

Integrating Gender and Nutrition within Agricultural Extension Services

GUATEMALA

Landscape Analysis

Working Document

September 2016



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Abbreviations

CDCS	U.S./Guatemala Country Development Cooperation Strategy
EAS	Extension and Advisory Services
FANTA	Food and Nutrition Technical Assistance III Project
FAO	Food and Agriculture Organization of the United Nations
GHI	Global Health Initiative
GOG	Government of Guatemala
HDI	Human Development Index
INGENAES	Integrating Gender and Nutrition within Agricultural Extension Services
MAGA	Ministry of Agriculture, Livestock and Food (Ministerio de Agricultura, Ganaderia y Alimentacion)
PLANOCC	Food Security Plan for the Western Highlands
SESAN	The Food Security and Nutrition Secretariat
SNEA	National Agricultural Extension System (Sistema Nacional de Extension Agricola)
USAID	United States Agency for International Development
WEAI	Women's Empowerment in Agriculture Index
WHIP	Western Highlands Integrated Program
ZOI	Zone of Influence

Introduction

The Integrating Gender and Nutrition within Agricultural Extension Services (INGENAES) project, funded by the United States Agency for International Development (USAID), is designed to strengthen the efforts of the Feed the Future initiative to reduce global hunger and food insecurity. INGENAES endeavors to further integrate nutritional programming and gender sensitivity into agricultural extension and advisory services (EAS) in target Feed the Future countries, with the end goals of increasing agricultural productivity, improving nutritional outcomes, reducing poverty, and achieving gender equity.

This landscape study provides an overview of issues related to INGENAES' project objectives in Guatemala. The report gives a summary of country-wide issues but focuses particular attention on the Western Highlands where indigenous populations are the majority, and where Feed the Future is concentrating efforts under the umbrella of the USAID-led Western Highlands Integrated Program (WHIP). This report pays specific attention to the indigenous population of the Western Highlands and to the women of those communities. A 2013 baseline survey was conducted in the WHIP Zone of Influence (ZOI) to help determine the impact of WHIP projects. The data collected is particularly relevant to those intending to work in the Western Highlands and, as such, is frequently referenced in this report.

After beginning with general information about Guatemala, its people, and the challenges they face the report moves on to discuss nutrition related concerns and how they are being addressed by the national government. From there the document continues with an overview of the agricultural sector and some of the constraints (amongst them, poorly established land rights) that affect growth potential. A summary of the relatively new national extension system follows before Feed the Future's Multiyear Strategy for 2011-2015 and the U.S. Government's Country Development Cooperation Strategy is outlined. Information is then provided about some ongoing projects within the Western Highlands that may be of particular interest to the INGENAES team before concluding with final thoughts.

INGENAES supports the development of improved extension and advisory systems (EAS) to reduce gender gaps in agricultural extension services, increase empowerment of women farmers, and improve gender and nutrition integration within extension services by directly or indirectly assisting multiple types of stakeholders within a country, such as farmers, producer groups, cooperatives, policy makers, technical specialists, development NGO practitioners, and donors.

INGENAES efforts will strengthen the capacity of key stakeholders and providing the fora and networks for them to coordinate and reach agreement on policies and strategies to implement improved EAS that better meet the needs of men and women farmers. While INGENAES project will not directly monitor beneficiary impact, it will focus on changes in institutions that directly impact men and women who access agricultural information, training, technologies and nutrition information. Improved services empower women and engage men.

INGENAES will strengthen institutions by identifying their needs and strengthening their capacity to effectively integrate gender and nutrition sensitive information and activities into agricultural extension systems with the aim to promote gender equality, improved household nutrition, and increased women incomes and, subsequently, household food security. Based on the identification of four main gaps in extension services in terms of gender and nutrition integration, INGENAES activities can be divided into the following action areas:

- Build more robust, gender-responsive, and nutrition-sensitive institutions, projects, and programs capable of assessing and responding to the needs of both men and women farmers through extension advisory services (EAS);
- Identify and scale proven mechanisms for delivering improved EAS to women farmers;
- Disseminate technologies that improve women's agricultural productivity and increase household nutrition; and,
- Apply effective, nutrition sensitive, extension approaches and tools for engaging both men and women.

Indicative activities of the INGENAES project include: learning exchanges, assessments, curricula development, training into action, mentoring relationships, internship experiences, and networks that focus on identifying gender-responsive and nutrition-sensitive innovations that can be promoted by EAS organizations, and adopted by men and women farmers. Developing these outputs collaboratively with agricultural extension experts and other partners will transform extension-relevant institutions working directly with men and women farmers.

In each country INGENAES needs to examine the relationships, identify the key change actors, build their capacity, and provide them the incentives to make changes (e.g., set new policies, employ new management practices, modify organizational structures, make changes in practice, adopt innovations). The key actors will vary from country to country, although policy makers, the Ministries of Agriculture and Health, NGOs and the private sector, and of course, women farmers, are likely to be involved in most countries. Key actors will be identified as part of the needs and scoping assessments. Thus, and in preparation of country level activities, the consortium gathers information and key contacts to develop a landscape study of the agricultural sector in that country, a simple description of the pluralistic extension system, nutrition related initiatives, and gender issues. As such, the landscape study is intended as a preparatory tool and handy reference document for work in country. Each landscape study will be updated periodically as INGENAES continues to engage in that country and identifies new key contacts, organizations, and initiatives.

Background

The Republic of Guatemala is a small, multi-ethnic country in Central America. Comprised of 22 departments (analogous to states), it shares borders with El Salvador, Belize, Honduras and Mexico (see Map of Guatemala). In the last 25 years, the population has doubled to 14.9 million people and it is expected to double again in the same time frame (The Central Intelligence Agency, 2016; USAID|Guatemala, 2012). Spanish is the national language but there are 23 other officially recognized languages representative of the various Mayan, Xinka, and Garifuna indigenous communities that, together, comprise 43% of the population (the remaining 57% who are not indigenous are known locally as Ladino) (The Central Intelligence Agency, 2016; USAID|Guatemala, 2012). Life expectancy at birth is 72.02 years (74.06 for women and 70.07 for men) with a mortality rate of 126 per 1,000 for females, and 236 per 1,000 for males (The Central Intelligence Agency, 2016; UNDP, 2015).

