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Egypt, Factor 2: Water Scarcity

Egypt: We Need Clean Water!

The amount of water in Egypt is keeping the country from growing and developing in the agricultural zone. "The total population of Egypt increased from 22 million in 1950 to around 85 million in 2010. The annual rate of population growth has steadily declined from 2.4% during the 1976-1986 decade, via 2.1% for 1986-1996 to 1.9% for the year 1996-2006 periods" (Ministry of Water Resources and Irrigation, 2014). This rapid increase in population growth will continue for many years to come and could possibly increase to around 130 million by 2050. This population growth rate will make the problems with limited water worse in the future. The quality of water is quickly deteriorating in both surface and groundwater. Agriculture consumes the highest amount of the available water in Egypt, using more than 85% of the total demand for water. In the Egyptian economy, the agricultural sector contributes about 20% to Gross Domestic Product (GDP) and provides about 40% of total employment (Ministry of Water Resources and Irrigation, 2014). In perspective of the normal increase in the need from different divisions, for example, civil and mechanical water supply, the improvement of Egypt's economy strongly relies on upon its capability to preserve and deal with its water assets (Ministry of Water Resources and Irrigation, 2014)

Farming devours more than 85% of Egypt's offer of Nile water yearly. In spite of the fact that the nation lost part of its rich area to urbanization, this has been adjusted by extension of farming regions. Development in farming is conveyed out on a level plane and vertically through harvest strengthening by developing the arrival more than once a year.

The main (the most popular and used) wellspring of water in Egypt is the Nile River. Egypt is unique when compared to other nations in its reliance on water from one source. The Nile water concurrence with Sudan, assigns 55.5 BCM a year to Egypt. This sum is ensured by the multi-year administrative limit assigned by the High Aswan Dam (HAD). Precipitation in Egypt happens just in winter as scattered and little showers. The normal yearly measure of successfully used precipitation water is assessed to be 1.3 BCM/year. This sum can't be viewed as a solid wellspring of water due to high spatial and worldly variability.

Groundwater exists in Western Desert and Sinai in aquifers that are generally profound and non-renewable. The aggregate groundwater volume has been evaluated at around 40,000 BCM. In any case, current reflection is assessed to be 2.0 BCM/year. The principle obstructions in using this tremendous asset are the extraordinary profundities (up to 1500 m in a few zones) of these aquifers and falling apart water quality at the expanding profundities. Shallow Groundwater in the Nile aquifer can't be viewed as a different wellspring of water. The aquifer is energized just by drainage misfortunes from the Nile, the watering system channels and channels and permeation misfortunes from inundated grounds. Thus, its yield should not be added to Egypt's aggregate water assets. Consequently, it is considered as a repository in the Nile stream framework with an immense limit yet with just 7.5 BCM/year rechargeable live stockpiling. The current deliberation from this aquifer is evaluated at 6.5 BCM in 2013.

Desalination of seawater in Egypt has been given low priority as a water asset on the grounds that the expense of treatment is high compared to different sources. Desalination is really drilled in the Red Sea beachfront region to supply tourism towns and resorts with sufficient household water supply where the financial estimation of the water is sufficiently high to take care of the treatment costs. Other groundwater desalination units are developed at a few areas in Sinai as a water supply for Bedouins. It might be pivotal to utilize such assets as a part without bounds on the off chance that the development of the interest for water surpasses all other accessible water assets. Be that as it may, its utilization will rely on upon mechanical improvement in this field. Treated household sewage is continuously reused for watering system with or without mixing with new water. The expanding requests for household water will increase the aggregate sum of sewage accessible for reuse. It is evaluated that the absolute amount of reused treated wastewater in Egypt is around 0.3 BCM in 2013. (Ministry of Water Resources and Irrigation, 2014)

Numerous studies demonstrated that the Nile River is extremely sensitive to temperature and precipitation changes for the most part due to its low overflow/precipitation proportion (4%). The delayed 1979-1987 dry season constrained Egypt to diminish its water use notwithstanding the concurrent yearly stockpiling in Lake Nasser behind the High Dam in Aswan, which unmistakably demonstrates the helplessness of Egypt to changes in waterway streams that environmental change may create (Ministry of Water Resources and Irrigation, 2014). An environmental change forecast model recognized water assets as one of the three most defenseless divisions to environmental change in Egypt. Others included seaside zones and farming assets. Being the most downstream nation on the Nile, Egypt is influenced by atmosphere change sways inside its borders, as well as inside the entire bowl, which it imparts to 9 different nations. Monetary improvements in upstream nations and measures they may take to adjust to environmental change are liable to put more weight on water assets in Egypt. In this manner, it is of prime significance or Egypt, amongst other Nile nations, to survey the hydrological effects of environmental change on the Nile. (Ministry of Water Resources and Irrigation, 2014)

Water prerequisites in Egypt are constantly expanding because of population explosion build and enhancing expectations for everyday life and the administrative approach to Empower industrialization. Interest for water might be classified in classes speaking to primary things in the interest side of the water offset. Water necessities of the rural segment speak to the biggest part of the aggregate water request in Egypt

A typical poor urban family in Egypt would be a father and a mother with around three children. The father would possibly work for the city in transportation or sanitation. He would have a relatively small salary. The mother would most likely not be employed. The parents may have a low quality of education. The children attend public schools which are overcrowded and inexpensive. They do have access to public health care, but they must wait a long time for their turn. This family would eat traditional Egyptian food such as beans, flafel, and koshary. Meat is expensive and they would rarely eat it. A poor urban family would often purchase food at a restaurant that sells traditional foods. They would not have space for a garden. There are not many jobs that the father can get that would pay more many. The lack of water in Egypt makes the quality and quantity of food available to this typical poor family limited and expensive.

