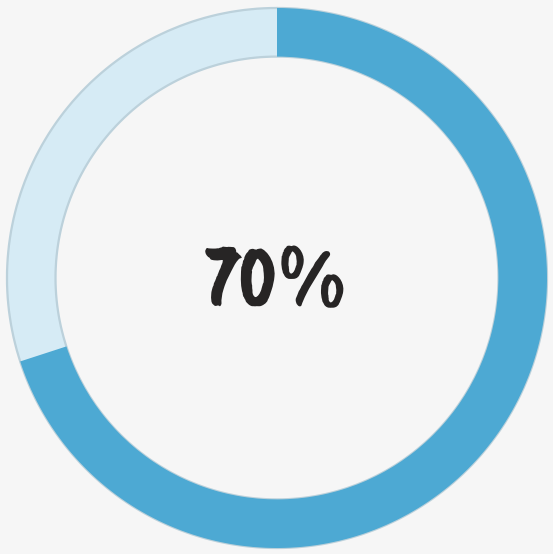
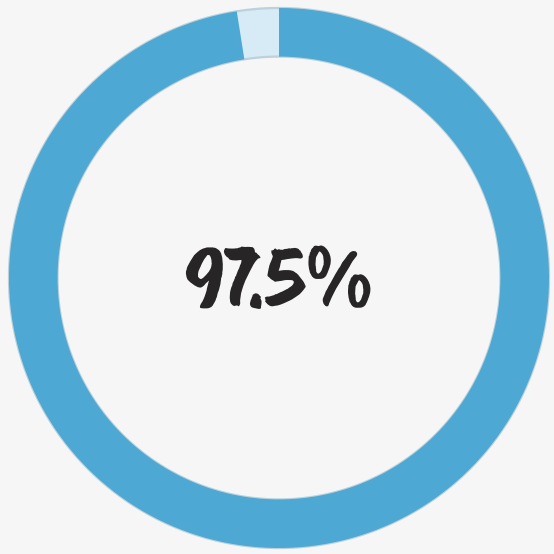
# Water Availability

Our planet is covered in water, but the reality of what's available for human use tells a very different story. Understanding the distribution of Earth's water is the first step in recognizing the urgent need for clean water access worldwide.




### of our Planet is Water

The Earth's surface is dominated by oceans, seas, and other bodies of water




### is Salt Water

Almost all of Earth's water is in our oceans and cannot be consumed by humans


### is Fresh Water

Just a small fraction of Earth's water is fresh. Most of it is trapped in glaciers and underground aquifers, leaving very little easily accessible for human use.

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## Daily Survival Need

**5 gallons per person** per day is the minimum needed for drinking, cooking, and basic hygiene.

## American Daily Use

**150 gallons** is what the average American uses daily - 30 times more than the survival minimum.

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# The Global Water Crisis

Access to clean water remains one of the most urgent humanitarian challenges of our time. An estimated **2.2 billion people worldwide lack safely managed drinking water**, with devastating consequences for health, education, and economic opportunity. The burden is greatest in developing communities, where families face daily risks simply to survive.

**2.2B**

**billion people**
lack safely managed drinking water.

**829,000**

**deaths each year**
are linked to unsafe water, sanitation, and hygiene.

**300,000**

**children under five** die annually from water-related illness.

# Waterborne Diseases

### TYPHOID FEVER

Contracted through drinking contaminated water, specifically containing the feces of an infected person or animal.

**Symptoms:** Fever, Headache, Abdominal and Intestinal Pain, leads to dehydration, Diarrhea.

### E.COLI

Contracted through drinking contaminated water, more specifically containing fecal coliform.

**Symptoms:** Fever, Headache.

### SCHISTOSOMIASIS

Contracted through direct contact with water contaminated with parasitic worms.

**Symptoms:** Bleeding when urinating, Diarrhea, Abdominal Pain.

### GUINEA WORM

Contracted through drinking contaminated water containing a parasitic worm.

**Symptoms:** Blistering of the skin once the worm has reached maturity, typically on the lower limb.

### RIVER BLINDNESS

Contracted through the bite of a blackfly that breeds in fast flowing streams.

**Symptoms:** Itching and rashes around the eyes with eye lesions at times.

### CHOLERA

Contracted through ingestion of contaminated water.

**Symptoms:** Diarrhea and Dehydration.

### HEPATITIS A

Contracted through drinking contaminated water.

