



Intersections of Youth & Food Security

Justine Feighery, Paige Ingram, Stephanie
Li and Sean Redding

This report was developed as part of a Capstone Project through the Trachtenberg School of Public Policy and Public Administration at The George Washington University. This report was prepared for the Office of Economic Growth, Agriculture and Trade, within the United States Agency for International Development. Submitted May 3, 2011.

Acknowledgements

The team would first like to acknowledge the guidance of Erin Mazursky and Rachel Blum of the United States Agency for International Development's Office of Economic Growth, Agriculture, and Trade. Both played an active role in determining the scope of our research, pointing us to key sources, and demonstrating leadership on this important issue.

We would also like to acknowledge the field experts who agreed to share their knowledge with us. This includes Ben Fowler, an independent consultant; Anna Cuny and Bronwyn Irwin, ACDI/VOCA; Ben Linkow and Jeanne Downing, USAID; Jessie Grillo, CHF International; Jacky Bass, Cardno Emerging Markets; and Dr. Mirza Jahani, Aga Khan Foundation U.S.A.

Finally, we would like to recognize the Trachtenberg School of Public Policy and Public Administration at the George Washington University. Faculty and teaching staff at the Trachtenberg School, notably Joan Dudik-Gayoso, Diana Blumenfeld, and Jeffrey Williams, have provided helpful feedback and guidance throughout the course of our research.

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I. Executive Summary

The purpose of this report is to provide guidance to USAID on how to best engage youth in global food security initiatives. USAID is a leader in addressing the root causes of food insecurity and providing solutions that improve agricultural activity, promote market development, prevent nutritional deficiencies, and promote rural growth. This work is in line with the Millennium Development Goal to half the amount of hungry individuals by 2015. However, much work is still needed in this field, as almost one billion individuals remain food insecure. According to USAID:

“Food insecurity is often rooted in poverty and has long-term impacts on the ability of families, communities, and countries to develop. Prolonged undernourishment stunts growth, slows cognitive development, and increases susceptibility to illness. Food security means having, at all times, both physical and economic access to sufficient food to meet dietary needs for a productive and healthy life. A family is food secure when its members do not live in hunger or fear of hunger.”

With global populations rapidly increasing – especially in the developing world – providing food security increasingly requires innovative solutions and technologies. The United Nations predicts that by 2050 global populations will increase by approximately 2.5 billion people, with the majority of this increase occurring in the developing world. Much of this growth will be among youth, who are expected to make up half of the 2050 population. Due to these demographic shifts, youth are extremely vulnerable to food insecurity. Problems of rising food prices and crop loss from climate change-related weather patterns only exacerbate this vulnerability. For these reasons targeting the overall youth cohort is a promising way to address the development challenges associated with decreasing food insecurity, and will ensure that USAID maintains its leadership role throughout the development world.

One important theme of this report is that youth cannot be viewed as a homogenous group. Targeting them with interventions involves a closer examination of

specific cohorts within the overall demographic, how they vary across regions, and the current barriers each faces to achieving food security. Because of these differences there is a belief among development practitioners that youth are a difficult group to target. However, in order to effectively address the problem of food security a shift is needed from viewing youth as a challenge, to viewing youth as an asset for development, for both the agricultural and economic growth of a country. Youth should be viewed as an integral part of the solution to food security. There is limited research that looks at food security through a youth lens. The issues examined in this report are those that most directly create barriers to food security for youth, and that present opportunities for youth to be engaged in solutions to food insecurity.

USAID has developed a widespread and impactful program to address food security around the world. However, the Office of Economic, Growth, Agriculture and Trade noticed that the interests of youth are not always explicitly advocated in food security initiatives. This report was produced in order to inform that integration. In terms of understanding how youth are affected by food security and how they can be a part of the solution, the research for this report suggested a dichotomy of issues: production and income generation. For example, within these two areas there are sub-issues, which can guide development interventions. Within agriculture for production policymakers must address the lack of available land, the need for agricultural technology and modern farming techniques, youth's disinterest in agricultural careers, and the fact that youth do not consume enough nutrient-rich food. Income generating issues also present multiple subissues for policymakers to address, including lack of education, training and market access, and the fact that youth who migrate to urban areas are unable to earn enough income to achieve food security. Additionally, there are larger cross-cutting issues that affect agriculture and income barriers to food security that youth face, including geographic locale (urban or rural) and gender. Examples of specific programs and policies are highlighted for each area.

A final goal of this report was to identify research gaps within the intersection of youth and food security. Several areas were identified, which are detailed both in the paper and in the conclusion. Specific research gaps include a need to disaggregate youth from adults and children when examining food security issues, further examination of the

priorities that specific youth cohorts hold, and the determination of how youth connect to food security and conflict, in both theory and practice.

II. Introduction

The research in this report investigates the connections between youth and food security. Many of these issues are also relevant to the food security of the general adult population. However, this report focuses on how these connections specifically impact youth, including the barriers that they face, the ways in which youth are currently engaged in food security and agricultural activities, and how the demographic can be targeted in future initiatives.

Food security is defined, within this paper, as when all people, at all times, have both physical and economic access to sufficient food to meet dietary needs for a productive and healthy life.¹ Food security is further broken down into four areas: availability, access, utilization, and stability. As defined by USAID, families and individuals require a reliable and consistent source of quality food (availability), as well as sufficient resources to purchase it (access), and the knowledge and basic sanitary conditions to choose, prepare, and distribute it in a way that results in good nutrition for all family members (utilization). Finally, the ability to access and utilize food must remain stable and sustained over time (stability).¹

Currently, one billion people are considered food insecure. Two things are exacerbating this problem. One is increasing global populations, which is requiring that more food be produced than ever before. The importance of this fact is only going to increase in coming years, with projections for 2.5 billion more people in the world by 2050, and a need for a 70 percent increase in food production.² Second, rising food prices over the last decade have caused hundreds of millions more people to become vulnerable to hunger, since rising food prices lead to a decrease in individual purchasing power. The food distribution and supply side of the issue has also been greatly affected as wheat and rice growing countries create export barriers in response to threats of crop shortages, causing

greater instability of staple crop prices. In developing countries, where the majority of individuals live on less than two dollars per day, up to 70 percent of income is spent on food. These individuals are particularly vulnerable to increases in staple crops like rice, wheat, and corn, even if the increases are small.

