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Kenya: Getting Clean Water and Proper Sanitation to the Korogocho Slum.

Kenya lies across the equator in East Africa on the coast of the Indian Ocean. Kenya is relatively the size of Texas. Korogocho, the fourth largest slum in Kenya and also one of the most densely populated, is located just outside the city of Nairobi. This slum is built around Nairobi's biggest city dump and it is home to an estimated 100,000-120,000 people (Ksup). Thousands of children and adults visit this dump everyday for something to eat, something to sleep in and to survive. This dump outside of Nairobi, Kenya is the reason many of these Korogocho citizens are still alive and managing to survive. It is also the reason that many of the adults and children are dying because of the disease lurking in and around the dump. One of the many problems that face Korogocho today is the scarcity of water and impossible living conditions due to improper sanitation. At a place like this, the toilets are more expensive than food. So the chance of getting hit by a flying toilet are very high. Just like the many other slums in Kenya, flying toilets are the only way for people to get rid of their wastes without paying for a public toilets. Due to these sanitation problems, finding clean waters around the dump is extremely hard for them. Water is either really expensive to buy or the water they do have near or around the slum is filled with human wastes making it unsanitary and unhealthy to drink. If not, women and small girls carry the burden of walking miles each day starting very early in the morning to get water from streams or Rivers. Even then, the streams and rivers are the same streams and rivers people shower and wash their clothes in. The streams and rivers are the ones filled with water borne diseases that makes families sick. They drink it anyway because water is something humans can not live without. Korogocho is a swahili word for chaos, meaning everyone has a problem. In this case, it literally means Everyone! If money is not saved up, families end up eating only a few meals a week. Something to think about is a majority of these families are composed of small children and elders. This is a serious problem!

The typical poor urban family in Kenya is composed of six to eight people; with a usual amount of six children. Most families would want more male than female children, so as to continue the family lineage and to help provide funds. Also, a woman without any males is considered inadequate in Kenya. If a woman cannot produce a male heir for her husband, he is allowed to marry another woman. Females are usually not allowed to work outside of their house and males are not meant to do housework. The main job for a female is to be raised well in order to marry young and provide another good family. A usual Kenyan diet is made up of tea, milk, meats and traditional foods. Meats such as pork, goat, beef, chicken, and fish. Traditional foods such as ugali, uji, red bean stew, mandazi, githeri, samosas, and chapati. The most traditional food is Ugali is corn that has been ground up and mashed until almost all flavor is gone. After the grinding and mashing it is put into boiling water and mixed until a bit hard. Some eat it for every meal. The food they eat are known as cheap fast foods. Meaning they are extremely unhealthy for them but they cost less than a nutritional balanced meal. Within the last five years, about seventy- six percent of Kenyans say they've had to alter their diet due to food prices rising. (Mugu, Irin news) Citizens of Korogocho reduce the size of food they consume due to the cost of the food. People also purchase their food from street vendors in small marketplaces. They usually buy meats, mandazi, french fries, chapati, samosa, and fish. The problem with them eating these types of foods is the fact that it is severely unhealthy for their diets. These types of foods are the cause of diabetes and obesity. Though this food may be a little less expensive than others, it may also not be very hygienic food. Some of these foods are created with ingredients that need refrigeration or they go bad. Many of the citizens in Kenya, especially the slums, do not have fridges and freezers. That food left unsold through the day is usually food that gets fed to the family for a couple of days or sometimes the vendors are forced to throw them out. Though it may be really unhealthy and little bit pricey, the purchase from street vendors is one of the ways for them

to save money. (xinhuanet.com)

Healthcare accessibility is very minimal for the slum residents of Korogocho. Since there is no social security system or health care readily available for everyone, only half of Kenyans actually get the opportunity to have access to health care. Healthcare from the government is not affordable enough for a majority of people in Kenya especially in slums. Although some organizations provide free clinics to the people living in slums like Korogocho, many people have no way of getting there quickly. It's especially bad when someone in the family is really ill. Without proper care, less than half of poor children receive proper vaccinations and immunizations. A survey of young children was taken, the results showing that during the two weeks leading up to the survey, sixty-four percent of children under three years of age had been ill with fever. (Guardian News)