Map of Guatemala



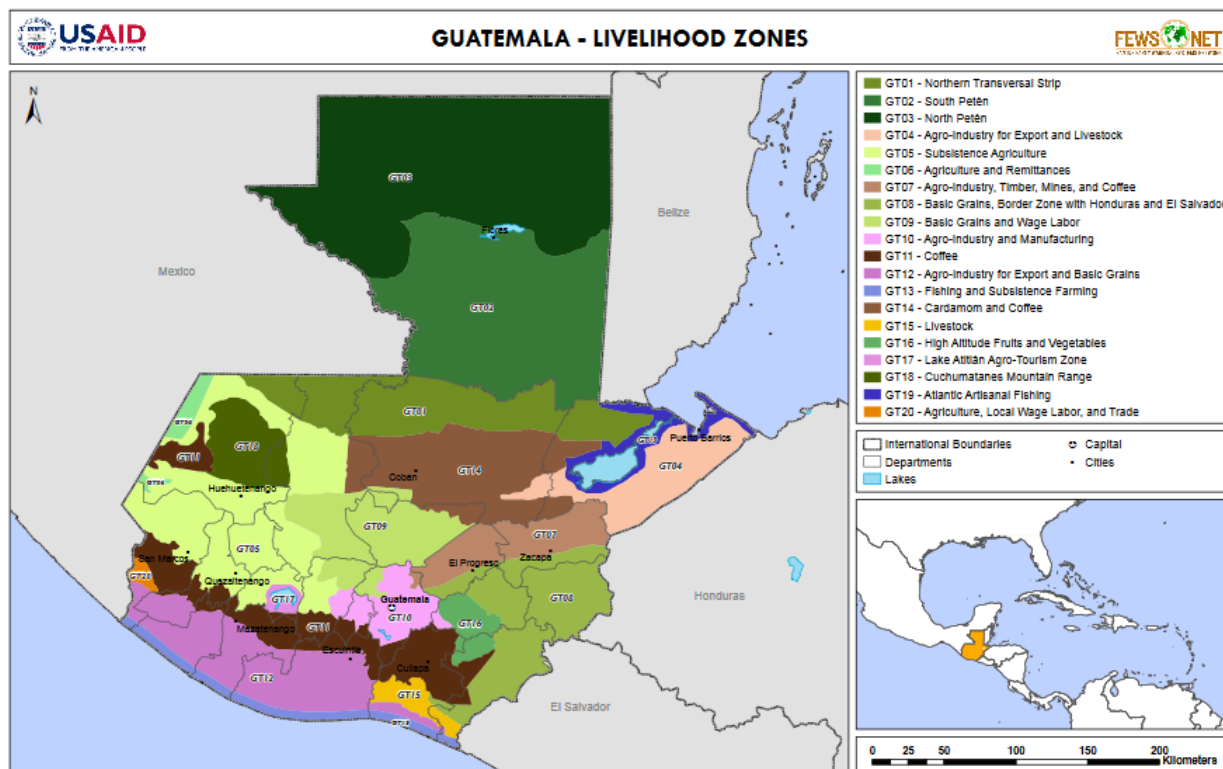
Source: Nations Online Project

The population is rather young with a median age of 21.4 years (The Central Intelligence Agency, 2016). Among the total population, 54% lives below the poverty line but that number spikes to 75% for the rural population (80% of which is indigenous) (The Central Intelligence Agency, 2016; USAID, 2010). A baseline survey was conducted in 2013 to gather data on the effectiveness of activities carried out in the ZOI under

the WHIP which, among other programs, encompasses Feed the Future. That survey found that 76% of residents in the ZOI live below the poverty line while 27% live below the extreme poverty line (27.17 and 13.18 Quetzales per capita daily, respectively) (Angeles, et al., 2014).

On a broader scale, the economy is the largest in Central America and boasts a per capita GDP of \$2,650 but the benefits of any economic strength are felt mostly by the urban, non-indigenous population (USAID|Guatemala, 2012). The 2009 global financial crisis slowed economic growth to 0.6% but, by 2012, it had grown to 3% - largely due to tourism and the export power of agriculture and industrial products (USAID, 2014). Within the country as a whole, there is a 3% unemployment rate; however 49.9% of the labor force is engaged in vulnerable employment¹ (UNDP, 2015). Compared to men’s participation in the labor market at 88.2%, women’s participation is low at 49.3% (UNDP, 2015; USAID|Guatemala, 2012). Employment opportunities are largely determined by geographic location, as seen in Figure I: Guatemala Livelihoods Map.

Figure I: Guatemala Livelihoods Map



Source: Famine Early Warning Systems Network, 2010

¹ Lawrence Jeff Johnson of the International Labour Organization defines vulnerable employment as the sum of own-account and contributing family workers who are engaged in informal employment arrangements wherein the workers often lack decent wages, proper working conditions, voice, or adequate social security (Vulnerable employment and poverty on the rise, Interview with ILO chief of Employment Trends Unit, 2010).

With a value of 0.627 on the Human Development Index (HDI)², Guatemala is considered to be in the medium human development category, ranked at 128 out of 188 countries and positioned below the average of 0.748 for Latin America and Caribbean countries (UNDP, 2015). Inequality and racism are pervasive. When the HDI is adjusted for inequality it plummets from 0.627 to .443. Inequality in life expectancy at birth is 17.4%, in education it is 36.2%, and in income it is 33.1% (UNDP, 2015). The richest 20% of the population accounts for more than 51% of all consumption, whereas the indigenous account for just 25% of the country's total income and consumption (The Central Intelligence Agency, 2016; Ospina, 2015).

The greatest disparities in social, economic, and political opportunities lie between the urban and rural populations, and the Ladinos and indigenous (USAID|Guatemala, 2012). These cleavages result in the exclusion of roughly half the population which is evidenced by their limited access to economic resources and opportunities, education, and public services. These outcomes factor into poor health and nutrition, susceptibility to recruitment into crime, and the unsustainable use of natural resources (USAID|Guatemala, 2012).

Education is one of the areas where inequality has the most profound impact. While there is positive data regarding both literacy (81.5% of the total population is considered literate)³ and primary school enrollment, students are generally not well-served by the education system in Guatemala (The Central Intelligence Agency, 2016). As of 2009, Guatemala had achieved almost universal primary school enrollment (99% of boys, 92% of girls) however only 75% of students complete primary (of those, 80% were boys, and 73% were girls) (USAID|Guatemala, 2012). Only 29% of children enroll in lower secondary and just 18% enroll for upper secondary (UNDP, 2015; USAID|Guatemala, 2012). In addition to poor enrollment and retention, Guatemala's poor educational outcomes are fueled by low investment of GDP to education (3.4%); low qualification standards for teachers; school fees that are often prohibitive for poor families; demand for child labor; and lack of access to schools – particularly in rural areas (UNDP, 2015; USAID|Guatemala, 2012). This contributes to disparities in educational attainment as indigenous children average 3.8 years of formal education, while their non-indigenous counterparts average twice that (USAID|Guatemala, 2012). Additionally, without schooling, the indigenous population rarely develops the proficiency to speak Spanish (the national language that 60% of the population speaks) which further isolates them (The Central Intelligence Agency, 2016). According to the baseline survey for WHIP, within the Zone of Influence (ZOI) for WHIP, almost eight out of every ten females, and seven out of every ten males, reported not completing primary education (Angeles, et al., 2014).

The flawed educational system rarely prepares children of either gender for meaningful economic opportunities but, for girls - particularly indigenous girls - the situation is far worse. Poor families often require the added labor of children to help make ends meet; for girls, this may also include providing childcare for siblings. Among children aged 5-14, 25.8% are engaged in child labor (Global Education Fund; UNDP, 2015). For girls in rural areas, distance to a school can present additional dangers. As noted by Elizabeth Quiroa, former Secretary General of the Presidential Secretariat for Women girls "are subject to rape, violence and forced participation in the drug trade" (Guinan, 2015). Poverty sometimes also drives

² The Human Development Index is a measure of average achievement that focuses on people and their capabilities by examining indicators for health, education, and standard of living (United Nations Development Programme, n.d.).

