

Mitchell McLaughlin
Xavier High School
Cedar Rapids, IA
Dominica, Factor 13

Diversifying Economy, Developing Infrastructure, and Establishing Sustainable Supply-Chains, to Promote Economic Growth and Development

Today, we face an unprecedented challenge to sustainably produce sufficient to food, fiber, and feed to meet global demand. This paper will be addressing specific solutions for rural and subsistence farming families living in the country of Dominica. The rural farmers are the key to success in promoting economic growth as well as developing infrastructure in Dominica. Dominica's agricultural industry dominates the country's economy; the rural farmers account for almost 60% of the agricultural industry. The agricultural industry prospered throughout the 1980's and 1990's, due to the "banana boom" a period when banana exports to England tripled. However, recently, the United Kingdom is expected to cease banana imports from Dominica in favor of importing cheaper bananas from Latin America, making a balanced economy essential to Dominica's future. The first step needed for economic growth to occur is a shift to a diverse economy with multiple sectors of industry. These potential industries include: fishing and tourism. Development of these industries will directly result in an increase in income due to job opportunities for those farming families who pursue an occupation in fishing or tourism in addition to subsistence farming. Specifically, the fishing industry will also improve the quality and quantity of food available to subsistence farmers. Infrastructural development will flourish after the economy has been diversified, allowing for further improvements in adequate storage, transportation, and processing of goods which primarily benefit the poor, rural farmers first.

The typical subsistence farm family in Dominica lives in small communities or villages and has an average of six people. However, many of the farming families are multigenerational and may have up to three generations residing in separate homes but share one common piece of land. The majority of subsistence farmers own less than five acres of land. Most villages have at least one school, health center and church. The island is divided up into ten parishes and seven health districts. Access to health care must be improved. People are commonly sent to neighboring islands in order to receive specialized treatment which they cannot receive in Dominica. There are two centralized hospitals located on the island, in addition to 52 health clinics/centers. Each clinic serves approximately 300 people within five miles and provides child and reproductive health, nutrition education, health education, medical care, and emergency services. Both hospitals also provide services such as: dental units, delivering units for pregnant mothers, and in-patient care. The Princess Margaret Hospital, for example, has a capacity of 225 beds. The both hospitals on the island are understaffed; there is a shortage of medicine, and there is a lack of certified doctors and specialists. However, the government is making efforts to pass laws which require all medical intuitions to provide healthcare to children under the age of five, women of childbearing age, all expecting mothers, adolescents, men in the reproductive age group, and the elderly. This is the first step in a comprehensive process to reform health care. In 2000, health sector reform implemented a User Fee System which resulted in reduced fees and exemptions for special groups of people. The typical rural family diet consists mainly of wheat bread as well as fish, land crabs, river crayfish, opossum, agouti, imported chicken, locally raised livestock (goats, pigs and cows), sausage, milk, packaged snacks and homemade sweets which are made using flour, salt, and sugar. The rural families produce their own food to eat and supplement their diet with purchased foods from the local market. Education is highly valued and is viewed as the only way to escape the rural farming life. The majority of children complete primary school. Unfortunately, opportunities for education beyond primary school are limited because children must score high on the Common Entrance Examination in order to be admitted to a secondary school. Furthermore, only 2% of the population receive an education from a university or college and are

immediately offered a position to work for the government upon graduation. The women and daughters are responsible for childcare, chores, and household work. The women also work to sell baked goods at the local markets for an additional household income. The women are at a disadvantage because their work is valued less than the men's work. The men do the work in the fields such as harvesting crops, they also fish and hunt. This is the main source of the family's food as well as their income. The most common food grown is the banana, but they also grow many fruits and vegetables such as: citrus fruits, coconut products, coffee, cocoa, onions, and peppers. The total income for a farming family varies, but the majority of them barely earn enough for a living wage each year. Commonly, some families rely on money sent from relatives who have immigrated overseas. The major barrier to improving agricultural productivity for rural farmers is storage, processing, and cost efficient transportation of their goods. The average farming family loses 10% of its crops directly from these factors. Therefore, if infrastructure and supply chains are improved and established, the amount of crops lost would be reduced significantly resulting in more income for the family. In addition, opportunities for employment and access to food markets would be available with a better transportation system connecting urban areas with rural areas.

Infrastructure development greatly influences the success of agricultural productivity on rural families' income, food quality, and availability of food. The current state of the infrastructure and the agricultural industry, in particular the banana industry, does not present opportunities for extra income for the farm families, which negatively affects the families' ability to earn a living wage, to produce adequate food, and to consume a healthy diet. The rural farming families cannot travel to urban areas because there is no public transportation and no paved roads. This leaves them with no other option besides subsistence farming. When the family cannot earn a living wage, the family then must sacrifice the quality and quantity of food which they consume. The Dominican infrastructure is not viable and consistent effort and funding (whether private or public) is essential to its development. Recent trends show there has been a sense of urgency to develop infrastructure through government aided programs as well as attempts to diversify the economy, for example, the development of the Roseau Fishery Complex. Also, the banana industry can be measured by total GDP of bananas, and in the last decade there has been a 10% decrease in the exports in bananas. In the near future, the banana industry is uncertain and experts believe the United Kingdom will stop importing bananas from Dominica in favor of cheaper bananas from Latin America causing the Dominican economy to collapse. The current situation for income of rural farmers is very unstable and could potentially be disastrous if the United Kingdom would cease all banana imports from Dominica. The St. Vincent prime minister, Lewis Straker shared this thought on the current banana situation: "If the bananas are no longer imported by England, rural Dominican farmers will be reduced to poverty overnight." (Straker) Without the income of bananas, the majority of the population is at risk to become poor, making the importance of diversifying the economy and developing infrastructure that much more urgent.