When discussing youth, the initial research made clear that they are not a homogenous group. Rather, the exact classification of youth is determined based on local contexts regarding age, matrimonial status, and work status. For the purpose of this paper, youth includes individuals between the ages of fifteen to twenty four, plus or minus five years. Further, differences in youth like gender and geographic locale (e.g. rural or urban) must be understood to best develop policies and programs for specific youth cohorts.

To develop the analyses below, research looked at theories of how youth are impacted by food security, the challenges of targeting youth with interventions, and the effectiveness of specific programs that have addressed youth in terms of food security. Sources included academic reports from government agencies and nongovernmental organizations, policy briefs, and data and statistical analysis reports. Additionally, phone interviews were conducted with five experts who specialize in issues related to youth and food security.

The research revealed that youth face a number of obstacles to achieving food security that are unique to their demographic. These obstacles can be organized under two streams: production barriers and income generation barriers. Within these two areas there are sub-issues. For production, these include youth's lack of access to available land, lack of agricultural technologies and farming technique needed to increase overall production, lack of knowledge to properly utilize the food available, and lack of interest in pursuing agriculture as a career. Income generation issues include youth's lack of education, lack of training and market access, and the fact that youth migrating to urban areas do not produce enough income to maintain household food security. While these issues are kept distinct in this report it is worth noting that in real life they are often connected, with one factor feeding into multiple issues, and solutions available that can target multiple problems. For each issue, a basic analysis is provided, followed by potential opportunities and solutions to these issues, including examples of relevant programs.

III. Analysis and Opportunities

A. Agriculture and production barriers to food security

Rural youth predominantly gain food security from household agricultural production. However, it is becoming increasingly difficult for youth to generate a livelihood and maintain food security from involvement in agriculture. There are several causes of this problem. One is that youth often lack access to the land needed to engage in agriculture. Due to this scarcity of land many youth are migrating into urban areas. Those youth who remain in rural areas lack access to the techniques and technology needed to maximize food production on their land, including improved seeds and fertilizers. A final component to this issue is that youth lack the knowledge to grow the most nutritious food, as well as post-harvesting techniques to process and store the food produced, so that year-round food security can be obtained.

Barrier: Lack of available land reduces youth's ability to attain food security through agricultural production

Population increases, continuing demand for land by multi-nationals for food and biofuel, urban migration, and tenure insecurity all make land availability a prominent issue for youth facing food insecurity.³ Land markets and secure land rights are necessary to provide rural youth with livelihoods that maintain household food security through agricultural production. Without them, youth face food security risks by having to rely on small plots or marginalized land that may not produce enough food to maintain adequate food levels for the household.

Access to land contributes to food security, household nutritional well being and the ability to withstand shocks. Studies show that with land at their disposal, young farmers are more likely to be engaged in agriculture and are better able to provide food for their households. Additionally, youth who own land are in a better position to access income and

credit that can strengthen their economic level, as lenders often require customers to offer collateral for loans, such as land.⁴

A significant barrier for youth accessing land is their inability to secure property rights. Traditional land systems pass equal amounts of property onto descendant children, meaning that each successive generation receives increasingly smaller and less valuable pieces of farmland.⁵ This problem is further intensified with current population trends, which are resulting in even less land available for each person. Women are particularly vulnerable to land insecurity. Land titles typically transfer only to heads of household or individuals with birth certificates, which women rarely have. When a woman is widowed, her deceased husband's land is passed on to a brother or reverted back to his family.ⁱⁱ⁶ In Kenya, 25 percent of women living in urban slums report that they are there because they were involuntarily displaced from their land.⁷ Land insecure women are also at high risk when multi-national corporations search for new resources. As these corporations purchase land in developing nations for food or fuel use, women and other individuals without official land titles lack any legal recourse. As of 2009, an estimated 180 land purchase deals with multinational corporations were finalized or in development.⁸ Governments tend to accept these projects on the promise of improved infrastructure and new jobs, but the reality is that this land is often already being by indigenous people. Those without land often forage undeveloped land to find additional food resources. This push factor leads people to take jobs on farms and depend on income for food security, rather than be self reliant.

Opportunities and Solutions

While land availability affects food security for both urban and rural populations, those in rural areas are particularly at risk.⁹ Developed land markets can provide youth the ability to purchase larger landholdings. Additionally, youth who have access to land are more motivated to earn livelihoods in rural areas. Cairo, Egypt provides a case in point, as the capital has become one of the largest urban cities in the world, with a third of the

ⁱⁱ In Burkina Faso half the land is controlled and distributed by the government and passed on from men to other men. While the law does not specifically discriminate against women owning land, the provisions above make it extremely difficult for women to gain land tenure. Additionally, men often have multiple wives in the region, making the chances of securing the husband's land after his passing ever more difficult. In Uganda that HIV/AIDS rate leaves young widows who cannot inherit land when their husbands die.

population between the ages of ten and twenty-four. Traditionally, college graduates in Egypt have relied on the government to provide job opportunities, but with increasing populations the government has been unable to meet demand in recent years. Instead, they created a program with the International Fund for Agricultural Development that provides close to 40,000 landless college graduates with a million acres of reclaimed desert. The program is successful in pulling youth from the urban center back into rural areas and into careers of agricultural production. Egypt's cultivated land is only .05 hectares per person, nearly the lowest in the world.¹⁰ By providing land to youth, the program is able to help ensure their household food security, and also increase food imports into the urban areas.ⁱⁱⁱ Mexico provides another example of a government addressing youth's need for land. The country created a land market by giving youth credits to purchase underutilized, potentially productive land.¹¹

