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Precious Freshness: Water, the Way We Like It

As far as we know, all life on Earth depends on water. As humans, we need freshwater to survive. Many of us in the United States don't spend a lot of time thinking about water. When we're thirsty, we grab a glass and it is always available. When we want to shower, we turn on the



Children in Kazakhstan drinking from a water source made accessible by USAID.

Source: USAID

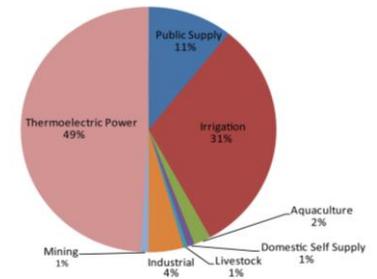
faucet and out it flows, in a seemingly unlimited amount. When we want to eat, we buy groceries— food from crops that farmers have grown, often by using irrigation. We charge our electronic devices with electricity created by waterpower or cooled by water. You might be surprised to know that in the U.S., we use almost half of our freshwater to create electricity! We don't have to lug containers down to a muddy stream or community well to haul water back home for drinking, cooking, and keeping clean. Most of the time, we aren't worried about water unless there's too much, as in a flood, or not enough, as in a drought. Yet this precious and essential resource isn't distributed evenly across our planet.



Three women reach their water source, a low water level lake in India.

Credit: Joydeep Mukherjee, Source: USAID

Estimated Total U.S. Water Withdrawals by Category (in million gallons per day)



Source: American Geosciences Institute, from data by the USGS

Earth's School Colors



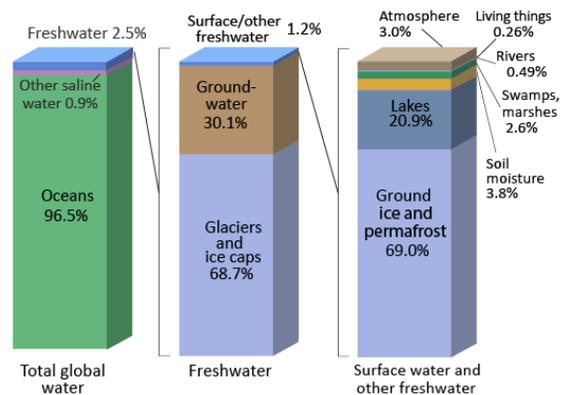
Credit: NASA

In an image of Earth from space, two colors immediately pop out: blue oceans and white clouds. Roughly 70 percent of Earth's surface is covered by water. Earth's water is finite, which means the amount of water on our planet doesn't increase or decrease. Water from lakes, rivers, and oceans evaporates into the air, and forms clouds to rain down again.

Of all the water that exists, 97 percent is saltwater. Of the roughly three percent of

water on Earth that is freshwater, most is frozen in glaciers, ice caps, and places that are continually snow covered. Less than one percent of freshwater is liquid, with seven billion people and many plants and animals relying on this precious resource.

Where is Earth's Water?



Source: Igor Shiklomanov's chapter "World fresh water resources" in Peter H. Gleick (editor), 1993, *Water in Crisis: A Guide to the World's Fresh Water Resources*. NOTE: Numbers are rounded, so percent summations may not add to 100.



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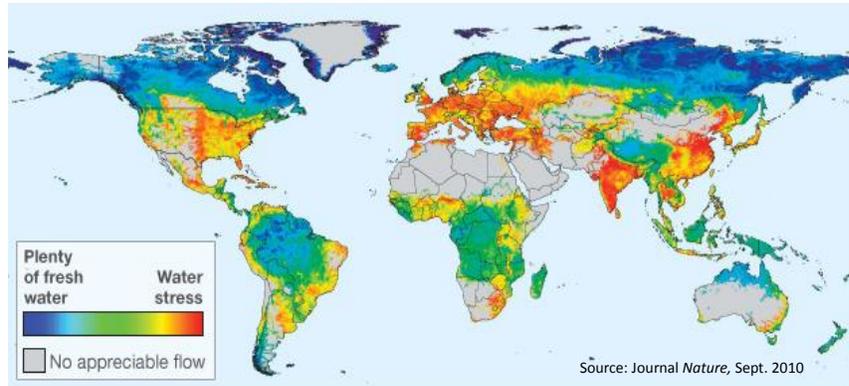
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Water Isn't Everywhere

Freshwater can be found in lakes, streams, and rivers that we see on Earth's surface, and also in underground lakes, streams and rivers, called aquifers. But water doesn't occur in equal amounts everywhere. Some places on Earth are drenched, such as temperate and tropical rainforests. Some are so dry, that communities, such as Las Vegas, Nevada, recycle water

that has been used for bathing and cleaning—known as gray water—to water gardens. Efforts to create more freshwater include desalination operations, which remove salt from saltwater. Desalination operations, however, require a lot of energy, and produce a very salty by-product as a result of taking the salt out of the water. Protecting and conserving the freshwater we have are often economic choices. Keeping freshwater clean and free of contaminants; harvesting rainwater; and using less are some approaches that communities are using to meet the demands of growing populations.



By building local partnerships, introducing appropriate technology for delivering clean water, and educating people about good hygiene practices such as washing hands after going to the toilet, developing countries are working to improve the lives of children, their families, and a community's people. In this image, a well in South Sudan helping to improve health and decrease conflict over resources.

Source: USAID

Links for more about the images used in this article:

Climate impacts on Global Issues, including water (images from India and Kazakhstan): <http://go.usa.gov/Xazh>

Water withdrawals: <http://go.nasa.gov/1xinuij> USGS report: <http://pubs.usgs.gov/fs/2009/3098/>

Image of Earth: <http://go.nasa.gov/14Jd6qz>

Where is Earth's Water: <http://water.usgs.gov/edu/earthwherewater.html>

Water stress: <http://www.bbc.co.uk/news/science-environment-11435522>

Water issues in South Sudan: <http://www.usaid.gov/africa/south-sudan/water>



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