Charles Krouse Upper Arlington High School Upper Arlington, OH The Commonwealth of the Bahamas, Factor 8: Spoilage & Waste

The Commonwealth of the Bahamas: Food Waste

By now, it is likely obvious to all people that hunger is one of the most prevalent, pernicious, and persistent problems in today's world. From the distanced point of view that I, and many people in my community have, hunger is not an issue. However, all across the world, and even in this country today, people are going hungry tonight. They do not have even the simplest of meals to eat, and they wait until they gratefully accept food that is given to them. Here in Upper Arlington, many people have a difficult time shedding light on the hungry. We tend to be well fed, and, a lot of times, are hardly even close to being grateful for the food we receive and eat. Joel K. Bourne Jr. of the National Geographic magazine said it best, by saying that "[f]or most of the past decade, the world has been consuming more food than it has been producing' (Bourne 2009). Typically, those who are able to afford the food are the ones who buy and consume it in great amounts. Therefore, the wealthier part of the world is eating more, and the poorer part of the world is eating less, which is the bluntest form of the problem at hand.

The Bahamas, a country in the Caribbean, is one of the many victims of hunger around the world. For me personally, the Bahamas holds a special place in my mind. When I last took a vacation there, I, as all people should, enjoyed the hotels, swimming, and resorts. However, the part I was most drawn to was what was outside the taxi window. The gritty, raw and urban areas of the Bahamian town of Freeport made me feel comfortable, and at home. I thought about the men, women and children that lived there, and the lives they led. Each and every day, many Bahamians often go hungry. Therefore, when assigned this project, I knew that the Bahamas would be my choice.

Traditionally, Bahamian families tend to stay rather big in size. The average family tends to have between 6 and 10 children. However, this number is in decline. The families tend to either be led by a single mother or a mother and father, not often a single father. It is typical for the husband to cheat on the wife, and to even father children with multiple wives. This practice is known as "sweethearting", and is common in Bahamian households. Once the original relationship ends, the husband/father tends to have difficulty in providing financial support for the mother and children. For this reason, the wife tends to be open to the idea of "sweethearting" with another partner after the end of one relationship in order to provide financial stability for her children. It is also rather common for grandparents to join in on supporting the family. The Bahamian diet includes staples like poultry and fish, is usually served during most meals. Breakfast tends to consist of grits, eggs, and fish, as well as corned beef and possibly sausage. Many types of soups are made from local meat and fish, and a local delicacy, conch (pronounced "konk"), is often served in most restaurants, stands, or family dinner tables (online.culturegrams.com).

When the children eating at these dinner tables grow old enough, they are required to attend schooling until the age of 16 (online.culturegrams.com). The average years of schooling completed by someone in the Bahamas is 11.5 years (factfish.com). Public schools provide free entry for elementary and secondary schooling, yet many churches and other organizations provide private schooling. Much of today's Bahamian youth have become quite ambitious when it comes to getting a good education and a high-paying job, and the adult literacy rate is at a high 96%. For these reasons, the wealthier students may choose to attend college abroad in places like Canada, the U.K, and the U.S (online.culturegrams.com). The education expenditure as a percent of total GDP, when it was last estimated in 2000, is about 2.8 percent (http://hdr.undp.org). In high school, the youth are notified through awareness programs of one of the most widespread diseases in the country that we know as AIDS. In addition to this common killer, health in the Bahamas is somewhat of an issue. The total health expenditure as a percent of the total GDP

in the Bahamas is around the 8 percent mark, as measured in 2011

(http://www.tradingeconomics.com).To combat against disease, 8% of Bahamians do not have access to improved sanitation facilities. On the other end of the food spectrum, when it comes to malnutrition, the Bahamas is ranked number 89 in the world out of all other countries in the world, with the percent people malnourished sitting at roughly 4 to 6 percent. To care for the sick and hungry, there are only 2.8 physicians per 1,000 people in the Bahamas. Bahamians have a life expectancy of roughly 74 years and a fertility rate of about 2 births per woman (factfish.com). As of 2013, the total population at 377,374 people, with an estimated growth rate of 1.3% (worldbank.org)

Though the Bahamas does have a great variety of living situations, an incredibly low percent of the islands are made up of farmland. The typical farm in the Bahamas averages between 500 and 3,000 acres, with a grand total of only about 36,148 acres of farmland. Only less than 1 percent of Bahamian land is arable, and 1.5% of the land is used in farming (factfish.com). This means that one third of the land used for farming is actually rendered arable, or farmable. For the farms that grow well, the most common crops grown are most citrus fruits, tomatoes, bananas, cucumbers, coconuts, and many popular peppers in the Bahamas.

