

JUNE 2017



TRACKING **PROMISES**

Analyzing the Impact of Feed the Future in Guatemala

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Reid Hamel

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A REPORT OF THE

CSIS GLOBAL FOOD SECURITY PROJECT

CSIS | CENTER FOR STRATEGIC &
INTERNATIONAL STUDIES

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ACKNOWLEDGMENTS

THIS REPORT DRAWS FROM both a broad literature review and interviews and site visits conducted in Guatemala City and in the Western Highlands of Guatemala in October 2016. Members of the CSIS Global Food Security Project met with representatives from the government of Guatemala, the U.S. Agency for International Development (USAID), and the U.S. Department of Agriculture (USDA). An array of program implementing partners as well as relevant UN technical staff also contributed substantial knowledge and insight to this analysis.

Paco Fión's excellent photography and videography have both enhanced the vibrancy of the report and allowed for the production of an accompanying short documentary.

Gabriela Alcaez conducted preliminary research for this case study that informed the final synopsis and analysis.

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EXECUTIVE SUMMARY

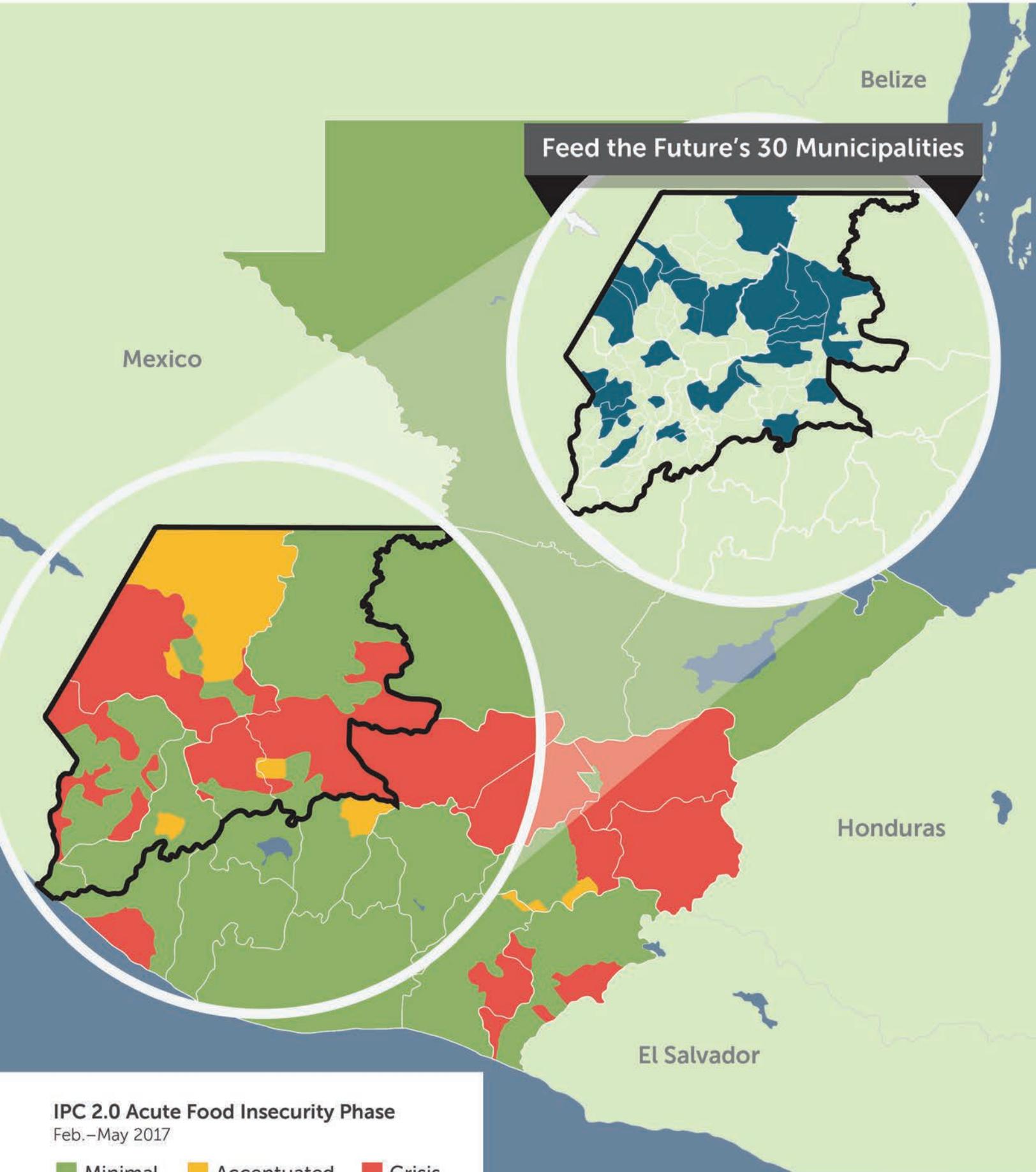
DESPITE ITS LOWER-MIDDLE-INCOME STATUS, Guatemala grapples with some of the most alarming food security challenges in the western hemisphere. Nearly half of its children are stunted, a measure of severe and irreversible physical and cognitive underdevelopment that ripples throughout the life course, perpetuating the intergenerational transmission of poverty and strangling the rural economy. While national economic growth has been steady in recent years, already high levels of poverty have simultaneously crept upwards. Socioeconomic inequality is acute.

Indigenous communities, representing two-fifths of the population, suffer from an egregiously systematic lack of access to healthcare, water and sanitation services, education, agricultural extension, social protection, and economic opportunity. In addition to a pervasive deficit of government services and basic infrastructure, the livelihoods of the rural agrarian poor are further threatened by recurrent natural hazards and an escalating exposure to climate change. Much of locally produced maize, the dietary staple, is contaminated with aflatoxin, the most potent known human liver carcinogen. Aflatoxin levels in Guatemala are already 10 to 50 times global averages and are likely to increase as temperatures rise. At the same time, untreated water sources lead to microbial contamination in agricultural produce, including *E. coli*, *Salmonella*, and parasites.

Public-sector corruption in Guatemala is endemic, cronyism is rampant, and the tumult of political transition at national and local levels every four years undercuts longer-term programming across sectors. The government levies among the lowest tax bases in the region, thwarting well-intentioned strategies even where they do exist with a lack of minimal resources. Land and natural resources are increasingly concentrated in the hands of a small cadre of elites. Guatemala failed to meet most of its Millennium Development Goals. Nationwide, nearly two-fifths of Guatemalans receive financial remittances from migrants working abroad as domestic employment prospects for the landless and uneducated remain bleak.

The United States is partnering to improve the health and livelihoods of some of Guatemala's most disadvantaged people despite this barrage of challenges, or perhaps as a direct result of it. Feed the Future programming supports food and nutrition security in 19 countries globally, including three in the Americas: Guatemala, Honduras, and Haiti. Guatemala is home to the largest Americas program and is also overwhelmingly the wealthiest focus

FEED THE FUTURE'S ZONE OF INFLUENCE AND ACUTE FOOD INSECURITY IN GUATEMALA



country among the broader set of 19. The initiative, launched in 2010, seeks to reduce poverty by 15 percent and stunting by 12 percent in select areas of Guatemala's predominantly indigenous Western Highlands among a total population of about 1.6 million people—about 10 percent of the country.

Feed the Future/Guatemala has contributed to a number of prominent successes in the agricultural and nutrition sectors. In FY 2016 alone, the value of total sales attributed to Feed the Future work in the coffee sector summed to nearly \$32 million. Horticultural sales exceeded \$15 million, a 150 percent increase from just the previous year.¹ The U.S. Agency for International Development (USAID) estimates that expanded production and commercialization has led to the creation of over 20,000 new jobs. On the nutrition side, it reports that roughly 249,000 children under five have been reached by nutrition interventions.²

Guatemala's Feed the Future portfolio is large, complex, and diverse. It is beyond the scope of this report to provide a comprehensive assessment of its strengths and weaknesses. Dedicated donor and partner staff are clearly committed to maximizing welfare impacts for vulnerable Guatemalans in the face of formidable resource and political constraints. Seven years after the initiative was introduced, Feed the Future's strategy to achieve ambitious stunting and poverty reduction targets in Guatemala is worth reflecting upon, as are the targets themselves.

Representatives from the Center for Strategic and International Studies' Global Food Security Project met with a diverse group of food and nutrition security experts in both Guatemala and Washington in the fall of 2016, many of whom lamented the crippling lack of national leadership, inept bureaucracy, and paltry domestic resource mobilization. The reality on the ground begs an honest discussion of whether, given such contextual challenges, the achievement of very ambitious poverty and stunting reduction goals among 1.6 million people with an annual budget of \$12 to \$18 million was ever a realistic objective.

At the time of Feed the Future's inception, Guatemala was the focus of five presidential initiatives, had a long history of Food for Peace programming, and a robust presence from the U.S. Department of Agriculture (USDA). Before Feed the Future's work began, food aid was overwhelmingly USAID's most heavily funded sector, at about \$21 million in FY 2009. Agriculture, in contrast, received just \$3.5 million in 2009 but that allocation ballooned to \$18 million by 2016.

In 2016, food aid funding surged to over \$27 million, of which \$12 million was allocated for emergency programming. But even in the recent period of drought-driven acute food in-

1 USAID/Guatemala, "Project Brief Agriculture," June 2016, <https://www.usaid.gov/sites/default/files/documents/1862/Sector-Brief-Agriculture.pdf>.

2 Ibid.

security, *in-kind* food assistance through Food for Peace has declined substantially across both development and humanitarian programming as technical approaches favor cash- and voucher-based interventions to food transfers.

The USDA was well-established in Guatemala before the launch of Feed the Future. Its programming has largely focused on trade with the United States through the Dominican Republic-Central America Free Trade Agreement (CAFTA-DR):³ the value of bilateral agricultural trade between the United States and Guatemala was estimated at \$3 billion in 2015, nearly two-thirds of which were U.S. imports.⁴

USDA also runs two of its flagship programs that seek to improve the welfare of local communities through food commodity transfers: Food for Progress and the McGovern-Dole International Food for Education and Child Nutrition Program. McGovern-Dole programming reaches vulnerable children in 859 Guatemalan school communities. While agricultural commodities entering Guatemala through the Food for Peace program have declined precipitously in recent years, commodities imported through Food for Progress have simultaneously quadrupled. When Food for Peace, Food for Progress, and McGovern-Dole contributions are jointly accounted for, more U.S. commodities were injected into the Guatemalan economy in 2014 than in 2010.

In late 2014, Guatemala, El Salvador, and Honduras jointly committed to the Alliance for Prosperity Plan. The United States contributed \$750 million to support the plan in 2016 alone through its Strategy for Engagement in Central America (CEN Strategy), with the aim of addressing the root causes of crime, violence, and migration to the United States. About 60 percent of CEN Strategy funds are earmarked for security and military support, but Guatemala was allocated \$112 million for development assistance within the plan—over six times Feed the Future’s annual budget to support many of the same goals.

This reports proceeds to outline the complexities of the Guatemalan food and nutrition security context in Chapter 1. Chapter 2 takes a deeper dive into the national political environment and policy leadership to eradicate hunger and malnutrition. An overview of Feed the Future’s design, evolution and current portfolio is laid out in Chapter 3, while Chapter 4 fills in a broad array of complementary U.S. government food security programming. Chapter 5 highlights prominent findings of this analysis through a series of critical questions. A set of recommendations furnished in Chapter 6 includes the following:

3 CAFTA originally encompassed Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua but was renamed CAFTA-DR when the Dominican Republic joined in 2004.

4 USDA Foreign Agricultural Service, “International Agricultural Trade Report: Spotlight on Guatemala as Trade Flourishes Under CAFTA-DR,” August 2016, https://www.fas.usda.gov/sites/default/files/2016-08/08-2016_iatr_cafta-dr_guatemala.pdf.

Recommendations for the U.S. government

- Reassess the overall balance and allocation of U.S. government resources to achieve shared high-level goals in Guatemala.
- Broaden technical and targeting strategies to a.) encompass livelihoods diversification outside of agriculture, b.) include the poorest households that lack a critical asset base to effectively participate in export value chains, and c.) better address the needs of food-insecure urban communities.
- Refocus on financial services and financial education.
- Better leverage investments from the government of Guatemala.

Recommendations for the government of Guatemala

- Substantially increase funding for public-sector health system and social safety net programs
- Create a permanent, expanded civil service for agricultural extension and prioritize funding for, and evidence-based regulation of, agricultural research.
- Join the Caribbean Catastrophe Risk Insurance Facility to improve humanitarian response in the face of mounting climate change threats.

Recommendations for both the U.S. government and the government of Guatemala

- Set more realistic and attainable targets for development goals.
- Increase transparency in both program financing and progress.
- Expand emphasis on nutrition and on food and water safety.
- Expand civil society strengthening efforts to increase supply-side accountability through demand for services.



PACO FIÓN

Although Guatemala is overwhelmingly the wealthiest of the 19 Feed the Future focus countries, it has one of the world's most unequal wealth distributions. The average income of the top 20 percent is over 17 times the average income of the bottom 20 percent.

THE GUATEMALAN FOOD AND NUTRITION SECURITY CONTEXT

Introduction

THE GOVERNMENT OF GUATEMALA DECLARED A FOOD SECURITY state of emergency in September 2009 in response to the coalescing contributions of the global economic and food price crises, a 10 percent reduction in remittances, and climate change that drove \$23 million in crop losses between January and September of that year.¹ The L'Aquila Joint Statement on Food Security was signed at G-8 meetings just months before, and Guatemala came to be the largest recipient of U.S. food security investments in the Americas in the years to follow.

Of the 19 countries targeted by the U.S. government's Feed the Future Initiative, Guatemala is overwhelmingly the wealthiest, with per capita GDP in excess of \$3,900 in 2015 and steady annual growth rates in the range of 4 percent (see Figure 1.1).² And yet, recent data show poverty trends on the upswing.³ A 2014 survey found over 59 percent of the population living in poverty, up from 51 percent in 2006, with a growing

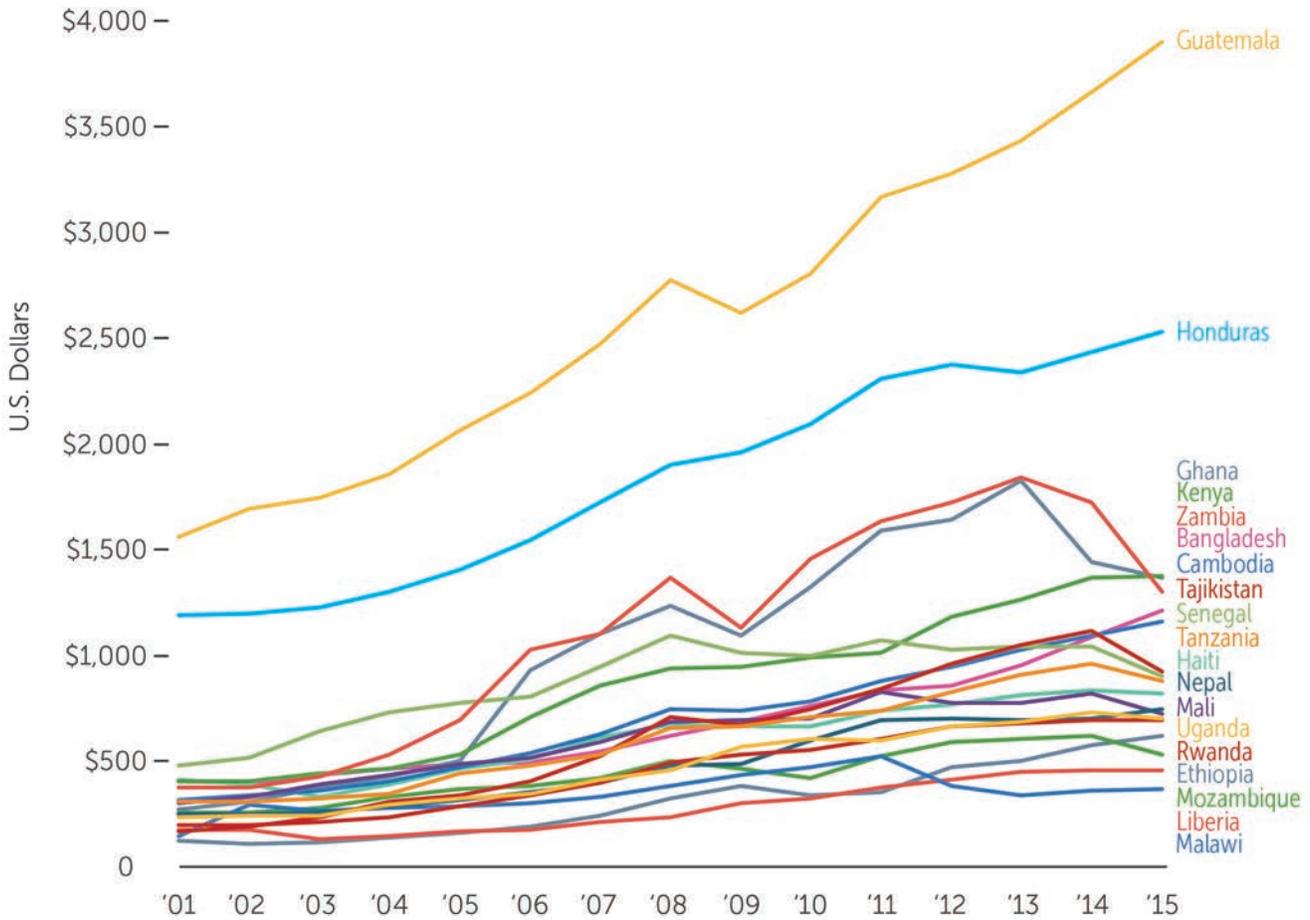
1 U.S. Agency for International Development (USAID), "Guatemala Feed the Future FY 2010 Implementation Plan," 2010, <https://feedthefuture.gov/sites/default/files/resource/files/GuatemalaFeedtheFutureImplementationPlan2010.pdf>.

2 The World Bank, "World Bank Open Data," 2015, <http://data.worldbank.org/>.

3 Instituto Nacional de Estadística (INE), "República de Guatemala: Encuesta Nacional de Condiciones de Vida 2014: Principales Resultados," Guatemala, December 2015, <http://www.ine.gob.gt/sistema/uploads/2015/12/11/vjNVdb4IZswOj0ZtuivPlcaAXet8LZqZ.pdf>; Manuel Rodríguez, "Guatemala. According to the National Institute of Statistics, Poverty Grew from 51% to 59% in Eight Years," *The Dawn News*, December 11, 2015, <http://www.thedawn-news.org/2015/12/29/guatemala-according-to-the-national-institute-of-statistics-poverty-grew-from-51-to-59-in-eight-years/>.

Figure 1.1

GDP PER CAPITA OF THE 19 FEED THE FUTURE FOCUS COUNTRIES



concentration classified as “extremely poor” (23 percent).⁴ Indeed, Guatemala has one of the world’s most unequal wealth distributions: the top fifth of the population accumulated nearly three-fifths of all income in 2014, whereas the bottom fifth captured just 3 percent of it. The average income of the

top 20 percent was over 17 times the average income of the bottom 20 percent.⁵

And so, despite its relative overall prosperity, Guatemala has made underwhelming development progress over the two decades since the end of its multigenerational civil conflict. Of the 24 measurable human devel-

4 Secretaria de Planificacion y Programacion de la Presidencia (Segeplan), “Informe Final de Cumplimiento de Los Objetivos de Desarrollo Del Milenio: Guatemala 2015,” Guatemala, December 2015, http://metasdelmilenio.segeplan.gob.gt/odm/informes/ODM_Informe_final.pdf.

5 Instituto Nacional de Estadística (INE), “Republica de Guatemala: Encuesta Nacional de Condiciones de Vida 2014: Principales Resultados.”

opment targets it committed to achieve by 2015 as a partner in the Millennium Development Goals, it reached only six.⁶ It aimed to reduce the proportion of people living in poverty to 9 percent, but over half of Guatemalans still fell below the poverty line in 2015. Indigenous households comprise over three-quarters of that group despite numbering less than half of the overall population. Guatemala's child stunting prevalence of 46.5 percent is comparable to rates recently observed in Yemen and Malawi (Feed the Future's poorest country).⁷

Inequality in wealth corresponds to inequality in land distribution, which has only been further concentrated in the hands of elites as global demand for sugar cane and palm oil have spiked in the past two decades. According to the UN Food and Agriculture Organization (FAO), 2 percent of commercial producers use 57 percent of the country's land while 92 percent of smallholders share just 22 percent of it.⁸ "Democratization" of land structures was a component of the 1996 Peace

Guatemala's child stunting prevalence of 46.5 percent is comparable to rates recently observed in Yemen and Malawi.

Accords, but by 2013, nearly half of the smallholders granted titles no longer held them.⁹ Farmers may sell their land due to debt or crop failure, an increasingly prevalent risk in the country's volatile and changing climate, and larger sugar cane or palm oil companies are taking advantage of the bargain.¹⁰

Population Overview

At the time of the 1996 Peace Accords, Guatemala's population was estimated at 10.6 million people, already the largest country in Central America by a significant margin.¹¹ But with a total fertility rate of 5.1 in 1995¹² (6.8 among indigenous women) and still 3.1 in 2014–2015¹³ (3.6 among indigenous wom-

6 Henry Pocasangre and Andrea Orozco, "Pobreza En Guatemala Aumenta, Según Segeplan," *Prensa Libre*, January 11, 2016, <http://www.prensalibre.com/guatemala/justicia/guatemala-retrocede-en-combate-a-la-pobreza>; Secretaria de Planificacion y Programacion de la Presidencia (Segeplan), "Informe Final de Cumplimiento de Los Objetivos de Desarrollo Del Milenio: Guatemala 2015."

7 UNICEF, "Malnutrition," accessed February 9, 2017, <https://data.unicef.org/topic/nutrition/malnutrition/>.

8 FAO, "Latin America and the Caribbean Is the Region with the Greatest Inequality in the Distribution of Land," April 5, 2017, <http://www.fao.org/americas/noticias/ver/en/c/878998/>.

9 Oxfam estimated 46 percent. Sibylla Brodzinsky, "Guatemala's Sugar Cane Land Rush Anything but Sweet for Corn Growers," *The Guardian*, June 26, 2013, sec. Global development, <https://www.theguardian.com/global-development/2013/jun/26/guatemala-sugar-land-corn>.

10 Ibid.

11 In 1996, El Salvador recorded a population of 5.6 million while Honduras posted 5.7 and Nicaragua 4.7. UN Population Division, "World Population Prospects, the 2015 Revision," accessed January 25, 2017, <https://esa.un.org/unpd/wpp/DataQuery/>.

