

Good example of water pollution in egypt research paper

[Health & Medicine](#), [Alcoholism](#)



Environmental concerns are always addressed in stable nations like the United States, but in countries with socio-economic and political problems such as Egypt, the government never takes care of the environmental issues. Water pollution in Egypt is one of the most threatening environmental concerns of the country. Water pollution affects the people's healthy living standards as it reduces their ability to obtain and use water. Egypt is listed among the ten countries that are threatened by water crisis by 2025 due to the rapidly increasing rate of pollution in the water of the Nile River . About 97% of the water is consumed from the River Nile, and the rest from ground water aquifers . The major source of water for the people of Egypt is the Nile River is subject to unsustainably high levels of industrial, domestic and agricultural wastewater pollution.

Drinking water should be clear and free from odors and micro organisms. However, the drinking water of Egypt is the opposite of the above mentioned qualities. There are several reasons that are accountable for the pollution of water in Egypt. The wastes from the industries and factories, agricultural wastes, human and domestic wastes are a few reasons of water pollution . Another major reason of water pollution is the scarcity of pure water due to the high population of Egypt that has raised the demand for more water. The Biochemical Oxygen Demand of the waste water ranges from 160-760 mg/l which is very high. The following paragraphs give a brief description of each of the problems and solutions to prevent water pollution.

Industrialization in Egypt has led to the deterioration of the environment. The majority of the water in Egypt is polluted as a result of industrial activities. The Nile Delta of Egypt has been considered as one of the most prominent

areas of the country for setting up industries such as textiles, leather tanning, metal, food, sugar distillation factories, wood pulp processing factories and many others . Depending upon the type of industry, the pollutants can be classified into many types. The liquid industrial waste consisting of organic and toxic substances such as mercury, asbestos, cadmium, lead and arsenic is disposed from the industries into the waters of the Nile River and the Mediterranean . The toxic substances cause permanent damage to the water as it is very hard to separate the substances from the water. The radioactive materials such as uranium and iodine when disposed into the water cause pollution to both surface water as well as the underground water.

Industries and agriculture form a major part of the growth of a country's economy. However, the misuse of Egypt's Nile River for the profit of the economy has resulted in a majority of the Egyptians suffering from long term diseases. There are many rural villages and towns along the Nile River, which are not connected to the cities and the people living in these areas have no means to buy bottled or distilled water . The only option the people are left with is drinking the polluted river water. After diagnosis, it was found that the patients were exposed to illnesses due to the presence of chemical substances in the drinking water.

The drainage of seeping water from the agricultural lands is considered to be a non-point source of pollution. However, the extent of damage done by the agricultural seeping water is abundant. Phosphorus and nitrogen is released in large quantities into the water to contaminate it . Furthermore, it is found that the Delta region of the Nile River that cultivates a majority of the crops

in the country receives greater amounts of waste water from the agricultural fields.

People living in areas with less access to safe drinking water and regular sewage treatment are the ones suffering from kidney failure, Hepatitis C Virus, cancer, schistosomiasis, bacterial enteritis, amoebiasis, liver cancer and many other diseases . Schistosomiasis is transmitted through physical contact with polluted water. Water pollution also results in renal failure . Farmers are mostly prone to renal failures as they are infected from the irrigation water. The government should take special prevention measures to protect the health of its people. Sickness prevention programs should run at all villages to make sure that the people are not suffering from illnesses. The negative effects of water pollution on aquatic wildlife have affected the fishermen. The fishermen are losing their livelihoods because of the non-availability of fish in the river due to water pollution . The country has also lost a great number of tourists due to unsafe and unclean water and surroundings. Diarrhea was observed in a majority of the tourists when they arrived in Egypt. Several cases of mass poisoning have been observed in most of the areas as a result of drinking polluted water. The main reason for the pollution of water in the Nile River is due to the low levels of water during winters as less water discharges from the dam. The presence of fish farms on the coastal areas and dispose of wastes directly to the agricultural banks, which drain into the river are also the major reasons for water pollution . A population of about 20 million people resides along the Nile River in Egypt. The huge population discharges their wastes and untreated sewage into the Nile. The overpopulation of the country has also contributed to the

contamination of the River Nile . The increase in the population has in turn multiplied the demand for water supply for domestic consumption and irrigation. Abundant water is available in the Nile River but it is contaminated water and is not advised for drinking or use at home. Cleaning the Nile's water requires opening up the valves and releasing extra water, especially during winter when the Nile's water flow decreases. It also requires the flow of water from higher dams when there is scarcity of water.

