

Ann Hewitt
Lang Science Program
AMNH
New York, N.Y.
Haiti, Factor 19

Ending Hunger in our Lifetime: A Call to Action

“Beyond mountains there are mountains” (Kidder 36). Three quarters of Haiti’s 10,714 square miles consist of mountainous terrain. In fact, the name Haiti, used by the indigenous Taino people, implies the “land of mountains” (Haggerty 1989). But this proverb’s significance to Haitians is more meaningful and relevant; because Haiti is the poorest nation in the western Hemisphere. “Beyond the mountains there are mountains” is a metaphor ; for beyond the problems in front of us lie deeper ones. The greatest challenge for Haiti, is to reach the United Nations number one Millennium Goal and to eradicate hunger. Short term solutions alleviate today’s problems, but are not sustainable. To obtain food security Haiti needs to improve access from farms to markets through infrastructure development. Haiti’s history and geography are to a great extent responsible for its precarious circumstances. It is located on Hispaniola, the second largest island in the Caribbean, which it shares with the Dominican Republic. Haiti was discovered by Columbus in 1492 and colonized by the Spanish, who relinquished the western third of the island to the Kingdom of France in the 17th century. Throughout the 18th century, Haiti supplied Europe’s insatiable hunger for sugar and coffee produced with slave labor. It was not until 1804, that Haiti gained the admiration of freedom seeking revolutionaries all over the world, when Toussaint L’Ouverture threw off the yoke of colonization and Haiti became an independent nation (Haggerty 1989). However, overtime, decades of political instability and massive deforestation have compromised the country’s ability to feed itself.

The geographical location of Haiti has further exasperated the situation. Haiti is located within the Caribbean hurricane belt and is on the destruction path of devastating storms such as Hurricane Sandy in 2012 and Hurricane Irene in 2011. Its landmass traverses the Enriquillo-Plaintain Garden fault zone (EPGFZ) an active seismic zone which runs along the southern part of the Island of Hispaniola. The catastrophic earthquake of January 12, 2010, with its epicenter 16 miles outside the capitol of Port-au-Prince is considered to be the largest urban disaster in modern history. It not only reduced the capitol to rubble and but it has severely affected the lives of more than 3 million of Haiti’s 10 million citizens

Nobel Peace laureate Norman Borlaug believed “ The destiny of the world depends upon providing a decent standard of living for all mankind (Borlaug 1970). Food security is the essential part of this equation. Although eighty percent of Haiti’s land is presently used in agricultural production, only 28% is considered to be arable. The remainder is deemed to be too steeply inclined to be cultivated . (Library of Congress 2006).

85% of Haitian farms consist of subsistence farmers with lack of access to seeds, agriculture equipment, fertilizer and knowledge of commerce and markets to maximize their produce and thus profit. Small farmers cultivate just enough food to survive and most of the time it’s barely enough to eat. For more than 50 years, no investment has been made to assist them and yet small Haitian farmers remain the most precious and undervalued resource in Haiti. Haiti will not pull itself out of poverty until these farmers are given the chance to become sustainable (Avery 2011).

The typical Haitian subsistence farm family marital relationship is a type of common law marriage called *Plasaj*. Although not recognized by law, it is socially acceptable within communities and practiced by 80% of the Haitian population (Accilien 78). *Plasaj* was institutionalized in the 19th century by peasants who “placed” a companion on land to work the fields (Accilien 93). Today, it has evolved into an economic agreement which requires the husband to cultivate at least one plot of land for his wife and to provide her with a house. The husband is responsible for heavy work, such as tilling the soil, and the wife is in charge of selling produce in the market. Previously, cooperative labor groups comprised of extended families provided a social network and agricultural force to help one another. This reciprocal system has vanished, primarily because farms have become significantly smaller. The Haitian judicial system, based on the Napoleonic Code, stipulates how property is inherited from one generation to the next; though equitable, it has undermined the long held tradition of cooperative farming. As each generation inherits land, the lots are divided among siblings, decreasing their size and diminishing their potential output. Households are comprised of nuclear family members with 4.9 children, widowed parents and sometimes adopted cousins (World Report 2013). Exchanges with extended families exist but are not structured. The Haitian diet consists of two meals a day: coffee, bread juice or an egg for breakfast is followed by a carbohydrate rich lunch of manioc, sweet potatoes, rice served with beans or a bean sauce prepared with a tomato paste base and small portions of poultry, fish, or goat. Snacks include mangoes, peanuts and *rapadou* a nutritious snack made out of molasses.