The main idea to note is that people in the Bahamas struggle with agricultural productivity, as many barriers stand in their way, and the lack of access to proper nutrition. In the Bahamas, food production is a major issue. Roughly 40% of the population is rural, and agriculture is most certainly not the Bahamas' biggest priority. In fact, the agriculture only adds a mere 2 percent to the total GDP of the country. This shows how grave the Bahamian agricultural situation is. The islands of the Bahamas themselves are unlike any other islands in the world. They are made entirely of calcium carbonate, which is precipitated by organisms that dwell in coral reefs, which explains for the grave difficulty in farming on the islands (bahamas.co.uk).

With that stated, Bahamians may face minor struggles along the path to being well fed, yet the greatest barrier on that front is poverty, and the inability to afford fresh food. An estimated 43,000 Bahamians live in poverty, and 50% of them are children. With the dots connected, this means that these poverty stricken people are unable to purchase and eat fresh food, something often taken for granted by Americans (handsforhunger.org).

The Bahamas alone faces a slew of issues, ranging from poverty to disease to hunger. With one of the most important problems being food security, there are naturally many things that can lead to said problem. These may include a lack of agricultural production, malnutrition, or even human rights. Here on this series of islands in the Caribbean, agricultural production is average, malnutrition is not incredibly common, and human rights are stable. On the other hand, a problem that shows up often is the waste of food in Bahamian stores, restaurants, bakeries, etc. These places serve people the food they pay for, and whatever does not get sold is thrown out in the dumpster out back (handsforhunger.org).

The more food gets thrown out, the more Bahamians go hungry. Farmers grow these crops, and when they are finished being checked and certified, they are shipped out to stores. The stores sell these products to those who can afford it, until the product no longer meets certification standards, and it "goes bad" and is thrown out. This causes an inability for a poverty-stricken family to gain access to adequate nutrition. With good food being wasted instead of redistributed to people and families in need, the Bahamas does indeed face a gap between those who are hungry and those who are well fed (handsforhunger.org).

Presently, this factor is moderately important to the hunger in the Bahamas. In fact, in the region of the Caribbean, the amount of food lost due to waste is enough to feed everyone suffering from hunger in said countries. Therefore, it is obvious that the current problem of hunger in the Bahamas can be eradicated, and to some, it is obvious as to how. In addition to those going hungry, the environment is being degraded

by this food loss as well. The still-fresh food we throw in the dumpster gets taken to the landfill, and then emits thousands of pounds of CO_2 emissions, a powerful greenhouse gas, into Earth's atmosphere. The waste of food in the Bahamas not only causes people to continue to suffer from hunger, but it also continues to destroy the environment with the harmful gases the food releases into the atmosphere.

For the most part, the hunger caused by food waste trend is increasing, meaning more people are going hungry, and the gap between those who are well-fed or even obese and those who are hungry is growing, with the number of those obese in the country being around the 34.7% mark, as measured in 2008 (CIA World Factbook). Based on the country's emergent hunger gap, it is apparent that the issue of hunger is not being focused on enough. A family suffering from said hunger would be greatly affected by this trend, because to them, it is essentially life or death as to if this hunger problem ends or not.

When the Bahamas' retail food waste is lowered, it will usher in a new era of well-fed people. The food, instead of being wasted, will be redistributed, and placed into the hands of those who need it most, and otherwise would not be able to afford it. The family that started off, scraping for money and just getting by is now able to have a meal on their table for dinner tonight. In turn, this would also lower the poverty rate in a sense. When we picture a poverty-stricken individual, we see a cold, hungry, shelter-less, and alone being. When this person is well fed, it jumpstarts a new life for them. Food is one of the basic human necessities, and without it, hardly anything will be able to be accomplished.

In addition to the new Bahamas where hunger is not an issue, the redistribution of otherwise wasted retail food not only feeds the poor, but also benefits the Bahamian nation and, in turn, the world. No, this food will not make it's way into the hands of hungry citizens elsewhere, but it will add, little by little, to the cause known simply as saving mother earth. The food that would be thrown in the landfill would greatly increase the amount of greenhouse gases released into the atmosphere, further speeding up the process of global warming. This country will not only feel well fed, but also will attribute to another one of the world's most important issues: the treatment of the ecosystem.