In developing land access policies and programs, care should be taken to ensure that they are nondiscriminatory to women and indigenous people, so that the greatest number of young farmers are reached. If cultural or political norms in a country prohibit policies that immediately give women rights, alternative programs should be considered within the context of the community that allow women to produce food without large tracts of land. One example is animal husbandry programs, which provide a valuable opportunity for women to contribute to household food security while also earning income.¹² Providing women access to land is not merely an issue of gender equity, but also one of productive efficiency. Studies show that by allowing women to manage land agricultural output in developing countries could increase by two to four percent, which would reduce world hunger by twelve to seventeen percent.¹³

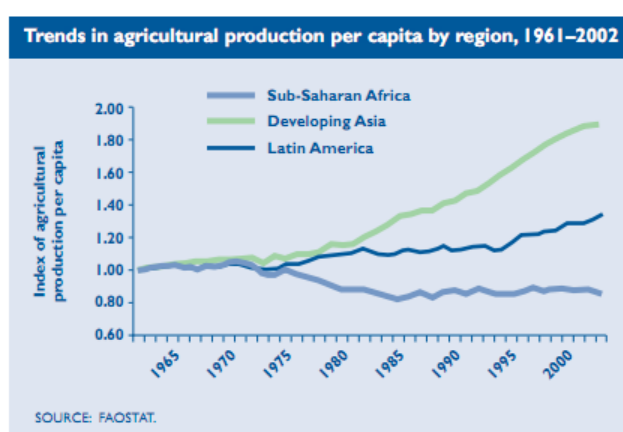
ⁱⁱⁱ The program also provided farmers with agricultural education, including training on the use of irrigation drip systems, increasing agricultural production.

Barrier: Youth lack the agricultural technology and modern farming techniques needed to increase production on land

Productivity plays an important role in hunger reduction. Given recent population growth projections, increasing agricultural yields is more essential than ever.¹⁴ Data indicate that the world will need 70 to 100 percent more food by 2050.¹⁵ To meet the growing demand, yields per acre and per capita must increase, especially on the African continent. Africa is the only region in the world in which the average per capita food production has been consistently falling for the last forty years (See Figure). With land availability decreasing, increasing productivity in agriculture so that more can be produced with less, is a vital step

in addressing long-term food security challenges. Technology and farming practices hold the keys to this success.

Youth should be targeted in strategies for increased agriculture productivity.



According to the FAO, many agricultural extension offices include rural youth programming as an integral part of their work, to help young farmers apply new practices and improved technology. Experience has shown that younger farmers are an appropriate target for such programs, as they will be more open to new ideas and practices than older farmers.¹⁶ Programs can also help young farmers develop both agricultural and non-agricultural income generating activities, especially those based in rural areas. The impetus behind this strategy is that any attempt to enhance the knowledge, skills, and experience of young people, while also increasing their access to resources, will have an immediate impact on food security, regardless of whether the program only indirectly involves producing food.¹⁷

Opportunities and Solutions

In general, any policy or program that aims to improve agriculture productivity must address one of more constraints. First, farmers often lack access to existing technology. Even when they do have access, farmers may prefer not to adopt the new technology due to an inability to bear the risks associated with their continued use. This is especially true in communities where small farmers are accustomed to saving seeds from one generation to the next. Also, smallholder farmers often lack sufficient liquidity to pay for new seeds and fertilizers, which can be more expensive than their traditional counterparts. If they are not using them on a large scale, it may not be worth the additional cost.¹⁸ Two strategies to stimulating agricultural production are proven to be effective: increasing investment in agricultural research, and improving access to agricultural inputs like fertilizers and seeds.

Youth can be a part of these strategies, especially in Africa, where the most abundant asset is human capital. Youth are better equipped and more interested in testing improved seeds and practices than the older generation. For example, in Niger, a program named Farmers of the Future educates young people about how to transition from subsistence farming to market-oriented farming with new technologies. As a result, young people have been able to implement a technological revolution in their communities. Education programs such as these are frequently used as an instrument to fight poverty and to trigger youth participation in other agricultural research programs. Education of farmers in developing countries is also shown to have a positive effect on farm production, although further research needs to be conducted to better understand if these relationships are causal.¹⁹ The literature identified two specific approaches to increasing yields: training farmers to be more productive and educating a new generation of scholars, including researchers, agricultural economists, seed breeders and soil scientists.

One program example from Alliance for A Green Revolution in Africa is the Program for Africa's Seed Systems (PASS). The goal of PASS is to create new varieties of seeds and make improved seeds more accessible in Africa, especially to rural farmers. One part of the program is *Educate the Next Generation*. By working across the seed value chain this program has already trained more than 150 African crop scientists, with goals to expand over the next five to ten years, including providing PhD fellowships in plant breeding to 80

African scientists, strengthening the crop science program in at least 10 African universities, and developing and releasing 400 new crop varieties over 10 years.²⁰ Improved crops, quality seeds, and new techniques are helping Africa's farmers raise their yield and incomes. By adding youth into the picture, the program strengthens the ability to sustain long-term success of the seed value chain.

