying livelihoods and minimize the use of negative coping mechanisms.

Most food assistance is built on resource transfers to food-insecure populations. The aim is to fill food gaps while rebuilding assets for recovery and long-term resilience. This provides platforms for considerable innovation that will enhance resilience and draw vulnerable groups into the mainstream through novel bundling of interventions. At the community and household levels, effective approaches boost risk management through: i) improved resource management – risk reduction; ii) insurance – risk transfer; iii) micro-credit – prudent risk taking; and iv) savings – risk reserves (OXFAM, 2014; WFP/OXFAM, 2015). This work increasingly focuses on mechanisms that can be integrated into social protection systems and productive safety nets so that results can be applied at a much larger scales by governments and international organizations.

Disaster preparedness and early warning systems are fundamental at all levels (IASC, 2013). Modern financial mechanisms such as risk pooling, risk transfer and contingency financing facilities can be used to help countries to capitalize on the natural diversification of weather risk. This in turn enables them to manage their risks as a group and secure funds from donors and the international risk market to respond to risks. These techniques, which are based on advanced satellite weather surveillance, can reduce the cost of responding to disasters before they become humanitarian crises. They can also help countries and agencies to provide better services to people affected by disaster (ARC, 2017).

Sophisticated digital platforms underpin many ground-breaking innovations. Especially promising are tools that feed on satellite data to deliver forecast-based modalities for improved preparedness and early action all the way down to the community level (Box 4.1).

Two WFP staff members collect information at Sheddar Somali Refugee Camp, Jijiga, Ethiopia.
WFP/Giulio d'Adamo

BOX 4.1: Real-time food and nutrition security monitoring

WFP's mobile vulnerability analysis and mapping (mVAM) system uses mobile technology for remote monitoring of household food security and nutrition and trends in food markets in real-time. It thus provides high-frequency, gender-disaggregated and operationally relevant data that supports humanitarian decision-making. The system includes an automated two-way communication system to give people free access to real-time information.

The mVAM system was launched in 2013 with small-scale pilots in Somalia and the Democratic Republic of the Congo. Funding was provided by the Humanitarian Innovation Fund. The project results were evaluated independently and were found to have achieved proof of concept. The system has since been scaled up considerably.

Collecting primary data on household food security can be challenging, time consuming and costly – particularly in areas with limited humanitarian access. Remote data collection is a flexible and efficient way to gather information on food security, and it enables frequent food-security monitoring in unstable areas without putting the enumerators at risk.

By the beginning of 2017, mVAM was operational in 28 countries in all six WFP regions; plans are in place to expand to another six countries. Data-collection methods are adapted to the needs of each country in which mVAM operates. In general, mVAM uses live voice calls, text messages and interactive voice response technology – also known as robo-calls – to collect data. The data collection toolbox is being expanded to include Chatbot and Facebook Free Basics. For specific data collection tools employed in each country, please refer to the country-specific page on the mVAM website.

Data and reports aggregated in mVAM – known as bulletins – are shared online and are publicly available on the mVAM website. Reports are also posted on Reliefweb, the leading humanitarian website. Data from mVAM is also shared through the Office for the Coordination of Humanitarian Affairs Humanitarian Data Exchange. WFP has a data-sharing arrangement with FEWS-NET at the global level, and both organizations utilized food-security data during the Ebola crisis. The mVAM system aims to expand collaboration and replicate this data-sharing arrangement with other partners. It is using some of its data-collection tools – text messages, IVR, Facebook Free Basics and Chatbot – to establish communication mechanisms for listening in and delivering information about food security to people who need it. This new approach means that people in remote and vulnerable communities obtain information that matters to them for free and on demand.

Source: WFP.

CONFLICT

People living in states affected by conflict are up to three times more likely to be undernourished than are those living in more stable developing countries (FAO, 2010). Vulnerable groups such as children, refugees and IDPs, and people living with HIV or disabilities often have limited access to social protection, and many live in situations of conflict and instability (World Bank, 2015a). Conflict forces millions of people to flee their homes, robbing them of the means to feed themselves and condemning them to poverty. People who are exposed to violence, exploitation and abuse are often the most vulnerable and food-insecure. Hunger causes and exacerbates risks to people's safety and dignity, which in turn affect people's access to food. Hunger can be a contributing factor to conflict (WFP, 2013b).

An increasingly uncertain global political environment is opening space for continued proliferation and fragmentation of conflicts, leading to increased displacement and growing humanitarian needs (UNHCR, 2016a; WFP, 2017i). The migration crisis brought on by the civil war in the Syrian Arab Republic highlights the fact that when there is no prospect of peaceful solution to conflict, long-term protracted emergencies develop. These limit opportunities for development, and also require broad-based humanitarian assistance. Countries emerging from conflict often relapse. In the last decade, 90 percent of civil wars were fought in countries that had experienced civil war in the previous 30 years (World Bank, 2011). Even where nations have overcome overt conflict, they frequently retain some level of fragility: clashes continue in some areas and government institutions struggle to deliver services. These conditions are often exacerbated by natural disasters, violent crime and economic stresses such as volatile food prices (WFP, 2015f).

The displacement of large groups of people as a result of long-term conflict requires substantial and sustained food assistance in camps for refugees and IDPs. The protracted nature of conflicts means rethinking humanitarian assistance (OCHA, 2017). Where displaced people have little prospect of returning home in the near future, food assistance must do more than meet immediate needs in the locations where they are living: it must contribute to building more sustainable livelihoods. This requires more long-term, sustainable options.

The complex and entrenched nature of conflict suggests that even the broadest definition of food assistance is unlikely to yield scope to address root causes. But food assistance can be leveraged to address core symptoms. Protracted conflicts can lead to situations in which populations are unable to build assets and development becomes impossible. A variety of food assistance-based innovations have been developed: the most promising work centres on CBTs delivered to refugees and host communities with a view to expanding financial inclusion and incentivizing market growth (see Box 4.2).

Photo on the right page:
A Syrian refugee undergoes an iris scan to purchase food from a shop in King Abdullah Park refugee camp, Jordan. Instead of using physical cash or vouchers, the system automatically confirms identities and bank balance.
WFP/Mohammad Batah

BOX 4.2: Leveraging CBTs to reduce food costs for refugees and host communities

WFP has developed a "retail engagement strategy" that leverages cash-based transfers to increase the purchasing power of beneficiaries by helping local retail supply chains become more efficient. WFP works with retailers to itemize retail point-of-sale data to determine buying habits and make supply chains more efficient. This information allows WFP to aggregate demand and develop other innovative ways of helping shopkeepers to achieve savings on their own purchases. Although its retail engagement strategy aims to improve the lives of the people it serves, WFP also helps to improve local retail supply chains, ultimately reducing shelf prices for all consumers and improving local economies. The strategy aims to:

i. reduce shelf prices to increase the purchasing power of WFP food assistance recipients and other customers;

ii. leverage itemized sales data to support its own needs for traceability, contracting along the supply chain and implementing effective internal controls; and

iii. develop capacity in the retail sector by introducing basic retail systems to meet the needs of all consumers.

The potential to leverage previously unconnected investment for new and important impacts is significant. In Iraq, Jordan, Kenya and Lebanon, for example, where the beneficiaries of food assistance and the agents and retailers serving those beneficiaries are registered in SCOPE (see Box 4.9), WFP has leveraged its supply chain expertise and purchase volumes. This is done to negotiate discounts with the retailers and pass on the savings to consumers, leading to price reductions of between 6 percent and 15 percent for beneficiaries, with corresponding increases in purchasing power for beneficiaries and host communities.

Source: WFP (2015b).

URBANIZATION

More than half of the world's population now lives in urban areas, where the bulk of population growth is occurring (UN Habitat, 2017). Exposure to risks is at least proportionate. Cities increasingly face significant risk of disasters such as extreme weather, earthquakes and epidemics. Such natural hazards are likely to trigger additional man-made hazards such as fire in overcrowded settlements or technological disasters. Nearly 1.5 billion people live in informal settlements and slums without access to adequate healthcare, water or sanitation (Kyazze et al., 2012). Rapidly growing informal settlements are often in the most hazard-prone urban areas, which increases the risks of flooding and other climate hazards for poor urban populations (UN Habitat, 2017).

Disasters often strike in urban contexts of chronic poverty and high levels of political or criminal violence (Brown, 2012; IFRC, 2010). Many urban residents struggle to pay the high costs of city living such as rent and transport or to afford sufficient food to meet their minimum nutritional requirements. Unhygienic, crowded living environments with poor access to basic services, lack of security of tenure, unemployment, violence, public health risks and poor sanitation may further undermine food security (WFP/CNSA, 2016). These underlying causes of food and nutrition insecurity are often exacerbated by climate hazards and by international and domestic increases in the cost of food and fuel. Given their high dependency on markets for food, urban populations are particularly vulnerable to food price fluctuation (Brown, 2012; IFPRI, 2017; IFRC, 2010).

Threats to food security in urban areas are related primarily to poverty and exclusion. The livelihoods of the urban poor feature insecure tenure, precarious living conditions, limited access to basic services, unemployment, violence, public health risks and poor sanitation – all of which are underlying causes and reflections of food and nutrition insecurity (IFPRI, 2017; WFP/CNSA, 2016).

Comprehensive data are not yet available, but emerging evidence suggests a rapidly growing share of urban populations in food assistance interventions worldwide. A number of WFP's largest operations have significant urban segments: in January 2017, for example, WFP reached 1.8 million refugees in the five countries affected by the crisis in the Syrian Arab Republic – Egypt, Iraq, Jordan, Lebanon and Turkey. The bulk of these refugees were living in and around major cities and towns (WFP, 2017).

The design and implementation of food assistance in urban situations present unique challenges. These include: i) identifying levels of vulnerability to food insecurity in urban areas; ii) assessing different types of urban food insecurity and vulnerability; iii) organizing appropriate responses to urban food insecurity; and iv) establishing an effective collaborative mechanism for responses to food insecurity in urban crises (USAID, 2008; WFP/CNSA, 2016).

In urban areas people often have multiple livelihood strategies. Tools for identifying geographical livelihood zones for assessment, analysis and targeting are less effective in urban setting than they are in rural areas (USAID, 2008). But even when there are clear groups toward which to direct assistance – for example IDPs or refugees – political and ethnic tensions may prevent these groups from identifying themselves. Gaining the trust of such groups through sensitive understanding of local, national and regional political and conflict dynamics is essential to ensure that the most vulnerable are not missed (WFP/CNSA, 2016).

In theory, CBTs are well suited to food assistance in urban areas where people generally depend on external suppliers and markets for goods and services rather than producing their own food or fetching their own water or fuel. But many challenges must be overcome, especially those related to the identification of vulnerable neighbourhoods. Multi-layered approaches are being developed (see Box 4.3). Methods must take several factors into account such as: i) differences in food consumption in households; ii) complex food consumption patterns that may include street food and other food eaten outside the home; iii) the diversity of earnings within households and geographic areas; and iv) multiple coping strategies typically used in urban areas.

BOX 4.3: Urban food and nutrition security assessment

A food security assessment carried out by the *Coordination Nationale de la Sécurité Alimentaire (CNSA)* and WFP between May and August 2016 covered the six communes of the metropolitan area of Port Au Prince and nine secondary urban centres. The assessment aimed to: i) estimate food insecurity prevalence in urban areas; ii) identify the main sources of incomes, food and food consumption and expenditure patterns; iii) describe the main shocks and coping strategies of urban households; iv) provide recommendations for the establishment of an urban observatory; and v) monitor the food security situation in urban areas. To address challenges linked to identifying vulnerable households and measuring their food insecurity, analysts adopted an approach comprising the following four methods:

i. online quality survey. General perception of respondents of food security in their neighbourhoods – 991 responses using random domain intercept technology;

ii. key informant interviews in Port au Prince. Each informant was asked to define wealth groups of sub-neighbourhoods within enumeration areas;

iii. literature review. Demographics, income, migration, urbanization, markets and other factors; and

iv. survey of 4,500 households in 17 strata – 9 secondary urban and 6 Port-au-Prince communes.

Each component informed the other three, not only at the level of information missing or required, but also as to the best way to collect it. Ultimately the first three components made sure that the household-level survey was based on a sound stratification in terms of survey design and disaggregation of analysis, that it focused on relevant data only, that it did not exclude the most vulnerable neighbourhoods and segments of the disadvantaged population and that it used tools adapted to the local context such as specific response options adapted to the urban Haitian context. The assessment found that:

- in the metropolitan area of Port-au-Prince 30 percent of the households were food insecure – 750,000 of the estimated 2.6 million inhabitants. The level of severe food insecurity was 2 percent – about 50,000 people;
- the level of food insecurity in the metropolitan area of Port-au-Prince was considerably less than that seen in the drought-affected rural areas assessed in December 2015;
- the commune of Cité Soleil and the cities of Gonaïves, Jérémie and Port-de-Paix stood out as having the highest levels of food insecurity;
- unacceptable food consumption was evident in 40 percent of households;
- food insecurity was also driven by economic vulnerability, with 50 percent of households spending over half their budget on food;
- increases in prices of food and other goods were the most common shock reported; and
- the majority of households were forced to engage in negative coping strategies, including 25 percent relying on crisis or emergency strategies, which are difficult to reverse.

Source: WFP/CNSA (2016).

INEQUALITY

Income inequality is increasing globally, reflecting deeper patterns and trends in exclusion and vulnerability (Piketty, 2013). Populations requiring food assistance typically harbour groups that are marginalized by forms of inequality rooted in politics, culture and belief (WFP, 2016a).

Indigenous peoples continue to face discrimination based on their identities and disadvantages that limit or even prevent their access to social, economic and political opportunities and resources. Their socio-economic and human development conditions are significantly worse than those of other population groups. Even when they have made social and political progress, powerful threats to their traditional land-use practices or to their cultural and linguistic diversity remain (IFAD, 2016).

Ethnic and religious inequality often implies that well-being depends on group affiliation (Alesina et al., 2013). Inequality in income along ethnic and religious lines is likely to lead to political inequality, increase animosity and lead to discriminatory policies of one or more groups against the others. Differences in preferences along these lines may lead to inadequate public goods provision, because groups' ideal allocation of public goods will not coincide. Economically dominant ethnic minorities may reduce their support for inclusive institutions, so it is more likely to generate envy and perceptions that the system is "unfair" – more so than the conventionally measured economic inequality because the latter can more easily be thought of as the result of ability or effort (Alesina et al., 2013).

Cutting across all forms of inequality – and most relevant for design and implementation of all food assistance measures – is gender inequality.

Women play key roles in the production, transformation and distribution of food. They also tend to have the main responsibility for household

Market stalls in a street of Les Cayes, Haiti.
WFP/Alexis Masciarelli

food security and nutrition by undertaking household food production, preparation and distribution. Despite this, women and girls also make up the majority of people living in hunger: 60 percent of the world's malnourished people are women and girls (ADB and FAO, 2013). There are correlations between countries with high levels of gender inequality and high levels of hunger (IFPRI, 2009).

Women and girls face substantial inequities in access to and control over education and resources, from production to consumption. Although they are responsible for its preparation, women and girls may also have less access to food as a result of norms dictating that males have priority access (IDS, 2014). Women tend to lack voice and power in decision-making processes from the household to the community and national levels. These limitations arise from deeply embedded gender norms that in some cases – land tenure, for example – may be formalized in law (ADB and FAO, 2013). Women's livelihoods, education and health suffer as a result.

Gender inequalities have direct and indirect effects on the underlying causes of food insecurity and malnutrition – poor access to nutritious food, inadequate mother-and-child care practices and poor access to health, water and sanitation services. These aspects affect the lives of women, men, girls and boys differently. Food preferences, taboos and consumption patterns have different impacts on the nutrition status of family members according to their sex and age, with boys being given preference in some contexts and girls in others. For women affected by food insecurity, lack of macronutrients and micronutrients such as iron during pregnancy leads to low birthweights and other health problems for their babies and themselves (WFP, 2015).

There are important interactions between gender inequality and other dimensions of vulnerability and food insecurity. For instance the impacts of climate change affect women and men, boys and girls differently, often exacerbating gender inequalities. Although ensuring food security is a shared responsibility, men and women often have different roles in households and communities, with men preparing the fields and women growing and preparing most of the food consumed such as vegetables and small livestock. Women and girls are essential agents in ensuring household food security and nutrition, but they face discrimination in access to, control over and consumption of food. Discriminatory gender roles, unequal distribution of power and challenges in access to education, land and finance also mean that women and girls are often excluded from decision-making related to disaster preparedness and have less access to information about natural hazards and climate risks, with consequent negative effects on their capacities to act on early warnings (WFP, 2017a).

Given these considerations, food assistance must address gender inequalities and avoid exacerbating them. Women, men, girls and boys benefit from food assistance programmes and activities that are adapted to their different needs and capacities (WFP, 2015g). Specific work is required to guarantee women's participation and capacity to benefit from food assistance (see Box 4.4). Agencies are responding: for example as a result of explicit actions that draw them into initiatives, women and girls make up 51 percent of WFP beneficiaries and are in a clear majority of IDPs, refugees and CBT recipients. Girls are equally represented in most nutrition initiatives and dominate in school meal programmes.

Conditional food and cash transfers targeting women feature increasingly in food assistance. Transfers are provided directly to mothers whose children attend school or health clinics, or who receive healthcare themselves. In addition to improving education, nutrition and health outcomes for children, these programmes promote gender equality and women's empowerment by enhancing their decision-making powers at home, improving access to healthcare and boosting their self-confidence and knowledge of their rights as citizens. Applying a gender lens in a crisis increases the effectiveness of targeting and the efficiency of programme delivery to the people whose lives are most at risk (WFP, 2015g). Sex- and age-disaggregated data can play a powerful role in ensuring that interventions meet the needs of various groups and promote early and effective results (WFP, 2015g).

A vendor and her child at Libenge Market, Equateur, Democratic Republic of Congo.
WFP/Olivier Le Blanc

BOX 4.4: The Gender Marker methodology

In order to improve the quality of humanitarian and development interventions by promoting good design, implementation and monitoring practices, the gender marker was piloted by the United Nations Development Programme (UNDP) in 2007 and 2008. From 2009 to 2010, the Inter-Agency Standing Committee (IASC) developed guidance on the coding criteria, which were subsequently adapted for use by UNICEF in 2011, and UNFPA and WFP in 2012/13. On a 0-2 scale the gender marker establishes whether a project fully addresses the different needs, vulnerabilities and priorities of women, girls, boys and men.

WFP's Gender Policy 2015 uses a twin-track strategy and establishes minimum standards for achieving its objectives of gender mainstreaming and targeted actions. Collecting, analysing and using data disaggregated by sex and age is the first step in designing sound food assistance programmes and policies. Gender considerations can then be mainstreamed into all phases of the programme cycle, from the initial needs assessment to the final evaluation. When gender and age analysis indicates that one population group is particularly vulnerable or at risk, actions targeting that group can be promoted. The 10th minimum standard for gender mainstreaming is that: "WFP's food assistance policies and programmes adhere to the IASC gender marker and minimum standards for prevention and mitigation of gender-based violence, adapted by WFP for the nutrition and food security sectors." The IASC gender marker code or equivalent – guiding the design, implementation, monitoring and evaluation of project activities – is reported in all project documents and budget revisions. The aim is to ensure that 100 percent of WFP projects achieve codes of 2a/2b (WFP, 2015c). Since the adoption of the IASC gender marker in 2012, the percentage of projects with potential to contribute significantly to gender equality – code 2a or 2b – increased from 24 percent to 100 percent in 2016. Recently developed Country Strategic Plans for Bangladesh, China, Colombia, Ecuador, El Salvador, Indonesia, the Lao People's Democratic Republic and Zimbabwe were reviewed and rated with the gender marker code 2a.

Source: IASC (2012).

Code	Description	Criteria
0	The project design is gender blind.	• Differences between women and men are not reflected anywhere in the project design document.
1	Contributes in a limited way to gender equality.	• Differences between women and men are reflected in at least one of the following two categories in the project design document: - the Context and the Food Security and Nutrition Situation - the Response Strategy, the Beneficiaries & Targeting and the Implementation Arrangements
2(a)	Gender is mainstreamed; the project is likely to contribute significantly to gender equality.	• The analysis of the differences between women and men in the Context and the Food Security and Nutrition Situation sections is reflected in both of the following categories in the project design documents: - the Response Strategy, the Beneficiaries & Targeting and the Implementation Arrangements - the Outcomes (in addition to outputs).
2(b)	The principle purpose is to advance gender equality.	• As a result of the gender analysis, the project targets a particular group - girls, boys, women, or men - who are disadvantaged because of their gender role. The main purpose of the project is to advance equality.
N/A	Applicable to the project.	• Operation, IR-EMOP and budget revisions.

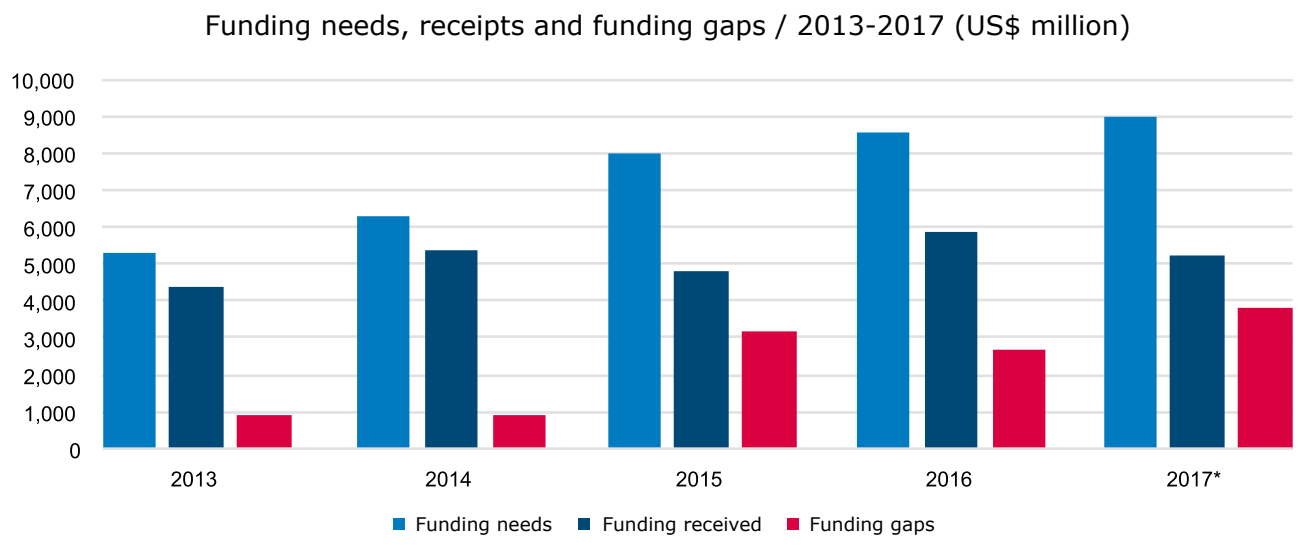
Humanitarian action

The number of people affected by humanitarian crises has more than doubled over the past decade (GHAR, 2016). The frequency, scale and severity of humanitarian crises is increasing (OCHA, 2016). Crises are growing in complexity and duration. Funding needs are climbing sharply. Humanitarian principles are under threat, with humanitarian response constantly at risk of being co-opted by political objectives. These challenges apply in full to food assistance agencies. As is the case for all areas of humanitarian action, food assistance agencies face significant challenges linked to funding levels and conditions, access to beneficiaries, protection of beneficiaries and security of staff.

FUNDING PROBLEMS

Between 2013 and 2016 donor contributions to WFP averaged US$5.11 billion per year, rising to a record level of US$5.9 billion in 2016. But estimated needs over that period averaged US$7.03 billion per year, with the gap growing from US$937 million in 2013 to US$2.68 billion in 2016 (see Figure 4.1). Each year these funding gaps have combined with a range of access-related challenges to prevent the assessed needs of millions of people from being met (WFP, 2016b).

FIGURE 4.1: WFP's food assistance needs, funding levels and gaps, 2013-2016



Source: WFP. / Note: 2017 figures are estimates.

The bulk of WFP's funding comes from a relatively small group of donor countries (see Table 4.2). Over the past five years, 88 percent of voluntary contributions to WFP have come from just 15 countries (WFP, 2016b). There is an urgent need to expand and diversify the funding base for internationally facilitated food assistance (IASC, 2013). In addition to being insufficient, funding is often delayed, restricted and unpredictable. As a result, the scope to adapt to changing priorities, provide timely needs-based responses, and maximize cost efficiencies is limited and complicated. Ear-marking of funding – that is, the insertion of provisos that direct funds to specific recipients without reference to other objective criteria – is especially detrimental. Additional challenges include fragmented, duplicative and excessive reporting requirements that divert time, resources and focus away from implementation (WHS, 2016).

