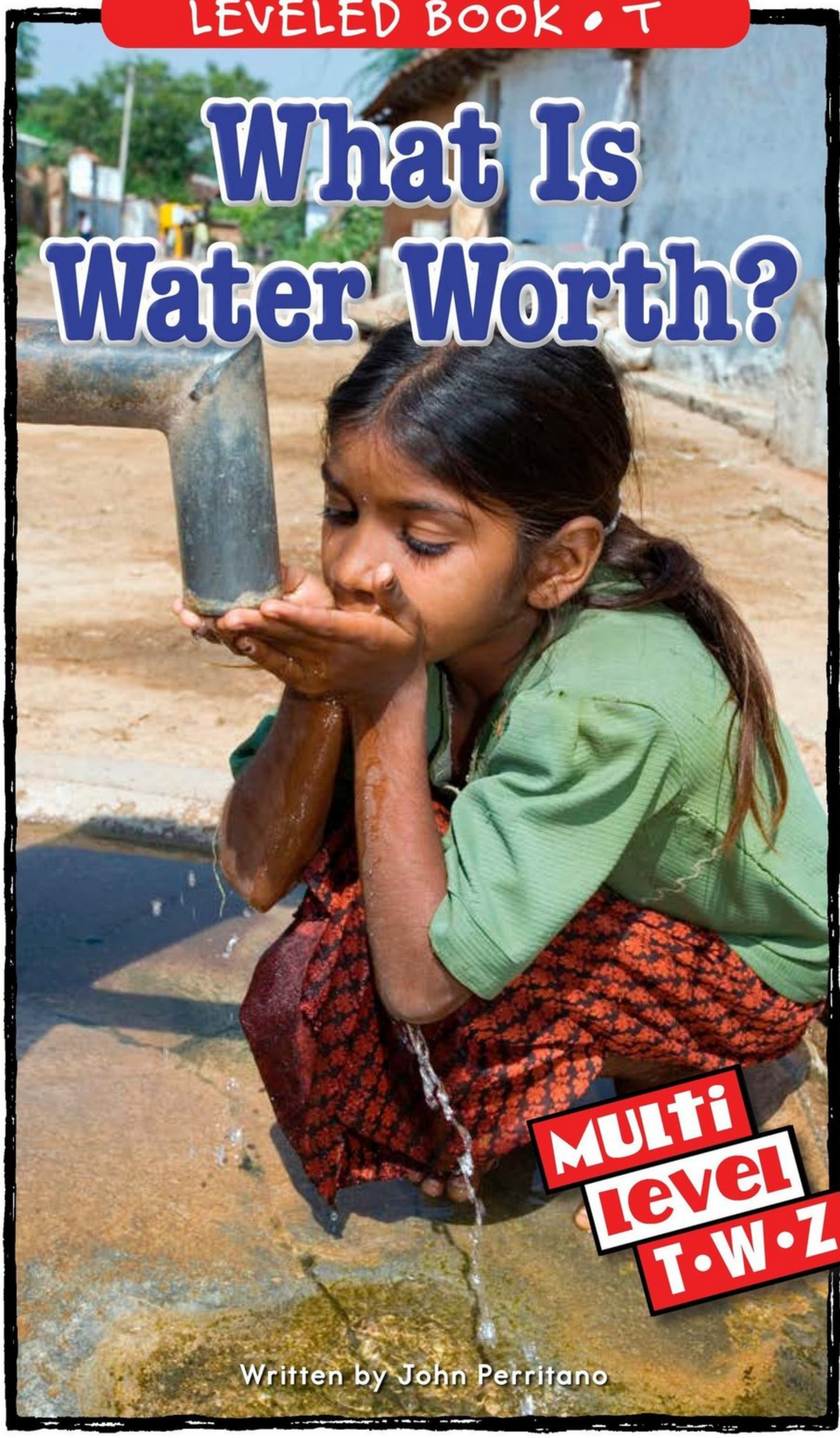
LEVELED BOOK • T

What Is Water Worth?



