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Ecuador, Factor 11: Malnutrition

Educating Hillside Farmers To Address Malnutrition Among Ecuador's Relocated Farm Families

Across the globe, malnutrition is a big problem. According to the World Food Program, one in nine people around the world do not have a sufficient amount of food to lead to a healthy lifestyle. In developing countries, where most of the world's malnourished people live, 12.9 percent of the population are malnourished. Poor nutrition also causes almost half the deaths in children five years of age and under. Malnutrition and disease are also linked closely. Often times, disease is the result of malnutrition (World Food Programme). When people are malnourished, their body systems are deprived of adequate nutrients to keep their body running healthily. According to The World Factbook, bacterial diarrhea, hepatitis A, and typhoid fever are common throughout Ecuador with a high degree of risk (THE WORLD FACTBOOK). Fortunately, malnutrition is relatively easy to measure. As reported by HUNGaMA, the most common way to measure malnourishment is to know a person's weight, height, and age. These measures are then put on a graph and compared to the average height and weight of people the same age. Findings then determine if a subject is malnourished, healthy or overweight. While malnourishment is a serious problem, it is getting better. Since 1990, the amount of people living around the world with chronic malnutrition has dropped by 17 percent (HUNGaMA). It stands to reason by reducing malnutrition, poverty would be reduced, as the two go hand-in-hand.

Despite the reduction in malnutrition over the years, one big obstacle to face is the population is still growing around the world. As of January 1, 2016, Ecuador's population was approximately 16,273,000. Ecuador's population has also been rising by 1.56 percent (countrymeters). In Ecuador, population shifts are occurring from the rural highlands to the urban areas. As stated by Compassion International, the Ecuadorian people are moving to find work to support their families. With the poverty population growing in the cities, not only do malnourished people have to be fed, but also the growing population needs to learn how to feed the future, larger generations of people (Compassion International). In other words, the current population needs to be fed but also the generations in the future.

To fight the malnourishment of the current poverty stricken generation in Ecuador, the relocated highland agricultural population needs to know how to grow and produce food while supporting their families. While people are taught to grow and produce food, they also need to be supplied with food to support their families. Educating relocated farmers on plant science and encouraging them to raise the proper food would reduce malnutrition and could even pay the farmers for taking part in the project. This in turn reduces poverty and supplies parents and children the money to pay for education. Education is at the root of the malnutrition issue. According to the Center for Global Development, "Education gives people the skills they need to help themselves out of poverty and into prosperity." Education around the world has many positive effects. First, it results in a healthier population. When the population is educated, people are more likely to be able to prevent disease. The people may also use health services more effectively. For example, people may follow a health schedule, such as going to the dentist once a year. Secondly, it results in a better economy. A better economy is usually the result of people earning higher wages as in most poor countries one more year of education can result in wages being ten percent higher. When people have more money, they tend to invest more. Thirdly, education results in better political stability because people are aware of their rights and know how to put them into use. The whole country benefits from education (Center for Global Development). Education has many effects, but the greatest may be that educated people not only obtain better quality jobs but also get paid better. This means that families earn more money to spend on food and other necessities. Education serves both the producers and consumers in an agricultural market. If producers know more about agricultural techniques and how to

properly implement them, the farmers can communicate about their planting, growing, or harvesting practices. Consumers, tourists and native Ecuadorians alike, can then say they feel more at ease with buying the higher-quality produce and products in the marketplace. Consumers can also say they feel as if they are making major contributions to the urban farmers through the purchase of the produce and products. The marketplace can become a lucrative and close outlet for relocated farmers in urban Ecuador. Nelson Mandela was spot on when he said, "Education is the most powerful weapon which you can use to change the world." By educating people, malnutrition may be seen one day as a thing of the past.

