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## **Where Should Somalia Begin?**

A country with many diverse problems, the promise of the future such as biofuels production brings hope. The problems in Somalia are very complex and it will take decades for major changes to happen. First, this paper will provide background on the history of Somalia. The geography of the country is the next component. The situation of the government will be explained. The economy of the country contributes to the situation in Somalia. Next it will look at the war as the prime reason that Somalia is in the position it is in today. Last, it will look to the future and dream what Somalia could be with the implementation of biofuels. It will take peace, assistance, patience, and time. War has destroyed the government, the people, the education and the farming.

Historically, many Somalis have lived the pastoral life as herdsmen. An interesting perspective is the life of the herdsman during the 1992-93 conflict went on unchanged while there was turmoil in the cities. Still today, in parts of Somalia, life is filled with taking care of the animals. Herds of camels, cattle, sheep, and goats are the traditional animals. The majority of people raise animals to sell for money. Livestock as well provides families with milk and meat. The region sandwiched between and around the Shabeele and Jubba rivers is a farming area. Farmers in attendance grow vegetables, grains, citrus fruits, and bananas. Somalia is an extremely poor country with its malicious political difficulties and environment.

Somalia's economy is based on agriculture and livestock herding. Herders raise camels, hardy goats, and sheep, which can live a long period of time without water. The families need to move to find food and water so the animals can stay alive. They move every 3 or 4 weeks dismantling their hut which is supported by sticks and has a covering woven from grass. The framework sticks are tied on the backs of camels with the few other belongings of the family. The children ride on the camels and the herd moves to a new location where there is food and water.

The book, Desert Flower, written by Varis Dire explains the life of a family who travels through the desert with their herds constantly on the move in search of water and food. The first chore of the morning at sun rise is to milk the herds. Saplings are gathered during the travels to make pens for the animals so they do not wander off during the night. The milk provided the breakfast for the family. After there was milk for the family, the calves were allowed to nurse. Due to the dry climate there are no crops so there is no bread or vegetables. Animals are considered too valuable to slaughter but are rather used to trade as needed for goods. The camel's milk provides the daily sustenance for breakfast and supper. If there is not enough for everyone, the smallest children are fed first, then the older ones, etc. An occasional sack of rice is a treat. Butter is made by shaking the cow's milk in a woven basket.

There is no ownership of the grazing land in Somalia. Each day the responsibility of finding food for the herds is divided among all family members. Time is directed by the shadows of the sun, so the children who are alone with their herd, must watch the sun to determine when it is time to head home. They must keep watch for animals such as lions, wild dogs who travel in packs and the fearsome hyenas.

From the time a child is born in Somalia, daily existence is a struggle and the promise of a long fulfilling life is not likely. The infant mortality rate is 132 per 1000 births. The life expectancy at birth is 47 years. Education is not a priority. As the young children grow and are old enough to go to school only 18% of school age children are enrolled in primary school. Of those enrolled, 54 % are boys. Since the adult literacy rate is 19% the opportunity to receive additional education will continue to be a

challenge as they mature. Life is driven by survival as 71% of the population does not have enough to eat. Health concerns permeate their existence as only 23 % have access to safe drinking water although 49 % have access to improved sanitation. HIV is not a big factor in Somalia but common diseases are diarrhea, malaria, and tuberculosis. In contrast to the sad conditions, I found it interesting that 14 out of 1000 have a cellular telephone.

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The situation in Somalia is very severe. Somalia is the easternmost country on the mainland of Africa and is one of the hottest climates on the earth. About the size of Texas, it is known as the Horn of Africa. In addition, with the strained political situation and the ongoing civil war and no central government since 1991, it is almost overwhelming to imagine life in this country. Historically, the location of Somalia has made it a likely point of invasion. The location on the Horn of Africa is strategic as it is the point of the shortest sea route from the Indian Ocean to Europe. For centuries, many countries have tried to claim a stake in Somalia. These include the Arabs and Persians who introduced Islam to native Somalis. As time passed the British, Portuguese, Egyptians, Italians and Ethiopians also made changes in Somalia.