³ 87.4% of men and 76.3% are categorized as literate (The Central Intelligence Agency, 2016).

families to encourage early marriage for young daughters to help with debts or the financial costs of the child (Ospina, 2015). This contributes to a high rate of teen and child pregnancy. The birth rate attributed to women aged 15-19 is 97.2 per 1,000 women; however, this does not capture the alarming rate of child pregnancies (UNDP, 2015). In 2011, 3,046 girls between the ages of 10 and 14 gave birth in the midst of a rising trend of adolescent pregnancies in Guatemala. The country now has the highest adolescent fertility rate in all of Latin America (Valladares, 2012).

Universal access to contraception and reproductive health education in schools is written into law; however, in practice, actual access to these resources is very low. The Catholic Church's ban on contraception limits access to birth control and information related to family planning. Additionally, health centers often deny girls birth control if they are not accompanied by a man (Valladares, 2012). This lack of contraceptive access and awareness, along with the high proportion of reproductive aged-individuals, has led to Guatemala having the highest population growth rate in Latin America (The Central Intelligence Agency, 2016). Maternal mortality is also one of the highest in the region with 140 deaths per 100,000 live births⁴ (compared to 85, the average for Latin America and the Caribbean) (UNDP, 2015).

The latter half of the 20th century was particularly tumultuous resulting in a brutal 36-year guerilla war. In 1985, while still in active conflict, a new constitution was signed transitioning Guatemala from a dictatorship to a democracy but the war did not end until the Peace Accords were signed in 1996. In addition to widespread human rights violations, the conflict claimed the lives of more than 200,000 people and forced another million to flee the country (The Central Intelligence Agency, 2016). In the wake of that war, democracy is still considered fragile and the government is struggling under the weight of its people's needs. A number of issues converge to create serious threats to stability and economic growth including organized crime, pervasive inequality and racism, poverty, corruption, natural disasters, a particularly young (and increasing) population, lack of institutional infrastructure, poor education, and widespread chronic malnutrition (USAID|Guatemala, 2012). These issues also contribute to greater out-migration which can place tremendous burdens on families⁵. Male out-migration is accelerating in Guatemala (World Bank Group, 2015). As of 2005, there were 1,136,175 Guatemalans living outside of the country, with 97% of them residing in the United States (Smith J. , 2006).

A weak judicial system, along with an environment of impunity and corruption, have nurtured a thriving criminal element and made Guatemala one of the most dangerous countries in the world (USAID|Guatemala, 2012). Criminal organizations partake in the transnational trafficking of humans, drugs and weapons while, within the borders, youth gangs are known to be involved in armed robbery, contract killings, and extortion. Either as perpetrators or victims, young people aged 15-24 are disproportionately involved in violence (USAID|Guatemala, 2012). Women are at particular risk of violence. Sexual violence, domestic violence, and femicide are rising in Guatemala fed by the machismo culture that helps normalize these abuses (BEVAN, 2014; USAID|Guatemala, 2012). A Small Arms Survey conducted in 2012 found that gender-based violence in Guatemala is at epidemic levels leading to the country ranking third in the world

⁴ Deaths are as much as five times higher for rural and indigenous mothers where skilled birth attendance is less than half that for urban and non-indigenous mothers (USAID|Guatemala, 2012).

⁵ It should be noted that, unlike what is commonly seen in other developing countries, female-headed households in Guatemala do not generally have a higher level of poverty than male-headed households but that is partially due to women being the principal recipients for remittances (Feed the Future, 2011; USAID|Guatemala, 2012).

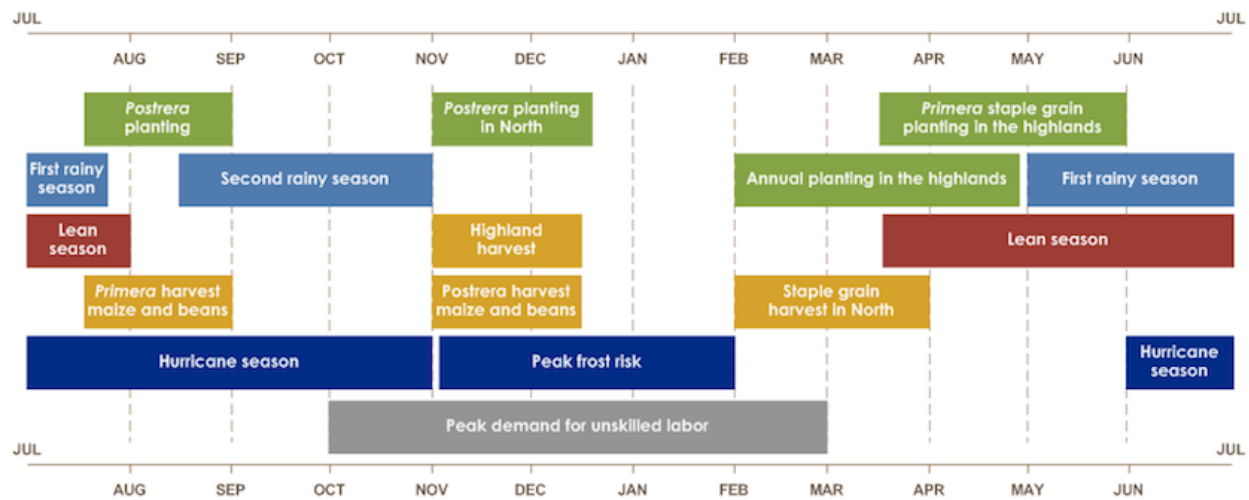
for killings of women. UN Women Representative, María Machicado Terán stated that in Guatemala, "80% of men believe that women need permission to leave the house, and 70% of women surveyed agreed" (Guinan, 2015). In terms of sexual violence, Guatemala's Human Rights Office reported that thousands of adolescent children are sexually assaulted by relatives every year, 30% of which are sexually abused by their own parents (BEVAN, 2014). Political reforms to address these issues are slow but there have been recent changes⁶ that can help shift the treatment of these crimes, not as cultural matters, but as criminal ones.

Guatemala's score on the Gender Inequality Index (used to demonstrate gender disparities) is 0.533 on a scale of 0-1, giving the country a relatively low ranking at 119 out of 155 countries. This was determined after examining women's health status and the relative position of women to men in terms of empowerment and economic opportunities (UNDP, 2015). Historically, it is men who control political, social, and economic resources and who make decisions resulting in a high dependence on men (USAID|Guatemala, 2012). Only 13.3% of parliamentary seats are held by women though the National Policy of Women's Promotion and Development for 2008-2023 aims to increase the percentage of women in elected and executive positions (UNDP, 2015; USAID|Guatemala, 2012).

Guatemala is the second most vulnerable country in the world to natural disasters and climate change⁷ due to frequent earthquakes, volcanic eruptions, and weather events such as floods and droughts. The weather varies greatly by region, impacting both agriculture and risk of natural disaster (see Figure 2: Seasonal Calendar) (FEWS Net, 2016). These present a very real threat to human lives, the survivability of crops/livestock, and the soundness of infrastructure such as market access roads (USAID, 2014; USAID|Guatemala, 2012).