Multi level L•W•Z

Written by John Perritano

www.readinga-z.com

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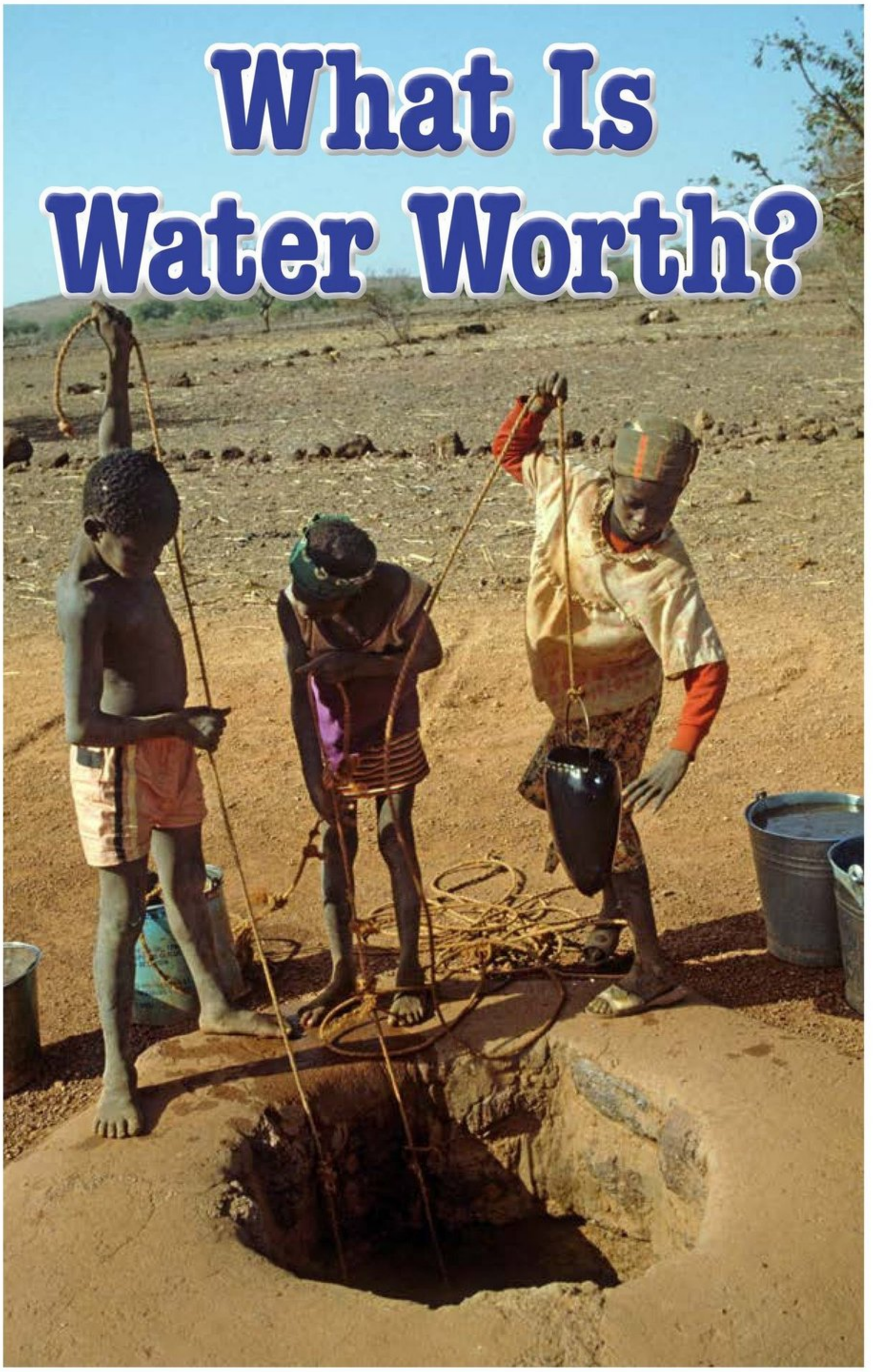

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A summer rain can mean fun in many places. In others, it can mean survival.