Haiti’s literacy rate of 53% has been attributed to severe shortages of teachers and educational curriculum. Although “fundamental education” or elementary education is compulsory for children between the ages of 6 and 11, the children of subsistence farmers have been traditionally underrepresented in schools, in large part because 92% of schools are private or run by churches. For a population of which 76% live on an income of under \$2.00 a day, tuitions are excessively high (Suzuta 10). One hundred and forty-five districts have no public schools (Suzuta 10). Furthermore, many schools require that students attend pre-school prior to matriculating. This adds another layer of difficulty for families wishing to educate their children. The limited number of pre-schools means that often children are forced to wait several years before they are admitted, resulting in many children being age 8 and above by the time they enter first grade. Statistically, over-age children of farm workers have a low retention rate, they are also at a higher risk of dropping out if they have not reached the requisite 50% grade to advance into the next class (Suzuta 12). Their age is not only a social disadvantage that sets them apart from their classmates, but it also damages their self esteem. Therefore students turn down the option of repeating a grade, to pass the standard exam they need to complete elementary education. Other factors that contribute to a high dropout rate are the lack of good roads to get to and from school, and reliance on school age children to help with childcare, housework and farming. Although Haitian society values education, only 22% of students pass the exams at the end of fundamental school; often because teachers have not been adequately trained to teach nor have they presented their students with the necessary material. The prospect of sending children of subsistence farmers to high school is unlikely since 78% of secondary schools are located in urban areas (Suzuta 13).

To end poverty and eradicate hunger Haiti must develop an infrastructure that will benefit family units, the educational system and universal access to health care. The lack of infrastructure primarily good roads and electricity means that most rural areas in Haiti do not have health care. This directly affects the well being of subsistence farmers and their families. Women deprived of prenatal care and medical supervision throughout their pregnancies have resulted in a high infant mortality rates of 50.9 deaths for each 1000 live births (CIA World factbook 2013 estimates). The development of infrastructure is critical to women who are often the most vulnerable in society. It would facilitate information sharing on many issues such as the nationwide vaccination campaigns, malnutrition and cholera. It would encourage the development of grass roots movements and help build self-reliance.

Rural Haitians are not exclusively subsistence farmers. Women typically sell much of the family harvest in regional open-air market places and use the money to buy other household foods. Farm sizes vary from 0.50 of a hectare to 7 or more hectares. The medium size farm being two hectares or less (Verner 2007). Large portions of Haiti's prime land is reserved for the exclusive farming of export crops such as sugar cane and tropical fruit versus local food crops such as beans, corn and rice. Coffee beans are planted on inclining slopes and plantains are now being cultivated in areas to prevent erosion. Most peasants own a few farm animals, usually goats pigs, chickens and cattle for their personal consumption and also to sell in the market to obtain cash. Many farm animals, are viewed as an investment that is reserved to finance a marriage, medical emergencies, schooling, seeds for crops, or emigration(Smucker 7). The lack of fertilizers and irrigation systems are major barriers to improving agricultural productivity. Reserving prime agricultural land for exports products instead of growing staples to adequately feed the population seems counterintuitive. Furthermore, inexpensive rice from Miami Florida has thwarted rice cultivation in Haiti. Why grow a staple when it is cheaper to import it. This reasoning is jeopardizing agricultural production in Haiti. Marcel Augustin, head of arable land at the Agriculture Ministry, believes that "Haitians should be encouraged to change their eating habits and adopt the diets of their grandparents. Locally grown crops such as yam, manioc, sorghum, sweet potatoes and maize were the staples of previous generations, who had rice as a Sunday treat. They grow easily in Haiti and provide a nutritious alternative to rice" (Economist 06/22/13). Augustin's advice is something to consider because world demands on rice could increase overnight and the price of this staple for Haitians would then be out of reach of most of the population. The major barriers facing a typical subsistence farmer are cheap importations of food which prevent farmers from becoming sustainable, lack of adequate irrigation systems, fertilizers to increase yield and adequate roads to enable producers to quickly access markets.

Infrastructure development is the most effective way of improving access from farms to markets and eradicating hunger in Haiti. Ifzal Ali, Chief Economist and Ernesto M. Pernia , Lead Economist at the Asian Development Bank have demonstrated in their research that there is a direct correlation between infrastructure: Roads, Irrigation and electricity and poverty reduction (Ali 3).

For example, a road investment could result in an increase in agricultural productivity, nonfarm employment and productivity, directly raising the wages and employment of the poor and, hence, their economic welfare. This is the (direct) income distribution effect. In addition, higher productivity and expanded employment lead to higher economic growth, affecting the supply and prices of goods and, thus, the poor's well-being. This is the (indirect) growth effect. Similar links can arise from irrigation and electricity investments. (Ali 4).