Level 3 emergencies – those that require mobilization of global augmentation of regional and country-level response capability – dominate food assistance funding and expenditures, most of which is ear-marked (see Figure 4.2).[xxiii] This ear-marking diverts attention from other protracted but lower-level emergencies (see Figure 4.3). This reflects broader trends in humanitarian funding.

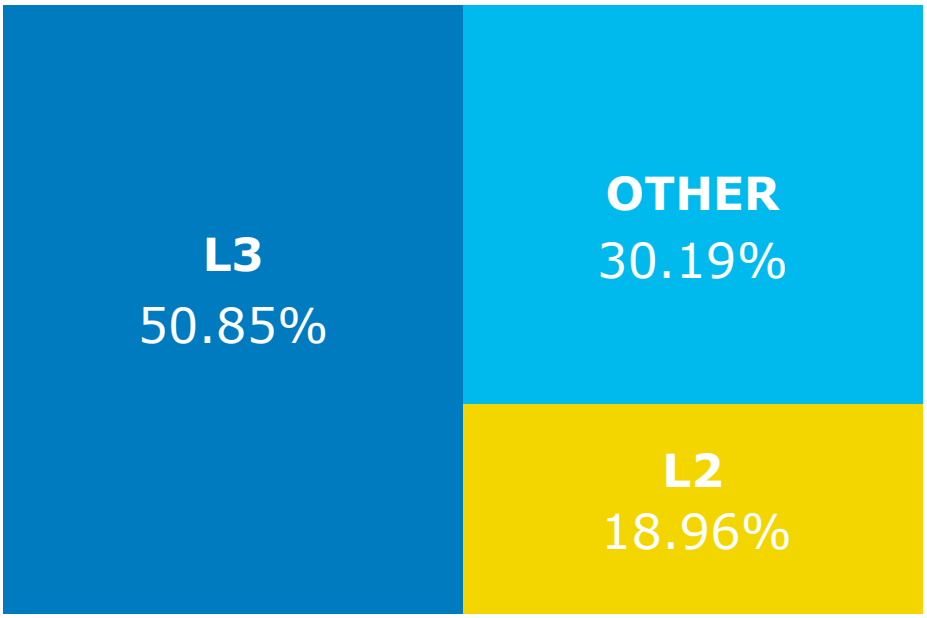
In 2015, whether appeals were made or not, funding was increasingly concentrated in a relatively small group of emergencies. Five crises – in Iraq, South Sudan, Sudan the Syrian Arab Republic and Yemen – accounted for more than half of all funding allocated to specific emergencies (GFAR, 2016).

TABLE 4.2: Contribution (US$) to WFP: comparative figures and five-year aggregate ranking, 2013-2017

5-year rank	Donor	2013	2014	2015	2016	2017	Total
1	USA	1 493 768 312	2 227 092 953	2 007 375 943	2 027 955 885	621 451 477	8 377 644 570
2	European Commission	333 375 080	372 457 869	250 393 394	894 682 803	192 145 487	2 043 054 633
3	Germany	230 391 966	301 321 896	329 258 331	884 565 754	156 623 240	1 902 161 187
4	United Kingdom	451 854 891	408 791 019	456 482 987	355 982 023	122 447 160	1 795 558 080
5	Canada	366 660 880	350 065 593	261 645 796	211 004 816	179 254 733	1 368 631 818
6	Japan	238 532 511	156 778 856	196 773 084	207 127 392	105 763 619	904 975 462
7	UN CERF	143 322 869	137 313 501	159 928 948	122 092 323	90 518 138	653 175 779
8	Sweden	106 348 849	93 653 626	91 490 856	121 718 815	97 244 741	510 456 887
9	Saudi Arabia	21 306 016	271 146 747	151 249 675	35 724 885	-	479 427 323
10	UN Other Funds and Agencies (excl. CERF)	83 045 369	115 246 796	76 968 803	129 120 180	23 378 757	427 759 905
11	** Private Donations	85 130 142	113 606 802	99 091 700	73 809 565	20 506 150	392 144 359
12	Australia	95 117 699	112 307 777	72 481 915	82 954 370	17 519 683	380 381 444
13	Switzerland	82 813 308	86 683 717	84 965 034	67 340 897	54 899 002	376 701 958
14	Netherlands	66 635 325	88 563 728	101 444 296	66 839 848	49 116 327	372 599 524
15	Norway	65 572 866	71 893 757	92 570 778	68 574 118	61 032 610	359 644 129
16	Denmark	60 700 541	67 879 062	56 997 245	46 412 135	43 121 025	275 110 008
17	Pakistan	40 074 603	69 553 012	80 626 872	55 614 046	15 730 101	261 598 634
18	Russian Federation	50 000 000	66 477 065	48 722 936	37 000 000	21 100 000	223 300 001
19	Finland	31 296 061	34 864 492	34 609 250	33 327 929	21 684 641	155 782 373
20	Malawi	3 860 000	6 388 237	17 772 373	112 154 210	2 179 444	142 354 154

*** Private contributions do not include extraordinary gifts-in-kind./ Source: WFP*

FIGURE 4.2: The distribution of WFP food assistance expenditures by emergency status



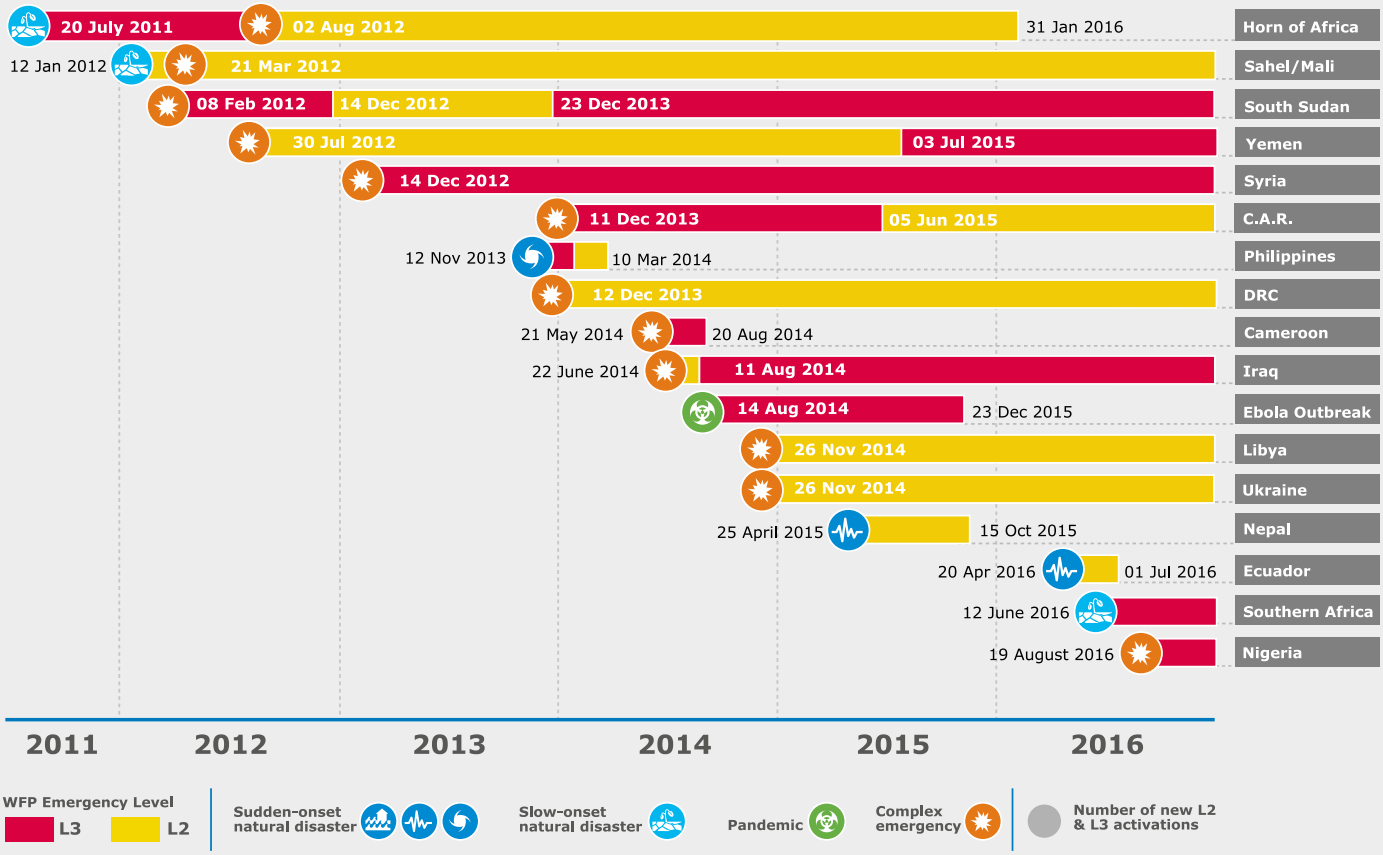
Source: WFP.
Note: L3 = country facing a Level 3 emergency requiring mobilization of global augmentation of regional and country-level response capability; L2 = country facing a Level 2 emergency requiring regional augmentation of country-level response capability

Most if not all funding for international food assistance is provided voluntarily.[xxiv] Most donors are governments. Although the resources provided by donors enable food assistance agencies to respond to crises as required, even the most agile donors usually require several weeks to approve new contributions. Food-insecure areas are often remote with poor transport infrastructure connecting them to the outside. Moving food to such areas can take several months, especially during rainy seasons when many roads become impassable. This combination of factors can result in lengthy and costly lead times for food deliveries to needy populations.

The abrupt and compressed nature of the demand for food assistance is such that food assistance agencies face severe cash flow problems as they seek to rapidly ramp up efforts. They also have high working capital requirements if they endeavour, as they should, to purchase and position food in advance rather than wait until a need materializes. These issues drive to the core of food assistance agencies' business models. WFP is no exception: and as a result it has been forced and encouraged to develop several tools to address these challenges such as cash flow financing, forward positioning and macro-advance financing.

WFP has developed a cash flow financing or project lending facility that allows projects to commence, or continue, even before contributions have been confirmed. This enables projects with a reasonable expectation of receiving donations in the future to use these "forecast contributions" as collateral against immediate cash transfers worth up to 80 percent of the anticipated donation. Once contributions are confirmed, the loans are repaid and the cash is effectively "recycled". With this facility, food can be procured and other assistance can commence as soon as a need is identified, saving vital weeks. The concept is being scaled up through the macro-advance financing pilot (Box 4.5).

FIGURE 4.3: Major WFP emergency responses, 2011–2016



Forward positioning minimizes delivery lead-time, especially during emergencies, and enables food procurement at the right time to increase value for money. WFP has systematized this practice with the Global Commodity Management Facility (GCMF), a strategic financing platform for positioning food in a region or corridor on the basis of anticipated demand from nearby country offices. The GCMF allows WFP to plan its purchases more effectively according to when the time is right in the markets, and it can significantly shorten the delivery times for operations. It ensures that the food distribution pipeline is pre-filled and minimizes the time taken from a project's request for food to its being delivered. Stocks are replenished on the basis of aggregate demand and resource projections. The cash is recycled as soon as food is paid for, using confirmed contributions or loans from the project lending facility. Currently 40 percent of the overall amount of food distributed by WFP and 50 percent of all cash-funded purchases are made through GCMF. For some of WFP's largest operations – Ethiopia, Malawi, South Sudan and Yemen – GCMF accounts for 90 percent to 100 percent of total cash-funded purchases.

Taken together, the project lending and global commodity management facilities reduce the average food distribution lead time by 85 percent – from well over three months to three weeks and often much less. These mechanisms have grown in popularity over time and in recent years the number of loans and the total amount advanced has rapidly increased, leading to an expansion of the facility with a higher ceiling (WFP, 2016b).

BOX 4.5: WFP's macro-advance financing pilot

The macro-advance financing concept is an extension of the cash flow financing or project lending mechanism, which has a ceiling of US$570 million and is backed by the operational reserve of US$95 million – a leverage factor of six to one. Macro-advances are not tied or linked to donor-specific forecasts of cash contributions: they are linked to the level of resources that a country office expects for a given year on the basis of historical trends and knowledge of donors' likely intentions.

Pilot countries for the initiative were selected on the basis of: i) historical funding trends; ii) stability as reflected in needs and risk assessments; iii) participation in the resource-based planning pilot with a validated resource-based plan; and iv) an accountability agreement acknowledging the responsibilities and obligations associated with the macro-advance.

A first tranche of US$82.3 million of funding for four pilot countries – Ethiopia, Kenya, Mali and the Sudan – was endorsed by the Strategic Resource Allocation Committee and approved by the Executive Director. Subsequently, a macro-advance of US$1.3 million was approved for the Nicaragua country programme, and a second tranche of US$17 million was released to the Ethiopia protracted relief and recovery operation. These releases bring the total advanced in the macro-advance pilot to US$100.7 million. As of July 2016, US$71.8 million of repayments had been made, all in accordance with donor conditions.

Benefits identified by managers from the five pilot country offices included: i) increased predictability of resources, facilitating long-term planning of ration composition and reducing the number of periodic ration cuts; ii) increased supply chain efficiency, resulting from direct delivery from the port to the country and reduced transhipment costs – storage and handling; iii) reduced lead-times in procurement, transport and delivery of food to final distribution points; iv) reduced pipeline breaks, by covering initial CBT requirements before contributions arrived; v) increased operational effectiveness, by pre-positioning food ahead of the rainy season and achieving lower transport costs; vi) increased cost savings, by procuring food at harvest, when prices are lower; vii) an improved forecasting framework, enabling better planning of resource mobilization; and viii) increased accountability for providing reliable and realistic contribution forecasts.

Implementation of the macro-advance financing pilot has been constrained by donor conditions attached to contributions. Earmarking and other donor restrictions reduce a country office's ability to repay macro-advances, limiting the predictability and flexibility to maximize delivery of food assistance to beneficiaries. The validity dates on grants posed a particular challenge, with country offices facing difficulties with repayments when the validity date of a grant did not match the timeframe in which a macro-advance was utilized.

Source: WFP

ACCESS PROBLEMS

Populations in need of food assistance are often beyond the reach of humanitarian actors. This may be because of insecurity, conflict, lack of infrastructure, inclement climatic conditions, rough terrain, bureaucratic restrictions or requirements and attacks by armed groups (Labonte and Edgerton, 2013; United Nations, 2015a). Official and unofficial authorities do not always welcome assistance, and may impose access constraints as a result of different views about civil protection, tactical or policy considerations, mistrust about humanitarian objectives and fears of foreign influence (Rohwerder, 2015).

Access constraints include bureaucratic obstacles such as: i) visa restrictions, travel permits, registration and approval procedures and checkpoints; ii) interference in the implementation of humanitarian activities, including the extraction of fees; and iii) security constraints such as ongoing fighting and violence against humanitarian workers. The beliefs, motivations and operating approaches of armed groups can render negotiation of access particularly challenging. Perceived association with political or military actors may make governments and de facto authorities reluctant to grant access to humanitarian organizations (Rohwerder, 2015; Kumar and De la Haye, 2012).

Humanitarian space thus expands or shrinks in accordance with a range of social and political barriers that can be overcome only through complex and protracted investment and negotiation. Timely and continuous access is critical for food assistance because food is life-saving, perishable and easily marketable. Although non-food items are often delivered on an ad-hoc or one-off basis, food assistance deliveries must take place regularly. Food distribution timing is also critical, particularly to meet heightened needs during lean seasons, and in programmes aimed at enhancing self-sufficiency by distributing food in support of agricultural activities.

Lack of access need not necessarily be linked to violence and conflict. Even then it has major implications for the logistics of food assistance (see Box 4.6). Arranging adequate and secure storage and planning for transport arrangements can be challenging given that food has limited shelf-life and must be transported immediately. Food is bulky, of high value and normally costlier to transport than non-food-items. Food access requires greater planning and delivery time than access for other goods, and it depends on the availability of sufficient transport. Before distribution, food usually requires secure and adequately covered storage facilities for stockpiling. These considerations apply fully to CBTs where private actors must perform these functions through several interrelated markets for goods and services.

Impeded access has several other consequences for programming, the well-being of beneficiaries and the safety of personnel. These include: i) incomplete information for planning; ii) inability to register beneficiaries appropriately and monitor assistance provided; iii) restricted or delayed deliveries or cancelled distributions; iv) deterioration of nutritional status, increased need for supplementary and therapeutic feeding, and increased mortality rate; v) further erosion of local communities' coping mechanisms; vi) increased operational costs caused by "last resort" delivery and management mechanisms such as airdrops and WFP-chartered air services; vii) repeated postponement of rehabilitation and recovery programmes; viii) erosion of the perception of neutrality; and ix) increased risks for field staff.

No single strategy can bring success in all contexts. Like other humanitarian organizations, food assistance agencies must employ several approaches to overcome access constraints. In some cases they engage in humanitarian negotiations with all conflicting parties, which requires capacity for sustained dialogue, especially where there are objections to negotiations with non-state armed groups. The way in which organizations are perceived plays an important role in how effective their negotiations will be. Perceptions of neutrality, independence and impartiality are vital but difficult to sustain in complex and volatile contexts featuring limited trust and major communication gaps.

Agencies also seek to implement programmes where access is limited through strategies such as remote management, low-profile approaches, working with local organizations, and cross-border operations. These approaches entail compromises and have considerable risks, but they may be the only way to gain access to populations in need.

Agencies also seek to adhere to core humanitarian principles, international humanitarian law and national legal, traditional and customary norms to encourage all parties to a conflict to allow humanitarian access. Avoiding perceptions of capture by political objectives is paramount.

BOX 4.6: The food assistance supply chain –enhancing food systems and beyond

Most food assistance is delivered in disrupted, insecure and volatile environments. Programmes are built on a complex network of sourcing, contracting, storing and transporting a wide range of food items and related goods and services that aim to provide food, cash, services and equipment to affected populations within hours of an emergency being declared, anywhere in the world. Planning, logistics and procurement capacities are vital.

As the world's largest humanitarian agency providing food assistance, WFP's supply chain apparatus is formidable. On any given day WFP coordinates an average of 5,000 trucks, 40 ocean shipments, 70 aircraft, a worldwide network of 650 warehouses, 800 WFP-owned trucks and 35 fleet workshops. This capacity is made available to the United Nations system, NGOs and governments through several shared services: these include the United Nations Humanitarian Air Service, the United Nations Humanitarian Response Depot network, the Logistics Cluster and the Emergency Telecommunications Cluster. By contracting local businesses and working with NGOs and other actors, food assistance agencies contribute to more sustainable food systems, more dynamic retail sectors and more robust transport and storage networks.

WFP's supply-chain support for the Ebola crisis response in Guinea, Liberia and Sierra Leone illustrates the challenge and potential. In addition to reaching 3 million people in the three affected countries with food and nutrition support that curbed the spread of the virus by reducing movement pressures faced by affected communities, WFP also provided logistics, storage, procurement and transport support for humanitarian partners, and enhanced medical facilities. Logistics hubs were established in or near capitals and forward logistics bases were established in the three countries. WFP built 30,000 m^3 of facilities to house medical supplies and protection gear. The United Nations Humanitarian Air Sservice operated in and between the affected countries and regional hubs. Through the Emergency Telecommunications Cluster, WFP and its partners provided internet and radio connectivity in 115 locations, giving reliable internet access to 3,300 humanitarian staff.

THE EBOLA RESPONSE:
WFP'S LOGISTICS NETWORK

AIR COORDINATION CELL

(Cologne, Germany)

- Operational equipment
- Medical supplies
- Relief items

UNHRD

(Ghana, Italy and UAE)

- WFP High Energy Biscuits
- Personal protective equipment
- Relief items
- Medical supplies

LOGISTICS CLUSTER

- Coordination
- Storage and transport
- Cargo tracking
- Information management

From North America, Europe, and Las Palmas, Spain

- WFP food
- WFP trucks
- Operational equipment
- Relief items

Key: Main logistics hub | Forward logistics base | WFP-built Ebola Treatment Units

PROTECTION PROBLEMS

Serious violations of international humanitarian law and abuses of international human rights law are increasingly common in humanitarian crises featuring food assistance (MINUSCA, 2015; UNCHR/UNMISS, 2017). Humanitarian action operates in wide political, economic, cultural and social contexts. Humanitarian needs often result from processes of violence and subjugation stemming from violations of fundamental national policies and regulations, or failure of international mechanisms intended to contain or regulate violence. Humanitarian responsibility thus entails delivering the best food assistance possible, and also tailoring operational objectives and advocacy approaches to patterns of violence with a view to avoiding active or passive complicity (UNHCR, 2017).

Five principles or imperatives apply (WFP, 2012):

1. All food assistance agencies must recognize the host state's primary responsibility to protect all the people within its jurisdiction, and must work with governments to seek solutions for safe and dignified food assistance programming.
2. The food assistance agency's chief accountability is to crisis-affected and food-insecure people, who are the primary actors in their own survival and protection. Agencies must therefore seek ways of empowering these people and increasing the space for them to ensure their own protection.
3. Food assistance activities should be based on context and risk analysis, including an understanding of how protection gaps contribute to food insecurity and hunger and vice versa, and how interventions can help to close these gaps.
4. Food assistance processes – including negotiations for humanitarian access, advocacy, partnerships and delivery mechanisms – should be pursued in accordance with humanitarian principles and international law.
5. Food assistance should be provided in ways that support the protection of populations affected by conflict and disaster and, at the very least, not expose people to further harm.

Protection measures ensure that food assistance reaches marginalized people and is delivered in ways which do not put them at risk or create or reinforce negative impacts (UNHCR, 2017; WFP, 2012). Food assistance must hence adopt a "do-no-harm" approach that guards against causing or perpetuating protection problems for vulnerable populations – often women suffering as a result of deeply engrained inequalities. Protection around food assistance must ensure that distribution sites are safe, that adequate facilities are available and that distance travelled and waiting times are minimized.

In complex emergencies, women and children usually comprise the largest section of affected civilians (UNGA, 1974; UN Women, 2000; UNHCR, 2016). They are therefore particularly susceptible to harm, including threats of sexual and gender-based violence. Food assistance programmes can help to reduce risks of such harm (see Box 4.7). These risks are a function of threats to the rights of affected individuals, and also of their vulnerability and their capacities for dealing with those threats. The most vulnerable and food-insecure people with few coping mechanisms are often those whose rights are most egregiously infringed (Mabiso et al., 2014).

At the same time the provision of food assistance to certain vulnerable individuals or groups such as women, IDPs and refugees – may give rise to greater risks if their protection concerns are not taken into account during assistance planning and design. For example authorities, community leaders and other groups in power may discriminate or manipulate food assistance mechanisms to force the return of displaced people in a manner that does not respect the dignity, safety and interests of beneficiary populations, or that is against the principles of international law (Action Aid, 2009). Certain types or forms of food assistance such as packaging styles may make people more vulnerable to specific protection problems such as attacks, sexual abuse and looting (WFP, 2012). Programmes must therefore be designed with protection objectives in mind.

Required innovations include: i) investing in institutional capacity for context and risk analysis; ii) incorporating protection concerns into programme tools; iii) integrating protection objectives into the design and implementation of food assistance programmes; iv) developing staff capacity to understand protection concerns and formulate appropriate and principles-based responses; v) establishing informed and accountable partnerships; and vi) establishing clear guidance and systems for managing protection-related information (WFP, 2012).

BOX 4.7: Ensuring safe access to fuel for women and children in risky environments

Every day millions of women and children face serious challenges while they search for the firewood they need to prepare their food. In humanitarian settings where resources are scarce, many women and girls spend hours travelling long distances to collect firewood, putting themselves at risk of attack and sexual violence. Vulnerable populations often undercook or sell food just to buy or save on firewood, thereby jeopardising their nutrition. The dependence on firewood, charcoal and agricultural waste to prepare meals puts considerable pressure on the safety of families and the environment, contributing to degradation and deforestation. This in turn increases people's vulnerability to climate change because they are more exposed to climate risks such as more frequent and intense floods and droughts.

WFP's SAFE initiative adopts a multi-faceted approach to meet the energy needs of displaced people worldwide through sustainable energy-related activities, thereby protecting people and the environment. WFP focuses on reducing people's exposure to gender-based violence, nutrition and health threats, and where possible building resilience and long-term food security working towards the following objectives:

- Safety. Reduce possible violence towards women and children who are collecting firewood by providing alternative fuel sources and reducing the amount of time needed to collect the firewood.
- Health. Minimize indoor air pollution through education and the use of fuel-efficient cooking stoves.
- Environment. Mitigate negative environmental impacts of deforestation as a result of firewood collection and from cooking stove emissions by promoting fuel-efficient stoves.
- Self-sufficiency. Create alternative livelihood opportunities by educating women and vulnerable communities in building fuel-efficient cooking stoves and other income-generating activities.

