

International Bottled Water Association

Response to United Nations University

“Global Bottled Water Industry: A Review of Impacts and Trends”

The recent report by the United Nations University (UNU) is nothing more than a compilation of well-known and often rebutted false claims made by organizations and people who do not think the bottled water industry should exist. The authors are clearly biased, cherry-picking facts to support their agenda against the bottled water industry. The report references decades-old data while omitting more recent positive studies about the industry.

The bottled water industry is proud to produce safe drinking water for consumers. People drink our products for a variety of reasons. In developed countries, bottled water is an important option for health-conscious consumers—with Beverage Marketing Corporation (BMC) calling bottled water “the virtuous alternative to carbonated soft drinks and fruit juice drinks.” Bottled water helps people live a healthier lifestyle and eliminate or reduce their intake of sweeteners, caffeine, and additives that are in other packaged drinks.

For many economically developing countries, bottled water serves as a partial solution when safe drinking water is not available. Many countries have not built the necessary public water distribution systems. For those countries, bottled water is often their only source of safe water.

In addition, certain individuals in both developed and developing countries may require reliable access to bottled water due to medical issues, such as compromised immune systems, allergies, cancer, or other significant health conditions. In fact, the [U.S. Centers for Disease Control and Prevention \(CDC\) recommends](#) that individuals with compromised immune systems drink bottled water.

The International Bottled Water Association (IBWA) thinks that water is the best and healthiest choice for hydration, whether it’s bottled water, filtered water, or tap water. People should always be encouraged to drink all types of water.

Bottled water is one way safe drinking water is provided to humans. Point-of-use (POU) filtration devices, point-of-entry (POE) filtration systems, and tap water are also capable of delivering safe drinking water. Each has a place and an important role to play in human health and well-being.

IBWA members are primarily based in the United States; therefore, most of IBWA’s work centers on U.S. issues. As such, the statements below have a similar focus. Here are the facts about bottled water:

Water use

- The UNU report claims that bottled water withdrawals contribute significantly to groundwater resource depletion, though it does not provide information to support that statement. The report also claims that a lack of data on water use is due to a lack of transparency by the bottled water industry. Both of which are not true.

Bottled water production uses an extremely small amount of water. Of all the water used in the United States, just 0.01% is used to produce bottled water (includes production and bottle contents). (See: <https://bottledwater.org/wp-content/uploads/2019/11/US-water-use-droplet-2020.png>).

Each year IBWA reports sales and production volume data provided by a third-party research firm, Beverage Marketing Corporation (BMC). IBWA uses BMC's data with a water use ratio figure for bottled water (1.39 L/L) from a life cycle analysis (LCA) study to estimate total water used in the industry in the United States each year.

In the United States, the bottled water industry produced 15.88 billion gallons of water in 2022, according to BMC. We multiplied that number by 1.39 (the water use ratio) to get 22.07 billion gallons used by the bottled water industry in a year.

The U.S. Geological Survey (USGS) website has data on water use in the United States. See link: <https://waterdata.usgs.gov/nwis/wu>. USGS data show that total water withdrawals were 322 billion gallons per day in 2015 (the latest data available). Thus, if the bottled water industry uses 22.07 billion gallons in a year, that's 0.06 billion gallons a day, which is 0.01% of all water withdrawals. (Note: If we were to use 2015 bottled water use data, this number would be even smaller.)

Bottled water companies are continuously dependent upon a safe, fresh, and replenishable supply of water. Contrary to many false claims (such as those made in the UNU report), bottled water companies do not drain aquifers and/or surface waters or use more water than can be replenished.

The water sources used by bottled water companies must be renewable to justify the large investment that bottled water manufacturers make to bring their products to market. As such, bottled water companies are continuously developing innovative and efficient ways to use and conserve this critical resource. These measures include:

- using hydro-geological evaluations on springs to assess any potential impact on local groundwater levels and stream flows
- managing water withdrawals in a manner that ensures the long-term viability of water sources
- reducing water extraction through improved water processing and bottling processes
- auditing total water use at bottled water facilities
- implementing water use restrictions at those facilities to comply with water rationing during drought or low regional water supply conditions
- looking for leaks in all plant piping and tanks
- using efficient cleaning methods inside plants to reduce water usage when cleaning reusable 3- and 5-gallon bottles for water coolers used in homes and offices
- reducing water use when cleaning and sterilizing water pipes and storage tanks
- planting drought-resistant vegetation at bottling facilities

- training employees to be good stewards of the environment and encouraging water conservation

Plastic pollution associated with bottled water

- The UNU report claims that the bottled water industry is a major generator of plastic, which is also not true.

Data show the bottled water industry is not a major plastic producer. Bottled water is just one of thousands of food products packaged in 100% recyclable plastic. Even though bottled water consumption continues to grow, the overall amount of plastic used in these products has actually decreased due to the light-weighting of plastic bottled water containers. For comparison, note that a PET bottled water container weighs, on average, 8.8 grams; a PET soda bottle weighs 22.2 grams, due to carbonation and manufacturing processes.