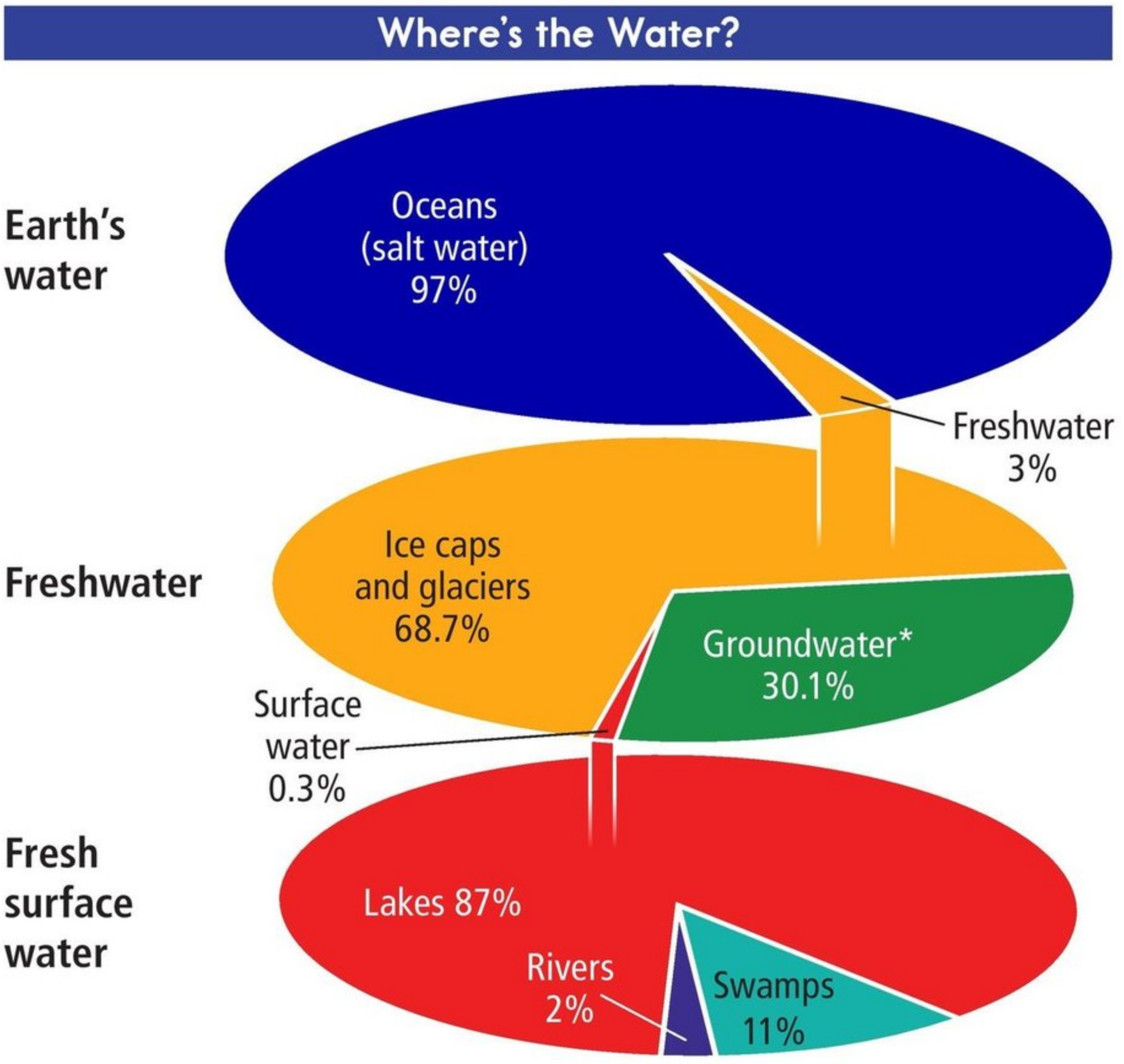
Water, Water Everywhere

Many of us around the world don't think about water very often. Why should we, when water is all around? It comes out of our faucets and collects in puddles on the sidewalk when it rains. Lakes and rivers are full of water. We buy water in bottles and sip it from fountains.

In fact, if we had a glass as big as the United States and filled it with every drop of water on the planet, the glass would have to be 145 kilometers (90 mi.) tall to hold it all. With so much water, you'd think everyone would have enough to drink. Not so!

A Drop in the Bucket

Water is fast becoming more precious than gold or oil. The planet simply does not have enough usable water for everyone. For one thing, most of Earth's water is salt water, which we can't drink or use to water our crops. Only about 3 percent of Earth's water is fresh. Most of that is locked away in polar ice caps, **glaciers**, or underground layers of rock.



*Groundwater provides 25% to 40% of the world's drinking water. It provides even more water for growing food. However, groundwater supplies are shrinking.

In India, young girls collect water from a hole dug in the ground.

Some countries have more **freshwater** than others, but most have enough water to meet people's needs. However, they can't always make that water available to people. Rich countries can tap into hard-to-reach sources of water. In poor countries, people often don't have enough money to dig wells or build dams.