Unfortunately, primary school is usually only free for children 6-14 years of age. Studies show that poverty is related to the level of education one receives. In urban areas, primary school enrollment is higher than in rural areas. In a slum, like Korogocho, for every twenty-five thousand people there are no public schools and only two private ones. In most slums though, there are going to be many children in school and not enough teachers or facilities to comfortably house them. Unfortunately, when parents are low on money, the first thing they do is take their children out of school. Some families may put their youngest male child in school and the oldest stay home to help. The females originally stay uneducated and do house work whether young or old. In other words, many children work instead of going to school.

The effect of the water and sanitation issue is without clean water, families can not produce healthy crops, build houses, take care of livestock and stay healthy. Lack of water and improper waste disposal is a huge threat to the citizens of Korogocho. Without proper sanitation and clean water, the risk of catching a water borne disease is much higher and more likely to happen in the slum. These kinds of diseases can be spread very easily especially in dense, overcrowded areas. Especially to growing children. One in five children are killed by diarrhea caused by water borne diseases. These children usually never make it to their fifth birthdays. (The Water Project)

Due to lack of employment, people of Korogocho live in Poverty. Only about 14% of the citizens of Korogocho are even able to self employ. Some of those jobs include cleaning houses, creating crafts, sewing, and braiding Hair. Some even turn to street vending to try and make enough money to help their families. People in Korogocho live on about a dollar a day or 86 shillings, and about thirty one thousand one hundred and twenty two shillings a year. It may sound like a lot but for six to eight people per household, its not even close to enough. That big number only adds up to about three hundred and sixty U.S. dollars per year. compared to the thousands a month Americans make, these few hundreds are just not enough for a family to survive. The effect of the water and sanitation issue is without clean water, families can not produce healthy crops, build houses, take care of livestock and stay healthy. Lack of water and improper waste disposal is a huge threat to the citizens of Korogocho. Without proper sanitation and clean water, the risk of catching a water borne disease is much higher and more likely to happen in the slum. These kinds of diseases can be spread very easily especially in dense, overcrowded areas. Especially to growing children. One in five children are killed by diarrhea caused by water borne diseases. These children usually never make it to their fifth birthdays. (The Water Project)

While the husband tries to make money outside of the slum, the women try their hardest to grow food in small gardens. They plant their gardens in hopes of making a little more money and maybe getting some to feed their families. For some, the gardens are their only hope because it's very hard to find good paying jobs in the city mower days. So women spend most of their days taking care of their families and farming for money and food. Their form of gardening is called vertical gardening or sack farming. Sack farming is poking holes and planting seed in a recyclable bag. The usually try to grow kale, sweet peppers, and spring onions, as well as other vegetables. Some that have little success growing food for themselves, are

usually fortunate enough to own a couple of goats, a couple of chickens and sometimes even both. If successful in having livestock and growing their products, some may have enough to eat and enough to sell. Growing gardens and raising livestock may sound good, but it has its flaws. First, freshly planted seeds usually do not end up growing because the chickens and birds that around like to pick them out. Also, goats really try to get into the garden and eat all the vegetables growing. For the poor gardeners of the slums, that isn't the only problems that worry them. One of the things that worry them the most is something called "Midnight Harvesting". That is when other people decide to sneak into other people's gardens and harvest their crops at a time when no one is awake. The other huge problem bothering them is obviously the water problem. Finding clean and healthy water for them to drink is hard enough as it is. Trying to find good enough water for their crops to grow properly just adds on to the list of problems. If the water they have near them is too filthy to drink, then it is not sanitized enough for them to use for growing their crops. The way they solve this problem is by trying to tap into untreated waste water. The problem with that is it is filled with viruses and bacteria that cause the many waterborne diseases a majority of the citizens catch. While trying to make a living in these poor community, there are some things that happen that they cannot control. For example, the fluctuating weather contributes on the water crisis in Kenya. Whether it rains too much or barely rains at all, it seems that the weather is almost never on their side. According to the Gardeners; however, it's free water and they do not have to depend on rain fully to get their crops growing.