Barrier: Youth's disinterest in agricultural careers creates a labor deficit in the agriculture sector

As the average age of the global population trends younger, the average age of the farming population is increasing, as youth choose not to participate in agricultural production as a livelihood. Youth disinterest in agriculture presents a key challenge for the international development community; policies must encourage young people to enter careers in the agricultural sector. Currently, the population of the world remains more rural than urban, with about 3.1 billion people residing in rural areas.²¹ However, rural populations continue to decrease in regions such as Latin America, the Caribbean, and East and South East Asia. In other regions, namely the Middle East, North Africa, and South and Central Asia, the growth in rural populations has begun to slow.²² Between 2020 and 2025, the total rural population will peak and begin to decline, and the developing world's urban population will overtake its rural population.²³

Rural-to-urban migration is an important component of these population shifts²⁴ and is directly connected to the youth demographic. Most urban migrants in the developing world are young people, both male and female.²⁵ Youth migrants are typically reacting to the "push" factors of their home villages and the "pull" factors of urban areas. These factors can vary greatly based on the context. Some of the factors pushing rural young people from their homes are perceived lack of employment opportunities, unavailability of cash income, and disinterest in agriculture as a career.²⁶ The pull factors of urban areas can include perceived employment opportunities, increased opportunities for personal development, and a perceived ability to generate cash.²⁷

Youth disinterest in agricultural careers is an especially troubling “push” factor for the development community, as smallholder agriculture and non-farm production in rural areas present the greatest youth employment opportunity in most developing countries.²⁸ The reasons for their disinterest vary by country, but common themes include the lack of quick cash income provided by farming, a view that it is an old-fashioned career, lack of control over their family lands²⁹ and the belief that agriculture does not always provide a stable income. Many young people believe the industry is not profitable.³⁰ The result is that the industry is dominated by an older generation, which may have trouble adapting to innovative business strategies, and will eventually die out. This leads to even more disinterest from youth, who view it as a dull or stagnant career not suited for someone their age.³¹

On the issue of stability, the World Disasters report of 2001 shows how the damage caused by climate change and extreme weather is negatively affecting youth, noting that an estimated 175 million youth would be affected in the 2000s, and even higher numbers in subsequent years.³² While this statistic captures explicit losses such as reduced food supplies, damages to land and degraded infrastructure, what is missing is the impact that such instable farming conditions are having on young people’s desire to become farmers. The decline in interest is logical: if there is a good yield, a farmer makes a good income and has sufficient access to food. If there is not a good yield, there is little product left to sell. In order to make youth more interested in farming there is a need to both reduce risk and foster growth, so that farms can better deal with the setbacks of natural disasters and low yields, as well as develop a more sustainably profitable business model.³³

Opportunities and Solutions

There are many possible approaches to deal with the labor deficit in the agricultural sector, and youth present a key opportunity in this area. Projects can encourage rural youth to remain near their homes and pursue a career in the agricultural sector. For example, if youth are concerned with profitability, projects might focus on fast-germinating crops to encourage successive plantings and increased income throughout the year. Such strategies are not limited to smallholder farming or on-farm activities; they can include encouraging

involvement in agribusiness or non-farm activities, such as providing small-scale services for farmers. The key may be to determine the rural “push” factors and reasons for disinterest in agriculture at play in a specific context—which, as mentioned above, vary by country and community—and to respond to these factors head-on.

There is hope in reversing youth disinterest in agriculture and rural areas. A recent USAID assessment in Mali reveals that young people would be willing to pursue agriculture if they thought it was economically viable.³⁴ Youths informally interviewed in Kenya said they are interested in agriculture but do not want to do it the same way their parents did. They associate the slow process of maize farming with their parents’ generation and are more interested in crops with short production seasons and quicker turnaround for income.³⁵ As more youth assessments are conducted, researchers must continue to ask the questions about agriculture and rural areas that were asked in the Mali assessment and Kenya discussions. Once the general reasons for disinterest are known, programs can begin to address them. For example, programs might focus on the innovative or business side of agriculture, while increasing the possibilities for and demonstrating the potential for income-generation.

There are some useful examples of programming in this area, though it is somewhat difficult to find sufficient evaluation and analysis. One example is the Kapchorwa Commercial Farmers Association in Uganda, which has increased its membership from twenty seven to more than five thousand members since 2001 by focusing on applying business practices to the agricultural sector, and making it more profitable. Members said that the Association’s most important achievement was increasing youth involvement in agriculture by increasing profitability.³⁶ In Albania, problems with youth urban migration led the Albanian Agriculture Competitiveness (AAC) Program to launch RASTI, a network for young agribusiness entrepreneurs that trains young people in agribusiness, leadership, and entrepreneurship.³⁷

Some recent research has shown that rural areas have their own “pull” factors as well, and potential solutions may need to build on this. Young people in Mali acknowledge that a sense of community and strong familial connections increase the appeal of their home villages.³⁸ Youths who do remain in rural areas, particularly in sub-Saharan Africa, are often

living with their families as part of an inter-generational household. They may have specific responsibilities and obligations associated with this, such as taking care of their siblings or small children. It is important to recognize that most rural youth are engaged in many different productive activities, both directly and indirectly related to agricultural production.³⁹ Most youth in Angola are expected by their families to engage in farm activities. Angolan youth acknowledge the value in agriculture but hesitate to embrace it as a profession.⁴⁰ Effective policy making has to address this disinterest in agriculture as a livelihood by ensuring that youth already involved in agriculture can continue to meet their familial or community food security obligations while offering off-farm activities that offer new challenges and promote overall interest in agricultural production as a whole. Effective programs might also build on the pull factors of rural areas.

Barrier: Youth do not consume enough nutrient-rich food and lack the knowledge to properly grow, store and process food

Most youth are not eating the United Nation's recommended 2100 k/cal per day and are at risk for inadequate nutrient intake due to lack of available food. Malnutrition is one effect of food deficits. Most of the calories consumed by food insecure individuals come from staple crops, which lead to diets that lack nutrient diversity. Increasing the quantity of nutrient-rich food that youth receive is a difficult challenge. Youth are particularly susceptible to the effects of malnutrition, including deficiencies in vitamin A, iron, zinc and iodine that affect their physical and brain development.^{iv41} As children enter adolescence they are expected to contribute to household work and food security, but if they are undernourished they will have difficulty contributing to overall household food security through agricultural work, off farm employment, or food processing and preparing. The ability to concentrate on schoolwork will also be compromised.

^{iv} Vitamin A deficiency causes 500,000 children per year to lose their eyesight, half of whom die. Lack of iron causes anemia in 1.5 billion people including half of all women of child bearing age. Zinc deficiency is thought to account for 400,000 deaths per year.

