

Chelsey Deal
W.B. Saul High School of Agricultural Sciences
Philadelphia, Pennsylvania
Kenya, Factor 5

Kenya: Improving the Response to Droughts to Create Self Efficiency

Kenya is one of the most vulnerable countries to climate change. The drought in Kenya has impacted millions of people. There is not enough food. Farmer's jobs and markets are affected by the change in climate and their ability to progress. Because of drought they are unable to produce enough food. Their income is low and it is hard for them to make a living without being able to sell extra crops. That is a situation shared by many people. This is caused by the response to climate change. When the drought first appeared people did not know how to farm in drought conditions. They did not have a plan to save their production and this led to hunger throughout the country. This has caused many people to live in poverty. To create self sufficiency in Kenya the people have to improve their response to the drought. Using new techniques such as planting drought tolerant crops and improving irrigation systems will allow the food supply to increase.

It was discovered that five aquifers were found in Kenya's undergrounds. Drill test have been done on two of the aquifers and confirmed. The aquifers are hundred of meters beneath the surface and it has been estimated that the aquifer holds 250 billion cubic meters of water (Reuters). The aquifers will be used to irrigate crops and supply water to people. It will take time and effort to get the water pumping, but it will help improve the damaged land.

The average household size in Kenya is five people. Women are responsible for the chores. They have to cook, clean, wash clothes, and look after the children. Women usually do not have a paid job. The men are the head of the household. When a woman is the head of a household, that family is usually very poor. Each farmer would produce enough food for himself and his family (Pateman 45). Sometimes he could have enough extra food to sell. The food eaten is filling and inexpensive. Diet consist of mainly corn, maize, potatoes, and beans with a little meat if it is affordable.

A primary education is the highest school level of the average family. Only a few people in a household have a secondary education. Girls tend to have a higher dropout rate because they have to stay home and help their mother. Many students are held back from school because of the education fees. They would have to pay for tests, uniforms, and books. It is rare for a farm family to have good health care because they cannot afford the limited health services that are available. The facilities are under staffed, under equipped, and have limited medicines.

The average family farm is one acre. Maize, local beans, bananas, cassava, sweet potatoes, cabbage, tomatoes, and ground nuts are crops that are grown on this acre. Most households do not use modern equipment such as tractors. Some use oxen and plows and a small amount use chemical fertilizer. Many use animal manure and compost. Since there is no irrigation system, the main source of water is rainfall.

Major barriers to improving agricultural productivity are the lack of available resources. Kenya's land is over eighty percent arid or semi-arid and only six percent of land is available to grow food to feed a population of about forty million. Since the increase of the number of droughts, there has been a water shortage. Farmers are unable to grow their crops because of the severe conditions.

The lack of education is a major barrier to employment and earning a living salary. Without an education a farmer is unsuccessful. For example, farmers do not use land properly because knowledge is not being

shared between them. They do not have the skills to compete against the drought and it causes them to lose money.

The lack of food production is a barrier for markets and adequate nutrition. People are malnourished because they are unable to get the right nutrition from not buying food. Food markets are closing down because they are not properly getting the right amount of food. The seller is hurt because he will have to pay for the little food that is not brought. It becomes a long cycle until the seller cracks and then has to close down from because he is in debt.

The climate change is the reason a farming family does not produce enough food. The increase in the number of droughts causes the family not to be able to grow crops from the damage from the land. There are fewer crops that would survive in the drought conditions. When the family is unable to grow enough crops to sell, they will be unable to earn money from it. The income of the family becomes low from the drop in food production. As the amount of food decrease, the family would become malnourished.

According to Govel, food security has worsened for most households in Kenya. Since there are limited water sources, pastures began to dry up and the crops fail. Livestock markets collapsed because farmers lack the skills they need. From failed crops and the increase in food prices, food shortage is more common. The number of people that are hungry is increasing by the year.

Improving response to the drought can increase the amount of food. The skills to farm in drought conditions could be passed on and farmers can become more efficient with the crops they grow. The food will have a better quality. The amount of food would increase because it is able to grow in new conditions. From the improvement, a typical farming family's income would rise. The family will use the new skills to create a greater quantity of food, so they can sell what they grow. The status of the family would change and food production would improve from the new approach to climate change.