The people of Egypt have also contributed an equal share in the pollution of water. Domestic activities such as improper sewage systems, leakage from septic tanks have been a major hit on water pollution. Biochemical decomposition of human and animal wastes has also led to water pollution due to the presence of inorganic and toxic substances . High concentration of pesticides and fertilizers in the water is also one of the reasons of water pollution . Pesticides and fertilizers have not only degraded the surface water, but have also done a major loss to the ground water.

In order to avoid the drinking of polluted water, the people of Egypt have been following the traditional methods of water purification. Few people filter the tap water on a soft cotton cloth while a few others use the technique of boiling the water to remove the bacteria present in it . Due to the excess amount of pollutants present in the water, the traditional techniques have not been able to prove good results. many people have also switched to using filters and bottled water. Both these methods have their own side effects. When using filters, people should take care to clean the filters regularly to prevent the incubation of bacteria and impurities . Bottled water has also proven to be dangerous as it was found that the companies that are

manufacturing bottled water have been using harmful elements in the process of water purification. It was also noticed that the bottled water lacks proper storage procedures and does not meet the international standards . Egypt should follow effective technologies to address the issue of water quality in the country. The water treatment systems should be designed in such a way that they remove all the pathogens from the water. The disinfectants used in the process of water purification should be free from all the components that prove dangerous to human health . The water distribution network in Egypt should be strengthened to guarantee the transport of fresh potable drinking water to the people of the country. The water purifying techniques should be economical and easy to operate and maintain . The government should take special care to ensure that the people drink safe and hygienic water.

In addition to the surface water, the ground water is also facing major concerns of pollution. Since 95% of Egypt's land is a desert, in addition to the water coming from the Nile River, the ground water resources have also been able to fulfill the needs of the people. However, it has been observed that the odor and color of the ground water have changed in the recent years. Fertilizers and pesticides have also played a major role in contaminating the ground water . Degradation of the ground water due to the presence of high concentrations of harmful chemicals has increased the long-term risk of the pollution of the ground water. Sodium and magnesium were found in large quantities in the ground water reserves of the country . High concentration of ammonia deposits was also observed in the ground water reserves of Egypt, which rings an alarm for the government to take a

strict action to prevent the possible hazards . In order to prevent the ground water from getting polluted, the extensive use of fertilizers and additives in agricultural activities should be minimized. The sanitary and sewage systems should be constructed properly to prevent potential leakages of waste substances. The water resources should be closely monitored to prevent disposal of wastes. Wells should be built in areas of high reserves of ground water .

The government of Egypt employs the technique of mixing chlorine in the water as a measure to disinfect the water from bacteria, organic waste substances and other pollutants. However, the method of mixing chlorine in the water proved fatal to the kidneys, and various kidney failure cases have been recorded in such areas . The government of Egypt is lacking its efforts in the maintenance of water purification systems in the country. The environmental agencies at the ministerial level have been trying their best to prevent the disposal of industrial wastes into the water .

Non- profit organizations have taken up awareness programs to address the environmental issues. One such example is the Green Compass Research Program. The World Bank's Board of Executive Directors has approved a Global Environment Facility grant for Egypt, which is worth \$7. 15 million, to improve the mechanisms for the management of coastal areas in Alexandria . The Egyptian Initiative for Personal Rights (EIPR) has recently published a report about the new amendments to the law number 48 that protects the Nile River.

The report mentions that a very little or zero improvement was made to combat pollution as there were no effective procedures introduced in the

amendment . The regulation prohibited the flow of sewage into fresh waters, but at the same time, it allowed the drainage water into non-fresh water. The Amendment also allowed to dispose the industrial wastes into the agricultural banks . Egypt needs more efficient solutions such as implementing low-cost technologies to treat domestic drainage and use it for irrigation in agricultural fields to prevent water pollution. The involvement of the local people to fight for clean and hygienic drinking water might bring a change in the country.

While various social programs are being set up in many areas along the Nile River to increase the water treatment, the increasing population in the area has become an obstacle. Desalinating the seawater is another way to increase fresh water in Egypt . However, the process of desalination is costly and a developing country like Egypt may not afford to spend that amount. We can notice that the aspects of water pollution in Egypt are dealt in a careless way. Most of the people of Egypt prefer medical treatment over resolving the environmental issues of the country. The industries and factories should minimize the quantity of wastewater discharged into the rivers .

The mass media and education system should promote the awareness among the people about the hazards of water pollution. Conferences and seminars on the bad effects of water polluted should be conducted every now and then to involve the participation of the people . New monitoring techniques should be utilized to analyze the water quality periodically and give special attention to the water to protect from chemical pollution . The government should also identify the areas that have good reserves of ground

water and prevent agricultural activities or construction of buildings and roads in such areas. Continued efforts will hopefully pave the path to a more healthy and energetic environment in Egypt.

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