12 Instituto Nacional de Estadística (INE), USAID, and Macro International Inc., "Encuesta Nacional de Salud Materno Infantil 1995," Guatemala, October 1996, <http://www.dhsprogram.com/pubs/pdf/FR70/FR70.pdf>.

13 Ministerio de Salud Pública y Asistencia Social (MSPAS) et al., "Guatemala VI Encuesta Nacional de Salud Materno

en—a notable decline), the population grew to 16.7 million¹⁴ by 2016.¹⁵ In 2030, the target year of the UN Sustainable Development Goal to eradicate hunger completely, Guatemala will need to provide public services and economic opportunities for over 21 million people.

The last full Population and Housing Census was conducted in 2002,¹⁶ at which time 39 percent of Guatemalans belonged to one of 21 Mayan ethnic groups.¹⁷ Sixty-nine percent of the population over age 3 learned to speak Spanish at home, but 23 other languages were also represented in the census.¹⁸ In 2014, about 40 percent of the population self-identified as indigenous, and 40 percent of indigenous people lived in extreme poverty.¹⁹ Education levels are quite low, particularly in rural indigenous areas, and the National Committee on Illiteracy estimated that 17 percent of Guatemalans were unable to read in 2012.²⁰

Food and nutrition insecurity profile

Poor and vulnerable Guatemalans lack economic access to food within their local marketplaces. In an 18-month period between 2006 and 2008, the nominal cost of a basic food basket rose by over 22 percent, a starker increase than observed in either Honduras (13 percent) or El Salvador (17 percent).²¹ The jump is particularly notable given that over half (54 percent) of the calories accounted for come from basic, locally produced staples: beans and maize. The World Food Programme estimates that increased prices resulted in a 6 percent reduction in food consumed over that period. Since many households spend over half of their income on food, it also led to an estimated 229,000 non-poor Guatemalans falling into poverty in 2007 alone.²²

The cost of a basic food basket in January 2017 was estimated at 4,079 Quetzales, up 11

Infantil ENSMI 2014–2015: Informe de Indicadores Basicos,” DHS, Guatemala, November 2015, <http://dhsprogram.com/pubs/pdf/PR57/PR57.pdf>.

14 UN Population Division, “World Population Prospects, the 2015 Revision.”

15 This reflects an annual growth rate of 2.26 percent, calculated continuously.

16 In May 2012, President Otto Pérez Molina announced plans to conduct a full census in 2013 at a cost of about \$22 million but the process did not move forward. In October 2016, the National Institute for Statistics announced that a census will be fielded in November and December 2017. CentralAmericaData.com, “Guatemala National Census in 2013,” May 14, 2012, http://www.centralamericadata.com/en/article/home/Guatemala_National_Census_in_2013. Por María Renée Estrada, “Guatemala: INE Anuncia Censo de Población Para El 2017,” FADEP, October 21, 2016, <http://fadep.org/principal/guatemala-ine-anuncia-censo-de-poblacion-para-el-2017/>.

17 National Institute of Statistics, Republic of Guatemala, “Características de La Poblacion Y de Los Locales de Habitación Censados,” July 2003, <http://www.ine.gob.gt/sistema/uploads/2014/02/20/jZqeGe1H9WdUDngYXkWt3GhUUQCukcg.pdf>.

18 The largest (native) linguistic groups after Spanish are K’iche’ (9 percent), Q’eqchi’ (7 percent), and Mam (5 percent).

19 Instituto Nacional de Estadística (INE), “Republica de Guatemala: Encuesta Nacional de Condiciones de Vida 2014: Principales Resultados.”

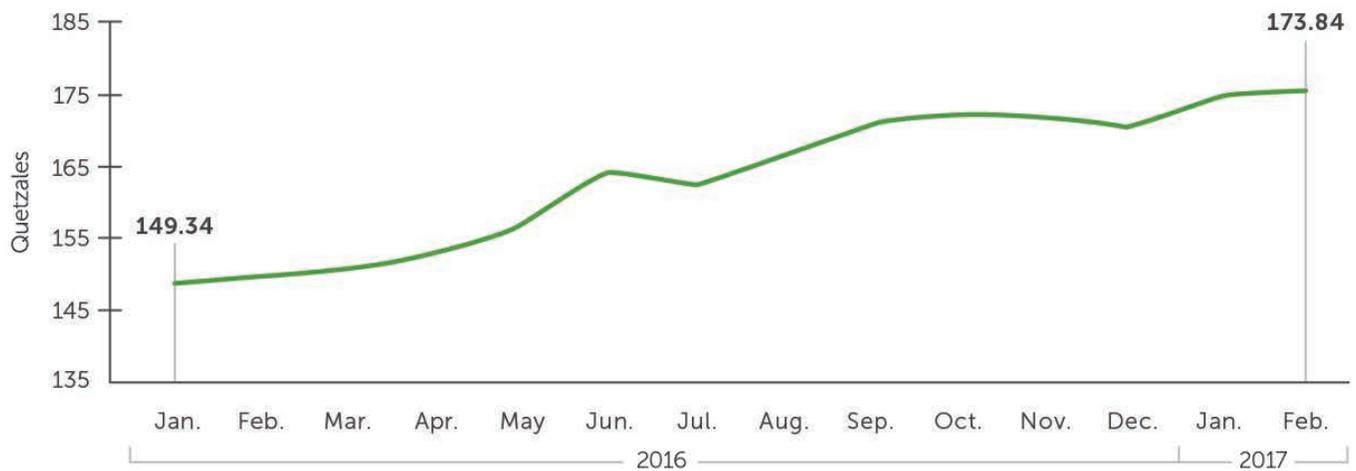
20 National Institute of Statistics, Government of Guatemala, “Caracterización Estadística República de Guatemala 2012,” November 2013, <http://www.ine.gob.gt/sistema/uploads/2014/02/26/5eTccFIHERnaNveUmm3iabXHaKXtw0C.pdf>.

21 In Nicaragua, price spikes were even more extreme, rising by 34 percent. World Food Programme, “Executive Brief: Central America Prices, Markets and Food and Nutritional Security, May 2008,” accessed January 13, 2017, <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp182850.pdf?iframe>.

22 World Food Programme, “Executive Brief: Central America Prices, Markets and Food and Nutritional Security, May 2008.”

Figure 1.2

GUATEMALAN FOOD PRICE INDEX JAN. 2016 – FEB. 2017



percent from the previous year given protracted drought.²³ The overall food price index rose over 16 percent in 2016 (see Figure 1.2), a proportional increase more than four times greater than that observed in other sectors of the economy.²⁴

The basic food basket is now estimated to cost 4,079 Quetzales, over 70 percent of the 5,750 Quetzal extreme poverty line below which nearly a quarter of the pop-

ulation lives.²⁵ Maize, grown for household consumption by most rural smallholders, is therefore a main source of both calories and protein in the diet. White maize is more heavily consumed than yellow maize, which is often used as poultry feed.²⁶

Despite its apparent ubiquity in production, even maize has become much more expensive in recent years. The uptick was driven by increased international prices and result-

23 Instituto Nacional de Estadística (INE), “Índice de Precios Al Consumidor - IPC - Y Costo de La Canasta Básica Alimentaria Y Vital Enero 2017,” February 2017, <http://www.ine.gob.gt/sistema/uploads/2017/02/07/PqrbKvoTCXA0f3A1TR7rlwL7R545pAZ4.pdf>.

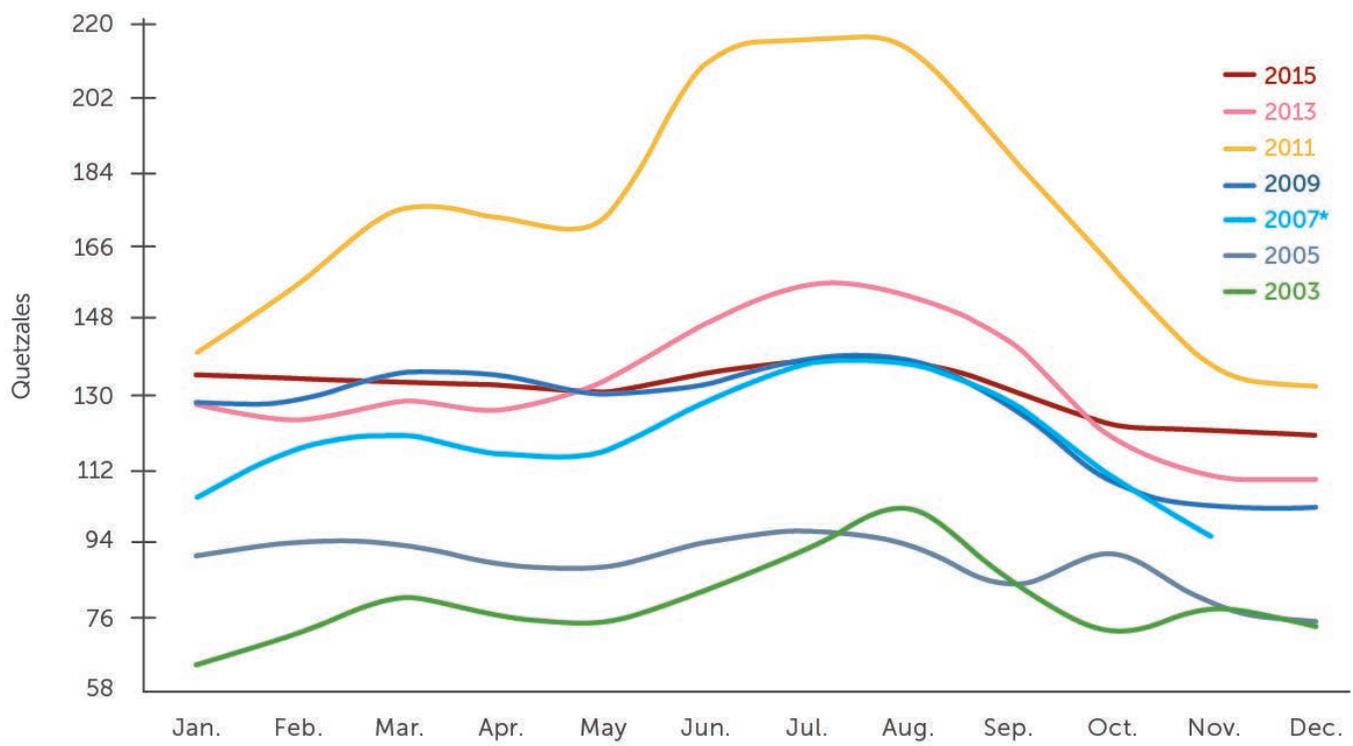
24 The overall consumer price index rose by 3.83 percent over the same period. In December 2016, the national consumer price index had inflated 4.23 percent over the previous December, according to the Foundation for the Development of Guatemala (FUNDESA) and the National Institute of Statistics. It was the 12th month in a row during which 12-month inflation benchmarks exceeded 4 percent. For this most recent monthly estimate, the difference is primarily attributed to an increase in food prices. Ibid.; FUNDESA, “Boletín Económico Enero 2017,” Guatemala, January 2017, http://www.fundesa.org.gt/content/files/publicaciones/Boletin_Economico_FUNDESA_enero_2017.pdf.

25 Instituto Nacional de Estadística (INE), “República de Guatemala: Encuesta Nacional de Condiciones de Vida 2014: Principales Resultados.”

26 USAID and FEWS NET, “Guatemala Price Bulletin May 2011,” May 2011, http://www.fews.net/sites/default/files/documents/reports/Guatemala_2011_05%20En.pdf.

Figure 1.3

MONTHLY PRICE VOLATILITY OF WHOLESALE WHITE MAIZE (45 kg)



*December 2007 data not available.

ed in a total nominal maize price increase of 63 percent in a single year around 2011.²⁷ As Figure 1.3 reflects, seasonal maize price volatility often approaches or exceeds its inter-annual variance.

Agricultural Profile

In 2015, agriculture contributed \$6.7 billion to Guatemala's economy, or 11 percent of gross domestic product.²⁸ While not a high-value crop, maize production still dominates cultivated land areas. In 2014,

the National Institute of Statistics estimated that nearly 820,000 hectares were used for maize production. Land allocations to primary annual and permanent crops in 2003 and 2014 are compared in Figure 1.4. The second most prominent annual crop and an important source of nutrition, black beans, now takes up just 56,000 hectares despite the crop's earlier prominence. Nearly 15 times as much land is allocated to maize as to beans but productive output diverg-

27 World Food Programme, "The Market Monitor: Trends of Stable Food Prices in Vulnerable Countries," October 2011, http://documents.wfp.org/stellent/groups/public/documents/ena/wfp241926.pdf?_ga=1.91844754.943001923.1484341588.

28 CEPALSTAT, "Guatemala: National Economic Profile," accessed January 12, 2017, http://estadisticas.cepal.org/cepalstat/Perfil_Nacional_Economico.html?pais=GTM&idioma=english.

es even more starkly: maize output is now about 44 times that of beans.²⁹

While the economy has diversified somewhat in recent decades, agriculture is still the country's largest employment sector, now accounting for about a third of the active labor force.³¹

But national data suggest that poverty rates are nearly twice as high among agricultural workers (74 percent poor) as among those working in industry (44 percent), and over three times higher than among those working in commerce (23 percent poor).³²

The overwhelming majority (85 percent) of employment opportunities in rural areas is informal, making poverty and labor supply associations all the harder to track.³³ Much demand for labor, particularly for landless workers, also ebbs and flows with the sea-

son, resulting in a cyclical lean season from mid-March through July.³⁴ Agricultural wages generally increase during the fall harvest relative to other seasons, but the 22 percent increase in the international price of coffee recorded in 2016 has not been reflected in the wages of day laborers.³⁵

The stark poverty among farmers and farm laborers is explained in part by inadequate systems of transit, irrigation, energy supply, and other infrastructure

in rural areas, which thwarts both productive capacity and potential linkages to aggregators, processors, and markets. The CSIS team was repeatedly told that poor road quality results in substantial damage to fresh produce in transit. One informant explained that there are 186 speed bumps between two major trade areas—Quiché and Los Encuentros. A lack of cold storage similarly hampers agricultural market interconnectivity.

In 2015, agriculture contributed \$6.7 billion to Guatemala's economy, or 11 percent of gross domestic product.

29 This comparison is based on weight. The National Institute of Statistics (INE) estimated in 2014 that total maize output was 29,205 quintales while bean output was 669 quintales. Instituto Nacional de Estadística, "República de Guatemala: Encuesta Nacional Agropecuaria 2014," Guatemala, October 2015, <http://www.ine.gob.gt/sistema/uploads/2015/10/16/iQH6CPCSZUC1uOPe8fRZPen2qvS5DWsO.pdf>.

30 Ibid.

31 In 1989, half of the employed population worked in agriculture. The World Bank, "World Bank Open Data."

32 Note that this data is drawn from the National Living Standards Survey (ENCOVI) of 2000 and is thus quite dated. USAID, "Guatemala FYI 2011–2015 Multi-Year Strategy," April 28, 2011, <https://feedthefuture.gov/sites/default/files/resource/files/GuatemalaFeedtheFutureMultiYearStrategy.pdf>.

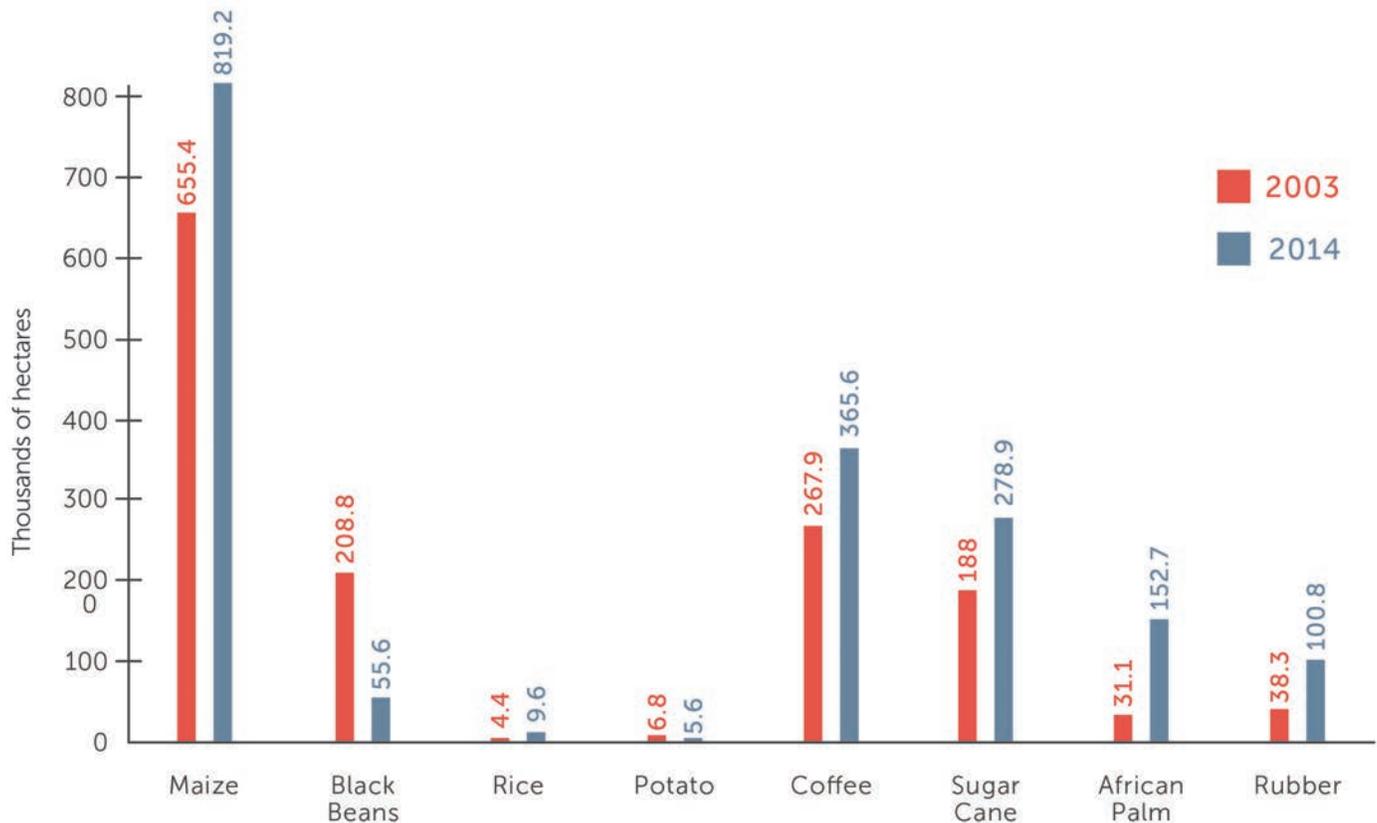
33 National Institute of Statistics, Government of Guatemala, "Caracterización Estadística República de Guatemala 2012."

34 FEWS NET, "Guatemala - Seasonal Calendar: Sat, 2013-12-14 | Famine Early Warning Systems Network," December 2013, <http://www.fews.net/central-america-and-caribbean/guatemala/seasonal-calendar/december-2013>.

35 FEWS NET, "Guatemala Actualización de La Perspectiva de Seguridad Alimentaria," December 2016, http://reliefweb.int/sites/reliefweb.int/files/resources/Guatemala_2016_12_PB_EN.pdf.

Figure 1.4

MAJOR CROP PRODUCTION AREAS IN GUATEMALA, 2003 AND 2014



Source: Government of Guatemala, "Instituto Nacional de Estadística," 2017, <http://www.ine.gov.gt/index.php/estadisticas/tema-indicadores>.

Despite such challenges, agriculture dominates the export market with a different set of food commodities: over a fifth of all Guatemalan exports in 2015 were accounted for by just the top three agricultural products: raw beet and cane sugar, bananas, and coffee.³⁶ The United States is overwhelmingly Guatemala's largest trading partner, as depicted in Figure 1.5.

Weather Hazards and Climate Change: An Escalating Threat

In September 2009, the government of Guatemala declared a food security state of emergency amid the worst drought in 30 years on the heels of the global economic crisis. Crop losses in parts of the dry corridor were estimated in the range of 80 to 100 percent,³⁷ affecting 2.5 million Guatemalans.³⁸

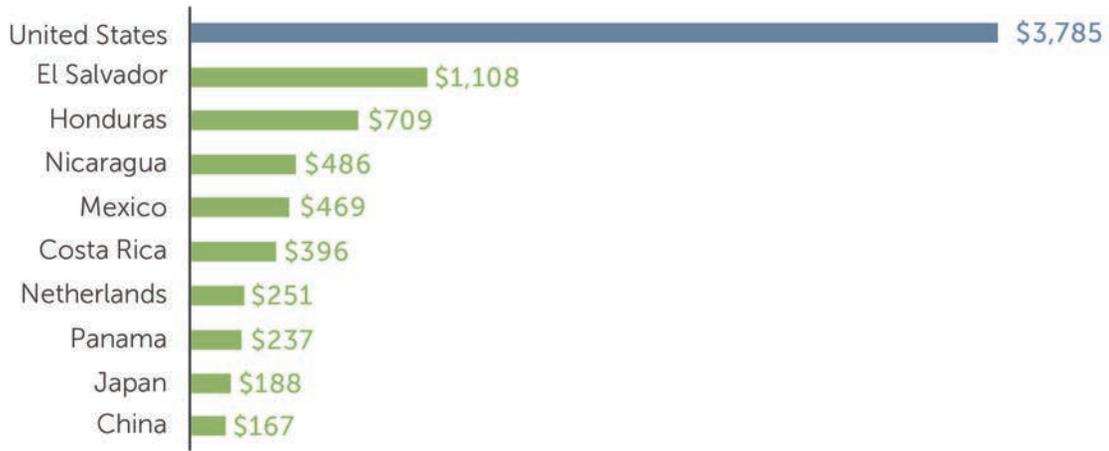
36 CEPALSTAT, "Guatemala: National Economic Profile."

37 U.S. Department of Agriculture and USAID, "U.S. International Food Assistance Report 2010," 2011, http://pdf.usaid.gov/pdf_docs/Pdact300.pdf.

38 The World Bank Group, "Climate Change Knowledge Portal," 2017, <http://sdwebx.worldbank.org/climateportal/>

Figure 1.5

THE VALUE OF GUATEMALAN EXPORTS TO TOP 10 TRADE PARTNERS IN 2013 (MILLION USD)



Source: Government of Guatemala, "Instituto Nacional de Estadística," 2017, <http://www.ine.gob.gt/index.php/estadisticas/tema-indicadores>.