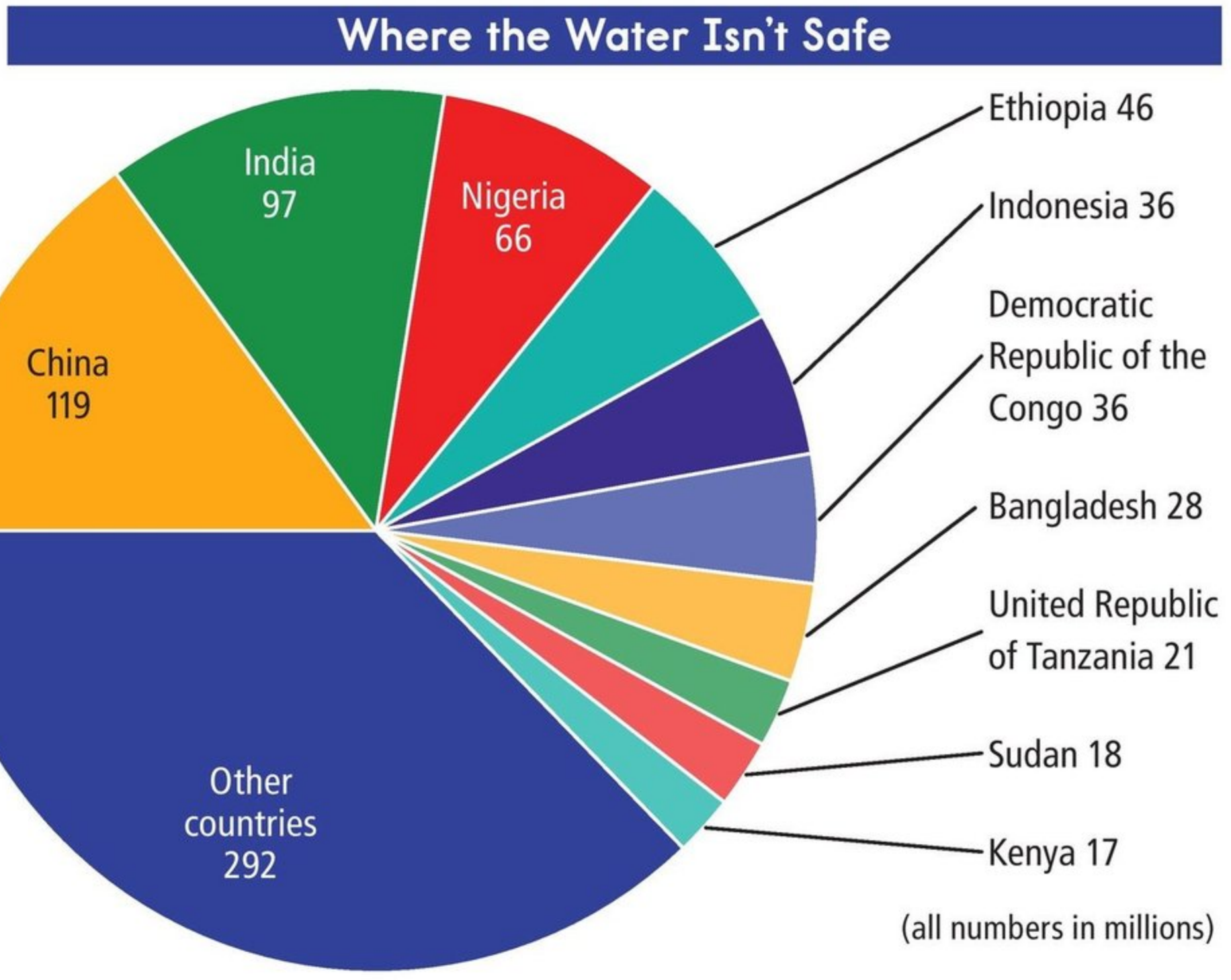
Today, we humans can only use 1 percent of Earth's freshwater. That 1 percent is in such short supply for three main reasons: **pollution**, **population**, and **climate change**.

Pollution's Impact

Water pollution is a huge problem on many continents. In South America, people have been dumping harmful chemicals into the Amazon River for years. Drilling for oil and mining for gold have poisoned some parts of the river and surrounding forest.

In other poor areas where freshwater often goes untreated, pollution makes people sick in other ways. Because people lack running water, they dump human waste outside their houses. Filled with bacteria, that waste then flows into rivers and streams. People use the water in these polluted waterways for drinking, cooking, and bathing. Research shows that half the world's hospital beds contain patients sick from drinking unclean water.

A girl sick from unclean water gets help in Haiti.



Around the globe, millions of people lack access to safe drinking water—783 million in all.

Source: UNICEF/UN 2012 joint report

In Haiti, one of the poorest countries in the world, seven out of ten people do not have clean water to drink. Each year, unclean drinking water causes more than half the deaths in Haiti. A huge earthquake in 2010 damaged wells and water pipes there, making clean water even more **scarce**. Many children and adults must walk miles to find clean water to drink.