The issue of natural disaster is the only outside factor holding back the country of Dominica. Hurricanes, volcanoes, and earthquakes are occurring on the island every year, destroying millions of dollars worth of property and crops. It is evident from past hurricanes, for example, Hurricane Ivan in 2004, that when all of the crops on the island are destroyed, the economy becomes stagnate. The economy must be composed of industries resilient to natural disaster or the Dominicans will continue to experience the same vicious cycle which will yield no progression in economic or infrastructural development.

Rural farmers in Dominica are the solution to fighting hunger and poverty, not the problem. They are the key players to confronting the poor state of the current economy and infrastructure because they drive the current economy in Dominica. They must be willing to change the economy, seek careers in fishing and tourism, and work together for the common good. Infrastructure development complements the growth in economy. With access to a viable transportation system, rural farmers will be able to travel to the coast and to urban cities much more quickly than they could previously. Members of the family would then

have the option to pursue occupations in urban areas, such as tourism or an occupation in fishing on the coast. Also, rural farmers would have access to urban food markets or fishery complexes, which would increase their access to better quality of food and access to a variety of nutritional foods. This would place less of a dependency on subsistence farming because of the opportunities to work in urban areas. Women would be the ideal target for these jobs because they benefit most due to their disadvantage on the farm, required to perform all of the household duties and chores. If the women could get away from their house maintenance duties, their work may become equally valued to men's work. In addition, the women would contribute to the family's income, and in the long term, remove the family from poverty. Supply chains will also improve pending infrastructure development allowing for faster shipping times, reduction in spoilage of crops, and reduction in damage to goods. The current supply chain may take anywhere from two days to a week to send goods from a rural area to an urban area for the distribution of goods, or to an international airport for further distribution of goods. A dedicated train system would allow goods to be shipped overnight directly from rural areas to urban areas, which both the consumer and farmer would benefit from. Following improvements in infrastructure, immediate improvements must be made to the economy in order to resolve challenges facing rural farmers. First, in order to diversify the economy, the country of Dominica must be supportive to domestic economic growth. Dominica can no longer rely on European markets to import their goods, and they must develop a sense of self-reliance. Specifically, the fishing and tourism industries must be established, this would create better job availability for people living in poverty, thus, more income for rural farm families, and an overall reduction of poverty. Dominica must use its marine resources as an advantage to develop a fishing industry. Other major fishing nations such as: United States, Canada, Japan, all send their fishing fleets to Dominican waters and Dominica does not benefit from it. Dominica needs to become active in pursuing agreements with these countries if they are to use Dominica's marine resources, so Dominica's own fishing industry may benefit and develop. The fishing industry must invest in the production of fiber reinforced plastic vessels which are relatively inexpensive and are ideal for any person interested in starting an occupation in fishing. For example, the Caribbean Fisheries Training and Development Institute of Trinidad is currently being funded by Japan. Any programs or projects funded by the Japanese would be the ideal solution because it benefits both Dominica and Japan. One possible solution would be to have the Dominica government and the Japanese government work together. The Japanese would make the inexpensive fiber reinforced plastic vessels in return for a fixed percentage of earnings from the fishing industry. This would give any Dominican the ability start a career in fishing, obtain a fishing license, and earn income. The Japanese government is ideal for partnership because of their powerful fishing industry and their interest in Dominica's marine resources. The Japanese previously assisted Dominica in building the Roseau Fisheries Complex and is currently assisting in the construction of the Portsmouth Complex, and the Marigot Complex. These two facilities will also serve as hurricane shelters in time of disaster.

Another program which will be ideal is a disaster relief fund for fishermen to provide reimbursement for recovery and damage costs. A specific focus in the fishing industry is to provide adequate storage facilities, which have been a great handicap in the past to the fishermen of Dominica. The cold storage facilities must be implemented into all fisheries in the country to provide a better product to consumers, thus resulting in development of the supply chain. There is an increase in demand for fish in Dominica. It has become a key source of protein for Dominican consumers. Once the fishing industry is developed in Roseau (the capital), it would serve as a model for the rest of the country. The next step would be to continue building fishery complexes throughout the island. Another point of emphasis would be to have the government invest in modern fishing equipment such as GPS and research and development for new fishing equipment. The fishing industry plays a unique role in the economic development of Dominica. It can emerge as the sole industry which is unaffected by natural disasters. When hurricanes hit the island, the crops are severely damaged, whereas all of the marine resources are still available. Beneficiaries to the fishing industry include: providers of bait to the vendors, boat builders and repairers, engine repairers, and

net menders. The fishing establishment in Roseau has elicited hope for Dominica's in the future of the fishing industry.