⁶ In 2008, the Law Against Femicide and Other Forms of Violence Against Women was passed. This was followed by the Law Against Sexual Violence, Exploitation, and Trafficking of People in 2009 which criminalized sexual relations with minors under 14 (the legal marrying age) and established protocols to launch investigations when pregnant minors under 14 visit hospitals (Ospina, 2015; USAID|Guatemala, 2009). A specialized court was established in 2010 to prosecute femicides and violent crimes against women. Two years later a joint task force was created to deal with crimes against women and provide assistance to victims to facilitate their access to justice. While violence against women is still alarmingly high, these are important steps in treating crimes against women as criminal, and not cultural, matters (Guinan, 2015).

⁷ Looking forward, climate change models predict that by 2050 Guatemala's temperatures will increase between 1.5°C and 4.5°C; there will be a reduction in precipitation from July-September leading to heat intensification and increased evapo-transpiration expanding the amount of semi-arid areas; and some departments will face a reduction in superficial water of 10% to 50% (Guatemala: Country Note on Climate Change Aspects in Agriculture, 2009).

Figure 2: Seasonal Calendar

Source: (FEWS Net, 2016)

In August of 2014, the GOG introduced a broad-reaching sustainable development plan known as "Nuestra Guatemala K'atun 2032" (K'atun: Our Guatemala 2032) that recognizes the current struggles of citizens. In total there are 36 priorities that are outlined throughout the five main pillars:

1. Urban and rural Guatemala
2. Human welfare
3. Wealth for all
4. Natural resources for today and the future
5. State protection of human rights (Marty, 2014).

Nutrition

The country has the worst rates of chronic malnutrition (also known as very low height for age or stunted growth) in the western hemisphere and the fourth highest rate of malnutrition in the world (Food Assistance Fact Sheet - Guatemala, 2015; USAID|Guatemala, 2012). Food insecurity impacts 1.8 million people and is worst in the Western Highlands and drought-prone areas in the east where people survive on non-irrigated subsistence farming. Of these 1.8 million, 1.7 million receive some sort of food aid though it is not on a consistent basis (USAID|Guatemala, 2012). A number of factors contribute to poor nutritional outcomes including poverty, food insecurity, poor hygiene environments, inequality, and insufficient child care. (USAID, 2014). Micronutrient deficiencies are present in 20-35% of pregnant women which can result in anemia for both mother and child and also contribute to the child's stunted growth. In the Western Highlands, the USAID-funded Food and Nutrition Technical Assistance III Project (FANTA) identified nutrient gaps in pregnant and lactating women's diets and determined that it would be difficult to consume adequate levels of iron, zinc, calcium, and folate by using local foods. The problems identified with satisfying dietary needs from local foods included: family finances; seasonal variation in food production and market prices; challenges in attaining and storing fresh food; the cost and time barriers to marketing; and a culture of equal food-sharing among families (Food and Nutrition Technical Assistance III Project (FANTA), 2015). A study in southeastern Guatemala found there is higher food diversity and food security in households

receiving remittances, relative to both single woman headed households, and those with both partners present (World Bank Group, 2015).

It is estimated that child malnutrition has cost Guatemalan society \$3.13 billion in reduced health, education, productivity over the last 60 years (USAID|Guatemala, 2012). Almost half of Guatemalan children under five are stunted due to not being able to access or properly utilize nutritious food (this number increases to 65% among indigenous communities) (Food Assistance Fact Sheet - Guatemala, 2015). Within WHIP's ZOI, 67% of children under five years old are chronically malnourished (Angeles, et al., 2014). Additionally, maternal education levels and wealth are both inversely related to stunting⁸ (USAID, 2014). The Government of Guatemala (GOG) is prioritizing improvements in children's health. The National Agenda for Change, instituted in 2012, is tasked with tackling malnutrition and reducing stunting through the National Zero Hunger Pact (operationalized through the Zero Hunger Plan 2012-2016). The strategy incorporates efforts to improve the nutrition and health of children through education, social services, and food aid as well as broader interventions to address the root causes of undernutrition such as poverty, poor water and sanitation, and lack of education for women (USAID, 2014).

Agriculture

Agriculture contributes 13.7% to Guatemala's GDP and employs half the population (The Central Intelligence Agency, 2016; USAID|Guatemala, 2012). Of Guatemala's 109,000 square kilometers, 43% is agricultural; 13% is arable and 24% is pasture land (USAID, 2010). The country has abundant natural resources, labor, and favorable micro-climates - all of which house enormous potential for developing a competitive advantage in a number of key agricultural commodities. Despite this, the sector is still unable to produce enough food for domestic needs and is a net importer of maize, rice, black beans and other staple foods (Food and Agriculture Policy Decision Analysis, 2014; GFRAS). Even with these imports, food insecurity is not uncommon, especially in rural populations where agriculture is the primary source of income (GFRAS; USAID|Guatemala, 2012). A study in rural Guatemalan agricultural communities found that food insecurity in these locations occurs due to a number of factors including lack of access to markets, the cultivation of non-traditional agricultural exports over subsistence crops, and the inability to pay for food items (Webb, et al., 2016). Within WHIP's ZOI, 14% of households suffer moderate or severe hunger (Angeles, et al., 2014).

Maize is one of the main crops cultivated, along with beans, rice, sorghum and wheat (Guatemala: Country Note on Climate Change Aspects in Agriculture, 2009). The most common crops produced for export are bananas, sugar, coffee, and palm oil. The crops with the highest export value are green coffee, raw sugar, and bananas (Food and Agriculture Policy Decision Analysis, 2014). Guatemala is considered a leader in Central America for the development of non-traditional agricultural exports such as snow peas and green beans (Guatemala: Agriculture, 2016). Indigenous families live on subsistence production of maize, sorghum, and beans with some working as agricultural laborers on sugar and coffee plantations for additional income (Fanzo, et al, 2013). In Guatemala, the vast majority of agricultural households remain in agriculture when the male head of house migrates, but they become more likely to employ outside agricultural labor and are

⁸ Among children whose mothers had no education, 69.3% are stunted compared to only 14% for children whose mothers attained secondary or higher education. Similar numbers are seen in children from the poorest households with stunting in 70.2% of children, compared to 14.1% from the richest households (USAID, 2014).

less likely to utilize all of the land available to them. Agricultural production also decreases as households shift to subsistence or consumption smoothing during periods when remittances are lower (World Bank Group, 2015).

Land Rights

One of the underlying causes of the civil war was conflict over land ownership. The Peace Accords attempted to address land ownership but the political will for reform has been limited. Guatemala's land distribution is the most inequitable and concentrated in all of Central America with the largest 2.5% of farms possessing 65% of the country's agricultural land, while 88% of farms occupy just 16% (USAID, 2010). Perpetuating the inequity is the fact that an oligarchy owns vast amounts of productive land in fertile areas and they have the political influence to dictate both land and labor issues. Meanwhile, subsistence farmers struggle to grow their crops on small hillside parcels with increasing rates of erosion (USAID, 2010). Farm parcels in impoverished areas typically range from 0.5 to 2 hectares per family, however tenure is insecure and often a key cause of poverty for indigenous and peasant households. Inequitable access and rights to land has been identified as a seriously concerning problem for the indigenous population, and specifically for indigenous women, and it is leading to an increase in social tensions (USAID, 2010). Without effective and practical means to resolve land disputes and secure access to those currently excluded, economic development and competitiveness will be greatly inhibited (USAID, 2010).

