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Malawi, Water and Sanitation

Malawi: Improving the WASH system

Background

Over 50,000 years ago, humans were known to have been in Malawi. The Maravi Confederacy was established in the 1480s, reaching from the Mozambique coast to eastern Zimbabwe (including parts of Zambia and the majority of Malawi). The kingdom was successful through its trade of ivory and iron. However, as clan leaders within the Maravi confederacy began trading and grew independent, the confederacy split into smaller independent areas (ADF Staff, 2023).

Once the slave trade reached southern Africa, colonization became a primary influence on the proto-nation. Although the Portuguese never colonized Malawi, their colonial rule of Mozambique and their participation in material trades were largely influential to Malawi's history. In 1891, Malawi, under the name of "Nyasaland," was colonized as a British protectorate (Palmer, 2021).

Future Malawian president Hastings Kamuzu Banda led the country to officially declare independence on July 6th, 1964. Malawi remained under the leadership of Banda for 28 years. Over the two and a quarter decades, Malawi had major improvements in transportation, communication systems, and roads. Banda placed emphasis on cash crops such as tobacco, tea, and sugar. Smaller farms were not financed by the Agricultural Development and Marketing Corporation (ADMARC), and the fertilizer controlled by ADMARC was also expensive for independent farmers.

The country has since gone through various presidents and political scandals. During a famine in 2002, the Malawian government was slow to receive aid due to accusations of mismanagement of food. Malawian president Joyce Banda managed to improve foreign relations. Her term eased some of Malawi's financial burdens and worked to fight against governmental corruption. After the unexpected death of Malawi's most recently elected president, Saulos Chilima, cabinet member Michael Usi was chosen to fill in the role as president and is currently serving as Malawi's president (Phiri et al., 2025).

Geography

Malawi is a small country located in southeast Africa. The climate is subtropical, with a wet season from November through May that averages between 30 and 35ºC (86 to 95ºF) and a dry season with an average temperature of 13ºC (55.4ºF). It's a very hilly place with large plains and a few mountains. The country is landlocked, which makes imports and exports more expensive than nearby coastal nations (*Malawi*, 2025).

Lake Malawi, previously known as Lake Nyasa, is 580 kilometers long and is bordered by Malawi, Mozambique, and Tanzania. The lake is an important resource for the country's water supply and the livelihood of its people.

Society and Culture

Malawi is a diverse nation with many different cultures. From north to south, there are eight primary cultural groups in Malawi: Lambaya, Nyakyusa or Ngonde, Tumbuka, Tonga, Chewa, Yao, Lomwe, and

Sena peoples. Chewa is the largest group, making up approximately 34.3% of the population (*Malawi*, 2025). The Yao people account for the majority of the Muslim population in Malawi.

The estimated 2025 population of Malawi is around 22,216,120 people (UN). Of this population, only around 18.3% live in urban areas, while the remaining 81.7% of people live in rural areas. The majority (77.4%) of Malawians are some variety of Christian, while 13.8% are Muslim, 1.1% are traditionalists, and the rest are *none* or *other* (*Malawi*, 2025). The birth rate in Malawi is approximately 5.5 children per woman. Major improvements have been made in maternal and infant care, and the majority of children are vaccinated, though the Malawi population continues to grow at a high rate. Researchers estimate the population will reach 54 million by 2070 (KC and Lutz, 2017).

People in cities often do not have adequate access to water and sanitary systems; Malawi's National Planning Commission reported that only 65.5% of houses were using safely managed sanitation systems as of 2020. Additionally, an estimated 60% of people in urban areas live in slums or inadequate housing (NPC, 2020). Rural areas fare even worse, with many houses being constructed of dried mud walls and straw roofs. Food is cooked by placing pots on rocks over an open fire.

Water & Sanitation

Currently in Malawi, only around 67% of households have access to clean, safe drinking water. Water and sanitation in Malawi have improved with help from organizations such as the UNICEF Water, Sanitation, and Hygiene (WASH) Program, WaterAid, and the Lilongwe Water and Sanitation Project. The state of water quality in Malawi is much better than that of other similar sub-Saharan countries, yet there are still struggles.

Despite many improvements being made to sanitation and water, there are numerous issues that persist. WASH issues in Malawi are primarily caused by the nation's poverty. The Malawian government cannot afford to fund large-scale overhauls of the sanitation system. Additionally, many Malawians lack the proper education for construction or maintenance of WASH systems.

As previously mentioned, access to water and sanitation is heavily divided between urban and rural populations. In urban populations, around 87 percent of people have access to clean water. However, only around 63% in rural areas have access to water (*Malawi*, 2025). Further, children and women are the most affected by water and sanitation issues, as they are typically the ones who have to walk long distances to collect water for their families. Additionally, lack of proper sanitation causes the spread of diseases that have the harshest impact on the elderly, children, and other vulnerable populations.

Sanitation issues also harm the environment. Pit latrines can have very harmful effects on the environment. A pit latrine consists of a hole dug around ten meters into the ground. This hole is then used to collect fecal matter and urine, without the need for running water or expensive infrastructure. Although pit latrines are more beneficial for the environment than open defecation, which can cause the spread of pathogens and bacteria, they can cause major issues if improperly installed or managed. If a latrine pit were to be built into a water table, then the well water for the surrounding area could be tainted and could spread diseases like cholera or diarrhea. Additionally, flash flooding could cause fecal matter to get into the water and cover the surrounding area with those same diseases (United Nations, 2025). Both situations could cause harmful bacteria to get into surrounding waters and natural areas, leading to a less healthy environment.