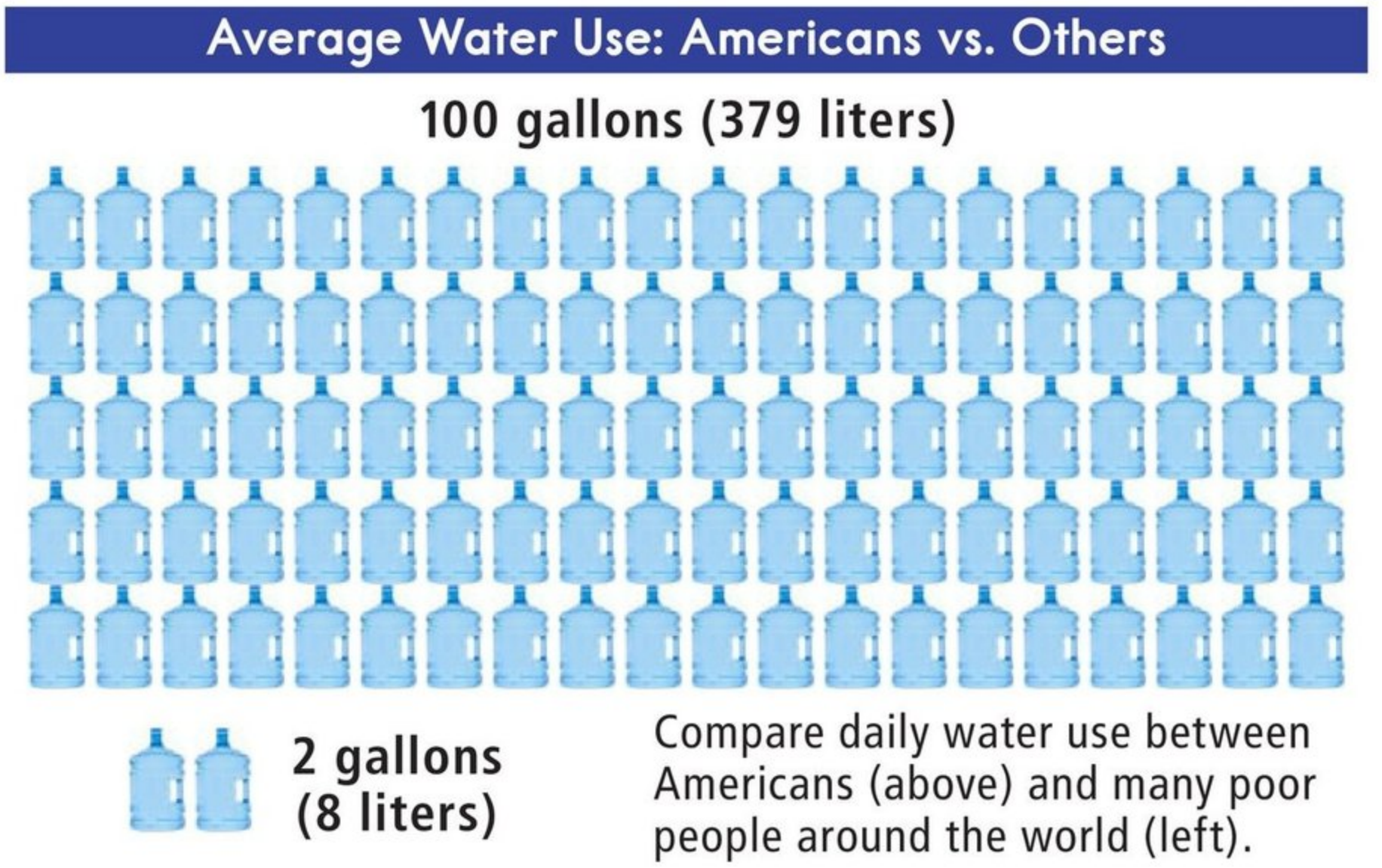
Do You Know?

Worldwide, more people have a mobile phone than a toilet.