The constitution recognizes the right to own private property and includes a provision mandating that the state provide indigenous communities with state lands, but the implementation has been limited (USAID, 2010). There is not a basic land law that defines different types of tenure or addresses indigenous people's rights to land. This makes it difficult to resolve conflicts or even obtain legal certainty pertaining to land interests and rights (USAID, 2010). In practice, the most common types of tenure are private ownership, communal use, leasehold, and government ownership. Land is typically secured through inheritance, sale, lease, use, fiat, and government programs (USAID, 2010). In 1998, only 30% of the privately owned land was registered and that was primarily in urban areas (only 5% of rural land was registered at the time)⁹ (USAID, 2010).

The Civil Code provides for marriage settlements and the distribution of marital property and the 1999 Land Fund Act (FONTIERRAS) allows for both land ownership by single women and co-ownership for married and de-facto couples. In practice though, there is a low incidence of both joint land registration and land ownership by women. Cultural influences typically work to exclude women from owning land - especially among indigenous communities, so it is typically accessed through male relatives. Only 6.5% of agricultural land is administered by women (USAID, 2010). Qualitative data collected by the World Bank in southeastern Guatemala found that, in 42% of cases where women inherited land from her side of the family, the woman did not consider the land to actually be hers (World Bank Group, 2015).

In most families, major decisions about land use are made by male heads of house (USAID|Guatemala, 2012). The Women's Empowerment in Agriculture Index (WEAI) provides a measurement of women's empowerment, agency, and inclusion in the agricultural sector. This is done by examining their impact (if

⁹ With support from the World Bank, the Guatemalan Government developed a plan to title at least half of the land by 2013 and help resolve land disputes (USAID, 2010).

any) on five domains (production, resources, income, leadership, and time) and then weighing it against the impact of the men in their households. The WEAI score for Guatemala is 0.77 (on a scale of zero to one) (Angeles, et al., 2014). Research conducted by the World Bank Group in rural southeast Guatemala found that women's decision making power regarding what to plant and what inputs to use increased significantly in households where the male partner was currently a migrant (USAID|Guatemala, 2012; World Bank Group, 2015). The same study found that only 15% of the women whose husbands were currently migrants had a say in the decision for him to leave and 81% said the decision was the made by the man alone. Within WHIP's ZOI, 86.6% of households have at least one male, and one female, adult present (World Bank Group, 2015).

Women work as paid agricultural laborers as well as unpaid family laborers. In the cultivation of more labor-intensive products, such as coffee and horticulture, women are expected to carry the increased agricultural workload on top of their domestic labors which may take them away from more traditional income-earning activities such as sewing and baking (USAID|Guatemala, 2012).

Extension and Advisory Services

The national extension system that currently exists is relatively young. In the mid-1990s the national extension system was dismantled leaving a gap that civil and private society failed to fill. For close to two decades many marginal communities - particularly those in the most need - saw no extension and advisory services whatsoever (Fanzo, et al, 2013). In 2008, with support from the Food and Agriculture Organization of the United Nations (FAO), the Ministry of Agriculture, Livestock and Food (Ministerio de Agricultura, Ganaderia y Alimentacion) (MAGA) re-launched the national EAS (Fanzo, et al, 2013). The Food Security and Nutrition Secretariat (SESAN) established a food insecurity ranking system that identifies communities and households for extension service (Fanzo, et al., 2013). In 2010, the National Agricultural Extension System (Sistema Nacional de Extension Agricola) (SNEA) began projects in the field that prioritized smallholder farmers and those that produced a surplus who might help strengthen value chains and the rural economy (Fanzo, et al., 2013; Smith, 2011). SNEA provides assists targeted at production levels. SNEA provides services to farmers that produce below subsistence level by focusing on home gardens and small animal husbandry. On the other hand, subsistence level farmers are encouraged to diversify their crops and expand their horticultural knowledge while also learning how to organize within their communities and sell their produce (Smith H. A., 2011).

SNEA is currently operating extension services within 19 of the country's 22 departments and MAGA estimates that half the country's municipalities have extension coverage (Smith H. A., 2011). Agricultural extension agents operating at a departmental level facilitate community involvement, administer demonstration plots and workshops, and promote food security and resource conservation. Another type of extension agent employed in the SNEA model is the youth promoter. These individuals work in rural communities to pass on agricultural information and help develop a sense of citizenship and self-esteem in local youth (Smith H. A., 2011).

There are also female home extension agents in almost all of the country's 332 municipalities. These agents work with women (mostly through grassroots women's groups) to improve conditions for households. Through home gardening and harvesting wild foods, these home agents promote the consumption of more nutritious food - including underutilized indigenous food (Fanzo, et al., 2013). These home agents also teach proper food preparation and work with women to improve health, hygiene, and self-esteem. The nutrition

component of these agents' work is integrated into the GOG's broader Zero Hunger Plan 2012-2016 that aims to address underlying causes of undernutrition (Fanzo, et al, 2013; USAID, 2014). It should be noted that, according to the WHIP baseline survey, only 12.1% of households indicated they have gardens or crops for household consumption even though 44.3% reported having land available (Angeles, et al., 2014).

Despite women's contribution to agriculture, they are often excluded from the resources that could help them increase the benefits of their labors. In addition to barriers to accessing credit (such as limited access to land property) women are also less welcome in farmers' groups or cooperatives which reduces their access to inputs, information and markets. Further, the majority of extension agents (outside of home agents) are men who are more likely to dedicate their attention to male farmers (USAID|Guatemala, 2012). To overcome this, women have tried to form women-only farmer groups for commercial agriculture but, given their lack of experience and resources, they have not had the same success in leveraging resources as men (USAID|Guatemala, 2012). The 2014

World Bank Group study conducted in the southeast of Guatemala found that rural women rarely receive extension service or technical assistance. While 70% of female respondents indicated they learned about farming from their fathers, many reported that they had to learn how to farm when their male partners migrated leaving them with the responsibility of agricultural production. These women either learned from their husbands (in person before his departure or by phone) or from male relatives (World Bank Group, 2015). This highlights a massive gap in SNEA's extension model of targeting women for reproductive role-oriented interventions at the expense of larger scale production.

To bolster their efforts and impact, SNEA has formalized coordination mechanisms with government agencies across sectors while also cultivating relationships with civil society, academia, and international organizations (Fanzo, et al, 2013). Universities do not have a formally recognized role within the EAS system but they do participate in extension projects. Extension originating from the private sector focuses on input use by farmers and on providing technical advice to farmer groups in relation to export crops (GFRAS, n.d.).

