

# Water Use



## Aquifer Depletion

Along with surface water in rivers and lakes, aquifers (a permeable layer of rock and sand where water collects underground) are one of the few areas of fresh water accessible to humans. Water pumped from aquifers is used for domestic, agricultural, and industrial needs and is sometimes removed faster than it can be naturally replaced. Of the nearly 40,000 wells drilled since 2011, 36 percent were in areas already experiencing groundwater depletion. Population increases, migration, and changing human consumption patterns resulting from economic growth will be key drivers of rising fresh water demand in the future.

## Water Conflicts

As freshwater reserves dwindle or become polluted, conflicts over waterways and basins may increase. According to a 2012 Global Water Security report, “water shortages, poor water quality, and floods by themselves are unlikely to result in state failure. However, water problems—when combined with poverty, social tensions, environmental degradation, ineffectual leadership, and weak political institutions—contribute to social disruptions that can result in state failure.” There is rising concern that disputed water basins and access to water may be used as political leverage or even a weapon as nations struggling to provide for their citizens are faced with shortages of the natural resource.

## Pollution

Pollution further compounds water shortages. Various human activities and water uses have degraded the nature and quality of the world's water supply. Polluted and poisoned by sewage, agricultural runoff, and industrial wastes, water flows back into our streams, rivers, lakes, and oceans. In cities of the developing world, some 90 percent of sewage is released untreated into surface water. Frequently these wastes pollute waters used for drinking and irrigation. As urbanization in developing countries increases, more people may be exposed to unsafe drinking water.

## Impact on Girl's Education

Running water and indoor plumbing are a luxury not realized in many parts of the world. Every year, people throughout Africa spend 40 billion hours walking to collect water and two-thirds of that burden is handled by women. The time spent carrying water is time not spent on school and getting an education, running a small business, or taking on a role in their community. In fact, for every single hour reduction in time spent collecting water, girl's school attendance increased – Nepal recently saw an increase of over 30 percent in girls' school attendance for this reason.

## **Irrigation**

Irrigation and other agricultural practices are responsible for about 69 percent of all water withdrawals on a global scale. In fact, the irrigation of crops solely for livestock feed accounts for a major portion of the United States water consumption. And as incomes increase around the globe, so does the demand for meat and other animal products. Considering meat production is projected to double by 2050, more water will be diverted to irrigating crops used as feed for livestock.

### Sources

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