During the last twenty-five years, the government of Somalia has struggled with poor economic and social conditions and internal fighting of its people. The majority of Somalian people have few reasons for conflict as they share the same language, culture, and religion. The problem, however, is that they are much divided because of the clan tradition. This conflict has been the root cause for much of the conflict. This inter-clan warfare has led to the destruction of their agriculture and as a result has contributed to starvation for many of the people.

Since the government was not in control, food security was a major concern. Food provided to feed the people was instead hijacked and traded with other countries for weapons as well as to protect the leaders of the clans. During the period of 1992 and 1993 it is thought that 300,000 Somalis died of starvation. In March 1993, the U.N. assumed control and named the mission UNOSOM – II with the hope to promote “nation building”. “UNOSOM – II worried about improving the infrastructure, restoring law and order, and assisting the people with locating a representative government.”

As recent as June, 2006, UNICEF correspondent Sarah Crowe wrote an article entitled: “Conflict Over Scarce Resources in Drought-Stricken Somalia.” She wrote: “In a country that is ungoverned and ungovernable, men with guns are as much a part of the Somali landscape as are the dusty roads.” Since the government is not in control, guns seem to be the ruling party. Somalia is at a critical stage in its history. Somalia doesn't have a central government...it is difficult to use its natural resources. It is an unstable country; it makes it difficult for its agriculture to be useful to the country itself and to trade with other countries. With few public education systems, no social, economic infrastructure, no legal system, and health; what is left for Somalia?”

Since an adequate supply of water is essential to the production of biofuels, water will be a very precious commodity. If and when the national government takes power over this shattered country, it will face challenges of water. Water may become a business. Somalia has only two large rivers. The Jubba River flows south from southern Ethiopia. From the Somali border, it continues about 545 miles before emptying into the Indian Ocean North of the port city of Kismaayo. The only river in Somalia with a

year-round water supply is Jubba. Even though the river is low, flat-bottomed boats can navigate during the rainy months. A fertile farming region surrounds the Jubba River.

Shabeelle, Somalia's only other major river, also begins in the Ethiopian highlands. 1130 miles in length it flows southeastward. The Jubba and Shabeelle River join north of Kismaayo about 20 miles from the Indian Ocean throughout the rainy seasons. All through the dry seasons the Shabeelle River never reaches the sea and turns to marshy area.

The area of the Jubba River is a great potential for Somalia. While upstream areas of Ethiopia have the Melka Wakana hydroelectric project on the upper reaches of Shabelle River, Somalia has not implemented this possibility. These two rivers help Somalia's rice bowl and also are a rich source of water for this area. However, to harness this possibility is the key to the development of a hydroelectric project in Somalia.

Water resources are perhaps the greatest concern for Somalia next to having peace. Without peace, nothing is possible. There is also the responsibility of other countries sharing this water resource. Since Somalia is the end user of the water flow they are in a difficult situation in terms of hydropolitics. Therefore, it is extremely necessary that they can get along with Ethiopia. It would be very possible that Ethiopia could change the course of the water to be an advantage for them. In addition, they could also cause pollution if the water was not handled properly. This can be explained as the web site [www.somwat.com](http://www.somwat.com) so clearly stated: "As these shared waters will play a key role in future relations between Ethiopia and Somalia, the desperate need to initiate cooperation through dialogue based on mutual security is significant and trust needs to be established. The only assurance that no harm is done to the interests of any party lies in the process of collaboration through negotiation, and a useful way to initiate and sustain dialogue is to seek opportunities for mutual benefits."

Yes, there is hope. Food security will follow peace in Somalia. After peace is established, the very future of the country may lie in the biofuels production. Biofuels are liquid or gaseous fuels originating from biomass of either plant or animal origin. First, there needs to be a supply of plants to use to produce biofuels. The following research will take dedication of the farmers, government and people; however, it will provide Somalia with a product to use to better their country or to export.

The research offered by Professor Mati is significant to improve the crop production in Somalia. Professor Mati offered substantial information on her research document "Overview of Water and Soil Nutrient Management under Smallholder Rain-fed Agriculture in East Africa", in conjunction with the International Water Management Institute (IWMI). Her research is very significant as it is an organizational administration of possibilities of managing the rain, soil and farming. While it would take decades to implement, not to mention extensive resources, once it was implemented it would be a way for Somalia to manage the available resources.