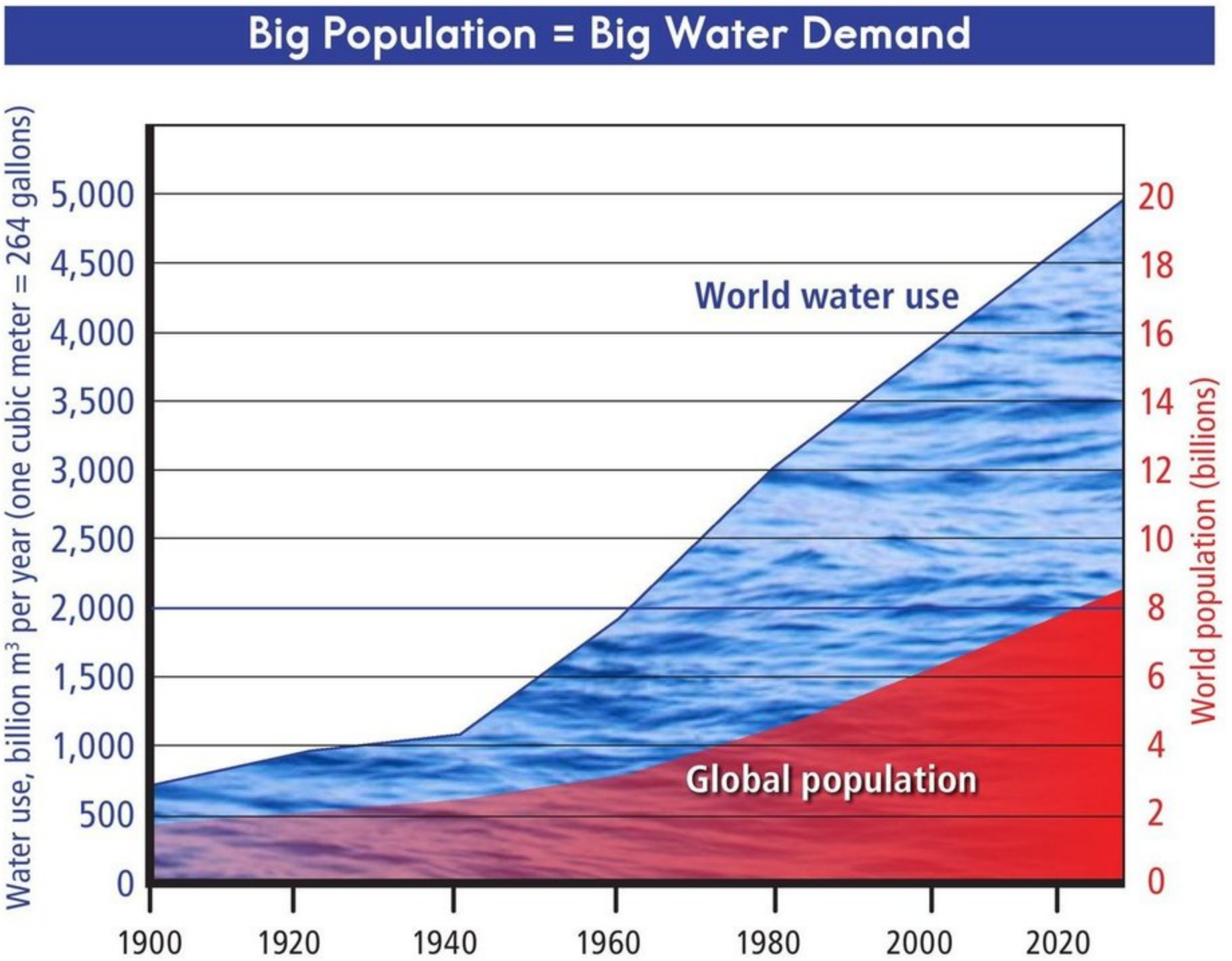
Population's Impact

On October 30, 2011, a baby girl was born in the Philippines. She was the world's 7 billionth person. By the time she turns 40, experts say that 9 billion people will be walking the planet. Each of us will be looking for food, energy, land, and water.

Growing populations limit the amount of water for each person. Research shows that today, more than 1.1 billion people—almost 1 in every 6 people in the world—don't have enough clean water to drink. They live on less than 8 liters (2 gal.) a day. Experts say that by 2035, 3.6 billion people will be living in areas where water is scarce.



Compare daily water use between Americans (above) and many poor people around the world (left).



Even wealthy countries can face water shortages, in part because people in wealthy countries use more water. In the United States, a four-person family, on average, uses 1,514 liters (400 gal.) of water a day. That's about 379 liters (100 gal.) per person.

This level of use could last if only a few people were using the water. Instead, more and more people rely on limited water sources. For example, the Los Angeles area's population is expected to reach 41 million by 2020. Yet the rivers they pull their water from carry less water than they used to.

