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Sustainability: Water, the fight against wasting "Blue Gold" begins with agriculture

70-80% of water resources used by humans goes to agricultural irrigation: it takes 500 liters of water to produce one kilo of wheat



The growing demand for water is closely linked to the continuous increase in food production, and water pollution that renders enormous amounts of water unsuitable even for industrial uses. But the way to reduce our "water footprint" exists, starting from reducing the amount of fresh water taken from the natural cycle.

There are 7 billion of us on Earth today. If we continue at this rate of growth, in 2050, there will be 9 billion people on our planet. To provide everyone with drinking water and food, we will also need 70% more water resources than currently used.

Water is already scarce today, as we are reminded by the **United Nations Environmental Programme (Unep)** report, written in cooperation with the **International Water Management Institute (IWMI)**: "Currently, 1.6 billion people live in areas of physical water scarcity and this could easily grow to 2 billion soon if we stay on the present course. With the same practices, increased urbanization and changing dietary patterns, the amount of water required for agriculture in terms of evapotranspiration would increase from 7,130 km³ today to 70-90% more (which is between 12,050 and 13,500 km³) to feed 9 billion people by 2050.

Globally, human beings use 54% of all accessible freshwater, of which 70-80% is used for irrigation (source: UNESCO-WWAP 2003; UNESCO, 2009). Despite this, more than 1 billion people do not have access to drinkable water and half of the world's population live in countries where aquifer levels are dropping and the aquifers are running dry.

In addition to the problems of local and regional water shortage, there is water pollution that renders enormous amounts of water unsuitable even for industrial uses. Every day, 2,000,000 tons of human waste are dumped into waterways and, in

developing countries, up to 70% of industrial wastewater is disposed of directly into the sea and rivers without treatment.

As of today, 41% of the world's population live in environments characterized by "severe water stress," that indicates the absence of sufficient water to meet agricultural, industrial and domestic needs (source: World Resources Institute, 2000). According to FAO projections, it is predicted that this percentage will rise to two thirds of the world's population by 2025. To quantify agriculture's impact on water consumption, just think that it takes 500 liters of water to obtain 1 kg of wheat, 450 for an ear of corn and 70 for one apple (Unesco IHE data).

"The agricultural sector is therefore facing a challenge without precedent in the story of mankind, and innovation, that includes fertilizers, plays a decisive role because it represents the only possibility for optimizing production in a sustainable manner, reducing waste. Fertilizers in particular, by replenishing nutrients in the soil, help produce food without the need to increase the acreage of farmlands, with considerable water savings in terms of irrigation," states Francesco Caterini, president of Assofertilizzanti.

But there is also another way of reducing water consumption. **Mutti**, a manufacturer of tomato concentrate, purée and pulp, is the first company in Italy, and among a few in the world, to have calculated the amount of water consumed in its production, from growing the tomatoes to the finished product, **availing itself of the scientific assistance of the WWF** and the Department for Innovation in Biological, Agri-Food and Forestry Systems at the Università della Tuscia (Viterbo).

"Mutti is a virtuous case because it is one of the first companies in the world to quantify, with the official Water Footprint Network methodology, a concrete reduction target, measurable and challenging," said Stuart Orr, Freshwater Manager of WWF International. "It is an innovative project that has made it possible to identify more efficient solutions, actively involving the agricultural chain in virtuous processes for the environment."

This experimental project, based on the effective calculation of the entire production chain's water footprint, examined the amount of water stored in each product. Given that 83% of the company's water footprint comes from growing the tomatoes, Mutti focused most of its attention on farmers, with a campaign for increasing awareness and support for rationalizing the use of water resources in agriculture.

Mutti has committed itself to working towards reducing the two main components of its water footprint, the blue one relative to the amount of freshwater taken from the natural cycle for agriculture or industrial purposes, and the gray one relative to the amount of water polluted.

Source: [Planet Inspired](#)



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