The success of SAFE relies on combining different activities to comprehensively address the challenges related to access to cooking fuel:

i. beneficiaries providing or producing fuel-efficient stoves and alternative sources of cooking fuel for WFP-assisted households and schools;

ii. investing in sustainable natural resources such as planting tree seedlings, nursery management and climate change mitigation projects;

iii. activities introducing alternative livelihood options; and

iv. technical training and sensitization to gender-based violence.

In 2009 WFP committed to reach six million displaced people through a combination of activities addressing the issues WFP beneficiaries face when cooking. By 2014, WFP's SAFE programmes had reached 2.8 million people in countries such as Ethiopia, Haiti, Kenya, Sri Lanka, the Sudan and Uganda. Between 2016 and 2020, WFP is aiming to scale up such SAFE programmes and to reach additional countries with cooking fuel access concerns in keeping with its goal of reaching 10 million people by 2020.

Source: WFP (2017)

SECURITY PROBLEMS

Food assistance and other forms of humanitarian support are often delivered in highly insecure environments (UNHCR, 2016). In 2000 there were 41 significant attacks on aid workers, and by 2014 the number had risen to 190. In these 15 years over 3,000 aid workers were killed, injured or kidnapped. In 2015 more than 300 were killed, wounded or kidnapped, the second worst year on record (IRIN, 2015). Staff delivering food assistance face a range of security-related challenges. These include: i) attacks with improvised explosive devices carried on vehicles or by individuals; ii) kidnapping and hostage-taking; iii) direct threats against offices resulting in their closure; iv) invasions of compounds as a result of armed conflict; and v) assaults, robberies and direct personal threats to life and well-being. In April 2017 three WFP-contracted porters in South Sudan were murdered as they tried to make their way to the WFP warehouse where they worked. Despite improvements to road safety and the implementation of risk-reducing measures, road accidents are a significant cause of injuries and fatalities (WFP, 2016c).

Armed conflict and terrorism will continue to be the most significant threats to food assistance operations. With growing military pressure on militant groups in areas where food assistance operations are underway –the Middle East, Somalia, South Sudan, northern Nigeria and the Lake Chad Basin are examples – these groups are expected to revert to terrorist tactics and attacks of various kinds; acts of cyber warfare are also expected to increase in frequency (WFP, 2016c).

Food represents power and leverage. It can be used as a weapon of war to influence power dynamics in recipient areas and elsewhere. Food assistance agencies can be high-profile targets: hence they are particularly exposed to these threats from groups who may oppose cooperation between food assistance agencies and host governments and view its programmes as contrary to their aims. Robust security measures based on security analysis adapted to food assistance needs are required (see Box 4.8). This requires developing security capacities in food assistance teams, in line with corporate approaches to the management of humanitarian access. Proficient security risk management and dependable funding are vital.

BOX 4.8: "How to stay" – safety and security training for humanitarian staff

The mounting hostility and increasing number of violent attacks against humanitarian staff, premises and assets emphasize the need to promote and deliver safety and security training for humanitarian personnel in unstable and dangerous areas. Since January 2007, the United Nations System Staff College and the United Nations Department of Safety and Security have been contributing to improved preparedness among the staff of United Nations organizations, international organizations, NGOs and government agencies so that they can identify, face and respond to direct and indirect threats and incidents that jeopardize their lives and compromise their ability to serve the targeted populations.

Safe and Secure Approaches in Field Environment (SSAFE) training reflects a move away from a culture of risk aversion to an acceptable risk paradigm that affirms the "how to stay" approach endorsed by the United Nations Chief Executives Board. The aim is progressive development of a decentralized security management system that enables field offices to take the necessary decisions to ensure that security is effectively managed.

A WFP staff member at a food distribution site in the Imvepi Refugee Settlement in Northern Uganda.
WFP/Claire Nevill

The SSAFE programme is the instrument through which 14,000 United Nations and personnel from other organizations and governments in 16 countries have benefited from a thorough safety and security training curriculum of theoretical and practical training delivered by 400 certified SSAFE trainers. The modular structure and flexibility of the SSAFE training renders it easily customized to different working contexts and realities. The objectives are to raise participants' awareness of threats in their operational environments and equip them with the knowledge and skills required to prevent and respond to security incidents in the field. The subjects covered include: i) hostage incident survival; ii) "active shooter response"; iii) mission planning and convoy security; iv) access negotiation in high-risk environments; v) stress management and resilience in high-risk environments; vi) emergency communication systems; vii) threat assessment and security risk management; viii) personal security and weapon awareness; ix) first aid; and x) cultural awareness.

Source: OCHA (2001).

ACCOUNTABILITY TO AFFECTED POPULATIONS

Room for manoeuvre in humanitarian action is shrinking (GHAR, 2016). Digital innovations in assessment, sampling, targeting, programme delivery and monitoring and evaluation in remote areas are helping to overcome access, protection and security challenges by reducing the need for movement by beneficiaries and food assistance staff (see Box 4.9). Blockchains – distributed ledgers or decentralized replicated databases, synchronized via the internet and visible to anyone within the network – provide scope to increase peer-to-peer transactions, build trust, reduce the need for intermediaries and increase security. By enabling the digitization of assets, blockchain technology is driving a fundamental shift of motivation and action in the internet from instantly viewing, exchanging and communicating information to instantly exchanging assets, thereby greatly reducing the need for major intermediaries where trust is established through consensus and complex computer code rather than by central intermediaries (Thompson, 2016).

BOX 4.9: Digital solutions for beneficiary information and transfer management

WFP has developed SCOPE – a digital information and transfer management platform that supports the programme intervention cycle from beginning to end. It is a cloud-based solution for registering people, intervention setup, distribution planning, entitlement management, transfer management and operational distribution tracking. It is conceived as a flexible and powerful data source with online and offline capabilities. SCOPE enables WFP to understand the people it serves more fully and give them more personalized assistance, with the flexibility to correct the course of action during an intervention. It can also be used as a single platform to transfer benefits from various agencies.

SCOPE currently supports all WFP's transfer modalities – in-kind, voucher and cash – for a variety of project activities including community-based capacity development to manage and control water. Also included are nutrition programmes for pregnant and lactating women, school meals programmes, community-based rural infrastructure rehabilitation initiatives and urban food safety nets. In 2016, 8.4 million people will be registered for cash distribution and 18.6 million for in-kind assistance through the SCOPE programme.

SCOPE was originally created to be WFP's system for cash operations. It has evolved into a digital platform that now applies to cash-based and in-kind interventions. This is leading to streamlined and balanced project implementation, especially in the challenging "last mile" contexts in which WFP often works. Several host governments are using SCOPE to develop the food safety net components in national social protection systems.

Source: WFP-SCOPE (2017).

A core dimension of these digital innovations is their capacity to enhance accountability to affected populations (Madianou et al., 2015). Accountability is one of the core values that helps humanitarian agencies provide the best possible service to the people they assist under conditions of shrinking humanitarian space. It constitutes a change in mindset from an almost exclusive focus on accountability to donors to a recognition that food assistance agencies must also be accountable to the women, men, girls and boys that they assist, and involve them in decisions that affect their lives. It is a shift towards perceiving affected people as partners and stakeholders, not simply as beneficiaries (IASC, 2011).

Food assistance agencies are entrusted with responding to the needs of people affected by food insecurity and malnutrition. Agencies should be accountable to these people for achieving results and for the manner in which programmes are implemented, because they have a right to be involved in decisions that affect their lives. Ensuring that programmes are accountable to affected people is therefore a major aspect of rights-based programming. Engaging affected people in programme decisions makes food assistance more effective. Basing programmes on the preferences of affected people helps to ensure that needs are correctly identified and understood, and that programmes are designed in a manner appropriate to the context. Engagement with affected people can also flag problems in programme implementation early on, thereby enabling timely and effective adjustment (WFP, 2015d).

Three dimensions of accountability are relevant: i) provision of information; ii) consultations; and iii) complaints and feedback mechanisms. Food assistance agencies must provide accurate, timely and accessible information to affected people about their assistance. The information provided must be clearly understood by everyone irrespective of age, gender or other characteristics. Agencies must seek the views of all segments of the affected population and invite feedback throughout each stage of the project cycle. And agencies must provide the means for affected people to voice complaints and provide feedback in a safe and dignified manner. A formal complaints and feedback system must include procedures for recording, referring, taking action and providing feedback to the complainant. These three components provide opportunities for affected people to make informed decisions and express their views about food assistance programmes. To ensure that this translates into actual accountability, agencies must use the input they receive from affected people to adjust programme design and implementation and inform learning through monitoring and evaluation (WFP, 2015d).

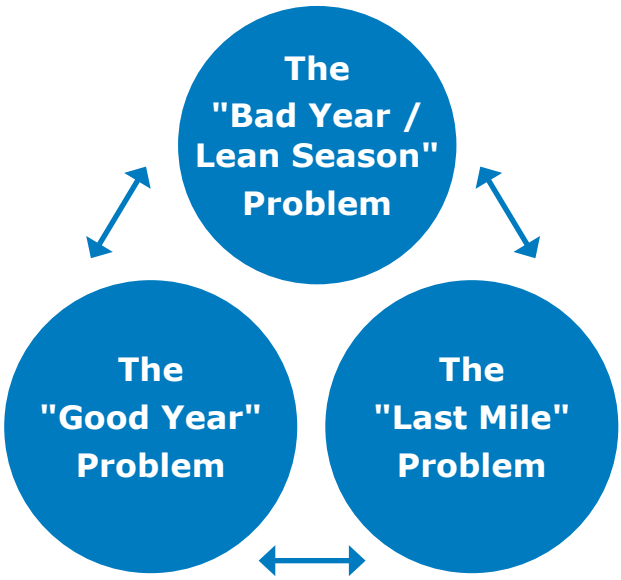
Food system structure and functioning

Food assistance is delivered within and through food systems, defined here as interlocking networks of relationships that encompass the entire range of functions and activities involved in the production, processing, marketing, consumption and disposal of goods. Conflict, violence and natural hazards such as droughts, floods and storms can overwhelm these networks, render functions and activities impossible and generate food emergencies of varying severity. Food assistance is undertaken in anticipation of or in response to these eventualities. But as repeatedly evidenced by the very different impacts of hurricanes in the Dominican Republic and Haiti, particular hazards can have distinct manifestations and impacts (Pichler and Striessnig, 2013).

Food assistance measures accordingly differ in scale, intensity and content. They also vary in relation to the underlying features of the food systems in which they are delivered. Specifically, initiatives are affected and defined by three deeply-rooted and related systemic problems in food systems – problems that destroy private value, constrain livelihoods and consume public resources: i) the "bad year" or "lean season" problem; ii) the "last mile" problem; and iii) the "good year" problem (see Figure 4.4). The argument advanced in this section is that when ignored or inadequately addressed the three systemic problems contribute to risks and vulnerabilities that generate chronic hunger. By weakening food systems they also increase the risk that these systems will collapse under shocks, leading to food emergencies that call for food assistance. The resilience and overall performance of food systems thus hinge on how effectively these problems are handled.

FIGURE 4.4: Systemic problems in food systems

Thin markets extant in many regions struggle to absorb food surpluses, depressing sales prices, blunting future incentives for farmers, and generating waste and spoilage that sharpen seasonal price upswings and cut into consumer purchasing power



Physically, economically, and socially marginalized households in rural and urban areas regularly face periods of severely constrained access to nutritious food

The hungry poor are "hard to reach" and can themselves "reach out" only at great cost, resulting in low-return, subsistence-oriented livelihoods in rural areas and high unit-cost, hand-to-mouth livelihoods in urban areas

Food emergencies rest on and exacerbate these three problems, at scale
Food system effectiveness and resilience are defined by how well these three problems are handled

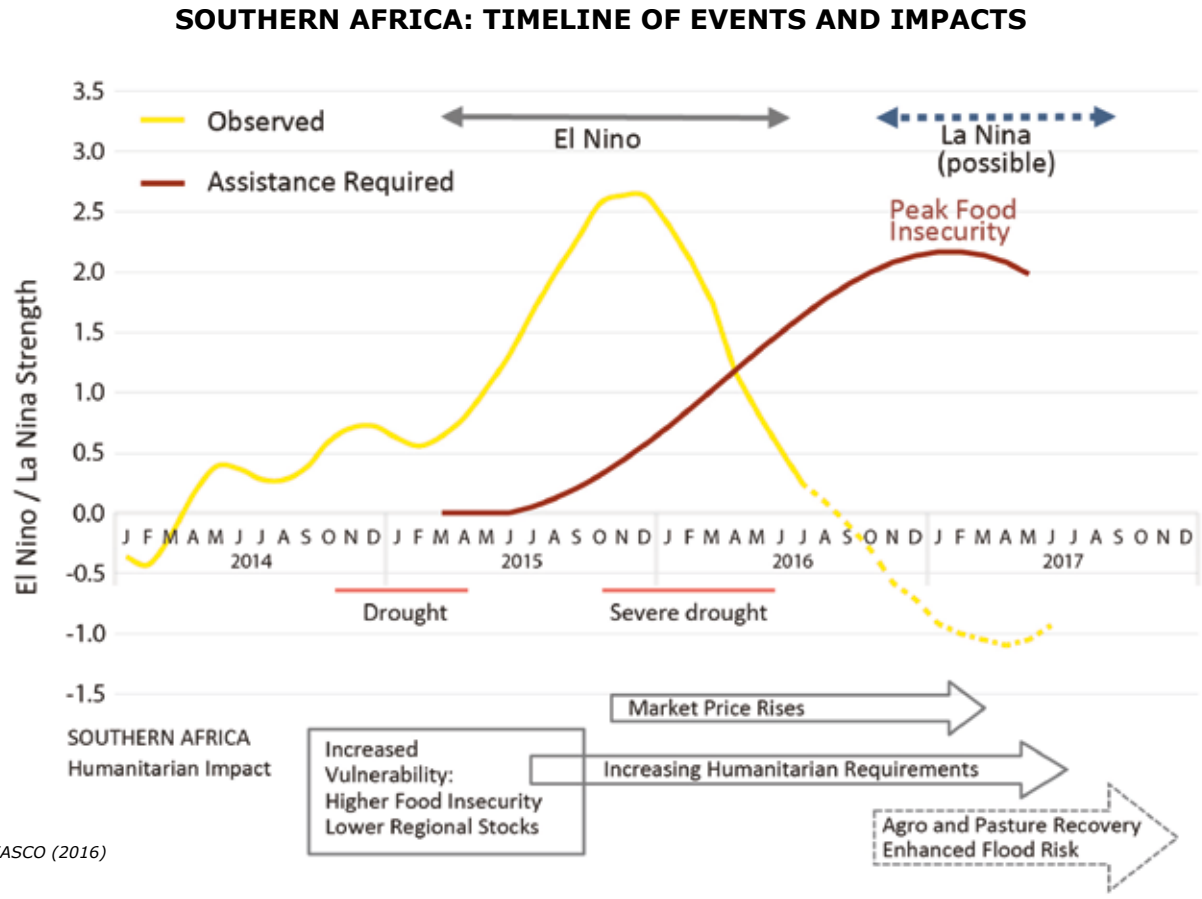
THE "BAD YEAR" OR "LEAN SEASON" PROBLEM

In the quintessential "bad year" areas or groups are struck by unforeseen hazards that overwhelm their capacities to cope. Natural hazards, armed conflict, civil strife and economic shocks of various kinds cause problems that end lives and disrupt livelihoods at massive scales. Such "bad years" are increasing in frequency and intensity (CRED, 2017; UNISDR, 2015).

Food systems mediate and reflect the core dimensions of "bad year" dynamics. Because food systems underpin millions of livelihoods worldwide (Timmer, 2014), they also harbour forces that define "bad years" for millions of people dependent on those livelihoods. Large numbers of marginalized households in rural and urban areas lack their own supplies of food in sufficient quantity to meet their needs. They also earn incomes that are too low and possess assets that are too few to confer the purchasing power needed to meet their food needs fully from markets. Such households regularly face periods spanning months or even years of severely constrained access to nutritious food. Periods of extreme hunger result, often accompanied by physical wasting and leanness – hence the term "lean season."

Children are especially vulnerable, as are women with extensive domestic workloads and care duties. In rural areas bad years and lean seasons are typically linked to unfavourable weather that affects crop and livestock yields (see Figure 4.5). In especially fragile environments the lean season can cover several production cycles, bringing with it extreme hardship. In urban areas the lean season is associated with joblessness, job loss and uneven expenses – some such as school fees anticipated, others such as healthcare or funerals not anticipated, that overwhelm meagre incomes (Mohiddin et al., 2012).

FIGURE 4.5: Evolution of a "bad year" during El Niño in Southern Africa, 2015-2017



Source: RIASCO (2016)

Over time vulnerable people develop complex methods for tackling the hardships associated with bad years and lean seasons (Maxwell, 1995; WFP, 2008). These strategies vary depending on types of livelihoods, asset holdings, land use patterns and systems of trade, marketing and finance. But common to most of these coping strategies is that the quantity and quality of food consumed decline. Meals are missed and portion sizes reduced. Starchy staples loom larger in diets at the expense of nutrient-rich but more expensive meats, dairy products and vegetables.

The undernutrition and micronutrient deficiencies generated by lengthy or repeated lean seasons produce a vicious cycle of depravity. For households for whom the lean season is especially severe and long-lasting, miscarriages, low birthweights, stunting, morbidity and reduced lifetime achievement result. High rates of dropout, repetition and absenteeism among primary school children are common. Valuable assets are often sold, limiting future productive capacity of households (WFP, 2008).

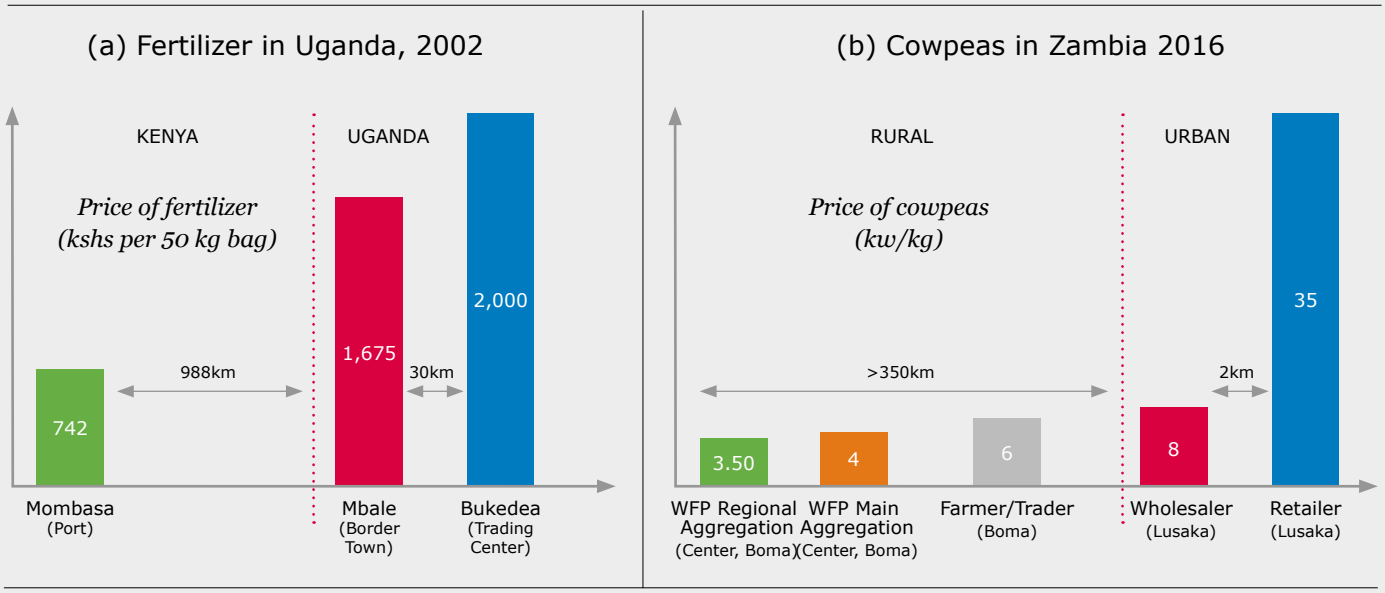
THE "LAST MILE" PROBLEM

A defining feature of the hungry poor is their physical, economic, social and political isolation (Gatzweiler et al., 2011). In rural and urban areas they are "hard to reach" and can themselves "reach out" only at great cost. In rural areas smallholder agriculture often dominates landscapes and livelihoods (IFAD, 2016). Large numbers of dispersed producers face high risks linked to insecure land tenure and property rights; they lack on-farm storage capacity, trade

bulky and relatively low-value products in small quantities and have low bargaining power relative to buyers, who have access to better and more complete information. These hurdles lead to significant market coordination failures because potential service providers face uncertain demand for their services and thus refrain from making the "last mile" investments that would improve farmers' access to the inputs and technologies that in turn would allow them to sustainably intensify production. The prices of improved inputs and services are high (see Figure 4.6). Low-return subsistence-oriented production and trading livelihoods are continually affirmed, and so too are the hunger and poverty associated with these livelihoods (Hazell, 2012).

In urban areas poor households with few skills and assets struggle under pervasive unemployment and low-paying jobs (Baker, 2008). Food, housing, health care, transport, schooling and other necessities are low-quality and patchy. Because of their low purchasing power, the urban poor can afford to buy only small quantities of these goods and services at a time. This raises costs for suppliers, resulting in high unit costs to consumers (see Figure 4.6). Where food choices are limited because of narrow ranges and scarcity of food outlets, households often have much higher food costs than others (Kaufmann et al., 1997). Residents in low-income areas have disincentives to purchase affordable and healthy food as a result of the spatial organization of their local food market (Hatzenbuehler, 2012). Hand-to-mouth livelihoods are thus the norm. Capacities to purchase food and maintain adequate nutrition are severely curtailed.

FIGURE 4.6: The last mile problem for food producers and consumers in Uganda and Zambia



Source: WFP calculations based on data from Boma, a rural town and Lusaka, Zambia

Vulnerabilities generated by rural and urban manifestations of the "last mile" problem are accentuated by environmental and natural resource degradation, political conflict, poor physical infrastructure and a range of economic shocks linked to macroeconomic policy, trade and globalization.

In humanitarian contexts the "last mile" is often besieged, sometimes for months or years on end (WFP, 2016a). Yet even besieged populations cultivate, plant, harvest, store, process and trade food for consumption. The dynamics outlined above apply to them in the extreme (see Box 4.10).

BOX 4.10: The "last mile" in humanitarian contexts – food prices in besieged and hard-to-reach areas in the Syrian Arab Republic in 2016

In a 2016 study of food prices and supply chain costs in besieged and hard-to-reach areas in the Syrian Arab Republic where road blocks and insecurity resulting from airstrikes and clashes in conflict areas disrupted the functionality of supply routes and cut sharply into food availability in markets, WFP found that:

i. actual market prices were as much as ten times higher than the equivalent "efficient" or "unimpeded" market prices computed on the basis of supply-chain costs;

ii. the monthly food-related economic cost of siege and poor access averaged US$110 per person or US$550 per household; this figure also captured the average level of benefits that would accrue to individuals and households as access improved, when the siege ended or when people were allowed to leave besieged areas;

iii. on the basis of this level of individual cost or implicit benefit, the food-related economic cost of siege for the 861,200 Syrians involved in 2016 was US$78.97 million per month, or US$948 million per year; by implication, and aside from the humanitarian rationale, there was a strong "pure" economic rationale for WFP's projected need for US$255 million over six months in its Syria emergency operations – potential annual benefits of US$948 million vs. projected annual costs of US$510 million; and

iv. assuming a unit cost of US$10,000 per mt for food airdrops, wherever the gap between the actual and "efficient" or "unimpeded" prices of the food basket exceeds US$565 per mt, food airdrops were justifiable in purely economic terms, without considering humanitarian aspects. This threshold was breached in many besieged and hard-to-reach areas in 2016.

Source: WFP Syria country office.

WFP carries out its first successful airdrop of vegetable oil in Ganyiel, South Sudan, an area where insecurity and poor roads makes access challenging. *WFP/George Fominyen*

THE "GOOD YEAR" PROBLEM

The "good year" problem is paradoxical in that it relates to a desired outcome – production of food surpluses. But it is just as devastating to households, communities and countries as the "bad year", "lean season" and "last mile" problems. Two sketches capture its essence – one from Ethiopia the other from Tanzania.

