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# Water Scarcity: Sudan

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## Global View of Water Scarcity

Water scarcity is defined as not having access to clean water due to lack of sanitation or physical shortages. It is an environmental condition that is caused by wasteful agricultural practices, climate change, and over population (Kharraz, El-Sadek, Ghaffour, & Mino, 2012). Water scarcity is commonly diagnosed by hydrologists using the Water Stress Index founded by Lindh and Falken in 1974. The WSI considers the total amount of water, the withdrawals, and the water volume for upkeep in its calculations (Ruess, 2015). Even though researchers have been aware of the problem of water scarcity for decades, it is still a growing issue globally. It is predicted that by 2025 approximately two thirds of the worlds population could be living in water-stressed conditions (United Nations, 2014). Water scarcity is an issue that affects every continent (United Nations, n.d.); it is estimated that 700 million people in 43 countries around the world are directly suffering from water scarcity (United Nations, 2014).

Although it is a globalized issue, certain areas of the world face more serious water scarcity than others. For example, Sub-Saharan Africa contains the most water-stressed countries regionally (Water for life decade: water scarcity). According to researchers at the University of Arizona, the top five countries with the greatest water scarcity problems are Yemen, Libya, Jordan, the West Sahara, and Djibouti (“Five countries with the greatest water scarcity issues,” 2016). Populations that are more vulnerable to the effects of water scarcity are children, women, the poor, and those living in areas of political unrest. If water is not adequately treated, bacterial and viral agents can infiltrate water supplies and can lead to diarrheal diseases. Around 88% of the 2,200 child deaths caused by diarrheal disease are due to a lack of access to water and sanitation (Center for Disease Control and Prevention, 2016).

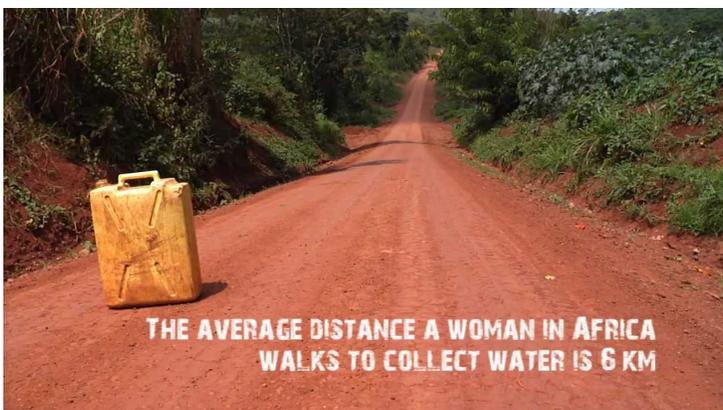


Young girls in South Sudan carrying water buckets.

Retrieved from [https://www.thestar.com/news/world/2012/10/14/refugees\\_in\\_south\\_sudan\\_find\\_hope\\_amid\\_the\\_despair.html](https://www.thestar.com/news/world/2012/10/14/refugees_in_south_sudan_find_hope_amid_the_despair.html)

## The Ways in Which Water Scarcity in Sudan Disproportionately Causes Women to Suffer

The responsibility of collecting water both in Sudan and in many water-stressed countries of the world falls on women. This role is culturally determined and is influenced directly by the social determinants of health. For example, due to the fact that women are seen as having lower social status compared to men and their



Retrieved from <https://www.youtube.com/watch?v=wtJ0gJEHHyw>

place in society is limited to the home, water collecting is seen as their job. Additionally, women are often the first to be forced out of school in order to travel to remote places to collect water. This lack of education sets women up to continue in the realm of domesticity and reliance on their husbands for financial stability for their entire lives. Finally, an abundance of health problems could be brought on by carrying immensely heavy containers of water each day often from miles away. Lacking access to healthcare services to treat these health problems can force women to recruit their young daughters to leave school and assist them

in the water retrieval—thus starting the vicious cycle over again (Keefer & Bousalis, 2015).

## Possible Solutions for Areas Such as Sudan

Creating solutions to solve the global problem of water scarcity requires uniquely tailored solutions to fit the populations and areas that are being targeted. For example, South Sudan has attempted to install piped water that is available at a cost in order to make up for the urban water systems that have been demolished through war. However, these distribution points are located extremely far from rural populations, which limits the amount of water a mother can carry back to her family. Also, if an area uses water tanks instead of piped water, the trucks are sometimes unable to reach areas due to poor road conditions. Regardless of the delivery mechanism, the poorest families are often unable to afford the price of safe water. Instead, the poorest families or families that run out of their safe water supply early are forced to use the unfiltered water from the Nile, which could lead to diarrheal diseases and parasites. Water delivery systems have mostly been the responsibility of private ministries in the past due to the low economic state of Sudan's government (Rwakaringi, 2016).

The goal of providing piped water to the population instead of clean water on trucks is a more reliable solution, but the distribution stations have to be easily accessible for all communities. Therefore, either organizations such as the UN or the Sudan government itself has to provide more outposts, build more boreholes, provide water sanitation kits, or provide reliable transportation to the existing outposts. In order to address the needs of the most vulnerable populations as well as keep women's health intact and girls in school for longer, boreholes and water sanitation measures such as chlorine that could improve the usability of the Nile are a possible solution. Additionally, policy makers have to take responsibility over waters scarcity issues instead of private charities by installing strict laws regarding wasteful agricultural irrigation as well as working alongside experts in the field such as hydrologists and sociologists to create enduring solutions.

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