The HIV/AIDS epidemic is causing youth in developing countries to contribute to household security in greater numbers each year. Millions of youth are orphaned each year due to HIV/AIDS and forced to take over as heads of household, responsible for food production, income earning, and nutrition and food security for themselves and their siblings. Additionally, youth are also affected by malnutrition due to HIV infections. Half of all infections occur before age 25, and 12 million youth are infected globally, 75 percent of whom live in sub Saharan Africa.⁴² Vulnerable youth such as these should be targeted with nutrition education, as they require a combination of nutrients that will keep them as healthy as possible and free of non-HIV related illness.

Opportunities and Solutions

Nutritional deficiencies can be addressed most effectively through cross sectional approaches that target youth in three main areas of their lives: home, school, and the workforce. An example of a successful workforce program that has targeted all three areas is the Afghan Rural Youth Program, which has implemented nutritional livelihood education to increase year-round dietary diversity. The program uses a multi sector approach that includes raising nutritional awareness, providing agricultural training, and offering agricultural internships.⁴³ This program involved the government, NGOs and other youth projects working in collaboration.

In terms of targeting youth at school, one successful program is the Junior Farmer Field and Life Schools (JFFLS).⁴⁴ These schools target rural areas with large populations of HIV/AIDS to provide those ages ten to nineteen with skills related to food security. JFFLS teach all aspects of nutrition training, including processing, food safety, and nutrient absorption.^v JFFLS are proven to improve long-term food security, create gender equal attitudes, and improve nutrition. They tap into a community's indigenous knowledge of agricultural practices to create knowledge libraries and develop best practices related to

^v Specifically, the JFFLS teaches youth how food is obtained, processed, prepared and eaten, how it is digested and stored within the body, different nutritional components of food, examples of a healthful and balanced diet, food safety and hygiene practices and encourages equal participation in preparing food among genders. It also provides students with the knowledge to raise livestock, beekeeping and aquaculture. The JFFLS provide food baskets for students to take home that provide 50% of their daily energy, protein and fat requirements.

what crops and vegetables grow best in the region. They also address personal nutrition by expanding students' dietary diversity through year round crop growing and crop rotation.

A home-based approach to targeting youth and increasing their micronutrient intake is to make more diverse crops available.^{45 46} As the above section on land availability revealed, a barrier specific to youth is having available land. This fact makes them a target population for the development and implementation of programs that increase small-scale productivity and generate the production of more nutritious food. Specific strategies vary depending on the local context. In rural areas, homestead food production models that incorporate small animal husbandry and farming increase dietary diversity.^{vi47} These programs provide technical assistance to poor rural and peri-urban gardeners, so that they can increase year round production of micronutrient rich food.⁴⁸ Larger homestead gardens can also provide food to sell. With increased income to purchase food, micronutrient intake also increases. However, this link is only proven true if the additional income is given directly to women.⁴⁹ Where less land is available, home gardens provide opportunities for such additional food sources and nutrients.^{vii} Young urban dwellers can also increase nutritional intake through landless gardens, where gunny bags and seeds are provided to grow vegetables.⁵⁰

By targeting adolescents, there is also a possibility to indirectly impact the rest of a household. For example, when youth participate in nutrition education programs they are likely to go home and share the information with family members. The FAO has created programs to capitalize on this. In Namibia, where youth make up 25 percent of the population, the FAO and The Ministry of Youth developed and tested agricultural leader guides for girls and boys with subsequent specialization in food/nutrition, poultry, or vegetable gardening, to improve nutrition skills.⁵¹

While school-based nutrition programs have proven successful for both males and females, they have an important effect on females. In many countries twice as many women suffer and die from malnutrition as men.⁵² Also, since most girls in the developing world are

^{vi} Over 5 million people have been given access to HFP's in 5 countries and evaluations have shown that they have increased year round production of nutritious foods, animal based foods and income.

^{vii} Home gardens can teach nutrition education, soil and water management, harvesting techniques, crop diversity, low cost pest management and reduction of food crop gaps. There is a need for increased agricultural extension works to disseminate this information. *Improving Nutrition through Home Gardening*. FAO 2010.

susceptible to anemia, which can create problems during pregnancy, it is important to proactively provide related nutrition education. Given that most women in the developing world give birth by age 18, this intervention needs to occur at a relatively early age. School-based interventions have been shown to reduce female adolescent anemia.⁵³

B. Income generation barriers to food security

Hunger and food insecurity are direct manifestations of poverty. Youth inability to generate income, largely due to the fact that youth are two to three times more likely to be unemployed than adult populations, makes them particularly vulnerable to food insecurity.

Youth face a myriad of barriers to generating sufficient income. Especially in developing countries, youth lack job training and skills that make them employable. In some instances they even lack basic education, on which to build sector-specific on-the-job knowledge. The issue of urban migration is also related to income generation. Those youth who choose to pursue agriculture as a livelihood find that incomes are at risk from crop failure and instable prices. However, many youth migrate to urban centers to find jobs. Once there, they often discover that the positions which are available do not provide enough income to purchase food. As food prices sharply rise, these jobs offer even less purchasing power.