There are many ways to preserve the environment sustainably. One of the ways would be to change the way climate changes are approached. Natural resources like rain and water should be treated differently. For example, the systems of farming could have small changes. Instead of using all of the land during a drought, part of the land could be in use while the rest is recovering from damage. When using irrigation a better system can be developed such as using pipes keep the water from evaporating.

Resolving the response to climate change can lead to economic development and poverty reduction. The adaptation to the weather conditions would improve the way people can make a living. It will require many techniques to change the way people farm. This will result in an increase in the economy because money will be brought into the system from the development. The wealth will began to spread over time throughout the country and the rate of poverty will reduce.

Women and small holder famers can benefit from the change in farming methods. Once the land is being used properly in drought conditions, jobs will be available. Women would have a role in a working position and would be able to support themselves and their family. On the other hand for small holder farmers, they will develop a well rounded education about farming in drought and skills to adapt to the change in climate. They can learn how to improve management of grazing systems and have the techniques to produce a better farm. Then small holder farmers will be able to provide food for markets and the country will grow slowly on the increase of food and money.

Population growth and water scarcity are major issues that can affect the well being of typical subsistence farming families and their response to droughts. With the increase in population, it would increase poverty in communities because of the shortage of food from the droughts. According to the article, "Food Security and Climate Change", it is to be predicted by the year 2050 that the number of

malnourished children is expected to increase by twenty four million. Water scarcity is a huge problem that could affect the well being of people. Having safe water is a struggle because it is not easily accessible. People who are poor would have to buy water that costs higher than what a non struggling person would have to pay for. A typical household would have to make four to six trips daily to get clean water. When these issues are going on, it makes it harder for a farming to progress from climate changes.

The most efficient way to address the response to droughts is to save natural resources. This will require Kenyans to learn the importance of improving and saving the environment. It is important to save the environment. Once Kenyans learn they can make a better way to live they will want to take action to improve their lives. Taking greater care of their land to grow crops during droughts will help improve the environment and it will create food to eat. Another way for Kenyans to improve the environment is to harvest water. Developing systems to save water using irrigation will be a way to help the environment. Giving them the reasons they need to better their lives will help them create an efficient way to address their needs.

To solve the situation by 2015, some practices that may work will involve agroforestry, drought tolerant crops, and food reserves. Agroforestry offers benefits towards climate change. It helps improve the soil quality for the crops to grow. Thurow stated "African soils are some of the poorest in the world" (Thurow 162). It can be a new practice that will help enhance Kenya's land. Investing in drought tolerant crops will allow farmers to have the opportunity to grow food to help end hunger. Then food reserves can be created to store food supply when fields begin not to produce enough food to sale. These practices can help solve the response to droughts by 2015.

My suggestion for the role of Kenyans is to share information about how to take care of their land when reacting to droughts. When information is able to be spread, more people will be able to become efficient when dealing with their farm. The result of improving the knowledge of Kenyans will cause their fields to produce a quantity of food, one step closer to the stopping hunger, and to become self reliant. The government can take part in this move to stop hunger by supplying Kenyans with the tools they need to succeed. Like Charles said, "if you want to feed the people, you want to give the farmers materials that perform best in their soil" (Thurow 162).

The big problem in Kenya is the ability to get water to properly produce enough food to become self efficient. The change in climate has caused droughts to appear in Kenya. Kenya has been fighting the battle against droughts and is losing tremendously. The land is drying up and the food supply is decreasing. A subsistence farmer does not have the skills to create a system that will allow them to grow food during a drought. Their family income will begin to drop and they will become financially unstable. This is a problem that is increasing throughout Kenya and is causing the country to be underdeveloped. Food is not being grown and people are unable to afford a healthy lifestyle. People live in hunger; however, making the response to droughts more affective by improving water usage will improve their lives. Making sure subsistence farmers are being updated with new techniques and the ability to tap into the aquifer will be a start for Kenya to rise from food insecurity.

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