The government does not intervene in the market by providing price support but there are policies aimed at increasing production - mainly through modernization and inputs. After an increase in public funding for irrigation, MAGA designed the Irrigation Development Framework 2013-2023 to improve irrigation efficiency and sustainability to bolster food production. The government-funded program is tasked with promoting modern technologies, incentivizing efficient water use, developing water regulation, and building

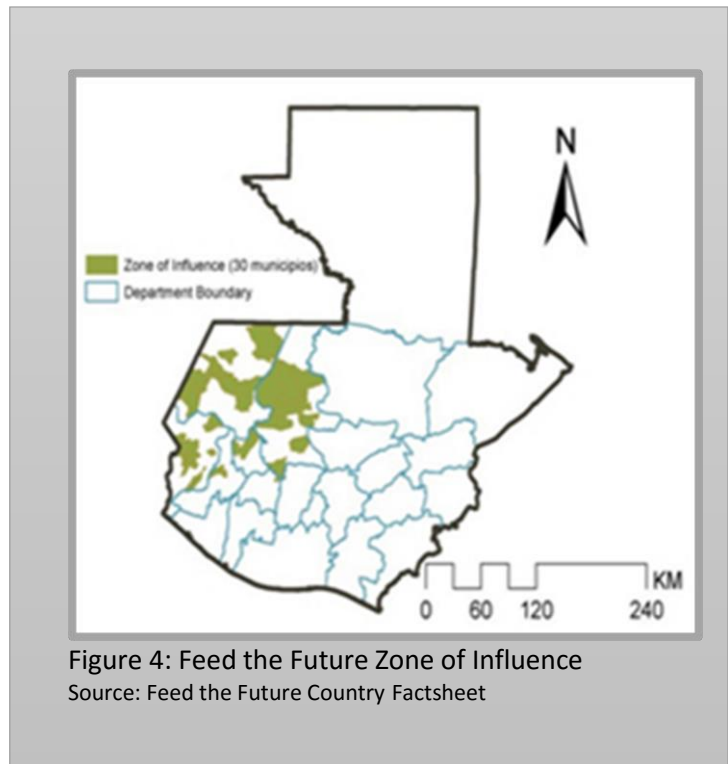


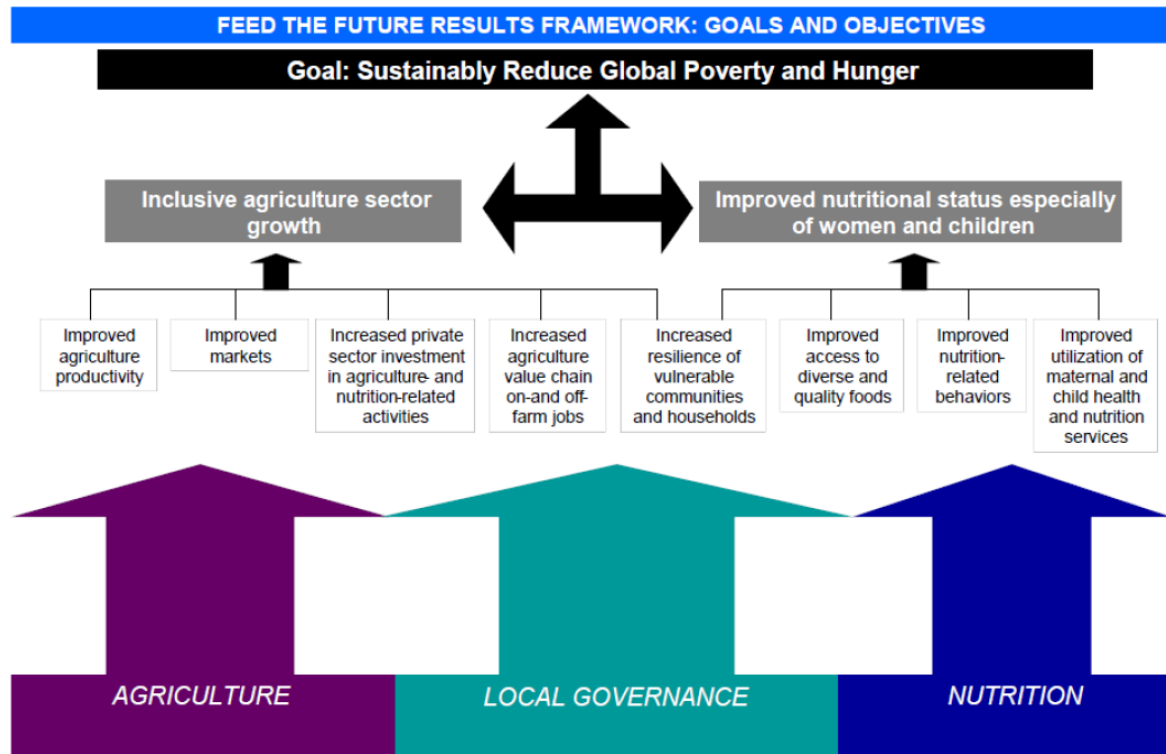
Figure 4: Feed the Future Zone of Influence
Source: Feed the Future Country Factsheet

off-farm infrastructure for water collection and storage (Food and Agriculture Policy Decision Analysis, 2014). The government also funds the National Fertilizers Programme which targets small-scale farmers who cultivate staple grains to make them surplus producers (Food and Agriculture Policy Decision Analysis, 2014). Just over 26% of responding households in the WHIP baseline survey reported receiving benefits from this program (Angeles, et al., 2014).

Feed the Future Multi-Year Strategy 2011-2015

The most recent Feed the Future Multi-Year Strategy for Guatemala is one that focused on reducing rural poverty and malnutrition in five departments of the Western Highlands (Huehuetenango, Quetzaltenango, Quiché, San Marcos and Totonicapán) during the period of 2011 to 2015 (see Figure 4: Feed the Future Zone of Influence). There are 1.5 million Guatemalans living in Feed the Future target regions and of those, 5.9% live in poverty (Feed the Future). In the western highlands agriculture employs 33% of the economically active population. Seventy-four percent of those households are poor (USAID|Guatemala, 2012). In selecting the target regions and strategy, Feed the Future consulted the GOG and other donors before determining that the best course of action is one that incorporates market-led agricultural development, integrates health interventions to improve nutritional outcomes, and strengthens local governance (see Figure 5: Feed the Future Results Framework) (Feed the Future, 2011).

Figure 5: Feed the Future Results Framework



Source: Feed the Future Multi-Year Strategy 2011-2015, p. 11

As previously stated, Feed the Future operates in Guatemala as a component of the USAID-led WHIP which also encompasses the Global Health Initiative (GHI) and the Global Climate Change Initiative. WHIP seeks sustainable rural development through agriculture, economic growth, the provision of health services, education, improved nutrition, local governance, climate change adaptations, and gender equity while promoting coordination among those working toward the same goals in the Western Highlands (Guatemala: Agriculture, 2016). Collaboration among WHIP partners is ongoing through technical working groups in an effort to help provide greater understanding of each other’s work and to improve coordination (USAID|Guatemala, 2013).

Joint programming was established to develop more comprehensive approaches to reducing poverty and malnutrition for Feed the Future’s priority interventions, as seen in Table I: Priority Feed the Future Interventions in the Western Highlands (Feed the Future, 2011).