Though the storage of food is one of the most prevalent problems with the food security in the Bahamas, many other factors can complicate the issue of food storage. The Bahamas indeed suffers from a slew of problems with the population, climate, water, and other things of that nature. The amount of people in the Bahamas has more than tripled in size since the 60's. As previously stated, the current population of the Bahamas sits at roughly 377,374 people, with a growth rate of roughly 1.3 percent, as measured in 2013 (worldbank.org). With this amount going up, there will evidently be more people to split the already limited resources among. As the size of the total population increases, the current amount of food available per person will be decreased to account for the new people. Rather than the food in the retail stores to be wasted, it could be, much more humanely, distributed to this new population of people.

In the Bahamas, the population is also predominantly urban, and that number of urban Bahamians is growing. With this being said, it is likely that these people are going to rely more likely on grocers and retail stores to feed them, rather than food they grow on farms. The retail stores, in order to feed a greater number of people, would need to increase the amount of product they have stocked on their shelves and in their freezers. In addition, the energy demand in the stores is also very much an issue. In the Bahamas, it is incredibly difficult to produce electricity. In fact, they have such great difficulty, that their electricity is produced by imported petroleum and liquid natural gases (britannica.com). For the stores, this means that is incredibly difficult to keep cold food cold, and produce fresh. This makes it difficult for those who are able to purchase food from groceries to actually do so.

Lastly, another problem that Bahamians face in regard to food storage and security is change in the climate. With it already being difficult for farms to thrive in the Bahamas due to the islands' fossilized coral make-up, any rise in the sea level could just as easily flood and wash away farms. If a farm gets

flooded, that leads to an inability for the farms to ship their food out to retail stores, and this means less food for people in the Bahamas who purchase their food from stores. If global climate change rose, then less food would be grown not only in the Bahamas, but also all over the world. The climate would, in addition, cause the price for importing food to go up due to the law of supply and demand.

The problem of the lack of food security in the Bahamas is obviously incredibly prevalent. The people are going poor and hungry due to problems that can seemingly be remedied and treated. Already in place is a major charity known today that dedicated their time to addressing the fact that the Bahamas is wasting food and creating a gap between those who are hungry, and those who are well fed. Hands for Hunger, founded in 2008 by student leaders is active in their collection of food on all Bahamian islands that would otherwise be thrown out, and supplying the hungry Bahamians with said food. So far, they have collected roughly 650,000 pounds of food to redistribute since 2008, and they provide about 10,000 meals each week to hungry Bahamians (handsforhunger.org). In early 2014, they developed relations with a new corporate partner that has been operating for over 100 years in Kansas City, Missouri. Assurant Employee Benefits volunteered in the Bahamas and aided in spreading the word about the true awakening facts about hunger in the Bahamas (tribune242.com). In addition to providing aid to this charity, there are still a vast amount of recommendations that can be given to the country of the Bahamas to aid these issues.

For example, the Bahamas could continue on the same path of progress that Hands for Hunger does by addressing the problem of food waste, but through the implementation of other charities and policies for the retail stores, hotels, bakeries, and restaurants that are the culprits of this issue. The Food Waste Reduction Alliance suggests that to begin the end of wasting food, it is best to start off by categorizing and quantifying the food: how much of what kind of food is being wasted. After that, many forms of recycling the food byproducts can be done, such as repurposing the food to be used as animal feed, which would increase the amount of food if these animals are then eaten, and recycling oils to use as energy (foodwastealliance.org). In addition, a policy could be put in place by the national government that reduces the amount of food one store/restaurant is able to be supplied each week, dependent on how much product they move. If they only use the amount of food they need, then this would allow for more room for a hungry family to obtain food through charities that collect the food that would be wasted. The farms that would otherwise provide the stores with food would be left with more product to move, and it would be given to those who need it.

In addition to this issue with food storage, other things could be done. The Bahamian government could pull out a small portion of money for proper electricity to be provided in food supplying places. For example, the flourishing amount of tourism that the Bahamas gains provides a great amount of the money. If a small portion of money was taken to provide better electricity to food suppliers, then it would be easier to store food for longer periods of time, as the electricity powers cold storage such as freezers and refrigerators. When this food is stored for longer, much less food would be wasted. On another note, this money could also be used to invest in solar power for cold storage, a much easier way to store food with an incredibly abundant resource. In 2010, the Bahamas began a small-scale lead-acid battery solar grid system that can store four megawatt hours, and that is also able to support the load of electricity during the day and night without using diesel, thus leading to a lower electricity cost (iadb.org). If it was possible to move this up to a larger-scale solar grid system, then the cost of electricity would be greatly reduced, and more stores could use more of it for cold storage.

