
The War on Water

Module 15 • i2P • H2O Tour



“The next war in the Middle East will be fought over water, not politics”

- Former United Nations Secretary General Boutros Boutros Ghali, 1985



THE DEEP LAKE

Last month Ray and Kevin traveled over Lake Baikal by foot, suspended by a thin crust of ice that lies atop roughly twenty percent of the world's surface liquid fresh water. Imagine, one out of every five cups of fresh surface water in the world is in one lake found in Southern Siberia. The volume of Lake Baikal is almost the same as the volume of all the Great Lakes combined! Curiously Lake Baikal is not the largest lake by surface area in the world; that distinction goes to Lake Superior. What accounts for Lake Baikal's great volume is its depth. It lies over a slowly widening fault and descends more than a mile in depth. Lake Baikal is on average 5 times deeper than Lake Superior (Baikal is 744.4 meters in average depth compared to Superiors 147 meters in average depth). Clearly for the people of the region fresh water is not lacking. Unfortunately the



Figure 1: Water fountain in Milwaukee Wisconsin ([Wikimedia Commons](#))

same cannot be said for many areas of the world. Tunisia is a case in point.

A LOT OF WATER

There is a great deal of water in the world, but very little of it is actually fresh, and even less is easily accessible and in drinkable liquid form. There is a total of 1,400,000,000 km³ of water in the world. Of that total only 3% is fresh water, and 70% of the fresh water is bound in frozen ice caps and glaciers. The vast majority of the remaining water is found in underground aquifers and water tables. That means that a miniscule 0.0003% of the world's total water resources are found in the form of fresh surface liquid water.

Did You Know?

If all of the world's water was poured on the United States, it would cover the land to a depth of 90 miles (145 kilometers).

WATER SHORTAGE

As we have learned through the course of the previous modules The United Nations estimates that there are currently 1.1 billion people that live without adequate water resources ([United Nations Human Development Report](#)), and 3.6 million people die each year from water-related illness. Significant areas of the world are experiencing worsening physical water scarcity most notably locations in India, China, North Africa, the Middle East and the United States. Experts predict that, fueled by a combination of population growth and climate change, worldwide water shortages are expected to become much worse. According to the journal Nature (see: [Nature](#)) by the year 2050 75% of the world's population will be experiencing water scarcity.

DESPERATE

What would you do if you had no water? Without water to drink you would become thirsty and it would be impossible to grow plants and raise animals. You and your family would grow hungry and soon die of dehydration if water was not found. A thirsty person is a desperate person, and goes in search of water. History has witnessed the mass migration of people searching for water; migration that in turn



Figure 2: A boy carrying water in the The Shimelba Refugee Camp in Northern Ethiopia in 2008.

can lead to violence and war as competing groups of people vie for limited resources.

Canadian war historian Gwynne Dyer writes that growing water shortages, spurred by population growth and global warming, will result in a global food crisis of enormous proportions. He predicts that by the year 2046 starvation will lead to mass migration and violence. "People who don't plan to sit there and starve are moving across borders or being shot down as they cross borders. You've got failed states where governments have collapsed. You probably have lost or are losing the Amazon, and you've made the southern United States and the Mediterranean uninhabitable." (see: [climate wars](#))

Did You Know?

Globally, water usage has increased six times in the past 100 years and will double again by 2050, driven mainly by irrigation and demands of agriculture."

see: [water use](#)



Figure 3: Madhya Pradesh (in red) is a province in central India.

Although these predictions may seem alarmist, one need not look to the future for examples of water related violence. In the central Indian province of Madhya Pradesh decreased rainfall coupled with inequities in municipal water supply have led to a surge in violence. In May 2009 over fifty clashes and twelve deaths stemming from water shortages were reported. In one incident a family of three were murdered by a mob after they drew water illegally from a municipal water line (see [water deaths](#)).

Some are predicting that water related violence in India will worsen as populations grow, groundwater mining continues, and one of the principal sources of water for much of the continent, the glaciers of the Himalayas recede. Although there were alarmist reports based on incorrect statements about the rate of glacier recession made by the Intergovernmental Panel on Climate Change (see: [Himalayan ice](#)) the Himalayan glaciers are still receding.

THE HISTORY OF WATER WARS

Many experts are predicting that there will be growing human conflict fueled by water shortages. These claims are difficult to dismiss as alarmist, because human history has many examples of water based conflict. The Pacific Institute has documented these

conflicts from about 3000 BC to the present time. This information can be viewed as a chronological list of events (see: [chronology of water conflict](#)) and on a map (see: [water conflict map](#)).

WATER FLASH-POINTS

There are a number of factors that put a region at particular risk of water related conflict. Foremost is water scarcity. Water scarcity comes in two forms, physical scarcity (physical absence of water) and economic scarcity (inability to afford infrastructure to supply clean water). In regions of water scarcity, population growth leading to greater use of limited water resources, coupled with water pollution and deglaciation provide the foundation for water conflict. Combine this with the fact that some nations principal water source comes from rivers flowing from across the border of hostile neighbors and the likelihood of conflict rises (see: [water war](#)).

Hot spots for fresh water depletion are India, China, Australia, the Middle East, North Africa as well as the United States (see: [hotspots](#)). The situation is particularly concerning in the Middle East where pre-existing political tensions coupled with



Figure 4: Sign rendered pointless by the 2007/2008 Australian drought: Rawnsley Park Station , South Australia ([Wikimedia Commons](#)).

worsening water shortages have led to predictions of an impending water war (see: [Middle East water](#)).