In Ecuador, there are relocated highland farmers in urban areas. They are in the cities to support their families beyond subsistence and moving to urban areas looking for work. Here is an example. A disadvantaged, relocated urban family is made up of a dad and mom, and together they have two children. Here is a description of their typical day, as claimed by CultureGrams. When they wake up, they have a very Americanized breakfast, such as eggs, bread, and coffee, or they can go to a market and buy a breakfast which consists of rice with chicken or pork. The marketplace is where urban Ecuadorians purchase their food. The drawback to food in the marketplace is buyers lack knowledge of how the food was grown. Characteristics like food origin, growing processes, harvesting and handling are unknown (ProQuest).

Lunch, which is the main meal of the day in Ecuador, is highly diversified and depends on the region. This family lives in Quito, the capital city of Ecuador, so technically they are located in the highlands. In Quito, people usually prefer to have a lunch of corn and beans. Soup is a staple food in Ecuador, and is usually served at both lunch and supper. In the highlands, the school year begins in September and ends in June. Almost all children age six through eighteen are able to receive free public education. While the literacy rate is at 99 percent in Ecuador, the education system has some major flaws (ProQuest). As reported by Compassion International, even though primary school is required, approximately eight percent of the Ecuadorian population does not receive education. In urban areas, 35 to 40 students have an average of one teacher. Children that do attend secondary school have one of the highest rate of absence. One out of ten students are absent daily. Health care is a problem (Compassion International). According to Oxford Journals, "Almost a third of Ecuador's population lack regular access to health services, while more than two-thirds have no health insurance and insufficient resources to pay for health care services."

Even though Ecuador is the world's number one exporter in bananas, the country does face some major barriers to their agricultural productivity (ProQuest). As reported by the Houston Chronicles, even though bananas are a fruit, they are not a great food for people on a diet. In extreme cases in the United States, people have cut bananas from their diets altogether. It doesn't matter if the nutritional value is being treated fairly, bananas are still being dismissed from the American diet on a large scale. This is because bananas are high in fructose and carbohydrates and are low in protein (Samuels). In addition to a problem with a main export, there is climate volatility in Ecuador. Ecuador is located on the Ring of Fire, which is where a large amount of earthquakes and volcanic eruptions take place. As reported by CultureGrams, having 31 active volcanoes poses a huge threat to the agriculture of Ecuador. The country is also located at the center of El Niño, a weather pattern generating heavy rainfall that can cause devastating floods and mudslides. El Niño is usually followed by La Niña which results in drought. Unstable weather patterns have consequences for agricultural practices, which usually largely disrupts food production (ProQuest). Effects could include necessary replanting, lack of money for additional seed and supplies, or the season could be completed or near completion which hinders replanting.

As claimed by Compassion International, in Ecuador, 90 percent of the people that live in the highlands make money by working in informal commerce, such as selling water in the streets or shining shoes (Compassion International). This hand-to-mouth existence provides the barest livelihood for urban families in poverty. Proposals that better the lives of the poor Ecuadorians in the urban areas must address the threatening weather conditions and provide skills and knowledge that could be used in careers.

Malnutrition is another one of the biggest problems in Ecuador. In fact, chronic malnutrition affects 28.5 percent of the population (THE WORLD FACTBOOK). As stated by Klieser, the malnutrition of Ecuador is directly affected by poverty levels (Klieser). According to Verfaillie, "Poverty and malnutrition have a direct link, poverty is the main and principal cause of malnutrition." Approximately 35 percent or 40 million of the people are living in poverty while 17 percent more of the people are at risk of entering poverty. In Ecuador, 1.5 million people are living in extreme poverty, which means that if they spend all their money on food, they will still not be able to meet daily nutritional requirements. Also according to Verfaillie, young children and pregnant mothers are the most vulnerable to the issues of malnutrition (Verfaillie). In addition, malnutrition can often result in disease. Bacterial diarrhea, hepatitis A, and typhoid fever are common throughout Ecuador and the degree of risk to the country's population is high (THE WORLD FACTBOOK).