According to Ali and Pernia, the positive effect of road density has the greatest impact on the poorest households, primarily because of the time saving that occurs on a normal day to day basis. Furthermore, their research has demonstrated that "Roads create opportunity, facilitate empowerment and enhance security"(Ali 7). The lack of good roads in Haiti has prevented subsistence farmers from getting their produce to market in a reasonable time, it has isolated farmers from larger markets and export opportunities. It has also kept them from engaging with experts on the advantages of fertilizer and amending soil, how to irrigate crops, how to plant crops so that soil is not depleted of nutrients, and when to change crops because there is a surplus which will drive the prices down. Lack of adequate roads has prevented rural farmers from earning sufficient income to purchase food and access adequate nutrition. The lack of good roads in Haiti has a negative effect on elementary education because it severely limits the ability of students to attend school or a better school that might be further away. Women are particularly disadvantaged because not only are they the vendors in the public markets and they need to transport their products to the markets but they are also trying to balance their lives as mothers and heads of households. Reducing travel time could increase their incomes by giving them more time therefore more opportunity to sell items. Good roads would also give woman access to medical facilities, increase

their life expectancy and lower the infant mortality rate. Ali and Pernia's research on Vietnam " reveals that in poor households living in rural communes with paved roads have a 67% higher probability of escaping poverty than those in communes without paved roads (Ali 6). Irrigation is also critical to helping households earn an adequate income.

In Viet Nam, Van de Walle (1998) finds that targeting irrigation expansion to households with small per capita landholdings leads to the most progressive distribution of gains, benefiting the poor the most. The increase in crop income is about 4.5% of household expenditure for the poorest, Van de Walle (2000) notes strong complementarities between returns to irrigation and education in Viet Nam. Raising primary schooling of all household heads to five full years (and other adults by one standard deviation) results in a 36% differential increase in crop income between irrigated and unirrigated farms. The synergistic effect of schooling and irrigation appears to be largest for the poorest (Ali 8).

The importance of Haiti's concentration on infrastructure is essential to its future economic development and poverty reduction. Studies in Bangladesh and India have shown that electricity increases the use of irrigation and lowers incidences of poverty (Ali 8). But it also improves the lives of subsistence farmers by empowering them and making them more resilient to challenging events (Ali 8). This is a worthy quest. Presently, NGO's and International Organizations have agreed that infrastructure is essential to the future of Haiti. Although climate change, population growth, water scarcity, urbanization, energy demands and pollution will impact the development of infrastructure and its access from farms to markets, the accrued benefits to farmers should outweigh other factors. Deforestation, the cause of soil erosion and severe flooding has contributed to climate change. In fact less than 2% of Haiti's land has forest cover today (UN 2012). Building roads would facilitate the planting of trees which would prevent further erosion and flooding. Haiti is presently going through reverse urbanization, resulting from the earthquake. People are leaving Port au Prince and returning to ancestral lands. According to the United Nations data over 604,215 people have left the capitol since 2010 (UN 2012). This displacement may have a positive effect on the infrastructure of Haiti. Roads, irrigation and electricity will be demanded by Haitians who were previously city dwellers. If educated Haitians move to rural areas, demands for better schools will be met, which in turn will have a multiplier effect on the society and the possibilities for new industries will be unlimited. This could end Haiti's hunger in our lifetime.

Infrastructure investments in Haiti have to be focused on tangible results. The funds exist. For the period from 2010-2020 Multilaterals and Bilaterals have allocated \$13.34 billion to relief and recovery efforts. Private donors have contributed an additional \$3.06 billion to United Nations Agencies and NGO's. This worldwide generosity is unprecedented and spent carefully it could rebuild Haiti. To date, 48.2 % has been dispersed through the Haiti Reconstruction Fund. In order successfully build infrastructure there has to be an inclusive development partnership with Haiti. The infrastructure has to be part of local development plans, it has to create local jobs, encourage public sector activity and be relevant to the needs of all citizens. Although NGO's and government agencies should be involved, they have to accompany Haitian organizations at both the community and national level. Paul Farmer believes that the most effective way of aiding Haiti is by using the "accompaniment approach – working alongside the Haitian government and its partners, channeling more aid to direct budget support in order to strengthen national institutions; recruiting and training Haitians whenever possible; and contributing resources and expertise to Haitian institutions (Farmer 2012).

Sustainable self –sufficiency is on Haiti's horizon. In 2012, 77% of children were attending primary school versus 50% in 2005-2006 (UN 2012). One million children benefit from free education. The United Nations supports 750,000 of these children and 16, 500 teachers, it also provides 685,000 children in 2000 schools with hot lunches every day. Three million children have been vaccinated against polio,

rubella and measles, and acute malnutrition went down from 7% in 2005 to 5.1% in 2012 (UN 2012). Eight thousand hectares of land have been planted and rehabilitated with soil conservation techniques. Forty-one thousand females or 60% of women from urban and peri-urban areas have received agricultural inputs and have sold part of their production. And two hundred km. of streets and roads have been built since October of 2011. In June of 2013, the U.S. Agency for International development began a five-year project with the Government of Haiti Ministry of Agriculture to increase the incomes of 40,000 farmers in Northern Haiti. A crucial component of this project is to improve roads in some of the most fertile and inaccessible areas, stabilize watersheds that support farming and provide loans to agribusinesses (USAID 2013).