The poorer half of Nairobi only takes up five percent of the residential land. This means that the place is greatly overcrowded. The problem with the overcrowding is the fact that building is extremely hard. There is no where to build affordable food markets, health centers or clinics with no space to build it. Also, slum population in Kenya only grows up to six percent each year. Another barrier affecting the people of korogocho and other slums in Kenya is getting transportation to places they need. Access to food markets and health centers are hard for people to find in the slum areas. Reason is there are no real roads which means two things. One, Police are never really enthusiastic about entering areas with no roads. Also if it rains, and when it rains, people are usually forced to walk through muddy, dirty water to get where they need to. An alternative form of transportation is the use of Matatus. Matatus are like buses for poor people. For example if a person is in need of a hospital and they don't have money to pay for ambulance, there are forced to walk miles or pay for a Matatu. Even with these matatus, some people still can't afford it. This means sacrifices in the family have to be made for the rest to survive.

There is a grand number of agricultural barriers with the water and sanitation issues in Kenya. When unsanitary, untreated water gets into the soil, the soil becomes corrupt. This is not only unhealthy for the plants, it is also extremely life threatening for humans and animals. If animals were to inhale, touch, or ingest contaminated soil, and if humans consume animals or plants that have been contaminated, there are high risks of catching some kind of disease that was in the plant. This happens when a plant soaks up all the substances inside the water provided through it's roots. In this case, it's the contaminated unsanitary water they have to provide to their crops. To make matters worse, only less Than 20% of land in Kenya is actually proper for cultivation. This is due to the majority of the land which is semi arid or arid making it almost impossible for any form of agriculture to occur.

A majority of people in informal settlements have to buy water from kiosks because only twenty-two percent have water provided to them by the Nairobi City Water & Sewerage Company. Even though these people are getting clean water from these kiosks, the prices happen to be extremely high. The high prices charged are because the kiosks are run by water delivery services and private entrepreneurs. Only about twelve percent have piped water supply and eighty percent complained of shortages and pipes running dry. Meanwhile, the other three percent of households have public taps that provide water for them.

Trying to solve the water and sanitation issues in Kenya is not easy but it can be done. I have found that sanitation is the leading effect on diseases that occurred and are occurring today. The cause of bad

sanitation is due to improper waste disposal. In a place where the use of a toilet once is more expensive than the cost of food for a week, the disposal of waste is bound to be careless. For a solution I think that creating more government funded public bathrooms will decrease the amount of waste contaminating the streets of Korogocho and other slums. They can put some restrooms inside the slum so the citizens wouldn't have to travel far to use them. If not government funded, they should lower the prices to use these restrooms. If the prices are a bit more affordable, they would use the restrooms instead of the flying paper bags. As for the water crisis, I would propose the building of stable wells connected to pipes that surround the entire slum. The purpose of the wells would be for storage of water when it rains. With the wells there would be showers or washrooms. This is something that the government can put funds into. This would not only help the citizens in need of these wells, it would also help political leaders in many respectable ways. For example; elections, re elections, political offers and even respect from their citizens. Since a majority of the slum people go to a river or stream to wash up, the waters become contaminated with viruses and other harmful bacterias. So these wells can store drinking water, shower water and planting water for their gardens. My thoughts are, with people out of the streams for personal uses, the stream would eventually flush out making the water a little cleaner. Of course this may have it's flaws due to the fluctuating weather conditions in Kenya, but it is a solution.