The Impact of Climate Change

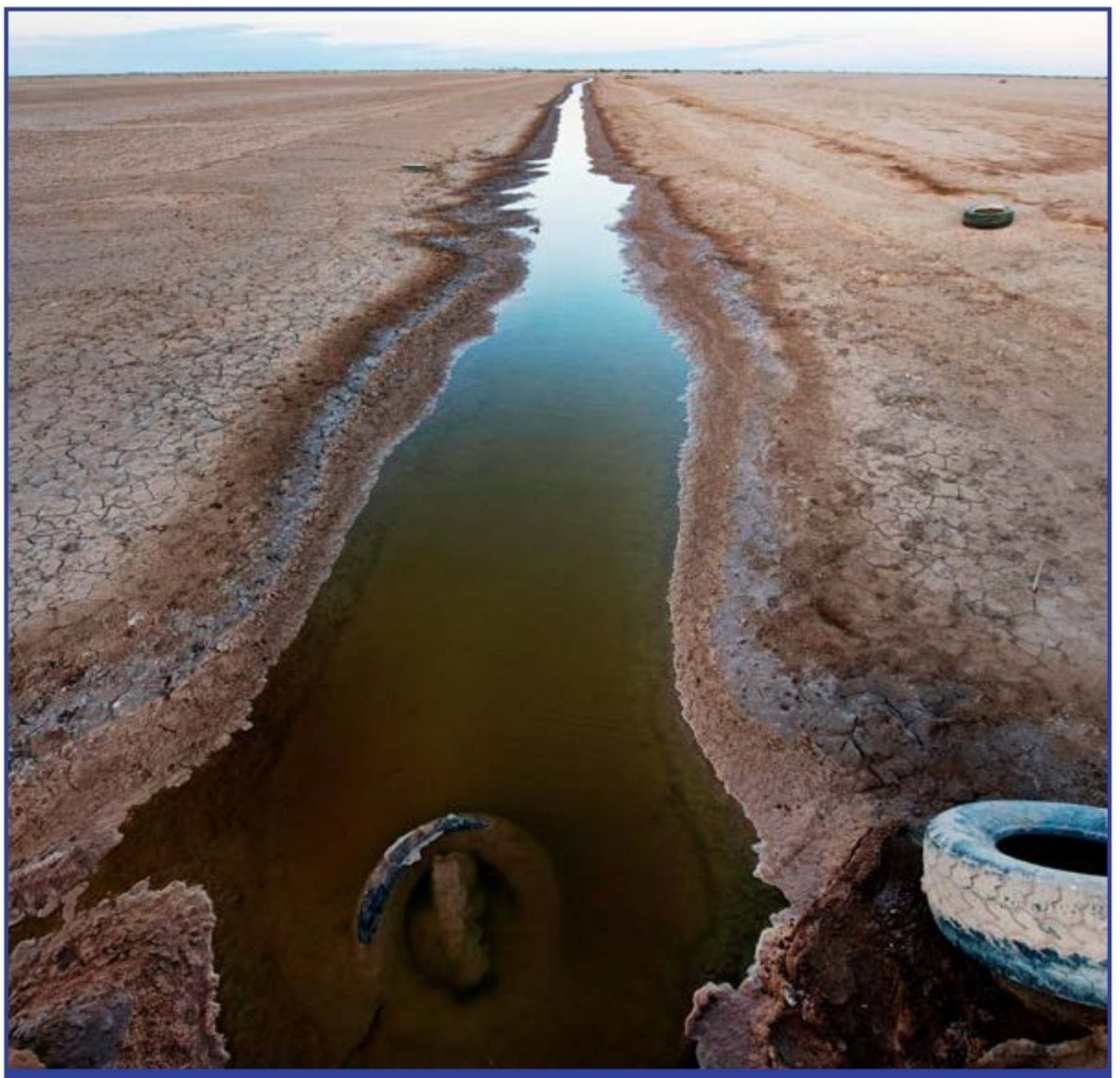
Climate change threatens the global water supply. Scientists predict that by 2050, one-fifth of the world's population may face serious water shortages as a result of climate change.

Climate change results from too much carbon dioxide and other greenhouse gases in the atmosphere. These gases, produced in large part by the burning of **fossil fuels**, trap the Sun's heat close to Earth's surface, much like a greenhouse. The result is an overall increase in Earth's temperature.

As Earth warms, the weather in different parts of the world is changing. Unusual amounts of rain and snow can fall in some areas, causing floods. Dry areas can become much drier.

A *drought* is a long period of lower-than-normal rain or snow that results in a shortage of water. Regions at the highest risk of drought include the Mediterranean and the Middle East. In the United States, most scientists say that climate change is responsible for an extreme drought in the Southwest and California.

The drought in the Southwest has been causing problems in the region since 1999. States such as Nevada and Arizona rely on the shrinking Colorado River, a source of freshwater for 22 million people. If rains don't increase soon, odds are good that desert residents will be forced to use less water in their daily lives.



A River Runs Dry

More than 30 million people depend on the Colorado River. It now trickles to an end before it can reach the sea.

A boy fishes in the Daning River, one of many rivers fed by the Himalayas.

Scientists say climate change is also melting glaciers high in the Himalayan Mountains. The glaciers help provide freshwater for 1.5 billion people living in India, Pakistan, and six other Asian countries. In the past, the melting glaciers slowly released water into the rivers below. Now the glaciers are melting rapidly, and the long-term water supply is shrinking. At the same time, the increased melting has caused severe flooding along these rivers.

As the climate changes, less water is available in many countries for ranching, growing crops, and producing energy. Nature and wildlife suffer. Arguments break out between cities, states, and even countries.