Barrier: Youth lack the education, training and market access necessary to generate enough income to maintain household food security

Youth poverty is a serious global problem often caused by a lack of income-generating opportunities. Nearly half of all youth are living in poverty and are prone to food insecurity in developing countries.^{viii} Youth are constrained by poverty because they lack access to the skills and education needed in order to make them a viable member of the workforce. This fact is evidenced by global unemployment rates for youth, which are two to

^{viii} World Youth Report 2005 by UN estimated that among 209 million young people or 18% youth live on less than 1 dollar per day, and 515 million young people, or 45%, live on less than 2 dollars per day.

three times higher than the rates for adults.⁵⁴ Unemployment rates are only expected to rise as the youth bulge leads to an even larger demographic group.^{ix} While population growth is a problem worldwide, it is more acute in Sub-Saharan Africa, with 28 percent of the population classified as youth, making it the “youngest” region in the world. At the same time, they have the highest youth unemployment rates.⁵⁵

The youth bulge could be a valuable asset in Sub-Saharan Africa. However, in order for this to be realized youth must be given access to education, job skills, and markets. As it is now, African youth enter the labor market at young ages and with few skills, which limit their contribution to economic growth and increase their vulnerability to poverty, food insecurity, and economic hardship. A substantial proportion of young people in African countries never enter school, moving directly into the labor force without job training or skills.^x Illiteracy among 15 to 24-year-olds is also alarmingly high, making them less employable.^{xi} Africans who do transition from school to work are likely to experience very long periods of inactivity, posing significant social and economic problems.^{xii}

Like most aspects of youth and food security, youth cannot be viewed as a homogenous group when considering income generation and employability. For example, urban youth generally enter the workforce later and attain higher education levels than rural youth.⁵⁶ Gender variability differs across countries^{xiii} but some generalizations can be made, as male youths in both urban and rural areas usually stay in school longer than females, attain higher education levels, and start the transition to work later in life.⁵⁷ In the Middle East and North Africa female participation in the workforce is on the rise, which may alter this dynamic, as employment rates for young men in these regions has peaked and is beginning to decline.⁵⁸

^{ix} According to the International Labor organization, the highest rates of youth unemployment are found in the Middle East and north Africa, at roughly 24 percent each, youth are nearly three times more likely to be unemployed

^x In 29 African countries for data available, an average of 35% of children under the age of 15 work. International Labor organization

^{xi} In Burkina Faso, Ethiopia, and Mozambique more than 75% of out-of school youth have no education at all, World Bank 2006

^{xii} In 8 countries (Cameroon, Ethiopia, the Gambia, Kenya, Mali, Mozambique, Sao Tome and Principe, and Zambia) young people face about five years of inactivity before finding work; youth in Uganda are inactive for more than three years on average. World Bank 2006

^{xiii} According to recent labor force survey of seven West African countries, while Abidjan, Dakar, Douala, Niamey and Ouagadougou display higher proportions of female unemployment among the young, the reverse is true for Kinshasa, Lome and, to a lesser extent, Bamako and Cotonou. Some studies argue that in female unemployment rate is lower than man because the lack of measure for household work, and females are more likely to stay at home and doing unpaid productive work.

Opportunities and Solutions

In order to end the cycle of unemployment and food insecurity youth need to be prepared to take advantage of income generating opportunities and to create new ones through self-employment and entrepreneurial activities. Access to education and skills training is an important part of this process. Although the relationship between education levels and employment outcomes is not always clear, the success of a workforce is still influenced by education, apprenticeship and early work experience.^{59 xiv} Preparation for employment starts with basic education, which provides the foundation for future human capital accumulation and acquisition of vocational skills in schools, training institutes, and the workplace. For these reasons it is crucial that youth have access to schools and other educational opportunities from an early age. Once basic education is gained, attention can be turned to gaining vocational skills through on-the-job training, such as internships and apprenticeships. This strategy is particularly applicable in Africa as most countries in the continent already have a well-developed apprenticeship system for sector-specific training. A study in Ghana shows that apprenticeships are the most effective way to gain training and are primarily utilized by those with low-levels of education.⁶⁰

While education and training are needed to help youth obtain employment, once they are in the workforce, generating enough income to maintain household food security is dependent on having strong markets to work within. In this arena, USAID and many other organizations use the value chain approach. A value chain represents a sequence of activities required to bring a product or service from conception to final consumers – from input suppliers, to producers, to wholesalers, to retailers and finally to the consumer. At each stage of this chain interventions are designed to link producers to other private sector actors, who have access to growth markets. The goal is to empower individuals to upgrade their firms and inspire collective action to create a competitive value chain that contributes

^{xiv} Education has long been used as a tool to help young people finding a job, but the effectiveness of the strategy is much less now than in the past. In a context where average education levels were very low and where the rising population and state involvement in active development strategies implied a growing public sector, diplomas were keys to obtain a job in this segment. However, since the end of the 80s, the economic crises and the limitation of public expenditure in most African countries have meant that these employment opportunities have greatly shrunk. DIAL document 2007. On the other hands, World bank report noted unemployment is sometimes found to increase with education

to overall economic growth.⁶¹ Such benefits are particularly valuable for vulnerable populations like youth.⁶² A report from the International Fund for Agricultural Development (IFAD) said that strong value chains are essential when targeting rural youth in middle income countries, as a way to help them step out of subsistence-based agriculture and into a genuine business environment, where they can make extra money to invest in new land or new tools and meet household food security needs.⁶³

The value chain approach is particularly applicable to youth because it can be applied to a variety of youth cohorts, to address a number of different market-related barriers. USAID has noticed that some chains are more appropriate for youth integration than others. When developing an intervention care should be taken to identify what youth cohort is being targeted and how the intervention relates to their goals and motivations. In general, chains that require high capital investment or skill levels should be avoided, as youth of all backgrounds tend to have minimal assets. Many youth, especially those who have migrated to urban areas to earn extra income for their families at home, tend to have financial obligations that require a fast return on economic activities. For this reason, urban interventions should avoid activities where payment will be delayed.⁶⁴ For rural youth, IFAD recommends integrating value chains into the existing activities of those targeted. This will help to empower the individuals to do their current work more efficiently, rather than frustrate them by learning a new skill. If activities are introduced that alter daily routines they need to clearly demonstrate added value in order to be effectively integrated.