The new Feed the Future North is a five-year, \$88 million project that will focus on expanding farmers' yields of primarily five key crops – corn, beans, rice, plantains and cocoa. The program is innovative. In addition to traditional farmer support, erosion protection, and investments in agricultural infrastructure, it will seek to employ new technology – including mobile money – to make it easier for farmers and agribusinesses to manage their transactions, and cellphones to transmit market and other information beneficial to farmers. The project will ensure that both women and men benefit from FTFN interventions (USAID 2013).

By focusing on core principals and inclusive development practices between Haiti, Multilaterals, Bilaterals and NGO's and demanding transparency and accountability in all financial matters, Haiti's near future appears bright. The mountains remain but they are surmountable.

Works Cited

Ali, Ifzal, and Ernesto M. Pornia. "Infrastructure and Poverty Reduction -What Is the Connection?"

Asian Development Bank, 2003. 10 Aug 2013. 15 Aug 2013. 2 Sept. 2013.

<<http://www.adb.org/sites/default/files/pub/2003/PB013.pdf>>.

Borlaug, Norman. "Nobel Lecture." 02 Sept. 2013. 09 Sept. 2013.

<http://www.nobelprize.org/nobel_prizes/peace/laureates/1970/borlaug-lecture.html>.

"Cooperative Farm Initiative for Haiti." *Causes*. 09 Sept. 2013. <[http://www.causes.com/causes/258186-](http://www.causes.com/causes/258186-cooperative-farm-initiative-for-haiti)

cooperative-farm-initiative-for-haiti>.

Farmer, Paul E. "Lessons From Haiti – Infrastructure Key Statistics (Government of Haiti, 2004)".

<http://www.lessonsfromhaiti.org/download/Report_Center/UN-factsheets-2012-en.pdf>.

"The Government Tries to Load up the Plates of the Poorest People in the Americas June

22nd 2013.”

The Economist. 01 Sept. 2013. <<http://www.economist.com/topics/michel-martelly>>.

"Haiti's Desperate Food Crop Outlook." *CFACT*. 5 Aug. 2013. <<http://www.cfact.org/2010/1/29/Haitis-Desperate-Food-Crop-Outlook/>>.

Kidder, Tracy. *Mountains beyond Mountains*. New York: Random House, 2003.

Pinstrup-Anderson, Per, and Satoru Shimokawa. "Rural Infrastructure and Agricultural Development."

World Bank, 2006 10 Aug,2013. 15 Aug.2013. 29 Aug.2013

Sitersources.worldbank.org/INTDECABCTOK2006?Resources/Per_Pinstrup_Andersen_Rural_Infrastructure.pdf.

Raizada, Manish. "Soil Nutrient Management in Haiti, Pre-Columbus to the Present Day: Lessons for Future Agricultural Interventions Remy N Bargout and Manish N Raizada*." *Agriculture & Food Security*, 29 July 2013.

Smucker, Glenn R., T. Anderson White, Michael Bannister. "Land Tenure and the Adoption of Agricultural Technology in Haiti". *9th Biennial Conference of the International Association for the Study of Common Property Victoria Falls, Zimbabwe-17-21 June 2000* .

<dlc.dlib.indiana.edu>.

Suzuta, Erico. "WISE - World Innovation Summit for Education." *Education in Haiti : An Overview of Trends, Issues and Plans*. 01 Sept. 2013. <<http://www.wise-qatar.org/content/education-haiti-overview-trends-issues-and-plans-sept-2011>>

"USAID launches five year project to boost farmer's incomes and promote local organizations in Northern Haiti." *Press Release* 21 June 2013.

<<http://www.usaid.gov/news-information/press-releases/usaid-launches-five-year-project-boost-farmer-income>>.

USAID/HAITI : *Issues : Earthquake*. 09 Sept. 2013. *<<http://haiti.usaid.gov/issues/earthquake.php>>.*

Verner, Dorte. "Labor Markets in Rural and Urban Haiti Based on the First Household Survey for Haiti"
The World Bank Social Development Sustainable Development Division *<<Http://www-wds.worldbank.org/servlet/WDSCon>>.*

"Why Is Haiti so Poor?" 15 Aug. 2013.

<<http://www2.webster.edu/~corbetre/haiti/misc/topic/leftover/whypoor.htm>>.

"World Report 2013: Haiti". 02 Sept. 2013. *<<http://www.hrw.org/world-report/2013/country-chapters/haiti>>.*