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BOTTLED WATER: Pouring Resources Down the Drain

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The global consumption of bottled water reached 154 billion liters (41 billion gallons) in 2004, up 57 percent from the 98 billion liters consumed five years earlier. Even in areas where tap water is safe to drink, demand for bottled water is increasing—producing unnecessary garbage and consuming vast quantities of energy. Although in the industrial world bottled water is often no healthier than tap water, it can cost up to 10,000 times more. At as much as \$2.50 per liter (\$10 per gallon), bottled water costs more than gasoline.

The United States is the world's leading consumer of bottled water, with Americans drinking 26 billion liters in 2004, or approximately one 8-ounce glass per person every day. Mexico has the second highest consumption, at 18 billion liters. China and Brazil follow, at close to 12 billion liters each. Ranking fifth and sixth in consumption are Italy and Germany, using just over 10 billion liters of bottled water each. (See data at www.earthpolicy.org/Updates/2006/Update51.htm)

Italians drink the most bottled water per person, at nearly 184 liters in 2004—more than two glasses a day. Mexico and the United Arab Emirates consume 169 and 164 liters per person. Belgium and France follow close behind, with per capita consumption near 145 liters

annually. Spain ranks sixth, at 137 liters each year.

Some of the largest increases in bottled water consumption have occurred in developing countries. Of the top 15 per capita consumers of bottled water, Lebanon, the United Arab Emirates, and Mexico have the fastest growth rates, with consumption per person increasing by 44–50 percent between 1999 and 2004. While per capita rates in India and China are not as high, total consumption in these populous countries has risen swiftly—tripling in India and more than doubling in China in that five-year period. And there is great potential for further growth. If everyone in China drank 100 8-ounce glasses of bottled water a year (slightly more than one fourth the amount consumed by the average American in 2004), China would go through some 31 billion liters of bottled water, quickly becoming the world's leading consumer.

In contrast to tap water, which is distributed through an energy-efficient infrastructure, transporting bottled water long distances involves burning massive quantities of fossil fuels. Nearly a quarter of all bottled water crosses national borders to reach consumers, transported by boat, train, and truck. In 2004, for example, Nord Water of Finland bottled and shipped 1.4 million bottles of Finnish tap water 4,300 kilometers (2,700 miles) from its bottling plant in Helsinki to Saudi Arabia.

Saudi Arabia can afford to import the water it needs, but bottled water is not just sold to water-scarce countries. While some 94 percent of the

bottled water sold in the United States is produced domestically, Americans also import water shipped some 9,000 kilometers from Fiji and other faraway places to satisfy the demand for chic and exotic bottled water.

Fossil fuels are also used in the packaging of water. The most commonly used plastic for making water bottles is polyethylene terephthalate (PET), which is derived from crude oil. Making bottles to meet Americans' demand for bottled water requires more than 1.5 million barrels of oil annually, enough to fuel some 100,000 U.S. cars for a year. Worldwide, some 2.7 million tons of plastic are used to bottle water each year.

After the water has been consumed, the plastic bottle must be disposed of. According to the Container Recycling Institute, 86 percent of plastic water bottles used in the United States become garbage or litter. Incinerating used bottles produces toxic byproducts such as chlorine gas and ash containing heavy metals. Buried water bottles can take up to 1,000 years to biodegrade. Almost 40 percent of the PET bottles that were deposited for recycling in the United States in 2004 were actually exported, sometimes to as far away as China—adding to the resources used by this product.

In addition to the strains bottled water puts on our ecosystem through its production and transport, the rapid growth in this industry means that water extraction is concentrated in communities where bottling plants are located. For example, water shortages near beverage bottling plants have been reported in Texas and in the Great Lakes

region of North America. Farmers, fishers, and others who depend on water for their livelihoods suffer from the concentrated water extraction when water tables drop quickly.

Studies show that consumers associate bottled water with healthy living. But bottled water is not guaranteed to be any healthier than tap water. In fact, roughly 40 percent of bottled water begins as tap water; often the only difference is added minerals that have no marked health benefit. The French Senate even advises people who drink bottled mineral water to change brands frequently because the added minerals are helpful in small amounts but may be dangerous in higher doses.

The French Senate also noted that small, localized problems with tap water can cause a widespread loss of confidence in municipal supplies. In fact, in a number of places, including Europe and the United States, there are more regulations governing the quality of tap water than bottled water. U.S. water quality standards set by the Environmental Protection Agency for tap water, for instance, are more stringent than the Food and Drug Administration's standards for bottled water.

There is no question that clean, affordable drinking water is essential to the health of our global community. But bottled water is not the answer in the developed world, nor does it solve problems for the 1.1 billion people who lack a secure water supply. Improving and expanding existing water treatment and sanitation systems is more likely to provide safe and sustainable sources of water over the long term. In villages, rainwater harvesting and digging new wells can

create more affordable sources of water.

The United Nations Millennium Development Goal for environmental sustainability calls for halving the proportion of people lacking sustainable access to safe drinking water by 2015. Meeting this goal would require doubling the \$15 billion a year that the world currently spends on water supply and sanitation. While this amount may seem large, it pales in comparison to the estimated \$100 billion spent each year on bottled water.

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FOR ADDITIONAL INFORMATION

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LINKS

Natural Resources Defense Council

<http://www.nrdc.org>

United Nations Millennium Development Goals

<http://www.un.org/millenniumgoals>

U.S. Environmental Protection Agency

<http://www.epa.gov>

U.S. Food and Drug Administration

<http://www.fda.gov>

World Water Council

<http://www.worldwatercouncil.org>

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