**Symptoms:** Loss of Appetite, Jaundice, Nausea.

### DIARRHEA

Contracted through drinking contaminated water

**Symptoms:** Passage of 3 or more liquid or loose stools per day.

# Walking for Water

## This is a JERRY CAN

It is used in developing countries to transport water.

A full jerry can is **5 GALLONS** of water and weighs **44LBS.**

Women and children, typically between the ages of 8-13, are the ones tasked with transporting water.


The average distance walked by women and children to fetch water is **3.75 miles.**

That's approx. 66 football fields

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It takes an average of **6-8 hours** per day for women and children to fetch water.

Children can't go to school to improve their education and women can't get jobs to provide for their families.

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Unsafe water exposes families to dangerous bacteria and parasites that cause preventable disease.

The long walk to collect water adds another risk. Carrying heavy containers for miles places **serious strain** on women and children, leading to **long-term physical stress and health complications.**


Time spent collecting water is time not spent earning income or attending school. In many communities, this daily burden limits economic participation and **reduces long-term development potential.**

Access to clean, local water is one of the most effective tools for unlocking education, productivity, and economic mobility.

# The Solution: Community-Based Water Projects

In the regions where we work, groundwater is often available beneath the surface. Unlike rivers, lakes, and open ponds, groundwater is naturally protected from many parasites and bacteria that contaminate exposed water sources.

Through our implementation partner, Water to Thrive, each project is selected based on local geology, water availability, and long-term sustainability. In-country engineers and project managers determine the most appropriate solution for each community.

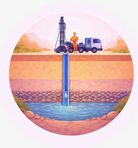
## Project Types

### Hand-Dug Wells

When groundwater is accessible at 10-15 meters deep, communities can construct hand-dug wells with guidance from water technicians. Concrete rings reinforce the shaft, and a plastic liner protects water quality. This cost-effective solution empowers communities to participate directly in creating their own water source.

### Spring Protection

Natural springs provide continuous water flow, but contamination from dirt, bacteria, and animals makes them dangerous. We cap the spring's source and build a cement protection box with sand and gravel filtration. Clean water then flows through pipes to collection points where communities can safely access it.



### Shallow Boreholes

When no surface springs exist, drilling rigs reach groundwater at 20-50 meters deep. Protective casing prevents collapse and contamination, while hand pumps bring clean water to the surface. These wells serve communities where water tables are moderately deep but still accessible with standard equipment.

### Deep Boreholes

The most complex projects require drilling 50-250 meters to reach deep, high-yield aquifers. These wells require specialized drilling equipment, trained crews, and reliable power sources. When successfully completed, deep boreholes can provide sustainable water access for large communities, particularly in regions with very low water tables.

## What Is W.A.S.H.?

W.A.S.H. stands for Water, Sanitation, and Hygiene. Sustainable clean water access requires all three.

1

**Water:**

We build protected water systems that reduce exposure to contaminated surface sources.

2

**Sanitation:**

Each project includes improved sanitation infrastructure to protect water sources and community health.

Latrines are simple, enclosed structures designed for safe waste disposal. Properly constructed pit latrines prevent contamination of groundwater and eliminate open defecation.

This protects both the well and the community.

3

**Hygiene:**

Communities receive education on proper handwashing and safe water handling practices to reduce the spread of disease.

Clean water, sanitation, and hygiene work together to create lasting transformation.

4

**Community Water Committee:**

Before construction begins, a local Water Committee is formed. Community members are trained to:

- Manage the well
- Oversee maintenance
- Collect small repair funds if needed
- Ensure equitable access

Local ownership is what makes wells last.

## Clean Water Transforms Communities!

Once a well is built in a community...

### Economic Growth:

Women gain back hours each day that were once spent walking for water. That time can be invested in work, small businesses, and income-generating activities that strengthen families and local economies.

### Education:

Kids can go to school and get an education when they don't have to walk 3-4 miles a day to fetch water for their families.

### Food Security:

Water security supports food security. With consistent access to water, families can grow crops, care for livestock, and build more stable food systems.

### Health and Sanitation:

Access to clean water reduces exposure to waterborne disease and improves overall community health. Clean water, sanitation, and hygiene interventions can reduce diarrheal disease by up to 30-50%, significantly lowering preventable illness and child mortality.