Malnutrition causes more problems than poverty. As reported by Compassion International, because of poverty, many young children will work to help their families instead of going to school. This leaves them unskilled and uneducated. When the children grow up, they then aren't able to find steady, well-paying jobs. This repeats the ongoing cycle of poverty. In other cases, one or both parents will often move to a different area looking for employment while they leave their children with relatives. Because many children in Ecuador do not have much parental oversight, there have been many negative effects. Children are then often abused and neglected. In Guayaquil, the country's largest city located in the coastal area, 30 percent of boys and 40 percent of girls have suffered at least one incident of sexual abuse. Delinquency and teen pregnancy rates are also higher, (Compassion International).

In Quito, the capital of Ecuador, a project teaching people to grow and produce food started in September 2000 as reported by the Food and Agriculture Organization of the United Nations. The project was simple and took place on a hill called El Panecillo which is located at the center of Quito. El Panecillo is unique, as it is a hill that can't have houses built on it; it is too steep. The project participants included urban people and rural people who had moved to the city. Many of the participants took part in the project to save money on food and make extra income. The participants were also below the income level and had only completed primary school. On the hillside farms, participants grew a variety of vegetables. Recycling and use of organic wastes were promoted in the program to fertilize the crops. The project estimated the 47 percent of the garden produce was sold and the other produce was left for home consumption. This project accomplished two things. The participants grew healthy food for themselves to eat which fought malnourishment, and the participants were educated about farming (Food and Agriculture Organization of the United Nations). Education is the first step toward overcoming malnourishment.

A few changes are needed to improve this project for all involved. Relocated highland farmers would be able to participate in the project for free. This is an assumption about the El Panecillo project, but more research is needed to make sure it is actually free. One major change would involve the whole family, including both parents and children. A free meal could be provided to attract families to this program, as physical needs need to be met before other needs, such as education, are met. Families would most likely be feed food from the project, which could possibly make them more excited to participate in the project. Educating the current generation and equipping the future generations will lead to food security for future generations of Ecuadorians. Classes for the project would most likely take place once a week, most likely on weekends, since children would be out of school and parents would most likely not be working. Areas in the city not suitable for construction nor architecture, like El Panecillo, would be where these projects could take place. As this project goes on, leaders of the project would educate whole families on growing and producing food. Families could also be educated on nutrition so they know what their bodies' nutritional requirements are. The families would grow and tend to all the food so they are able to learn and experience the whole growing process. When the food is harvested, the families would keep around 50 percent of the food. The families could bring some of the food that isn't used for their family meals to

the market to make money. The profits earned from the food sales would be given directly back to the families. A co-op of families may even decide to fund farming equipment or a scholarship system. The scholarship system would basically be money put into an account for families to be used for continuing education to improve farming practices. This in turn would encourage participants to receive higher education.

This project would help many problems in Ecuador. First and foremost, this project would provide relocated highland farmers the healthy food to feed their families. Secondly, the project will also educate families on growing and producing food and educate families on nutrition. According to Compassion International, many Ecuadorian families are left uneducated about nutrition (Compassion International). Educating families on nutrition will be a major step in overcoming malnutrition. This project will then lessen malnutrition because the families will be given food and will receive education on their bodies' daily nutritional requirements. This project will also give the families some income, which the families of Ecuador desperately need. Lastly, this project will encourage continuing education. Families that participate in these projects will be able to teach others what they learned so that others can benefit from these projects besides just the limited participants. These projects could be run by organizations like the United Nations as the United Nations has played a key role in fighting malnutrition and poverty across the globe. The government of Ecuador could also play a crucial role. If the Ecuadorian government took part in the project, the government could control the quality of food going to the open markets without raising prices. This would be a positive thing because most urban Ecuadorian families do not know where food at the local markets come from. Other non-governmental organizations, such as places of worship could fund and teach the project, that way another need would be met - a spiritual one. Another possibility for the running of this project could be that non-governmental organizations start it but the government takes it over because they see the positive effects the project has. This project would also encourage and promote the recycling and use of organic wastes. This would be very beneficial because there are lots of organic wastes that come from urban areas. This program would also reinforce the farming techniques that participants learned before moving to the urban areas from the rural areas.

