

Bottled water: is it the right choice?

Water is a precious, vital and extremely important commodity. In short, it is a resource that should be preserved and protected every day. Yet on the contrary, what we see increasingly more frequently is unsustainable management of this essential resource, increasingly frequently treated as private property, to the detriment of citizens and the environment. Last summer, marked by severe draught, wildfires and progressive reduction of the flow of rivers and groundwater levels, revealed the limits of the current water management model and the structural shortcomings in our Country.

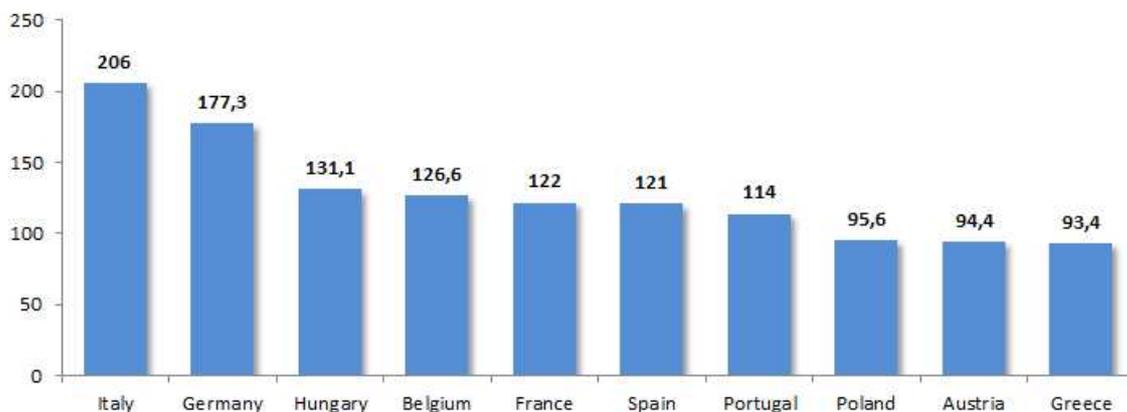
Despite the fact that Italy is a country with abundant supplies of generally good quality water, the system for supplying, managing and analysing this water shows a number of critical problems all over Italy. Sixty percent of Italian public water mains are more than 30 years old and at least half of the 350 thousand kilometres of piping need repair or replacement. Average leakage from the Italian water network is 40.6%, well above the European average of around 23%. Alongside these problems, common all over the national water network, other local situations may occur too, such as levels of bacteria or chemical substances above the legal limits, on which it is important to take prompt action, informing the citizens.

Lastly, water rationing is sometimes necessary in various Italian cities to deal with water shortages, not just during the summer or in periods of draught. All of this often tends to make Italian families steadily less willing to drink tap water.

Italy, the Country of plastic bottles

The direct result of this distrust of tap water is an increase in consumption of mineral water, with which Italian families satisfy their daily need for water. At 206 litres per head, Italy is the country that drinks most bottled water in Europe, and comes second in the world. Only Mexico (with 244 litres per head per year) consumes more bottled water than Italy. In 2016, there were more than 260 brands bottling over 14 billion litres of mineral water required to satisfy the national demand, at no less than 140 plants. This is the situation that emerges from the research "Acque in bottiglia. Un'anomalia tutta italiana" (Bottled water. A peculiarly Italian anomaly) published by Legambiente and Altreconomia, to mark World Water Day (22 March).

Per capita consumption of mineral water in Europe



Consumption of mineral water in Europe: the top 10 countries. Source: Legambiente based on Censis data.