The European Commission maintains an open-source dataset, INFORM, to assess country-level risk exposure to humanitarian crisis and disaster worldwide. It compiles a broad set of indicators pertaining to hazard exposure, population vulnerability, and lack of coping capacity in times of crisis. Of 33 Latin American and Caribbean countries assessed in 2017, Guatemala ranks first in humanitarian risk exposure, with Haiti coming in second.³⁹ Despite its acute level of vulnerability, Guatemala has failed to become a member

of the Caribbean Catastrophe Risk Insurance Facility (CCRIF), although it has purportedly expressed interest in doing so for years.⁴⁰

Both the country's Pacific and Caribbean coasts are vulnerable to tropical storms and hurricanes from mid-May through November.⁴¹ In 2010, Tropical Storm Agatha struck in late May as the first storm of the year and two days after the eruption of Pacaya Volcano. While the storm was considered relatively weak, at least 14 inches of rain fell in a sin-

countryprofile/home.cfm?page=country_profile&CCode=GTM&ThisTab=NaturalHazards.

39 INFORM, "INFORM Latin America and Caribbean," accessed February 17, 2017, <http://www.inform-index.org/Subnational/LAC>.

40 Haiti is a member of the CCRIF; the only Central American country to join to date is Nicaragua, which received two payments in June and December 2016. ThinkProgress, "Obama Just Committed \$30 Million to Insure Developing Countries against Climate Threats," *ThinkProgress*, December 2, 2015, <https://thinkprogress.org/obama-just-committed-30-million-to-insure-developing-countries-against-climate-threats-b09227869b5>; CCRIF SPC, "CCRIF Members," accessed February 17, 2017, <http://www.ccrif.org/>.

41 U.S. Department of State, Bureau of Diplomatic Security, "Guatemala 2016 Crime & Safety Report," March 14, 2016, <https://www.osac.gov/pages/ContentReportPDF.aspx?cid=19279>.



Agriculture is Guatemala's largest employment sector, accounting for a third of the labor force. In 2015, agriculture contributed \$6.7 billion, or 11 percent of GDP, to Guatemala's economy.

gle day with some areas reporting twice as much,⁴² leading to severe flooding, landslides and mudslides, and 174 fatalities.⁴³ Infrastructure damage was severe, impacting dozens of roads and hundreds of schools while destroying 20 major and nearly 100 minor bridges.⁴⁴ The National Coordinating Body for Disaster Reduction registered 397,808 people who were directly affected and the United Nations

identified nearly 100,000 living in shelters.⁴⁵ At the time, the government of Guatemala estimated total combined losses and damages associated with the eruption and storm at \$982 million.⁴⁶ The World Bank subsequently assessed a total impact in excess of \$1.5 billion—over 4 percent of the country's GDP.⁴⁷ Changing climate conditions over the longer term pose an even greater, if less immediately

42 "Agatha Storm Deaths Rise across Central America," BBC News, May 31, 2010, sec. Latin America & Caribbean, <http://www.bbc.com/news/10195619>.

43 International Federation of Red Cross and Red Crescent Societies, "Emergency Appeal Final Report Guatemala: Tropical Storm Agatha," April 20, 2012, http://reliefweb.int/sites/reliefweb.int/files/resources/Ful_Report_3835.pdf.

44 "Guatemalan President Seeks Tax Hike to Pay for Storm Damage," *The Tico Times*, June 11, 2010, <http://www.tico-times.net/2010/06/11/guatemalan-president-seeks-tax-hike-to-pay-for-storm-damage>.

45 International Federation of Red Cross and Red Crescent Societies, "Emergency Appeal Final Report Guatemala: Tropical Storm Agatha."

46 Government of Guatemala, "Evaluacion de Danos Y Perdidas Sectoriales Y Estimacion de Necesidades Ocasionados Por El Paso de La Tormenta Tropical Agatha Y La Erupcion Del Volcan Pacaya: Resumen Preliminar," June 30, 2010, http://www.cepal.org/noticias/paginas/4/36404/resumen_ejecutivo.pdf.

47 The World Bank Group, "Climate Change Knowledge Portal."

“We need to change the traditional response strategy and tackle the structural causes of poverty and food insecurity in Central America’s Dry Corridor, and not settle for simply mounting a humanitarian response every time an emergency situation occurs.”

- FAO Director General José Graziano da Silva

apparent, risk to rural populations. The Central American region produces less than half a percent of total global carbon emissions, but it is one of the areas most threatened by climate change.⁴⁸ A range of forecast scenarios predict that, by 2050, temperatures in Guatemala will increase by between 1.5 and 4.5 degrees Celsius, a reduction in precipitation will severely impact agriculture, and the resulting expansion of semi-arid areas could prove devastating for smallholder livelihoods.⁴⁹

El Niño events,⁵⁰ which occur irregularly at intervals of between two and seven years, have been observed five times since the year 2000. The 2009 El Niño resulted in crop losses of \$23 million;⁵¹ maize production was

devastated. Its most recent occurrence had a particularly strong effect between 2014 and 2016, leading to severe drought.

At a meeting convened by the U.N. Food and Agriculture Organization (FAO) on June 30, 2016, experts from FAO, the World Food Programme, and the International Fund for Agricultural Development reported that an estimated 3.5 million people across the northern triangle needed humanitarian assistance related to the drought.⁵² In the face of food security crises mounting in both frequency and severity, FAO Director General José Graziano da Silva proclaimed, “We need to change the traditional response strategy and tackle the structural causes of poverty

48 World Bank, “Guatemala: Country Note on Climate Change Aspects in Agriculture,” December 2009, http://sitere-sources.worldbank.org/INTLACREGTOPURBDEV/Resources/840343-1319570618921/Agr_CC_Guatemala.pdf.

49 The World Bank Group, “Vulnerability, Risk Reduction, and Adaptation to Climate Change Guatemala,” April 2011, http://sdwebx.worldbank.org/climateportalb/doc/GFDRRCountryProfiles/wb_gfdr climate_change_country_profile_for_GTM.pdf.

50 The El Niño phenomenon describes the warming of surface-level Pacific Ocean currents that shift atmospheric circulation, impacting rainfall and related weather patterns around the world. “El Niño,” *Wikipedia*, January 5, 2017, https://en.wikipedia.org/w/index.php?title=El_Ni%C3%B1o&oldid=758391119.

51 USAID, “Guatemala Feed the Future FY 2010 Implementation Plan.”

52 FAO, “To Reduce El Niño’s Impact on Central America’s Dry Corridor, Build Resilience and Invest in Sustainable Agriculture,” June 30, 2016, <http://www.fao.org/news/story/en/item/422132/icode/>.

and food insecurity in Central America's Dry Corridor, and not settle for simply mounting a humanitarian response every time an emergency situation occurs."⁵³

Throughout 2016, the World Food Programme supported 694,600 food-insecure people, 91 percent of whom were targeted by a relief and recovery operation.⁵⁴ By December, increased cases of acute malnutrition stemming from both climatic and economic drivers were reported in San Marcos, Totonicapán, and Huehuetenango (all areas where the U.S. government has focused development efforts, as discussed in Chapter 3). Reduced harvests and the resulting weak labor market increase the probability of persistent malnutrition well into 2017.

A February 2017 situation update observed particular vulnerability among poor households in four departments of the Western Highlands: Quiché, San Marcos, Huehuetenango, and Totonicapán.⁵⁵ Maize production among these smallholders fell to about 30 percent of normal levels during the November/December 2016 harvest and most households reported near-total losses of their bean crops. This is the third or fourth year of below-normal crop production for the region

and the poorest households report eating fewer meals per day and reducing the variety of their diets.

Food and Water Safety Concerns Undermine Nutrition

Maize is a staple in the Guatemalan diet, particularly among the rural indigenous poor. But levels of aflatoxin, the most potent known liver carcinogen, are 10–50 times higher in Guatemala than global averages and likely to increase with warming temperatures (see Chapter 4 for a detailed discussion).

The provision of effective potable water and sanitation services is required by Guatemalan law,⁵⁶ but in reality few municipalities are able to meet this requirement and have no strong incentive structure to do so. While estimates vary, it has been reported that 40 percent of the rural population lacks access to a household water connection, compounding their vulnerability to the increasing frequency of droughts.⁵⁷ The majority of community water sources are contaminated with *E. coli* and several other bacteria, viruses, and parasites.⁵⁸

Over a fifth of children under age 6 living in poverty had recently suffered from diarrhea

53 Ibid.

54 World Food Programme, "WFP Guatemala Country Brief," November 2016, http://reliefweb.int/sites/reliefweb.int/files/resources/Guatemala_CB_Nov_2016%20OIM.pdf.

55 FEWS NET, "Guatemala Food Security Outlook February–September 2017," February 2017, http://www.fews.net/sites/default/files/documents/reports/Guatemala%20-%20Food%20Security%20Outlook%20-%20February%20-%20September%202017%20-%20EN_0.pdf.

56 James T. Riordan, "USAID/Guatemala Food Security Framework Analysis," Chemonics International, April 27, 2010, http://pdf.usaid.gov/pdf_docs/Pnadu457.pdf.

57 The World Bank Group, "Vulnerability, Risk Reduction, and Adaptation to Climate Change Guatemala."

58 USAID et al., "The United States Global Health Initiative Guatemala Strategy," December 11, 2010, <https://www.ghi.gov/wherewework/docs/guatemalastrategy.pdf>.

in 2014.⁵⁹ This frequency of illness compromises children's physiological ability to absorb the critical vitamins, minerals, and other micronutrients they need to grow, develop, and thrive. Across all cases of diarrhea, treatment rates have not improved in recent decades. In the year 2000, 68 percent of diarrhea cases received medical treatment. In 2014, 66 percent did.⁶⁰

The most recent Demographic and Health survey (known by its Spanish language acronym ENSMI⁶¹) found that 46.5 percent of Guatemalan children under five years old are stunted⁶²—one of the highest ratios in the world. Among the poorest fifth of the population, two-thirds of children are stunted.⁶³ The national prevalence of stunting has shown alarmingly slow improvement in over 20 years of peace—it stood at 55 percent in 1995 after the country had been embroiled in civil war for decades.⁶⁴ The persistent lack of clean water and adequate hygiene and sanitation infrastructure and practices is cited as a primary driver of stunting outcomes.⁶⁵

The national health budget has consistently fallen below 2 percent of GDP in recent years, sinking to just 1 percent in 2010, when Feed the Future was introduced.

Government services to address such systemic problems are consistently inadequate and underfunded, tantamount to willful neglect of the population's most basic needs. Since the end of the war in 1996, Guatemala has regularly captured only about 11 percent of GDP in tax revenue, peaking at 12.8 percent in 2007 and falling back to 10.8 percent in 2015.⁶⁶ The national health budget has consistently fallen below 2 percent of GDP in recent years, sinking to just 1 percent in 2010, when Feed the Future was introduced.⁶⁷

59 Instituto Nacional de Estadística (INE), "República de Guatemala: Encuesta Nacional de Condiciones de Vida 2014: Principales Resultados."

60 Ibid.

61 Encuesta Nacional de Salud Materno Infantil.

62 The survey was fielded between July 2014 and February 2015, an unusually extended period reflective of the remarkably large household sample of over 21,000. Note that the protracted nature of this field work may be problematic for indicators with seasonal variance, as data were collected from the peak of the lean season through three distinct harvest periods. Stunting, an indicator of chronic rather than acute malnutrition, is generally less responsive to seasonal variance than other nutrition indicators, such as wasting, a proxy for acute malnutrition. The response rate was also an impressive 98.7 percent. Ministerio de Salud Pública y Asistencia Social (MSPAS) et al., "Guatemala VI Encuesta Nacional de Salud Materno Infantil ENSMI 2014-2015: Informe de Indicadores Básicos."

63 UNICEF, "Malnutrition."

64 ICF International, "STATcompiler: Building Tables with DHS Data," 2012, <http://statcompiler.com/>.

65 Univeristy Research Co., LLC, "Technical Note: Strengthening Coordination between the Ministry of Health and Municipal Governments for Improved Water and Sanitation," Guatemala, August 2015.

66 CEPALSTAT, "Guatemala: National Economic Profile."

67 USAID et al., "The United States Global Health Initiative Guatemala Strategy."

Unemployment, Crime, and Migration

A preponderance of crime is both a cause and a consequence of insufficient economic opportunity, which the bulging youth population confronts disproportionately.⁶⁸ Both real and perceived barriers to local economic success fuel the steady flow of international migrants, many of whom head to the United States. In 2014, apprehensions of unaccompanied minors from the Northern Triangle at the U.S. border spiked to unprecedented levels. A similarly precipitous decline by the winter of 2015 is explained in part by Mexico ramping up its own enforcement efforts through its Southern Border Program along the Guatemalan and Belizean frontiers.⁶⁹ While U.S. apprehensions thus fell by half between FY14 and FY15, Mexico's simultaneously increased by 50 percent, and by over 700 percent in a four-year period.⁷⁰

While migrant counts are difficult to estimate with any precision, the capital injections they send home are easier to trace. Remittances to Guatemala have increased more than 10-fold in just a decade and a half, from \$634 million

in 2001 to over \$6.5 billion in 2015. Remittance flows constituted a disproportionate share of overall economic growth during the period, representing about 3 percent of national GDP in 2001 but over 10 percent by 2015.⁷¹ The global financial crisis of 2008 impacted the earnings of migrants abroad over the subsequent two years, leading to modest declines in remittance flows, which still never dropped below \$4 billion. But aggressive GDP growth was back on track by 2011 and remittances more than rebounded as well.⁷² In January 2017, the Foundation for National Development (FUNDESA) reported that total 2016 remittances had increased nearly 14 percent over the previous year, exceeding \$7 billion for the first time.⁷³

The Northern Triangle of Central America (Guatemala, Honduras, and El Salvador) is reputed to be the world's riskiest region for homicide outside of war zones. Guatemala's homicide rates are indeed alarmingly high, with an incidence of 36 per 100,000 people in 2015, or 9 times higher than that of the United States.⁷⁴ The U.S. Department of State attributes this high rate to four factors: narco-

68 The International Labor Organization (ILO) estimates that youth unemployment levels in Guatemala (ages 15–24) are nearly twice the levels among older cohorts. The World Bank, "World Bank Open Data."

69 Marc R. Rosenblum and Isabel Ball, "Trends in Unaccompanied Child and Family Migration from Central America," Washington, DC: Migration Policy Institute, January 2016, <http://www.migrationpolicy.org/sites/default/files/publications/UnaccompaniedMinors-Factsheet-FINAL.pdf>.

70 Ibid.

71 World Bank, "Personal Remittances, Received (% of GDP) | Data," 2017, <http://data.worldbank.org/indicator/BX.TRF.PWKR.DT.GD.ZS?end=2015&locations=GT&start=1999.a>

72 World Bank, "Personal Remittances, Received (Current US\$) | Data," accessed January 17, 2017, <http://data.worldbank.org/indicator/BX.TRF.PWKR.CD.DT?locations=GT>.

73 Using January 2017 exchange rates. FUNDESA, "Boletín Económico Enero 2017."

74 However, the U.S. Department of State notes that the National Civil Police (Policía Nacional Civil in Spanish, or PNC) do not record a homicide in cases where the victim leaves the scene alive and subsequently dies. So while United Nations homicide data, considered authoritative in international comparisons, draws from PNC tabulations, the National Institute of Forensic Sciences reported approximately 20 percent higher in 2014 and 2015 than did the PNC. Agence

trafficking activities, gang-related violence, a heavily armed population (over 60 percent of people own a gun), and a police and judicial system unable or unwilling to hold perpetrators accountable.⁷⁵ Criminal organizations act with impunity, recruiting children as young as 12 to commit targeted assassinations.

In November 2014, the United States also announced the Strategy for Engagement in Central America (CEN Strategy) to support the regional Alliance for Prosperity Plan in the Northern Triangle. Its stated objective was to stem the flows of migrants by addressing the underlying structural incentives that drive them out of their home countries. Congress authorized \$750 million for the CEN Strategy in 2016 but just \$299 million was earmarked for development programs.⁷⁶ Three-fifths of the CEN Strategy's budget was funneled not to economic or social initiatives to improve local conditions and opportunities for would-be migrants, but rather to a bevy of security measures (narcotics control, law enforcement, and military financing and training), raising concerns among international civil society and human rights communities.⁷⁷

France Presse (AFP), "Central America's Violent Northern Triangle Registers 17,422 Homicides in 2015," *The Tico Times*, January 5, 2016, <http://www.ticotimes.net/2016/01/05/central-americas-violent-northern-triangle-registers-17422-homicides-in-2015>; U.S. Department of State, Bureau of Diplomatic Security, "Guatemala 2016 Crime & Safety Report." AFP, "Northern Triangle Violence."

75 U.S. Department of State, Bureau of Diplomatic Security, "Guatemala 2016 Crime & Safety Report."

76 The White House, "FACT SHEET: The United States and Central America: Honoring Our Commitments," Whitehouse.gov, January 14, 2016, <https://obamawhitehouse.archives.gov/the-press-office/2016/01/15/fact-sheet-united-states-and-central-america-honoring-our-commitments>.

77 Laura Iesue, "The Alliance for Prosperity Plan: A Failed Effort for Stemming Migration," Council on Hemispheric Affairs, August 1, 2016, <http://www.coha.org/wp-content/uploads/2016/08/The-Alliance-for-Prosperity-Plan-FINAL.pdf>; Dawn Paley, "The Alliance for Prosperity Will Intensify the Central American Refugee Crisis," *The Nation*, December 21, 2016, <https://www.thenation.com/article/the-alliance-for-prosperity-will-intensify-the-central-american-refugee-crisis/>.



KIMBERLY FLOWERS/CSIS

Public sector investments in Guatemala are among the lowest in the region due to minimal tax collection, structurally inadequate government systems, and discrimination against indigenous populations.

GOVERNMENT POLICY, PROGRAMMING, AND RESOURCES

IN 2011, FORMER GENERAL OTTO PÉREZ MOLINA ROSE TO POWER WITH A VOW

to rule with a “mano dura” or “iron fist” approach to crime and corruption. He ran on a platform of hiring 10,000 new police officers, expanding video surveillance, and lowering the age of criminal responsibility—despite little evidence of “iron fist” policy effectiveness in neighboring Mexico or El Salvador.¹

Upon taking office in January 2012, the administration of the first military president since army rule ended in 1986 pledged to grow the ranks of the army by 22 percent.² But in the end, Pérez was unable to escape the plague of corruption he had himself diagnosed. The UN-backed International Commission Against Impunity in Guatemala (CICIG) has been investigating and prosecuting malfeasance among senior government officials since 2007. In April 2015, it reported on a scandal that came to be known as *La Línea*, after a telephone hotline used in a scheme involving millions of dollars in kickbacks to customs officials in exchange for reduced import tariffs.³ In the months that followed, CICIG also uncovered political campaign financing with drug trafficking revenues and fraud within the Social Security Institute.⁴ Vice President Roxana Baldetti resigned in May 2015 and President Pérez followed in September as protests escalated.

1 “The Return of the Iron Fist,” *The Economist*, September 2011, <http://www.economist.com/node/21528620>.

2 “Quick March,” *The Economist*, January 21, 2012, <http://www.economist.com/node/21543219>.

3 “A Central American Spring?,” *The Economist*, August 15, 2015, <http://www.economist.com/news/americas/21661036-fury-corruption-sparks-mass-demonstrations-central-american-spring>.

4 Ibid.



Smallholder farmers in Guatemala face many challenges to improve yields and increase incomes, including weak agricultural extension services, dilapidated infrastructure, limited land access, climate change, and low education levels.

Under the current Guatemalan constitution, adopted in 1985,⁵ not one of what *The Economist* refers to as the country's "disposable" political parties has won the presidency more than a single time.⁶ Presidential elections have been held every four years since the fall of 1995 and have always required two rounds of voting⁷ to achieve a majority given the preponderance of candidates (2011 saw 10 candidates in the first round, 2015 turned up 14). Congressional pluralities (across 158 current members) track presidential voting patterns closely along party lines. The unicameral Congress, along with mayors and councils for all 338 municipalities, are elected every four years concurrently with the president, a system that fractures any potential for functional continuity across administrations.

The 2015 presidential election represented a departure from recent history in that it was the first time since 1999 that the runner-up of the previous election did not prevail. Weeks before the election, the running mate of frontrunner Manuel Baldizón was revealed to have used his position leading the central bank to shield businesses involved in money laundering.⁸ Current President Jimmy Morales won the smallest share of first-round votes of any president since the end of the civil war, tallying just shy of 24 percent. A relative newcomer to politics, Morales was a populist comedian who garnered support with the campaign slogan, "Neither corrupt, nor a thief" in the wake of compounding corruption scandals plaguing the previous administration.⁹ The election of this right-wing Evangelical

5 Previous constitutions were approved in 1945, 1956, and 1965.

6 "Quick March," *The Economist*.

7 The second round is always a run-off of the top two candidates regardless of the distribution of first-round votes.

8 "A Central American Spring?," *The Economist*, August 15, 2015, <http://www.economist.com/news/americas/21661036-fury-corruption-sparks-mass-demonstrations-central-american-spring>.

9 See Reid Hamel, "The Challenges of Country-led Development: Insights from Guatemala," CSIS Commentary, No-

Christian and self-described nationalist who denies the Mayan genocide and advocates a contentious position that Belize is sovereign territory of Guatemala has been heralded as signaling the distrust that most Guatemalans feel for traditional ruling classes of political elites. But so far, the administration more closely resembles business as usual than a radical new deal,¹⁰ and wobbles with its own early symptoms of corruption.¹¹

Food Security Commitments: A History of Rhetoric without Resources

The more progressive administration of Álvaro Colom (2008–2012) produced a three-year *Strategic Plan for Food and Nutritional Security* (PESAN) in June 2009, a month before the L'Aquila Joint Statement on Global Food Security was adopted by the G-8. The Strategic Plan laid the groundwork for U.S.-funded food security and nutrition programs with five objectives:¹²

1. Increase food availability with emphasis on basic grains to provide for food self-sufficiency in the country.
2. Promote access to a basic food basket.

3. Promote education and communication on food and nutrition by improving the consumption of food, promoting exclusive breastfeeding, and contributing to a reduction in chronic malnutrition.
4. Widen coverage and quality of public services in health, water, sanitation, and family hygiene to reduce chronic malnutrition.
5. Strengthen the institutional capacity of the National Food and Nutrition Security System (SINASAN) and of civil society to contribute to a reduction in food and nutritional insecurity of the population.

The plan emphasized targeting the most vulnerable populations in priority municipalities rather than aiming to provide blanket coverage across the country, a model later adapted by Feed the Future. It is noteworthy that the plan does not prioritize supporting the livelihoods of smallholder farmers, but rather relies on broad and progressive social and health service provisioning to furnish a safety net for the most vulnerable. To implement the plan, the government established a Secretariat for Food Security and Nutrition (SESAN) and a Secretariat for Planning and programming (SEGEPLAN).

vember 2016, <https://www.csis.org/analysis/challenges-country-led-development-insights-guatemala>, which discusses the Guatemalan political landscape and its challenges for development partnership in greater depth.