Currently the water supply is affecting the availability of food and clean drinking water for the poor in Egypt however, in the future it could get terrible. The water supply is drastically decreasing and if

something does not change the poor families will have difficulties in finding water. Egypt currently imports a large amount of different food crops, and they are one of the largest importers of food in the world. As the water supply decreases in Egypt the amount of food imported is going to increase causing food prices to be higher. The High Dam is the main source of electricity, so if the water level decreases the cost of electricity, food, and petroleum.

The scarcity of water in Egypt is getting worse, because of the increase in population, the low amount of rainfall in recent years, and the high temperatures which cause evaporation. It is estimated the each person uses between 2,000 to 5,000 liters of water per day, so as the population of Egypt increases the amount of clean water needed increases dramatically. Egypt is currently very reliant upon the amount of rainfall for agriculture and if the rain does not come the crops will be useless. Due to the high temperatures the sun evaporates a high amount of water from the river Nile. The government of Egypt is not currently utilizing underground water sources and is only using desalinization in limited areas on the Red Sea. These water sources could be useful in the future of Egypt.

Also drinking bad quality of water leads to death. It is estimated that 17000 children die from diarrhea. This is also due to unmaintained treatment plants which will let viruses spread by an easier way and the increase of the percentage of the infection. So we need more technological treatment plants to get a higher quality of drinking water and clean usable water.

Farming overflows, mechanical effluents and civil sewage are constantly heedlessly dumped into the Nile River, bit by bit making its water unfit for human utilization. Sewage water from slums and numerous different regions in Cairo is released into the stream untreated because of absence of water treatment plants. Farming overflows frequently contain contaminates from pesticides and herbicides, which have contrary impacts on the waterway and the individuals utilizing it. Mechanical effluents are frequently exceptionally lethal, containing substantial metals that can join with the suspended solids in residential wastewater to structure garbage. These elements join together to make Nile a contaminated stream which may spell fate for the eras to come.

Egypt controls greater part of the water asset separated from the Nile River because of pioneer period bargain, which ensured Egypt 90 percent of the Nile, and kept their neighbors from concentrating even a solitary drop from the Nile without authorization. Notwithstanding, nations along the Nile, for example, Burundi, and Ethiopia are exploiting the political strife that has inundated Egypt and are increasing their control over the rights for the Nile. With the Nile supplying 95 percent of Egypt's freshwater, losing a percentage of the water supply can result in extra issues for Egypt.

Improving the supply of water in Egypt would help the poor urban family by improving access to clean water, decreasing the cost of food, and decreasing or at least maintaining the cost of electricity and petroleum. Currently, the poor family might have to walk to a water source that may or may not be 100% clean for drinking and personal use. Improving the water supply would help them to have easier access to clean water on a more consistent basis. An increased water supply for agriculture would improve the crops in Egypt, lowering the amount of food that would be imported into Egypt. Lowering the demand for imported food would therefore lower the cost of food for the people of Egypt. When the supply of water is high the High Dam can produce more electricity which will then cost less.

Egypt must make some changes to have more clean water available and to lower the need for water usage. They can increase irrigation from rivers and aquifers for increased agriculture production. We can use the regions which have rain for more agriculture, instead of other uses. Using water more wisely so that the amount of water needed for crops can be decreased. Work together to trade food from high productive area to low productive areas. Manage the demand for water by changing diets and reducing the amount of food wasted. These are several options for Egypt to get more food and clean useful water.

There are many other solutions for water scarcity such as education, improved irrigation and improve water harvesting and catching. At last, changing the substance of this emergency includes training to spur new practices. Adapting to the advancing time of water lack will oblige significant update of all manifestations of utilization. Enhancing watering system can help close supply and interest crevices. In specific cases reprobate watering system polishes implied for a prior period has debilitated the capacity of ranchers to give sustenance and fiber to a developing world. Water catchment frameworks are vital for ranges with constrained water sources. Egypt is a nation that battles with a climate and needs to redesigning rainwater reaping frameworks. These endeavors give free control of water assets.

Food security for the poor urban family in Egypt is largely dependent upon the availability of water both for the agriculture in Egypt and for individual consumption. With the increasing population in Egypt the need for clean water is becoming greater every year. If Egypt cannot increase the amount of water available or find ways to decrease the need for water, the poor families will find it harder and harder to secure the needed food. Many things in Egypt depend upon the availability of water, when water levels are low the prices increase. Food and electricity become more expensive because Egypt becomes dependent upon imported food and electricity. The poor families may not be able to afford food and other expenses needed to live.

We should take care of the education in Egypt to let our children know the importance of water and how we can't live without it. We need to teach them how to use the water wisely and not to use it for big amounts of water for nothing. We also need to tell them what is the importance of water in our bodies and if we stayed without water for a certain long time this will be really bad. Also, there are a lot of water sources in the world, and we need to recognize how much water is in the world and why god made big amounts of water because it is really one of the main things which all living organisms can't live without.

The water is very important to our lives. Water makes up to 70% of an adult's total body weight. It helps rid the body of waste and regulates temperature. Egypt is dependent upon the river Nile for most of its water, so if the level of water in the Nile decreases because of lack of rain or because other countries are using the water the poor will suffer. Egypt needs to research other potential water sources such as, desalinization and aquifers. The government also should research ways to decrease the amount of water needed for agriculture. Water is one of earth's most precious resources that many people take for granted. The people of Egypt know how precious a clean water source can be for survival. For the future of dry countries such as Egypt, please conserve water and treat it as the precious resource it is for the future of our children.

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