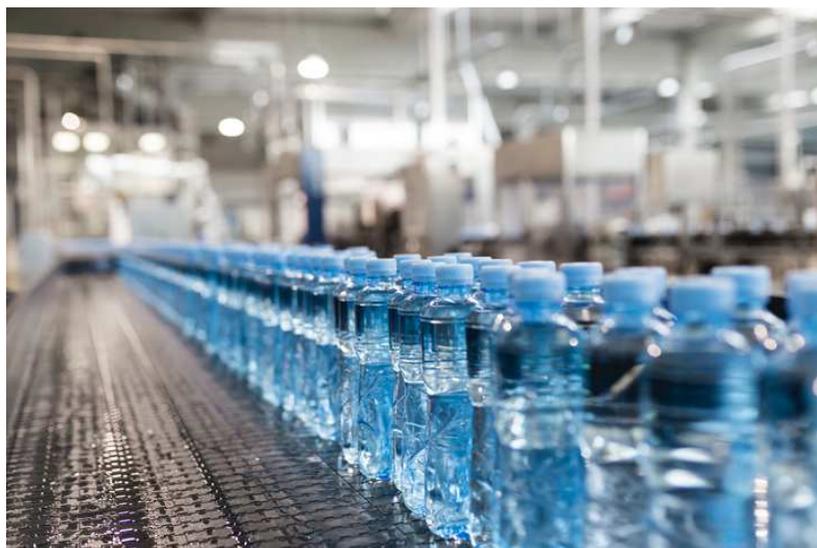
A false belief that bottled water is superior in quality and safer than tap water is what underlies this record peculiar to Italians. In order to promote the drinking of bottled water, adverts make use of images of high mountain peaks and perpetual snow, thus conveying to consumers the message that mineral water is pure. Yet mineral water is not

necessarily better than tap water: when mineral water is subjected to laboratory tests, it often proves to be far from pure and without defects.

Unlike mineral water, the water piped into our homes is subjected to very accurate and frequent analyses and regulations are constantly updated. In short, the reasons for the typically Italian passion for bottles of water cannot be justified only by health concerns. For this reason, alongside the necessity for a thorough reform of the system of rules for companies, a campaign needs to be conducted to provide correct information for consumers thus encouraging them to make more mindful decisions on the water they drink. In Rome, for example, approximately 250,000 analyses are conducted each year on tap water, 220,000 in Genoa, 350,000 in the provinces of Milan, Pavia and Lodi, while water is monitored in Emilia Romagna and more than 100 times a day. Two types of analyses are envisaged: on the one hand there are internal tests by the water board supplying the water, on the other there are those made by the local health authorities, scheduled on a regional basis.

Impact of plastic bottles on the environment

Each year in Europe (EU28), we consume 46 billion plastic bottles, according to the “Single-use plastics and the marine environment” report published by Seas at Risk. In Italy, 90-95% of all bottled water is sold in plastic containers, while the remaining 5-10% is sold in glass containers. Therefore, 8.4 billion plastic bottles were used to contain the 14 billion litres of mineral water consumed in 2016.



Bottling of mineral water.

Given that over 90% of plastic is produced from virgin raw materials (representing 6% of global consumption of petroleum) and that 80% of bottled water in Italy is transported by road to regions other than the one where it was bottled (and an articulated lorry emits as much as 1300 kg of CO₂ into the environment for every 1000 km travelled), it is clear that the environmental impacts linked to bottled water may be multiplied exponentially if they are not correctly managed. Precisely the poor management of waste is the prime cause of the enormous quantity of plastic that is invading marine ecosystems. The Beach Litter investigation conducted by Legambiente shows that over 80% of litter found on Italian beaches between 2014 and 2017 was made up of plastic objects and bottles and their caps account for 18% of it. This quantity corresponds to over 15 thousand bottles: considering that, according to UNEP, what we see on beaches is only 15% of waste dumped into the marine environment, we cannot even image the quantity of plastic bottles that have sunk to the sea bed.



Plastic bottles and caps account for 18% of litter left on beaches.

The Ministry for the Environment, with the decree no. 142, dated 3 July 2017, has decided to implement an experimental and voluntary scheme for cash-back returnable plastic and glass bottles with volumes from 0.2 to 1.5 litres (those used for mineral water and beer) sold by bars and restaurants and anywhere where they are used, with the aim of reducing production of packaging and favouring recycling of used bottles. This experiment will last for 12 months as from 7 February 2018 and tradespeople can decide to voluntarily take part. It is a useful experiment, albeit partial (and not very well publicised); it is important that a binding law that will change the point of view of an occasional and voluntary approach to reuse of packaging should be passed. The situation in the rest of Europe is different: In Germany, for example, returnable bottles have been regulated since 1991, in Denmark return of glass bottles is compulsory, while in Norway drinks cans too have to be returned, and there are many other examples in other European countries too. It is estimated that by applying a returnable containers system, the amount of waste can be reduced by 96% for glass and 80% for plastic, and that reusing glass bottles 20 times can lead to energy savings of as much as 76.9%.

Bibliographical references:

[“Acque in bottiglia. Un’anomalia tutta italiana”](#)