Though the main charity devoted to this cause in the Bahamas does a great deal of help for the country, it would also benefit from the intervention of other international organizations, as one charity alone cannot possibly hold the weight of an entire country's hunger on its shoulders. For example, organizations like the Food and Agriculture Organization, the International Fund for Agricultural Development, and the World Food Programme could recognize the issue in the Bahamas, and step in to help, similar to what they have done with other countries in Africa, like the "mainstreaming food loss reduction initiatives for

smallholders in food deficit areas" project that they had lined up for the countries of Burkina Faso, the Democratic Republic of the Congo, and Uganda (fao.org). Though an intervention from these specialists would help, an incentive from the government would also help stimulate getting closer to ending the hunger, such as giving tax breaks to food donors. Also, as shown in the Last Food Mile conference in December on the problems of food waste and how to solve it, the 150 participants had an average satisfaction level of 8.3 out of 10 (repository.upenn.edu). With people responding well to these claims, it would be likely that the Bahamians would respond similarly, causing them to be willing to take more initiative.

With the amount of people growing in the Bahamas, the food security issue grows as well. We see that the population has been growing throughout the years, and with the more people that are being born in the country, this, at its simplest form means more people to feed. There are a various amount of changes that the country could take, yet they tend to be rather drastic. These include the installation of new policies for the government to regulate the amount of children to be born per person. This would directly reduce the amount of people, but tends to be considered morally wrong. Another idea could be the cracking down on of the practice of sweethearting, so that the husband would stay with the wife and produce no more children with other people. This would again reduce the amount of children, but could still be perceived as the persecution of a traditional practice. Therefore, rather than reduce the population itself, it would likely be easiest for more food to be provided to the countries. More revenue could be taken out of the governments spending money and putting it towards more food from the countries that they already receive a lot of their food from, because of the difficulty of growing food on their home land. Simply, this would provide the hungry with food.

There are many possible ways to implement these new policies and ideas, yet they all rely on the hands of the people in charge of food security. First off, when it comes to the farmer, there is an obvious idea at hand, yet it is rather controversial in today's culture. Genetically modified organisms, or GMOs are crops that are engineered to increase their size, growth speed, and survival chances. With GMOs being incredibly controversial, as they are believed by some to be unnatural and should not be consumed, there will most likely be many against this idea. However, with the need of higher agricultural productivity to feed people so they are not dying, GMOs may be one of the Bahamas' few choices.

Secondly, the national government of the Bahamas would indeed play a role as well. They would be the ones to provide the farmers with said GMOs, and also they would need to advocate for the benefits of these plants, for they will keep the hungry fed and alive, yet some find that they are harsh on the system and unnatural. Also, new policies sit in the government's hands. These would include donation of money towards the charity Hands for Hunger, and also the addition of applying more money towards the physical preservation of food through electricity and cold storage.

Lastly, it is up to the world as a whole to push forward a new era of a nourished, healthy, and happy world. In all, countries could share some of their overly abundant resources with the countries that lack these, including the Bahamas. This could mean more aid from the U.S. and Canada, as well as other countries that have resources that they could provide to countries without them. In addition, the world could push toward a better international climate as a whole. This would increase agricultural productivity, and with increased agricultural productivity, we see hunger wiped out.

Compiled together, we see a vast amount of information on food security in the Bahamas. We see that the Bahamas itself has a great amount of people on or below the poverty line, a great amount of food being wasted, and most importantly, a great amount of people going hungry. With the growing number of people being added to this list, it is obvious that the people in the Bahamas, the government itself, and the world as a whole need to make a stand against these high rates of food being wasted, of food not being grown, of the climate becoming a bigger issue, and of the people going hungry. It may be strenuous, but

in no way is it too late to fix this problem. What needs to be done is clear, and they have their work cut out for them. It's time for the government to issue new recovery policies, in order to fix the hunger gap mess at hand. In addition, it's up to the farmers and farms to remain secure from climate change. For this to be done, the world must come together as a whole to be more environmentally conscious. With these tasks at hand, it is important that the Bahamas, and the rest of the world, get to work to save others and themselves. It will most certainly not be an easy job, but to quote Nelson Mandela, "It always seems impossible until it's done".

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