Table 1: Priority Feed the Future Interventions in the Western Highlands

Economic Growth Office/ Feed the Future	<ul style="list-style-type: none"> • Introduce improved value-chain technologies • Improve horticulture/coffee yields, production and quality • Expand and strengthen producer and marketing associations • Strengthen enforcement of phytosanitary regulations
Health Office/GHI	<ul style="list-style-type: none"> • Increase adoption of nutrition behavior change • Implement integrated case management of childhood/ maternal care • Ensure equipment and supplies/commodities to deliver basic package of health/nutrition interventions • Engage community and civil society leaders in promotion of behavior change
Democracy and Governance Office/Local Governance	<ul style="list-style-type: none"> • Deliver basic services – especially water/sanitation • Strengthen Municipal Economic Development strategies/plans • Support civil society to advocate for improved health/nutrition
Food for Peace/PL 480	<ul style="list-style-type: none"> • Assist vulnerable families to increase food production, consumption and utilization • Link select households to —value chainll production activities
USDA	<ul style="list-style-type: none"> • Implement McGovern-Dole and Food for Progress in targeted departments • Strengthen capacity of research institutions to develop and transfer technologies • Advocate for policy reform
Private Sector	<ul style="list-style-type: none"> • Increase investments in value chains • Increase contributions to nutrition/health activities • Advocate for policy reform

Source: Feed the Future Multi-Year Strategy 2011-2015, p. 10

An assessment of the impact of Feed the Future's impact during 2014 revealed:

- 35,300 farmers and producers began utilizing improved technologies and skills
- Feed the Future farmers in target areas earned \$11 million in agricultural product sales
- 220,500 children under 5 years old were reached through U.S. Government programs
- 8,000 families received improved local black bean seeds shown to have a fivefold increase in yield
- Thousands of farmers were trained on growing export crops and on proper pesticide use which led to a significant reduction in application
- From 2013-2014 there was a 19% increase in horticulture sales as a result of adopting new technologies (Feed the Future)

Country Development Cooperation Strategy

The Country Development Cooperation Strategy (CDCS) is a five-year plan developed by USAID and the government of Guatemala in consultation with other U.S. agencies, academics, donors, development partners, civil society leaders, the private sector and indigenous populations. The agenda is based on a targeted approach that addresses the interrelated challenges to development that are currently affecting the country. Underlying it is the hypothesis that the country will be more democratic, secure, and prosperous if the approach to development involves: improving security and justice; bolstering economic growth and social development in the Western Highlands; and mitigating climate change through better natural resource management (USAID|Guatemala, 2012). Unlike the previous approach of having USAID interventions in each of the 22 departments, the current CDCS focuses on 13 departments with a strategic focus on five departments in the Western Highlands where food insecurity and poverty are the highest.

The CDCS prioritizes one goal, “A More Secure Guatemala that Fosters Greater Socio-economic Development in the Western Highlands and Sustainably Manages its Natural Resources” under which are three development objectives (see Figure 3: CDCS Results Framework):

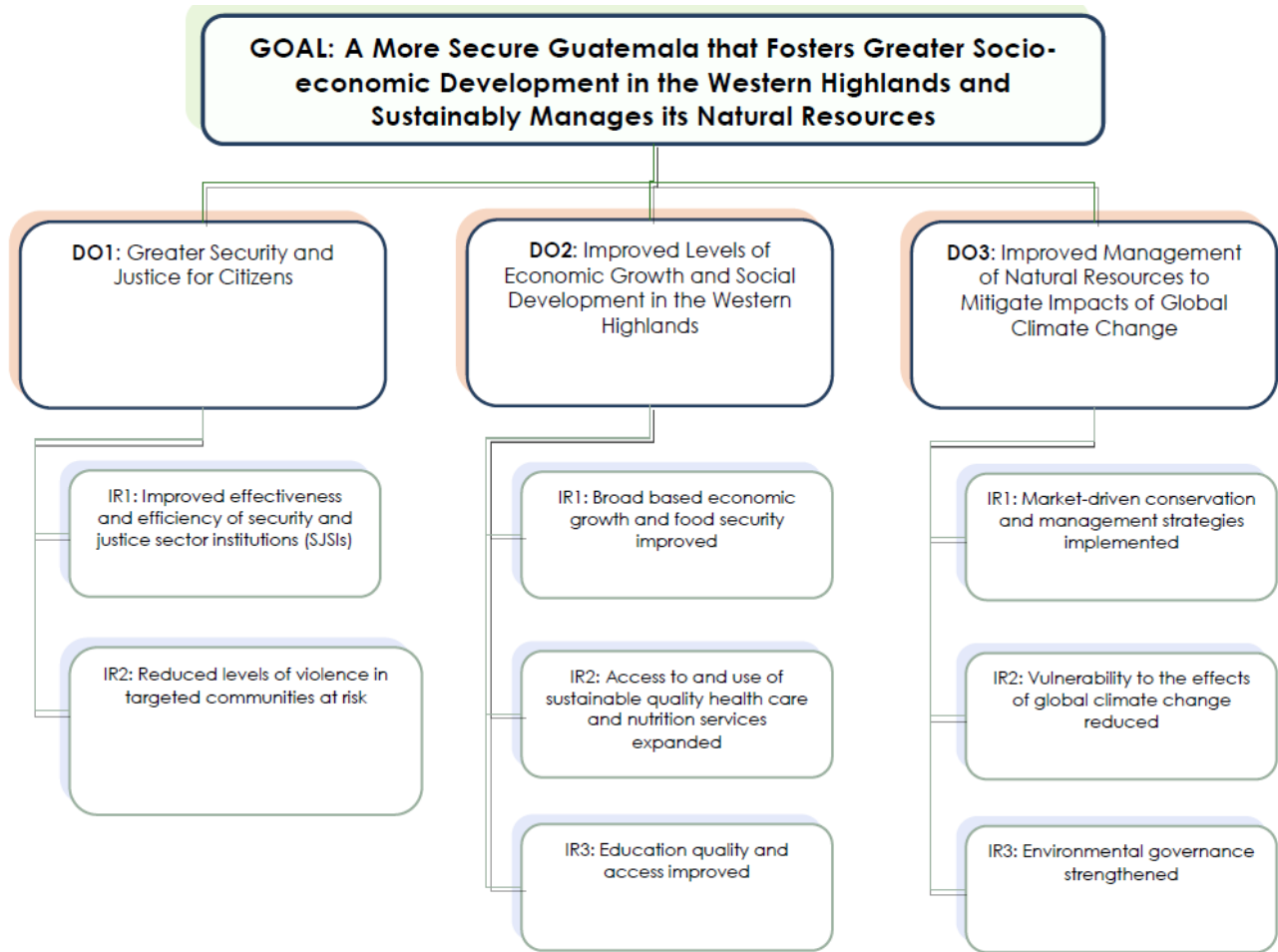
Development Objective 1: Greater Security and Justice for Citizens

Development Objective 2: Improved Levels of Economic Growth and Social Development in the Western Highlands

Development Objective 3: Improved Management of Natural Resources to Mitigate Impacts of Global Climate Change

The first objective focuses on improving social stability and the third focuses on mitigating the risks associated with climate change while protecting biodiversity. Development Objective 2 integrates the work of Feed the Future and aims to improve incomes, health and nutrition, and education in the Western Highlands (USAID|Guatemala, 2012).