10 Lauren Carasik, "Jimmy Morales Can't Fix Guatemala," *Foreign Policy*, March 16, 2016, <https://foreignpolicy.com/2016/03/16/guatemala-morales-perez-molina/>.

11 Just 11 days after Morales took office, his minister for communications, infrastructure, and housing resigned after tax delinquencies were revealed. In January 2017, Morales's brother and son were arrested and formally charged with fraud related to a 2013 corruption scandal involving false receipts. Attorney General Thelma Aldana stated that neither relative appeared to have profited personally from the scandal, which involved the son's then-girlfriend and her mother. "Guatemala President's Brother, Son Held on Suspicion of Fraud," Reuters, January 19, 2017, <http://www.reuters.com/article/us-guatemala-corruption-idUSKBN1522NS>.

12 USAID, "Guatemala Feed the Future FY 2010 Implementation Plan," 7.

Table 2.1: An excerpt from the Zero Hunger Plan

OBJECTIVES OF ZERO HUNGER PLAN	RESPONSIBLE INSTITUTIONS
Reduce by 10% the prevalence of child chronic malnutrition by 2105, promoting early child development.	SEPREM, MSPAS, FONAPAZ, MINEDUC, MIDES, MINECO, MINFIN, SOSEP, MAGA, MINTRAB MICIVI, MARN, CONJUVE, SEGEPLAN, SCEP, INFOM, SBS.
Prevent seasonal hunger and reduce mortality among children under 5 due to acute malnutrition by the end of 2015.	SEPREM, MSPAS, MARN, MAGA, FONAPAZ, INFOM, MICIVI, MIDES, SOSEP, CONRED, MINECO, MINFIN, MINTRAB, SCEP.
Promote food and nutrition security among the Guatemalan population, as integral base of the human being.	SEPREM, MSPAS, FONAPAZ, MINEDUC, MIDES, MINECO, MINFIN, SOSEP, MAGA, MINTRAB, MICIVI, MARN, CONJUVE, SEGEPLAN, SCEP, INFOM, SBS.
Prevent and attend food emergencies related to climate change and natural disasters.	MINFIN, MARN, CONRED, MIDES, FONAPAZ, MAGA, MICIVI.

Source: Government of Guatemala, "Plan for the Zero Hunger Pact," 25.

Upon assuming office in 2012, Pérez introduced *Pacto Hambre Cero*, the "Zero Hunger" Plan. This new and (overly) ambitious plan committed to reducing the prevalence of chronic malnutrition by 10 percentage points within four years and by 24 percentage points within 10 years (effectively halving the prevalence of stunting) through education, nutritional supplements, improved hygienic conditions and practices, and the treatment of diarrhea.¹³

The Zero Hunger Plan had further ambitions still, announcing, "today we decide to con-

front the immediate causes of this scourge, but also the structural roots that brought it about and that are related to poverty and absence of development."¹⁴ It focused activities in five vulnerable departments in the Western Highlands and also sought to incorporate the 1,000 Days approach and to draw from the strategy elaborated by the Scaling Up Nutrition (SUN) movement.¹⁵ Like its predecessor, it emphasized the necessity of social safety nets, through the establishment of a Social Protection Network, and on nutrition

13 "Guatemala: Edging Back from the Brink," *The Economist*, January 26, 2013, <https://www.economist.com/news/americas/21570694-potential-failed-state-clawing-its-way-back-something-normality-edging-back>; Government of Guatemala, "Plan for the Zero Hunger Pact," Guatemala, 2012, http://pdf.usaid.gov/pdf_docs/PA00K9V3.pdf.

14 Government of Guatemala, "Plan for the Zero Hunger Pact," 7.

15 Government of Guatemala, "Plan for the Zero Hunger Pact."

surveillance systems. Interventions to reduce chronic malnutrition began in 166 prioritized municipalities exhibiting acute need with the intent of reaching a national scope by 2015.¹⁶

SESAN remained responsible for the initiative's implementation but a long list of related government entities¹⁷ with overlapping mandates have resulted in a dearth of leadership that compounds a general lack of funding. A

page from the Zero Hunger Plan depicted in Figure 2.1 is illustrative of excessive bureaucracy and inscrutable accountability:

The Woeful State of Complementary Government Services: Agricultural Extension and Public Health

The Zero Hunger Plan purports to tackle the absence of economic development in rural areas, where the majority of the population works in agriculture. The lack of a permanent agricultural extension¹⁸ service is particularly detrimental to smallholder production systems, undercutting low-income farmers' ability to improve yields, and thus income. While the history of an extension system can be traced to the 1950s, services were curtailed in 1990

amid the protracted civil conflict, only to be reestablished by the Ministry of Agriculture (MAGA) in 2013.¹⁹ The current model adopts a farmer-to-farmer dissemination approach,

with three extension agents per municipality responsible for training a cadre of volunteer farmers. But the lack of a civil service (most extension agents are hired through non-permanent contracts) undercuts the continuity of

The lack of a civil service undercuts the continuity of agricultural extension service provision.

agricultural extension service provision. In the early months of the Morales administration, the contracts of around 1,000 agents were not renewed, effectively eliminating the extension system for a full crop cycle. A local expert also told CSIS that many of the terminated agents had just been trained by USDA's Food for Progress program (see Chapter 3). Rehiring began in the fall of 2016, but recruitment is understood to be a predominantly political process, with party affiliations trumping technical skills as vacancies are refilled. While government revenues are perennially lacking, informants also told CSIS that the Ministry of Agriculture was challenged to spend its budget in 2016 given the byzantine procurement process.

16 Ibid.

17 Other agencies include the National Council for Food and Nutrition Security (CONASAN) and food security commissions at the department, municipal, and community levels (CODSAN, COMUSAN, and COCOSAN).

18 Vickie Sigman, "Agricultural Extension and the Buena Milpa Project in the Western Highlands of Guatemala" (Urbana-Champagne, March 2016), <http://dev.meas.illinois.edu/wp-content/uploads/2015/04/MEAS-Report-2016-Guatemala-Sigman.pdf>.

19 Ibid.

The provision of basic healthcare is similarly burdened with extensive plans and minimal resources. A National Health Plan prepared by the Ministry of Health in 2008 formed the aspirational basis of subsequent donor collaboration, itself drawing from health-related components of the 1996 Peace Accords.²⁰ It emphasized the development of human resources, decentralization of services, reduction of inequalities across the population, and increased funding. Immediate priorities included the expansion of services in the 125 poorest municipalities along with improved information systems. Nearly a decade later, the same set of needs remains acutely urgent and unaddressed. The anemic budget remains stagnant and the workforce grossly inadequate.

Land Distribution

The distribution of land cannot be overlooked as another primary “structural root” of poverty upon which the Zero Hunger Plan may seek to cast its gaze. A 2014 FAO report observed that “land concentration and re-concentration in Guatemala have been evident for more than a decade in the sugar cane sector, and more recently, for African palm.”²¹ A former minister of agriculture, Elmer López (arrested last year in a \$66 million contraband scandal²²), explained in 2013 that the government’s

policy was to prevent the re-concentration of landholding, but that it lacked effective tools in practice. He said that the agencies established by the peace accords to address land issues received inadequate support as successive governments focused more on export-oriented agribusiness than on domestic food security. A rural development law that would have promoted better access to land, employment, and other rights for smallholders died in Congress in 2012 amid protests from large landowners and businesses.²³

20 USAID et al., “The United States Global Health Initiative Guatemala Strategy.”

21 Sergio Gomez, “The Land Market in Latin America and the Caribbean: Concentration and Foreignization,” FAO, 2014, 66, <http://www.fao.org/3/a-i4172e.pdf>.

22 López served under former President Molina. In September 2016, he was arrested for a 2014 contraband scandal around the public purchase of unregistered and illegally imported maize and beans from Mexico. The purchased commodities were distributed as a component of the Zero Hunger Plan when the government declared a state of emergency. This 492,930,000 Quetzal purchase was worth \$66.3 million. “Capturan a exministro Elmer López, por contrabando,” *Prensa Libre*, September 27, 2016, <http://www.prensalibre.com/guatemala/huehuetenango/exministro-elmer-lopez-capturado-contrabando-granos>.

23 Brodzinsky, “Guatemala’s Sugar Cane Land Rush Anything but Sweet for Corn Growers.”



Feed the Future programs have improved the livelihoods of tens of thousands of coffee farmers in Guatemala. In 2016, the value of total sales attributed to Feed the Future support to the coffee sector was \$32 million, an increase of 24 percent from the previous year.

FEED THE FUTURE IN GUATEMALA

IN 2010, GUATEMALA FOUND ITSELF THE TARGET of five U.S. presidential initiatives: Feed the Future, the President’s Emergency Plan for AIDS Relief (PEPFAR), the Global Health Initiative (GHI), the Global Climate Change Initiative (GCCCI), and the Central American Regional Security Initiative (CARSI).¹

More broadly still, the 2012–2016 Country Development Cooperation Strategy tackles a long list of priority investment areas: citizen security, counter-trafficking in persons, and civic responsibility; policy and institutional strengthening; improved local governance; literacy education; agricultural program expansion; environmental program expansion; and development of new public-private partnerships.²

Guatemala is one of three Feed the Future focus countries in the Americas³ and receives overwhelmingly the largest amount of funding within this regional group—increasing from about \$13 million in FY 2012 to \$18 million in FY 2016.⁴ USAID/Gua-

1 USAID et al., “The United States Global Health Initiative Guatemala Strategy.”

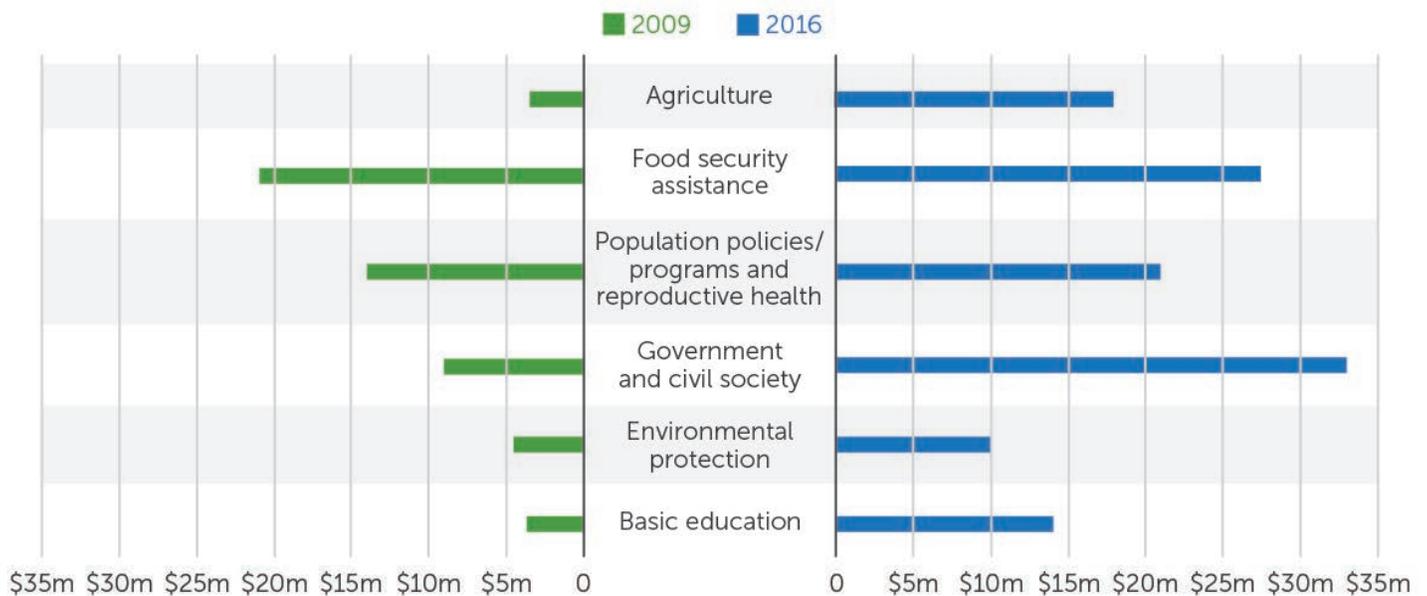
2 USAID Guatemala, “Guatemala Country Development Cooperation Strategy 2012–2016,” March 16, 2012, <https://www.usaid.gov/sites/default/files/documents/1862/GuatemalaCDCS.pdf>.

3 The other two are Haiti and Honduras.

4 U.S. Department of State, “Congressional Budget Justification Foreign Assistance Summary Tables Fiscal Year 2016,” 2015, <https://www.state.gov/documents/organization/238223.pdf>; U.S. Department of State, “Congressional Budget Justification Foreign Assistance Summary Tables Fiscal Year 2015,” 2014, <https://www.state.gov/documents/organization/224071.pdf>; U.S. Department of State, “Congressional Budget Justification Foreign Assistance Summary Tables Fiscal Year 2014,” 2013, <https://www.state.gov/documents/organization/208292.pdf>; U.S. Department of State, “Congressional Budget Justification Foreign Assistance Summary Tables Fiscal Year 2013,” 2012, <https://www.state.gov/documents/organization/185016.pdf>; U.S. Department of State, “Congressional Budget Justification Foreign Assistance Summary Tables Fiscal Year 2012,” 2011, <https://www.state.gov/documents/organization/158269.pdf>.

Figure 3.1

USAID PROGRAM FUNDING OBLIGATIONS BY SECTOR IN FY 2009 AND FY 2016



temala has a long history of food security sectoral engagement, but Feed the Future’s programmatic dominance is clearly reflected in shifting resource allocations between FY 2009 and FY 2015 (see Figure 3.1). Before the initiative’s introduction, food aid was overwhelmingly the most heavily funded sector, at about \$21 million in FY 2009. Agriculture, in contrast, received just \$3.5 million in 2009 but ballooned to \$18 million by 2015. Working in 30 vulnerable municipalities of the Western Highlands, Feed the Future aimed to reduce the prevalence of poverty by 15 percent and the prevalence of stunting by 12 percent between 2012 and 2017.

Noteworthy Feed the Future Outcomes

Feed the Future/Guatemala has contributed to a number of prominent successes in the agriculture and nutrition sectors. In FY 2016, the value of total sales attributed to USAID/Guatemala in the coffee sector was nearly \$32 million, an increase of 24 percent from FY 2015; in horticulture it was over \$15 million, representing a 150 percent increase from just the previous year.⁵ Across both sectors, USAID estimates that over 20,000 new jobs have been created as a result of expanded production and commercialization. It also reports that 249,000 children under five have been reached with nutrition interventions.⁶

5 Internal project documents and USAID correspondence.

6 USAID, “Feed the Future Guatemala,” *Feed the Future*, accessed May 1, 2017, <https://www.feedthefuture.gov/country/>

Table 3.1: Evolving Feed the Future priority areas

2010 IMPLEMENTATION PLAN	2011–2015 MULTI-YEAR STRATEGY
1. Market-led agricultural development.	1. Value chain development for horticulture and coffee.
2. Prevention and treatment of undernutrition.	2. Integration of health interventions to improve nutrition.
3. Improvements to humanitarian food assistance and social safety nets.	3. Improved local governance at the municipality level.

Feed the Future’s Technical Strategy

The 2010 plan refers to a shift away from the trade-oriented paradigm of previous work “to a rural growth model that creates jobs and income opportunities for small farmers and the rural poor.”⁷ USAID/Guatemala identifies three key areas of work to achieve the twin goals of reducing rural poverty and malnutrition.⁸ The 2011–2015 Multi-Year Strategy delineates programmatic refinements to the previous plan, as depicted in Table 3.1.

The first two focal areas are most similar, while the earlier focus on social assistance programming, including safety nets, is dropped despite its prominence in the national policies of both the Colom and Pérez administrations, and replaced by improved municipality-level governance (which may still encompass the management of such social services). Between 2011 and 2015, Feed the Future/Guatemala expected to reach 219,000

A clear theory of how a basket of activities directly reaching 385,000 people would drive double-digit impacts on the prevalence of poverty and stunting among a population of over 1.6 million was never sufficiently detailed.

vulnerable Guatemalans with poverty-reducing interventions and an additional 166,000 children with nutrition services.⁹ A clear theory of how a basket of activities directly reaching 385,000 people could drive double-digit im-

guatemala.

7 USAID, “Guatemala Feed the Future FY 2010 Implementation Plan,” 7.

8 Ibid., 6.

9 USAID, “Guatemala FYI 2011–2015 Multi-Year Strategy.”

pacts on the prevalence of poverty and stunting among a population of over 1.6 million was never sufficiently detailed.

Focus Area 1

AGRICULTURAL VALUE CHAIN DEVELOPMENT

The multiyear strategy emphasizes production-oriented activities, describing Guatemala's recent successes exporting non-traditional agricultural crops, such as snow peas, green beans, and mini-vegetables, a market that grew by 541 percent between 1999 and 2008.¹⁰ It explains that further export expansion is limited not by market demand but rather by compliance with Sanitary and Phytosanitary (SPS) standards (current U.S. Department of Agriculture programming addresses these constraints, as discussed in Chapter 4). Profit margins are much greater for horticulture than for staple crops such as maize, particularly given the very small land holdings of most poorer households. With one manzana of land (0.699 hectare or 1.73 acres), a farmer splitting the area between horticulture crops and maize stands to earn six times the profits, or about \$4,800, of producing maize alone on the full area.¹¹

Coffee production is similarly advantageous where conditions allow for it, with substantially reduced front-end investment and risk. A patch of land that can produce a maize har-

vest worth 450 Quetzales can support a coffee crop that sells for 1,800. The coffee production sector in Guatemala comprises approximately 120,000 small and medium holders, generally with less than 10 hectares of land, and often much less.¹² Regular training and engagement is required to address production challenges, but public research and capacity-building systems, including agricultural extension services, are inconsistent at best.

Focus Area 2

INTEGRATED HEALTH AND NUTRITION

The 2010 strategy of the parallel Global Health Initiative (GHI) diagnosed Guatemala's situation as such:

The child mortality rate at 42 per 1,000 live births is the highest in Central America and the third highest in the region after Haiti and Bolivia. The maternal mortality ratio of 136 per 100,000 live births is also one of the highest in the region, and the contraceptive prevalence at 54% one of the lowest. The health situation in Guatemala is essentially a tale of two countries. Paralleling the income and education disparities, large differences in health outcomes exist between urban, non-indigenous populations and rural, indigenous groups. Child mortality and malnutrition are 50% higher among rural and indigenous children. Maternal mortality

10 Ibid.

11 Ibid., 6.

12 Karla Tay, "Guatemala Coffee Annual: Partial Recovery from the Rust Outbreak," Global Agricultural Information Network (GAIN), May 13, 2016, https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Coffee%20Annual_Guatemala%20City_Guatemala_5-13-2016.pdf.

is up to five times higher in some rural areas compared with Guatemala City. Skilled birth attendance among rural and indigenous women is less than half of that for urban and non-indigenous women. Guatemala will continue to have comparatively poor health outcomes as long as these disparities exist.¹³

Feed the Future would later commit to reducing the prevalence of stunting to 59 percent in the zone of influence, but the GHI was much more ambitious in 2010, targeting a national stunting prevalence of 29 percent, in line with the Millennium Development Goal. The GHI strategy entailed micronutrient supplementation, seven essential nutrition actions such as community-based growth promotion, the retraining of health extension workers on behavioral change, and support for the Ministry of Health (MOH) to improve accountability.

The 2010 Feed the Future plan anticipated developing a nutrition surveillance system with the Ministry of Health and the Institute for National Statistics. It also targeted the development of strategy, logistics systems, and public-private alliances for micronutrient supplementation in infants and young children (including Vitamin A, iron/folic acid, and zinc). And given the high prevalence of diarrhea, rota-virus vaccinations were deemed appropriate in addition to improved water and sanitation practices.

The subsequent multiyear strategy places additional weight on nutrition-sensitive

rather than nutrition-specific interventions, including improved dietary diversity through home gardening and animal husbandry, and cooking demonstrations. It also describes a focus on the 1,000 Days approach with the promotion of improved nutrition behaviors, including micronutrient supplementation for pregnant and lactating women, exclusive breastfeeding in the first six months, and regular growth monitoring. Health systems interventions included improvements to MOH logistics, information, and monitoring systems to improve the distribution of basic commodities without due consideration that abysmal funding implied slim chances to truly expand service coverage and quality. Two health systems experts working in Guatemala told CSIS that the lack of health funding remains the proverbial elephant in the room.

Focus Area 3

LOCAL GOVERNANCE AND RESILIENCE

The Multi-Year Strategy does not elaborate in much detail upon the type of local governance programming that Feed the Future will invest in, noting simply that “local governments (i.e. municipalities) hold significant potential to coordinate and deliver sustainable local development.”¹⁴ It does explain that municipal governments will be a target of capacity-building efforts that emphasize improved planning and service, especially of water and sanitation services.¹⁵ Demand for

13 USAID et al., “The United States Global Health Initiative Guatemala Strategy,” 4.

14 USAID, “Guatemala FYI 2011–2015 Multi-Year Strategy,” 9.

15 USAID, “Guatemala FYI 2011–2015 Multi-Year Strategy.”

these types of improved services was to be simultaneously augmented through the support of community-based civil society groups.

The strategy also espouses a resilience orientation. The resilience of vulnerable communities and households to natural disasters and climate change was to be improved via a (very) diverse set of activities ranging from local government training in social auditing methodologies, to training on early warning systems, to improved agricultural practices for subsistence farmers, to the integration of maternal and child health services with food assistance, to school feeding programs (vestiges of a social protection strategy remained). The strategy recalls Guatemala's high exposure and high vulnerability to natural disasters:

The Feed the Future program must be flexible and resilient enough to overcome drought, hurricane winds, flooding, and volcanic eruptions that could displace populations, affect infrastructure, and destroy crops. A serious natural disaster might force the GoG to mount major relief/recovery efforts and result in a corresponding short-term shift in USG attention and resources to assist the GoG and the international community in such efforts. This shift in attention and resources, if significant, could affect achievement of Feed the Future results.¹⁶

Yet it makes no serious attempt to anticipate, mitigate, and recover from such shocks in a systemic manner through a set of interventions that is both necessary and sufficient to the task.

USAID's Western Highlands Integrated Program (WHIP) and Feed the Future's Zone of Influence

In 2013, USAID/Guatemala announced the decision to integrate development activities across its five presidential initiatives in select areas of the Western Highlands.¹⁷ Then-Mission Director Kevin Kelly characterized the shift as follows:

Our model of program integration is an unprecedented mission-wide effort. Based upon a focused strategy, the internal collaboration on the design of procurement instruments, and extensive interaction with our partners, the Mission is forging a new way of doing business. We have a shared vision for our programs in the highlands. It is a program that recognizes the importance of increased income, increased access to health care, food security safety nets, important behavior change, education, climate adaptation and the potential long-term sustainability that comes by working with local authorities at all levels. Our programs were developed with the Guatemalan government and with valuable private sector input. The result is a program that benefits from broad support.¹⁸

16 Ibid., 25.

17 USAID/Guatemala, "Integration of USAID in the Western Highlands," May 3, 2013, http://pdf.usaid.gov/pdf_docs/pdacx493.pdf.