The Value Girls Project in Kenya meets both the need to develop skills and integrate youth into value chains. The program works with the poultry and vegetable production value chains by offering girls who are still in school training in business, financial literacy and technical issues – all of which were identified as market constraints. For girls who are out of school, the program utilizes partnerships with the banking and agriculture industries to connect women to affordable microloans and training for poultry management. Additionally, the project offers a mentoring component by linking the older youth participations to those who are still in school.⁶⁵

A project in Northeast Brazil works throughout the value chain to address a variety of issues in the community that are impeding food security. The first intervention of the

Dom Helder Camera project refurbished water pipes and wells, which allowed farmers to grow more crops and add 15 new vegetables into their diet, thus improving the health and food security of the community.⁶⁶ The project also improved income-generating opportunities for local farmers by working with the local and federal

“Before we thought of this semi-arid region as a place where it is almost impossible to survive. Today we have changed this idea and we see our land as full of potential. We are happy to see that it is worth investing and staying here. We do not need to migrate anymore.”ⁱ

-Naelson Medeiros, a participant in the Dom Helder Camera project, age 28

government to establish vegetable fairs, and supply produce for schools and hospitals. The final component, which is now being implemented, touches on the need to development employment skills by teaches youth marketing and business skills, so they can maximize their sales. More than 700 youth have received this training, in collaboration with local agrarian schools and farmers’ associations.⁶⁷

Barrier: Youth who migrate to urban areas are unable to earn enough income to achieve food security

Urbanization is a major issue at play in the modern world. Between 1995 and 2005, urban populations increased between 20 percent and 60 percent in all regions of the world. By 2030, it is estimated that up to 60 percent of individuals living in cities will be under the age of 18.⁶⁸ Youth migrants in urban centers face several specific challenges that keep them from finding the employment needed to achieve household-level food security.

It is important to recognize that food security challenges and approaches can be very different for rural and urban areas.⁶⁹ However, it is also important to clarify that rural and urban societies are not as separate from each other as they once were. Migration to urban areas often occurs seasonally; young men move to urban areas after the harvest and return during the rainy season.^{xv} Temporary migration like this can be an important survival strategy for poor households,⁷⁰ and it is often a household decision.⁷¹ The spread of mobile phones has greatly improved communication between those in rural and urban areas, which

^{xv} See, for example, Mali Youth Assessment.

has contributed to a growing interconnectedness between rural and urban society.⁷² Rural and urban households are still distinct from each other and tend to employ different coping strategies, but the growing linkages between urban and rural societies may be causing rural and urban lifestyles to become more similar.⁷³

One of the challenges for rural youth migrating to urban areas is that there are often fewer opportunities for them in urban centers than perceived. Urban young people tend to be better educated than their rural counterparts, so it is difficult for the migrants to compete in urban job markets.⁷⁴ Without the ability to generate income, youth migrants are not able to be food secure. (United States Agency for International Development, 2010)

Opportunities and Solutions

Food security interventions can target youth living in urban areas. Many experts argue that migration cannot be prevented, so the food security of young people living in cities must be addressed within the cities.⁷⁵ Projects in urban areas can be as diverse as urban agriculture programs, which have been around since the 1980's,⁷⁶ or increasing the income-generating potential of urban youths through better job training, and increasing employment opportunities so they can purchase their own food. Many of the opportunities discussed in the income generation section above may be applicable here.

Urban gardens address this issue by helping individuals improve their own food security, which allows them to spend a lower percentage of their income on food. Currently, poor urban households spend up to 80 percent of their income on food.⁷⁷ Temporary migrant workers would especially benefit from urban gardens, as they can bring more of their income to their families in rural areas. In addition, urban gardening, or micro-gardening, can serve as a small additional source of income⁷⁸. An interesting program example of an urban garden is in Nairobi, in Africa's second largest slum. Here, a youth empowerment group has transformed a garbage dump into an organic garden. Members of the group eat the vegetables grown, but also use the garden as an income-generating activity, selling all vegetables that they do not eat.⁷⁹ An additional urban garden example is in Dakar, Senegal, where FAO has assisted more than 4,000 urban residents in starting micro-gardens in backyards.⁸⁰

Research into youth urban migration reveals research gaps. The development community would benefit from data on the employment status and incomes of youth migrants (preferably disaggregated to different youth cohorts), both permanent and temporary. It would also benefit from perspectives of youth migrants on the opportunities found in urban areas. Evaluations and assessments of urban garden programs should also specifically look into youth involvement.

IV. Conclusions

It is the recommendation of the research team that USAID begin developing programs for implementation by the Food Security Bureau that specifically target youth. As part of this process, additional research and evaluation should be conducted to determine which youth cohorts USAID can target most effectively, given their resources. Additionally, local experts in the field should be consulted to gauge whether or not the programs and strategies considered will be supported by the communities that they target.

The issues detailed above explain the dual factors of agricultural production and income generation that contribute to food security among youth. Within each of these areas there is room to prioritize how resources should be allocated. The research team recommends that land availability be considered the core issue of agricultural production and that providing education and job skills be considered the core issue related to income generation.

In terms of land availability, youth must be given secure access to enough arable land so that they can grow food to obtain long-term food security. Agricultural technology and nutrition education will be more effective as long term solutions if implemented concurrently with secure land rights. Youth disinterest in agriculture will be more difficult to change as the current generation continues to shift focus to jobs in urban areas. There is a need for a greater understanding of the pull factors that could prompt youth to stay in rural areas, whether through strengthening local connections, or assisting villages in increasing yields so that agriculture can be both for production and extra income generation.

In order to maintain household food security youth need jobs that generate income. However, they first need the necessary education and sector-specific training to qualify them for these jobs. This effort should include on-the-job training such as apprenticeships, especially where this kind of arrangement is already a part of the local culture, like in Africa. Once skills are gained and youth enter the workforce they must also have access to strong markets, in order to generate income. While there are many strategies to strengthen markets, the value chain approach would be particularly effective in targeting a variety of youth populations. While these interventions are important, they may only be applicable at later stages of development. Before gaining job skills or developing markets, youth must first have access to basic education.