In 2001, as a result of good weather conditions and widespread adoption of improved seed and fertilizer acquired on credit, Ethiopian farmers produced a bumper maize crop. The huge surpluses caused an 80 percent drop in prices (Bonger et al., 2002). Facing prices at which they could not recoup their production costs, farmers left an estimated 300,000 mt of grain to rot in their fields. Defaults on input loans were widespread. The rare trader who tried to move food from surplus to deficit areas lost money as a result of high transport and other transaction costs. Markets failed as a result of several fundamental institutional and physical gaps, most notably poor market information, limited financing for small-scale traders and huge deficiencies in the storage, transport and telecommunications systems needed to handle a bumper harvest. There were no methods to assure product quality, nor to enforce contracts that would have provided traders with the confidence to acquire, store and move large volumes of food (Gabre-Madhin and Goggin, 2005). In 2002/03, paradoxically, 14 million people were food-insecure and in need of 1.9 million mt of food assistance (Relief Web, 2003).

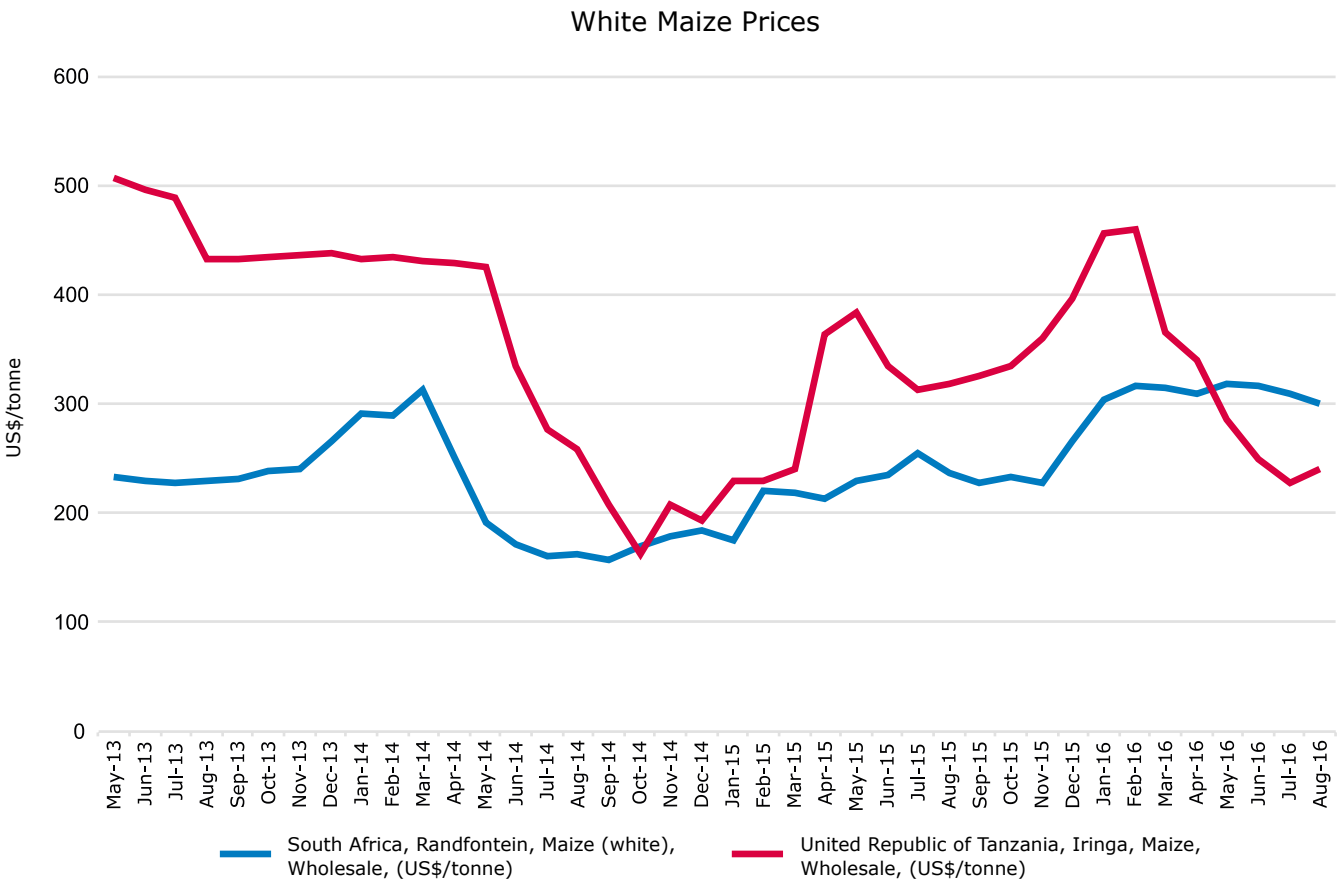
Similar instances of plunging prices caused by surging surpluses in one region of the vast country alongside shortages, high prices and deprivation elsewhere continue to this day (GIEWS, 2016a).

In 2014, Tanzanian farmers also produced a bumper maize crop of 6 million mt – 25 percent above the country's total annual need (RATIN, 2016). But as in Ethiopia in 2001, markets failed to handle the massive harvest (see Figure 4.7). In Rukwa and Katavi, for example – two major maize-producing regions – a 100 kg sack of maize was being sold at an all-time low of TSH 15,000, equivalent to US$90 per mt, down from TSH 45,000 – US$270 per mt – a few months before, and well below the prevailing international price of US$220 per mt (RATIN, 2016).

The government's National Food Reserve Agency could only afford to buy a small fraction of the surplus at harvest time. Traders targeting export markets bought large volumes but made hardly a dent in the avalanche of food available for purchase. Expectations that the Government would absorb the harvest were high but ultimately misplaced. Ruvuma region, for example, a major surplus area in southern Tanzania, was allocated funds to buy 40,000 mt of maize even though estimates suggested that there was a stock of more than 300,000 mt still in the hands of farmers (Muchoki, 2015). As was the case in Ethiopia, waste and spoilage were massive and pervasive (Macharia, 2015). And as in Ethiopia, these challenges continue (GIEWS, 2016b).

High Energy Biscuits produced with local ingredients in a mobile factory in Kabul, Afghanistan.
WFP/Alessandro Pavone

FIGURE 4.7: "Good year" maize price collapses in Iringa, Tanzania - 2014 and 2016



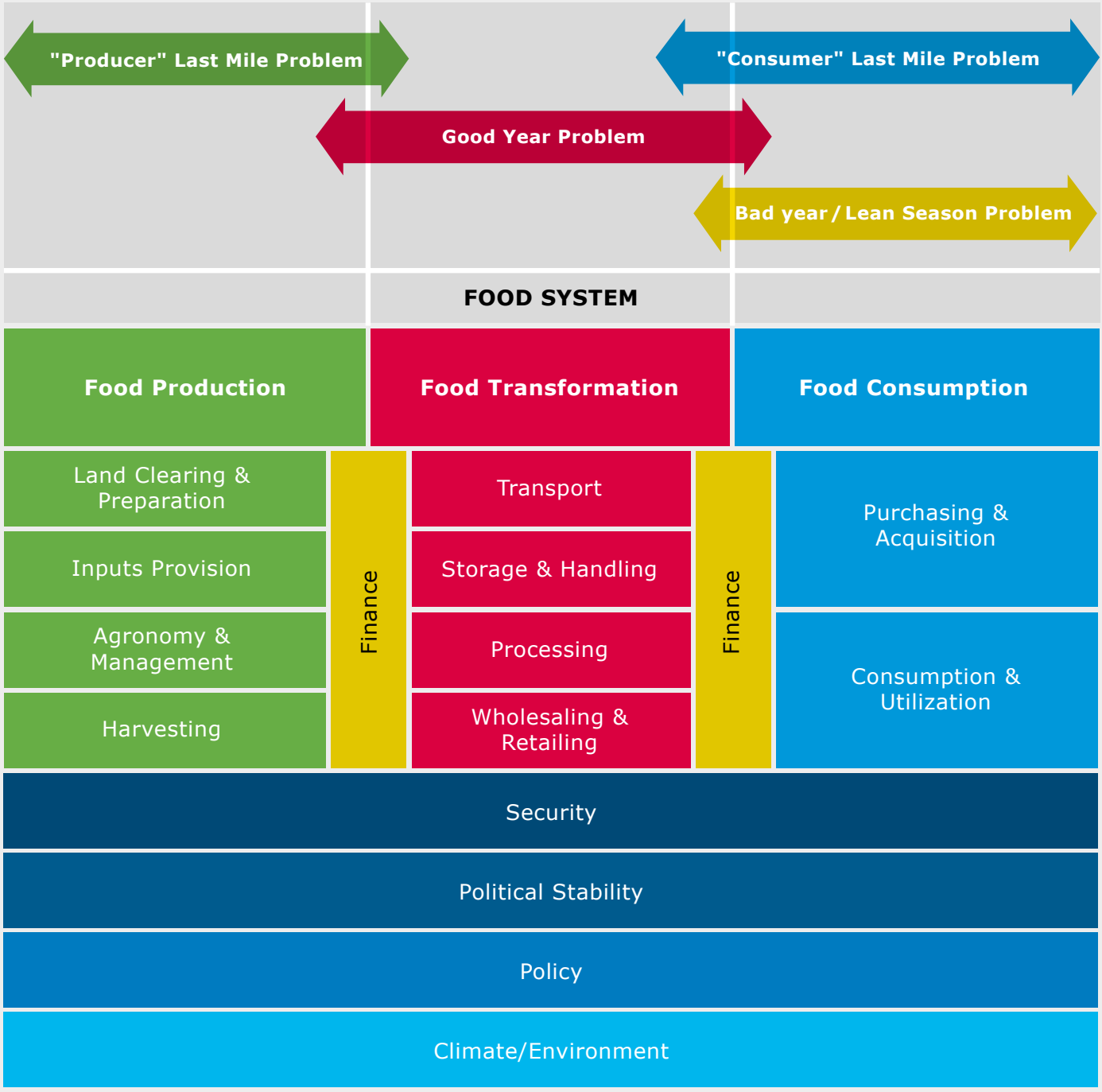
Source: RATIN (2016)

The examples from Ethiopia and Tanzania show that the "good year" problem stems from aggregation challenges, which in turn spring from a combination of "hard" and "soft" factors such as lack of on-farm storage capacity and poor access to post-harvest management technologies and practices. Another major factor is the need for cash at harvest-time alongside restricted access to credit that together oblige farmers and especially smallholders to sell large shares of small surpluses immediately after harvest when prices are low, rather than defer sales for more lucrative markets that may not pay immediately. Aware of these constraints facing farmers, traders and other aggregators complete the bulk of their purchasing at harvest-time, thereby raising major financial bottlenecks for themselves.

To the extent that traders can borrow, they do so. But they routinely leave large volumes of food unpurchased, condemned to rapid deterioration on-farm or in poor off-farm facilities. This occurs even when potential outlets exist in deficit areas, both domestically or in other countries (Bonger et al., 2002). The political content of food policy often presses governments into statements and actions such as export bans, pan-territorial floor prices and public food trading practices that reward urban consumers but punish food producers while absorbing huge amounts of public funds and creating artificial shortages of storage space that further distort incentives (FEWS-NET, 2017).

The three problems manifest themselves in particular segments of food systems. The "bad year or "lean season" problem expresses itself in household and individual food consumption (see Figure 4.8). The "last mile" problem presents itself for producers and consumers of food, with linkages forward and backward to food transformation. The good year problem is largely a food-transformation problem, but it reaches into food production because of obvious links to harvest and into food consumption because of impacts on food quality and safety.

FIGURE 4.8: The three systemic problems in food systems



Source: WFP.

When ignored or inadequately addressed the three problems generate systemic dynamics that promote vulnerability and food insecurity. And by weakening food systems they also increase the risk that systems will collapse under shocks, leading to emergencies that call for food assistance.

More than for any other single group on the planet, the three problems converge directly on smallholder farmers. Numbering over 500 million worldwide (IFAD, 2016), this group of people reside in the rural "last mile", are exposed to weather-induced bad years and suffer through good-year outcomes every harvest. The physically and economically remote, low-productivity and subsistence-oriented production systems pursued by smallholders combine with poor on-farm storage and post-harvest management technologies and practices to generate meagre incomes that can only support equally meagre and unhealthy diets. Such diets – typically featuring heavy consumption of relatively cheap starchy staples – cannot support healthy lives. Not surprisingly, smallholders are chronically vulnerable and food-insecure, and hence are strongly represented in food assistance programmes (WFP, 2016a).

The plight of smallholders worldwide demonstrates that the resilience and overall performance of food systems before, during and following food emergencies hinge on whether and how effectively these systemic problems are routinely handled. As a set of measures and routines that anticipate, mitigate and follow food emergencies, food assistance can play a role.

FOOD ASSISTANCE-BASED SOLUTIONS

Almost by definition food assistance confronts systemic problems in food systems. And also almost by definition it must do so pragmatically, driven by the need for speed, precision and effective partnerships in emergency contexts, with similar urgency translating to transition and development settings. The systemic potential of food assistance springs from the fact that it combines capacities and innovations in supply chain management and operations on one hand, with programming and policy design and implementation on the other. The core idea in food assistance-based solutions to systemic problems in food systems is hence leverage of food assistance interventions via complementary investments, enhanced capacities, transformative partnerships, institutional innovations and policy reforms.

Food system actors for leveraged food assistance include producer-traders, trader-processors or buyer-processors, retailers and consumers. At issue are the incentives for actions or behaviours and investments that overcome or mute the impacts of core drivers of the three systemic problems. Consumers feature in bad year or lean season solutions, producer-traders in last mile solutions, trader-processors in good year solutions and retailers in all three. The four sets of actors have unique and problem-specific priorities for innovation and capacity enhancement. The driving force of leveraged food assistance is sustained effective demand for quality food, where quality relates to nutritional content and safety and where demand may be expressed through markets or other channels.

Notional demand is ever-present in food systems. Effective demand must articulate itself or be deliberately articulated, as in many humanitarian situations. Many problems of food system performance stem from the collapse, inadequacy, non-appearance or non-conferral of effective demand. There is no natural motive force in food systems that translates the notional demands for food and other food system goods and services of marginalized groups such as smallholder farmers and the urban poor into effective demand for these items.

Effective demand for nutritious food is especially problematic. Powerful forces at play during food system transformation or during humanitarian crises drive demand toward non-nutritious foods (Tschirley et al., 2015a).[xxv] Challenges raised by the nutrition transition emerge, whereby undernutrition and micronutrient deficiencies appear in the form of overweight and obesity. Nutrition education is necessary but far from sufficient. Nutritious food is not alone in this regard. Sustained effective demand must often be articulated through a combination of technical, organizational and institutional innovations that boost investment and promote behaviour change. These considerations apply in full to food assistance-based solutions to the three hunger-promoting systemic problems in food systems.

Bad year or lean season solutions

The principal challenge to be overcome in the bad year or lean season problem relates to the existence of sizable populations of physically, economically and socially marginalized households in rural and urban areas who suddenly or regularly face periods of severely constrained access to nutritious food resulting from a range of negative shocks – covariate shocks such as droughts, floods, storms and earthquakes, and idiosyncratic shocks such as illness, death and loss of employment. Food assistance that addresses the bad year/lean season problem features measures that predictably and sustainably boost purchasing power for, or confer access to, nutritious food for vulnerable or exposed groups (Del Ninno et al., 2003).

Productive skill-enhancing, asset-increasing and nutrition-specific and nutrition-sensitive food and cash based transfers to vulnerable groups are relevant in many contexts. These transfers not only improve food and nutrition security: they also address capacity gaps that inhibit uptake of quality-enhancing technical and organizational innovations in food production, aggregation and sale. Increasingly, linkages to investments in long-term productive capacity are stressed. Enhanced capacity to manage risk is especially important, ideally embedded in institutional platforms for reducing vulnerability and increasing resilience such as shock-responsive social protection systems, with a focus on institutional mechanisms and administrative processes that link transfers to core elements of disaster risk management – prevention, mitigation, preparedness, response and recovery (OPM, 2015; see Box 4.11).

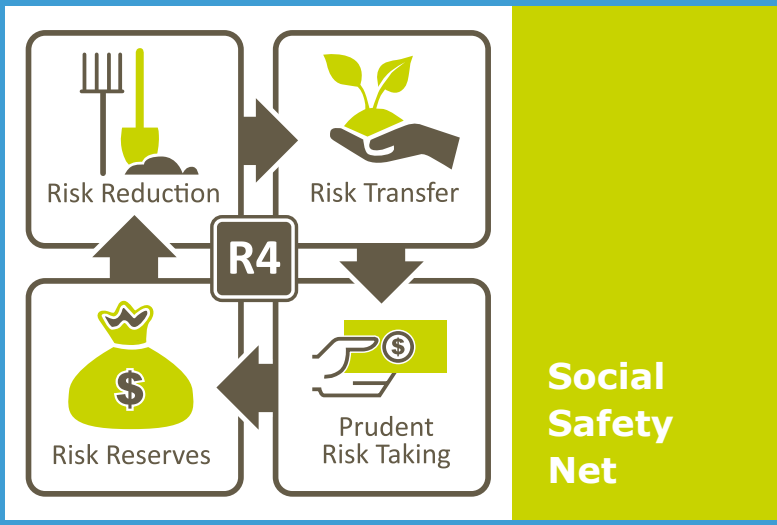
For the millions of retailers on whom vulnerable consumers rely for large shares of their food needs – and especially for those who serve recipients of food assistance through CBTs – priorities for innovation centre on overcoming technical and organizational challenges linked to acquisition, inventory and stock management, customer service and sales promotion for quality food. Like other "last mile" operators, retailers benefit from innovations that help them to overcome numerous challenges linked to their physical and institutional isolation. Innovations that enhance capacities for risk management are especially important. To expand scope for retailers to achieve profitable growth and higher customer value, demand-led investments to upgrade retailer supply chain management capacities are increasingly prioritized. Ideally, such investments – which can include "hard" physical infrastructure and "soft" management platforms – are based on industry benchmarks and employ fast-evolving ICT solutions that can dramatically reduce operational costs (Abrahamsson and Rehme, 2010).

For vulnerable consumers, the ability to adjust and substitute foods in diets without major reductions in the volume and quality of food intake is paramount in bad years/lean seasons (Timmer et al., 1983). Women and mothers burdened by domestic duties and community responsibilities are especially implicated (WFP, 2015c). Support entails not only appropriate exercise of purchasing power or entitlements, but also enhanced nutrition education and knowledge and practice of appropriate self and family care and feeding behaviours.

Investments in food fortification and development and enforcement of food safety and quality standards in food assistance supply chains spill over into food systems. Capacity for sustainable production and availability of nutritious food is boosted, thereby enhancing scope to address various forms of malnutrition (SUN-BN, 2017; WFP, 2015e).

BOX 4.11: Boosting household and community resilience through enhanced risk management

WFP and Oxfam America launched the R4 Rural Resilience Initiative (R4) in 2011 to enable vulnerable rural households to increase their food and income security in the face of increasing climate risks. R4 builds on the initial success of the Horn of Africa Risk Transfer for Adaptation initiative pioneered in Ethiopia by Oxfam America, the Relief Society of Tigray and Swiss Re. R4 helps communities become more resilient in the face of increasing climate variability and shocks. Under R4's comprehensive risk management scheme, communities are stronger in the face of disasters. Protected by insurance, households can avoid the need to sell their assets or take their children out of school in case rains fail.



Through R4 farmers can access insurance by paying with their labour through insurance-for-assets schemes. When a drought hits, compensation for weather-related losses prevents farmers from selling productive assets and stimulates faster recovery. Insurance-for-assets schemes are built into government social safety nets or WFP's food assistance for assets programme. Assets built through risk-reduction activities promote resilience by steadily reducing vulnerability to disaster risks over time. Insurance facilitates access to credit at better rates by serving as collateral. Households can invest in riskier but more remunerative enterprises, and in seeds, fertilizers and new technologies to increase their agricultural productivity. Participants establish small-scale savings, which are used to build "risk reserves". Savings help build a stronger financial base for investing – but also act as a buffer against short-term needs and idiosyncratic shocks such as illness and death.

To ensure long-term sustainability, R4 contributes to the creation of rural financial markets by building local capacities and gradually transitioning farmers to payment for insurance in cash. R4 has broken new ground in climate risk management by enabling the poorest farmers to pay for crop insurance with their own labour. Impact assessments in Ethiopia show that insured farmers saved more than twice as much as those without any insurance, and they invested more in seeds, fertilizer and productive assets such as plough oxen. Women, who often head the poorest households, achieved the largest gains in productivity through investing in labour and improved tools for planning. In Senegal, after two consecutive bad harvests, R4 farmers were able to maintain their food security compared to others exposed to the same risks.

R4 currently reaches 40,000 farm households – 200,000 people – in Ethiopia, Malawi, Senegal and Zambia through a combination of four risk management strategies: i) improved resource management through asset creation – risk reduction; ii) insurance – risk transfer; iii) livelihood diversification and microcredit – prudent risk taking; and iv) savings – risk reserves. In 2016 as a consequence of El Niño, about US$450,000 in payouts were distributed through the initiative in Ethiopia, Malawi and Senegal.

Source: OXFAM (2014); WFP/OXFAM (2015).

Last mile solutions

Food assistance that addresses the "last mile" problem includes measures that confront and overcome the isolation that generates last-mile outcomes. Sources and drivers of isolation are numerous and complex, typically including combinations of economic, social and political factors that generate vulnerability and destitution. Solutions focus on first-order implications for supply of and demand for quality food. The main actors are food producer-traders – especially smallholder farmers who dominate rural landscapes in many contexts and also the ranks of the hungry poor – and food retailers – especially small rural and urban enterprises such as kiosks and small shops on whom the hungry poor rely for large shares of their food supplies. Demand for quality food is the driving force, opening scope for food assistance-based solutions. For producer-traders, the challenge is to respond to that demand; for retailers, the challenge is to understand and shape it.

For producer-traders, innovations centre on overcoming technical and organizational challenges linked to production, aggregation and sale of quality food. These profound and pervasive challenges include spatial dispersion, high transport costs, seasonality, limited physical infrastructure and yield and market-price risks, essentially defining the last mile phenomenon (IFAD, 2016). For retailers, priorities for innovation revolve around overcoming technical and organizational challenges linked to acquisition, inventory and stock management, customer service and sales promotion for quality food (Abrahamsson and Rehme, 2010).

Like producer-traders, retailers benefit from innovations that help them to overcome numerous challenges linked to their physical and institutional isolation. Innovations that enhance capacity for risk management are critical for both groups. For food assistance agencies seeking to support marginalized producer-traders, the aim is to leverage the "social demand" for food embedded in food assistance programmes – school meals and MCHN programmes for example – to progressively improve market access, increase their capacities to aggregate, link them to off-takers and enhance access to input credit and trade finance (see Box 4.12).

For retailers seeking to serve end customers with a smooth, flexible and cost-efficient stream of goods, the flow of information must be effectively managed. Investments in physical infrastructure, especially roads, and digital platforms enhance the diffusion of market data and information among different supply chain actors, and increase efficiency and value to customers, especially poor food buyers and consumers (Reardon and Zilberman, 2016). Support for collective action such as buyers' clubs benefits small retailers who are disadvantaged relative to suppliers who operate at larger scale over wider areas (Schiller, 2015). Support for consumer food cooperatives may also be relevant in some contexts with a view to countering cartels and other collusive activity by retailers and other traders (Reyes, 2015).

Many policies, laws and regulations affecting food value chains that serve the hungry poor are ambiguous, economically flawed, excessive or poorly implemented (AGRA, 2012). Such measures must be clarified, removed or reformed. Especially important are clear and enforceable food safety and quality standards that facilitate trade rather than hamper or impede it. Policies and regulations that blunt incentives toward price-gouging are fundamental.

Food assistance agencies can bring valuable knowledge, data and analysis to the complex policy engagement required to address these challenging issues. In particular, food assistance agencies routinely collect and analyse data and information about drivers of food security and vulnerability, with a focus on conditions in markets for key foods, typically employing cutting-edge digital technology (WFP, 2017a). Detailed supply chain information about the food systems in which agencies operate is also compiled and analysed (WFP, 2015b). When analysed together, market and supply chain information can yield powerful insights into systemic challenges facing vulnerable groups and systemic opportunities open to agencies and partners (see Box 4.10).

BOX 4.12: Supporting smallholder farmers from the demand-side of food systems

Operating at the intersection of commercial food markets and the public interest represented by food assistance, WFP's demand for food and food system services can be a direct and indirect force for enhanced performance of food systems. This contributes to inclusive agricultural growth, sustainable social and economic transformation and broad-based food security. Given that in many countries the bulk of food available in local markets originates from smallholder farms, WFP's procurement footprint in these markets can provide a basis for partnerships with governments and the private sector to catalyse demand-driven platforms that enable smallholders to engage sustainably and profitably with local markets beyond WFP.