Similar Projects

UNICEF and the Lilongwe Water and Sanitation Project are working to give people access to clean water and sanitation systems. These projects, among others, have been successful in eliminating open defecation in Malawi. They have also improved the sanitation of Malawi, with Malawi having one of the best WASH systems in sub-Saharan Africa. However, there are many places for the projects to improve. The major issues are a lack of access to cleaning supplies, little to no sanitation systems in rural areas, and a lack of resistance to climate disasters or issues.

In the nearby country of Zambia, UNICEF has a similar program to give better access to water. However, one of the major factors discussed by the project is climate resistance; as stated by the UNICEF webpage, the program works nationally to "support the creation of an enabling environment for sustainable and climate-resilient WASH services at scale." They also focus on creating better policies and implementing physical water retrieval systems. Although the systems would vary, a similar idea could be implemented in Malawi.

Sewage System

The major barrier to Malawian people accessing water and sanitation is lack of access. The best solution to this issue would be to give people access to clean water and improved sewage systems. Malawi's population is projected to grow to over twice its current size by 2070 (National Planning Commission Malawi, 2021). It would benefit Malawi to invest in updating its water and sanitation infrastructure now instead of waiting for a future event.

Although sanitation and water access are much better in cities than rural areas (Mvula, 2025), cities are less developed than they need to be. Cities could focus on installing more industrialized systems, as they have a larger demand. Rural parts of Malawi could focus more on improving their current systems and installing wells or water pipelines. Many people in rural areas have to walk miles to get access to water (International…, 2009). Installing improved infrastructure would ease the struggles that people, disproportionately women and children, have to face.

Creating the systems would begin with blueprinting the specific designs of the sewage systems. Implementation would ideally include Malawians themselves who were given the education to use the necessary tools and procedures correctly. In cities such as Lilongwe and Blantyre, the systems could be more focused on expansion and maintenance. In smaller cities and rural areas, wells could be dug and pit latrines could be installed as necessary.

Soap program

Even if the majority of people in Malawi had access to clean water, it's likely that most people could not afford to pay for soap. Malawi is considered one of the poorest nations in the world (World Bank). It stands to reason that people who already cannot afford food or housing would also not be able to afford proper hygiene supplies.

A solution to this issue would be a Malawi soap program. In such a program, organizations such as the Bank of Africa or UNICEF could help fund small Malawian companies. Once given the physical and educational resources needed to make soap, these local companies could produce soap for the nation. These same organizations could provide lye and plant oils, both of which are instrumental in creating soap yet would be difficult to access in Malawi through natural means. Donations given could then allow the nonprofit organizations to distribute the soap to all Malawians free of charge.

Poverty is a large issue that must be taken into account when trying to improve Malawi's WASH system. Through giving people in the nation jobs creating soap, the economy could improve. Additionally, people who otherwise couldn't afford soap would be able to receive the resources for proper hygiene. Having proper hygiene prevents the spread of deadly illnesses. We may also consider the environmental impact. Soaps made using the proper materials are biodegradable, causing little to no harm to the ecosystem.

This project would be led by nonprofit organizations that work with the Malawi people. Nonprofit organizations like UNICEF could give people access to education and assist with the transportation of materials.

Concrete-lined pit latrines

A large-scale overhaul of Malawi's WASH system would be heavily based upon improving the current systems. Currently, pit latrines are the primary mode of sewage in Malawi. These pits, especially in rural areas, are often not lined. Instead, they are typically built by digging a hole directly into the soil. In two different districts in Malawi, approximately 76.5% and 76.7% of people used unlined pit latrines (NPC 2020). However, these dirt pits can be unstable. They also have the potential to leak seepage into the surrounding environment, causing environmental damage and potentially even causing the spread of diseases.

Concrete-lined pit latrines provide a safer and cleaner waste management system. Waste is less likely to be able to contaminate the surrounding water tables and soil when pit latrines use stone or concrete instead of soil (Ballard). Additionally, lining pit latrines with concrete would work with the current system, helping to improve what has already been created.

With each of these solutions working in tandem, access to clean water and proper sanitation would greatly improve across Malawi. The economic state of the nation would also likely improve, as people would have jobs in building and managing the sanitation systems as well as improved health due to improved sanitary services.

Funding, Sustainability, and Culture

The Malawian community would be the most involved group of each of these projects. Through educational and funding assistance, Malawians would learn the importance of sanitation as well as how to implement and maintain such systems. Governments would manage the legal side and would be an important part of planning. UNICEF would be the primary means of organizing, managing, and distributing resources, as they have lots of experience and a large enough resource base to do so.

Additionally, for each of these projects, a partnership with the Malawi government and UNICEF could be the primary means of funding. The maintenance of the pit latrines would be the most expensive part. Ideally, UNICEF would provide funding for the building materials, physical labor, and transportation. The Malawi government could sign a grant application to assist in their work with UNICEF. This would create accountability on the side of the Malawi government for how the funding is used.

Sustainability would be present in the project through creating climate-resistant infrastructure that would require fewer repairs and resources; cleaning up unsanitary pits that could infiltrate the water and environment; increasing sanitation to prevent health issues; and encouraging use of soaps that are environmentally friendly. Increasing community awareness would help encourage more sustainable practices.

With such a diverse community of people, culture in Malawi can vary between locations and families. It's important that we consider the typical behaviors of people in each area. For example, many people in rural Malawi are used to using pit latrines without handwashing afterward. This would need to be taken into account when trying to improve sanitation and water in Malawi.

Conclusion

Water and sanitation are key to a healthy country. Implementing improvements in Malawi's WASH system through building a large-scale sewage system, creating a soap program, and lining pit latrines can better the lives of Malawians.

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