

Water and the consumer

The point of reference for individual water consumption is essentially the visible quantities of water we use in our daily lives: our morning showers, toilets, washing machines, cooking and washing-up, as well as the watering of our vegetable gardens and lawns. This translates into a cubicmetre figure and euros on a bill, and is tangible, concrete and measurable. Numerous awareness campaigns have led us to install dual-flush toilets and water-saving devices for taps, to avoid leaving the water running unnecessarily, etc. So we know that we have a certain level of control over our water use, yet we can influence just 12% of the total.

What can we do about the remaining 88%? This unseen water used by agriculture and industry is known as “virtual” water. It is needed to produce the goods we consume: from the provisioning of raw materials and processing, through to packaging and distribution and potentially to recycling. Each of these stages in a product’s lifecycle requires water. A cup of coffee provides perhaps the best example. For a kilogram of roasted coffee, 26 400 litres of water are needed to grow the bushes producing the coffee grains in Africa, South America or Asia, and then to transport and roast them. This means that the few dozen millilitres of dark liquid in our cup of coffee leave a virtual footprint of 150 litres of water! This same exercise can be done for a pair of jeans or a steak. Beef wins the virtual water consumption prize, with 15 000 litres per kilogram of meat. A plastic water bottle uses the same amount of water to produce as it can hold (1.5 litres).

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John Anthony Allan of King’s College coined the term “virtual” in the early 1990s to refer to the water used in production, but this water could not be more real. International trade circulates 2.32 trillion cubic metres of virtual water a year, or 74 million litres exported or imported every second.

Consequently, just as you can calculate the carbon footprint of an individual, company or country, there is an indicator for the water use of these categories – the water footprint – expressed in cubic metres per person, per day or per year. Globally, the average individual has a water footprint of 1 400 cubic metres per year, or 3 800 litres per day. The disparities are huge. For example, a North American uses 7 800 litres a day, mainly due to high beef consumption of 43 kilograms a year per person.