WFP's portfolio of smallholder-facing initiatives includes Purchase for Progress (P4P) and Home-Grown School Feeding, which leverage demand from WFP and other public actors, the Farm to Market Alliance that leverages demand from large private buyers, and a range of non-purchase-based initiatives that address the many "last mile" challenges facing smallholders – the Post-Harvest Loss Initiative, R4 and an expanding range of nutrition-sensitive investments. WFP is also experimenting with an app-based supply and demand information platform called the Virtual Farmers' Market.

The approach rests on three components: i) consistent demand for quality; ii) targeted capacity enhancement for smallholder farmers, typically through farmers' organizations; and iii) coordination and linkage support for providers of supply chain services, notably aggregators. In 2015, 1 million smallholder farms – 5 million people – were reached through these programmes in 35 countries. Since 2008, under P4P, WFP has procured over 600,000 mt of food, putting more than US$230 million directly into the hands of smallholder farmers. And between 2008 and 2013, farmers' organizations not previously selling collectively sold US$60 million worth of quality food to buyers beyond WFP. Almost all P4P contracts were below import parity prices, therefore respecting WFP's principle of "cost-efficient procurement" and realizing cost savings relative to importation. Compared to import parity, total savings over the course of the five years exceeded US$40 million.

Source: WFP (2015e).

P4P-supported smallholder farmers in El Salvador.
Photo: WFP

BOX 4.13: Reducing post-harvest losses for smallholders through technical and organizational support

Every year in Africa unacceptable levels of food loss continue. In 2011, the Food and Agriculture Organization of the United Nations (FAO) reported annual food losses in the region exceeding 30 percent of total crop production, valued at US$4 billion. Although losses are found at every stage in the supply chain, the bulk occur pre-farm gate as a result of poor harvesting, drying, processing and storage of crops. These losses directly contribute to the food insecurity of millions of smallholder farming families. As food accounts for up to 80 percent of household spending, and as crop production is the principal source of family income, there is considerable potential to improve food security and livelihoods.

In 2014 in Burkina Faso and Uganda, WFP undertook a trial of improved post-harvest management methods at the farm level in which 400 smallholder farmers participated. They received capacity development support and were then equipped with new handling and storage technology in the form of locally produced metal and plastic silos or imported hermetic bags to assist with the upcoming harvest. There was subsequent follow-up training on farms, field support for crop preparation and positioning of equipment, and monitoring of the trial outcomes during the three months following harvest. On all participating farms, without exception, the new technology enabled farmers to retain 98 percent of their harvest, regardless of the crop and regardless of the duration of storage. A smallholder harvesting maize in Uganda in December 2013 would normally attempt to sell the majority of his crop within a few weeks of harvest to minimize the expected losses. This farmer selling maize in the early weeks of January 2014 would have received somewhere in the range of UGX 480, or US$0.17, and UGX 520, or US$0.19 per kg. By utilizing the new storage technology and taking her crop to market three months later in April 2014, she received somewhere in the range of UGX 760, or US$0.27, and UGX 820, or US$0.30.

Source: WFP (2015e).

Good year solutions

The fundamental challenge to be overcome under the "good year" problem is that thin markets in many poor regions struggle to absorb food surpluses. The results are depressed sales prices, blunted future incentives for farmers and waste and spoilage that sharpen seasonal price upswings and cut into consumer purchasing power. Food assistance solutions to the good year problem therefore include measures that mute or address the impacts of plunging prices arising from surging good year surpluses, including reductions in waste and spoilage.

Trader-processors and retailers are the key actors. For trader-processors, innovations based on food assistance centre on overcoming technical and organizational hurdles in food transformation in terms of transport, storage, processing, and finance. In a good year, pressures to perform these transformations quickly and efficiently are especially high. The principal leverage point for food assistance is purchase of quality food from trader-processors (WFP, 2015e). That may entail targeted investment in physical infrastructure and technical and organizational capacity in post-harvest management and loss reduction (Box 4.13). Where demand for "raw" product is sharp and immediate, as is often the case in emergencies, purchases can be of such "raw" product.

But demand typically unfolds more gradually, implying heavy front-loading of transformation capacity if waste and spoilage are to be avoided.

Food assistance investments to fill capacity gaps facing trader-processors include support for uptake and utilization of improved storage and handling equipment and for processing into products with shelf-lives well beyond those of raw products (WFP, 2015b). With increasingly sophisticated food baskets in food assistance programmes and growing reliance on cash-based transfers in emergencies, scope for leveraging demand for specialized nutritious foods to absorb good-year surpluses is growing.

The same set of capacity needs for retailers under bad year or lean season and last mile solutions applies here. Priority innovations for retailers centre on overcoming technical and organizational challenges linked to acquisition, inventory and stock management, customer service and sales promotion for quality food. Again, innovations that improve risk management are essential (Abrahamsson and Rehme, 2010).

Synthesis: mobilizing demand and supply of quality food

The systemic potential of food assistance is broad and significant (see Table 4.3). A core message of this report is that this potential originates in the demand-side of food systems. Effective demand-inducing and demand-sustaining innovations in food systems do not crop up overnight, nor do they come for free. They spring from sustained investment in human and institutional capacity, typically featuring iterative efforts to improve products, processes and outcomes. Some capacity gaps are in specific operational tasks such as transport and storage, others cover cross-cutting functions such as food quality maintenance, and a few are strategic and policy-oriented such as trade regimes. Such gaps are costly and time-consuming to fill, with set-up or activation costs typically swamping initial returns by several orders of magnitude. Patient long-term perspectives are required.

The cross-cutting importance of quality cannot be overstated. The capacity to maintain food quality and meet high quality standards is a necessary condition for capturing the full systemic benefits of food assistance. Any food product whose quality cannot be sustained is a liability. By implication, food products for which quality can be maintained become assets. Also by implication, therefore, development and enforcement of standards, technologies and institutions for food quality and safety are vital. Across the board, technical and organizational challenges linked to aggregation of quality food must be overcome. This applies not only in humanitarian contexts, but also in food systems. Capacities enhanced in the context of food assistance interventions can generate long-lasting benefits in food systems.

Quality premiums exist, but they are relatively small in size if viewed in themselves, averaging slightly under 8 percent in several countries (WFP, 2014). The core impact of producing high-quality grain is in the opening provided for entry into a higher-volume market with more stable sales and enhanced relationships between sellers and buyers. This enables access to finance and investment in post-harvest management technology – storage, cleaning and drying for example – further sustaining quality grains and enhancing access to the high-volume market (WFP Ethiopia, 2013).

TABLE 4.3: Summary of food assistance-based responses and solutions to systemic problems in food systems

FOOD ASSISTANCE-BASED SOLUTIONS TO SYSTEMIC PROBLEMS IN FOOD SYSTEMS		
Bad year/ lean season solutions	**Last mile solutions**	**Good year solutions**
• Nutrition-specific and nutrition-sensitive productive – skill and asset building – food-based and cash-based transfers to vulnerable consumers • Transfer-based capacity development for enhanced household and community resilience and risk management • Transfer-based nutrition education and self and family care for women • Demand-led, ICT-based, benchmark-driven investments to upgrade retailer supply chain management	• Nutrition-specific and nutrition-sensitive productive – skill and asset building – food-based and cash-based transfers to vulnerable consumers • Purchase of quality food from producer-traders • Purchase-based coordination and facilitation of supply-side, aggregation, and financing support for smallholders and rural small-to-medium enterprises • Demand-led, ICT-based, benchmark-driven investments to upgrade retailer supply chain management	• Purchase of quality food from trader-processors, including locally fortified nutritious foods • Demand-led investments to fill food transformation gaps for trader-processors • Demand-led upgrading of market and supply chain physical infrastructure • Digital innovations in value chain integration and tracking • Demand-led, ICT-based, benchmark-driven investments to upgrade retailer supply chain management
Cross-cutting solutions		
• Food fortification and development, and enforcement of food safety and quality standards • Digital platforms to enhance quantity, quality and flow of market data and information • Reform and strengthening of food platforms in shock-responsive social protection systems • Reform of structure and functioning of public food reserves • Reform of market and trade policy standards and implementation • Improvement of food market infrastructure • Preparedness and early warning systems		

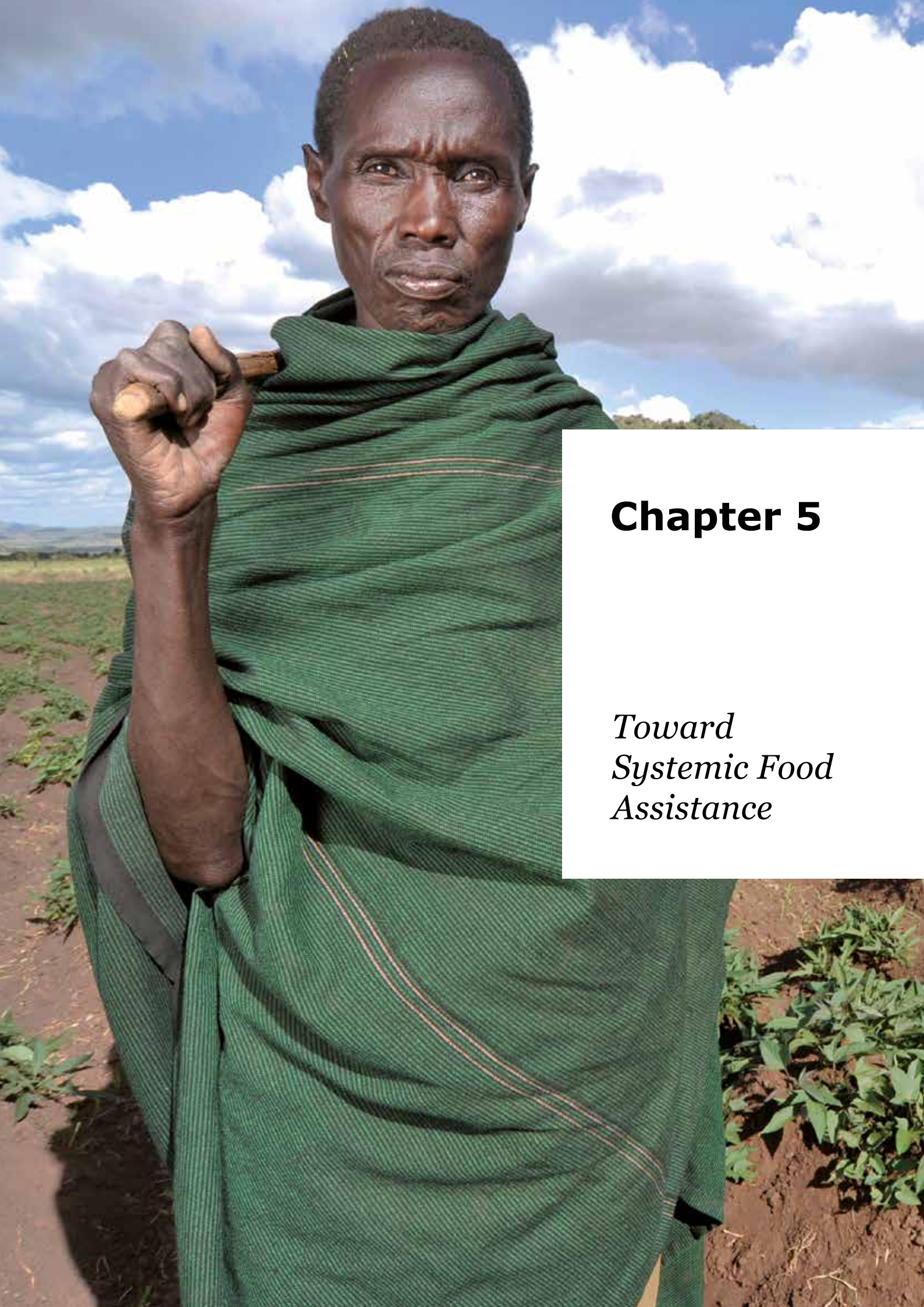
Several factors combine to render supply and demand for quality food far from natural or automatic. On the supply side are: i) damaging traditional harvesting and on-farm storage methods; ii) difficult and costly transport; iii) inadequate on-farm handling equipment; iv) poor and limited collective storage capacity; v) inadequate market facilities; and vi) sharp household-level liquidity constraints, especially at harvest-time for food producers. All of these "hard" and "soft" factors require sustained attention and investment if they are to be overcome.

On the demand side, the structure of effective demand for quality food and the structure of retail commodity circulation that guarantees that the needs of populations will be met must be understood and accommodated. The structure of effective demand for quality food depends chiefly on income levels and various social, economic, sex and age characteristics of the population, including nutrition education. Food sellers must have a strong sense of such characteristics in potential buyers. The structure of retail commodity circulation is determined not only by these factors, but also by reserves of commodities available for sale at any given time. Effective supply chain management is therefore fundamental. Logistics capabilities represented in combinations of physical assets, organizational routines, skills, knowledge and collaborative relationships with suppliers and customers must be developed, scaled and sustained (Abrahamsson and Rehme, 2010; Reardon and Zilberman, 2016).

The small-scale and medium-scale food trading, processing and retailing enterprises that serve the hungry poor face massive challenges linked to their small size, informality, high-risk environments, lack of basic infrastructure, inadequate credit and insurance markets, poor tenure security and ethnic and gender disparities (Nagler and Naude, 2014). These challenges must be systematically addressed. A core message of this report is that the technical, organizational and financial arrangements that underpin food assistance can be powerful platforms for structured solutions to these challenges.

Needs extend well beyond the capacity of individual food assistance agencies. More strongly, responsibility for mobilizing effort and resources to address deeply rooted systemic problems resides with national governments. Nevertheless, an important recognition is that many food assistance agencies as food buyers and direct and indirect deliverers of food assistance are not only large food trader-processors, they are also major food retailers. Most of the priorities identified for trader-processors and retailers outlined above thus apply in full to food assistance agencies, and especially to WFP.

Like any trader-processor, WFP must secure, transform and move food supplies at minimum costs. And like any retailer, or any facilitator of retail food exchanges, WFP must understand what its customers – food assistance beneficiaries – want to receive or buy, offer that to them at personal costs or prices that they are prepared to meet or pay and make sure that what they want is available when they are ready to receive it or want to buy it. In its own operations and in those of food transformers operating in the food systems through which food assistance is delivered, WFP must focus on cost, capital expenditure and supply chain efficiency, integrating product lines and delivery and service channels with a view to ensuring alignment with industry benchmarks. Process simplification, consolidation of central functions, outsourcing of non-core functions, control of interfaces in the supply chain, disciplined range and stock management using appropriate warehousing and merchandizing systems – ideally employing digital technology – must all be understood, kept in view and influenced in ways that enhance food system performance.



Chapter 5

Toward Systemic Food Assistance

Patrick Lumumba Lomodo stands in his field of sweet potatoes in Lokariwon, Uganda
WFP/Riccardo Gangale

Internationally funded and facilitated food assistance is huge in scale. National efforts are greater still. The potential for food assistance-based hunger reduction is massive. This report has sought to frame that potential, and what must happen to translate it into felt benefits.

Delivering life-saving food and nutrition in the face of vast challenges requires standardization of best practices and knowledge-sharing in and among agencies, along with substantial innovation.

Initiatives cycle through assessment and analysis, project formulation, implementation, monitoring and reporting, evaluation and eventually exit, continuation or hand-over to government actors, the private sector or civil society. Each level presents opportunities for innovation to increase efficiency and effectiveness. Learning from past work and inventing new methods help food assistance agencies reach populations in difficult circumstances, and to address the causes rather than the symptoms of hunger and food insecurity.

The cycle of a food assistance initiative starts long before a crisis appears. The first step is data collection and analysis to understand situations, predict shocks and make good programmatic decisions. Emergency preparedness and planning enhances readiness to respond and reduces the impact of shocks on vulnerable populations. Nutritious, high quality food must be purchased at the best price possible, ideally sourced locally and from developing countries to boost economies and enhance markets. That food must then be moved swiftly to people in need: this often involves overcoming challenges such as poor infrastructure and high levels of insecurity. Transfer modalities must minimize transaction costs and logistic complexities and maximize speed of delivery of food assistance to targeted populations.

As the 2030 Agenda makes clear, at issue is the resilience of households, communities, food systems and economies and societies. Vulnerability to hunger and vulnerability to shocks are intertwined; shocks can have permanent consequences (Lybbert et al., 2012). Low resilience is a driving force of marginalization, which can fuel conflict and spawn immense human suffering featuring food and nutrition insecurity, malnutrition and related mortality (Von Braun and Thorat, 2014). Households change their asset accumulation and production choices in response to ex ante assessments of risk and ex post realizations of actual shocks. Certain risk expectations and shock realizations can cause dispersal of assets along with pursuit of low-risk but low-return production practices. Together these forces can push households into "poverty traps" of chronic vulnerability, poverty and hunger (Barrett et al., 2008). Resilience entails absorptive, adaptive and transformative capacity (DFID, 2011; UNISDR, 2009; von Braun and Thorat, 2014). These capacities are boosted by investments and arrangements that enhance capacities to manage risk.

At the household and community levels, the core drivers of enhanced resilience are diversification of production systems, diversification in income sources, improvements in education, increased borrowing and savings, increased remittances from urban areas, improved management of natural resources and more effective public institutions (USAID, 2013). The public works and employment guarantee schemes that often feature in food assistance initiatives are highly relevant. The ability of these schemes to support consumption and avoid distress sales of land and other assets is well documented (del Ninno et al., 2009). Ethiopia's productive safety nets programme is an excellent example (Gilligan et al., 2009), as are several other resilience-enhancing initiatives in the Horn of Africa (CRS, 2013).

At the system and sector levels, effective early warning and preparedness platforms are vital everywhere, including burgeoning urban areas increasingly exposed to natural and man-made hazards (GIEWS, 2017; IASC, 2013). Significantly increased investment in basic physical infrastructure is required – roads, railways, irrigation systems and marketplaces. Such infrastructure is fundamental to food assistance in emergency contexts. Where it is lacking, it must be constructed, typically at great cost. Where it is in place and functional, it provides a platform for efficient public action in partnership with the private sector and civil society. As the backbone of most humanitarian assistance operations, food assistance can serve as a platform for efficient and effective disaster preparedness and response, enhanced risk transfer and prudent risk-taking with a view to stability-promoting livelihood diversification.

Fundamentally, food assistance combines capacities and innovations in supply chain management and operations on one hand, and programming and policy design and implementation on the other. A range of transfer-based initiatives expand access to food and nutrition. These and several other non-transfer-based efforts seek to build assets and enhance skills that boost household and community adaptation and resilience to climate and other shocks, secure their livelihoods and help them enter mainstream processes of growth and transformation.

Driven by the needs of these programming activities, food assistance agencies routinely express demand for quality food and food-related goods and services, sometimes at scales that have structural consequences in food systems. The rise of CBTs in food assistance programmes has greatly expanded the demand-side reach of food assistance in food systems. Clearly articulated and shaped, the demand-side of

food assistance can be a potent force for enhanced performance of food systems.

Such "systemic food assistance" – food assistance that seeks to improve food system performance – takes the concept of food assistance to its logical conclusion (WFP, 2017b). The core idea is leverage of food assistance interventions to address systemic problems in food systems and thereby contribute to sustained improvements in the performance of those systems. Such improved performance can support inclusive growth of agrifood sectors, sustainable social and economic transformation and broad-based food security and hunger reduction, thereby helping to prevent food emergencies of the kind currently afflicting the world (Timmer, 2014).

The potential of systemic food assistance lies in the opportunities it opens for otherwise disconnected actors in food systems to align incentives, potentially leading to pooled investments and leveraged impacts (TechnoServe, 2014). The analysis in Chapter 4 suggests that those opportunities spring from the building blocks of systemic food assistance: demand-side stimuli, innovation and capacity development. Given that impetus, at issue are: i) how to identify and develop new demand outlets; ii) how to articulate and seize opportunities to innovate; and iii) how to organize and finance capacity development.

The partnership imperative is clear, with national governments taking the lead (see Box 5.1). The demand-side technical, financial and institutional capacities of food assistance agencies are only part of a wide range of interventions required to transform food systems. To provide the appropriate institutional and technical support for food producers, traders, retailers and consumers in different contexts, measures must be designed with a focus on partnerships at all levels with a view to leveraging the diverse strengths and specializations of organizations working in different food systems.

Refugee children in Zaatari camp run to have breakfast outside when the sun comes up each morning, Mafraq Governorate, Jordan.
WFP/Joelle Eid

BOX 5.1: Enhancing Country Ownership of Food Assistance - WFP's Integrated Road Map to 2030

In September 2015 world leaders formulated the 2030 Agenda for Sustainable Development, which sets out an ambitious 15-year time frame for achieving sustainable development and ending poverty, hunger and inequality. The Agenda situates humanitarian action in the context of human progress and development, with a clear focus on the most vulnerable people and a strong commitment to leaving no-one behind. The Agenda is led and driven by Member States and is global in coverage and universally applicable. Its 17 goals are integrated and indivisible. Each country, under government leadership, will determine its own priorities and set its own national targets, guided by the global vision of the goals and adapted to the national context.

In 2016, WFP introduced a new corporate architecture to enhance support for national governments in their efforts to achieve these goals. This Integrated Road Map will change the way WFP plans, manages and reports on programmes, with a view to improving operational effectiveness to maximize impact for beneficiaries, and to align more closely with country priorities. The Integrated Road Map has four elements: the Strategic Plan (2017–2021), the Policy on Country Strategic Plans, the Financial Framework Review and the Corporate Results Framework.

The Strategic Plan provides the framework for WFP's contribution to achieving Zero Hunger. It prioritizes two goals – SDG 2 on achieving zero hunger and SDG 17 on partnering to support implementation of the 2030 Agenda – while contributing to other SDGs according to country contexts and national priorities.

This effort calls for a new way of developing country portfolios fully aligned with and owned by national governments. Guided by the Strategic Plan, the Policy on Country Strategic Plans outlines WFP's approach to strategic and programmatic planning at the country-level. It introduces a unique programmatic framework based on coherent country portfolios, which replace existing programme categories and project documents. To achieve the objectives of the 2030 Agenda, each country will determine, under government leadership, its own priorities and targets and the actions required to reach these. These priorities will then guide the Country Strategic Plans developed by WFP Country Offices.

Implementing the Country Strategic Plans requires the development of a new Financial Framework and a new Corporate Results Framework. The Financial Framework Review aims to maximize operational effectiveness through realistic financial planning, enhanced accountability, streamlined processes and harmonized financial and results frameworks. Simultaneously the new Corporate Results Framework is designed to improve WFP's organizational accountability and performance management with regard to the new Country Strategic Plans. Together, these reforms and innovations will render WFP more capable of leveraging its strengths, capacities and knowledge to boost country-level work to achieve the SDGs.

Sources: WFP (2016a, 2016d, 2016e, 2016f); United Nations (2015b).

Most if not all of the SDGs entail sustained progress against gender-based discrimination and exclusion. Humanitarian crises must not be allowed to exacerbate or prolong gender inequalities. Food assistance can play a role by providing opportunities to address gender inequality through positive impacts on the immediate causes of gender-based vulnerability, which are related to improving protection, and the underlying determinants of exclusion and discrimination, which are related to power relations and decision-making authority. Food assistance must seek not only to be gender-sensitive, but also to be gender transformative. Including women as participants is necessary but not sufficient to ensure integration of gender issues into all aspects of programme and policy conceptualization, development, implementation and evaluation. Programmes and interventions must aim to create opportunities for individuals to challenge gender norms, promote positions of social and political influence for women in communities and address power inequities between people of different genders. Measures must also incorporate a gender-sensitive and protection perspective to ensure that women and girls benefit equally, and are not harmed.

In humanitarian, transition and development contexts, food assistance seeks to ensure that the nutrient needs of targeted populations are met. Programmes to prevent and treat acute malnutrition in children aged 6–59 months, pregnant and lactating women and malnourished adults are essential. Food assistance programmes provide opportunities to improve nutrition because they have positive impacts on the immediate causes of malnutrition, which are related to improving dietary intake, and the underlying determinants of nutrition, which are related to food security, caregiving resources, gender relations, access to health services and a safe, hygienic environment. Operational and programmatic requirements for food assistance are evolving to meet these imperatives and opportunities.

Quality is fundamental in terms of nutrient content and safety. The nutrition-specific approaches that feature increasingly prominently in food assistance initiatives entail special nutrition products and processed foods. Because of the complex production methods and handling needs, these items have higher risk profiles than do the grains and pulses traditionally included in food baskets. Infestation, microbial contamination, inadequate packaging and labelling and insufficient shelf life pose major risks to beneficiaries' health and agencies' reputations. Food quality lapses disrupt supply chains, tarnish reputations and lead to inefficiencies and wastage that prevent full realization of food assistance objectives. Food losses lead to additional expense and increased workloads for staff who are required to follow up on these losses. End-to-end quality management is vital.