18 Ibid., 1.

A 2009 livelihoods study in two departments, Quiché and Huehuetenango, found that families purchased 80 percent of their food, on average.

The WHIP began in 2012 in an effort to coordinate the implementation of 18 USAID activities across 30 municipalities. These municipalities, drawn from the five departments of Huehuetenango, Quetzaltenango, Quiché, San Marcos, and Totonicapán, also constitute Feed the Future's geographical zone of influence and are illustrated opposite the executive summary of this report. The zone of influence, which encompasses between 9 and 52 percent of the population of each department, is home to over 1.6 million people (see Appendix B for further details).

An August 2016 evaluation of the WHIP observed that it presents many opportunities for collaborative success but a pervasive challenge is that activities do not have specific deliverables, objectives, or metrics related to coordination.¹⁹ At the same time, it found that the WHIP lacks both uniform technical approaches, including a behavior change strategy, and clear management processes. The assessment recommends that a USAID staff member be allocated time to

manage the process given partners' other commitments.

The overwhelming livelihoods strategy in the Western Highlands is subsistence agriculture, where maize and black beans dominate crop production. Despite this fact, the region faces an annual deficit of both major staple crops, importing them from other parts of the country²⁰ and from abroad. A 2009 livelihoods study in two departments, Quiché and Huehuetenango, found that families purchased 80 percent of their food, on average, in spite of their agrarian livelihoods. Northern, western, and southern peripheries of the region produce coffee, attracting agricultural laborers both locally and from central areas of the highlands.²¹

19 USAID, "Guatemala Case Study: Improving Nutrition Outcomes through the Western Highlands Integrated Program (WHIP)," August 2016, http://pdf.usaid.gov/pdf_docs/pa00mgmg.pdf.

20 FEWS NET, "Guatemala | Famine Early Warning Systems Network," accessed January 10, 2017, <http://www.fews.net/central-america-and-caribbean/guatemala>.

21 Ibid.

BASELINE SURVEY

USAID's Western Highlands Integrated Program (WHIP), which is also Feed the Future's focus geography, incorporated a longitudinal series of community surveys to track changes over time. The first round of data collection was fielded between July and November 2013. General findings included the following:²²

- The 2013 poverty line stood at 27 Quetzales per capita per day, or about \$3.45 at the time. By this metric, 76 percent of WHIP households lived in poverty and 27 percent lived in extreme poverty (according to national poverty lines).
- Two-thirds (67 percent) of children under five were stunted, a reflection of chronic undernutrition.
- Nearly a quarter of households (23 percent) in the zone of influence live in urban areas.
- More than three-quarters (76 percent) of household heads identified as indigenous.
- Nearly 80 percent of women and over 70 percent of men had not completed primary education.
- One in five children suffered from diarrhea in the two weeks prior to the survey.

- Anemia is highly prevalent: one in three children aged 6 to 59 months exhibit a degree of anemia, along with 18 percent of reproductive age women and 29 percent of pregnant women.

Major Feed the Future Projects

Overwhelmingly the largest Feed the Future activity in Guatemala's portfolio is the **Rural Value Chains Project (RVCP)**, shared between two local implementing partners, AGEXPORT and Anacafé. Each partner operates in a distinct subset of the 30 focus municipalities of the Feed the Future zone.²³ The five-year, \$42 million project, which sought to reach 32,000 households,²⁴ was launched in 2012. Both implementation arms state that the objectives are to:²⁵

- Increase the number of rural households participating in value chain activities
- Increase both sales and local employment opportunities
- Increase local income
- Improve nutrition at the community level

Both projects aim to improve the quality and reach of competitive value chains, increase the agricultural productivity that they depend

22 USAID, "Guatemala Feed the Future Zone of Influence Baseline Report," July 2014, https://feedthefuture.gov/sites/default/files/resource/files/Guatemala_Feed_the_Future_Baseline_Country_Report.pdf.

23 AGEXPORT works in 12 municipalities in the departments of Quiché, Quetzaltenango, and Totonicapán. Anacafé engages the remaining 18 municipalities in the departments of Huehuetenango and San Marcos.

24 Feed the Future, "Feed the Future Grants Awarded to Two Guatemalan Organizations," June 22, 2012, <https://www.feedthefuture.gov/article/feed-future-grants-awarded-two-guatemalan-organizations>.

25 USAID Guatemala, "Economic Analysis of Feed the Future Investments: Rural Value Chains Project—AGEXPORT," July 2013, <https://www.usaid.gov/sites/default/files/documents/1865/Guatemala%20Agexport%20CBA%20-%20Economic%20Analysis.pdf>; USAID Guatemala, "Economic Analysis of Feed the Future Investments: Rural Value Chains Project—Anacafé," September 2013, <https://www.usaid.gov/sites/default/files/documents/1865/Anacafe%20CBA%20Economic%20Analysis%20PUBLIC.pdf>.

on, improve household food production and utilization, and strengthen markets and commercial activity.²⁶

AGEXPORT is a private and nonprofit export association with over 30 years of experience working across five broad sectors. By 2016, it had reached over 18,000 households with technical assistance and business development services, surpassing its project target.²⁷ The same year, it reported that nearly 14,000 producers (over 40 percent women) participated directly in 173 value chains (the project partners with 173 micro-, small, and medium enterprises). The value of total sales exceeded \$29 million.²⁸

Anacafé, Guatemala's national coffee association, has an established infrastructure around the country's coffee-producing areas, with 7 regional offices and 72 technical assessors (extension agents).²⁹ It represents 120,000 coffee producers and has branded eight distinct regional types of shade-grown coffee, two of which grow in the Feed the Future zone. Coffee production has recently been estimated to generate 150,000 full-time jobs and 300,000 part-time jobs in Guatemala.³⁰ After coffee leaf rust spread intensively

across the region in 2012, national production the following year was estimated to be 25 percent lower than expected, on the heels of 2012's record harvest (3.8 million 60 kg bags).³¹ But Guatemala was not hit as hard as neighboring Honduras where, for example, 70 percent of farmers in one USDA program were affected.³² By last year, coffee production had nearly recovered and 2015/16 production was estimated to total 3.4 million bags, of which 3.1 million were for export.³³

In 2016, Guatemala was the world's eighth leading coffee exporter, with two fifths purchased by the United States, but it still shows great potential for increased global market share—neighboring Honduras exported more than twice as much between October 2015 and May 2016 despite overall lower production levels as recently as 2010.³⁴ In Guatemala, 60 percent of coffee plantations and trees are over 15 years old with dwindling productivity and will require renovation and replanting in the coming years, with an estimated cost of nearly \$1 billion.³⁵ Anacafé's export-oriented value chain work engages not only coffee producers, but also both horticultural and handicrafts production, though to a lesser extent.

26 USAID Guatemala, "Economic Analysis of Feed the Future Investments: Rural Value Chains Project—AGEXPORT";

USAID Guatemala, "Economic Analysis of Feed the Future Investments: Rural Value Chains Project—Anacafé."

27 AGEXPORT, "AGEXPORT Cuadro 6 Avance de Indicadores Tecnicos RVCP a Septiembre 2016," September 2016.

28 Ibid.

29 Anacafé, "Presentación Institucional Anacafé Oct 2016," October 2016.

30 Tay, "Guatemala Coffee Annual: Partial Recovery from the Rust Outbreak."

31 Ibid.

32 USDA and USAID, "U.S. International Food Assistance Report Fiscal Year 2014," Washington, DC, May 13, 2016, <https://www.usaid.gov/sites/default/files/documents/1867/FY%202014%20IFAR%20-%20May%2013%202016.pdf>.

33 Tay, "Guatemala Coffee Annual: Partial Recovery from the Rust Outbreak."

34 Anacafé, "Presentación Institucional Anacafé Oct 2016."

35 Ibid.



Mariano Hernandez, 60, is a coffee farmer who receives training and support from the Feed the Future Rural Value Chains Project. In 2016, two-fifths of Guatemala's coffee exports were purchased by the United States. Guatemala was the world's 8th leading coffee exporter last year with potential for significant growth.

RVCP horticultural work focuses on potatoes, peas, and broad beans while handicrafts production centers around products from locally sourced wool—rugs, pillow covers, etc. Handicrafts groups are a niche element of the project and scalability should be carefully assessed, but they do offer a unique pathway to engage urban youth who may be most likely to consider migration. By 2016, the value of total sales across value chain activities summed to \$48 million from over 30,000 producers.

In addition to income generation through productivity improvements and coffee plantation renovation, the project has focused on business management, resource conservation and climate change adaptation, and education. Producer organizations have improved their business administration, marketing, and governance practices. The CSIS

team observed reforestation and coffee shade management activities to control erosion and create wind barriers. Soil quality is improved with the production of organic fertilizer from coffee pulp. In horticultural production as well as home gardens, micro tunnels and/or drip irrigation systems are employed to maximize increasingly scarce water resources.

MásFrijol is a four-year project (2013–2017) led by the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes at Michigan State University. MásFrijol partnered with the Institute for Agricultural Science and Technology (ICTA), the Ministry of Public Health and Social Assistance, and others to reach 25,000 Guatemalan households across 200 communities with education on agricultural production and nutrition. While there are self-evident advantages to targeting the same

households with both agricultural and nutrition interventions, seven of Feed the Future's 30 target municipalities have climate, soil, or altitude conditions that make them unsuitable for bean production, and only the educational component is implemented in these areas.

The project design is based on evidence that smallholder farmers lack access to productivity-enhancing technologies and suffer from both low yields and inadequate storage capacity. At the same time, available beans may not be consumed due to a lack of understanding of their nutritional value. MásFrijol aims to increase smallholder access to quality seeds of improved, disease-resistant bean varieties adapted to local conditions through sustainable community seed production. Its scientific directors explained to CSIS that it worked with four varieties of black beans that tend to increase yields by about 25 percent, but sometimes by as much as 300 percent.

Bean seed commercialization isn't feasible in the Central American private-sector seed markets for several reasons. The seeds are very heavy and thus expensive to transport while simultaneously not commanding lucrative prices. Production is geared toward home consumption so farmers have less willingness to make investments, plus beans are self-pollinating so new plants are clones of their parents. For this reason, yields are similar with seeds

reused from year to year—there is no returning customer base (unlike for high-value horticultural seeds with recessive genes). MásFrijol thus determined that local farmers needed to replicate their own seeds through a public-sector system. By 2016, the project had established 47 community seed depots (with plans for 28 more) and distributed over 8,000 bags of improved seeds to nearly 33,000 households, vastly exceeding early targets.³⁶ It simultaneously provides integrated crop management training and access to improved post-harvest storage technologies.³⁷ In the project's third year, 352 hectares were cultivated with improved black bean varieties, yielding an astounding average of 779 kg of beans per hectare.³⁸ Improved storage bags were also distributed to over 800 families with the expectation of significant scale-up as the year progressed.³⁹

On the nutrition side, MásFrijol works to increase household knowledge of the benefits of regular bean consumption while teaching alternative processing and cooking methods with an emphasis on the preparation of easily digestible foods for young children. Over 8,000 beneficiaries had been trained on nutritional information and meal preparation by mid-2016 and plans are underway to evaluate behavioral and consumption shifts associated with this exposure.⁴⁰

36 Feed the Future Innovation Lab for Collaborative Research on Grain Legumes, "MasFrijol Annual Report FY2016."

37 "Technical Application for Associate Award under the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes," March 2014.

38 Feed the Future Innovation Lab for Collaborative Research on Grain Legumes, "MasFrijol Annual Report FY2016."

39 Ibid.

40 Ibid.

PEACE CORPS

The Peace Corps has been working in Guatemala since 1963 and recently reported 87 volunteers working in seven departments in the western highlands.⁴¹

The primary focus of their work is on health education and youth development, but a smaller set of more experienced volunteers work in food security. In FY 2017, the Peace Corps expects to contribute over \$30 million to the Global Food Security Strategy worldwide, with more than two-thirds of that sum earmarked for 21 African posts.⁴² Volunteers focused on food security work both on and off farms, promoting improved agricultural management practices, income diversification strategies, better business management, and improved nutrition knowledge behaviors in partnership with healthcare providers and community leaders.

Peace Corps plays a smaller role in Guatemala's Feed the Future portfolio, but it remains an important one. Strategic partnerships with other Feed the Future implementing partners are on full display, exemplifying the type of collaborative structures outlined in the agency's recent implementation plan:

As community mobilizers who have fully integrated into remote villages, volunteers serve as a bridge between rural communities and other Feed the Future programs, expanding the effectiveness and reach of other U.S. investments to address hunger and poverty.⁴³

The CSIS team met with a Peace Corps volunteer and staff associate partnering with the MásFrijol project to expand community-level nutrition training. The collaboration to date has drawn on a pool of experienced volunteers who have already completed two years of service and developed Spanish fluency, as further translation into local languages is often required. Because of this model, volunteers are affiliated with MásFrijol for less than a year, sometimes just three to six months, which can pose a challenge in terms of service continuity. But this is a first foray into harnessing the power of Peace Corps volunteers across the zone of influence and this early collaboration sets the stage and dialogue for suitable future partnerships.

Peace Corps could additionally provide complementarities in food security programming by focusing its core volunteer efforts on issues tackled less directly by other Feed the Future partners. The Peace Corps' 2017 Implementation Plan explains that it will "align its approaches to sectors that are not represented in the Global Food Security Strategy," such as education and youth.⁴⁴ For example, in 2017, the Peace Corps is recruiting 16 agricultural extension agents to support the government of Guatemala.⁴⁵ While this is not a sustainable model for the government, the deficit of staff and funding for agricultural extension presents a clear opportunity to engage in the short term. □

41 U. S. Embassy Guatemala, "Peace Corps," July 14, 2014, https://guatemala.usembassy.gov/peace_corps.html.

42 Peace Corps, "Peace Corps Global Food Security Implementation Plan," 2016, http://files.peacecorps.gov/documents/GFSA_PC_Implementation_Plan_FY17.pdf.

The **Buena Milpa**, or “Good Field,” project (2015–2018) is led by the International Maize and Wheat Improvement Center (CIMMYT), also in collaboration with ICTA. It supports a sustainable intensification strategy for traditional, mixed-use plots of corn, beans, pumpkins, fruit trees, and other native plants. Buena Milpa emphasizes biodiversity conservation, particularly of maize varieties, and takes a comprehensive approach to land, soil, water, and pest management. Its objective is to preserve diverse types of maize while also improving seed and grain quality to improve production and resilience.

Like MásFrijol, **MásRiego** (2015–2018) is a project helmed by one of Feed the Future’s 24 Innovation Labs. But unlike MásFrijol, it focuses much more on implementation than on research and is frankly a peculiar match for the skills and expertise that Innovation Labs offer. MásRiego, which means more irrigation, is led by the University of California, Davis Horticulture Innovation Lab. The project was designed to work with 9,000 small commercial farmers in 12 municipalities, training them in conservation drip irrigation that also incorporates fertilizer usage, creating demand while connecting equipment producers with consumers, and providing farmers with access to credit for irrigation systems purchases. MásRiego initially struggled with management and partnership aspects of start-up without

the original intent to have a U.C. Davis staff member based in Guatemala. Early partners withdrew and substitutes needed to be found, a process that would likely have been more navigable with a seasoned program leader in place. The primary implementer is the Barbara Ford Center for Peace, which focuses on social programs for vulnerable youth and is not experienced with agricultural or market-based interventions. Additional collaborations with both MásFrijol and Buena Milpa have injected the project with additional technical guidance. A more persistent challenge presents itself in that even many commercial farmers rent their land, curtailing any incentive to make longer-term investments.

Nexos Locales (2014–2019) is the primary local governance program in the portfolio with six distinct tranches of funding for work in democracy and governance, climate change, water and sanitation, maternal and child health, and nutrition in addition to its Feed the Future mandate. It seeks to support both supply and demand sides of governance through improved capacity for public service provisioning and strengthened civil society. In addition to collaborations with local government entities and international implementing partners, in its second year, the project allocated nearly \$800,000 in grants to 13 local organizations to build local ownership of key community management decisions.⁴⁶

43 Ibid., 3.

44 Ibid.

45 U.S. Peace Corps, “Peace Corps Guatemala,” accessed April 6, 2017, <https://www.peacecorps.gov/guatemala/>.

46 DAI Global LLC, “Guatemala Local Governance/ Nexos Locales Project Annual Report FY2016,” October 2016.

A central challenge facing Nexos Locales in its bid to augment local leadership and autonomy is that about 90 percent of municipality budgets come from the central government. Work is further hindered by low education and literacy levels, the prominence of eight Mayan languages, and a poorly connected landscape with dilapidated transport infrastructure. CSIS visited a meeting of a municipality-level food security situation room in one urban center. SESAN positioned a staff member at the municipality level but the convening is meant to be led by local officials, with representatives from the health, agriculture, and education sectors and from local NGOs in attendance. The purpose of the meetings was represented to be an assessment of food security data and determination of mutually agreed planning and response protocols. However, the burdensome data requirements were not possible to meet on a monthly basis, nor would population-level statistics, if attainable with such frequency, be likely to change measurably over such short intervals. A greater concern still is the lack of clear demand for such an onerous exercise, and the attendant lack of incentive for institutions to contribute in a timely manner. Group members explained that they would also post a vast set of data publicly, but could not articulate how that would productively engage a community that largely resides outside of the urban center and in which illiteracy is a formidable challenge. Convening such groups of stakeholders is a clear first

step, but the lack of governance capacity and general education levels were obviously substantial barriers to local leadership and ownership of municipal-level food security assessments and actions. An increased emphasis on civil society, advocacy group, and direct community education may be at least as important as supply-side efforts in such a challenging context.

Partnering for Innovation (2012–2018)

works with the private sector to support the commercialization of agricultural technologies, products, and services for smallholder consumers. The project works with seven USAID missions but the work of its partners extends into 16. To date, it has funded 69 technological innovations, from improved vegetable seed and livestock, to new financial tools, to improved storage inputs.⁴⁷ It has reached nearly 800,000 farmers worldwide. In Guatemala, grants have supported certified potato seed sales, youth savings and loan groups, improved inputs for pest and disease management, and software technology to better track export processing. The web-based software, Farmforce, was developed by the Syngenta Foundation for Sustainable Agriculture and allows for tracking of produce to the farm level, in compliance with the U.S. Food and Drug Administration's Food Safety Modernization Act of 2011 (discussed further in Chapter 5). Feed the Future elevates the adoption of this software as an important success in its 2015 progress report, noting

47 Feed the Future, Partnering for Innovation, "About Us," accessed April 7, 2017, <http://www.partneringforinnovation.org/about.aspx>.

that older pen and paper systems would have cut Guatemala out of the \$280 million U.S. market for snow pea imports alone.⁴⁸

Nutri-Salud (2012–2017) is a large project working in all 30 Feed the Future/WHIP municipalities to improve the nutritional status of women and children in more than 2,000 communities.⁴⁹ The project provides direct technical support to the Ministry of Public Health and Social Assistance to build management, planning, and technical skills that improve service delivery, with an emphasis on improved data usage for decisionmaking. It is also known for its *rueda*, or wheel, methodology, an easy-to-understand approach to nutrition in the critical 1,000-day window between pregnancy and a child's second birthday. It emphasizes 19 critical actions throughout the 1,000-day period that, in concert, can substantially improve child health and nutrition.

Nutri-Salud has produced a rich series of technical reports on healthcare governance, workforce development, medical commodity systems and logistics. It has published manuals to reduce maternal mortality and a thoughtful proposal to improve primary care access and quality. The impediment to health systems improvement in Guatemala, however, is not sound analysis and advice, which it receives from Nutri-Salud and others, but rather a gross lack of financing for basic, and

There is still some ambiguity about the ways value chain activities should be expected to contribute to nutrition outcomes.

critical, systems and services. Just 1.5 percent of GDP is allocated to the entire healthcare system. Experts told CSIS that, based on experiences in other countries, Guatemala should set its target closer to 8 percent.

The Food and Nutrition Technical Assistance project, or **FANTA** (2012–2017), supports the government of Guatemala to achieve ambitious stunting-reduction targets at the national level. The project, which ended recently, promoted the integration of evidence-based nutrition interventions within national budgeting and planning processes. An emphasis on food-based interventions sourced with locally available ingredients, over medicalized approaches, characterizes the project, which produced a great deal of quality analysis of micronutrient deficiencies and dietary intervention costing and cost-effectiveness. FANTA worked with a broad array of Guatemalan government and civil society institutions as well as USAID-funded projects to develop maternal and child health training

48 USAID, "2015 Achieving Impact: Leadership and Partnership to Feed the Future," 2015, https://feedthefuture.gov/progress2015/assets/2015_FTF_Progress_Report.pdf.

49 Nutri-Salud Guatemala, "Enfoque Técnico," accessed May 2, 2017, <http://nutri-salud.org/content/enfoque-t%C3%A9cnico>.

programs and to disseminate its findings and implement recommendations on food-based nutrition programming.

A third nutrition-oriented activity, the Strengthening Partnerships, Results, and Innovations in Nutrition Globally (**SPRING**, 2012–2017) project, worked in 16 countries in the Americas, sub-Saharan Africa, and Central and South Asia. SPRING has come to specialize in interventions focused on social behavioral change around nutrition practices and on nutrition-sensitive agriculture, forging stronger connections between these sometimes poorly integrated sectors. In Guatemala, SPRING contributed important formative research to better understand community and household knowledge, norms, and practices; gender dynamics; and other factors such as environmental considerations to better incorporate nutrition-sensitive work into the Rural Value Chains Project. SPRING explains that it partnered with RVCP staff to develop and tweak interventions to better support and measure nutrition gains, “although there is still some ambiguity about the ways value chain activities should be expected to contribute to nutrition outcomes.”⁵⁰

50 SPRING, “SPRING Guatemala,” September 19, 2014, <https://www.spring-nutrition.org/countries/guatemala>.



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Guatemala has some of the most alarming food insecurity rates in the Americas. In the Western Highlands, where Feed the Future programs are concentrated, 76 percent of the people live in poverty and 67 percent of children under five are stunted.