The development of the Dominican tourism industry must use attractions specific to Dominica to appeal to the average tourist. Dominica is often noted for its natural beauty, fresh water lakes, sulfur springs, rainforests, historical sites, deep coastal waters, boiling lakes, waterfalls, tasty fish, volcanoes, small beaches, and peaceful lifestyle. Currently, the attractions are only open to tourists in port from a cruise ship. However, more attractions could also be extended to non cruise visitors such as: Experiencing the Boiling Lakes (Tours), Waterfall Climbing (aided by a tour guide), Tours of Working Rural Farms and Plantations (experiencing the Dominican culture), Rain Forest Touring, Boat "Get-a-Ways" on the deep coastal waters with music and food, "Taste of Dominica" a comprehensive sampling of the best foods and drinks in Dominica (rum factories, fish, bananas, fruits), and historical museums and attractions to celebrate famous Dominicans. Dominica also must attract fast food franchises, large chain hotels, develop international advertising contracts, and develop a welcoming spirit towards tourists that will allow them to enjoy their experience in Dominica and to give Dominica an identity as a tourist country. Tourism would be a key long-term goal for economic development, and may not have the same initial impact as the fishing industry. However, both the fishing industry and tourism industry have the potential to revitalize the Dominican economy if managed correctly. All of the discussed industries, programs, supply chains, and developments in infrastructure provide opportunities for economic growth, resulting in better cost efficiency for rural farms, increases income and job opportunities, and most importantly reduces poverty to allow for food security.

The main source of funding will have to be received from the Dominican national government for improvements in infrastructure. However, private funding for infrastructure development also would supplement the funding from the government and is extremely beneficial. Dominica must apply to receive funding and aid from United Nations, World Bank, and the American Red Cross for developing infrastructure as well as coping with natural disasters, primarily hurricanes, but also earthquakes and volcanoes. As discussed previously, the fishing industry has the potential to use its marine resources to make partnerships with country such as: United States, Japan, and Canada. These partnerships would serve as a direct source of funding for economic growth. When infrastructure is developed the majority of funding will be domestic and will be available to promote further economic growth.

The majority of the population consists of subsistence farming families who are the key players to success in promoting economic growth and infrastructural development in Dominica. In order for the discussed solutions, we have to understand that it is a process which will take time. Various parts of the process may be immediately productive, but other aspects may take a longer period of time to develop and to produce results. When all of the specific solutions discussed are implemented and the Dominican infrastructure is established (a public transportation system, paved roads, and direct access to all rural and urban areas), the economy will be diversified (particularly the fishing and tourism industries), supply chains will be established (facilities that provide adequate food storage, reduced shipping times, and quicker distribution and packaging of products and to more locations, including internationally), economic growth and development will ensue. Thus, the poor rural farmers will prosper from many new opportunities such as: access to quality food, improvements in nutrition, and opportunities for additional household income. Dominica will experience a reduction of unemployment and a reduction of people living in poverty; Dominicans will be able to obtain food security and sustainably produce sufficient food for themselves as well as the rest of the world.

Works Cited

- Byltheman, Joanna. "Banana Wars." *The Observer*. The Observer, 13 Mar 2005. Web. 28 Sep 2010. <<http://www.gaurdian.co.uk/lifeandstyle/2005/mar/13/foodanddrink>>
- "Country Assessment Report: Dominica." *UNDP*. UNDP, 06 May 2008. Web. 28 Sep 2010. <<http://www.undp.org/crmi/docs/crmi-gtfcnadominica-bp-2009-en.pdf>>.
- "Dominica – Agriculture." *Encyclopedia of the Nations*. Web. 28 Sep 2010. <<http://www.nationsencyclopedia.com/economies/Americas/Dominica-AGRICULTURE.html>>.
- "Dominica – Poverty and Wealth." *Encyclopedia of the Nations*. Web. 28 Sep 2010. <<http://www.nationsencyclopedia.com/economies/Americas/Dominica-POVERTY-AND-WEALTH.html>>.
- "Dominica." *World Health Organization*. Web. 28 Sep 2010. <<http://www.paho.org/english/sha/prfldom.htm>>.
- News, DW. "Fisheries Division Launch Fisheries Industry Census of Dominica 2008." *Dominica News*. Web. 28 Sep 2010. <<http://www.dominica-weekly.com/news/fisheries-division-launch-fisheries-industry-census-of-dominica-2008/>>.
- Paugh, Amy. "Culture of Dominica." *Every Culture*. 13 Mar 2005. Web. 28 Sep 2010. <<http://www.everyculture.com/Cr-Ga/Dominica.html>>.
- Shillingford, Dr. J Davis. "Strategies and Projects for Dominica's Economic Development." *DA Academy*. Oct 2005. Web. 28 Sep 2010. <<http://www.da-academy.org/stratproj.html>>.