Priority areas for investment include improved supplier management, quality tracking systems, functional capacity and training processes and materials. In all contexts the central actors are national governments through whose policies and institutions good practices are empowered and incentivized in the context of *Codex Alimentarius* standards that provide the normative framework for national and sub-national action. The fundamental need is therefore for coherent national standards, policies and regulatory frameworks that facilitate clear food safety and quality mandates for internal and external stakeholders. A core issue is the real return on investment for private actors on whose shoulders food quality and safety rests. Training and empowerment of local stakeholders is critical, along with encouragement of collaboration and partnerships between educational institutions and leveraging of technology and enabling environments that promote food quality and safety.

Digital innovations have the potential to transform the analytical and organizational foundations of food assistance by providing cost savings and traceability of information flows, and by reducing transaction times. Food assistance agencies are similar to those in other industries in that sophisticated digital platforms have long been fundamental to their day-to-day business processes. Digital technology has recently become crucial for more efficient and personalized humanitarian action. Several issues are constantly at stake in food assistance design and implementation: how agencies verify the identities of the people they serve, how they assess and target entitlements to assistance, how they select the appropriate delivery mechanisms for those entitlements and how the level and quality of anticipated outcomes are ascertained and most effectively measured.

Several digital solutions to this complex set of questions are being delivered at scale, including cloud-based platforms, fingerprint and iris scanning biometric registration and verification tools, and mobile vulnerability analysis and mapping systems based on mobile phone surveys using text messages and live telephone interviews (GSN, 2014; IFRC, 2013; Meier, 2015). With the growing importance of CBTs in various forms from traditional banknotes, bank transfers or paper vouchers to innovative electronic platforms such as special SIM cards, smart cards or mobile money, food assistance agencies are developing commercial financial relationships to provide cash-out points: these include mobile money, banks, card services and transfer agents. The result is greatly enhanced speed, coverage and accuracy. Scope for continued rapid progress would appear almost limitless. Blockchain technology, for example – open, distributed ledgers that can record transactions between two parties efficiently and in a verifiable and permanent way – is emerging as a potentially powerful tool to share information and transfer and track digital financial assets securely, thereby improving information management, participant identification, supply chain tracking, cash programming and humanitarian financing. Its relevance and efficacy in operational contexts is being explored (WFP, 2017h).

Zero Hunger must be achieved in the context of increasingly complex and protracted humanitarian needs. Conflict, climate change and growing inequality amplify these challenges, thereby disrupting food systems, economies and societies and increasing people's vulnerability. Current trends point to continued disruption over the medium term. This report has made clear the role and importance of food assistance measures put in place before, during or following these disruptions. It has also demonstrated that food assistance can address the underlying causes of food insecurity, thereby supporting populations in lifting themselves out of poverty and making themselves less vulnerable to potential shocks. Systemic food assistance is not only well within reach, several elements are already at play at the intersection of effective humanitarian action and sustained hunger reduction.

A WFP beneficiary stands smiling with the fresh bread that she receives each morning in Zaatari Refugee Camp, Mafraq Governorate, Jordan.
WFP/Joelle Eid

References

Abrahamsson, M. & Rehme, J. 2010. The role of logistics in retailers' corporate strategy – a driver for growth and customer value. Supply Chain Forum 11(4): 14–22.

Action Aid. 2009. Women's rights in emergencies: Integrating women's rights into emergency responses – a guide for trainers. Available at: http://www.actionaid.org/sites/files/actionaid/womens_rights_in_emergencies_manual.pdf

AGRA. 2012. Assessment of Agricultural Policy and Regulatory Constraints to Agribusiness Investment in Burkina Faso, Ethiopia, Ghana, Nigeria and Tanzania. Nairobi.

Alderman, H. & Bundy, D. 2012. School feeding programmes and development: Are we framing the question correctly? World Bank Research Observer 27(2): 204–221.

Annan, K., Conway, G. & Dryden, S. 2015. African farmers in the digital age: How digital solutions can enable rural development. Foreign Affairs, special issue.

ADB & FAO. 2013. Gender Equality and Food Security: Women's Empowerment as a Tool against Hunger. Mandaluyong City. Available at: http://www.fao.org/wairdocs/ar259e/ar259e.pdf

AUC. 2016. African Peace and Security Architecture. Addis Ababa: African Union Commission. Available at: http://www.peaceau.org/uploads/2015-en-apsa-roadmap-final.pdf

Baker, J. 2008. Urban Poverty: A Global View. Washington DC, World Bank.

Barrett, C., Carter, M. & Ikegami, M. 2008. Poverty traps and social protection. Manuscript. Ithaca, NY, Cornell University.

Benedek, C. 2014. The changing humanitarian landscape and the role of the private sector. United Nations Business Focal Point Newsletter 20. Available at: https://business.un.org/en/documents/11208

Bonger, T., Gabre-Madhin, E. & Babu, S. 2002. Agriculture technology diffusion and price policy. Proceedings of 2020 Vision Network for Eastern Africa, report no. 1. Washington DC, International Food Policy Research Institute.

Brown, C. 2012. The 21st Century Urban Disaster. Silver Spring, MD, Cooperative Housing Foundation International. Available at: http://www.alnap.org/pool/files/2012-chf-urban-disasters.pdf

CFS. 2015. Framework for Action for Food Security and Nutrition in Protracted Crises. Rome, Committee on World Food Security. Available at: http://www.fao.org/fileadmin/templates/cfs/Docs1415/FFA/CFS_FFA_Final_Draft_Ver2_EN.pdf

CRED. 2017. Emergency events database (EM-DAT).

CRS. 2013. The Road to Resilience: Case Studies on Building Resilience in the Horn of Africa. Baltimore, MD, Catholic Relief Services.

Del Ninno, C., Dorosh, P.A. & Smith, L.C. 2003. Public policy, markets and household coping strategies in Bangladesh: Avoiding a food security crisis following the 1998 floods. World Development 31(7): 1221–1238.

Del Ninno, C., Subbarao, K. & Milazzo, A. 2009. How to make public works work: A review of the experiences. Social protection discussion paper no. 0905. Washington DC, World Bank.

De Janvry, A. & Sadoulet, E. 2012. Making conditional cash transfers more efficient: Designing for the maximum effect of the conditionality. World Bank Economic Review 20(1): 1–29.

DFID. 2011. Defining Disaster Resilience: What does it mean for DFID? London.

EIU. 2016. Economist Intelligence Unit Global Food Security Index. Available at: http://foodsecurityindex.eiu.com.

EU. 2016. Evaluation of the Use of Different Transfer Modalities in ECHO Humanitarian Aid Actions, 2011–2014. Brussels, ECHO.

FAO, IFAD & WFP. 2015. The State of Food Insecurity in the World 2015. Meeting the 2015 international hunger targets: taking stock of uneven progress. Rome, FAO.

FAO. 2013. State of Food and Agriculture 2013: Food systems for better agriculture. Rome.

FAO & WFP. 2010. The State of Food Insecurity in the World: Addressing food insecurity in protracted crises. Rome.

FEWS. 2017. Famine early warning system. Available at: https://www.fews.net

FEWS-NET. 2017. Zambia food security outlook. Available at: http://www.fews.net/southern-africa/zambia/food-security-outlook/february-2017.

FSIN. 2017. Global Report on Food Crisis, 2017. Rome. Available at: https://www.wfp.org/content/global-report-food-crisis-2017.

Gabre-Madhin, E. & Goggin, I. 2005. Does Ethiopia need a commodity exchange? An integrated approach to market development. EDRI-ESSR policy working paper no. 4. Addis Ababa, Ethiopia Development Research Institute.

Gatzweiler, F., Baumüller, H., Ladenburger, C. & von Braun, J. 2011. Marginality: Addressing the root causes of extreme poverty. ZEF working paper, series 77. Bonn, Germany, University of Bonn.

Gentilini, U. 2014. Our daily bread: What is the evidence on comparing cash versus food transfers? Social protection and labour discussion paper no. 1420. Washington DC, World Bank.

Gentilini, U. 2016. The other side of the coin: The comparative evidence of cash and in-kind transfers in humanitarian situations. Washington DC, World Bank.

GHAR. 2016. Global Humanitarian Assistance Report. Bristol, UK, Development Initiatives.

GIEWS. 2016a. Ethiopia country brief. Available at: http://www.fao.org/giews/countrybrief/country.jsp?code=ETH.

GIEWS. 2016b. Tanzania country brief. Available at: http://www.fao.org/giews/countrybrief/country.jsp?code=TZ.

GIEWS. 2017. Global Information and Early Warning System. Available at: http://www.fao.org/giews/en/

Gilligan, D. & Hoddinott, J. 2007. Is there persistence in the impact of emergency food aid? Evidence on consumption, food security and assets in rural Ethiopia. American Journal of Agricultural Economics 89(2): 225–242.

Gilligan, D., Hoddinott, J. & Taffesse, A. 2009. The impact of Ethiopia's productive safety net programme and its linkages. Journal of Development Studies 45(10): 1684–1706.

GSN. 2014. Leveraging Digital Networks for Humanitarian Response. Lighthouse case study. Available at: http://gsnetworks.org/wp-content/uploads/Digital-Humanitarian-Network.pdf

Hatzenbuehler, P., Gillespie, J. & O'Neil, C. 2012. Does healthy food cost more in poor neighborhoods? An analysis of retail food cost and spatial competition. Agricultural and Resource Economics Review 41(1): 43–56.

Hidrobo, M., Hoddinott, J., Peterman, A. & Margolies, V.M. 2012. Cash, food or vouchers? Evidence from a randomized experiment in northern Ecuador. IFPRI discussion paper no. 01234. Washington DC, IFPRI.

HLPE. 2012. Food Security and Climate Change. Rome. Available at: http://www.fao.org/fileadmin/user_upload/hlpe/hlpe_documents/HLPE_Reports/HLPE-Report-3-Food_security_and_climate_change-June_2012.pdf

HLP. 2016. Too Important to Fail: Addressing the Humanitarian Funding Gap. Rome. Available at: http://www.un.org/news/WEB-1521765-E-OCHA-Report-on-Humanitarian-Financing.pdf

Hoddinott, J. & de Brauw, A. 2011. Must conditional cash transfer programs be conditioned to be effective? The impact of conditioning transfers on school enrollment in Mexico. Journal of Development Economics 96, 359–370.

Hoddinott, J., Gilligan, D., Hidrobo, M., Margolies, A., Roy, S., Sandstro¨m, S., Schwab, B. & Upton, J. 2013. Enhancing WFP's Capacity and Experience to Design, Implement, Monitor, and Evaluate Vouchers and Cash Transfer Programmes: Study Summary. Washington DC, IFPRI.

Hopp-Nishanda. 2012. Giving Peace an Address? Reflections on the Potential and Challenges of Creating Peace Infrastructures. Berghof handbook dialogue no. 10. Berlin, Berghof Foundation. Available at: http://www.berghof-foundation.org/fileadmin/redaktion/Publications/Handbook/Dialogue_Chapters/dialogue10_hopp_nishanka_lead.pdf

IASC. 2011. IASC commitments – accountability to affected populations. IASC taskforce on accountability to affected populations, co-chaired by WFP and World Vision International. Rome.

IASC. 2012. The IASC Gender Marker. New York. Available at: https://www.humanitarianresponse.info/en/topics/gender/page/iasc-gender-marker

IASC. 2013. Common Framework for Preparedness. New York. https://interagencystandingcommittee.org/system/files/common_framework_for_preparedness.pdf

IASC. 2016. Donor Conditions and their Implications for Humanitarian Response. New York. Available at: http://reliefweb.int/sites/reliefweb.int/files/resources/20160416_donor_conditions_study_final_0.pdf

IDMC/NRC. 2015. Global Estimates 2015: People displaced by disasters. Available at: http://www.internal-displacement.org/assets/library/Media/201507-globalEstimates-2015/20150713-global-estimates-2015-en-v1.pdf

IDS. 2014. Gender and Food Security: Towards gender-just food and nutrition security. Brighton, UK, University of Sussex.

IFAD. 2011. IFAD Guidelines for Disaster Early Recovery. Rome.

IFAD. 2016. Rural Development Report 2016: Toward inclusive rural transformation. Rome.

IFPRI. 2015. Global Food Policy Report, 2015. Washington DC.

IFPRI. 2016. Global Food Policy Report, 2016. Washington DC.

IFPRI. 2017. Global Food Policy Report, 2017. Washington DC.

IFRC. 2010. World Disaster Report: Urban Risk. Geneva. Available at: http://www.ifrc.org/Global/Publications/disasters/WDR/wdr2010/WDR2010-full.pdf

IFRC. 2013. World Disasters Report: Focus on technology and the future of humanitarian action. Geneva. Available at: http://www.ifrc.org/PageFiles/134658/WDR%202013%20complete.pdf

INFORM. 2016. Index for risk management. Available at: http://www.inform-index.org.

Johnston, B.F. & Kilby, P. 1975. Agriculture and Structural Transformation, Economic Strategies in Late-Developing Countries. Ithaca, NY, Cornell University Press.

IRIN. 2015. Mapped: 15 Years of Aid Under Fire. Geneva. Available at: http://newirin.irinnews.org/irin-2015-the-top-ten/

Kaufman, P., MacDonald, J., Lutz, S. & Smallwood, D. 1997. Do the Poor Pay More for Food? Item Selection and Price Differences Affect Low-Income Household Food Costs. Agricultural economic report 759. Washington DC, US Department of Agriculture.

Kumar, C. 2011. Building national "infrastructures for peace": UN assistance for internally negotiated solutions to violent conflict. In: S. Nan, Z. Mampilly & A. Bartoli (eds.) Peacemaking: From Practice to Theory, ch. 24. Santa Barbara, CA, USA, Praeger Press.

Kumar, C. & De la Haye, J. 2012. Hybrid peacemaking: Building national "infrastructures for peace". Global Governance 18(1): 13–20.

Kyazze, A.B., Baizan, P. & Carpenter, S. 2012. Learning from the City: British Red Cross Urban Learning Project Scoping Study. London, British Red Cross Society.

Jones, W.O. 1961. Food and Agricultural Economies of Tropical Agriculture: A Summary View. Food Research Institute studies, vol. II, no. 1. Stanford, CA, USA, Stanford University. Available at: http://ageconsearch.umn.edu/bitstream/136589/2/fris-1961-02-01-442.pdf

Labonte, M.T. & Edgerton, A.C. 2013. Towards a typology of humanitarian access denial. Third World Quarterly 34:1, 39-57. Available at: http://dx.doi.org/10.1080/01436597.2012.755015

Lybbert, T., Just, D. & Barrett, C. 2012. Estimating risk preferences in the presence of bifurcated wealth dynamics: can we identify static risk aversion amidst dynamic risk responses? European Review of Agricultural Economics 40(2): 361–377.

Mabiso, A., Maystadt, J-F., Vendercasteelen, J. & Hirvonen, K. 2014. Refugees, food security and resilience in host communities: Transitioning from humanitarian assistance to development in protracted refugee situations. IFPRI 2020 conference on food and nutrition security, paper 2. Washington DC, IFPRI.

Madianou, M., Ong, J., Longboan, L., Cornelio, J. & Curato, N. 2015. Finding a voice through humanitarian technologies? Communication technologies and participation in disaster recovery. International Journal of Communication 9(2015): 3020–3038. Available at: http://humanitariantechnologies.net/wp-content/uploads/2015/11/Humanitarian-Technologies-executive-summary-FINAL.pdf

Macharia, J. 2015. Lessons from mitigating post-harvest loss in Tanzania. Nairobi: Alliance for a Green Revolution in Africa. Available at: http://phlcongress.illinois.edu/Presentations/Day2/4_SessionG/3_Macharia.pdf

Maxwell, S. 1995. Measuring food insecurity: The frequency and severity of coping strategies. FCND discussion paper no. 8. Washington DC, IFPRI.

Meier, P. 2015. Digital Humanitarian: How Big Data is Changing the Face of Humanitarian Response. Boca Raton, FL, USA, CRC Press.

MINUSCA. 2015. Violations and abuses of international human rights and humanitarian law committed in Bangui, Central African Republic, between 26 September and 20 October 2015. Available at: https://minusca.unmissions.org/sites/default/files/bangui_report_final._english.pdf

Mohiddin, L., Phelps, L. & Walters, T. 2012. Urban Malnutrition: A Review of Food Security and Nutrition Among the Urban Poor. Newbury, UK, Nutrition Works. Available at: http://www.fao.org/fileadmin/user_upload/drought/docs/Nutrition%20Workds%20Urban%20malnutrition%20201307.pdf

Morley, N. 2005. Feeding Ancient Rome. Bath, UK, Bath Royal Literary and Scientific Institution. Available at: https://www.brlsi.org/events-proceedings/proceedings/25021

Nagler, P. & Naude, W. 2014. Performance and survival of non-farm entrepreneurship in rural Africa: Evidence from the LSMS-ISA surveys. Paper prepared for the Annual Bank Conference on Africa, 2014. Paris.

OCHA. 2011. Safety and Security for National Humanitarian Workers. New York. Available at: https://docs.unocha.org/sites/dms/Documents/Safety%20and%20Security%20for%20National%20Humanitarian%20Workers,%20PDSB,%202011,%20English.pdf

OCHA. 2016. World Humanitarian Data and Trends 2016. New York. Available at: http://interactive.unocha.org/publication/2016_datatrends/

OCHA. 2017. New Way of Working. New York.

UNHCR/UNMISS. 2017. A report on violations and abuses of international human rights law and violations of international humanitarian law in the context of the fighting in Juba, South Sudan in July 2016. Available at: http://www.ohchr.org/Documents/Countries/SS/ReportJuba16Jan2017.pdf

Omamo, S.W., Gentilini, U. & Sandstrom, S. 2010. Revolution: Innovations in Food Assistance. Rome, WFP.

OPM. 2015. Shock-responsive social protection systems: A research programme for DFID. Working paper no. 1. Oxford, UK.

OXFAM. 2014. Managing Risks to Agricultural Livelihoods – Impact Evaluation of the HARITA Project in Ethiopia (2009–2012). London.

Pichler, A. & Striessnig, E. 2013. Differential vulnerability to hurricanes in Cuba, Haiti and the Dominican Republic: the contribution of education. Ecology and Society 18(3): 31. Available at: http://dx.doi.org/10.5751/ES-05774-180331

Piketty, J. 2013. Capital in the Twenty-First Century. Cambridge, MA, USA, Harvard University Press.

RATIN. 2016. Regional Agricultural Trade and Information Network database. Nairobi: East African Grains Council. Available at: www.ratin.net

Reardon, T. 2016. The rapid transformation of food systems in Africa and Asia. Keynote speech, WFP Food Systems Strategy. Rome.

Reardon, T. 2015. The hidden middle: The quiet revolution in the midstream of Agrifood value chains in developing countries. Oxford Review of Economic Policy 31(1).

Reardon, T. & Timmer, C.P. 2014. Five inter-linked transformations in the Asian Agrifood economy: Food security implications. Global Food Security 3(2): 108–117.

Reardon, T. & Timmer, C.P. 2012. The economics of the food system revolution. Annual Review of Resource Economics 14: 225–264.

Reardon, T. & Zilberman, D. 2016. Climate-smart food supply chains in developing countries in an era of rapid dual change in agrifood systems and the climate. In: D. Zilberman, N. McCarthy, L. Lipper, S. Asfaw, G. Branca (eds.) Climate Smart Agriculture: Building Resilience to Climate Change. Rome, FAO.

Relief Web. 2003. WFP extends emergency food operation in Ethiopia as food shortages persist. Available at: http://reliefweb.int/report/ethiopia/wfp-extends-emergency-food-operation-ethiopia-food-shortages-persist.

Reyes, D. 2015. How Cooperative Grocery Stores are Bringing Food Access to Low-Income Neighborhoods. Northampton, MA, USA, Cooperative Development Institute. Available at: http://cdi.coop/food-coops-food-deserts-low-income-communities/

Rohwerder, B. 2015. Restriction on Humanitarian Access. GSDRC helpdesk research report no. 1297. Birmingham, UK, University of Birmingham. Available at: http://www.gsdrc.org/wp-content/uploads/2015/11/HDQ1297.pdf

Sancez, A. 2010. Sanchez, Alejandro. 2010. Peacekeeping and Military Operations by Latin American Militaries: Between Being a Good Samaritan and Servicing the National Interest. Available at: http://www.coha.org/peacekeeping-and-military-operations/

Schiller, B. 2015. In South Africa's poor townships, social entrepreneurs are creating a food delivery service. Available at: https://www.fastcompany.com/3050378/in-south-africas-poor-townships-social-entrepreneurs-are-creating-a-food-delivery-service

SUN-BN. 2017. Scaling Up Nutrition Business Network. Geneva. Available at: http://sunbusinessnetwork.org

TechnoServe. 2014. A business approach to staple crops in Ethiopia: Partnering with the World Food Programme. Available at: http://www.technoserve.org/blog/purchase-for-progress-a-business-approach-to-staple-crops-in-ethiopia#sthash.2Aqe4WzH.dpuf

Timmer, C.P. 2014. Managing structural transformation: A political economy approach. World Institute for Development Economics Research annual lecture no. 18. Helsinki, United Nations University.

Timmer, C.P., Falcon, W. & Pearson, S. 1983. Food Policy Analysis. Baltimore, MD, USA, Johns Hopkins University Press.

Thompson, C. 2016. How does the blockchain work? Intrepid Review. October 2016. Available at: https://medium.com/the-intrepid-review/how-does-the-blockchain-work-for-dummies-explained-simply-9f94d386e093#.m4ujtxklz

Tschirley, D., Myers, R. & Zavale, H. 2013. MSU/FSG Study of the Impact of WFP Local and Regional Food Aid Procurement on Markets, Households and Food Value Chains. East Lansing, MI, USA, Michigan State University.

Tschirley, D, Snyder, J., Dolislager, M., Reardon, T., Haggblade, S., Goeb, J., Traub, L., Ejobi, F. & Meyer, F. 2015a. Africa's unfolding diet transformation: Implications for Agrifood system employment. Journal of Agribusiness in Developing and Emerging Economies 5(2).

Tschirley, D., Reardon, T., Dolislager, M. & Snyder, J. 2015b. 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).

United Nations. 2015a. Report of the Secretary-General on the protection of civilians in armed conflict. New York, United Nations Security Council. Available at: http://www.un.org/en/ga/search/view_doc.asp?symbol=S/2015/453

United Nations. 2015b. Transforming our World: the 2030 Agenda for Sustainable Development. United Nations General Assembly. New York. Available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E

United Nations. 2017. United Nations Peace Keeping – Peace and Security. New York. Available at: http://www.un.org/en/peacekeeping/operations/peace.shtml

UN Habitat. 2017. New Urban Agenda. Available at: www.nua.unhabitat.org

UNISDR. 2009. Terminology of Disaster Risk Reduction. Geneva.

UNGA. 1974. Declaration on the Protection of Women and Children in Emergencies and Armed Conflict. United Nations General Assembly Resolution 3318. New York.

UNHCR. 2016a. Global Trends – Forced Displacement in 2015. Geneva.

UNHCR. 2016b. Staff Safety and Security. Geneva. Available at: http://www.unhcr.org/57e909f27.pdf

UNHCR. 2017. UNHCR Protection Manual. Geneva. Available at: http://www.refworld.org/protectionmanual.htm

UNHCR. 2017a. Ten Funding Resources for Humanitarian Innovation. Geneva. Available at: http://www.unhcr.org/innovation/10-funding-resources-for-humanitarian-innovators-

UNISDR. 2011. Global Assessment Report on Disaster Risk Reduction. Geneva. Available at: https://www.unisdr.org/we/inform/publications/19846.

UNISDR. 2015. 2015 Disasters in Numbers. Geneva. Available at: http://www.unisdr.org/files/47804_2015disastertrendsinfographic.pdf

UN Women. 2000. Women and Armed Conflict. New York. Available at: http://www.unwomen.org

USAID. 2008. Emergencies in urban settings: A technical review of food-based program options. Occasional paper no. 6. Washington DC.

USAID. 2013. Feed the future learning agenda literature review: Improving resilience of vulnerable populations. Contract no. GS-23F-8144H/AID-OAA-M-12-00006. Rockville, MD, USA, Westat.

Von Braun, J. & Thorat, S. 2014. Policy implications of exclusion and resilience. In: S. Fan, R. Pandya-Lorch & S. Yosef (eds) Resilience for Food and Nutrition Security. Washington DC, IFPRI.

WFP. 2008. The Coping Strategies Index: A tool for rapid measurement of household food security and the impact of food aid programs in humanitarian emergencies. Rome. Available at: http://documents.wfp.org/stellent/groups/public/documents/manual_guide_proced/wfp211058.pdf

WFP. 2011. WFP policy on disaster risk reduction and management. Rome.