COMPLEMENTARY U.S. GOVERNMENT FOOD AND NUTRITION SECURITY WORK

FOOD FOR PEACE HAS HAD A LONGSTANDING PRESENCE IN GUATEMALA and food aid was the largest sector of USAID work in FY2009, the year before Feed the Future was introduced (see Figure 3.1, last chapter). In 2016, food assistance programs surged to over \$27 million, of which \$12 million¹ was allocated for emergency programming in response to the severe drought. However, even in the recent period of acute food insecurity, in-kind food assistance through Food for Peace has declined substantially across both development and humanitarian programming: from nearly 11,000 metric tons (MT) in FY 2012 to just 1,000 MT in FY 2016 (see Table 4.1).²

Since FY 2011, USAID's Bureau of Food Security in Washington, D.C., has made development assistance funds available to Food for Peace in order to support community-level development activities in instances when the monetization³ of commodities does not advance a country's development objectives.⁴ In FY 2014, the Bureau for Food Security co-invested \$80 million in such Community Development Funds (CDF) for Food for Peace Development Programs in seven of its focus countries, including

- 1 This figure combines \$1.3 million in Title II Emergency funds and \$10.7 from the Emergency Food Security Program (EFSP).
- 2 In 2013, after which food aid fell by more than half, the basket of commodities comprised corn-soy blend, pinto beans, rice, and vegetable oil. USDA and USAID, "U.S. International Food Assistance Report Fiscal Year 2013," October 2014, https://www.fas.usda.gov/sites/default/files/2014-10/usda-usaid_fy2013_food_assistance_report.pdf.
- 3 Monetization refers to the sale of U.S. commodities on local markets or directly to partner governments in order to fund development programming.
- 4 Dina Esposito, "Food for Peace Information Bulletin FFPIB 14-01," May 8, 2014, <https://www.usaid.gov/sites/default/files/documents/1866/FFPIB%2014-01%20Draft%20for%20comment.pdf>.

Guatemala.⁵ The funds were used in part to offset the need for monetization (and to provide the equivalent of \$100 million in monetized Title II funding) while also improving collaboration and learning across USAID offices.⁶ In FY 2015, Guatemala received \$10 million of CDF.⁷

Guatemala currently has two active Food for Peace awards, PAISANO and SEGAMIL, which were awarded in 2012 to reduce food and nutrition insecurity over six years. **PAISANO**, the Spanish acronym for “Integrated Food Security and Nutrition Program in the West,” works with over 26,000 households in 12 municipalities across Huehuetanango, Quiché, and Quetzaltenango.⁸ **SEGAMIL**, an acronym for “Food Security in the First 1,000 Days,” works with over 23,000 households in 8 municipalities of San Marcos and Totonicapán.⁹ Together, the projects are valued at approximately \$70 million over six years. With an average annual combined value of about \$12 million, the Food for Peace non-emergency portfolio was approximately the same size as the entire Feed the Future portfolio prior to FY 2015.

Both projects have had success with home-stead gardens, cooking demonstrations, savings and lending groups, and empower-

ment-oriented trainings. Midterm evaluations concluded that both could improve targeting to be more inclusive of men, so as not to be dismissed as a “women’s project,” and that their work could be better integrated and sustained within local governance structures. USAID also recommended that both programs phase out blanket rations for pregnant and lactating women and children under two that are not based on assessed need. It notes that “providing free resources can pose a serious threat to the sustainability of activities and impact after the project ends.”¹⁰ The programs have since adopted a greater reliance on cash and voucher-based interventions over commodity transfers.

U.S. Department of Agriculture

Agricultural trade between the United States and Guatemala was valued at \$3 billion in 2015: Guatemala exported \$1.9 billion of goods and imported \$1.1 billion.¹¹ The U.S. Department of Agriculture (USDA) was also well established in Guatemala before the launch of Feed the Future. Its programming has largely focused on trade with the United States through the Dominican Republic-Central America Free Trade Agreement (CAFTA-DR),¹² but USDA also operates two of

5 The others were Nepal, Haiti, Uganda, Malawi, Niger, and Burkina Faso.

6 USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2014.”

7 FY 2015 is the first year in which CDF is systematically reported at the country level in the annual U.S. International Food Assistance Report.

8 USAID, Save the Children, and PCI, “PAISANO 2015 Midterm Evaluation Report,” 2015, http://pdf.usaid.gov/pdf_docs/pa00mfpd.pdf.

9 USAID and CRS, “SEGAMIL Midterm Evaluation Report 2015,” 2015, http://pdf.usaid.gov/pdf_docs/pa00mfpf.pdf.

10 Ibid., 54.

11 USDA Foreign Agricultural Service, “International Agricultural Trade Report: Spotlight on Guatemala as Trade Flourishes Under CAFTA-DR.”

12 CAFTA originally encompassed Costa Rica, El Salvador, Guatemala, Honduras, and Nicaragua but was renamed

Table 4.1: U.S. Agricultural Commodity Allocations for Food for Peace, Food for Progress, and McGovern-Dole Activities in Guatemala (metric tons)

FISCAL YEAR	FOOD FOR PEACE DEVELOPMENT	FOOD FOR PEACE EMERGENCY	FOOD FOR PROGRESS	MCGOVERN-DOLE
2010	25,100	9,720	9,750	9,150
2011	17,320	6,770	N/A (prior year agreement with costs incurred in 2011)	11,450
2012	10,870	—	12,000	5,970
2013	10,540	—	—	3,390
2014	4,560	—	40,000	7,660
2015	5,840	—	—	1,740

Source: Note that McGovern-Dole commodity data was provided to CSIS by USDA and USAID directly via email correspondence. USAID, “Food Assistance Fact Sheet - Guatemala,” August 15, 2016, <https://www.usaid.gov/guatemala/food-assistance>; USDA and USAID, “U.S. International Food Assistance Report 2010”; USDA and USAID, “U.S. International Food Assistance Report 2011,” Washington, DC, 2012, <https://www.usaid.gov/sites/default/files/documents/1866/FY%202011%20IFAR%20FINAL.pdf>; USDA and USAID, “U.S. International Food Assistance Report FY 2012,” Washington, DC, July 2014, https://www.fas.usda.gov/sites/default/files/2014-07/usda-usaid_fy2012_food_assistance_report.pdf; USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2013”; USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2014”; USDA and USAID, “U.S. International Food Assistance Report FY 2015,” January 2017, https://www.fas.usda.gov/sites/default/files/2017-01/8229000_59_fy_15_ifar.pdf.

its flagship programs in Guatemala that seek to improve the welfare of local communities: Food for Progress and McGovern-Dole. The integration of USDA and USAID staff and programming in Guatemala is unique among Feed the Future focus countries. The collocation of USDA Foreign Agricultural Service staff within the USAID mission is a model suitable for replication in other locales.

Food for Progress

Under the Food for Progress program, U.S. commodities are donated to recipient coun-

tries and sold on local markets. The proceeds are then used to support agricultural, economic, or infrastructure development programs in emerging democracies in order to promote private enterprise. The program’s two principal objectives are to improve agricultural productivity and to expand trade of agricultural products.¹³ Guatemala is one of two countries¹⁴ with direct government-to-government Food for Progress agreements¹⁵ but it has also had another active program from 2012–2017 led by an

CAFTA-DR when the Dominican Republic joined in 2004.

13 USDA, “Food for Progress | USDA Foreign Agricultural Service,” 2016, <https://www.fas.usda.gov/programs/food-progress>.

14 The other is Mauritania.

15 USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2014.”

While agricultural commodities entering Guatemala through the Food for Peace program have declined precipitously in recent years, commodities imported through Food for Progress have simultaneously quadrupled.

international NGO implementing partner. The program is credited with reestablishing the national rural extension system and enhancing the knowledge and training capacity of rural development learning centers.

While agricultural commodities entering Guatemala through the Food for Peace program have declined precipitously in recent years, commodities imported through Food for Progress have simultaneously quadrupled. In 2010, Food for Progress contributed less than 10,000 MT of commodities but, in 2014, that figure swelled to 40,000. When Food for Peace, Food for Progress, and McGovern-Dole contributions are jointly accounted for, more U.S. commodities were injected into the Guatemalan economy in 2014 than in 2010. It is possible that this overall upward

trend could curtail the investment of Feed the Future's Community Development Funds (CDF) used to reduce commodity monetization requirements within Food for Peace.

The McGovern-Dole Food for Education and Child Nutrition Program

The McGovern-Dole program supports maternal and child nutrition as well as children's literacy, education, and development worldwide with the donation of U.S. agricultural commodities, financial resources, and technical assistance.

Since 2003, USDA has provided over \$190 million in school feeding assistance to Guatemala under the McGovern-Dole program.¹⁶ Currently, USDA has five active projects in the Western Highlands in the departments of Huehuetenango, Totonicapán, and Quiché. Together, these programs reach 159,054 direct beneficiaries in 859 school communities. The active projects work to provide nutritious meals in schools, provide literacy instruction and management certification courses for teachers and school administrators through partnership with local universities, and promote the use of pedagogical school gardens for instruction on nutrition, social management, land conservation, and social responsibility.

In 2011, the Micronutrient Fortified Food Aid Products Pilot awarded U.S. company Hormel Foods Corporation a small grant of \$120,000 to develop and test its poultry-based fortified spread, SPAMMY, in Guatemala.¹⁷ When

16 All data in this paragraph is derived from correspondence between CSIS, USAID, and USDA in April 2017.

17 USDA, "USDA Invests in Micronutrient-Fortified Food Aid in Six Countries to Improve Nutrition for Vulnerable Popula-

Glenda Leticia Perez, a 23-year-old mother of four, works as a health center promoter. Besides recording the weight of children coming in for check-ups, she educates mothers on dietary diversity through cooking demonstrations.



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grants were announced, Secretary of Agriculture Tom Vilsack explained that “these grants will fund the development of new food aid products that are tailored to the nutritional needs of a specific population.”¹⁸ Hormel had been working with Guatemalan partners to provide children with the spread since 2008. Research to better understand specific local needs revealed acute deficits in vitamins D and B12 in the preschool-age population and the product was reformulated to supply more of these micronutrients.

Children who consumed SPAMMY exhibited reductions in underweight status and increases in iron levels.¹⁹ A later study compared the

outcomes associated with consuming fortified and unfortified versions of SPAMMY that contained identical amounts of protein, calories, and fat.²⁰ The study revealed that all children made greater-than-expected improvements in cognitive gains and that there was a 44 percent reduction in school days missed due to illness. Children receiving the fortified version did show higher levels of vitamins D and B12, while a positive correlation between vitamin D concentration and cognitive gains was also observed. In 2013, Hormel donated 2.4 million cans of the product. SPAMMY was added to the official commodity list as Fortified Poultry Based Spread in FY 2015.²¹

tions,” December 6, 2011, <https://www.usda.gov/wps/portal/usda/usdahome?contentid=2011/12/0502.xml>.

18 Ibid.

19 USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2013.”

20 Hormel Foods, “Hormel Foods and USDA Collaborate to Help Improve Physical and Cognitive Development in Malnourished Children,” July 15, 2014, <http://www.hormelfoods.com/Newsroom/Press-Releases/2014/07/20140715>.

21 USDA and USAID, “U.S. International Food Assistance Report Fiscal Year 2014.”

USAID Partnership

USDA has a regional partnership with USAID—**Promoting Food Security and Trade Integration through SPS and Other Agriculture-Related Capacity Building**—to work in seven Central American countries.²² The project provides training to agricultural producers, private-sector actors (with an export focus), government officials, and members of civil society. By summer of 2016, it had trained over 2,000 such stakeholders in Guatemala on topics ranging from agronomic practices to market information systems to post-harvest management.²³

The program also dedicates significant attention to regulatory environments at both regional and national levels. Focus areas include reviews of microbial standards, pesticide registration and sales, food labeling, quarantine protocols, public fee levies, and meat and slaughterhouse inspections. In Guatemala, the project is actively engaged in the development, ratification, and implementation of six such policies and regulations, three of which have been adopted.

22 USDA refers to this as a Participating Agency Program Agreement, or PAPA.

23 USDA, “USDA/USAID PAPA Promoting Food Security and Trade Integration through SPS and Other Agriculture-Related Capacity Building. Progress Report Quarter Three FY 2016,” July 2016.



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Forty percent of the rural population lacks access to household water and most community water sources are contaminated with bacteria, viruses, and parasites. The persistent lack of clean water and adequate hygiene and sanitation is cited as a primary driver of stunting.

CRITICAL QUESTIONS

1. Is Feed the Future on track to achieve its stunting and poverty targets in Guatemala?

Perhaps for stunting, probably not for poverty, but it is a highly nuanced discussion. Feed the Future/Guatemala has more moderate poverty and stunting goals (in terms of both proportional reduction and population coverage) than many other focus countries:¹ it aims to reduce stunting by 12 percent and poverty by 15 percent among 1.6 million people in the Western Highlands.² However, in absolute terms, these goals are still highly ambitious.

Feed the Future's baseline evaluation reflected a 2013 stunting prevalence of 67 percent. The 12 percent reduction goal implies a stunting target of 59 percent by 2017. This average annual rate of reduction would rival the fastest observed stunting declines globally, recently documented in India and Bangladesh, both of which have demonstrated strong government leadership.³

Despite this high level of ambition, Feed the Future's 2016 progress report presents midterm survey data showing that stunting progress was on track in 2015 (see Fig-

1 Globally, most Feed the Future focus country strategies committed to reducing both poverty and stunting by 20 percent.

2 USAID, "Guatemala: Nutrition Profile," June 2014, <https://www.usaid.gov/sites/default/files/documents/1864/USAID-Guatemala-Profile.pdf>.

3 Unicef India, "Fastest Decline in Child Stunting Cases," August 7, 2014, <http://www.unicef.in/Story/686/Fastest-Decline-in-Child-Stunting-Cases>.

Figure 5.1

FEED THE FUTURE/GUATEMALA'S REPORTED PROGRESS IN STUNTING REDUCTION 2013–2015



ure 5.1).⁴ Unfortunately, detailed results from Guatemala's 2015 midterm survey were not available as of May 2017 to better understand this success. Whether or not this rapid rate of decline can be sustained over a longer period remains to be seen.

The measurement of poverty is much more complex, and the national poverty rate in Guatemala has *increased* in recent years.⁵ In the zone of influence, 76 percent of households were found to live at or below the national poverty line in 2013. While Feed the Future regularly reports poverty trends according to the national poverty line, its own poverty reduction target is based on moving

people over an income threshold that is less than a third of that cut-off (see Figure 5.2).

The 2013 baseline report calculates a national poverty line of 27.17 Quetzales per person per day and a national extreme poverty line of 13.18 Quetzales per person per day. In mid-2013,⁶ the national poverty and extreme poverty lines converted to \$3.92 and \$1.90, respectively, accounting for purchase power parity. But these are not the poverty metrics used by Feed the Future to assess its progress. Instead, it bases performance on the internationally standardized poverty lines which estimate local purchasing power equivalencies at the \$2 (regular poverty) and \$1.25 (extreme poverty) levels. These alternative poverty lines equate to much lower consumption potential, at 13.85 and 8.66 Quetzales daily, respectively.⁷

Feed the Future's 15 percent poverty reduction goal is based on the internationally standardized extreme poverty line of \$1.25 per day.⁸ This very low threshold characterizes less than 6 percent of the zone of influence population. The adoption of the \$1.25 threshold makes a 15 percent poverty reduction target more attainable than reliance on the national poverty line: while the national poverty rate would imply a reduction target of 11 percentage points,

4 USAID, "Feed the Future 2016 Progress Report: Growing Prosperity for a Food-Secure Future," accessed February 9, 2017, https://feedthefuture.gov/sites/default/files/resource/files/2016%20Feed%20the%20Future%20Progress%20Report_0.pdf.

5 The World Bank, "World Bank Open Data," 2015, <http://data.worldbank.org/>.

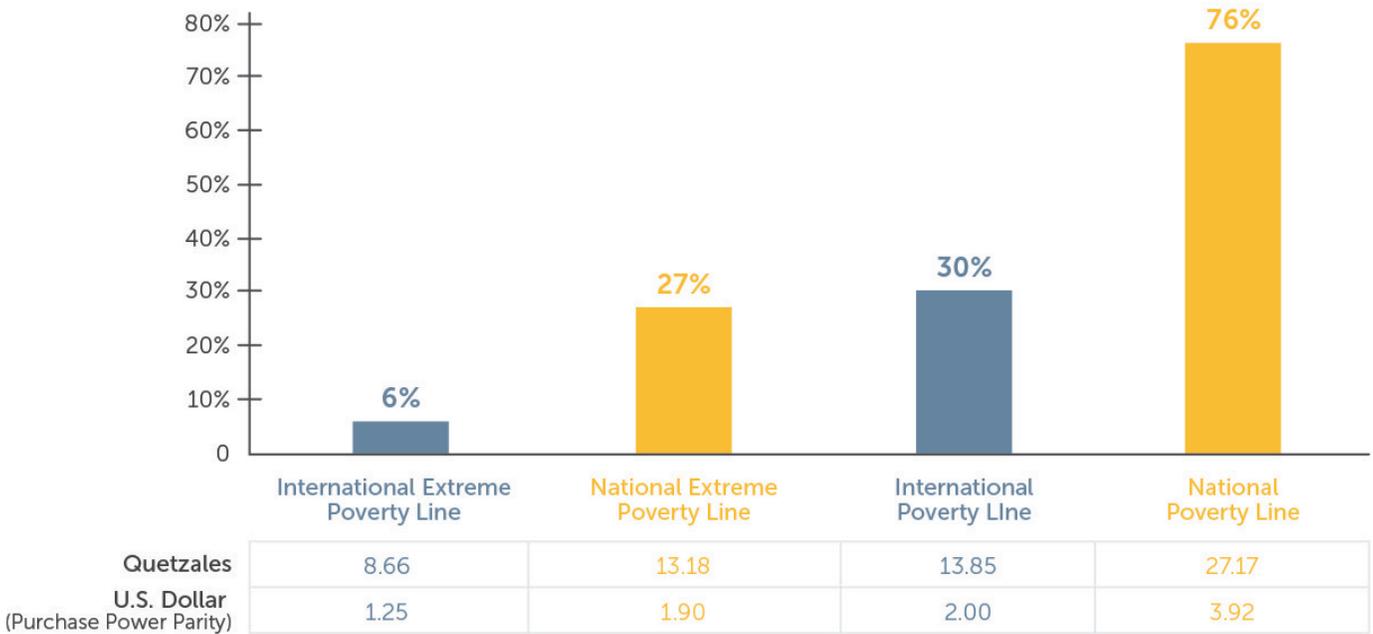
6 It inflates 2011 national poverty line thresholds with a consumer price index ratio. The exchange rate on July 1, 2013 was 7.83 Quetzales to one U.S. dollar. XE Currency, "XE Currency Current and Historical Rate Tables," accessed April 10, 2017, <http://www.xe.com/currencytables/?from=USD&date=2013-07-01>.

7 USAID, "Guatemala Feed the Future Zone of Influence Baseline Report," July 2014, https://feedthefuture.gov/sites/default/files/resource/files/Guatemala_Feed_the_Future_Baseline_Country_Report.pdf.

8 Purchase power parity. USAID, "2015 Achieving Impact: Leadership and Partnership to Feed the Future," 2015, https://feedthefuture.gov/progress2015/assets/2015_FTF_Progress_Report.pdf.

Figure 5.2

PREVALENCE OF POVERTY IN FEED THE FUTURE’S ZONE OF INFLUENCE, 2013



Feed the Future’s benchmark implies a reduction target of less than one percentage point (from 5.9 percent to 5 percent, see Figure 5.3).

There are sound reasons for a global initiative like Feed the Future to design objectives around globally standardized metrics, but the choice to do so also dilutes local relevance. The selection of the extreme, versus the regular, international poverty line merits additional discussion supported by a clearer presentation of data.

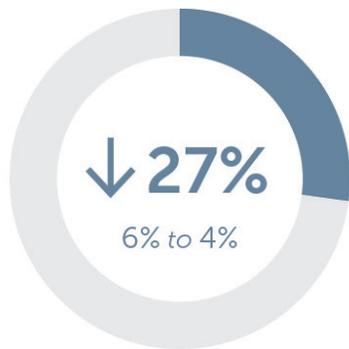
Setting measurement issues aside, the potential for the export-oriented value chain approach to

drive community-level economic and welfare gains at scale is also insufficiently established. While Feed the Future’s poverty goal prioritizes engagement of the extreme poor, its largest interventions mostly do not. A 2013 economic analysis of the Rural Value Chains Project notes that 19 percent of households targeted by Anacafé activities and 17 percent of those targeted by AGEXPORT activities fell below the *national* extreme poverty line.⁹ The analysis does not provide beneficiary proportions below the international extreme poverty line favored by Feed the Future because publicly available data were inadequate for their calculation. Re-

9 USAID, “Economic Analysis of Feed the Future Investments: Rural Value Chains Project - Anacafe,” September 2013, <https://www.usaid.gov/sites/default/files/documents/1865/Anacafe%20CBA%20Economic%20Analysis%20PUBLIC.pdf>; USAID, “Economic Analysis of Feed the Future Investments: Rural Value Chains Project - AGEXPORT,” July 2013, <https://www.usaid.gov/sites/default/files/documents/1865/Guatemala%20Agexport%20CBA%20-%20Economic%20Analysis.pdf>.

Figure 5.3

FEED THE FUTURE/GUATEMALA'S REPORTED PROGRESS IN POVERTY REDUCTION 2013–2015



International extreme poverty line

ardless, over 80 percent of direct beneficiaries in Feed the Future's two largest projects were too wealthy from the start to count towards its measured progress on poverty.

A 2014 (non-experimental) impact evaluation of USAID/Guatemala value chain programs targeting smallholder farmers between 2006 and 2010, before Feed the Future's inception, found no evidence of per capita income gains at the municipality level.¹⁰ In fact, the group of treatment municipalities fared worse on income measures than the group of matched quasi-control municipalities over the period. This may be attributable to the fact that individual beneficiary households could not be isolated in the analysis, and so their positive gains could not be parsed from averages of their broader communities, but the absence of earlier value chain programs' impacts at the municipality level calls the feasibility of Feed

the Future's poverty target into question given its similar technical approach.

2. Are local export groups leading the largest agricultural value chain activity well-suited to reach the most vulnerable households?

No, but this is not the right question.

Anacafé and AGEXPORT have much experience in the export sector but their technical skill sets do not align well with the needs of the most vulnerable, sometimes landless, households. This comes as no surprise, and it would be nonsensical to contract these organizations for their specialized expertise in one area expecting them to immediately pivot to apply a different skill set. A local expert did express concern that neither partner is focused on "helping the little guys." CSIS was told that, in retrospect, focus on the cooperative model should have been prioritized earlier given the economies of production scale required to make commercial transport viable. Both Rural Value Chains Project partners have posted impressive results among the beneficiaries they do engage, and credit is due for those achievements. CSIS visited one producers' association in which horticultural yields had increased by over 50 percent, allowing the group to expand from 10 to 44 full-time processing employees. Another association was able to contract the construction of a large new processing plant, the first in its municipality, and hire 40 women with

10 Optimal Solutions Group LLC, "Does Assistance to Farmers Translate into Community Welfare Improvements? Non-Experimental Program Evaluation of USAID Assistance to Smallholder Farmers in Guatemala," August 18, 2014.

future capacity to add 60 more. The facility was financed by exporting partners (and by seed funding from the RVCP partner) with an eight-year contract for facility maintenance before ownership is transferred to the association. In the meantime, association members improve their business and financial management skills. Community benefits are indisputable.