Starting in 2000-2001 the program was begun and the staff was added, substantial time was spent on a process to identify the main priorities for this region of Africa. "By 2002 we realized that one very important focus for IWMI's work ought to be on water and land management in "rain-fed" as well as irrigated agriculture; we called our incipient effort "intensifying rain-fed agriculture," and focused on such topics as rainwater harvesting, small individualized technologies such as bucket and drum drip kits and pedal pumps, and low-cost water storage." This quote is a summary statement by Douglas J. Merrey, principal scientist for Intuitions and Policies of the IWMI organization. He also acknowledged assistance from IPTRID, the International Program for Technology and Research in Irrigation and Drainage.

Agriculture is the main economic pursuit of this region which supports about 67% of the people. However, since this is dependent on rain and the rainfall is very unpredictable it is difficult to ensure this

is a sustaining form of income. This fluctuation from year to year contributes to poverty and food insecurity. Much of the land would be classified as dryland. In Somalia, 100 percent of the land can be affected by drought. Therefore, the agricultural production is well below any potential. Irrigation has not been exploited. There appears to be a need for rain-fed agriculture which would greatly improve the lives of these people. Studies have been done to implement suggested changes including “integrated soil fertility management, soil and water conservation, rainwater and runoff harvesting systems, integrated pest management, tillage and soil management systems, improved seeds, and innovate agronomic practices.”

The area of the Jubba River has many possibilities for any or all of these solutions suggested by Mati to be implemented. The area adjacent to the river is rich soil. When the rains come, there is predictably soil erosion. This loss of top soils weakens the soil richness. There must be a vast store of rich soil at the bottom of the river bed. However, when the hard rains occur, undoubtedly some is washed out to sea.

Terracing would reduce the steepness of the slope. “Terracing by excavating ditches, construction of earth and some stone bunds, and vegetative barriers are normally defined as soil and water conservation structures, and are primarily promoted to reduce soil erosion.” The terraces could be complimented by grass strips which would decrease soil erosion. This could also provide food for animals or the vegetation planted could be used for bio fuels production. This paper did not research vegetation that could survive with low rainfall and the heat that is part of Somalia.

Water storage is also a very important concept that needs to be implemented. When the rains come, there is no system in place to retain the water. It pools and for a time provides water for livestock, washing of clothes and people but soon it evaporates. Bags made of skins are filled and some is retained by the wells and is absorbed by the ground. However, if there were storage tanks underground, the water could be accessed during the dry spell. Perhaps some of these storage tanks could be adjacent to the terraces so the water would not have to be carried. Even if the simple skill of siphoning the water from the ponds in the terraces to the nearby storage tank could be achieved, some water could be saved for later use.

Mati provided many examples that were variations of terraces. The ‘Fanya juu’ terraces are made by digging a trench about 6 feet wide along the slope and the soil is piled up to provide an embankment. This makes less of a slope and helps with soil erosion. Sometimes the embankment is large enough that water can pond and can be harvested. This bunding system can help with extending the time water is available. This system seems to have been a manageable process for small farmers as it is relatively simple and can be adapted to various situations.

Although the topic of this paper is biofuels, the potential alternative energy sources existing are incredible. These include solar energy, hydroelectric, and wind energy. The sun is an energy resource that is unending, easily accessible and environmentally friendly. Even though the start up costs of establishing solar energy is large, the long term benefits are promising. Solar collection apparatus systems can be set up even in the most remote locations. If this were used in conjunction with wind energy it would seem that a significant amount of kilo watt hours would be available. Also the hydroelectric potential of the Jubba River could be a very significant source of energy to that region.

Is there hope for this ravaged country? Somalia is at a critical stage in its history and must look to the future. It will require decades to rebuild the country. While the production of biofuels seems like a difficult task, it can be achieved. While this is an unstable country; it makes it difficult for its agriculture to be useful to the country itself and to trade with other countries. Food security will also be transformed with peace and a concentrated effort to manage water and the growth of crops.

With limited public education, social, economic infrastructure, legal system, and health; what is left for Somalia? First peace must be established. Once peace is established it will take the United Nations efforts to maintain this struggling country. Funding for any program will have to be acquired from outside sources. Next, education for all ages and stages of life will be imminent from children to farmers. With peace, the country will have the opportunity to flourish and life will endure the slow process of improvement in transforming this nation.

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