WFP. 2012. WFP humanitarian protection policy. Rome.

WFP. 2013a. Food aid flows report, 2012. Rome.

WFP. 2013b. WFP's Role in Peacebuilding in Transition Settings. Rome. Available at: http://documents.wfp.org/stellent/groups/public/documents/eb/wfpdoc062766.pdf

WFP. 2014a. WFP 2008–2013 Purchase for Progress pilot initiative: Evaluation report. Rome.

WFP. 2014b. Markets for Quality Beyond WFP. Rome.

WFP. 2015. Impact of Climate Related Shocks and Stresses on Nutrition and Food Security in Selected Areas of Rural Bangladesh. Rome. Available at: https://www.wfp.org/content/bangladesh-impact-climate-shocks-nutrition-food-security-rural-bangladesh-july-2015

WFP. 2015b. WFP supply chain report, 2015. Rome.

WFP. 2015c. WFP gender policy. Rome.

WFP. 2015d. WFP protection and accountability to affected populations. Rome. Available at: http://fscluster.org/iraq/document/wfp-protection-and-accountability.

WFP. 2015e. P4P Purchase for Progress – Reflections on the Pilot. Rome.

WFP. 2015f. Policy on building resilience for food security and nutrition. Rome. Available at: http://documents.wfp.org/stellent/groups/public/documents/eb/wfpdoc063833.pdf

WFP. 2015g. WFP gender policy. Rome. Available at: http://documents.wfp.org/stellent/groups/public/documents/communications/wfp276754.pdf

WFP. 2016a. WFP Strategic Plan (2017–2021). Rome.

WFP. 2016b. WFP Management Plan (2016–2018). Rome.

WFP. 2016c. WFP security report 2016. WFP/EB.A/2016/10-E. Rome.

WFP. 2016d. Policy on country strategic plans. Rome.

WFP. 2016e. Financial framework review. Rome.

WFP 2016f. Corporate results framework (2017–2021). Rome.

WFP. 2017a. The Assessor. WFP's Food Security Analysis e-Newsletter. Available at: https://www.wfp.org/food-security/newsletter

WFP. 2017b. Systemic food assistance: Fighting hunger through a food systems approach. Rome. Available at: https://docs.wfp.org/api/documents/19b3c58955a840b0b7fb5a3c55ad43f1/download/

WFP. 2017c. SysFOOD: The systemic food assistance initiative. Rome. Available at: https://docs.wfp.org/api/documents/6d7394999bf2413198e57e578f02c57e/download/

WFP. 2017d. WFP climate change policy. WFP/EB.1/2017/4-A/Rev.1*. Rome.

WFP. 2017e. WFP policy on capacity development: An update on implementation (2009). Evaluation report, OEV/2015/028. Rome.

WFP. 2017f. WFP Programme Guidance Manual. Rome. Available at: https://www.wfp.org/food-security/guidelines

WFP. 2017g. Share the Meal. Rome. Available at: https://sharethemeal.org/en/index.html

WFP. 2017h. Blockchain 'Crypto' Assistance at WFP. Rome. Available at: http://innovation.wfp.org/blog/blockchain-crypto-assistance-wfp

WFP. 2017i. At the Root of Exodus: Food Security, Conflict and International Migration. Rome. Available at: https://www.wfp.org/content/2017-root-exodus-food-security-conflict-and-international-migration

WFP-Ethiopia. 2013. The Ethiopia P4P Story. Rome.

WFP-Namibia. 2017. Strengthening food assistance programmes in Namibia: An information note. Windhoek. Available at: http://documents.wfp.org/stellent/groups/public/documents/newsroom/wfp261986.pdf?_ga=2.117354246.1408105938.1494506085-1256901640.1494506085

WFP/CNSA. 2016. Haiti Urban Food Security Assessment, November 2016. Joint Report by the Government of Haiti, Coordination Nationale de la Sécurité Alimentaire and WFP. Rome. Available at: http://reliefweb.int/sites/reliefweb.int/files/resources/wfp287802_0.pdf

WFP/BCG. 2016. Food – Restricted Voucher or Unrestricted Cash? How to Best Support Syrian Refugees in Jordan and Lebanon. Rome.

WFP/OXFAM. 2015. Rural Resilience in Action – Preliminary Results of the Impact Evaluation for the R4 Rural Resilience Initiative in Senegal (2013–2015). Rome.

WFP-SCOPE. 2017. SCOPE in Five Minutes. Rome. Available at: http://documents.wfp.org/stellent/groups/public/documents/communications/wfp272586.pdf.

WHO. 2016. World Health Organization, Global Database on Child Growth and Malnutrition. Country-level data are unadjusted data from national surveys, and thus may not be comparable across countries. Adjusted, comparable data are available at http://www.who.int/nutgrowthdb/en. Aggregation is based on UNICEF, WHO, and the World Bank harmonized dataset (adjusted, comparable data) and methodology. Geneva: UN World Health Organization.

WHS. 2016. World Humanitarian Summit – Commitments to Action. Istanbul, Turkey. Available at: https://worldhumanitariansummit.org

Williams, P. 2017. Global and regional peacekeepers: Trends, opportunities, risks and a way ahead. Global Policy Volume 8 Issue 1. Available at: http://onlinelibrary.wiley.com/doi/10.1111/1758-5899.12393/abstract

World Bank. 2011. World Development Report 2011: Conflict Security, and Development. Washington DC.

World Bank. 2012. Africa Can Help Feed Africa: Removing Barriers to Regional Trade in Food Staples. Washington DC.

World Bank. 2015. Shock Waves: Managing the Impacts of Climate Change on Poverty. Washington DC. Available at: https://openknowledge.worldbank.org/handle/10986/22787

World Bank. 2015a. The State of Social Safety Nets, 2015. Washington DC.

World Bank. 2016a. World Development Indicators. Washington DC.

World Bank. 2016b. Cash transfers in humanitarian contexts. Strategic note prepared for the IASC principals. Washington DC.

Acronyms used in the document

CBT	cash-based transfer
FAO	Food and Agriculture Organization of the United Nations
FEWS(-NET)	Famine Early Warning System (Network)
GFD	general food distribution
GNI	gross national income
IASC	Inter-Agency Standing Committee
IDP	internally displaced person
IFAD	International Fund for Agricultural Development
INTERFAIS	International Food Aid Information System
LIC	low-income country
LMIC	Lower-middle income country
MCH(N)	mother-and-child health (and nutrition)
MIC	middle-income country
NGO	non-governmental organization
OCHA	Office for the Coordination of Humanitarian Affairs
P4P	Purchase for Progress
SDG	Sustainable Development Goal
SSAFE	Safe and Secure Approaches in Field Environment
UNHCR	Office of the United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UMIC	Upper-middle income country
WFP	United Nations World Food Programme
WOFA	World Food Assistance

WFP regions

APR	Asia and the Pacific
ECA	East and Central Africa
LAC	Latin America and the Caribbean
MENA	Middle East and North Africa
SA	Southern Africa
WA	West Africa

Acronyms used in references

AGRA	Alliance for a Green Revolution in Africa
ADB	African Development Bank
CFS	Committee for Food security
CRED	Centre for Research on the Epidemiology of Disasters
CRS	Catholic Relief Services
DFID	Department for International Development (UK)
EIU	Economist Intelligence Unit
EU	European Union
FSIN	Food Security Information Network (EU)
GHAR	Global Humanitarian Assistance Report
GIEWS	Global Information and Early Warning System
GSN	Global Solution Network
HLPE	High Level Panel of Experts
IDS	Institute for Development Studies
IFPRI	International Food Policy Research Institute
IFRC	International Federation of Red Cross and Red Crescent Societies
INFORM	Index for Risk Management
MINUSCA	United Nations Multi-Dimensional Integrated Stabilization Mission in the Central African Republic
OCHA	Office for the Coordination of Humanitarian Affairs
OPM	Oxford Policy Management
RATIN	Regional Agricultural Trade Intelligence Network (Kenya)
SUN-BN	Scaling Up Nutrition Business Network
UNISDR	United Nations International Strategy for Disaster Reduction
UNGA	United Nations General Assembly
UNMISS	United Nations Mission in South Sudan
USAID	United States Agency for International Development
WHO	World Health Organization
WHS	World Health Statistics

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Statistical Annex

TECHNICAL NOTES

1. FORMS/OBJECTIVES OF FOOD ASSISTANCE

Source: WFP Information Network and Global Systems (WINGS), accessed in January 2017. All the following variables represent direct expenditures in US dollars. Expenditure data are available for 2009–2016.

To describe food assistance forms and objectives the report adopts WFP's Work Breakdown Structure (WBS), with food, cash and vouchers and technical assistance as separate forms and objectives, and "direct operations support and administration" cutting across the three modalities. However, logistics – which pertains and is directly related to food interventions – is kept separate to highlight its weight in the total portfolio. The resulting variables have been used to describe the forms and objectives of food assistance. They have been labelled food transfers, logistics, cash-based transfers and technical assistance.

FOOD	**Commodity** **ODOC Food** **LTSH** **External Transport** **Cargo Preference**
CASH-BASED TRANSFERS	**C&V Transfers** **C&V Related Costs**
TECHNICAL ASSISTANCE	**CD&A Transfer**

Food transfers

Food transfers are obtained as the sum of actual food transfers (Commodity in the WINGS database) and other food-related costs, which are coded as ODOC (other direct operational costs). These include staff, non-food items and services provided by WFP in parallel with food distribution; they include costs of monitoring activities where the host government, cooperating partners or the humanitarian community are the prime users of the information.

Logistics

Logistics is obtained as the sum of landside transport, storage and handling (LTSH), external transport and cargo preference.

Cash-based transfers

CBTs are obtained as the sum of "cash and vouchers transfers" and "cash and voucher related costs".

Technical assistance

Technical assistance corresponds to what in the WINGS database is referred to as "capacity development and augmentation".

Direct operations support and administration

Direct operations support and administration is made up of "direct support costs (PSA_DSC)" and "special account costs". These expenditures include staff, resources, equipment and service costs directly linked with the implementation of a project, and includes costs of monitoring activities where WFP is the primary user of the information. PSA stands for Programme Support and Administrative; DSC for direct support costs.

2. CONTEXTS OF FOOD ASSISTANCE

Source: WFP Information Network and Global Systems (WINGS). Database accessed in January 2017. All the following variables represent direct expenditures in US$. Expenditures data are available for the period 2009-2016.

Emergency

In the WINGS database, emergency expenditures are coded as EMOP (emergency operation); this category involves response to natural and man-made disasters that threaten people's lives and livelihoods.

Recovery and transition

In the WINGS database, recovery and transition expenditures are coded as PRRO (protracted relief and recovery operation). PRROs are set up to provide assistance during and in the aftermath of emergencies and to support long-term refugees and IDPs.

Development

In the WINGS database, development expenditures are coded as DEV (development programme). DEVs support long-term objectives with a single development activity and/or component.

Special operations

In the WINGS database, special operations are coded as SO. WFP implements SOs to speed up the movement of food, regardless of whether the food is provided by WFP itself. Typically, these operations involve logistics and infrastructure work and are designed to overcome operational bottlenecks.

Other

This fifth expenditure area is a composite of several small activity areas coded in WINGS.

Note: Indirect support costs (ISC). The analysis focuses only on "total direct expenditures" and does not consider ISC apart from graphics and figures which explicitly mention "total expenditures" instead of "total direct expenditures". Internally, ISC equals 7 percent of total direct expenditures.

Financial amendments. The figures presented in this report are net of the negative financial amendments recorded in the WINGS database. However, at the country level, the inclusion of such amendments leads to a situation where some cost categories take up a negative value.

Therefore in the statistical annex, whenever a cost category for a country in a given year took up a negative value, this was equally distributed among the remaining non-null complementary categories.

For the computation of correlation matrices, observations with country-level cost components showing a negative value have been dropped.

3. BENEFICIARIES

Source: WFP, Historical standard project reports (SPR) database, accessed in March 2017. Beneficiary data are available for the period 2009-2015.

The beneficiary statistics information comes from two main internal datasets – COMET and DACOTA – at the country and project levels. The beneficiary dataset includes: beneficiary totals by age and gender, beneficiary types – refugees, returnees and IDPs, and beneficiary groups – GFD, school feeding, MCH, FFW, FFT, HIV/AIDS.

4. INCOME

GDP per capita, PPP (constant 2011 international US$)

Source: World Bank, International Comparison Program database. Data are available for the period 1990-2015.

GDP per capita based on purchasing power parity (PPP). PPP GDP is gross domestic product converted to international dollars using purchasing power parity rates. An international dollar has the same purchasing power over GDP as the US dollar has in the United States. GDP at purchasers' prices is the sum of gross value added by all resident producers in the economy plus any product taxes and minus any subsidies not included in the value of the products. It is calculated without making deductions for depreciation of fabricated assets or for depletion and degradation of natural resources. Data are in constant 2011 international dollars.

GNI per capita, Atlas method (current US$)

Source: World Bank national accounts data, and OECD National Accounts data files. Data are available for the period 1987-2015.

GNI per capita (formerly GNP per capita) is the gross national income converted to US$using the World Bank Atlas method, divided by the mid-year population. GNI is the sum of value added by all resident producers plus any product taxes (less subsidies) not included in the valuation of output plus net receipts of primary income – compensation of employees and property income – from abroad. GNI calculated in national currency is usually converted to US$at official exchange rates for comparisons across economies, although an alternative rate is used when the official exchange rate is judged to diverge by an exceptionally large margin from the rate actually applied in international transactions. To smooth fluctuations in prices and exchange rates, the special Atlas method of conversion is used by the World Bank. This applies a conversion factor that averages the exchange rate for a given year and the two preceding years, adjusted for differences in rates of inflation between the country and through 2000 the G-5 countries – France, Germany, Japan, the United Kingdom and the United States. From 2001, these countries include the Euro area, Japan, the United Kingdom and the United States.

TABLE A1: Food assistance expenditures

Country	Total direct expenditures (US$million)		Share of CBTs in total expenditures (%)		Share of food transfers in total expenditures (%)		Share of technical assistance in total expenditures (%)		Share of emergency in total expenditures (%)		Share of recovery and transition in total expenditures (%)		Share of development in total expenditures (%)	
	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016
Total	3 867.04	4 965.44	4.75	19.16	51.36	39.47	4.09	7.95	35.42	41.58	47.01	42.84	9.48	6.15
Asia and the Pacific	705.91	431.46	3.80	11.73	61.89	48.28	3.04	9.37	22.13	5.73	58.71	70.23	13.70	16.35
Afghanistan	213.00	110.55	3.88	7.01	49.57	39.72	5.42	14.74	30.75	4.22	61.27	79.50	-	-
Bangladesh	51.17	34.32	11.31	31.44	69.90	40.24	-	6.46	-	0.01	5.73	13.27	92.98	83.14
Bhutan	1.96	0.57	-	-	83.00	79.49	-	5.29	-	-	-	-	100.00	100.00
Cambodia	26.27	10.21	2.55	17.70	69.48	28.04	-	11.13	22.90	-	- 0.00	-	76.34	100.00
Fiji	-	3.32		69.12		-		12.06		100.00		-		-
India	5.09	1.68	-	-	72.31	-	-	29.74	-	-	-	-	60.64	-
Indonesia	5.23	1.45	-	-	58.10	2.34	-	68.43	0.02	-	13.97	-	52.19	92.00
Democratic People's Republic of Korea	52.20	26.07	-	-	75.75	74.76	-	-	47.33	-	52.67	100.00	-	-
Lao People's Democratic Republic	7.43	10.83	-	-	49.12	35.27	-	14.22	-	-	1.19	-	98.81	98.35
Myanmar	37.09	40.56	0.42	23.91	68.50	43.57	-	1.52	-	-	99.74	100.00	-	-
Nepal	33.18	27.94	8.14	19.65	52.21	26.68	-	20.40	-	27.53	79.09	8.33	20.91	44.24
Pakistan	231.51	130.74	3.56	7.36	66.96	68.23	4.18	1.67	25.84	-	67.25	99.51	-	-
Papua New Guinea	-	7.61	-	-	-	58.25	-	-	-	100.00	-	-	-	-
Philippines	20.09	12.37	2.34	14.03	67.64	12.27	1.12	41.96	-	-	96.70	84.30	-	-
Sri Lanka	15.70	6.75	3.23	21.19	69.15	48.56	-	1.82	1.38	18.27	88.15	16.03	10.11	63.15
Timor-Leste	6.01	2.79	-	-	59.16	13.21	-	58.99	-	5.96	8.46	-	90.94	94.04
Regional	-	3.70	-	-	100.00	-	-	143.74	-	0.44	-	-	-	-
Middle East and North Africa	632.07	1 899.49	8.58	32.22	56.75	40.34	0.41	4.98	68.53	77.78	21.49	15.00	4.53	2.36
Algeria	25.53	16.25	-	-	74.82	75.21	-	-	-	-	100.00	100.00	-	-
Armenia	3.53	3.56	-	-	82.76	44.40	-	24.19	-	4.65	26.88	-	73.12	92.52
Egypt	12.82	42.11	-	45.36	86.19	36.88	-	5.86	0.49	45.92	-	-	79.62	51.49
Georgia	0.44	-	-	-	48.53	-	-	-	-	-	100.00	-	-	-
Iran (Islamic Republic of)	1.26	3.80	-	-	64.29	82.32	-	-	-	-	100.00	100.00	-	-

TABLE A1: Food assistance expenditures

Country	Total direct expenditures (US$million)		Share of CBTs in total expenditures (%)		Share of food transfers in total expenditures (%)		Share of technical assistance in total expenditures (%)		Share of emergency in total expenditures (%)		Share of recovery and transition in total expenditures (%)		Share of development in total expenditures (%)	
	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016
Iraq	22.77	184.91	16.20	31.90	42.51	46.27	7.34	2.36	5.28	97.39	83.31	0.16	2.04	-
Jordan	15.61	183.86	25.89	82.51	66.11	10.24	-	0.72	100.00	95.07	-	3.46	-	1.48
Kyrgyzstan	4.22	7.94	-	-	70.55	42.72	-	27.56	-	-	100.00	-	-	100.00
Lebanon	9.83	237.90	72.71	94.79	15.03	0.60	-	0.70	100.00	100.00	-	-	-	-
Libya	8.06	10.90	26.13	-	21.50	76.57	-	-	85.78	100.00	-	-	-	-
Morocco	-	0.39	-	-	-	-	-	80.35	-	-	-	-	-	100.00
Palestine	59.72	43.31	18.00	41.45	57.11	36.97	-	0.21	51.75	-	48.25	100.00	-	-
Sudan	242.44	211.27	9.02	17.41	41.54	30.20	-	7.87	89.28	-	-	92.47	-	-
Syrian Arab Republic	85.22	505.80	2.02	0.62	77.44	72.19	0.36	9.11	94.94	88.91	-	1.92	3.04	-
Tajikistan	12.35	9.37	-	-	76.34	65.60	-	3.86	-	- 0.00	24.79	1.45	75.21	96.34
Tunisia	1.05	0.12	44.24	-	4.56	-	-	38.19	34.71	-	65.29	-	-	100.00
Turkey	2.91	66.97	84.76	88.36	1.41	-	-	1.13	100.00	100.00	-	-	-	-
Ukraine	-	23.90	-	14.80	-	66.45	-	4.44	-	94.66	-	-	-	-
Yemen	123.25	345.41	-	10.44	71.45	43.23	0.52	4.70	54.90	92.87	41.55	2.03	2.85	-
Regional	1.05	1.74	-	-	-	-	-	6.74	100.00	92.76	-	-	-	-
East and Central Africa	1 269.02	1 369.45	1.78	8.22	44.81	34.18	5.69	10.07	33.65	21.35	52.42	62.76	7.19	4.20
Burundi	17.50	31.53	0.16	20.45	54.10	39.29	-	4.13	-	-	75.50	69.33	24.50	30.60
Djibouti	16.23	9.53	6.35	8.15	60.02	43.25	-	-	-	0.01	92.66	90.89	6.97	8.21
Ethiopia	384.13	412.51	1.43	4.96	53.97	48.06	1.50	6.25	-	-	88.48	83.28	8.72	3.35
Kenya	275.81	110.04	5.35	24.16	49.95	32.86	-	4.35	-	-	92.58	88.12	7.42	11.57
Republic of South Sudan	314.16	546.82	-	3.15	30.03	22.42	13.06	13.68	85.18	53.28	-	32.43	-	-
Rwanda	15.57	25.09	0.87	22.88	53.45	39.78	-	4.12	4.19	2.62	69.54	71.78	24.10	19.08
Somalia	190.79	143.41	0.48	20.05	35.20	25.64	13.29	13.87	83.23	-	2.19	85.38	-	-
Uganda	54.83	90.50	0.48	7.23	63.06	52.79	0.01	11.35	-	0.39	48.79	78.08	51.21	17.41
Regional	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Western Africa	762.43	564.42	8.47	10.23	49.51	36.54	4.59	13.91	43.91	38.47	40.20	36.90	9.98	10.47

TABLE A1: Food assistance expenditures

Country	Total direct expenditures (US$million)		Share of CBTs in total expenditures (%)		Share of food transfers in total expenditures (%)		Share of technical assistance in total expenditures (%)		Share of emergency in total expenditures (%)		Share of recovery and transition in total expenditures (%)		Share of development in total expenditures (%)	
	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016
Benin	2.19	2.14	-	4.59	54.40	50.21	0.12	1.76	16.12	-	-	-	79.00	100.00
Burkina Faso	48.05	11.15	17.99	8.79	56.25	52.20	-	-	17.78	4.96	70.24	58.24	10.43	36.81
Cameroon	17.23	60.92	-	8.63	57.73	43.42	-	5.98	72.36	90.64	17.77	1.20	9.87	1.64
Cabo Verde	0.39	-	-	-	37.04	-	0.61	-	-	-	-	-	52.82	-
Central African Republic	22.79	66.91	-	7.25	33.80	23.93	24.21	22.35	-	75.96	65.26	-	8.89	0.28
Chad	168.77	97.40	-	7.96	36.07	30.03	7.75	12.19	7.37	21.77	80.31	64.54	4.09	0.95
Côte d'Ivoire	33.83	13.11	1.20	7.58	58.90	44.71	9.94	3.15	76.53	-	10.81	48.55	0.09	51.45
Gambia	10.67	1.79	3.32	8.30	67.55	38.53	-	6.45	91.07	0.74	-	1.09	8.93	98.18
Ghana	18.67	4.45	-	42.43	77.40	6.92	-	4.69	4.90	-	46.95	0.00	47.32	100.23
Guinea	6.19	18.11	-	-	50.04	23.88	-	35.92	-	7.65	25.95	0.54	74.05	52.86
Guinea-Bissau	3.81	8.80	-	0.21	62.28	56.97	-	2.28	-	-	-	10.10	80.05	89.90
Liberia	29.37	17.19	0.60	-	45.21	23.49	1.97	18.94	59.80	7.57	13.41	15.20	23.08	54.62
Mali	76.87	51.55	1.25	16.37	61.86	31.41	0.63	15.38	81.30	0.07	0.00	86.79	16.46	2.71
Mauritania	49.29	16.83	9.60	17.48	51.52	27.50	6.89	21.12	84.89	8.39	-	67.63	6.75	2.38
Niger	214.97	102.40	21.09	15.02	46.38	44.07	3.95	8.06	66.27	30.44	26.49	61.35	2.44	-
Nigeria	0.35	60.06	-	8.15	-	55.91	7.80	17.96	-	84.77	-	-	-	-
Sao Tome and Principe	0.81	0.11	-	-	50.77	9.13	-	5.86	-	-	-	-	100.00	100.00
Senegal	43.45	8.59	9.07	41.60	66.78	25.27	-	0.92	-	-	88.87	59.92	10.20	25.91
Sierra Leone	13.12	19.44	-	2.79	62.41	29.32	-	34.13	-	5.09	44.96	21.12	55.04	34.41
Togo	0.55	0.06	-	-	1.49	-	7.99	79.06	4.49	-	-	-	25.96	100.00
Regional	1.07	3.40	-	-	-	-	-	-	7.57	62.49	-	-	-	-
Southern Africa	332.40	504.23	4.24	11.46	48.12	52.40	5.50	5.20	7.38	4.77	70.57	79.58	15.46	8.78
Congo	9.70	5.40	3.56	2.94	46.73	28.17	2.16	5.21	11.33	61.88	39.88	5.49	46.51	32.63
Democratic Republic of the Congo	126.10	106.64	4.66	15.68	35.09	24.40	14.32	20.65	15.90	12.54	67.72	64.63	-	-
Lesotho	7.54	13.75	-	19.57	65.41	54.40	-	2.29	39.74	6.80	-	29.78	57.28	25.29
Madagascar	14.55	31.28	-	12.98	59.51	56.17	-	1.34	1.57	-	58.21	79.46	40.27	18.90
Malawi	44.22	192.95	1.91	6.95	69.25	68.56	-	0.30	0.28	-	71.13	89.57	28.59	9.87