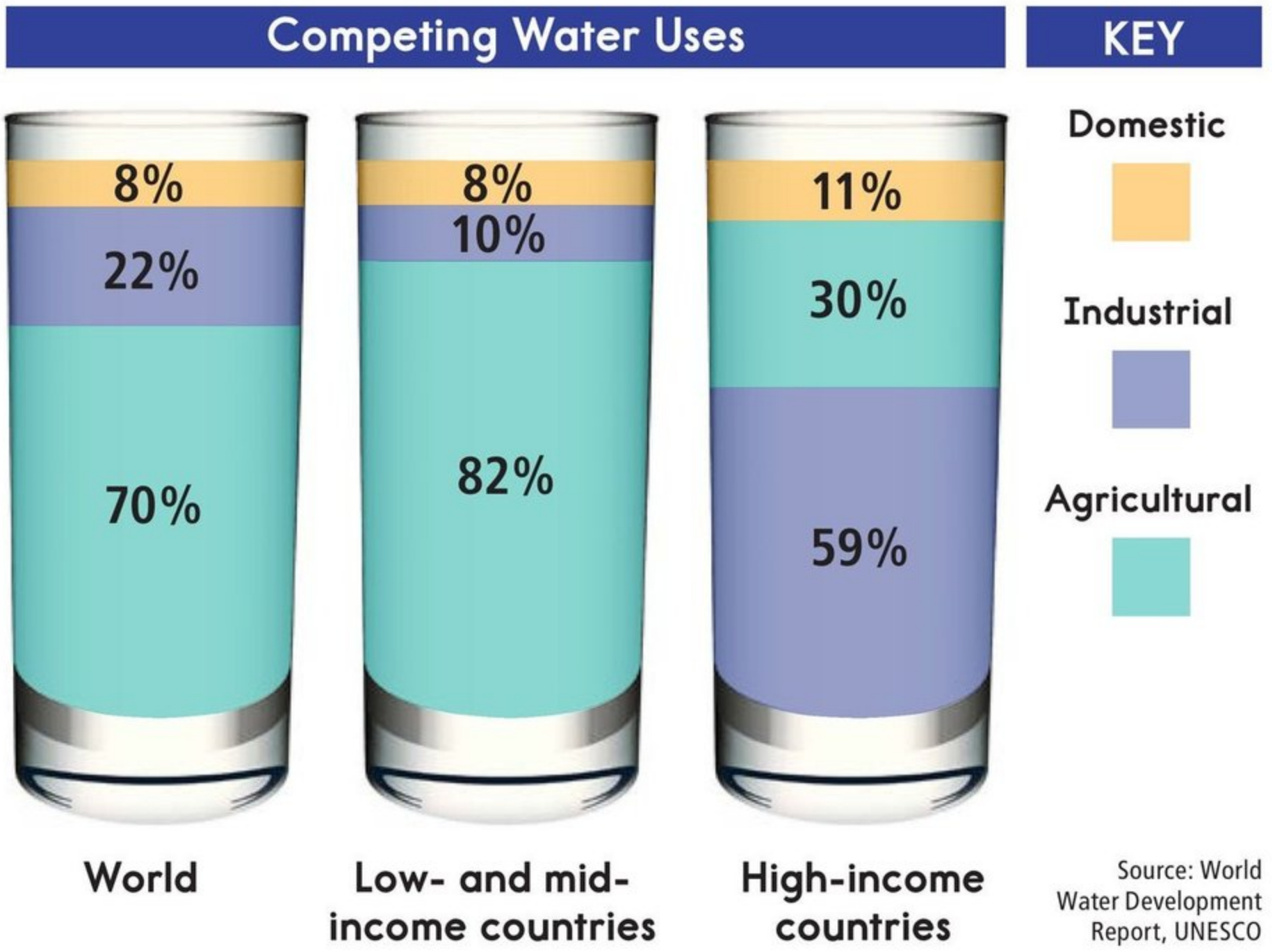
Solving the Problem

So what can we do? Each person's efforts to save water can help.

Countries need to find solutions, too. Workers in Saudi Arabia are converting salt water to freshwater in a process called *desalination*. The process is expensive, though, and many countries cannot afford to build desalination plants.

What Can You Do?

- Turn off the water when brushing your teeth.
- Take shorter showers (or take baths if you like to linger).
- Turn off the hose when washing the family car.
- Buy a rain barrel to store water for plants.
- Fix leaks and drips.
- Eat less meat (on average, beef requires 125 times more water than the same amount of potatoes).
- When you can, buy used or recycled stuff instead of new stuff.



The island of Singapore is seeing if they can clean their wastewater. They're trying to reuse water that comes from washing dishes, flushing toilets, and taking baths and showers. Some other countries do this, too, but Singapore obtains one-third of its water this way.

While cities are growing rapidly, agriculture uses about 70 percent of the world's freshwater. Should some of that water go to cities instead?

Solving the planet's water problem is hard. Still, we all need to find ways to **conserve** this valuable **resource**. It's not just for our generation, but for the ones yet to come.

Glossary

climate change *(n.)* the long-term, lasting changes in Earth's weather patterns or the weather patterns of a region (p. 6)

conserve *(v.)* to protect a natural place or resource so it will last longer (p. 15)

fossil fuels *(n.)* energy sources, such as coal, oil, and natural gas, that are taken from the ground (p. 11)

freshwater *(n.)* water that is not salty (p. 6)

glaciers *(n.)* large bodies of accumulated ice and compacted snow that are found year-round and that slowly move downhill (p. 5)

pollution *(n.)* the act or result of putting harmful substances into the air, water, or soil (p. 6)

population *(n.)* all the members of one species in a particular area (p. 6)

resource *(n.)* a supply of something valuable or very useful (p. 15)

scarce *(adj.)* rare; present in small amounts (p. 8)

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Level T Leveled Book

Written by John Perritano

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