A more appropriate question would be: Is Feed the Future, across its portfolio, targeting the neediest of families with the most room to gain ground in terms of stunting and poverty reductions? Here, too, the answer is complex. Over 80 percent of RVCP beneficiary households were already above Feed the Future's poverty threshold of interest at baseline (see Question 1). But targeting the ultra-poor is the remit of Food for Peace, and many other Feed the Future activities are ill-suited to engage extremely poor and landless households. Feed the Future uses Community Development Funds to support Food for Peace programs for this reason. USAID colleagues explained that they initially envisioned more of a graduation model to move Food for Peace households that had established a critical asset base into Feed the Future value chain activities, but this has proven very challenging. Evidence also suggests that agricultural value chain activities have multiplier effects that reach the poorest—for example through job creation for the landless

and improved food quality and prices in local markets. Whether these types of spillover effects are sufficient to drive population-level poverty reduction over years rather than decades is a conversation worth engaging. It bears repeating that nearly a quarter of households in Feed the Future's zone of influence are urban, bringing with them a different set of assets, potential, and opportunities than their rural counterparts.

3. Are Innovation Lab activities to engage the scientific and research expertise of U.S. universities well-designed?

Yes, in the case of one Innovation Lab, no, in another, but the government of Guatemala could be a stronger partner for research acceptance and dissemination. The Innovation Lab for Collaborative Research on Grain Legumes' current 4.5-year global contract runs from 2013 to 2017 with an authorization of \$25.5 million.¹¹ As of late 2016, it supported 10 multidisciplinary research and capacity-building projects in 13 Feed the Future countries. A 2016 evaluation of the Lab, which manages MásFrijol, was largely very positive. It concluded that the Lab produces a sufficient amount of quality research pertaining to both legume genomics/breeding and to socioeconomic factors that inhibit bean diffusion and consumption. It is meeting its training targets, effectively managing diverse projects across a wide array of countries, and collaborating with the right set of

11 Jeffrey Alwang et al., "External Evaluation Team Report on the Feed the Future Innovation Lab for Collaborative Research on Grain Legumes," August 2016.

partners. However, at the global level, the evaluation observed the following:¹²

Many stakeholders noted that Legume Innovation Lab research is not meeting expectations in terms of reducing a long-standing gap between experiment station yields and national averages. Numerous factors contribute to this yield gap, and Legume Innovation Lab research is investigating many of these factors, but policy makers and development assistance programmers are not incorporating research findings into their actions, often because they are unaware of the findings.

MásFrijol's model promises to better address this universal challenge of scaling up adoption of improved inputs and practices. Its early identification of seed system market failures and vision to overcome this hurdle with the establishment of 75 public community seed depots is potentially a sustainable solution to the dearth of quality bean seeds in the western highlands—if they are well-managed. The project's balance of genomic, market, and social science research combines the strengths of multiple disciplines to account for the important, dynamic, and mutually responsive systems that ultimately drive and sustain improvements in markets, in household economics, and in household nutrition. MásRiego, conversely, is not designed to take full advantage of an Innovation Lab's comparative advantages, namely in technical research and its dissemination. MásRiego

does have a minor research component but none of it is affiliated with a U.C. Davis primary investigator. Rather, it collaborates with two other U.S. universities on smaller projects led by graduate students, as well as with Guatemalan universities. Its partnership with Guatemalan institutions is commendable, but without a robust core of Innovation Lab research expertise to engage, local students also end up underserved.

Finally, Guatemala does not allow for the commercial production of genetically engineered plants. As discussed in Chapter 6, the government needs to codify policy and regulatory frameworks for the use of biotechnology to eliminate a de facto moratorium. A clearer and more supportive regulatory environment, combined with increased domestic scientific investment, would afford many Innovation Labs greater latitude to pursue their work with the most efficient and logical approaches. The country's urgent need to draw from a full complement of scientific methods comes into focus through the lens of climate change, as discussed below.

4. Is adaptation to the impacts that climate change will have on rural populations sufficiently prominent?

Yes, in many practical ways, if not in policy. Within Feed the Future, climate change adaptation is laudably prominent at the level of community-based agricultural activities but less apparent at the policy level, with a

12 Ibid., vi.

notable gap in attention to increased natural hazard exposure.

The largest Feed the Future activity, the Rural Value Chains Project, focuses attention on climate change adaptation strategies for horticultural and coffee production through both of its local implementing partners. Buena Milpa and MásFrijol are both closely engaged with the Guatemalan Institute of Science and Agricultural Technology (ICTA) to promote better land management practices and access to climate-resilient inputs, including improved seed varieties. MásRiego and a recently ended smaller project, Sustainable Water Management in the Cuchumatanes, both focus on scarce water inputs.

While improved agricultural practices and risk management are important elements of climate change adaptation for farmers, livelihoods diversification outside of farming may be critical to the welfare of Guatemala's next generation. It is beyond the commonly understood central mandate of Feed the Future to, for example, connect rural youth with urban and peri-urban employment opportunities, but such parameterization of development initiatives may ultimately harm the beneficiary segments most deserving of assistance.

A December 2012 analysis of climate change threats and appropriate adaptation strategies

commissioned by USAID/Guatemala parsed its analysis by region, observing that in the Western Highlands, agricultural impacts include "1) loss of crops due to frosts, 2) loss of crops due to excess rainfall and high humidity, 3) increase in pests, 4) drought, and 5) soil loss and degradation."¹³ The assessment also repeats the common refrain that local governments lack the capacity to manage climate adaptation well while also making a detailed case for the importance of local leadership and resource stewardship.

Many suitable responses to confront temperature fluctuation, pests, and drought are already implemented within Feed the Future programs but could be augmented and scaled with additional support from the Global Climate Change Initiative, which currently focuses on biodiversity preservation.¹⁴ While the Americas constitute a less prominent region in global Feed the Future resource allocations, over 20 percent of the Global Climate Change Initiative budget went to the region in FY15.¹⁵ Such investments targeting national policy and agricultural extension systems would complement and reinforce community-based food security efforts going forward.

At the same time, climate-driven increases in natural hazard exposure, including rain-induced land- and mudslides and the highly proba-

13 Private Institute for Climate Change Research (ICC), Global Climate Adaptation Partnership (GCAP), and Grupo Laera, "Deliverable 4 (Final Report). Recommendations on Climate Change Adaptation Responses for Guatemala," December 2012, 10.

14 The Global Climate Change Initiative launched a third party-certified REDD+ program that led to the sustainable production and marketing of \$42 million worth of forest products for local communities, creating 2,000 jobs.

15 USAID, "USAID Climate Action Review: 2010–2016," 2016.

ble increase in tropical cyclone intensity,¹⁶ go unaddressed. Development gains can unravel quickly in the face and aftermath of humanitarian crisis. As such, the government of Guatemala and donors alike should prioritize systematic preparedness, mitigation, and response mechanisms in anticipation of increased hazard exposure. See Chapter 6: Recommendations for further discussion of this topic.

5. Are food and water safety concerns addressed adequately?

No, but food- and waterborne illnesses stem from a neglect of public systems that are primarily the responsibility of the government and not of international donors. Food and water safety concerns are a tremendously impactful and unattended problem in Guatemala. Contaminants that are most harmful to human health, and thus of most predominant concern, are microbial agents, such as norovirus, *E. coli*, *Salmonella*, and *Listeria*; and chemical toxins, including mycotoxins (fungal toxins such as fumonisin and aflatoxin), cyanotoxins, arsenic, lead, and pesticides.¹⁷

Aflatoxin is the most potent known human liver carcinogen, and is common in maize, peanuts, and tree nuts grown in warmer climates. In Guatemala, fumonisin and aflatoxin levels are 10 to 50 times above world averages.¹⁸ Primary liver cancer is the third leading cause of cancer mortality globally,¹⁹ and liver cancer is more than twice as prominent in less developed countries.²⁰ Guatemala has the third-highest rate of liver cancer among women in the world.²¹

In Guatemala, aflatoxin is not heavily present in the Western Highlands where Feed the Future works. Rather, contaminated maize grown in other parts of the country is frequently dumped in markets serving poor rural households that are net purchasers of their staple crop. The enforcement of food safety laws could curb this illicit practice. To address the broader problem, the World Health Organization recommends the production of transgenic maize to control fumonisin but the government of Guatemala was not considering the strategy as of 2015.²² In 2012–2013, Herculex corn was tested along the southern coast of the country but commercial-

16 See the following references for an interesting discussion of climate change and cyclones. Robert Mendelsohn et al., "The Impact of Climate Change on Global Tropical Cyclone Damage," *Nature Climate Change* 2, no. 3, March 2012: 205–9, doi:10.1038/nclimate1357; A. Gettelman et al., "Projections of Future Tropical Cyclone Damage with a High-Resolution Global Climate Model," *Climatic Change*, March 3, 2017, 1–11.

17 Tay, "Guatemala Agricultural Biotechnology Annual: Efforts to Strengthen the Cartagena Protocol."

18 Ibid.

19 Jian-Guo Chen et al., "Reduced Aflatoxin Exposure Presages Decline in Liver Cancer Mortality in an Endemic Region of China," *Cancer Prevention Research*, Philadelphia, Pa., 6, no. 10, October 2013.

20 Cancer rates are age-standardized in order to make viable comparisons across populations with different age structures. The age-standardized rate of liver cancer in more developed countries was recently estimated at 5.4 per 100,000 people. In less developed countries, the rate was 12 per 100,000. World Cancer Research Fund International, "Cancer Facts and Figures: Comparing More & Less Developed Countries," 2015, <http://www.wcrf.org/int/cancer-facts-figures/comparing-more-less-developed-countries>.

21 World Cancer Research Fund International, "Liver Cancer Statistics," 2015, <http://www.wcrf.org/int/cancer-facts-figures/data-specific-cancers/liver-cancer-statistics>.

22 Tay, "Guatemala Agricultural Biotechnology Annual: Efforts to Strengthen the Cartagena Protocol."

ization is not yet foreseeable despite promising field test results.²³

Shifting production and dietary consumption patterns in aflatoxin-rich environments can make a substantial impact on public health outcomes. In Qidong, China, where aflatoxin-contaminated maize was a staple dietary element until the 1980s, one in 10 men died of liver cancer by age 45.²⁴ Market reforms, increased trade, and government facilitation of a dietary pivot toward rice led to over a 50 percent reduction in liver cancer mortality²⁵ between the birth cohorts of the 1960s and those of the 1980s.²⁶

A 2012 study of 1,271 Feed the Future communities found that 56 percent had access to piped water but fewer than one in six water sources were chlorinated.²⁷ The balance of 44 percent had no access to piped water at all, including nearly two-thirds of communities surveyed in Huehuetenango. The 2010 Global Health Initiative set a target that 100 percent of water access points should be chlorinated but progress has been slow to come.

The midterm evaluation of both Food for Peace development projects also identified

water and sanitation activities as a strategic gap that should be addressed in the project's second half. But that same evaluation noted that "WASH needs to be part of a larger learning and capacity development strategy that involves government and community structures."²⁸ As discussed in Chapter 6, food and water safety improvements are the neglected responsibility of the government of Guatemala and not of international donors.

Climate change may further exacerbate food and water safety concerns via a number of pathways. Foodborne disease outbreaks and contamination levels are associated with increased land surface temperatures.²⁹ For example, warmer conditions pose a dual risk for increased levels of aflatoxin contamination: 1) *Aspergillus* fungi that produce the toxin are likely to produce more in warmer temperatures, and 2) plants growing in warmer temperatures are simultaneously under greater stress and thus more disposed to infection.

Increased water temperatures are associated with the growth of certain microorganisms that cause human gastroenteritis. Heavy rains and flooding are also associated globally with

23 Ibid.

24 Cancer risk is substantially increased when chronic Hepatitis B infection interacts with aflatoxin ingestion. Felicia Wu, "A Monotonous Diet Isn't Just Boring, It's Dangerous," *Quartz*, April 2, 2015, <https://qz.com/375279/a-monotonous-diet-isnt-just-boring-its-dangerous/>; Chen et al., "Reduced Aflatoxin Exposure Presages Decline in Liver Cancer Mortality in an Endemic Region of China."

25 Among those under age 35.

26 Chen et al., "Reduced Aflatoxin Exposure Presages Decline in Liver Cancer Mortality in an Endemic Region of China."

27 Univeristy Research Co., LLC, "Strengthening Coordination between the Ministry of Health and Municipal Governments for Improved Water and Sanitation."

28 USAID, Save the Children, and PCI, "PAISANO 2015 Midterm Evaluation Report," 2015, ix, http://pdf.usaid.gov/pdf_docs/pa00mfpd.pdf.

29 Joan Rose and Felicia Wu, "One of Climate Change's Biggest Dangers Is One the World Still Isn't Talking about," *Quartz*, August 1, 2015, <https://qz.com/469541/one-of-the-biggest-threats-from-climate-change-is-one-the-world-still-isnt-talking-about/>.

the outbreak of waterborne disease. After hurricane Mitch struck Guatemala in 1998, the incidence of cholera increased nearly tenfold.³⁰ The government of Guatemala, with both support and pressure from the United States, should prioritize food and water safety investments before conditions worsen further.

6. Does Feed the Future programming curb migration?

Probably to some extent, but the sheer scale of migration flows dwarves programmatic investment levels. The government of Guatemala estimates that 2.3 million Guatemalans live outside of the country and that 110,000 new migrants attempt to reach the United States each year—a bit under half of those succeed.³¹ Remittances, 97 percent of which come from the United States, now sum to over \$7 billion, or over 10 percent of GDP.³² A recent survey revealed that benefits accrue to a broad swathe of the population—38 percent of Guatemalans, over 6 million people, received remittances in 2016. This represents a nearly 40 percent increase since 2010.³³ While it is difficult to pinpoint the precise origins of undocumented migrants, remittance flows offer some insight into the regions from which these workers stem.

Overwhelmingly the largest volumes of remittances are sent to the vicinity of densely

populated Guatemala City. But outside of the capital, three of the five USAID-targeted Feed the Future/WHIP departments, Huehuetenango, San Marcos, and Quetzaltenango, are also among the largest recipient areas.³⁴ Half of remittances are sent to rural areas while half go to urban households, with which Feed the Future has very limited contact. The bottom line is that Feed the Future can take credit for creating additional employment and income-generating activities in rural areas of the Western Highlands and that may well stem the flow of migrants from within beneficiary households. This is no small feat for \$18 million per year. But the ultimate responsibility here lies with the government of Guatemala, which has the potential, but not the will, to invest orders of magnitude more in the medium-term development of rural and urban communities alike while immediately providing the most vulnerable population with a safety net to escape extreme poverty.

30 Ibid.

31 Urias Gamarro, "Remesas Benefician Al 38% de Guatemaltecos," *Prensa Libre*, February 17, 2017, <https://www.press-reader.com/guatemala/prensa-libre/20170217/281522225847130>.

32 Urias Gamarro, "Reciben Remesas 6.2 Millones de Guatemaltecos," *Prensa Libre*, February 16, 2017, <http://www.prensalibre.com/guatemala/migrantes/reciben-remesas-62-millones-de-guatemaltecos>.

33 Gamarro, "Remesas Benefician Al 38% de Guatemaltecos."

34 Gamarro, "Reciben Remesas 6.2 Millones de Guatemaltecos."



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Both the U.S. government and the government of Guatemala can improve individual and joint efforts to achieve shared food and nutrition security goals. Setting more realistic development targets, increasing transparency, and expanding emphasis on nutrition and on food and water safety are critical.

RECOMMENDATIONS

USAID/GUATEMALA'S FEED THE FUTURE PORTFOLIO IS LARGE, COMPLEX, AND DIVERSE.

It is beyond the scope of this report to provide a systematic, comprehensive assessment of its strengths and weaknesses. Dedicated donor and partner staff are clearly committed to maximizing welfare impacts for vulnerable Guatemalans in the face of formidable resource and political constraints. This section offers recommendations to both the U.S. government and the government of Guatemala to improve the efficacy and efficiency of their partnership to achieve shared food and nutrition security goals.

Recommendations for the United States government:

1. Reassess the overall balance and allocation of U.S. government resources to achieve shared high-level goals.

Feed the Future seeks to address the root causes of hunger and malnutrition. It is widely understood that, in Guatemala, these challenges are driven not by a lack of agricultural production or food availability, but rather by egregious inequality in economic opportunity. It is this same set of woeful economic prospects facing the rural and urban poor alike that drives migration flows to the United States and elsewhere.

Feed the Future/Guatemala is funded at about \$18 million per year. The U.S. Strategy for Engagement in Central America (CEN Strategy) was funded at \$750 million for FY2016 work in Guatemala, Honduras, and El Salvador.¹ A widely observed challenge is substantial earmarking within the Strategy's budget—just 40 percent of its resources have been funneled to development programming, with the balance reserved for military and security

1 Americas Society / Council of the Americas, "Update: Central America and the Alliance for Prosperity," February 25, 2016, <http://www.as-coa.org/articles/update-central-america-and-alliance-prosperity>.

support. The FY16 budget (and current continuing resolution for FY17 spending) allocated \$112 million for Guatemalan development assistance through the CEN Strategy—over six times Feed the Future’s total annual budget to achieve many of the same underlying objectives. Is the allocation of the \$112 million symbiotic with Feed the Future implementation? The alignment of these two separate tranches of development funding to achieve shared goals could be much more transparent.

Similarly, Community Development Funds (CDF) from Feed the Future have been used in recent years to reduce Food for Peace’s monetization requirements in Guatemala, resulting in a substantial reduction in commodities transferred to fund programming. But over the same period, agricultural commodities sold to fund Food for Progress development programs have quadrupled, resulting in a net increase in total commodity transfers. The rationale for these seemingly contradictory trends should be reexamined.

2. Broaden technical and targeting strategies to a.) encompass livelihoods diversification outside of agriculture, b.) include the poorest households that lack a critical asset base to effectively participate in export value chains, and c.) better address the needs of food-insecure urban communities.

One local expert remarked that “the export-oriented approach works for certain groups but leaves many out.” He assessed that in fact it systematically excludes the worst off, a concern that the CSIS team heard

repeatedly. Graduation model approaches within Food for Peace programming have not worked well, in part due to many households’ lack of agricultural land. The introduction of goat programs was questioned in Food for Peace’s midterm evaluation given that the poorest families are not able to care for a goat: the evaluation suggested that poultry production would be more accessible to those with the least resources.

If Feed the Future’s objective is to remain poverty and stunting reduction, it should consider with much greater granularity who is poor and who is stunted. Do those who fit the profile have agricultural land? If not, then agricultural interventions may generate a great deal of increased income while simultaneously failing to move the needle on poverty. Do they live in rural villages? Nearly a quarter of households in Feed the Future’s zone of influence are urban, bringing with them a different set of assets, potential, and opportunities than their rural counterparts.

3. Refocus on financial services and financial education.

The FY2010 plan identifies sparse access to financial services as a key barrier to rural economic growth in both agriculture and other sectors. The plan also notes a target of creating a new credit facility in order to increase access to loans for seed capital.

Rural Value Chain Project (RVCP) beneficiaries explained to visiting CSIS staff that large produce exporters will sometimes provide loans to individuals or cooperatives for input and

production costs. However, all risk is borne by borrowers in an environment characterized by severe and unpredictable weather and climate hazards. Beneficiaries noted that loan terms can sometimes be adjusted when unforeseeable production losses occur, but the conditions for such adjustments are not established ex ante and are unlikely to be applied in a uniform manner. RVCP and other projects have incorporated community-based savings and loan groups, with a focus on women and youth, into their programming and this work should be recognized positively. However, future program designers should not lose sight of broader access to, and education about, formal financial services as a viable end goal.

One RVCP arm reached an agreement with Oikocredit to provide lending services to four of their cooperative partners. Oikocredit is a global cooperative and social investor that provides credit and capital to microfinance institutions, cooperatives, and small to medium businesses. It focuses on fair trade, agriculture, and renewable energy in 70 countries and already had an established presence in Guatemala. This is a commendable service for those four groups but it is not a model that can be broadened to reach the most vulnerable, and the partnership has already ended.

Tailored, third-party financial products for both on- and off-farm enterprises with trans-

parent risk mitigation guarantees when exogenous shocks occur would likely increase uptake and investment. Clearly delineated and triggered adjustments contingent on external factors such as drought or market price collapse may include reduced principal or interest payments, deferral periods, or extended repayment timelines. The USDA Food for Progress program has recent experience in both financial trainings and a local credit union partnership and the success of loans it facilitated to over 5,000 beneficiaries, a majority of whom were women, should be carefully monitored and mined for future lessons.

An astounding 38 percent of Guatemalans receive remittances from abroad but, despite this growing influx of cash, just 27 percent of adults in the poorest 40 percent of households have a bank account according to the 2014 Global Financial Inclusion (Findex) Survey. This estimate likely overstates the penetration of formal financial services among the indigenous poor as interviews were conducted in Spanish only.² A recent survey found that remittances are overwhelmingly used for basic household consumption rather than productive investment—on expenditures like basic food, health services, and transport.³ A broader strategy to improve the management of those substantial resource flows could yield dividends. An improved ability both to save remittances and to channel them toward more productive investments (includ-

2 The 2014–15 ENSMI, in contrast, employed interviewers fluent in Q’eqchi, Mam, Kaqchikel and K’iche’. Ministerio de Salud Pública y Asistencia Social (MSPAS) et al., “Guatemala VI Encuesta Nacional de Salud Materno Infantil ENSMI 2014–2015: Informe de Indicadores Básicos.”

3 Gamarro, “Reciben Remesas 6.2 Millones de Guatemaltecos.”

ing children's nutrition) could better insulate households from near-term shocks while improving welfare over the medium to longer term. In finalizing this report, CSIS learned of a new USAID activity, the Opportunities for My Community Project (2016–2019), that promotes savings formalization and investments in education among remittance-receiving communities. This is a step in the right direction, offering a useful platform from which to consider a continuum of financial services that addresses the needs of poor individuals and medium-sized enterprises alike.

4. Better leverage investments from the government of Guatemala.

In 2010, Feed the Future made it clear that “political will of the government of Guatemala to take ownership of the initiative as part of a country-led process” was a prerequisite to the initiative's success.⁴ It explained that the partnership would prioritize tackling policy constraints, and would make key investments in areas such as “rural finance, infrastructure (irrigation, rural roads, packing sheds, colds chains), [and] research and extension” in the first year.⁵ There is scant evidence that the government of Guatemala has kept up its end of the bargain.