Figure 3: CDCS Results Framework



Source: USAID | Guatemala, 2012

Donor-Funded Projects

The Government of Guatemala has done a remarkable job at facilitating donor coordination – so much so that the approach has been adopted as a model in the region. Coordination occurs at three levels: the Dialogue Group (Ambassadorial); the Coordination Group (heads of international donor agencies); and sectoral working groups (USAID|Guatemala, 2012). Table 2 details some of the organizations that are currently working on projects that may have complimentary goals as INGENAES.

Table 2: Donor-Funded Projects

Project	Length	Purpose	Contact
(USAID-funded) University Research Co: Nutri-Salud	2012-2017	Nutri-Salud is a program that aims to improve the nutritional status of reproductive aged women and children under the age of five with a particular focus on Mayans. Additionally, the program works to strengthen family planning and health care at the community level and helps mobilize groups to better access local government services.	7200 Wisconsin Avenue, Suite 600 Bethesda, Maryland 20814 Phone: (301) 654-8338
(USAID-funded) FHI 360: Food and Nutrition Technical Assistance (FANTA) III	2012-2016	Nutrition advocacy program aimed at improving the nutritional status of children and reproductive women. FANTA III is part of Guatemala's Zero Hunger Initiative.	359 Blackwell Street, #200 Durham, NC 27701 919-544-7040
(USAID/Feed the Future-funded) Anacafe: Rural Value Chains Project (RVCP)	2012-2017	The RVCP is active in 30 municipalities within the Western Highlands departments of Quetzaltenango, Quiché, and Totonicapán. The RVCP aims to increase incomes and improve food security of smallholder farmers and impoverished households. Focuses on coffee, horticulture, and handicrafts value chains.	Binta Cisse 202-640-6657 bcisse@savechildren.org
Catholic Relief Services: Food Security Focused on the First Thousand Days (SEGAMIL)	2012-2018	Food aid program aiming to improve the health and nutrition of children under two and pregnant and lactating women.	502-2362-2173
Project Concern International & Save the Children: Program for Integrated Food Security and Nutrition Actions in the Western Highlands (PAISANO)	2012-2018	In addition to distributing food aid this program also works with community leaders to promote better nutrition. PAISANO also trains agricultural promoters on improved varieties, animal husbandry, and technical production of forest and fruit species.	Gwenelyn O'Donnell-Blake Senior Food Security Technical Officer godonnell@pciglobal.org

Conclusion

Guatemala has made impressive gains since the end of the civil war in 1996 but there are still considerable obstacles to overcome. USAID and the government of Guatemala are working together to secure the foundation for economic growth and development by strengthening stability and increasing both economic potential, and resilience to natural disasters. Development partners have a key role to play in supporting the development of underserved communities, such as those in the Western Highlands. WHIP is an ideal entry point for INGENAES' activities as the program actively works to develop coordination and synergies in the Western Highlands where Feed the Future activities are being carried out.

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Annex B: Annotated Bibliography

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The *Monitoring and Evaluation Survey for the Western Highlands Integrated Program: Baseline 2013* report describes the program's goals of reducing poverty and improving health and nutrition in the region through the Rural Value Chains Project (RVCP) and a health and nutrition program. The report also summarizes the results of survey data collected in the Zone of Influence for the Western Highlands Integrated Program (WHIP). The survey data provides detailed information that illustrates the living conditions and various challenges affecting individuals that live in the ZOI for integrated USAID programs in the Western Highlands. In addition to data on the food security and cultivation of food crops for household consumption, the report also details community members' perceptions about malnutrition prevalence and impact which can be useful in interventions that promote home gardening or crop diversification. Similarly, information regarding family contribution to agricultural and livestock labor could help the INGENAES team better understand the demands and participation levels of the target beneficiaries. The baseline report also includes data collected utilizing the Women's Empowerment in Agriculture Index (WEAI) revealing different aspects of control over resources and contributions to decision making.

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Country Fact Sheet: Guatemala. Feed the Future.

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Feed the Future's most recent Multi-Year Strategy (MYS) for Guatemala descriptively provides the context for working in the Western Highlands, including the challenges to, and opportunities for, improving food security and nutrition outcomes. In addition to outlining the framework for coordination between multilateral and bilateral donors and the relevant GOG ministries and programs, the MYS details priority interventions and the approaches identified to best achieve its outcomes. This includes the activities associated with achieving each target and how the impact of the program will be evaluated. The follow-up *Feed the Future Country Fact Sheet* updates readers on the impacts of the progress made during the 2014 fiscal year.

Ingrasci, Z., Leonard, S., & Temple, C. (Directors). (2013). *Living on One Dollar* [Motion Picture].

Available from <https://www.youtube.com/watch?v=tmOujWTMuC8>

Topical clips: <http://livingonone.org/changeseries/#.VINDe9lrJFG>

This hour-long documentary follows college-aged friends from the United States as they attempt to survive for two months in the rural Mayan village of Peña Blanca, Guatemala on less than \$1 a day. During this time the film crew battles hunger, malnutrition-induced fatigue, parasites, lack of access to clean water, and the unpredictability of a fluctuating income while developing relationships with their neighbors and learning about their lives. During their time, they learn of the extreme risk of economic shocks brought on by illness and natural disasters and the loss of education that many children face when family demands require them at home or employed. They also visit a financial institution and discover that the requirements for a loan are outside of the reach of countless poor families before showing the easier access and high impacts of small loans through Grameen. Additional clips covering topics that include water safety, the impacts of natural disasters, and hunger are available on the film's website cited above.

Smith, H. A. (2011). Report: Trip to Guatemala on behalf of MEAS program to attend Second National Workshop on Agricultural Extension in Guatemala. April 7-8 2011, Guatemala City. Wimauma, FL: University of Florida, Gulf Coast Research and Education Center.

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Dr. Hugh A. Smith's report describes what he learned about Guatemala's extension system through first person interviews with various individuals involved, the review of MAGA documents, and his attendance at the Strengthening the National Agricultural Extension System workshop in April of 2011. Smith introduces the extension system's framework at both the national and departmental level before detailing the roles of the different kinds of extension workers and the possible contribution that might be made through collaboration with the Modernizing Extension and Advisory Services (MEAS) program. Thoughts on the performance of Guatemala's extension, current challenges, and recommendations for strengthening the system are also included.

USAID|Guatemala. (2012). Guatemala Country Development Cooperation Strategy 2012-2016. USAID.

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USAID's Country Development Cooperation Strategy report describes Guatemala's history and the current context within which development must occur. The authors of the report give a detailed analysis of the challenges facing both the citizens and the government in areas that include security, justice, education, agriculture, economic potential, and vulnerability to climate change and natural disasters. Also provided is USAID's assessment of the work that must be prioritized in order to help facilitate growth and stability in a sustainable manner. The strategy document describes how each objective will be addressed and how it fits into the overarching goal for Guatemala's development.