

INCOPA position paper

Tap water a sustainable resource

It seems like bottled water is becoming more and more popular in Europe, becoming an icon for healthy life! But is bottled water really better than tap water? Are rules tougher for bottled water, compared to tap water?

Regulatory situation

The quality of tap water intended for human consumption is regulated in Europe by the Drinking Water Directive (98/83/EC of 3 November 1998). The Directive sets quality standards for drinking water quality at the tap (microbiological, chemical and organoleptic parameters e.g. taste, colour, odour) and the general obligation that drinking water must be wholesome and clean. It also obliges Member States to regular monitoring of drinking water quality, to take remedial action in case the monitoring reveals problems and to provide to consumers adequate and up-to-date information on their drinking water quality.

The regulation of bottled water depends on the source of the water that is used. Customers may often not be aware that bottled water can be produced either from natural sources, such as springs, or it may simply be ordinary tap water, possibly filtered through a carbon filter to remove any taste of e.g. disinfection agents. The criteria for “natural mineral waters” are set out in the Natural Water Directive (80/777/EC of 30 August 1980). For any water that does not fall under this directive, the Drinking Water Directive applies.

Health

In order to maintain good quality of the tap water supplied to the consumer, coagulants are added to the raw water in the drinking water production plant to precipitate and remove particles, colour, organic substances and metals from the raw water. In Europe the quality of tap water is of very high level and from a health perspective there is no reason why people should drink bottled water instead of tap water.

Paying dearly for bottled water does not guarantee that it is healthier than the water delivered through the water tap. Take as an example the content of minerals which is often emphasized as one of the benefits of bottled waters. In fact tap water also contains minerals which are beneficial for health e.g. calcium, magnesium. In addition, drinking water is a perishable commodity and you can always be sure that the water from the tap is fresh. When it comes to bottled water however, you don't know for how long it has been transported and stored on the shelf at the grocery store before you consume it.

Environment

Another aspect is the environmental impact of drinking water. What consumers of bottled water may not be aware of is the environmental impact resulting from production, transportation and packaging of the water.

The provision of bottled water to the consumer involves a high environmental burden - more than 2000 times as much carbon dioxide as the same amount of tap water. An American study¹

¹ P H Gleick and H S Cooley , Environ. Res. Lett. 4 (2009) 014009

calculated typical energy content of bottled water to be 5 – 10 MJ/l, not including additional burdens from waste management or recycling. While in a Swedish study², the energy consumption for the production and distribution of municipal drinking water was calculated to be about 0.0024 MJ/l of water.

The main sources of greenhouse gas emissions come from the production of the bottle, which hugely outweighs the other inputs from water treatment and packaging, as well the high burden from transport. The amount of emissions depends on how far, how efficient and with which means water is shipped. Train and boat transport will lead to fewer emissions than long-distance transport by truck. The contribution to environmental impact can be reduced massively by choosing tap water in the first place.

Economics

In addition to the environmental impact, the price of the bottled water is enormous by comparison; a typical unit cost of municipal tap water in Europe is €1-3 per 1000 litre, while the price the consumer pays for bottled water, is usually a similar amount **per litre**.

Turning Europe back to tap water

Consumption of tap water instead of bottled water is therefore not only very much cheaper, but it also avoids the huge environmental impact of using bottled products. There is no waste problem, it doesn't have to be purchased and brought home, and is always available at your home, at work or public places!

In conclusion, tap water is healthy, tasty and environmentally friendly!

² Thomas Angervall, Anna Flysjö, Berit Mattsson, UP 04 12975, Jämförelse av dricksvatten – översiktlig livscykelanalys, LCA (2004)