TABLE A1: Food assistance expenditures

Country	Total direct expenditures (US$million)		Share of CBTs in total expenditures (%)		Share of food transfers in total expenditures (%)		Share of technical assistance in total expenditures (%)		Share of emergency in total expenditures (%)		Share of recovery and transition in total expenditures (%)		Share of development in total expenditures (%)	
	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016	2012	2016
Mozambique	20.54	22.52	4.80	0.18	37.98	61.40	-	4.51	-	-	56.01	70.08	42.49	24.34
Namibia	0.58	-	-	-	60.73	-	-	-	2.76	-	97.24	-	-	-
Swaziland	2.52	7.42	-	8.31	60.21	68.18	-	1.71	1.28	81.36	69.93	-	28.79	17.18
United Republic of Tanzania	29.52	40.71	0.14	0.39	57.97	54.68	-	1.07	-	0.00	62.79	90.16	37.21	9.82
Zambia	4.64	3.49	-	2.48	52.69	62.91	-	4.31	-	0.45	11.14	-	77.70	95.17
Zimbabwe	72.50	79.48	8.28	24.99	52.02	45.27	-	0.66	-	-	100.00	97.87	-	-
Regional	-	0.58	-	-	-	-	-	58.77	-	59.84	-	-	-	-
Latin America and the Caribbean	129.43	US$160.74	0.96	37.72	65.11	29.23	2.96	10.65	-	18.09	46.26	43.76	16.28	18.03
Bolivia (Plurinational State of)	1.64	US$2.51	0.87	59.82	64.40	20.61	-	4.66	-	51.43	39.65	-	60.35	38.40
Colombia	11.32	US$13.38	-	34.91	46.45	14.20	-	17.46	-	1.44	90.80	87.81	-	-
Cuba	12.39	US$1.35	-	-	98.86	6.26	-	70.73	0.27	2.50	-	-	1.81	97.50
Dominican Republic	0.99	US$1.40	-	-	36.16	26.92	-	28.20	-	-	-	-	-	-
Ecuador	3.49	US$15.62	25.14	73.30	41.76	0.00	-	18.16	12.49	61.33	61.15	19.22	-	-
El Salvador	15.02	US$7.90	-	63.88	90.09	4.65	-	13.24	-	-	24.37	64.84	-	4.41
Guatemala	6.65	US$17.83	-	57.70	76.29	20.24	-	5.94	-	-	62.25	82.53	37.69	13.88
Haiti	44.69	US$55.53	0.78	24.18	44.36	33.43	8.56	10.32	-	29.24	74.65	39.94	15.17	20.60
Honduras	25.49	US$34.27	-	38.57	79.95	48.28	-	0.75	-	-	5.63	36.37	27.03	16.92
Nicaragua	5.40	US$7.19	-	-	67.65	68.22	-	9.14	-	-	54.29	7.68	45.59	92.32
Paraguay	1.80	US$1.34	-	76.13	71.97	5.92	-	6.98	100.00	89.67	-	-	-	-
Peru	-	US$1.49	-	-	-	-	-	81.52	-	10.80	-	-	-	-
Regional	0.54	US$0.94	-	-	-	3.16	0.78	46.48	7.38	39.91	50.97	60.09	41.65	-
Global	35.77	35.66	-	-	-	-	-	-	-	-	-	-	-	-

TABLE A2: Food assistance beneficiaries

Country	Total number of beneficiaries		Number of female beneficiaries		Number of male beneficiaries		Number of internally displaced people		Number of refugees		Number of returnees		Expenditure per beneficiary (US$)	
	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014
Total	97 218 722	77 863 319	50 306 747	40 375 329	46 911 975	37 487 990	6 513 045	5 195 999	2 358 209	6 694 679	743 739	787 778	39.78	58.87
Asia and the Pacific	28 823 995	16 509 522	14 603 284	8 642 683	14 220 711	7 866 839	1 558 161	2 035 102	77 598	61 460	122 575	148 735	24.49	30.35
Afghanistan	6 004 466	3 263 345	2 702 009	1 657 575	3 302 457	1 605 770	-	218 526	-	-	-	10 073	35.47	36.83
Bangladesh	1 882 031	1 607 224	976 752	839 675	905 279	767 549	-	-	24 437	32 044	-	-	27.19	21.08
Bhutan	36 269	30 346	18 057	15 200	18 212	15 146	-	-	-	-	-	-	54.02	33.35
Cambodia	1 179 567	742 017	594 389	372 327	585 178	369 690	-	-	-	-	-	-	22.27	20.71
India	456 849	-	278 765	-	178 084	-	-	-	-	-	-	-	11.14	-
Indonesia	90 289	57 729	45 865	31 898	44 424	25 831	-	-	-	-	-	-	57.93	55.36
Democratic People's Republic of Korea	2 926 768	1 782 671	1 719 989	1 065 499	1 206 779	717 172	-	-	-	-	-	-	17.84	12.30
Lao People's Democratic Republic	225 576	280 467	107 177	139 126	118 399	141 341	-	-	-	-	-	-	32.93	35.64
Myanmar	1 023 223	1 113 743	534 824	579 146	488 399	534 597	174 775	214 636	-	-	-	-	36.25	37.08
Nepal	922 391	524 953	469 665	267 498	452 726	257 455	-	-	53 161	29 416	-	-	35.97	27.67
Pakistan	12 417 442	3 441 424	6 300 671	1 806 018	6 116 771	1 635 406	1 376 158	1 594 657	-	-	93 009	137 622	18.64	48.39
Philippines	1 236 462	3 201 391	630 596	1 622 614	605 866	1 578 777	-	-	-	-	-	-	16.24	18.54
Sri Lanka	353 252	448 664	180 954	235 464	172 298	213 200	7 228	7 283	-	-	29 566	1 040	44.43	21.89
Timor-Leste	69 410	15 548	43 571	10 643	25 839	4 905	-	-	-	-	-	-	86.62	156.97
Middle East and North Africa	14 620 376	22 056 908	7 492 879	11 300 397	7 127 497	10 756 511	1 885 318	9 577 196	83 228	3 826 145	9 909	366 505	43.23	77.33
Algeria	124 960	124 960	75 806	75 806	49 154	49 154	-	-	-	124 960	-	-	204.27	139.23
Armenia	55 726	77 733	26 593	37 784	29 133	39 949	-	-	-	-	-	-	63.39	39.77
Bosnia and Herzegovina	-	50 000	-	25 000	-	25 000	-	-	-	-	-	-	-	3.67
Egypt	415 490	684 400	210 064	354 457	205 426	329 943	-	-	-	100 189	-	-	30.84	62.44
Iran (Islamic Republic of)	29 412	29 018	14 958	14 178	14 454	14 840	-	-	29 412	28 835	-	-	42.99	93.21
Iraq	748 112	2 274 503	345 663	1 121 651	402 449	1 152 852	-	1 771 671	-	116 211	-	-	30.43	55.84
Jordan	158 569	1 491 185	81 282	777 282	77 287	713 903	-	-	-	1 103 793	-	-	98.47	162.78
Kyrgyzstan	494 960	100 311	249 555	49 740	245 405	50 571	-	-	-	-	-	-	8.53	69.90
Lebanon	110 448	1 032 916	56 328	526 787	54 120	506 129	-	-	-	1 032 916	-	-	89.01	286.52
Libya	349 548	15 003	186 659	8 102	162 889	6 901	30 000	15 003	9 704	-	-	-	23.06	49.72

TABLE A2: Food assistance beneficiaries

Country	Total number of beneficiaries		Number of female beneficiaries		Number of male beneficiaries		Number of internally displaced people		Number of refugees		Number of returnees		Expenditure per beneficiary (US$)	
	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014
Palestine	645 650	1 862 903	310 165	922 089	335 485	940 814	-	347 150	-	873 586	-	-	92.49	47.13
Sudan	3 636 374	4 257 452	2 007 731	2 256 449	1 628 643	2 001 003	1 855 318	2 307 325	44 112	130 287	9 909	47 588	66.67	61.73
Syrian Arab Republic	1 833 957	4 939 775	908 379	2 531 634	925 578	2 408 141	-	4 445 797	-	3 761	-	-	46.47	84.67
Tajikistan	522 609	435 331	262 339	216 672	260 270	218 659	-	-	-	-	-	-	23.63	19.98
Tunisia	4 977	-	2 422	-	2 555	-	-	-	-	-	-	-	210.98	-
Turkey	-	234 910	-	115 980	-	118 930	-	-	-	234 910	-	-	-	291.31
Ukraine	-	35 724	-	23 643	-	12 081	-	27 712	-	-	-	-	-	34.70
Yemen	5 489 584	4 403 784	2 754 935	2 239 743	2 734 649	2 164 041	-	655 538	-	76 697	-	318 917	22.45	26.55
East and Central Africa	19 820 549	13 927 820	10 301 967	7 208 055	9 518 582	6 719 765	1 769 618	1 299 398	1 403 205	1 776 059	201 536	49 679	64.03	86.20
Burundi	743 377	943 711	385 630	451 491	357 747	492 220	-	22 160	25 723	59 754	35 000	31 020	23.54	29.54
Djibouti	136 387	103 520	70 496	50 867	65 891	52 653	-	-	18 639	19 000	-	-	119.03	89.94
Ethiopia	6 209 900	5 272 030	3 169 500	2 686 467	3 040 400	2 585 563	-	-	339 400	593 500	-	-	61.86	53.61
Kenya	5 066 322	2 504 699	2 751 467	1 279 106	2 314 855	1 225 593	-	-	578 995	493 854	-	-	54.44	73.93
Rwanda	441 149	127 098	225 058	69 380	216 091	57 718	-	-	72 384	73 694	10 778	12 290	35.29	146.05
Somalia	3 622 753	1 516 645	1 886 983	786 714	1 735 770	729 931	1 253 058	134 237	-	-	-	-	52.66	90.01
South Sudan	2 721 606	2 647 195	1 333 587	1 449 934	1 388 019	1 197 261	516 560	1 143 001	225 097	233 049	143 579	6 369	115.43	177.50
Uganda	879 055	812 922	479 246	434 096	399 809	378 826	-	-	142 967	303 208	12 179	-	62.37	86.67
West Africa	18 113 224	12 968 041	9 585 917	6 696 978	8 527 307	6 271 063	11 950	878 108	530 120	812 720	219 492	116 667	42.09	53.33
Benin	114 718	99 760	52 339	44 689	62 379	55 071	-	-	-	-	-	-	19.1	16.65
Burkina Faso	2 470 345	586 583	1 296 870	324 671	1 173 475	261 912	-	-	64 826	31 683	-	-	19.45	32.82
Cameroon	304 006	441 413	181 634	256 858	122 372	184 555	-	20 000	23 851	164 095	-	-	56.68	56.29
Central African Republic	333 500	1 637 798	165 098	863 808	168 402	773 990	-	788 519	-	14 036	-	-	68.35	53.93
Chad	2 830 837	1 289 829	1 467 488	684 467	1 363 349	605 362	-	-	343 534	433 460	-	74 758	59.62	90.45
Côte d'Ivoire	971 451	564 861	456 685	267 250	514 766	297 611	11 950	-	-	-	215 000	30 605	34.82	13.96
Gambia	536 642	194 650	271 711	120 731	264 931	73 919	-	-	-	-	-	-	19.88	13.92
Ghana	409 774	250 420	243 726	136 247	166 048	114 173	-	-	-	16 372	-	-	45.55	39.72
Guinea	157 660	724 978	70 860	359 383	86 800	365 595	-	-	-	5 043	-	-	39.24	48.33
Guinea-Bissau	206 194	170 154	104 316	89 718	101 878	80 436	-	-	-	-	-	-	18.46	41.57

TABLE A2: Food assistance beneficiaries

Country	Total number of beneficiaries		Number of female beneficiaries		Number of male beneficiaries		Number of internally displaced people		Number of refugees		Number of returnees		Expenditure per beneficiary (US$)	
	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014	2012	2014
Liberia	381 564	663 533	186 128	327 417	195 436	336 116	-	-	37 000	37 096	-	-	76.96	58.50
Mali	1 174 758	1 878 174	661 025	1 008 955	513 733	869 219	-	69 589	-	-	-	-	65.43	72.90
Mauritania	764 726	475 422	400 855	250 494	363 871	224 928	-	-	-	61 462	-	-	64.46	54.10
Niger	5 125 242	1 778 763	2 836 087	855 669	2 289 155	923 094	-	-	60 909	49 473	1 922	11 304	41.94	68.17
Sao Tome and Principe	49 411	40 332	24 308	19 964	25 103	20 368	-	-	-	-	-	-	16.47	10.58
Senegal	1 826 486	1 007 770	931 192	528 902	895 294	478 868	-	-	-	-	2 570	-	23.79	19.88
Sierra Leone	455 910	1 163 601	235 595	557 755	220 315	605 846	-	-	-	-	-	-	28.78	27.60
Southern Africa	11 750 927	9 051 020	6 223 163	4 816 710	5 527 764	4 234 310	1 044 115	569 616	243 613	195 079	190 227	106 192	28.29	35.17
Congo	174 117	179 048	90 270	101 732	83 847	77 316	17 866	-	83 081	46 535	-	-	55.69	42.73
Democratic Republic of the Congo	3 654 755	1 396 700	1 996 939	765 391	1 657 816	631 309	1 023 507	568 457	21 922	43 298	145 079	76 819	34.5	75.21
Lesotho	288 994	329 081	159 627	179 684	129 367	149 397	-	-	-	-	-	-	26.08	43.31
Madagascar	843 235	623 304	444 914	331 303	398 321	292 001	-	1 159	-	-	-	-	17.25	21.21
Malawi	2 191 505	2 696 307	1 150 305	1 391 333	1 041 200	1 304 974	-	-	15 253	20 624	-	-	20.18	28.24
Mozambique	631 503	377 229	325 681	208 257	305 822	168 972	-	-	9 091	8 750	-	-	32.52	43.90
Namibia	5 601	-	2 835	-	2 766	-	-	-	5 601	-	-	-	103.35	-
Swaziland	326 691	196 020	186 339	102 731	140 352	93 289	-	-	-	-	-	-	7.71	13.80
United Republic of Tanzania	926 234	663 875	458 930	346 543	467 304	317 332	-	-	105 572	75 872	-	-	31.87	34.05
Zambia	840 272	861 638	416 342	439 435	423 930	422 203	-	-	3 093	-	915	-	5.53	8.89
Zimbabwe	1 868 020	1 727 818	990 981	950 301	877 039	777 517	2 742	-	-	-	44 233	29 373	38.81	30.35
Latin America and the Caribbean	4 089 651	3 350 008	2 099 537	1 710 506	1 990 114	1 639 502	243 883	413 775	20 445	23 216	-	-	31.65	34.10
Bolivia (Plurinational State of)	132 195	164 417	63 972	82 973	68 223	81 444	-	-	-	-	-	-	12.37	37.79
Colombia	272 547	466 563	138 452	241 184	134 095	225 379	243 883	413 775	-	-	-	-	41.55	38.68
Cuba	860 774	209 092	420 451	102 160	440 323	106 932	-	-	-	-	-	-	14.39	2.94
Ecuador	75 494	46 891	40 917	24 688	34 577	22 203	-	-	20 445	23 216	-	-	46.28	105.98
El Salvador	57 160	85 446	29 091	43 514	28 069	41 932	-	-	-	-	-	-	262.75	39.17
Guatemala	332 028	376 995	168 985	196 622	163 043	180 373	-	-	-	-	-	-	20.02	31.20
Haiti	1 653 682	1 151 169	876 111	591 758	777 571	559 411	-	-	-	-	-	-	27.02	34.84
Nicaragua	279 246	440 447	140 699	224 618	138 547	215 829	-	-	-	-	-	-	19.34	12.28
Paraguay	51 880	29 970	25 629	14 805	26 251	15 165	-	-	-	-	-	-	34.75	37.52

Endnotes

[i] Famine is defined as a situation in which at least 20 percent of the population does not have enough food for the average person to lead a healthy life (2,100 kcal a day), there is acute malnutrition in more than 30 percent of children, and there are two deaths per 10,000 people every day, or four child deaths per 10,000 children every day.

[ii] The figures for 2016 are yet to be finalized and released.

[iii] See HLPE (2016) for alternative relatively more abstract definitions.

[iv] Reardon (2016) has found that on average, this midstream segment of food systems accounts for 40 percent of food system costs. The implication is that investments to reduce costs and increase mid-stream productivity are equally important as similar investments at the farm level. Efficiency gains in the mid-stream of food systems generate benefits across entire food systems, especially for the hungry poor, who often face extremely high costs when performing or accessing basic food systems functions

[v] WFP has begun to pursue such an analytical agenda.

[vi] IFAD pursued a similar approach in the 2016 Rural Development Report (IFAD, 2016).

[vii] Internally, "technical assistance" is referred to as "capacity development and augmentation" while "operations support and administration" is made up of a number of cost categories related to direct and indirect operational and administrative costs.

[viii] Internally, "recovery and transition" is referred to as "protracted relief and recovery." WFP draws-up "special operations" to speed-up the movement of food, regardless of whether the food is provided by the Agency itself. Typically, these operations involve logistics and infrastructure work and are designed to overcome operational bottlenecks.

[ix] The increase in the share of CBTs and technical assistance reflects WFP's shift over this period from a food aid agency to a food assistance agency following adoption of the 2008-2012 Strategic Plan. With that shift has come an embrace of an expanding array of tools to address food insecurity in emergency, recovery, and development contexts. The overall stability of the functional areas reflects WFP's identity as the world's largest humanitarian organization addressing hunger and nutrition. With this identity comes a responsibility for fulfilling commitments and expectations in emergency response and recovery in contexts of crisis and disruption, aiming to save lives through first-rate food assistance interventions designed and implemented in partnership with national governments, international agencies and other actors.

[x] APR = Asia and Pacific (Afghanistan, Bangladesh, Bhutan, Cambodia, Fiji, India, Indonesia, Korea DPR, Laos, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Timor-Leste); ECA = Eastern and Central Africa (Burundi, Djibouti, Ethiopia, Kenya, Republic of South Sudan, Rwanda, Somalia, Uganda); LAC = Latin America and the Caribbean (Bolivia, Colombia, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Nicaragua, Paraguay, Peru); MENA = Middle East and North Africa (Algeria, Armenia, Egypt, Iran, Iraq, Jordan, Kyrgyzstan, Lebanon, Libya, Morocco, Palestinian Territories, Sudan, Syrian Arab Republic, Tajikistan, Tunisia, Turkey, Ukraine, Yemen); SA = Southern Africa (Republic of Congo, Democratic Republic of the Congo, Lesotho, Madagascar, Malawi, Mozambique, Swaziland, Tanzania, Zambia, Zimbabwe); WA = Western Africa (Benin, Burkina Faso, Cameroon, Central African Republic, Chad, Côte d'Ivoire, Gambia, Ghana, Guinea, Guinea-Bissau, Liberia, Mali, Mauritania, Niger, Nigeria, São Tomé and Príncipe, Senegal, Sierra Leone, Togo).

[xi] Low-income = Afghanistan, Korea DPR, Nepal, Burundi, Eritrea, Ethiopia, Rwanda, Somalia, South Sudan, Uganda, Benin, Burkina Faso, Central African Republic, Chad, The Gambia, Guinea, Guinea-Bissau, Liberia, Mali, Niger, Senegal, Sierra Leone, Togo, Democratic Republic of Congo, Madagascar, Malawi, Mozambique, Tanzania, Zimbabwe, Haiti; Low-middle-income = Bangladesh, Bhutan, Cambodia, India, Indonesia, Laos, Myanmar, Pakistan, Papua New Guinea, Philippines, Sri Lanka, Timor- Leste, Vanuatu, Armenia, Egypt, Kyrgyzstan, Morocco, Sudan, Syrian Arab Republic, Tajikistan, Tunisia, Ukraine, Uzbekistan, Palestinian Territories, Yemen, Djibouti, Kenya, Cabo Verde, Cameroon, Côte d'Ivoire, Ghana, Mauritania, Nigeria, São Tomé and Principe, Republic of Congo, Lesotho, Swaziland, Zambia, Bolivia, El Salvador, Guatemala, Honduras, Nicaragua; Upper-middleincome = Fiji, Albania, Algeria, Azerbaijan, Bosnia and Herzegovina, Georgia, Iran, Iraq, Jordan, Lebanon, Libya, Russian Federation, Turkey, Angola, Namibia, Colombia, Cuba, Dominican Republic, Ecuador, Panama, Paraguay, Peru; High-income = Japan, Greece, Chile.

[xii] Timor-Leste is not included in Figure 2.7 because its computed expenditure per beneficiary in 2015 equaled US$600.64, an extraordinary level for the country and organization.

[xiii] L3 Emergencies in 2015 included: Ebola outbreak (Guinea, Liberia, Sierra Leone), Iraq, South Sudan, Syria and Syrian Refugees (Egypt, Iraq, Jordan, Lebanon, Syria, Turkey), Yemen; L2 Emergencies in 2015 included: Central African Republic, Democratic Republic of Congo, Horn of Africa Drought (Ethiopia, Kenya, Somalia), Libya, Mali, Nepal, Ukraine.

[xiv] The GNI per capita is the dollar value of a country's final income in a year, divided by its population. It reflects the average income of a country's citizens.

[xv] Developed by the Economist Intelligence Unit, the GFSI considers the core issues of affordability, availability, and quality across a set of 113 countries. The index is a dynamic quantitative and qualitative scoring model, constructed from 28 unique indicators, that measures these drivers of food security across both developing and developed countries. The overall goal of the index is to assess which countries are most and least vulnerable to food insecurity through the categories of affordability, availability, and quality/safety. To capture drivers of food security which are not currently measured in any international

dataset, the index includes a number of unique qualitative indicators, many of which relate to government policy. http://foodsecurityindex.eiu.com. To limit risk of spurious correlations with the other variables, measures capturing political stability and corruption were removed from the index. Robustness checks confirmed that the restricted index closely tracked the full one.

[xvi] Underweight in children is measured as percentage of children under 5 years of age with low weight-for-age according to the WHO child growth standards. Alternative measures of hunger (e.g., prevalence of undernutrition and stunting) were considered. Child underweight was selected because of a very practical advantage it offered by covering a continuous interval ranging from 0 to 100, as compared with prevalence of undernourishment that assigns a value of 5 to all countries registering rates between 0 and 5, 111 thereby hindering the capacity of the analysis to differentiate several countries. For most countries, data were available for years falling within the 2010-2014 period.

[xvii] INFORM was developed by WFP and several other UN agencies, donors, NGOs and research institutions as a way to understand and measure the risk of humanitarian crises and disasters, and how the conditions that lead to them affect sustainable development. Available for 191 countries, INFORM is made up of three dimensions – hazards and exposure, vulnerability, and lack of coping capacity. 50 different indicators are used to measure these three dimensions, generating risk profiles for each country based on ratings from 0-10 for risk and all of its components. http://www.inform-index.org.

[xviii] The country classification by income level is that developed by the World Bank. For the current 2017 fiscal year, low-income economies are defined as those with a GNI per capita, calculated using the World Bank Atlas method, of US$1,025 or less in 2015; lower middle-income economies are those with a GNI per capita between US$1,026 and US$4,035; upper middleincome economies are those with a GNI per capita between US$4,036 and US$12,475; high-income economies are those with a GNI per capita of US$12,476 or more.

[xix] The same relationships hold for all the regions (WFP, 2016).

[xx] Except where explicitly stated, only direct expenditures are reported; indirect support costs are not included.

[xxi] Internally, "technical assistance" is referred to as "capacity development and augmentation" while "operations support and administration" is made up of a number of cost categories related to direct and indirect operational and administrative costs.

[xxii] As noted above, within WFP, "recovery and transition" is referred to as "protracted relief and recovery."

[xxiii] L3 Emergencies in 2016: Iraq, Nigeria, South Sudan, Southern Africa (Lesotho, Madagascar, Malawi, Mozambique, Swaziland, Zambia and Zimbabwe), Syria and Syrian Refugees (Egypt, Iraq, Jordan, Lebanon, Syria, Turkey), Yemen L2 Emergencies in 2016: Central African Republic, Democratic Republic of Congo, Ecuador, Horn of Africa Drought (Ethiopia, Kenya, Somalia), Libya, Mali, Ukraine.

[xxiv] WFP is entirely voluntarily funded.

[xxv] Production, processing, and distribution costs of nutritious food are considerably higher than are those for basic staples. Nutrition education is patchy. In fragile settings, complementary services such as access to clean water and sanitation that support safe consumption of many nutrient-dense food items are thin.

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