The work of Feed the Future will now be carried forward by the U.S. government's Global Food Security Strategy of 2016. The strategy does not yet specify focus countries and the level of food security funding earmarked for Guatemala in

the future remains uncertain. What is certain is the United States' deep and historic relationship with this Central American neighbor, along with its contributory role in fomenting current economic and political challenges (see a related CSIS commentary for further discussion of this history⁶). Motivated by strategic interests related to migration and trade, the United States will continue to have an abiding interest in Guatemala's growth and development. Successive Guatemalan governments have been equally aware of this reality. An analogous lack of domestic resource mobilization to address the health and welfare of a country's most vulnerable segments would mount a real barrier to collaboration in many other bilateral relationships, and Guatemala should be no exception. The United States should devise a strategy to incentivize increased domestic investment in social and economic infrastructure and consider a reduction or withdrawal of some support in the absence of meaningful change. Guatemala is by far the wealthiest of the 19 Feed the Future focus countries and it isn't paying its fair share of the development tab.

Recommendations for the government of Guatemala:

1. Substantially increase funding for public-sector health system and social safety net programs.

Rural areas have just 3 health workers for every 10,000 Guatemalans. This ratio is nothing short of scandalous in a country

4 USAID, “Guatemala Feed the Future FY 2010 Implementation Plan,” 8.

5 Ibid.

6 Reid Hamel, “The Challenges of Country-Led Development: Insights from Guatemala,” CSIS Commentary, November 2016, <https://www.csis.org/analysis/challenges-country-led-development-insights-guatemala>.

with such relative wealth, but just 1.5 percent of its GDP is allocated to the entire public health system. It is no wonder, then, that poor children's health and nutrition outcomes remain abysmal two decades after the civil war came to an end. The government of Guatemala should carefully reexamine the economic as well as the moral case for health and nutrition investments. Poor physical and cognitive development, recurrent and chronic illness, and the lack of care for acute conditions and injuries collectively undermine the social and economic potential of much of the country, with substantial spillover effects that curtail gains for rich and poor alike. Multiple international donors and partners remarked that government agencies lack the basic resources to implement well-crafted hunger alleviation plans.

Guatemala can take pride in a recent history of establishing food and cash transfer programs targeting needy populations but such programs are woefully underutilized. In 2008, the government, under Colom,⁷ began to support a food aid program, *Bolsa Solidaria*, that provided commodities (rice, beans, and oil) to 50,000 families in the country's western areas as well as in the capital.⁸ In 2012, the Pérez ad-

ministration rebranded the program as *Mi Bolsa Segura* while leaving it substantively intact with an urban focus. The program is designed to provide temporary food aid to vulnerable families with a high level of social risk, namely single mothers, mothers under age 20, adults over age 65, and people with disabilities or chronic diseases.⁹

In 2011, the Ministry of Social Development initiated a conditional cash transfer program, *Mi Bono Seguro*, which seeks to improve demand for and use of health and education services among poor rural families. It promotes early childhood development and school enrollment, attendance, and retention among children up to age 15.¹⁰ Children under six and pregnant and lactating women meet the conditionality with regular health check-ups while children 6–15 fulfill the requirement with a 90 percent school attendance rate. The program has an additional modality that can be activated during emergencies: resources can be quickly mobilized and transferred to any beneficiaries living in areas declared to be a State of Emergency. The design of the program shows great promise.

7 The Colom administration was characterized by significant social welfare spending focused on education, health, and economic opportunity. One such program, *Mi Familia Aprende*, or *My Family Learns*, sought to complement school feeding programs with community-level behavior change. Another Colom initiative, *Mi Comunidad Produce*, or *My Community Produces*, was launched by the First Lady (Sandra Torres was later barred from running for president on the grounds of being a direct relative of a former president despite divorcing Colom) to increase the productive capacity of smallholder producers and link them to regional and international markets. USAID, "Guatemala Feed the Future FY 2010 Implementation Plan."

8 Ibid.

9 Food and Nutrition Security Platform (FNS), "Guatemala: Mi Bolsa Segura," accessed February 6, 2017, <http://plataformacelac.org/programa/153>.

10 Food and Nutrition Security Platform (FNS), "Guatemala: Mi Bono Seguro," accessed February 6, 2017, <http://plataformacelac.org/programa/151>.

Table 6.1: Household level participation in national social assistance programs in the Feed the Future/WHIP Departments, 2014.

DEPARTMENT	POVERTY RATE	<i>MI BOLSA SEGURA</i> (Food)	<i>MI BONO SEGURO</i> (Cash)
Huehuetenango	74%	0.70%	21.20%
Quetzaltenango	56%	0.70%	8.50%
Quiché	75%	2.10%	25%
San Marcos	60%	0.70%	17.90%
2014 Totonicapán	78%	1.50%	11.10%

The 2014 Living Standards Survey (ENCOVI) assessed the proportion of households both nationally and at the department level receiving these two social assistance programs. Nationwide, just over 9 percent of households benefited from *Mi Bono Seguro* (cash) while 4 percent participated in *Mi Bolsa Segura* (food) that year. In terms of population coverage, neither safety net program had the reach of public transfers for agricultural inputs (10.4 percent of the population), school feeding (16 percent), or educational scholarships (25.4 percent).¹¹ Table 6.1 reflects food and cash transfer participation levels within the five western departments of focus within Feed the Future and USAID’s Western Highlands Integrated Program (WHIP).

These types of social assistance programs seek to reach the most vulnerable segments

of the population but are generally not well targeted. In 2014, 73 percent of extremely poor households benefited from one such program, but so did 35 percent of non-poor households.¹² Given the very high incidence of poverty in these five departments, there is substantial scope for the expansion and improved targeting of such programs.

2. Create a permanent, expanded civil service for agricultural extension and prioritize funding for, and evidence-based regulation of, agricultural research.

Agricultural extension services are too critical to the rural economy to ebb and flow with the political tide. As discussed in Chapter 2, the Morales administration terminated the contracts of about 1,000 agricultural extension workers in its first month of office, slowly refilling the positions some six or more months later, sometimes with the

11 Instituto Nacional de Estadística (INE), “Encuesta Nacional de Condiciones de Vida (ENCOVI) 2014,” January 2016, <http://www.ine.gob.gt/sistema/uploads/2016/02/03/bWC7f6t7aSbEI4wmuExoNR0oScpSHKyB.pdf>.

12 Ibid.

same people. Meanwhile, smallholder farmers endured a season without public-sector technical assistance. But the limited potential reach and impact of the current system's model, with just three extension workers per municipality on six-month contracts, cannot be overstated. Such anemic investment in the dissemination of improved agricultural practices and inputs that are known to increase incomes and insulate against shocks belies official commitments to the welfare of these communities. Minister of Agriculture Mario Méndez told CSIS he agreed that year-long or permanent contracts would improve agent motivation and performance.

Investments in agricultural research and development are by far the lowest in the region, at just 0.14 percent of this agricultural economy's GDP. The CSIS team was impressed with the work of the Institute for Agricultural Science and Technology (ICTA) to develop or import; clean, test, and adapt; and eventually distribute or commercialize improved varieties of maize, beans, potatoes, sweet potatoes, and cassava. But the public budget is barely sufficient to cover ICTA staff salaries. All funds for research, chemicals, equipment, and other necessities come from donors. One primary piece of specimen heating and cooling equipment was out of order due to electrical voltage variation and other appliances are more than 30 years old.

A scientist with 25 years of experience at ICTA explained that, at times, staff are unable to proceed with their work due to a lack of basic resources, and they must halt important processes until sufficient funds become available from donors. *Total* public agricultural sector spending sums to less than half a percent of GDP, a rate that should and does alarm food security and agriculture donors. The government of Guatemala should reflect upon the strategic and political as well as the economic advantages of increased funding in applied agricultural research.

Agricultural research is undermined not only by inadequate funding, but also by restrictive policies. Guatemala does not allow for the commercial production of genetically engineered plants despite the fact that farmers, and particularly maize farmers, are in favor of increased biotechnology adoption.¹³ The country does import genetically engineered crops for food and animal fodder despite domestic production bans. Since 2006, it has permitted field trials and seed production for export (although no genetically engineered seeds had actually been exported as of November 2016).¹⁴

Field trial paperwork approval of Herculex maize, which better controls fumonisin (fungal) contamination while reducing pesticide use, took almost two years.¹⁵ Herculex maize ultimately earned the approval of the na-

13 Tay, "Guatemala Agricultural Biotechnology Annual: Efforts to Strengthen the Cartagena Protocol."

14 Karla Tay, "Report: Guatemala Agricultural Biotechnology Annual," Global Agricultural Information Network (GAIN), November 20, 2016, https://gain.fas.usda.gov/Recent%20GAIN%20Publications/Agricultural%20Biotechnology%20Annual_Guatemala%20City_Guatemala_11-21-2016.pdf.

15 Ibid.

tional Biosafety Committee but still cannot be grown commercially. Guatemalan maize producers have been uncompetitive with their Honduran neighbors for 15 years due to Honduras' embrace of biotechnology which has resulted in higher produce quality and safety at lower prices.¹⁶

Guatemala is a signatory of the Cartagena Protocol on biosafety. The National Council on Protected Areas (CONAP) leads the Cartagena Protocol commitment and thus holds control over biotechnology policy. As of late 2016, CONAP had submitted a draft regulatory framework to MAGA, the Ministry of Health, and the Ministry of the Environment for consideration.¹⁷ The Interagency Commission on Biotechnology has recommended that genetically engineered crops be approved for commercial production but CONAP, an office in the executive branch that reports directly to the president, has maintained an obstructionist position. This political stalemate harms the health and economic welfare of rural Guatemalans and must be overcome as soon as possible.

3. Join the Caribbean Catastrophe Risk Insurance Facility (CCRIF) to improve humanitarian response in the face of mounting climate change threats.

Every senior expert that the CSIS team spoke with agreed that climate change is a pressing concern for Guatemala, and particularly for the rural poor in the Western Highlands. Parametric risk insurance schemes that more efficiently respond to natural hazards and climate change have captured much attention in recent years.¹⁸ In December 2015, at the U.N. climate talks in Paris, President Obama announced a \$30 million U.S. contribution to climate risk insurance schemes in the Pacific region, in Africa, and in Central America and the Caribbean. The portion earmarked for the Americas was specifically designated to expand Caribbean Catastrophe Risk Insurance Facility (CCRIF) membership coverage to Central American countries.¹⁹ In April 2016, the European Commission contributed an additional 14 million Euros to the Multi-Donor Trust Fund to facilitate low-cost risk insurance coverage for Central American countries' CCRIF.²⁰

16 Tay, "Guatemala Agricultural Biotechnology Annual: Efforts to Strengthen the Cartagena Protocol."

17 Tay, "Guatemala Agricultural Biotechnology Annual."

18 Daniel J. Clarke and Stefan Dercon, *Dull Disasters: How Planning Ahead Will Make a Difference* (Oxford University Press, 2016), <https://www.gfdr.org/dull-disasters-how-planning-ahead-will-make-difference>; Theodore Talbot and Owen Barder, "Payouts for Perils: Why Disaster Aid Is Broken, and How Catastrophe Insurance Can Help to Fix It," July 2016, <http://www.cgdev.org/sites/default/files/payouts-perils-why-disaster-aid-broken-and-how-catastrophe-insurance-can-help-fix-it-0.pdf>; Pete Ogden, Ben Bovarnick, and Yume Hoshijima, "Key Principles for Climate-Related Risk Insurance," Center for American Progress, August 2015, <https://cdn.americanprogress.org/wp-content/uploads/2015/08/26131302/ClimateRiskInsurance-report.pdf>.

19 In April 2015, the Council of Ministers of Finance of Central America, Panama, and the Dominican Republic (COSEFIN) signed a Memorandum of Understanding with the Caribbean Catastrophe Risk Insurance Facility (CCRIF) that allowed those countries to join as equal members. "Obama Unveils \$30 Mln for Climate Risk Insurance to Protect Poor," Reuters, December 1, 2015, <http://www.reuters.com/article/climatechange-summit-insurance-idUSL8N13Q3S320151201>.

20 World Bank, "European Commission and World Bank Sign Agreement on Catastrophe Risk Insurance for Caribbean and Central American Countries," accessed February 17, 2017, <http://www.worldbank.org/en/news/press-re>

But to date, Nicaragua remains the only Central American nation among the 17 CCRIF members. In 2016, it received its first two payments, for an earthquake in June and a hurricane in December. Given Guatemala's significantly higher level of natural hazard and climate change risk exposure (discussed in Chapter 1), the government of Guatemala should prioritize attaining CCRIF membership.

Recommendations for both the U.S. government and the government of Guatemala:

1. Set more realistic targets for development goals.

Both governments struggle to set realistic and attainable development targets. Feed the Future aims to significantly reduce poverty and stunting levels across a population of 1.6 million by directly reaching 385,000 people while likely systematically excluding some of those most vulnerable to poverty and stunting. Its strategic documentation fails to mount a compelling case as to how its basket of interventions could drive double-digit poverty and stunting reductions among the broader population, particularly without reaching those with the most ground to gain.

Quite similarly, Guatemala's original Zero Hunger Pact Plan sought to reduce the national prevalence of stunting by 10 percentage points in four years without unlocking resources for complementary health and poverty interventions. Aspirational targets are

laudable when they spur political leadership, community and civil society engagement, and resource mobilization from domestic coffers and international donors alike. But overly ambitious targets, or even realistic ones lacking a sound technical strategy and financial backing, run the risk of never being taken seriously.

Reliance upon a bevy of improbable assumptions for development program success is another sure sign of an unrealistic target, or at least of an insufficient plan. For example, a rural livelihoods program in Guatemala should not assume radical increases in public resource allocations, healthcare safety nets, access to private sector financing, or immunity from natural hazards.

2. Increase transparency in both program financing and progress.

Documentation of programmatic resource allocations and of program outputs and impacts is sparse in the cases of both governments. Financial allocations and flows should be much more transparent and readily accessible to the public in order to elevate the quality of public discussion and debate. Program output and impact goals, with benchmarks for progress, should be clearly articulated at the outset of any new investment. Funders should report against indicators on a regular basis, acknowledging shortcomings as learning opportunities where they present themselves. Feed the Future could improve data transparency by

publicly releasing project and portfolio-wide survey reports and accompanying data within a year of data collection.

3. Expand emphasis on food and water safety and nutrition.

The acute need for improved food and water safety in Guatemala is discussed in Chapter 5. While that discussion concludes that such concerns are inadequately addressed in the portfolio, it is also nonsensical that an international donor should take up the mantle of this responsibility. Feed the Future should consider supporting technical assistance at the policy level to improve food and water safety, but the government of Guatemala must prioritize investments in this area. How can it expect the international community, and the United States in particular, to invest in its people and economy when it cannot summon the resources to protect its most vulnerable citizens from easily preventable food- and waterborne illness?

In terms of broader nutrition investments, Feed the Future and the Global Health Initiative have made commendable contributions at both population and policy levels, but they are no substitute for viable national systems to prevent and treat chronic malnutrition through such measures as behavioral change, education and mass media, means-tested public-sector transfers (cash, vouchers, commodities), supplementation, improved access to diverse diets through home production and markets, biofortification, expanded ac-

cess to contraception, improved antenatal and young child care, etc. The government of Guatemala simply must step up.

4. Expand civil society strengthening efforts to increase supply-side accountability through demand for services.

The Guatemalan Advisory Council for Social Participation (INCOPAS) provides a forum in which private sector and civil society stakeholders in national food security can engage with the government of Guatemala.²¹ INCOPAS is recognized as a key component in the national system for food security and nutrition but CSIS was told that it has been under-engaged throughout the life cycle of Feed the Future/Guatemala. The emphasis on local governance in the portfolio is predominantly focused on the supply side of local service provisioning and a number of observers remarked that more could be done to empower civil society and advocacy groups in order to strengthen demand, accountability, and the social contract. Low education levels and an alarming prevalence of illiteracy remain a major hindrance to community engagement and accountability in Guatemala and must be proactively addressed.

21 USAID, "Guatemala FYI 2011–2015 Multi-Year Strategy."

Feed the Future Guatemala

Stakeholders that informed this report

USAID/Guatemala

USAID/Bureau for Food Security (Washington, D.C.)

U.S. Department of Agriculture Foreign Agricultural Service in Guatemala

Guatemalan Ministry of Agriculture (MAGA)

Guatemalan Secretariat for Food Security and Nutrition (SESAN)

AGEXPORT

Anacafé

Buena Milpa

FANTA III

MásFrijol

MásRiego

Nexos Locales

Nutri-Salud

SEGAMIL (Food for Peace)

Feed the Future Guatemala

Municipalities

Dept. and Municipality	Pop. Estimate (2016)[1]	Proportion of the dept. pop. in ZOI (2016)	Proportion of the pop. identifying as indigenous (2014)[2]	Proportion of the pop. living in poverty (2014)[3]	Proportion of the pop. under age 18 (2014)[4]	Prevalence of stunting, children under 5 (2014)[5]	Proportion of pop. with access to improved sanitation services (2014)[6]
Huehuetenango (32 municipalities)	1,294,114	45.10%	56%	73.80%	47.40%	67.70%	37.30%
Feed the Future Municipalities (10)	Chiantla	104,657					
	Concepcion Huista	19,479					
	Cuilco	63,300					
	Jacaltenango	47,899					
	La Democracia	46,994					
	La Libertad	41,463					
	San Antonia Huista	20,127					
	San Sebastian Huehuetenango	32,015					
	Santa Cruz Barillas	169,506					
	Todos Santos Chuchumatan	38,310					
Quetzaltenango (24 municipalities)	882,6006	8.60%	47.10%	56%	41.30%	48.80%	61.70%
Feed the Future	San Juan Ostuncalco	57,019					
	Concepción Chiquirichapa	19,064					
Quiché (21 municipalities)	1,124,965	52.10%	83.90%	74.70%	47.30%	68.70%	38.50%
Feed the Future Municipalities (8)	Chajul	62,705					
	Chichicastenango	165,019					
	Cunén	40,709					
	Nebaj	98,888					
	Sacapulas	51,696					
	San Juan Cotzal	31,006					
	Uspantán	77,651					
	Zacualpa	58,517					

APPENDIX B

Dept. and Municipality		Pop. Estimate (2016)[1]	Proportion of the dept. pop. in ZOI (2016)	Proportion of the pop. identifying as indigenous (2014)[2]	Proportion of the pop. living in poverty (2014)[3]	Proportion of the pop. under age 18 (2014)[4]	Prevalence of stunting, children under 5 (2014)[5]	Proportion of pop. with access to improved sanitation services (2014)[6]
San Marcos (29 municipalities)		1,147,401	23.40%	33%	60.20%	47.70%	54.80%	35.60%
Feed the Future Municipalities (8)	El Rodeo	18,125						
	Nuevo Progreso	41,339						
	San Lorenzo	12,855						
	San Miguel Ixtahuacán	39,330						
	San Pablo	59,943						
	San Rafael Pie de Cuesta	16,739						
	Sibinal	17,462						
	Tajumulco	63,236						
Totonicapán (8 municipalities)		553,362	31%	93.60%	77.50%	43.90%	70%	30.10%
Feed the Future	Momostenango	145,515						
	San Lucía La Reforma	26,182						
Total Population of 5 Western Departments		5,002,448						
Total Population of 30 ZOI Municipalities		1,686,748						
Proportion of Population in 5 Departments Considered ZOI		33.70%						

Major Feed the Future Guatemala Activities

Name	Partner	Duration	Budget (total)
Rural Value Chains Project	Guatemalan Export Association (AGEXPORT)	May 2012–May 2017	\$21 million
Rural Value Chains Project	National Coffee Association (Anacafe)	May 2012–May 2017	\$21 million
Nexos Locales	DAI	2014–2019	\$16.3 million (\$4.7 million from Feed the Future)
Buena Milpa	International Maize and Wheat Improvement Center (CIMMYT)	Jan. 2015–Dec. 2018	\$7 million
MasFrijol	Michigan State University	Mar. 2014–Mar. 2018	\$4.3 million
MasRiego	University of California, Davis	Jul. 2015–Jun. 2018	\$3.4 million
Taking an Innovative Approach to Food Security and Trade	National Cooperative Business Association (NCBA)/Cooperative League of the U.S. (CLUSU) International	Apr. 2014–Sep. 2018	\$3.5 million
Sustainable Water Management in the Cuchumatanes	Fundación para el Desarrollo y la Conservación (FUNDAECO)	Jul. 2013–Jul. 2016	\$1 million
Partnering for Innovation	Fintrac partnerships with Popoyán, Post-Cosecha, Farmforce, and Agrijovent	Jun. 2015–Jul. 2017	\$6.3 million
Impact Evaluation of the Government of Guatemala's Zero Hunger Pact	International Food Policy Research Institute (IFPRI)	Sep. 2011–Sep. 2016	\$3.7 million
Nutri-Salud	University Research Council	Jun. 2012–May 2017	\$31.8 million
Food and Nutrition Technical Assistance (FANTA) III	FHI 360	Jan. 2012–Jan. 2017	\$1.2 million
Strengthening Partnerships, Results, and Innovations in Nutrition Globally (SPRING)	John Snow International	Feb. 2014–Aug. 2016	\$0.1 million
Food Security Focused on the 1,000 Window of Opportunity (SEGAMIL)	Catholic Relief Services	Aug. 2012–Jun. 2018	\$30 million
Western Highlands Program of Integrated Actions for Food Security and Nutrition (PAISANO)	Save the Children	Aug. 2012–Jun. 2018	\$40 million
Promoting Food Security and Trade Integration through SPS and Other Agriculture-Related Capacity Building	U.S. Department of Agriculture	May 2011–Jul. 2019	\$2.4 million in Guatemala (of \$10.2 for the region)

ABOUT THE AUTHOR

REID HAMEL is a senior fellow with the CSIS Global Food Security Project. Her work focuses on U.S. policy and strategy in global food security investments, with an emphasis on agricultural intensification and sustainability; risk management, financial services, and social protection; smallholder livelihoods; and nutrition. She is the author of a previous report in the Tracking Promises series with a focus on Bangladesh, as well as of numerous CSIS commentaries pertaining to acute and chronic food insecurity worldwide.

An economic demographer, Dr. Hamel designed and taught a new course, Global Population Growth and Food Security, at Middlebury College. She completed her Ph.D. at the University of California, Berkeley, where her dissertation quantified the public-sector cost savings to social safety net programs associated with the incorporation of voluntary family planning services. Case studies were drawn from two food-insecure countries, Niger and Tajikistan, in which nascent safety net programs are a key tool to combat hunger and malnutrition.

Dr. Hamel was previously associate director of the Save the Children Department of Hunger and Livelihoods, where she led research design and evaluation strategy. She has also worked with the Economic Development Program at the Asia Foundation, with the Caucasus Research Resource Centers, and as a Peace Corps volunteer in Azerbaijan.

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