In all interventions, those developing policies and programs must be cognizant of the need to recognize youth as a unique group. Further research will inform this approach. The current research has clear gaps in the understanding of youth as a distinct demographic; youth are seldom disaggregated and instead lumped with adults or children. The next research step should be to break down youth into specific cohorts, with the goal of identifying specific priorities of each group and the barriers to food security that they face. While these cohorts vary by country and context, examples for research include urban youth, rural youth, youth who are still living with family, and youths who are heads of household. Given the diversity of the youth demographic, involving youth in local and national government decision-making is recommended, to ensure that their concerns are reflected in policies. Such involvement could include the development of a youth advisory group, or hiring youth to serve as advocates within specific offices related to developing food security programs and interventions.

Further research is also warranted to gain a better understanding of how youth education levels relate to food security. As mentioned above, the literature on this subject is not consistent; it was not evident if increased education correlated with increased food security. More specifically, it is not apparent how education correlates with employability and therefore income in increasing food security. The role of education in access to employment, and more generally the link between human capital investment, informal sector participation, and work trajectories are promising fields of research in the African

context. Moreover, knowledge is lacking regarding possible gender specificities in access to employment, in particular in the informal sector.

V. Research Recommendations and Limitations

As demonstrated in this report, the issue of food security is complex, with much left to be researched. When examining the issue with a youth lens, these research gaps are even larger. To that end, this report is not comprehensive of all of the intersections between youth and food security, but rather focuses on the barriers that most directly involve youth, and for which there was already a base of research to begin analysis. Any further, in-depth work by USAID should look at additional connections that might be present.

Specifically, the research team noticed a research gap in the relationship between rising food prices and riots in countries largely dominated by youth bulges. While there is great speculation regarding this correlation, no research makes a direct link from youth food insecurity to conflict. A handful of academic studies identify post-conflict youth as a distinct cohort. Examining the relationship between food security and youth's likelihood to enter conflict would make a compelling case to involve youth in future food security initiatives. Recent linkages include the protests in Egypt, both in 2008 and 2011, which were mainly led by youth activists and had roots in the country's food security crisis. The dramatic rise in food prices in 2008 also led to civil unrest in Africa, the Middle East, and South Asia. The development community needs to know more about how policies or programs can better protect young people in conflict zones from being manipulated through food security, particularly single males. Assessments and evaluations of food security programs that target youth or other vulnerable populations in post-conflict regions will help to explain specific issues and needs so that effective interventions can be developed. What is important to understand is that conflict adds another layer to youth food security needs.

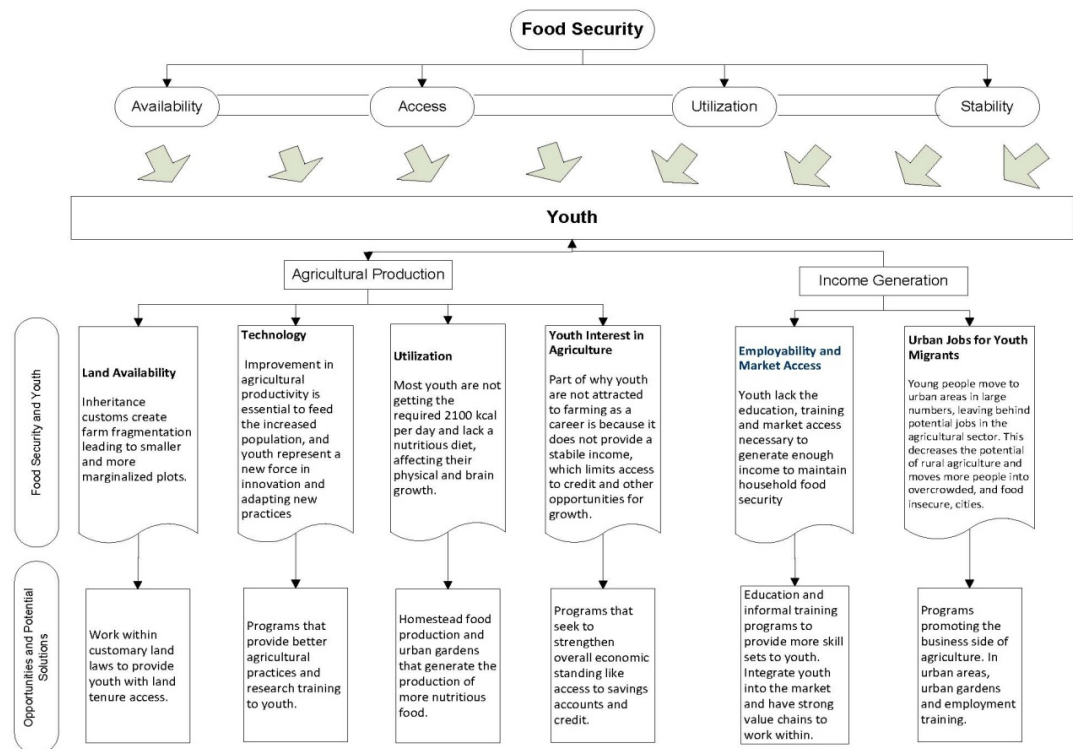
USAID could also add to the field of food security and youth by developing indicators for monitoring and evaluation, both in terms of economic development and youth participation in food security. Prioritized issues for economic development include: percentage increase of youth in secure employment, number of youth engaged in

apprenticeships, number of countries with a national youth policy council or taskforce in place; country budgetary increase for youth development, percentage increase in school attendance at the secondary level for both sexes, and development of indices and surveys to measure youth development at local level. Indicators for monitoring and evaluation for youth participation in food security include: percentage increase of youth involved in formal and informal agricultural activities, percentage increase of youth access to purchase food, percentage decrease in youth malnutrition rates, and development of indices and surveys to measure barriers and motivators to engaging in agriculture. Indicators should be developed specifically per the design of any program being implemented.

Youth can either be viewed as a challenge to the developing world or as an asset; with an estimated 1.2 billion individuals entering adulthood in the coming decade policies and programs should target youth as a vulnerable population, but also as one that can greatly enhance food security within their nations and communities.

VI. Annexes

A. Matrix



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