The project would directly benefit Ecuador and its people. First, families would receive healthy food to feed their families. When families receive the food, they would first end up being well fed and not hungry. Secondly, the families will not only be eating enough food to fill them up, but it will be healthy food. This will result in healthier, well fed families. Participants will also be educated on growing and producing food and also be educated on nutrition. For example, the disadvantaged, relocated urban family. The family will now know how to produce food and be educated on the nutrition the family needs, which will have positive effects on both the parents and children. Now the parents will be able to share what they have learned with their children and in turn, be educating the future generation. The parents will also be able to look out for themselves and their two children by making sure that they are getting the nutrients they all need on a daily basis. Thirdly, with education heavily encouraged and emphasized, its framework reinforces the family structure. When the family structure is reinforced, there may be many positive effects. For one, childhood abuse and neglect will lower, which will result in less incidents of sexual abuse. Delinquency and teen pregnancy rates may also lower because of the reinforced family structure. Indirect benefits would allow the relocated families to continue the tradition of growing highland crops for personal consumption and celebrate their culture. Other consumers in Ecuador, like tourists, would benefit from the uniformity of methods used to grow the food. Consumers at the marketplace could depend on the safety and origin of the food they buy. Ultimately, the relocated highland farmers and their families could begin to enjoy a quality of life without malnutrition and beyond subsistence.

Works Cited

- Center for Global Development. *Education and the Developing World*. 2006 йил 12-June. Web. 2016 йил 7-July. <<http://www.cgdev.org/publication/education-and-developing-world>>.
- Compassion International. *Compassion International*. 2016. Web. 17 March 2016. <<http://www.compassion.com/ecuador/andes.htm>>.
- Compassion International*. 2016. Web. 17 March 2016. <<http://www.compassion.com/ecuador/ecuador-beaches.htm>>.
- Countrymeters. *Ecuador Population*. 2016 йил 1-January. Web. 2016 йил 23-June. <<http://countrymeters.info/en/Ecuador>>.
- Food and Agriculture Organization of the United Nations. *Food and Agriculture Organization of the United Nations*. 2015. Web. 2016 17 March. <<http://www.fao.org/ag/agp/greenercities/en/GGCLAC/overview.html>>.
- HUNGAMA. *HUNGAMA*. 2010. Web. 27 March 2016. <<http://www.hungamaforchange.org/index.html>>.
- Klieser, Kenneth W. *The Borgen Project*. 13 February 2014. Web. 16 March 2016. <<http://borgenproject.org/poverty-ecuador-plans-development-growth/>>.
- Lopez-Cevallos, Daniel F and Chunhuei Chi. *Health Policy and Planning*. 7 September 2009. Web. 25 March 2016. <<http://heapol.oxfordjournals.org/content/25/3/209.short>>.
- ProQuest. *Ecuador*. 2016. Web. 8 March 2016.
- Samuels, Mike. *Houston Chronicle*. 2016. Web. 28 March 2016. <<http://livehealthy.chron.com/people-say-bananas-arent-good-eat-diet-2657.html>>.
- THE WORLD FACTBOOK. *THE WORLD FACTBOOK*. 2016 йил 17-June. Web. 2016 йил 7-July. <<https://www.cia.gov/library/publications/the-world-factbook/geos/ec.html>>.
- Verfaillie, Nina. *The Borgen Project*. 19 November 2009. Web. 28 March 2016. <<http://borgenproject.org/10-facts-poverty-malnutrition/>>.
- World Food Programme. *World Food Programme*. 2016. Web. 27 March 2016. <<https://www.wfp.org/hunger/stats>>.