The government could be a huge help to this cause as far as funding, if they could ignore politics for a while. According to Transparency International, "Kenya is one of the most corrupt nations in the world. It is difficult for the majority of the population to escape the poverty in Kenya, when government money is used improperly"(Kenya-Advisor.com). The one problem that angers the Kenyan citizens is the fact that the government of Kenya is so sucked into politics, they do not realize what their citizens go through. Its not a matter of getting them to fund the water crisis in Kenya, its teaching them to ignore politics long enough to realize the damage they could have prevented. The government of Kenya needs to use the government money properly. The "Cause of Poverty in Kenya" section under Kenya-Advisor states "Bribes, fraud and tribal favoritism are common within the all levels of government, which hampers any attempt to improve conditions across the country". This means that the government only throws their money to what they think is politically important. That immediately excludes their suffering citizens in the slums and other poorer places in Kenya. It doesn't have to stopat teaching the government how to use their money and what to use it on, the richer half of the citizens can help too. The first class and middle class citizens can also help by donating to the local charities. It does not have to be much, but I can tell you now that if everyone put a shilling or two into their local donations, they would raise enough money to feed the families of the slums. All it takes is a little dose of reality that their country is going down and it will keep going down until they all work together and do something about it.

As far as organizations go for improving the water and sanitation problems occurring right now, there are multiple organizations helping. One of the programs would be the Korogocho Slum Upgrading Programme by the Un-Habitat For A Better Future organization. They are working on educating the government and the people on water regulation, while improving the quality of the living environment of the people and enhancing their socio-economic well-being through participatory planning and management. This program and many others are mainly working on improving the living environment of the citizens of Korogocho. They are also working on the water and sanitation issues in Kenya itself. Improving the water and sanitation factor would increase the amount of safe and clean water for the citizens of Korogocho. Increasing the safe and clean water for one slum would mean possibilities of increasing the amount of safe and clean waters for the rest of Kenya. Improving this factor would also decrease the number of diseases, especially waterborne ones. The majority of deaths that occur in the citizens, especially children under the age of five, are caused by water borne diseases. So clean water and proper sanitation would be a huge benefit not only to the sick in the slums, but the rest of people that may catch a disease. In other words, the fewer diseases there are, the lower the death rates, the more children for the more traditional families. Also, this would be a huge opportunity to provide education for Kenyan Government and all of the citizen on regulating water. Most of the people that do not know how it really

feels to not have much would complain of any water and sanitation problems that the government needs to fix. In reality, it is the people that need to get up and work on it themselves. A way for people in the community to help with the water and sanitation crisis in Korogocho and other slums in Kenya is by being clean themselves.

Another international organization doing the same work on Kenya is the Water & Sanitation for the Urban Poor (Wsup). They have been working in Kenya with Nairobi City Water and Sewerage company to reduce non-revenue water in the southern zone of Nairobi city (Pro-Poor Non-Revenue Water, Wsup). They have also established a management model for the pre-existing water kiosks in Kenya. Management is delegated by the local utility to small independent water operators through many contracts. This improves water services in places the local utility would not be able to help. This can bring up small pre-existing water suppliers that link up to the local water utility as sub suppliers. The formal contracts would ensure water that is of a safe standard and sold at an agreeable price. (Delegated Management, Wsup). I believe that this is an extremely sufficient way of solving the water and sanitation crisis because it is of standard and at an affordable price. There are also numbers shown to prove that what they are doing is working. In Kenya so far there are 178,552 people with improved water services; 90,565 people with improved sanitation services and 574,741 people with improved hygiene practices (Water & Sanitation for the Urban Poor).

Kenya is a country that has faced it all. They have survived disasters from droughts to the big food crisis, corrupt politicians to horrible storms that took lives with flooding. The fact is, the slums never get a break and it is always harder on them. They pay high rent for a small dense, over crowded place. The women and younger girls sell their bodies in order to make money for their family. Also, most children are dropped out of school to work in hard, unsafe jobs to make money for the family. When it comes to the high crime rate, there are barbed wires all over the place to keep them safe. Most families cannot afford immunizations either, so that means making sacrifices for the family's survival. That may mean letting a loved one go, and in their case, it's usually a small child. Women usually like having many children. It may seem dumb that they want so many children when they can barely survive but in reality, it's because they want to ensure the survival of at least one. This is just another problem they face, but they can get through this with the help of the government, the people and you. A glass of clean water is something many people take for granted. Many people even throw it away if they don't like it. What many people do not realize is the fact that they never have to worry what is in it. Look at things at a different perspective sometimes. A glass half empty for you, is a glass half full for many others. My goal in life, is to help people realize that someday.

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