Environment

- Of all packaged drinks, bottled water in PET plastic packaging has the smallest environmental footprint. Here's why: PET water bottles use less than half of the material weight of all other packaging types — including aluminum cans, paperboard cartons, glass, and even PET soda bottles. Lower material usage means less impact from material extraction, manufacturing, and ultimately results in less material entering landfills or needing to be recycled.
- Describing bottled water containers as “single-use” isn't accurate because bottled water containers are 100% recyclable. This distinguishes bottled water containers from other common plastic products that are truly “single-use,” such as non-recyclable plastic items (e.g., straws, cutlery, and plates); certain food and goods packaging (e.g., film, heat-sealed and multi-layered laminate bags); and other containers (e.g., non-PET, non-HDPE, and non-PC bottles and tubs). Single-use plastic items that do not have a recycling symbol are not recyclable. However, individual-sized bottled water containers and larger-sized bottles, such as 1-, 2.5-, 3-, and 5-gallon containers, are all 100% recyclable. By recycling plastic bottled water containers, the plastic can be used over and over again [to make new beverage bottles or products.](#)
- All empty bottled water containers should always be placed in a recycle bin or brought to a redemption center. Bottled water containers are the most recognized and most recycled containers in curbside programs, making up nearly 49% of all PET plastic beverage containers collected, according to data from the National Association of PET Container Resources. Bottled water containers should always be recycled, but when they are not, they make up just 3.3% of all beverage containers that end up in landfills. Waste percentage numbers are much higher for the glass (66.7%), aluminum (7.9%), and plastic soda bottles (13.3%) that end up in landfills.

- Environmental stewardship is part of the bottled water industry’s history, and protecting, maintaining, and preserving water resources for future generations is something we take very seriously. Through our environmental sustainability efforts, the bottled water industry is able to meet the consumer demand for good-tasting, safe bottled water products while:
 - managing water collection in a manner ensuring the long-term viability of the watershed
 - using as little packaging as possible, leveraging new technologies and/or renewable resources to maximize conservation of non-renewable resources
 - working with government, industry, and public interest groups to promote and increase bottled water packaging recycling and reuse for home-and-office delivery products
 - minimizing energy use in the production and distribution of bottled water, while selecting renewable energy sources wherever possible
 - seeking to reduce the impact on the environment as much as possible at every step in the bottled water life cycle

Bottled water marketing

- The UNU report falsely claims that the bottled water industry uses marketing to convince consumers their products are safer than tap water by using isolated public water system failures. This is not true.

The bottled water industry does not consider tap water to be our competitor in the marketplace. Instead, bottled water competes with other packaged drinks – such as carbonated soft drinks, fruit juices, and energy drinks – all of which require far more plastic packaging (at least 167% more plastic) due to carbonation and manufacturing processes.

Public water system failures are not uncommon in the United States and are reported daily in local newspapers. When alerted to a water system failure, consumers are advised to boil their water or drink bottled water. Local officials convey this news to consumers, not the bottled water industry.

The bottled water industry is proud of its long history of providing safe drinking water to people in need during emergency situations, however, this is only possible when the bottled water market is strong and viable during the year.

Regulation comparison

- The UNU report falsely claims that bottled water rarely faces the same rigorous public health and environmental regulations as tap water. This is not true.

Consumers can rely on bottled water's consistent record of safety and quality. Bottled water is comprehensively regulated as a food product by the U.S. Food and Drug Administration (FDA). By federal law, FDA regulations governing the safety and quality of bottled water must be as protective of the public health as the Environmental Protection Agency (EPA) standards for tap water. (See 21 U.S. Code §349.) FDA must review every new EPA maximum contaminant level (MCL) and monitoring requirement for public drinking water to determine if it should apply to bottled water. FDA has 180 days after the date of each EPA final rule to make that decision. If FDA takes no action, the new EPA standard for tap water will, by operation of law, become applicable to bottled water.

Bottled water quality

- The UNU report falsely claims that bottled water is tested less frequently than tap water and results seldom make it to the public domain. This is not true.

On a gallon for gallon basis, bottled water in the United States is tested 20 times more often than tap water. By U.S. federal law, bottled water that does not meet strict standards of quality (SOQs) must be recalled and removed from store shelves. Many bottlers publish their water quality reports online for easy consumer access. This is in contrast to tap water, which is already distributed to people's homes before they are alerted of a water quality problem.

- The report cites mostly old studies, many of which are more than 10 years, and nearly every study has been thoroughly rebutted. The newer studies cited in this report rely on data from older studies, which again have been rebutted.
- Clearly, authors of the UNU report were grasping at straws when they were trying to find reliable studies that show any concern about bottled water quality. In the few instances that bottled water products had issues, these events are truly rogue outliers and are not the industry norm.

Microplastics

- It is important to note that there is currently no scientific consensus on the potential health impacts of microplastic particles, which are found in all aspects of our environment – soil, air, and water.
- Bottled water is just one of many thousands of food and beverage products that are packaged in FDA-approved plastic containers.
- Latest research on the major origins of microplastic particles in oceans shows these are not from bottled water production, but from wastewater from washing machines. Polyester clothing is made from the same material (PET plastic) as bottled water containers. [Read more here.](#)

Bottled water saves lives

- Communities across the United States often experience instances of compromised public water systems after emergency situations or natural disasters (e.g., hurricanes, floods, tornados, fires, or boil alerts). During these times, bottled water is a necessary and reliable alternative to deliver clean, safe drinking water. The bottled water industry has a proven record of being ready to help when disastrous events occur, and bottled water companies donate millions of gallons of their products every year to help ensure a reliable source of drinking water is available for the public during and after emergencies.
- The bottled water industry is there when people need it most, but it's important to understand the industry is only able to provide aid quickly during these situations because of a viable and strong market throughout the year.

Public water systems

- The industry does not criticize tap water; in fact, we support strong public water systems, which are important for providing citizens with clean and safe drinking water.
- Many IBWA members produce purified bottled water products using water from public water systems. It is important to note that "purified bottled water" is not "just tap water in a bottle." Once the municipal source water enters the bottled water plant, several processes are employed to ensure that it meets the purified standard of the U.S. Pharmacopeia, 23rd Revision. Those treatments can include reverse osmosis, distillation, or de-ionization. The finished water product is then placed in a bottle under sanitary conditions and sold to the consumer. To learn more about this process, review this chart: <https://bottledwater.org/wp-content/uploads/2021/08/Flowchart-Final-scaled.jpg>.